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NOTES
OF
THIRTY-ONE CASES OF SUPRAPUBIC OPERATION.

PERFORMED BY

SIR HENRY THOMPSON, F.R.C.S.,
Consulting Surgeon to University College Hospital.

(Reported by H. T. HERRING, M.R.C.S., M.B.)

HAVING been engaged in assisting Sir Henry Thompson in completing the histories of all the cases in which he has operated on the bladder for calculus and for tumour up to the end of 1888, upwards of 1,000 in number, I have with his assent made a brief outline, comprising all the operations performed above the pubes in these circumstances by themselves. I may add that at four of the latter cases I have been present.

They are thirty-one in number, and include two performed by the old method, as generally adopted before the modification suggested by Garson, and carried out so successfully by Petersen, of Kiel. This latter operation Sir Henry Thompson introduced here, and first performed in this country, being Case I, second series. There are twenty-nine cases of the new operation; eleven of these were for tumour of the bladder, and eighteen for calculus, including one remarkable case[1] associated with calculus.

The chief points attended to in this operation were, to commence with a fully, yet prudently-distended rectum, followed by a fair distension of the bladder; a sparing use of the knife, so that a ligature was very rarely necessary; the opening of the bladder by a small incision sufficient to admit the finger, but enabling further enlargement to be made by dilatation only, since after this the opening contracts, and stitching is not necessary, and moreover appears to be generally not advisable.

TWO CASES OF SUPRAPUBIC OPERATION BY THE OLD METHOD.

CASE I.—E. F., aged 13, sent by Mr. Mason, of Burton-on-Trent, for admission to University College Hospital.

1865, January.—She stated she had passed a stout hairpin into the bladder; much pain followed; attempts in the country to remove it were unsuccessful. Under chloroform examined the bladder; the pin was embedded firmly, and no traction short of violence would remove it. The bladder was opened above the pubes upon a sound and the pin withdrawn. She made an excellent recovery in about a month's time, and was on the point of leaving, when she was suddenly attacked by severe pain and rigor, and died in two days. The autopsy showed that an abscess had formed in the track of the apparently healed wound, and had burst into the peritoneal cavity.

CASE II.—Capt. H., aged 58, 1877. A large uric acid calculus removed. Mr. Teale, of Leeds, present. The patient had been the subject of complete paraplegia for years, and on this account could not be placed in the position for lateral lithotomy. All the urine had, during that period, been drawn by catheter. A difficult operation from the presence of a long false passage. He sank exhausted ten days afterwards.

THE SERIES OF SUPRAPUBIC OPERATIONS BY THE NEW METHOD.
(CASES OF TUMOUR IN THE BLADDER.)

CASE I.—Miss P., aged 73, sent by Dr. Edis, of Gloucester. Vesical bleeding about a year and a half, lately considerable, very frequent micturition, suffering extremely severe.

[1] *Clin. Soc. Trans.*, vol. xxi, p. 46.

October 17th, 1885. Digital exploration, by dilating the urethra, revealed a large papillomatous growth springing from the upper extremity of the vesical wall; hence the suprapubic operation was necessary, and a tumour about the size of an orange removed. Recovering slowly but steadily, the symptoms greatly improved. She died nine months afterwards. The operation had undoubtedly prolonged and rendered her life more easy.

CASE II.—A. S., aged 55. Micturition frequent for four or five years, now every half-hour. Blood first seen one year and nine months ago, lately increasing. Patient very feeble.

November 16th, 1885. The bladder evidently filled by the tumour, and the high operation was performed. Dr. Lloyd and others present. A quantity of papillomatous growth removed, leaving a firm hard base. The patient returned home relieved at the end of a month, but died during the following year, recurrent masses (of round-celled sarcoma), having appeared in the situation of the wound.

CASE III.—J. A., aged 45. Seen with Mr. Maurice, of Reading. Symptoms of four years' duration, consisting chiefly of blood in the urine and increased frequency of micturition.

October 8th, 1886. Digital exploration revealed a soft growth, with wide base attached to the upper part of the bladder. Evidently was only to be dealt with through a suprapubic opening. The wound healed in a month. He was then able to hold his water four hours, which was passed free from blood, and without pain. It reappeared next year, and was similarly removed by Mr. Maurice.

CASE IV.—H. T. B., aged 54. Long-standing symptoms of vesical tumour, lately severe, and recognised as a large growth. He was seen with Dr. Boyd, of Wandsworth.

December 8th, 1886. A large pedunculated papillomatous tumour by high operation, and the whole removed. He made a rapid recovery. In November, 1887, he was in good health and actively employed, and there has been no sign of the reappearance of the growth.

CASE V.—Capt. B., aged 61. In April, 1885, a considerable papillomatous growth had been removed by a perineal opening with much relief. He returned February, 1887, his symptoms having reappeared.

February 26th, 1887. The high operation was performed in presence of Dr. Wilson, of Boston, and Dr. Mudd, of St. Louis, and a large papilloma removed. His symptoms were somewhat relieved, but he never regained his strength, and he died the following June.

CASE VI.—A. W. P. K.; sent by Dr. Travers, of St. Leonards. Attacks of hæmaturia for many years. The bleeding had lately become continuous, and papilloma was suspected. The pain and frequent micturition were very severe.

March 21st, 1887. Digital exploration verified the diagnosis. The suprapubic operation was done in the usual way, and a fimbriated papilloma was removed, leaving a thick and hardened base. Much fever followed, from which he rallied, but gradually grew weaker, and ultimately died on April 1st.

CASE VII.—Major B., aged 62; for eighteen months has been subject to hæmaturia, lately becoming severe.

May 6th, 1887. Removed by the suprapubic operation a small, wide-based, papillomatous tumour. Mr. Maurice, of Reading, present. Recovery delayed owing to the deposit of phosphates in the bladder.

May, 1889. During the last year and a half he has had frequent trouble from the same cause, but when these have been removed by a lithotrite he lives in tolerable health and comfort.

CASE VIII.—G. L., aged 63, seen with Dr. Pickering, of Monte Carlo. Last fifteen months marked symptoms of vesical tumour.

July 7th, 1887. Digital exploration, finding a broad-based tumour, and the high operation at once performed, removing as much as possible. He recovered slowly, and returned to the

country relieved. Three months later he gradually sank from the extension of the growth, which proved to be epithelioma.

CASE IX.—E. I., aged 57. First seen with Dr. Montgomery, of Maidenhead. Had lost much blood during the last three months. Examination of the urine showed a fragment of papilloma.

July, 1887. Removed a broad-based growth, very like in form to that in the preceding case. The deposit of phosphates retarded his recovery, but eventually the wound healed soundly. He called the following October to say that he was free from symptoms, and following his very active business pursuits as usual.

CASE X.—Col. B., aged 59. Three years ago first saw blood, which has been gradually increasing since. Considerable masses of round and spindle-celled tissue were found in the urine. He was seen with Dr. Pavy and Sir James Paget.

April 11th, 1888. The bladder was examined with the cystoscope, and a tumour seen on the posterior wall.

May 7th, 1889. The tumour was removed in the presence of Dr. Pavy, and Mr. A. Parkes, Longton, Stafford, and a large mass separated close to its base. He left for Eastbourne five weeks afterwards, the wound not yet closed.

June 28. The growth had evidently developed in the cicatrix, and ultimately in the original site, and he sank a month or two later.

CASE XI.—T. C., aged 50. Sent by Dr. Dobie, of Chester. Four years ago first saw blood in the urine. Now persistent and severe. Microscopic examination of the *débris* showed the presence of papilloma.

June 22nd, 1888. An irregular tumour removed as close to the base as possible. July 18th he left town, the wound having healed and free from all symptoms. Heard, in the following November, that a mass of growth had appeared in the cicatrix of the suprapubic wound, and he subsequently died in the Liverpool Infirmary.

CALCULOUS CASES.

CASE XII.—C. H., aged 36. Symptoms of stone for some time, with an abundant deposit of cystine in the urine.

June 2nd, 1884. A cystine calculus weighing two ounces and three quarters was removed at the operation, at which Dr. Pinter, of Buda Pesth, and others were present. He made a slow but sound recovery, and is now in excellent health. He was seen conjointly with Sir William Roberts, of Manchester.

CASE XIII.—W. R. P., aged 12. The stone was evidently so large for a lad that there could be no question of adopting the high operation, which was performed on March 24th, 1885. An oval stone weighing one and a half ounce was removed. Dr. Pondrell, of Euston Road, present. He returned home quite well in a month.

CASE XIV.—W. H., aged 62. Symptoms of calculus for fifteen years. The last seven years he had passed mostly in bed and on the sofa. A very large stone found on sounding.

April 29th, 1885. Dr. Hickman, of Dorset Square, and Professor Rockwood, of Colombo, present, a calculus of pure uric acid weighing no less than fourteen ounces was extracted without difficulty. He made rather a slow but ultimately sound recovery. In the spring of 1889, he wrote that he was enjoying excellent health and leading a busy and active life.

CASE XV.—J. G., aged 73. Severe symptoms had existed more or less for five years.

May 2nd, 1885. Lithotrity was attempted, but the stone being large and not easily grasped, the suprapubic operation was performed in the presence of Dr. Hickman and Professor Rockwood. The stone weighed rather more than one and a half ounce. A rather slow but sound recovery. In July, 1887, he called to say that his health and strength are remarkably good for his age.

CASE XVI.—J. B., aged 70. Seen in consultation with Mr. Adams, of Aldersgate Street. A large stone found on sounding.

April, 1885. The patient, who was very feeble, was submitted to the operation as a last resource; he never regained strength, and he died on August 13th.

CASE XVII.—J. B., aged 76. First seen in December, 1870, and a small stone, the size of a nut, discovered. He refused operation.

August 9th, 1885. Being fifteen years after the last visit, the calculus was now very large, and the suprapubic operation alone afforded him any chance of safe removal. This was done in the presence of Mr. R. Jones and Mr. A. A. Henley, of Woodbridge, and a uric acid stone, weighing six ounces and a half, removed. He made a good recovery without any troublesome symptoms, and lived in comfort for a year or two afterwards.

CASE XVIII.—J. M., aged 50. Sent from Sydney by Dr. Mackenzie, with uric acid calculus.

March 5th, 1886. Removed a stone weighing two ounces and a half in the usual manner, Dr. F. Keegan, Indore, India, being present. He had completely recovered in a month, and was then in good health.

CASE XIX.—E. H., aged 65. For many years had passed all his urine by catheter, with great frequency and pain, and had had two operations for stone. The prostate was of an enormous size, and to relieve the symptoms a suprapubic opening was made on April 29th, 1886. Mr. G. R. Ord was present at the operation. The wound was fitted with a curved tube passing through a shield on the surface, and thus to an ordinary urinal attached to the leg. The patient was much relieved by the operation, and is still in good health, without pain. He continues to pass all his urine through the tube in the suprapubic opening (April, 1889).

CASE XX.—E. G., aged 63. Sent by Dr. Whitla, of Belfast.

July 7th, 1886. A rough stone, weighing one ounce and a half, composed of oxalate of lime, removed with ease. He returned home in the beginning of August well and free from all symptoms.

CASE XXI.—J. J., aged 62. Sent by Mr. Atkinson, of Bennington.

October 15th, 1886. A uric acid calculus, weighing one ounce and a quarter. Mr. Rice Ord was present at the operation. The patient made a sound recovery.

Case XXII.—T. T., aged 68, sent by Dr. Potter, of Collumpton. For some years had been compelled to pass all his urine by catheter.

October 25th, 1886. Crushing attempted, but the stone was found to be large and hard, and was therefore removed by the high operation. It weighed two ounces and three-quarters. Mr. Rice Ord was present. At the end of a month he returned home perfectly well; continued so to present time.

CASE XXIII.—J. A. P., aged 59.

May 13th, 1887. An oval uric acid calculus, one ounce and a half in weight, removed as usual. He was sent by Dr. Ensor, of Port Elizabeth, South Africa. He made a sound and rapid recovery.

CASE XXIV.—J. B., aged 67, from Toronto, Canada. First seen with Dr. De Woolfson, of Shrewsbury, and a large stone found on sounding.

August 1st, 1887. Removed in the presence of Dr. Vansart, of Philadelphia. The patient made a rather slow but ultimately sound recovery.

CASE XXV.—Col. A. A. B., aged 73. October, 1887. The high operation was undertaken in this case, as the stone was not easily seized with the lithotrite. The patient was very stout, and the subject of an unusually large prostate. For the first few days after the operation he did well, and then gradually lost power, and died exhausted on the eleventh day.

CASE XXVI.—R. I., aged 36. May 5th, 1888. Dr. Maclaren, of Harley Street, and Dr. Rowell, of San Francisco, present. Crushing attempted, but the stone was a large, rough oxalate of lime formation, and therefore the high operation was preferred. Thirty-six hours afterwards abdominal pain was complained of, and the tube was removed with relief. The urine then continued to flow freely by the wound, but vomiting and pain became severe, and he died on the fifth day. At the necropsy, signs of cellulitis were seen about the sides of the bladder under the peritoneum, and local peritonitis around these points. There was no perforation of the cavity. It is difficult to account for the condition; there had been no check or difficulty met with in the performance of the operation. The stone, from its large size and spiked character, was an awkward one to remove, and may have damaged the soft parts. No other circumstance happened likely to have done so.

CASE XXVII.—D. W. G., aged 68. October 5th, 1888. Operated upon at Kidderminster with Dr. Stretton, for an oxalate of lime calculus weighing 1 oz. The wound healed within a month, and the patient is now in good health.

CASE XXVIII.—R. C. H., aged 51. Had been the subject of entero-vesical fistula for upwards of six years, and lately had developed marked symptoms of stone. Lithotrity was contraindicated in consequence of the condition described, and after consultation with Mr. Erichsen and Dr. Townshend, of Cork, it was decided to perform the high operation.

October 13th, 1888. In the presence of Mr. Erichsen and Dr. Cummings, of Cork South Infirmary, this was done with difficulty, owing to the impossibility of distending the bladder with fluid.

It was only with extreme care that the contracted bladder was safely opened on the point of a staff, and the calculus extracted.

All went well in regard to the operation, but on October 16th he had a severe attack of bronchitis and asthma, to which he had been subject for years. His asthma had long prevented sleep in a recumbent position, and an upright one in bed was necessary after the operation. He died exhausted on October 24th.

CASE XXIX.—C. R., aged 29. Had suffered for many years with symptoms of stone. He had been sounded frequently without result.

November 14th, 1888. Examined under ether, and a large and very flat oval calculus detected. The following day the suprapubic operation was performed. The calculus was composed of uric acid, and weighed one ounce and a third. His convalescence was somewhat prolonged, but ultimately he returned home perfectly well.

It will thus be seen that among the eleven cases of tumour only one was fatal, and that from pyæmia. Among the eighteen calculous cases there were three deaths, if the fatal result in Case XXVIII is not included, in which death was clearly due to the severe attack of bronchitis and asthma, to which the patient had long been subject. The whole of these cases represent the most advanced and the most complicated examples of disease, and were on that account not amenable to lithotrity, or to a perineal section of any kind.

NOTES
ON
ACQUIRED LEPROSY
AS OBSERVED IN ENGLAND.

By JONATHAN HUTCHINSON, F.R.C.S., LL.D., F.R.S.,
Consulting Surgeon to the Hospital for Diseases of the Skin, to the Royal London Ophthalmic Hospital, and to the London Hospital.

II.

THE case with which I concluded my paper last week was of great importance as proving that the leprosy process (that is, the life and multiplication of the bacillus) may come to an end if the patient is removed to a place where the disease is not endemic. I have another yet to relate which is quite as definite, and I have, I believe, several patients under observation in whom the process of cure in England is slowly in progress.

CASE II.—The case to which I allude is that of a Methodist clergyman, of high endowments, who was born in Canada, and who, in 1850, at the age of 24, went on missionary service to reside in the Bermudas. Five years after going to the Bermudas he married, and, being then in excellent health, continued to reside there. In 1857, owing to some nervous failure, he became unable to write with his right hand, and in 1859 an eruption appeared. In 1863 he saw Dr. Brown-Séquard, who said that it was a confirmed case of leprosy with paralysis. During the next ten years he continued to suffer from the disease in an aggravated form. On one occasion, after an injury, he had an anæsthetic toe amputated. In 1875 his eyes began to suffer, and during the next five years he became quite blind after repeated attacks of inflammation. Several iridectomies were, I believe, done by a most skilful ophthalmic surgeon (Dr. Bullar, of Montreal), in the hope of arresting the disease, but without any permanent result. There are many interesting details in this case with which I forbear to trouble the reader. It is sufficient for my present purpose to say that the Rev. Mr. D. came under my observation about twenty-five years after the beginning of his leprosy, and that he was then, at the age of 55, an example of recovery. All leprosic processes had come to an end. There had been no fresh manifestations for some years. He still enjoyed the use of a powerful intellect, but he was blind, much disfigured, and crippled in both hands and feet.

The case proves (1) that one not inheriting any taint may acquire leprosy by residing in a locality where it is endemic; (2) that such acquisition may be effected wholly without exposure to hardship or poverty; (3) that the malady may come to an end in the course of years during residence in a healthy district.

I do not see that it is possible to suggest more than two ways in which it is probable that the disease was acquired. Clearly Mr. D. in some way took in, while residing in the Bermudas, the specific germs of a specific malady. He must have taken them either by direct contagion, or he must have received them in food. A similar proposition may, I think, be made in reference to most of the cases with which I am at present dealing.

CASE III.—My third case is that of a young English lady who went to reside in Burmah in connection with a mission school. She went out at 19 and returned at 30 with her features so disfigured by "tubercular" leprosy that she looked like a woman of 60. She was for some months under my care in the London Hospital. It is now eight years since I saw her, and I do not know anything as to her present state.

CASE IV.—A woman, Mrs. C., was under the care of my colleague, Mr. Waren Tay, and presented a marked example of leprosy. Her age was 31 when I saw her. She had been taken to India at the age of 5, and had lived there twenty-two years. When she returned to England she was, as far as she knew, in sound health, and it was not till two years later that the signs of leprosy became definite. The first manifestation was the appearance of brown patches about the neck and shoulders, and when I saw her these brown areas covered almost the entire surface. I have not kept any record as to the precise part of India in which this woman had resided, but she told me that it was inland, and that there was abundance of fresh-water fish. She herself did not like the fish, but she believed that she had nevertheless partaken of it on an average two or three times a week.

CASE V.—A gentleman born in England, of English and Irish descent, named L. G. H., consulted me in 1880 for leprosy. He went to live at Bombay in 1856, and in 1875 his first patch was observed. It was a discoloration on his right leg. It was not until eighteen months later that his face was affected. The disease was in its seventh year when I saw him, and was well characterised. He said that in India he had eaten fish and prawns occasionally.

CASE VI.—A gentleman of Scotch descent consulted me on account of well-marked leprosy. He had been engaged for some years on the newspaper press of Calcutta, and there his disease had commenced. This patient had never been subjected to any kind of hardship, and he had not left England until he was 20 years of age.

CASE VII.—Colonel H. P. C. was born in England, of English parents. He went to India in 1849, and returned in 1869. In 1870 he consulted a London surgeon for an eruption which was diagnosed as syphilis, but in respect to which he denied that he had had any chancre, or been exposed to any risk of contagion. He was married, and had healthy children. In 1874 he consulted me, and he was then the subject of leprosy in an advanced form, his skin being almost universally discoloured, and of a brown tint. The lobes of his ears were thickened and dusky, and the soles of his feet painful. I saw Colonel C. several times during the next year, but do not know anything as to his subsequent history. He told me that whilst living in Burmah he had eaten fish moderately, and that he had been particularly fond of a condiment prepared from prawns, which he had special facilities for obtaining. This gentleman gave me interesting information as to the prevalence of leprosy in Burmah, with the facts concerning which he was officially well acquainted. He said that it was very common, and especially so among the coast population, and that the Government was at that time engaged in making extensive provision for the care of lepers. He drew my attention to a passage which had been recently published by Mr. Francis Day, and expressed his unbounded surprise that anyone who had travelled in Burmah could have written it. The passage to which I refer is as follows: "If, however, we look a little further to the east, we find the Burmese race, who are most assuredly a fish-consuming one, and who like their odoriferous nga-pee far better than fresh fish. Yet in my recent travels through Burmah I never saw an instance of leprosy amongst the indigenous population; neither did I see any cases of that congenital malformation of the fingers and toes so common among the natives of India born with a leprous taint. In fact, it has been frequently observed that this disease does not exist amongst the Burmese, and the same remark applies to the Andamanese, whilst it is as common in India amongst the inland classes who do not eat fish, as it is amongst those who consume it."[1] I quote this passage as an example of the very misleading information

[1] "On Fish as Food." By Surgeon Francis Day, F.L.S. and F.Z.S. *Indian Medical Gazette*, February 1st, 1871.

which the student of medical geography has occasionally to encounter. It is only one of many which have met me in my investigations as to leprosy.

CASE VIII.—A colonel in the army, aged 53, who had been born in England, but had lived twenty-seven years in different parts of India, Burmah, etc., became leprous. The beginning of his disease was three years before I saw him, and occurred in the left foot. He was a man of splendid physique, of most temperate habits, and in excellent general health. Although both feet were numb, he had only about a year before I saw him engaged in athletic sports, and won a race. Both his ulnar nerves were affected, but on the right side the paralysis was only commencing. This gentleman had been exposed to the ordinary dietetic and climatic influences of India and Burmah, but had never suffered any hardship. He had eaten fish, etc., when he could get it.

CASE IX.—Colonel B. F., aged 45, consulted me first in May, 1879, having been then the subject of leprosy for about six years. He was of English parentage, but had been engaged in service in India for twenty-four years. He had been stationed chiefly on or near to the sea-coast, and he said that he thought he had rarely been a day without taking fish at dinner. He had been very fond of prawns and of prawn curry.

CASE X.—A gentleman, Mr. P., aged 48, had resided twenty-seven years in India. He had been born in England, and of English parents. He had lived in different parts of India, having been engaged for six years on the Ganges, and subsequently at Allahabad, Oude, and Scinde. He stated that he had been accustomed to eat fish whenever he could get it, and had been fond of prawns. His leprosy, which was very severe when I saw him in 1883, had commenced six or seven years prior to that date. There was a very interesting fact in this gentleman's family history. His wife, an English lady, had never suffered in any way, but one of his children, who had lived with him in India and was, I believe, born there, showed the disease at the age of 9. This child had returned to England a little before the symptoms had shown themselves. He was seen and the disease diagnosed by Sir Joseph Fayrer and Mr. Balmanno Squire. He subsequently returned to India, where he died of heat apoplexy. Having regard to the dates at which the disease appeared in father and son, and to the entire immunity of the mother, it would appear improbable that the child acquired the disease by inheritance. It would seem more likely that he and his father got it at the same time from one common source. This supposition is also supported by the fact—one to which I shall have to draw attention shortly—that it is not very uncommon for the children of English parents born in leprosy districts to acquire the disease while their parents remain free. It would seem that the bacillus develops with facility in the young.

Both the portraits which are given in the New Sydenham Society's *Atlas*—one showing the anæsthetic and the other the tubercular form of leprosy—are from patients with English parents who had acquired the disease in foreign parts. One of these (Case XI) a Scotch sea-captain, in vigorous health, had traded for many years to and from Barbadoes. He had usually stayed in the island about six weeks at a time. He had never suffered from any kind of hardship, and, on the contrary, had led what would seem to have been a most healthy kind of life. At about the age of 45 he became a leper. In the other case (No. XII) a woman who had been born in Ireland went to India as the wife of a soldier. She resided there for many years and in various parts, being employed chiefly, I believe, as a washerwoman. She eventually became the subject of leprosy in a severe form.

The twelve cases which I have quoted do not, I believe, comprise by any means all the examples of leprosy beginning in patients of British birth and descent which have come under my observation. They are all, however, of which I am able at present to find record in my notebooks.[2] One and the same criticism may be said to apply to all. They are examples of the acquisition of a specific disease by healthy persons who had no inherited predisposition. In no single instance had the person so acquiring it been exposed to any degree of hardship, or deviated in any definite manner from the ordinary conditions of a cleanly and well-regulated life. In every case the acquisition of the disease had occurred in some country where it was known to be prevalent, the East and the West Indies being the chief localities. I submit—as, indeed, I have already suggested—that there are only two suppositions open to us by which to explain the *de novo* acquisition of such a disease in cases such as these. The patients must either have received the specific contagium of leprosy on some part of the skin or mucous membrane, or they must have swallowed it in connection with food. Both these suppositions are possible. I may confess, however, that to my own mind one of them seems far more probable than the other. In no single instance had there been any known exposure to contagion. In no case had the patient associated with anyone suffering from leprosy, and in most instances the statement given was that they had but rarely seen lepers, and had certainly never come near them. All had, however, eaten the food common in leprosy districts; and if we incline to suspect that fish, and especially potted fish, is an ordinary vehicle for the contagion, all had undoubtedly been exposed to this risk.

Another and perhaps larger group of cases, very similar to those I have just quoted, consists of examples of leprosy beginning in persons of European blood, but born in leprosy districts. The evidence which these cases give is somewhat less conclusive than that of the group which we have been considering. Thus it is obvious that in some instances the parentage may have been mixed, and thus the disease may have been inherited. Where the admixture of native blood is but slight, and its evidences not very obvious, our patients are not always eager to divulge the truth, and may be willing to pass as of pure English descent when not really so. Again, it is possible that a child born in India may inherit something which has never as yet made itself manifest in his parents; there are also the perils of vaccination; and lastly, we have the fact that a child born in India, of English parents, may have been suckled by a native woman, and possibly by one having a taint of leprosy. I do not myself attach much importance to any one of those sources of fallacy, but it is right that they should be named. My belief is that the cases which will form the subject of my next series may most of them be placed side by side with those already quoted as being examples of leprosy acquired by Europeans as the result of residence in affected districts.

[2] In particular I well remember to have seen two or three soldiers who had become lepers in the Indian service, but of whose cases I cannot find any record.

THE CROONIAN LECTURES

ON THE RELATIONSHIP BETWEEN

CHEMICAL STRUCTURE

AND

PHYSIOLOGICAL ACTION.

Delivered before the Royal College of Physicians of London.

BY T. LAUDER BRUNTON, M.D., D.SC.EDIN., LL.D.ABER., F.R.S.,
Fellow of the Royal College of Physicians; Assistant-Physician and Lecturer on Materia Medica at St. Bartholomew's Hospital.

LECTURE IV.

ANALGESICS.

Non-reception and Non-perception of Painful Stimuli.—The two classes of drugs which we have already considered, general anæsthetics and local anæsthetics, both abolish pain: the latter by acting upon the peripheral terminations of sensory nerves, so that they do not receive the painful stimuli; and the former upon the nerve centres, so that they do not perceive them.

Non-transmission of Painful Stimuli.—But pain will also be relieved if the conducting power of the sensory nerve trunks or of the sensory paths in the spinal cord be so altered that painful impressions can be no longer transmitted.

Action of Cocaine on Nerve Trunks.—Cocaine has this effect upon nerve trunks when locally applied, for, when injected subcutaneously near a nerve, it may produce anæsthesia in all the district to which that nerve is distributed.[1]

Action of Cocaine on the Spinal Cord.—It has a similar action on the sensory tracts of the spinal cord, for Hughes Bennett[2] found that it rendered these tracts insusceptible to stimulation; and Mosso[3] found that both conductivity and reflex excitability in the cord are destroyed by it before the nerve trunks, either sensory or motor, are paralysed.

Action of Cocaine on the Cerebral Cortex.—It lessens the irritability of the cerebral cortex when directly applied, for if a 4 per

[1] Hall and Halsted, *New York Medical Journ.*, Dec. 6th, 1884.
[2] Hughes Bennett, *Edin. Med. Journ.*, Oct., 1873.
[3] Ugolino Mosso, *Arch f. exp. Path. u. Pharm.*, vol. xxiii, p. 153.

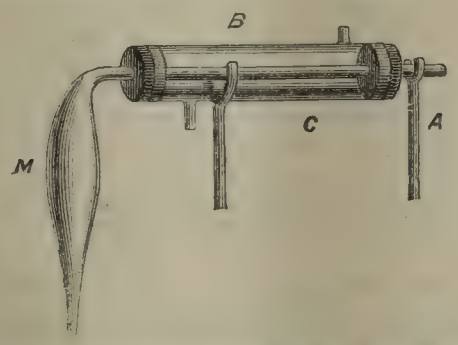
cent solution be applied to the motor areas, no convulsions can be produced by irritation by a faradic current.[4]

Excitability and Conductivity.—We must distinguish between excitability and conductivity both in nerve trunks and in the spinal cord. For these two functions of nerve fibres are to a certain extent independent of each other, and a nerve fibre may still be able to conduct stimuli from the peripheral terminations to the nerve centres, and *vice versâ*, when irritation applied to the nerve trunk produces no apparent effect. This condition may occur after exposure to great cold, and also in some pathological conditions.

Action of Drugs on the Conducting Power of Nerve Fibres.—Loss of conductivity may also be produced by the application of various substances to the nerve trunks, and a knowledge of the effect of drugs on the conducting power of nerve fibres appears to me absolutely necessary in order to understand the action of drugs on the spinal cord or on the higher nerve centres. For in the cord and brain the nerve cells and nerve fibres are so closely associated, that it is very difficult, if not impossible, to separate the action of a drug on the one from its action on the other. But in the nerve trunks we can apply the drug to nerve fibres alone. Having thus ascertained its action upon them, we may be able to judge with greater certainty what part of the drug's effect on the spinal cord is due to its action on the fibres, and what to its action on the cells.

For this reason I thought it necessary to begin a research on this subject along with my assistants, Dr. Batten and Mr. Bokenham.

The method employed was to take the sciatic nerve of a frog, with the gastrocnemius muscle attached, so that its contraction or non-contraction when the nerve was stimulated might serve as an index for the presence or absence of functional activity in the nerve.



The nerve could be stimulated by a faradic current, either at the end A, farthest from the muscle M, or at a point B nearer the muscle. A large portion of the nerve was placed in a small glass chamber C, into which various vapours or liquids could be introduced at will, so as to act on the nerve trunk. When the nerve was in its normal condition, the muscle M contracted on stimulation of the nerve either at A or B. But if carbonic acid was introduced into the chamber, it abolished the irritability of that part of the nerve on which it acted, so that stimulation at B no longer caused any contraction of the muscle. But it did not destroy the conductivity nearly so quickly, for a stimulus applied at A would be conducted to the muscle, and cause contraction, when one applied at B had ceased to have any effect. Alcohol and ether had just the opposite effect, for they destroyed conductivity before irritability, so that stimulation at A had no effect, while it caused contraction if applied at B. Phenol acted like carbonic acid, and destroyed irritability before conductivity. The action of dimethylbenzene differed according to the position of the methyl groups. Orthodimethyl, benzene, or orthoxylene had almost no action; paraxylene increased the irritability of the nerve, so that a single stimulation caused tetanus, and metaxylene did the same to a still greater extent. The number of substances experimented with has been considerable, but it would occupy too much time to discuss the results now. I would merely draw attention to the action of xylenes as having a possible bearing on the action of analgesics.

Mode of Action of Analgesics.—But our knowledge of the conduction of impressions in nerve trunks and the spinal cord is insufficient as yet to explain either the physiology of pain or the action of analgesics. We frequently notice that a very small dose of laudanum, such as 3 or 5 minims, will relieve abdominal pain without producing the least drowiness, or, indeed, without exerting any other apparent effect upon the organism; and a similar result may be observed in severe headache from the administration of 5 or 10 grains of antipyrin. In trying to explain such phenomena we are obliged to have recourse to hypotheses. A hypothesis in itself has no value, and is worse than useless if it leads people away from facts, but it is extremely useful when limited to its proper function, namely, to help us to string together facts which are already known, and to indicate the direction in which to look for new ones. Thus Dalton's atomic theory has been of the utmost value to chemistry, and the hypothesis that the carbon atoms are united into a ring has not only rendered the classification of aromatic compounds much easier, but it has aided in the discovery of new ones.

Facts regarding the Transmission of Painful Impressions.—As the first function of the hypothesis is to link facts together, let us first see what facts we have got in relation to pain. Painful impressions are conveyed by the grey substance in the spinal cord. This seems to be shown both by physiological experiments and by clinical observations. Tactile impressions are conveyed by the white matter, probably in the lateral columns. Tactile impressions are conducted more quickly to the brain than painful ones, and a more powerful stimulus is required to produce a painful impression than a tactile one.

Fibres and Cells as Conductors.—This is exactly what one would expect from the different nature of the conducting paths of the two instances; for the nerve fibres which conduct the tactile impression have an almost direct course, and afford little opportunity for any weakening of the stimulus by diffusion. The branching cells of the grey substance, on the contrary, form a zigzag path which must be longer than the other; it probably presents greater resistance, and it affords more opportunity for entire loss of the stimulus by diffusion to other cells in the cord. Thus, unless the stimulus is tolerably powerful, none of it may pass upwards to the brain, and therefore no painful sensation will be perceived.

Summation in Cells.—But, on the other hand, it would appear that the cells of the grey substance in the spinal cord or the sensory ganglia of the brain may be so excited by a succession of very feeble stimuli, each reinforcing the other, that the extremest agony may be produced. Thus we have all heard that one of the most dreadful tortures of the Spanish Inquisition consisted in allowing a single drop of water to fall at regular intervals; and Naunyn[5] has found that in some cases of spinal disease intense pain may be caused by gently touching the foot with the point of a camel's-hair pencil at regular intervals. A summation of the stimuli appears to go on in the cells, each stimulus increasing the effect of the preceding, just as a slight touch upon a swing, repeated at the proper moment, will send it higher and higher and higher until it oscillates to the fullest extent of which it is capable.

Effect of Stimuli depends on Time of Application.—But if similar touches be applied to the swing so as to interfere instead of to assist its oscillation, they will soon bring it to rest. Similar touches will thus produce opposite effects from a change in their relations to the oscillation of the swing. Translating this into physiological language, we should say that in the first instance we had a case of summation, in the latter of inhibition. Let us follow this familiar illustration one step further. We all know that when we start a swing we stand close to it at the spot where it hangs when it rests, and as its oscillations get longer and longer we move further back. If we move a little way back our pushes will first have the effect of summation, but if we remain in that position and do not adapt our pushes to the increasing oscillation of the swing, they will lessen instead of increase its movements, or, in other words, they will have an inhibitory action. Thus we will have stimuli producing alternately an increase and a diminution in the oscillations in the swing, though the increase and diminution will not be very great.

Alternate Stimulation and Inhibition in Health.—We seem to have a somewhat similar condition in the nervous system. Some time ago I was making some experiments with one of Mr. Francis Galton's whistles, which he kindly lent me. I adjusted it so that the sound produced was almost at the upper limit of my sense of hearing. On then sounding it continuously I was struck by the fact that the sound was alternately audible and inaudible, although I ascertained that no corresponding change occurred in the strength with which the whistle was blown.

In Disease.—A similar observation was made by the younger Remak[6] in relation to pain in a case of tabes dorsalis. He found

[4] Tumass, *Arch. f. exp. Path. u. Pharm.*, vol. xxii, p. 107.

[5] Naunyn, *Arch. f. exp. Path. u. Pharm.*, vol. xxv, p. 301.

[6] Remak, *Arch. f. Psych. u. Nervenkrank.*, vol. vii, p. 505.

that when a faradic current was applied by a brush the sensation it produced gradually increased, then diminished, and increased again, although the strength of the current remained perfectly the same. With a weak current, the increase each time became less, and the pauses between became greater, until at last no sensation was felt. With a stronger current the sensation gradually increased until it became so painful as to be unendurable.

Possible Effect of the Blood.—In my own case I was unable to satisfy myself that the alternate appearance and disappearance of the sound of Galton's whistle might not be due to an alternate increase in the sensibility of my auditory centres from altered supply of blood, for I observed[7] some years ago a capillary pulsation in man which usually occurs about once in twenty seconds, and this appeared to be nearly the time of each wave of hearing. In Remak's case the waves of sensation were from twenty to fifty seconds, and the alteration in the length of interval between them renders it probable that they were due to summation in the nervous system itself rather than to its vascular supply.

Analogy between Sensation and Motion.

Summation of Motor Stimuli.—A marked analogy seems to exist between sensory and motor processes in the spinal cord. In a research which Stirling made under Ludwig's direction, he showed that reflex contractions only occur from repeated shocks to the nerve centres—that is, through summation of successive stimuli.

Summation of Sensory Stimuli.—According to Naunyn the same rule holds good for pain, which he regards as also a consequence of summation. For this reason it can only occur when conduction through the grey substance is not too much disturbed, because it is only in the grey substance that summation can take place, the structures of the white columns not being adapted for it.

Summation in Peripheral Nerves.—But if the analogy between sensory and motor processes be true in the spinal cord, we should expect to find something similar in the peripheral ends of nerves.

Tickled to Death.—There is no phenomenon in physiology which strikes me as more wonderful than the extraordinary motor effects which can be produced by the application of extremely slight stimuli to the skin, phenomena which seem utterly disproportioned in their extent to the slightness of their cause. I well remember, as one of the most frightful moments of my life, being nearly tickled to death by a nurse. I do not think I could have been more than 5 years of age, but the agony of that moment is deeply imprinted in my memory, and I can well believe the truth of the statement that Simon de Montfort, during the persecution of the Albigenses, put some of them to death by tickling the soles of their feet with a feather. Yet of all parts of the body the skin of the soles of the feet is liable to the most constant and severe stimulation in walking, running, and leaping. It has sometimes occurred to me that possibly the different effect of a slight stimulus like the touch of a feather, which causes intense reflex action, and of a gentle but steady pressure of the finger, which gives rise to no reflex action at all, may be due to the stimulation by the latter of two sets of nerves which counteract or inhibit each other. The prolonged course of the nerve fibres in some of the tactile corpuscles may possibly have something to do with this. A similar phenomenon to the effect of steady pressure in lessening reflex action may be observed in the relief afforded by rubbing or stroking a part which has been pinched or bruised, or by scratching an itching spot.

Transference of Hysterical Hemi-Anæsthesia.—But this is much less in degree and is by no means striking, while the transference of hemi-anæsthesia to the other side of the body in hysterical patients by the simple application of a piece of metal or even a wooden button is comparable to death from tickling, both in the extraordinary character of the result and the slightness of the cause.

Mode of Action of Analgesics.

In considering the action of analgesics we must take into account their possible effect on nerve endings, peripheral and central, as well as their action upon nerve trunks and nerve cells. It is *a priori* probable that when the blood contains any drug having the power to lower the activity of nerve fibres its action will be exerted upon the peripheral ends before they have received a medullary sheath, and at the central ends where they have lost it, at their junction with nerve cells, before it can act on the nerve trunks. For not only is a nerve trunk sparingly supplied with blood, but the medullary sheath will oppose a certain obstacle to the action of drugs upon the axis cylinder. This appears to be the case with cocaine; for, at a certain stage of poisoning, irritation of the nerve trunks will produce reflex action, although irritation of the skin is no longer followed by any response, a fact which indicates that the peripheral terminations of the nerves have been paralysed before the fibres in the trunk.

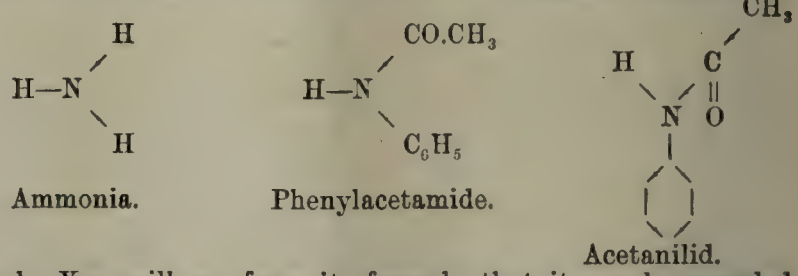
Explanations.—Dealing with hypotheses, as we must do in relation to the action of analgesics, one of the first explanations that occurs to us as probable is that the sensory impulses which in the normal condition would give rise to summation in the cord or sensory ganglia, and, being transmitted to the brain, give rise to pain, may be diffused from one cell to another, and the impulses, instead of causing summation, may even produce inhibition.

Possible Failure of Analgesics to Relieve Pain.—It is evident that if the relief of pain by analgesics is due to the diffusion of a sensory stimulus, so that it does not reach the brain, it is quite possible for a very powerful stimulus to pass to the sensory centre in spite of loss by diffusion. In such a case the pain might actually undergo a process of summation in the cord and be rendered more excruciating instead of being relieved by the remedy.

Irradiation of Motor Impulses Produced by Analgesics.—There appears to be, as I have said, a resemblance between the sensory and motor processes in the cord, and most of the analgesics, as distinguished from the anæsthetics, tend to cause irradiation of motor impulses. While anæsthetics lessen the activity of all the nervous tissues and thus produce drowsiness, loss of sensation, and abolition of motor power and reflex action, many of the analgesics, when pushed to excess, tend to produce excitement of reflex action with diffusion of movement. Thus, when the toes of a frog are slightly pressed it only draws the foot away, but in a frog poisoned by an overdose of some of the analgesics the stimulus, instead of being localised in the cord and producing a reflex action limited to one limb, appears to be diffused through the nervous system generally, giving rise to tremor over the whole body or even to convulsions and tetanus. This condition is observed when frogs are poisoned by the most powerful of all analgesics, namely, morphine, and it is common to most of the others—cocaine, antipyrin, antifebrin, phenacetine, and exalgine.

Chemical Structures of Analgesics.

All those substances belong to the aromatic group of bodies, and it is in this group that we are likely to find the most powerful drugs to relieve pain as well as to reduce temperature. The constitution of morphine is very complicated, and we do not yet know what it is; all that can be said about it is, that it is probably a quinoline of phenanthrene. Antifebrin, or as it is scientifically called, acetanilid, or phenylacetamide, has the simplest constitution of any of the bodies that I have mentioned, for it merely consists of aniline in which one atom of hydrogen is replaced by acetyl. You will see from its formula that it may be regarded as ammonia, in which one atom of hydrogen is replaced by phenyl, and another by acetyl. When regarded from this point of view it is called phenylacetamide. But it may be regarded also as benzene in which one atom of hydrogen has been replaced by NH_2, and thus converted into aniline, and then an atom of H in the NH_2 has been replaced by acetyl $CO.CH_3$. When regarded from this point of view it is called acetanilid. In two long researches on which Dr. Cash and I have been engaged for more than six years, as well as in some experiments in aid of which I obtained a grant from the Royal Society, fifteen years ago, we have been trying to ascertain the effect of ammonia and its various compounds on the one hand, and of substances belonging to the aromatic or benzene series on the other, upon muscle, nerve, and nerve centres.



Ammonia. Phenylacetamide. Acetanilid.

Action of Ammoniacal Compounds.—In the course of the research we found that ammonia and its salts stimulate and afterwards paralyse the spinal cord. The stimulant action was marked in

[7] Lauder Brunton, *Journal of Physiology*, vol. v, p. 14.

ammonia, ammonium bromide, and ammonium chloride. The paralysing action was more marked in the case of the iodide. The compound ammonias have a much more powerful paralysing action both on the spinal cord and on the motor nerves, especially on the latter, and here again the paralysing action is most marked in the case of the iodides.

Action of Aromatic Compounds.—The aromatic compounds all tend to produce increased sensibility, inco-ordination, and tremor, but they do not all seem to affect the spinal cord alike, for while benzene and its haloid compounds, mono-chlor-, mono-brom-, and mono-iodo-benzene produce in frogs tremors which remind one of disseminated sclerosis in man, with ethyl benzene the movements of the frog's legs were short, clapping, and ineffective, reminding one of locomotor ataxy in man. Aniline may be regarded either as amido-benzene, that is, benzene, C_6H_6, in which one atom of hydrogen is replaced by amidogen, NH_2, or as phenylamine, that is, ammonia, in which one atom of hydrogen has been replaced by phenyl, C_6H_5.

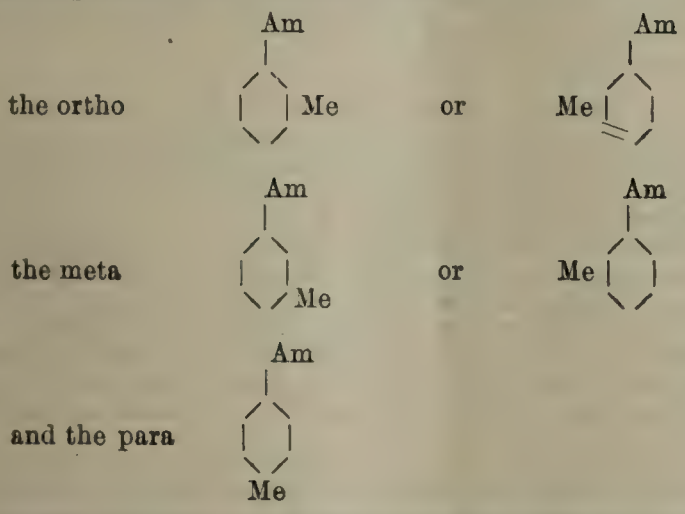
Action of Aniline.—In accordance with this constitution we found that the symptoms produced by it were different both from those of benzene and those of ammonia. They differ from those of benzene, and resemble those of ammonia in the tendency to more violent spasm and to greater paralysis of muscle and nerve.

They differ from those of ammonia, inasmuch as the convulsion never assumes the form of true tetanus, the tetanic spasm which the ammonia atom would produce being broken up, so to speak, by the action of the benzene.

Tetanising Agents ought to be Analgesics.—If the hypothesis be correct that a relationship exists between the power of a drug to cause diffusion of sensory and of motor stimuli in the cord, one would expect that substances which cause tetanus like ammonia, chloride of ammonia, and strychnine ought to act in some measure as analgesics. Indeed, this seems to be the case, for ammonium chloride is sometimes a very successful remedy in the treatment of neuralgia, and strychnine is sometimes useful in the lightning pains of locomotor ataxy. But the fact that ammonia, benzene, and ethyl benzene, while all tending to produce spasm, cause movements of such different kinds, indicates that they affect the motor parts of the spinal cord in different ways. We might, therefore, expect that similar differences would exist in the sensory parts of the cord, and thus one drug might have a special tendency not only to relieve pain in general, but to relieve a particular sort of pain more than another.

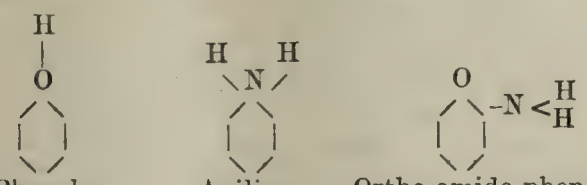
According to Dujardin-Beaumetz,[8] the power to relieve pain is most marked in those amidogen derivatives of the aromatic group in which an atom of hydrogen is replaced by an alkyl and especially by methyl, while the amidogen derivatives, where no such substitution has taken place, have their antipyretic action most marked. Thus acetanilid, which is an amidogen derivative of benzene, is a powerful antipyretic. It has also an analgesic action,[9] but when it is combined with methyl its analgesic power is increased.

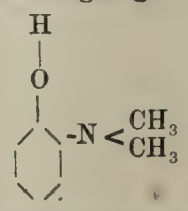
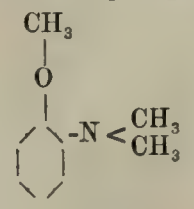
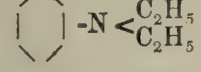
Constitution of Acetanilids in Relation to their Action.—It is a matter of considerable importance where the methyl is placed. There are three positions in relation to the amidogen group where it can be placed in the benzene nucleus,



According to Jaffe and Hilbert, the meta-methyl-acetanilide or meta-aceto-toluide is the only one which retains the antipyretic action, the compound in which the methyl is in the para position being inactive and the ortho compound being toxic but not antipyretic.

Exalgine.—These compounds have again been investigated by Dujardin-Beaumetz and Bardet, and they have found what the previous investigators missed, that the ortho-aceto-toluide has a marked analgesic power, so great that they think it deserves the name of exalgine. According to them, its power to relieve pain is very marked in all kinds of neuralgia, and is greater than that of antipyrin.[10]



Effect of Alkyls on Aromatic Compounds.—Another most interesting research on the effect of introducing alkyls into aromatic compounds has been made by Baldi under Schmiedeberg's direction. Curiously enough though phenol and aniline are both poisonous, yet ortho-amido-phenol is not poisonous. If the two hydrogen atoms in the amidogen group in this body are replaced by two methyls,  , an extremely weak narcotic substance is produced, and curiously enough the narcotic action is still weaker if the hydrogen in the hydroxyl is also replaced by methyl,  . But if all three hydrogens are replaced by ethyl,  the substance has a distinct narcotic action, and the body,

$$C_6H_4\begin{cases} O.\,CO.\,OC_2H_5 \\ NH_2 \end{cases}$$

has a powerful analgesic action.

Prospect of Numerous Analgesics.—As the ways in which methyl may be combined with aromatic bodies are almost numberless, we may expect before long a great increase in the number of analgesics, and not improbably some new ones may far surpass in their power to relieve pain anything that we as yet possess. Before passing from this subject, however, I must indicate a possible source of danger from the continued employment of such analgesics.

Dangers from Analgesics.—We know that the continuous employment of narcotics, such as morphine or chloral, is apt to grow into a habit, and the consequences may be very deleterious to the mental functions. A similar habit, we know, may be established by the use of cocaine, and it is possible that something similar may occur in the case of other analgesics. But there is another possibility which I wish to indicate in addition to this, namely, that just as the brain may become deteriorated by the use of chloral or morphine, so the cord may possibly be injured by the use of analgesics. I have already mentioned that Dr. Cash and I observed in frogs symptoms resembling those of disseminated sclerosis, or of locomotor ataxy in man, and Batten and Bokenham have noticed that antipyrin may produce in frogs a condition like that of spastic paralysis. Cash and I tried to produce symptoms of permanent disease of the spinal cord in frogs by keep-

[8] Dujardin-Beaumetz and Bardet, *Compt. rend.*, cviii., p. 571.
[9] Lépine, *Rev. de Méd.*, 1887, pp. 306, 520.
[10] My own experience of this drug has been somewhat disappointing, but it much too limited to enable me to express any definite opinion.

ing up the poisoning for some time. We were unsuccessful in the attempt, as the symptoms always passed off when the poison was eliminated, but still the conditions in our experiment were very different from those which would occur from the prolonged use of analgesics by a patient, inasmuch as the treatment of the latter might continue for weeks, months, or years, whereas in our experiment time could be counted by days. A circumstance that renders circumspection in the use of analgesics all the more necessary is that various nervous disorders in which the symptoms appear to depend either upon peripheral neuritis or an affection of the spinal cord have lately been described as arising from the use of some of the new explosives, whose chemical constitution approximates somewhat to that of the analgesics. Another action of analgesics which renders caution desirable in their use is their effect upon the blood. Thus exalgine may render the blood incapable of performing its respiratory functions, and thus induce marked lividity, with tendency to collapse, and thus endanger life, while others may destroy the blood corpuscles and produce marked anæmia.

Possible Relation of Leucomaines or Ptomaines to Spinal Disease.—In relation to this, another question suggests itself: whether diseases of the spinal cord may not owe their origin, at least in part, to poisons of the aromatic series, generated either in the intestinal canal or in the tissues of the cord itself.

Use of Suspension.—The remarkable benefit obtained from suspension in cases of locomotor ataxy is one of the most striking discoveries that have been made in therapeutics of recent years. It is very difficult to explain, but I should be inclined to think that suspension merely acted upon the cord in the same way that massage does upon the muscles, by removing the lymph and with it the products of nerve waste; while, at the same time, it may increase the processes of oxidation and repair by promoting a free circulation of the blood.

SUMMARY OF THREE LECTURES
ON
SOME AFFECTIONS OF THE GENITO-URINARY ORGANS.

Delivered at the Royal College of Surgeons of England.

By MATTHEW BERKELEY HILL, F.R.C.S.,
Senior Surgeon to University College Hospital.

Lecture III.
Prostatitis.

Symptoms.—In inflammation of the substance of the prostate besides the symptoms of granular prostatitis, there are aching or stabbing pains in the anus, sacrum, or perineum; pain at the suprapubic region is a common sign. There are also radiating lumbar or femoral pains after exercise or long journeys, general languor, *malaise*, or depressed spirits. Increased frequency of micturition is often absent; when present, it is felt by day, not by night. The flow of urine is altered by delay at the beginning, which may amount to retention. Dull pain after micturition, sometimes spasm at the end of the flow, with a sense of more to come are complained of. In cases of long standing, micturition during sleep is a symptom,—constipation is almost invariable. When the congestion is great, there is pain during defæcation and between the acts a sense of weight at the anus or in the perineum. Pain in the testes when it occurs is simply a neuralgia. There is constantly hypersecretion of mucus.

In some patients, the organ recovers its natural condition in a few weeks; but usually the disease drags on a course more or less wearisome; thus the termination is very uncertain. Relapses are almost sure to follow if the patient exceed in his diet or *régime*. In relapses small abscesses often collect in obstructed ducts, which usually empty themselves through a duct before accumulating much. Sometimes the inflammation spreads to the parenchyma, and the prostate then becomes unyielding to the touch, hard, and sensitive. The enlargement of the organ may last long. The increase in size may be symmetrical, or only affect one part, giving the sensation of irregularity or lobular form when felt by the finger. In course of time, the nodules may disappear, and the organ regain its natural size, or even shrink below it, and feel quite firm and smooth.

Treatment of Chronic Prostatitis: General.—The treatment of chronic prostatitis is very tedious. Of the many remedies in use, but few are trustworthy. General treatment only assists local remedies. In the first place, the dyspepsia must be cured. The tonics most beneficial are iron in non-astringent forms; nux vomica or strychnine are usefully added to the iron. Belladonna also may be added to the tonics if micturition during sleep be a symptom. Ergotine is especially useful when the organ is large, and aching is caused by walking, or standing, or railway journeys.

Local Treatment.—When the organ is enlarged, soft, and not tender, a very good remedy is the cold sitz bath, taken at first for one or two minutes, once or twice daily, at a temperature of 50° F., gradually prolonged to ten minutes, and lowered to 35°. The cold douche on the perineum or anus is also useful. Cold enemata are more generally beneficial than baths, two to four ounces of cold water thrown into the rectum daily, and retained there; beginning at 45° F., and gradually lowered to 35°. Among recognised remedies is blistering the perineum, but the lecturer has no faith in its efficacy. Caustic injections are valuable if used after other means. The solution of 20 to 30 grains of nitrate of silver to the ounce, and ten minims injected at a time, is a good preparation. This has to be repeated several times.

Prostatitis from Masturbation or Excessive Venery.—Masturbation is a frequent provocative of prostatitis, sometimes in the acute form, more often in the subacute or chronic forms. In the mildest form of prostatitis through masturbation, the prostate bleeds easily, the urine is often tinged with blood, smoky, or even coffee-coloured. If felt per rectum, the organ is found little changed from the natural condition. General *malaise*, inappetency, and slight elevation of temperature usually accompany the bleeding. Bleeding from the congested prostate may be copious in young men when it follows prolonged venereal excitement and excessive copulation. Commonly very copious when thus originated, it may be profuse for an hour or two, and exhausting.

Treatment.—In these affections the liquid extract of salix nigra, a drachm three times daily, has often a marked effect in checking involuntary emissions, and thereby preventing the irritation and exhaustion and neuralgia which some persons feel after these attacks.

Sequelæ of Prostatitis.—Persons who have suffered from a congested prostate are liable to too speedy ejaculation during copulation. This may be so rapid, and erection so fugitive, that effective coitus is impossible. For such cases the liquid extract of damiana has sometimes a powerful effect. But cure is almost hopeless if continence is neglected. Some persons give way to the sexual appetite without limit. Then follows a condition of great helplessness. The intense neuralgia of the lower extremities which follows the shortest walk renders exercise impossible. Pain is rarely absent, even when at rest; it extends from the sacrum along the spinal column to the occiput. The digestion is deteriorated. Topical treatment, after the mucous catarrh and chronic inflammation of the prostate is quelled, must be laid aside. The best remedy is a life of quiet, absence of exertion of any kind; a long sea-voyage is one of the best remedies. In rare cases chronic parenchymatous prostatitis excites temporary mania, which has erotic irritation for an early or leading symptom. It disappears if the patient recovers from the physical affection.

Tuberculous Disease of the Prostate.

Etiology.—This frequently follows gonorrhœa. In the early stages the symptoms, being those of catarrh, escape notice, and the tubercle in the prostate cannot be detected by the finger until it has become considerably developed.

Early Symptoms.—This catarrhal condition of the prostate, with slight irritation of the bladder, lasts an indefinite time; eventually attention is directed to the prostate by the occurrence of other symptoms, such as frequent seminal emissions or by weight in the perineum and pain in the sacrum. In other cases, the patient notices increased frequency of call to micturate, but a slowness in starting the stream of urine; then he feels a burning or cutting pain during the flow.

Later Symptoms.—As soon as the shape and consistence of the prostate are altered, the finger in the rectum finds the prostate irregular, perhaps larger than natural, tender, particularly at the posterior part near the trigone. The disposition of these irreguliar thickenings is variable. When cystitis is developed, copious viscd pus mixed with shreds and blood clot form the urinary sediment' and the urine contains albumen in considerable quantity. The

further progress of the case is accompanied by gradual participation of the ureters and kidneys in the septic inflammation, and the patient is gradually exhausted. Acute general tuberculosis may terminate his sufferings.

Age.—The ages of the patients usually range from 19 to 40 years.

Use of the Cystoscope.—The lecturer had inspected two cases of advanced disease by the cystoscope, and the surface was irregular, with pits at the uvula vesicæ or neighbouring part of the floor of the bladder, partly filled with shreds of tissue, muco-pus, and blood clot, though in those cases cystitis, ulceration, burrowing abscess in the floor and walls of the bladder are usually superadded before death.

Differential Diagnosis of Tubercle in the Prostate.—In early cases the presence of tubercle elsewhere may be wanting, as the prostate is often affected before other organs. The disease most commonly suspected when tubercle is irritating the prostate is stone in the bladder. The urine is at first only moderately turbid in both. In prostatic tubercle there is often a gleet, or history of such having continued since an attack of gonorrhœa; a little shreddy mucus may be washed out with the first portion of urine voided, the remainder being only slightly turbid. In stone, on the other hand, a drop of blood often comes at the end of the stream instead of pus at the beginning. When blood comes from the prostate it is usually washed out first as coagula mixed with curdy pus. If the patient be sounded and stone be there, it can be generally detected. Sounding does not always discover any alteration in the shape of the prostate or trigone unless the tuberculous disease be far advanced. The distinctions of vesical tumour from prostatic tubercle are so great that confusion is not likely to occur. Tuberculous pyelo-nephritis creates symptoms which often suggest disease of the neck of the bladder. In these cases the absence of change in the condition of the prostate and the presence of tenderness in the renal regions indicate the real seat of disease.

Treatment of Tuberculous Prostatitis.—In the early stages the catarrh must be cured, and the general treatment for tubercle applied. In the later stages the ragged cavities must be carefully washed out. A good antiseptic solution is two grains to the ounce of sulphate of quinine, two ounces being injected and left in the bladder after the pus and urine are well cleared out by repeated small injections of boric acid solution. Still more antiseptic is an emulsion of iodoform. In cases of chronic cystitis, if the bladder is well washed, and a couple of drachms of this emulsion injected, the most fœtid ammoniacal urine is replaced by acid urine, fœtor disappears, and the pus rapidly diminishes. In cases of cystitis caused by neglect of prostatic retention, the urine in ten days becomes quite free from deposit, and even when calculus or tumour or malignant ulceration co-exist, the improvement is enormous. The lecturer exhibited two diagrams copied from drawings made of the floor of the bladder viewed by the cystoscope, which showed an early tuberculous ulcer of the mucous membrane before and after healing. This was cured by washing out the bladder with an injection of iodoform emulsion, so that in a fortnight the patient, a man with advancing pulmonary tubercle, was cured of his bladder trouble. When the pain of washing the bladder is severe, cocaine previously injected often renders the operation bearable. When things are too far gone for this, ether should be given while the bladder is thoroughly washed with a large silver catheter and Clover's extracting bottle, then a drachm of iodoform emulsion is injected and left in. Subsequent washings may then be carried out with very little suffering. The formula for the emulsion is: iodoform, 2 parts; mucilage, 4 parts; glycerine, 2 parts; water, 20 parts.

Perineal Section.—In former years the lecturer had found it necessary to do perineal section in order to obtain constant drainage when the urine could not be restored to a healthy state by other means. But the use of iodoform emulsion may prevent this necessity when perineal drainage is carried out. The daily washing is still as needful as when the urine is voided by the urethra. The effect of this thorough drainage is so great that patients feel strong and well while it is continued, and a permanent cure by this method may be attainable. In a patient under the lecturer's care in University College Hospital, the bladder trouble was kept in complete abeyance, if not quite cured, and the patient grew stout and strong, until he sank under rapid tuberculous meningitis.

Demonstration of the Endoscope and Cystoscope.—At the conclusion of the lecture the endoscope and cystoscope were shown. Grünfeld's endoscope, illuminated with light from a kerosene lamp, was inserted into the urethra of an ox. Leiter's endoscope, illuminated with electric light, was used to explore the urethra in a patient with chronic urethritis. There were several cystoscopes: Two of Dr. Nitze's, and two of Leiter's (a modification of Nitze's). Nitze's is of better shape than Leiter's, but Leiter's has the most powerful illumination. One of Nitze's has been reconstructed by Mayer and Meltzer, so as to permit of a free flow of water through the bladder, by which blood and pus are cleared away and the contents of the bladder kept translucent during introspection. Introspection was made in "phantom" or dummy bladders, on the interior of which mock papillæ and orifices of ureters had been painted. These were borrowed from Mr. K. Schall, of Wigmore Street, Leiter's agent in England, who also superintended the batteries employed for illuminating the electric lights. Just too late for this exhibition, Mr. Schall received an irrigating cystoscope from Leiter, which is of extremely ingenious construction, and promises to be efficacious.

SOME CASES IN PRACTICE BEARING UPON THE FUNCTION OF THE PROSTATE.

By REGINALD HARRISON, F.R.C.S.,

Surgeon to the Liverpool Royal Infirmary, and Lecturer on Clinical Surgery in the Victoria University.

Many examples will occur where both to the pathologist and surgeon the observation of processes of disease in organs of the body, as well as the operative procedures necessary for their relief, have proved of service in assisting to determine the purpose and function of the part in question. In my Lettsomian lectures (1888), I laid stress on the muscular action of the prostate relative to micturition, independently of its glandular association with the generative act, whatever the latter may be. In this muscular exercise I included (1) a sphincter action, such as we know of in connection with all outlets from the body, and (2) the provision of a muscular basis for supporting the bladder and its contents. The latter purpose seems to have been insufficiently recognised, not only as a normal and well defined function of the prostate, but relatively to that form of hypertrophy of the part which constitutes disease.

In the first place, it will be noted that all deep sections of the prostate radiating from the urethra outwards, deprive it for a time of its sphincter power, and thus render it incapable of controlling the retention of the urine. Of wounds of the prostate which may cause temporary or permanent incontinence, we have instances in the deep incision of lateral lithotomy. In the ordinary median operation, the prostate is not touched with the knife, hence, where the stone is not large and the amount of dilatation or prostatic tearing is not great, the patient may never entirely lose control over the urine. This is one of the objections to the median operation, where for some reason or other it is necessary to subject the bladder to a process of involuntary drainage. In the few instances which have come under my notice where, in the male, lateral lithotomy has been followed by permanent incontinence of urine, I have no doubt that the prostatic ring has been completely severed either by a too deep incision or by the tearing of the parts in the extraction of the stone. Under these circumstances it is hardly fair, on reflection, to urge such an occurrence as an objection against the operation of lateral lithotomy.

The power of the prostate in retaining urine is further evidenced in those cases where the urethra has either been extensively or completely ruptured in its membranous portion, just in front of the apex of the prostate. Where such an accident happens, retention of urine immediately occurs, and continues until the degree of tension on the outlet of the bladder becomes such as to paralyse it; in this way time is given for Nature to repair in, and for art to interfere. In numerous cases of this kind where I have opened the perineum in the median line within twenty-four hours of the accident, for the purpose of providing an escape for the urine, it has been noted that though the bladder may have been distended, there was no evidence that extravasation of urine had occurred. The contracted condition of the prostate as determined by the finger has, as I have frequently pointed out, been quite sufficient to explain this. In the case of the last patient I operated upon, that of a young man aged 22, who was

admitted into the infirmary on May 1st with a ruptured urethra and a fractured leg, caused by being run over, though sixteen hours had elapsed since the accident, and the bladder was largely distended with bloody urine, there was not the slightest evidence that any extravasation of urine into the contused perineum had taken place. Here the prostate was so firmly contracted as to grip my finger with considerable firmness as I pressed it along the prostatic urethra, prior to the introduction of the drainage-tube. This condition of the prostate I have frequently drawn attention to under similar circumstances.

In connection with wounds of the prostate, allusion may be made to various operations which are now being practised for the removal of portions of it when it becomes hypertrophied. Where this is extensively done so as to include the greater portion of the ring, incontinence of urine is certain to follow. In a case I recorded[1] where the prostate was almost entirely extirpated for carcinoma, though the patient lived for over twelve months, and was able to resume his out-door occupation, he had incontinence of urine, which was pretty successfully remedied by the use of a sort of perineal truss which I had specially made for him. The patient eventually died of a recurrence of the disease in the neighbouring glands. I showed the part removed at a meeting of the Royal Medical and Chirurgical Society, in connection with some remarks on the operative treatment of the enlarged prostate.

The experience of the operative surgery of the urethra seems pretty clearly to show that to render a male temporarily or permanently primarily incontinent of urine, the lesion must involve more or less of the continuity of the prostatic circle. The examination of persons who have died within ten days after lateral lithotomy affords direct evidence in support of this conclusion.

Similarly, certain disintegrating diseases of the prostate may be followed by the same consequences. Of these, I may mention some of those rare instances where calculi have formed within the prostate and have been removed from it by operation. I have now a case of this kind under observation (the particulars of which I hope to publish after the lapse of a little more time), where I fear the power of retaining urine will be much restricted. On referring to the remarkable case of this kind recorded by the late Dr. T. H. Barker,[2] of Bedford, where a large prostatic calculus was removed by perineal incision, it was reported that though recovery took place the patient remained unable to retain more than one ounce of urine at a time. In the same way I have observed that in some chronic abscesses of the prostate, where there had probably been considerable destruction of tissue, the power of retaining and holding urine was interfered with. The acuter forms of prostatic abscess, such for instance as those seen in connection with gonorrhœa, are chiefly confined to the ducts of the part, and are rarely followed by any permanent weakness. I have now the case of a young man under observation where by reason of the prostatic ring being riddled with tubercular deposit as far as the finger can reach, the power of holding urine is almost entirely lost.

I will illustrate in another way how the prostate may lose its power as a sphincter. The following case is, in my experience, almost unique, for though I have frequently suspected that certain symptoms connected with the act of micturition were due to varying degrees of the pathological condition of the prostate, presently to be described, I have never had another opportunity of demonstrating it to others.

R. W., aged 50, was admitted into the Royal Infirmary under my care on February 4th, 1889. Three years previously, after some excess in drinking, he had difficulty in passing his urine, which continued up to fifteen months ago, when, under medical advice, he had to resort to regular catheterism. He has since been unable to pass any urine without the use of the instrument. On admission it was found that he had to use a catheter three or four times during the day, and twice or thrice during the night. There was no stricture of the urethra, but a sense of resistance when the prostate was reached. Examination by the rectum showed the prostate to be natural in size, with some fulness about the right lobe. The urine was normal. The patient was carefully catheterised for several days, but as no improvement took place, I performed median perineal urethrotomy on February 19th. On introducing the finger the prostatic urethra was found in the condition of a hard fibrous ring, not unlike the constriction of a thick rubber band. This was also examined by Mr. Bickersteth, who assisted me, and it was agreed to divide it freely in a downward direction, and to put in a drainage tube. This was accordingly done; the drainage tube was retained for eight days, when it was removed, the urine escaping involuntarily by the perineal wound. The patient's condition gradually improved; he was able to dispense with the use of the catheter, and when he left the infirmary he was voiding urine naturally, with the exception of a small quantity, which escaped by the wound.

What the future of the case will be it is impossible to predict. However this may be, it in no way detracts from its value relative to the morbid condition the prostate may assume, both as regards function and structure. Here there could be no doubt that within the limits of the prostatic urethra there was such an obstacle to the voluntary discharge of urine as could only be removed by a surgical procedure.

The last case I shall bring forward is also one of much interest, not only in reference to the subject now under notice, but as bearing upon certain functional disorders of micturition from a somewhat different standpoint than has, so far as I know, been hitherto adduced. The case was brought to me for corroboration by Professor Barron, who has kindly permitted me to refer to it at length in connection with these remarks.

A well-nourished, healthy-looking boy, aged 4 years, was brought to me with the statement that he had suffered from birth with incontinence of urine, except at times when he was lying down. He had, in addition, suffered constantly from constipation of the bowels.

On examining the genital organs it was noted that circumcision had been performed, the portion of the prepuce that remained having a hypertrophied appearance. The penis, and particularly the glans, were deficiently developed. The scrotum and testes were natural in appearance and consistence. He was placed fully under chloroform, and a small metal sound passed into the bladder in order to facilitate the examination of the parts involved and their relations. The capacity of the bladder was small; it contained about a drachm of urine. On passing the finger into the rectum the line of the urethra was noted to be in much closer relation with the anterior wall of the rectum than is normal at this age. On examining the neck of the bladder nothing like the usual rudimentary prostate could be felt; there was a slight ridge on the left side which would correspond in position with the left prostatic lobe. The ridge did not extend to the right side, and, compared with other boys of the same age I have examined, did not represent the normal amount of prostatic development. Further, the relationship between the rectum and the neck of the bladder was far closer than what is usual in male children at this period of life. The thighs and adjacent parts had that excoriated appearance which is seen in cases of extroversion of the bladder. It was reported that the urine was normal. I concurred in the conclusion arrived at by Dr. Barron that there was evidence of arrested prostatic development. and that this probably explained the incontinence. Professor Gross gives the following measurements relative to the prostate at four years of age: "Breadth at base 6 lines; just above the middle, 7; and at the apex, 2½; length along the middle, 6 lines, and 7 lines at the margin; thickness at base, 2¾ lines; at the middle, 4; and at apex, 2. Weight, 23 grains." The question naturally arises, What proportion of cases of incontinence in male children is due to an imperfect development of the retentive apparatus which must exist in the parts constituting the neck of the bladder? My belief is that by far the larger number of them are explainable by reflex causes, such as we are familiar with. I am not, however, at all sure that some may not be due to an arrested development in the prostate, such as I have illustrated. The muscular use of the prostate appears to me to be indicated in connection with the common operation of passing a bougie or a catheter along a urethra of natural calibre. The process is, as a rule, unattended with any other than the usual sensations of passing a foreign body along a mucous canal until the instrument enters the prostatic canal, when an irresistible desire to discharge urine is experienced; in fact, persons as a rule believe they are micturating, though a bougie only is used when this part of the canal is entered. This experiment may be easily tested either by measurement or with the finger in the bowel.

In a paper recently published by Mr. J. Griffiths[3] on the minute

[1] *The Surgical Disorders of the Urinary Organs.* By Reginald Harrison. Third Edition, p. 346.

[2] *Trans. Prov. Med. Assoc.*, vol. iii (New Series).

[3] *Journal of Anat. and Phys.*, April, 1889.

anatomy of the prostate, it is stated that its muscular power appears to have been exaggerated, and exception is taken to the conclusions drawn in reference to this point by Professor Viner Ellis.[4] It seems difficult to reconcile Mr. Griffiths' views with such illustrations as I have ventured to draw from the practice of surgery bearing upon the function of this part.

NOTES OF A CASE OF WEIL'S DISEASE.[1]

By Surgeon-Major W. B. MILLER, Medical Staff.

Private J. N., aged 21, of two years' service, and belonging to the 2nd West Riding Regiment, when on parade on May 24th last, suddenly felt faint, and had at the same time a burning sensation all over him, with a feeling of exhaustion. On admission to hospital the temperature was found to be 103.6° F. He complained of slight headache, his face was dusky, the conjunctivæ were congested, he complained of a disagreeable taste in the mouth, his tongue was moist, indented, and covered with a dirty yellow fur. The heart sounds were faint, and respiration was slightly increased. He had no diarrhœa. The urine was dark coloured, in fair quantity, specific gravity 1022, and contained no albumen. He developed slight jaundice and congestion of the abdominal organs. Three days after he had a mucous expectoration of a dirty brown colour, while the lungs presented no physical signs to account for it. There was considerable gastric disturbance.

On May 28th he complained of pains in the calves of the legs. There was no œdema of the parts or swelling of the muscles. Gastric disturbance continued, and the first sound of the heart remained weak.

On May 29th there was a marked diminution of the slimy expectoration and the pains in the calves. There had been no eruption. The temperature gradually went down, and on the last day but one of the month the circulation had improved and the tongue was much cleaner. At night he had a sharp epistaxis, and while he had been heavy before it, he became much relieved and brighter. On the last day of the month there was an absence of fever.

On June 2nd both pulse and temperature were subnormal, as well as the respirations.

On June 4th these were normal, as also were the secretions and excretions.

On June 9th he was convalescent, and was allowed to be out of bed, and was discharged fit for duty on June 16th.

Diagnosis.—This might have been a case of non-specific continued fever from exposure to heat, or might have been supposed by some to have been enteric fever. It had not, however, the appearance of ardent fever, while its mode of commencement, with severe general symptoms, rapid pulse, and pains in the calves, the absence of diarrhœa, together with the other symptoms and the temperature chart, helped to distinguish it from enteric fever.

A word of caution regarding temperature charts may here be given. They are not so valuable as they formerly were as helps to diagnosis, as by antipyretics in general use the chart becomes more a guide as to the effect of these remedies than a clinical aid in detecting diseases.

This case was diagnosed as Weil's disease. Weil's disease, the cause of which is at present unknown, is said to attack the male sex at the prime of life, and develops usually during the hot season of the year. It was described by Dr. Weil in 1886, and was thought to be an abortive form of enteric fever; but Dr. Fiedler, who has given some attention to it, says that it is not so, but is a distinct, acute infectious, or toxic affection. The case under review presented the general characters, namely, fever which lasts eight or ten days, headache, gastric disturbance, jaundice, and muscular pains, especially in the calves of the legs.

Prognosis.—Had it been a case of enteric fever the prognosis would have been very guarded, as complicatians at any time might have arisen; but being a case of Weil's disease, the opinion formed was of a favourable nature.

Treatment.—The man was isolated on account of the infectious nature of the ailment. A purgative draught was given on May 25th. There was nothing of an unusual character in the stools. The temperature was reduced by sponging; quinine was afterwards given, and, later, iron. The diet at first was milk or milk and soda water; towards the end a little brandy was given, and he was put on solid food some days before his discharge from hospital.

HYSTERICAL CHOREA.[1]

By P. BLAIKIE SMITH, M.D.,
Physician and Lecturer on Clinical Medicine at the Aberdeen Royal Infirmary.

The case of hysterical chorea which I shall presently introduce to your notice is that of a woman, aged 22, who was admitted into the infirmary under my care on February 20th.

There is nothing important in her family history, but her personal record and the origin of her trouble are highly significant. She stated that about five years ago she acted for six months as nurse to a child the subject of St. Vitus's dance, and that three months ago another child, also affected with this complaint, resided near her house. Towards the end of last year she got a great fright by a dog suddenly running against her legs, and ever since then she has suffered much from nervousness; but she dates her convulsive trouble from four days before coming to the infirmary, when a violent pain temporarily seized her right foot, and coincident with this her "shakings" made their appearance. When I first saw her she was lying in bed with closed eyes and half-averted face. Her shoulders and arms were in constant movement. Each shoulder alternately was either violently raised or brought forward, and then suddenly lowered or retracted, while the arms, as they lay on the coverlet, were constantly being rotated inwards or energetically flexed. The movements of the shoulders seemed to have no relation to those of the arms, and both sets of movements were liable to sudden and unaccountable exacerbations. There were no spasms of the muscles of the neck, nor any contortions of the face. The tongue was protruding quietly, and remained out for inspection until the patient was told to withdraw it. Speech was unaffected. The grasp of both hands, notably the right, was much impaired. The superficial reflexes of the legs and trunk were greatly diminished, the knee-jerks much exaggerated and capable of being produced by tapping the rectus tendon on the front of either thigh. Rectus clonus, too, was present on both sides; ankle clonus was absent. The legs were free from spasm. The heart-sounds were normal, and its action regular.

A few days after admission it became evident that the spasmodic movements were performed with a certain amount of regularity; it was also noted that they ceased during sleep, that they were intensified by mental emotion, and that, however violent they were, they could occasionally be kept under control. For instance, the patient could feed herself without spilling her food; she could also knit, but, strange to say, she was quite unable to sew, and, though she could write, the agitation of her hand rendered it almost impossible to decipher what she had placed upon the paper.

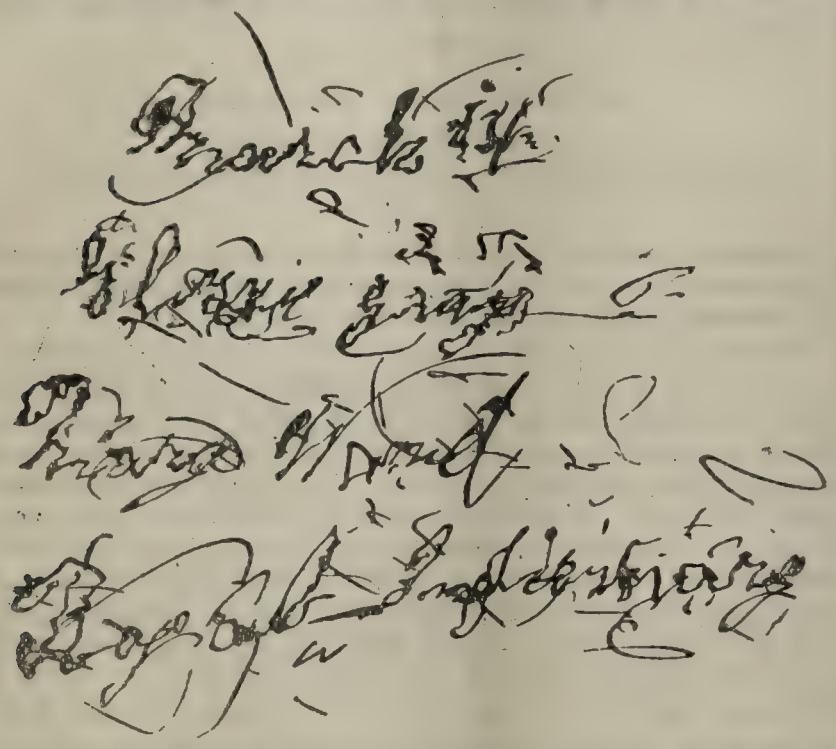
When she walked, her body swayed from side to side, and her progress was erratic. She repeatedly knocked up against the furniture in the ward, and there were frequent sudden flexions of the body, now to this side, now to that, as she went along, while all the time her shoulders and arms continued in a state of active movement. Her mind was clear, and she was generally bright and cheerful, but occasionally she had fits of crying. For nearly three weeks there was little change in the symptoms just detailed. The movements persisted with varying intensity. The condition of the reflexes, too, was not constant; sometimes they were nearly normal, at other times they were in excess; hardly ever were they equal on the two sides. During this period the treatment consisted first in the administration of large doses of

[4] *Med. Chir. Trans.* Vol. xxii.

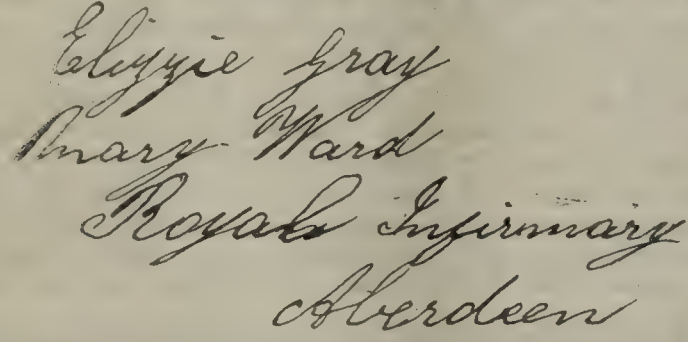
[1] Read at a meeting of the Bermuda Branch of the British Medical Association.

[1] Read before the Aberdeen, Banff, and Kincardine Branch of the British Medical Association.

bromide of potassium, in combination with tincture of asafœtida, and subsequently of valerianate of zinc in the form of pill, but, as I have just indicated, there was no real improvement in the patient's condition. Accordingly, on March 15th, she was ordered to have, twice a day, four minims of liquor arsenicalis, and the effect of the change of treatment was something marvellous. The



morning following its adoption the patient was still convulsed as usual, while next day she lay as quietly as anyone in the ward so long as attention was not specially directed to herself. When addressed, however, the movements of the shoulders and arms again returned to a very limited extent, but they speedily subsided when the mental excitement which produced them had passed away. On this date, too, it is interesting to note that her power of writing legibly was completely restored,



that she became once more able to sew, and that she could walk without presenting those contortions of the body which were so pronounced during her former efforts at progression.

The case which I have just detailed belongs, I believe, to a variety of hysteria where the symptoms of that complaint closely resemble those of true chorea—hence the name hysterical chorea. Where chorea is simulated by hysteria, the distinction between the two is often a most difficult matter. Authorities allude to the occurrence of pregnancy, the onset of endocardial disease, and the pre-existence of acute rheumatism as favouring the presence of the former complaint, and to the evidence of an hysterical constitution as giving countenance to the diagnosis of the latter; while as regards movements, it is pointed out that irregularity is their distinguishing feature in chorea, but that in its hysterical counterfeit a certain amount of order is generally to be observed in their performance. In the case before us none of the concomitants of chorea were present, nor any of its antecedents except fright, but the patient had had every opportunity of becoming acquainted with the symptoms of the disease from her tolerably close association with choreic children.

She was manifestly hysterical, too, and her spasmodic movements had undoubtedly a tendency to regularity in their occurrence. These points of themselves were sufficient to justify the opinion that was arrived at, but there were other and most important circumstances, which gave additional support to the diagnosis. The first of these was to be found in the changing nature of the reflexes. The reflexes of the leg varied during short intervals of time in an unaccountable manner, and in this variability of the reflexes I believe we have a pretty sure indication of the presence of hysteria. In ordinary chorea reflex excitability is either diminished or increased; it does not alter from day to day. Another circumstance favouring hysteria was the inconsistence of some of the symptoms.

In most forms of nervous disease, accompanied by muscular spasms or tremors, the performance of voluntary acts either aggravates the movements or diminishes their intensity; but in hysterical chorea inhibition is erratic and inconsistent. Certain acts are easily performed, while the performance of others closely similar in their nature is greatly interfered with, or rendered impossible altogether.

In the present instance, the patient, in spite of her spasmodic movements, experienced no difficulty in feeding herself. She could knit, but was unable to sew; and she could not write with any degree of legibility. Hence, her actions may be fairly described as contradictory or inconsistent, and thus they afforded additional proof of the hysterical nature of her condition.

Lastly, and even of greater significance than the changing reflexes and the inconsistent movements, comes the fact that the symptoms from which the patient had been suffering for more than a month rapidly subsided two days after the commencement of a fresh plan of treatment.

A CASE OF LEPROSY APPARENTLY ARRESTED.

By WYNDHAM COTTLE, M.A., M.D.Oxon., F.R.C.S.Eng.,
Surgeon to the Hospital for Diseases of the Skin, Blackfriars.

As this subject is attracting attention at the present time, I think the further history of a case of leprosy, in which the disease appears to be arrested, may be of interest. In the JOURNAL of June 28th, 1879, I published the following account of a man suffering from this disease:

"T. M. was born in, and spent his youth in, England. After residing twenty-four years in Jamaica, he returned to London in November, 1877. He noticed the first symptoms of his disease in May, 1878, when large patches of discoloration appeared on his legs, followed by similar spots on the face and arms. A tonic treatment was first employed, and in September, 1878, chaulmoogra oil in small doses was given, which was increased to 20 minims three times daily. This he continued to take till March 10th, 1879, when I first saw him. He stated that his condition improved when he commenced to take the oil, but the complaint recurred in a more marked degree.

"On March 10th, 1879, he presented the following appearance: He was hale and well-nourished. There were dusky-red, raised patches, two or three inches in diameter, scattered over the face, neck, body, and limbs, with the characteristic leonine expression of countenance and thickening of the ears and of the tissues in the positions occupied by the spots. A superficial ulcer existed on the outside of the left leg, and one spot on the right thigh; and the insides of the feet, from the great toes to the heels, were anæsthetic.

"I directed him to take chaulmoogra oil in drachm doses thrice daily. The only inconvenience he experienced was slight constipation, which an occasional mild purgative removed. He has continued the same treatment. The ulcer on the leg rapidly healed. When I saw him a week ago the spots had faded in colour and lost some of their thickening, while some had disappeared, and the anæsthesia was less marked, and his general health had improved."

I have kept this man under observation at the Hospital for Diseases of the Skin, Blackfriars, ever since. He continued to take the oil in diminishing doses, and to apply it freely to his skin till within the last year or so. His symptoms gradually became less marked, the areas of anæsthesia contracting and the discoloration of the skin slowly fading. He has experienced no recurrence. When I last saw him, towards the end of 1888, there was no evidence of his having had the disease except a slight brownish staining of the skin of the backs of the hands, and some loss of sensation about parts of his legs and feet. His general health was excellent. He has resided all this time in the suburbs of London. I saw his wife and daughter, and they are neither of them affected with the disease.

I have tried the same treatment in other cases of leprosy with-

out success, but no other patient of mine has been able to take such large doses of the oil. This man took it in 90-minim doses at one time.

This case seems to me interesting on several grounds: (1) as showing that the disease may seemingly be arrested in an early stage, the patient living in London; (2) that the disease did not mend till he took full doses of chaulmoogra oil; (3) that, like Mr. Hutchinson's case, in which the progress of the disease apparently ceased, the complaint was consequent on residence in Jamaica.

The evidence has long appeared to me to point to leprosy being primarily dependent upon an organism which is associated with decomposing organic substances, such as fish or flesh, and is introduced into the body with the food.

SURGICAL MEMORANDA.

PRECANCEROUS CONDITIONS OF THE MUCOUS MEMBRANE OF THE BLADDER RECOGNISABLE BY ELECTRIC LIGHT.

It is generally admitted that precancerous conditions of the tongue, mammary areola, and prepuce do exist and are recognisable. I believe that in some instances the mucous membrane of the bladder may be observed, by means of electric light, to pass through a similar stage. Usually the first indication of a well-developed vesical tumour is an attack of painless hæmaturia; but this is not always so. Out of twenty-five cases of vesical growth which have been under my observation during the last eighteen months—since the introduction of the incandescent lamp cystoscope—two cases which I repeatedly but vainly examined for vesical tumour awoke in my mind suspicions as to the probability of a precancerous stage existing. In both instances my surmises were justified by cancer subsequently developing. In three other cases recently examined, presenting symptoms of growth but in which no tumour could be discovered, I have been forced to give a most guarded prognosis on account of the appearance of the mucous membrane.

In nearly all these cases a certain amount of residual urine (not of prostatic origin) was present, and a painless profuse hæmaturia was observed. The mucous membrane over the posterior wall behind the inter-ureteral bar was blurred, lumpy, and gelatinous. I have pointed out that this is the situation at which vesical cancer commences, and I have good reasons for believing that the irritation of residual urine is sometimes a causative factor in its production.

Old Burlington Street, W. E. Hurry Fenwick.

AMPUTATION OF THE THIGH UNDER UNFAVOURABLE CIRCUMSTANCES.

N., a native woman, aged 60 (wife of the regimental cook), was brought in a dandy to the station hospital on the morning of March 20th, suffering from fracture of the left leg. On examination I found that there was a compound fracture of the lower end of the tibia and fibula, the lower half of the anterior surface of the tibia being completely exposed, the end of the bone protruding through the wound, the foot being inverted. She stated that she fell out of a loaded bullock cart the day previous about 1 P.M., the wheel of the cart passing over her leg. I informed her relatives that it was a case for amputation, but they would not consent to it. The leg was then put up in splints, and antiseptic dressing applied, but it was nearly impossible to keep the bones in apposition, so extensive was the destruction of the tissues at the seat of fracture. It soon, however, became apparent that the old lady must succumb to her injuries unless the limb was removed, as mortification was beginning to set in, with infiltration of the tissues extending as far as the knee-joint. Her relatives finally gave their consent to the operation on March 22nd, and in the afternoon of that day, kindly assisted by Surgeon R. L. R. Macleod, M.S., I amputated at the lower third of the thigh. Prior to the operation she was suffering from bronchitis. Temperature 101.6°; pulse small and weak. She lost very little blood during the operation, and her pulse improved under chloroform. Antiseptic dressing was applied to the stump, and a drainage tube inserted.

March 23rd. Had little sleep. 7 A.M., temperature normal; 4 P.M., normal. Hypodermic injection, one-third of a grain of morphine at bedtime.

March 24th. Slept well. 7 A.M., temperature 98.8°; 12 P.M., 101.8°; 4 P.M., 101.6°. Stump dressed. Hypodermic injection, one-third of a grain of morphine at bedtime.

March 25th. 7 A.M., temperature 98.8°; 12 P.M., 101.8°: 4 P.M., 101.4°. Slept well. Stump discharging. Removed one stitch. Dressed morning and evening.

March 26th. 7 A.M., temperature 101.8°; 12 P.M., 99.8°; 4 P.M., 102°.

She continued much the same up to March 29th, when there was profuse discharge from the stump, and all the stitches had to be opened, and the stump syringed out and dressed antiseptically. On April 2nd she had an attack of diarrhœa, which was checked with astringent medicine. From that date up to April 7th her temperature varied between 99.4° in the morning and 101.4° in the evening. After this her temperature continued normal up to April 19th, when a small abscess formed on the inner side of the thigh, and the temperature rose to 100°. With the exception of two or three small abscesses having formed, the stump healed rapidly after this, and there is now only a small surface the size of half-a-crown to heal.

I merely mention this case for the following reasons: 1, the age of the patient (60 years); 2, the great extent of the injuries received; 3, the time that had elapsed between the receipt of the injury and the operation (three days); 4, her weak condition prior to the operation, complicated with bronchitis and traumatic fever.

Subattur, Punjab. H. H. Stokes, M.B., Surgeon-Major.

ON THE OPENING OF BUBOES.

The best method of opening a bubo is a matter of much greater importance than at first sight appears, and especially to the military surgeon, who has so many of them to treat. I believe that a very considerable reduction of his "constantly sick" would be the result of a procedure different from that which now prevails.

Surgeon-Major Adye-Curran, in a recent number of the Journal, has drawn attention to the advantages of aspiration *versus* free incision in the evacuation of suppurating buboes, and the method is, I am quite sure, a good one.

It is now some four-and-twenty years since I abandoned the free incision by which I was taught to open a bubo, a method of opening which is still very generally adopted, apparently orthodox, and perhaps, in civil life, necessary. For so many years have I invariably opened a bubo by a mere puncture with a narrow-bladed bistoury, and so very well satisfied have I been with the good results, that I shall continue the practice. By adopting this method that most odious spectacle, "an open bubo," is avoided, as well as the reproach of a protracted cure; not in all cases by any means, for sinuses will form that must be opened up, and the consequence of neglect, or a vitiated state of constitution, must be dealt with.

It is necessary to observe that to obtain the best results a bubo should be opened at the proper time; not too soon before a sufficiency of morbid deposit has broken down, nor too late when the vitality of the tissues may have become impaired. The experienced operator chooses the right time, which is probably a very few days after the presence of pus has been diagnosed. The small opening made by the bistoury will often be found closed the following day; it may be reopened by a blunt-pointed probe if necessary.

The puncture is much less painful than the free incision, and it of course has the advantage of leaving but a very small mark, whilst it has no disadvantage, as it can at any time be converted into as long an incision as may be thought necessary. I am quite certain that the opening of a bubo by a free incision, instead of by puncture, often extends the duration of a case from days to weeks, or from weeks to months. I hope, therefore, that those who condemn the free incision may have many followers, and that "open buboes" may be relegated to the opprobia of the past; at all events, so far as the deliberate action of the surgeon is concerned in their production.

J. P. H. Boileau, B.A., M.D., etc., Surgeon-Major A.M.S.

Woolwich.

CLINICAL MEMORANDA.

AN EPIDEMIC OF HERPES ZOSTER.

In the course of one week recently as many as four cases of herpes zoster came under my notice; all were remarkable either for the extent or site of the eruption.

The first case was a young woman who had several small clusters of vesicles on her left leg, following the course of the internal saphenous nerve from below the knee to the inner ankle.

The second case was an elderly man with a most copious eruption covering the right pectoral, deltoid, and scapular regions, extending also down the outer aspect of the arm to the first joint of the thumb.

The third case was a young boy who had an eruption of small detached clusters of vesicles scattered over the pectoral, acromial, and scapular regions.

The fourth was an octogenarian, who suffered so much previous pain in the right hyphochondrium as to lead to the suspicion that he was passing a gall-stone. His eruption was unusually thick and semi-confluent, and covered the epigastrium and right hypochondrium, spreading obliquely across the scapula to the upper dorsal spines.

On making inquiry among the other medical men in the town, I learn that one firm had seen seven or eight cases of herpes zoster during last month, and two this month, with the characteristic eruption in every possible situation. The nearly simultaneous appearance of so many cases of this disease must be something more than mere coincidence, and points, I think, to atmospheric influence. HENRY TAYLOR.

Guildford.

THERAPEUTIC MEMORANDA.

ANTIPYRIN IN CHOREA AND TETANUS.

THE following brief references to a case of chorea will show the value of the drug in this disease:—F. C., aged 12, had an attack of acute rheumatism last year, without complications, from which he completely recovered under large doses of salicin. When seized with present illness had been suffering two days; spasms almost continuous, day and night; semi-delirious. After twenty-one days' treatment by various methods without avail, chloral and bromide of potassium failing to produce sleep, antipyrin in 10-grain doses every four hours was given in the afternoon. That night he slept well, next day the choreic spasms were less frequent, and in three days he was practically well. I may add that, at a consultation with two other medical men the day before the antipyrin was given, the prognosis was considered by all to be most unfavourable.

Last week I gave antipyrin in tetanus, and although the case terminated fatally the spasms were much relieved by the drug, more so than by doses of chloral ℥ss. and pot. bromidi gr. xv, every four hours. A. GARLAND, L.R.C.P.E., M.R.C.S., etc.,
Medical Superintendent, Oamaru Hospital,
New Zealand.

REPORTS
ON
MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

NORFOLK AND NORWICH HOSPITAL.

A CASE OF THYROTOMY FOR FOREIGN BODY IN LARYNX.[1]

(By MICHAEL BEVERLEY, Surgeon Norfolk and Norwich Hospital.)

R. F., aged 42, railway porter, was admitted into the Norfolk and Norwich Hospital on June 5th, 1888, at 6.30 P.M., under Mr. Crosse, with the following history: A gentleman gave him a threepenny piece: he placed it in his mouth, and jumped off the platform; the sudden jerk caused him to swallow the coin. He immediately found that "he could hardly get his breath," and at once went to the hospital, where the assistant house-surgeon (Mr. Green) passed an œsophageal bougie, as the patient said the coin was lodged in his throat. As it could not be dislodged by this means, the laryngoscope was then used by Mr. Nance, house-surgeon, and the coin was seen lying across the true vocal cords, impacted above their anterior extremities. With the aid of the mirror, laryngeal forceps were used. The coin could be touched, but, owing to its oblique position (its seen edge looking downwards), it could not be grasped. Inversion and succussion were tried, but without avail. The symptoms were: hoarseness, occasional cough, but no dyspnœa.

June 6th. Various attempts were made (by Mr. Crosse, Dr. Beverley, Mr. Robinson, and Mr. Nance, house-surgeon) to seize the coin with laryngeal forceps, aided by laryngoscopic mirror and electric light; no success. Inversion again tried. No further local or constitutional symptoms.

June 7th. No attempts made; no dyspnœa; very hoarse.

June 8th. Further attempts made to seize the coin, but without success.

June 9th. Left alone. No further symptoms.

June 11th. At a consultation of the staff, it was decided to again attempt extraction through the mouth, and, if this failed, to perform laryngotomy; and, if the coin could not be removed by either means, that thyrotomy should be resorted to. After repeated unsuccessful attempts had been made to remove the coin (which could be seen and felt in its original position), Dr. Beverley performed laryngotomy, and attempted to remove the coin from below by passing the forceps between the vocal cords, but without success. Having ascertained with the laryngoscope that the coin was still in its original position, thyrotomy was at once performed. The alæ of the thyroid cartilage, when severed in the middle line, were held back with retractors, and the interior of the larynx fully exposed to view. No coin could be seen or felt; it had evidently fallen back (the patient was supine and under chloroform) into the gullet, and from thence had passed into the stomach. The severed thyroid cartilages were sutured with catgut, and a tube placed in the trachea through the laryngotomy wound. The patient made an uninterrupted recovery. The tube was removed at the end of a week, and on the ninth day after the operation the coin was passed *per anum*.

On July 7th, the patient left the hospital. The wound had completely healed, and there was no rubbing of the alæ of the thyroid. Laryngoscopic examination shows: true vocal cords do not meet anteriorly; the false vocal cords are tumid. The patient is perfectly well, but hoarse.

REMARKS.—As a contrast to this case, I give the notes of another, as related in a letter from Mr. Read, of Stradbrooke, to Mr. Cadge. The patient, a relieving officer, placed a sixpence in his mouth. Owing to the movements of a restive horse, he swallowed it. With the exception of a slight cough, he had no irritative symptoms; in the complete absence of which, Mr. Read and Dr. Barnes, of Eye, decided not to perform tracheotomy. The patient continued at his duties by no means inconvenienced by the presence of the foreign body, his only symptoms being occasional spasmodic cough and pain in the throat, until October 25th, 1888, when he coughed up the sixpenny-piece, ten months after he had swallowed it. Mr. Read concludes his note by asking Mr. Cadge: "Ought we to have operated at the time?" Speaking for myself, I should say that, if I could have seen the coin with the laryngoscope, I should not have left it to chance expulsion, as statistics (Erichsen, Gross, Durham) prove that operative treatment is more successful and far less fatal than expectant. The duty of the surgeon is thus expressed by Erichsen: "So long as the foreign body is allowed to remain, the patient is in imminent danger either from immediate and sudden suffocation, or from inflammation at a more remote period." In the case I now show you (the patient was present to be examined) there is now perfect union of the thyroid cartilage along the line of the thyrotomy incision, and, with the exception of the cicatrix, no evidence of operative interference with the larynx remains beyond hoarseness, which is now much less than when he left the hospital. He has long resumed his work at the Great Eastern Railway Station, and his voice steadily improves in tone and force. I do not expect it ever to completely regain its former clearness, and this is quite as much due to the injuries the vocal cords received during the numerous endolaryngeal attempts to remove the coin as to the operation of thyrotomy. It may be asked, Why not have been content with the laryngotomy, and have waited, as in Brunel's case, for the possible spontaneous expulsion through the laryngotomy wound, or through the mouth, under these altered conditions? My reply is, Because the coin was in the larynx (in Brunel's case it was in the trachea), hence at the consultation, when the case was handed over to me by my senior colleague, Mr. Crosse, I stated that, if tracheotomy failed, I should go on to perform thyrotomy according to the rule laid down by Erichsen, who says: "If tracheotomy fail, the operation of thyrotomy should be performed, and it is of importance that it should not be delayed." Some very conflicting opinions have been expressed with regard to thyrotomy—some

[1] Read at the Norfolk and Norwich Medico-Chirurgical Society.

asserting that it is an operation free from danger, and not threatening life; whilst others maintain the opposite. Probably Professor Virchow's opinion is correct—namely, that thyrotomy, performed in an otherwise healthy larynx, is an operation free from great risk or danger. Such it certainly proved to be in the case just related.

MIDDLESEX HOSPITAL.

A CASE OF CORROSIVE POISONING.

(Under the care of DAVID W. FINLAY, B.A., M.D., F.R.C.P., Physician to the Hospital, and Lecturer on Forensic Medicine and Public Health in the Middlesex Hospital Medical School.)

THE following case possesses interest from the point of view both of medicine and medical jurisprudence, and is therefore worthy of brief notice.

A. C., a boy, aged 7, was admitted into the Middlesex Hospital on November 24th, 1887, having drunk by accident from an unlabelled sodawater bottle, in which hydrochloric acid and a small piece of zinc had been placed by his father the previous evening, for use in his occupation. The boy was brought to the hospital about fifteen minutes after swallowing the poison. He was then vomiting and retching almost continuously. He had no pain or tenderness in the abdomen, and there was no sign of corrosion about the lips, mouth, or fauces, or spots of staining. The tongue was moist and slightly furred. White of egg and milk were freely administered, each portion being vomited almost immediately after being swallowed. His pulse was natural, and there was no appearance of collapse. He continued to vomit and retch during the morning, bringing up about noon some material very slightly tinged with blood. He was ordered three minims of tincture of opium every four hours, together with milk and limewater.

During the early part of the following night he slept, the vomiting ceased, and he complained only of thirst. Next morning he vomited a little, but remained free from pain. On November 26th he had some abdominal pain and slight dry cough, his temperature marking 101.4° F.

On the following day (November 27th) he was better, breathing quietly, and in no pain. He was sick again on November 28th, but after this became rapidly convalescent, was able to take solid food on December 2nd, and left the hospital apparently well on December 4th.

A fortnight later (December 19th) he was readmitted on account of a recurrence of the vomiting, and he was then pale and emaciated. He was now ordered enemata, consisting of milk and beef-tea, to which a little liquor pancreaticus was added, and he was tried from time to time with very small quantities of essence of beef by the mouth. All that he took by the mouth was rejected, but he retained the enemata well. The vomited material was only very faintly acid, and was brought up sometimes immediately and sometimes not for half an hour after ingestion.

The further history of the case was steadily downward, and the boy gradually became weaker and more emaciated, and died on January 9th, 1888.

It should be added that after ten days of rectal feeding he failed to retain the enemata for a day, but an injection of starch and opium allayed the irritability of the rectum, and the enemata were resumed; later on nutrient suppositories were also employed.

At the *post-mortem* examination the mucous membrane of the œsophagus was found to be quite healthy. The stomach was not dilated; its coats were of normal thickness, but the mucous membrane presented a much smoother and more shiny appearance than natural. Over its surface were several lines of atrophy roughly following the direction from cardia to pylorus, an eighth of an inch wide, slightly depressed, and whiter and tougher than the neighbouring mucous membrane. At the pylorus was an annular ulcer, which spread from the valve inwards to the stomach. Its surface was covered with small, pale, indolent granulations, and it had produced such a narrowing of the pyloric orifice that a No. 3 catheter was passed with difficulty. The mucous membrane of the rectum was swollen and injected, probably from the stimulation of the rectal feeding. Many of the mesenteric glands were swollen, and one contained a caseous softening focus, otherwise the abdominal organs showed no unusual change.

REMARKS.—There were two poisonous substances probably concerned in the case, hydrochloric acid and chloride of zinc. The mixture is employed in soldering, zinc being added to the acid to "kill it," as the workmen say who use it. The preponderance of one or the other would depend on the quantity of zinc present, which was not ascertained; but as both substances act as corrosives, this is a point of no importance. Cases of poisoning by corrosive substances may, as regards results, be conveniently divided into four classes. First, those which are speedily fatal from the immediate effects of the poison; secondly, those which succumb to the chronic effects; thirdly, those characterised by imperfect recovery, a dyspeptic condition being permanently established; and lastly, those which recover completely in a few days. The case first narrated, although at first appearing to belong to the last named class, became ultimately a typical example of the second, vomiting recurring shortly after his discharge from the hospital and rapid emaciation supervening. It is somewhat remarkable that so much damage should have been done to the stomach, while the lips, mouth, and fauces escaped, but a similar condition has been recorded in other cases. The same remark applies to the absence of abdominal pain, and of vomiting of blood to any extent. These facts, however, might be accounted for by the smallness of the quantity of the poison swallowed.

As bearing upon treatment it was evident during life that there was damage either to the pylorus, or to the body of the stomach, or to both. The fact that vomiting followed so soon after anything was taken into the stomach, and that there was no evidence of the stomach itself being dilated, suggested strongly that the body of the stomach had suffered; and it was this which induced one to refrain from operative intervention with the view of dilating the pyloric orifice, which might have been usefully practised if the pylorus alone had been affected. The *post-mortem* examination showed the correctness of these considerations.

Although outside of the medical part of the case, perhaps the most important point which emerges from its consideration is the manner in which the poisoning occurred. Deaths from accident and negligence in which one of the corrosive acids has been the fatal agent occur with alarming frequency. In the fiftieth Annual Report of the Registrar General (1887), the deaths recorded under this head from sulphuric, nitric, hydrochloric, and carbolic acids, amount in number to thirty-six; cases of suicide by the same four poisons numbering forty-eight. It seems, therefore, the duty of the authorities responsible for the law regulating the sale of poisons to frame rules which would render such a case as that above narrated scarcely possible. The culpable recklessness or ignorance which is shown in the sale to all and sundry, in oil shops, of the most destructive poisons which happen to be in use in various trades or for disinfecting purposes, might at least be checked if it were made a penal offence to sell such substances in any but bottles of a particular pattern and colour, labelled "poison," since in most instances the accident occurs from the poisonous liquid being placed in bottles which ordinarily contain beverages in common use. As the Privy Council have already refused to add carbolic acid to the Poison Schedule of the Pharmacy Act, the same result would no doubt follow any application regarding sulphuric, nitric, and hydrochloric acids; hence these poisons could still be purchased with such freedom as to be available for purposes of suicide; but careless persons and children at least deserve such reasonable protection as would be afforded to them by a regulation like that suggested.

REPORTS OF SOCIETIES.

BRITISH GYNÆCOLOGICAL SOCIETY.

WEDNESDAY, MAY 22ND, 1889.

FANCOURT BARNES, M.D., Vice-President, in the Chair.

Twisted Pedicle.—Dr. EDIS exhibited an ovarian cyst, where the pedicle had become twisted and the cyst strangulated. F. W., aged 30, was delivered of a fine child after a good labour, on March 18th, 1889. The abdomen remained swollen, so that it was thought probable there was another child. On the evening of May 11th, she was seized with violent pain, shooting from the left side to the back. This subsided in a little time, but recurred the following evening with redoubled violence. She suffered intense pain in the left lumbar region, spreading from thence towards the middle line of the body and backwards to the spinal column. She also suffered from severe vomiting. On the 17th she was removed to the Chelsea Hospital for Women, where ovariotomy was at once performed. The cyst, as large as the pregnant

uterus at the eighth month, was full of a dark greenish-coloured fluid evidently from hæmorrhage having occurred into the cyst. There was also effusion of blood between the walls of the cyst on one side, where it was of the consistence of the spleen. The pedicle which was formed by the left broad ligament, was twisted about one and a half turn from left to right. The right ovary, being enlarged and cystic, was also removed. Sickness was troublesome for the first few days after operation, but the patient made a perfect recovery. Remarks were made by Mr. LAWSON TAIT, Dr. BARNES, Dr. R. T. SMITH, and Dr. PURCELL, and Dr. EDIS replied.

Cyst of Broad Ligament.—Dr. R. T. SMITH showed some silk ligatures which had come away from a patient aged 43, from whom he had removed an ovarian tumour five months previously. A cystic swelling reaching to the umbilicus had recently developed, and at the operation it was found to spring from the broad ligament. The internal lining was easily enucleated with a few touches of the cautery applied in its deepest portion, where the adhesion was most intimate. The sac was then closed with ligature as low as possible and left as an ordinary pedicle. It was tied in three loops with stout silk. A drainage-tube was left in the abdominal cavity, but was removed the next day, there being no hæmorrhage. For seven days the progress of the case was uninterrupted, and the wound healed. On the eighth day the dressings were found saturated with a brownish sour-smelling fluid, and the discharge continued for three months. The patient was sent to the seaside, having a small india-rubber drainage-tube in the wound. On her return the sinus was found to be six inches deep. A fortnight later the three-looped ligature came away, and in ten days the wound was absolutely healed, and the patient quite well. Dr. Smith said that possibly the cure would have been more speedy, and perhaps less risky, if the sac itself had been drained from the first.—Dr. BANTOCK said his practice was to shell out the cyst from the wall proper, and if the base was so large as to make ligature unsafe, he stitched the sac to the parietes.—Mr. LAWSON TAIT said since Dr. Myers's paper he had enucleated all cysts of the broad ligament; once the cyst proper was out, drainage was a matter of the greatest ease, the tube being passed into the pocket of cellular tissue. Hæmorrhage was not to be feared, and it was a matter of indifference whether they stitched the cyst to the abdominal wall or not.—Dr. EDIS said they learnt from the case that silk ligatures were not absorbed so easily as they might imagine. The one shown was scarcely altered at all.—Dr. INGLIS and Dr. HEYWOOD SMITH referred to some other instances of chronic sinuses.

The Relation of Gynæcology to General Practice.—Dr. DOLAN read a paper on this subject.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

WEDNESDAY, JUNE 19TH, 1889.

JOHN SMITH, M.D., LL.D., President, in the Chair.

Intestinal Obstruction.—A discussion on the diagnosis and treatment of intestinal obstruction was opened by Mr. A. G. MILLER, who for practical purposes, more especially from the point of view of diagnosis, made a triple subdivision: (*a*) acute obstruction; (*b*) subacute; (*c*) chronic. Exact diagnosis was always difficult, but especially so in the cases belonging to the second group. Five cases were described, all of which proved fatal. This result was doubtless due in part to the delay preceding the operation. When they should operate would always constitute the practical difficulty.—Mr. DUNCAN inclined to divide the cases into acute and chronic. The chief point was the diagnosis. They had to bear in mind, in the first place, that there was a considerable danger of confounding other conditions with obstruction. There were various conditions of the bowel wall or external to the wall; there were internal conditions and there were certain reflex conditions, all of which might give rise to symptoms simulating those of true obstruction. In illustration of the last group, he described a case which had been presented to him, in which alarming symptoms, marvellously like those of obstruction, were found to be reflex in origin and dependent on an inflamed testicle, only partially descended. In connection with obstruction due to a mass of fæces, Mr. Duncan spoke of the occasional value of the long tube, which might be passed further up the intestine than was usually supposed. With it he had succeeded in breaking down such a mass situated high up, which had resisted other treatment and given rise to serious apprehensions.—Dr. AFFLECK began by emphasising the fact that some cases of apparent obstruction were amazingly tractable. He had more than once reduced intussusception in children by means of inflation with bellows. In a case with most urgent symptoms, due to fæcal accumulation, he had succeeded perfectly with the constant current. His experience of operation was unfavourable. One of the most important causes of this was delay. In every case they should exclude hernia, and the rectum should be examined. If the patient were a child, intussusception was suggested. The patient's habit of bowel must be carefully inquired about. The history of old inflammatory attacks might be important. Constipation was of less value by itself than when associated with the absence of the passage of flatus. The character and situation of the pain might prove to be of importance. Vomiting had been said to be greater the higher up the seat of obstruction. This might be so, but he was inclined to think that in some cases the vomiting was entirely reflex, and depended little on the actual seat of obstruction. Then the amount of meteorism was important, being, of course, more pronounced the lower the obstruction. He doubted whether Mr. Treves's suggestion of auscultation of the colon was practically of much service. In respect of treatment, purgatives might first be tried. It was only the failure of ordinary and safe purgatives which excited the suspicion that they had to do with a case of obstruction. Enemata, galvanism, massage, and opium, all had their own place. In judging of operation, each case was to be taken *per se*.—Mr. CATHCART argued that more might be made of the analysis of individual symptoms. Thus, in studying pain, they must observe accurately its seat, its character, whether constant or intermittent, and whether accompanied by tenderness on pressure. As a rule, this latter condition would be found to be associated with peritonitis. So in respect of vomiting, it was usually supposed to be ominous when a simple belching of fluid occurred without actual retching.—Dr. WILLIAM RUSSELL spoke of the difficulties of exact diagnosis, illustrating his remarks from the records of *post-mortem* work. In his experience, the prognosis in connection with operations was bad.—Drs. JAMES YOUNG, KENNEDY, CAIRD, WALLACE, STILES, and SCOTT LANG also spoke.

REVIEWS AND NOTICES.

AN ESSAY ON ASPHYXIA. By GEORGE JOHNSON, M.D. London J. and A. Churchill. 1889.

AN essay by Dr. GEORGE JOHNSON upon the well-worn subject of asphyxia is calculated to excite the interest of all who take delight in scientific medicine. When a writer of originality and a practitioner of veteran experience turns for his theme to subject-matter which the younger student is apt to consider best fitted for a mere academic exercise, one feels desirous to discover how and whither he has been conducted by his train of thought. It is a long step from the days when Bichat sought to reduce to three the *atria mortis* down to modern physiology; and, during all that time, of these three *atria* of Bichat no one has been the object of more constant and profound attention than that which we are accustomed to term, by a misnomer, asphyxia—a misnomer which, *pace* the essayist, we believe, with regret, is now irremediable.

The central fact around which Dr. Johnson's thoughts are grouped—the fact which as it were he has taken for his text—is a phenomenon repeatedly noted by the classic philosophers of medicine, namely, the engorgement with blood of the right side of the heart after death by asphyxia and the emptiness of the left side. Recent textbooks of physiology have not, as the essayist points out, laid the same stress upon this point as was laid in former years. The student no longer has this held up to him as the most significant feature to be studied in the picture. Indeed, not only is it referred to as a matter of slight importance, but the very circumstance itself has come to be treated as one of inconstant occurrence, or as the exception rather than the rule. Of this discrepancy between the accounts of old and recent authorities Dr. Johnson suggests an explanation. He writes: "When the inspection has been delayed for twenty-four hours or more not only is it found that the right cavities are much less distended, as was first noted by Harvey, but the vital contraction of the pulmonary arterioles having ceased, some of the blood has been driven onward by the elastic resiliency of the distended pulmonary artery and the right cavities of the heart, so as to engorge the pulmonary

capillaries, which immediately after death are always empty; while another portion passes on through the pulmonary veins to the left side of the heart."

As to the way in which asphyxia brings about cessation of the cardiac beat, Dr. George Johnson "will none of" the hypothesis accepted by Professor Sanderson and others. Professor Sanderson believes "that the contractile power of the heart's wall is gradually impaired, and ultimately destroyed, by the circulation of venous blood through its tissues." Dr. Johnson very lucidly exhibits the inadequacy of this explanation. "If it were a true theory, when once the circulation and the heart's action had been brought to a stop the arrest would be permanent and irremediable, and the disappearance of the pulse under the influence of nitrous oxide inhalation would be a final and fatal disappearance. For the theory assumes that in order to renew the heart's beats aërated blood must reach the coronary vessels, an event which could not be brought about without previous renewal of the heart's action." The essayist himself has espoused the view that asphyxia is attended by constrictive spasm of the pulmonary arterioles. In this way these arterioles become the seat of an obstruction, insuperable by the heart; from that reason, and not from paralysis of the cardiac muscle consequent on "defect of oxygen" within it, has the heart in an asphyxiated animal ceased to beat.

An assumption is required for the theory adopted by Dr. Johnson. The lungs must be supplied with vasoconstrictor nerves. Badoud's researches left much doubt upon this point. Not many years ago there was no evidence at all for it, except the contraction of the pulmonary vessels in the frog upon stimulation of the skin. Now, however, the assumption rests upon a basis as secure as any in the whole range of physiology. Lichtheim has shown that although Schiff's hypothesis of vasomotor fibres to the lungs contained in the vagus nerve is untenable, yet a vasomotor path to the lungs is discoverable in the cervical spinal cord. Under strong stimulation the vasomotor fibres to the lungs can raise to more than double the resistance offered to the right ventricle in the pulmonary circulation. Further knowledge has been gained from quite recent researches in this country. Dr. Gaskell, in his well-known paper on the spinal nerves, pointed to the anterior roots of the thoracic nerves as presumably containing within them vasomotor fibres to the lungs. This presumption has been apparently converted into certainty by the recent experiments of Drs. Bradford and Dean in Professor Schäfer's laboratory at University College. These experiments disclose vasoconstrictor fibres for the lungs leaving the spinal cord by the anterior roots of the dorsal nerves from the second to the seventh inclusive.

Thus the demand of the essayist for a vasoconstrictor mechanism for the lungs is amply justified by recent physiological work. But he requires, further, that that mechanism be one peculiarly independent of the general vasomotor centre, and differing from that centre in its reaction to supervenous blood. It must be less sensitive towards a slight increase of venosity of the circulating blood, but, when finally affected, it must be more lastingly so. As regards the former of these requirements, the work of Lichtheim, as also that of Drs. Bradford and Dean, reveals remarkable independence of the vasomotor mechanisms of the pulmonary and systemic circulations respectively. A rise or fall of blood pressure in the systemic aorta is often not merely unaccompanied by a similar change of pressure in the pulmonary artery, but is even attended by a change in the reverse direction to the aortic change. With regard to the second requirement of the theory, it would appear that vasomotor centres for various vascular areas do really differ in their sensitiveness to the irritation of supervenous blood. Frédérique showed recently that during the earlier stages of acute dyspnœa the vessels of the abdominal viscera become contracted in extreme degree; but during the very same period the vessels of the skin are not contracted, but dilated. On the other hand, when later the vasoconstriction in the splanchnic area is giving way to vasodilation, constriction of the cutaneous vessels almost amounting to their extinction suddenly sets in. In this way it seems that in asphyxia a similarity of constitution is evidenced by the vasoconstrictor mechanisms of the lungs and skin respectively; and there are many considerations which make this similarity probable and interesting.

The essayist, therefore, rejects Professor Sanderson's theory of complete paralysis of the cardiac muscle, due to four minutes of "defect of oxygen," and Dr. George Johnson's view of the circulatory troubles in asphyxia seems to be much more in harmony with modern physiology than that which he quotes from Professor Burdon Sanderson. One would be grateful, however, for the author's further consideration of one point. The vasoconstrictor mechanism of the lungs is not a powerful one: can it offer insuperable obstruction to the heart? May not the huge distension of the venous chambers, perhaps inducing inhibition, contribute also to the lethal cardiac failure? Professor MacWilliam's local inhibitory centre lies close to the auricle of the right side.

To many readers the concluding section of the book will doubtless be the most attractive of all. In it the author applies the ideas he has derived from his study of acute asphyxia to various problems offered by disease. But, delightful as every portion of the essay is, it is the second or controversial section which is especially admirable for skill of argument and vigour and impressiveness of thought and expression. Physiology in this country has had a real benefit conferred upon it by the publication of the essay. Our teachers of the science will be grateful to the author for pointing out the importance of an observation of which in latter years they appear to have been somewhat neglectful, and the entire profession may be heartily congratulated on the latest offspring of Dr. George Johnson's pen.

Clinical Lectures and Essays on Diseases of the Nervous System. By John Syer Bristowe, M.D.Lond., LL.D.Edin., F.R.C.P., F.R.S., Senior Physician to St. Thomas's Hospital. London: Smith, Elder, and Co.

The great majority of medical books published at the present day are either textbooks for the use of students, or elaborate treatises on special departments of medicine. Considerations of space, as a rule, compel the authors of such works to confine themselves more and more to the didactic method, and a great deal of the living interest which carried the reader through the older textbooks has to disappear. Dr. Bristowe, in the preface to the volume now before us, states that it has grown out of a wish formed while writing his well-known textbook, to bring together a collection of cases illustrative of the different chapters of that admirable work. The task, however, would have involved enormous labour, without probably any corresponding reward; in its place he has presented us with a series of clinical studies, which gain in interest and value from the fact that the author has not been compelled to fill in every detail of a complete scheme, but has been able to choose subjects which have been well illustrated by cases under his care, and have had a special interest for him. Many of the essays or clinical lectures have already appeared in the columns of the medical press, some of the most important in this Journal.

The earlier chapters contain many interesting observations on hysteria and on other functional nervous disorders. Special interest attaches to two observations of ophthalmoplegia, apparently functional, both in young women, and associated in the one case with Graves's disease, and in the other with chorea; a third case observed in a man was not so clear, and gross organic disease may well have been present, as Dr. Bristowe is himself inclined to believe. The two other cases, however, are very remarkable, and well deserving of careful study, though probably light will only come from the collation of other examples; of one of the cases here described we have a very full history, as the patient was in the London Hospital, under the care of Dr. Warner, who fully reported it in the *Medico-Chirurgical Transactions*. She was then suffering from symptoms of Graves's disease, all of which had passed away before she came under Dr. Bristowe's care about two months after leaving the London Hospital; at the latter date she had right hemianæsthesia; she was found to have very irregular fever, vomiting, and persistent headache. After an illness of about three years she died of acute bronchitis; and most careful macroscopic and microscopic examination of the brain revealed no structural change of any sort. Both the women had epileptic fits, and the febrile movement preceded these fits, and ended abruptly when these came on. The moral which Dr. Bristowe draws from the cases is that they should fortify us in the hope that "many other cases of obscure and progressive brain-disease, which do not seem to be hysterical, and which simulate organic disease, may also prove amenable to treatment or the influence of time." A short paper on recurrent palpitation, the heart beats running up to 250, or even over 300, a minute, may be read with advantage in this connection, though Dr. Bristowe rejects the hypothesis that the condition is very nearly related to Graves's disease.

Further illustrations of the "moral" quoted above will be found

in the chapters on cases of recovery from symptoms pointing to the presence of progressive organic cerebral disease, of recovery from cerebral embolism, and from idiopathic cerebro-spinal meningitis. The articles on general paralysis and tabes dorsalis, on myelitis, and on diphtheritic and related forms of paralysis, have been so recently published in this JOURNAL that it is not necessary to point out their merits in this notice. The whole volume cannot fail to add to Dr. Bristowe's already high reputation as a clinical observer and teacher.

SUR UNE SÉRIE DE VINGT CAS DE TRÉPANATION DU CRÂNE; QUINZE CAS POUR ACCIDENTS CÉRÉBRAUX EN DEHORS DU TRAUMATISME. Par M. F. LUCAS-CHAMPIONNIÈRE, Chirurgien de l'Hôpital Saint Louis. Paris: G. Masson. 1888.

IN this pamphlet, which is a reprint from the *Bulletin de la Société de Chirurgie*, we are presented with the latest of M. LUCAS-CHAMPIONNIÈRE'S contributions on the subject of trephining. This surgeon, who has done so much to further the use of the trephine in the treatment of recent head-injury, is here an advocate for surgical intervention in many cases of chronic cranial or intra-cranial lesion which, whether of traumatic or non-traumatic origin, usually come under the care of the physician. The results of such intervention in affections of this kind are shown in the records of twelve cases, in one of which trephining was practised three times, and in another twice. Six of these were instances of obstinate fixed pain with vertigo, four of true epilepsy, and two of symptomatic epilepsy, one of which last was of syphilitic, the other of traumatic origin. The shortness of the interval that has followed the date of operation in most of these cases renders it difficult to form a correct estimate of the results of such treatment. The first case was discharged in November, 1885, and in three cases treatment had been continued almost up to the time of the first publication of this paper. In studying the results of trephining in these twelve cases, we find that both complete cure and absolute failure are rare exceptions, and that a record of decided and very satisfactory amelioration, though unfortunately with an occasional tendency to relapse, is the usual conclusion. There is, however, this important point that all the cases agree in supporting the oft-repeated statement of M. Lucas-Championnière that trephining, even when of a very extensive character, is, if properly performed and with suitable precautions, a perfectly safe operation. The main object of this contribution seems to be a suggestion of an extended range of indications for operative intervention in chronic affections of the head. The author has nothing to tell us relating to cerebral abscess, to intra-cranial tumour, or to the special form of epileptiform convulsions to the operative treatment of which Horsley has directed so much attention; on the other hand, he considers mainly the advisability of extending to other forms of disease the benefits to be derived from trephining, and urges the propriety of performing this operation at as early a date as possible in cases of severe fixed pain with vertigo, and of epilepsy, indications which though not dangerous to life often render it intolerable. The addition to the above mentioned records of four cases of trephining for recent injury serves to remind us of the important part that has been taken by M. Lucas-Championnière in the modern development of cranial and cerebral surgery. In his *Etude Historique et Clinique sur la Trépanation du Crane*, published in 1878, a work which may fairly be regarded as a classical one, the advocacy of a more frequent use of the trephine in the treatment of head-injury is strongly supported by conclusions derived not only from valuable clinical records, but also from study of the history of trephining and from the results of recent physiological and anatomical investigation. In the first place, the freedom of trephining from any serious risk is shown by the results of ethnological inquiry. There cannot be a doubt that this operation was frequently practised by prehistoric man, very probably from a religious and not from any therapeutic motive, and the custom still survives in Mexico and amongst the aboriginal inhabitants of Algeria. In this connection reference is made to a contribution by Dr. Hudson, of Redruth, to the JOURNAL of July, 1877, in which the facts are related of a former wide-spread and traditional belief amongst Cornish miners on the efficacy of trephining in cases of fractured skull, and of the very frequent performance of this operation with good results before certain steps had been taken for the prevention of injury. Having proved in opposition to the views of Desault, Malgaigne, and other surgeons, that trephining need not be contraindicated by any probability of serious risk attending the operation itself, M. Lucas-Championnière proceeds to urge the more extended use of the trephine as a result of the solution, by recent physiological discovery, of the following problem: certain motor disturbances consecutive to injury of the head being presumed, can the region of the compromised cerebral cortex be determined with sufficient precision for the guidance of the surgeon who proposes to afford relief by trephining? It is mainly through his efforts to apply scientific principles in his advocacy of trephining, and to regulate its practice by the results of careful scientific inquiry, that M. Lucas-Championnière has succeeded in doing such great service to modern surgery. Like many of his countrymen, especially Charcot and Broca, his attention was attracted by the investigations of Hitzig and Ferrier, and struck with their important bearing on clinical work as well as on pathological inquiry, he became a pioneer in utilising cerebral localisations in the treatment of head injuries. In a paper read at the Société de Chirurgie in 1877, he proved by records of cases that in many forms of such injury the injured region may be clearly indicated by the presence of paralytic and convulsive symptoms, and he subsequently studied the nature and forms of these symptoms in their bearing on the results of surgical intervention. Certain rules of much value were laid down for the application of the trephine, and some investigations in topographical anatomy described which resulted in the defining of the well-known Rolandic line and the associated guides to the different convolutions of the motor centre. Some of the conclusions of M. Lucas-Championnière have been modified and questioned in the course of the recent active work on cerebral surgery. Too much attention seems to have been paid to the importance of cerebral localisation in cases of injury, in which it is certainly much less valuable than in cases of secondary lesions, of abscess, and of new growth. The accuracy of the Rolandic line has been disputed, although probably no more reliable guide has yet been suggested. The great value, however, of this work as a guide to a previously unexplored region cannot be doubted, and its influence in the developing and perfecting of the most recent department of surgical practice will without doubt be long maintained.

PAPERS ON DERMATOLOGY. By E. D. MAPOTHER, M.D. London: J. & A. Churchill. 1889.

DR. MAPOTHER assigns, as we think properly, the first place in his collection of papers to a short memoir on the vascularity of the skin and the communications of subcutaneous with visceral veins, extracted from the *Proceedings of the Surgical Society of Ireland*, 1876. This paper is practically a dissertation on topical blood-letting, and, short as it is, gives a most instructive sketch of the principles which ought to guide the practitioner in abstracting blood topically in various inflammatory conditions. The occasional advantages of blood-letting are, we assume, so well recognised that the practice will be continued with more or less frequency independently of the rise and fall of the varying doctrines which hold sway during progressive generations of medical teaching. Dr. Mapother shows how leeching the skin of the belly cannot sensibly affect the circulation in the stomach, intestines, liver, or spleen, which are best relieved by draining from the rectum. In acute dysentery and other inflammatory affections of the abdominal organs in the tropics, it is on record that half as much blood drawn quickly from the arm produces a greater impression on the system than by a hundred or two leeches applied to the abdomen. In acute cystitis or prostatitis the surface of the rectum is a fit site, and it is better to puncture one or two veins with a long narrow bistoury than to leech, the flow of blood being promoted by warm lavements. Leeching the skin over an inflamed joint or periosteum is equivalent to opening the vessels from the invaded part. Whilst venesection at the bend of the elbow is almost a thing of the past, in severe whitlows and synovitis of the wrist-joint it gives relief as a topical measure, the same being true of opening the internal saphena vein in acute inflammation of any part of the lower extremity. In pericarditis leeches applied to the third, fourth, and fifth intercostal spaces at the edge of the sternum, especially on the left side, will, through the internal mammary, relieve the veins of the pericardium. The lung may be depleted by leeching on the left side where the superior intercostal receives the bronchial veins near the fifth intercostal space.

For those engaged in active practice and liable to be suddenly called upon to treat severe cases of acute disease this short paper is well worth perusal.

In a paper on the co-relations of eczema and gout the author expresses his belief in an intimate connection between the two diseases. Needless to say, that, with this conviction, in many cases of eczema a plan of treatment suited to a gouty diathesis is recommended. In his own words Dr. Mapother strives to show that constitutional eczema depends upon the gouty diathesis, and therefore should be treated upon the well-known therapeutic indications observed in that condition.

In describing a raw surface involving the right tragus and the hairless skin in front of it in a married woman aged 40, Dr. Mapother remarks on its likeness to Paget's disease of the mammary areola, and takes occasion to remark that Paget's disease of the mammary areola appears to be rare out of England. We learn from this short note that the solution of gutta-percha in chloroform, now called traumaticin, was used forty years ago by Graves. There are other papers on Ichthyosis, Induction of Elephantiasis by posture, the Purpura of Epidemic Meningitis, the Treatment of Angioma, Plastic Operations for the Mouth and Nose, the Treatment of the Syphilides and the Irish Sulphur Spas, all of which are written in an attractive style, are suggestive, and have the additional charm of brevity. The author states in his preface that this little volume is given as a substitute for a third edition of his *Lectures on Skin Diseases*, delivered at St. Vincent's Hospital, in consideration of the recent works which have appeared on this subject. Many readers will congratulate him on the choice that he has made, and will perhaps be as much instructed by these papers as they would have been by the addition to the works on dermatology already before the profession which are of a more bulky volume.

KNIGHT'S GUIDE TO THE ARRANGEMENT AND CONSTRUCTION OF WORKHOUSE BUILDINGS. With Notes and Diagrams. Knight and Co. 1888.

THE author of this book, which bears only the publisher's name, has a keen appreciation of the value of his readers' time. It is seldom that so much valuable information is condensed into such a small compass. Chapter I, within the limit of fourteen pages, gives a concise, accurate, and interesting history of the union workhouse; it touches lightly the old parish poorhouse and the shocking condition of these houses and their occupants before the Poor-law Amendment Act, 1834. Attention is then directed to the indefinite way in which, under the old system, relief was administered, and the wasteful result it led to. We are reminded that "one of the chief causes of the introduction of the new laws was the rampant way in which *able-bodied* pauperism had previously asserted itself, threatening as it did to sap the very life-blood of the country;" and that "the success which has attended the labours of the Poor-law Commissioners of that day is shown by the fact that in the workhouses of the present day there are practically no able-bodied paupers of the original kind to be found." The author then traces the progressive steps by which the arrangements considered desirable in the poor-law institutions of the present day have been arrived at, and, with an evident intimate knowledge of his subject, hints that the arrangements and accommodation necessary for the local governing bodies and their officers have recently been dealt with so liberally as sometimes to amount "almost to lavishness." When we remember that double the cubic space is now considered necessary for healthy persons, and treble the cubic space for the sick and infirm, it is easy to understand that the cost of poor-law institutions must necessarily be much greater than formerly, but nevertheless the hint as to "lavishness" is well-timed and worth remembering.

The work contains all the regulations upon the subject which have been issued by the Local Government Board, and many useful explanatory diagrams. We recommend this eminently practical treatise to the notice of medical men, poor-law guardians, architects, and others interested in the subject.

DISEASES OF THE EYE: A PRACTICAL TREATISE FOR STUDENTS OF OPHTHALMOLOGY. By GEORGE A. BERRY, M.B., F.R.C.S. Edinburgh: Young J. Pentland. 1889.

WE have no doubt that this work will take its place, as it deserves to do, as a standard textbook for English readers. We confess that it seems to us in some places that the author has dived into theoretical matter deeper than was necessary, and has shown a want of appreciation of the difficulties of the average practitioner and student. But the more advanced reader is compensated for this by more space being devoted to many subjects which generally receive but scant attention.

The most striking feature of the book is the very large number of coloured illustrations; these must have involved so much trouble and expense that we wish the results were more satisfactory, but it must be confessed that many of them, on close inspection, prove disappointing.

Some of the external conditions depicted are so easily described that the illustrations are superfluous, and more typical examples of others might have been selected. Fig. 14, representing episcleritis, is, however, free from both these objections, and some of the others are excellent, as, for example, Fig. 20 of hypopyon keratitis, Fig. 22, showing vascular interstitial keratitis, and some others. The statement that Fig. 31 is "slightly diagrammatic" does not, we fear, sufficiently excuse its enormity. The ophthalmoscopic drawings appear for the most part to be made from the inverted method; at least, this is so in the case of Fig. 43, showing a coloboma of the choroid. The author expresses a preference for this method of examination, which we think but few share. The illustration of opaque nerve fibres (Fig. 55) is exceedingly crude, and Fig. 29, which represents a subconjunctival dislocation of the lens, is apparently intended as a puzzle—which of the three globular swellings contains the lens?

The chapters on iritis, sympathetic inflammation, and glaucoma are all exceedingly good. Gonorrhœal iritis, so often omitted from the textbooks, is described; the illustrations of glaucomatous and physiological cupping are rough, but sufficiently illustrative; we should take exception, however, to the statement that in the latter the vessels can always be traced, followed down the side of the excavation; we have over and over again seen physiological cups in perfectly healthy eyes, in which the sides were as abrupt as in any case of glaucoma.

The chapter on diseases of the crystalline lens is very clear and full, though its completeness is a little spoiled by the operation being relegated to another part of the book. In the paragraph on congenital dislocation we miss any allusion to the capsular striæ that are so frequently to be seen. The author advises the retention of iridectomy in extraction as a rule, but is evidently not very decided; probably his conclusion represents fairly well the feeling of the majority of surgeons at the present time. "The proper course to pursue is, I believe, to perform iridectomy as a rule, but not to adhere too slavishly to it, as some cases present features favourable to the successful accomplishment of the more ideally perfect operation without iridectomy; the most suitable are those in which the cataract is not only fully mature, but soft. If, at the same time, the use of cocaine produces a maximum dilatation of the pupil, it is certainly very tempting, and, generally speaking, very safe to leave the iris intact."

In the chapter on "Errors of Refraction," Mr. BERRY is evidently in his element, especially in the small print, and he erects fractions like four-storied houses, and skips down ladders of formulæ occupying whole lines with a facility that lands his reader with a sigh of relief at the bottom, where he finds the whole thing condensed into the old and familiar equations. The chapter, however, is not really so formidable as it looks, and the advanced student will find it very interesting. We fear, however, that the author has failed to appreciate the wants and difficulties of the average student and the busy practitioner. These want plain directions as to the best method of working out a case, and care nothing for the reasons why the ophthalmoscopic image alters its size or shape, as the objective lens is withdrawn. On such a difficult and important subject as when to use a mydriatic Mr. Berry has nothing to say; apparently he never uses one himself, but he cannot seriously advise novices to follow his example. He advises the correction of only the manifest hypermetropia; but what is to be done in cases in which with defective vision all the hypermetropia is latent, or in which there is spasm of accommodation producing an apparent myopia, a condition of which we find no mention?

A special chapter, and a very good one, is devoted to intraocular tumours, and, as might be expected, all subjective symptoms are well considered. The chapter on muscular affections is on the whole excellent, with the exception of that part of it which deals with the treatment of convergent strabismus; here much too low a view is taken of the effect of correcting the hypermetropia, and there is nothing to indicate which are the cases most likely to be cured in this way. Spontaneous cure is spoken of as a rather frequent occurrence; it would be interesting to have some statistics on this point; for our own part we believe that this is exceedingly rare.

Taken as a whole, we should say that this is a textbook which

is far above the average. In a book of this size there must necessarily be many slips, and it is very difficult to keep constantly in view the relative importance of subjects. If here and there prominence has been given to theoretical matters to the exclusion of more practical, this makes the book more attractive to many readers. There is at any rate much in it that is not to be found in many other standard textbooks.

NOTES ON BOOKS.

Du Lavage de la Vessie sans Sonde à l'Aide de la Pression Atmosphérique. Par le Dr. J. M. LAVAUX. (Paris: G. Steinheil. 1888.)—The method of washing out the bladder advocated by M. Lavaux in this work is carried out by means of a reservoir of the ordinary kind fixed at a certain height above the patient, and connected by india-rubber tubing, not with a catheter, but with a metallic tube only 3 centimètres long. This tube fits into a conical perforated india-rubber obturator, which is introduced within the urethral orifice. The stream of water is then turned on, and, a force sufficient to overcome the "inter-urethral" sphincter being employed, the fluid passes on into the bladder. As soon as a feeling of distension is experienced by the patient the flow is stopped and the obturator removed, and he empties the bladder by his own effort. The stream of water is regulated by means of a difference in calibre of the short urethral tubes, of which there are six sizes, the smallest having a channel one millimètre and a third in diameter, and the largest one of three millimètres. The force of water flowing through each of the tubes with the reservoir at a given height has been calculated, and one or other size is selected according to the sensibility of the bladder and the resistance of the sphincter in each case. This plan is said to be applicable to to all kinds of cystitis in both sexes, especially in the more painful forms of the affection in which the introduction of a catheter causes so much pain and irritation. It is also equally applicable for maintaining an aseptic condition of the urinary passages in cases of operation, the essential condition in any case being that the patient should be able to empty the bladder voluntarily. M. Lavaux has also devised a peculiar form of catheter for irrigation of the anterior portion of the urethra, and the same instrument can be adapted for washing out the uterus. The solutions mostly used by the author contain boric acid or nitrate of silver varying in strength according to the case, and preceded or followed by a solution of cocaine when the use of that drug is indicated. A number of cases are detailed illustrating this mode of treatment, which, in the hands of its author, has been followed by excellent results.

An Epitome of the Practice of Medicine, Surgery, and Midwifery or the "Keynotes of Practice." By Dr. BUCHANAN, author of numerous essays and works on progressive medicine. Second Edition. (New York: R. R. Russell. 1888. London: Potter and Clark.)—This book belongs to a class of which, perhaps, the less said the better. It is not easy to determine for what particular category of readers it was intended, for it is difficult to conceive that medical men, even if recently qualified, require to know that a yellow skin is presumptive of jaundice, or redness of congestion. Turning to his remarks on particular diseases, we find he states that diphtheria is due to the ravages of the "disease-germ," *oïdium albicans*, a view not hitherto promulgated. Syphilis is attributed to the deterioration of normal elements into "a diseased germ, a living, contagious, and infectious disease, a potent microbe." It is to be hoped that the work will die a natural death, and not be the means of disseminating the errors and misstatements in which it abounds.

Notes on Venereal Diseases. By H. DE MÉRIC. (London: H. Renshaw. 1889.)—Of the subjects treated in this small work, that of syphilis naturally occupies most of the space, and the description given of the disease is, on the whole, a good one, but it would have been better if more care had been taken to avoid obscurity of expression such as the following:—"This rarity of the presence of simple sores on other parts of the body, except on the mucous membrane of the genitals, seems to me an additional proof of the greater solution of continuity, and of the larger and closer want of contact required by the virus of these sores compared to that necessary for the inoculation of the syphilitic lesion." The section on gonorrhœa is mostly good as far as it goes, but, like that on syphilis, it is incomplete. The "gonococcus" is not even mentioned, nor have we been able to find a word about such complications of the disease in women as perimetritis, salpingitis, and ovaritis—maladies concerning which the gynæcologists have spoken and written so much and so gravely of late years. Every book, again, ought to have an index, or at least an adequate table of contents. This book has neither.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS,
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

THE SHANNON LETTER AND BILL FILE.

WE have received from the Shannon File Company, 2, Finsbury Street, E.C., one of their letter and bill files which seem well adapted to supply the requirements of the busy practitioner, to whom a file which admits of the rapid classification of documents and ready reference thereto is a desideratum. The filing arrangement consists of two parallel nickel arched wires separating in the centre, into which loosely fit alphabetical index sheets, between which under the desired letter any document can with great facility be placed. In order to render the filing more easy and the documents less liable to be torn, the file is fitted with a perforator which cuts two circular holes of the necessary dimensions to allow of the document being dropped on to the file without trouble. The advantages claimed for the Shannon file, and which it undoubtedly seems to possess, are, that papers can be manipulated with the greatest ease; that any documents can be removed, or documents from the same person or relating to the same matter can without difficulty be placed together without disturbing the orderly arrangement of the others. When the file is filled, the contents may without disarrangement be removed and placed in a binding case which is provided, and is well adapted for the purpose. The value of the file is further enhanced by what is known as the C. C. cover, which serves the purpose of an index to the binding cases. The use of these files is likely to prove a great convenience, and to save the annoyance and trouble often incidental to the want of some well arranged and easy mode of filing letters and documents.

NEW CLINICAL THERMOMETERS.

MESSRS. HOOPER (7, Pall Mall East, London) have brought out two new thermometers, with an ingeniously devised casing which will save a great deal of loss in breakage and be found otherwise very convenient for clinical use, whether in hospitals or in private practice. The thermometer No. 1 is so made that it can be used while folded into its case, the latter being so arranged that the numbers can be perfectly read without removing the protective case, and the thermometer can be used under the axilla or in the mouth without the chance of being broken, nor will it roll off the table. This thermometer is also so arranged that by a simple mechanical adjustment it turns on a hinge, and can be drawn out of its case, and thus used as a long thermometer for uterine purposes.

Thermometer No. 2 is intended for the nurse's use in hospital, although it does equally well as an ordinary medical thermometer. The index is very legible. It can be suspended to the nurse's waist-band or hung on a chain, and is protected by its casing. It will no doubt be usually worn on the chain and guard like a watch in the folds of the dress.

SUPPORTS FOR THE LITHOTOMY POSITION.

SIR,—In the JOURNAL for May 25th, page 1175, you describe as a new invention supports for the lithotomy position, stated to have been devised by Dr. W. C. Wile, of Danbury, Connecticut. These supports appear to be an adaptation of "gynæcological crutches" devised by me and shown at the meeting of the British Medical Association in Dublin. A correct representation of these crutches for the lithotomy position is given in the third edition *Diseases of Women*, by Macnaughton Jones, page 225, where he recommends my crutches for operations on the perineum when describing Tait's operation. Our transatlantic cousins are so apt to copy inventions, and even to republish books of merit in their own names (I have before me a copy of a reprint of a well-known British author's book purporting to be edited by a gentleman of Philadelphia) that I think it is due to me to have the credit of these supports for the lithotomy position. On reference to Macnaughton Jones's book, page 225, you will observe that the woodcut, with certain modifications, is identical with that shown in your recent issue.—I am, etc.,

Glencone, May 28th. W. ALEXANDER, M.D., Brigade-Surgeon.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1889.

SUBSCRIPTIONS to the Association for 1889 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, JULY 6TH, 1889.

THE UNIVERSITIES (SCOTLAND) BILL.

AFTER years of weary waiting the Universities (Scotland) Bill has at last appeared before the House of Commons, has successfully passed through all its stages there, and has quietly gone up to "another place." The Lords are not likely to make organic changes in its structure, and although some questions have been allowed to stand over for discussion on report, they are chiefly matters of detail, and their acceptance or rejection will not alter the provisions of the Bill. We may therefore safely assume that the Act, as we may almost venture to call it, is now virtually adopted by the Legislature, and will in the very near future become law; and it may not be without interest if we briefly direct attention to its main provisions, to the changes which it effects in the constitution of the Universities, and to the alterations which have been made in it since the second reading.

In the first place, the Bill proposes to alter the composition and widen the power of the University Courts. To these bodies are to be entrusted a wide variety of functions, including the sole charge of all funds, the appointment of professors, the regulation of extramural teaching, the appointment of various committees, and the ultimate decision of certain questions which may come before them on appeal from the Senatus Academicus. An attempt was made to widen the range of selection so as to introduce a larger infusion of popular representation into the Court; and it was pointed out with considerable force that the Universities might gain not only strength but material advantage by more direct contact with wealthy industrial centres, and with School Boards and other educational bodies. But after prolonged discussion the Government only yielded so far as to place St. Andrews and Dundee on a level with their sisters by providing their chief magistrates with seats on the Court. Coming next to the Commission, we note that every Scotch member who spoke in the debate concurred with his colleagues in a good solid grumble over the way in which it has been formed. Not only is it overgrown and unwieldy, but the component parts of which it is made up do not seem to give sufficient guarantee for energetic reform or substantial progress. As Mr. Hunter phrased it, this Bill is nothing more nor less than a blank cheque placed in their hands; and when we consider that they have control practically unlimited, save by the Act of 1858, over the powers, jurisdictions, and privileges of chancellors, rectors, assessors, professors, lecturers, assistants, teachers, examiners; over the government, policy, and discipline of the University; that they have the regulation of fees and of the general course of study, of compensation for degrees, of the salaries of professors, and of the foundation of new chairs, the necessity which existed for scrutinising very carefully the educational character of those to whom the duty of filling in the figures is to be entrusted is very evident. The opening skirmish took place over the size of the Commission, and it was pointed out that equally delicate and difficult work had been done by bodies numbering from seven to ten, and that fifteen may well seem to be a direct encouragement to irregularity of attendance. But, although the reformers were beaten in this little struggle, the skilful tactics of Mr. Campbell-Bannerman induced the Government to agree to come to terms with their opponents so far as to alter the quality if not the quantity of the Commission. Accordingly, four names are to be taken out and replaced by others suggested by the Committee; those of Dr. Heron Watson, Dr. Blackie, Sir William Thomson, Professor Stuart, and Dr. Bruce, of Dingwall, were offered for the consideration of the Lord Advocate. The ultimate decision has been postponed till the Bill comes back to the Commons, and we understand that an effort will then be made to replace the name of Sir J. Crichton Browne, which has been somewhat invidiously selected for extraction, and whose loss would be greatly felt. The three others were shorn away by the summary process of cutting from below upwards, and it is a great misfortune that this blind use of the pruning knife will affect Mr. Erichsen, whose abilities and experience specially mark him out for inclusion, and who will leave a serious and all but irreparable blank. Perhaps some means may yet be found of retaining his valuable services.

The affiliation clause of the Bill is of no little importance, for by it provision is made for the extension of the Universities by the attachment of new colleges under regulations to be laid down by the Commissioners; the most defined of these arrangements at the present time is for the establishment of a fully equipped conjoint school of medicine at St. Andrews and Dundee.

A word or two may now be said regarding some of the leading amendments proposed in Committee, as indicating various lines of thought on University matters, and the practical form in which reform is desired to proceed.

Mr. Haldane inveighed with some energy against the elevated emoluments of the medical professors, and proposed that all the fees should be placed in a general chest, and distributed with an impartial hand, for the frugal but not luxurious maintenance of the occupants of chairs, and for the benefit of the University. The example of Germany was referred to in this connection, but the widely different standard of living in this country seemed to make such a comparison as odious as comparisons proverbially are, and it was felt by the Committee that it would hardly be fair to withdraw from scientific men the direct stimulus of sharing the pecuniary benefits of their own success.

A vigorous appeal was made by Mr. Wallace, and ably supported by Sir W. Foster, in favour of conferring degrees without residence on all those who had followed a regulated curriculum, and could pass the requisite examination. After

an interesting debate this proposal was rejected by a considerable majority; and a similar fate befell another amendment giving practical free trade in teaching to all who can come up to a certain standard of efficiency.

Failure also attended the very reasonable wish to hand the Crown patronage of chairs directly over to the Court, but better luck was in store for Mr. Bryce's amendment, and Government consented so far to meet his views as to enable the Scottish Universities to follow the example of Oxford and Cambridge, and no longer exact any test from the occupants of lay chairs.

Finally, one word about finance: That the Universities north of the Tweed are seriously hampered by poverty is only too well known, and the oldest and most historical of them all—St. Andrews—has been reduced by agricultural depression to a state of positive indigence which it is painful to contemplate. The purse strings of the Consolidated Fund have only been so far relaxed as to allow £42,000 to dribble forth annually for the settlement of a large amount of competing claims, and we fear the relief effected will be much more apparent than real. But now that finality has at last been reached, and the worrying period of uncertainty removed which paralysed all progress and checked every useful reform, we doubt not that patriotic citizens will now, as in former days, rally round these ancient seats of learning, and share with them that wealth which the teachings of their old Almæ Matres may have helped them in some measure to amass.

But, although unhappily this Bill still leaves our Universities, as regards endowment, on a footing of sad inferiority to those of many Continental countries of less wealth and population than our own, it will, at all events, supply some of the encouragement and stimulus which they need, and we feel sure that in the future they will continue with increased energy that great work for the education of the people which they have undertaken in the past, and which must always be a source of legitimate pride to the country of which they are the distinguished ornament.

THE SCOTCH LOCAL GOVERNMENT BILLS.

The Government Bills for reforming the existing system of local government in Scotland are awaiting the critical detailed consideration to be given to them in Committee by the House of Commons. The proposals in these Bills are of a very important character, affecting, as they do, the whole future of local administration in Scotland, and it is to be hoped, therefore, that the pressure of other business will not unduly curtail the time available for the full consideration which the proposals deserve. It is at the same time to be hoped that the amendments which are needed in order to make the measures efficient may be agreed to by Parliament, and that the Bills may become law during the present session.

Many very important and contentious questions connected with finance, education, and general administration are involved in the Bills; but it will be a great public misfortune if those questions are allowed to overshadow and hide the no less important matters connected with the improvement of the present system of sanitary administration. We have already called attention in these columns to the influence which this legislation will have on future sanitary administration throughout Scotland.

We have endeavoured to emphasise the remarks made by the Lord Advocate when introducing the Bills, that "the administration by the parochial boards of the law relating to the public health has not by any means been completely satisfactory;" but that, on the contrary, "the Public Health Act is in many parts of Scotland nothing more than a dead letter;" and we have pointed out that, although many of the principles for which the British Medical Association has long been contending have been embodied in the present Bills, yet there are many most important questions left in their present unsatisfactory condition.

The Chairman of the Parliamentary Bills Committee of the Association has given special attention to this question, and has laid before influential Members of Parliament the views, after communication with many leading authorities, endorsed by the Committee as to the flaws in the Bills, and the best means of rectifying them. There is reason to hope that when the amendments which they have urged (see page 34) come to be considered by Parliament, they will be favourably received.

The most important of these necessary amendments relate to the appointment and tenure of office of medical officers of health, and to the need for strengthening the Board of Supervision, so as to increase its usefulness as the central controlling public health authority.

In the Bills it is proposed to give to the new County Councils the power, "if they see fit," to "appoint and pay a medical officer or medical officers." Mr. Mark Stewart has given notice of an amendment which would make the appointment of a medical officer by each County Council a compulsory duty. It requires no elaborate argument to prove that it is as necessary for an authority having serious responsibilities in connection with the health of the community to have the advice of a medical adviser skilled in preventive medicine as it is to have proper legal or other professional advice. It might, however, be a hardship to impose upon some of the smaller county authorities the expense of employing a separate medical adviser with adequate experience and skill; but that difficulty can be met by providing that any such county may enter into arrangements with the Council of an adjoining county for the appointment of one and the same medical officer.

It is also provided in the Bills that the local authorities in each county may arrange with the County Council for the employment of the county medical officer. Under this arrangement the advantageous combination of districts under the same medical officer will be promoted as vacancies occur amongst the existing office-holders, and an eventual saving in the aggregate expense may be looked for.

In connection with this question there is the truism that every local authority entrusted with the protection of the public health and the administration of the sanitary laws should have the properly-skilled advice of a medical officer of health. But, under the Public Health (Scotland) Act, 1867, the appointment of such an officer is permissive only, and consequently in a large number of districts there is no health officer whatever. The appointment of a skilled medical ad-

viser should be made compulsory upon every local authority, and it should be remembered by those whose first consideration is a financial one that if such authorities availed themselves of the services of the county officer they would ensure to themselves sound and experienced advice for a comparatively trifling contribution.

The tenure of office of the medical officer is another very important matter. The medical officer of health is an advising officer, and the responsibility for adopting or neglecting his advice rests upon the local authority, who have to account for their actions to their constituents. It is therefore absolutely essential, as proved by English experience, that the adviser should be beyond the reach of the caprice of the authority he immediately serves, or of the individual members of that authority. Hence he should have some reasonable security in his tenure of office, and should hold his appointment during good behaviour. He should not be removable from office except with the consent of the central authority—the Board of Supervision. It is a very curious fact that, although the local sanitary inspector in Scotland is removable only by the Board of Supervision, no such protection is extended to the medical officer of health, who is therefore at the mercy of the parochial board.

Another matter of importance is the need for strengthening the Board of Supervision. That Board at present consists of nine members, but not one of them is a medical man. Nor have the Board appointed such a medical staff as the Central Health Department of the country should possess. They have secured part of the services of the able health officer of Edinburgh, but beyond this they have no special medical advisers or inspectors for sanitary purposes. It would be well if provision were made for the appointment of at least one medical commissioner on the Board of Supervision, as is the case in the constitution of the Local Government Board for Ireland, and for slightly increasing the Board's medical staff. Otherwise it is difficult to see how the Board of Supervision can properly carry out the responsibilities to be imposed upon them by section 23 of the Bill, when a County Council causes a "representation to be made" to them respecting the non-enforcement of the Public Health Act in a particular district. The benefit which it is generally admitted has accrued, both to individual localities and to the community at large, from the efforts of the medical department attached to the English Local Government Board is a further argument in favour of our contention.

The views we have expressed are shared by those best qualified from personal experience and observation to form a correct opinion as to sanitary administration in Scotland. We would again urge all who are interested in Scotch sanitation to approach their local Parliamentary representatives and the Government upon this important subject, in order that the soundest and most efficient form of sanitary administration may be secured for Scotland.

AN INTERNATIONAL COURTESY.

Dr. Billings, the accomplished American physician, whose address at the International Medical Congress in London excited much admiration, and whose works are well known and greatly esteemed by all of us, has recently passed through London—where he has been the guest for a few days of Dr. Ord—on his way to Oxford, to receive there the distinction of an honorary degree in law at the annual encænia. Being charged with the preparation of the forthcoming census of the United States he could make but a brief stay, and is already on his way home, otherwise we might have hoped to have seen him at our Leeds meeting.

Few could have deserved this new honour better. Dr. Billings is still a comparatively young man when the work which he has done, the position which he fills, and the honours which he has obtained are considered. He was born in Indiana in the year 1838. He took his degree of M.A. at Miami University, Ohio, and the degree of M.D. at Cincinnati, Ohio, in the year 1860. In the next year the war of secession broke out, and he entered the Federal military service. His energy and abilities at once marked him as a man to whom serious responsibilities should be entrusted. He was Medical Inspector of the Army of the Potomac in 1863 and 1864. He served with the Federal army in the field, being present at the battles of Chancellorville and Gettysburg, and subsequently took part in General Grant's fighting in Virginia. His talent for organisation found ample field in the development of the great field hospitals, with their thousands of wounded and sick. After the war he and others were occupied in creating that monumental record—the great *Medical and Surgical History of the War of the Rebellion.* This work could only be accomplished with the aid of the Government, and this was dispensed to Dr. Billings and his colleagues with a generosity which has enabled them to produce a work than which none other of like magnitude, completeness, and merit exists. It will prove for many years to come, as it has already proved, a treasure-house of information.

A work not less important, and perhaps more after his own heart, has been the making of the Army Medical Museum and Library at Washington. The museum is really a wonderful thing for its age, both from the quantity and quality of the material arranged in it. It has been now transferred from the old theatre building in which Lincoln was murdered to the palatial structure on the shore of the Potomac, specially built for it under Dr. Billings's direction. Here, too, the wise liberality of the Government is displayed in the completeness of the arrangements and the great expenditure they have entailed. Here, too, are many rooms where, under the supervision of its head, much good work is being accomplished.

It is, we believe, not too much to say that the library of the Army Medical Department is the largest and most complete medical library in the world. It, likewise, owes its development to the fostering care of Dr. Billings. It contains not only all the best modern books and periodicals in every language, but a collection of the classic works of every kind connected with medical knowledge of our forefathers in scientific work. Not only is it free to everyone to enter, but to any part of the great United States books from this library are forwarded on application to any duly qualified man. The losses which this entails are stated to be infinitesimal. The crown has recently been placed on another great work fostered by Dr. Billings in the opening of the Johns Hopkins Hospital at Baltimore, built from his plans and under his supervision, an account of which he recently published. No expense has

been spared in the successful attempt to make this the most perfect of modern hospitals.

Amid all this primary official work he has found time for other offices and for the production of books. He has been Vice-President of the National Board of Health. He had charge of the vital statistics of the tenth census, bringing out a report in two large volumes. He has also charge of the vital and mortality and social statistics of cities for the approaching census of the United States.

With all this important occupation Dr. Billings's official rank is less high than is generally supposed in this country. He is Major and Lieutenant-Colonel and Surgeon in the United States Army.

His appearances in this country have been such as to make his great power obvious. No one who heard him can readily forget his addresses at the International Congress in 1881, and at the meeting of the British Medical Association at Brighton in 1886. They were characterised by breadth of view, and by close and compact marshalling of facts—by appropriate and often humorous quotations and illustrations. They held large audiences in earnest attention from first to last.

Dr. Billings has also done great service to the whole of the medical profession by his *Index Medicus*, begun in 1879, and still in regular publication. He is now preparing a large dictionary of medical terms, in two volumes, which is to appear speedily.

With such a record, it is not to be wondered that the University of Oxford, wherein all that Dr. Billings has done is well known to Sir Henry Acland, should have deemed him worthy of the high honour of its D.C.L., thus adding his name to those of Owen, Alison, Brodie, Milne Edwards, Van der Hœven, Christison, Stokes, Jenner, Gross, Paget, Lister, Allen Thomson, William Farr, Simon, and others to whom she has given in the last few years her highest degree. Besides this honour, he already holds the honorary degrees of LL.D.Harvard, LL.D.Edinburgh, and M.D.Munich, and he is a member of the National Academy of Sciences in America, which may be in many respects compared to our Royal Society.

How various are the ways by which scientific medicine is being advanced is plain enough to our readers. It is pleasant to think that the United States are advancing along the whole line of knowledge. It is of no small moment that Washington, but lately only a political capital, is becoming a centre of scientific biological effort, through the rapidly expanding National Museum, and the labours of Dr. Billings in the War Office. The probable effects cannot easily be overestimated. The problem of the future of the United States is one of the most interesting, as well as the newest, in the history of the human family. The modern appliances for material growth there seen have never in history been so rapidly developed, and we are glad that a firm grasp is likely to be taken by our American brethren of all of the circumstances that affect the progress of scientific, curative, and preventive medicine.

THE man upon whom the operation of ligature of the common iliac artery was performed by Mr. Clement Lucas has continued to do well; the wound has healed, and he is now considered to be convalescent.

THE Hospital Sunday Fund amounted on Wednesday night to £27,000, an excess of £1,500 over that of the corresponding date of last year.

THERE exist at the present time, counting the Paris Institute, more than twenty antirabic institutes scattered over the world. There are six in Russia—at Odessa, St. Petersburg, Moscow, Kharkoff, Samara, and Tiflis; five in Italy—at Naples, Milan, Turin, Palermo, and Bologna; one each in Vienna, Constantinople, Bucharest, Rio Janeiro, Buenos Ayres, Havannah, Chicago, Malta Two new laboratories are in course of organisation.

THE Yorkshire Branch, the East York and North Lincoln Branch, the Glasgow and West of Scotland, and the Dorset and West Hants Branches of the British Medical Association, have called special meetings on July 17th, to discuss Dr. Rentoul's proposed hospital scheme. No doubt other Branches will take a similar course, and we shall be glad to receive notes of the discussion, or at any rate of the resolutions passed.

H.R.H. THE DUKE OF EDINBURGH.

HIS ROYAL HIGHNESS THE DUKE OF EDINBURGH will this week terminate his course of treatment at Kissingen, whither he was sent by the advice of Sir Oscar Clayton. His condition has so much improved that he now considers himself in the enjoyment of his usual health and strength. He will remove to Coburg, and remain there with his family until November, when he will return to London.

SUNSTROKE OF SOLDIERS.

THE reported statement that thirty-five cases of sunstroke had recently been sent to the military hospital from the 2nd Battalion of Buffs (East Kent Regiment), as the result of heat or fatigue from route-marching is quite incorrect. It always struck us, however, as monstrously absurd to have the field days at exactly the same hour in the summer heat as in the winter cold. In both cases the clothing is the same. Is it any wonder that men "fall out" on the march? Common sense would suggest drilling in the early morning in summer heat, as in India; but "red-tape" and "regulations" are apt to get the better of common sense, and sunstroke, notwithstanding, will apparently continue to do so.

RABIES IN LONDON.

SOME surprise has undoubtedly been created by the fact that the London County Council, instead of exercising their power for the muzzling of dogs, which has become necessary owing to the increase of rabies in the metropolis, should have asked the Privy Council to issue an order relating to the whole country. There is no question but that the muzzling of dogs throughout England would lead to far more beneficial results than if this precaution were limited to any one part; and experience has shown that the benefits resulting from the action of one local authority have been prejudiced by the want of more general action. Two courses were open to the London authority: the first, to exercise the powers they possess, and, at the same time, to point out the insufficiency of this proceeding; the other, to decline to move unless the larger area were included under an order. They have selected the latter, and the Privy Council having refused to comply with the request, the County Council are left in the very awkward position of either leaving London without this protection, or doing what was open to them in the first instance. We may anticipate that now they have a health department they will be less likely in future to meet with these difficulties.

ENGLISH PATIENTS AT THE PASTEUR INSTITUTE.

In a letter to Sir Henry Roscoe, read by him at the Mansion House meeting, M. Pasteur gives the following figures relating to the English subjects treated in Paris:—"Up to May 31st, 1889, their total number was 214. Of these, there have been five unsuccessful cases after completion of the treatment, and two more during treatment, or a total mortality of 3.2 per cent., or more properly 2.3 per cent. But the method of treatment has been continually undergoing improvement, so that in 1888 and 1889, on a total of 64 English persons bitten by mad dogs and treated in Paris, not a single case has succumbed, although amongst these 64 there were ten individuals bitten on the head and 54 bitten on the limbs, often to a very serious extent."

THE NEXT INTERNATIONAL MEDICAL CONGRESS.

It is now definitively settled that the tenth International Medical Congress, to be held at Berlin, shall open on August 4th, 1890. The proceedings will terminate on August 9th. A general meeting of representatives of all the medical faculties and societies in Germany has been convoked by Professors Virchow, von Bergmann, and Waldeyer. It will meet at Heidelberg on September 17th, to discuss the arrangements to be made for the congress. Among those expected to be present at this conference are all the men of light and leading in the medical profession in Germany. Among other names we notice those of von Ziemssen, Biermer, Czerny, von Zehender, Schwalbe, Lichtheim, Weigert, Trendelenburg, Mosler, Binz, Hegar, Leichtenstern, von Zenker, Schönborn, Naunyn, Graf, His, Hitzig, etc.

THE ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

The Royal Medical and Chirurgical Society has commenced the alterations and improvements at its new house in Hanover Square, which will, it is hoped, render it in every way suitable for the purposes of the Societies which will in future meet there. We are glad to hear that Dr. Quain, wishing to assist the Society in the manner likely to be most permanently useful, has made it the very liberal donation of £100, and that the Council has determined to invest this sum as the nucleus of an "Endowment Fund," only the interest of which is to be used. It is to be hoped that other Fellows of the Society will follow Dr. Quain's excellent example, and thus enable the Society by donations and legacies to accumulate a fund which will give to it permanent financial stability. There seems in the past to have been an erroneous idea that the Society was wealthy, and there is good reason to believe that legacies have gone elsewhere which, but for this, might have come to the Royal Medical and Chirurgical Society. As a matter of fact, the Society has always been obliged to spend upon its library and *Transactions* the whole of its annual income; and Dr. Quain is, we believe, the first who has made any pecuniary donation to the Society.

THE OBSTETRICAL SOCIETY.

As we noted last week, the meeting of the Obstetrical Society, held on Wednesday, July 3rd, is the last assembly of any of the four well-known Berners Street Societies which will ever be held in the well-known rooms. Dr. Galabin, President of the Society, was in the chair, and after the exhibition of several specimens of high interest, a paper was read by Dr. Matthews Duncan on a Peculiar Laceration of the Vagina in Labour. An active discussion followed the reading of this communication. The second paper, on Chorea in Pregnancy, was read by Dr. Montagu Handfield-Jones. Some interesting observations were made in the discussion which ensued. The meeting displayed a very creditable sample of the kind of work which has been transacted in the rooms by various societies for over half a century. In adjourning the meeting, Dr. Galabin referred to the fact that no more meetings would be held in Berners Street, and that negotiations were in progress between the Obstetrical and the Royal Medical and Chirurgical Society for the installation of the library of the former society, and the holding of its meetings, in the new Hanover Square premises of the latter.

THE FATHER DAMIEN MEMORIAL FUND.

At a meeting at Marlborough House, at which the Prince of Wales presided, the Executive Committee presented a very able report, which was adopted. It will be seen that the features which we hinted at as open to objection have now been skilfully eliminated, and that in the form in which the project is now moulded it provides in an elastic manner for any needed assistance to indigent lepers in this country, who are, and we hope always will be, very few in number; and secondly, for the carrying out of investigations by the aid of skilled assistants to be sent abroad, who will no doubt be placed in communication with those British physicians who have already distinguished themselves in the colonies and dependencies in the study of these subjects. The aid is invoked of the Colleges of Physicians and Surgeons, to prepare detailed plans, and large assistance is asked, and may be expected, from the Government of India.

THE TRANSFERENCE OF POWERS BY THE LOCAL GOVERNMENT BOARD TO THE COUNTY COUNCILS.

The Local Government Board have had for some time in preparation an Order in Council for the transfer of the various departmental powers of the Board, which, under the Local Government Acts, are to be transferred to the County Councils by such Order. We learn with regret that it is now arranged that none of these powers shall be so transferred before May 2nd next year. The reason assigned is that full opportunity will thus be given for Parliamentary discussion of any such Order before it comes into operation. This is of course reasonable, but the present powers of the Councils, and especially of the London County Council, are so very inadequate and insufficient, especially in reference to sanitary questions, that the delay is much to be regretted.

PHYSIOLOGY IN GIRLS' SCHOOLS.

An endeavour is being made to induce the Council of the Girls' Public School Company to introduce a systematic course of lectures on Physiology and Hygiene into their schools. Some of the ladies of the Council appear to fear that the selection of subjects might be difficult. Dr. Schofield, one of the lecturers of the National Health Society, attended a recent meeting and gave explanations which may, it is hoped, remove these difficulties. It is not a little strange that in the course of the modern education of women, the most essential of all knowledge should be withheld—that, namely, of the elementary facts of physiology and the laws of health, as to which correct elementary ideas are essential, not only to their own well-being but to that of the families of which they are ultimately to be the mistresses.

THE MUSEUM OF THE COLLEGE OF SURGEONS.

The annual show of new specimens was displayed on Thursday for the benefit of the Fellows who came to record their votes at the Council election. Among the more important and novel additions to the Pathological Series were congenital displacement of the femora, taken from Dr. Carnochan's original case, anthrax of the intestines, actinomycosis of the human liver, calcification in hepatic cirrhosis, psorospermial cysts of the ureters, syphilitic disease of joints and epiphyses, dermoid tumour of the testicle, and avulsion of the lower limb with the whole length of the great

sciatic nerve. There were also specimens of intestines, forming a series of experimental operations where Senn's plates were employed. Another series illustrated Mr. Jonathan Hutchinson, jun.'s Jacksonian Prize essay on injuries of epiphyses. Dr. Matthews Duncan's fine series of watercolour drawings taken from life, representing lupous, cancerous, and other ulcerative affections of the vulva, were also on view. Other series of drawings and photographs of morbid conditions, prepared by Mr. Burgess, were displayed; as well as many originals of illustrations which have been published in the archives of various London societies. Mr. Eve, the pathological curator, has issued the annual supplement to the catalogue. The larger number of new specimens in the department of comparative anatomy have been added to the series illustrating the tegumentary system, an effort having been made by the conservator, Professor Stewart, to bring together preparations in illustration of some laws of colour, distribution, mimicry, etc. A preparation showing the erupted teeth of *Ornithorhynchus* and the horny plates which replace them in the adult are of great interest.

THE PROPAGANDA OF HEALTH.

THE National Health Society (whose headquarters are at 44, Berners Street, London) held a public function of interest on Saturday last, under the presidency of Sir Spencer Wells. The Duchess of Westminster presented the prizes and certificates to some hundreds of persons, chiefly ladies, who had distinguished themselves in a numerous series of examinations in subjects appertaining to "the health of the home," the principles of domestic economy and hygiene, elementary physiology, and "first aid." Dr. Schofield, Mr. Owen Lankester, Mr. Gell, and Miss Homersham are among the most active of the Society's lecturers and examiners. Classes have been formed, and examinations held all over England, in fashionable and aristocratic drawing-rooms, as well as in the poorest parishes of the East End; mothers' meetings and minors' classes being equally within the sphere of the Society's operations. Testimony to the good work of the Society was borne by the Chairman (whose daughters have passed through the classes), Mr. S. Pope, Q.C., Dr. Thorne Thorne, Mrs. Garrett Andersan, and Mr. Owen Lankester. Mr. Pope observed that nothing lied like a proverb; and the proverb that a little knowledge is a dangerous thing only applied to those who did not know how little their knowledge was. The speeches were excellent throughout, and the proceedings lively and instructive. In summing up the proceedings as Chairman of the Council, Mr. Ernest Hart referred to the great value of the cheap sanitary pamphlets and flysheets which the Society publishes and distributes; its readiness to give teaching and advice in all the poorest districts throughout England; and the great devotion and ability of Miss F. Lankester, the Secretary of the Society—"one of the most successful of public officials." Dr. Thorne dwelt on preventable infant mortality, in a speech which should be reprinted *verbatim*. The Society provides lectures, circulates diagrams and cheap sanitary literature; opens classes, conducts examinations, supervises and gives lectures on first aid, on home nursing, and domestic economy and physiology, and generally undertakes and aids the propaganda of health wherever its aid is needed and invoked. Its work is carried out very expensively; among the members of its Council are Mr. Shirley Murphy, Mr. Noble Smith, Inspector-General Dr. Leonard, Mr. H. H. Collins, Mr. Ernest Turner, and other well-known sanitary authorities. Its work has been carried on for many years, and is annually extending.

MEAT POISON.

THE following particulars of a recent series of remarkable cases of acute poisoning from eating unsound meat have been furnished by Mr. William Spiers, M.R.C.S., L.R.C.P., Cleator. On Sunday morning, June 23rd, a number of young men visited St. Bees on the Cumberland coast for the purpose of bathing. After their dip they proceeded to the Seacote Hotel there, and were supplied with sandwiches consisting of roast meat, ham, and bread. No suspicion of anything being wrong with the meat occurred to them at the time, and some ate three sandwiches and others four. In the course of the afternoon several complained of feeling rather sick, but all were able to take tea at home, and nothing serious occurred till about twelve hours after eating the sandwiches, when four were seized with all the symptoms of English cholera, six others were attacked within twenty-four hours, while in three cases the symptoms did not set in till after about thirty hours. The symptoms varied in degree, but were the same in all—excessive vomiting and purging, accompanied by headache, severe pain in the stomach and bowels, intense thirst, and collapse, followed in three cases by high temperature and delirium. The vomited matter was green, and the motions dark brown in colour. In all the cases improvement was first indicated by cessation of the vomiting and the tongue cleaning at the tip and edges, the diarrhœa persisting but becoming painless and less frequent; indeed, all are still having loose motions, but they are reduced to two or three in the twenty-four hours, as compared with every ten minutes in the severest cases. The treatment was varied in each case, consisting of mixtures containing (1) opium and bismuth; (2) opium, catechu, and chalk mixture; and (3) small doses of morphine with Gregory's powder, which answered well in relieving the sickness. The diet was restricted to boiled milk, cold, with soda-water, also rice-water, and barley-water, to which a little brandy was added. After the vomiting had subsided, well boiled barley with milk, and boiled rice with milk, were added to the dietary, and several are now able to take a lightly boiled egg with tea. All these cases are now doing well, although two are still unable to leave their beds from weakness, while all show by their changed appearance that they have come through a serious illness. It is to be noted that several who had ham but no meat were unaffected, whereas all who had meat were attacked. The cow from which the meat was taken was killed on June 13th, and the piece (14 lbs. of sirloin), roasted in an oven on June 21st. It was *underdone*, as blood flowed when the sandwiches were being cut on Sunday, 23rd. Several of the inmates of the hotel ate the meat and all were seized, some being dangerously ill. There was one fatal case, that of a woman, as to which, Dr. Braithwaite stated in his evidence at the inquest that when sent for he found her complaining of sickness and diarrhœa, and very severe griping pains in the bowels, and cramp of the extremities, especially of the legs. She complained of intense thirst and was severely purged. Dr. Braithwaite did not think at that time that the symptoms were those of poisoning. She stated that she had had dinner of beef, potatoes, cauliflowers, and a very light tea. Later the same day, there were no fresh symptoms. He was led to think death was due to blood-poisoning from the absorption of some putrescent animal matter. A verdict was given in accordance with the medical opinion.

KRAUROSIS VULVÆ.

IN 1885, the late Professor Breisky described a peculiar degeneration of the tissues of the vulva, to which the name of kraurosis vulvæ was given.[1] The labia minora especially undergo atrophy, and owing to the degeneration of the vestibular structures, the meatus urinarius gapes, and becomes liable to severe irritation, or even ulceration. The skin of the perineum and the clitoris share in the atrophic process. The sudoriparous and sebaceous glands of the labia become diminished in size and in number. Dr. Janovsky, of Prague, has recently published observations on kraurosis vulvæ in the *Monatshefte für praktische Dermatologie*. He studied six

[1] *Zeitschrift für Heilkunde*, vol. vi, p. 69.

new cases, and found that their etiology was obscure. Therapeutic aid was of no avail. In one instance he believed that he could trace the disease to œdema, which was followed by a sclerotic process, and consequent atrophy of the involved tissues. Dr. Janovsky also considered that chronic gonorrhœal discharges and venereal ulcers at least predisposed to kraurosis, if they did not actually cause that obscure and somewhat interesting affection.

LITHOPÆDION AND NORMAL LABOUR.

Dr. Tuppert, of Wunsiedel, describes in the *Münchener medicinische Wochenschrift*, No. 1, 1889, the case of a woman, age 34, who bore for over three years a mummified fœtus, which had died in the seventh month of an extra-uterine pregnancy. At the end of that period, she became pregnant again, and gave birth at term to a healthy child. The labour was perfectly normal. After convalescence, the lithopædion was found to lie immediately under the symphysis pubis, in precisely the same position as before the labour. Its presence caused no pain or discomfort.

THE AMOUNT OF ALBUMEN IN DIET.

Medical men are in favour of the use of animal food in moderate quantity. But it is very difficult, physiologically speaking, to say what is a moderate quantity, and most men eat as much flesh meat as they feel inclined for without any consideration of the kind. Another attempt to estimate accurately the albumen actually required for tissue-change has been made recently in the chemical laboratory of the Berlin Pathological Institute by Dr. Kumagawa, a native of Japan. Five series of experiments were made upon himself with the following diets—namely, one series with the usual Berlin diet, two with a mixed Japanese diet, and two with a purely vegetable diet—boiled rice. The results of feeding on the last diet are given in the *Centralb. f. d. med. Wiss.*, No. 12, 1889. The experimenter's age was 27, his weight 48 kilogrammes; and the problem was to ascertain the minimum albumen supply requisite to keep up that weight, other proximate foods being afforded in due quantity. Previous experiments showed that for this a diet sufficed which corresponded to 2,300 calorics, and which contained from 70 to 90 grammes of albumen per diem. The rice diet afforded 2,500 calorics, but contained very little albumen, of which the daily supply was 50.5 grammes, of carbohydrates 569.83; the caloric value of the albumen was 6.3 per cent., of the carbohydrates 93.7 per cent. On this diet, there was actually a gain of albumen in the body of 5.884 grammes in nine days—that is, 173 grammes of flesh—and the body-weight increased 0.4 kilos. Thus it is shown that an adult may, upon a diet having less albumen than is destroyed in the fasting condition, not only preserve intact the nitrogenous equivalent (as also Hirschfeld's experiments have proved), but may even increase the albumen deposited as flesh, if only the diet afford sufficient caloric.

PRACTICAL BOTANY.

Not all students are aware of the valuable privileges granted to them for the purpose of botanical study by the Royal Botanical Society of London. The admirable morning lectures given in their beautiful gardens are among the highest intellectual and physical pleasures which an industrious student can enjoy. We see from the last report of this most valuable Society that 708 medical students attended the gardens during last year with free admissions granted to them from one to three months; 47,000 specimens were distributed to students. The interesting collections of medico-botanical and of hardy plants and of hardy medico-botanical trees, arranged in order of their natural affinities, are alike beautiful to the eye and instructive to the mind of the botanical student. To those really desirous of study, the facilities granted by the Society cannot be too gratefully recognised. The Society is managed by Mr. W. Sowerby, the Secretary, under the supervision of the Council, of which Sir Joseph Lister, Dr. George Johnson, Mr. Mivart, Dr. Robert Liveing, and Sir Edwin Saunders are members.

PRIMARY SARCOMA OF THE SUPRARENAL CAPSULE.

Dr. Berdach, of Vienna, described a case of this disease, diagnosed during life, in the *Wiener med. Wochenschrift*, Nos. 10 and 11, 1889. The patient was a man, aged 55. In the course of five months, a large tumour developed in the left hyponchondrium. Severe pains radiated from the seat of disease. There was no jaundice nor dyspepsia. Relief from the pain could only be procured by strong flexion of the body forwards. During the last days before death the temperature was subnormal. After the patient's decease a small spindle-celled sarcoma of the left suprarenal capsule was discovered; the tumour displaced neighbouring organs. The kidneys were free from disease, but there were metastatic deposits in the liver. The severe epigastric pain, absence of fatty motions seen in pancreatic tumours, and the subnormal temperature were among the symptoms which led Dr. Berdach to diagnose the case correctly.

WHAT WAS THE CIRON?

In many medical works of the sixteenth, seventeenth, and eighteenth centuries, the ciron, syrone, or sirone is mentioned as a hand-worm. The word "ciron" is French, and is given in several French dictionaries as meaning a hand-worm, also cheese-mite or itch-mite. It is hence stated in at least one excellent modern English dictionary, that ciron was the *acarus scabiei* or itch-mite. Ciron is given as early as 1530 as a hand-worm, and again in 1611; while, according to Sir William Aitkin,[1] "Moufet, in his *Theatrum Insectarum*, first mentioned the itch insect in a particular manner in 1663." Moreover, the early references to the ciron all speak of it as a worm. Cooke, of Warwick, for instance, in 1685, defines "sirones" to be "Pustules in the palm of the hands or soals of the feet, having little worms in them;" and he directs that the worms, "having been pickt out with a needle, the parts are to be washt with the decoction of oak-leaves and alum, or sulphur with tartar" (while he mentions the itch in a different place without referring to its parasitic nature); and Urquhart, in his *Rabelais* (1693), speaks of the ciron-worm. The earlier writers on the itch-insect did not depict it as a worm, but as an insect with six legs, and it does not seem to have been regarded as a mite or worm at all until 1812, when the French apothecary, Galès, defrauded the Academy of Sciences out of the prize it offered for the demonstration of the existence of the itch-insect by concealing common cheese-mites under the nail of his thumb, and dexterously producing them as he pricked the pustules of itch patients, representing them to be the veritable itch-mites. There are only two other parasites to which it is possible to refer the ciron—namely, the guinea-worm and the chigo or jigger. The latter (the *Pulex penetrans*) is found in the West Indies as well as in America; it burrows in the soles of the feet, and may possibly have been known as early as 1530, though this is hardly likely. It has given to it by an American geographer (Morse) in 1796, this very name of ciron, but possibly by error. The guinea-worm (the *Filaria* or *Dracunculus medinensis*) is declared by Hirsch to have been well-known to the ancients; but he adds, that Galen (who had never seen a case) believed it to be an affection of the veins, and not a worm; and that subsequent writers were misled by this and similar opinions into believing that the so-called dracunculi were portions of altered tissue, and not living entities at all. It appears, however, that as early as 1674, Welsch had disproved this

[1] *Science and Practice of Medicine*, i, p. 205.

belief, and shown that the disease was caused by a parasite. It is not improbable either that cases of guinea-worm had been observed in sailors returning from Egypt to Europe, and, being supposed to be a disease other than dracontiasis, the parasite may have thus received the French name "ciron." The communication between the French Mediterranean ports and Egypt make this the more likely. Be this as it may, however, it is probable that Sloane, in his *Jamaica* (1725), is speaking of the dracunculus when he says, of the chigo, that "if taken out like a ciron, there is no harm." On the other hand, Sir M. Hales, in 1677, speaks of the "acarus, cyro, or hand-worm," while Dr. Henry Power, in 1664, evidently refers to the acarus in his experimental philosophy, where he speaks of "whey-worms, called by some wheal-worms or burrows." It is therefore probable that more than one parasite was included under the name "ciron."

A BILL TO AMEND THE DOGS ACT.

THE Bill introduced by Sir Henry Roscoe to amend the Dogs Act of 1871 proposes to put in force a series of stringent regulations on the subject. The owner of any dog (not specially exempted) that is "permitted or suffered to be at large" in any part of the United Kingdom without wearing a muzzle "of a form to be approved by the Privy Council," shall be liable to a penalty of twenty shillings. The owner shall also be liable for all "injury done to the person" by the dog, without any proof being required of "previous mischievous propensity" on the part of the dog, or of negligence on the part of the owner. Every dog must wear a metal ticket with date and number of licence, the penalty being as before the seizure of the animal and fining of the owner. Every dog lost shall be reported to the police within three days under pain of a penalty. Any "appearance or symptom" of rabies shall be immediately reported to the police. Every dog seized by the police shall be examined by a veterinary surgeon and, if condemned, "disposed of under the provisions of the Act," and "the carcase shall be burned."

HYGIENIC REFORM IN SPAIN.

AT a recent meeting of the Sociedad Española de Higiene, the President, Señor Martinez Pacheco, bewailed the apathy both of the Government and of the public in Spain with respect to sanitation. He mentioned several parts of the country in which malaria still prevailed, and others in which pellagra and leprosy were extending their ravages. The society has formulated an appeal to the authorities, calling for the establishment of a public system of disinfection in every town of any importance, and the rigorous enforcement of the measures for that purpose approved of by the Congress of Hygiene held at Vienna. It was also urged that a transport service should be organised in every town for the removal to hospital of persons suffering from contagious disease. The establishment of a proper drainage system in towns was likewise called for; latrines and cesspools must be abolished; and every house must be provided with drains properly trapped, and with pipes disconnected from the sewers. Other desirable reforms are indicated, and it evidently will not be the fault of the Society of Hygiene if a sanitary millennium is not soon inaugurated in Spain. We fear, however, that it will take the Society a long time to educate public opinion in that romantic but unsavoury country up to its own level.

SARCOMA OF THE TONSIL.

MALIGNANT disease of the tonsil is a subject of high importance, for it is liable to be overlooked in its earlier stages and mistaken for chronic inflammatory enlargement of the same gland. Dr. W. Gray, microscopist to the Army Medical Museum, Washington, describes an instructive case of this rare disease in the February number of the *American Journal of the Medical Sciences*. On October 20th, 1887, a lad, aged 6, suffering from slight soreness of the throat, came under the care of Dr. Hardee, of Moriah, North Carolina. That physician observed a small ulcer in the centre of the right tonsil. On January 22nd, 1888, the patient was once more brought to Dr. Hardee. There was considerable enlargement of the tonsil, unattended by inflammation or pain in deglutition. The ulcer had entirely disappeared. The tonsil began to slough on January 28th, a waxy concretion forming on its surface. Paroxysms of dyspnœa, especially during sleep, set in on February 1st. Dr. Hunter McGuire, of Richmond, Virginia, removed a small piece of the tonsil, and sent it to Dr. W. Gray for examination. Dr. Gray prepared microscopical sections, which presented the characters of alveolar sarcoma. Two good drawings of the sections accompany Dr. Gray's paper. The patient afterwards enjoyed intervals of comparatively good general health, which lasted for a few days only. In March, 1888, the complexion became cachectic. Strange to say, though the lad could, in the latter stages of the disease, swallow nothing but fluid nourishment owing to the size of the tumour, no pain was cause by the act of deglutition from first to last. The tumour projected externally, forming a mass the size of the child's fist. By May 6th the tumour had involved the surrounding tissues, the opposite tonsil, and the gums. Paroxysms of pain were frequent; the attacks were instantly relieved by painting with a 5 per cent. solution of cocaine. The patient died on June 4th, 1888, no necropsy was permitted and there was no positive evidence of metastasis in the viscera. Dr. Gray gives a list of eighteen cases of sarcoma of the tonsil reported in medical literature. Mr. Butlin, in *Sarcoma and Carcinoma*, published in 1882, tabulated nine cases of sarcoma of the tonsil, all occurred in male patients; three were seventeen or eighteen years old, none younger, the remaining six all over thirty. He stated that these cases were very hard to get together, as they had to be carefully collected from a total series of reported cases where in many instances microscopical evidence was absent or doubtful. A large proportion of the eighteen cases collected by Dr. Gray have been reported since the publication of Mr. Butlin's work; most of these cases appear to be based on microscopical evidence, three being taken from recent volumes of the *Transactions of the Pathological Society of London*. In some the original reference is, unfortunately, not given. Dr. Gray's paper is of undoubted clinical and pathological interest.

HOSPITAL MIDWIFERY IN KAZAN.

DR. STOLUPINSKY has published a statistical record of the Kazan Midwifery Institute, from October, 1876, to May, 1887. Statistics of this kind are always of interest to the obstetrician; 966 women were delivered, 30 per cent. being primiparæ. The premature labours were 51; abortions, 22; twin labours, only 2. Head presentations occurred in 85.7 per cent.; of these, 62.8 per cent. were in the first cranial position. The pelvic presentations amounted to 3.3 per cent.; cross-births, 0.34; face presentation, 0.4, including 1 perforation. There were 3 brow presentations; in all the forceps was applied. In the pelvic presentations, the mortality of the children was 25 per cent.; in the transverse, 66.6 per cent. All cases where the conjugata externa measured 18 centimètres or less were entered as "contracted pelves." They made up 4 per cent. of the total 966. In 28 per cent. of the contracted pelvis cases, operative interference was needed. There were 5 cases of placenta prævia, 3 children lost, all the mothers saved. Convulsions took place in 5 cases, 4 being first labours; 2 of the mothers and 3 of the children were lost. The perineum was torn in 112 cases, including 26 multiparæ. The wound was only sewn up on the spot in 17 cases. Prolapse of the cord occurred in 7 cases, hydramnios in 1, rupture of the uterus and vault of the vagina in 5. The forceps was used in 30 per cent. of the

cases. In 1 case craniotomy was performed after the forceps had been applied three times; in a second, turning was attempted after two applications of the forceps, the vault of the vagina was torn, and the patient died of septicæmia. The mortality of the mothers in the forceps cases was 9.7 per cent.; of the children, 9.6 per cent. In 10 cases perforation was deemed necessary. Turning was performed in 12 cases; maternal mortality, 16.6 per cent.; fœtal mortality, 50 per cent. Extraction of the fœtus in pelvic presentations was done 11 times; embryotomy 3 times (fœtus dead in all these cases). The placenta was detached manually 35 times (3.6 per cent.), and expressed after Credé's method 139 times (14.3 per cent.). Porro's operation was performed once, unsuccessfully. The patient had been seven times pregnant; the pelvis was deformed through mollities ossium; the fœtus was already macerated. Death occurred on the third day. Only one patient died from *post-partum* hæmorrhage; the uterine cavity was not plugged. On microscopic examination, chronic inflammation of the uterine tissue at the site of placental insertion was detected. Antiseptics were not systematically employed during the first few years; in the last year of the series the mortality from septic disease after delivery was only 0.8 per cent. The proportion of boys to girls was 100 to 91. The total infantile mortality was 5 per cent. There was one case of diaphragmatic hernia. The eyes of the new-born children were washed in a half-per-thousand sublimate solution.

DR. BROWN-SÉQUARD'S HYPODERMIC FLUID.

THE extraordinary statements made by Professor Brown-Séquard as to the efficiency of hypodermic injections of fluid expressed from the testicles of young animals in senile debility have been to a certain extent confirmed by M. Variot, who made a communication to the Société de Biologie on June 29th. The patients chosen were debilitated men, aged 54, 56, and 68 years respectively, and they were not informed of the nature of the treatment adopted. In all three cases the injections were followed by general nervous excitement, increased muscular power, and stimulation and regulation of digestion. M. Brown-Séquard said that M. Variot's observations disposed of the objection that the results he had observed in himself were due to "suggestion."

ACTION OF COCAINE ON THE BODY TEMPERATURE.

As interesting as those chemical bodies which reduce temperature in the febrile state are those which when introduced into the bodies of animals or of man produce fever. It is possible that the investigation of the action of these fever-producers may lead to some clearer ideas than we have at present on the influence of the central nervous system on heat-production and heat-loss. According to Ott and Colmar, peptones and albumoses, when introduced in sufficient quantity into the circulation of the blood, cause a rise of body temperature by affecting the cerebral heat centres. We may therefore have a "peptone fever." Mosso, in an elaborate paper on cocaine published last year, showed that cocaine also increased the body temperature; and he considered it the most energetic body yet known that possesses this action. Curiously enough, he found that although chloral hydrate antagonised many of the physiological effects of cocaine it did not counteract the febrile action, a result all the more astonishing since one of the most marked effects of chloral is to reduce the body temperature. Reichert, in a recent communication to the *Universal Medical Magazine*, has further experimented with cocaine. He found that in dogs a dose of 0.0025 gramme of hydrochlorate of cocaine per kilo of body weight raises the temperature 0.2° to 0.5° C., while a larger dose, 0.02 gramme per kilo, causes a rise of 4° C. There is, however, no direct relation between the dose of cocaine and the effect on the body temperature; small doses may have a greater effect than large, and *vice versâ*. With large non-fatal doses, however, the temperature may remain high for as long as eight hours; so that we have not merely an evanescent rise of the temperature, but the development of an actual febrile state. As in the case of peptone, section of the medulla from the spinal cord prevents this action of cocaine. The effect is therefore on the heat centres in the brain. Calorimetric investigation showed that there was increased heat production at first, followed by increased loss of heat. If the animal were curarised, however, it was found that instead of the increase of production there was an increase of loss of heat; so that curare in this respect seems to antagonise the effect of cocaine.

SUPRAPUBIC LITHOTOMY IN YOUNG CHILDREN.

DR. ALFRED LENDON, Lecturer on Forensic Medicine, University of Adelaide, has operated for vesical calculus in male children under 5 years of age, three times within twelve months, and with complete success. In each case the rectum was distended with the bulb of a spray-producer as a substitute for Petersen's bag, and the bladder washed out and then distended with boracic acid lotion. The skin-incision in no case exceeded one inch and a half. The bladder was not sutured; the skin wound was brought together with horsehair, and a drainage tube inserted, which projected into the bladder. The first patient was 4 years of age; the calculus weighed 58 grains; urine passed through the urethra on the eleventh day, and ceased to pass through the wound on the thirteenth. The second patient was not quite 2 years old; the stone weighed 100 grains; urine passed naturally at the end of the first week, ceasing next day to pass through the wound. In the third case the patient was $3\frac{1}{2}$ years old; the calculus weighed 45 grains; the urine passed through the urethra on the seventh day, and ceased to pass through the wound on the nineteenth. The drainage tube was removed on the day of operation in the second and youngest case, on the second day in the first, and on the third day in the third case. Dr. Lendon, who writes his experiences in the *Australasian Medical Gazette*, states that, had the proper instruments been available, he would have performed litholapaxy in preference to lithotomy. For a surgeon who had no special experience of vesical surgery, suprapubic appeared in many respects preferable to perineal lithotomy. In Dr. Lendon's cases the chief difficulty was the extraction of the stone after the opening of the bladder.

A NEW SYMPTOM OF PERICARDITIS.

IN some cases the diagnosis of effusion into the pericardium is difficult; and a symptom, first noticed by Bamberger, is said to be constantly present, and to aid materially in arriving at a correct conclusion. Puis, in the *Wiener medicinische Wochenschrift*, early in this year, has again attracted attention to the point. By percussion of the patient in a sitting position, or when lying on the right side, there is a muffled tympanitic resonance or diminished resonance over the left side of the thorax behind, extending downwards from the angle of the scapula; and at the place of greatest loss of resonance there is distinct bronchial breathing and bronchophony, with increased vocal fremitus. If the patient is made to bend forward, a portion of the dulness completely disappears, another portion becomes tympanitic, and no bronchial breathing is heard. This change is more marked still if the patient assumes the knee-elbow position. The physical signs observed are ascribed to compression of the lower lobe of the left lung by the fluid in the pericardium, and is found chiefly in young adults with chests which are elongated or narrowed antero-posteriorly. The presence of pneumonia or pleuritis is contra-indicated by the alteration of the physical signs when the position of the patient is changed.

SCOTLAND.

HER MAJESTY the QUEEN has been graciously pleased to confer on the Glasgow Sick Children's Hospital the honour of being called "The Royal Hospital for Sick Children in Glasgow." The directors of this hospital have recently made the following appointments to the dispensary: John Love, M.D., extra physician; R. H. Parry, L.R.C.P. & S. Ed., extra surgeon; C. Fred. Pollock, M.D., extra oculist.

ROYAL SOCIETY OF EDINBURGH.

AT an ordinary meeting of the Royal Society of Edinburgh, on Monday, July 1st, an interesting communication was made by Mr. A. Crichton Mitchell, which proved how enormously the conductivity of steel was reduced by a small admixture of alloy. The experiments, on which the paper was founded, were made on manganese steel, which contains from 10 to 15 per cent of manganese. They showed that the thermal conductivity of manganese steel is only about one-sixth that of iron. Professor Sir William Turner read a paper on the Placentation of the Halicore Dugong. Dr. Nansen and others spoke on the value of the research in connection with the elucidation of other important biological problems.

THE SALE OF TUBERCULOUS FLESH AND MILK.

THE Scottish Veterinary Association, at a recent meeting in Edinburgh, considered a motion submitted by Professor W. O. Williams, "That the Society, thoroughly believing that tuberculosis is a contagious disease, urge upon the Government—first, to stop the sale of milk from animals suspected of being infected; secondly, to suppress the consumption of meat from tubercular animals; and, thirdly, to give compensation for a limited number of years." In the discussion of this motion it was apparent that though there were differences of opinion as to how much of an affected animal ought to be condemned as unfit for food, all the speakers were in favour of visibly diseased parts being destroyed, and were of opinion that the milk from diseased animals was especially dangerous. They were also unanimously in favour of legislation to stamp out the disease, to secure proper inspection at abbatoirs, and moderate compensation to owners. A committee was appointed to draw up a memorial to Government to secure these objects and to take action in the matter with other societies.

ST. ANDREW AMBULANCE ASSOCIATION, GLASGOW.

THE annual report of the St. Andrew Ambulance Association states that, during the past year, 1,755 calls have been made on the wagons of the Association, and since the formation of the Association in 1882 they have safely carried 5,769 patients. Since June 1st, 1888, new wagons have been stationed at Blantyre, Mossend, Perth, Port Glasgow, and Larkhall; one is being built for Newton, and wheeled litters have been supplied for Lesmahagow and Bradford. The Central Executive, however, desires to see an ambulance wagon in every town and manufacturing district in Scotland. During the year, 5,064 pupils have been trained, making a total of 25,033 since 1882. New centres have been formed—Cambuslang, Hull, Musselburgh, Galashiels, and Selkirk—making the total number of Association centres 24; and in 82 towns detached classes have been held, while in eight districts an ambulance corps has been set up.

LORD RANDOLPH CHURCHILL'S Bill to amend the constitution of the College of Surgeons has been backed by, among others, Sir Albert Rollit, Sir Walter Foster, Sir Guyer Hunter, Dr. Farquharson, and Mr. R. Chamberlain.

IRELAND.

DR. MCCAUSLAND was on Wednesday appointed to the position of Surgeon to Steevens's Hospital, in succession to the late Dr. Robert McDonnell.

THE DUBLIN HOSPITALS BILL.

IN reference to the proposed Bill dealing with grants to Dublin hospitals, Mr. J. Byrne, one of the Guardians of the North Dublin Union, has given notice that he will move the Board to oppose it. He objects to the closing of the Richmond, Whitworth, and Hardwicke Hospitals, because this would throw an increased charge on the rates of the Union, the Guardians being forced to provide for an increased number of sick. He objects to any reduction of the hospital grants and to the placing of the fund in the hands of any central board not responsible to the ratepayers. The motion, it is said, is not likely to pass.

PYLORECTOMY.

ON June 26th Sir William Stokes performed the operation of pylorectomy in the Meath Hospital on a female patient, aged 48, suffering from cancer of the pylorus. This is said to be the third case in which this formidable procedure has been adopted in the United Kingdom, Mr. Southam's and Mr. McArdle's cases having been the first and second. The operation, in Sir William Stokes's case, lasted over two hours. The patient subsequently rallied fairly well, and continued to progress satisfactorily up to 9.30 P.M. We regret to learn that she then became alarmingly weak, and notwithstanding the efforts that were made to revive her, the weakness continued to increase, and at 11 P.M. she became collapsed, and died at 11.35 P.M., just twelve hours after the operation. The statistics of the operation so far are not encouraging, for of seventeen cases operated on for pyloric disease, there are said to have been only four recoveries.

OVERCROWDING IN CORK.

THE Executive Sanitary Officer in his annual report states that the great obstacle to the efficient administration of the sanitary laws in Cork is the insufficient dwelling accommodation for the working classes. Within the past five years many houses have been closed as unfit for human habitation, and the result has been that several districts have become congested. With rare exceptions, the tenement houses in the city are so overcrowded as to be injurious to health, and at the present moment there are hundreds of houses without sanitary provision of any kind, many of them mere hovels upon which it would not be worth the owner's while to spend a sovereign in improvements; but, in consequence of this want of dwelling accommodation, the hands of the Corporation are tied. During the year considerable attention was paid by the Public Health Committee to the quality of the water-supply. For years past the Macroom guardians neglected to provide for the sewage of that town in such a manner as to prevent any portion of it from entering the river; and more recently complaints have been made of a noxious discharge into the Shournach, a tributary of the Lee at Blarney. It is satisfactory to learn that the cause of the latter complaint no longer exists, and an analysis of the water in this stream after it has passed Blarney shows that it is of excellent quality, and quite suitable for drinking purposes. In July, 1888, a scheme for the domestic scavenging of the city under the powers conferred by the 52nd Section of the Public Health Act, was adopted by the sanitary authority, and the system came into operation on February 1st last. The service has, up to the present, given satisfaction, and the system will, without doubt, have an extremely beneficial effect on the sanitary condition of the city.

TOPICS OF THE DAY.

(AN OCCASIONAL COLUMN.)

By the Editor.

The Lord Mayor of London took a step which the sentiment of the medical profession in this country has long called for, and which has met with approval in the highest regions of intellectual society, in summoning a meeting to secure public recognition in Great Britain of the services rendered to humanity by M. Pasteur, and in support of the Pasteur Institute. It was at one time hoped that the duty of recognising the generous reception and saving treatment, by M. Pasteur, of some two hundred English subjects would have been undertaken or shared by the Government. In the letters on "Medical Paris of To-day," descriptive of the Institut Pasteur,[1] I ventured strongly to emphasise this feeling in the following words:

"It is painful to remember that England, and England almost alone amongst European nations, has approached the Pasteur Institute with empty hands. When I met M. Pasteur yesterday in the garden of his Institute, he said to me, with the simple directness which belongs to his character: 'What was the meaning of the answer which the Chancellor of the Exchequer gave Sir Henry Roscoe in the House of Commons last week when he asked if it were the intention of the English Government to contribute, as other nationalities have done so liberally, towards the erection of this Instute, which is created and maintained by voluntary subscriptions?' I repeated the sense of the words of the Minister, that no doubt a considerable proportion of English persons who had been benefited by this Institute were those whose means would enable them to contribute to the Institute. M. Pasteur expressed his surprise at such an answer from a Minister of such a great nation. 'Nine out of ten,' he said, 'of the English who come here are persons of extreme indigence, and the Minister has therefore not taken the pains to inform himself as to the real facts.' I did not know how to find any answer which could explain or justify the official declaration. As a matter of fact, there are even now a number of English persons under treatment at the Institute, many of them severely bitten in many places. All persons are received and treated alike with the greatest possible care, and receive personal benefit from this admirable Institute and its devoted officers. Let us hope that either the State or some of its wealthy citizens will wipe away the reproach which now rests upon England, of being willing enough to avail itself of the discoveries and labours of M. Pasteur, and to benefit by his charity, but of having failed to recognise in any practical way the immense benefit conferred on so many of the poorest English subjects."

The Lord Mayor was well aware of the kind and extent of annoyance to which he was likely to be subjected in performing this public duty. The prompt and public concurrence of the Royal Society, and of the leaders of the medical profession, the warm support of men such as Huxley and Tyndall, the high sanction of the Prince of Wales, the hearty co-operation of the societies of dog owners, have, however, assured him that he has taken a wise, patriotic, and popular step. The scurrilous abuse to which he has been subjected was, as Sir James Paget pointed out, a necessary incident and a secondary proof of the extent to which he was promoting scientific progress. The Lord Mayor had reason to congratulate himself that the meeting held was, as he described it, perhaps the most distinguished and notable collection of the leaders of the scientific world ever held in the Mansion House, and one to which he should ever look back with the utmost pride and satisfaction. A great public object was successfully achieved, and an act of justice publicly done under circumstances of brilliant notoriety. Subscriptions will be received at the Mansion House.

It has been decided that the Royal Commission on Vaccination shall hold its meetings privately, and that reporters and the public will not be admitted. This is in accordance with the usual custom of Royal Commissions, but it seems to me none the less regrettable and unreasonable. Select Committees sit in public; Royal Commissions, usually, in private. Why? They are altogether kindred in their objects and methods of inquiry. It is often a mere toss up which form of inquiry is adopted. When a Commission is preferred to a Committee, it is usually because it is thought advisable to add to the committee experts not to be found available in either of the Houses of Parliament. The publication of the evidence from time to time, or the presence in court of the interested parties, often suggests evidence which is valuable, which would not otherwise be tendered, and which fills up the lacunæ otherwise left unfilled. I am altogether in favour of open doors at such inquiries; it secures fair play for all, inspires continuous interest, and helps the object of the inquiry, which is to secure all the available information and sift all the trustworthy evidence. In the present instance, however, I believe it is intended by the Royal Commission to publish from time to time the evidence received on each separate branch of the inquiry as it is completed, which will be a useful proceeding.

[1] Journal, January 5th, 1889.

It is sometimes urged as a reason why Royal Commissions should sit with closed doors, that otherwise the evidence given is apt to be published in mutilated and garbled extracts; and especially in cases where strong partisan sentiments are involved. No doubt this liability exists. But it applies equally to Select Committees and all public inquiries. Reporters are not always to be trusted; but that is not an adequate reason for altogether excluding them. They are a fallible but useful agency. It is, as with other occupations, *il n'y a pas de sots métiers; il n'y a que de sottes gens.*

Apropos of the Royal Commission on Vaccination, Dr. Collins informs me that he objects to being described as an anti-vaccinator. He does not, however, furnish any other defining word, and in view of his hereditary and friendly sympathy with that dissentient sect, it may be properly assumed that he will take care that their views and figures are fully presented and considered. There is no doubt that he was put on the Commission with that intention. Mr. Ritchie has declined to add the other names suggested, and is hotly reviled in consequence.

Public speaking, we are told, was among the Romans an art in which it was not so much a glory to excel as a disgrace to fail. Precisely the opposite condition notoriously prevails among ourselves and especially is the art of after-dinner speaking rare or non-existent among the "English of to-day." It seems to be a racial defect—a post-prandial fault which we shall probably never outgrow. Other nations are not so afflicted. An American has generally something pointed, pleasant, and often witty to say and he says it easily and neatly. A Frenchman is generally systematic, lucid, and graceful in his speech; even a German after dinner knows how to be brief and jolly in his utterance, or sentimental and sententious, but short. Nothing seems to have surprised our American brethren at the International Congress so much as the faltering and stumbling sentences and the inartistic delivery of the English doctors, and humorous squibs circulated in the medical papers for some time afterwards. But we do not need to be told of this defect, we recognise it, and probably secretly take some delight in it. A certain dumbness seems to fit the English character; we have chosen neither the crowing cock nor the screaming and soaring eagle as our symbolic animal, and *facta non verba* is a favourite device of Englishmen. But having recognised our verbal incompetency, why parade it with long-drawn pride on all festive occasions? Everybody confesses that where speeches are long and numerous after dinner, they do not exhilarate the feast of reason and only obstruct the flow of soul. Blessed is the man, says, I think, George Eliot, who having nothing to say does not feel it necessary to afford lengthened evidence of his inability to say it. But few after-dinner speakers are blessed—by those who hear them; while we know, from their own frequent confession, that the oppressive consciousness of their coming doom has, all through dinner, been a source of uneasiness, and therefore a presage of dyspepsia and an index of indigestion, which possibly explains the vacant gloom which often darkens their speech and depresses their auditors.

Can we not emanicipate ourselves from this traditional tyranny at medical dinners? A liberal profession need not be perpetually bound by civic superstitions. There are, too, signs of grace. At the Army Medical Department dinner there were only three toasts which were spoken to, and those briefly. Our devotion to the institutions of our country is on ordinary occasions sufficiently expressed by announcing the toasts from the chair in due succession, and honouring them by acclamation and

by the customary and solemn imbibition of a sip of wine thereafter. It is surely unnecessary on every such occasion for each speaker, either in proposing or in responding, to deliver a feeble string of faltering platitudes. Military mess dinners and royal banquets afford a brilliant example, which might well be followed by loyal subjects. After pledging with joyful and loyal but speechless acclamation the institutions of the country, there remain always, at most of our medical dinners, those toasts which constitute the business of the evening. As to these, it should be remembered that it is a cruelty to call upon the most practised speaker to deliver himself "without previous notice;" and those least liable to inflict the pains of empty verbosity and rambling but vapid rhetoric on their hearers are least likely to accept the challenge. An after-dinner speech should at least contain a new thought or a new application, some vestige of humour, some trace of eloquence, the point of an epigram, the flavour of a joke, or the grace of a well-turned compliment. Looking to the short hour at disposal, I think it might be fair to say that no speech should exceed five minutes, except those connected with the toast of the evening, and that every speaker should have long enough notice given him to enable him to be brief.

Want of preparation is a great cause of diffuseness. If medical after-dinner speakers would write out beforehand what they are going to say, and remorselessly cut it down, they would soon discover how often their speeches are nothing more than the pointless repetition in long-drawn-out phrases of worn out and empty commonplaces, expressed in stilted but unpicturesque phrases, such as they would ridicule and condemn in others. We must all frequently dine together with each other in public; it is a hospitable and a cheering institution, and a commendable function; it aids charity, promotes good fellowship, dissolves enmities, and brings into public life the amenities of private friendship. Deprived of this particular drawback which is a relatively recent excrescence, it would be an altogether admirable institution, and there is no reason why it should not be.

THE annual dinner of the Birmingham Branch of the British Medical Association is generally a very interesting function. Birmingham was for long the central seat of the Association, and a chief mainspring of its activity, the meeting place of the Council, and a controlling power in its great provincial inspiration and influence. The members of the Branch are somewhat lessened by the formation of other Branches in the surrounding district, but it is still the historic mother town, and full of energy and interest, with a sound sentiment of independence and self-respect. The presence of Dr. Gairdner, the President of the Association; Dr. Bridgwater, the President of Council; Sir Walter Foster, Dr. Bridges, and other visitors of official position and old local association gave a special character to the occasion. Mr. Bartleet, the son of the old honorary secretary of the Branch, and himself many years incumbent of that office, in an able summary of the vast progress of the Association, analysed its sources of success, and emphasised the approval by provincial members of the course lately pursued by the Council. Dr. Gairdner "dotted the i's" by reference to like evidence which had reached him from the great extra-metropolitan centres, and ringing cheers greeted Dr. Bridgwater's firm declaration of policy. The spirit of the meeting was in every way unanimously cordial and auspicious.

Two suggestions which fell from Dr. Gairdner should be recorded. The first was that summer meetings of English Branches should, as with those of Scotland, be partly holiday meetings "in the country," and occasions for social enjoyment as well as business. The second that the vast benefits and large charities which were the outcome in the clerical profession of the formation of the Corporation of the "Sons of the Clergy" afforded a hint for the creation of a society among the less numerous and successful sons of medical men of a like society, "Sons of Æsculapius," who should be bound together by work of the same beneficent nature among the broken and disabled members of the profession to which they own a like filial tie. There is no doubt that such an auxiliary society might be formed. "The Sons of the Clergy" are almoners of large sums monthly. It is a widespread, wealthy, and beneficent body. Will someone endeavour to give shape and vitality to this excellent suggestion?

DR. BRIDGES, the Medical Officer of the Local Government Board, made a speech, to which his official situation gave importance, expressing his regret that the reformed workhouse infirmaries and "hospitals of the State" had not been left open to clinical study and teaching, as I had originally suggested, and as Mr. Gathorne Hardy's Act provided. He expressed a warm approval of the attempt now to be made to rescind the subsequent rescinding Act which closed them; and he made a good point in remarking that they are the only hospitals officered by general practitioners. They contain more patients than all the voluntary hospitals, and with their clinical facilities and increased interest in the lessons which they are capable of teaching, the hospitals of the State and of the general practitioner might take the place originally intended for them and due to them in the teaching system and in the scientific progress of the country.

APROPOS of the Cannes incident, Sir Edward Watkin writes to me that he never intended to cast any imputation upon the *bona fides* or motive of the physician, and does not now see that any passage in his letter should be so interpreted. This is quite satisfactory; but that interpretation was put on it publicly and privately. Sir Edward naturally felt aggrieved that the illness should have been attributed to climatic causes rather than to drain-poisoning, and his feeling took a very practical, effective, and publicly useful form.

I LEARN that the article in the JOURNAL of June 15th, which was, as I lately mentioned, alleged in a medical journal to be the result of the machinations of a "clique," was the able leader on Leprosy on page 1364 of the JOURNAL of June 15th. The particular grievance appears to be that special mention was not made of the name of a gentleman who had recently read a paper on the subject at a metropolitan Society. The omission was adjudged culpable, and was supposed by the writer to show personal bias. This is comic. It happens that the particular gentleman in whose favour the complaint is made was sent for with the view to his writing the article, but he was absent from town. *Solvuntur tabulæ.*

MALCOLM MORRIS INDEMNITY FUND.

IT is felt by many of Mr. Morris's friends that, as we last week suggested, he should not be allowed to bear the heavy costs of the recent trial in addition to the months of anxiety and worry he has been compelled to undergo. By his courage and promptitude Mr. Morris has done a service both to the profession and to the public which requires a more solid recognition than a simple expression of sympathy.

The following subscriptions have already been promised, and those who desire to contribute are requested to communicate without delay with Mr. G. P. Field, 34, Wimpole Street, or Dr. Sidney Phillips, 21, Upper Berkeley Street.

	£	s.	d.
Sir Andrew Clark	5	5	0
Sir James Paget	5	5	0
Dr. Quain	5	5	0
Sir Alfred Garrod	5	5	0
Sir Edwin Saunders	5	5	0
Dr. Broadbent	5	5	0
Dr. Ord	5	5	0
Thomas Smith, Esq.	5	5	0
Dr. Cheadle	5	5	0
Dr. John Anderson	5	5	0
Walter Coulson, Esq.	5	5	0
Dr. Stephen Mackenzie ...	5	5	0
Dr. Danford Thomas	5	5	0
G. A. Critchett, Esq.	5	5	0
G. P. Field, Esq.	5	5	0
W. Adams Frost, Esq.... ...	5	5	0
Dr. Gervis	3	3	0
Dr. Woakes	3	3	0
Sir William Mac Cormac ...	2	2	0
Dr. Douglas Powell	2	2	0
Dr. Symes Thompson... ...	2	2	0
Dr. Braxton Hicks	2	2	0
Dr. Percy Boulton	2	2	0
Dr. Sidney Phillips	2	2	0
Dr. C. H. Ralfe...	2	2	0
Dr. Maguire	2	2	0
H. E. Juler, Esq.	2	2	0
J. Ouston Smith, Esq. (Shrewsbury	2	2	0
George Pollock, Esq.	1	0	0
J. E. Lane, Esq.	1	1	0
H. Kiallmark, Esq.	1	1	0
Henry Davis, Esq.	1	1	0
F. B. Hulke, Esq. (Deal) ...	1	1	0
A. Matcham, Esq.	1	1	0
Rev. Edgar & Mrs. Montagu	1	1	0
Dr. J. S. Scriven (Derby) ...	0	10	6

PROFESSOR KRAFFT-EBING.—Freiherr Dr. Richard von Krafft-Ebing, the well-known Professor of Psychiatry and Neuropathology at Graz, has been appointed to the corresponding chair in the University of Vienna. This distinguished alienist was born at Mannheim in 1840, and, after studying at Zurich, Vienna, and Prague, took his Doctor's degree in 1863. In 1871 he was appointed lecturer in the newly-founded German University of Strasburg, from which in 1873 he migrated to Graz.

PARLIAMENTARY BILLS COMMITTEE.

A MEETING of the Parliamentary Bills Committee of the British Medical Association was held at the offices of the Association on Thursday, June 27th. There were present Dr. Bridgwater (President of Council), Dr. Alfred Carpenter (Croydon), Dr. G. W. Crowe (Worcester), Dr. W. Dickson (London), Dr. Robert Esler (Belfast), Dr. R. Farquharson, M.P. (London), Mr. E. H. Galton (London), Dr. Ogilvie Grant (Inverness), Mr. Ernest Hart (London), Dr. Hugh R. Ker (Halesowen), Dr. Mickle (London), Dr. G. H. Philipson (Newcastle-on-Tyne), Mr. C. H. Watts Parkinson (Wimborne), Mr. John Prankerd (Bath), Mr. Sibley (London), and Mr. F. Wallace (London).

Dr. PHILIPSON moved and Dr. CARPENTER seconded the motion that Mr. Ernest Hart be the Chairman of the Parliamentary Bills Committee for the ensuing twelve months. This was carried unanimously.

Notice appointing the Committee having been read, the CHAIRMAN announced that letters and telegrams of apology and expressions of regret had been received from Professor Gairdner, Dr. W. Carter (Liverpool), Dr. Cameron, M.P., Dr. Henry Barnes (Carlisle), Dr. A. Emrys-Jones (Manchester), Mr. Jeaffreson (Framlingham), Dr. Bruce Goff (Bothwell, Lanarkshire), Mr. J. H. Hemming (Kimbolton, Hunts), Dr. A. J. Harrison (Bristol), and Dr. Phillips (Reading).

CERTIFYING FACTORY SURGEONS.

The CHAIRMAN said the documents which they were met to consider had been circulated among the Committee. They would take first the proposed memorial to the Home Secretary as to certifying factory surgeons, which had undergone a good deal of revision, and seemed, as now printed, to meet with general approval. The following was a short statement of the position of the Committee in the matter: On February 3rd a deputation from the Manchester United Cotton Spinners' Association, representing, it was said, 430 firms, and employing 30,000 people, waited upon the Home Secretary on the question of dispensing with the office of certifying surgeons in factories. It was argued among other things that since the Elementary Education Act had come into force there was no need for the certifying surgeon to attend at the factories in order to certify as to the ages of children working as half-timers; it was, they argued, a needless expense, as the School Board furnished certificates. A large number of factory surgeons, finding their interests and position attacked, put themselves into communication with the Chairman of the Parliamentary Bills Committee, meetings were held, and they banded themselves into an Association of Certifying Factory Surgeons, with Mr. Francis H. Walmsley as President, and Dr. Holmes as honorary secretary. A summary and review of their present position, as well as a reply to the statements made by the Cotton Spinners' Association, were printed and circulated, and on March 25th a deputation of the Association of Factory Surgeons waited upon the Home Secretary, being introduced by the Solicitor-General for Scotland. Dr. Alfred Carpenter was good enough to attend and represent the Committee in his (the Chairman's) absence. A full report of the meeting was published in the JOURNAL for March 30th, p. 735. The Home Secretary replied that the statements made by the certifying surgeons should have his most careful consideration before any change was made in the law. Leaders on the subject had been published in the JOURNAL after consultation with persons most interested in the subject. Copies of these leaders, with letters on the subject, had been sent to the Home Secretary. A communication was afterwards received from the Home Office asking for copies of subsequent articles on the subject, which were duly forwarded and acknowledged. A request was made by the Association of Certifying Factory Surgeons for 5,000 reprints of the leaders and for copies of the report of the deputation. That request had been complied with. A memorial had been drawn up for presentation to the Home Secretary, which had been submitted to the members of the Committee in unrevised form and in the form in which it now appeared; it had been modified in accordance with numerous communications made, and if now approved would be presented in official form. In order to influence public attention in the matter, a question was put in the House of Commons on April 8th, when Mr. Matthews stated that the representations had been under his consideration, and he hoped to be able to introduce a Bill amending the Factory Acts this session, and he would take that opportunity of stating the decision of the Government on the subject. The memorial was before them for discussion and alteration. The following is a copy of the memorial:

To the Right Honourable the Secretary of State for Home Affairs.

This memorial respectfully shows:—

That the employment of medical men as certifying surgeons was resorted to in the first instance because of the alarming prevalence of disease and deformities among factory operatives.

That as the true interest of the employers is to obtain the greatest efficiency among those they employ, the medical supervision of the physical ability and soundness of those entered for work is contributory thereto.

That no effectual and persistent supervision of the physical condition of those employed in factories is to be got except by the introduction of a neutral person from outside, instructed in the recognition of disease, and able to act in a completely independent manner.

That to rely upon the carefulness and discretion of the parents is altogether futile. Their interests are too intimately bound up with the gain to be obtained by the employment of their children, whose possible unfitness for work is either not recognised, or is purposely disregarded. The whole past history of factories demonstrates this fact, and the every-day experience of the certifying surgeons furnishes illustrations of it.

That it is important to the general sanitary interests of the operatives in a factory that no contagious or infectious disease be introduced from without by those engaged for work; while the principle goes farther, for it affects the general public, who are the ultimate recipients of the goods manufactured.

That it is essential that persons disabled by deformity or by imperfections of the special senses be not employed where the work is calculated to augment the disablement, or where defects of sensory organs expose the sufferers or their fellow-workers to peril or accident.

That in the interests of humanity it is a primary duty to reject as unfit for work those who exhibit signs of organic disease, whether of lungs or other internal organs.

That it is important in manufactories, where many diverse processes are carried on, as frequently happens, that some competent authority exist to determine not only the general question of fitness for labour, but that also of fitness for the particular work to be undertaken.

That compulsory medical examination acts as a deterrent to parents and others from presenting for employment unfit hands.

That experience shows a marked improvement has been brought about in the physical well-being, the cleanliness and order of children and young persons, which is largely attributable to the action of the certifying surgeons.

That the certifying surgeons, by reporting on the nature and the causes of accidents, and investigating them on the spot, exercise an important function in respect of future action to be taken by the factory inspectors.

That in all the preceding matters it is in their character as medical men that the certifying surgeons are proved to be essential to the due administration, and to the fulfilment of the sanitary purposes of the Factory Acts.

That it is contrary to reason to contend that a certificate of age is in itself sufficient as a guarantee of fitness for work—that is, any sort of labour that may be imposed. For age and physical ability are not convertible terms.

That the vigilance of the certifying surgeons is constantly called into requisition to detect wilful alterations of the dates showing the age, or the fraudulent substitution of certificates of age, or the forgeries of the numbers showing the standard of education reached—for, in many factories, the services of the surgeon are sought for to watch over the observance of the educational conditions of labour.

That the weekly or very frequent visits of certifying surgeons to factories contribute greatly to the proper keeping of the registers—upon which hinges all action to be taken by the inspectors in enforcing the Act.

That, moreover, such visits keep constantly in the view of masters and managers the operation and requirements of the Factory Act, and afford opportunities to all concerned in the management of factories to seek the solution of any questions respecting the requirements of the Act. In fact the surgeons are perpetually called upon to act as expositors or interpreters of the legislative provisions. This happens by reason of their being at hand, and also by the comparative infrequency of the visits of the inspectors, whose districts are of so great extent that an annual visit to every factory is out of the power of those officers.

That these considerations demonstrate the great value of the services of the certifying surgeons as complementary of the duties specially belonging to the inspectors, and that, as a corollary, the abolition of the surgeon's office would, if the Act is to be administered as efficiently as at present, necessitate a vast addition to the staff of inspectors, at great cost to the country, and, not improbably, with increased friction to the manufacturers. That it is a known fact in small factories, where frequent visits by the surgeon are not arranged for, that there are almost always grave irregularities and omissions in the observance of the law.

That, considering the Factory Act to be established not solely for the benefit of the employed, but likewise for that of the manufacturers, it is a correct principle to charge some part of the cost of its administration upon the latter.

That the revision of fees made by the present Act leaves no valid grounds of complaint, the basis of payment being fixed on the lowest terms. To illustrate: a certificate is to be had at the house or office of a certifying surgeon at the cost of sixpence. This includes the examination of the document produced to show the age; the entry in the register from that document of the assigned date, and the names of parents; the signature to the certificate asserting fitness for work and freedom from disease and deformity, the notice of objection, if any be found, and the date at which the certificate is granted. In the case of factories employing five or more hands coming under the Act, the certificate has to be given at the factory itself; one object of which is to detect personation, and to identify the candidate with the factory in which he is to work. Here, too, the payment is based on the same standard; for although the law allows two shillings and sixpence for the visit to the factory, the surgeon may, and often is, called upon to examine five individuals for that amount.

In these particulars the surgeons' fees present a strong contrast with those allowed to registrars of births; viz., half-a-crown for a copy of a birth register.

That the earnings of the surgeons are in direct proportion to the number of certificates given and the visits made. That if the sum total reaches, in some instances, a considerable amount, it represents a large district, numerous factories ,and much time and labour expended in the duties.

That the re-examination of children, passing from half to full time, or exchanging their places of employment, is as necessary to assure fitness on their

part as the primary examination required in commencing work, and on precisely the same grounds.

That instead of curtailing the medical supervision of factory hands, there is a need of its extension. All places of associated labour, whether termed factories or not, should be subjected to like conditions, and the protective influence of the surgeons should not be exercised only at the entrance of a factory, but should, under certain limitations and conditions, be extended to the operatives engaged in it. Moreover, their aid should be available to carrying out to the full those sanitary clauses of the Act at present entrusted to the inspectors.

Lastly, that the special information acquired by the certifying surgeons, relative to disease in factories, might with advantage be communicated to the sanitary department of the State, and be rendered contributory to the repression of disease.

Dr. ESLER (Belfast), speaking as one who knew a great deal of the details of the working of the Factory Acts, said he had read the petition carefully, and congratulated the authors of it on having furnished a very concise and sweeping document, touching, he thought, all the essential points. He wished to emphasise the importance of one or two paragraphs, and especially Paragraph 5, "That it is important to the general sanitary interests of the operatives in a factory that no contagious or infectious disease be introduced from without by those engaged for work; while the principle goes further, for it affects the general public, who are the ultimate recipients of the goods manufactured." In the paragraph "That instead of curtailing the medical supervision of factory hands, there is a need of its extension," etc., the words "there is a need for its extension" should be underlined. He had had charge for a number of years of 3,000 factory workers, and he knew how important it was to have some medical control over infectious diseases in factories, and therefore it was that he would give special expression to the words in the concluding paragraph to which he had referred that factory surgeons should not only have the powers they at present possessed, but should be endowed with greater powers to interfere for the good of the general public inside and outside the factory. A few months ago a young man came to him with his skin peeling off. He told him he had scarlatina, and asked what department he was in. He replied he was in the cloth-passing department; and it appeared that every piece of cloth coming out of the looms was passing through the hands of that young man, and this cloth was going into the warehouses of one of Her Majesty's Privy Councillors. They would see how important it was that some medical supervision should be exercised over the spread of contagious diseases. At present factory surgeons had not much power, and he would emphasise very strongly, and through the JOURNAL bring all the opinion that the Parliamentary Bills Committee had in their power to use upon the Government, not to do away with the office, but to give them extended powers. The case he had quoted was a typical case of what was happening every week.

Dr. OGILVIE GRANT (Inverness) agreed with what the previous speaker had said as to the importance of extending the duties of factory surgeons. On the other hand, he could not quite agree with the memorial, as he thought the present system of carrying out the duties of that office was little more than a farce. He refused to join the Association of Factory Surgeons. In the first place, there seemed to be some great alteration needed with respect to the office of factory surgeons. They should, he contended, be appointed by some more responsible party than at present, and have special qualifications for the appointment. The appointment, he thought, should be made by the Government, and open to all legally qualified medical men. It was at present a necessity (in order that things might go on smoothly) to keep on good terms with the manufacturer, which, he contended, it was impossible to do if the surgeon did his work properly. He objected out of principle to the factory surgeons being paid by the manufacturer. He considered it important that they should be paid by the State. These were opinions he held very strongly.

Dr. CROWE (Worcester), said he quite agreed with what had fallen from the last speaker. What they required was more extended powers; the present powers were most inadequate.

Dr. ALFRED CARPENTER said he specially urged before Mr. Matthews the necessity for increased powers. He was himself a factory surgeon for some years, and on resigning the post he placed it in the hands of the medical officer of health for the district, whom he considered to be in a much better position to see the Act performed efficiently than himself; and that he thought was the direction in which legislation should go. He saw no objection to manufacturers paying some portion of the fees. He quite agreed it would be an advantage if factory surgeons were paid by the State. They required to have more decided powers, and, as he told Mr. Matthews, they ought to become more closely intimate with the sanitary arrangements of the country; that was what they were asking for. The memorial seemed to him to take in the points that the factory surgeons themselves thought to be most important, and he thought it opened the field for future legislation. He considered it would be rather by supporting the memorial than being antagonistic to it that they would get improved legislation and improved factory laws with regard to children.

The CHAIRMAN said in point of fact every argument that had been used by those present was contained in the memorial. It expressly called for an extension of medical supervision: it called for placing the factories themselves, and not merely the operatives at entrance, under the protective influence of certifying surgeons; it expressly suggested that they should be placed in communication with the sanitary inspectors. It said: "Their aid should be available to carrying out to the full those sanitary clauses of the Act at present entrusted to the inspectors." The last paragraph suggested that they should acquire special information as to the sanitary condition of the place, and have the powers now entrusted to the inspectors, and that they should report to the health officers—the sanitary authorities. He thought, therefore, in point of fact, that they were really at one.

DR. ESLER moved and Dr. DICKSON seconded: That the memorial be signed on behalf of the Committee by the Chairman and be presented to the Home Secretary. This was carried unanimously.

THE LOCAL GOVERNMENT (SCOTLAND) BILL.

The CHAIRMAN, referring to the proposed new clauses and amendments in this Bill, copies of which had been laid before the members of the Committee, said they were the result of a number of communications he had had with leading health authorities in Scotland, and with persons in this country who were very well acquainted with the working of the English Acts. They had given him great labour. The following is a copy of the document referred to:

LOCAL GOVERNMENT (SCOTLAND) SUPPLEMENTARY PROVISIONS BILL.

PROPOSED NEW CLAUSES AND AMENDMENTS.

[*N.B.—The New Matter and Proposed Modifications are in Italics.*]

PART IV.—SUPPLEMENTAL.

PROVISIONS RELATING TO THE BOARD OF SUPERVISION.

21(a).—(1) *The Board of Supervision shall henceforward include in addition to the persons named in the Act passed in the sessions of the Eighth and Ninth years of the reign of Her Present Majesty, Chapter eighty-three, intituled an "Act for the amendment and better administration of the Laws relating to the Relief of the Poor in Scotland," one or more Medical Commissioners, to be appointed by Her Majesty and to hold office during Her Majesty's pleasure, such Medical Commissioner or Medical Commissioners to be of not less than ten years' standing in the Medical Profession, and possess in each case the qualifications required, for the time being, to be possessed by a medical officer appointed under the provisions of this Act.*

(2.) *The Board of Supervision shall have power to appoint in writing such medical inspectors and other officers as the Board may from time to time, with the sanction of the Treasury, deem to be necessary.*

(3.) *There shall be paid to such Commissioner or Commissioners, and to such inspectors and officers out of moneys provided by Parliament, such salaries or remuneration as the Treasury may from time to time determine.*

REASONS FOR PROPOSED NEW CLAUSE—21 (*a*).

(1.) The constitution of the Scotch Board of Supervision has, on a variety of different grounds, given rise to oft-repeated expressions of dissatisfaction, notwithstanding the fact that good work in various directions has been accomplished by it. The Board was established in 1845 by the "Act for the Amendment and Better Administration of the Laws relating to the Relief of the Poor in Scotland," and consists of the Lord Provost of Edinburgh, the Lord Provost of Glasgow, the Solicitor-General of Scotland, the Sheriffs depute of the counties of Perth, Renfrew, and Ross and Cromarty, together with three other persons to be appointed by Her Majesty by warrant under the sign manual. But although this provision would seem to admit of the appointment of a medical man to the Board, no such appointment has been made.

This Board was by the same Act empowered to appoint "all such..... officers as they shall deem necessary," and under this provision two "superintendents of the poor," and two "visiting and inspecting officers," have been appointed. But not one of these officers is a medical man, and thus it will be seen that, although innumerable medical questions arise in the administration of the Poor Laws, there is no medical man on the Board, nor is there any medical man among its poor-law officials.

In 1867 the Public Health (Scotland) Act was passed, and under it the Board of Supervision became the central controlling authority for the administration of the sanitary laws throughout the country. There was, however, no modification made in the constitution of the Board. It was to remain just as it had been formed, in 1845, for supervision and relief of the poor, although the new responsibilities which were placed on its shoulders involved the application of a number of principles which were then only beginning to be rightly appreciated and could only be properly interpreted by an experienced student of preventive medicine. It would almost seem as if pains had been taken, however inexplicable it may appear, to exclude medical influence from the Board's councils; for, on looking into the Act, we find that even in the presence of a formidable epidemic threatening the country, when it might have been expected that the assistance of medical training and experience would have been specially useful, it is provided

(Section 32) that "the Sheriff of any County in Scotland, other than Renfrew, Perth, or Ross and Cromarty, may be appointed an additional member of the Board."

The intention of the first sub-section of the proposed new clause is to secure the presence on the Board of one or more competent and experienced medical members who could speak with authority and exert proper influence on all matters affecting the public health.

It may be here noted that these considerations were not overlooked by Parliament when the Irish Local Government Board was established; for it is expressly provided (14 & 15 Vict., ch. 68, secs. 1, 2, etc.; and 35 & 36 Vict., ch. 69, sec. 3) that the Queen may from time to time appoint two members of the Board, but that one of the persons so appointed "SHALL BE A PHYSICIAN OR SURGEON OF NOT LESS THAN TEN YEARS' STANDING, AND SHALL HAVE THE TITLE OF MEDICAL COMMISSIONER."

(2.) As regards the medical advice for sanitary purposes at the disposal of the Board of Supervision, it must be admitted that the Board have power under Section 14 of the Act of 1867 "to appoint all such officers.....as they shall deem necessary." But as regards medical officials, they have not exercised this power to any great extent. They have, it is true, secured part of the services of Dr. H. D. Littlejohn, the able health officer of Edinburgh, and under his influence much good work has been accomplished. But Dr. Littlejohn is the only medical official (beside the Superintendent of Vaccine) connected with the Board.

The procedure adopted by the Board, in respect of their sanitary functions, was thus described by Mr. (now Sir W. S.) Walker, the Chairman of the Board, in his evidence before the Royal Sanitary Commission, in May, 1870, and the description holds good at the present time:—

> "The Board appointed no additional inspectors or visiting officers. We had three such officers under the Poor Law,[1] and we thought it sufficient in the meantime to give them separate instructions with regard to the Public Health Act, because in the course of their duty they were continually travelling about in their districts and visiting villages and towns, and they would almost necessarily see, or could very easily inquire into, what was being done and what was required to be done, and we directed them to report to us ..... When these reports come to the Board we proceed to transmit a copy of them to the local authority for their observations ..... (Q. 12,089.)

This is still the method of procedure, and, apart from the consideration that the reports are made by more or less unskilled observers, the system is obviously defective and insufficient. If it is to be inferred that sanitary administration is subordinated to that of the Poor Laws, some alteration is obviously needed.

It is desired by the proposed clause to secure the nucleus of a strong useful medical department under the central Board, and this endeavour is supported by the knowledge of the value of the small but able staff attached to the English Local Government Board, and of the great services that have been rendered by that staff, not only to individual localities throughout the country, but also in the promotion of sanitary science and preventive medicine.

PROVISIONS AS TO POWERS OF COUNCIL.

22.—(1) The council of *every county shall, except where otherwise allowed by the Board of Supervision*, from time to time appoint and pay a medical officer or medical officers and a sanitary inspector or sanitary inspectors, who shall not hold any other appointment or engage in private practice or employment without express written consent of the council.

Provided that the Board of Supervision may, for reasons brought to their knowledge, allow any County Council to make and carry into effect arrangements with any other County Council for the employment, jointly, of the services of one and the same medical officer, on such terms as to the contribution to the salary of the officer, or otherwise, as may be agreed.

(2.) The County Council *or County Councils, as the case may be*, and any District Committee, as the local authority under the Public Health Acts, may from time to time make and carry into effect arrangements for rendering the services of such officer or officers regularly available in the district of the District Committee, on such terms as to the contribution by the District Committee to the salary of any medical officer or sanitary inspector, or otherwise, as may be agreed, and the medical officer or sanitary inspector shall have within such district all the powers and duties of a medical officer or sanitary inspector appointed by a District Committee.

(3.) *Such an arrangement, when once made and carried into effect, shall not be altered, except with the consent of the Board of Supervision, given after full investigation of all the circumstances of the case; and* so long as such an arrangement is in force, the obligation of the District Committee under the Public Health Acts *(as amended by this Act)*, to appoint a medical officer or sanitary inspector shall be deemed to be satisfied without the appointment of a separate medical officer or sanitary inspector.

(4.) *The provisions of the Public Health Acts relating to the appointment of officers are hereby varied so as to provide that henceforward it shall be the duty of every district Public Health Committee from time to time to appoint and pay a medical officer and a sanitary inspector. The powers, duties, and rights of the medical officer, and of the sanitary inspector, shall be those prescribed for such officers respectively by the Public Health Acts, and by any regulations made in that behalf, from time to time, by the Board of Supervision.*

(5.) *Every medical officer and every sanitary inspector appointed under this Act, or under the Public Health Acts, shall be removable from office only by the Board of Supervision.*

REASONS FOR AMENDMENTS PROPOSED. CLAUSE 22.

(1.) The clause as originally drafted would leave the appointment by a county authority of a medical officer or a sanitary inspector an entirely optional and permissive question. But having regard to the great importance from a public health point of view of every county authority having proper skilled advice in their supervision of the local administration of the sanitary laws, and having in view the hesitation that is at present apparent in England on the part of many of the new County Councils to avail themselves of the similar permissive powers to appoint county medical officers of health, it is obviously a preferable plan to render compulsory the appointment of a medical officer and sanitary inspector by every County Council, it being left to the discretion of the Board of Supervision as Central Authority to make exceptions where special circumstances show such exceptions to be reasonable, and not disadvantageous from a public health point of view.

The chief exceptions which it is contemplated should be made by the Board are those where two adjacent small counties desire to combine in the appointment of one and the same medical officer, and where a single officer, devoting all his time to the work, could satisfactorily undertake the duties of both counties.

With the view of facilitating such joint action, the proposed PROVISO has been suggested.

The chief objection to the proposal to make the appointment of a medical officer of health compulsory on every Council will no doubt be based on the additional expense that would be involved; but this additional expense is more apparent than real. If the adoption of the proposal did in some cases involve an initial additional expenditure, it should be remembered that judicious combination of adjoining districts for the appointment of sanitary officers would be encouraged, and as vacancies occurred among existing officers such combinations would be extended. Eventually the initial slight additional expense would disappear, and in some cases an actual saving would probably ensue. Moreover, it must be remembered that at present there is a large number of districts in Scotland without a medical officer of health, as the appointment of such officers by local authorities under the Act of 1867 was not, as in England, compulsory. Such districts undoubtedly need medical supervision, and this could at once, without difficulty or great expense, be supplied by a county officer.

There is also the further contention that sanitary authority is more likely to listen to the advice of an officer appointed by themselves than to that of an officer appointed by a superior authority. But this objection falls to the ground when it is remembered that the medical officer of health is altogether an ADVISING officer and that the responsibility for adopting or rejecting his advice rests directly with the local authority, and indirectly with the County Council.

(2.) The addition of the words "OR COUNTY COUNCILS AS THE CASE MAY BE," is rendered necessary by the preceding PROVISO to sub-section 1.

(3.) The proposed addition to this sub-section (3) is suggested with the view of preventing the breaking up of satisfactory combinations, in consequence of unjustifiable opposition on the part of an ignorant or capricious constituent authority. If a conscientious medical officer calls attention to sanitary defects in the district of such an authority, and recommends action which would involve expenditure, he is very liable to arouse the hostility of the authority, who might in their anger endeavour to secede from the combination, and appoint for themselves a more pliable adviser. The need for some such safeguard as that proposed has been proved to demonstration in English experience.

(4.) It is very desirable that every district Public Health Committee should have proper skilled advice on sanitary matters. Hitherto the appointment of medical officer and sanitary inspector has been optional, although the Board of Supervision have the power of requiring such appointments to be made if they think fit; and, as a result, in a large number of districts no medical officer has been appointed. It is now thought that the appointments should be made compulsory on the local authorities, and there is the less appearance of hardship now in this proposal, as, for a comparatively trifling contribution, such authorities will be able in future to avail themselves of the services of the county officers.

The second part of this new subsection (4) is a modification of Clause 17 (3) of the other Bill [Local Government (Scotland) Bill], and is rendered necessary by the proposed amendment of that clause (*q.v.*).

(5.) Under Section 8 of the Public Health (Scotland) Act, 1867, it is provided that the sanitary inspectors "shall be removable from office only by the Board" of Supervision, "except in the case where the local authority is the Town Council or Police Commissioners or Trustees in any burgh in Scotland having a local Act for police purposes, or having a population of ten thousand or upwards according to the census last taken, in which case the inspectors shall be removable from office by the local authority."

But by a strange anomaly, no such protection is afforded to medical officers appointed under that Act. In his evidence before the Royal Sanitary Commission on March 31st, 1870, Mr. E. S. Gordon, Q.C., who as Lord Advocate had framed and was mainly responsible for the Bill of 1867, stated that—

> "The sanitary inspector is not removable without the consent of the Board of Supervision. I rather wished also that the medical officer should be in the same position, but I found that there was a strong disinclination to the power of dismissal being vested in the Board of Supervision alone; and, not being in Parliament at the time, I was obliged to come to a compromise." (Q. 11,092.)

That compromise is not satisfactory or just to the medical officers.

On the same occasion Mr. (now Sir W. S.) Walker, the Chairman of the Board of Supervision, threw further light on this matter in his evidence, when he admitted that the medical officer is much more dependent upon the local Board than the inspector is, and added—

> "I may observe that in Scotland the Board of Supervision have not the same power with reference to medical officers that the Poor-law Board have in England. The tenure of office of a poor-law medical officer in Scotland is not permanent, and the Scotch members or their constituents did not wish to place the medical officers under the Public Health Act in a different position from that of medical officers under the Poor-law Act." (Q. 12,103.)

It requires no elaborate arguments to show that it is of the utmost importance from every point of view to obtain reasonable security of tenure, during good behaviour, for the medical officer as well as the sanitary inspector, and for the officers of the new County Councils as much as for those of the old local authorities. Without such security of tenure perfect independence in the advice given by the medical officer cannot be ensured, and great hardship may fall on the head of an officer who, fearlessly doing his duty, points out the sanitary defects of his district. The need for such security has long been seen in English experience, and recently Bradford, Ruthin, and many other places have afforded striking evidence of this statement. Hence the proposal to add the new subsection (5) to Clause 22 of the present Bill.

23.—(1.) Every medical officer and sanitary inspector under the Public Health Acts for a district in any county shall send to the County Council a copy of every [*periodical*] report of which a copy is for the time being required by the

[1] Now (June, 1889) there are four such officers, but not one of them is a medical man.

regulations of the Board of Supervision (which they are hereby authorised to make) to be sent to that Board, [*and if a medical officer or sanitary inspector fails to send such copy the County Council may refuse to pay any contribution, which otherwise the Council would in pursuance of this Act pay, towards the salary of such medical officer or sanitary inspector.*]

(2.) If it appears to the County Council from any such report, *or from any other information or representation*, that the Public Health Acts have not been properly put in force within the district to which the report relates, or that any other matter affecting the public health of the district requires to be remedied, the Council may cause a representation to be made to the Board of Supervision on the matter.

REASONS FOR AMENDMENTS PROPOSED TO CLAUSE 23.

(1.) The County Council should have a copy of EVERY report of importance made by the local health officers, and not merely those that have to be PERIODICALLY made. It frequently happens that the "special" occasional reports on particular outbreaks of disease or on pressing local matters, are of the greatest importance. If the County Council are to exercise any effectual supervision over sanitary proceedings in their county, they should have copies of those reports in their hands at the times they are made, and should not have to wait for their incorporation in some "periodical" (probably annual, or at most, quarterly) report.

The clause as at present drafted, has been copied from the English Act of last session, but the defect referred to has already been discovered in the working of that Act. The word [PERIODICAL] should therefore be omitted.

The second part of this subsection (1), which has been copied from the English Act of last session ("AND IF A MEDICAL OFFICER OR SANITARY INSPECTOR FAILS TO SEND SUCH COPY, THE COUNTY COUNCIL MAY REFUSE TO PAY ANY CONTRIBUTION WHICH OTHERWISE THE COUNCIL WOULD, IN PURSUANCE OF THIS ACT, PAY TOWARDS THE SALARY OF SUCH MEDICAL OFFICER OR SANITARY INSPECTOR"), seems to be inapplicable to Scotland, as in that country there has been no repayment from the Parliamentary Grant of a moiety of the salaries of sanitary officers under the Public Health Acts. It should therefore be omitted.

Moreover, in any case, the stoppage of a moiety of some of the paltry salaries paid to the average health officers in Scotland would be but a very trifling punishment.

(2). The insertion of the words "OR FROM ANY OTHER INFORMATION OR REPRESENTATION" after the words "FROM ANY SUCH REPORT," is desirable in order to enable the County Council to take action (if so disposed) on complaints or on information other than that afforded by the report of the local health officer.

24.—(1.) Except where the Board of Supervision, for reasons brought to their notice, may see fit in particular cases specially to allow, no person shall hereafter be appointed the medical officer of any county or district, unless he be legally qualified for the practice of medicine, surgery, and midwifery.

(2.) No person shall after the first day of January one thousand eight hundred and ninety-three be appointed the medical officer under the Public Health Acts for a county, or district, or a parish which contained, according to the last published census for the time being, a population of fifty thousand or upwards, unless he is qualified as above mentioned, and also either is registered on the *Medical Register* as the holder of a diploma in sanitary science, public health, or State medicine under Section 21 of the Medical Act, 1886, or has been during the three consecutive years preceding the year one thousand eight hundred and ninety-three a medical officer under the Public Health Acts *as defined by this Act, or under the Public Health Act, 1875, or under the Public Health (Ireland) Act, 1878*, for the district of a local authority under the said Acts containing a population according to the last published census of not less than twenty thousand.

(3.) No person shall, except with the express consent of the Board of Supervision, be appointed as the sanitary inspector for a county unless he *possess a certificate or diploma in sanitary science from a body competent to give such certificates or diplomas*, or has been during the three consecutive years preceding his appointment the sanitary inspector of a local authority under the Public Health Acts, *as defined by this Act, or under the Public Health Act, 1875, or under the Public Health (Ireland) Act, 1878*, the district of which contained a population, according to the last published census, of not less than twenty thousand.

REASONS FOR PROPOSED AMENDMENTS TO CLAUSE 24.

(2.) The words proposed to be added seem to be necessary to ensure that the important post of medical officer of health shall be open to competition from all parts of Great Britain and Ireland.

(3.) The first amendment to this subsection (3) is designed to secure that preference shall be given to holders of special sanitary certificates or diplomas.

The second amendment is necessary in order to secure that the post of sanitary inspector shall be open for competition to candidates from all parts of the United Kingdom.

50.—(1.) The clerk of supply in office at and after the passing of this Act shall discharge all the duties of county clerk until the appointed day, and upon such day the clerk of supply in office shall become the clerk of the County Council (in this Act referred to as the county clerk or clerk of the County Council), and shall continue in office for twelve months after the first meeting of the Council, unless he shall sooner vacate office by death, resignation, or disqualification. At the expiration of such period he shall continue in office during the pleasure of the County Council.

(2.) In addition to any other rights and duties conferred or imposed on him by the Council, the county clerk shall have and discharge the rights and duties now belonging to or devolving on the clerk of supply, and all things authorised or required to be done by or to the clerk of supply may be done by or to the county clerk.

(3.) Subject to the provisions of sub-section (1) of this section, the County Council may from time to time appoint a county clerk, treasurer, collector, assessors, surveyors, and such other inspectors, officers, and servants as may be necessary and proper for the efficient execution of the duties of the County Council, and may make regulations with respect to the duties and conduct of such county clerk, treasurer, collector, assessors, surveyors, inspectors, officers, and servants. If it is deemed expedient one person may be appointed to fill two or more offices, and two or more persons may be appointed jointly to fill one office.

(4.) It shall not be lawful to appoint a county councillor or the partner in business of a county councillor to any office or place of profit under the County Council; and the disqualification shall apply to any person and his partners in business during six months next after such person has ceased to be a county councillor.

(5.) The Council shall pay to the county clerk, treasurer, collector, assessors, surveyors, inspectors, officers, and servants appointed or employed by them such reasonable salaries, wages, or allowances, and may award to them such pensions, not exceeding those which may be awarded to civil servants of Her Majesty under the like circumstances, as they think proper, and every such county clerk, treasurer, collector, assessor, surveyor, inspector, officer, and servant shall hold office during the pleasure of the Council [*subject, as regards medical officers and sanitary inspectors, to the provisions of section 22 (5) of this Act.*]

(6.) The Council may at any time (*subject, as regards medical officers and sanitary inspectors, to the provisions of section 22 (5) of this Act*), discontinue the appointment of any [*inspector,*] officer, or servant appearing to them not necessary to be reappointed; and may from time to time make such arrangements as they think necessary as to the offices required to be created or abolished.

REASONS FOR PROPOSED AMENDMENT TO CLAUSE 50, SUBSECTION 6.

The proposed saving clause in sub-section (5) and (6) appears to be necessary in view of the proposed new subsection 5 of Clause 22 (*q.v.*). Otherwise there would be a serious inconsistency between the various provisions in the Act relative to the tenure of office of the sanitary officers.

Under these circumstances the word "inspector" had also better be omitted. The word "officer" would seem to include "inspector," and possible confusion may be avoided by omitting the latter word altogether.

LOCAL GOVERNMENT (SCOTLAND) BILL.

17. With respect to the transference to the County Council of the powers and duties of parochial boards as local authorities under the Public Health Acts, the following provisions shall have effect:—

(1.) For the purposes of the administration of the laws relating to public health, the county shall be divided into districts in the manner provided in the Acts of 1889, and there shall be a district public health committee for each such district constituted as provided in the said Acts.

(2.) A district public health committee shall, subject to the provisions of the said Acts, be the local authority under the Public Health Acts, and as such shall have and may exercise within its district all the powers and duties by the Acts of 1889 transferred to or conferred on the County Council with respect to the administration of the laws relating to public health, except those relating to medical officers or sanitary inspectors for the county, and subject to the provisions following:

(*a*). A district public health committee shall have no power of raising money by rate or loan.

(*b*). The County Council may make general regulations for the government of a district public health committee, and such committee shall conform to those regulations.

(*c*) *If not less than one-tenth of the ratepayers in a district appeal to the County Council from a determination or order of the district public health committee, the County Council shall take such appeal into condition, and shall have power to confirm or vary or rescind such determination or order; and such determination or order shall be stayed pending the appeal.*

(2*c*.) It is felt that "five" is too small a number of ratepayers to be entrusted with the right of appeal against, and consequent power of delaying the execution of, an order of the local sanitary authority. If the proposal in the Bill were enacted every sanitary improvement would almost certainly lead to an appeal and delay. The appellants should be at least some percentage of the interested ratepayers, and in the clause suggested for substitution for Clause 17(2*c*) ten per cent., or one-tenth, is proposed.

(3.) *Except as regards medical officers and sanitary inspectors* the power of appointing officers under the Public Health Acts is hereby varied, so that it shall be lawful to appoint such officers either for the whole district or any part thereof or parish therein as shall be deemed expedient. The officers so appointed shall have, as nearly as may be, within the areas respectively assigned to them the same powers, duties, rights, and tenure (if any) as the officers, as the case may be, of the existing local authority, have within the area of the parish. The district public health committee shall have power to appoint and remove a district committee clerk, who shall, whenever possible, be the same person appointed by the district committee of the same district for any other purpose under the Acts of 1889.

REASONS FOR PROPOSED AMENDMENT OF CLAUSE 17 (3).

(3.) This subsection as drafted would apparently continue a faulty arrangement as to the tenure of office of medical officers, which it is proposed to deal with fully in the "Suplementary Provisions" Bill (*q v.*). These officers should therefore be excepted from the operation of the Clause 17 (3).

Dr. FARQUHARSON said the Committee and the profession were deeply indebted to Mr. Hart for the great labour which he had bestowed on this complicated subject, and he complimented him on the high value of the results. The clauses were most important, and most ably drawn. He urged the necessity for taking this opportunity of endeavouring to strengthen the Board of Supervision, for after the present Bill was passed, it would be very difficult to get an amending Act. He thought there should be an amendment in the constitution of the Board of Supervision, or its removal, which would be the best policy.

It was decided on Dr. Farquharson's recommendation to distribute the various amendments among members of Parliament interested in the subject.

Dr. ALFRED CARPENTER endorsed Dr. Farquharson's view, and said in Glasgow he had found there was a very strong condemnation of the Board of Supervision, and a general opinion that it would be better if it were abolished altogether. He thought they should go in strongly for its amendment at the present moment.

It was moved Dr. OGILVIE GRANT, and seconded by Dr. FAR-

QUHARSON, "that the proposed new clauses and amendments be approved, and that steps be taken to ensure their introduction in Committee by various members of Parliament."

*** Copies will be furnished to members of the Association on application.

LUNACY ACTS AMENDMENT BILL.

Dr. MICKLE reported that this Bill was fully discussed before the Subcommittee in the spring, and a number of resolutions were printed in the JOURNAL of April 6th, page 799. The Lord Chancellor had modified the clauses respecting medical restraint, in accordance with the recommendations of the Parliamentary Bills Committee; that was to say, he had so modified them that a patient could be restrained for any medical or surgical reason, which was, he thought, pretty nearly as far as it was desirable they should go, and covered most of the ground asked for.

The following are the more important additional suggested amendments, with reasons for the same, on which it was decided that instance should be more strongly made while the Bill was before the Law Committee (the Bill as ordered to be printed, February 25th):—

Sect. 29, Subsect. 4, p. 18, line 30, to omit "a special report," and the words following to include the word "with" in line 33, and to make the necessary alterations in this and subsequent subsections to harmonise with this alteration.

The medical certificate of unsoundness, to be sent periodically, is thought to be sufficient, and the "special reports" will impose a large amount of extra routine work on the medical superintendent, to the detriment of more important duties.

Sect. 3, Subsect. 7, p. 2, and Sect. 33, Subsect. 1 p. 20. It is suggested that these be omitted, as singling out for restrictive legislation medical men from among those who now receive "single patients."

Sect. 37, p. 22. It is suggested that this section be omitted. If this section be not omitted it is suggested that the person making application for discharge of a patient under this section should give adequate security for the payment of all necessary expenses, and that persons be disqualified to sign any medical certificate under this section who hold to the applicant under this section the same relations as the persons disqualified to sign under Section 14 hold to the "petitioner" for an order for reception of an alleged lunatic into an asylum, etc.

It is to be anticipated that, under this section, vexatious, wholly unnecessary proceedings would sometimes be instituted, and that it is likely to lead to the discharge of persons who are in an unfit state for discharge.

Sects. 43 and 44. It is suggested that these sections be omitted, or, failing this, that Sect. 44 be omitted and the part of Sect. 43 following the word "be" in line 22, p. 26.

The correspondence of patients in private asylums is thought to be already duly protected, inasmuch as all letters to certain authorities must be forwarded unopened, and any letter written by a private patient and not forwarded to the person to whom it is addressed must be endorsed to that effect, and be laid before the Visiting Commissioners or the Committee of Visitors, as the case may be, at their next visit.

Sects. 54 to 60, p. 33, *et seq.* It is suggested that the provisions of the Bill be so altered as not to subject the registered lunatic hospitals to special restrictions and disabilities.

Sect. 65, p. 36, line 38. It is suggested to omit the words "wholly or in part belonging the same local authority," so that the services of medical officers in any two or more county or borough asylums should count accumulatively towards pension as if all such service has been in one asylum, each such local authority to contribute its appropriate share.

It is also suggested that officers and servants in county and borough asylums should be entitled to claim pensions as a right after a certain length of service with good conduct; and that the medical officers should be placed, as regards this matter, on a footing analogous to that of members of the Civil Service.

Dr. MICKLE, replying to a question from Dr. FARQUHARSON on the subject of private asylums, said there was a clause in the present Bill which indirectly would most certainly lead to a large diminution of private asylums and the patients in them by encouraging public authorities to provide accommodation for private patients. Dr. Mickle quoted figures to show that already the movement had been largely that way; and that of the total number of registered private lunatics, including those resident with their committees, less than three-eighths were in private asylums.

It was proposed by Dr. BRIDGWATER, seconded, and carried unanimously, that the amendments above quoted be placed in the hands of members of Parliament, with a view to securing their adoption in the Bill now before the Law Committee.

MEDICAL ACT (1886) AMENDMENT BILL.

THE following is the text of a Bill to amend the Medical Act, 1886, introduced by Sir Walter Foster, and backed by Mr. Whitmore, Sir Trevor Lawrence, Sir Guyer Hunter, Dr. Farquharson, and Sir Lyon Playfair:—

BE it enacted by the Queen's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows:

1. This Act may be cited as the Medical Act, 1889, and shall be construed as one with the Medical Acts.

2. Every body being a medical corporation within the meaning of the Medical Act, 1886, or any two or more of such bodies acting in combination, shall be competent to hold special examinations and to grant diplomas in sanitary science, public health, or State medicine; and every holder of any such diploma shall, subject to the provisions of Section 21 of the said Act, be entitled to have such diploma entered in the *Medical Register*, in addition to any other diploma or diplomas in respect of which he is registered under the Medical Acts; and every such diploma shall be deemed to be a diploma in sanitary science, public health, or State medicine under the said section, within the meaning of Section 18, Subsection 2, of the Local Government Act, 1888, and for all other purposes.

LUNACY ACTS AMENDMENT BILL, 1889.

A DEPUTATION from the Royal College of Physicians, consisting of the President, Sir Andrew Clark, Bart., Sir Edward Sieveking, chairman of the Lunacy Bill Committee, Dr. Maudsley, and the Registrar, waited on the Home Secretary, the Right Hon. Henry Matthews, on Monday last, the 1st inst., in support of the amendments to the Lunacy Acts Amendment Bill which the Committee of the College had agreed to recommend, and which had already been submitted to Mr. Matthews.

The deputation was very courteously received by the Home Secretary, and the President opened the subject of their interview by adverting to the disapproval of the Bill as a whole which prevailed very generally in the profession, and more particularly among those entrusted with the curative treatment of the insane; the intervention of the judge or justice, which is a fundamental principle of the measure, being especially objected to. He pointed out how the dread of publicity, especially in its effect on the future of their children, which could hardly fail to attend an inquiry by a local magistrate, would lead the heads of families to postpone as long as possible the petition for an order, and thus interfere with the early treatment of patients, on which so much depended. He ventured to express a hope that the Government might see fit to postpone legislation on the subject to a future session.

The HOME SECRETARY replied that he could give no encouragement to this hope, and that the intention was to proceed with the Bill; and that with regard to the intervention of the judge or justice, it came with the recommendation of three successive Chancellors, and could not be abandoned.

Sir ANDREW CLARK then proceeded to address the Home Secretary in support of the amendments. The principal points insisted on were those which have been already set forth in the report of the Lunacy Bills Committee and in the petition of the College to the House of Commons on the second reading of the Bill. Sir Andrew Clark observed that if an application to a justice and an inquiry by him were to be made the condition of the issue of a reception order, it was hoped the inquiry would be as little public as possible, and the time allowed as short as possible. With respect to the provision that the magistrate may visit the patient before making the order if he thinks fit, Sir Andrew pointed out that this is no part of the practice in Scotland, to which it is the avowed intention of the Bill to assimilate that of England. Referring to the section of the Bill which provides that the alleged lunatic may have a personal interview with a judge or justice after his reception, Sir Andrew insisted on the unsettling and injurious effect this might have on the patient's mind, and pointed out how undesirable it was that the duty of refusing permission should be thrown on the medical superintendent. In this contention he was ably supported by Dr. MAUDSLEY, and the hope was expressed that this section of the Bill might be abandoned, more especially as sufficient provision is already made against the needless confinement of patients by the periodical visits of the State-appointed commissioners.

In the matter of "single patients" in private houses, both the President and Dr. Maudsley insisted with much force on the undesirability and injustice of placing the houses of medical men in an exceptional position in this respect by requiring an order from a judge in lunacy before a patient can be received. They also pointed out that this "boarding out," under proper care, of two or three patients, should be rather encouraged than hindered, and that, in view of the gradual abolition of private asylums, the development of this system offered the best opportunities for future progress and improvement in the care and treatment of a large class of insane patients.

Lastly, the proposal to establish a monopoly of existing private asylums was strenuously opposed on the grounds of public policy, and free competition advocated. The impression left on the mind of the deputation was that the Home Secretary himself scarcely considered this provision of the Bill as defensible in principle.

Sir EDWARD SIEVEKING, fully endorsing the statements made by the President of the College of Physicians, dwelt upon the unanimity of the profession in its objections to the Bill in its present form. Giving full credit to the framers of the Bill for their desire to meet the necessities of the case, he ventured to suggest that, as the College of Physicians had the benefit of the community, and the welfare of the patients specially, at heart, it would be most desirable that, to ensure a perfectly satisfactory result, conferences should take place between the legal and medical representatives of opinion before the passing of the Bill.

Mr. MATTHEWS expressed his satisfaction at having had an opportunity of hearing the opinions of representatives of the medical profession, so well informed on the subject as the members of the deputation, and his desire to give full consideration to the views they had expressed.

The deputation then thanked the Secretary and took their leave.

It is hoped that, although the leading features of the measure will probably be retained, some small concessions may be made in response to these representations, which will have the effect of modifying some of the more objectionable provisions of the Act and of facilitating the working of it.

THE PASTEUR INSTITUTE.

A MEETING was held on Monday last at the Mansion House "for the purpose of hearing statements from Sir James Paget and other representatives of scientific and medical opinion with regard to the recent increase of rabies in this country, and as to the efficiency of the treatment discovered by M. Pasteur for the prevention of hydrophobia." The Lord Mayor presided, and among those present were the Duke of Northumberland, the Duke of Westminster, Sir John Lubbock, M.P., Sir James Paget, Sir Spencer Wells, Sir George Stokes, P.R.S., Sir R. N. Fowler, M.P., Sir W. Mac Cormac, Sir William Bowman, Sir Joseph Lister, Sir Henry Roscoe, M.P., Professor John Marshall, Professor Michael Foster, Rev. Prebendary Harry Jones, Rev. H. L. Paget (vicar of St. Pancras), Dr. Playfair, Captain W. H. James (London County Council), Colonel Howard Vincent, M.P., Dr. Farquharson, M.P., Dr. Lauder Brunton, Professor Ray Lankester, Professor Victor Horsley, Mr. Everett Millais, Mr. Ernest Hart, Dr. Fleming, C.B., Professor Roberts-Austen, Sir F. A. Abel, Dr. Sedgwick Saunders (medical officer of health for the City), Sir J. Risdon Bennett, Dr. George Harley, Dr. Priestley, M. Pasteur, jun., Dr. Armand Ruffer (Pasteur Institute), Dr. Bridgwater (Harrow), Dr. Holman (Reigate), Sir E. Sieveking, Professor Humphry, Dr. Wilks, Dr. Gladstone, Dr. Wakley, Mr. W. H. Cross (St. Bartholomew's Hospital), Mr. Brudenell Carter, Rev. E. C. Hawkins (rector of St. Bride's), Sir Frederick Perkins, Sir Trevor Lawrence, M.P., Dr. Dickson, R.N. (Her Majesty's Customs), Dr. Gordon-Brown (City Police), Colonel Sir Edmund Henderson, Dr. Vintras, Dr. Sydney Jones, the Dean of Manchester, Mr. G. W. Osborn (London County Council), Mr. Cumming Macdona (President of the St. Bernard Dog Club), Professor Frankland, General Strachey, M. Blouet ("Max O'Rell"), and Professor Flower.

Professor RAY LANKESTER read a letter from H.R.H. the Prince of Wales, forwarding a cheque for £100, in which His Royal Highness referred to the recent visit of himself and the Princess to the Pasteur Institute; to the painless nature of the method employed; and said, from what he heard and saw, he had convinced himself of the great value of M. Pasteur's labours in the cause of humanity, and he heartily approved of the objects of the meeting.

A letter was also read from Professor Huxley, in which he said:—

I find it no less difficult to imagine that our wealthy country should be other than ashamed to continue to allow its citizens to profit by the treatment freely given at the Institute without contributing to its support. Opposition to the proposals which your lordship sanctions would be equally inconceivable if it arose out of nothing but the facts of the case thus presented. But the opposition which, as I see from the English papers, is threatened, has really, for the most part, nothing on earth to do either with M. Pasteur's merits or with the efficacy of his method of treating hydrophobia. It proceeds partly from the fanatics of *laissez faire*, who think it better to rot and die than be kept whole and lively by State interference; partly from the blind opponents of properly-conducted physiological experimentation, who prefer that men should suffer rather than rabbits or dogs; and partly from those who, for other but not less powerful motives, hate everything which contributes to prove the value of strictly scientific methods of inquiry in all those questions which affect the welfare of society. I sincerely trust that the good sense of the meeting over which your lordship will preside will preserve it from being influenced by these unworthy antagonisms, and that the just and benevolent enterprise you have undertaken may have a happy issue.

Letters were also read from the President of the Royal Society, the Scientific Grants Committee of the British Medical Association, the Society for the Advancement of Medicine by Research, etc.

The LORD MAYOR said since he had consented to the holding of the meeting he had been deluged with literature and letters, many of the latter being anonymous and a large proportion scurrilous. The opposition that had been most prominent was that of the London Anti-Vivisection Society. He analysed in an amusing manner the signatures to a memorial which the Society had forwarded. He had been urged to advocate the establishment of a Pasteur Institute in this country, but had declined, considering it would be more economical for English patients to be treated in Paris. He regretted that M. Pasteur had been charged with cruelty; he found him a gentle and humane man, and he hoped they would be enabled to send a handsome contribution to the Pasteur Institute, and he hoped another result of that meeting would be the stamping out of rabies and hydrophobia in this country.

Sir JAMES PAGET, speaking as a delegate from the Royal Society, said he should confine himself to the subject of the resolution, which was as follows:—"That this meeting records its conviction that the efficacy of the antirabic treatment discovered by M. Pasteur is fully demonstrated." The special and most direct evidence of that was easily told, for they had to look back not far to a time when every person bitten by a really rabid dog was almost sure to die; and the quite certain fact that everyone in whom the symptoms of rabies showed themselves after the bite was as sure to die as anything that might be named in this life. Now, it was difficult at that time to make anything like an estimate of the number of persons bitten by dogs who became subjects of the disease. In some instances there were probably not more than five in the hundred of those bitten who suffered from the disease; in others fifteen, in others twenty, and in some cases, especially in those who were bitten on the hands and face and fully exposed parts, the mortality rose to as much as 50 or 60 in the hundred. In those that were so bitten by wolves, as they very nearly all were in Russia, it rose to 80 per cent. of the persons bitten, and the 50 or 60 or 80, if they showed symptoms of rabies, did certainly die. The reasons for these variations in number were plain enough. Many of those supposed to be rabid animals were not so; they were savage ill-conditioned dogs, but not subjects of the disease. All the dogs suffering from the disease were not equally rabid. The virulence was not equally intense in all cases; all patients were not equally susceptible, some were bitten through their thick woollen clothes, and the virus was wiped off and not communicated; some had their lives saved by deep incision or cauterisation of the wound. There was quite reason enough for having such a wide range in the number of deaths, but the fairest estimate that could be made, and it was not in the least too high, but, if anything, too low, showed that, taking the average, of every 100 persons bitten by rabid dogs, 15 would suffer from the disease, and 15 per cent. would die. To look at the result of M. Pasteur's treatment: He began his work on rabies in the year 1885, in the month of July, so they celebrated very nearly the anniversary of the very beginning of his treatment, and in those four years very nearly 7,000 persons had been treated at his Institute, and of that number 4,500 were certified as having been bitten by rabid dogs, either by the declaration of a veterinary surgeon or the still more severe test by inoculations made in animals susceptible of rabies; of those 7,000 persons the number of deaths was not exactly certain, for some might have died of other diseases, and in many the treatment was conducted too late, but Professor Ray Lankester had taken great pains to ascertain the exact number, and he had stated that of the 7,000 there were 71 who died. Other estimates were made, and one was widely published, which stated it at 162, but that estimate included the names of all those who had died of the disease in other institutes besides those of M. Pasteur. He did not know what it would come to if those were removed, but what he wanted them to feel now was that they were not to consider them as less or more; he declared only in the resolution that the treatment was efficacious. Of the 7,000 bitten, if 15 of each 100 had died, there would have been as nearly as possible 1,000 deaths. Look at the fact in that simple light, if 1,000 would have died, and only 100 had died, the other 900 lives were as absolutely saved as if they had been snatched from drowning! Those persons were as a ship away from land. Lifeboats failed sometimes to reach the wreck, or they came too late, or were sometimes wrecked. Charges of failure were not brought against them, and they were still looked upon as among

the most humane of institutions. They reckoned the numbers they saved, not the numbers they failed to save. Pasteur had saved already at least 900 lives, and that by a treatment which was derived entirely from his own investigation. Had this had similar success in anyone else? Were they to rely upon M. Pasteur alone? Those who knew him would rely upon his word without any question. At least it might be said that it had met with the same success elsewhere. In the other institutions for the treatment of rabies, especially those in Russia—Warsaw and Odessa—and at one other principal place, there were incidents of just the same kind as they knew, and there numerous patients were treated; and those were patients who were most apt to suffer from the most severe forms. The last estimates showed the mortality was a little over 1 per cent.—of the 100 bitten, one died; he believed that of those who suffered from bites from rabid animals in Russia in former times, fully 50 out of every 100 died. It would indeed have been a marvellous thing if at the first essay the best possible means of using the treatment had been known. It had been improved since, and he should like to read the result of the last year's experience; it was published only ten days ago in the *Proceedings* of the Academy of Sciences in Paris. Last year 1,673 persons were treated. They were all certified to have been bitten by rabid dogs; they were either so certified as suffering from rabies, or were proved to be by inoculation. Of the 1,673, 13 died; of those 13, six died during treatment, making it, therefore, very sure that in them the treatment had been begun too late: and of the remaining 7, four died so soon after the treatment, that it might be suspected that in them also the treatment was begun too late. There were only three examples of what might be called complete failure. Thirteen deaths, instead of the number that would have been before the treatment of M. Pasteur—about 250. Clearly then, as a matter of fact—fact which was undeniable—it could not be disputed, its value could only be diminished. The distinct fact shown was that M. Pasteur's treatment was efficacious. He would venture almost to ask (and that was his own impression) whether there was in anything a treatment more efficacious than his. They might indeed speak of small-pox as reduced by vaccination to almost as small a mortality, but with that exception they could not adduce a single thing to show that they had anything surpassing that for its complete efficacy. But he should not like them to suppose that that was only some chance discovery, and but the one thing which M. Pasteur had done. He would therefore very briefly state that that was only one result of a long life of scientific inquiry, of which only a part had been devoted to the prevention of disease. That inquiry began by the researches on fermentation, and out of them directly sprang, by the marvellous insight and energy of Sir Joseph Lister, the teaching and marvellous utility of antiseptic surgery. That was the direct issue of M. Pasteur's earliest work, and his work on fermentation led him to a clearer knowledge of what was to be understood by a virus when speaking of any virulent or infective disease. It made him to understand what a virus might be—that it might be a deadly ferment; that it might be possible so to attenuate, so to dilute it, so to make it comparatively powerless, that the disease might be given to an animal without risk of life. They all knew that a large number of infectious diseases could be had only once, such as fevers and the like. Speaking generally, a man could have small-pox, scarlatina, or typhoid fever only once; and they knew that an attack of any of these diseases was in itself as great a preventive from a subsequent attack as anything could afford. So, thought M. Pasteur, if he could give to those animals, if he could give to those sheep and chickens the disease from which they died in a mild, harmless form, he should protect them from a fatal one; and so twenty years ago he began these experiments on chicken which died in abundance of so-called chicken cholera; and then he extended them to cattle and charbon (anthrax), and then to swine and *rouget*. M. Pasteur obtained the true virus, the true contagium of these diseases, and he attenuated it down to a point in which he could communicate the disease without danger, and he had done this on an enormous scale. To mention only one: Since 1881 there had been 170,000 sheep inoculated for charbon (anthrax), and the mortality of sheep in France was reduced from 10 per cent. to 1 per cent.; and it was now customary for sheep insurance societies in France to put the same question concerning sheep as in English insurance papers they made with regard to vaccination: "Have you been vaccinated?" "Have they been inoculated for anthrax?" According to the answer so was the insurance. Briefly, he would view the evidence of the efficacy of Pasteur's method by its complete conformity with the great mass of medical and scientific fact, which had now constituted it one of the great principles of further inquiry into disease. Its fruits were not nearly finished. They were being added to every year. There was nothing in which pathology now took a deeper interest than in the extension of a knowledge of the prevention and protection from infective disease. There was one evidence which might be asked for: Had it been universally accepted? The answer was, "No;" and let, he said, that be emphatic; and there had never yet been a scientific and philanthropic truth of great moment that had met with universal acceptance. The opposition that M. Pasteur had received was almost a necessary accompaniment to the positiveness of the truth that could be adduced from other quarters. He (Sir James Paget) wished it to be distinctly understood that there was not one word of exaggeration in what he had spoken. If he had laid emphasis, the Lord Mayor had justified his doing it on the grounds that all of them who knew M. Pasteur, knew him to be a thorough gentleman, and of a kind and most humane temper, and most persevering in the pursuit of truth. If they could flatter him, it would be by the contribution for which the Lord Mayor asked. Let them promote his Institute, and declare their confidence in his work, and there was no personal honour which he could receive compared with that.

Sir HENRY ROSCOE seconded the resolution, which was supported by Sir JAMES LISTER, who referred to the frank and open manner in which M. Pasteur had treated the Commission.

The LORD MAYOR announced subscriptions amounting to a total of £1,200.

On the motion of Sir J. LUBBOCK, M.P., seconded by the Rev. Prebendary HARRY JONES, and supported by Dr. HIME (Bradford), a resolution was passed thanking M. Pasteur and the staff of the Institut Pasteur "for the generous aid afforded by them to over two hundred of our fellow countrymen suffering from the bite of rabid dogs."

Professor MICHAEL FOSTER moved and Dr. LAUDER BRUNTON seconded a resolution requesting the Lord Mayor "to start a fund for the double purpose of making a suitable donation to the Institut Pasteur, and of providing for the expenses of British subjects bitten by rabid animals who are unable to pay the cost of a journey to Paris."

Professor RAY LANKESTER said that to Lord Coleridge thanks were due for the impulse given to the movement by his ungenerous observations from the bench concerning M. Pasteur.

Professor HORSLEY proposed and Dr. FARQUHARSON, M.P., seconded a resolution to the effect that rabies might be stamped out of these islands, and inviting the Government "to introduce without delay a Bill for the simultaneous muzzling of all dogs throughout the British islands as provided in the measure drafted by the Society for the Prevention of Hydrophobia, and for the establishment of quarantine for a reasonable period of all dogs imported. Captain W. N. JAMES (London County Council), and Mr. EVERETT MILLAIS supported the resolution, which was carried unanimously.

Professor Sir G. STOKES, M.P., proposed and Sir W. BOWMAN seconded a resolution for appointing a committee to co-operate with the Lord Mayor in giving effect to the previous resolutions. The names suggested were Sir James Paget, F.R.S.; Sir Henry Roscoe, F.R.S.; Sir Joseph Lister, F.R.S.; Professor Stokes; Sir John Lubbock, M.P., F.R.S.; the Rev. Prebendary Harry Jones; Professor Michael Foster, F.R.S.; Professor Ray Lankester, F.R.S.; Professor Horsley, F.R.S.; Mr Ernest Hart; Mr. J. Romanes; Dr. Lauder Brunton, F.R.S.; Mr. Bertram Currie; Dr. Pye-Smith; General Strachey; Colonel Howard Vincent.

A vote of thanks to the Lord Mayor for presiding was proposed by General STRACHEY and seconded by Mr. ERNEST HART, who, in doing so, said he had the honour to be there (together with Dr. Bridgwater of Harrow, and Dr. Holman of Reigate) as a deputation from the Scientific Grants Committee of the British Medical Association, an association of medical men 13,000 in number, which desired that it should be understood that the words that had fallen from the representative men of science on the platform that day were heartily echoed by the medical profession generally. That great, instructed, and humane body of physicians, surgeons, and general practitioners of Great Britain were heartily in accord with the movement which the Lord Mayor had inaugurated, and he (Mr. Hart) was present on their behalf to ask the meeting now to thank the Lord Mayor for the ability, the courtesy, and the skill with which he had conducted the proceedings that day.

The LORD MAYOR briefly replied.

At a special meeting of the Scientific Grants Committee of the British Medical Association, held on June 29th at the offices, 429, Strand, a resolution of which the following is a copy was passed:

"Resolved: That this Committee desire to express their approval of the action taken by the Lord Mayor to make public and national recognition of the great work done by M. Pasteur in the prophylactic treatment of rabies and hydrophobia, and in the successful investigation of the causes and means of prevention of other diseases of men and animals. That the following gentlemen be appointed a deputation to attend the meeting at the Mansion House on July 1st, and to support its objects:—Professor Burdon Sanderson, F.R.S.; Dr. Bridgwater, President of Council; Dr. Holman, Treasurer of the Association; and Mr. Ernest Hart."

THE LEPROSY COMMITTEE.

At a meeting of the Father Damien Memorial Committee, held at Marlborough House on June 29th, His Royal Highness the PRINCE of WALES presiding, the following recommendations of the Executive Committee were carried:

That a sum of not less than £500 be appropriated to the memorial to be erected to Father Damien in some public place at Kalawao. That a fund be formed, the interest of which should be devoted to the medical treatment and care of indigent British lepers in the United Kingdom, and that the application of such fund be placed in the hands of three trustees; that these trustees be appointed, one by the Royal College of Physicians, one by the Royal College of Surgeons, and one by the General Committee of the Father Damien Memorial Fund.

That a sum of money be set apart and placed under the control of the above-mentioned trustees, for the endowment of two studentships, one student to make Europe his field of investigation, and the other to go abroad and study the disease in China, the colonies, and elsewhere. The studentships to be held for a period of three years, to be renewed by the trustees if thought desirable.

It was also resolved:

That a commission be appointed for not less than one year, consisting of three members, one to be named by the Royal College of Physicians, one by the Royal College of Surgeons, and one by the General Committee of the Father Damien Memorial Fund, to go out to India for the purpose of investigating the disease of leprosy there; and that the Indian Committee be requested to add two members to this Commission. The Executive Committee entertain a hope that the Indian Committee may see fit to invite contributions on a large scale in India for the treatment of leprosy among the people of that country.

The Executive Committee further recommend that a standing committee for the study of leprosy be appointed, composed of not more than six members, to be nominated in equal proportion by the Royal College of Physicians, the Royal College of Surgeons, and the Committee of the Father Damien Memorial Fund, and that this standing committee be requested to prepare memoranda for the guidance of the above-mentioned students and the Indian Commission, and to consider the reports furnished by them from time to time, and to bring the same, with their remarks thereon, before the Father Damien Memorial Fund.

A Subcommittee, consisting of Baron Ferdinand de Rothschild, M.P., Sir James Paget, and Sir William Guyer Hunter, M.P., were appointed to nominate the Secretaries.

THE ELECTIONS AT THE COLLEGE OF SURGEONS.

ON Thursday last, July 4th, the meeting for the election into the Council took place. There were three vacancies, caused by the retirement of Sir James Paget, Mr. Hulke, and Mr. Heath, who had served their due term of eight years as members of Council. Mr. Hulke and Mr. Heath sought re-election, the other candidates being Messrs. Rivington, Cowell, Howse, Steele, Tait, and Tweedy.

The elections were held, as usual, in the library, but the compartments formerly erected, into which voters might enter in order to fill up the balloting papers in deep secrecy, were dispensed with on this occasion. Owing to the size of the enlarged library these compartments were no longer needed. The ballot-box was placed on a long table in front of the President's chair. Each candidate, before dropping his paper into the box, passed by the Assistant Secretary, who marked off his name in a printed list of Fellows of the College. The adjoining council room, in which was displayed the annual show of specimens added to the Museum, proved a place of assembly for Fellows who had recorded their votes or who were about to do so. Friendly greetings were freely interchanged and active discussion maintained with but little, if any, acrimony, as each Fellow who cared to enter into argument preferred as a rule to thresh out opinions with men of his own way of thinking rather than to attempt the hopeless task of answering opponents.

At two o'clock the Secretary read the names of the candidates. The voting then at once commenced, being carried on in the usual manner as above described. The 424 voting papers sent by post were placed in a case close to the ballot-box, opened by the Secretary at the commencement of the ballot and its contents deposited in the ballot-box. Two scrutineers, Mr. Doran and Mr. Battle, were appointed by the President to witness the opening of the voting papers; 308 of these papers came from beyond the London postal district. The ballot is, according to by-law, kept open for two hours, that is to say, till four o'clock.

At 4 P.M. the ballot closed, and, after due scrutiny, the result was declared about 5.20 P.M. as follows:

	Votes.	Plumpers.
Mr. Christopher Heath ...	397	5
Mr. Hulke	385	8
Mr. Howse	241	2
Mr. Rivington	180	3
Mr. Lawson Tait	177	8
Mr. Tweedy	145	2
Mr. Steele	99	3
Mr. Cowell	51	2

Precisely 600 votes were polled; out of these 6 were invalidated; 5 of the voting papers, it must be remembered, were invalidated by being returned too late. The President concluded the proceedings by declaring Messrs. Heath, Hulke, and Howse duly elected.

BLACKPOOL (Population, 20,540).—*Typhoid and Diphtheria in same Locality: Absence of Small-pox: Portable Hospital Provided.*—Dr. H. Welch reports a satisfactory decrease in the death-rate for 1888, 15.6 per 1,000 as compared with 16.0 per 1,000 in the previous year. That rate is the most favourable on record. He considers the decrease as due to a lessened mortality from zymotic diseases, and in particular from diarrhœa and whooping-cough. Scarlet fever was also below the average, but measles, enteric fever, and diphtheria showed an excess, especially diphtheria. This latter disease has, unfortunately, shown a tendency to increase in Blackpool during the past few years, and, during 1888, 32 cases were reported with 13 deaths. It is noteworthy that the locality chiefly affected was the same as that in which enteric fever had been more than usually prevalent. As Dr. Welch remarks "this identity of the local incidence of the two diseases which have always been understood to be, if not actually engendered, at least the most readily propagated by accumulations of filth, is very important, and the more so that the coincidence has not been limited to one year only, but is one that has been pointed out in previous reports." Not a single case of small-pox appeared in the borough, although a disastrous epidemic prevailed in a neighbouring district. All possible precautions were taken, and revaccination was generally adopted; besides which a small portable hospital was purchased and held in readiness. Fortunately, the town was spared an outbreak. Deducting deaths of visitors, the death-rate becomes 13.2 per 1,000.

LINCOLN.—*Neglect of Parents as regards Measles and Whooping-cough: Small-pox Outbreak.*—From the annual report of Dr. Harrison as to the mortality in this city during 1888, it is seen that 58 children died from measles and whooping-cough. The latter disease was prevalent during the whole year, and its record of deaths was the greatest of any during the last twenty-two years. Dr. Harrison comments on the neglect of parents as to the care of children suffering from measles and whooping-cough. Many consider those ailments to be trifling, and children are often allowed to attend schools from infected houses. On inquiring into cases of measles, it has often been found that a child, who has been at school in the morning, has had the rash of measles fully developed at night. Cases have also been reported where a child who had been taken for medical advice to the General Dispensary, was found sitting in the waiting room amongst many other children. Small-pox was introduced into the city on three occasions. The patients were removed to the City Hospital, the houses disinfected, and the clothing destroyed. In no case did the disease spread, and all the patients recoverd. Typhoid fever caused 11 deaths, 5 of which were in the first quarter of the year, and 1 death was registered from scarlet fever; while 3 children died from diphtheria. The birth-rate was 24.7 per 1,000; the death-rate 16.7 per 1,000, or, if deaths in public institutions be excluded, 14.5 per 1,000. During the first quarter of the current year scarlet fever has shown a tendency to prevail in the city. Six deaths have been caused by that disease. The whooping-cough prevalence of 1888 has also continued into the present year, and has caused 10 deaths during the first quarter. The death-rate for the quarter was 18.4 per 1,000.

ASSOCIATION INTELLIGENCE.

COUNCIL.

NOTICE OF MEETING.

A MEETING of the Council will be held in the Council Room of the Association, at No. 429, Strand (corner of Agar Street), London, on Wednesday, the 10th day of July next, at 2 o'clock in the afternoon.

The following Committees will also meet:—

Tuesday, July 9th, 1889.—Trust Funds Committee, 3.0 P.M.—Premises Committee, 4.0 P.M.—Scientific Grants Committee, 5.0 P.M.—Subcommittee on Council Report, 6.0 P.M.—*Wednesday July 10th, 1889.*—Journal and Finance Committee, 11.0 A.M.

FRANCIS FOWKE, *General Secretary.*

July, 1889.

NOTICE OF QUARTERLY MEETINGS FOR 1889. ELECTION OF MEMBERS.

MEETINGS of the Council will be held on July 10th, and October 16th, 1889. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting, namely, September 26th, 1889.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member *by the Council* or by any recognised *Branch Council.*

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No member can be elected by a Branch Council unless his name has been inserted in the circular summoning the meeting at which he seeks election.

FRANCIS FOWKE, *General Secretary.*

COLLECTIVE INVESTIGATION OF DISEASE.

THE series of Maps forming the Report of the Collective Investigation Committee on the GEOGRAPHICAL DISTRIBUTION OF RICKETS, ACUTE RHEUMATISM, CHOREA, CANCER, AND URINARY CALCULUS are deposited in the Library of the Association, and are open to the inspection of members. A descriptive commentary appeared in the JOURNAL of January 19th, 1889.

An inquiry into the ORIGIN AND MODE OF PROPAGATION OF EPIDEMICS OF DIPHTHERIA is in progress.

Memoranda and forms for communicating observations may be had on application to the Secretary of the Collective Investigation Committee, 429, Strand, W.C.

GRANTS FOR SCIENTIFIC RESEARCH.

THE Scientific Grants Committee of the British Medical Association desire to remind members of the profession engaged in researches for the advancement of medicine and the allied sciences, that they are empowered to receive applications for grants in aid of such research. Applications for sums to be granted at the next annual meeting should be made without delay to the General Secretary, at the office of the Association, 429, Strand, W.C. Applications must include details of the precise character and objects of the research which is proposed.

Reports of work done by the assistance of Association grants belong to the Association.

Instruments purchased by means of grants must be returned to the General Secretary on the conclusion of the research in furtherance of which the grant was made.

BRANCH MEETINGS TO BE HELD.

NORTH OF IRELAND BRANCH.—The eleventh annual meeting of this Branch will be held in the Royal Hospital, Belfast, on Thursday, July 18th, at 4 P.M. The annual dinner will be held in The Grand Restaurant and Café, Arthur Square, Belfast, on the same evening, at 7.30 P.M. Tickets, 7s. 6d., exclusive of wine; 15s. with wine. It is requested that those who intend being present at the dinner will let the secretary know as early as convenient. Gentlemen who wish to bring any subject before the meeting will kindly communicate with the Secretary, JOHN W. BYERS, M.D., Lower Crescent, Belfast.

OXFORD AND DISTRICT BRANCH.—The annual meeting will be held in the Council Chamber, Abingdon, on Friday, July 26th, when the President-elect, Slade Baker, Esq., will entertain the members of the Branch at luncheon. Notice of any communications which members intend to make should be sent to the Honorary Secretary, W. LEWIS MORGAN, 42, Broad Street, Oxford, on or before Friday, July 12th.

READING AND UPPER THAMES BRANCH.—The annual meeting of this Branch will be held in the Library of the Royal Berkshire Hospital, Reading, on Thursday, July 18th, at 4.15 P.M. The chair will be taken by W. B. Holderness, Esq., of Windsor, President, and the business of the Branch will be transacted, after which Dr. Price, of Reading (the President for the coming year), will take the chair, and deliver an address. Discussion will be invited on the question of the Disproportionate Growth of the Out-patient Department of Hospitals, as well as the subject of Provident Dispensaries, Medical Aid Associations, and Sick Clubs. The annual dinner will take place on the same evening, at 6.15 P.M., at the Queen's Hotel, Reading. Dinner tickets (10s., including wine, or 5s. without) should be obtained from Mrs. George, Queen's Hotel, on or before July 16th.—H. HEYGATE PHILLIPS, Honorary Secretary, 43, London Road, Reading.

NORTH WALES BRANCH.—The annual meeting will be held at Bettwsycoed on Monday, July 15th. Members having any communications to make to the meeting or new members to propose are requested to give notice to the Secretary at once. Papers have been promised by Drs. Emrys-Jones, Isambard Owen, John Roberts, Lloyd Roberts, Lloyd Williams, and Richard Williams.—W. JONES-MORRIS, Honorary Secretary.

NORTH OF ENGLAND BRANCH.—The annual meeting will be held at Durham on Tuesday, July 16th. The President-Elect, Dr. Barron, will deliver the address, and the officers of the Branch will be elected for the year.—G. E. WILLIAMSON, F.R.C.S., Honorary Secretary.

BORDER COUNTIES BRANCH.—The twenty-second annual meeting will be held at the Infirmary, Dumfries, on Friday, July 12th. The chair will be taken by the President, Dr. Robertson (Penrith) at 3.45 P.M. A meeting of the Council will be held at 3.30 P.M. The usual election of office-bearers for the ensuing year will take place. Dr. Thomson (Dumfries) will deliver his Presidential address. Dr. Haddon (Canonbie) will read: (1) An Account of a Visit to the Alpine Health-resorts in Winter. (2) On the True Nature of Lumbago. Dr. Victor Black (Dumfries) will read: Notes of Cases of Choreic Rheumatic and Traumatic Insanity. Drs. Thomson and Black will show living patients. Dinner at the King's Arms Hotel, Dumfries, at 6 P.M.—HENRY A. LEDIARD, Honorary Secretary, 41, Lowther Street, Carlisle.

SHROPSHIRE AND MID-WALES BRANCH.

THE annual general meeting of the Branch was held at the Salop Infirmary on Tuesday, June 25th, the President, H. J. ROPE, F.R.C.S., in the Chair.

Election of Officers.—The following members were duly elected to fill the undermentioned offices:—*President-elect:* Mr. J. E. Brooks. *Honorary Secretary and Treasurer:* Mr. J. A. Bratton. *Branch Representative on the Council of the Association:* Mr. J. D. Harries. *Branch Representative on the Parliamentary Bills Committee:* Mr. W. Bowen Davies. *Branch Council:* E. Burd, M. D., W. Charnley, M.D., E. Cureton, W. B. Davies, S. J. Gwynn, M.D., J. D. Harries, J. R. Humphreys, G. H. Keyworth, W. H. Pacher, M.D., H. J. Rope. *Auditor:* R. W. O. Withers.

Report of Branch Council.—The report stated that the Council had met twice, and that one half-yearly meeting had been held on March 5th, at the Salop Infirmary, with a good attendance of members. The following members had died:—J. Bratton, T. Pidduck, W. H. O. Sankey, M.D. Two members had resigned, while four had joined during the year, and there were five new members for election, bringing the total number of members up to ninety-nine. The balance in the hands of the Secretary amounted to £5 8s., which was not so large as in former years, but was explained by the fact that some members had not paid their subscriptions for last year, and that very few members had paid their subscriptions for the current year through the Branch Secretary.

Votes of Thanks.—It was resolved that the best thanks of the meeting be tendered to Mr. J. Morgan, the Vice-President, for his services during the past year. A hearty vote of thanks was accorded to the late Secretary, Mr. Edward Cureton, for his services during the past seven years.

The Hospital and Dispensary Question.—A communication was read from the amalgamated Worcestershire and Herefordshire and Gloucestershire Branches, when it was resolved to adopt their first resolution, which ran as follows:—"That the disproportionate growth of the out-patient department in all hospitals demands a general inquiry, as well as the subject of provident dispensaries, medical aid associations, and sick clubs.

New Members.—The following member of the Association was duly elected a member of the Branch:—A. R. F. Exham, M.B., Market Drayton. The following gentlemen, having been duly elected members of the British Medical Association by the Branch Council, were duly elected members of the Branch:—J. Gray, Shrewsbury; H. H. B. McLeod, Shrewsbury; A. W. Burrell, M.B., Ruyton XI Towns; E. Somerset, Salop Infirmary.

Communications.—Dr. SAVAGE, of Birmingham, read a paper

entitled, "Remarks on Renal and Abdominal Surgery," when the Branch unanimously accorded to him a vote of thanks for his paper.—Mr. EDDOWES read notes of a case of Suprapubic Lithotomy; from his experience he was not in favour of this operation.—Dr. J. P. THOMPSON read notes of an Epidemic of Pleuro-Pneumonia, one portion of the epidemic occurring in a hill district, which he classified as the "highland outbreak," comprising thirteen cases with one death; the other portion of the epidemic occurring in a low-lying district, which he classified as the "lowland outbreak," comprising ten cases in all with three deaths. The two outbreaks were three miles apart, the first commencing in January, the second early in May. Dr. THORNFIELD, the medical officer of health, Mr. TREDINNICK, and Mr. EDDOWES took part in the discussion which followed.—Mr. J. D. HARRIES read notes of a case of Dermoid Cyst of the Ovary, showing the specimen and a cast of the teeth contained in the cyst.—Dr. SAVAGE made remarks on the case.—Dr. CHARNLEY showed a case of Lupus of the Eye and Throat, and a case of Ranula.

Dinner.—The annual dinner was held afterwards at the Raven Hotel, the members and their friends, to the number of twenty-eight, spending a most enjoyable evening.

SPECIAL CORRESPONDENCE.

PARIS.

[FROM OUR OWN CORRESPONDENT.]

Disinfection of Hands.—Antirabic Inoculations.

MM. ROUX and Reynès have tried the method recommended by Dr. Fürbringer, of Berlin, for disinfecting the subungual portions of the fingers with alcohol at 80° C. After thoroughly washing and brushing their hands and nails with hot soap and water, then with carbolic acid at 10 per 1,000, they scraped the subungual portions with a short, rough, thin wire, previously sterilised. The wire was then placed in gelatine, or in agar-agar. Forty-eight hours afterwards the cultivations became liquefied, owing to the numerous colonies they contained. This experiment was repeated twelve times, with similar results. The authors then scraped their nails by a mechanical dry process, and after washing and brushing their hands in hot soap and water they washed and brushed them in alcohol at 80° C. After the alcohol evaporated they again washed and brushed their hands in an antiseptic solution. Out of forty experiments, aseptic results were obtained thirty-three times. Out of eight clinical attempts, these results were obtained four times. The authors conclude that the method is superior to that ordinarily employed, and may be applied with advantage in abdominal surgery and gynæcology.

Within the last few years M. Galtier has shown by his experiments on herbivorous animals that, even after they have been bitten a certain time, they may be rendered refractory to rabies by venous injections of rabid virus. MM. Nocard and Roux have also employed this method. It may be applied to all ruminating animals and to pigs; it has the merit of being simple and easy. The virus may be obtained from the animal which has inflicted the bite. The nerve-substance is dissolved in water, and filtered in order to eliminate the solid particles. M. Galtier has made several successful inoculations this year. In February he vaccinated two ewes. They were submitted to four venous injections. They were rendered completely refractory, and in July were sent to the slaughter-house. Further successful experiments have confirmed M. Galtier's belief that herbivorous and omnivorous animals may be rendered completely refractory to rabies by this method of inoculation. He considers that the animals not only escape the consequence of the immediate bite, but also enjoy immunity in the future.

EGYPT.

[FROM OUR OWN CORRESPONDENT.]

Deterioration of Water-supply.

As usual at this time of the year, the quality of the Nile water has deteriorated considerably, and may be expected to grow steadily worse until the annual rise, of which, unfortunately, there are as yet no signs. Owing to the almost stagnant condition of the river, and to the unhappy fact that, in addition to being the sole source of water-supply of the country, it is also its universal sewer, the amount of putrescible matter it contains is enormous. It is, therefore, not to be wondered at that on still days a scum, partly green and partly iridescent, should be plainly visible covering the surface, and that complaints should arise on all sides regarding the quality of the water. An Englishman, highly placed in the service of the Egyptian Government, has lately complained most bitterly to his Minister that the water supplied to his house smelt so badly as to be entirely unusable, the cause of this intolerable nuisance, according to his view of the case, being the misdoings of the Water Company and the negligence of the Sanitary Department. Nile water, he averred, had not this nauseous odour; so the filter-beds and those whose duty it is to control them must be responsible for it. The Minister at once wrote a severe letter to Dr. Greene Pasha—a letter amounting almost to a reprimand; but, on the latter investigating the case, it was discovered that the house inhabited by the high official in question was one of the few of which the water-supply does not pass through the filters of the Company at Abbassieh, but is pumped up direct from the Nile at Kasr-el-Nil.[1]

SWITZERLAND.

[FROM OUR OWN CORRESPONDENT.]

Bacteriology of Green Sputa.—Sozoiodolates in Diseases of the Nose and Throat; Thüre-Brandt's Massage in Uterine Diseases.

AT a recent meeting of the Gessellschaft der Aerzte, in Zurich, Dr. Frick read a paper on the bacteriology of the green sputum, which is sometimes seen in cases of chronic bronchitis and pulmonary tuberculosis. According to his researches, which are based on a series of cases from a local hospital, the sputum invariably contains a peculiar chromogenic bacillus resembling in size and shape the typhoid bacterium, and elaborating a fluorescent green pigment matter both in artificial media and various sputa. The micro-organism is markedly aërobic and has a lively motility, but no pathogenic properties. The pigment originates in the medium, in close vicinity to the bacillus, which itself is colourless. The production of pigment, however, is not a vitally necessary function of the microbe, since, by employing certain nutrient media, it proves possible to obtain a luxuriant growth without any trace of the colouring matter in the neigbourhood. The substance is insoluble in alcohol, ether, or chloroform, but easily soluble in water and alkalies. The bacillus has no clinical significance, as it thrives in sputa of all possible morbid varieties.

In the *Correspondenzblatt für Schweizer Aerzte*, May 1st, 1889, p. 283, Professor Hermann Suchannek, of Zurich, describes his experience with the sozoiodolates of potassium, sodium, zinc, and mercury in nasal and laryngeal disease. His observations agree with those of Fritzsche and Seifert in being very favourable to the new drugs; in particular, the writer found that sozoiodolate of potassium, in the form of powder, mixed with talc (1 to 1 or 2), is a valuable nasal insufflation in cases of chronic mucopurulent, purulent, and serous rhinitis with profuse discharge, while the sodic salt is especially useful in tuberculous or lupoid affections of the nose, fauces, and larynx. Sozoiodolate of zinc, mixed with talc in the proportion of 1 to from 12.5 to 7.5, is said to be an active stimulant of the nasal glands, and hence proves of great service in chronic hypertrophic rhinitis associated with scanty secretion and swelling of the lower turbinated bodies, as well as in cases of senile atrophy of the nasal mucous membrane, in scrofulous rhinitis and in genuine atrophic and syphilitic ozœna. One or two applications of the zinc compound, after the local use of cocaine, often cut short attacks of acute coryza. Further, the zinc salt considerably diminishes the dryness and other unpleasant subjective symptoms in patients suffering from pharyngitis sicca. Sozoiodolate of mercury, mixed with talc in the proportion of 1 to 20 or 10, and applied by means of a brush or cotton-wool, may be recommended in syphilitic ulcers of the nasopharynx.

Dr. Alfred Goenner, of Basle, reports eight cases treated by Thüre Brandt's massage and pelvic gymnastics. In five of these there was retroflexion of the uterus without marked procidentia, in two there was retroflexion or retroversion with great procidentia, and in one there was complete prolapsus. All the patients suffering from simple retroflexion were completely and to all appearance permanently cured. The cases complicated with procidentia were very considerably improved, the womb having

[1] The point of the whole story lies in the fact that the high official is none other than the head of the Irrigation Department, to whose operations and *barrages* is greatly due the present unhygienic condition of the river.

assumed an almost normal anteflexed position, and risen higher up in the pelvis, though being still lower than normal. The women were able to do without pessaries. In the case of a complete prolapse (in a patient aged 75) the condition was improved so far that cystocele, with frequent micturition and tenesmus, as well as certain rectal symptoms (involuntary defæcation), disappeared altogether, and, after a month's course of treatment, the womb could be effectively kept in place by means of a jute plug. Previously all sorts of pessaries had utterly failed to keep the organ within the pelvis.

CORRESPONDENCE.

OVARIOTOMY IN TENERIFFE.

SIR,—Having seen Sir Spencer Wells's contribution to the JOURNAL, published April 13th last, on "Ovariotomy in Spain," I have thought that it would interest your readers to have a record of the cases operated in Teneriffe.

The operations are six in number, all successful, as may be seen from the accompanying notes:—Two were performed by my father, Don Victor Perez (M.D., Paris), and four by Don Eduardo Dominguez (M.D., Madrid), both of whom had seen Sir Spencer Wells's practice at the Samaritan Hospital.

Dr. Dominguez has kindly sent me the particulars of his four cases, to which I append a translation. His last case had been operated on by Sir Spencer about the middle of April, 1882. I introduced the patient to him, being then a student in London.—I am, etc. G. V. PEREZ, M.B.Lond.

OVARIOTOMIES by Dr. VICTOR PEREZ.

CASE I.—B. F. J., of Readejo, Orotava, Teneriffe, aged 37, single; had been tapped by different medical men in the island seven times; first, in 1877; secondly, fourteen months after, and then the intervals became less; the seventh time was in 1882, two months before the operation, which took place on May 9th, 1882, Dr. Soler giving chloroform, was performed at Orotava. A large multilocular tumour of the left ovary was removed, weighing some 27 lbs.; notwithstanding the previous tappings, there were no adhesions. The pedicle was tied with silk and left in. The operation was performed with Listerian precautions and spray. The wound united well. There was slight feverishness for a few days. Good recovery, patient still alive, and employed in teaching as before.

CASE II.—M. de A., wife of a landed proprietor, mother of several children, aged 34. First seen by her medical attendant, Dr. Soler, shortly before the date of operation, on June 24th, 1886. Diagnosis doubtful, on account of the very rapid growth, great dropsy of parietes and ascites. Dr. Soler gave chloroform, and after the escape of much fluid from abdominal walls, and ascitic collection, a large multilocular cyst of the left ovary was found, which was easily removed (fluid in cysts gelatinous, of different colours). The pedicle was tied with stout silk. Listerian dressing. Wound healed kindly, and patient was up and about soon. Relapse a few weeks after, rapid growth of another tumour with similar symptoms, and death from syncope some eight months after operation,[1] no necropsy.

OVARIOTOMIES by Dr. E. DOMINGUEZ (Translation of Original Notes in Spanish), Teneriffe.

CASE I.—I. C. de A., of the island of Gomera (Canary Islands), aged 37, multiparous, several tappings; œdema of face and lower extremities, fever for some months before operation. Operation, April 5th, 1884, under chloroform; multilocular cyst right ovary, adherent to omentum and anterior wall; Listerian; pedicle left in; metallic and silk sutures. Well fourteen days after operation.

Observations.—On the seventh day, the bed-curtain took fire, and, notwithstanding fright, no harm done; some fever after operation.

CASE II.—I. F. de G. de P., from Grand Canary, aged 22, married, no children; tumour excessively large. Operation, May 2nd, 1885; multilocular cyst of right ovary; numerous adhesions to abdominal walls and omentum, some to intestine; this remained retracted at the upper part of the abdomen. On the fourteenth day she had severe intestinal colic with hysteria, lasting hours; the intestines came down during this and the next day. Well seventeen days after operation.

CASE III.—I. B., Esperanza, Teneriffe, aged 25, one labour. Operation, September 27th, 1887; multilocular tumour, not many cysts, no adhesions, left ovary. Well eight days after operation. No fever or complication.

CASE IV.—C. R. H., Tegueste, Teneriffe, single, aged 39, operated on for a cyst of the right ovary by Sir Spencer Wells, in April, 1882, in London. On her return home some pain in the left ovarian region; some time after, the abdomen increased in size; this increase gradually became pronounced. Operation, May 5th, 1888; left ovary (hernia in linea alba about the umbilicus); numerous and strong adhesions to abdominal wall, to omentum, and to posterior and deep parts of pelvis; some parts of the tumour remained attached to the pelvis. Hæmorrhage eight hours after operation; dressing had to be changed. Sickness and diarrhœa; fever slight. She got up twenty-four days after operation. She had been ordered leeches on account of some discomfort owing to want of catamenia.

[1] I remember having spoken to Sir Spencer of this case when he visited Teneriffe, and he thought it must have been a malignant tumour, from the history. G. V. P.

THE SPREAD OF LEPROSY.

SIR,—In your review of the most valuable work *Leprosy an Imperial Danger*, by Archdeacon Wright, in the JOURNAL of June 8th, you mention the quotation from Dr. Leloir as to its geographical distribution and history. In fairness to myself I beg to point out that Dr. Leloir has simply quoted my own book, both as to fact and deduction.[1] I think I proved (I did not assume) twelve years ago that leprosy had been carried to the Western Hemisphere by negroes; and also, as bearing on the all-important point of its transmission by contact, that, in all probability, it existed in Egypt, having been imported there from the Soudan long before 1500 B.C., possibly even 4200 B.C., so that the Jews became infected, and carried it out of Egypt with them. I also pointed out the facts as to the North American Indians.

It is almost impossible to express the value of such a work as Archdeacon Wright's at the present time, and I sincerely hope that it will fully effect its purpose, that of calling attention to the spread of this horrible plague, and direct attention to the only means for its extirpation, segregation.

It affords me great pleasure remembering that, eighteen years ago, when studying the subject, I stood alone against the great authority of the Royal College of Physicians, and such as Erasmus Wilson, in holding and trying to prove that leprosy was contagious or communicable, to see the fearful error committed in 1867 recognised, and the views I have always contended for admitted, and, I hope, soon to be officially acted on, so that, so far as the power of the law can assist, segregation may be enforced throughout the British dominions.

With, in India, from a quarter to half a million of lepers, and thousands more in our Colonies, and more than a threat of leprosy again attacking this country, the importance of a correct means of preventing its spread cannot be over-estimated, and this means, as I pointed out years ago, is segregation, humanely but firmly carried out.—I am, etc., W. MUNRO.

Derby House, Cheetham, Manchester.

[1] *Leprosy*, pp. 6, 7, 9, 28, 29.

THE REGISTRATION OF NURSES.

SIR,—The question of the registration of nurses is so important that it is incumbent that the public, as well as the nurses, should fully realise that the most experienced of the hospital managers, with the heads of the nurses' training schools, from the Nightingale Fund downwards, are fully convinced that the time has not arrived for a system of registration to be tried. The Hospitals Association which originated the idea of registration for trained nurses, and which worked out a scheme with this object before the British Nurses' Association was in existence, abandoned the idea because they became convinced after much research that a general register of nurses was rightly regarded, by those most capable of forming a sound judgment on the question, as being calculated to produce more evil results than good.

Miss Lückes, in her paper which you recently reviewed, gives the principal reasons why it is advisable not to bring all nurses to a dead level by registration.

As one who had had many years' experience, not only in this institution, but also in one of the largest metropolitan hospitals, of the requirements of nurses, I bring this matter forward in order that the public may know what the hospital and nursing world generally have decided after careful examination and due consideration.

One thing is certain: no certificate of registration by an association unconnected with any of the great medical charities can ever take the place of the certificates presented by the leading nursing institutions of the kingdom.—I am, etc., P. MICHELLI.

Seamen's Hospital, Greenwich, June 19.

SHORTHAND.

SIR,—I have written shorthand for thirty-eight years. I learnt it before commencing my medical studies, and was able, when a medical student, to write 150 words a minute.

For a session or two I took down the lectures almost verbatim; but I soon found that it was labour wasted, and that I could get more information from textbooks than from lectures.

I cannot say that I derived much, if any, help in preparing for my examination from shorthand. To learn to write shorthand rapidly enough to report lectures requires much time and practice, and no medical student can afford to spare from his medical studies the time required to become an expert shorthand writer.

Shorthand should be learned before medical studies are begun, or after they are finished. It is a delightful art, and to the busy practitioner and the literary man it is invaluable. He can jot down his thoughts as they flow without labour or fatigue. He can write and rewrite any article he may be composing without the waste of time incurred in rewriting pages of longhand. But if he wishes to learn to report he must practise much and long, and he will find that what he gains in speed he will lose in legibility.

In reporting, so many abbreviations are employed that even Pitman's system is not very legible. The medical man had better not try to be a reporter, but content himself with learning to write eighty or a hundred words a minute legibly.

Pitman's system is the most simple, the most legible, the most easily learnt, and consequently the most popular of all systems yet invented.—I am, etc., J. FOSTER.

Bradford, June 26th.

NAVAL AND MILITARY MEDICAL SERVICES.

ALLOWANCES.

IN reply to "Candidate," the medical staff draw allowances according as laid down in the Regulations for Allowances. These consist of lodging allowance in lieu of quarters varying in the executive ranks between 2s. 3d. and 4s. 6d. a day, according to rank; of servants' allowance, uniformly 1s. a day; and a small allowance in lieu of fuel and light when not issued in kind, varying according to the season of the year. Forage is also issued in certain cases, but the keep of a horse more than swallows it up. The money value of these allowances may be from £70 to £120 a year, according to rank and service. In India consolidated pay is now issued, which is held to cover and include the old batta, palki allowance, etc.

BOMBAY MEDICAL SERVICE.

RETIRED writes: Medical matters in Bombay are in a mess. The chief inducements to enter the Bombay service have hitherto been connected with the prizes presented by the Grant Medical College. But these appointments are now by preference, it appears, to be conferred on civilians, as advocated by a body calling itself the Bombay Medical Union. The object is to oust from the teaching staff of the College the European officers, and unfortunately the Governor seems to have been got at in this direction. The Council of the British Medical Association should keep its eye on this retrograde policy.

SURGEON OR SERGEANT?

MEDICAL STAFF writes: With regard to military titles for medical officers, I wish to place on record my late experience. I have now been serving all over the world for over thirty-five years; was present at the battles of Alma, Inkerman, all through the siege of Sevastopol, and right through two other big campaigns, so I think I may claim to call myself "a soldier" as much as numbers of colonels, majors, captains, etc., who have never seen a shot fired except at a musketry range.

I was some time ago appointed to a district in the United Kingdom, and had a good many transactions with the local tradesmen. I have received both letters and parcels addressed as follows: "Surgeon ——," "Surgeon-Major ——," "Sergt. ——," and, lastly, "Sergt.-Major ——," and yet Viscount Wolseley, Major-General Buller, and others are surprised that medical officers should wish for any alteration of their present senseless and cumbersome titles, which the public, and, indeed, the army itself, do not understand, and never use.

THE MEDICAL PROFESSION IN THE ARMY AND LORD WOLSELEY'S *SOLDIER'S POCKET-BOOK*.

ONE OF THEM writes: There is much to interest the profession generally in the points raised in the remarks on the above subjects in the JOURNAL of April 27th.

1. On the sanitary officer to be attached to the quartermaster-general's staff of an army in the field. It would be a point of interest to know what is the rule or regulation of the service which would justify the general officer in command acting on Lord Wolseley's suggestion and "leaving the sanitary officer in the rear;" but at present it is mythical as far as one can judge; and surely an appointment made by higher authorities is not lightly to be set aside, even should the general officer consider it a "fad." It is a strange comment, too, on the conclusion he arrives at on the worth of the individual in question that, in two of the late campaigns in which he was burdened with this "fad," both the officers filling this post were promoted—the Tel-el-Kebir affair and the Nile expedition. If they made "no useful suggestion" and "many silly ones," why were they selected for advancement? and, if Lord Wolseley did not recommend them for it, how could it have been carried out? Moreover, if general and other officers are competent to recognise and rectify the deficiencies of medical officers, why does the author stop short at reduction of numbers and position? The logical outcome is abolition. But it would appear that in India at least the officer in field command is not for the future to be burdened with this "fad." *The Field Service Manual for the Medical Department of the Indian Army*, recently published, so far as sanitation is concerned, makes the duty a general one—from the principal medical officer of the force to the principal medical officer of brigades and the medical officer attached to corps; all are responsible for their respective charges, all act as sanitary advisers; and, though the principal medical officer of a division is allowed to select one "from the establishment of a field hospital to whom the details of sanitary work may be entrusted," yet "he will not be styled *sanitary officer*" (the italic is in the *Manual*). Hence, for combining sanitary suggestions as a whole there is nothing; it is no one's duty; each one is to act in his own sphere individually, and with what results may be anticipated. Here is another roll backwards of the sanitary wheel set going by the commissioners after the Crimean War.

2. Whatever may have been the intentions of Lord Wolseley in penning his comments on the medical staff, there can be no doubt of the tendency—to lower every medical officer in the estimation of every other officer and of the rank and file; and whether this will assist in making the military machine run more smoothly and harmoniously, and in providing the soldier with the desirable medical and surgical help in the hour of need, may be left to common sense. Will the army returns continue to show the same promising results in disease and death reduction as heretofore, provided the offered advice be acted on? and who is likely to profit by an inferior medical staff? The country certainly not, nor the officer nor soldier, either in barracks or on a sick bed or on the field of battle, nor even Lord Wolseley himself when next he assumes command in the field, should his "fad" gain the day.

3. If, however, the medical profession is in the future to hold a befitting position, it is essential that its recruits should be of equal calibre in social, educational, and intellectual features with other professions and with army officers. In the army an inferiority in these respects is certain to lead to an undesirable subordinate position. A liberal profession must open its gates to all social grades; but surely no one can say that these have been properly and generally protected by educational tests, or that the standard is the equal of other professions.

THE MEDICAL STAFF.

QUARTERMASTERS H. S. WEBB, GEORGE TOWERS, TIMOTHY CONNOR, and JOSEPH HUNT, all of whom entered the service as Lieutenant of Orderlies July 2nd, 1879, are now granted the honorary rank of Captain.

ARMY MEDICAL RESERVE.

SURGEON S. H. MOORE, F.R.C.S.Edin., 2nd South Middlesex Rifles, and Surgeon and Honorary Surgeon-Major R. C. M. POOLEY, 1st Volunteer Battalion Duke of Cornwall's Light Infantry (late the 1st Cornwall Rifles), are appointed Surgeons ranking as Captains.

INDIAN MEDICAL SERVICE.

THE retirements of the undermentioned, which have been already announced in this JOURNAL, have received the approval of the Queen: Deputy Surgeon-General A. M. DALLAS, C.I.E., and A. J. COWIE, both of the Bengal Establishment; and Brigade-Surgeon R. E. PEARSE and Surgeon-Major J. P. M'DERMOTT, M.D., both of the Madras Establishment.

The following promotions, which have also all been duly announced in the JOURNAL, have received the Queen's approval: Brigade-Surgeons E. O. TANDY and JOHN RICHARDSON to be Deputy Surgeons-General; Surgeon-Major L. D. SPENCER, M.D., to be Brigade-Surgeon; Surgeons W. OWEN, M.D., D. M. JACK, W. CONRY, G. J. KELLIE, D. BASU, A. W. MACKENZIE, J. MULLANES, M.D., D. MULLEN, M.D., J. A. NELIS, A. M. CROFTS, JAMES CROFTS, M.D., WILLIAM COATES, M.D., and JOSEPH BLOOD, to be Surgeons-Major. (The foregoing are all of the Bengal Establishment.) Surgeons A. F. NAILER, DONALD ELCUM, and N. CHATTERJIE, of the Madras Establishment, to be Surgeons-Major; Surgeons W. K. HATCH, H. D. MASANI, and K. R. KIRTIKAR, of the Bombay Establishment, to be Surgeons-Major.

Surgeon-Major J. M'CLOGHRY, Bombay Establishment, Civil Surgeon at Jacobabad, is appointed to act as Civil Surgeon at Kurrachee. Surgeon W. E. JENNINGS, M.B., of the Bombay Establishment, will act for Surgeon-Major M'Cloghry at Jacobabad.

Surgeon-Major G. PRICE, M.D., Bengal Establishment, Principal Assistant Opium Agent, Behar, is appointed to act as Civil Surgeon of Bhangulpore.

Surgeon-Major W. OWEN, M.D., Bengal Establishment, officiating Civil Surgeon at Jessore, is to act as Principal Assistant Opium Agent, Behar.

Surgeon A. G. E. NEWLAND, Madras Establishment, is appointed to the Civil Medical charge of the Pakôkku District, Burmah, and its police.

THE VOLUNTEERS.

THE following gentlemen are appointed Acting-Surgeons to the regiments named: SYDNEY RUMBOLL, 1st West Riding of Yorkshire Artillery; JOHN CUNNINGHAM, M.B., 1st Argyll and Bute Artillery; G. B. COURTNEY, M.B., 1st Middlesex Engineers.

Acting-Surgeon R. H. HODGSON, 2nd Tower Hamlets Engineers, is promoted to be Surgeon.

Acting-Surgeon T. JOYCE, of the 2nd Volunteer Battalion East Kent Regiment (late the 5th Kent), is appointed to be Surgeon and also to be Surgeon-Major, ranking as Major, and Acting-Surgeon W. H. HARMER, of the same corps, is to be Surgeon.

Acting-Surgeon R. HAGYARD, 1st Volunteer Battalion East Yorkshire Regiment (late the 1st East Riding of York), to be Surgeon.

MEDICO-LEGAL AND MEDICO-ETHICAL.

MILLER *v.* GODDARD.

Before Mr. JUSTICE STEPHEN, without a jury.

THIS was an action by Dr. Andrew Miller, of Rosslyn Hill, N.W., to recover fees for professional attendance on the defendant's wife and child. One of the defences raised—negligence and want of skill—gives the case special importance. Briefly stated the facts of the case were that Dr. Miller was engaged to attend Mrs. Goddard in her confinement, that he was summoned early in the morning (September 18th), went as soon as possible, but arrived after the birth of the child. The placenta, which was detached but not expelled, was removed. On the third day some portions of membrane came away, as to the size of which there was conflicting evidence, the defence relying on the evidence of a nurse, who said that one piece was a foot square. Mrs. Goddard got up on the fourteenth day, and on October 24th she visited Dr. Miller's house, where an erosion of the cervix was diagnosed and treated by local applications. On October 31st she again visited Dr. Miller, and a further local application was made. On November 1st Mrs. Goddard had a sharp rigor, which ushered in an attack of pleurisy. Dr. Miller attended up to November 21st, and on two occasions met the patient's brother, a medical man, in consultation. On the date mentioned he was requested to discontinue attendance. The defendants in the action made a counterclaim. The plaintiff, Dr. W. H. Fenton, and Dr. Cooper Rose were called, examined, and cross-examined at length, the case occupying two days. For the defence Mrs. Goddard, the nurse, and Dr. Edward Blake, who saw the patient on November 21st, were called. Counsel subsequently stated that after the evidence given the defendant felt that he could not contest the case further, and would submit to a verdict for the amount claimed.

The Judge said this course was very creditable to the defendant. He might say he had certainly formed an opinion of his own about the case, and should, no doubt, have found a verdict for the plaintiff. He also commented on the charge which had in effect been made against Dr. Miller, and expressed the opinion that a medical man could not have done otherwise than bring an action under such circumstances. There could be no doubt in the present case that Dr. Miller was bound to come to this Court. It was one of those cases which might be of vital importance to the reputation and position of a man in the medical profession, and everyone who was himself a member of a profession must feel that a person must defend his professional capacity at all hazards. Therefore the order would be made as asked. He gave judgment for the amount claimed, with costs on the High Court scale.

FEES FOR EXAMINING ALLEGED PAUPER LUNATICS.

MR. HENRY TERRY (Northampton) writes: If your correspondent "Lex," in the JOURNAL of June 22nd, will kindly communicate with me, I can probably give him some information on the above subject.

UBIQUE writes: The guardians have no control over the above fees, which are ordered by the magistrate to be paid by the guardians to the medical practitioner who examines the case. The magistrates call *a* surgeon to their assistance, anyone whom they please, and may reward him as they think fit; in my neighbourhood the fee granted is £1 1s. for a pauper, and £2 2s. for a non-pauper. The magistrates use a wise discretion in these cases, non-paupers giving more trouble and greater responsibility, the latter often requiring two or more attendances. I have always been paid £1 1s. in any case; whether sent to asylum or not, the magistrates consider that the same amount of trouble is taken.

Some hostile guardians have had an idea that they have power over awarding fees, but this power only exists in their imagination, and not in law.

RIVAL PRACTITIONERS.

CHEATED.—If our correspondent has unfortunately been as autocratic in tone to his club patients and others as the too forcible language of his note to ourselves not unnaturally leads us to apprehend, it need scarcely excite his surprise that he has received notice, or that the M.D. in question should have successfully progressed in the district. If the latter (M.D.), however, has unfairly retained any patient to whom he was called in consultation by "Cheated," such conduct would be in direct contravention of the recognised rules of the profession, and would lay him open to censure.

In regard to reporting the case to the General Medical Council, it would be a useless sacrifice of time and trouble, inasmuch as a consideration of such charges is outside their defined official duties.

FEES FOR INSURANCE CERTIFICATES.

MEMBER BRITISH MEDICAL ASSOCIATION writes: Some two months after the death of a gentleman, a private patient, one of his executors called at my house for a medical certificate of the cause of death filled up for an insurance office. Kindly inform me if I am entitled to charge the executors any fee for filling up and signing such certificate; and, if so, how much?

*** Our correspondent is clearly entitled to charge a fee for the certificate in question. The amount depends on circumstances; the usual fee, we believe, is one guinea.

INSURANCE.—If questions are addressed by an insurance company to a gentleman whose name is given as that of "a private friend" of the insurer, it is not the custom to pay a fee, and one ought not to be asked for. Medical men should beware of that trap, and refuse to reply except as experts and for a fee. It is as that of an expert that their evidence is used, and they should decline to fill in any paper except on that express footing. To endeavour to obtain from a medical man an expert opinion gratuitously on the ground that he is "a friend" is a proceeding which condemns itself. If a similar series of questions involving legal knowledge were addressed to a lawyer, he would make very short work of it.

FEES FOR CERTIFICATE WHERE NO INQUEST IS HELD.

MEMBER BRITISH MEDICAL ASSOCIATION writes: A man died suddenly, having been recently attended by a medical man; the wife of deceased sends for a doctor, who inspected the corpse. The police, after being communicated with, applied to the doctor to fill up an enclosed medical certificate, which he did, and no inquest was held. Will you kindly inform me whether any fee is chargeable for this certificate; and, if so, of what amount, and who is liable for payment?

*** We do not think that provision exists for charging a fee for the certificate given under the circumstances referred to, but should recommend an application being made to the coroner on the subject. The Acts of Parliament prescribing the fees for medical witnesses in case of inquests do not apparently provide for any fee for a certificate when no inquest was held. If the deceased had been attended in his last illness by the medical man in question, the latter would have been bound, under the Registration of Deaths' Act, to furnish a certificate.

THE L.S.A. AND THE TITLE OF "DR.:" FOREIGN MEDICAL DEGREES.

MEDICUS.—"Legally" there is nothing to prevent a L.S.A. calling himself "Dr.," but other than legal considerations arise.

The degrees of M.D., C.M., from a Canadian university being obtained since June 30th, 1887, do not confer any additional privilege in this country, as the Medical Act, 1886, has not yet been made to apply to Canada.

AN UNQUALIFED PRACTITIONER.

MR. JOHN STEWART BRYDEN is much indebted to the leniency of a coroner's jury. He is an unqualified assistant to Dr. C. J. Carr, a practitioner in the south of London, and in that capacity saw an infant and prescribed for it a mixture containing syrup of poppies. The infant died—as was proved by the medical evidence and by the verdict of the jury—from narcotic poisoning; but the jury had not, so they said, enough evidence before them to show whether the narcotic symptoms were due to an overdose in Mr. Bryden's prescription or not. Unless they believed that someone else had also prescribed a narcotic for the infant, the jury were simply stultifying themselves by so lame and impotent a conclusion. If an infant is given a medicine known to contain a narcotic, and if, after taking that medicine, it dies with symptoms of narcotic poisoning, surely it is perfectly clear that the dose administered to it was for it an overdose. If it was not, then persons who die from a narcotic poison do not die from the effects of an overdose; in other words, a quantity which was too much for them was not an overdose—in fact, there is no such thing as an overdose.

THE DIGNITY OF THE PROFESSION.

INQUIRER writes: In a small agricultural town there are two practitioners, one of whom has been about eighteen months in the place. Is it compatible with the dignity and etiquette of the profession for the newcomer to accept an appointment as officer to a cheap dispensary and insurance society, the fees for attendance and medicine being ½d. a week for children and 1d. for adults? The agent makes a point of canvassing the patients of the other practitioner, even while he is in attendance, strongly recommending the doctor for whom he is acting. Is it best to entirely ignore the whole concern, as remonstrances on other breaches of etiquette have been totally without avail?

*** Although "Inquirer" has evident cause for complaint against the course of action taken by his fellow practitioner—and especially against the agent's procedure in the matter in question—we are of opinion that he will better study his own and the general professional interest by not ignoring grave breaches of professional etiquette, but rather by submitting them to the corrective influence of public medical opinion, and subsequently, in any glaring case, evoking the disciplinary laws of the Colleges of the defaulting member.

SPECIAL HOSPITALS AND GENERAL PRACTITIONERS.

A GENERAL PRACTITIONER complains of physicians at special hospitals attending well-to-do patients already under the care of a medical man. This is an old grievance, and likely to continue as long as the present hospital system is in force. In the case he quotes, the physician probably did not

know that the patient was under his treatment. The evil consists in it being possible for such people to be treated at any hospital.

"THE CODE OF MEDICAL ETHICS."

MR. G. L. JOHNSON (Stratford Place, Oxford Street, W.) asks if it is possible to get a book on medical etiquette. He cannot get one anywhere, either new or secondhand.

*** We give insertion to our correspondent's note with the view to aid him in obtaining a copy of the *Code* referred to, should any possessor of such feel inclined to dispose of it. The delay in publishing the intended new edition has arisen, we believe, from the continued ill-health of the author.

OBITUARY.

CHARLES BLAND RADCLIFFE, M.D., F.R.C.P.

DR. RADCLIFFE was born on June 2nd, 1822, at Brigg, in Lincolnshire. His father, the Rev. Charles Radcliffe, was a man of great cultivation, a scholar, an antiquarian, and a mathematician, and took great pains with the early education of his son, who used to say that he could read Latin tolerably well at 7 years old. On his father's removal into Yorkshire shortly afterwards, he was sent to the Grammar School at Batley, near Leeds. In due time he was placed with Mr. Hall, a general practitioner at Wortley, of whose abilities he always spoke with great respect. His medical education was carried on at the Leeds School of Medicine, where he was clinical clerk and dresser to Mr. Teale. There he gained several medals and certificates of honour, and was the first provincial student who received a gold medal from the University of London. He continued his studies at Paris and in London, taking his M.B. degree in 1845. About 1848 he began to practise in London. He took his degree of M.D. in 1851, and was married in the same year, and was soon after appointed Assistant-Physician to the Westminster Hospital, where, after twenty years' service, he resigned in favour of the late Dr. Anstie, and was appointed Consulting Physician. While there, he, in connection with Lady Augusta Stanley, Sir R. Alcock, and others, was the means of inaugurating the improvement in the system of nursing which has been so successful there and elsewhere.

In 1863 he was appointed Physician to the Hospital for Paralysis and Epilepsy, succeeding Dr. Brown-Séquard, whose house he took in Cavendish Square. Strange to say, though he had talked for some time past of resigning his office there, he sent in his resignation on the morning of the day on which he died.

His health had been failing visibly for the last two or three years, but not so far as to interfere with his work, which he continued indefatigably to the last evening of his life.

Few records remain of his earlier days. His only brother, Mr. John N. Radcliffe, died about five years ago, and the friend and fellow student who could have told more of him than anyone, Dr. Elam, is too ill even to be told of his death.

He wrote little about himself, but almost every hour that he could spare from practice was spent in reading, for he was never without a book at hand, or in writing on the subjects—medical, scientific, or philosophical—in which his interest was inexhaustible.

Professor Burdon Sanderson has sent us the following estimate of Dr. Radcliffe's scientific work:

During a period of nearly thirty years, begun with the publication of *Proteus, or the Law of Nature*, Dr. Radcliffe devoted himself with extraordinary aptitude and perseverance to the study of those fundamental questions relating to what Bichat called the functions of animal life, which bring it into relation with physics on the one hand and with psychology on the other. Perhaps the best specimen of his work is to be found in the latest of his purely scientific productions, an essay on *The Connection between Vital and Physical Motion*, which was privately printed by him some years ago for the criticism of his friends, in the hope that the truths set forth might thereby receive more complete illustration.

The fundamental doctrine of Dr. Radcliffe was that all the functions or activities of the nervous and muscular systems were essentially electrical. In the fact, he writes, that muscular action is directly proportionate to the development of heat and the exhalation of carbonic acid, "there is nothing to justify the notion that heat is transformed into muscular force," or "that electricity may not be developed along with heat in the combustion of force-fuel within the system, and that electricity may not do the work that has been ascribed to muscular force.....In a word, you may with little or no trouble satisfy yourself that muscular force and nervous influence must share the same fate, and that the only intelligible agent that is left in possession of the field is electricity." He accordingly looked forward to the time when "the words irritability, irritation, stimulation, and the like will be replaced by other words which show that the idea of irritability is resolved into that of natural electricity."

The way in which he explained to himself, with the aid of "electricity," the relations between centres afferent and efferent nerves and motor and sensory end organs may be also best understood from his own words: "The electricity which is generated in the nerve centres mainly by the action of the red blood..... counteracts or inhibits vital action as long as it is properly kept up." In some centres the electrical "charge" runs down more quickly than in others. Thus the rhythmical centres of the heart "run down" more quickly than those of respiration. Comparing the rhythmical nerve centres with the non-rhythmical, it would seem that the inhibitory action which prevents contraction is more prolonged in the case of the latter centres than in the case of the former. There is, however, no impassable line of separation between the two, for, as is seen in the case of paralysis agitans, or chorea, or disseminated spinal sclerosis, the action of the brain or spinal cord, which is non-rhythmical under ordinary circumstances, may become rhythmical under extraordinary circumstances. In these cases it would seem that the electrical charge of the brain or spinal cord, diminished by degeneration or by an insufficient supply of red blood, runs down more quickly than it ought to do, and that for this reason nerve centres which are non-rhythmical naturally become rhythmical;.....and, if the rhythmical nerve centres within the heart, or the respiratory nerve centre or centres are more highly developed or more vivified by red blood, it may be supposed that the electrical charge of these centres will run down less quickly, and that the effects of this change would be to retard the beatings of the heart and the heavings of the chest. In a word, it is not difficult to bring the non-rhythmical and the rhythmical nerve centres into the same category, and at the same time to see that all nerve centres have, so long as their electrical charge is kept up as it ought to be, the inhibitory action which is supposed to belong only to certain special inhibitory centres."

Those who are acquainted with the progress of physiology during the last ten years may, if they are so disposed, find in the paragraphs we have quoted suggestions or forecasts of truths which other men have laboriously arrived at by inference from experimental fact.

Dr. Radcliffe was essentially a vitalist, but with this difference, that in his doctrine electricity took the place of the vital principle. In compliance with the spirit of the time he substituted for "life" something else, of which the relation to the facts to be explained was equally undetermined. He was an acute observer in science as in medicine, and a persevering experimenter, but his experiments were rather made for the purpose of establishing principles which he had already accepted as unquestionable truths than for the discovery of new facts. The lucidity of his style and the shrewdness of his reasoning made all that he wrote worth reading and his talk interesting and instructive; and this was the case, even though the reader or listener might doubt whether the views he advanced would bear scientific criticism.

Some thirty years ago Dr. Radcliffe was the only person in this country who was conversant with the then recent discoveries of Du Bois-Reymond and his immediate predecessors relating to the electrical properties of living muscles and nerves. For the purpose of studying these phenomena for himself he had mastered the technical difficulties of observation, which were then very great; and it was to his house in Henrietta Street that the young physiologists of that time had recourse to learn elementary facts in nerve and muscle physiology which are now familiar to all medical students. The writer well remembers how accessible he always was for this purpose, how perseveringly he struggled with experimental difficulties, and what intense pleasure it gave him when at the end of a long evening he succeeded in demonstrating some important fact.

The Rev. Harry Jones writes to us: During the score and more of years which have passed since I first knew Dr. Radcliffe, I have found in him one of those who grow steadily from an acquaintance into a still more valued friend, and his departure makes a sudden gap in the ring of a man's life into which affectionate memory begins at once to flow, but which it cannot fill. There was a warm and manifold vitality about him which did not need the

zeal of its enjoyment by my master Frederic Denison Maurice, to prove its genuineness.

"When I asked myself what marked it most, I think not merely of selfish satisfaction, but the thought immediately rises that I never heard him speak unkindly of anyone. And then I recall the shape and material of his friendliness; it was not made of words but deeds. How well I remember, years ago, when I was in trouble, and when some would have contented themselves with kind (and valuable) messages, how the doctor, accompanied by his good wife, put himself out of the way to visit us, and brought with him a beaming cheeriness that made the hour (it was on a Good Friday) at once appreciably better. Then, too, our many conversations (in his house and in my own), which often ranged over the widest fields, always left me with not only a perception of the full and varied stores on which he drew, but of that insistent quiet intrepidity of thought that leaves a pleasant flavour of its own about the memory of the longest talks. With all this, without venturing on an opinion about any subject of scientific inquiry, I have always felt that in Dr. Radcliffe I had a friend in whom an unforced habit of Christian worship accompanied a spirit of fearless investigation.

"There was a rare personal buoyancy, sense of wholesome humour, and perceptive thoughtfulness for others about him which seemed never to run dry; and when I heard that he was dead I knew that one of the lights which cheer the way of this life had suddenly been screened, and that, however great my affection for him had been, I felt would gather even more appreciation about it after it had been withdrawn."

HOSPITAL AND DISPENSARY MANAGEMENT.

PROPOSED PUBLIC MEDICAL SERVICE.

How Medical Practitioners holding Hospital Appointments can make it a Success.

Sir,—As the pivot on which the success of the above scheme revolves is hospital co-operation, and as it is essential that the majority of patients who will use it must be well-to-do people who are excluded from the out-patient departments of our medical charities, and as numbers of members have asked me to give them some fuller information regarding those hospitals which have tried to deal with the great out-patient difficulty, with your permission I shall mention some of the more important.

1. *The Manchester System.*—In 1876 the Manchester Provident Society, a body similar to a charity organisation society, invited the hospitals to appoint subcommittees to meet them so as to discuss a plan for relieving the congested state of their out-patient departments, and also to decide who were to be suitable cases for charitable medical relief. They agreed on the following "poverty scale." Man and wife, 18s. per week; single man or woman, 12s.; each child, 1s. 6d. If any of these were making above this scale they were considered ineligible. Four of the principal hospital committees agreed to furnish a complete list of the names and addresses of the applicants to the Provident Society. This society, on its part, agreed to make their inspectors inquire into the social condition of applicants. The inspector, after inquiry, asks for the hospital card, and if he finds them to be ineligible he stamps their card and informs them that they are ineligible for medical aid, and refers them to the provident dispensary. The inspectors are paid at the rate of 25s. to 30s. weekly. The four chief hospitals contribute £95 towards the cost of defraying investigation expenses. If the patients insist on returning, the authorities, seeing their card stamped, refuse further treatment. No one is refused first treatment, so that all apparent severity is excluded. Mr. Saunders, Secretary to the Manchester Infirmary, says: "Undoubtedly the establishment of provident dispensaries has been of great benefit to Manchester." Mr. Macdonald, clerk to the Manchester Guardians, says: "In reply to your inquiry I beg to say that the Manchester Provident Dispensaries must, to some extent, have the effect of reducing the number of applicants for outdoor medical relief." Mr. Forrest, hon. sec. to the Ancoats Hospital, says: "It is most undoubtedly a manifest saving to the charities." In 1875, when the investigation was set on foot, it was found that 43 per cent. were ineligible—that is there was an "abuse rate" of 43 per cent. It has now been worked down, by careful inspection, to 13 per cent. Such a system could be introduced into all our towns and cities. It seems to be the best plan, for it places all the applicants under one system of inspection. It can readily be understood that if only one hospital co-operates the patients refused at it will only go to another charity—where there is no co-operation—and so defeat the purpose of the inspection.

2. *The London Hospital System.*—Here a notice is fixed on the hospital gates and in the patients' waiting-halls, on which it is stated that on and after a certain date a waiting hall inspector would be employed, to ascertain if the *out*-patients were fit and proper persons for the receipt of medical relief. It is also stated that the charity is for the sick poor. The inspector is paid £145 yearly. He asks a few leading questions of those whom he thinks are improper cases for relief, and if not satisfied he asks for a reference—generally that of the employer. If the inquiry is unsatisfactory, the patient is advised accordingly, and told not to come again. If the patient is dissatisfied at the inspector's ruling, he or she has the power to appeal to the House Governor, or to the Committee. No one is refused first treatment. In 1884, when the inspector was first appointed, the number of *out*-patients was 20,905; in 1888, 21,464. Previous to 1884 "there had been a serious tendency to increase in this class of cases," that is, out-patients. No doubt a very large number were prevented from even paying a first visit to the hospital, knowing that they would, if ineligible, be refused second treatment. Even in 1883—the year before inspection began—the number of *out*-patients was 28,236! In twelve months the plan brought about a reduction of 6,970 patients. This may seem a small sum, but each *out*-patient costs, on an average, 4s. This number, therefore, gives a saving of over £6,000 in one year to the funds of the charity. Mr. W. J. Nixon, the House Governor, says the system works well, as the patients know that the inquiry is made in good faith. Why cannot other hospitals follow this plan, instead of trying to increase their numbers each year? Do let us try. At this hospital the "abuse rate" was about 50 per cent.

3. *The St. Bartholomew's Hospital System.*—Here there is also an inquiry officer, who is paid £156 yearly. The secretary says: "He draws the patients' attention to the fact that the hospital is a charitable institution, designed for the relief only of the necessitous poor." In 1882, the year previous to the appointment of an inspector, the number of casualty and out-patients was 170.030, while last year the total number was 144,681; a falling off of 25,349. Compare this plan with the very doubtful one pursued at Guy's Hospital, where they charge the sick poor threepence for advice and medicine. Who introduced this iniquitous system of a medical charity actually selling its charity?

4. *The St. George's Hospital System.*—Here only 15 new out-patients are admitted to each doctor weekly. These are selected by the resident physician and surgeon. This plan prevents overcrowding. The cases are admitted only because of their clinical value; no "tickets of recommendation" being permitted.

5. *The Children's Hospital (Great Ormond Street) System.*—Here an arrangement was made with the Charity Organisation Society that the inspectors of the latter should inquire into the social conditions of applicants. No patient whose parents were making under 30s. per week's wage were to be excluded from hospital treatment. No first treatment was refused, but second treatment was if the inspector had not stamped the card. Each parent or guardian had to answer the following questions: Name and address, date, employment, name of employer, married or single, number and age of family, weekly earnings of father and mother, income from clubs and other sources, in receipt of parochial relief. The hospital authorities sent 8,798 card cases for inquiry by the inspectors, but only 4,574 of these went to the Charity Organisation Society, about half shirking investigation. Of the 4,574 who went, only 43 per cent. were found to be eligible for medical relief. Thus there was an abuse rate of 57 per cent. Unfortunately this splendid arrangement between the hospital and Society fell through. Cannot the careful thinker tell why? Were not these 57 per cent. actually stealing the funds given to support the sick poor?

6. *The Royal Free Hospital Plan.*—Here an inquiry was made by the Charity Organisation Society in 1875 into the social status of 641 out-patients of this hospital, care being taken to avoid any approach at the selection of cases. Of these, 231 were making between 20s. to 40s. per week's wage, and so were ineligible for gratuitous relief, while 169 were making under 20s., and so were eligible. Thus, these figures give an "abuse rate" of 61½ per cent. And is the abuse rate not likely to have increased since 1875? The fashionable theory of some hospital managers now is that, with an increase of the rate of wages, there should be an increase in the

dependence of the wage-earning classes on the charity of others. For are not the number treated each year an increase on its predecessor?

7. *The Devonport Hospital and the Horton Infirmary Systems.*—The Honorary Secretary, Mr. Shapcote, says: "I beg leave to say that the out-patient department of this hospital was converted into a provident dispensary in 1868, because we found that the hospital was being crippled by the large amount spent on out-patients. The scheme has worked remarkably well." Here is an entire out-patient department being used by a well-to-do class of the community.

I need not here refer to the Leicester Dispensary. Suffice it to say that it was converted into a provident one, all the previous "charity" cases being well able to pay, on an average, 6s. per annum.

I think the above cases may be taken as a precedent. For my part, I feel that the out-patient hospital difficulty could be very easily solved if we carried out the command, "Thou shalt not steal." Now we have well-to-do people going to the charities and pretending that they are worthy objects of relief. Are these people not using up funds subscribed for the poor? Is this not theft? We have some hospital authorities trying to *sell* their charity, and thereby not only prostituting a philanthropic scheme, but also breaking through the wishes of the founders of these charitable institutions. They try to commercialise our hospitals, and to supply a plan to the public, these having never asked for it. The "pay patient" secures the first place, while the poor one is thrust back on the parish. Is not this the very basest pretence, and is it not theft? Again, some medical charities are selling bottles of medicine at one penny each to well-to-do people. Is not this stealing from the chemist? The "sixpenny doctor," the bogus club-runner, and the one who treats as club patients, and at 3s. 6d. per annum, men in the receipt of from £250 to £500 per annum, are not each pilfering and stealing? Near St. Bartholomew's Hospital a medical man states, on a large brass plate, that he treats patients "at the usual hospital fees." What a satire on some of the actions of "charitable" institutions! Yet the Secretary of the Hospital Saturday Fund (London) says that at sixty-seven London hospitals "the services of medical men of the highest skill are to be had for 6½d. per patient." Think of that. With all our protestations about the "noble and Christ-like calling," this seems to be a sorry spectacle for the public to look on.

No doubt, ere long, we doctors, even as a matter of policy, will find that to be honest with each other, and with the public, is "the best policy." It has been hinted that we shall not secure hospital co-operation from hospital doctors, because by excluding the well-to-do, they would not again have the opportunity of drafting these patients into their private practice. I trust by their actions they will prove the opposite to be true.

To my mind, one of the chief advantages of a public medical service will be that it will be the property of medical practitioners. There will be no degrading canvassing for votes; there will be no exclusion from committees. It seems to be the growing fashion now to exclude the medical staff from hospital committees, and to fill their place with working men. Even the provident dispensaries are following this baneful example; while the sick clubs, and tontines of butchers, sweeps, and such like, plainly tell their surgeon that he is their paid servant.

When will the members of the medical profession cease to prove to the public their incapacity to legislate for their own wants, and when will they find out the disadvantages of disunion, and the advantages of co-operation?—I am, etc.,

Liverpool. ROBERT R. RENTOUL, M.D.

ALLEGED ABUSE OF OUT-PATIENT DEPARTMENTS.

SIR,—We hear much in your columns from general practitioners and provincial physicians of the abuse of out-patient departments of hospitals, and some London consultants also, such as Sir Spencer Wells and Mr. Timothy Holmes, have, I believe, expressed opinions which favour that view. Before, however, we talk of discussing in detail, as you propose, remedies for the abuse of out-patient departments, it will be well first of all to settle among ourselves whether there is such abuse, otherwise we cannot expect any great sympathy from the outside public when we appeal to hospital governors for assistance in the matter; nor so long as there is a palpable division of opinion, and high authorities can be ranged on one side and the other, are we likely to be able to secure the concordant and unanimous action in our own body which is alone likely to be efficient in remedying an alleged abuse. It is obvious that a large number of hospital physicians who desire an extensive practice and abundant teaching material feel the plan to be on the whole rather a public and professional benefit than an injury. Let us settle whether there is an abuse, and this not by vague opinions but by positive evidence. I am led to make these observations by the following very pertinent remarks which I note as having been made on a great public occasion recently at the Mansion House by the President of the Royal College of Physicians, whose public utterances on this subject must carry great weight not only from his distinguished official and professional position, but from the great personal experience which he justly claims on the subject and from the great attention he has given to social subjects. Sir Andrew Clark, in the report which lies before me of his very able speech, made the following observations:—

"Then there is another difficulty, which I touch with great regret, because it is a difficulty which comes from the men whom I call crotchet-mongers, very odd, but very true. There are a certain number of men, very earnest and well-intentioned, who are ready to make any sacrifice for the truth, but who have an unfortunate faculty of seeing only what is wrong, and not seeing what is right in anything. There is a friend, for example, who has a great notion that the treatment of the out-patient department of great London hospitals is an awful iniquity, and ought to be put down. People will not listen to him, and he gets angry and assails the hospitals in every direction, charging them with abuse and corruption. At last people begin to say, 'There must be something in it; the man would never go on in this way if it were not true'; and thus the out-patient department of a great hospital is often robbed of half its income, and that upon the foundation of a mere mistake. Let me advert one moment to this question of the out-patient department. I will only say three things about it. First, let me say that I have perhaps the largest experience of any physician in London of out-patient practice in the London Hospital, and I can say of it that it would have been simply impossible for me to have practised my profession in the way in which I am engaged in it with anything like a pretension to efficiency unless I had had that work at the hospital. Why? Where else could I come face to face with the early aspects of disease? Where else could I come face to face with those first small indications of disease which tell of its near approach, and which are still within the power of art to avert? If they do away with these departments of our great hospitals, I venture to say that they will inflict a cruel, irreparable wound on practical medicine in this country. I have been told that they are grossly mismanaged, and that it is a shame to allow people to come to them and get outdoor relief when they ought to be paying for advice. On one occasion one of these narrow-minded but good men came to me at the London Hospital, and said: 'Oh! you are at this dreadful work; you ought to be somewhere else, and not encouraging this improper charity.' 'What do you find fault with?' I asked. 'Why, in coming along,' he said, 'I saw a man with a black coat on among the patients.' 'Did you?' I said; 'let us have him in.' He went out and brought him in. He was a pale, thin, wasted, anxious-looking, sickly man. 'What are you?' I asked. 'I am a clerk.' 'What wages do you get?' 'Twenty-eight shillings a week.' 'What family have you?' 'I have a sick wife and six children.' Why, he was much worse off than the commonest working man with twenty-four or five shillings a week. If that is the sort of abuse you object to, I face that abuse, and I say it is a great charity and not a great wrong. In Manchester they entered into this question *con amore*, and were determined to get rid of the abuse of the out-patient department. They investigated the matter carefully, I am told; and what do you think was the conclusion they came to? It was that about 8 per cent. of the people who attended at the infirmary might have contributed a little to some provident dispensary where they could have got relief. Eight per cent.! Will you think for a moment of the enormous advantages which I have pointed out to you coming from these hospitals, and will you let that 8 per cent.—the few who could 'pay a little'—wreck all that? It is not common sense, it is not reasonable. It is unutterable folly and cruelty to try to wreck the doing of so great a good for so small an evil. Are you to expect that any work is to be perfect? Never. So far as I know, the perfection of a work is begotten of its imperfections; and in this respect a hospital is no better than any other work, and no worse."

It will be seen that this physician absolutely denies that there

is any abuse worthy the name, and, if that be so, is it worth while for Dr. Rentoul to make all this pother, and for the Branches solemnly to appoint committees on so small a matter? —I am, etc.,

CRITIC.

UNIVERSITY INTELLIGENCE.

CAMBRIDGE.

DOWNING COLLEGE.—A successful gathering of "Old Downing" men took place at the Criterion Restaurant on Tuesday evening. Some sixty guests, of whom a large proportion belonged to the medical profession, sat down to dinner under the presidency of the Master, Dr. Alexander Hill. Amongst them were Professor Humphry, Professor Ray Lankester, Professor Brailey, Dr. Isambard Owen, Dr. Biss, Dr. Steavenson, Dr. Robert Boxall, and Mr. Sheild. Professor Latham and Dr. Bradbury were unavoidably detained at Cambridge. In proposing "The College," Professor Humphry alluded to the facilities which Downing, under its present *régime*, offers to students of science and medicine.

DUBLIN.

AT the Summer Commencements in Trinity Term, held on Thursday, June 27th, in the Examination Hall of Trinity College, the following Degrees in Medicine, Surgery, and Midwifery were conferred by the University Caput, in the presence of the Senate, namely:—

Baccalaureus in Arte Obstetriciâ.—J. H. R. Glenn.

Baccalaurei in Medicinâ, Chirurgiâ, et Arte Obstetriciâ.—G. Bracken, W. A. H. Burkitt, R. A. C. Burnes, C. H. Burtchaell, J. E. Carter, J. H. Cooke, R. S. French, A. H. Fuller, H. R. Griffith, J. O'L. Kilgarriff, W. Kirkpatrick, L. G. F. Macrory, L. G. S. Molloy, G. B. Morgan, J. Myles, E. P. Norman, T. M. Tate, H. E. Taylor, R. C. Twigg, S. C. Westwood, R. A. Yeates.

Baccalaurei in Medicinâ.—W. R. Spowart, G. J. Wilson.

Doctores in Medicinâ.—H. K. Abbott, A. R. F. Exham, W. L. Hickey, W. F. Hingston, W. Kirkpatrick, L. G. S. Molloy, A. S. Patton, W. R. Rice, R. M. Wilson, H. Worthington.

MEDICO-PARLIAMENTARY.

HOUSE OF LORDS.—Thursday, June 27th.

Rabies in the Metropolis.—Earl BROWNLOW, in reply to the Earl of MILLTOWN, said that early last month the First Commissioners of Police drew the attention of the London County Council to the fact that there was an increase in the number of cases of rabies, though not so large an increase as his noble friend supposed. In 1885, 369 dogs were destroyed, and in the present year 83 had been destroyed. It was impossible to say how many of the 369 were affected with rabies, since it was not until 1886 that the custom of examining carcases began. Of the 83, 70 were examined, and 22 of these were found to be affected with rabies. The County Council had made proposals to the Privy Council, which was considering whether or not the recommendation could be put into force.—Lord BELPER pointed out that while in many country districts precautions were being taken to prevent the spread of rabies, nothing was done in the great centre of the disease.—Viscount CRANBROOK remarked that the counties were absolutely free from the disease. The present state of legislation on the subject was not very satisfactory, and the Government were considering whether it would not be possible to give greater power to local authorities.

HOUSE OF COMMONS—Thursday, June 27th.

The Notification of Infectious Disease.—Mr. RITCHIE introduced a Bill to provide for the notification of infectious disease to local authorities. The two principal clauses are the following:—

2. This Act shall extend—

(*a*) To every London district after the expiration of two months from the passing of this Act, and

(*b*) To any urban, rural, or port sanitary district after the adoption thereof.

3. (1) Where an inmate of any building used for human habitation within a district to which this Act extends is suffering from an infectious disease to which this Act applies, then, unless such building is a hospital in which persons suffering from an infectious disease are received, the following provisions shall have effect, that is to say:—

(*a*) The head of the family to which such inmate (in this Act referred to as the patient) belongs, and in his default the nearest relatives of the patient present in the building or being in attendance on the patient, and in default of such relatives every person in charge of or in attendance on the patient, and in default of any such person the occupier of the building shall, as soon as he becomes aware that the patient is suffering from an infectious disease to which this Act applies, send notice thereof to the medical officer of health of the district.

(*b*) Every medical practitioner attending on or called in to visit the patient shall forthwith, on becoming aware that the patient is suffering from an infectious disease to which this Act applies, send to the medical officer of health for the district a certificate stating the name of the patient, the situation of the building, the name of the head of the family or other person who appears to him to be primarily liable to give the notiee under this Act to the medical officer, and the infectious disease from which, in the opinion of such medical practitioner, the patient is suffering.

(2) Every person required by this section to give a notice or certificate who fails to give the same shall be liable on summary conviction in manner provided by the Summary Jurisdiction Acts to a fine not exceeding forty shillings. Provided that if a person is not required to give notice in the first instance, but only in default of some other person, he shall not be liable to any fine if he satisfies the Court that he had reasonable cause to suppose that the notice had been duly given.

Further clauses make provision for the forms of certificate and the cases where there are two or more medical officers of a local authority; for the adoption of the Act in urban or rural districts by resolution of the local authority at a meeting to be held after fourteen clear days, and special notice for the definition of infectious disease and for the power of the local authorities to extend the definition of "infectious disease." The application of the Act extends to vessels, tents, vans, or sheds. It will be seen that the Act will have immediate application in London, but will be required to be specially adopted by any other local authority.

Universities (Scotland) Bill (the Bill in Committee).—The Provosts of St. Andrews and Dundee are added in the proposition of the Lord Advocate to the University Court. In regard to the other universities, it was arranged that instead of two Crown nominees there should only be one, and that members should be elected by the Town Councils of Glasgow and Aberdeen on the Courts of the Universities in those places in addition to the Provosts.—On the proposal of Sir GEORGE TREVELYAN, it was agreed that the University Court should act in regard to the appointment of professors, examiners, etc., under any regulations on the subject laid down by the examiners, which regulations, after the expiration of the Commissioners' powers, might from time to time be modified or altered by the University Committee.

Friday, June 28th.

Universities (Scotland) Bill (the Bill in Committee).—An alteration was made in the Commission by leaving out the names of Mr. Erichsen, Mr. Campbell, Mr. Macgregor, and Sir J. Crichton Browne, and substituting Dr. Heron Watson (Edinburgh), Dr. Black (Glasgow), Sir William Thomson, and Professor Stuart. —Mr. WALLACE moved an amendment to enable all persons resident in Scotland to submit themselves for examination for degrees without requirement of residence.—Sir WALTER FOSTER supported the amendment, which was proposed by Sir Lyon Playfair, and defeated by 140 against 67.—On the motion of Sir LYON PLAYFAIR, it was agreed that the Commissioners should have power to establish after January 1st, 1892, a general court to review subjects affecting the interests of the four Universities, and to report thereon to the Queen or the Secretary for Scotland.

Tuesday, July 2nd.

Universities (Scotland) Bill (the Bill in Committee).—On Clause 24, which provides that an annual grant shall be made from the Consolidated Fund to the Universities, a long discussion arose. Mr. HUNTER proposed in the first instance that the grant, instead of being placed on the Consolidated Fund, shall be voted annually by Parliament, with the view of bringing the management of the Universities under the control of Parliament. In this he was supported by Sir G. TREVELYAN and others; and the CHANCELLOR OF THE EXCHEQUER, after remarking that the provision was an inheritance from the former Bills, and pointing out that its operation would be to promote an academical rather than a House of Commons management of the Universities, agreed ultimately to reserve the point until the report. The blank in the clause as to the sum to be granted to the Universities was filled up by inserting the sum of £42,000, which the Chancellor of the Exchequer stated he could not exceed, although he pledged himself to recommend further assistance if, after the emoluments of the professors had been revised, the income at the disposal of the Commission was not sufficient to provide for pensions, etc.—After some conversation, mostly of an approving character, the amendment and the clause were agreed to. The remaining clauses and some new clauses were agreed to, and the Bill passed through Committee, amid considerable cheering on both sides of the House. The report stage was fixed for July 11th.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

TREATMENT OF SEWAGE AT KINGSTON-ON THAMES.

ON Saturday last the works of the Native Guano Company, recently erected for the treatment of the sewage of Kingston and Surbiton (population 38,000), were inspected by a large number of visitors previous to their opening. The process employed is very much the same as that of the old "A B C" Company, the parent of the present undertaking. The precipitating materials are alum, blood, and clay; and the process is essentially one of sewage precipitation, no attempt being made to filter the effluent water through soil or other filtering material before its discharge into the Thames. As was to be expected, the design and execution of the works are far superior to that of those now in use at Aylesbury, Coventry, and other places where sewage precipitation is still in vogue, the essentials of a satisfactory process being now so much better understood than at the time of construction of the old works. There are eight settling tanks, each 85 feet long by 50 feet broad, and 6 feet average working depth, holding, in the aggregate, 1,200,000 gallons, which gives a capacity of 30 gallons per head daily for a population of 40,000. The tanks are arranged in two series of four each, but it is found sufficient to pass the sewage through a series of two tanks only before discharging the effluent, which is subsequently well aërated by running in a broad shallow stream over a slope in the outfall channel. On the day

of inspection the effluent water was apparently in as highly purified a condition as the effluent from a precipitation process ever can be. As its volume is small in comparison with the volume of water flowing by in the Thames, it is not likely that any nuisance will be produced in the river; oxidation of organic matters will have free play, and the other aids to self-purification of the water will not be unduly strained.

One disadvantage of the process is the very large volume of sludge (the suspended matters of the sewage) left behind in the tanks after the effluent water is drawn off. This sludge is pumped into a sludge-well, and then drawn into four vessels or accumulators by the creation of a vacuum. It is then forced by air-pressure, at 100 lbs. on the square inch, into filter presses, from which it is removed as cakes containing about 60 per cent. of moisture. These pressed cakes are further dried in a Borwick's drying cylinder (with fan and condensing apparatus attached), ground into powder, bagged, and sold (according to the company's statement) at £3 10s. per ton.

As the sewage works are outside the town, any offensive gases given off from the sewage in the tanks, or from the subsequent treatment of the sludge, are not likely to cause a nuisance to the inhabitants. In a short time Hampton Wick (population 2,500) will send its sewage over the railway bridge to these works by means of one of Shone's ejectors.

After inspection of the works the visitors were entertained at luncheon by the chairman and directors of the company.

THE COMPULSORY NOTIFICATION OF INFECTIOUS DISEASES.

SIR,—Mr. Ritchie's long-promised Health Bill is at length printed, and I therefore beg you to be good enough to publish the enclosed copy of a letter which I wrote to him three months ago. The present Bill cannot be regarded as an Imperial measure, because, with the exception of London, its acceptance is optional on the part of the several local authorities. I cannot but regard this as matter for congratulation, considering the nature of its clauses, which embody the dual system pure and simple, for it gives such towns as Brighton a chance of maintaining their low death-rate, instead of following the rule of towns under the dual system, which have hitherto, almost without exception, shown an increasing death-rate. As for London, its death-rate during the last fifty years has continuously diminished, and for four years running has been under 20 per 1,000. If we may judge from experience, it will now, under the influence of this pernicious dual system of notification, begin to rise again, and tens of thousands of lives be sacrificed. Indeed, the only rational explanation of such a measure is that it will curtail an overgrown population without arousing much remark, and whilst purporting to have the contrary effect. Of course it does not do to prophesy unless you know. The sun may not rise to-morrow, and the whole course of Nature may be reversed; but, unless the dual system produce different effects in the future from those which have attended its path hitherto, there cannot be a doubt as to the result of passing this Bill.—I am, etc.,

D. BIDDLE.

Gough House, Kingston-on-Thames, July 2nd.

To the Right Hon. C. T. Ritchie, M.P., President of the Local Government Board.

THE COMPULSORY NOTIFICATION OF INFECTIOUS DISEASES.

RIGHT HONOURABLE SIR,—Believing that your Public Health Bill is yet unprinted, I very respectfully beg to inform you that you have a grand opportunity of carrying the great body of the medical profession with you, and of obtaining their cordial co-operation in working the sanitary reforms you meditate, if you will only substitute for what are known as the "model clauses" those which are in operation at Bradford, Norwich, and Nottingham.

In furtherance of this view I earnestly entreat your careful consideration of the enclosed statistics,[1] and those contained in my letters to the BRITISH MEDICAL JOURNAL of the 9th and 23rd March, 1889.[2]

From a voluminous correspondence which I held last year with general practitioners in most of the towns where the dual system is enforced, and from my study of the evidence collected in the cases of Liverpool and Brighton, which successfully resisted the enforcement, I am convinced that it is a mistake to go beyond the single system. This, requiring the medical man to *certify* but not to *notify* independently, works well; whereas the dual system is constantly attended with friction, and produces very indifferent results. It raises up a barrier between the public and the profession, causes parents and others to defer sending for medical aid much longer than they otherwise would, leads to much concealment of disease, thus frustrating the very object its promoters have in view, and actually augments the death-rate, which it is intended to diminish.

In conclusion, I would draw attention to the Report of the Royal Commissioners on Small-Pox and Fever Hospitals (1882), and very deferentially suggest that what we ask barely exceeds a compliance with their recommendation as given on pp. x, xi.

I have the honour to be, Sir, your obedient servant,

Kingston-on-Thames, March 25th, 1889. (Signed) D. BIDDLE.

[1] A copy of those published in the JOURNAL of July 21st, 1888.

[2] To which may now be added those published in the JOURNAL of April 27th and May 18th, 1889.

HEALTH OF ENGLISH TOWNS.

DURING the week ending Saturday, June 29th, 5,792 births and 3,170 deaths were registered in twenty-eight of the largest English towns, including London, which have an estimated population of 9,555,406 persons. The annual rate of mortality in these towns, which had been 16.6 and 16.7 per 1,000 in the two preceding weeks, further rose to 17.3 during the week under notice. The rates in the several towns ranged from 13.0 in Bristol, 13.7 in Brighton, 14.6 in Huddersfield, and 14.9 in Nottingham to 22.6 in Leeds, 23.5 in Preston, 24.2 in Sunderland, and 25.9 in Manchester. In the twenty-seven provincial towns the mean death-rate was 19.1 per 1,000, and exceeded by 3.9 the rate recorded in London, which was only 15.2 per 1,000. The 3,170 deaths registered during the week under notice in the twenty-eight towns included 184 which were referred to diarrhœa, 99 to measles, 93 to whooping-cough, 41 to scarlet fever, 35 to "fever" (principally enteric), 24 to diphtheria, and not one to small-pox; in all, 476 deaths resulted from these principal zymotic diseases, against 429 and 399 in the two preceding weeks. These 476 deaths were equal to an annual rate of 2.6 per 1,000; in London the zymotic death-rate was only 1.8, while it averaged 3.3 per 1,000 in the twenty-seven provincial towns, and ranged from 0.0 in Norwich, 0.6 in Huddersfield, and 1.1 in Portsmouth and in Derby to 4.5 in Bolton, 4.7 in Salford, 6.3 in Hull, and 9.0 in Preston. Diarrhœa caused the highest proportional fatality in Manchester, Sunderland, Bradford, Salford, Leeds, and Leicester; measles in Bolton, Halifax, Hull, and Preston; scarlet fever in Plymouth; and whooping-cough in Birkenhead, Oldham, Cardiff, and Wolverhampton. Of the 24 deaths from diphtheria recorded during the week under notice in the twenty-eight towns, 13 occurred in London, 2 in Birmingham, 2 in Salford, 2 in Leeds, and 2 in Hull. No fatal case of small-pox occurred during the week, either in London or in any of the provincial towns; and no small-pox patients were under treatment in any of the Metropolitan Asylums Hospitals on Saturday, June 29th. These hospitals contained, however, 547 scarlet fever patients on the same date, against 550 and 538 at the end of the two preceding weeks; 61 cases were admitted during the week, against 30 and 42 in the two previous weeks. The death-rate from diseases of the respiratory organs in London during the week under notice was equal to 2.0 per 1,000, and was considerably below the average.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday, June 22nd, 870 births and 496 deaths were registered in the eight principal Scotch towns. The annual rate of mortality, which had been 19.4 and 20.5 per 1,000 in the two preceding weeks, declined again to 19.4 during the week under notice, but exceeded by 2.7 per 1,000 the mean rate during the same period in the twenty-eight large English towns. Among the Scotch towns the lowest rates were recorded in Greenock and Perth, and the highest in Glasgow and Leith. The 496 deaths registered in these eight towns during the week under notice included 83 which were referred to the principal zymotic diseases, equal to an annual rate of 3.2 per 1,000, which exceeded by 1.0 the mean zymotic death-rate during the same period in the large English towns. The highest zymotic death-rates were recorded in Glasgow and Leith. The 227 deaths registered in Glasgow during the week under notice included 25 from whooping-cough, 10 from measles, and 2 from diphtheria. Seven fatal cases of measles occurred in Aberdeen, and 4 in Leith. Two deaths resulted from diphtheria in Dundee and 2 in Leith. The death-rate from diseases of the respiratory organs in these towns was equal to 2.8 per 1,000, against 2.0 in London.

In the eight principal Scotch towns, 873 births and 471 deaths were registered during the week ending Saturday, June 29th. The annual rate of mortality, which had been 20.5 and 19.4 per 1,000 in the two preceding weeks, further declined to 18.4 during the week under notice, but exceeded by 1.1 per 1,000 the mean rate during the same period in the twenty-eight large English towns. Among these Scotch towns the lowest rates were recorded in Edinburgh and Dundee, and the highest in Paisley and Glasgow. The 471 deaths registered in these towns during the week under notice included 79 which resulted from the principal zymotic diseases, equal to an annual rate of 3.1 per 1,000, which exceeded by 0.5 the mean zymotic death-rate during the same period in the large English towns. Among these Scotch towns the highest zymotic rates were recorded in Leith and Aberdeen. The 471 deaths registered in Glasgow during the week under notice included 15 which were referred to whooping-cough, 10 to measles, 7 to diarrhœa, 3 to scarlet fever, and 2 to diphtheria. Eight fatal cases of measles occurred in Aberdeen, and 4 in Leith; and 6 deaths were referred to whooping-cough in Dundee. The death-rate from diseases of the respiratory organs in these towns was equal to 2.8 per 1,000, against 2.0 in London.

HEALTH OF IRISH TOWNS.

DURING the week ending Saturday, June 29th, the deaths registered in eight of the principal town districts of Ireland were equal to 20.2 per 1,000. The lowest rates were recorded in Dundalk and Armagh, and the highest in Drogheda and Kilkenny. The 157 deaths registered in Dublin during the week under notice were equal to an annual rate of 23.2 per 1,000 (against 22.2 and 18.6 in the two preceding weeks), the rate for the same period being only 15.2 in London and 14.2 in Edinburgh. The 157 deaths in Dublin included 15 which were referred to the principal zymotic diseases (equal to an annual rate of 2.2 per 1,000), of which 7 resulted from fever (principally enteric), and 4 from measles.

AN International Congress of Hypnotism will be held in Paris from August 8th to August 12th, the subjects to be dealt with being divided under three heads: (1) Therapeutic and Clinical Application of Hypnotism and Suggestion; (2) Medico-Legal Applications of Same; and (3) Physiological and Psychological Applications. Those interested in the subject are invited to communicate without delay with the general secretary, Dr. Bérillon, of the Ecole de Médicine de Paris, 40*bis*, Rue de Rivoli, Paris.

MEDICAL NEWS.

THE distribution of medals and prizes to the students of Guy's Hospital Medical School will take place on Thursday, July 11th, at 3.30 P.M.

THE first Cinderella dance in aid of the Cardiff Infirmary was held at the Town Hall on April 30th, and was a marked success. Mr. J. Thomas, the house-surgeon, who acted as honorary secretary, has paid £60 to the funds of the Infirmary, being the proceeds thereof.

H.R.H. PRINCE GEORGE OF WALES has been compelled to change the date for laying the foundation stone of the new branch hospital of the Seamen's Hospital Society at the Albert and Victoria Docks from Thursday, 18th, to Monday, 15th inst.

PRESENTATION.—At the annual distribution of prizes to the successful students of the resuscitated Hastings and St. Leonard's branch of the St. John's Ambulance Association, Mr. John J. de Zouche Marshall, L.R.C.S.I., was presented by the lady members of his class with a solid silver inkstand and a stationery case.

INVALID'S RAILWAY CARRIAGE.—The North British Railway Company have had on exhibition at Edinburgh this week an invalid's carriage of a new description. The essential part of the arrangement is a hammock suspended on trestles, and hung on india-rubber straps, whereby it is hoped that the evils resulting from oscillation and jerking will be practically abolished.

AT the last meeting of the British Laryngological and Rhinological Association, Dr. Philip Smyly, of Dublin, was elected President for the coming year, and the following gentlemen were elected Honorary Fellows of the Association: Professor Voltolini, Breslau; Professor Massei, Naples; Dr. Solis Cohen, Philadelphia, and Dr. Fauvel, Paris.

ST. BARTHOLOMEW'S HOSPITAL.—On Thursday, June 27th, Mr. Mark Morris, who has served the Hospital for forty-eight years—first as assistant in the museum, and for the last thirty years as steward—was presented with his portrait, painted for the subscribers to his testimonial fund by Mr. Ouless, R.A. The ceremony took place in the Great Hall of the Hospital, where over 300 persons connected now or formerly with that institution were present. Mr. Savory took the chair, and formally presented the portrait. Mr. Morris, in receiving it, requested that the governors would accept the picture and hang it in the hospital. It was accordingly accepted by the treasurer, Sir Sydney Waterlow. A vote of thanks to the chairman, proposed by Sir James Paget, was carried unanimously. The ceremony was a graceful recognition of the services to the hospital which Mr. Morris has for so many years discharged with so much credit.

SOCIETY FOR THE STUDY OF INEBRIETY.—At a meeting of this Society, held on July 2nd, Le Chevalier Max Proskowetz de Proskow-Marstoff, President of the Austrian Society for the Study of Inebriety, said that Russia was favouring the sale of spirits for revenue purposes. In one year the St. Petersburg police arrested 47,000 persons, and 100 died from drunkenness. The consumption of strong liquors in St. Petersburg in one year averaged 37 gallons for each inhabitant, and over the whole empire 9 gallons. There was one liquor station for every 120 men in towns, and every 224 in villages. Clerical drunkenness was not uncommon. A number of monks drank so much that three died, and were found lying among the empty casks in their cells. The Tartar workmen were despised for their sobriety, and the new Trans-Caspian Railway was spreading drinking by frequent bars. Dr. L. D. Mason, of Brooklyn, read a paper advocating the establishment of hospitals for the treatment of acute alcoholic disease, such as delirium tremens, at the public charge. Dr. T. D. Crothers narrated several cases in which there was every reason to believe that persons guilty of violence were unconscious of their actions while under the influence of drink, having no remembrance of the circumstances when sober. A vote of congratulation was passed to one of the vice-presidents, Sir George Porter, on the baronetcy recently conferred upon him.

CONVERSAZIONE AT ST. THOMAS'S HOSPITAL.—The members of the Medical and Physical Society belonging to St. Thomas's Hospital entertained last week a large number of their friends in the Governor's Hall. Dr. W. B. Hadden, President of the Society, received the guests, who found much to engage their attention in the many interesting objects contributed by Dr. John Harley, Dr. Payne, Dr. Seymour Taylor, the Medical and Chirurgical Society, the Medical Society, and other exhibitors. It included specimens of medical works of the 15th and 16th centuries. Among the old books shown by Dr. Payne were the first work on surgery printed in England, a translation of Jerome of Brunswick's *Surgery*, printed by Peter Treveris, in 1525, with rude woodcuts. Several old herbals, including the first Latin edition of the so-called *Ortus Sanitatis*, or Garden of Health, dated 1491; and a German edition dated 1496. Also the first book in which copper-plate engraving was applied to the representation of plants, namely, the *Phytobasanos* of Fabio Colonna, printed at Naples in 1592. There were also some works by old surgeons and physicians of St. Thomas's, including the work on *Healing Scrofula or King's Evil by the Royal Touch*, published in 1684, by John Browne, Surgeon to the King and to St. Thomas's Hospital. The frontispiece represents Charles II. touching patients for the evil attended by his surgeon, Mr. Browne, whose duty it was to select suitable cases. Mark Akenside, the poet and physician to St. Thomas's, was represented by the quarto edition of Harvey's works, edited by him and published by the College of Physicians in 1766. This copy contained an interesting autograph inscription by Akenside, presenting it to his friend Jeremiah Dyson, whose generosity to the poet is well known. There was a large paper copy of Cheselden's well-known *Anatomy*. The other exhibits included medical caricatures by Cruikshank and Bunbury, and there was a fine display of instruments and batteries, with the latest inventions for electrical illumination. The graphophone was shown by Dr. Edmunds, and Mr. Muybridge exhibited electro-photographic apparatus for the investigation of animal locomotion. The stringed band of the Royal Artillery played, and in one of the rooms there was a concert under the direction of Mr. Alfred Caldicott. The conversazione was a highly successful one.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen passed the Second Examination of the Board in Physiology only, at a meeting of the examiners on June 29th.

W. T. Wray and E. G. Firth, students of Yorkshire College, Leeds; W. C. Wright and C. R. Billups, of Owens College, Manchester; G. W. Henry, of Bristol Medical School; H. A. Warke, of University College, Liverpool; W. E. F. Bird, of Edinburgh University; E. Bromhall, A. Emery, and H. P. Motteram, of Queen's College, Birmingham; A. V. Crossing, N. E. Norway, and C. W. Allen, of St. Mary's Hospital; D. Sims and P. G. Laver, of St. Thomas's Hospital; W. H. Cooke, of St. George's Hospital; H. R. V. R. de Groot, of King's College; W. C. Hinde and T. E. Lloyd, of Middlesex Hospital; T. R. Walker, O. W. Owles, and C. F. Wightman, of St. Bartholomew's Hospital; H. H. Mills and J. A. L. Campbell, of Westminster.

Passed in Anatomy and Physiology on July 1st.

T. M. Querney and G. S. Taylor, of Owens College, Manchester; G. L. Barker, of Sheffield; H. B. Bates and R. J. C. Rodgers, of University College, Liverpool; E. W. Bliss, H. C. Brown, W. M. Cox, and D. Stead, of Queen's College, Birmingham; P. A. Storey, of University College; H. T. Du Heaume, of St. Bartholomew's Hospital; W. D. Loveday, E. G. Evans, G. Mackeson, T. D. Lister, N. Instone, of Guy's Hospital; and R. H. Plummer, of California.

Passed in Anatomy only.

W. R. Mathews, of London Hospital; G. H. Norris, of St. Bartholomew's; G. W. B. Waters, of University College.

Passed in Physiology only.

W. C. Lawton, of Guy's Hospital; T. W. Hall, of Carmichael College, Dublin; W. P. Q. Daly, of St. Bartholomew's Hospital; F. G. Dorey, of Yorkshire College, Leeds; and C. W. R. Banham, of London Hospital.

Passed in Anatomy and Physiology on July 2nd.

J. T. H. Croft, of St. Bartholomew's Hospital; F. D. Woolley, of Owens College, Manchester; C. E. Moffatt, of Guy's Hospital; J. Campbell, of Belfast, Galway, and Paris; J. P. P. Tildesley, T. S. Vincent, and C. H. Harcourt, of Queen's College, Birmingham.

Passed in Anatomy only.

J. B. Garman, of Queen's College, Birmingham; R. Knowles, of Owens College, Manchester; L. J. G. Carré and G. D. Thomson, of St. George's Hospital; W. A. Ward and G. Lombardi, of Middlesex Hospital; C. B. Lourenz, of Ceylon Medical School; E. E. Dufty, of Sheffield; H. M. Cowen, of Toronto; E. M. Williams and W. B. Jones, of St. Bartholomew's Hospital; C. G. F. Morice, of Guy's Hospital; A. C. Leigh, of University College; and M. B. Foster, of Charing Cross Hospital.

Passed in Physiology only.

W. Faull, of Yorkshire College, Leeds; E. Wooldridge, of Queen's College, Birmingham; G. A. Peake, of Bristol; R. Ingram, H. St. J. Fraser, and T. I. Mills, of Guy's Hospital; A. D. Bensusan, W. J. Harper, F. W. Fullerton, G. F. Darker, and S. James, of St. Thomas's Hospital; R. H. Jackson, S. R. Lister, A. W. Port, F. G. Lloyd, and M. Cutcliffe, of St. Bartholomew's Hospital; T. R. H. C. Hicks, of London Hospital; H. S. Wild, of St. George's Hospital; E. W. Adams, of King's College; W. H. Payne and A. W. Seal, of University College; G. M. F. Nellen and W. H. Morgan, of Middlesex Hospital; and J. H. Hobling, of St. Mary's Hospital.

Passed in Anatomy and Physiology on July 3rd.

C. E. Waddington, of Yorkshire College, Leeds; R. Whitman, of Harvard University, Boston; B. D. Basu, of Lahore and Guy's; R. S. Bernard, of King's College; F. S. Bond, of Melbourne, St. Mary's, and Mr. Cooke's School of Anatomy; F. G. Bullmore, of St. Mary's Hospital; Dr. C. P. Taylor and W. B. Mason, of Charing Cross Hospital; G. Cross, of St. Thomas's Hospital and Mr. Cooke's School of Anatomy and Physiology; W. J. Bruce, of London Hospital; and L. S. Barns, of St. Bartholomew's Hospital.

Passed in Anatomy only.

T. Ager, of London, and Mr. Cooke's School of Anatomy; H. Gardner, C. F. Jack, and G. T. Bishop, of Charing Cross Hospital; H. H. Kendrick, R. J. Fyffe, F. Ellis, H. Sisson, C. A. Kitching, and S. W. Read, of London Hospital; S. E. Baxter, of St. Thomas's Hospital; W. L. Pethybridge, R. C. Gully, and A. F. H. Wray, of St. Bartholomew's Hospital; J. V. Pratt, of University College.

Passed in Physiology only.

C. M. Fleury, A. Allport, and P. M. May, of Guy's Hospital; G. W. Buxton, E. B. Cutting, H. Thomas, and W. H. Orr, of St. Bartholomew's Hospital; V. G. Drake-Brockman and G. D. E. Jones, of Middlesex Hospital; F. E. Easton, F. Knapton, and L. G. W. Tyndall, of St. Mary's Hospital; R. J. H. Allen, of University College; C. B. Prall, T. W. Hicks, and C. R. M. Woodward, of St. Thomas's Hospital; S. C. M. Nourse, of St. George's and Mr. Cooke's School of Anatomy and Physiology; and Archibald A. McKinnon, of King's College.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—Fellowship Examination. The following gentlemen have been admitted Fellows of the College:

W. Walter, M.D., Manchester; H. T. Warnock, Donegal; and J. W. O'Malley Martin, Surgeon-Major Medical Staff.

MEDICAL VACANCIES.

The following Vacancies are announced:

BURY DISPENSARY HOSPITAL.—Junior House-Surgeon. Salary, £60 per annum, with board, lodging, and washing. Applications by July 12th to the Honorary Secretary.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—House-Physician. Board and residence. Applications by July 12th to the Secretary.

CLAYTON HOSPITAL AND GENERAL DISPENSARY, Wakefield.—House-Surgeon. Salary, £120 per annum, with residence, etc. Applications by July 18th to the Honorary Secretary.

CUMBERLAND INFIRMARY, Carlisle.—House-Surgeon. Salary, £70 per annum, with board, lodging, and washing. Applications by July 20th to the Secretary.

CUMBERLAND INFIRMARY, Carlisle.—Assistant House-Surgeon. Salary, £40 per annum, with board, lodging, and washing. Applications by July 20th to the Secretary.

DENTAL HOSPITAL OF LONDON MEDICAL SCHOOL.—Medical Tutor. Salary, £40 per annum. Applications by July 10th, to the Dean.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell, E.—House-Surgeon. Board and lodging. Applications by July 11th to the Secretary.

GLENTIES UNION, Carrick Dispensary.—Medical Officer. Salary, £115 per annum, and fees. Applications to Mr. Arthur Brooke, Honorary Secretary, White House, Killybegs, Co. Donegal. Election on July 19th.

HOSPITAL FOR CONSUMPTION, Brompton.—House-Physicians. Applications by July 13th to the Secretary.

HULL ROYAL INFIRMARY.—Junior Assistant House-Surgeon. Salary, £50 per annum, with board and lodging. Applications by July 15th to the Chairman of the House Committee.

KING'S COLLEGE HOSPITAL.—Professor of Dental Surgery and Dental Surgeon. Applications to the Secretary.

MANCHESTER HOSPITAL FOR CONSUMPTION AND DISEASE OF THE THROAT, Bowdon, Cheshire.—Resident Medical Officer. Salary, £60 per annum, with board, lodging, and washing. Applications by July 6th to the Secretary.

NORTH STAFFORDSHIRE INFIRMARY, Stoke-upon-Trent. — Assistant House-Surgeon. Board, apartments, and washing provided. Applications by July 15th to the Secretary.

NORTHUMBERLAND COUNTY ASYLUM.—Clinical Assistant. Board and residence. Applications to Dr. McDowall, Northumberland County Asylum, Morpeth.

QUEEN'S HOSPITAL, Birmingham.—Honorary Physician. Applications by July 27th to the Secretary.

QUEEN'S HOSPITAL, Birmingham.—Honorary Obstetric Officer. Applications by July 27th to the Secretary.

ROYAL BERKS HOSPITAL.—Assistant House-Surgeon. Salary, £40 per annum, with board and lodging. Applications by July 23rd to the Secretary.

RUBERY HILL ASYLUM, near Bromsgrove, Worcestershire.—Clinical Assistant. Board and residence. Applications to Dr. Lyle.

ST. GEORGE'S HOSPITAL.—Assistant-Physician. Applications by July 13th to the Secretary.

VICTORIA UNIVERSITY, Yorkshire College, Leeds.—Demonstrator of Physiology. Salary, £120. Applications by July 13th to the Registrar of the College.

WARWICK COUNTY LUNATIC ASYLUM.—Clinical Assistant. Board and residence. Applications by July 20th to the Medical Superintendent.

WEST LONDON HOSPITAL, Hammersmith Road.—House-Physician. Board and lodging. Applications by July 11th to R. J. Gilbert, Esq., Secretary Superintendent.

WEST LONDON HOSPITAL, Hammersmith Road.—House-Surgeon. Board and lodging. Applications by July 11th to R. J. Gilbert, Esq., Secretary Superintendent.

WOLVERHAMPTON EYE INFIRMARY.—Resident Assistant. Board and washing. Applications by August 12th to the Chairman.

MEDICAL APPOINTMENTS.

BRODRICK, H. Edward, M.D., M.R.C.S., B.S., L.S.A., appointed District Medical Officer and Public Vaccinator for the District of Borrowby in the Northallerton Union, and District Medical Officer for Knayton in the Thirsk Union.

CAUDWELL, E., M.R.C.S.Eng., L.R.C.P.Lond., appointed House-Surgeon to the Gt. Yarmouth Hospital, *vice* F. H. Clarke, M.B., C.M.Edin., deceased.

CRUICKSHANK, J. D., M.R.C.S., L.R.C.P., appointed Resident Medical Officer to the Bright Ward of Guy's Hospital.

DE MESQUITA, S. B., M.R.C.S., L.R.C.P., appointed Senior House-Surgeon to the Miller Hospital and Royal Kent Dispensary, *vice* E. H. Biddlecombe, M.R.C.S., L.R.C.P., resigned.

DODDS, W. J., M.D., D.S.C.Edin., appointed Medical Superintendent of the New Asylum at Cape Town, and Visiting Physician to the Asylums of Robbin Island, Grahams Town, and Albany.

HUTCHINSON, A. C., M.D., appointed District Medical Officer to St. Leonard, Shoreditch, *vice* F. C. Roe, L.K.Q.C.P.I., L.R.C.S.I., deceased.

MARSHALL, E. Williams, M.R.C.S., L.R.C.P., appointed Junior House-Surgeon to the Miller Hospital and Royal Kent Dispensary, *vice* S. B. de Mesquita, M.R.C.S., L.R.C.P., resigned.

NICOLSON, Robert H., M.B., C.M.Aberd., appointed Senior Assistant Medical Officer to the Warwick County Lunatic Asylum, *vice* Alfred Miller, M.B., B.Ch., T.C.D., appointed Superintendent.

PENNY, H. L., appointed Assistant House-Surgeon to the Doncaster Infirmary and Dispensary, *vice* J. Rigby, resigned.

WIGHTWICK, F. P., M.B., M.R.C.S., L.R.C.P., D.P.H., appointed Medical Officer of Health, St. Olave District Southwark, *vice* J. Northcote Vinen, M.D., resigned.

WOOD, J. F., M.R.C.S., L.R.C.P., appointed House-Surgeon to the General Infirmary, Doncaster, *vice* F. H. Knaggs, L.R.C.P.Lond., M.R.C.S.Eng., resigned.

YOUNGER, H. J., M.B., C.M.Glas., appointed Assistant Medical Officer to Greenock Parochial Asylum and Poorhouse, *vice* F. A. Elkins, M.B., C.M.Edin., resigned.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the announcement. The first post on Thursday mornings is the latest by which advertisements can be received.

BIRTHS.

CHEYNE.—On June 26th, at 59, Welbeck Street, W., the wife of W. Watson Cheyne, M.B., F.R.C.S., of a son.

HARPER.—On June 30th, at 7, Drayton Terrace, South Kensington, the wife of James Harper, M.D., of a son.

MCCREERY.—On June 30th, at Hilsea Barracks, the wife of Surgeon-Major N. McCreery, of a daughter.

OLIVER.—On June 28th, the wife of James Oliver, M.D., F.R.S.Edin., Gordon Square, London, of a son (prematurely).

RAMSAY.—On June 12th, at Winton, Bournemouth, the wife of F. Winson Ramsay, M.B., B.S., of a daughter.

MARRIAGES.

ANDERSON—DUTHIE.—On July 2nd, at Ashley Lodge, Aberdeen, J. H. Anderson, M.D., J.P., of Bridgefield, Stonehaven, to Margaret Birnie, second daughter of William Duthie, Esq., of Cairnbulg.

CHARSLEY—BUNTING.—On June 27th, at SS. Philip and James, Oxford, by the Rev. R. H. Charsley, father of the bridegroom, assisted by the Rev. Frederick Vernon, Vicar of Shawbury, Robert Stephen Charsley, Senior House Physician, Westminster Hospital, to Gertrude Mary, daughter of the late Rev. A. Bunting, Vicar of Kilsby, Northants. No cards.

GREEN—CURTIS.—On July 2nd, at Buckland Congregational Church, Portsmouth, by the Rev. W. C. Talbot, Pastor, assisted by the Rev. J. Stockwell Watts, of London, William Green, L.R.C.P.Lond., son of the late Uriah Green, of Kingston Crescent, to Harriet Mary, second daughter of John Curtis, of Portsmouth.

HAYWARD—THOMSON.—On Wednesday, July 3rd, at St. George's, Hanover Square, John Davey Hayward, M.D.Lond., of Liverpool, to Fanny Mary, only daughter of the late Colonel Thomson, of Leyfield Priory, West Derby.

TAYLOR—BUXTON.—On June 29th, at St. James's, Birkdale, by the Rev. T. Buxton, assisted by the Rev. R. Stephenson, Vicar of St. James's, and the Rev. J. S. Blair, Vicar of Killingworth, John W. Taylor, F.R.C.S., of Birmingham, to Florence Maberly, eldest daughter of the late Joseph Holmes Buxton, Esq., M.R.C.S.

WHITELOCKE—REID.—On July 3rd, at the Church of St. Nicholas, Brighton, by the Rev. R. Daly Cocking, M.A., Incumbent of Trinity Church, Brighton, assisted by the Rev. C. W. Bond, M.A., Vicar of the Parish, Richard Henry Anglin Whitelocke, M.B.Edin., M.R.C.S.Eng., of 6, Banbury Road, Oxford, third surviving son of the late Hugh Anthony Whitelocke, Esq., of Moreland, and Bulstrode Park, Westmoreland, Jamaica, to Barbara Hemy, eldest daughter of George Lowe Reid, Esq., of Montpellier Crescent, Brighton.

DEATH.

CRIGHTON.—On June 30th, at Lydgate House, Carlisle Road, Eastbourne, R. W. Crighton, M.D

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the office of the JOURNAL, and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

ANSWERS.

A. P.—Dr. Stewart's little work on *The Treatment of Inebriety in the Higher and Educated Classes*, which was reviewed in these columns on May 11th, is published by Mr. H. K. Lewis, Gower Street, London.

DR. A. MACLACHLAN.—The *American Armamentarium Chirurgicum* is a catalogue of the surgical instruments supplied by George Tiemann and Co., 107, Park Row, New York, by whom it is published at, probably, a nominal price.

STAFF SURGEONS IN TROPICAL SEAS.

ONE WHO HAS SUFFERED.—We have communicated with the company to which our correspondent refers, and find that they are quite alive to the inconveniences of which he complains, and are most desirous of relieving them in so far as the exigencies of the service will permit. They are quite willing to receive any suggestions which are made to them and to give them their most favourable consideration. They much regret the inequalities that must necessarily prevail, and still more that any candidates should have applied without thoroughly understanding what the conditions are, favourable and unfavourable. In future they will take every possible care that applicants shall be informed of the conditions of the service which they are desirous of entering. They agree with us in thinking that in many cases the advantages to be gained may possibly have been overrated.

THE FELLOWSHIP EXAMINATION.

A COUNTRY PRACTITIONER will find Dr. Green's *Pathology* (Renshaw) sufficient for his purpose. For treatment he should study the textbooks of Holmes, Bryant, Erichsen, or Walsham.

FRACTURE OF THE FIBULA.

DR. HERBERT BRAMWELL (Cullercoats) writes: On May 30th I was called to see W. G., aged 29, who complained of having sprained his ankle while jumping from a table. I found the internal lateral ligament of the right ankle-joint partially ruptured, and the foot displaced outwards. The fibula was fractured, not in the lower third, as is usual in Pott's fracture, but in the upper third, one inch below the head of the bone. Fracture of the tibia in its lower third is generally accompanied by fracture of the fibula in the upper third; but it is very uncommon to have fracture of the fibula in this position associated with outward dislocation of the ankle-joint.

CONSANGUINITY IN MARRIAGE.

DR. GEORGE E. SHUTTLEWORTH, Medical Superintendent Royal Albert Asylum for Idiots and Imbeciles of the Northern Counties (Lancaster) writes: In reply to "Alpha's" query *re* "Consanguinity in Marriage," on page 1331 of the JOURNAL of June 1st, I should say that, considering the double relationship of A. and B., marriage of the parties would be attended with great risk of degeneracy of offspring, as there would be a double chance of the intensification of any morbific taint (mental or physical) which may exist, either potentially or actually, in either family. I enclose two copies of a paper which I wrote some years ago on "Consanguineous Marriages in Relation to Mental Unsoundness," and may add that subsequent experience leads me to think even more seriously than before of the undesirability of marriages between cousins. Perhaps you would kindly send a copy of paper to "Alpha," who will find further information in "Huth on the Marriage of Near Kin," also "Intermarriage of Relations," by Nathan Allen, M.D.

Quite lately I admitted into this institution four imbecile brothers and sisters out of a family of six, the progeny of the marriage of cousins, and in this case no other cause than the consanguinity of parents has yet been ascertained.

ARTIFICIAL DRUM-HEADS.

DR. F. A. A. SMITH (Cheltenham) asks where he can get some photoxylon fit for making artificial drum-heads; also what kind of paper would be used for carrying out Dr. Blake's method of sized paper discs.

*** Discs of albuminised paper, with a thread attached in the middle, make, for some cases of perforation, capital artificial membranes. Mr. Hawksley, of 357, Oxford Street, W., supplies artificial parchment used for the same purpose and in the same way. Photoxylon is a nitre cellulose, made by treating wood-wool with a nitrate which will dissolve in alcohol, and forms a tough and rather durable membrane. It is to be had at W. Martindale's, 10, New Cavendish Street, W.

NOTES, LETTERS, ETC.

MONSTER WITH ABSENCE OF LOWER EXTREMITIES AND TAIL-LIKE PROJECTION OF COCCYX.

MR. WALTER B. NISBET, M.B. (Townsville, Queensland) writes: In the JOURNAL for January 19th, just to hand, I have read with some interest your description (page 147) of a limbless monster, from the *Centralblatt für Gynäkologie*. In consequence, I conclude that such a condition is sufficiently rare to form an excuse for my asking you to record in the JOURNAL the case of a similar monster, the birth of which it was my good fortune to attend some time before leaving England.

The facts are briefly these: The mother, aged 33, was pregnant with her seventh child, all the others being healthy and well-formed. I was summoned late in the day, and found labour well advanced, membranes ruptured, and a brow presenting. All attempts to convert the presentation into a face or a vertex failed, and I was compelled to let things take their course. Much to my surprise, no difficulty in delivery occurred, and at the end of about eight hours the child was born, the presentation remaining unchanged throughout.

While tying the cord I noticed there was something peculiar about th lower extremities; but my attention was fully occupied for some minutes in getting the child to breathe properly, as it was completely blue and asphyxiated on being born. Afterwards a close examination revealed the following peculiarities: There were no legs at all, nor apparently any acetabula on the pelvic bones. Attached to the buttocks on each side was a small appendix of skin about an inch in length, in shape and size closely resembling the little finger of a newly-born child. The pelvis seemed abnormally broad; but this was only apparent, being due to the absence of extremities. These appendages presented none of the appearance of stumps, and the abnormality was evidently not due to intra-uterine amputation. An arrest of development had also taken place in the right arm, as the limb was only about half its proper length; there was no elbow-joint, and the hand seemed to articulate with the lower end of the humerus. The left arm was normal in size and shape, but the fingers on both hands were webbed and distorted so as to look like claws more than fingers. The most curious point of all, however, was that the coccyx projected externally, carrying the skin with it so as to clothe it, and thus forming a rudimentary tail about three-quarters of an inch in length. The head, chest, and abdomen were normal to all appearance.

It was my intention at the time to have communicated an article illustrated with photographs on this, I believe, unique case; but, suggestions being made to the mother by gossiping neighbours that one of the lower animals was the parent of the child—she was separated from her husband—no one was ever again allowed to see it, including myself, and no attempts at persuasion or offers of reward would induce her to allow me to examine it again. The infant proved strong and grew rapidly. When a few months old I vaccinated it successfully, and, to the best of my knowledge, it is living still; if so, it will be about 18 months old.

In Tarnier's *Accouchements*, vol. ii, 1886, is pictured and described a similar monstrosity under the name "Ectroméle," the upper limbs also being absent, and the explanation there suggested is that the arrest of development is due to compression by the amnion and fusion of the limbs. This seems hardly satisfactory in such an irregular way as this case I describe. It might account for the absence of lower extremities, and the other peculiarities might be due to a reversion to a lower type, which the webbing of the fingers and the presence of a distinct rudimentary tail would strongly support. Could the brow presentation also be due to the absence of lower extremities and the consequent transposition of the centre of gravity of the child to a position nearer the head?

The case is full of interest, and I only regret that the stupidity and ignorance of the mother prevented me giving a more minute account of the various points.

*** The monster would be classified by Förster under the variety "Peromelus apus." In that teratologist's *Missbildungen des Menschen*, Pl. xi, figs. 9 and 10, two similar cases are figured; in both the lower extremities are absent and the upper imperfect. For information on anomalies of the coccyx see Hyrtl, *Lehrbuch der Anatomie des Menschen*.

FISH POISONING.

MR. J. LAWRENCE HAMILTON (Queen's Hotel, Folkestone) writes: The interesting and instructive case of a vaccine vesicle on the tongue, reported by your correspondent Dr. W. R. Buckell, in the JOURNAL of June 22nd, due originally to a fish-bone wounding the tongue of a woman, who subsequently kissed the vaccine vesicle of her child, tends to confirm my view as to the origin of many cases of fish poisoning.

I believe, when decomposed fish and its bones, say as in the herring, are swallowed, that often these small bones may make intestinal lesions, and thus incite ulceration, which sores may absorb the septic materials from decomposing fish swallowed at the same or subsequent meals.

In all cases where gastric or intestinal lesions already exist, it is obvious that there is special danger in eating tainted fish. It must be recollected that even all living healthy fish contain bacteria, hence the necessity to bleed and gut fish immediately on capture, as I have long advocated.

Having retired from the practice of the medical profession since 1871, to devote myself exclusively to the study of fish preservation and fish products, I should gratefully esteem it a favour if pathologists, museum curators, and practitioners would kindly communicate cases and the history of specimens bearing upon this subject.

Absent from my own library and from all public scientific libraries and museums, I have been unable, since reading Dr. Buckell's letter, to refer to the literature upon this subject.

DR. EDWARD H. RYAN-TENISON (Kilronan, Bexhill-on-Sea, Sussex) writes: Miss X., her sister, and nurse, partook of bloaters at 9.45 A.M. on June 12th. Just after breakfast, Miss X., feeling very sick, produced vomiting, and was then attacked by diarrhœa, which lasted one hour. Her sister and nurse both

became cold, had shivering fits, then became superficially hot. I saw them at 11.30, when the sister had bluish-red patches of erythema about her face, arms, and chest. Pulse 66, temperature 98.2°. I ordered an emetic of vin. ipecac., to be followed by a mild saline, which relieved effectually the symptoms.

The Treatment of Pertussis.

Dr. C. R. Illingworth writes: Carbolic acid, according to Neale's *Digest*, was used by Bott in 1872, by Cole in 1878, and by Nicholls, Dunlop, and Moritz. It is useful, I think, in every stage, on account of its anæsthetic and antiseptic properties. I find it helpful to divide the disease into two stages: the first being the febrile or spasmodic stage, during which there is no expectoration, but sympathetic febrile disturbance of the bronchial system, or of the meninges of the brain, with general circulatory excitement. The pathological condition at this stage is one of stasis of blood in the laryngeal tissues at the points of lodgment of the micro-organisms of whooping-cough, and sympathetic bronchial congestion in the vicinity. The remedies, therefore, are peripheral vascular stimulants, such as spirits of nitrous ether, acetate of ammonia, and salicylate of soda, with cardiac depressants, such as aconite, ipecacuanha, gelseminum, etc., for the removal of the stasis, and the consequent establishment of secretion, as evidenced by expectoration, ushering in the second stage. As soon as the second stage begins, I give iron, chloral, belladonna, and carbolic acid. The belladonna is most useful when there is much depression and tendency to collapse, as shown by clammy skin, cold extremities, and puffiness of the face, but it is no remedy for the first stage.

When there exists urgent spasm of the glottis in the first stage, and almost incessant cough, I give from one to two grains each of chloral and bromide with the ordinary medicine; and when that has not sufficed, I have found painting the glottis with a thirty-grains-to-the-ounce solution of the nitrate of silver, as advised by Ringer, of the utmost service in securing a good night's rest. When meningeal mischief supervenes in this stage, I find antipyrin of great value, especially when there are convulsions; also the biniodide of mercury in iodide of potassium.

I consider, from experience during the present epidemic, that sulphurous acid is superior to any other agent as an inhalation. I order a small piece of sulphur to be burnt three times a day in the room occupied.

Besides iron, I have used nitric and sulphuric acids, and alum with success in the second stage; but iron (in the form of perchloride) is the best.

Mr. Edmund J. Simpson, L.R.C.P.E., etc., Civil Surgeon (Rai Bareli, Oudh, India) writes: With reference to Mr. Eade's note in the Journal of May 11th on the use of carbolic acid in pertussis, I have much pleasure in adding my testimony to his as to its benefits, the disease disappearing in from fourteen to eighteen days. I would refer that gentleman to my paper in the April number of the *Provincial Medical Journal*, 1888, in which the results of three methods of treatment in one epidemic are given.

Red Milk.

Dr. Robert Main (East Ilsley, Newbury) writes: I wish to draw the attention of your readers to an uncommon case which has occurred in my practice. Mrs. W., a multipara, aged 30, was recently confined, and two days later drew my attention to the pink colour of her nightdress in the immediate neighbourhood of the mammary glands. She said the milk appeared perfectly natural on excretion, but after drying on her nightdress it became a light pink or magenta colour, and this colour did not appear only on the nightdress, but on any other white substance that was applied. I have satisfied myself that no deception was practised, and have thoroughly watched the proceedings myself.

My patient is taking an ordinary milk and farinaceous diet, and has not had any medicine whatever. I should like to know if these cases are at all common, as this is the first I have seen. I should like also the opinions of your readers in regard to the cause of this phenomenon.

Shorthand: a Correction.

Dr. Gowers asks us to express his regret that, by a mistake, the words attributed to Professor Greenfield were ascribed to him by an erroneous reading of his letter. How the mistake occurred is mysterious, but such an error would have been altogether impossible (according to Dr. Gowers's experience) with a letter written in phonography.

COMMUNICATIONS, LETTERS, etc., have been received from:

Dr. W. Munro, Cheetham; Dr. S. Braithwaite, Egremont; Dr. J. Haddon, Canonbie; Mr. D. Walsh, London; Dr. C. Parsons, Dover; Mr. M. H. Feeny, London; Professor B. Sanderson, Oxford; Rev. S. M. Young, London; Mr. E. T. Collins, Kew; Dr. W. Cottle, London; Rev. F. Lawrence, York; Observer; Dr. J. Highet, Workington; Dr. Rentoul, Liverpool; Dr. R. Robertson, Ventnor; Mr. H. R. Robinson, Monkwearmouth; Sir Spencer Wells, London; Dr. D. W. Finlay, London; Mr. W. Pye, London; Sir F. Abel, London; Mr. R. M. Smyth, London; Dr. G. Vincent, Downham; Dr. H. E. Brodrick, Thirsk; Dr. M. Charteris, Glasgow; Mr. G. C. Peachey, Brighton; Mr. C. E. Paget, Salford; Mr. R. M. Miller, London: Dr. R. T. Halliday, Glasgow; Mr. A. C. Clark, Bothwell; Mr. B. Hill, London; Mr. E. D. Rowland, Southsea; Dr. M. C. Hime, Londonderry; Retired; Dr. J. F. J. Sykes, London; Mrs. Elam, London; Mr. J. Foster, Bradford; Mr. W. Stephenson, Aberdeen; Dr. De Bartolomé, Sheffield; Sir E. Sieveking, London; Dr. B. J. Baron, Clifton; Dr. R. Main, Newbury; Mr. J. F. Gray, Birmingham; Dr. Sherrington, London; Mr. F. J. Rebman, London; Mr. W. H. Hulton, Dartford; Miss G. Wright, Edinburgh; J. Scanlan, M.B., Glasgow; Rev. A. Templeton, Glasgow; Mr. T. J. Fletcher, Northwich; Mr. A. Andrews, London; Mr. G. Stoker, London; Dr. C. F. Hutchinson, Scarborough; Rev. R. H. Charsley, Oxford; Mr. C. Macnamara, London; Mr. J. Poland, London; Mr. G. A. Ballingall, Lewes; F. W. Ramsay, M.B., Winton; Mr. F. W. Farrer, London; Dr. A. Castodi, Milan; Dr. W. J. Simpson, Calcutta; Dr. Lassar, Berlin; Dr. Maddox, Edinburgh; Dr. A. Haig, London; Dr. F. Payne, London; Dr. R. Stockman, Leith; J. Russell, M.B., Keighley; Dr. W. J. Naismith, Ayr; Dr. Ridge, Enfield; Mr. C. Muirhead, Edinburgh; Dr. A. Andrews, Hertford; Dr. Abercrombie, London; Mr. Armstrong, London; Dr. F. F. Bond, Rastrick; The Registrar of the Royal College of Surgeons in Ireland, Dublin; Dr. E. H. Ryan-Tenison, Bexhill-on-Sea; Dr. R. T. Smith, London; Mr. E. S. Wood, Pontypool; Mr. E. Flinn, Kingstown; Professor J. Attfield, London; Mr. A. Athro-Knight, West Brighton; Dr. T. M. Watt, Hovingham; Mr. J. D. Reckitt, Dover; Dr. R. P. Smith, London; Mr. A. Hulme, Birmingham; Mr. J. H. Williams, Llanidloes; Dr. R. D. R. Sweeting, London; Dr. S. Phillips, London; Dr. G. Henty, London; Dr. Stewart, Manchester; Our Sheffield Correspondent; Mr. G. A. Phillips, Walsall; Mr. F. S. Gramshaw, Easingwold; Mrs. A. Collins, Bridgwater; Mr. A. Dickson, Driffield; R. H. Nicolson, M.B., Warwick; Dr. Finley, Whitby; Mr. F. W. Browning, London; Mr. T. H. Walker, Newcastle-on-Tyne; Mr. W. Floyer, Staines; Dr. A. B. MacDowall, Eastbourne; Mr. H. K. Lewis, London; Mr. C. Costeker, Darwen; Rev. Harry Jones, London; Mr. S. McBean, Newcastle-on-Tyne; Mr. A. Cooper, London; Mr. C. J. Wood, London; Dr. J. Althaus, London; Mr. C. H. Wells, London; Dr. G. W. Potter, London; Mr. H. Larder, London; Mr. R. Brazier, Oxford; Mr. E. Hurry Fenwick, London; The Lord Mayor of London; Mr. S. Paget, London; Dr. L. H. Ormsby, Dublin; Mr. C. Atkins, Liverpool; The Secretary of the Metropolitan Provident Medical Association, London; Surgeon-Major J. P. H. Boileau, Woolwich; Dr. Biddle, Kingston-on-Thames; Sir J. Risdon Bennett, London; Mr. J. Pearson, Sheffield; Mr. de B. Burch, Leeds; Mr. T. M. Bonar, Glasgow; Dr. Ord, London; Mr. P. Kingsford, Dover; Dr. Willoughby, London; Mr. A. G. Klugh, London; Mr. C. S. Loch, London; Mr. G. E. Williamson, Newcastle-on-Tyne; Messrs. Burroughs, Wellcome, and Co., London; Dr. Edwardes, London; Mr. C. E. Paget, Salford; Mr. H. Green, Portsmouth; Dr. W. Speirs, Cleator; Dr. O. Grant, London; Dr. Parkes, London; Mr. T. B. Betts, London; Dr. J. Ratton, London; Mr. S. Murphy, London; Mr. G. E. Seon, Reading; Mr. J. Banks, London; Dr. Norman Kerr, London; Dr. J. Davy, Halifax; Sir H. Acland, Oxford; Dr. E. Liveing, London; Dr. R. B. Low, London; Messrs. Baillière. Tindall, and Cox, London; Dr. Howden, Montrose; Mr. A. F. Reid, Glasgow; Mr. J. J. Stack, London; Dr. Mackern, London; Mr. J. Halls, Leeds; The President of Guy's Hospital, London; Surgeon-Major C. H. Swayne, London; The Imperial and Royal Society of Physicians, Vienna; Mr. R. G. Patteson, Dublin; Mr. J. B. James, London; Mr. H. J. Stormont, London; Dr. W. Pearce, London; Dr. D. C. McVail, Glasgow, etc.

BOOKS, etc., RECEIVED.

American Resorts, with Notes upon their Climate. By Bushrod W. James, A.M., M.D, Philadelphia and London: F. A. Davis.

The Retrospect of Medicine: a Half-yearly Journal. Edited by James Braithwaite, M.D.Lond. London: Simpkin, Marshall, and Co. 1889.

Chemistry—General, Medical, and Pharmaceutical. By John Attfield, F.R.S. Thirteenth Edition. London: Gurney and Jackson. 1889.

Electricity Theoretically and Practically Considered by the aid of Thermo-Electricity. By Arthur Rust. London: E. and F. N. Spon.

The Secret of the Lamas: a Tale of Thibet. London: Cassell and Co.

The Admirable Lady Biddy Fane. By Frank Barrett. London: Cassell and Co.

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A CASE OF SPLENECTOMY.

By Sir SPENCER WELLS, Bart.,

WITH

A HISTORY OF THE DISEASE,

By W. N. MACCALL, M.D.,

Honorary Physician to the Clinical Hospital for Women and Children, Manchester.

AND WITH

A REPORT ON THE BLOOD A YEAR AFTER THE OPERATION,

By J. DRESCHFELD, M.D., F.R.C.P.,

Professor of Pathology, Victoria University, Manchester.

Doubt has been often expressed whether, after excision of the spleen, the blood would remain in a normal condition. I have already in the *Medico-Chirurgical Transactions* (vol. lxxi, 1888) shown cause to believe that in one of my successful cases of splenectomy the blood remained normal several months after operation. Splenectomy was performed in December, 1887, and the patient is now in excellent health. But in that case I had not the advantage of a microscopic examination of the blood, which I have in the case I have now the pleasure of laying before the profession, with the kind help of Dr. Maccall and Dr. Dreschfeld.

History of the Case, by Dr. Maccall (dated August, 1888).

Mrs. R., a young Jewish lady, was born in Roumania in July, 1867, and is therefore now only 21 years of age. At the age of 4 she was attacked by ague, which is endemic in her native place, affecting natives as well as foreigners. She continued to suffer from it more or less for two years, in spite of treatment, and became very anæmic and ailing. The spleen is said to have been then considerably enlarged; but the account of this, obtained from her parents, is somewhat vague. When 6 years old, she came with her parents to reside in England; and, although very ill on the way, she soon regained perfect health. Shortly afterwards I became the medical attendant of the family, and have been ever since. My knowledge of the patient, therefore, extends over nearly fifteen years, during all of which time she has enjoyed good health, so good that I am not sure if I ever had to prescribe for her, and certainly never had occasion to examine her or see her in bed.

She grew up a well-formed, handsome young lady, with fairly good colour, and apparently perfect health. She married about the end of 1886, when fully 18 years of age. As she went to live at some distance from me, I advised her to have a medical attendant living nearer to her. About the end of February, 1887, her mother came to me in distress, saying that the doctor who attended her had discovered an abdominal tumour, which was believed to be either left ovarian or peri-uterine, and that she would like me to see Mrs. R.

Accordingly, on March 4th, 1887, I saw her in consultation with her medical attendant, Dr. Heckscher. I found a roundish, rather firm tumour, about the size of a fist, in the left ovarian region. It was freely movable, and its movement did not affect the uterus. That organ was normally placed, and neither fixed nor dragged. But the os and cervix uteri were rather full, and the patient had missed one menstrual period. My opinion was that there was, most probably, a tumour of the left ovary. But as there was a possibility of beginning pregnancy, it was agreed that we should wait, and Dr. Heckscher should keep her under observation. The patient said that for some years, she could not say how many, she had been aware of a lump in that region, of about half its present size, and freely movable. But as it was quite painless, and caused her no inconvenience, she thought it was natural—something that every one had—and, therefore, had never even mentioned it to her mother or elder sister.

I did not see her again for about six months, but heard frequently that she was very well, and, in spite of advancing pregnancy, not suffering much inconvenience. About the end of August I was asked to attend her in confinement, which I agreed to on condition that a medical man in the neighbourhood should act with or for me in case of emergency.

On September 4th, 1887, I examined the patient, then about seven months pregnant. I found the fœtal heart distinct, the child normally placed, and the tumour a little, but not much, larger, pushed up by the increasing uterus into the left hypochondriac region, and not causing any inconvenience. I saw her again on September 18th and October 27th, when I noted that, except the advancement of pregnancy, there was no marked change in the local conditions, and her general health was good.

On November 9th, 1887, Mrs. R. was confined of a fine healthy boy, the accouchement being in every respect natural, and her after-progress good. As the uterus contracted, the tumour descended; it was freely movable, and not attached to the uterus. After a week it had resumed its old position, and was only slightly larger than before pregnancy began. Mrs. R. suckled her baby, and in about a month went to Southport, but returned on December 16th with a deep-seated abscess in one breast, which pulled her down considerably. In a few weeks she regained her strength, and when I saw her on January 12th, 1888, her health was good, and the condition of the tumour unchanged.

Owing to my own illness, I did not see her again until February 26th, 1888, when I found a very remarkable change in the local condition. My notes say: "The tumour is now centrally situated, lying in front of the uterus, extending from the pubes to the umbilicus, and measuring fully nine inches transversely. It is still painless, fairly firm, and smooth to pressure, and the fingers, pressed firmly behind it at the sides, feel firm rounded edges. It is still slightly movable, and evidently not attached to the uterus. I said: 'This is *not* an ovarian tumour, as I had supposed; I have already decided that it is *not* uterine, but I am not at all sure what it *is*.'"

I accordingly sent my patient up to Sir Spencer Wells to obtain his opinion. He wrote to me on March 1st, saying he believed the tumour to be an enlarged displaced spleen, and that he could feel the splenic notch.

On re-examining and questioning Mrs. R., and reviewing all the circumstances, I at once accepted Sir Spencer Wells's view of the case as the correct one. He advised trying iron and quinine for about six weeks, and that Mrs. R. should then see him again. On March 13th, I found matters practically unchanged.

March 29th, 1888. On returning from a few days' holiday, I was asked to see Mrs. R., then on a visit to her mother (who lives near me), as she had suddenly become very much worse. I found her sitting up, her face blanched, pinched, and with an anxious haggard expression, pulse small, over 120. She said that about thirty-six hours before, on the evening of the 27th, the tumour had begun suddenly to enlarge, and became very painful and tender. She afterwards confessed that this had followed an attempt on her part to force the tumour back into its original free position in the left side. I sent her at once to bed, and found the tumour much increased in size; it measured over 10 inches from side to side, and extended from pubes to ensiform cartilage, quite filling the abdomen anteriorly. The flanks were clear to percussion. The tumour was very hard, and decidedly tender to pressure. The patient complained of dragging pains in the back and thighs. She had not been able to sleep, and had quite lost her appetite. Temperature 98.6° F. Next day rigors occurred, and the temperature rose to 105°; the slightest touch or movement caused agonising pain. For over a week her condition was very critical; peritonitis accompanied by fever of a hectic or irregularly intermittent type (the temperature ranging from 101° to over 104°) being evidently present. There was also extreme irritability of the stomach, evidenced by very frequent and distressing vomiting. Dr. Lloyd Roberts saw her with me twice during this period. Our opinion was that sudden hæmorrhage, to a large extent, had occurred into the spleen substance, probably not rupturing the splenic capsule, as the flanks remained clear and the tumour was fairly well defined, and that, as a result of the sudden distension, etc., peritonitis had ensued. After about ten days, the temperature became normal, and the other indications of peritonitis subsided. The tumour diminished in size until it was about two-thirds of its largest dimensions. About April 17th, this steady diminution ceased, and various points of softening were detectable. These increased rapidly and coalesced; the accumulating fluid pressing up on the chest, causing dyspnœa, and bringing back the distressing vomiting, etc. I suggested tapping to relieve her and gain time, and Sir William Roberts saw her on the 24th with reference to my suggestion. He thought tapping

would become necessary, but advised waiting a few days because of the risk of renewed hæmorrhage and other dangers.

May 2, 1888. Mrs. R.'s condition had now become so serious from orthopnœa, distressing vomiting, pain, etc., that it was evident she must be relieved at any hazard. Accordingly, under chloroform, Mr. Hardie and I drew off by the aspirator ten pints of a somewhat thick reddish brown fluid, the operation lasting about two hours. Microscopically, I found this to contain mainly broken-down red blood corpuscles, with very numerous leucocytes. I omitted to say that after accepting the splenic theory of the tumour, I had examined the patient's blood microscopically, and found no very marked increase of the white blood corpuscles, certainly nothing approaching leukæmia. After the tapping, Mrs. R.'s condition rapidly improved, but soon the fluid began to reaccumulate in the sac, and increased so quickly that Mr. Hardie and I agreed that the best chance for the patient would be to have the tumour removed at once, or drained, rather than have her physical powers steadily and surely exhausted to the fatal end by repeated tappings and reaccumulations. Accordingly, I wrote to Sir Spencer Wells, describing the state of affairs, and asking if he would undertake the operation. He agreed to do so and fixed May 13th, 1888, for the operation. On the 12th I again examined the blood, and found no very marked increase of white corpuscles. About 10 A.M., Mrs. R. was put under ether by Dr. W. S. Scott, and Sir Spencer Wells proceeded to operate, assisted by Mr. Hardie, Mr. Walsh, and myself. In the course of the operation the cyst wall ruptured, and a quantity of reddish-brown fluid rushed out, similar to that removed by aspiration, but rather thinner. It could not be measured, but apparently was as much, or nearly as much, as that removed by aspiration, probably amounting to eight or ten pints. The solid part of the tumour, consisting of hypertrophied spleen tissue, weighed four pounds. There were extensive adhesions to intestines, uterus, etc. Many of these were separable, but a part in front was so firmly adherent that it was deemed wiser to leave a portion of the cyst wall, about three to four inches from above downwards, and two to three from side to side, and a quarter of an inch thick. The patient was so exhausted, that to have prolonged the operation by separating this adhering portion of the splenic capsule would have been very hazardous. Sir Spencer Wells decided not to drain, and, after securing the splenic vessels by silk ligature, stitched up the wound with fine silk, including sac-wall, peritoneum, and integument; but he arranged with me that if fluid formed, part of the wound should be reopened. The operation, which lasted fifty minutes, was performed under the carbolic spray, and the wound was dressed antiseptically. Scarcely any blood was lost except from the splenic pulp, but the patient was much exhausted after the operation; pulse over 150 and very feeble.

The history of the next week may be briefly summed up. For two days she remained very collapsed; the pulse remaining small and rapid, over 120. Then she began to improve sensibly, and continued to do so steadily, the pulse gaining force and becoming slower. The temperature on the 14th, the day after the operation, once reached 100° F.; but at all other times, although taken from four to six times daily, it was normal, or slightly sub-normal. On the 16th she complained of some smarting at the wound, and I dressed it. There was no irritation, redness, or tenderness, and after merely changing the dressings, she felt quite comfortable. On the morning of the 19th she again complained of the same, and I changed the dressings. I found some swelling of the abdomen, chiefly on the right side of the wound, doubtfully dull to percussion, and a moderate amount of flatulent distension. The wound looked healthy, no dragging of stitches, and pressure nowhere caused pain. The patient felt quite well, pulse and temperature were normal, and I therefore decided not to remove stitches, but to dress daily and watch. At night, when I saw her, she said she had been quite comfortable all day; she felt and looked well.

Next morning, Sunday, May 20th, just a week after the operation, I found my patient very much upset. The nurse said that in the early morning a quantity of thin, greyish-yellow discharge had begun oozing from the wound, soaking through the dressing, and had continued ever since. The smell was most offensive, of which my nose had made me aware before I entered the room. Mrs. R., who is of a highly nervous temperament, was much excited and restless, with anxious look and rapid pulse, but the temperature was normal. I dressed it temporarily, and later on, with Professor Sinclair, of Victoria University, removed a stitch in the centre of the wound, when a quantity of discharge gushed out with some force. We then washed it out thoroughly with perchloride of mercury solution (1 in 1,000), inserted an india-rubber drainage tube, and dressed with sublimate wood-wool. The patient continued fairly well until about 2 A.M. on Monday, when vomiting, very frequent and with distressing straining, set in. Finding that everything was rejected (and as the bowels had been moved for the first time), I decided to trust entirely to rectal alimentation, and for the succeeding thirty-six hours nothing was given by the mouth but an occasional tablespoonful of iced champagne. By the rectum, nutrient and stimulant enemata were administered every three or four hours, with an opiate when required. The vomiting ceased about 9 o'clock in the evening, but the patient was so exhausted that I was afraid she would die. Next day she rallied slightly, and on Wednesday she was decidedly better, and we began cautiously to feed by the mouth again. By the end of the week she was as well as before this disturbance. At no time was the temperature above the normal, but it occasionally got below 97° F. In syringing the pus-forming cavity it was clear that there was no communication with the general peritoneal cavity.

The subsequent history is simply that of uninterrupted improvement, rapid as to the patient's general health, slower as to the local condition. I dressed the wound daily as above, and the sac gradually contracted, becoming a sinus. When I last saw her at her own home on July 22nd, she looked and felt perfectly well, and only a small superficial sore remained. Menstruation has occurred twice since the operation, normal in colour, but less in amount than formerly, with just a month's interval between the periods. She feels no pain, dragging, or inconvenience of any kind. No one to look at her would suppose that she has so recently been three months in bed; that during those three months she has been three several times at death's door, and lost a very large amount of blood. She does not seem, so far, to suffer from the absence of her spleen; if anything, I should say she has regained her colour more rapidly than most people who possess spleens manage to do after severe hæmorrhage.

I have not thought it necessary to go into the details of nursing, etc., but there was frequent irritability of stomach, and the question of alimentation was a most serious one throughout, taxing all our skill and generalship. The care and watchfulness of the two nurses contributed largely to the fortunate ending of this extremely interesting but very trying case.

May 14th, 1889. I have to-day seen Mrs. R. just a year after the operation. Since the date of my last report she has enjoyed perfect health in every respect. Her colour, if it differs, is, if anything, better than before. She has neither pain, dragging, nor inconvenience of any kind, and can walk, dance, or exert herself in any way as well as ever she did in her life. The scar is firm, and pressure through the abdominal walls gives rise to no abnormal sensation. Her baby, now eighteen months old, is a very fine little fellow. Menstruation is, and has been ever since the operation, perfectly regular, but whereas before the splenectomy it was decidedly excessive in quantity, it now is quite normal in amount and duration.

Copy of Dr. Dreschfeld's Report on the Examination of the Blood.

The blood to the naked eye had a perfectly normal appearance, and coagulated in the usual way. Examined microscopically, the blood appeared perfectly normal. The red blood corpuscles were of normal size and appearance; no poikilocytes, very few microcytes. The leucocytes were present in the normal proportion. They were of normal size, and, on the addition of acetic acid, showed compound nuclei. Examined with Gowers's hæmocytometer, the average of several examinations showed 4,500,000 red blood corpuscles per cubic millimètre, and about 7,000 colourless corpuscles per cubic millimètre. Examined with hæmoglobinometer, the quantity of hæmoglobin was between 75 and 80 per cent. [Dated June 21st, 1889, more than a year after operation.]

Note by Sir Spencer Wells.

I need not add more to the above interesting reports of Dr. Maccall and Dr. Dreschfeld than to say that on June 7th, 1889, Mrs. R. called on me in London in excellent health. The abdominal cicatrix was firm, and nothing abnormal could be discovered either in the abdomen or pelvis. She was about to travel on the Continent. Menstruation quite regular.

PRESIDENTIAL ADDRESS
ON
SOME POINTS OF PROGRESS IN OPHTHALMIC SURGERY.

Delivered at the Annual Meeting of the Yorkshire Branch of the British Medical Association at Sheffield.

By SIMEON SNELL, M.R.C.S.,
President of the Branch.

After a reference to matters affecting the Branch and its work, the author proceeded:—No one can, I think, on taking a survey of medicine or surgery of to-day, doubt how little applicable to the present time is Lord Bacon's sneer, when he said "that these (medical) sciences stand at a stay, and have done for many ages." The time we live in is essentially one of progress, and not less so is this true of medicine and surgery than it is of science. Look where we will, and on every hand and in every department is evidence of activity. True it is that much that is called progress may, in the course of time, be proved to have been spurious, but much must remain as permanent advances.

The increase in our knowledge of nervous diseases and the elucidation of many problems connected therewith in clinical, pathological, as well as histological respects, is at once evident as one of the many paths along which medicine has and is travelling on the road of progress. For certainly one of the brightest pages in medicine and surgery of this or any time is the one recording the successful efforts at the localisation of nervous function, and the consequent recognition of the seat of disease and the surgical means which have satisfactorily, in many cases, been adopted for its eradication.

Again, in the domain of surgery may be mentioned the widened field opened out by the improved means of diagnosis and treatment of abdominal disorders. Other directions in which the progress of medicine and surgery is evident will at once be apparent.

In speaking, however, of progress, I am not sure that sufficient stress is always laid upon the greatly improved means at our disposal for investigating disease, and the necessity which in consequence, among other causes, has arisen for the more exact and complete recording of cases. These are both, I take it, great advances of themselves. There is a leaning towards exactness, but it must be confessed in truth that in too many respects the goal is still remote.

It is not long since that the cavities of the body were more or less sealed and impenetrable as far as the medical eye was concerned. The groping in the dark has ceased, and now their recesses are illumined, and an insight is held to be necessary, and for this the simple knowledge of how to use a mirror is largely responsible. Not only is this insight true of the ophthalmoscope and the interior of the eye, but who for instance would ever now syringe an ear without examination with mirror and speculum, or would give an opinion on a nasal case without the use of similar instruments, or a laryngeal one without the laryngoscope. The same in other ways will at once suggest themselves. In every direction facilities have increased for the greater use of the eyes in diagnosis. Not that the value of the sense of touch is lessened, but that sight is enabled to be taken more advantage of.

Now, in this general progress to which allusion has been made, as well as in the acquirement and use of better and more accurate means for investigating disease, and the consequent more exact and complete recording of cases, the department of surgery in which I am specially interested has borne its part and reaped corresponding advantages. Many of the ways in which progress could at once be indicated have on many occasions been demonstrated, and are some of them now so apparent as hardly to need further remark. My intention to-day is rather to leave this well-trodden track, and to briefly refer to some points in comparatively recent work—of interest, I trust, outside the confines of ophthalmic surgery.

Let me take an instance illustrating the more exact investigation of a case as practised now than was formerly done. The pupil shall serve as the text. At one time, and at not such a remote period, it was held to be sufficient to note with respect to it that it acted to light or was sluggish, was contracted or dilated. Now we know that much labour has been bestowed on the investigation of the pupillary movements and their significance. Its indications frequently in a treatise now find separate notice, and often at some length. The conditions of its reflexes as an aid to diagnosis in locomotor ataxy, general paralysis of the insane, and other nervous disorders, are well known. An examination nowadays of the pupil, not pretending to be exhaustive, would include the following among other points: Does it act to light? If so, does it do so to light thrown on all parts of the retina? For it is known that, in some cases of hemianopsia, light projected on the portion of nervous expansion in which function is in abeyance or abolished does not occasion a pupillary response. Exclusion of the fellow-eye has been taken for granted.

Further, does the pupil act to accommodation? If so, and it does not respond to light, the well-known Argyll-Robertson phenomenon is present, so indicative of spinal disease. Again, does it act to convergence? There are other reflexes, such as from surface-irritations, which I need not refer to. Is the pupil dilated? If so, to what extent? and the measurement may be taken with a pupillometer, indicating, also, whether the size was recorded in the shade or light. What is the effect of atropine? does it further dilate the pupil or not? Does eserine contract it? if so, does it do so fully or not? If the pupil is contracted, note the effects again of atropine or eserine.

These latter points are of importance in deciding whether the mydriasis or myosis is dependent on irritative or paralytic lesion. In what has been said no account is taken of the effect of disease in the iris, and the pupil is regarded only as an index of disease elsewhere.

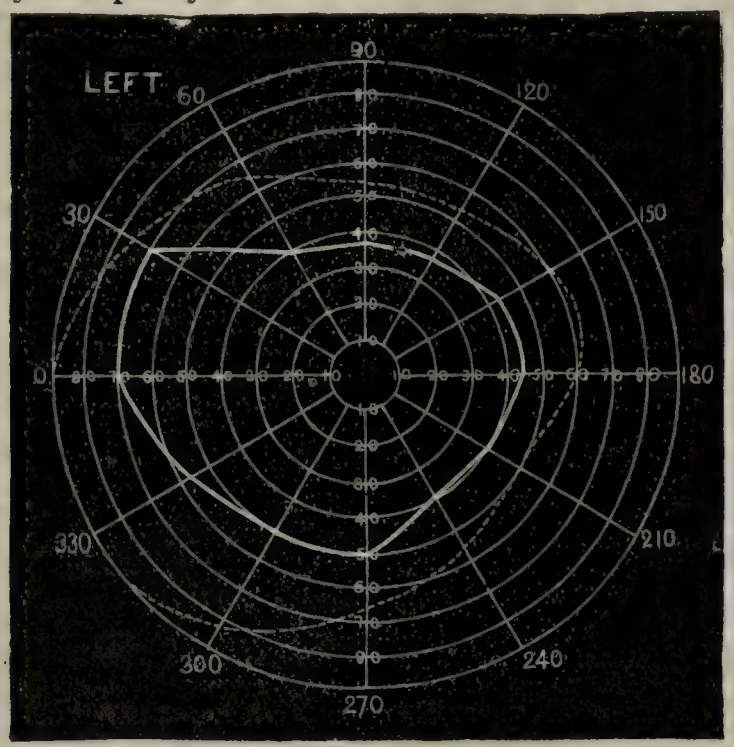
Passing next to the consideration of the ways in which progress has been made in the methods and means of investigating disease, I will take the perimeter as my example. Under the ruder and rougher methods, the lessons to be taught by an examination of the visual field could not be understood. With the means which have been now at our disposal for some time, thanks in our country to the labours of Mr. McHardy and Mr. Priestley Smith, the field of vision is able to be mapped out with something approaching exactitude. Most valuable information has been gained, and this not only as aiding to the diagnosis and prognosis in some cases, but also, in some cerebral lesions, to its localisation. Among other diseases, its use may be mentioned both for diagnosis and prognosis in the insidious non-inflammatory form of glaucoma. The perimeter, moreover, has not merely taught lessons as to the perception of light, but as to colours as well.

A case illustrating particularly the value of perimetric taking of the field of vision came under my notice about this time last year. A young married woman had been severely injured in the Doncaster railway accident of the preceding September (1887), and she was suing the railway company for damages. Her injuries had been very severe. Amputation at the right thigh had immediately been required, and the left leg was severely fractured. She lost a considerable amount of blood, had been badly knocked about the head and neck, and had remained more or less insensible for three days. My friends, Messrs. Knight and Garrard, who had been in attendance, referred the case to me to report on her vision for the trial. I found that sight was perfect, and that the weakening of accommodation from which she suffered was completely relieved by spectacles, and with these she was enabled to read with comfort. There was no tangible change in the optic nerve discoverable by the ophthalmoscope. I was aware, however, that Mr. Garrard for some time believed that the visual field was somewhat contracted. A casual examination was sufficient to enable me to agree with the accuracy of Mr. Garrard's surmise, and a careful mapping out of the fields of vision demonstrated a decided narrowing in each, but more especially in the right. Moreover, the field for red was also correspondingly contracted in each eye.

Here was a fact that could not be got over. The charts coloured, as now shown [the charts coloured were shown at the meeting; they are now of course printed plain], placed before the jury, presented evidence more telling and tangible than verbal could be. Mr. Garrard had known for some time that the field had been contracted, but there was no evidence whether the impairment indicated by the perimetric charts was progressive or stationary. The optic nerve yielded only negative evidence. The cause of this peripheral retinal impairment and other questions connected therewith I must pass by, and I will merely add that

the woman's severe injuries entitled her to handsome compensation. The company offered £600; she wanted £800, and the jury awarded her £1150.

The revolution which has been wrought in general surgery by the introduction and adoption of antiseptics has not been without effect on ophthalmic surgery. Without desiring at all to question the better results, which by a tolerably general consensus of opinion have been obtained under a strict antiseptic *régime* in general surgery, I am free to confess that it has seemed to me that in attributing so much to the kind of antiseptic used and the plan adopted, too little credit has been assigned to the increased care and cleanliness practised in the treatment of wounds of all kinds. The principle involved in the drainage of wounds, for instance, must exert its influence for good, quite independently of any antiseptic system.



It may be admitted that the greatest care had for long been taken as to the performance and after-treatment of ophthalmic operations, but at the same time it is quite noticeable that increased vigilance is exercised now as to the cleanliness of the instruments, and to details in preparations for operations. Generally speaking the results have been better. I believe I was one of the first in this country to record the adoption of antiseptic precautions in cataract operations. That was before this Branch in a paper[1] in 1878. Carbolic acid was then the antiseptic used, but even in weak solutions it was condemned as irritating, and the convalescence of cases after operation was stated to be prolonged.

Perchloride of mercury, after a trial of many others, is the agent now mostly employed, and it is used in weak solutions, 1 in 5,000, or less. Before proceeding to operate for a case of cataract, for instance, the patient's face should have been well washed with soap and water, especially about the eyes and eyebrows. Then immediately before operating the eyes outside are bathed with the perchloride solution, and the lids are separated and the solution allowed to run freely over the globe and under the eyelids. Most antiseptics act injuriously on the instruments, and, therefore, their immersion should only be momentary. For my part I believe it is sufficient to see that your knife is *spotless* and then to place it and your other instruments in absolute alcohol before using.

Some operators will assert that antiseptics completely banish suppuration from their cataract cases. I am disposed to agree that, with the precautions I have pointed out, with cleanliness in the nursing afterwards, and with good sanitary surroundings, suppuration should be only of the rarest occurrence.

In a less methodical manner there are many additional ways in which antiseptic agents are of use in ophthalmic surgery, and upon which I cannot now touch. Iodoform is a most valuable remedy, whether it be in combating the gonorrhœal gonococcus in the conjunctiva, or checking sloughing corneal wounds, whether after operation or otherwise.

[1] JOURNAL, 1880, vol. i, p. 241.,

Any reference to the changes in recent ophthalmic practice would be singularly incomplete without a mention of cocaine. The introduction of this remarkable agent, only about four years and a half ago, immediately wrought a complete revolution, and the test of time has well substantiated its value and efficacy. Valuable, however, as the drug has proved to be in other directions, it is in the field to which it was originally introduced that its properties are most esteemed and find their most constant use. In my own practice, hospital and private, general anæsthetics have almost been put on the shelf, and are only resorted to as a rule in cases requiring enucleation of the eyeball, or in those which are for some reason exceptional. Speaking generally, all conjunctival and corneal operations are done under its influence, as well as strabismus, cataract operations, puncturing the sclerotic, and cases necessitating the use of the electro-magnet. Iridectomies



and operations on the iris must also be added to this list. Ether is still necessary, as before mentioned, for removal of the eyeball. But, here also, I must have performed more than a dozen enucleations with the aid only of cocaine. Generally they have been cases in which, for some reason or other, the use of an anæsthetic was wished to be avoided. After instilling a 3 per cent. solution three or four times during the quarter of an hour or ten minutes preceding the operation, it will be found that the conjunctiva may be divided without pain; then, after checking the bleeding, the cocaine solution is allowed to run freely over the insertions of the tendons, and by avoiding undue haste, it will often be found that the recti may be divided and the operation performed almost painlessly down to the division of the ciliary nerves surrounding the optic nerve. The latter step certainly causes pain, though once or twice a patient has stated that he has suffered hardly anything. Invariably however, I think, they have expressed their pleasure at the operation having been performed without a general anæsthetic.

Simple instillation of cocaine is sufficient, and in only two or three cases of enucleation have I resorted to subcutaneous injection. Toxic symptoms will occasionally occur even from simple instillation. The patient will say that he feels queer, his face will be pale and moist. I have never met with any really serious symptoms. For all operations involving the cornea or sclerotic, too much care cannot be exercised, I think, to have the solution of cocaine fresh. My practice is to have it made just before it is required, either with plain water or with salicylic or boracic acid added.

Another point of distinct advantage in the use of cocaine is the saving of time effected. One of my students recently told me that he had calculated that I had occupied just over sixteen minutes in the performance of five squint operations, and that included bringing the patients into the room, laying them on the couch, and their afterwards retiring into the ante-room. I was not aware at the time of the calculation, and I need hardly add that previously all the cases had been carefully examined.

In the performance of the ordinary squint operation, cocaine is

of very great service. It can often be performed almost, if not quite, painlessly. Down to dividing the tendon sensation can be avoided if expeditiously performed, and by keeping the conjunctival wound open and dropping the solution into it, over the site of tendon, it can be completed with but little pain. A general anæsthetic is not required in more than 10 per cent. of my cases and then often its administration [2] is limited to a "moral effect" to calm the fears and consequent difficulty in believing that the eyeball has been rendered so insensitive.

The operation for squint which I have advocated,[3] namely, dividing the tendon from above instead of from below, as is usually done, is of special value when cocaine is employed. The operator is behind the patient, who thus is prevented seeing the instruments, an important point, especially with children. There are other advantages in this method, which I have on other occasions described. I have during the last three years performed it in more than 200 cases.

The present generation has witnessed many improvements in the operation for squint. The objects to be aimed at by operations have become well understood, and though our Board schools and other educational establishments are still busy aiding in manufacturing the article, and the supply is as large, it is the experience of perhaps every operator, that, comparatively speaking, he submits fewer squints to operation than was even a few years ago the case. The reason is easily stated. It is our better knowledge of the relations of optical errors to strabismus, and our increased facilities by retinoscopy and other means of estimating the degree of hypermetropia or astigmatism present, and then of prescribing the appropriate glasses. In this way many cases are cured without operation, and if seen sufficiently early this would generally be the case. Age is hardly a bar to wearing spectacles for this purpose. I have frequently prescribed them for children of three, and sometimes under, and considering that it is generally after this age that squint commences, there is usually little difficulty in this matter of spectacles. Even in the cases that do come under operation the tenotomy is limited as much as possible, the after-correction of the refractive error being allowed to complete the cure.

A mode of treatment which has come much into vogue in both medical and surgical practice in recent years has also found its uses in ophthalmic cases; I refer to massage. It is true that there is not scope for the many refinements under various names with which massage has beset itself. The mode of employment as advocated on the Continent and in this country by myself [4] is very simple. It consists in rubbing gently, in varying directions, to and fro, and in a more circular manner, the eyelids over the eyeball. The friction may be concentrated chiefly on one spot or be more general, and the surfaces of the eyelids may be rubbed together. Usually a lubricant is used, and vaseline [5] answers this purpose; but, especially in corneal and conjunctival affections, which are so often well treated by massage, the yellow oxide of mercury ointment, made with vaseline, is to be preferred, the value of the ointment and of the massage being made use of at the same time.

Time compels me only to mention in the most general way the cases for which this method is applicable. Corneal and conjunctival affections, chiefly in chronic, but often in acute cases, derive great benefit from massage; generally they should be free from irritability. In the often obstinate cases of periscleritis it is frequently of great service.

Dr. Mules not long since recorded a case illustrating the value of massage in a recent instance of embolism of the central retinal artery; vision was recovered.

A class of cases has much interested me. I refer to traumatic cataracts, and I include among these soft cataracts which have been needled. I have no doubt that in many cases the process of absorption is decidedly promoted by massage. It should not be adopted until the eye is tolerably free from irritability. If the opening in the capsule is at all free, softened portions of lens can often be massaged out of the capsule into the anterior chamber, and any portions already there can be moved about in the aqueous. More recently I have made use of massage as a means of ripening immature cataract, especially in cases in which Forster's operation for maturation has not produced such a rapid development as could be wished. In others the anterior chamber may be tapped before commencing the massage. My experience is too limited at present to speak as to its value in these cases.

Some years since I met in the street an old infirmary patient who had undergone successful cataract extraction in one eye. I asked when he was coming to have the other eye operated upon. He replied he was "rubbing it off." When I desired him to come and see me when he had rubbed it off, I little thought that I should be advocating massage as a means for promoting absorption, at all events, of traumatic cataracts, or, as my friend would have called it, "rubbing it off."

The introduction of the electro-magnet [6] for the removal of fragments of steel or iron from the eye may well, I believe, be regarded as one of the distinct gains in recent ophthalmology. It has obtained a firm footing in eye surgery, not only in our own country, but in all parts of the world. That its use has rescued many eyes otherwise doomed to destruction is positive, and equally certain we may be that, if its employment could in all cases be procured early after the accident, the number of failures would be very small. I do not intend to trouble you with details of cases in which the electro-magnet has been employed. I have already put on record thirty-eight such cases, and since then have had thirty-four additional ones, bringing the total up to seventy-two. Out of this number sixty-three fragments were removed from various regions—twenty-five from the vitreous chamber, one from the retina, six from the cornea, ten from the conjunctiva and sclerotic, eight from the iris and anterior chamber, three from the orbit and eyelids, nine from the lens and its capsule, and one from the lachrymal sac.

I am able to introduce to you to-day a man from whom a piece of steel was removed from the vitreous in September, 1880. He recovered perfect vision, and still retains his sight unimpaired. This was my first case in which an electro-magnet was employed. I can merely add that the nine failures admit of a ready explanation. The specimen shown is from one of these cases; it will be seen that the fragment of steel is firmly imbedded in the optic papilla. It is visible on the outer side also, at the point where the optic nerve has been severed at the time of enucleating the globe. It is needless to say that such a case was outside the range of usefulness of the electro-magnet. In the number of cases mentioned, no account is made of the very numerous probings in recent doubtful cases.

I cannot leave this subject without saying, as I have done on other occasions, that the electro-magnet has uses outside the confines of the eye and orbit. In general surgery cases do occur, in which its employment cannot fail to be of service. Mr. Lockwood, when house-surgeon at the Public Hospital, related before our Medico-Chirurgical Society a case in which with the electro-magnet he had removed a portion of steel from a man's urethra. At the infirmary again, Mr. Staniforth collected a large number of cases proving amongst the casualties its value, including portions of metal imbedded in different regions. I myself witnessed also, in a case of my brother's[7] (Mr. J. Snell, Gargrave) its assistance in removing a needle imbedded for some time in the hand. The electro-magnet admits of adaptation to a variety of cases.

Before passing from eye accidents, I may mention that the treatment of sclerotic wounds by suture has in many cases led to the happiest results. I have before now pointed out[8] that it is unnecessary and, for some reasons, undesirable to unite directly the lips of the scleral wound. It is sufficient to suture the conjunctiva, for the drawing together of this membrane, the thread, having been passed well under it on either side, pulls together the deeper wound and brings the scleral edges into perfect apposition. By this means, not only is puncturing the sclerotic avoided, but also that of the underlying choroid and retina; the loop of suture, a foreign body in the interior of the globe, and the disturbance incidental to removing such sutures are also done away with. Moreover, in most cases of large scleral wounds, a considerable quantity of vitreous has probably escaped, and the manipulations necessary to pass a needle through the sclerotic unavoidably tend to increase the loss. The conjunctival method obviates this danger considerably.

I am able to show you a youth, whom I treated five years ago, in

[2] Cocaine mydriasis passes off under ether or chloroform, whilst that dependent on atropine does not. Cocaine mydriasis must not be relied on for needling lens operations with chloroform.—*Vide* my note, JOURNAL, 1885, vol. ii. p. 153.

[3] JOURNAL, 1887, vol. ii. p. 657.

[4] Brighton meeting British Medical Association, 1886; *Ophthalmic Review*, 1888, p. 134.

[5] Lanoline may be used as a base.

[6] JOURNAL, vol. i, 1881; vol. ii, 1883, p. 937; vol. i, 1885; also *Electro-Magnets in Ophthalmic Surgery*, 1883.

[7] JOURNAL, vol. i, 1886, p. 1147.

[8] *Ophthalmic Review*, 1884, p. 300; *Trans. Ophth. Society*, vol. vii., p. 291.

the manner mentioned. The wound was situated above the sclerotic between the superior and internal recti. The loss of vitreous had been great, and it was still increasing; the eyeball had collapsed, the anterior chamber was nearly filled with blood, and was much deepened by the falling back of the iris and lens. Two months later vision equalled $\frac{2}{3}\frac{0}{0}$, and as you see him now—tested shortly before being shown V = $\frac{4}{6}\frac{0}{0}$, and he read J 1 easily—he possesses excellent sight, and to outward appearance the eyeball is equal to its fellow.

Such a case as this may well be considered a triumph for conservative ophthalmic surgery. I have selected it to relate, rather than a more recent one, partly on account of the severe nature of the injury, but also because of the length of time that has now verified the result at first obtained.

In conclusion, I will offer a few remarks on transplantation of flaps. Ophthalmic surgery is responsible for the introduction of non-pedicled flaps from distant parts. Dr. Wolfe,[9] of Glasgow, has been particularly zealous in advocating this method, and with it his name has now become associated. It is certainly one that it seems to me that general surgeons might find serviceable more widely than has hitherto been the case. Recently Professor von Esmarch[10] has recorded a series of thirteen cases. I have had satisfactory experience of its value in ectropion.[11] The case I am about to relate is not brought forward because of its success with this method, but rather because, in spite of its apparent failure, the result nevertheless was very satisfactory.

W. H., a little boy aged 6, was brought to me in February, 1888, in consequence of eversion of the right upper eyelid, which had resulted from an abscess some weeks previously. The eyelid was completely turned inside out, and the swollen, thickened, distended and irregular surface of the palpebral conjunctiva suggested an appearance very much like the crumpled outside of a tomato.



From a photograph (before operation).

For the purpose of setting the condition right, the following operation was performed:—On February 10th ether was administered, and the cicatrix which bound the edge of the everted eyelid almost to the brow was divided, and the dissection continued until the eyelid was able to be replaced in its normal position. The next step was to fix it in its place, and for this purpose the edges of the eyelids were vivified at their centres, and united to each other by two or three fine sutures. To fill the vacancy left by the restoration of the upper eyelid to its proper place, a flap was taken from the soft skin on the inner side of the boy's right arm. It measured 1½ inch long and over half an inch wide. The areolar tissue was separated from the under surface of the flap. It fitted well into the vacant place in the eyelid. It was retained in position by fine sutures; and it was covered with green protective, and over that cotton absorbent wool. On the fourth day the flap looked well, and gave every evidence of vitality. During sleep, however, the next night, the boy unfortunately rubbed off the dressings, and in the morning the flap was found turned up at the edges, and sloughing resulted. Later several small grafts were transplanted on the granulating surface. But, notwithstanding the boy's arms being tied, and every endeavour being made to keep the patient still, again he rubbed off the dressings. Fortunately, during the whole of this time, the adhesion between the eyelids held good. No little islet of new growth could be detected after the transplantation of small grafts, but it is impossible to say that they in no wise aided towards the formation of the thin cicatrix. The wound in the upper lid gradually healed, and as this progressed it showed no tendency to again become everted. The temporary ankyloblepharon undoubtedly in this case contributed most to the satisfactory result, and I think you will agree with me that if the original non-pedicled flap had lived, the result could hardly have been better. In all these cases therefore, it may be regarded as essential to join the eyelids together, for even by itself this temporary ankyloblepharon will, in some cases, no doubt be sufficient to effect a cure. In the case of this boy the adhesions between the lids became, after a time, just a band in the middle; the eye could be seen well, and he was also able to use it. It was not severed until ten months after the operation.

The transplantation of conjunctival flaps, in cases of adhesion of the eyelids to the eyeball, has rendered very great service. Here also, however, help may be gained in certain cases from distant parts. I have myself, and others have also done so, transplanted the conjunctiva from the rabbit; use for this purpose has also been made of the conjunctiva of another person, or from a recently enucleated eye. In February of last year (1888), a lady consulted me on account of a gradually narrowing socket, which compelled her time after time to procure a smaller artificial eye. The one she had, she could no longer wear, and she feared that soon there would be room for none. All this had resulted from



From a photograph (after operation).

the irritation consequent on continuing, after warning, to use greatly roughened artificial eyes. Examination showed that to one band in particular something could be done. When preparing to operate it was more evident than it had been before that to proceed as I intended, and to transplant or rather transpose the conjunctiva would be robbing Peter to pay Paul, and might possibly end unsatisfactorily. I obtained her ready assent to remove a portion of mucous membrane from the inside of the lower lip. Cocaine rendered this painless, as it did most of the operation in the orbit. The piece from the lip fitted beautifully the place in the socket. It was secured there by two fine sutures. The result was excellent, and she was able again to wear with comfort an artificial eye. I repeated the proceedings a little later in a boy with an extensive adhesion, after a burn, of the lower eyelid to the globe. Here also it was very valuable, as it has also been in other cases.

At the Dublin meeting of the British Medical Association (1887) Mr. Arthur Benson showed some excellent instances of the use of transplanting mucous membrane from the lip in the treatment of in-

[9] JOURNAL, 1875; *Practitioner*, 1883.
[10] JOURNAL, 1889, vol. i., p. 514; *Lancet*, 1889, vol. i., p. 113.
[11] *Lancet*, 1882, vol. ii., p. 102.

growing eyelashes. This suggested to me the use of the mucous membrane in the cases I have related. I afterwards found, however, that it could hardly be termed an original proceeding,[12] for it had been performed previously in other lands, as also it has been since.

ABSTRACT OF THREE LECTURES ON TUBERCULOSIS IN SOME OF ITS SURGICAL ASPECTS.

Delivered at the Royal College of Surgeons of England.

By HOWARD MARSH, F.R.C.S.,

Senior Assistant-Surgeon and Joint Lecturer on Surgery at St. Bartholomew's Hospital; Hunterian Professor of Surgery and Pathology at the Royal College of Surgeons.

Lecture I.

After subscribing to the view that tuberculosis is a parasitic disease essentially dependent on the bacillus tuberculosis, the lecturer spoke of the various influences which bear upon the production of a fitting soil in which the bacillus may be developed, and continued:—

1. One of these is the influence of inheritance. This is universally recognised. I have notes of a family of four children whose father and mother both died of phthisis. Of these four, one died of caries of the spine, and the remaining three had hip disease, and were patients at different times at the Hospital for Sick Children. In all excision of the joint was performed, but in all the operation failed, as previous treatment had, and all these children ultimately died of the disease.

Yet, although such examples show how strong the influence of inheritance may sometimes be, its effect is often much exaggerated. I have frequently seen children who were descended from phthisical parents, and who have been attacked with tuberculous disease of the spine or a large joint, recover under favourable circumstances, and remain perfectly sound, the only noticeable features in their case being that recovery was slow, and that relapses were for some time very easily provoked. Indeed, if appropriate treatment is adopted in the early stage of these diseases, recovery so frequently follows, in spite of a strong family history of tuberculosis, that the fact that a patient comes of a highly tubercular stock need not prevent our anticipating a perfectly sound and permanent recovery. The two following cases will serve to illustrate this fact.

Case I.—M. F., aged 8, several of whose relatives on the mother's side were consumptive, and whose brother had died of hip disease, had inflammation of her left hip-joint. She was at once confined on her back, and weight extension was used. At the end of six months the joint was freely movable in every direction. Rest was maintained for six months longer, twelve months in all, and she was then allowed to be up with crutches and a high boot on the sound side. The use of the crutches was continued for a twelvemonth. This was five years ago. There has been no relapse; the joint is freely movable, and the only evidence of the former disease is a scarcely appreciable limp, the result of slight muscular wasting.

Case II.—F. M., whose brother died of spinal caries, whose mother afterwards died of phthisis, and of whose family several other members were tuberculous, had, at the age of 5, caries of the spine. The disease had been in progress about four months. She was placed in the horizontal position, and this was maintained without a break for twelve months, when it was advised that she should be allowed to get up. Her mother, however, being afraid of a relapse, kept her lying down for another year. At the end of this second year the disease had disappeared. There was no recurrence, and the patient, who is now 25, has been married for three years, has two children, and is in good health.

2. Anything which impairs the general health is well known to act as a predisposing cause of tuberculosis. Fortunately, the converse of this is equally true—that, when conditions unfavourable to the general health are removed, sound recovery from tuberculous disease, if this is not far advanced, will often follow.

3. The influence of age deserves careful attention. A large majority of all cases of tuberculous disease of the spine, joints, cancellous bone, and lymphatic glands begin between the third and the eighth years of childhood, and, though they undoubtedly occur after this period, they become more and more rare as age advances. I am, moreover, convinced that, as a very general rule, the active period of these and similar affections is limited in duration, in other words *transitory*. It appears, broadly speaking, to extend, in different instances over from two or three, to five or six years, and to lie somewhere between the ages of 3 and 9. It is during this period that surgical tuberculosis most frequently sets in, and that it shows a strong tendency to advance. But when this time has elapsed, often no further outbreak occurs, and sound repair takes place. I may briefly relate two cases to make my meaning clear.

Case III.—A boy, aged 3, was attacked with subacute tuberculous inflammation of his knee. For the next three years, during which the joint was mainly kept at rest, though he was sometimes allowed to walk on it, the disease slowly advanced. He then came under my notice. At this time the joint was enlarged, and there was also flexion combined with rotation outwards. The limb was now enclosed in leather splints, and the patient was kept completely off his feet. For the next two years the joint slowly improved, but from time to time relapses occurred, indicated by increase of swelling and of heat. During this period he suffered from enlargement of the cervical glands. This was at times considerable, but would then subside, and subsequently return. He was also attacked with disease of the left elbow. For this, leather splints were immediately applied, and the joint recovered, with unimpaired movement, in the course of six months. In the following year, that is when the boy was 9, and when his knee had been affected for six years, the joint improved remarkably, becoming fully extended and free from deformity, and perfectly free movement being regained. As I watched this boy, it seemed evident that his tuberculous period lasted for some five years, but that after this time it ceased, and then repair of the joint disease which had previously been delayed, because the tubercular process was still tending to advance, was enabled to take place. For the last four years this boy has been perfectly well, and is constantly on his limb. The joint is fully movable and free from any trace of relapse.

Case IV.—A boy, whose father had himself suffered with hip disease, had disease of his right hip when he was aged 5. I saw him a year later. The limb was then flexed and adducted, and there was considerable thickening about the upper and outer part of the thigh, as if suppuration was impending. For the next four years he was constantly under observation. At first, weight extension was employed; but later, a Thomas's splint. Eighteen months after the treatment was commenced, he was allowed to be up, with crutches, and a high boot on the sound side. The joint slowly improved. But, between the ages of 6 and 8 he had several attacks of inflammation of the cervical glands, many of which suppurated. At the end of this time the enlarged glands had disappeared, and all mischief at the hip had subsided. The patient, who is now 16, has had no relapse; the joint is freely movable, and no trace of lameness remains.

This experience as to the transitory nature of the tuberculous tendency, although it does not often attract attention, is certainly by no means novel. Every surgeon is familiar with instances in which, even after long-continued and destructive disease of the spine, or of one of the large joints, the time has come when the tubercular process has ceased, and recovery, with firm ankylosis, has ensued, and the patient has remained years afterwards in the enjoyment of robust health.

There is a fact in connection with age, in respect to tuberculosis, which demands particular notice. It is that surgical tuberculosis and phthisis are prevalent at different periods, and are, speaking broadly, separated from each other by an interval of between five and fifteen years. Indeed it is remarkable that pulmonary phthisis and surgical tuberculosis very seldom occur together, or as complications the one of the other. At the Alexandra Hospital for Hip Disease, phthisis is very rarely met with, while, on the other hand, I am informed by Dr. Douglas Powell that at the Hospital for Consumption at Brompton, tubercular disease of the joints and caries of the spine are scarcely ever met with among the patients with tubercular phthisis.

[12] W. F. Smith, Knapp's *Archives of Ophthalmology*, 1888, p. 430, Meighan; Journal, 1889, vol. i, p. 706.

4. Another influence which favours the growth of the bacillus tuberculosis—that is, provides an appropriate soil—is inflammatory action. This is seen when phthisis follows catarrhal inflammation of the pulmonary mucous membrane, when tuberculosis ensues close upon gonorrhœal epididymitis, and in those numerous instances which are familiar to us all, in which tuberculosis follows slight mechanical injury of the spine and the joints. It is equally clear that the tuberculous process advances while inflammatory action is in progress, and recedes when inflammatory action is arrested. This is seen in cases in which, as long as a joint affected with tuberculosis is disturbed by movement, the disease steadily advances, while, as soon as the joint is kept at rest—provided the mischief is not too far advanced—the tubercular process loses its activity and gradually undergoes complete arrest.

I have dwelt upon the question of fitness of soil for the purpose of showing that it is a matter which has an important bearing on the development and course of tuberculosis. When we look into its life history, we find that the bacillus tuberculosis is dependent for its vitality and maintenance upon conditions and influences which are either in their nature transitory or such as can be counteracted or removed; and that, when these conditions are no longer present, the bacillus perishes and the tuberculous process comes to an end. When this point is reached there is ample evidence to show that tubercle, together with the products to which it has given rise, becomes a mere *corpus mortuum*, and either is gradually removed by disintegration and absorption, or gives rise, as any other "sequestrum" might, to an abscess, with the evacuation of which it is swept clean away. When this clearance has been effected, the structures concerned, relieved of the parasitic element, are left free to undergo repair. This consists—where much damage has been done—in the formation of cicatricial tissue, or more rarely in the development of bony ankylosis; but, in cases in which the process has been arrested early in its course, the tissues are restored to a normal condition and to the discharge of all their functions. I am convinced that in such instances, if a microscopic examination could be made, no trace whatever of any of the elements of tubercle would be discovered.

A clear and conspicuous example of the absorption of caseated and liquefied tubercle is afforded by those instances, which all must have seen, in which, in disease of the hip-joint, which has gone on to the formation of a chronic abscess, the abscess is absorbed, and a sound recovery of the joint ultimately takes place.

These views respecting the course and the results of tuberculosis are so contrary to the opinions which some observers entertain, that it is necessary the evidence upon which they rest should be at once produced. This evidence can best be given by the relation of some typical cases.

Case v.—E. M., whose mother's family was tuberculous, and whose father died at the age of about 30 of rapid phthisis, promoted by intemperance, was attacked, when she was between 4 and 5 years old, with hip disease. I saw her first when the disease had been in progress for about five months. She was placed in bed, and a long splint was applied to the sound side to keep her on her back; the affected limb was supported in its position of flexion and abduction, and weight extension was employed. As muscular contraction passed off, the limb was gradually brought into the horizontal position. During the next two years three attempts were made to dispense with extension, but on each occasion the limb became drawn up and more fixed. At the end of this time, however, another trial was made, and as no return of symptoms was observed, the weight was discontinued, and the child was allowed to be up with crutches, and with a high boot on the sound side. When she was 8, an abscess suddenly appeared on the outer side of the thigh. This was aspirated. It never refilled, nor was anything more ever seen of it. Its occurrence was not associated with any symptom of renewed disease of the joint. The patient is now 22. She is constantly on the limb, and walks and dances with scarcely any appearance of a limp. Her general health is perfectly good. Here the necrosed tubercle led to an abscess, with the evacuation of which it was swept away.

Case vi, a girl, was, when I first saw her in 1880, 7 years old, and had been suffering for nine months with tuberculous disease of the right knee, and for five months with disease of the left. The right was flexed and much swollen, the skin over it was congested and dusky, and an abscess over the outer tuberosity of the tibia, which had been forming for six weeks, had recently burst. The left knee was also flexed; the skin covering it was congested and dusky, and the synovial membrane was thickened and pulpy. In both limbs there was considerable muscular wasting. The knees were at once enclosed in leather splints, those on the right side being cut away over the sinus, so that dressings could be applied, and the limbs were kept in a horizontal position. A month later an abscess formed, and soon burst, by the side of the ligamentum patellæ of the left knee. In both joints the abscesses discharged for several months, but at last the sinuses closed. Both limbs gradually became fully extended, and the swelling of both subsided. The child was kept entirely off her feet for two years. At the end of this time the joints had both perfectly recovered. They were freely movable, and have since continued so; she has now been using the limbs without restraint for ten years, and she walks and runs without any appreciable lameness or defect. In this instance the necrosed tubercle was gradually removed by the suppurative process.

But some cases seem to carry us a step further, and to show that, even when conditions highly favourable to the advance of tuberculosis are present, the process may be arrested, and leave the patient free to make a rapid recovery. The following is an example:—

Case vii.—A boy, aged 7, in the Alexandra Hospital, had hip disease, which had commenced when he was 5, and for which he was admitted two years later. An abscess soon formed, suppuration became profuse, and there were at one time four sinuses discharging about the joint. Two of these were in the neighbourhood of Poupart's ligament, and, by their position, indicated that the pelvis was diseased. The temperature was high, and amyloid disease was present. As suppuration extended far down the thigh, and as it was believed that the pelvis was involved, the case was considered unsuitable for excision, and amputation at the hip joint was discussed. It was, however, thought that the boy was too weak to bear the operation, and thus his condition was regarded as incurable. But very soon after this conclusion had been arrived at he began to improve. Suppuration diminished, his temperature became lower, his appetite increased, and he gained flesh. Within four months all the sinuses were soundly healed, the temperature was normal, and he had regained a healthy appearance. Twelve months later he was in robust health, the amyloid disease had entirely disappeared, the limb was in good position, and he was walking with crutches. When seen a few weeks ago he had been running about without pain for a year, the joint was fixed, the sinuses were quite sound, and the limb was only slightly flexed and adducted.

It is best to keep to matters of fact and to refrain from an attempt to explain them by hypotheses which may be regarded as doubtful. Yet, I will venture to state the view I hold of the course taken by the remarkable case just related, especially because it is by no means an isolated instance, but one that is representative of a group which throw an important light on the history of tuberculosis. I believe that, although conditions favourable to the vitality and progressive formation of tubercle, consisting of suppuration and a raised temperature, were present, yet, either because the tubercular period for this particular patient had elapsed or for some other reason of which we are at present ignorant, the tuberculous process had ceased some time previously, but that the tubercle already formed remained in a necrotic state in the tissues. Around this, as it might around a piece of dead bone, suppuration occurred, and the evacuation of the tubercle in the discharge commenced. Before this evacuation was complete the boy's health gave way and he nearly died of exhaustion; but at length all the tubercle had been got rid of, and when this point was reached the striking change in the condition of things, which I have described, took place. Relieved of the foreign body the tissues were left free—as is the case after a sequestrum has been removed—to undergo rapid and sound repair, and the boy recovered from his tuberculous disease as completely as a patient recovers from an attack of typhoid or scarlet fever, when the *materies morbi* and its products have been got rid of.

I have met with many cases which seemed to confirm this view, that suppuration may be maintained until the necrotic material left in the tissues on the cessation of the tubercular process has all been carried away in the discharge, but that when evacuation is complete the tissues will heal soundly, and often with quite unexpected rapidity.

To the same group apparently belong those instances in which children have either been refused admission, or have been trans-

ferred to an incurable home on the ground that the disease was so far advanced that nothing could be done, or discharged because they were thought to be incurable, and in which these patients have come to show themselves three or four years afterwards, and have been found to have recovered, and to have regained perfectly robust health.

Much the same sequence of events may, I am informed, occur in cases of phthisis. Even where the disease has advanced to the formation of a cavity, the tuberculous process may, under favourable conditions, be arrested, and then, during a period in which expectoration remains copious, the caseated tubercle is gradually coughed up, and sound healing takes place.

But, I may be asked, what of the relapses which are so notoriously frequent in cases in which it was hoped that a cure had been effected? The question is an important one. Relapses are of two kinds. There is one which occurs when the patient is allowed to get about too soon—that is, before there has been time for (*a*) the arrest of the tuberculous process, (*b*) the removal of the tuberculous products, and (*c*) the return of the affected tissues to a sound condition. Now it is these consecutive changes which constitute recovery, and they are, it is obvious, of such a nature that they must necessarily occupy a considerable time. The period required, even in cases treated when they are quite incipient, can very seldom be less than from six to nine months; generally it extends to a year or a year and a half. In cases of longer standing, where an extensive deposit of tubercle has taken place, the time required for sound repair must be extended to two years or even more. When once suppuration has become profuse the time will be three or four years.

Now it is necessary to realise that these periods are indispensable in the different stages of tubercular disease, and to see that many of the relapses that take place inevitably result because these periods are curtailed. Children, in whom all is going on perfectly well and in whom perhaps the tuberculous process is just coming to an end, are allowed to be up, and the result is that the conditions favourable to the growth of the tubercle are again produced, and a further development takes place. Such relapses as these are easily avoided, but only by allowing the requisite time; for *Naturæ non imperatur nisi parendo*..

The other form of relapse is one which is, I think, often misunderstood. It occurs in cases in the treatment of which the necessary time has been given, and they are not relapses at all in the proper sense of the word, for they do not depend on any renewal of the tubercular process. The explanation of these so-called relapses is that the joints, damaged by the previous disease, but now quite free from tubercle, become, from overuse, the seat of an attack of common inflammation. It is as if a joint, damaged by injury or by rheumatism, should, when overtaxed, from time to time break down. That this is the true explanation is shown by the circumstance that if these patients are made to lie up for a month or six weeks, these false relapses, attended as they often are with severe pain, and perhaps with nocturnal startings of the limb, will completely subside, and leave the patient quite as well as he was before.

A further example of the manner in which even a very extensive growth of tubercle, taking place under very favourable conditions, may be swept clean away, and the patient be left to make a complete recovery, is seen in those instances in which tubercular peritonitis, which in some of the cases has gone on to suppuration and the formation of a large collection of pus, is repaired when the abdominal cavity is opened and drained. Several examples are referred to in an instructive paper by Mr. Knaggs in the *Clinical Society's Transactions*, vol. xxi, p. 37. In the case which he specially describes, the peritoneum, when the abdomen was opened, was found studded "with myriads of pale pink gelatinous-looking tubercles, as big as hemp-seeds, thickly and universally distributed, and varying but little in appearance and size." The patient made a complete recovery from the operation, and rapidly regained flesh. Six months later she had no symptoms left of abdominal disease, although she was developing signs of phthisis.

In a case under my own observation, a girl aged 10 was, on admission into St. Bartholomew's Hospital in July, 1887, much emaciated, and so weak that she could not sit up in bed. I saw her first early in September, having been till then out of town. She was pale and very emaciated, and presented the general appearance of a patient in the advanced stage of tuberculous disease. The abdomen was greatly enlarged, and the superficial veins were distended and tortuous. Five pints of pus had been removed by aspiration a few days previously. As fluid was reaccumulating, I opened the abdominal cavity, and two pints of fœtid pus were let out. The cavity was irrigated with an iodine solution (1 part of the tincture in 500 of water), and a drainage tube was introduced. The result was very striking. For several days the temperature, which had previously been 101°, remained below 98.8°, except on two or three occasions, when fluid was retained in a deep pocket between adherent coils of intestine. Irrigation was continued. Within three weeks she had a very large appetite, and was rapidly gaining flesh. A few weeks later she became plump and rosy, and regained all the aspect of robust health. She remains quite well.

I believe that such cases as these—which I submit, not as rare and exceptional, but as strictly representing the course of tuberculosis under fairly favourable circumstances—go to show that the disease is much less inveterate and beyond control than many believe. They afford strong evidence that the bacillus, on the presence of which the disease essentially depends, often, for want of an appropriate soil, dies out and becomes inoperative. They show, in other words, that, instead of being tenacious of life, the bacillus is perishable and often short-lived, so that in a large number of cases its action entirely ceases; and when this is the case, and when its products have been got rid of, the tissues previously invaded by it are restored either to a completely normal state or to such a condition of sound repair as they are capable of, seeing the degree of injury which the tuberculous process, before it ceased, had inflicted upon them.

It is, moreover, essential in this connection to recognise the fact that there is no constitutional element in tuberculosis. What has been regarded as a constitutional condition—a phrase which never, I think, had any very definite meaning—has consisted merely in the presence of those elements which favour the development of the bacillus—elements of the nature of which we are as yet ignorant, but which may be present at one period and completely absent at another; present, in certain individuals, in the case of the lungs, between the ages of puberty and 30; in the case of the joints, the spine, and the lymphatic system, between the ages of 3 and 9; often present when a joint has been contused, when an individual is overworked and ill fed, or residing in a damp inland neighbourhood, or when a child has recently had measles; but which are as absolutely absent at other periods of life, or under other conditions, as the elements which constitute fitness of soil for scarlet fever are absent in a child who has recently had the disease, or as those appropriate for variola are absent in individuals who have recently been vaccinated.

I believe that these views in respect to tuberculosis, though some may perhaps think them overdrawn, would in a general sense be endorsed by a large majority of surgeons; but there are good grounds for asking attention to them, and enforcing them by clear evidence, at the present stage of the discussion of the principles that should be our guide in the treatment of tubercular diseases of the joints.

I now turn to treatment. Thirty years ago disease of the hip—to take this as an example—ran, speaking generally, a deplorable course. It was an obtrusive opprobium to surgery. Chronic and tedious, it was attended with severe suffering; it often led to irremediable deformity, and, at a moderate estimate, was attended with a mortality of upwards of 30 per cent. At about the period I have mentioned an earnest effort was commenced, both in England and America, as well as on the Continent, to ascertain by what form of treatment these results could be amended. As this investigation proceeded, it soon became apparent that the first thing to insist upon was an early diagnosis. In this department such good progress has been made that anyone who will take the necessary care can detect, in all but rare and exceptional cases, the presence of early disease, and thus the business of treatment can be entered upon at once.

The question of treatment, however, has been pursued under considerable disadvantages. In the first place, it has been prejudiced by the tradition that the disease verged on the incurable, and this preconceived estimate has done much to counteract and weaken the evidence of clinical experience as to the results which it is possible to obtain. In the second place, the cases are so tedious that it has been difficult to keep them in view, and to collect a sufficient number of typical examples that have, under different forms of treatment, been watched to a conclusive result. Thirdly, it is only lately that the improvements that have been introduced into the treatment of wounds have made us familiar

with much better results of operative interference than those which were obtained some years ago. Fourthly, treatment of whatever kind has been subjected to a somewhat unfair and deceptive test, for a large proportion of the cases have been too far advanced when they have presented themselves to be brought to a satisfactory result.

Now, considering the present condition of surgery—that, on the one hand, operative treatment has made great advances, and, on the other, that many observers are more than ever impressed with the reparative power evinced during early life—it is inevitable that, in combating such an affection as tuberculous joint disease, two main but widely diverging lines of treatment should be adopted and worked out, so that they may be weighed the one against the other:—the one being founded on the principle of removing all the affected structures by excision of the joint, so that the remaining structures may undergo sound repair; the other consisting of placing the diseased joint under the most favourable conditions, in the hope that the tuberculous process may undergo arrest, and that recovery may then ensue.

Towards a solution of the question which of these two methods yields the best result, some amount of evidence has already been produced, yet I am afraid a conclusive verdict is still in the distance. For while some surgeons strongly advocate early excision, others do all they can to avoid the operation, and only resort to it when every other available means has been tried and has failed.

It will be remembered that Mr. Barker, my predecessor here, last year, strongly advocated the treatment of tubercular disease of the joints by early and complete excision, and specified the grounds on which his views were based.

All, I am sure, who heard the lectures were impressed with the care and thoroughness with which they had been prepared, and with the earnest and conscientious spirit in which the subject was treated. The case for excision, in fact, was presented in a manner which rendered full justice to it, and nothing was left unsaid that could be wisely urged in its favour.

It thus becomes necessary, unless judgment is to go by default, that the case, if there is one, on the other side should be presented, and that it should be shown what objections there are to early excision, and what results can be obtained by an alternative method of treatment adopted at a similar stage of the disease. I will discuss these inquiries in the next lecture.

THE CROONIAN LECTURES

ON THE RELATIONSHIP BETWEEN

CHEMICAL STRUCTURE

AND

PHYSIOLOGICAL ACTION.

Delivered before the Royal College of Physicians of London.

BY T. LAUDER BRUNTON, M.D., D.SC.EDIN., LL.D.ABER., F.R.S.,
Fellow of the Royal College of Physicians; Assistant-Physician and Lecturer on Materia Medica at St. Bartholomew's Hospital.

LECTURE IV—(*Continued*).

CIRCULATION.

THE state of a patient's circulation has always been regarded as the most important guide the physician can have in regard both to prognosis and treatment. The arms of our college exhibit a hand feeling the pulse as the most characteristic act of a physician.

Test for Life.—As the old adage has it, "While there is life there is hope," and life can never be regarded as extinct while circulation continues. One of the best, if not the best, tests whether life is actually extinct or not is to tie a piece of thread with moderate tightness round the finger. If the person be quite dead no change will occur, but if there be any circulation, however slight, the end of the finger will gradually swell. Even after death has occurred and circulation has ceased in the body generally we are able to maintain the functional activity of isolated organs by means of artificial circulation, so that the lung retains its vitality, the muscles their conductivity, and the glands their secreting power for hours or even for days after the rest of the body to which they belonged are dead. On the other hand, if the circulation in an organ be arrested by contraction, plugging, or pressure upon the vessels supplying it, its function is quickly abolished, although the other parts of the body may be perfectly healthy.

"*Faint Heart never won Fair Lady.*"—Feeble circulation leads to poor nutrition and general weakness and inefficiency, so that a faint heart has become proverbially unsuccessful. A stout or strong heart, on the other hand, leads to active circulation, good nutrition, general power, and success in life. By keeping up an abundant supply of blood to the tissues, it removes the acid products of waste which, as we have seen, powerfully tend to interfere with oxidation. But possibly this is not the only effect of a powerful heart.

Chemical Uses of the Pulse.—According to Fleischl, the shock of the blood sent into the capillaries at each cardiac systole has a mechanical action in aiding the chemical processes of tissue change, in somewhat the same way, though to a less extent, as a blow upon a percussion cap. It is therefore of the utmost importance in the treatment of disease to maintain the action of the heart, and to stimulate it when it is flagging.

Beef-tea as a Cardiac Stimulant.—It is curious to note how a well-grounded practice often holds its own amid changes of theory, and beef-tea still maintains a foremost position amongst our cardiac stimulants. We have other drugs which increase the power of the heart, and which are most useful in their place: digitalis, strophanthus, convallaria, adonis vernalis, and erythrophlœum, and the whole class of drugs usually known as cardiac poisons. Unfortunately these drugs do not always give us the result we desire, and at present we are often unable to say why they fail. We do not know their chemical constitution, and therefore we cannot modify it or produce at will drugs having a similar but not identical action, as we can, to a certain extent, in the case of antipyretics and analgesics. Starting from beef-tea, however, we may perhaps obtain what we want. One of the constituents of beef-tea is xanthine. This has a very powerful action on voluntary muscular fibre, but its effect on the heart requires to be more carefully made out.

Caffeine as a Cardiac Tonic.—Methyl xanthine, or caffeine, is now recognised as an important cardiac tonic. Like xanthine, it tends to increase the contraction of muscular fibre, both voluntary and involuntary, and, when its action is pushed far enough, it produces an extraordinary state of muscular rigor. In consequence of this, voluntary muscles dipped into a solution of it frequently contract to the utmost extent of which they are capable, and when applied to the frog's heart it causes the beats to become slower and the heart more and more contracted, until it ceases to beat in systole. In this action it agrees with the other cardiac tonics, like digitalis; but a curious point is here to be noted.

Paradoxical Action of Caffeine.—Although it usually causes firm contraction of the frog's muscle, yet sometimes it causes none at all, and Cash and I have actually found it cause elongation. At present we are unable to explain this curious phenomenon with certainty.

Possible Transverse Contraction and Active Elongation of Muscle.—To me it seems most readily explained on the supposition that muscular fibre, both voluntary and involuntary, not only contracts longitudinally and thus becomes shorter, but may contract transversely and thus become longer. The varying conditions, which Cash and I have observed in the frog's muscle under the influence of caffeine, may be explained by supposing that usually the longitudinal contraction is greater than the transverse, and therefore the muscle shortens; that occasionally the longitudinal and transverse contraction occur together and counteract each other, so that the muscle retains its usual length; and finally, that occasionally, though rarely, the transverse is greater than the longitudinal contraction, and therefore the muscle becomes elongated.

Practical Bearing of Physiological Questions.—But some men may say, What does it matter to us whether a frog's muscle, dipped in caffeine, becomes longer or shorter, and what possible connection with medicine can a discussion have on the question whether its fibres contract transversely as well as longitudinally? And yet it is a matter of vital importance to a patient with mitral disease whether the muscular fibres of his heart will shorten sufficiently to expel the blood from his ventricles or whether they will remain quiescent altogether, or actually elongate, so that the heart stands still in full diastole.

Necessity of Investigation of the Action of Simple Drugs on Simple Tissues.—It is only by a thorough knowledge of the conditions which cause bodies of simple chemical structure like caffeine or xanthine sometimes to produce contraction and sometimes elongation of muscle that we can hope to treat cardiac disease with certainty, either by means of these substances or by more complex cardiac tonics. The only indication that we have of life is motion, either of the body as a whole or its parts, as in the movements of the respiration or pulse, or of the blood in the test for life I have already mentioned, or in secretion, as in the case of glands kept alive by artificial circulation. In order to understand thoroughly the effect of any drug we must know what its action is upon muscular fibre, and the variations produced in its action by changes in the temperature or reaction. But muscular fibres are usually stimulated to contraction or to relaxation by efferent nerves, and they are again excited by the nerve centres from which they proceed. Unless we know the action of drugs on nerves, as well as on muscles, we cannot rightly estimate their action upon nerve centres. It is on this account that Cash and I have not only taken up the study of comparatively simple drugs, such as ammonia, compound ammonias, alkalis, earths, and the simpler aromatic compounds; but we have worked more especially at the action of those substances on muscle and motor nerves, hoping in this way to lay a foundation for future researches on higher structures and more complex drugs.

Modifications in the Action of Drugs.—The action of drugs upon voluntary muscle is not always alike. It may be different in frogs and mammals, nay, more, it may differ in two species of frogs. It may be different in voluntary and involuntary muscle, and the involuntary muscular fibre of the heart may not react in quite the same way as that of the vessels, and the intestines may differ from both. Yet a general likeness can usually be discerned between the action of a drug on all kinds of muscular fibre, and it is precisely the fact that differences exist which will give us most assistance in treatment, after we have once learned the causes of these differences. Caffeine usually, as I have said, contracts the muscles of the frog's legs, but sometimes it elongates them, and the same difference in its action is observed in the heart. Generally the heart stops in systole, but sometimes it stops in full diastole. In this respect the action of caffeine resembles that of digitalis.[11]

Complexity of the Heart.—In the heart we are not dealing with muscular fibre only, but with nerves and ganglia as well, and the effect of any drug upon this organ is the resultant of its action, not only upon all these structures in the heart, but upon the medulla as well. Moreover, when we are dealing with the heart in connection with the blood vessels the action becomes still more complex, for contraction or relaxation of the vessels will alter the resistance which the heart has to overcome. The problems we have to solve in looking for new cardiac tonics are, therefore, far from easy, but we may hope that patient investigation will solve them, and that we may ere long aid the sufferers from cardiac disease more efficiently than we can at present.

Direction in which to Look for Cardiac Tonics.—I have already pointed out that most drugs belonging to the class of cardiac tonics are also local anæsthetics, but all local anæsthetics do not appear to be cardiac tonics. Nevertheless, by looking through the class of local anæsthetics we may perhaps find some new cardiac tonics, and, at any rate, it is worth while to try.

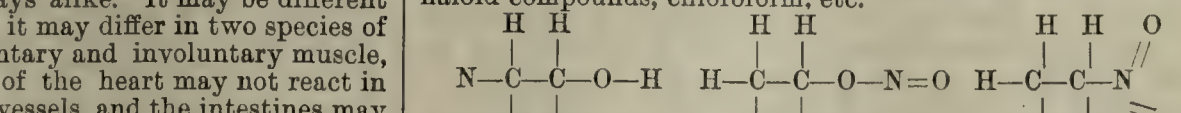
Action of Drugs on the Blood Vessels.

Our knowledge of the chemical nature of drugs which dilate the blood vessels is somewhat greater than of those that contract them, for the agents which cause dilatation most markedly are of very simple chemical structure. They are, in fact, nitrites, or substances which yield nitrous acid in the blood, but all nitrites have not an equally powerful action, and the efficiency of the NO_2 depends to a great extent on the radical with which it is combined, and the mode in which this combination occurs. For the group NO_2 may be arranged thus: —O—N=O, or $-N\begin{matrix}\diagup O\\ |\\ \diagdown O\end{matrix}$. In each of these the nitrogen is trivalent. But it may be quinquevalent, in which case the group would be $-N\begin{matrix}\overset{O}{\diagup\!\!/}\\ =\\ \underset{O}{\diagdown\!\!/}\end{matrix}$. In nitrous compounds, it is probably O=N—O—, while in nitric compounds it is probably $-N\begin{matrix}\overset{O}{\diagup\!\!/}\\ =\\ \underset{O}{\diagdown\!\!/}\end{matrix}$. But in nitrous compounds we have two classes: nitroso and iso-nitroso. We thus see that there may be considerable differences in the NO_2 groups, and the action of this group is determined to a considerable extent by the alkyl to which it is joined and the manner in which the joining takes place.

[11] *Cf.* Lauder Brunton, *On Digitalis*, pp. 96, 104. London, Churchill, 1868.

Nitrites of Methyl, etc.—When we have the junction taking place through oxygen, the group NO replacing hydrogen in alcohol, we obtain the nitrites of methyl, ethyl, propyl, butyl, amyl, and so on, but when we have the nitrogen directly united to carbon by one affinity, the group NO_2 replacing hydrogen in methane, we get the nitro compounds, nitro-methane, nitro-ethane, nitro-propane, nitro-butane, nitro-pentane.

Action of Nitro-methane, etc.—These nitro compounds appear to have less action on the vessels than the nitrites, and do not cause the same marked dilatation in them or consequent fall of blood pressure. They tend rather to produce narcosis, like the haloid compounds, chloroform, etc.



Ethyl alcohol. Ethyl nitrite. Nitro-ethane.

Amyl Nitrite.—Amyl nitrite has a rapid action, quickly occurring and quickly passing off, and since I first used it for angina pectoris in 1867 its utility in the treatment of this disease has become almost universally recognised.

Other Nitrites.—While working in Ludwig's laboratory in 1869 on the action of this drug, I satisfied myself that other nitrites, and especially that sodium nitrite, had a similar action. In 1876, Dr. Gresswell and I made some experiments, which we have not published, although a preliminary note appeared of them at the time. From these experiments it appeared that amyl nitrite had a more marked action than ethyl nitrite, but the next in the series, capryl nitrite, was less active than amyl. Recently the subject has again been taken up, and Cash and Dunstan have found that butyl nitrite is still more powerful than amyl, but the question now arises, which butyl or amyl is it whose combination with NO_2 is most efficacious, that is to say, which acts most quickly and most powerfully.

Tertiary Amyl Nitrite.—According to Bertoni the nitrite obtained from tertiary amyl alcohol or ethyl-dimethyl-carbinol acts more powerfully and for a longer time than ordinary amyl nitrite. My assistants have tested it for me, and laboratory experiments showed that in animals, while it caused fall of blood pressure, it also produced vomiting. In one middle-aged patient suffering from angina pectoris it was not so efficacious as ordinary nitrite, and in him it produced vomiting; but in an old man it produced no vomiting, and gave more relief than other nitrites. It is possible that there may be a difference in the effect of the different nitrites in consequence of greater or less rigidity of the vascular walls. It is possible that where the vessels are not rigid ordinary amyl nitrite or iso-butyl nitrite may be best, but when the vessels are rigid a more prolonged action may be desirable, and in these nitro-glycerine and Bertoni's nitrite may be preferable.

Bright's Disease.—But there are other cases in which prolonged dilatation of the vessels is very desirable. First, in cases where the heart is weak and barely able to carry on the circulation; secondly, where the tension from the vessels is very high, and there is danger of rupture, as in cases of Bright's disease. In both of these it is highly probable that we may obtain better results with the nitrites of some of the higher alkyls than with any that have yet been employed. A series of experiments is also desirable on the action of nitro-butane, nitro-pentane, and other nitro compounds in these cases.

Action of Drugs upon the Blood.

In addition to the power to dilate the vessels, nitrites have a

very marked action upon the blood. When mixed with it they cause it to become of a chocolate colour, and they produce a similar change in it while it is still contained in the vessels of animals poisoned by nitrites. As Gamgee showed, nitrites, as it were, lock up oxygen in the hæmoglobin, so that blood which has been acted upon by them will not either take up or give off oxygen so readily as normal blood, but strong reducing agents will remove the oxygen, and then the reduced blood will combine with oxygen readily again. On this account nitrites do not arrest the respiration in the tissues in the same way as carbonic oxide, for when they have brought the animal to the verge of suffocation by locking up the oxygen in oxyhæmoglobin, the nitrous compound becomes reduced, and the hæmoglobin then resumes its normal functions. A few inhalations of the nitrites, such as amyl nitrite, may thus produce asphyxial convulsions, but the animal recovers quickly and certainly unless the inhalation be maintained. The nitrite appears to behave to the oxygen of the blood corpuscles in somewhat the same way as the stopper of a bottle does to the liquid it contains, preventing anything from going out or into the bottle, but when sufficient force is applied to withdraw it, it no longer interferes with either exit or entrance. A similar effect is produced by nitro-glycerine and also by hydroxylamine. Nitrites must almost necessarily interfere with oxidation of the blood, and probably it is on this account that they give rise to the appearance of sugar in the urine. Nitrites, notwithstanding their marked effect upon hæmoglobin, do not destroy blood corpuscles, and consequently do not give rise to the presence of hæmoglobin in the urine; but a number of substances, more especially those belonging to the aromatic group, like toluylene-diamine, have this power, and an interesting question arises how far paroxysmal hæmoglobinuria may not really be a form of poisoning, due to the absorption of poisonous compounds of the aromatic series, and pernicious anæmia has been attributed by Sandoz[12] to poisoning by substances formed in the intestine and absorbed from it.

Action of Drugs on the Liver.

For a long time the liver, notwithstanding its great size and its remarkable position, was regarded as having little functional importance, and was supposed merely to excrete bile, a fluid which plays quite a minor part in the digestive processes. But for some years back the liver has been gradually increasing in importance, and its functions are now recognised to be various in kind as well as most necessary to the organism.

Bile only a By-Product although a Useful One.—The coal tar refuse of gas works is now utilised, at least in large towns, but even in small places gas continues to be made, although the coal tar produced in the process cannot be worked up, and remains simply as refuse. In the same way the bile is certainly useful in the digestive process, preventing decomposition, accelerating peristalsis, and aiding the pancreatic juice to digest fats. But still it is, after all, to be regarded as a by-product of hepatic activity.

Dangers to Life.—The knowledge which we have gained during the last few years regarding the poisonous properties of some albuminous substances, and of the products which albumen yields when decomposed, makes it, as Mr. Darwin said, a wonder that we are all alive considering how many poisonous substances are constantly formed in the intestine.

The Liver as a Gatekeeper.—Indeed, one can hardly see how life would continue long were it not that the liver has a position and function like the gatekeeper or porter of a town or castle in times of war, inspecting all comers and turning back those that are dangerous. It possesses a twofold power to prevent poisons entering the portal vein from passing into the general circulation, for it turns back some and destroys others. Some of them, such as lead, copper, mercury, and iron are simply arrested by it, and instead of passing into the general circulation are excreted by the bile, and finally ejected from the body. Some organic poisons, such as curara, appear also to be partly excreted in the same way. But the liver appears to have not only the power of excreting poisons but of actually destroying them, or, at any rate, converting them into non-poisonous compounds. Thus double the quantity of strychnine, veratrine, quinine, and morphine are required to kill an animal, if injected into the portal vein, as would be sufficient if injected into the jugular vein, while no less than three times the quantity of curara is requisite.[13] The liver exerts a similar power over peptones and ptomaines, as well as over compounds of ammonia with weak acids, such as ammonium acetate, but chloride of ammonium is unaffected.

Uses of Glycogen in Regard to Poisons—Organic poisons appear to have their activity lessened in the liver by combination with glycogen, for when animals are made to fast, the power of the liver to destroy the toxic action of poisons gradually diminishes as the glycogen disappears. In cases where ptomaines are found in quantity in the intestine, Roger recommends such food to be given as will quickly supply glycogen, such as milk. He explains the usefulness of milk in uræmic poisoning in this way, while beef-tea in such cases simply increases the poison. It is possible that the peculiar symptoms of tremor, faintness, and even mental weakness which occur in some patients when fasting, and which are rapidly relieved by food, may be, in some degree, due to the ptomaines formed in the intestine, and the relief by food may be explained by their destruction by the increased activity of the liver. At the same time we must remember that ptomaines—or, perhaps, we ought rather to say leucomaines—are formed in the tissues generally, and that an increase of glycogen in the blood may combine with poisonous products in the nerves and muscles, preventing them from exerting a poisonous action, and thus removing weakness, languor, or tremor due to them. The whole of this subject presents a fruitful field for further inquiry, and at present our knowledge is little more than sufficient to indicate how much there yet remains to be known.

Glycogenic Function of the Liver.

Another most important function of the liver is that of forming glycogen. It does this both from proteids and from carbo-hydrates, and thus acts, one might say, as the coal bunker of the body, storing up a reserve of nutriment to be utilised during the hours of fasting. But here again, we meet with a curious action of some drugs.

Action of Ammonia.—Ammonia, as I have mentioned, is a poison, and so is ammonium carbonate if injected into the jugular vein, but the poisonous activity of these substances is greatly diminished when they are injected into the portal vein. But this is not all. The liver actually converts these poisons into food, and when they are given to an animal, along with a non-nitrogenous diet, they increase the quantity of glycogen in the liver, and ultimately pass out in the form of urea, just as albumen would have done. Some amido-compounds, such as asparagine, and glycocoll, have a similar action, but this is not shared by all the amido substances, for beef-tea, and Liebig's extract, contain a number of these, and yet neither seems to act in the same way as ammonia.[14]

Removal of Glycogen from the Liver.—Notwithstanding all the labour that has been expended in investigating the glycogenic function of the liver, it cannot be said that we clearly understand, even yet, the way in which glycogen is formed in the liver, or the way in which it disappears from it. Probably, a good deal of it is carried off by the blood in the form of sugar, and some also in the form of glycogen.

Action of Poisons upon Glycogen.—We have already seen that glycogen unites with some poisons, such as morphine, and with peptones, or other poisonous products of albuminous decomposition, so as to alter their properties and lessen their poisonous activity. We might therefore expect the converse to be the case, and look for them to exert an action upon glycogen, and perhaps render it less easily decomposed. We can readily understand on this supposition how the addition of a single egg, or piece of cheese, to a meal of bread and butter will increase its staying power, so that a person will be able, with this slight addition, to go on for four or five hours, instead of wanting another meal at the end of two. It would also explain the action of morphine in cases of diabetes. As Claude Bernard found that reflex dilatation of the hepatic artery would increase the transformation of sugar in the liver and induce diabetes, one was inclined to attribute the beneficial action of morphine or codeine to their sedative action on the nerve centres, preventing any irritation which might exist from affecting the hepatic vessels. But Mitchell Bruce has clearly shown that this is not the case, and that we must look to a direct action of morphine upon the liver itself for an explanation of its utility in diabetes.

Glycosuria caused by Drugs.—There are a number of substances which will produce temporary glycosuria. Many of these are supposed to act by dilating the hepatic artery; for example, amyl nitrite, curara, ortho-nitro-propionic acid, and methyl delphinine,

[12] Sandoz, *Corr. Bl. f. Schweiz. Aerzte*, 1887.
[13] Roger, *Action du Foie sur les Poisons.*
[14] Paul Bahlmann, *Inaug. Diss*, Erlangen, 1885.

chloroform, chloral hydrate, alcohol, and hydrocyanic acid. It is not improbable, however, that some of these at least, may cause sugar to appear, by lessening the normal processes of oxidation, by which it ought to be converted into carbonic acid. For carbonic oxide is a most powerful agent in producing glycosuria, and amyl nitrite, alcohol, and chloroform all tend to lessen oxidation. The most remarkable substance in producing glycosuria seems however to be phlorizin.[15] This substance, which is obtained from the root bark of apple trees, appears to have the power of preventing the organism from oxidising or otherwise utilising sugar. When dogs are kept without food for several days, but receive phlorizin all the time, the whole of the glycogen disappears both from the liver and the muscles; but if they are still kept without food, quantities of sugar appear in the urine, which can only be produced, so far as one can see, from the breaking up of the albuminous tissues of the body. In birds phlorizin causes glycosuria even after the liver has been extirpated.[16] Arsenic, antimony and phosphorus all cause the glycogen to disappear from the liver,[17] but they produce at the same time fatty degeneration, whereas phlorizin appears simply to cause a general shrinking of the liver.[18]

Amount of Bile as an Index to Functional Activity in the Liver.—The secretion of bile, although it has attracted more attention than the other functions of the liver, is in itself of minor importance. But just as a stranger visiting a gas-factory in the country, where they could not use up their waste products, might judge by the amount of tar he saw about whether they had been making much gas or not, so from the secretion of bile we may draw important conclusions regarding another very important function of the liver, namely, its power to destroy blood corpuscles. Life appears to consist of a continual process of destruction and repair, and the blood forms no exception to the rule. Its vitality appears to be maintained by constant formation and destruction of blood corpuscles. Whether the corpuscles be actually broken up in the spleen, and their fragments carried to the liver, or whether they be destroyed in the liver itself does not at present concern us.

Relation between Blood-pigment and Bile-pigment.—At all events it is in the liver, or rather perhaps we should say in the bile, that we find the remains of one of their most important constituents, hæmoglobin. Since Virchow pointed out the relationship between hæmatoidin and bile pigment, numerous researches have been made, to show that hæmoglobin could be converted into bilirubin.

Hæmoglobinuria and Jaundice.—Thus, Kühne found that bile pigments appeared in the urine after the injection of hæmoglobin into the blood, and the same result has been observed after intravenous injection of substances which will dissolve corpuscles in the vessels such as bile acids, large quantities of water, ether, chloroform, and phosphoric acid. In trying to repeat some of these experiments, many years ago, I obtained a negative result, and other observers have also failed. In place of bile pigment I found hæmoglobin, and others have done the same, but Städeleman has cleared up the discrepancies. In his researches on toluylene-diamine, he found that in some animals he obtained hæmoglobinuria, and in others jaundice. This jaundice was due to the fact that the bile ducts became plugged by bile so thick that it would not flow along an ordinary test tube, and much less through the hepatic ducts. The mode of action of the poison with which he experimented, as well as of chloroform, water, or bile acids injected into the circulation, seems to be as follows: They break up the blood-corpuscles, liberating hæmoglobin. This is carried by the blood to the kidneys and liver as well as to the other organs. In the kidneys it is partly excreted, giving rise to hæmoglobinuria. In the liver it is taken up by the hepatic cells and converted into bile pigment.

Hæmatogenous Jaundice.—At first the whole quantity of bile is increased, solids as well as liquids, so that toluylene-diamine may be looked upon as a most powerful hepatic stimulant. Soon, however, the solids increase out of proportion to the fluid in the bile. It becomes thicker and thicker, until it will no longer flow along the ducts, and then a part of it being absorbed from the biliary capillaries, jaundice is produced. These researches show that although all jaundice may be looked upon as of hepatic origin, yet the function of the liver is so much affected by the nature of the blood, that jaundice may occur in consequence of the destruction of red blood corpuscles, and the name of "hæmatogenous" as applied to such a form of jaundice, may therefore be justified.

Jaundice from Poisons—One of the oldest observations on jaundice of this sort is probably that of Galen, that the skin becomes yellow in some persons after the bite of a viper. This is particularly interesting in relation to the possible causation of epidemic jaundice, or even of so-called catarrhal jaundice, in those cases where the catarrh is supposed to affect the bile ducts only, and there is no evidence of its extension to the intestine or stomach. The venom of poisonous snakes, both viperine and colubrine, paralyses both motor nerves and nerve centres, but the viperine poison differs from the colubrine in its effect upon the blood, which it deprives of its coagulating power, while at the same time it tends to destroy the red corpuscles. The researches of Weir Mitchell, Reichart, Martin, and Wolfenden have shown that the poisonous substance in snake poison is not an acid or an alkaloid, but an albumose similar in its chemical reactions to the products of the ordinary digestion of albuminous foods in the stomach or intestine. It is only within the last few years that the poisonous properties of albumoses have been recognised, but poisons belonging to this class are now found to be pretty widely distributed.

Poisonous Blood in Fishes.—They occur, according to Martin, in the jequirity or abrus seed, and Mosso has recently found the blood of lampreys and hag fishes, and Springfield that of eels, to be poisonous from albumoses which it contains. The poisonous properties of albumoses are destroyed by boiling, and usually also by the simple process of digestion; but if they should be taken in large quantity into the stomach they might be able to pass through the liver in sufficient quantity to prove injurious, and, if this be so, one can thus understand why Henry I. of England should have died after eating lampreys to excess.

Epidemic and Catarrhal Jaundice.—At present we are quite ignorant of the pathology of epidemic jaundice, or of those cases of catarrhal jaundice where yellowness is the only symptom, and it seems not improbable that both of these may due to poisons of some sort absorbed from the intestine. I know of one case at least in which jaundice of this sort came on after eating ham which appeared to be tainted.

Acute Red Atrophy of the Liver.—In another case, which I saw only a few months ago, sudden illness came on a few hours after eating ham. I diagnosed the case as one of poisoning by ptomaines. Death occurred in a few days, and the *post-mortem* examination showed nothing to account for death, excepting the liver, which was in a condition of red atrophy. This also is a disease of whose pathology we are ignorant, and further researches must decide whether or not it may really be simply due to the effect of poisons on the organ.

New Remedies in Disorders of the Liver.

But an extended knowledge of pathology is not the only gain we may hope for from a thorough investigation of the action of drugs upon the liver; we may reasonably expect great additions to our power of treating its functional disorders or even organic diseases. I have already mentioned the peculiar effect of ammonium salts upon the glycogenic function. Dr. Stewart's introduction of chloride of ammonium in hepatic abscess is a most important aid in the treatment of that disease. The biliary function appears to be modified in a remarkable way by many substances of the aromatic series which greatly increase the bile. It is a very remarkable thing that a great number of ptomaines belong to the class of compound ammonias or amines, and the remarkable action of toluylene-diamine appeared to me to indicate the necessity for ascertaining if possible what effect would be produced on the liver by bodies of the aromatic series, free from nitrogen, as compared with the effect of similar bodies combined with ammonia. At my suggestion Dr. Collins made a number of experiments with toluene and toluylene-diamine in my laboratory, and found that both these substances greatly increased the flow of bile. Not feeling quite certain what effect toluylene-diamine and allied bodies might have upon patients, I felt a little chary of using them until I should obtain fuller knowledge of their mode of action. In order to be ready, however, to use them as soon as I had acquired sufficient knowledge, I asked Messrs. Burroughs and Wellcome to prepare me some tabloids and capsules containing toluene and toluylene-diamine. This they kindly did, and a gen-

[15] Von Mering, *Verh. d. h. Congress. für inn. Med.*, 1887.
[16] Minkowski and Thiel, *Arch. f. exp. Path. u. Pharm.*, Bd. 23, p. 142.
[17] Salkowsky, *Virchow's Arch.* 34, p. 78.
[18] Ueber d. Einfluss v. Giften a. d. Grösse d. Leberzellen, A. Neumann, *Inaug. Diss.* Berlin, 1888.

tleman to whom Dr. Collins had mentioned the existence and probable use of the tabloids tried them upon his patients with good success, as he informs me.

Vegetable Cholagogues.—Most of the vegetable hepatic stimulants, iridin, euonymin, and aloes, belong to the aromatic series, although we do not know their chemical structure. Much benefit is frequently obtained by their use in so-called "biliousness," and we may reasonably expect that a full knowledge of the mode of action and chemical structure of the vegetable cholagogues will enable us, not only to apply them more judiciously, but to modify their structure, and consequently their action in various directions, to suit our wants. It is almost certain, also, that we shall obtain a very large series of new bodies which may act upon the liver, either as stimulants or as depressants, increasing or diminishing the formation of bile, and affecting the other functions of the organ, which I have already mentioned. The frequency with which functional hepatic disorder occurs, and the great discomfort which it occasions, not only to the sufferer, but to his friends, and even to the community at large, renders it most desirable that efficient modes of treatment should be discovered.

METHODS OF SEARCHING FOR NEW HEPATIC REMEDIES.

The search after new remedies has hitherto been conducted almost entirely in two ways: first, by the administration of drugs to patients, and a chemical analysis of the liver itself so as to ascertain whether the amount of glycogen and fat has been altered by the drug. According to Ellenberger and Baum, who experimented on horses, the hepatic cell when in action is larger, has a sharper contour, has a net-like arrangement of its proto-

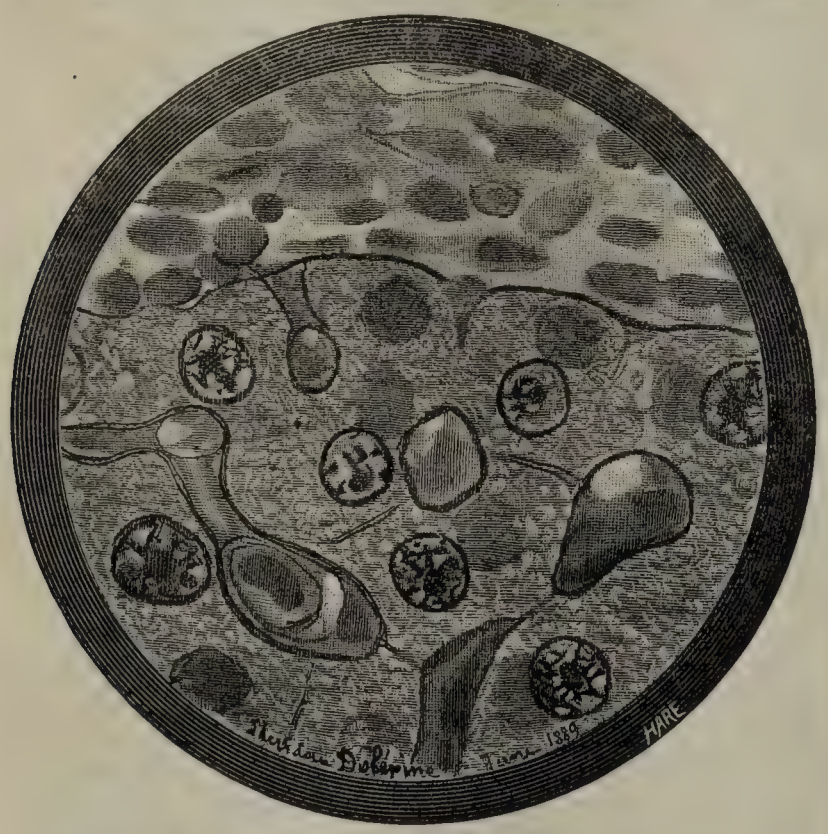


Fig. 1.—Fasting liver. Rabbit 6 weeks old. Last food, 18½ hours before death.

plasm, and contains more granules which stain with eosin, and fewer pigment granules than the cell when at rest. This active condition of the cell occurs during digestion, but it may be produced independently of digestion by such drugs as pilocarpin, muscarin, and aloes. A similar but less powerful action is exerted by salicylate and benzoate of soda and by rhubarb. On the other hand, atropine arrests the activity of the liver, so that the hepatic cells appear to be completely at rest, even in the very middle of the digestive process. A similar but less powerful action is exerted by ammonium chloride, sulphate of magnesia, and calomel. Copper and lead also arrest the hepatic activity, but when they are given for a time they produce fatty degeneration of the cells and accumulation of bile in them. The action of a very large number of substances on the liver cells has been investigated by Alfred Neumann under Ehrlich's direction; and many belonging to the aromatic series have been found to produce enlargement of the hepatic cells. Amongst these are cocaine, coumarin, acetophenone, azobenzine, dibromazobenzene, dimethylparaphenylendiamine sulphate, martius yellow, orthonitrophenyl propionic



Fig. 2.—Active liver. Rabbit 6 weeks old. Killed 6 hours after meal.

acid, paraoxybenzaldehyde, paratoluidin, phenanthroquinone, and phenylthiourea.

Dr. Sheridan Delépine has kindly examined for me the changes which the hepatic cells in the rabbit undergo under the action of atropine, pilocarpine, and toluene. It will be seen from the



Fig. 3.—Action of atropine on an active liver. Rabbit 6 weeks old. Last food, 5.30 hours before death. Injection of $\frac{1}{100}$th gr. atropine 3.25 hours before death.

accompanying figures that the effect of atropine and pilocarpine on the liver of the rabbit resembles that which Ellenberger and Baum have described as occurring in the horse.

The effect of toluene is very peculiar. The outline of the cells becomes sharp, but the cells become small and the blood vessels large, so that the liver is congested. The bile also appears to be

expelled from the liver, for the blood corpuscles in the vessels are not destroyed, while they usually are dissolved by the bile.

This subject is one of the greatest possible practical interest, because its investigation may explain the causation of those very common and very troublesome symptoms to which the term



Fig. 4.—Action of pilocarpin on a fasting liver. Rabbit 6 weeks old. Last food, 17½ hours before death. Injection of ½ gr. pilocarpin 1½ hour before death.

"biliousness" is commonly given, and which are usually ascribed to a "torpid liver." Experiments on the effects of nitrogenous and non-nitrogenous foods on the liver cells are required in order to give us a firm physiological basis; and then a study of the



Fig. 5.—Action of toluene on fasting liver. Rabbit 6 weeks old. Last food, 20 hours before death. Toluene, 1 minim, 4¾ hours before death.

action of various substances belonging to the aromatic and ammoniacal groups may enable us to discover what products of albuminous decomposition in the intestine lead to hepatic congestion, "torpid liver," and "biliousness." At the same time, we may hope that such an investigation will also enable us to find efficient remedies for these conditions. At all events, I think it is evident that the whole subject of hepatic stimulants must be studied anew, not by the older method of trying to ascertain their action on the organ as a whole, but rather on the cells which compose it. As I mentioned in my first lecture, the latest development of pharmacology is the "pharmacology of the cell;" and to it we must look for the fullest information regarding the action of remedies, whatever be the class to which they belong.



Fig. 6.—Action of toluene on active liver. Rabbit 6 weeks old. Last food, 6.30 hours before death. Toluene, 1 minim, 5 hours before death.

Time will not allow me to enter upon the relations between the chemical structure of remedies and their action upon other glands than the liver, and especially upon the kidneys. Nor can I even flatter myself that I have treated any part of my subject fully. All I have done is to attempt to give a brief outline of it, not discussing it with a view to completeness, nor always bringing prominently forward those points which would be most interesting to a chemist, but rather endeavouring to bear in mind the practical intention of these lectures, and to show as much as possible the relationship of my subject to the prevention, control, and cure of disease. In trying to do this, I have thought it advisable to look forward as well as backward, and to indicate lines of research on which work is desirable, even at the expense of time which might have been given to a fuller exposition of results already obtained. In conclusion, I must again return you my most cordial thanks, not only for the honour you have done me in selecting me to give these lectures, but for the patient and kindly hearing you have given them.

NOTES OF THREE CASES OF XERODERMA PIGMENTOSUM, OR DERMATOSIS KAPOSI.

By W. BROWN HUNTER, M.D.,
Londonderry.

In the number of the JOURNAL for June 8th there is a typical case of this disease well recorded by Dr. McCall Anderson. In a note to that report it is said that there are only forty-one cases of this disease recorded. I write this report chiefly for the purpose of adding three more cases to that record, two of which are certainly typical, and the third I have not seen, but for reasons given below its identity is undoubted. I enclose photographs of the two I have seen, and the third case was a brother of these, who is now dead. The family in which these cases occurred consists of eight children altogether, two of whom are dead, one a girl at the age of 2½ years, who was unaffected with the disease, and a boy aged 18 when he died, who was the eldest of the family

and was affected. The other six children are alive—three boys and three girls. The girls' ages are 19, 7, and 5 respectively, and are all quite free of the disease. The boy who is unaffected is 12 years and 6 months. I mention the ages of these so that it may be seen that they have got past the age safely at which the disease generally, though not invariably, begins to be noticed. It will also be observed that in this family it has as yet obeyed the general law of keeping to the sex first attacked. The family, too, are agricultural, and much exposed to all weathers. The parents are well, and have always been healthy, and no members of the family on either side have ever been known to be affected by any such disease as this. The mother also mentions that the parts affected seem to get worse in the summer and harvest, and clear up a little again during the winter.

I shall now give a short description of each case:—

CASE I.—H. J. C., aged 18 when he died. He was the eldest in this family, and is said to have died of "a wasting away"—most probably phthisis, as he had a cough, and, near his end, diarrhœa. He is said, by parents, relatives, photographer who also took his likeness as well as those I now send, and by everyone who saw him, that he was affected in the same way as his two brothers now living are, that at an early age the freckles were noticed, and the disease assumed all the appearances which we see in these living cases, so that there can be no doubt of the identity of the affection.

CASE II.—C. C., aged 17, health good in every respect. At the



CASE II.

age of 4 freckles numerous and dark-coloured were noticed coming out on his face, and since that time to the present, his face, neck, hands, forearms up to elbows, have been affected. On examining the legs and feet they are also found to be affected, though not so observable, and were said not to be affected. I first saw him about three years ago, observing the peculiar discoloration of his face. About two years ago he came to me complaining of a sore on his right cheek. This sore was almost as large as a shilling, lupus-like in appearance, with large flabby granulations on surface, edges slightly raised and quite round. His mother says it arose out of a pimple being opened by a knife and grew rapidly. I burned it with strong nitric acid, and afterwards treated it with a powder of boracic acid and iodoform. It healed completely, leaving a cicatrix with a black spot in its centre. This is the only ulcer which has as yet formed. His face presents now—first, the freckles, some larger than others, and measuring in longest diameter 4 millimètres; secondly, the small hard nodular bodies; thirdly, a few red small vascular spots (telangiectasis); and, fourthly, the white cicatricial-like spots, which vary in size. These are more marked over the bridge of the nose and below the eyes; in fact, nearly all the surface in these localities is thus affected. In consequence, I presume, he suffers also from ectropion and some conjunctivitis. His lips are also swollen and prominent, especially the upper, rough on the surface, and a hard scab is formed on the upper at one spot. There is a small black spot the size of split-pea on the forehead and one or two on the cheeks, but smaller.

CASE III.—J. C., aged 10, in good health. Disease first noticed at the age of 5. The freckles in this case are very abundant and the pigmentation very noticeable. Same parts affected as those of brother. Feet and legs still less marked. It may be remarked here that these children went to school during the summer months without shoes or stockings and the trousers often rolled up. The latter is done so as not to interfere with running or jumping, and in wet weather to keep them (the trousers) clean. This is a com-



CASE III.

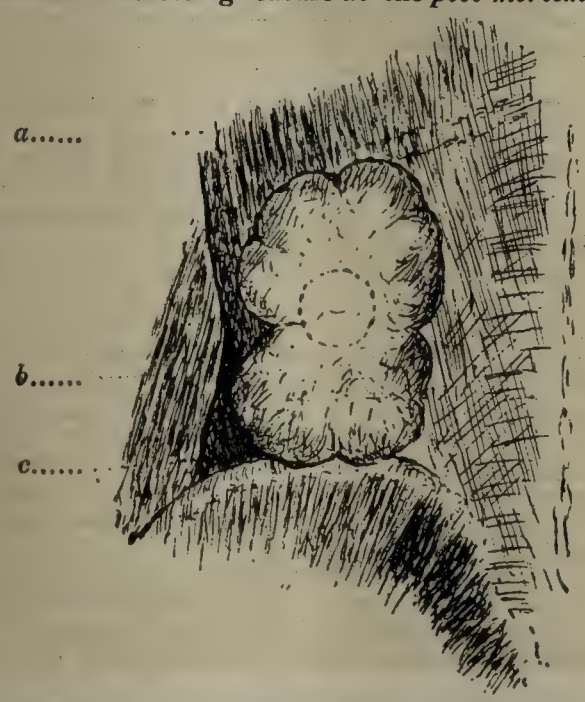
mon habit in the country districts, and thus, in these cases, the feet and legs which are affected were also exposed. His face also presents the small nodules, a good number of the telangiectases, and some of them raised. There is only one cicatricial-like spot, and this is on the middle of the nose, where the skin looks whitish and thinned. He has also some conjunctivitis, but no ectropion.

On the lower left eyelid there is a hard warty growth, the size of a pea, chalazion-like, but wants the characteristics of the latter. The boy who died had a similar growth, the mother now tells me.

ON LUMBAR HERNIA.

By J. HUTCHINSON, Jun., F.R.C.S.

It will be admitted that any contribution to our knowlege of this comparatively rare form of hernia is worthy of record, since there are several points about it which are still doubtful. It is generally assumed that the small triangular space bounded by the external oblique and latissimus dorsi muscles, and the crest of the ilium (Petit's triangle), constitutes a relatively weak spot in the abdominal wall, that hernial protrusion may here occur, but that strangulation of the contained intestine is very unlikely to develop. Indeed, almost the only record of an operation for strangulated hernia in this region which we possess dates from as far back as 1738 (Ravaton's case), since in Mr. Edmund Owen's case[1] the rupture was neither strangulated nor obstructed. To Mr. Owen, so far as I can ascertain, belongs the credit of having performed the first operation for radical cure of a lumbar hernia. There is singularly little evidence as to the anatomy of this form, and what there is hardly confirms the current view that the presence of Petit's triangle accounts for the development of the hernial protrusion. No specimen had hitherto been shown at the Pathological Society; and I believe the one which I was able to exhibit there a few weeks ago, through the kindness of Dr. Stephen Mackenzie, is the only dissection of a lumbar hernia in existence in London. It was obtained from an elderly and rather emaciated man, who died (from other causes) in the London Hospital; the hernia was about the size of one's fist, was situated in the left lumbar region lying over Petit's triangle, and extending nearly from the last rib to the iliac crest, and it had existed for some years. It could be made to markedly diminish on pressure, was resonant to percussion, and had an impulse when the patient coughed. Gurgling could be detected when reduction was made, the swelling returning when the pressure was taken off. It caused the patient no pain, and hardly any inconvenience. I was naturally inclined to think that the hernia protruded through the orthodox triangle, but found, on dissection, that this was not the case, as the aperture, which would admit two fingers and was circular in shape, was really situated above and to the inner side of the triangle. The protrusion was, in fact, just outside the quadratus lumborum, through the transversalis aponeurosis and the latissimus dorsi, where the latter arises from the strong fascia covering the erector spinæ. Another interesting feature at the *post-mortem* examination was the absence of any peritoneal sac. The looseness of the attachments of the peritoneum in this region is well known, and is taken advantage of in certain operations, such as removing the kidney through a lateral incision. It was quite easy to make the peritoneum, by gentle pressure, protrude into the centre of the hernial tumour, and, as it was certain that it had habitually during life contained intestine, it is obvious that every time the latter was reduced the peritoneal sac must have returned with it into the abdominal cavity. Whether this feature has been present in other cases of lumbar hernia it is impossible to decide, but it is one rarely met with in connection with the more common varieties of rupture.



a, latissimus dorsi muscle; *b*, external oblique; *c*, Petit's triangle. The dotted circle in the hernia indicates the relative size of the aperture and its position with regard to Petit's triangle.

What part of the intestine was present during life in the hernia I was unable to decide; the descending colon lay just to the inner side of the aperture, but it is quite probable that some coils of small intestine really protruded. The fact that this can occur is proved by Ravaton's case (No. 3 in the appended list), and that omentum may form part of the contents was also demonstrated in Baron Larrey's case (No. 17). But it is no doubt true, as suggested by several writers on the subject, that the colon (ascending when the hernia is on the right side, descending when on the left) is the most usual part of the abdominal contents to protrude in this region.

With regard to the coverings of a lumbar hernia it might be expected that the outer part of the sac would contain some part of the internal oblique and the transversalis aponeurosis, for the muscular fibres of the latter cease externally to the usual site of the hernia. But such little evidence as we possess on the point does not confirm this view, for in the cases in which an incision has been made there is no mention of any muscular fibres being cut through. In my case the sac was really formed by a local hypertrophy of the subperitoneal fat which had insinuated itself through the aponeurosis and muscles, and had thus come to form a tumour the size of an orange in the subcutaneous tissue. I have demonstrated the mode of development of fatty herniæ in the femoral, inguinal, and umbilical regions by a series of preparations shown at the Pathological Society.[2] It is certain that this mode of origin of hernia (the protrusion of subperitoneal fat followed by the descent of a peritoneal sac, and sometimes of intestine) is more common than one would be led to suppose from the ordinary textbook accounts, and it was especially interesting to me to find the same thing occurring in the lumbar region. It is probable that the cases reported by Marmisse, Auzias-Turenne, Gosselin, and Marquez (Nos. 11, 15, 18, and 20) were of the same nature. Out of the twenty-nine cases of which I have abbreviated the records, sixteen (over 50 per cent.) developed spontaneously, or were attributed to strain, and all of them were in adults or elderly subjects. Males and females appear to be equally liable to lumbar hernia; seven cases of this class (of apparently spontaneous origin) were on the left side, four on the right.

In six cases (about 20 per cent.) the hernia followed in the track of a previous abscess or sinus, four in males and two in females. An ingenious suggestion has been made that the path which the protrusion takes may be determined by the course of a nerve, especially perhaps the lowest posterior lumbar branch, and this may apply to the original abscess, which leads later on to the hernia.

In five cases the hernia was due to wound or other severe traumatism of the loin, and two were said to be congenital. About the origin of the last form of lumbar hernia we are absolutely in the dark, for there is nothing in the development of the abdominal wall that explains the formation of a gap in the lumbar region.

For practical purposes we may say that the spontaneous form of lumbar hernia is confined to the period of adult life or old age, whilst that due to abscess or traumatism may occur much earlier.

It is quite erroneous to attribute to M. Petit the first account of lumbar hernia. It was mentioned by Barbette so long ago as 1650, and as seen in the list appended, several cases were reported before M. Petit's very imperfect record was published in 1783; nor, as already mentioned, is there strong evidence that in the majority of cases the protrusion occurs through the triangle named after the French surgeon. Mr. Edmund Owen states that in the child on whom he successfully performed a radical cure the protrusion was at this site; but in the two other cases, in which one can feel certain on the point (Braun's, No. 27, and my own), the triangle was not the seat of the hernia; in the former case it did not exist. As is well known, the latissimus dorsi and external oblique may be in close apposition at their attachments to the iliac crest; and Lesshaft, by examination of a considerable

[1] Reported in the Journal for May 5th, 1888.

[2] *Transactions* for 1886 and 1887.

Table of Cases of Lumbar Hernia.

No.	Sex.	Age.	Side.	Particulars.	Reference.
1	F	30	?	3″ from anterior superior spine, apparently through Petit's triangle, 8 cm. in diameter, contained intestine only, easily reducible; appeared during straining effort at age of 30 A similar triangular aperture could be made out on the other side (without hernia)	Hardy, *Bull de l'Acad. de Med.*, vol. 34, p. 124.
2	,,	?	Right	In making a false step the patient felt sudden pain in right loin, then vomiting came on from which patient died. Garengeot, after death, found tumour "the size of a nut" which suddenly disappeared with gurgling during taxis	Garengeot, *Traité des Opérations*, 1731.
3	,,	Middle-aged	Left	Pregnant, 3 weeks vomiting since tumour appeared. Ravaton operated, let out some pus, then ligatured some inflamed omentum and returned 3 coils of small intestine. Some days after the operation the intestines came out again with each dressing and patient made a lingering but complete recovery and gave birth to a child	Ravaton, *Traite des Plaies Armes à Feu*, 1750.
4	M	,,	Both	The patient had other herniæ. A hernia existed in each lumbar region, but no full particulars are given	Lachausse, 1759.
5	F	,,	Left	Pregnant woman. Hernia the size of a child's head, was usually reducible but became strangulated. It was, perhaps, operated on, but, unfortunately, no details are given as to this point	J. L. Petit, *Traité des Maladies Chir.*, T. ii, 1783.
6	M	65	Right	Hernia appeared suddenly after violent exertion, was subsequently reducible but symptoms of strangulation developed a few months later. However when the patient lay prone reduction could be effected, and a truss kept the hernia back	Cloquet, *Thèse sur les Hernies*, 1819.
7	F	?	Left	The patient after a fall complained of severe lumbar pain and was long treated for "pleurisy." Some 36 years later an abscess developed in the loin and a loop of intestine was exposed. Healing occurred	Van Hengel, *Gaz. des Hôpitaux*, 1848.
8	,,	?[1]	,,	Hernia of small size and easily reduced	Colles, *Dubl. Journ.*, May, 1857.
9	M	Middle-aged	,,	Developed after a severe blow on the loin, was the size of a fist, easily reducible, and was cured by the continued use of a belt truss. At first it gave rise to many errors of diagnosis	Nélaton, verbal communication to Baron Larrey.
10	,,	,,	Right	Similar case to last, the hernia appeared some little time after the injury	Chapplain, *Bull. de la Soc. de Méd. de Marseille.*
11	F	40	Left	Tumour the size of a fœtal head at term, apparently was a fatty hernia in origin but contained intestine, the skin was stretched over it	Marmisse, *Gaz. des Hôpitaux*, 1862.
12	M	?[1]	,,	Supposed to be a lipoma at the time he came under care at the age of 18. It was the size of an apple, swelled out when he coughed and could be reduced. A belt was applied	Basset, *Bull. de la Soc. de Méd. de Toulouse*, 1864.
13	,,	67	,,	Said to have originated in a blow on the loin with a fist, it gave but little trouble and was only partly reducible. A belt with metal pad was applied	Grynfeltt, *Montpellier Méd.*, T. xvi.
14	,,	46	,,	Followed the healing of a lumbar abscess which originated in a severe contusion of the part, could be wholly reduced and kept in place by a belt	Sistach, *Recueil des Mémoires de Méd. Militaire*, 3e Série, T. xix.
15	,,	Elderly	,,	Of three years' duration, small, was probably a fatty hernia though suspected to be omental, easily reduced	Auzias-Turenne, communication to Baron Larrey.
16	F	?	?	Was supposed to be an abscess and incised, a fæcal fistula being thus formed. Fortunately this ultimately healed	Professor Dolbeau.
17	M	28	Left	Was shot in the abdomen, the ball lodging in the left loin, an abscess formed, and after its cicatrisation a hernia developed close to the scar. It was at first mistaken for an inflammatory swelling, could be mostly reduced, but some omentum remained. After death this was confirmed by dissection, the opening was oval and just below the last rib	Larrey, *Bull. de l'Acad. de Méd.*, 1869, p. 160.
18	,,	54	,,	Size of a small orange, was largely composed of fat, but contained intestine at times in its centre, was accompanied by vague pains radiating from the loin. Considered to protrude through Petit's triangle	Gosselin, *Gaz. Méd. de Paris*, 1881, p. 125.
19	?	6	,,	Was noticed directly after a severe fall in which the head and right side of the trunk were injured, it appeared to contain intestine and was reducible. The child died on the second day from the head injuries, but no *post-mortem* was made	Decaisne, *Bull. de la Soc. de Méd. de Gand*, Jan. 1839.
20	F	Aged	,,	Oval, "the size of an egg," was largely fatty but contained intestine which could be reduced, caused at times vomiting and colic. Had been noticed five years before she came under care	Marquez, *Soc. Méd. du Haut Rhin*, 1869.
21	?	,,	?	Similar case to the last, the hernia gave hardly any trouble	Levy, *Gaz. Méd. de Strasbourg*, 1869, p. 275.
22	F	,,	?	The hernia became twice incarcerated causing sickness, etc., but it was reduced and a belt applied	Triponel, *ibid.*
23	F	6	Right	The size of a small orange, developed in the site of a previous abscess, hernia probably contained colon. Was cured by a radical operation in which the sac was pushed back unopened and the muscles sutured	Mr. Edmund Owen, BRIT. MED. JOUR., May 5, 1888.
24	M	4	?	Followed the healing of a spinal abscess. Hernia size of goose's egg, easily reduced	Campbell, *New York Med. Jour.*, 1874, p. 184.
25	,,	Adult	Right	Hernia 5″ in diameter, was said to come through Petit's triangle and to contain ascending colon, reducible	Coze, *Revue Méd.*, 1874, T. i, p. 407.
26	,,	,,	,,	Was mistaken for an abscess and incised, much smaller than in the last case, both were in strong artillerymen and were attributed to strain in riding, etc.	Coze, *ibid.*
27	,,	33	Left	Patient had suffered from spinal caries and double lumbar abscess. Hernia followed close to the discharging sinus on left side. After death the aperture was found to be through the latissimus dorsi, Petit's triangle not existing	Dr. H. Braun, *Langenbeck's Archiv*, xxiv, p. 213.
28	,,	24	Right	Formed in an aperture produced by necrosis of part of iliac crest, easily reduced, said to contain ascending colon	*Langenbeck's Archiv*, xxv, p. 908.
29	,,	65	Left	Originally a fatty hernial protrusion to inner side of Petit's triangle contained intestine which was easily reduced	Author, specimen in London Hospital museum.

[1] Congenital.

NOTE.—The ages given refer to the time at which the hernia was first noticed in each case.

number of bodies, determined the fact that Petit's triangle was nearly always wanting in young children, and in about every fourth adult man. In grown-up women, however, it is practically constant. To those interested in the literature of lumbar hernia, Baron Larrey's and Dr. Braun's papers may be commended as giving the most complete account of the subject.

It only remains to say a few words as to diagnosis and treatment. With regard to the former, the mistake which has occurred most often has been to suppose that the hernia was a chronic abscess, and in Dolbeau's case (No. 16) the intestine was actually incised and a fæcal fistula formed, which, however, ultimately healed. The absence of true fluctuation, the probable resonance, and the reducibility of the swelling, should serve to prevent such an unfortunate mistake. Other erroneous diagnoses that have been made are hernia of muscle, sarcoma, and hæmatoma; but it is unnecessary to do more than mention these. With regard to lumbar hernia, as is the case with most rare diseases, the knowledge of its possible occurrence is the first and the chief step towards a correct diagnosis. That in more than one case the swelling has been at first called a lipoma is not surprising, since it is probable that the hernia, in a fair proportion of cases, has actually consisted in a protrusion of the subperitoneal fat. At any rate, this view is supported by the example now brought forward.

With regard to treatment, the use of a well-made abdominal belt nearly always suffices, but one may safely conjecture that Mr. Owen's case will be followed by others in which a radical cure is effected by operation. It is a curious fact that Ravaton's case,

reported more than one hundred years ago, remains the only one in which there is a clear history of operation for strangulation, though one or two others have been recorded in which this complication has occurred.

CASE OF STRANGULATED LUMBAR HERNIA.

By G. H. HUME, M.D.,
Surgeon to the Royal Infirmary, Newcastle-on-Tyne.

The following instance of this rare form of hernia occurred in the practice of Drs. Skrimshire and Brumell, of Morpeth, with whom the case was seen on April 24th. The patient was a gentleman, 68 years of age, who had always been constipated, and suffered from frequent attacks of spasms. Latterly he had shown marked evidence of cardiac failure in an extreme blueness and coldness of hands and feet, and in dyspnœa on exertion. For fifteen years there had been a lump in his left side, usually about the size of a fist, but frequently becoming larger; it never altogether disappeared. On more than one occasion it had become enlarged and painful, with symptoms of obstruction.

When seen, the tumour was as large as a child's head. It occupied the left lumbar region between the crest of the ilium and the last rib. Symptoms of strangulation had been present for two days, and operation was urged, but consent for this was not obtained till the following morning.

A slanting incision was made from the crest towards the ribs. After the skin and subcutaneous tissues, a thin muscular layer—the anterior portion of the latissimus dorsi—was cut through. Immediately underneath was the sac. This when laid open was found to contain anteriorly a coil of small intestine, inflamed and granular; next another coil of small intestine, quite gangrenous; and most posteriorly the sigmoid flexure which had become twisted on itself. The sac communicated with the general peritoneal cavity by a slit-like aperture, and across the neck were stretched two tense cords, which were the agents in producing strangulation. When these cords were divided it was easy, after separating some adhesions, to return the sigmoid flexure and the most anterior portion of the small intestine into the peritoneal cavity. The gangrenous coil was resected to the extent of thirteen inches, the cut ends of the bowel being reunited by Lembert's stitches of fine silk; and this portion of the intestine also was replaced. The sac was then stripped out of its bed, and cut away at the neck. The margins of the peritoneal opening were united by a continuous suture of strong catgut.

The patient rallied fairly well, but sank somewhat suddenly twenty-four hours after the operation.

So far as the disposition of parts could be ascertained during the operation, it seemed to be as follows: The hernial protrusion had taken place in front of the quadratus lumborum, and had expanded but not pushed through the anterior portion of the latissimus dorsi. When the sac was separated from its bed it seemed to have lain between this muscular layer and the aponeurosis of the transversalis. The rupture did not appear to have protruded through the triangle of Petit, as is stated to be the rule in cases of lumbar hernia. Unfortunately, the opportunity was not allowed of ascertaining by *post-mortem* dissection the exact relation of parts.

The Lords Committee on the Water of Leith Purification Bill, which consists of the Duke of Westminster, the Earl of Arran, Lord Colchester, Lord Sherborne, and Lord Sandhurst, were considerably startled by the production in the committee-room of enormous hampers filled with rather strongly-smelling samples taken from the bed of the river Leith, and produced with the view of showing how dangerous such material was to the public health. The members of the Committee quickly arrived at the conclusion that they were likely to be equally dangerous to their own individual health.

Splenectomy in Spain.—Splenectomy was recently performed for the first time in Spain by Dr. Mas, of Valencia. The patient was a woman, the mother of several children, who had a hydatid tumour of the spleen as large as a fœtal head. The organ was completely removed, and the patient made an excellent recovery.

Bequest.—The late Mr. George Dawes, of The Hall, Smethwick, who died on August 18th, 1888, has bequeathed £1,000 to the Queen's Hospital, Birmingham.

EXPERIMENTS ON LIGATURE OF THE INNOMINATE BY A MEDIAN INCISION WITH REGARD TO THE FAILURE HITHERTO OF THE LIGATION IN CONTINUITY FOR ANEURYSM OF THE SECOND OR THIRD PART OF THE RIGHT SUBCLAVIAN.

By WALTER G. SPENCER, M.S.
(From the Laboratory of the Brown Institution.)

Aneurysms of the second and third part of the right subclavian artery are a cause of great suffering to the patient, and, except in a few cases in which medical treatment and direct pressure have been successful, they have terminated fatally.

Their occurrence is not infrequent. We find in the published *Surgical Reports of St. Bartholomew's Hospital* that in the ten years, 1877-86 inclusive, there were in the hospital 8 cases of subclavian aneurysm as compared with 35 cases of popliteal aneurysm, the average number of in-patients being about 6,250. Of the 8 cases, seven died in the hospital; the eighth was unrelieved. One case, an aneurysm of the third part, was injected with perchloride of iron (2 drachms) on three days in succession. A consecutive aneurysm formed and burst on the twelfth day after the first injection. Two of the cases were treated by amputation at the shoulder-joint. Mr. Holden removed the arm for an aneurysm of the second or third part of the subclavian, which was threatening to burst. The sac of the aneurysm became inflamed, and blood leaked from it into the tissues around. Death took place on the thirty-seventh day from pleurisy and bronchitis. The other case was under Mr. Willett's care whilst I was one of his dressers, and I have his permission to make use of the notes which I made at the time.

A man, aged 30, had noticed the disease, after a strain, about nine months before. Medical treatment was employed for six months, and then Mr. Willett tried to ligature the third part of the subclavian, it being hoped that the aneurysm was more axillary than subclavian. When the deep fascia was divided, a pulsating swelling bulged and filled the whole of the subclavian triangle, and, although some of the fibres of the scalenus anticus were also divided, it was found to be impossible to get to the proximal side of the aneurysm. The arm was then amputated at the shoulder. The wound healed; but the aneurysm increased slowly until the patient's death fifteen months after the operation. He suffered pain during all this period, and at times the pain was apparently agony. It was combated in part only by morphine, of which he took 2 to 3 grains daily before the end. The aneurysm had filled the whole round of the shoulder, from the scapula forwards; the clavicle had been fractured and eroded so that only the two ends remained, and the same may be said of the upper two ribs; the third rib was eroded to a less extent. The aneurysm had involved the upper part of the chest, pushing before it the thickened pleura. The innominate and the first part of the subclavian artery as far as the thyroid axis were quite healthy; at this point the aneurysm commenced.

The innominate is, as a rule, healthy in patients who have died from these aneurysms; but Mr. Holden's case was an exception, for the innominate was found to be atheromatous and dilated to the size of the aorta. Subclavian aneurysm is about three and a half times more common on the right side than on the left, and on the right side about six times more frequent on the third part than on the first.[1]

The ligature of the innominate has been employed because other means have failed to rid the patient of a painful disease and the certainty of a fatal termination. The operation has appeared to the surgeons who have undertaken it to be Hunterian in its characters, and the success of the Hunterian ligature to other arteries has led to its application to the innominate. I shall show in tabular form how nearly the operation has been a success, and that it holds out a considerable promise of cure when the result on the aneurysm is noted in those cases in which the artery has been tied.

[1] Poland, "Report on Subclavian Aneurysm," *Guy's Hosp. Rep.*, vols. xv, xvi, xvii. Barwell, *Ashhurst's Internat. Encyclop. of Surg.*, 1883, vol. iii, p. 505, art. "Aneurysm."

It is important to consider the opinion arrived at by the surgeons who themselves have done these operations. Many of those who have tied the first part of the subclavian agree with Liston,[2] who had ligatured that vessel twice, but would never do it again. Those, on the other hand, who have tied the innominate, although unsuccessfully, state that it is a good operation, which they would undertake again, and which they believe will eventually succeed.

I propose first to describe the method by which I have succeeded experimentally in ligaturing the innominate; to place in a tabular form the more important of the cases which have been operated upon; and, thirdly, to draw conclusions from these two series of facts.

Experiments.—Macaque monkeys (macacus sinicus and macacus rhesus) have been used because their arteries appear to bear the same relation to one another as in man, and the relation of the arteries to the surrounding parts is the same. The ligature of the innominate in these monkeys may be exactly imitated on a still-born fœtus at term.

Method.—Ether was used as the anæsthetic, and 5 per cent. carbolic acid and the spray freely throughout. The ligature of Chinese twist silk which had been kept in 5 per cent. carbolic acid was boiled in that solution before being used. The wound was made as if for deep tracheotomy—a vertical incision in the middle line down to the upper border of the sternum, and, at the lower end of this, a transverse one through skin only in order to obtain retraction of the muscles more easily. The deep fascia between the two sterno-mastoids was divided in the middle line, the sterno-hyoid muscle and the sterno-thyroid likewise separated along the middle line from the muscles of the opposite side. These muscles were now retracted so as to get behind the sterno-thyroid, whilst the fascia in front of the trachea and the inferior thyroid veins were not touched. Behind the sterno-thyroid, at its outer border, is the carotid sheath, which was opened on its inner side about half-an-inch above the origin. A ligature was passed round the artery and tied tightly. The carotid artery then forms an exact guide to the innominate by following its inner side until it reaches the right border of the trachea. The sheath was separated sufficiently at this point to see that the ligature was placed below the point of bifurcation of the carotid and subclavian. The fascia between the artery and the sternum was hooked forwards. In following along the inner border of the carotid to the innominate no structure is met with, and no vessel divided. The left innominate vein was never seen, it lies below; and, if it crossed higher up, it would be in a plane of fascia anterior to the artery, and might be hooked forwards against the sternum. Of course the depth of the wound was behind the manubrium, and the instruments had to be sloped, and the light to come from beyond the head. The ligature was passed from without inwards and tied tightly. On releasing the retracted muscles they came together, so that no cavity was left in the deeper parts of the wound. The skin was exactly united, and a dressing of carbolic gauze and collodion applied.

Three experiments were made precisely after this method. The animals presented no shock. The wound healed by first intention before the animal pulled the dressing off. All that was found after the operation beyond the loss of pulsation in the right carotid and right subclavian was that two of the three were disinclined to use the right upper limb for some time after, but the right upper limb appeared to be as strong as the left. The right face and upper limb were equally warm with the left. The animals were killed at five weeks, ten weeks, and twelve weeks respectively after the operation, and the first one was injected. The result in the three was found to be identical. There was an almost imperceptible scar in the skin, the intermuscular septum consisted of a thin linear scar, which contained a little blood pigment, and was connected with the scar tissue around the arteries. There was a spindle-shaped mass of scar tissue extending from below the innominate ligature to above that of the carotid, surrounding the bifurcation and the commencement of the subclavian. This mass was united to the sheath of the right sterno-thyroid and sterno-hyoid muscles on their under surface. The tissues around were normal; the left innominate vein was below and anterior, the internal jugular and the vertebral external. The sheath of the pneumogastric nerve was adherent to the scar tissue opposite the level of the carotid ligature, but the nerve was quite free; as it crossed the subclavian artery it was entirely beyond the scar. The recurrent laryngeal nerve and the sympathetic were normal. The terminal filament of the descendens noni running in the carotid sheath, and in one case a cardiac branch of the sympathetic, were alone the structures involved in the scar. One monkey was injected from the abdominal aorta. The anastomosis was complete; the right upper limb as it happened was rather better injected than the left. The injection only entered the commencement of the innominate, the carotid to a short distance below its bifurcation, and the subclavian to a point just internal to the origin of the vertebral. The rest of the arteries were filled with the injection. The spindle-shaped mass of scar tissue was firm, the silk ligatures could be felt through it in the same position as when applied, firmly occluding the arteries. The innominate was slit up. It was found to be firmly closed by scar tissue on the proximal side of the ligature at the place where the internal coat had been cut through. Below this was a decolorised clot firmly adherent to the walls, which lower down became looser and coloured, tapering towards the commencement of the artery. The subclavian at its origin was closed by scar tissue, outside which was a decolorised firmly adherent clot, and outside this a looser coloured clot tapering and ending just before the origin of the vertebral. The carotid on the distal side of the ligature was closed by scar tissue, and above this was firmly plugged by a decolorised clot for half its length, beyond which until near its end it contained coloured clot.

In another monkey I varied the method by using a catgut ligature which had been kept in carbolised oil, and was soaked for twenty minutes in 5 per cent. carbolic acid, but only the innominate was tied, and not the carotid. The animal died on the seventh day of hæmorrhage. The ligature had perfectly occluded the artery on the proximal side; there was a small hole on the distal side just opposite the bifurcation, and both carotid and subclavian were patent. This is exactly the way in which so many of the patients operated upon have died. The cause of the hæmorrhage must have been either the catgut ligature, which I took all care to render aseptic, or it must have been due to the carotid being left patent, and a flow of blood from the subclavian into the carotid close to the distal side of the ligature have set up the ulceration in the vessel wall.

In another monkey I tied the carotid tightly, but the innominate was compressed by the ligature without cutting through the internal coat. The circulation soon became fully re-established in the brachial, causing a return of pulsation. On examining the artery, the condition as regards the scar around the ligature was the same as in the three cases above described, but the innominate and subclavian freely communicated, a groove on the outer coat of the innominate, at the site of application of the ligature, being apparent, but the internal coat was uninjured. There was no clot in either innominate or subclavian, whilst the carotid was closed from its commencement.

Of the cases of ligature of the innominate artery for subclavian aneurysm, eight terminated fatally within the first few days, the cause of death apparently being septic inflammation, and in one cerebral apoplexy in twenty hours. Of the case referred to by Dupuytren we only know that it died of hæmorrhage. The rest of the cases I have placed in a tabular form, *q.v.*

I wrote to Professor Durante, of Rome, and he most courteously replied to me in English, and I transcribe the letter as I received it, since the case is not yet known.

"Rome, January 9th, 1889.

"Dear Sir,—I have thought best to send you the history of the case as it appears in the records of the clinic. Giovanni Savini, *employé*, aged 45, from Viterbo, presents in the right supra-clavicular region a tumour of the size of a large apple, limited externally by the external margin of the trapezius, internally by the internal margin of the sterno-cleido-mastoid, and below by the clavicle. The tumour pulsates, is covered by healthy skin; when touched, it fluctuates, and is somewhat reducible; the pulsation is expansive and isochronous with the cardiacal beats; to each pulsation corresponds a sharp prolonged *souffle* in diastole, followed by a somewhat lengthy pause. The corresponding radial pulse gives 80 movements, the left 88. The right arm, as regards development and nutrition, is perfectly identical with the left. The man has an excellent constitution, the thoracic and abdominal organs are very healthy; the heart is within its physiological limits, and presents no appreciable increase in its cavities. In so much as regards remote anamnesis, we have nothing neither directly nor collaterally; no slight illness that has direct relation to the actual disease. About two years ago the patient began to note a tingling in the right thumb; the tingling gradually spread to the other fingers, the forearm, the arm, and the shoulder; the patient felt a

[2] *Practical Surgery*, fourth edition, 1846, p. 201.

Ligature of the Innominate.

Name, Place, and Date of Operation.	References.	Sex.	Age.	Incision.	Vessels Tied.	Material, Position, and Date of Falling Off of Ligature.	Course of Wound.	Termination.	Result of Ligature on the Innominate.	Result of the Ligature on the Aneurysm.
Mott, V., New York, May 11th, 1818	Mott's *Velpeau.*, 1851, vol. ii, p. 307	M	57	Division of right sternal muscles, angular skin incision	Innominate	Round silk, ½ in. below bifurcation, 14th day	Suppuration; hæmorrhage on 9th, 23rd, and 26th days	Death, hæmorrhage, 26th day	Neither proximal nor distal end occluded	Shrunk to small size, so that no deformity of shoulder; several coagula in the sac (See plates of tumour and skin incision; also of the parts after death).
Graefe, Berlin, March 5th, 1822	Letter to Macleod from Wagner, *Lond. Med. and Phys. Journ.*, 1823, xlix, p. 475; Graefe and Walther's *Journ.* 1822, Bd. iii, Hft. iv, p. 599; *op. cit.*, 1825, Bd. iv., Hft. iii, p. 587	,,	30	Inside sterno-mastoid, and outside sterno-hyoid and sterno-thyroid; carotid followed	,,	About 14th day	Suppuration; one hæmorrhage after 14th day; sac suppurated; spat blood and pus	Death, exhaustion, 68th day	Proximal occluded by clot from origin upwards	Aneurysm apparently cured.
Bland, Sydney, March 26th, 1832	*Lancet*, 1832-1833, vol i, Oct. 20th, 1832 p. 97	,,	31	Sterno-mastoid divided, sterno-hyoid and sterno-thyroid separated	,,	Double thread, tight, close to bifurcation	Suppuration; hæmorrhage 17th and 18th days	Death, hæmorrhage, 18th day	Solid plug for ⅛ of proximal end; carotid also firmly occluded; hæmorrhage from distal side of ligature	On 3rd day tumour reduced ⅓; no pulsation until 17th day, then some return of pulsation, apparently with inflammation of the aneurysmal sac.
Lizars, Edinburgh, May 31st, 1837	*Lancet*, 1837, vol. ii, p. 445, 602	,,	30	Sterno-hyoid and sterno-thyroid divided, not sterno-mastoid	Innominate and thyroidea ima	17th day	Suppuration; hæmorrhage 19th, 20th, and 21st days	Death, hæmorrhage, 21st day	Clot proximal short distance; carotid clot for short distance; subclavian patent; hæmorrhage distal side of ligature	Aneurysmal tumour collapsed and full of coagula, as also the subclavian beyond the aneurysm.
Gore, Bath, Sept. 24th, 1856	*Lancet*, 1878, vol. ii, p. 119	,,	52	Mott's incision	Innominate	Hemp	Suppuration; hæmorrhage 17th day	Death, hæmorrhage, 17th day	Firm clot, proximal partially plugging artery for ⅜ in.; carotid plugged up to bifurcation; ligature had partially cut through the artery	Fusiform aneurysm, subclavian; axillary and upper part of brachial much reduced in size, filled by firm coagulum.
Cooper, San Francisco, Sept., 1860	*Gaz. Hebdom.*, 1861, p. 612	,,	—	Mott's + removal of inner end of clavicle and upper part of manubrium	,,	—	Suppuration; hæmorrhage 32nd, 33rd, and 34th days	Death, hæmorrhage, 34th day	Hæmorrhage believed to be on distal side	—
Smyth, New Orleans, May 15th, 1864	1st part, *Americ. Journ. Med. Sc.*, n. s., vol. lii, 1866, p. 280; 2nd part, Thomson, *Dublin Journ. Med. Sc.*, 1876, 3rd series, vol. lxii, p. 482	,,	32	Mott's	Innominate and carotid	Innominate, ¼ in. from bifurcation, carotid 1 in. from origin, 17th day	Suppuration; hæmorrhage 15th, 16th, 17th, 34th, and 52nd days; ligature of vertebral 52nd day	—	In 1875 innominate received injection to point of ligature, there reduced to bundle of fibrous tissue; subclavian impervious to origin of inferior thyroid	No trace when shown at Medical Association 5 years later; recurred in 1874; ligature of int. mammary October 4th; sac opened and ligature attempted on March 5th, 1875; death April 6th; aneurysm supplied by intercostals through subscapular and axillary.
Bickersteth E. R., Liverpool, May 7th, 1868	*Med. Chir. Trans*, vol. lvi, 1873, p. 129	,,	40	,,	Innominate	Direct compression, May 5th, ligature above and below point of compression	Suppuration; hæmorrhage 7th and 8th days	Death, hæmorrhage, 8th day	From aorta to ligature filled with firm, closely-fitting plug of fibrin; hæmorrhage distal side of highest ligature	Aneurysm diminished in size; quite filled by firm laminated clot; subclavian beyond aneurysm, and first part of axillary nearly, but not quite, filled with clot; plate given.
Mott, A. B., New York, Aug. 13th, 1868	Letter to Wyeth, Prize Essay, *Trans. Americ. Med. Assn.*, vol. xxix, 1878, p. 168	,,	—	,,	Innominate and carotid	20th day	Hæmorrhages	Death, hæmorrhage, 23rd day	—	Aneurysm burst into pleural cavity.
Thomson, Dublin, June 9th, 1882	BRIT. MED. JOURN. 1882. vol. ii, p. 722	,,	29	,,	Innominate	Broad ligature (ox aorta) applied with moderate firmness, 18th day	Suppuration; hæmorrhage 30th and 38th days	Death, hæmorrhage, 42nd day	Chink not occ. by ligature through which blood passed; coats not divided; perforation ¼ in. on distal side of ligature; subclavian and carotid blocked by clot	Laminated clot, passive clot in process of becoming laminated; cavity in centre contained ½ oz. of blood.
Banks, W. M., Liverpool, Feb. 26th, 1883	Jacobson's *Operat. of Surg.*, 1889, p. 537; Proc. Med. Chir. Soc., BRIT. MED. JOURN. 1885. vol. i, p. 230; also letter to author	,,	50	,,	Innominate and carotid	Kangaroo tendon, broad, not dividing coats	Healed by first intention	—	*Post mortem*; innominate patent	Pulsation commenced to return the same evening; aneurysm rapidly increased; ligature of 1st part of subclavian 67 days after; on 4th day aneurysm small, hard; no pulse. (Death; hæmorrhage at subclavian ligature on 37th day.)
May, Birmingham, March 27th, 1886	*Lancet*, 1886, vol. i, p. 1064	,,	30	,,	Innominate	5 or 6 strands of catgut about middle of artery, not dividing internal coat	Aseptic until hæmorrhage 14th, 15th, 16th and 17th days	Death, hæmorrhage, 18th day	Chink not occluded by ligature; hæmorrhage from both sides of ligature	Aneurysm very large; became smaller and harder after ligature; small amount of laminated clot; large amount of passive clot, but none where branches of subclavian opened.
Durante, Rome, Mar. 25th, 1887	Letter to author	,,	45	,,	Innominate, carotid and vertebral	—	Aseptic then septic hæmorrhage 12th and 15th day; cerebral embolism 15th day	Death	Hæmorrhage distal side of ligature	Saccate aneurysm collapsed, containing coagula of various consistence.

particular sensation of weight in the arm, and an unusual weariness; then he felt vague pains, increasing daily in frequence and strength; the pains took a shooting character, spreading from the subclavicular region to the corresponding thumb and index. His doctor's diagnosis being "writers' cramp," he tried, without benefit, the appropriate remedies. Only a month ago the patient noticed the gradual development of the tumour, in consequence of which he was received into this institution on March 20th, 1887.

"*Diagnosis.*—Saccate aneurysm of the right subclavian between the scaleni.

Treatment.—March 25th. Ligature of the innominate trunk, of the vertebral and primitive carotid. Classical incision of Mott. Reunion of wound by first intention, with a small drainage tube at the inferior angle of the wound. March 26th. All proceeds in the most satisfactory manner. No circulatory disturbance; the right arm is indolent, the temperature normal; no general reaction. March 29th (fourth day of operation). The first dressing is changed, the line of incision is completely united; a small quantity of serous secretion exudes from the drainage tube; the drainage tube is shortened, the temperature continues to be normal. April 3rd. The dressing is changed for the second time. The wound is perfectly united. The drainage tube is removed. April 6th. The temperature rises to 39.5° C. in the evening. On removing the dressing, dense pus, coloured with blood, is seen exuding from the drainage aperture. It is disinfected, and the drainage tube replaced. April 7th. The wound is dressed morning and evening, and disinfected with corrosive sublimate. In the evening the temperature rises to 40.1° C. April 8th. In the morning, hemiplegia of the right side, which disappears in half an hour, leaving paralysis of the facial and tongue. After a little while, a remarkably full tracheal *râle* begins. In the afternoon, blood flows from the drainage tube, and is checked by a moderate but prolonged digital pressure. The temperature is lowered, sensation is diminished. The tracheal *râle* is much increased during the night, and most intense the following day. April 9th. Death in the afternoon (sixteenth day of operation).

"From the microscopical examination, made twenty-four hours after death, resulted: Nothing remarkable in the abdominal organs; slight hypertrophy of the left ventricle; diffused fatty degeneration of the great vessels. Near the ligatures the arterial walls appear almost completely dried, without the slightest traces of vasal phlogistic reaction. A small coagulum, near the common carotid, above the ligature. The aneurysmal, saccate, collapsed tumour contains coagula of various consistence. The brain presents an embolic softening of the left caudate nucleus.

"Trusting, dear Sir, that the above will supply you [with the information you desire, I remain, yours faithfully,

"FRANCISCO DURANTE."

From the foregoing experiments and cases I wish to draw three conclusions.

1. *The Incision, and the Characters of the Wound.*—Mott's incision has been followed more or less closely in nearly all the operations, and the insertions of the sternal muscles into the sternum and the inner part of the clavicle have been divided to a greater or less degree. The divided muscles retract, and they leave a cavity when the skin is closed, and since it is impossible to keep in apposition the deeper surfaces of the wound by pressure, a cavity is left. This fills with blood-clot, and from the cut ends of the muscles much oozing takes place. The record of the cases shows how easily the blood-clot breaks down when a sinus has been kept open too long by the constant drainage of discharge from the edges of the cut muscles. In this way septic changes gain access to the ligature. Now in the ligature of every other artery division of muscles is carefully avoided from the above reason, and the operations for the ligature of other large vessels are so planned as to allow muscles superficial to the artery to be retracted, and not divided. The ligature of the common and external iliac forms no exception, because the retracted peritoneum returns and covers the site of the ligature, and so no cavity is left, to say nothing of the important difference in drainage in the two cases. The wound which has been made for ligature of the innominate resembles rather an amputation wound, with the further disadvantage that the ligature is placed at the most dependent part. Therefore the great necessity appears to be that the ligature should be completely buried by immediate union of the depths of the wound.

I have described in my experiments the application of the ligature at the bottom of a wound in which no vessel had been divided; the wound was left perfectly dry, and then the muscles returned to their position, so that there was left neither cut muscles to cause oozing, nor cavity for the discharge to collect in. I need hardly say that I could not use a drainage tube in monkeys, because I was obliged to aim for healing by the first intention under a single dressing. This incision, indeed, has been used in two cases; Pirogoff[3] in 1856 used it, and the ligature was applied correctly; unfortunately, the patient died in forty-eight hours of acute septic inflammation. Professor Annandale[4] also used a median incision for the application of compression by means of a drainage tube; a sinus was formed by the drainage tube, and fatal hæmorrhage took place from the point on the artery where the drainage tube had been in contact.

The point for application of the ligature is immediately to the right of the trachea; of course this point is behind the manubrium, but if a line be drawn along the upper margin of the manubrium and the clavicle, the shortest distance from such a line to the site of ligature must be by the median incision. Even with Mott's incision it is necessary to first find the carotid as a guide to the innominate. It is not unimportant, further, that the median incision is at the greatest distance from the aneurysm, the inner part of which has encroached upon the wound made by Mott's incision in some cases; for instance, in Mr. May's case the nearness of the aneurysm prevented the union of all the wound by suture. The median incision avoids the use of a drainage-tube except superficial to the muscles; in so many of the cases which have lived the longest the wound has been reduced to a sinus, not draining well, and hence the hæmorrhage. Certainly Smyth's case was done by Mott's method, but it lacked one element of success, namely, that it did not strike out a path which might safely be followed by those coming after; for in his case distal hæmorrhage took place, from which the other cases had died, but his brilliant ligature of the vertebral saved the patient. Mr. Banks has been the first to obtain primary union by Mott's incision, but unfortunately the artery was not tied sufficiently tight to obliterate the vessel, so that as far as the effect on the subclavian aneurysm, the innominate artery cannot be said to have been ligatured. Neither by Mott's nor the median can the artery be tied if it is abnormally short.

2. *The Ligature.*—The ligature must be aseptic. The cases all show that a ligature which has to come away, such as might be applied to the femoral or carotid, cannot be used for the innominate. A silk ligature can be rendered more thoroughly aseptic than any other, in the way which I have described, without injuring its strength, and being aseptic, it will remain quiet in position without relaxing. The ligature should be drawn tight to divide the internal coats. All recent experiments agree in showing that the more antiseptic a ligation, the less the amount of coagulum, and the more has dependence to be placed upon the scar tissue which ensues on dividing the internal coat for closing the artery. The broad ligature, not dividing the internal coat, is a refinement which has been successfully employed for ligaturing arteries that were quite easily tied previously by the older method; but the object in running the risk of ligaturing the innominate is that the artery should be firmly secured once and for all. From the position of the vessel, it is impossible to cut down upon it and tie it again if the first does not succeed. Further, in the three cases of Professor Thomson and of Messrs. Banks and May, the vessel was not fully ligatured. In Professor Thomson and Mr. May's case a chink had been left between the folds through which blood passed, and both patients died from hæmorrhage at the site of ligature; and in Mr. Banks's case the aneurysm was unaffected, and continued to increase, the innominate not being closed; so that, neither as regards the broad ligature itself, nor the result on the aneurysm, does it appear to be superior even to the old silk ligature which had to come away, for in using this latter the innominate was firmly closed, and the aneurysm in process of cure in many of the cases if distal hæmorrhage had not carried off the patient. Mr. Ballance's method may be a better one still.

3. *The Carotid should be Tied in Addition.*—A thrombus is then formed in the proximal end of the carotid, which extends to the bifurcation, and thus aids a thrombus in forming in the first part of the subclavian as far as the vertebral; otherwise the blood flow will pass from the subclavian to the carotid close by the distal side of the ligature of the innominate, and so the operation will lack one of the important characteristics of a Hunterian ligation.

[3] Pirogoff, *Grundzüge der Kriegschirurgie*, Leipzig, 1864, s. 459; *Klinische Chirurgie*, Heft iii, s. 43.

[4] Annandale, JOURNAL, 1886, vol. i, March 13th.

The ligature of the vertebral from Mott's incision must only make the wound deeper still, and if the deeper parts of the wound do not heal by first intention, the ligature of the vertebral in addition will not arrest hæmorrhage from occurring. Smyth ligatured the vertebral fifty-four days after the innominate, but he did so by the usual operation for the ligature of that artery, which does not divide muscle nor leave a cavity. The arteria thyroidea ima is said to be present in one in ten cases. It was present in Lizars's case, and must of course be tied if it arises from the innominate or the proximal side of the ligature.

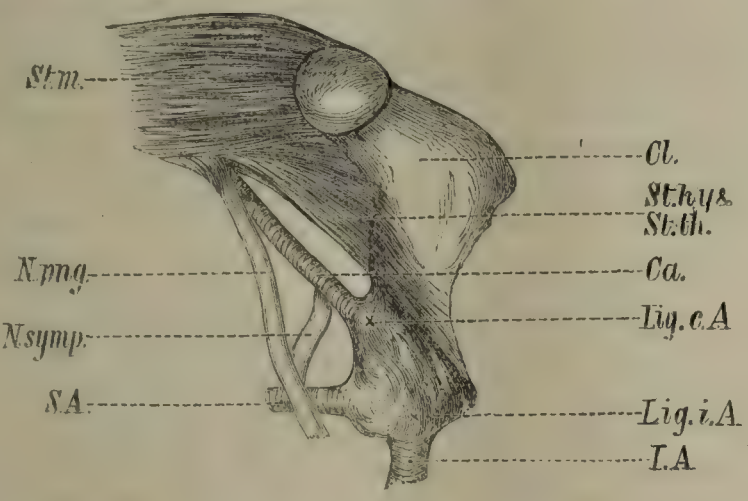


Fig. I.—The photograph has been made from the right side. The clavicle was cut through, and also the first rib; the inner third of the clavicle was then drawn across towards the left with the manubrium, the veins were cut away. The under surface of the sterno-mastoid attached to the inner third of the clavicles is exposed, also the under surface of the sterno-hyoid and sterno-thyroid muscles. The innominate artery coming up from the thorax enters the mass of scar tissue from which the subclavian and the carotid pass. The pneumograstric and sympathetic, where in contact with the subclavian artery, are quite free. The position of the ligatures buried in the scar tissue is marked. The scar tissue is attached to the under surface of the sterno-hyoid and sterno-thyroid muscles, and is drawn upon somewhat by the pulling over of the clavicle.

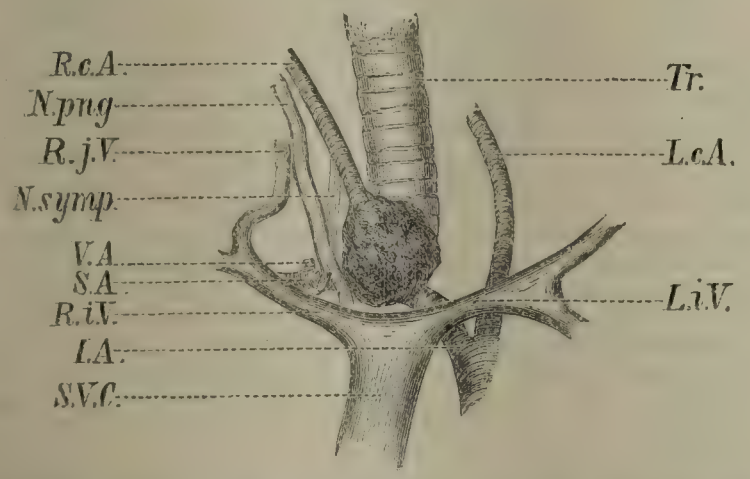


Fig. II.—The photograph is also from the right side. The upper part of the manubrium, with the sterno-hyoid and sterno-thyroid, was turned up and detached from the scar tissue closely adherent to the under surface of the muscles. The innominate artery is seen to be crossed by the left innominate vein some distance below the site of ligature, the vein being quite free. Also the internal jugular, the pneumogastric and the sympathetic nerves are free where they are in contact with the subclavian. The innominate enters the scar tissue and the carotid and subclavian leave it. The subclavian is to be seen as far as its vertebral branch.

St.m., sterno-mastoid; Cl., clavicle at its junction with the manubrium.
St.hy&, sterno-hyoid; St.th., sterno-thyroid; Tr., trachea.
N.png., pneumogastric; N.symp., sympathetic.
I.A., innominate; Lig.i.A., point of ligature of innominate.
S.A., subclavian artery; V.A., vertebral artery.
R.c.A&L.c.A., carotid, right and left; Lig.c.A., ligature of carotid artery.
R.i.V., right internal jugular vein.
R.i.V. and L.i.V., right and left innominate veins.
S.V.C., superior vena cava.

It has been often argued before that such experiments do not apply because animals differ from men, although no definite difference is assigned. A former opponent of the application of experiments on the ligature of arteries in animals to man supported his argument by saying that the kidney or spleen could be removed in animals but not in man. The successful experiments on animals in these last two instances have directed the way to successful extirpation of a diseased kidney or spleen in man. The monkeys were certainly young adults in perfect health, but amongst the thirteen cases in the table, six range between 29 and 32 years.

Smyth's case may be said to have been cured for a time, for five years after the operation he was shown at a medical association meeting, and it was generally agreed that the cure was complete; however, the aneurysm did recur at the end of ten years. Besides this, we have the cure progressing in other cases at the time of the patient's death. When we think of the hopeless character of these subclavian aneurysms, and their most painful course, there can be little doubt that other surgeons will, in the future, be influenced to repeat the operation by the prospects of cure which former operators have almost attained.

For success the *sine quâ non* must be ligature completely buried, to get which I believe I have shown that three things are necessary:

1. A median incision, not dividing muscles, and not requiring a drainage tube in the depths of the wound.
2. A perfectly aseptic ligature, drawn tightly.
3. The ligature of the carotid at the same time.

REPORTS

ON

MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

GLASGOW WESTERN INFIRMARY.

A CASE OF FŒTID EMPYEMA IN WHICH THE PUS WAS TEEMING WITH DEAD MICRO-ORGANISMS: RECOVERY AFTER REMOVAL OF A PIECE OF RIB AND FREE ABLUTIONS OF THE PLEURAL CAVITY.

(Under the care of Mr. A. Ernest Maylard.)

[Reported by Dr. Robert Anderson.]

The patient, a man aged 27, was admitted into the Western Infirmary on March 1st, 1889, suffering from breathlessness and cough, accompanied with pain. His present illness commenced about seven weeks previously with slight stitch on the right side, which was worse on taking a deep breath. This pain remained for two or three days, and then passed off, but returned about a week afterwards. The pain was in the same place, but much more intense. He remained in bed for three weeks, and at the end of that time he felt well. He then went out, and on the following day all his symptoms returned worse than before. He took to his bed again, where he has remained ever since. During his second and third attacks he was unable to lie on his right side on account of the pain and oppression in breathing. He gained most ease by being propped up in the sitting posture. His family history is good, and he himself has always enjoyed fairly good health.

Present Condition.—The patient is pale and thin. His breathing is rapid (40 per minute). He can lie only on the right side; if he tries to lie on his back or on his left side, he becomes very breathless. Pulse 134, soft. Tongue dry, very red, smooth, and glazed. The breath has a peculiar sweetish odour. His bowels are very loose, moving four or five times a day. Heart normal. The right lung is dull up to the clavicle. Behind, the dulness extends up to the spine of the scapula; above this the note is clear. The vocal fremitus is well marked in the upper half, and even at the base there is a faint trace. On the left side the fremitus is very marked. Respiratory murmur is very faint at the base, tubular in the upper part. Vocal resonance weak at the base, exaggerated at the upper part. Right side at nipple level measured 18 inches; left, 17¼ inches. Movement of right side almost in abeyance.

On March 2nd the chest was aspirated, and 83 ounces of a very fœtid purulent fluid removed. The temperature has always been over 101°, but it varies very little in the morning and evening. Urine contains no albumen.

March 8th. This morning Mr. Maylard made an incision into the right side of the chest in the lateral region, and then resected a piece of one of the ribs. About 50 ounces of excessively fœtid fluid were removed. A large double drainage tube was inserted, and the cavity thoroughly washed out with carbolic solution (1 in 100). The wound had to be dressed twice during the day after the operation. Patient has had very profuse sweating since the operation.

March 9th. Dressed twice to-day. The discharge is principally serous. There is much less odour from the discharge than before.

March 10th. Pleural cavity washed out twice to-day. Patient showing signs of improvement. Temperature lower than before the operation—indeed, is practically normal.

April 18th. Since last date the patient has continued to improve. He takes his food well, and is getting fat. The cavity is closing rapidly.

May 6th. Wound nearly healed; only the slightest amount of discharge. Patient dismissed to-day, and made an out-patient.

May 14th. Patient healthy and strong; wound all but closed.

REMARKS BY MR. MAYLARD.—My reason for recording this case is not so much for the clinical aspect which it presents as for the interest attending the bacteriological investigation of the pus. The pus removed, as the report states, was excessively fœtid, and, indeed, I may say I never remember smelling pus more offensive. I collected some of this pus in one or two sterilised glass tubes, and took them to my laboratory for cultivation experiments. Some cover-glass preparations were made and stained by Gramm's method. The pus so examined showed abundant presence of micrococci. Agar-agar plate cultivations were made on two consecutive days, but no development ensued. Thus, while the microscope revealed the presence of crowds of micro-organisms, the cultivation experiments showed that they were all dead. It would seem as if the microbes had been the cause of their own death; that is to say, they had multiplied so rapidly as to exhaust the soil upon which they had to live, and had produced products which were poisonous to themselves. The result of the investigation struck one with some little surprise. It is, perhaps, hardly what one would expect, that a patient should survive with such a quantity of putrid material in his body, in which even microbes were unable to live.

REPORTS OF SOCIETIES.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

FRIDAY, JULY 5TH, 1889.

J. W. HULKE, F.R.S., President, in the Chair.

Monocular (?) Suppurative Iritis.—Dr. ROCKLIFFE (Hull) read notes of this case occurring in a girl, aged 8. For a week before admission she had suffered from "acute iritis," without lachrymation or photophobia. The family and personal history were exceptionally good. When examined the right eye had no perception of light; there was acute iritis, the iris being studded with nodules, varying in size, their apices yellowish, their bases surrounded by bright red vessels. No hypopyon; cornea clear; eyeball not tender; T + 1. In a week all pain had disappeared, and did not recur during the subsequent history of the case. Three weeks later the nodules had increased considerably in size, and two ciliary staphylomata had appeared. A month after this date the iris was becoming atrophic with T − 1; and two months later the staphylomata had entirely gone, and the iris was much disorganised; T − 2. The eyeball was excised six months after the first visit, when it was somewhat shrunken. On section there was found to be total posterior synechia, with thickening of iris and ciliary body, degeneration of lens and detachment of retina. Dr. Brailey examined the specimen microscopically, and reported: "Rounded collections of cells, clearly new growth, probably inflammatory, on the inner aspect of the iris and ciliary body, and in and behind the base of the iris; to a less degree in the remainder of the iris. The central cells of these collections exhibited signs of inflammation, but an absence of the characteristics of tubercle. One small collection was present in the choroid. He considered that the case was one of irido-cyclo-choroiditis of a peculiar nature, with many of the features met with in sympathetic inflammation." Dr. Rockliffe referred to cases reported by Hutchinson, Eales, Nettleship, Lang, and Benson, and thought the evidence was more in favour of inflammatory new growths than tubercle or syphilitic gummata.—Mr. HULKE understood that the speaker regarded the lesion as an inflammatory neoplasm. He inquired if bacilli had been searched for.—Dr. ROCKLIFFE replied that no search had been made for micro-organisms.—Dr. W. J. COLLINS said that a case he had put on record closely resembled the one under discussion; it occurred in one eye only; the exudation was plastic in character, nodules of pinkish-grey lymph being present. Vision was not greatly damaged and the case did not go on to suppuration. He had ventured to name it "granulation iritis." Mr. Hutchinson, in the 8th volume of the *Moorfields Hospital Reports*, had recorded five cases occurring in children above the age of infancy; in not one was syphilis excluded, and in more than one it was distinctly proved to exist. He believed that some cases were due to overlooked traumatism.—Dr. MULES thought it was by no means too late to seek for bacilli if any material were still available.—Dr. ROCKLIFFE said there was no history of injury, and he had no material at hand for a bacteriological examination.

Cavernous Angioma of the Orbit.—Dr. EMRYS JONES (Manchester) communicated this case. The patient was a girl, aged 18, who first came under observation in June, 1884, with protrusion of the left eyeball, which had been slowly increasing for nine years. The proptosis then measured an inch and a half. An elastic tumour could be felt enveloping the eyeball. There was no pulsation, no fluctuation, no pain. Downward movement of the eye was lost; other movements diminished; pupil reacted to light; optic nerve pale; V = 14 J. On July 17th ether was administered, the globe enucleated, and a cone-shaped tumour contained in a capsule scooped out. The optic nerve was found imbedded along the inner aspect of the growth, which measured 8 centimètres × 7 centimètres × 5 centimètres. Microscopically the growth consisted of an open sponge-like framework of fibrous tissue, with numerous round, sinuous, irregular cavities filled with blood. Sections of the growth were shown.—The PRESIDENT spoke of a specimen of cavernous angioma in the Moorfields Hospital Museum, which was removed from the orbit of a young boy by the late Mr. Critchett. In that case there was no palpable pulsation, but the proptosed eyeball could easily be pressed backwards into its normal position, showing that there was no solid mass behind it.

Sarcoma of Ciliary Body.—Mr. SIMEON SNELL (Sheffield) related notes of two cases:—1. The first occurred in a woman, aged 62, whose right eye was affected. She was first seen on December 2nd, 1879. Patient complained of a spark from the fire striking the eye sixteen months before; it was, however, well in a few days; four months ago she first observed a dark brownish speck in the upper and inner ciliary region; it was then about the size of a pin's head. When seen vision was good; no pain. The elevation in the ciliary region was the size of a small pea, and extended close up to the cornea; it was also visible internally, and extended for some distance close to the ciliary margin of the iris. The patient disappeared for a time, but returned with growth enlarged. Enucleation performed August 30th, 1880. Tumour was melanotic sarcoma. 2. A man, aged 74.—First seen in April, 1883, when he complained of increasing dimness of sight of his right eye. There was then some opacity of the lens. In February, 1884, when he again presented himself, there was a blackish discoloration, and some bulging of the sclerotic (ciliary region) above. Vision was lost. The eyeball was excised on March 24th, 1884. The tumour was much larger than the external appearances suggested, about the size of a bean, and had the appearance of a pigmented round-celled sarcoma. The patient was reported alive and well, and showed no evidence of recurrent growth, although more than five years had elapsed since the operation.

Card Specimens.—The following patients and card specimens were shown: Mr. L. WERNER: Microscopical Preparations illustrating Subconjunctival Cysticercus.—Dr. BUZZARD: On a Method of Employing Electricity in Ocular Paralysis.—Mr. HARTRIDGE: Ophthalmoscopic Drawing of Peculiar Appearance at the Macula.—Mr. CRITCHETT: Scissors for Division of Anterior Synechiæ.—Dr. S. H. HABERSHON: Case of Uniocular Central Scotoma.—Mr. LLOYD OWEN: Specimens showing Exhibitor's Method of Mounting Eyeballs.—Mr. BRAILEY: Peculiar Thickening of the Anterior Part of the Conjunctiva and of the Subconjunctival Tissue in a Child, probably tubercular.

Annual General Meeting.—The business of the annual meeting was then taken, the SECRETARY reading the report of the Council. On the motion of Dr. BARLOW, seconded by Mr. WARREN TAY, the report was adopted.—The Treasurer's balance-sheet was presented

and showed by its figures an improvement in the finances of the Society.—Mr. CRITCHETT moved, and Mr. SIMEON SNELL seconded, a vote of thanks to the retiring President, which was carried unanimously.—Mr. HULKE replied in a few well chosen words, expressing the pleasure he had always felt in presiding over the meetings of the Society during the past three years.—The ballot for the election of officers and Council for the ensuing year having been taken, the following gentlemen were declared duly elected:—*President:* John Hughlings Jackson, M.D., LL.D., F.R.S. *Vice-Presidents:* Thomas Buzzard, M.D.; George Cowell; John Whitaker Hulke, F.R.S.; David Little, Manchester; Priestley Smith, Birmingham; H. R. Swanzy, Dublin. *Treasurer:* Wm. M. Ord, M.D. *Secretaries:* James Anderson, M.D.; A. Quarry Silcock. *Librarian:* W. Adams Frost. *Other Members of Council:* A. H. Benson, M.B., Dublin; G. A. Berry, M.D., Edinburgh; Edgar A. Browne, Liverpool; Robert Marcus Gunn; Gustavus Hartridge; Frank H. Hodges, Leicester; W. H. H. Jessop; J. G. Mackinlay; M. M. McHardy; Seymour J. Sharkey, M.D.; Treacher Collins; Samuel West, M.D.

OBSTETRICAL SOCIETY OF LONDON.

WEDNESDAY, JULY 3RD, 1889.

A. L. GALABIN, M.D., President, in the Chair.

Specimens.—Mr. MEREDITH: Solid Tumours of the Ovaries.—Dr. CULLINGWORTH: Hæmatosalpinx removed by Operation.—Dr. PLAYFAIR: Uterus extirpated for Malignant Disease.—Dr. HORROCKS: Rupture of Uterus.—Mr. ALBAN DORAN: Fragment of Membrane passed from the Uterus.—Mr. C. STEWART POLLOCK: Dermoid Cyst of the Ovary of a Mare.

Laceration of the Vagina in Labour.—Dr. J. MATTHEWS DUNCAN read a communication on this subject. He had lately observed two cases of a remarkable vaginal abscess in women recently confined. The symptoms were alarming. He attributed them to laceration of submucous cellular tissue and consequent hæmatoma. They were characterised by a rounded opening admitting the tip of the finger, which, when pressed, entered a cavity as big as a walnut.—Dr. HAYES had recently seen a case which lent support to Dr. Duncan's opinion. A primipara, over 30 years of age, complained of pain in the vagina and vulva a few days after delivery, which had been slow but normal. There was a short perineal tear. Slight febrile disturbance arose and vaginal pain became extreme. Upon further examination a semifluctuating swelling, of the size of a tangerine orange, was felt in the vagina near its orifice. A well-known surgeon, who thought that the swelling was an abscess, subsequently laid it open; but its contents proved to be chiefly blood clot mixed with purulent grumous fluid. Dr. Duncan's cases might, of course, have had a septic embolic origin.—Dr. CLEVELAND noticed that in both cases the short forceps was used, yet Dr. Duncan thought that in neither could the laceration be attributed to that instrument. If the author of the paper had himself operated, there would have been no need to raise the question, but Dr. Cleveland submitted that a strong guarantee was requisite, under the circumstances, for excluding the probability of a wound having been accidentally inflicted.—Dr. HERMAN had seen one curious case of laceration of the vagina, of a class to which allusion was made by Dr. Duncan, though not included in the main subject of his paper. The case occurred in a patient with a flat pelvis. The head entered the brim with its long diameter transverse, and was delivered with forceps applied in the sides of the pelvis. After delivering the head and removing the forceps, Dr. Herman was awaiting some indication of uterine action, that he might assist in the delivery of the shoulders, when he saw the hand protrude through the anus, the uninjured perineum being between the hand and the head. Then uterine action came on, and the shoulder was driven down, tearing through the recto-vaginal septum from above downwards.—Dr. CHAMPNEYS had met with two cases, both some years ago, both in hospital practice, and both fatal from septicæmia. In one case the forceps was used to terminate labour for eclampsia; very little force was necessary. In the other, labour was natural and apparently easy. In both, the openings were round, and unlike lacerations. In the second case the cavity looked unhealthy, and the veins starting from the placental site, and also the internal iliac veins, were full of pus.—Dr. BOXALL related the case of a weakly primipara who died seventeen days after delivery. Vaginal examination on the eleventh day revealed a thickening at the roof of the vagina fixing the cervix, but no laceration. At the necropsy two holes were found, quite at the upper part of the vagina, and immediately in front of the cervix. Each hole was the size of a sixpence. They lay one on each side of the middle line, and a smaller hole, of sufficient size to admit a goose-quill, was found below and between them. They intercommunicated, and led to a large cavity beneath the mucous membrane. The nature of this condition was doubtful. Dr. Boxall was now disposed to consider the cavity as originating in a hæmatoma, which had subsequently suppurated, and opened spontaneously into the vagina.—Dr. HORROCKS described a case, which he saw with Dr. Lynn, of Woolwich, where a hæmatoma formed between the vagina and rectum, which broke down and opened by a pin-hole orifice into the vagina. It was freely incised, and soon healed. In a second case the patient complained of great pain in defæcation. On examination a lump was felt in the submucous tissue of the posterior wall of the rectum.—Dr. HORROCKS asked if this might not have been caused by pressure during parturition, the intervening structures not being lacerated.—After some observations by Dr. W. S. A. GRIFFITH, two cases were described by Dr. HERBERT SPENCER. They occurred in primiparæ, delivered naturally. In one (inflammation in the usual situation being absent) there was induration of the recto-vaginal septum low down in the middle line, attended by high fever, and followed by the discharge of pus and blood into the vagina from a rugged cavity by a hole of the size of a pea. This had led him to diagnose suppurating thrombus. The other case was similar, but not observed to the end. Systematic examination of patients some time after labour would probably prove that injuries of the vagina were more common than was at present supposed.—After Dr. CARTER had discussed the subject, Dr. MATTHEWS DUNCAN replied. He had dissected in Paris several puerperal fever cases, and was astonished at the frequency of submucous vaginal ecchymosis or thrombus. The case of thrombus of the pudendum mentioned in his paper showed that blood might so accumulate to a very great extent when there was a large opening for its exit. These facts were the bases of his theory of the peculiar abscesses already described. Dr. Duncan was familiar with longitudinal lacerations of the vagina, spontaneous and by forceps. He had seen many of them in consultation when alarming symptoms supervened after delivery, and had observed them in his own private practice. Such lacerations could not be confused with the lesion he now described, for in the latter there was no evidence of laceration.

Chorea in Pregnancy.—Dr. MONTAGU HANDFIELD-JONES read a paper in which he said that the causes which lead to the production of choreic symptoms were probably numerous. The various theories which had been formulated to explain the causation of the disease might each have their application in different cases. In this communication the author drew attention to the disease solely when it occurred in pregnant women, illustrating by two cases one pathological process by which the symptoms of the disease might be caused, and by which they might reasonably be accounted for. The chorea of pregnancy was considered by itself, since in all cases of this variety of chorea there existed one common groundwork, namely an unstable condition of the nervous system. This condition was always present in the gravid constitution, of which it formed an integral part,—Dr. JOHN PHILLIPS, in referring to cases of severe chorea in children, spoke of two methods of treatment not mentioned in the above communication; namely, the warm, wet pack, which often had a marvellous effect in quieting the movements, and forcible feeding by Paley's bottle, when there was much exhaustion. These methods seemed quite suitable for the chorea of pregnancy.—Dr. HORROCKS believed that chorea was a blood disease in its origin, related to rheumatism. He spoke of the theory of the detachment of fibrinous shreds from the cardiac valves, which shreds when carried up to the cerebral vessels were believed by some authorities to account for the phenomena of chorea. In pregnancy, an acknowledged cause of chorea, the blood, was certainly altered. Fright was a potent factor in the production of chorea, and also of hystero-epilepsy, and even of true epilepsy, as in a case he had observed where there was no hereditary predisposition.—Dr. ARTHUR JAMISON described several cases where chorea was clearly due to fright in pregnant women and others. Hence it could hardly be a blood disease. He strongly advocated strong doses of conium; in one severe case where arsenic, iron, etc., had proved useless, marked benefit immediately followed the use of that drug.—Dr. HERMAN believed in the connection between chorea and pregnancy. The majority of such cases were benefited by the induction of abortion or premature labour, but not all. There were no

rules by which the obstetrician could distinguish the cases which would, from those which would not, be relieved by that treatment. Such rules could only be established by study of careful clinical reports like those in Dr. Handfield-Jones's paper. Dr. Herman did not agree with the author in his opinion that there was no organic change in chorea. Phrases like "exalted nerve sensibility" conveyed no instruction. The symptoms indicated organic changes, though as yet we had not the means of detecting them, nor could chorea very well be a blood disease, since it was usually unilateral. Blood diseases were marked by symmetrical phenomena.—Dr. AMAND ROUTH related a case of chorea associated with a low form of puerperal insanity, in a nullipara, aged 20. She was single, and pregnancy was ascertained on his examining the patient; the condition had previously been overlooked. Copeman's digital dilatation of the cervix was effected, but abortion ensued within a few hours, and in three or four days, in spite of a sapræmic attack, almost all the chorea had disappeared, and the patient became rational. In respect to the blood theory, Dr. Routh noted that almost all cases occurred during the first three months of pregnancy, when the blood state was but little altered.—Dr. MATTHEWS DUNCAN had recently seen a patient in whose two only pregnancies there was severe unilateral chorea, so exhausting as to demand induction of labour in the second pregnancy. In the first, twins were born alive at the fifth month. In both attacks there was no anxiety except on account of weakness. The temperature did not rise, nor were there signs of cardiac or renal disease. Medicines did no good. After the premature delivery, recovery was rapid.—In reply Dr. M. HANDFIELD-JONES pointed out that, in his communication he had not attempted to discuss the possibility of chorea depending, in some instances, on blood conditions or on organic changes in the nervous structures. His cases were quoted solely to show that the chorea of pregnancy was sometimes an outward sign of deranged function of nervous centres, and existed quite apart from any appreciable change in those tissues. He admitted that chorea was sometimes only one item in the rheumatic series, as Dr. Cheadle had recently pointed out in his Harveian Lectures. It could hardly be shown, however, that this point had any application in the cases now under consideration. If the chorea had depended on any lesion of tissue, the interchange between insanity of the muscles, delirium of the higher intellectual centres, and paralysis could hardly have taken place so rapidly.

REVIEWS AND NOTICES.

LECTURES ON BRIGHT'S DISEASE. By R. SAUNDBY, M.D.Edin. With 50 Illustrations; 290 pages. Bristol: John Wright and Co. London: Hamilton, Adams and Co. 1889.

OUR knowledge of Bright's disease and albuminuria has been so much extended within the last few years that a new treatise on this subject will be gladly welcomed. The task of writing such a treatise on a subject which, in spite of the numerous researches made since Bright published his Reports in 1827, has still many obscure points in its pathology and pathogenesis, is by no means an easy one. Dr. SAUNDBY, however, has accomplished this task very ably, and has succeeded in putting together, in less than 300 pages, an admirable account of Bright's disease in its various forms. It is so thoroughly practical that it recommends itself to the busy practitioner, and yet so scientific that even the specialist may consult its pages with great profit.

Dr. Saundby's lectures are not mere compilations; the author has himself materially assisted in the unravelling of some of the many obscure points in the pathology of Bright's disease, and has a large clinical material to draw upon for the illustration of his lectures.

In Section I, comprising about 100 pages, the author treats of albuminuria generally, and of the pathology of the other chief symptoms of Bright's disease, such as dropsy, tube casts and their significance, the cardio-vascular changes, the pathology of polyuria, the pathology of uræmia, and the retinal changes. To each of these subjects a separate chapter is devoted, giving briefly the history and the now prevailing views. The so-called functional albuminuria comes in for its due share of attention, and from his own observations the author concludes that albuminuria may be present in healthy persons, and persist for long periods without causing derangement of the general health or of the structure of the kidneys; that it may occur in dyspeptic people and in weakly overgrown persons, without being an indication of renal disease; and that *per se* it should not be regarded as an insuperable objection to life insurance. We are inclined to think that many of the cases of functional albuminuria are cases of gouty or incipient granular kidney; Dr. Saundby himself states: "Most of my cases have passed out of sight with persisting albuminuria." An exact diagnosis and prognosis in these cases is most difficult, and many points, such as the family history, the age of the individual, the condition of the pulse, the presence of oxalates and the amount of uric acid in the urine, have to be carefully considered. The chapter on uræmia is quite up to date, and the important observations of French writers, Lépine, Bouchard and others, receive the appreciation they fully deserve.

Section II treats of the clinical examination of the urine. It is a clear, correct, and concise account, and recommends itself to the general practitioner. It not only treats of the examination of the urine for albumen, but gives also a brief account of the examination for other abnormal constituents. The presence of aceto-acetic acid in the urine the author considers of no clinical significance even in diabetes. With this statement not many will agree.

Section III treats of the history, etiology, classification, and treatment of Bright's disease. The author, like most recent writers, looks upon Bright's disease as an inflammation affecting all the tissues of the kidney, though with varying intensity, and discards the distinction into parenchymatous and interstitial nephritis. He adopts an etiological classification, and considers Bright's disease under the following heads: 1. Febrile nephritis, which includes most cases of acute parenchymatous nephritis, and of chronic fatty kidney. 2. Toxæmic nephritis, comprising the red granular kidney, the gouty kidney, and the rarer forms of acute nephritis. 3. Obstructive nephritis, including all those cases where there is obstruction to the outflow of urine. Lardaceous degeneration is not considered as a separate group. Some objections may perhaps be made to this classification, as some of the febrile forms of nephritis are more likely to be toxic, while some belonging to the third group cannot be called cases of Bright's disease. Though the author's classification may be objected to, the description of the symptoms in the several cases which are given for illustration leaves nothing to be desired, and the same may be said of the chapter on treatment with which the work concludes. Dr. Saundby has succeeded in giving, in a clear and concise form, an accurate account of our present knowledge on albuminuria and Bright's disease. The work is written in an easy and readable style, and the illustrations are numerous and well executed.

ILLUSTRATIONS OF ZOOLOGY. By W. RAMSAY SMITH, B.Sc., and J. STEWART NORWELL. Edinburgh: Young J. Pentland.

THIS is a book of convenient size, consisting of seventy plates of drawings representing the external and internal anatomy of some thirty animals, selected as types of the various groups of the animal kingdom. The authors state, in their Preface, that this "book is a companion to a course of systematic zoology," but surely, in any course of lectures covering the whole ground there would be diagrams, drawings, and specimens in illustration thereof, within the reach of students? The majority of the drawings here published are drawn from the object by the authors: but in most cases similar ones can be found in various textbooks such as those by Claus or Huxley; and frequently the older drawings are better than those here presented, either in clearness or accuracy of detail. But of these we will speak later on.

The authors state that there is "need of such a book;" but is this the case? Do those students who take an advanced course, as opposed to those who take an elementary course such as is required by the London University or other examining board, require a book of illustrations? The elementary students are already provided for in a very efficient manner by Howes's *Biological Atlas*, of which the present book is to some extent a continuation, though in less detail; and although we may think it erroneous to produce such books, which are apt to lead students to neglect that necessary adjunct to a course of practical zoology—viz., drawing their own dissections—yet we must bear in mind that a large number of students who enter for the elementary

examinations prepare themselves by private study, and require such pictorial help. But in the case of more advanced students, to whom attendance at a course of lectures is absolutely necessary, there seems to us not only no "need" for such a book, but every reason for discouraging the use, by the students, of such a book; for it is infinitely more profitable to a man to make drawings himself, both of external and internal anatomy, than to have such drawings already done for him, and so readily to hand as to lead him to neglect to *observe* the structures in his own dissection. Experience in conducting classes on the subject leads to the conclusion that a total absence of books and drawings in the laboratory—except such as deal with histology, embryology, or such as illustrate minute or difficult points in dissection—is a far better means of making students observe for themselves and take pains in making careful dissections, than to have drawings, etc., which can be consulted at every moment and which many students copy slavishly into their note-books, often with merely a glance and a few cuts at the subject itself. Of course, these remarks do not refer to earnest students, but only to such as are "going in for" examinations; the class of students, in fact, for whom the present book is intended, and who merely wish to "get through" with the least possible trouble, and in the shortest possible time.

The authors further lay stress on the help which the book gives in "comparative anatomy." But let the reader refer to the drawings of the skull of skate, cod, bird, and rabbit, with a view to comparing the nerve-exits and other points. In the lateral view of the skate's skull most of the nerve-exits are indicated; in the corresponding view of the cod's skull not a single exit is marked, nor are the bones delineated (there is, indeed, a drawing of a disarticulated skull of this fish, but most of the bones and intervening cartilage should have been represented in the complete skull). In those of bird and rabbit no nerve-exits are indicated. From the point of view, therefore, of "comparison," these drawings have little value. The same complaint may be made of the drawings of the appendages of the crayfish; the joints are not named, nor any comparison made between the parts of an ambulatory limb, for instance, and the maxillæ. In most cases where the drawings are not original, the authors acknowledge the source from which they are copied, but it would have lent considerable value to the book if a reference had been given to the paper in which such figures appeared. Histology and embryology find no place in the book; this is greatly to be regretted, for students can easily obtain a knowledge of the anatomy, whereas these two branches are less adequately treated of in textbooks, and always present considerable difficulty to students. A well-illustrated comparative histology is a desideratum.

In the index, classified according to Claus, at the end of the work, there is a bad error, in that the group of entomostraca is stated to be represented by *Homarus* and the malacostraca by *Limulus!* Many of the drawings, besides, are so deeply shaded as to be of little value; for example, that of the starfish and that of the spiral valve of skate. The genital apertures in the earthworm are obliterated by shading. The kidney in *Myxine* may or may not be represented; one cannot see. In the drawing of this animal there is a decided error; the mass of muscle which surrounds the lingual cartilage is labelled "œsophagus." Again, of what use are the drawings "representing" transverse sections of *Hydra*, *Lumbricus*, and *Hirudo?* What information can a student derive from a drawing of *Lingula* after one valve has been removed? The characteristic arms are not shown, but only a few muscles.

There are some surprising omissions in many of the drawings: for example, no ganglion is shown on the cervical portions of the sympathetic nerve in the rabbit, Pl. lxviii. Fig. 5. No bile or pancreatic ducts are shown in the pigeon: no hepatic portal vein appears in the various drawings of the frog or pigeon: this is especially to be regretted, as students always have some difficulty in realising the arrangement of this part of the venous system. In the general view of the thoracic and abdominal viscera of the rabbit, no indication of the characteristic mammalian structure—the diaphragm—is given; a narrow space is merely left between liver and lungs, which no student would think was intended to represent a partition. The drawing of the viscera of *Lumbricus* lacks a great amount of utility in that the segments are not numbered, and no nephridia are drawn. The diagram of an isolated nephridion might well have been replaced by Gegenbaur's drawing of one. *Balanoglossus* is classed as "Hemichordata"; yet no picture giving the results of Bateson's researches is inserted, that is no "notochord" is represented, and hence no reason is supplied for its systematic name. A very glaring omission occurs in the transverse sections of *Amphioxus*, an omission greatly to be wondered at, as students already possess excellent drawings of this animal in a manual of practical zoology. The points that should have been brought out are the atrium and cœlom; no line or letter draws the student's attention to these cavities, and as these two are usually confused by students, the drawing is practically useless to them. Again, no myotomes are represented in the section. The diagram of a transverse section of the lobster showing the arrangements of the vascular system in the thorax is wrong.

On the other hand, a few of the drawings deserve mention for their clearness and usefulness, for instance, the gathering together of those illustrating *Balanoglossus*, the representation of the anatomy of the leech from the ventral surface, the venous system of the skate, and genital organs of the rabbit, as well as the reproduction of von Graff's drawing of *Myzostomum*.

We have no doubt that students will find the book of service to them, but, as we have already said, it is a matter of regret that they should be induced to make use of lithographed plates instead of making pencil sketches for themselves.

HEREDITY: A STUDY. By R. A. DOUGLAS LITHGOW. Pp. 247. London: Bailliére, Tindall and Cox. 1889.

THE substance of this book originally appeared in the *Provincial Medical Journal* during the years 1887 and 1888, and is regarded by the author as the "first systematic attempt to trace the influence of heredity in all the main diseases which afflict humanity." A few disorders such as gout, epilepsy, syphilis, and insanity, are certainly transmitted from parent to offspring, but to learn that nearly every disease is hereditary (to judge from the lists of them discussed in Dr. LITHGOW'S book) to which mankind is liable, is a very uncomfortable suggestion. Fortunately our fears and misgivings are speedily quieted in looking into the book, for the evidence on which this author assumes the hereditary character of most ailments dealt with by him is certainly very slender. One example will serve to illustrate this:—"Stahl also relates the following remarkable case: A soldier in war lost one of his eyes. He returned to his country and married; his wife bore him a son, one of whose eyes were quite dried up, so that he was monoculous like his father! Congenital blindness may run in families, and blind persons will sometimes beget blind children. A blind beggar was the father of four sons and a daughter, all blind."

Copious extracts have been made from most writers on hereditary affections, especially Ribot. This book, *Heredity*, may be described as one long chapter consisting of two hundred and forty-seven pages, and largely composed of extracts from authors, old and recent, who have devoted attention to this matter.

This is not the best way to advance our knowledge of an important and intricate subject. Malformations should be considered apart from injuries; diseases due to particulate poisons such as syphilis, tubercle, and the like, form a class by themselves, whilst morbid growths require much consideration and classification before we can determine which varieties are hereditary. Instead of this, the author has endeavoured to bring hereditary phenomena within "the compass of a few formularies" but his efforts are not very successful. We can, however, admire the patience with which so many suspected cases have been collected, but a more careful survey of the evidence would have induced a less enthusiastic writer to reject most of them as not resting upon reliable foundations.

THE BRONCHI AND PULMONARY BLOOD-VESSELS. By WILLIAM EWART, M.D. Pp. 227. London: J. and A. Churchill.

THIS book is one of great importance to those interested in the anatomy of the lungs. In the first place it is an attempt to fill up a gap in our knowledge of the bronchi, and secondly to serve as a criticism upon the late Professor Aeby's interesting work on the bronchi in man and mammals.[1] Professor Aeby's work was published at Leipzig in 1880 and was a scientific endeavour to reduce to a uniform standard the apparently wild distribution of the bronchi in the mammalian lung. The results of Aeby's labour mark a distinct and important advance in our knowledge of the morphology of the human lung, and the grounds on which his conclusions were founded have so far satisfied anatomical teachers in England and Germany that his views are now taught in dissecting rooms. Dr. EWART has in one way attempted to extend this

[1] *Der Bronchialbaum der Säugethiere und des Menschen.*

admirable work of the German professor by tracing the various ramifications of the bronchi, and assigning to them terms in the same manner that the branches of an artery receive specific names. These names have been selected with an almost exclusive regard to the anatomical relations of the bronchi; as examples we may select the following: apical, cardiac, pectoral, sternal, etc. But Dr. Ewart's work differs very materially from that of Dr. Aeby. The German professor endeavoured to throw light upon the intricacy of the human bronchial tree by dissecting it in comparison with the simpler disposition of the bronchi prevailing in lower mammals, and this is the method which in several important anatomical subjects has led to results of great value and interest. We cannot help feeling that in departing from this plan Dr. Ewart has narrowed his field of view and thus rendered his effort of less value than it would have been had he followed upon and extended the conquests made by his predecessor. This defect in Dr. Ewart's work renders his criticisms upon Aeby's work less valuable, because, in anatomical investigations, it is of the utmost service to be able to reduce organs and systems wherever practicable to uniform plans, and this applies with great force when dealing with such a complicated system of tubes as is presented by the human bronchial tree.

Dr. Ewart proves himself to be a painstaking anatomist, and this work will stand as an example of his industry and skill. We owe him our best thanks for endeavouring to render our knowledge of the anatomy of the bronchi in the human lung more accurate and precise than heretofore. He has, in addition, investigated the anatomy of the pulmonary blood-vessels by means of metallic casts and injections, and has marked out some facts of interest in connection with their distribution and relation, and has illustrated this subject by some drawings; the section devoted to the pulmonary blood-vessels constitutes a fifth part of the entire work.

Physicians who cannot afford time to enter into all the details of this work should at least make an effort to study the introductory pages of each section, for the author has cleverly managed to give in outline the subject matter of the section before dealing with it in detail.

AACHEN ALS KURORT. Unter Redaction von DR. J. BEISSEL 8vo, pp. 334. Aachen: C. Mayer. 1889.

THIS is the most complete work on the waters of Aix-la-Chapelle that has hitherto appeared. Doctors Alexander, Beissel, Brandis, Goldstein, Mayer, Rademaker, Schumacher, Thissen, have each of them furnished papers on the diseases which most commonly form the subject of treatment at Aix. These are gout, articular rheumatism, arthritis deformans, cutaneous diseases, injuries and their consequences, chronic catarrh of the intestinal canal, of the throat, larynx, and bronchi, syphilis, diseases of the nervous system, tabes dorsalis, syphilitic affections of the internal organs, chronic metallic poisoning, and affections of the eye. A chapter on the last of these subjects is a novelty in balneological books, and in reference to a place like Aix deals very much with the syphilitic affections of the organ of vision. As we have so lately discussed the views of Dr. Spender on osteo-arthritis, we have looked with interest for what Dr. Rademaker has to say on the same subject, and some of their points of agreement and of difference are the following:—

They are agreed as to its being an affection of the central nervous system (a view for some time adopted on the Continent), as to the necessity of early diagnosis, as to the hopefulness of early treatment, and practically as to method of treatment.

They are agreed as to the occurrence of various disturbances of the cutaneous sensibility—such as feeling of burning in feet and other parts, alternating with feeling of cold, irregular migraines, boring and tearing pains in the course of some nerves. But here their agreement ends:—Dr. Rademaker does not allude to the increased arterial tension or to the cutaneous discolorations on which Dr. Spender lays stress. Dr. Rademaker remarks an excessive dryness of the skin, where Dr. Spender finds moisture. Dr. Spender does not allude to the degeneration of the nails, on which Rademaker insists; and, finally, while Dr. Spender remarks on the early atrophy of muscles almost preceding loss of motor power, Rademaker insists, as an early point in diagnosis, on the loss of motor power preceding any atrophy of muscles. It is therefore, at present, impossible to bring the observations of symptoms by the two authors into accordance with each other. This work is well worth the attention of those who wish to make themselves acquainted with the Aix methods of treatment.

NOTES ON BOOKS.

Aids to Ophthalmic Medicine and Surgery. By JONATHAN HUTCHINSON, jun. (Baillière, Tindall, and Cox. 1889).—Had this little book been written to assist house-surgeons and dressers to an ophthalmic department by describing the minor operations they are likely to be called upon to perform, or the more common diseases that may come under their treatment, it might possibly have been of some service, but its purpose is obviously that of a crammer, pure and simple, and to remove all doubt on this score the author has appended a list of examination questions which may be answered from its pages. In our opinion the tendency of all such books is entirely mischievous; at the best they give the student but a smattering of a variety of subjects, and lead him to acquire a habit of getting all his knowledge, or that which does duty for it, in a slovenly way. Even as a crammer we think the book might have been better; the arrangement of the subjects is not good; concomitant squint is not mentioned under affections of the ocular muscles, but under hypermetropia. We miss any good description of the differences between superficial and deep injection of the conjunctiva, and definite instructions as to the mode of everting the upper lid. The treatment of lachrymal stricture is given in a very imperfect manner; the constant use of a leaden style is recommended. No description is given of the proper method of examining an eye; the author excuses this in the preface by saying that this can only be learnt by practice; but this is equally true of the operation for cataract and many other subjects that are treated of. The generally-received view that chalazion commences as a retention-cyst is said to be erroneous, and the reader is told that the tumour consists of a "gelatinous mass of small cells," a statement that is so vague as to be valueless.

L'Hygiène à l'Ecole: Pédagogie Scientifique. Par le Dr. A. COLLINEAU.—This is a very handy and readable treatise on scientific pedagogy. It is conveniently arranged for use, indexed, and illustrated with fifty sketches. We should have been glad to have seen a preface explaining the author's opinions and experience as to the best methods of training teachers to some knowledge of the physiological side of their work, the objects to be aimed at, and the means by which he would lead them to observe and study children. The volume appears to consist of lectures delivered by the author as Professeur aux Cours Normaux de la Société pour l'Instruction Élémentaire. It is much to be desired that an equally useful course of instruction could be given in the various normal colleges in this country. Commencing with the general hygiene of the school building Dr. Collineau passes on to the sanitation and furnishing of the various departments. Speaking of myopia as a condition very prevalent among the pupils he makes the practical suggestion that periodical medical inspections should be instituted as a means of detecting its existence and progress, and wisely adds that this condition must be met by efficient physical education and a simplification of the school programme, as well as by attention to the desks, illumination, and type of books. On the very important question of cerebral over-pressure the author protests against confining the pupil to school work for more than eight hours a day; and, as to French schools, he is of opinion that by giving more attention to physical exercises and the complete ventilation of the class-rooms much of the existing evil might be removed. He would also have the teachers give more care to developing the natural mental powers of the child without forcing it to work rigidly and uniformly on purely scholastic lines in the attainment of learning. A chapter well worthy of careful study is that on "night terrors" in children, and the subject is dealt with in a practical manner. Dismissing, after brief consideration, the presence of intestinal worms as a cause of cerebral disturbance, Dr. Collineau passes on to such conditions as fear of nocturnal incontinence of urine and dread as a mental state. He points to cases where neglect to inquire into the causes, or any attempt to remove them, has been followed by epilepsy. Such night terrors, commencing as merely transient nerve phenomena, resulting from some mental shock, may, it is said, appear to the ideation of the child as something superhuman, and in their recurrence may cause an amount of terror altogether out of proportion to the real disturbance.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1889.

SUBSCRIPTIONS to the Association for 1889 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, JULY 13TH, 1889.

INFANT LIFE INSURANCE.

THIS subject is still being inquired into by the Select Committee of the House of Commons on the Friendly Societies' Act, 38 and 39 Vict., and has lately been brought before the public by letters and leading articles in different papers throughout the kingdom. A great many opinions have been expressed that infantile insurance should be entirely swept away; but in considering the subject on a broad and liberal basis, we are of opinion that such a procedure is opposed to common sense.

A system has arisen, sanctioned by the Legislature, which allows infant life to be insured under certain conditions. The question which has now been brought before the Legislature is whether the system should be stopped, or whether it should be regulated in accordance with the experience which certain facts, brought before the public since the institution of this system, must necessarily suggest.

We will admit, for the sake of argument, that the insurance of infants is a proper thing, and likely to conduce to thrift. But it is clearly necessary that such a system should be placed under proper control. The great reason for this is that the rule as to insurable interest is set aside in favour of parents who are allowed to insure their children, by whose death they will receive pecuniary benefit, but in whose life they will derive none.

It has been urged by those who take up the cudgels on behalf of the insurance companies that an outcry has been raised against the industrial classes, who, according to the remarks made in many journals, are as a body supposed to commit child-murder for the sake of insurance. That such an idea is erroneous is amply proved by the tone of many letters addressed to the papers, especially one by Mr. A. Braxton Hicks, Coroner for Surrey, to the *Times* of February 14th last, comments upon which appeared in many papers throughout the breadth of the country.

Many facts and reasons were adduced in that letter showing that infantile assurance was likely to, and did at times, offer an inducement to child-murder or neglect.

The general answer of those who were interested in insurance companies was that statistics proved (though we doubt if in this matter statistics prove anything) that fewer of the insured children die than of the uninsured; but this statement does not meet the point which has been raised against infantile insurance, which is, not how many children die, but the cause from which they die.

Almost without exception where it has been possible to prove that children die as the result of a crime such as poisoning, neglect, etc., such children have been insured, and the motive adduced on the part of the prosecution has been the profit from the insurance money, and except that motive nothing else has been alleged.

It is hardly likely that without some idea of pecuniary gain parents or persons who have charge of children would be likely to run the enormous risks which would be incurred under such circumstances. It is only right, however, that we should say once and for all that we have never for a moment thought that the majority of parents who insure their children do it with any present criminal idea of ulterior gain; but that a wicked minority, mostly baby farmers and caretakers of children, do so, is amply proved by recent cases which have been reported in the public press. And how is it that these insurances have been possible?

The societies have asserted that they are most particular in framing rules to guard against the unscrupulous benefiting by crime. Yet it is a matter of fact that these rules are systematically broken by the agents who insure illegitimate children, or children in bad health, and allow persons to effect policies on the lives of strangers, and we do not think that in any of the cases brought before the public any society or agent has taken the initiative in bringing the facts before the proper authorities. We suppose they imagine that if they were to do so it would be a bad advertisement for them.

Statistics have been so often quoted both for and against the present system that we do not think it useful to rely upon them either way. Whenever facts, as distinguished from statistics, are brought forward against the present system, the supporters of that system always discount the facts in favour of statistics; but it is only by facts we can judge. Nearly all medical men in general practice can call to mind facts which have caused them to connect deaths of children with their insurance. Judges and coroners have called attention to the same thing. Therefore we cannot but think that there is something very defective in a system which does, although not in a majority of cases, yet still in a substantial minority, allow this state of things to exist. Friendly societies, as distinguished from the insurance companies which are registered under the Friendly Societies' Act, do not insure children of persons other than their own members, and it is asserted by those societies, and we think with truth, that no cases of infanticide or suspected infanticide have occurred where the insurance was with a friendly society. The reason, no doubt, for this is that the members have a certain supervision over each other.

A Bill to regulate infantile insurance, supported by Mr. A. D. Provand, M.P., has been read a first time in the House of Commons, and although it has not yet been printed we are given to understand that its object is to permit the insurance of funerals with friendly societies, and perhaps burial clubs, but not with insurance offices; that the sum assured shall not permit a profit to be made by those who receive the money under the policy, and that the society should themselves undertake the funeral.

We would further suggest, in all cases where a child is insured in any society, that notice should be given to the coroner in order that some inquiry should be made into the circumstances of each death, and that, if necessary, an inquiry might then be held. This would involve no hardship on the parents, and the principle has already been adopted under the Infant Life Protection Act.

It is believed that medical men sometimes give, unduly and without thought, certificates of death where their knowledge as to the primary cause of death is necessarily imperfect, and we think that it would be a great check upon neglect if medical men more often declined to give certificates until the matter had been reported to the coroner, who would then make inquiries, and in his discretion hold an inquest. It is stated that the impression that a medical certificate can be readily obtained prevents many parents calling in proper medical assistance until the last moment.

As regards the question of thrift which is urged by the insurance companies in favour of their system, it would seem to be a matter for the serious consideration of the Legislature, for the protection of the industrial and working classes, whether it is fair to those classes that so much of their hard earned money should be spent in commission and management, as is proved by the figures given before the House of Commons Committee.

TUBERCULOSIS AND ACTINOMYCOSIS.

THE more general recognition of the important etiological relations between the infectious diseases of man and of the domestic animals, which is one of the most marked features of the recent progress in pathology, lends an unwonted interest to the Reports of the Professional Officer of the Agricultural Department of the Privy Council. Professor Brown and his colleagues have to meet difficulties of the same kind as those which occupy the attention of the medical officer to the Local Government Board, and though the methods of dealing with the problems which arise are necessarily different, the scientific facts upon which administrative procedures are, or ought to be, based are identical. *The Annual Report of the Agricultural Department of the Privy Council Office on the Contagious Diseases, Inspection, and Transit of Animals for the Year* 1888, which will shortly be issued to the public, will be found to form with its appendices a volume of 336 pages, a very large proportion of which is devoted to subjects, such as tuberculosis, actinomycosis, anthrax, and rabies, which have a direct bearing on human pathology and preventive medicine.

The relation of human and bovine tuberculosis and the danger of using tuberculous meat have so recently been discussed in these columns,[1] that we need not recapitulate the facts and arguments there advanced. Professor Brown sets out the report of the Departmental Committee issued last July, and it may not be amiss to recall the recommendations of that Committee. As to prevention, these were (1) more stringent enforcement of the Dairy and Milk Shops Order, veterinary inspectors being given power of entry into all places where animals are kept; (2) greater attention to the hygienic surroundings of animals, including (*a*) isolation of infected cases; (*b*) precautions against the flesh or milk of diseased animals being given as food to pigs, fowls, and other animals; (*c*) care that fodder, litter, and water should not be taken from one animal or stall and given to another; (3) power to be given to the veterinary inspector to seize in fairs, markets, or in transit, all animals which come under the denomination of "wasters" or "mincers,"[2] such animals being, as a rule, in the last stage of tuberculosis; (4) that breeders should in their own, as well as in the public, interest discontinue breeding from tuberculous stock. As to extirpation of the disease, the Committee recommended that tuberculosis should be included in the list of contagious diseases, for the purposes of those sections of the Contagious Diseases (Animals) Act which provide for the slaughter of diseased animals, and for compensation. An Order in Council, making the required regulations, was drafted, but, unfortunately, it was thought that the practical difficulties in the way were too great, and the Order was never issued. One main objection is the difficulty of adjusting the circumstances under which compensation ought to be made, and its amount. This point has, however, been already somewhat fully discussed in the recent article to which reference is made above. A good deal of stress is laid by Professor Brown upon the difficulty of diagnosis; in particular, it was pointed out to the Privy Council that tuberculosis was liable to be confounded with actinomycosis, a disease which it now appears is prevalent in all parts of Great Britain where the land is wet, but especially in the Fen districts and in Scotland. This particular objection, however, cannot be admitted to have much weight, for in those cases of actinomycosis in which mistake is alone likely to occur, probably the best course is to slaughter the animal.

From another point of view, however, the importance of making a diagnosis between these two diseases in animals is considerable. There can be no doubt that bovine actinomycosis has been, up to quite a recent period, universally regarded as tuberculosis or scrofula, and that many veterinarians still fail to draw a distinction. Consequently, the proportion of cattle in this country returned as suffering from tuberculosis must have been considerably exaggerated. Now, actinomycosis is almost certainly a very rare disease in man, and the evidence at present available is all against the hypothesis that it is directly transmitted from animals to man. The commonest site for the disease in bovine animals is the tongue, and it is believed to gain a footing in slight abrasions produced by certain kinds of fodder, especially by barley. Jensen, indeed, goes so far as to assert that the fungus grows on grain, husks, and straw of different cereals, but most abundantly on barley, which is also most likely to wound the mucous membrane. The most probable hypothesis is that the disease infects human beings in the same way; this, as Professor Crookshank points out, receives some confirmation from an observation of Soltmann's. In this case a boy, aged 11, accidentally swallowed an awn of barley; an intrathoracic abscess formed, and when opened the awn was found in the evacuated pus; the abscess, however, did not close, and the characteristic ray fungus was eventually discovered. There appears to be no question that Professor Crookshank has succeeded in cultivating the ray fungus, thus confirming and extending the researches of Boström. His report on the disease, as observed

[1] JOURNAL, June 15th, p. 1359.

[2] So called because sold to the sausage makers!

in bovine animals and in man, is very full and exhaustive; it occupies nearly eighty pages, and is copiously illustrated by lithograph drawings of diseased animals, *post-mortem* appearances, and microscopic preparations; any one desiring to obtain an accurate acquaintance with the present state of our knowledge cannot do better than obtain this volume,[3] which, as we have already stated, will shortly be on sale.

In a further report on tuberculosis, also contained in this volume, Professor Crookshank brings evidence in favour of the view—advanced by Koch and supported by Woodhead, but disputed by Klein—that the same bacillus is found in human and bovine tuberculosis. There seems to be good reason to believe that the tubercle bacillus varies slightly in appearance according to the exact site which it occupies. As Klein pointed out, the bacilli seen in the tissues in bovine animals are smaller and straighter than in human sputum, and do not present the granular or beaded appearance often observed in the latter. Professor Crookshank, however, states that he has observed that the bacilli found in the milk of cows with tuberculous mammitis were long and beaded, so that they nearly resembled those ordinarily found in human sputum. The research in the course of which these observations were made afforded another striking proof of the danger of using the milk from cows with tuberculous mammitis, and, as the differential diagnosis of mammitis in the cow is extremely difficult, the inference is obvious.

THE LUNACY ACTS AMENDMENT BILL IN COMMITTEE.

THE Grand Committee on Law met last Thursday for the consideration of the Lunacy Acts Amendment Bill, and made considerable progress with their work. Thirty-nine clauses were passed, after more or less discussion, and two valuable concessions in furtherance of the views of the Parliamentary Bills Committee were obtained from Mr. Matthews, who displayed throughout much courtesy and tact, coupled with an evident desire to meet the wishes of honourable members, so far as he consistently could. In the first place, he promised to insert words which should remove the vexatious restriction prohibiting the medical man who signs an urgency order from attaching his name to the certificate, which may subsequently be required for the more permanent detention of the lunatic; and secondly, he agreed to strike out the subsection in Clause 33, which marked an invidious distinction between a doctor and other persons in the reception of single patients. The latter especially is an important amendment in medical interests. Sir John Dorington and Mr. Henry Davenport moved the rejection of Clause 2, on the ground that the judicial process is slow and cumbrous, causing injurious delay and furnishing an alleged protection to the medical man which may turn out to be rather apparent than real. On a division this was defeated by a large majority; and on Clause 4, Sir Guyer Hunter and Dr. Farquharson made a protest against the personal inspection of the lunatic by the justice, and the absurdity of over-riding the deliberate verdict of two qualified practitioners by a member of the legal profession.

In Scotland, whose procedure has been very imperfectly copied in this Bill, the functions of the magistrate are purely ministerial, and within the limits of this well-defined responsibility he can call for other medical evidence, or ask the medical men who have granted the certificates to supplement or add to the facts indicating insanity already inserted. And we feel convinced that judges in England, whether established and endowed, or belonging to the "great unpaid," will look with anything but satisfaction on the new duties imposed on them, by which they are encouraged to visit insane patients, and endeavour to find out personally what are medical facts. We note with approval that Mr. Matthews, in answer to a question, assured the Committee that the "special reports" called for under Clause 29, which have been objected to by our Committee, will be so arranged as to prevent any oppressive addition to the clerical work of the medical superintendent, and we hope to be able to record in our next impression further improvements on the Bill by judicious amendments made and accepted at the meeting on July 11th.

[3] To be purchased either directly or through any bookseller, from Eyre and Spottiswoode, London; Adam and Charles Black, Edinburgh; or Hodges, Figgis and Co., Dublin [C.—5679]. Price, 7s. 9d.

THE Hospital Sunday Fund amounted on Thursday to upwards of £36,000.

MR. RITCHIE'S Notification of Diseases Bill has been referred for consideration and report to a subcommittee of the Parliamentary Bills Committee, presided over by Dr. Alfred Carpenter.

AT a recent meeting of the Liverpool Hospital Saturday Fund Committee it was resolved to recommend a weekly collection in factories and workshops.

A GOOD example to follow, and one which may be commended to members of the British Medical Association who sympathise with the steps now being taken by the Council to secure a handsome, well-stocked library for the benefit of its members, is that of Mrs. Jane C. Stormont, widow of the late Dr. D. W. Stormont, of Topeka, who has generously given 10,000 dollars to the Kansas Medical Society, for the purchase of a library for the benefit of the profession.

THE fortieth annual meeting of the American Medical Association commenced at Newport, Rhode Island, on June 25th, and terminated on June 28th. The meeting appears to have been highly successful, though the attendance of members, especially from the Western States, was somewhat smaller than usual. The Association was welcomed by the Governor of the State, and the presidential address by Professor W. W. Dawson, of Cincinnati, contained an interesting review of the present position of the medical profession and of medical education in the United States.

THE WANT OF SEATS IN LONDON.

WE have often commented on this public need of London, and are glad that the daily press is echoing the cry. The foreigner within our gates, says a daily contemporary, must surely wonder at the spectacle presented by the seatless London streets, when he is himself accustomed to cities where commodious resting-places are to be found at every turn. The mere amount of physical suffering which elderly and feeble persons, and children, must endure from this easily-preventable cause it is difficult to estimate. It is, therefore, very much to be hoped that in course of time the Sewers Commissioners, or the authority which administers such matters for London generally, will see their way to give us seats here and there along our 3,000 miles of thorough-

fare. Tree-planting and the provision of artificial brooks may come a little later on; at present it is difficult to understand why a public authority, when it has the offer of seats for its citizens "free, gratis, and for nothing," should decline the proffered boon.

THE FLOODS IN AMERICA.

PHILADELPHIA physicians have come forward very generously to carry relief to the medical practitioners who were sufferers by the terrible flood at Johnstown. A committee was sent with funds from Philadelphia. They found that six physicians were drowned and twenty-one had lost all they had. They immediately expended about £600, which they took with them, and more money was at once raised to continue their good work as required.

WANTED, AN EDITOR.

"I WANT a hero—an uncommon want," sang the poet. A still more uncommon want, one would have thought, would have been that of an editor for a medical journal. Yet from this cause the *Breslauer ärztliche Zeitschrift* came to an untimely end on June 29th. It has been impossible to find "a commanding personality" to supply the place of the late Professor Gscheidlen, who founded the journal and gave it the prominent place it held in German medical literature during the ten years of its existence. Those interested in prolonging the life of the defunct periodical should have sought for what they wanted in this country, where would-be medical editors grow on every ush.

GUY'S HOSPITAL.

AT a meeting of the Court of Committees, held on June 26th, it was resolved that Dr. F. W. Pavy, F.R.S., the senior physician to the hospital, whose term of office was about to terminate from efflux of time, should be invited to retain his appointment for twelve months from the above date; and that Dr. L. E. Shaw, the medical registrar, should be nominated for the post of assistant-physician, in the room of the late Dr. Wooldridge, these arrangements being subject to confirmation by the General Court of Governors on July 31st. Dr. Shaw has already commenced work as assistant-physician.

THE JOHN HOWARD CENTENARY.

THE Russian Government has decided to give a prize of £80 and a large gold medal for the best work on the subject of "John Howard in the History of Prison Reform," as a mark of respect for the eminent British philanthropist, who died at Kherson, in South Russia, in 1790, after doing much towards the improvement of the prisons in this country. The prize competition is to be international, and, if not written in Russian, a French translation is to be forwarded with the original work. The essays are to be sent to St. Petersburg, when they will be judged by a select committee during the convocation of the fourth International Prison Congress, which takes place next year during the centenary of the philanthropist.

DEGREES FOR LONDON STUDENTS.

WHILE a large majority of the Senate of the University of London is prepared frankly to adopt the recommendations of the Royal Commission on University Education in London, there seems to be too much reason to fear that Convocation will take a very different view of the situation. This opposition may suffice to prevent the early realisation of the reform so urgently needed, for no new charter can be issued to the University unless its provisions are accepted by Convocation. It will, however, we believe, be found that the Senate will persevere with the scheme either with or without the consent of Convocation, and the possible result would be that Parliament would be asked to overrule the objections raised. As we have already stated, the Royal Colleges of Physicians and Surgeons have been officially informed of the course which the Senate of the University proposes to adopt; and the next communication must come from the Colleges. The joint committee which they have appointed has not yet met, and this delay is much to be regretted.

PHYSICAL EDUCATION IN BOARD SCHOOLS.

WE are glad to note that physical education is receiving increased attention from London School Boards, as from other similar bodies. On Wednesday, July 17th, there is to be a public drill competition, including Swedish drill and mass gymnastics by girls, at the Royal Albert Hall, over which the Duke of Cambridge will preside, and present the challenge banners to the winning competitors. All the Board Schools will have a holiday on that day, to permit teachers and children to be present, and the occasion will be made more pleasant by competitions in vocal music.

DR. THOLOZAN.

DR. THOLOZAN, the medical attendant of the Shah, who is at present in London, is an Excellency at Court, and holds a very high social as well as official position. Dr. Tholozan is an epidemiologist and physician of considerable mark in Europe as well as in the East. When last in London he received much and well-deserved attention from his colleagues here, and on the present occasion he has, we believe, been invited by leading members of the Epidemiological Society to share their collective hospitality, and a considerable number of members of the medical profession in London had the opportunity of meeting Dr. Tholozan at a *soirée* given in his honour this week by Sir Andrew Clark.

FAITH HEALING.

THE following authenticated facts throw some light upon one of the so-called cases of "faith healing" which has been promulgated by the press *urbi et orbi*. Richard Rummery, a patient who was "blind and bedridden," and cured by faith, has, we have ascertained, been suffering for some time from rheumatoid neuralgia, accompanied by depression and attacks of a hysterical character. He has also a post-polar cataract in the right eye. On returning from Bath he suffered from conjunctivitis in both eyes, with intense photophobia, but was much better both in general health and as regards the condition of the sound eye when the faith-healing incident occurred. Excepting that he gets up and out of doors, which, no doubt, he could have done previously had he been so minded, his condition is practically unchanged. We are informed that he has never been in any real danger.

THE ARMY MEDICAL DEPARTMENT.

FOR the first time since the issue of the last Warrant an examination will be shortly held for the Army Medical Service. The present unpopularity of the service in medical schools will undoubtedly operate greatly to reduce the quality and probably also the number of candidates for such appointments. It is much to be hoped, therefore, that the Camperdown Commission now sitting will issue its report with as little delay as possible as to the causes of the present discontent, and the remedies which it is proposed to apply to it. We may add that there is a very strong feeling in the service, which will, we believe, be entirely shared by the public and the medical profession, that it is only fair and just that the evidence given before that Commission should be published, and that the doubtful answer on that point, recently given by the Secretary of State for War in the House of Commons, is of a character in itself to cause dissatisfaction and discontent. Surely after the absolute denial which was given officially by the late head of the Army Medical Department to the existence of this discontent, and

the refusal to allow the army medical officers to give any sort of collective evidence on the subject, it would be eminently unwise and unjust that the evidence tendered, whether for or against their views, before the Royal Commission should also be suppressed. In such a case perfectly open dealing is the surest and best remedy for the existing evil, and the continuous suppression of evidence on either side will be regarded with considerable distrust and natural displeasure.

THE ENGLISH CONTRIBUTION TO THE PASTEUR INSTITUTE.

We are requested by the Lord Mayor to state that he will be happy to receive, at the Mansion House, donations towards making a suitable contribution to the "Institut Pasteur" in Paris, where over two hundred of our fellow-countrymen have been gratuitously treated by M. Pasteur and his staff, and (secondly) of providing for the expenses of British subjects bitten by rabid animals, who are unable without help to pay the cost of a journey to Paris. In addition to the sums already announced, the British Medical Association have given £100; Mr. J. P. Heseltine, £130; Mr. C. Czarnikow, £20; Dr. John Evans, F.R.S. (President of the Society of Antiquaries), £10; Mr. Alderman Evans, £21; the Lord Mayor, £21; Sir Frederick Abel, £10; Sir William Bowman, F.R.S., £21; Sir James Paget, F.R.S., £10 10s.; the Hon. Misses Pitt, £15; Professor Frankland, £20; Sir Henry Thompson, £10 10s.; Mr. James Mason, £20; Professor Crookshank, £25; and Mr. A. Gordon Salomon, £10.

TOTAL EXTIRPATION OF THE PREGNANT CANCEROUS UTERUS.

In October, 1888, Dr. Zweifel, of Leipzig, removed a cancerous uterus in the sixth month of pregnancy, The operation was performed half through the abdomen, half through the vagina. First the patient was placed in the lithotomy position. The cervix was separated from the vagina, and Douglas's pouch opened by means of a Paquelin's cautery. The vagina was then packed with iodoform gauze. Then the patient was placed in the usual position for abdominal section, the uterus exposed and opened, and the child extracted. An elastic ligature was applied to the lowest part of the uterus, and the broad ligaments were tied above it. Then the uterus was cut away, and the vesico-uterine fold opened. The abdominal wound being closed, the patient was once more placed in the lithotomy position, and the cervix freed entirely from its connections. Dr. Zweifel objected to leaving the wound open, as he had often seen intestine prolapse and adhere to dressings. He therefore closed the corners of the wound, and inserted a T-shaped gutta-percha tube. The patient recovered, convalescence being retarded by the formation of a large bedsore after an attack of gastric catarrh, with emaciation. The child was not saved. An abstract of the case appeared in the *Centralblatt für Gynäkologie*, No. 12, 1889. Total extirpation of the cancerous uterus, at term, has been performed twice by Schröder, with fatal results, and once by Bischoff, where the left ureter was tied, and the patient died. Sir Spencer Wells's case, performed at the sixth month, the mother recovering, occurred in 1881, and is well known to British surgeons.

RABIES IN ENGLAND IN 1888.

The Appendix to the Report of the Agricultural Department for 1888, which will shortly be issued, contains some interesting facts about rabies in Great Britain. The disease is still confined to England, and is met with almost exclusively in two areas, one including the counties of Chester, Lancaster, the West Riding of York, Stafford, and Derby; the other the counties of Middlesex, Essex, Kent, Surrey, and Sussex, which may for convenience be termed the northern and southern enzootic areas respectively. The number of cases in 1888 was only 176, as against 497 in 1887; the list of cases in 1887 was greatly swelled by the large number, 257, observed among the deer in Richmond Park; even if these cases be deducted, there is still a considerable decrease in 1888 as compared with 1887. This decrease has, however, been entirely in the northern enzootic area, if the Richmond Park cases be excluded; whereas if the same deduction is made, there was a very considerable increase in the southern enzootic area. The figures are for the northern enzootic area, 168 in 1887, and 84 in 1888; in the southern enzootic area, 35 in 1887, and 80 in 1888. A large majority of the cases of rabies recorded were in dogs, namely, 160 out of 176, or 91 per cent. Cases of rabies in other animals can be nearly always traced to the bite of a rabid dog, and the Chief Inspector of the Agricultural Department attributes the very marked decrease in the northern enzootic area to the regulations as to dogs made and enforced by the local authorities in that area, and the increase near and in the metropolis to the relaxation of the regulations which in 1885-6 had freed the metropolis from the disease. It is recommended that owners of dogs should be compelled to keep their animals muzzled or under control when outside their own premises, the police having authority to destroy at once every stray and ownerless dog. Out of the 160 dogs returned as affected by the disease, 64 were found straying and, so far as could be ascertained, ownerless. "To get rid of rabies in this country," to quote the words of the Report, "it would be necessary to prohibit the importation of dogs from all countries in which the disease exists, and then enforce uniform regulations in every infected district in Great Britain." It will thus be seen that the Agricultural Department fully concurs in the demand for a universal muzzling order.

METROPOLITAN PROVIDENT MEDICAL ASSOCIATION.

The report presented to the annual meeting of the subscribers and friends of this association last week, which was held in the Jerusalem Chamber, Westminster Abbey, the Dean of Westminster occupying the chair, stated that:—"The association has now in active operation 14 branches, to which there are 71 medical men attached. The number of persons entitled to medical treatment exceeds 20,000, and the members' payments amounted in 1888 to £3,000. Seven branches of the 14 are now independent of any financial aid from the Council; of the other 7, 2 have just been established at a cost of £170, while advances to the amount of £90 were made in the year 1888 to assist the remaining 5 branches as compared with £135 in 1887. There is every reason to believe all the branches will ultimately become self-supporting, thus leaving the council more free to devote time and funds to the establishment of new branches." It was shown that the working classes contribute not less than £3,000 to this fund, and that up to the present 30,000 have been relieved by it. On a resolution approving the work of the Association, a gentleman in the body of the meeting moved an amendment condemning its aims as tending to the pauperisation of the masses, but this was thrown out by practically the unanimous vote of the meeting.

THE DEPTFORD POISONING CASES.

It was to be expected that the coroner's inquest into the cause of death of the boy Sydney Bolton would terminate in a charge of murder against Mrs. Winter, inasmuch as the death had been clearly proved to be due to arsenical poisoning, which occurred whilst the boy was under her sole charge; moreover, and it was a very ugly feature in the case, she had insured the boy's life Since the commencement of the inquiry, the bodies of two other persons have been exhumed, and the coroner's jury have returned a verdict of wilful murder in all three cases against her daughter, Mrs. Frost. In the face of these facts it behoves us to see what

steps can be taken to blot out the particular form of danger thus brought into consideration, and this irrespective of the question whether the particular persons charged are or are not those guilty of the crime. In the first place it is clear that the law forbidding anyone to insure another's life must be stringently enforced, which at present is evidently not the case. It would probably be a good plan if a special form of death-certificate were made compulsory in all cases where the life had been insured, such certificate giving the fullest particulars as to the symptoms and duration of illness, mode of onset, etc., instead of as at present the bare name of the disease; the insurance office might be obliged to supply the certificate and to pay a special fee for it. An additional, and indeed the only absolute, safeguard, would be that a *post-mortem* examination, by a competent pathologist, should be required in all cases where the life of the deceased had been insured.

DEATH OF DR. ELAM.

FOLLOWING closely upon the lamented death of Dr. C. B. Radcliffe, we regret to have to announce the decease, at the age of 65, of Dr. Elam, a former colleague and close friend of Dr. Radcliffe, and one whose interest lay largely in the same region of medical thought and study. Dr. Elam dwelt and published much on such subjects as "Natural Heritage," "Moral and Criminal Epidemics," "Automatism and Evolution." His views on evolution brought him into opposition with the main current of modern scientific opinion. Dr. Elam was a man of peculiarly scholarly character and retiring disposition. At the time of the death of Dr. Radcliffe we had applied to him for an estimate of the qualities and character of some of that physician's work, which he was peculiarly qualified to give; but he was already suffering so much from the illness, which has now ended fatally, that it was not even possible to acquaint him with the death of the colleague whom he so much esteemed.

H. A. ALLBUTT V. THE GENERAL MEDICAL COUNCIL.

THE judgment of the Court of Appeal in the case of H. A. Allbutt *v.* the General Medical Council will be received with satisfaction by the profession, as it has been by several leading organs of public opinion. A contrary decision would have injured the prestige, and therefore the efficiency, of the Council. From such a state of things the public would suffer even more than the medical profession. The *Medical Register* is the statutory safeguard of the public against unqualified or unworthy practitioners; and unless the power vested in the Council of striking off the *Register* the names of those whom it judges to have been guilty of conduct "infamous in a professional respect" is to be exercised without appeal, the *Register* will necessarily cease to fulfil the object for which it was established. The act for which the plaintiff's name was removed from the *Register* was pronounced by the Council to be unprofessional. Such an offence could be properly dealt with only by a professional tribunal. On the general question of the morality of so-called "Malthusian" principles, the Medical Council does not claim to speak with special authority. It certainly, however, lies within its province to decide that injury is done to the medical profession by one of its members publishing in a cheap and popular form information which, however legitimate in its proper place, may be used for the worst purposes. Mr. H. A. Allbutt may, no doubt, have been actuated by the highest motives in making his pamphlet accessible *virginibus puerisque*, but that does not lessen the harmful effects of his publication. An attempt has been made in a certain section of the lay press to represent Mr. H. A. Allbutt as a martyr to anti-Malthusian bigotry. What the general opinion of the profession on that subject may be we do not know. It is probable, however, that Mr. H. A. Allbutt might have ventilated his views without let or hindrance from professional authority had he been content to address them to medical men instead of to the public. The part of the judgment of the Court which deals with the publication of the Council's decision in its ordinary official minutes is of special importance. The proceedings of the General Medical Council and other public bodies acting in a judicial capacity are to be regarded as privileged, even when the conduct and character of individuals are involved. In the words of Chief Justice Tenterden, which were adopted by Sir Alexander Cockburn, and again in the recent appeal by Lord Justice Lopes, "a man has the right to publish, for the purpose of giving the public information, that which it is proper for the public to know." The injury done to the individual is held to be more than counterbalanced by the benefit to the public. Besides, the greater publicity that is given to the proceedings of the General Medical Council in matters affecting the conduct of practitioners, the greater is the security that investigation shall be thorough and judgment dispassionate.

BONE-GRAFTING FOR RESTORATION OF A PHALANX.

DR. HARRY SHERMAN, of San Francisco, contributes to the *Pacific Medical Journal* for June, 1889, some notes on a case of "Reproduction of the Entire Ungual Phalanx of the Thumb by a Single Bone-graft." The patient was a boy, aged 13; the ungual phalanx of his right thumb was comminuted and pushed out by a punch used in tin work. The large wound which was left was allowed to granulate, and a fortnight after the accident, the granulations being healthy, a wedge of bone was cut from a healthy Newfoundland puppy. This was carefully done under chloroform. The wedge contained bone, cartilage, and the line of ossification. It was speedily cut to the shape and size of the lost phalanx, implanted in the granulating cavity, and an antiseptic dressing applied. Five months later the boy's father wrote to Dr. Sherman, saying that the patient had a very useful right thumb, almost as good as its fellow on the left hand.

DEATH FROM CHLOROFORM.

WE have received the following particulars relative to a case of death under chloroform narcosis which recently occurred at University College Hospital:—A powerfully-built man, aged 56, was admitted on June 15th on account of extensive epitheliomatous ulceration affecting the tongue and floor of the mouth. As he had been an habitual drunkard he was kept in the hospital and prepared for the operation, which took place on June 27th. Although he was stated to have had an attack of acute Bright's disease, with extensive œdema, he was, at the time of the operation, free from albuminuria. While in hospital he had an epileptic fit; there was a history of previous fits. The operation undertaken was removal of the anterior half of the tongue and incisor portion of the jaw. Chloroform was administered by a house physician, who employed Junker's inhaler. The patient was a somewhat longer time than usual in going off, but otherwise took the anæsthetic well, until, at the close of the operation he became restless, and in order to place the lip stitches it was necessary to push the anæsthetic. During the operation very little blood was lost and the pulse was good. As soon as the chloroform was again resumed the patient's face became cyanotic and respiration stopped. The stump of the tongue was dragged forward—it had been kept well forward with a string all along—and one deep inspiration followed. An attempt was made to catheterise the larynx, when another deep gasp occurred. Subsequently to this no respirations took place, although artificial respiration was maintained for some time, having been commenced as soon as breathing appeared hampered. Laryngotomy was performed, but without effect. Indeed, there did not appear

to be any mechanical hindrance to respiration. All the usual means of resuscitation were adopted, but without avail. A *post-mortem* examination revealed a practically healthy heart-muscle, but extensively adherent pleuræ. It may be added that the heart-sounds were noted at the time of the operation, and were of normal character. It seems almost impossible that any further precautions could have been taken in this case, or that anything could have prevented its occurrence; no appreciable shock was evidenced and no contra-indication for the anæsthetic present.

COMPOUND FRACTURE OF THE TIBIA TREATED BY WIRING.

A CASE of compound comminuted fracture of the tibia, in which the fragments were successfully united by metallic suture, was recorded some months ago by Dr. J. B. Henrique, of Concepcion (Chili).[1] The patient, a lad aged 17, had his left leg broken by a fall from his horse. "First aid" of a rough kind was given by those about him, the bones which projected being reduced more or less effectually by counter-extension, and a dressing of herbs applied. When first seen by Dr. Henrique, three days after the accident, the patient's general condition was very bad, while the wound in the leg, which was over the anterior border of the tibia, at the junction of the lower and middle thirds, was in a most unhealthy state. Dr. Henrique, however, determined to make an attempt to save the limb, and accordingly, after applying Esmarch's bandage, he enlarged the wound in the vertical direction, removed a large fragment of the tibia which lay loose in the cavity, and trimmed the corresponding ends of the upper and lower fragments with the saw, saving the periosteum as far as possible. Two holes were next drilled in each fragment, and strands of twisted silver wire passed from behind forwards, and crossed over the outer surface of the tibia in the shape of the letter X. A counter-opening was made in the calf, a drainage-tube inserted, and an antiseptic dressing applied. The limb was placed on a grooved splint, allowing access both to the wound and to the counter-opening. Fifty-three days after the operation, which took place on August 17th, consolidation was so firm that the limb could be raised by grasping the heel, or the latter raised by grasping the leg below the knee. The wound had not, however, entirely closed. On the extraction of a small fragment of bone and the removal of the sutures it healed up rapidly. At the date of the report (November 16th) the patient could bear on the injured limb when standing still, and there was every prospect of recovery without shortening or appreciable lameness.

PASSAGE OF A CALCULUS BY THE URETHRA.

DR. E. CUEVAS, of Quirihue (Chili), relates a case[2] in which a stone of somewhat unusual size was passed by the urethra. The patient was a man aged 80, who had suffered from symptoms of vesical calculus for twenty years. About two years before coming under notice he had observed that, when the flow of urine became obstructed, a hard body could be felt at the root of the penis behind the scrotum; this he had learned to force back by manipulation, when the retention at once ceased. By slow degrees the body came farther and farther forwards till, when Dr. Cuevas saw the patient, it occupied a position about 2 centimètres behind the meatus. On that occasion there had been retention of urine for three days, and the man suffered intense agony. Dr. Cuevas succeeded in extracting the offending substance with small forceps; it proved to be a hard calculus, ovoid in shape, and flattened. It measured 22 millimètres in length, by 14 in the longest, and 11 in the shortest, diameter. Its greatest circumference was 55, and its least 40, millimètres. No chemical analysis of the stone was made

[1] *Revista Medica de Chile*, December, 1888.
[2] *Revista Clinica de Chile*, April, 1889.

NEPHRECTOMY OF A HORSESHOE KIDNEY.

PROFESSOR SOCIN, of Bâle, performed an exploratory operation last year on a woman, aged 47, who had been subject for thirty years to pains in the right hypochondrium, where a tumour had gradually formed. He aspirated, and found that the swelling contained urine; then he performed nephrotomy. Hydronephrosis was discovered during the operation. The urine passed by the urethra remained normal, but on and after the fourth day an abundance of turbid urine drained from the opening made in the kidney, and an examination led to the conclusion that parenchymatous nephritis and purulent pyelitis were present. On May 12th nephrectomy was attempted. After an abdominal incision and successful ligature of the structures in the hilum, it appeared that nothing was left to do besides setting free the lower part of the diseased kidney. On careful manipulation this extremity was found to be continuous with a bridge of renal tissue, which passed over the aorta and vena cava and joined the lower part of the left kidney. This bridge or isthmus was found to be but loosely connected with the great vessels. Dr. Socin divided it by means of the thermo-cautery, so that the right side of the horseshoe kidney came away. Five ligatures were applied to bleeding points on the raw surface left behind, which was then covered over by the capsule, the edges of the latter being united by sutures. An abdomino-lumbar drain was applied. The patient was in excellent health four months after the operation. In Braun's (Heidelberg) similar case a horseshoe kidney was discovered at operation for the removal of a pyonephrosis. The isthmus adhered strongly to the vena cava; on attempting to separate them, profuse venous hæmorrhage occurred, which was controlled with difficulty. The patient sank from exhaustion at the end of the operation.

A DRAINAGE TUBE PASSED THROUGH THE RECTUM.

DR. MARIANI describes in the *Siglo Medico* a case where a rubber drainage tube was passed into the abdominal wound after the removal of a large dermoid cyst which adhered to the parietes the omentum, and the liver. The patient was 46 years old. The wound healed in a week, but the tube had been allowed to slip into the abdominal cavity. The patient complained of pain referred to the left anterior superior iliac spine. A week after the healing of the wound the tube was passed during defæcation. It had probably caused inflammation of the adjacent large intestine, and passed through the softened walls of the gut. About twelve years ago an entire stump of an ovarian pedicle was passed at stool. The case occurred in Germany, and the patient recovered. The expelled body must have entered the intestinal canal in the same manner as in Dr. Mariani's case.

SCOTLAND.

THE treasurers of the Scottish Branch of the Queen Victoria Nurses' Institute Fund have received a donation of £250 from the Royal College of Physicians of Edinburgh.

POST-GRADUATE COURSE OF MEDICINE AT EDINBURGH.

THE syllabus of the post-graduate course, to be held at Edinburgh this autumn, has been issued. The course, which is the fourth since the date of their institution in 1886, will commence on Monday, September 23rd, and close on Saturday, October 12th. Several subjects have been added, and the list of special classes, with limited numbers, has been increased. Further particulars may be obtained from Dr. Claud Muirhead or Professor Chiene, Edinburgh.

ROYAL EDINBURGH ASYLUM.

THE report of Dr. John Sibbald, Commissioner in Lunacy, on the Royal Edinburgh Asylum, of date June 19th, 20th, and 22nd, has been published. The report shows that there are 838 resident patients in the asylum. The management and arrangements of the institution are most highly commended, and the managers are congratulated on the progress already made with the new asylum, which has been frequently referred to in the JOURNAL. The report speaks in the most favourable terms of the site selected, and expresses the hope that the managers may achieve the further most desirable end, namely, the obtaining sufficient ground on the more exposed aspect of the site, to exclude the possibility of the asylum being overlooked.

EDINBURGH UNIVERSITY UNION.

IT has now been definitely arranged that the Edinburgh University Union will be opened at the commencement of the approaching winter session. A meeting of the Council Committee was held last week, when it was announced that the buildings were practically free of debts. A further sum of nearly £2,000 is required, in order to complete the furnishings, etc., but the Committee see their way sufficiently clearly to enable them to hold to their promise of opening the Union free of debt. A small Acting Committee, consisting of Professor Muirhead, Dr. Woodhead, Messrs. Austin, Kinmont, Lahore, H. G. Melville, and the honorary secretaries, was appointed. Some discussion took place regarding the proposed exclusion of spirits from the list of drinks to be kept on the premises. Finally, it was agreed that the law, as previously framed, should stand: "that the Committee of Management should have no power by itself, or by arrangement with any caterer, to permit the sale or consumption of spirits on the Society's premises."

IRELAND.

DUBLIN HOSPITALS.

THE statement is made that the Government have no intention of introducing a Bill dealing with Dublin Hospitals this Session. It will be recollected that the late Mr. E. D. Gray, member for Dublin, brought in a Bill, practically adopting the report of the Commission, but that it was blocked, and could not be considered in the short time that remained before the close of the then Session. For a couple of years the subject has been allowed to lie somewhat dormant, but an effort was made this year to arrive at a settlement. The parties interested are the Treasury and the Irish party, and the cause of failure to proceed further is that it has not been found possible to come to a satisfactory arrangement as to the sum of money to be secured to Dublin hospitals for the future. It is now just four years since the Commission was appointed, and two since the report was sent in. During that time the hospital authorities most interested in any threatened changes have been kept in a state of suspense. Every year the statement is made that change is imminent, but after a time it is announced that nothing is to be done for the present, which means that something may be done in the future. The Government ought to state definitely what their intentions are. If things are to be allowed to remain where the Commission found them, and this would be far better than a perpetual terror, the announcement should be made. The present course is simply trifling with important interests.

AMALGAMATION OF DUBLIN SCHOOLS.

SOME difficulty has arisen in reference to the transfer of the Carmichael School buildings to the College of Surgeons, as provided by the scheme. The surviving trustee says he cannot do this in the sense of a sale, but that he is willing to take in as a co-trustee the President of the College of Surgeons, and to have the buildings devoted to the purposes of medical teacing in the combined schools. Practically, this is all that is required; but the Council was under the impression that absolute sale was to be effected, and the difficulty thus raised may lead to delay. A motion will be made at next meeting of Council to proceed with all legal arrangements at once. In the meantime the Council have sent forward the necessary by-laws for the approval of the Lord Lieutenant.

GALWAY INFIRMARY.

IT will be recollected that the Queen's Bench issued a mandamus requiring the governors of this infirmary to elect a surgeon. They have now determined by a large majority to appeal. The result is that a further delay will take place, and the governors who were declared not to be qualified to give a vote at an election of medical officer will probably be fully qualified by lapse of time before the question is finally settled. The move is a skilful one from a strategical point of view.

FATAL SEWER ACCIDENT IN BELFAST.

A FATAL sewer accident took place in Belfast upon the morning of June 29th. Four men had descended into a sewer for the purpose of cleansing it, when they were overcome by the gases generated there and fell into the sewage. They were rescued as promptly as possible and taken to the Royal Hospital. One died shortly after admission, partly from the effects of sewer-gas poisoning and partly owing to the submersion. A second, after having rallied from the immediate effects of the accident, developed acute pneumonia and died in about twenty-four hours. A third also developed acute pneumonia, and was despaired of, but has rallied and will probably recover. The fourth case, the least serious of the four, had some pulmonary symptoms less severe in character, and has already left the hospital. An inquiry into the accident is proceeding.

ARMAGH COUNTY INFIRMARY AND THE RECENT RAILWAY ACCIDENT.

A MOVEMENT has been started by the residents of Armagh and surrounding districts to form a subscription list for a permanent memorial of the victims of the late railway disaster, to be associated with the County Infirmary in recognition of the signal services it has afforded in the relief of the sufferers. The memorial will probably take the form of such improvement in the fitting up of at least one of the existing wards as to render it a model in all hygienic appliances, and to endow the same, and for the erection of a suitable tablet bearing the names of the killed in whose memory the work is undertaken. About £200 has already been acknowledged, and, the object being a most deserving one, there can be no doubt but that the community at large will respond in a liberal manner to the appeal which has been made.—The Committee appointed by the grand jury to inspect the infirmary have reported that the wards are kept in excellent order, that the patients are well looked after, and also refer to the very excellent manner in which Dr. Palmer and his assistants met the demand on their resources in consequence of the railway accident.

HOSPITAL FOR DISEASES OF THE THROAT.—A dinner in aid of the funds of the Hospital for Diseases of the Throat, Golden Square, took place at the Hôtel Métropole on Saturday, July 6th. Lord Randolph Churchill was in the chair. Subscriptions to the amount of nearly £2,000 were announced, including a sum of £300 contributed by the Empress Frederick of Germany A special feature in the proceedings was the presentation to Sir Morell Mackenzie of a handsome silver bowl by a number of representative members of the dramatic profession, in token of gratitude for his services.

TOPICS OF THE DAY.

(AN OCCASIONAL COLUMN.)

By the Editor.

It is very necessary for us journalists to mind our p's and q's. But I was never made more conscious of it than when I found on opening the Journal last week that my favourite National Health Society, instead of being eulogised as "*ex*tensive" in its operations, was reviled as "*ex*pensive"—which is exactly the opposite of fact. It beats all Berners Street in economy.

Iræ amantium redintegratio amoris. It was a lovers' quarrel after all: and at the general meeting of the Metropolitan Counties Branch it was unanimously resolved to invite the Association to hold its general meeting next year in London. Nothing could be more gracious.

The result of the voting at the election of the College of Surgeons was to show a much more substantial proportion of the Fellows ready voluntarily to resign their hitherto exclusive privilege of administration than could reasonably have been anticipated. A large number of them seem totally indifferent on the subject; in fact, only half the nominal list voted at all. Of those who took the trouble to vote upon what had in impassioned language been put before them as a policy of "spoliation" and the negation of "law and order," only a relatively small majority showed any fear of or dislike to the moderate reform for which so great a mass of Members are moving, and which, it now appears, finds favour also with a considerable number of the Fellows. The half of them feared so little the policy so hotly stigmatised that they have rightly, as I think, not cared to lift a finger to obstruct it. Various interpretations may, of course, be put upon the negative action of the abstainers, but when they are rallied by more than one potent trumpet-call to the cry of spoliation, and yet decline to stir, they may at least be set down as indifferent to such powerful stimulus.

On the other hand, Lord Randolph Churchill, Sir Guyer Hunter, Sir Trevor Lawrence, Sir Walter Foster, and Dr. Farquharson, who appear all to have backed the College of Surgeons Reform Bill, will see in the figures which were last week announced a very effective argument for the Bill. Notwithstanding the prestige attaching to the high and senior professional position of the candidates representing the *status quo*, and their claim therefrom to the highest offices of the College, from which they would have been debarred if not elected; notwithstanding the compelling influence of hospital association among "Guyites, Barts' and University men," and their natural desire to support the teachers, companions, and guides from their respective schools; notwithstanding the strong appeals and moving protests brought to bear on the eve of what was treated as a political crisis, the highest number of votes recorded to save the Capitol was only 397, less than a third of the list of Fellows; only 60 votes separated Mr. Howse, a representative of the *status quo*, from Mr. Rivington, a representative of reform; and the number of votes recorded by the Fellows in support of the policy of self-denial, and of admitting Members to a share of the administration of the College was about the same as the total number who voted altogether at the last election. It should not be difficult to convert so powerful a minority into a majority before long, and when the first shock which proposals for any change opposed to "vested interests" gives to so many minds has abated.

It is unnecessary minutely to analyse the elements of a majority in such a case. There is always a pretty solid vote to be expected from the party in possession. They are highly satisfied with their position, and see no reason why it should be altered for the worse, or why they should be called upon to give up anything, or to admit any new order to share their privileges. There is also the party which I may call the party of the Peris, who are waiting at the gate, and whose "higher qualification" in surgery is the exclusive pass-key which they are asked to share with claimants now in the background; and many other subdivisions which I am not called upon to analyse. But the main fact is that, whereas the Members had but little right to anticipate that they would have received so large and self-denying a support from the Fellows, whose administrative privileges they claim to share on grounds which will be submitted to Parliament, they have yet received it in no unstinted measure. Recalling the desperate but ineffectual opposition which the claims of the profession at large to have direct representation on the General Medical Council met with on a former occasion, the generous action of so many of the Fellows affords a cheering omen having a significance in "political meteorology," of which the supporters of the Bill will, I suppose, be likely to take cheerful and effective note.

Dr. Haddon wishes to remind us that in 1874 he brought forward a proposition which he is pleased to think has been tardily adopted in two parts by the creation in 1881 of the Collective Investigation Committee, and this year of a weekly Reference Committee. There is no objection to his being pleased at any such analogy which he can discover. An annual expenditure of £1,100, which was out of the question in 1874 with the then very limited resources of the Journal, is very possible now with the much larger resources which it has in the meantime created, and might be very advisable. As a matter of fact, however, the analogy does not exist. The Collective Investigation Committee differs *longo intervallo* from what he proposed, and has no relation whatever to the weekly contents of the Journal; its success, too, has been so dubious that, after a brief period of existence, its animation has, I regret to see, been suspended. Although I desired the success of so interesting an experiment, I pointed out its sources of inherent weakness, and the improbability that it could fulfil the large expectations formed of it here, and which for a moment attracted the imagination of other associations and of the International Medical Congress. It was born with great *éclat*, baptised with many benedictions, welcomed with loud sounding of trumpets at Copenhagen; but neither energy, liberal subsidy, nor the devotion of some of the finest intellects in Europe could keep it alive.

As to the Committee of Reference, it has for many years been a favourite proposal of mine, and, *faute de mieux*, I had for long improvised a sort of voluntary substitute for it. There were many practical difficulties in the way of its formal establishment which till lately were insuperable. At the first moment that I saw the possibility of realising it I brought it forward again, and I am grateful to the Council for having adopted my proposal. It is still young as a working machine, but it is working smoothly and efficiently. It has, however, only the most distant resemblance to anything which Dr. Haddon suggested.

I refer to this, not only because it is important that the lesson of the past should not be misread, but because from that reading he deduces prophetic support for another proposition often put forward as one of novelty and force—the publication of the proceedings of the annual meeting in the form of a volume or volumes of *Transactions*. Speaking as a journalist, such publication would so much ease the pressure on these pages, that I should rejoice if it could be done. But, on the other hand, whenever examined, the proposal has shown itself chimerical and unsound. The issue of 13,000 copies of such a volume (it would be two large volumes) of *Transactions* would involve an enormous outlay, running into thousands of pounds. The volumes could not be prepared and published for several months afterwards, and by that time all that was of interest in them would have become ancient history. Who reads the *Transactions* of the International Congresses? How many would even put them on their shelves, but that they have paid for them, and, therefore, hesitate or delay to consign them to limbo? They are notoriously among the dreariest bogies of the library, and the most ghostly of the mournful array of "books of miscellaneous reference." Has anyone ever subscribed for them? How many have bought them? An association with *Transactions* alone has only a small membership and a transient annual flash of vitality; except for a week yearly, its animation is suspended. In an association with journal and *Transactions*, the weekly journal must devour the heart of the *Transactions*, and the baked meats served up at the funeral feast six months afterwards would attract but few guests. In the case of our own Association, it would be necessary largely to raise the annual subscription, or to make a voluntary fund, to defray the great expense of producing and distributing, six months after the meeting, 13,000 copies of a huge unreadable volume of heterogeneous contents, which not one in five hundred would ever open,

of which the cost would be enormous and the sale *nil.* "*Transactions*" of an association sound well; but in a world which will not even tolerate quarterly reviews, they have but a very back seat or a high shelf reserved for them. It is an age of serials and of monographs. Scarpa's injunction to "write monographs" holds good; but volumes of *Transactions* even for limited and exclusively learned bodies have commonly more or less the air of a corpse which has forgotten to have itself buried. No doubt the papers are embalmed in them; but authors, as a rule, do not wish their papers embalmed—certainly not before they have lived. I distinguish, of course, between the learned societies with limited numbers of members and small strictly scientific reunions, and associations and congresses with their annual picnics and sections. The two are sometimes spoken of as if they were alike; but they are very different—and happily so for both.

THE few words of feeble protest which I timidly uttered last week on the tedious tyranny of post-prandial prosiness at medical dinners have, I find, been taken in good part. The letters which I have received utter one long sigh of retrospective suffering seasoned by prospective satisfaction at the hope of future relief. I was not surprised at a little good-tempered banter on the subject at the very successful dinner of the Metropolitan Counties Branch, but the good effects were visible, and were much appreciated. The "toast list" offered the glorious prospect of seventeen speeches; but Dr. Ord gave the loyal toasts in the true military style, which I ventured to commend, heartily and cordially, but without speeches. There were only two songs, which were quite enough, an excellent band having played all through the dinner; and the speaking, which was throughout pointed and brief, was got through in gallant style in an hour and a half. The toast list, however, was felt to be far too long, and several of the speakers complained of having "no notice." One speaker complained good-naturedly that it was hard to be expected to be "witty" without possessing the natural gift. I had suggested, however, many other alternatives, and, in the absence of any other kind of humour, there remains the "soul of wit," which is at every man's command. "I tried above all things," said an eloquent but long-winded preacher to the celebrated Robert Hall, who was sitting among his congregation, "not to be tedious;" to which came the candid reply, "Ah, but you were tedious." That is apt to be the fate of the most eloquent orators after dinner, if they are lengthy. The Yankee explanation of why the lions did not eat Daniel when he intruded in their den was told dramatically and at length on Friday evening. Briefly, it was because they recoiled before the prospect of being required to make "an after-dinner speech." It is an excellent moral. Our lions are expected nowadays to make a great many speeches, and do not always do it well. To roar like a sucking dove is a rare accomplishment.

A MAN named Pascoe, described in the calendar as a surgeon, was charged at the Old Bailey recently with using instruments to procure abortion. Mr. Avory in the course of his statement said that the prisoner was the son of a surgeon, but had no diploma to entitle him to practise as a medical man. The accused was found guilty. He then pleaded guilty to having been convicted at Exeter in 1879, for a similar offence, when he was sentenced to five years' penal servitude. The learned judge passed a sentence of ten years' penal servitude. What I complain of here is that an infamous person, who is not a surgeon, should be so described in the calendar. In most of the papers in which the case is reported, the description of surgeon is held to be a sound one, and no correction is made. Now the word "surgeon" is a legal registrable title, and is defined by law as implying the possession of a diploma by one of the institutions authorised to confer such title. The misuse of the title and its fraudulent assumption is in itself an offence, and why should those who are charged with making up the calendar use an illegal description of the prisoner? Is it not the duty of some official at the Old Bailey to see that no such infringement of the law takes place in making up the calendar?

DESICCATION OF THE DEAD.—Dr. C. H. Harvey, in a paper read before the Congress of Medical Jurisprudence recently held in New York, advocated a process of desiccation instead of burial. The drying is effected by currents of dry air; and the body, when thus thoroughly dried, is said to remain unaltered for an indefinite time. It is even reported that a company has been formed to "work" the process.

SCOTCH LOCAL GOVERNMENT BILL.

A DEPUTATION from the West of Scotland Branch of the British Medical Association, consisting of Professor Eben. Duncan and Professor James Christie, Glasgow, and Dr. McVail, Kilmarnock, President of the Sanitary Association of Scotland, together with Dr. Farquharson, M.P., and Mr. Ernest Hart, Chairman of the Parliamentary Bills Committee of the British Medical Association, had an interview on Tuesday morning with the Lord Advocate of Scotland at Dover House on the subject of the public health provisions of the Scotch Local Government Bills. They put before him the subjoined document, and set out the reasons in support of it.

The Glasgow and West of Scotland Branch of the British Medical Association, which includes members of the Association resident in the counties of Lanark, Renfrew, Dumbarton, Ayr, Argyle, and Bute, held a special meeting on July 4th, 1889, to consider the Local Government (Scotland) Bill, more especially such of its clauses as deal with matters of public health; and, as the result of a full discussion, the Branch would respectfully submit, for the consideration of Her Majesty's Government, the following suggestions for the amendment of the Bill:

1. That in the Supplementary Provisions Bill, Section 22, Clause 1, the words, "The Council of any county may, if they see fit," should be altered to read "the Council of every county shall;" and that power of combination should be given, subject to the approval of the Board of Supervision, to counties which are small or sparsely populated.

2. That a clause should be inserted to the effect that the sanitary inspectors appointed under this Act should be subordinate to the medical officer of the district or county to which they are appointed.

The principles which underlie practical sanitation have been established by the labours of medical men. Almost all the legal processes by which the Public Health Act may be enforced rest upon the certificate and evidence of the medical officer. It seems absurd to leave to chance the harmony of the sanitary inspector's routine work with the opinion of the medical officer, which must ultimately in every case be appealed to.

3. In Clauses 2 and 3 of Section 22 of the Supplementary Provisions Bill, the words "or sanitary inspectors" should be deleted, because, while it is quite reasonable to suppose that in some counties several districts might be efficiently served by one medical officer, it is exceedingly desirable that every district in every county should be of sufficient size to occupy wholly the time of one sanitary inspector. It is well established by experience that if the districts are too small, and are allowed to combine to share the services of a sanitary inspector, the work will be badly done.

4. That the Bill should provide for a reconstitution of the Board of Supervision as the central health authority, by the addition to its membership of medical and sanitary engineering experts; and that the Board should be reinforced in its executive by the institution of a medical department, with a staff of medical and other advisers.

5. In any case the Board of Supervision ought to have some control over the excessive freedom of movement left by the Bill to every unit of sanitary administration, both as to individual and combined action. Part VIII of the English Health Act, "Alteration of Areas and Union of Districts," may be referred to for examples of the control given to the Local Government Board over such actions in England; these powers not being embodied in the Scotch Public Health Act are not possessed by the Board of Supervision.

6. That there should be a clause in the Bill providing that the medical officer of health and sanitary inspector should not be removable except by the central health authority, or by the Secretary of State for Scotland.

7. That in line 33, Clause 2, Section 24, of the Supplementary Provisions Bill, the limit of population be thirty thousand instead of fifty thousand. There are very few rural districts in Scotland, outside of the burghs, in which the population numbers fifty thousand.

8. That the last part of Clause 2, Section 24, of the Supplementary Provisions Bill, beginning with the words "for the district of a local authority," in line 39, should be deleted; and, further, that provisions should be made that all appointments of medical officers of health be sanctioned by the reconstructed central health authority.

9. That in Clause 3, Section 24, of the Supplementary Provisions Bill, it should be provided that no one be appointed as a sanitary inspector for a county unless he possesses a qualification in sanitary science granted by a recognised body.

ALEXANDER ROBERTSON, M.D.,
Chairman of Meeting.
ALEXANDER NAPIER, M.D.,
Hon. Secretary, Glasgow and West of Scotland Branch, British Medical Association.

The LORD ADVOCATE, in reply, expressed his general sympathy with their views, but pointed out the almost insuperable difficulty of taking steps to remodel the Board of Supervision at the present moment, although in the future it seemed a desirable step and one that might be carried into effect by further legislation. On all the other points he entered into explanations, indicating views corresponding to the amendments indicated, to several of which he promised favourable consideration, and suggested that amendments to carry them into effect should be at once put upon the paper. It will be observed that the amendments in question are entirely in accord with the draft amendments of the Parliamentary Bills Committee; and the deputation expressed their warm approval of and thanks for the action taken. Subsequently the members of the deputation proceeded to the House of Commons, and had interviews with various Scotch members of Parliament with the object of enlisting their support for the amendments.

FEMALE MEDICAL AID FOR THE WOMEN OF INDIA.

THE Lord Mayor presided on Tuesday last over a largely attended meeting at the Mansion House on behalf of the National Association for Supplying Female Medical Aid to the Women of India. The Marchioness of Dufferin, who has done so much good work in this direction, was among those present.

Sir W. W. HUNTER spoke of the known reluctance which Indian women had to being seen by medical men, and expressed the opinion that the only way to bring professional aid to them was to create a supply of female doctors, and to establish hospitals and dispensaries officered by women.

Sir ARTHUR LYALL described the progress which had been made in Northern India.

Sir M. GRANT-DUFF gave an account of the work which had been accomplished in Madras, Bombay, and other parts of Southern India. He showed that the movement to provide medical aid for the women of Southern India was set on foot many years ago, and from Madras women were sent who were useful as nurses, and some as practitioners. When, however, Lady Dufferin landed in India she had the sagacity to see that isolated provincial efforts, however good in themselves, required not to be centralised but to be co-ordinated, so that workers in different parts of India might feel themselves parts of a great organisation, the head of which was the wife of the greatest of the Asiatic potentates—the only potentate who, under ordinary circumstances, was visible to all India and to England. In South India her views were taken up as they were all over the rest of the peninsula. Having quoted from statistics from the report of the Madras Branch, the speaker contended that these showed that in Southern India a vast amount of female suffering had been met and alleviated.

The Marquis of DUFFERIN and AVA thanked the Lord Mayor for presiding, on behalf of Lady Lansdowne, who was prosecuting the work inaugurated by Lady Dufferin.

The LORD MAYOR announced that the Drapers' Company had given a donation of 500 guineas; the Mercers' Company, as already announced, had given a like sum. The following additional sums had been received:—From the Princess of Wales 50 guineas, the Duke of Bedford 50 guineas, the Duchess of Bedford 50 guineas, Baroness Burdett-Coutts 50 guineas, the Lady Mayoress £20, and other sums which would be acknowledged.

NATIONAL PENSION FUND FOR NURSES.

AT a meeting held on Thursday (Mr. WALTER H. BURNS in the chair), the Chairman announced that Her Royal Highness the Princess of Wales had accepted the office of President, and that the Prince of Wales had consented to act as Patron. It was reported that the authorities of the Royal Hants County Hospital, Winchester, had determined to affiliate their institution to the fund, and to pay half the premium of each of their nurses. As upwards of one thousand annuity proposals have been obtained, the fund is now legally constituted. The policies issued represent a premium income of sufficient extent to make the loading (that is, the amount provided by the actuary for expenses) equal to four-fifths of the whole expenditure under every head since business was commenced in July, 1888. The remaining fifth, together with the expenses incurred between the registration of the Society in February and the commencement of business in July, 1888, have been defrayed by Mr. Edward F. Coates, who has given 250 guineas, and by Messrs. C. de Murrieta and Co., who have contributed 500 guineas for this special purpose. The foregoing donations enabled the manager to report that all the money contributed to the bonus fund, together with the interest derived from the deposit of £20,000 in the Court of Chancery, was available for distribution to the nurses in bonuses without any deduction whatever. The four gentlemen who had deposited the £20,000 as security for the policy holders have now given this money absolutely to the fund. Wishing to show some mark of appreciation towards those of the first one thousand nurses who have joined the fund unaided by any institution, they have determined to give £5,000 thereof towards a special bonus fund to enable the Council to give to each of the said nurses a substantial reversionary bonus when her pension commences. They further wish to place the remaining £15,000 to the credit of the general bonus fund, to be used under the control and at the direction of the Council for the benefit of all the nurses within the British Empire who may from time to time join the National Pension Fund for Nurses.

SHORTHAND FOR MEDICAL STUDENTS.

WE are requested to state that the Shorthand Examination Committee, after careful consideration, have decided that the examination shall be limited to Pitman's *Phonography*. They are convinced that the original intention—to examine candidates also in other systems—would be to sacrifice the real interests of the profession, for which uniformity is of the utmost importance, and that its chief result would be to cause a small percentage of the students who acquire shorthand to find themselves out of harmony with the rest. Probably some of these would endeavour to learn the system of the majority in time that should be devoted to their proper studies. The committee is satisfied that Pitman's *Phonography* is the only system by which uniformity can be now assured, and that it is perfectly adequate for all the desired purposes.

To prevent misconception they would state that they consider it most undesirable that students should be encouraged to learn shorthand during the medical session, when their time should be fully occupied with special work. To avoid the risk of special practice during the beginning of the session they propose to hold the examination in the first week of October. The date will be announced in the Students' Number of each medical journal, and also, it is hoped, in the synopsis of the examination, which will be ready on July 15th, and to be obtained either at Lewis's Library, or by post from Dr. Coupland, 16, Queen Anne Street.

The committee will be glad to receive donations towards the expenses of the examination from all who approve it, The approval of only a few was obtained in the first instance, almost without selection, in order to establish the proposal. It is desired now to obtain enough to meet the expenses for two or three years, and also to obtain the financial support from as wide an extent as possible. While larger donations will, of course, be gladly received, those of 5s. or 10s. will also be welcomed. The following have been already received or promised, and the committee would beg to express its appreciation of the effective value of the support accorded to the proposal by those whose names head the list:—

	£	s.	d.
Sir William Jenner, G.C.B.	5	5	0
Sir Joseph Lister	3	3	0
Dr. Quain	2	2	0
Sir Henry Acland	1	1	0
Sir William Roberts	1	1	0
Sir Dyce Duckworth	1	1	0
Dr. Wilks	1	1	0
Howard Marsh, Esq.	1	1	0
Dr. Hughlings Jackson	1	1	0
Dr. Gray, Oxford	1	1	0
Dr. Gowers	1	1	0
Dr. Howard Tooth	1	1	0
Dr. Coupland	1	1	0

Subscriptions have also been received from Dr. Pye-Smith, Dr. Mitchell Bruce, and Dr. Fergusson, Cheltenham.

ROYAL COLLEGE OF SURGEONS.

A QUARTERLY Council was held at the College on Thursday, July 11th.

A report was received from the President stating the result of the election on July 4th, after which Messrs. Hulke, Heath, and Howse were introduced, and took their seats as members of the Council.

The Secretary was requested to inform a certain gentleman of the removal of his name from the list of Members of the College, in consequence of his infringement of Clause 2, Section xvi of the by-laws.

Mr. MARSHALL, as Chairman of the Committee on the Lunacy Acts Amendment Bill, reported the proceedings of that Committee, and laid before the Council a copy of a letter addressed to the Home Secretary on the subject of the Bill. This letter was entered on the minutes.

A letter was read from Mr. Arthur Milman, forwarding a copy of resolutions adopted by the Senate of the University of London, relating to the appointment of a committee to consider the report of the University for London Commission. This matter was referred to the combined committees of the two Colleges appointed to deal with this subject, to consider and report to the next meeting of the Council.

A letter was read from Mr. Frank Harris, Honorary Secretary to the Father Damien Memorial Fund, enclosing resolutions adopted by the Executive of the Fund. This was referred to the

President and Vice-Presidents of the College to report to the next meeting of the Council.

The following gentlemen were appointed as Professors and Lecturers for the ensuing year:—Professors of Surgery and Pathology: William Henry Battle, John Langton, Walter Pye. Professors of Comparative Anatomy and Physiology, etc.: William Watson Cheyne, Benjamin Thompson Lowne, Charles Stewart. Lecturer on Anatomy and Physiology (Arris and Gale): William Hunter. Erasmus Wilson Lecturer: John Bland Sutton.

Mr. Hutchinson was elected President, and Messrs. Bryant and Croft, Vice-Presidents, for the ensuing year.

The various annual committees were then elected, and the date of the next ordinary meeting of the Council was fixed for August 1st.

MALCOLM MORRIS INDEMNITY FUND.

It is felt by many of Mr. Morris's friends that, he should not be allowed to bear the heavy costs of the recent trial in addition to the months of anxiety and worry he has been compelled to undergo. By his courage and promptitude Mr. Morris has done a service both to the profession and to the public which requires a more solid recognition than a simple expression of sympathy.

The following additional subscriptions have been promised, and those who desire to contribute are requested to communicate without delay with Mr. G. P. Field, 34, Wimpole Street, or Dr. Sidney Phillips, 21, Upper Berkeley Street.

	£	s.	d.
Amount previously acknowledged...	119	2	6
Dr. Pavy	5	5	0
Sir Morell Mackenzie ...	5	5	0
Dr. Hughlings Jackson ...	5	5	0
William Adams, Esq. ...	5	5	0
Dr. Donald Hood	5	5	0
Dr. Montagu Handfield-Jones	5	5	0
Sympathising Patient ...	5	5	0
The *Lancet*	5	5	0
Sir Joseph Lister	5	0	0
Dr. Matthews Duncan ...	3	3	0
Sir J. Crichton Browne ...	2	2	0
Dr. Graily Hewitt	2	2	0
Dr. Lees...	2	2	0
A. T. Norton, Esq.	2	2	0
H. T. Butlin, Esq.	2	2	0
H. W. P.	2	2	0
Dr. Frank (Cannes)	2	2	0
W. A. Meredith, Esq. ...	2	2	0
Dr. Glover	2	2	0
Dr. G. May (Reading) ...	2	2	0
G. W. H. Bailey, Esq. ...	2	2	0
Dr. McCall Anderson (Glasgow)	2	2	0
William Rose, Esq.	2	2	0
Dr. Fitzpatrick	2	2	0
Dr. MacLaren...	2	2	0
Dr. Scanes Spicer	2	2	0
F. M. Mackenzie, Esq. ...	2	2	0
Dr. Holman (Reigate) ...	1	1	0
F. J. Gant, Esq.	1	1	0
Dr. Alderson	1	1	0
N. Davies-Colley, Esq. ...	1	1	0
Edmund Owen, Esq. ...	1	1	0
C. A. Ballance, Esq.	1	1	0
Dr. T. Barlow	1	1	0
Dr. Ross (Manchester) ...	1	1	0
Dr. J. M. Bright (Forest Hill)	1	1	0
Dr. Sidney Coupland ...	1	1	0
J. Scott Battams, Esq. ...	1	1	0
Dr. Seymour Taylor	1	1	0
Dr. Cholmeley...	1	1	0
Dr. Keyser	1	1	0
Dr. Cleveland	1	1	0
Rickman J. Godlee, Esq. ...	1	1	0
Dr. Hadden	1	1	0
Alban Doran, Esq.	1	1	0
J. Pugin Thornton, Esq. ...	1	1	0
Dr. Thin...	1	1	0
Dr. Finlay	1	1	0
Shirley Murphy, Esq. ...	1	1	0
Henry Sewill, Esq.	1	1	0
Dr. A. P. Luff	1	1	0
Dr. Sutherland	1	1	0
Dr. Brace	1	1	0
Dr. G. B. Mead (Newmarket)	1	1	0
Dr. David Little (Manchester)	1	1	0
Dr. Oliver (Harrogate) ...	1	1	0
Dr. Roberts (Portmadoc) ...	1	1	0
Dr. Barr Meadows	1	1	0
J. J. Gawith, Esq.	1	1	0
Dr. Major (Bradford) ...	1	1	0
W. Anderson, Esq.	1	1	0
G. Borlase Hicks, Esq. ...	1	1	0
A. W. H. Walker, Esq. (Har-			
Dr. J. F. Payne	1	1	0
Dr. J. Elliot Square (Plymouth)	1	1	0
H. Cripps Lawrence, Esq. ... rogate)	1	1	0
	0	10	6
Herbert Sieveking, Esq. ...	0	10	6

Hastings (Population, 55,119).—*Low Death-rates: Improved Sanitation.*—The exceedingly low death-rate which Mr. Knox-Shaw reports for 1888 (13.17 per 1,000) is indicative of a remarkably healthy state of the borough, being 2.64 below the decennial average, and the lowest death-rate recorded since 1874. The deaths from all causes include 25 from the seven principal zymotic diseases, and the zymotic death-rate is only 0.47 per 1,000. There were no deaths from measles, and very few cases were known to exist; scarlet fever was somewhat prevalent in the first half of the year, causing three deaths; diphtheria occurred in isolated cases chiefly, but in one instance, owing to defective sanitary arrangements, three persons in one house were affected; 2 deaths resulted from typhoid fever, and 11 from diarrhœa, though it must be noted that some of these latter deaths were in adults, and scarcely to be described as of zymotic origin. The year was also remarkable for a great diminution in infantile mortality, and this Mr. Knox-Shaw attributes in some measure to the improved sanitary condition of the borough in general, and to the influence of the cool summer. Sanitary matters seem to be well looked after in Hastings. The "sanatorium" was used for the isolation of 69 cases of scarlet fever last year.

ASSOCIATION INTELLIGENCE.

NOTICE OF QUARTERLY MEETINGS FOR 1889. ELECTION OF MEMBERS.

A meeting of the Council will be held on October 16th, 1889. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting, namely, September 26th, 1889.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member *by the Council* or by any recognised *Branch Council.*

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No member can be elected by a Branch Council unless his name has been inserted in the circular summoning the meeting at which he seeks election.

Francis Fowke, *General Secretary.*

COLLECTIVE INVESTIGATION OF DISEASE.

The series of Maps forming the Report of the Collective Investigation Committee on the Geographical Distribution of Rickets, Acute Rheumatism, Chorea, Cancer, and Urinary Calculus are deposited in the Library of the Association, and are open to the inspection of members. A descriptive commentary appeared in the Journal of January 19th, 1889.

An inquiry into the Origin and Mode of Propagation of Epidemics of Diphtheria is in progress.

Memoranda and forms for communicating observations may be had on application to the Secretary of the Collective Investigation Committee, 429, Strand, W.C.

GRANTS FOR SCIENTIFIC RESEARCH.

The Scientific Grants Committee of the British Medical Association desire to remind members of the profession engaged in researches for the advancement of medicine and the allied sciences, that they are empowered to receive applications for grants in aid of such research. Applications for sums to be granted at the next annual meeting should be made without delay to the General Secretary, at the office of the Association, 429, Strand, W.C. Applications must include details of the precise character and objects of the research which is proposed.

Reports of work done by the assistance of Association grants belong to the Association.

Instruments purchased by means of grants must be returned to the General Secretary on the conclusion of the research in furtherance of which the grant was made.

BRANCH MEETINGS TO BE HELD.

Oxford and District Branch.—The annual meeting will be held in the Council Chamber, Abingdon, on Friday, July 26th, when the President-elect, Slade Baker, Esq., will entertain the members of the Branch at luncheon. Notice of any communications which members intend to make should be sent to the Honorary Secretary, W. Lewis Morgan, 42, Broad Street, Oxford, on or before Friday, July 12th.

Reading and Upper Thames Branch.—The annual meeting of this Branch will be held in the Library of the Royal Berkshire Hospital, Reading, on Thursday, July 18th, at 4.15 p.m. The chair will be taken by W. B. Holderness, Esq., of Windsor, President, and the business of the Branch will be transacted, after which Dr. Price, of Reading (the President for the coming year), will take the chair, and deliver an address. Discussion will be invited on the question of the Disproportionate Growth of the Out-patient Department of Hospitals, as well as the subject of Provident Dispensaries, Medical Aid Associations, and Sick Clubs. The annual dinner will take place on the same evening, at 6.15 p.m., at the Queen's Hotel, Reading. Dinner tickets (10s., including wine, or 5s. without) should be obtained from Mrs. George, Queen's Hotel, on or before July 16th.—H. Heygate Phillips, Honorary Secretary, 43, London Road, Reading.

North Wales Branch.—The annual meeting will be held at Bettwsycoed on Monday, July 15th. Members having any communications to make to the meeting or new members to propose are requested to give notice to the Secretary at once. Papers have been promised by Drs. Emrys-Jones, Isambard Owen, John Roberts, Lloyd Roberts, Lloyd Williams, and Richard Williams.—W. Jones-Morris, Honorary Secretary.

North of England Branch.—The twenty-fifth annual meeting will be held at Durham, in Bishop Cosin's Library, on Tuesday, July 16th, 188-, at 3 p.m. Business: The President-Elect, Dr. Barron, will deliver the annual address. Report of the Council of Management. Treasurer's Account. Election of Officers for 1889-90. Election of Representatives on the Council of the

Association and Parliamentary Bills Committee. The dinner after the meeting will take place in the Castle Hall, Durham, at 5.30 P.M.; 6s. 6d. each, exclusive of wine.—G. E. WILLIAMSON, F.R.C.S., Honorary Secretary, 22, Eldon Square, Newcastle-upon-Tyne.

SOUTHERN BRANCH: ISLE OF WIGHT DISTRICT.—An ordinary meeting will be held at Daish's Hotel, Shanklin, on Thursday, July 18th, 1889, at 4 P.M. President, J. M. Pletts, M.D., in the chair. Agenda: 1. Election of Vice-President of the District. 2. Proposed new member: Tertius D'Oyley Pain, Esq., L.S.A., Bembridge. 3. Next Place of Meeting. Communications: 4. A visit to Apostoli's *Clinique*. 5. Notes on the Hypodermic Use of Guaiacol in Pyrexia: J. G. S. Coghill, M.D. 6. Fatal Case of Thoracic Aneurysm: Robert Robertson, M.D. 7. Case of Embolism of the Cerebral Arteries, Death: W. E. Green, Esq. Pathological Specimens: 8. Thoracic Aorta and Bronchus from the Fatal Case of Aneurysm. 9. Microscopic Specimens of Sputa, from Cases of Pulmonary Tuberculosis, treated by Hot Air Inhalation, shown by Robert Robertson, M.D. Gentlemen who are desirous of introducing patients, exhibiting pathological specimens, or making communications, are requested to signify their intention at once to the Honorary Secretary. Dinner at 6 P.M.; charge 6s., exclusive of wine.—ROBERT ROBERTSON, Honorary Secretary.

DORSET AND WEST HANTS BRANCH.—The next meeting will be held at Bournemouth on Wednesday, July 17th, 1889. The business meeting will be held at the Royal Bath Hotel at 3 o'clock. Agenda: Election of new Members. The following gentlemen to be proposed: Benjamin Pope Bartlett, Bourton; Henry Grabham Lys, M.B., Bournemouth; William Robert Thomas, M.D., Bournemouth; John Pleydell Wilton, Weymouth. Place and time of the Autumn Meeting. Consideration of a communication from the Worcestershire and Herefordshire and Gloucestershire Branches relative to the overgrowth of the out-patient departments of hospitals (see report of combined meeting at Worcester on May 7th, JOURNAL, May 18th, 1189, p. 1141). Consideration of Dr. Rentoul's Proposed Medical Service of England (see JOURNAL of June 22nd, page 1425). Mr. H. A. Lawton to move—"That in the opinion of this Branch it is incompatible with the interests of the British Medical Association and the dignity of its members that any of its members should be connected with any so-called medical aid society or provident dispensary." Discussion: Some Medical and Surgical Emergencies. Communications: Dr. Lawrie: Remarks on some of the Symptoms of Locomotor Ataxy from Cases. Dr. MacDonald: Notes on a Case of Tumour of the Cerebellum, with specimen. Dinner at 6 P.M.; charge 6s. each, without wine. Members intending to be present are requested to communicate with Mr. Nunn by Monday, July 15th. The President will be pleased to see members and friends to luncheon at his residence, "Maplestead," Bournemouth, between 12.30 and 2 P.M. Dr. Snow, Richmond Gardens, will also be pleased to see members and friends to luncheon at his residence.—WILLIAM VAWDREY LUSH, M.D., Weymouth; C. H. WATTS PARKINSON, Wimborne, Honorary Secretaries.

NORTH OF IRELAND BRANCH.—The eleventh annual meeting will be held in the Royal Hospital, Belfast, on Thursday, July 18th, at 4 P.M. Business: 1. To receive the Secretary's report, and the Treasurer's statement. 2. To elect officers for the ensuing year. 3. To elect two members as representatives of the Branch on the Council of the Association, and also two representatives on the Parliamentary Bills Committee. 4. The President (Professor Dill) will deliver an address on Forensic Medicine and Medical Evidence. 5. Dr. O'Neill will show a patient on whom he performed osteotomy for double knock-knee, and will read short notes of the case. 6. Dr. E. C. Thompson (Omagh) will read notes of a case of Abdominal Section for Bowel Obstruction. 7. Professor Sinclair will read notes of a case of Enterectomy. 8. Dr. Lindsay will show a case of Progressive Muscular Atrophy. 9. Dr. J. Mansergh Palmer (Armagh) will show a case of Jacobi's Ulcer of the Face. 10. Dr. Burden will bring before the members of the Branch the Desirability of Starting a Medical Journal for the North of Ireland. The annual dinner will be held at 7.30 P.M. on the same day in the Grand Restaurant and Café, Arthur Square; tickets, exclusive of wine, 7s. 6d.; with wine, 15s. Gentlemen intending to be present will kindly communicate not later than Wednesday with JOHN W. BYERS, M.D., Honorary Secretary, Lower Crescent, Belfast.

SOUTH-EASTERN BRANCH.

THE forty-fifth annual meeting of this Branch was held at Eastbourne on June 26th.

President's Address.—The retiring President, Dr. J. V. BELL, of Rochester, having made a few valedictory remarks, introduced his successor, Dr. HAYMAN, of Eastbourne, who delivered an address on Eastbourne as a winter health-resort. The climatic conditions necessary for a healthy winter resort were, first, an equable temperature; secondly, abundant sunshine; thirdly, a not too excessive rainfall; fourthly, absence of violent winds for any long duration; fifthly, a dry soil. Observations as to temperature had been taken for nearly twenty years, and during the past five years daily observations of sea temperature at the pier head. For the past nine years the mean winter temperature from October 1st to March 31st was found to be 45.2°, Bournemouth being 44.4°, Llandudno 44.4°, and Osborne 43.3°. This was attributable to the close proximity of the South Downs and to the shelter of Beachy Head. Eastbourne was much warmer than most inland places in the winter, the temperature being often 10° higher than in the Midlands, where a change of from 18 to 20° in twenty-four hours was sometimes experienced. These violent changes were almost unknown at Eastbourne. A special note during the whole year of 1888 showed that the mean change at the same hour (namely, 9 A.M.) was a small fraction over 2°. The mean daily range in winter was 9° and in summer 11°, a mean annual range per day of 10°. Secondly, with regard to sunshine, observations were commenced in 1885, from a Campbell and Stokes sunshine recorder placed in an excellent position. These observations were taken by Mr. R. Sheward, F.R.M.S., under the rules of the Meteorological Society and under the supervision of the Government inspector. Comparative observations made during the past winter, from October 1st to March 4th inclusive, and drawn from the weekly weather reports of the Meteorological Office, showed that, with the exception of Jersey, there was only one other place in the United Kingdom (namely, the neighbouring town of Hastings) registering over 400 hours of sunshine. Rainfall was sufficient, without excess. For the past nine years, from the Registrar-General's reports, in the six winter months there had been an average in Truro on 120 days in which rain fell of 26.20 in; Bournemouth, 94 days in which rain fell, 17.80 in.; Eastbourne, 96 days in which rain fell, 16.70 in. Fourthly, with regard to winds, Eastbourne had a south-east aspect and a long range of the South Downs, starting from Beachy Head, sheltered the town from the south-west to the north. These downs preserved it from the violent winter gales which sometimes for weeks swept over the kingdom. While the gale swept high over the houses of the town, invalids and others might walk on the parades, quietly witnessing the grandeur of the spectacle, when at most other seaside resorts they could not keep their footing. Careful observations of wind direction during March, when the whole kingdom frequently suffered from easterly winds, showed that they were greatly in the minority, and from the fact that they passed over a portion of the Channel, they absorbed some of the temperature of the water, which was warmer than the air. The percentage of wind direction in March, for the years 1888 and 1889, was: North, 39 per cent.; east, 12 per cent.; south, 12 per cent.; west, 37 per cent.; so that a considerable proportion of the wind at this time was from west to north, from which the town was protected. Fifthly, a dry soil. Eastbourne was almost entirely built on the chalk and green sandstone, which quickly absorbed all rain and kept the surface of the ground remarkably dry. Most of the streets of the town were planted with trees which grew luxuriantly on this soil, especially the Cornish and Winchester elms, the lime and plane trees. These advantages rendered Eastbourne suitable as a winter resort for patients suffering from a strumous diathesis, the early stages and quiescent later stage of phthisis, chronic bronchitis, and many forms of asthma, convalescence from pneumonia, pleurisy, acute nephritis, and after surgical operations.

Vote of Thanks.—A cordial vote of thanks was accorded to the President for his address.

Officers and Council.—Dr. J. H. Galton, Mr. G. F. Hodgson, and Dr. C. Parsons were elected as Branch representatives on the General Council; and Mr. E. H. Galton the Branch representative on the Parliamentary Bills Committee. The following gentlemen were elected as the Executive Council:—Dr. Adeney, Tunbridge Wells; Dr. Bagshaw, St. Leonard's; Dr. J. V. Bell, Rochester; Dr. Bowles, Folkestone; Dr. A. Buchanan, Chatham; C. W. Chaldecott, Dorking; Dr. T. Eastes, Folkestone; E. H. Galton, Brixton Hill; J. Hackner, Hythe; A. H. B. Hallowes, Maidstone; F. B. Hallowes, Redhill; Dr. C. E. Hoar, Maidstone; Dr. C. Holman, Reigate; Dr. W. Moore, Brighton; A. Napper, Guildford; Dr. Oldman, Bletchingley; T. F. Raven, Broadstairs; Dr. B. Roberts, Eastbourne; Dr. Stowers, Finsbury Square; E. W. Thurston, Ashford; J. S. Turner, Upper Norwood; J. E. Worship, Riverhead; Dr. H. Jeaffreson, Wandsworth; and Dr. Uhthoff, Brighton.

Next Meeting.—It was decided to hold the next annual meeting at Guildford. Mr. C. J. Sells was chosen President-elect; Dr. C. Parsons, of Dover, was unanimously re-elected Honorary Secretary.

Report of the Council.—The report stated that while at the last annual meeting of the Branch, which was held at Eastbourne (1877), the number of members was 416, last year there were 501, and now there were 495. They had to deplore the loss of three colleagues, two of them past presidents of the Branch; Dr. Barker, of Aldershot, had died, and Mr. Blackall Marsack, of Tunbridge Wells, was so shattered in health that he had given up practice; Mr. Whitling, of Croydon, died suddenly at sea on March 30th. With regard to the circular to the presidents of branches, criticising the JOURNAL and the editorial department, it was a matter for congratulation that the six districts were unanimous in condemning the mode of procedure which the memorialists thought fit to adopt, and in this judgment the Council entirely concurred. The Council felt that the wise sagacity and administrative ability with which the General Council dealt with this matter when it came before them for consideration demanded recognition, and

they unanimously passed a resolution expressing their entire confidence in the ability of the chosen representatives of the Association to manage its affairs. A hope was expressed that the newly established Reference Committee would become a permanent arrangement. The purchase of new premises in Agar Street was referred to, and the feeling was expressed that the business-like capacity which the General Council had shown in dealing with this and other similar matters deserved the commendation of the whole Association. The districts continued to thrive, and, under the auspices of the very excellent honorary secretaries, much good work was done at the meetings. With regard to the resolutions of the Branches relative to hospital out-patient departments and dispensaries, the Council had directed copies to be sent to the district secretaries, with a request that they would bring the matter to the notice of the members of their respective districts, at an early meeting, and report the result to the Council.

The financial statement was laid before the meeting. It showed that the financial condition of the Branch was satisfactory.

Excursion and Dinner.—The members afterwards proceeded in wagonettes, provided by the local committee, to Beachy Head and Belle Toute Lighthouse, calling at All Saint's Convalescent Hospital *en route*. At 6 o'clock they returned to dinner at the Queen's Hotel, where they were joined by the Mayor, the Rev. Canon Whelpton, and other gentlemen of note in Eastbourne, and spent a very enjoyable evening together.

LANCASHIRE AND CHESHIRE BRANCH.

THE fifty-third annual meeting of this Branch was held in the Winter Gardens, Blackpool, on Wednesday, July 3rd, 1889, at 2 P.M.

President's Address.—The minutes of the last meeting having been read, the retiring President, Dr. WATKINS (Newton-le-Willows), introduced the President-elect, Dr. DAVIDSON, who then delivered his inaugural address, which dealt largely with the medical aspects of residence at the seaside, and the influence of sea-air upon different diseased conditions.—On the proposition of Dr. WATERS, seconded by Dr. CARTER, a hearty vote of thanks was accorded to Dr. Davidson for his interesting paper.

Report of Council and Financial Statement.—The Honorary Secretary, Dr. GLASCOTT, then read the Report of Council and financial statement, which, on the proposition of Dr. CARTER, seconded by Dr. A. T. H. WATERS, was received and adopted. The report stated that during the past year 40 new members had been elected, and the resignations and deaths had only amounted to 18, a figure much below the average, the actual strength of the Branch being 896. The balance in hand, as shown by the financial statement, on January 1st last, amounted to £301 12s., as against £281 4s. 1d. the year before, and the improvement was notwithstanding the extraordinary expenditure caused by a donation of twenty-five guineas to the Epsom Medical Benevolent College. In October last an intermediate meeting of the Branch had been held at Warrington, at which numerous papers of high scientific interest were read before a numerous audience. A complaint of alleged unprofessional advertising by a member having been made, the Council had investigated the charge, with the result that the member (who had removed from the district) had the option given him of withdrawing his advertisement, or of being expelled from the Branch. The advertisement having been at once withdrawn, the Council decided to accept his resignation of the membership of the Branch, and the incident closed. Dr. Rogers, late of Rainhill Asylum, brought the subject of his pension, after upwards of thirty years' service, before the Council at a recent meeting, and his statement of the case was received with manifestations of sympathy for the treatment he had received, and the following resolution was adopted: "That the sincere sympathy of the Council be and is hereby expressed to Dr. Rogers for the unjust treatment he has received at the hands of the county justices in not voting him the full two-thirds of his income on his retirement from the onerous and important duties as superintendant of the County Asylum at Rainhill." By the kindness of the proprietors of Haydock Lodge Asylum, Drs. Beaman and Mr. Street, the Council had held one of their meetings there, being entertained to luncheon before the meeting, and then conducted over the asylum. The Council asked for a suggestion for a town in which to hold the October intermediate meeting; as far as the annual meeting was concerned, it was expected that Manchester would be the place selected.

Election of Office Bearers.—On the proposition of Dr. WATKINS, seconded by Dr. A. T. H. WATERS, Dr. Leech, of Manchester, was unanimously elected President-Elect for 1889-90. The following officers were then elected: *Vice-Presidents:* Mr. Taylor, Chester; Dr. Rogers, Chester. *Honorary Secretary:* Dr. Glascott.

Representatives on the Parliamentary Bills Committee: Dr. Barron and Dr. Carter.

The election of members of Council and representatives on the Council of the Association now took place, the following gentlemen being elected. *Representatives on the Council of the Association:* Geo. B. Barron, M.D., Southport; Alex. Davidson, M.D., Liverpool; Charles E. Glascott, M.D., Manchester, General Secretary; James Hardie, Esq., Manchester; James Taylor, Esq., Chester. *The Council for 1889-90:* W. Alexander, M.D., Liverpool; F. J. Bailey, Liverpool; J. M. Banks, M.D., Liverpool; W. C. Barnish, Wigan; J. Barr. M.D., Liverpool; E. H. Beaman, Southport; W. Berry, Wigan; G. Bowman, M.D., Manchester; J. J. Bride, Wilmslow; J. E. Burton, Liverpool; A. F. H. Cameron, Liverpool; W. M. Campbell, M.D., Liverpool; W. Carter, M.D., Liverpool; J. Corns, M.D., Oldham; A. Craigmile, M.D., Liscard; E. H. Dickinson, Liverpool; A. M. Eason, Lytham; H. M. Fernie, Macclesfield; W. H. Fitzpatrick, M.D., Liverpool; T. R. Glynn, M.D., Liverpool; A. Godson, M.B., Cheadle; F. Granger, Chester; W. Hall, jun., Lancaster, Local Secretary; C. E. Harris, M.D., Birkenhead; E. W. Hope, M.B., Liverpool; W. H. Hughes, Ashton; Leslie Jones, M.D., Manchester; T. Jones, M.B., Manchester; J. Lambert, M.D., Birkenhead; E. D. McNicoll, Southport; J. E. Moreton, Tarvin; G. Mould, Cheadle; Chauncey Puzey, Liverpool; Edwin Rayner, M.D., Stockport; C. J. Renshaw, M.D., Ashton-on-Mersey; D. Lloyd Roberts, M.D., Manchester; John Robinson, Frodsham; T. L. Rogers, Rainhill: J. Ross, M.D., Manchester; G. E. Shuttleworth, M.D., Lancaster; Starkie Smith, M.D., Warrington; G. Thomson, M.D., Oldham; C. Thorp, Todmorden; F. Vacher, Birkenhead; G. E. Walker, Liverpool; Wm. Walter, M.D., Manchester; J. W. Warburton, M.D., Liverpool; E. Waters, M.D., Chester; J. W. Watkins, M.D., Newton-le-Willows; H. Welch, M.D., Blackpool; A. H. Young, M.D., Manchester.

Next Annual Meeting.—It was decided, upon the invitation of Dr. GLASCOTT, to hold the next annual meeting in Manchester.

Lunacy Acts Amendment Bill.—Dr. SHUTTLEWORTH read a paper, of which he had given notice, on the proposed amendments of the Lunacy Acts Amendment Bill, and proposed the following resolution, which was seconded by Dr. CARTER, and carried: "That the Lancashire and Cheshire Branch of the British Medical Association, numbering 896 members, assembled in annual meeting at Blackpool, respectfully urge upon the Government the desirability of an early settlement of lunacy legislation. In the opinion of the Branch, the protection from vexatious proceedings of the certifying practitioner who has "acted in good faith," and with reasonable care, as provided for in Clause 11 of the Lunacy Acts Amendment Bill, is a matter of much importance both to the profession and the public; but the restriction apparently imposed by Clause 33 (taken with Clause 3, Subsection 7), as to the reception of single patients into the houses of medical practitioners, are invidious, and likely to prove detrimental to the prompt treatment of cases of insanity." It was then proposed by Dr. WATERS, of Chester, seconded by Dr. WATKIN, and carried unanimously: "That a copy of the above resolution be forwarded to each of the members of Parliament representing constituencies in Lancashire and Cheshire."

Communications.—Mr. BISHOP: On Congenital Clubfoot and its Treatment. Dr. LEECH: On the Uses of Nitrous Ether.—Mr. HARE: On Seats of Election in Amputation.—Dr. HILL GRIFFITH: A Case of Sympathetic Disease after Removal of the Injured Eye.—Dr. WALLACE: (1) On Vaginal Hysterotomy and Enucleation of Fibrous Growths; (2) Hysterectomy, after Laparotomy by Modified Enucleation.—Dr. SINCLAIR showed a Case of Hypertrophy of the Female Breasts.—Dr. MITCHELL BANKS made some remarks upon Intubation of the Œsophagus.

Dinner and Excursions.—The annual dinner, to which 70 members and guests sat down, was held in the Winter Gardens after the meeting. The weather being superb, the excursions to Lytham and the sea trip were much enjoyed by the members, who patronised them in large numbers.

BOMBAY BRANCH.

A GENERAL meeting of this Branch was held on May 13th, 1889. Present:—Brigade-Surgeons Preston and Hughes, Surgeons-Major Banks, Maconachie, Wilkins, and Hatch, and Surgeons Baker, Ferguson, Meyer, Prall, and Collie; Surgeon-Major BANKS, Vice-President, in the chair.

Communications. — Surgeon-Major MACONACHIE showed a patient affected with Sympathetic Ophthalmia of the Left Eye. He mentioned the various theories relating to sympathetic ophthalmia, and considered that this case proved that one of them was correct as regarded this particular patient, namely, where an inflammatory process travelled along the optic nerves in their substances or sheaths, and by uninterrupted continuity of progress reached the other eye.—Surgeon A. F. FERGUSON exhibited several Preparations of Bacteria, and also exhibited Temperature Chart of a case of Relapsing Fever, in which he stated that the spirillum was not found in the blood just before the temperature reached its highest point.

Litholapaxy in Children.—Surgeon-Major BANKS read a paper on litholapaxy in children. He said he believed there was no difficulty in performing the true operation of Bigelow in children from the age of four upwards with suitable instruments, and that the smallness, tenderness, and undeveloped condition of the urethra had been much exaggerated as preventive causes. Surgeon-Major Banks believed that as the operation became better known, lithotomy would scarcely be practised except in occasional cases. He said he would have no hesitation in crushing any stone on which he could lock a lithotrite. He laid particular stress on using two aspirators for the evacuation of the *débris*, as it facilitated the thorough and expeditious emptying of the bladder. As a rule, the operation on a medium-sized stone should not occupy more than fifteen or twenty minutes. Dr. Banks read notes of four cases on which he operated.—Surgeon-Major HATCH said there were decided advantages in favour of litholapaxy. He cited an accident which occurred in which the lithotrite would neither open nor shut after it had been introduced into the bladder and opened; he had to remove it through the urethra by the use of gentle force, and there was no laceration of the urethra. Lithotomy was performed, and the case did well. He would like to know if any such like accidents had been met with by other surgeons, and what they would do in similar cases. Dr. Hatch thought that if the instrument could not be removed, a lateral lithotomy or suprapubic operation should be performed and the blades sawn off. In his experience, although some cases recovered in three days from litholapaxy, the average time was ten days; in lithotomy it was three weeks. If cystitis existed, lithotomy should always be performed.—Dr. BAKER said that on inquiry into the history of lithotomy and litholapaxy, he found the idea of the latter operation presented itself to a French surgeon about a hundred years ago.—Dr. FERGUSON thought the success of lithotomy was so great, he would personally prefer it to litholapaxy. He suggested that in an accident similar to that related by Dr. Hatch, he would use the instrument as a staff, and cut down, performing lithotomy.

EAST ANGLIAN BRANCH.

THE annual meeting of this Branch was held at the Town Hall, Sudbury, on Wednesday, July 3rd, the PRESIDENT, J. S. Holden, M.D., F.G.S., in the chair.

Report of the Council.—The report showed an increase in the membership of the Branch. Successful meetings had been held during the year at Eye, Clacton-on-Sea, and Maldon, Essex. Norwich was recommended as the place for the annual meeting in 1890.

New Member. — Dr. Coffey, Brightlingsea, was elected a member.

Officers and Council.—Representatives upon the Council: Mr. T. W. Crosse, F.R.C.S., and Dr. W. A. Elliston. *Council of the Branch:* Mr. G. C. Edwards, Mr. R. V. Gorham, Mr. F. Haward, Mr. C. E. Addison, Mr. R. Atthill, Dr. Manby, and Mr. Vincent. *Representative upon the Parliamentary Bills Committee:* Dr. Mead, Newmarket, *vice* Mr. Jeaffreson, resigned. *Honorary Secretary:* Dr. Edgar Barnes. *Vice-Presidents:* Dr. Barnes and Mr. R. B. Marriott. *President-Elect:* Dr. Michael Beverley, Surgeon to the Norfolk and Norwich Hospital.

Vote of Thanks.—A vote of thanks to the retiring Honorary Secretary, Dr. Elliston, was moved by Dr. EDGAR BARNES and seconded by Professor LATHAM.

The Hospital Question.—Communications from Dr. Crowe, on behalf of the Worcestershire and Herefordshire and Gloucestershire Branches upon the subject of the Disproportionate Growth of the Out-patients' Department in all Hospitals as well as of the Effect of Provident Dispensaries, and a communication from Dr. Rentoul, of Liverpool, on a Proposed Medical Service for England, were adjourned for further discussion.

Medical Defence Union.—This subject, introduced by Dr. MEAD, was discussed, and a branch forthwith established.

Shorthand for Medical Students.—The necessity for phonography in a medical training was heartily approved.

Luncheon.—The members were hospitably entertained by the President at the Rose and Crown Hotel. About sixty members sat down, including Professor G. M. HUMPHRY, F.R.S., who proposed "The President's Health" in felicitous terms.

Papers.—The following papers were then read:—Dr. E. G. BARNES (retiring President): Association Events during the Past Year.—Dr. J. S. HOLDEN: Presidential Address—The History and Work of a Cottage Hospital during Twenty Years.—Sir WILLIAM MAC CORMAC: On the Surgical Treatment of some forms of Acute Intestinal Obstruction.—Professor LATHAM, M.D.: Remarks on the Treatment of Rheumatism by the Salicylic Salts.

The members present subsequently attended an At Home by the President and Mrs. Holden, and afterwards dined with the President in the chair.

WEST SOMERSET BRANCH.

THE forty-sixth annual meeting of this Branch was held at Yeovil, on Thursday, July 4th, at 2 P.M., under the presidency of Mr. W. A. HUNT. There were present seventeen members, and also, by invitation of the president, several of his medical friends from neighbouring towns, who do not belong to the Branch.

Report of Council.—The report gave a satisfactory account of the proceedings of the Branch during the past year. The last annual meeting at Wellington was a very successful one, and Dr. Colles's presidential address on Massage[1] excited great interest. At the autumnal meeting a discussion on the question, What Connection, if any, exists between Hæmorrhage and Mal-hygiene? was well introduced by a paper from Dr. Meredith.[2] At the spring meeting a discussion on the Use of Digitalis and Strophanthus in Heart Disease was introduced by Mr. R. J. Collyns. The attendance at all the meetings was above the average. The events which led to the appointment of a Reference Committee to act in conjunction with the Editor of the JOURNAL were briefly recapitulated. Allusion was made to the fact that this was the first occasion on which the Branch had celebrated its anniversary in the town of Yeovil; an intermediate meeting, however, had been held there in October, 1872. The membership of the Branch had increased; last year the number was 57, now it was 61. Two members (Dr. Kinglake and Mr. Hugh Norris) resigned; one had left the district; and Mr. W. J. Todd, of North Petherton, was thrown out of his carriage at Bridgwater in May last, and killed on the spot. The Treasurer's accounts, audited by Mr. Rigden, showed a balance in hand to the credit of the Branch of £7 9s. 3d. Resolved: "That the report of Council and and the Treasurer's accounts be received and adopted, and that the thanks of this meeting be given to the Council and to the Treasurer for their services during the past year."

Next Annual Meeting.—It was resolved: "That the next annual meeting be held at Bridgwater, and that Mr. H. M. Kemmis be President-elect."

Officers and Council.—Resolved that, to fill vacancies in the Council, Mr. A. R. Iles be elected in the place of Mr. Kemmis (who will sit as President-elect), and Mr. W. L. Winterbotham in the place of Mr. Prankerd, who retires in rotation, and does not wish to be re-elected; and that Mr. Alford and Dr. Meredith be re-elected.

Representative of the Branch on the General Council.—Resolved that Dr. Kelly be re-elected.

Representative of the Branch on the Parliamentary Bills Committee.—Resolved that Mr. Prankerd be re-elected.

Secretary and Treasurer.—Resolved that Dr. Kelly be re-elected.

President's Address.—The PRESIDENT, in compliance with a request that he should select some subject connected with dentistry, delivered an address on certain relationships of the fifth pair of nerves. By means of large diagrams he exhibited the relationship of the fifth pair with all the organs of special sense, and pointed out that its deep origin in the medulla oblongata, in proximity to the vagus, etc., explained how visceral and other distant irritations affected the branches of the fifth; and, *vice versâ*, how various irritations of the fifth were sometimes accompanied by pains in distant parts. He further pointed out by diagram the connections of the fifth pair with all the four cranial ganglia of the sympathetic, and, having alluded to examples of perverted

[1] See JOURNAL, July 28th, 1888.
[2] See JOURNAL, February 16th, 1889, p. 351.

nerve action in various parts of the body, he gave analogous examples in connection with the fifth pair, showing how, with these intricate relationships, irritations of its branches, of which bad teeth were the commonest and greatest, would produce disturbance by reflected, transmitted, or sympathetic action, and also by interference with the nutrition of the nerve trunks—the result, possibly, of the action of septic matter on the ganglia presiding over the small arteries supplying the nerve sheaths, etc. He believed that, when such causes were allowed to remain, neuritis occurred in the trunk nerve, causing further pain and more extended trouble the further it ascended. He pointed out how this was more often seen in cases of diseased lower wisdom tooth, the roots of which were so near the trunk nerve (inferior dental) as sometimes to be grooved or even perforated by it.

Geographical Distribution of Diseases.—Dr. ISAMBARD OWEN (London) exhibited maps constructed by the Collective Investigation Committee, and in an interesting manner gave explanatory accounts of the geographical distribution throughout the British Isles of rickets, rheumatism, chorea, cancer, and urinary calculus.

Votes of Thanks.—Hearty votes of thanks to the President and to Dr. Owen were carried by acclamation.

Exhibits, etc.—A man who some months previously had undergone Excision of the Knee-joint, exhibited himself with a good useful limb. He was now employed in the hayfield.—Samples of Condensed Alpine Cream, and a variety of Dietetic Products manufactured by Messrs. Loeflund and Co. were shown.

Reform of the College of Surgeons.—Copies of a draft Bill to amend the Constitution of the Royal College of Surgeons of England, with a memorandum on the subject, forwarded by the Coroner for Central Middlesex, were distributed, and the attention of the meeting was directed to the same by the President.

Excursion.—At the conclusion of the business an excursion was made to Ham Hill. After driving about five miles through charming scenery, the party were met by Mr. W. W. Walter, under whose guidance they walked over the hill, viewing the stone quarries and remains of the old encampment (with the celebrated "frying-pan"). They then descended to Stoke-under-Ham, where tea was partaken of at Mr. Walter's, and the curiosities in his museum were inspected. Mr. and Mrs. Walter were cordially thanked for their reception. Some of the party then returned home, and others drove back to Yeovil to dine with the President, all being full of expressions to him of their indebtedness for his great hospitality, and for having brought about a most pleasant and successful meeting.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.

THE nineteenth annual meeting of this Branch was held at the Hospital, Swansea, on June 27th. About fifty members were present. Telegrams and letters were read from Messrs. Evan Jones, J. T. Thompson, Marsh, and G. A. Brown, regretting unavoidable absence.

The President, Dr. C. T. VACHELL, having resigned the chair to the President-elect, Mr. J. FARRANT FRY, and a cordial vote of thanks passed to the retiring president for his services during the year, the minutes of the previous meeting were read and signed.

Report of Council and Financial Statement.—The report of Council, with a statement of account, was read and adopted. There were at present 205 members of the Branch, and a balance to the good of nearly £50.

Future Meetings.—It was decided that the autumn meeting should be held at Newport, the spring meeting next year at Neath, and the next annual meeting at Cardiff.

Disposal of Surplus Balance.—Several suggestions were made, including a prize essay on some subject in clinical medicine, surgery, or obstetrics every two or three years; payment of the expenses of a second representative on the Council; purchase of books with the view of forming a library; printing and circulating of selected papers read at meetings. Dr. SHEEN gave notice that he would move at the next ordinary meeting that the transactions of the Branch for the current year should, as an experiment, be printed and circulated partly at the expense of the Branch.

Officers and Council.—President-elect: William Price, M.B., Cardiff, was unanimously elected. *Council:* The following were declared elected: Messrs. Cresswell, Hall, H. N. Davies, Rawlings, and Pegge. *Honorary Secretaries:* Dr. Sheen (Cardiff) and D. Arthur Davies, M.B. (Swansea), were unanimously re-elected, and a cordial vote of thanks passed to them for their valued services. *Representatives on the General Council:* Dr. Sheen and Mr. Evan Jones were unanimously re-elected.

President's Address.—The PRESIDENT (Mr. Fry) then delivered an address on "The Immediate and Subsequent Surgical Treatment of Operations," followed by a discussion, in which Drs. GRIFFITHS, HALL, LATIMER, FRASER, H. N. DAVIES, CRESSWELL, VACHELL, and SHEEN took part.

New Members.—The following were elected members of the Association and Branch: Messrs. John Rees (Hirwain), W. Bassett (Newport), C. W. de Grouchy (Caerleon). J. Kerr, M.B. (Swansea Hospital).

Public Medical Service.—It was resolved that Dr. Rentoul's suggestions with regard to a public medical service, and a resolution bearing upon the abuse of the out-patient departments of hospitals, and the subjects of provident dispensaries, medical aid associations, and sick clubs, from the Worcestershire and Herefordshire and Gloucestershire Branches, should be discussed at the autumn meeting at Newport.

Luncheon and Excursions.—At 2 P.M. the members were conveyed in brakes to the beautiful bays of Caswell and Langland. At the former, the President generously provided a picnic luncheon; and at the latter, the chairman (Mr. Richardson Francis) and directors of the Langland Bay Hotel Company invited the members to inspect the new hotel and grounds, and provided light refreshments at the hotel.

The usual dinner was dispensed with.

BRITISH MEDICAL ASSOCIATION.

FIFTY-SEVENTH ANNUAL MEETING.

THE fifty-seventh Annual Meeting of the British Medical Association will be held at Leeds, on Tuesday, Wednesday, Thursday, and Friday, August 13th, 14th, 15th, and 16th, 1889.

President: Professor W. T. Gairdner, M.D., LL.D., Professor of Medicine in the University of Glasgow.

President-elect: C. G. Wheelhouse, F.R.C.S., J.P., Consulting Surgeon, Leeds General Infirmary, Hillary Place, Leeds.

President of the Council: Thomas Bridgwater, M.B., LL.D., Harrow-on-the-Hill.

Treasurer: Constantine Holman, M.D., Reigate.

An Address in Medicine will be delivered by J. Hughlings Jackson, M.D., LL.D., F.R.S., Physician to the London Hospital, and to the National Hospital for Paralysed and Epileptic, Queen Square, W.C.

An Address in Surgery will be delivered by T. Pridgin Teale, M.B., F.R.C.S., F.R.S., Consulting Surgeon to the Leeds General Infirmary, Leeds.

An Address in Psychology will be delivered by Sir J. Crichton Browne, M.D., LL.D., F.R.S., Lord Chancellor's Visitor in Lunacy London.

Head Mistresses' Room, Mechanics' Institute.

A. MEDICINE.—*President*, John Edwin Eddison, M.D. *Vice-Presidents*, Charles Parsons, M.D.; Robert Saundby, M.D. *Honorary Secretaries*, Alfred George Barrs, M.D., 22, Park Place, Leeds; Theodore Dyke Acland, M.D., 7, Brook Street, Grosvenor Square, W.

The proceedings of this Section will be opened by the President on Wednesday, August 14th, at 10 A.M., after which Dr. R. Douglas Powell will read a paper on The Clinical Aspects of Chronic Tubercular Diseases of the Serous Membranes and their Treatment. Sir Andrew Clark, Drs. Coupland, Vincent Harris, Roberts, Samuel West, Churton, Cheadle, Handford, More Madden, and Burney Yeo have promised, if possible, to take part in the discussion.

On Thursday, August 15th, a paper will be read by Sir W. Roberts on the prognosis of Cases of Albuminuria, with Special Reference to Life Insurance. Drs. Goodhart, Maguire, Pavy, Pye-Smith, Ralfe, Rabagliati, C. R. Drysdale, Robert Barnes, De Havilland Hall, N. Tirard, Joseph Ewart, and Saundby hope to take part in the discussion.

The following papers are promised:

BATEMAN, F., M.D. (Norwich). On the Jurisprudence of Aphasia.
CHURTON, T., M.D.
DRYSDALE, C. R., M.D. The Alleged Rarity of Phthisis among the Jews in London.

ECCLES, A. Symons, M.B. The Influence of Massage on the Rate of Absorption from the Intestines.
FINUCANE, T. D., M.D. (Blackrock). On Asiatic Cholera.
GREENE, G. E. (Ferns, Co. Wexford). Notes on Rötheln.
HAIG, A., M.D. On the Connecting Link between the High Tension Pulse and Albuminuria.
HANDFORD, H., M.D. On the Relations of Arterial Hypoplasia to Cardiac Disease.
JOHNSTONE, Thos., M.D. 1. Case of Massage. 2. Ilkley as a Resort for the Asthmatic.
LITTLE, J. Fletcher, M.B. The Modern Treatment of Palsies.
MCNAUGHT, Dr. A Case of Dilatation of the Stomach accompanied by the Eructation of Inflammable Gas.
MADDEN, T. More, M.K.Q.C.P.I. Clinical Experiences of the Chronic Tubercular Diseases of Childhood.
MAGUIRE, R., M.D. Presystolic Murmur without Organic Mitral Disease.
PEARSE, T. F., Esq. The Use and Abuse of Soap.
THOMAS, W. R., M.D. On Phthisis, with Remarks on the Varieties of Climatic Treatment.
THUDICHUM, J. L. W., M.D. On the Demodex Folliculorum, the Parasite of the Acne Punctata of Man and the Mange of the Dog.
TIRARD, N., M.D. Peptonuria and the Fehling Test.

Lecture Theatre No. 13 School of Science.

B. SURGERY.—*President*, Thomas Richard Jessop, F.R.C.S. *Vice-Presidents*, Edward Atkinson, M.R.C.S.; Arthur F. McGill, F.R.C.S.; Henry Morris, F.R.C.S.; *Honorary Secretaries*, Arthur W. Mayo Robson, F.R.C.S., Hillary Place, Woodhouse Lane, Leeds; Edward Ward, M.B., 22, Park Place, Leeds.

Arrangements have been made in this Section for the consideration of four special subjects, and the gentlemen whose names are appended have promised, if possible, to take part in the discussions.

The President of the Surgical Section will give an Opening Address on the Treatment of Cancer of the Rectum. The following gentlemen will take part in the discussion:—Dr. Ball (Dublin), Mr. Mitchell Banks (Liverpool), Mr. Bond (Leicester), Mr. Bryant (London), Mr. Harrison Cripps (London), Mr. Christopher Heath (London), Mr. Whitehead (Manchester), Dr. Alexander (Liverpool), Mr. H. Allingham (London), Mr. Alfred Cooper (London), Dr. Ward Cousins (Southsea), Mr. Vincent Jackson (Wolverhampton), Mr. Jordan Lloyd (Birmingham), Mr. F. Marsh (Birmingham), Dr. James Murphy (Sunderland), Mr. Bennett May (Birmingham), and Mr. F. B. Jessett (London).

Mr. Henry Morris will open a discussion on the Surgery of the Kidney. Professor Annandale (Edinburgh), Mr. Rickman Godlee (London), Mr. Bennett May (Birmingham), Dr. Newman (Glasgow), Mr. Lawson Tait (Birmingham), Mr. Bruce Clarke (London), Mr. Kendal Franks (Dublin), Mr. R. Lawford Knaggs (Huddersfield), and Mr. Edmund Owen (London) will take part in the discussion.

Mr. Frederick Treves will open a discussion on The Surgical Treatment of Typhlitis after the discussion on Renal Surgery.

Mr. A. F. McGill will open a discussion on the Treatment of Retention of Urine from Prostatic Enlargement. Mr. Edward Atkinson (Leeds), Mr. A. E. Durham (London), Mr. Reginald Harrison (Liverpool), Mr. Berkeley Hill (London), Mr. Bruce Clarke (London), Dr. Ward Cousins (Southsea), Mr. Vincent Jackson (Wolverhampton), Mr. Jordan Lloyd (Birmingham), Mr. Bennett May (Birmingham), and Mr. W. Whitehead (Manchester) will take part in the discussion.

The following further papers are announced:

ADAMS, W., Esq. (London). On the Successful Treatment of Cases of Congenital Displacement of the Hip-joint by Complete Recumbency with Extension for two years.
ALEXANDER, W., M.D. (Liverpool). The Surgical Treatment of Epilepsy.
BISHOP, E. Stanmore (Manchester). 1, Some Points in the Technique of Morton's Operation for Spina Bifida. 2. Will show a Splint Cradle for Excision of the Hip-Joint and Osteotomy.
CRIPPS, Harrison, Esq. (London). A Series of Cases of Cancer of the Rectum treated by Excision or Colotomy.
FRANKS, Kendal, F.R.C.S. Subcuticular Suture.
HERN, John, M.D. (Darlington). The Advisability of Aspiration of the Protruded Gut in Recently Strangulated Hernia, with Notes of Cases.
JONES, Robert, Esq. (Liverpool). 1. The Treatment of Joint Disease by Prolonged fixation. 2. The Treatment of Certain Cases of Peri-rectal Abscess by Partial Removal of the Sacrum.
KEETLEY, C. B., Esq. (London). Compression of the Abdominal Aorta by an Instrument passed through a Small Opening in the Anterior Wall of the Abdomen.
KELLEN, Otto E., M.D. (London). Trephining in a Case of Actinomycosis of Brain.
LLOYD, Jordan, Esq. (Birmingham). Abdominal Section for Acute Intestinal Obstruction.
OTIS, F. N., M.D. (New York). A *Resumé* of the Experience of Seventeen Years in the Operation of Dilating Urethrotomy.
OWEN, Edmund, Esq. (London). The Probable Future of Arthrectomy.
PARKER, Rushton, Esq. Cerebral Tumour removed Successfully.
PEARSE, T. Frederick, Esq. (London). The Treatment of Empyema.
ROBSON, A. W. Mayo (Leeds). 1. Two Hundred Consecutive Cases of Abdominal Section, with remarks. 2. Successful Case of Cholecystenterostomy for Biliary Fistula. Patient shown.
SILK, J. F. W., M.D. (London). Ether as an Adjunct to Nitrous Oxide Anæsthesia in Minor Surgery; with some general remarks upon Ether Narcosis and the teaching of Anæsthetics.
SPICER, Scanes, M.D. Note on a Case of Progressive Induration of Cervical Glands Simulating Malignant Disease, but readily yielding to the Treatment of Chronic Post-Nasal Catarrh.
STOKES, Sir Wm. Thyrotomy in the Treatment of Laryngeal Cancer.

Engineering Class Room, Mechanics' Institute.

C. OBSTETRIC MEDICINE AND GYNÆCOLOGY.—*President*, Charles J. Cullingworth, M.D. *Vice-Presidents*, James Braithwaite, M.D.; J. W. Byers, M.D. *Honorary Secretaries*, F. Hall, M.D., St. Mark's House, Leeds; Peter Horrocks, M.D., 9, St. Thomas's Street, S.E.

Dr. Braxton Hicks, F.R.S., will open a discussion on the treatment of Placenta Prævia. Drs. Robert Barnes, Gervis, Aust Lawrence, Malins, Playfair, Priestley, Macnaughton Jones, Robert Bell, William Walter, Wallace, and Messrs. Hall and Wright are expected to take part in the discussion.

Dr. Herman will open a discussion on Corporeal Endometritis, its Frequency, Diagnosis, and Treatment. Drs. Braithwaite, Byers, Halliday Croom, Gervis, Aust Lawrence, Playfair, Robert Bell, William Walter, Priestley, Wallace, Macnaughton Jones, Aveling, and Messrs. Pridgin Teale and More Madden are expected to take part in the discussion.

The following further papers are announced:

ARMSTRONG, J., M.B. The Use of Antiseptics in Midwifery.
BELL, R., M.D. On the Relation of Endometritis to Ovarian Disease, and will also show some instruments.
CAMERON, Murdoch, Esq. Cæsarean Section, with Notes of a Second Successful Case.
CROOM, J. Halliday, Esq. 1. On the Shedding of the Decidual Membrane late in the Puerperium. 2. On Encysted Tubercular Peritonitis Simulating Ovarian Tumour.
DUKE, Alexander, F.K.Q.C.P.I. 1. Additional Traction in Forceps Cases as an Alternative to Craniotomy. 2. New Plan of Plugging the Cervix Uteri in Metrorrhagia.
HANDFIELD-JONES, M., M.D. On Cardiac Insufficiency in its Relation to Abortion.
JOHNSTONE, A. W., M.D. (Danville, U.S.A.) The Mechanics of Puberty.
MADDEN, T. More, M.K.Q.C.P.I. On Some Points in the Treatment of Uterine Cancer.
NAIRNE, J. Stuart, Esq. Some Practical Points in the Surgical Treatment of Cancer of the Uterus.
PLAYFAIR, W. S., M.D. An Estimate of the Value of Electricity in Gynæcology.
WALTER, Wm., M.D. A Case of Total Extirpation of Uterus for Cancer.

Philosophical Hall.

D. PUBLIC MEDICINE.—*President*, Edward Ballard, M.D., F.R.C.P., F.R.S. *Vice-Presidents*, George Goldie, L.R.C.P.Edin.; Shirley F. Murphy, M.R.C.S. *Honorary Secretaries*, George Eastes, M.B., F.R.C.S., 35, Gloucester Place, Hyde Park, W.; Arthur Stopford Underhill, M.D., D.P.H., Great Bridge, Tipton, Staffs.

The following special subjects will be considered in this Section:

1. Medical Officers of Health: their Training, and the Conditions on which they should hold Office. The President of the Section will introduce this subject. Dr. John Brown (Bacup), Mr. D. E. Flinn (Kingstown), Mr. G. E. J. Greene (Ferns), Mr. J. Brindley James (London), and others have promised to read papers or take part in the discussion.

2. Disinfection and Isolation: with special reference to the Control of Epidemics. Dr. C. H. Allfrey (St. Mary Cray) will read a paper on The Management of Infectious Diseases in Hotels. Dr. W. Squire will read a paper on Disinfection and Isolation as necessary to the Control of Epidemics. Dr. C. R. Drysdale (London), Dr. E. W. Hope, and Dr. Joseph Loane (London) will take part in this discussion.

3. Town Refuse: its Treatment and Disposal. Excremental Matter: its Treatment and Disposal by other Methods than that of Sewers. Dr. E. Slade-King (Ilfracombe) will read a paper on Town Refuse: its Collection and Disposal in the Smaller Towns. Dr. M. Greenwood, jun., will read a paper on Dusting in our Large Towns, and will take part in the discussion on Town Refuse: its Treatment and Disposal. Dr. D. E. Flinn (Kingstown), Dr. G. E. J. Greene (Ferns), and others will also take part in this discussion.

4. Diseases and Injuries caused by Special Occupations: with reference to their Prevention. Dr. T. Churton (Leeds), Dr. J. T. Arlidge, Dr. G. E. J. Greene (Ferns), and others will take part in the discussion.

5. Contamination of Drinking-water by Lead: its Causes and Prevention. Dr. Sinclair White (Sheffield) will read a paper on

this subject. Dr. John Brown (Bacup) and Dr. T. Churton (Leeds) will take part in this discussion.

The following further papers are announced:

ARLIDGE, J. T., M.D. (Newcastle-under-Lyme). On Diseases in Some Occupations Produced by Noxious or Poisonous Dusts.
CHURTON, T., M.D. (Leeds). Results of Twelve Months' Systematic Inquiry into the Sanitary State of the Homes of Hospital In-patients.
DRYSDALE, C. R., M.D. (London). Class Mortality Statistics.
FLINN, D. E., F.R.C.S.I. (Kingstown). On the Public Cleansing of Towns viewed in Relation to Public Health.
JAMES, J. Brindley, M.R.C.S. (London). (1) Town Refuse: its Treatment and Disposal. (2) A Cabinet Minister of Public Health.
KING, E. Slade, M.O.H. (Great Torrington.) Town Refuse; its Collection and Disposal in the Smaller Towns.

Class Room 3, School of Science.

E. PSYCHOLOGY.—*President*, D. Hack Tuke, F.R.C.P., LL.D. *Vice-Presidents*, W. Bevan Lewis, L.R.C.P.; Ringrose Atkins, M.D. *Honorary Secretaries*, John Greig McDowall, M.D., Menston Asylum, near Leeds; Robert Percy Smith, M.D., Bethlem Royal Hospital, S.E.

Presidential address, Dr. Hack Tuke, on The Past and Present Provision for Pauper Lunatics in Yorkshire, introducing for discussion the question, Ought the Future Provision for this Class to be on the Same Lines?

Dr. W. W. Ireland will open a discussion on the Double Brain, and the Discordant Action of the Two Hemispheres in Insanity.

Dr. F. Warner, as Secretary of the Committee (appointed at the Glasgow meeting in 1888), will read their report, and introduce a discussion on the Draft Report of the Committee appointed to conduct an Investigation as to the Average Development and Condition of Brain Function among the Children in Primary Schools. Drs. Fletcher, Beach, Savage, and Shuttleworth will join in the discussion on Dr. Warner's report.

The following papers are promised:

BEACH, Fletcher, M.B. Some further facts respecting the Causation of Idiocy and Imbecility.
BATEMAN, F., M.D. On Hypnotism, with special reference to Certain Experiments at La Salpêtrière.
BULLEN, F. St. John, Esq. An Analysis of 1,565 *Post-Mortem* Examinations of the Brain performed at the Wakefield Asylum during a period of eleven years.
ROBERTSON, George, M.D. Melancholia from an Evolutionary and Physiological Point of View.
SAVAGE, G. H., M.D. Massage Treatment of Some Forms of Melancholia.
SHUTTLEWORTH, G. E., M.D. (1) A Contribution to the Etiology of Idiocy. (2) Remarks on a Series of Idiot Brains.
VOISIN, Professeur Aug. (of the Salpêtrière). On the Use of Hypnotic Suggestion as a means of Treatment in the Insane, and the Results he has obtained by this Method.
WIGLESWORTH, J., M.D. Note on Optic Nerve Atrophy Preceding the Mental Symptoms of General Paralysis.

Physics Lecture Room No. 11, School of Science.

F. PATHOLOGY AND PHYSIOLOGY.—*President*, Joseph Coats, M.D. *Vice-Presidents*, Thomas Churton, M.D.; De Burgh Birch, M.D. *Honorary Secretaries*, Ernest Henry Jacob, M.D., 12, Park Street, Leeds; T. Wardrop Griffith, M.D., 23, Park Square, Leeds.

A discussion on the subject of Fever will be opened by Dr. T. J. Maclagan. Dr. Gairdner, Dr. Dreschfeld, Dr. Handford, Dr. Broadbent, and Dr. Sims Woodhead will take part in the discussion.

The following further papers are announced:

BIRCH, De B., Esq. On the Nature of some Pressure Phosphenes.
COPEMAN, S. A. M., M.A. The Detection of Human Blood.
CROOKE, G. F., M.D. The Histology of Bright's Disease.
DRUMMOND, D., M.D. The Pathology of Acute Lead Poisoning.
HANDFORD, H., M.D. Visceral Changes in Enteric Fever.
HAYCRAFT, J. B., M.D. (Title not received.)
MOTT, F. W., M.D. The Pathology of Cardiac Failure.
POPE, F.M., M.D. Case of Thrombosis of Vertebral Artery: Pressure on Glossopharyngeal Nerve: Unilateral Loss of Taste.
WILLIAMS, Roger, Esq. The Neoplastic Process from an Evolutional Standpoint.
WOODHEAD, G. Sims, M.D.

The Pathological Museum will be held in the Chemical Laboratory of the Leeds School of Science (Mechanics' Institute). Dr. Beaven Rake will show a series of preparations illustrative of the various lesions of Leprosy.

Class Room 5, School of Science.

G. OPHTHALMOLOGY.—*President*, George Anderson Critchett, F.R.C.S.Edin. *Vice-Presidents*, John Albert Nunneley, M.B.; George A. Berry, M.B. *Honorary Secretaries*, Gustavus Hartridge, F.R.C.S., 65, Green Street, Grosvenor Square, W.; R. N. Hartley, M.B., 29, Blenheim Terrace, Leeds.

Mr. Jonathan Hutchinson will open a discussion on the Treatment of Glaucoma. Messrs. Couper, Frost, Evan Jones, Green, Griffith, Hutchinson, Little, Mackinlay, Macnaughton Jones, Prichard, Scougal, Sympson, Tweedy, Cant, and Lloyd Owen have promised to take part in the discussion.

The following further papers are announced:

BENSON, A. H., M.B. Pulsating Tumour of Orbit cured by Digital Pressure.
BERRY, G. A., M.B. St. Petersburg Operation for Entropion and Trichiasis.
BICKERTON, Thomas H., Esq. Criticism of the various Tests for Colour-Blindness, with special reference to the Board of Trade Tests, and further examples of Defective Eyesight occurring in Sailors.
BRONNER, Adolph, M.D., will show a Hook for Removing Remains of Lens Capsule,
CANT, W. J., Esq. A Case of Paralysis of the Right External Rectus Muscle after Injury to the Left Temple (*contre coup?*).
COLLINS, W. J., M.D. The Composition of the Human Lens in Health and in Cataract, and its Bearing upon Operations for the latter.
CROSS, F. Richardson, Esq. Muscular Advancement.
EMRYS-JONES, A., M.D. The Value of Galvano-Cautery in the Treatment of Conical Cornea (6 cases).
FORD, Vernon, Esq. The Value of Peritomy in Ulcers of the Cornea, etc.
FROST, W. Adams, Esq., will show a series of Ophthalmoscopic Drawings thrown on to a Screen.
HARTLEY, R. N., M.B., will show 1. Modification of Sichel's Knife for Cataract Operations. 2. Cases of Soft Cataract treated by Suction. 3. Cases of Hard Cataract extracted without Iridectomy.
HERN, John, M.D. Sclerotitis from Dental Irritation.
HEWETSON, H. B., Esq. 1. Series of Cataract Operations without Iridectomy. 2. Series of cases of Interstitial Keratitis treated by Syndectomy.
JESSOP, W., Esq. Some Experiments on New Drugs.
JOHNSON, G. L., Esq. Observations on the Therapeutical Action of the Violet and Ultra-violet Rays of Light on Vision.
MONEY, Angel, M.D. Sudden Transient Ocular Phenomena in Children.
MULES, P. H., M.D. Peripheral Neuritis of the Ophthalmic Division of the Fifth Nerve, and its Clinical Bearings.
SNELL, Simeon, Esq. Extraction of Cataract without Iridectomy.
TEALE, T. Pridgin, M.B., F.R.S. Description of the Operation he employs for Extraction of Cataract without Iridectomy.
THOMPSON, J. T., M.B. 1. A Note on a case of Superficial Keratitis induced by Aniline Violet. 2. Necrosis of Cornea from Contact with Crude Creasote.

Class Room 1, School of Science.

H. DISEASES OF CHILDREN.—*President*, Thomas Scattergood, M.R.C.S. *Vice-Presidents*, Richard Favell, M.R.C.S.; A. H. Carter, M.D. *Honorary Secretaries*, Walter Henry Brown, F.R.C.S.I., 19, Queen Street, Leeds; Angel Money, M.D., F.R.C.P., 24, Harley Street, Cavendish Square, W.

A discussion on the following subject will take place: The paralyses of the first two years of life. What is the relative frequency of paralysis from brain, cord, and nerve disease? What is the nature of the changes in the centres and nerves? This will probably be opened by the Honorary Medical Secretary. Papers will be read on the various forms of infantile paralysis: spastic paraplegia, congenital chorea, infantile palsy, and diphtheritic paralysis.

Surgical Portion.—Subject for discussion: The Surgical Treatment of the Various Congenital Malformations. Mr. Walsham and Mr. Morgan will take part in the discussion.

The following further papers are announced:

ASHBY, Henry, M.D. A case of Softening of an Infant's Brain due to Vascular Obstruction. Also a case of Acute Polio-myelitis; death six weeks after the Acute Attack. The specimens will be shown.
BROWN, John, M.B. (Bacup). Unsuspected Lead-poisoning in Children.
BURY, Judson S., M.D. On a Case of Microcephalus with Spastic Paralysis, and will show a Specimen.
CHURCHILL, F. Esq. Hare-lip Operations.
MORGAN, J. H., Esq. Congenital Malformations.
SQUIRE, W., M.D. Cases of Infantile Palsy, Spastic Paraplegia, and Diphtheritic Paralysis in Children.
SYMPSON, Mansel, M.D. (1) A Case of Cerebral Birth Palsy with Epileptoid Convulsions. (2) A Case of Infantile Palsy, with comments.
WALSHAM, W. J., Esq. Ectopia Vesicæ.
WARNER, F., M.D. The Frequency of Coincidental Defects in Development as seen in Children.

Class Room 2, School of Science.

I. LARYNGOLOGY.—*President*, Henry T. Butlin, F.R.C.S. *Vice-Presidents*, Francis de Havilland Hall, M.D.; Richard A. Hayes, M.D. *Honorary Secretaries*, Greville Macdonald, M.D., 47, Queen Anne Street, Cavendish Square, W.; Barclay J. Baron, M.D., 16, Whiteladies Road, Bristol.

The following subjects are proposed for special discussion:

1. Tonsillitis: its Varieties and Association with Rheumatism.
2. Perichondritis of the Larynx: its Etiology, Pathology, Symptoms, and Treatment.

Dr. R. Hingston Fox and Dr. Barclay J. Baron will take part in the discussions.

The following gentlemen have promised papers on these subjects: Dr. C. W. Haig-Brown, Dr. P. McBride, Dr. G. MacDonald,

Dr. David Newman, Dr. Scanes Spicer; and the following will take part in the discussions: Dr. Dundas Grant, Dr. Hodgkinson, T. Mark Hovell, Esq., C. J. Lewis, Esq., Dr. S. Moritz, Dr. G. Hunter Mackenzie, Dr. Scanes Spicer, G. Eland Stewart, Esq., Dr. Archibald Garrod, and Dr. de Havilland Hall.

The following further papers are announced:

BARON, Barclay J., M.B. A Case of Bilateral Paralysis of Abductors of the Vocal Cords.
LAWRENCE, L. H., F.R.C.S. (Title of paper not received.)
MACDONALD, Greville, M.D. Empyema of the Maxillary Sinus, with an analysis of twelve cases.
MACKENZIE, G. Hunter, M.D. Cases of Infraglottic Laryngeal Disease: (1) a Web removed by Laryngotomy; (2) a Growth a Sequel of Acute Laryngitis; (3) Intubation of the Larynx.
MORITZ, S., M.D. A Case of Acute Rheumatic Bilateral Paralysis of the Adductors of the Vocal Cords.
NEWMAN, David, M.D. A Case of Laryngeal Carcinoma complicated by Chronic Pulmonary Tuberculosis, with remarks respecting the rare coincidence of these diseases.
SPICER, R. H. Scanes, M.D. Throat and Nose Affections in Children as Causes of Functional Nervous Disorders.
STEWART, G. Eland, Esq. Tonsillitis as a Cause of Abscess in the Neck.
STOKER, George, M.K.Q.C.P.I. Laryngitis and Rhinitis in Diabetes.

Elementary Division, Mechanics' Institute.

J. OTOLOGY.—*President*, George P. Field, M.R.C.S. *Vice-Presidents*, Frederick Morrish Pierce, M.D.; Henry Bendelack Hewetson, M.R.C.S. *Honorary Secretaries*, Adolph Bronner, M.D., 33, Manor Row, Bradford; G. William Hill, M.B., 24, Wimpole St., W.

The following subjects are proposed for formal discussion:

1. The Causes, Varieties, and Treatment of Osseous Growths of the Ear.

2. The Influence of Diseases of the Nose and Pharynx on Affections of the Middle Ear.

3. The Diagnosis, with special reference to Localisation, of Intracranial Lesions the result of Aural Disease.

The first of these discussions will be opened by the President, Mr. G. P. Field, the second by the Vice-Presidents, Dr. F. M. Pierce and Mr. H. B. Hewetson, and the third by Mr. Cumberbatch and Dr. William Macewen, of Glasgow; Dr. Hughlings Jackson, Dr. Broadbent, Professor Ferrier, Mr. Lennox Browne, G. J. Mackesy, M.B., W. L. Mackesy, M.B., and Professor Horsley will probably speak on the latter subject.

The following otologists have also intimated their intention of joining in one or more of the discussions: Clarence J. Blake, M.D. (Boston, U.S.A.), Professor Urban Pritchard, M.D. (London), H. Macnaughton Jones, M.D. (London), J. Dundas Grant, M.D. (London), W. R. H. Stewart, F.R.C.S.Ed. (London), Donald Stewart, M.D. (Nottingham), Dr. Charles Warden (Birmingham), Mr. Lennox Browne, G. J. Mackesy, M.B., W. L. Mackesy, M.B., and Mr. Richard Williams.

The following further papers are announced:

BARR, Thomas, M.D. (Glasgow). On Non-operative Treatment of Aural Exostoses; and will show Sections of Temporal Bones from Cases of Intracranial Disease illustrative of the various directions by which Disease of the Middle Ear may extend to the Interior of the Cranium.
BRONNER, Adolf, M.D., Bradford. Notes on the Use of Menthol in the Local Treatment of Diseases of the Middle Ear; and will show (1) a Catheter for the Injection of Fluids; and (2) a Capsule for the Introduction of Vapours into the Middle Ear.
COUSINS, J. Ward, M.D., Portsmouth. On a New Antiseptic Ear Drum. (Specimen shown.
DALBY, Sir Wm, M.B. (London) and SHEILD, Marmaduke, M.B. (London). On Treatment of Aural Exostoses.
DAVIS, Henry (London). On the question of Anæsthetics in Operations for Adenoid Growths of the Naso-Pharynx.
ELLIS, Richard, F.R.C.S.Ed. (Newcastle). On an Osseous Growth of the Auditory Meatus simulating a Foreign Body and Causing Deafness. (Removal with restoration of hearing. Specimen.)
GUYE, Professor (Amsterdam). On Aprosexia, being the inability to fix the attention, and other allied troubles in the cerebral functions caused by nasal disorders.
HARTLEY, R. N., M.B. (Leeds). Abscess of Right Temporo-Sphenoidal Lobe following Old Middle Ear Disease. (Trephined and drained: Recovery: Patient shown.)
HILL, William, M.B. (London). On some Causes of Backwardness and Stupidity in Children; and will show Intranasal Guards for the safer application of Chromic Acid to the Nasal Cavities.
LEE, Charles G. (Liverpool). A case of Cerebral Tumour complicated with Symptoms of Acute Otitis.
LEES, David B., M.D. (London). On the Connection between Aural Disease and Meningitis in Children.
MATHESON, Farquhar, M.B. (London). On Some Subject connected with Deaf-Mutism.
NUNNELEY, John A., M.B. (Leeds).
POLITZER, Professor, M.D. (Vienna) (per Mr. G. Stone, Liverpool). On Osseous Growths of the Ear. (With specimens.)
STONE, George (Liverpool). A Case of Severe Unilateral Tinnitus due to Stricture of the Eustachian Tube cured by Persistent Bougieing.

Class Room 10, School of Science.

K. PHARMACOLOGY AND THERAPEUTICS.—*President*, Sir William Roberts, M.D., F.R.S. *Vice-Presidents*, T. Cranstoun Charles, M.D.; I. Burney Yeo, M.D. *Honorary Secretaries*, John B. Hellier, M.D., 1, De Grey Terrace, Leeds; Dawson Williams, M.D., 25, Old Burlington Street, W.

The proceedings of the Section will be opened by the President, who will give a short address on Chemical Therapeutics.

A discussion on Hypnotics and Analgesics, with special reference to remedies recently introduced, namely, Paraldehyde, Hypnone, Amylene Hydrate, Methylal, Sulphonal, will be opened by Dr. D. J. Leech, Professor of Therapeutics in the Victoria University, Manchester. Dr. Charteris, Professor of Therapeutics in the University of Glasgow, Sir J. Crichton Browne, Dr. W. H. Broadbent, Dr. Frederick Needham (Gloucester), Dr. Macnaughton Jones, Dr. T. Cranstoun Charles, and Dr. John Gordon (Aberdeen) have signified their intention of taking part in the discussion.

A discussion on Foods for Invalids and Infants will be introduced by Dr. Burney Yeo, and Dr. Sidney Martin, Dr. E. D. Mapother, Dr. T. Cranstoun Charles, and Dr. S. McBean (Newcastle) will take part in the discussion.

The following papers have been promised:

CHARLES, T. Cranstoun, M.D. (London). 1. The Hot-air Treatment of Pulmonary Consumption. 2. Some Cases of Diabetes.
CHARTERIS, Professor M., and MACLENNAN, W., M.B. Experimental Research on the General Comparative Action of the Natural and Artificial Salicylic Acids and their Salts of Sodium.
GORDON, John, M.D. (Aberdeen). On the Pharmacology of Urethane.
GREENE, G. E. F. (Wexford). Lychnis Flosculi in Renal and Vesical Affections.
HAIG, A., M.A., M.D. The Influence of Opium and Morphine on Uric Acid considered with reference to the Action in Health and Disease.
SOLLY, Samuel E., M.R.C.S., L.S.A. (Colorado Springs). On the Climate of Colorado.
WOODS, Hugh, M.D. (Highgate). The Oxyiodides of Calcium and Bismuth.

N.B.—All gentlemen who, up to the present, have promised papers, have also intimated their intention of taking part in one or other of the discussions.

Honorary Local Secretaries, Charles J. Wright, M.R.C.S., Lynton Villa, Virginia Road, Leeds; Charles M. Chadwick, M.D., 3, Park Square, Leeds; G. Herbert Rowe, M.R.C.S., Hillary Place, Leeds.

Honorary Local Treasurer, William Hall, M.R.C.S., Moorham, Headingley.

PROGRAMME OF PROCEEDINGS.

TUESDAY, AUGUST 13TH, 1889.

9.30 A.M.—Meeting of 1888-89 Council.
11.30 A.M.—First General Meeting. Report of Council. Reports of Committees; and other business. Coliseum.
4 P.M.—Service in Parish Church. Sermon by the Right Rev. the Lord Bishop of Ripon.
8.30 P.M.—Adjourned General Meeting from 11.30 A.M. President's Address. Coliseum.

WEDNESDAY, AUGUST 14TH, 1889.

9.30 A.M.—Meeting of 1889-90 Council.
10 A.M. to 2 P.M.—Sectional Meetings. Mechanics' Institute.
3 P.M.—Second General Meeting. Address in Medicine by J. Hughlings Jackson, M.D., LL.D., F.R.S. Coliseum.
4.30 to 6 P.M.—Afternoon Reception at the Yorkshire College by the President, Council, and Senate of the College.
8.30 P.M.—*Conversazione* by the President of the Association and Local Executive Committee in the Art Gallery and Municipal Buildings.

THURSDAY, AUGUST 15TH, 1889.

9.30 A.M.—Meeting of the Council.
10 A.M. to 2 P.M.—Sectional Meetings. Mechanics' Institute.
3 P.M.—Third General Meeting. Address in Surgery by T. Pridgin Teale, M.A., F.R.S., F.R.C.S.
7.30 P.M.—Public Dinner of the Association in the Town Hall.

FRIDAY, AUGUST 16TH, 1889.

10.30 A.M. to 1.30 P.M.—Sectional Meetings. Mechanics' Institute.
3 P.M.—Concluding General Meeting. Address in Psychology by Sir James Crichton Browne, M.D., F.R.S. Coliseum.
4.30 to 6 P.M.—Garden Party at the W.R. Asylum, Wakefield.
8 P.M.—Reception and Ball by the Mayor of Leeds in the Town Hall.

SATURDAY, AUGUST 17TH, 1889.

Excursions.

ANNUAL MUSEUM.

IN connection with the fifty-seventh annual meeting of the British Medical Association, the Museum and Exhibition will be held in the Mechanics' Institute, in which the Sectional meetings

are held, and grounds of the Leeds School of Science. The Museum will be arranged in the following Sections:—

SECTION A.—Foods and Drugs, including Antiseptic Dressings and other Chemical and Pharmaceutical Preparations. (Honorary Secretaries, Dr. J. Hellier, 1, De Grey Terrace, Leeds; Mr. C. V. Newstead, 40, Headingley Lane, Leeds.) In the Albert Hall.

SECTION B.—Pathology, comprising Casts, Models, Diagrams, Apparatus, Microscopical and Spirit Preparations, etc. (Honorary Secretaries, Dr. J. Dobson, 27, Burley Lawn, Leeds; Dr. E. H. Jacob, 12, Park Street, Leeds.) In the Chemical Laboratory.

SECTION C.—Anatomy and Physiology, comprising Special Dissections, Methods of Preparation, Drawings, Models, Microscopes, Microtomes, and Microscopic Preparations. (Honorary Secretaries—Physiology, Dr. De Burgh Birch, 16, De Grey Terrace, Leeds; Anatomy, Dr. T. Wardrop Griffith, 23, Park Square, Leeds.) In the Chemical Laboratory.

SECTION D.—Instruments and Books, including Appliances, Medical, Surgical, and Electrical. (Honorary Secretaries—Instruments, Mr. W. H. Brown, 19, Queen Street, Leeds; Books, Mr. F. H. Mayo, 49, Otley Road, Leeds.) In the Albert Hall.

SECTION E.—Sanitary and Ambulance Appliances. (Honorary Secretaries—Sanitary, Mr. J. S. Loe, Grafton Street, Leeds; Ambulance, Mr. R. N. Hartley, Blenheim Terrace, Leeds.) In the basement of the Boys' School.

In consequence of the great and increasing cost of these exhibitions, charges will be made to exhibitors (others than members of the medical profession), according to the space occupied.

Regulations Regarding Exhibits.

1. Intending exhibitors must communicate with the Secretaries of each Section in which they propose to exhibit, and a brief description of each exhibit, for insertion in the Museum Catalogue, must be in the hands of the respective Secretaries before July 8th.

2. All exhibits should be addressed to the "Secretary of the Museum, British Medical Association, Mechanics' Institute, Cookridge Street, Leeds," with the name of the Section for which they are intended.

3. Communications on general matters connected with the Museum to be addressed to the Museum Secretary, Dr. Jacob, 12, Park Street, Leeds.

All communications respecting advertisements in the Catalogue must be made to Messrs. Goodall and Suddick, Cookridge Street, Leeds.

PROPOSED EXCURSIONS.

1 *Bradford Excursion.*—To Bolton Abbey; lunch. To Ilkley; dinner. (Arranged by profession of Bradford and Ilkley.)

2. *Malham Cove, Gordale Scar, and Settle.*—Train to Bell Busk. Coach to Malham; lunch. To Gordale Scar by Malham Cove and back to Malham. By Kirkby Malham and Scaleber Bridge to Settle; dinner. Giggleswick and Stainforth, if time.

3. *Harewood, Farnley, Otley.*—Drive to Eccup and Harewood; lunch at Barrett's. Drive by Almscliff to Fewston. Over Jack Hill to Lindley Wood Reservoir and Farnley. See pictures at Farnley Hall. Dine at White Hart, Otley. Drive home.

4. *Nidd Bridge, Ripley, Ripon.*—By train to Nidd Bridge. Drive to Ripley; see Castle. To Brimham Rocks Lunch at Pateley Bridge. By Grantley to Studley; see grounds; Fountains Abbey. To Ripon; Cathedral; dinner. Train to Leeds.

5. *Leyburn, Aysgarth, Bolton Castle.*—Train to Leyburn. Drive to Middleham; lunch; see Castle. By Wensley to Aysgarth; see Falls. From Aysgarth to Bolton Castle. From Bolton, by Redmire, to Leyburn; dine. Walk to Shawl. Train home.

6. *York, Helmsley, Rievaulx.*—Train to York; Cathedral, etc. Train to Helmsley; lunch. Helmsley Castle, Duncombe Park, Rievaulx. Dine at Helmsley. Train home.

7. *Scarborough Excursion.*—A special train will leave Leeds 9.5 on Saturday morning, August 17th, arriving in Scarborough at 11.15. At 1 P.M. luncheon will be given by the profession of Scarborough to 100 members of the Association. In the afternoon excursions by sea and land will be arranged for; a Garden Party will also be given in honour of the visit of members of the Association. In the evening the Grounds of the Cliff Bridge Company will be thrown open to the members and especially illuminated for the occasion. Sunday will be spent as a day of rest, but various small social entertainments will be given. A fee of one guinea will be charged, which will cover all expenses of the excursion, namely: Special train from Leeds to Scarborough, hotel accommodation at two of the best hotels from mid-day on Saturday, August 17th, till mid-day on Monday, August 19th (with the exception of wine). The Cliff Bridge Company will admit members of the Association free to their Grounds on the three days August 17th, 18th, and 19th. All excursions arranged for during the visit of the Association will be free of expense. Any further particulars with regard to the Scarborough Excursion can be obtained on application to Charles F. Hutchinson, M.D., Honorary Secretary, May Lodge, Scarborough.

CHARLES M. CHADWICK, Honorary Secretary,
Excursions Subcommittee.

RAILWAY TICKETS.

Members of the Association, on application at the booking office at Leeds, and on production of their cards of membership, can have issued to them return tickets at single fares, available from Leeds to any station within a radius of fifty miles. The same facilities will be afforded to ladies accompanying members if they require to do so. Periodical tickets (first class) to Harrogate or Ilkley, available for seven days, will be issued to members of the Association at a charge of 10s. each on production of the voucher above named. These facilities will apply strictly to Leeds, and there will be no reduction in the fares charged to the members of the Association on their journey to Leeds for the meeting. Similar facilities will not be extended to Hull.

CARDS OF MEMBERSHIP.

The cards of membership can be obtained on personal application at the Reception Room and Reading Room of the Mechanics Institute, Leeds on Monday, when it will be opened from 12 till 6 o'clock, and the other days of the meeting at 9 o'clock till 6 o'clock.

Dr. EDWIN RICKARDS hereby gives notice that, at the Annual Meeting to be held at Leeds in August next, he will move:

That it be a recommendation to the Council of the British Medical Association that a decennial index of the contents of the BRITISH MEDICAL JOURNAL from its commencement up to the present time be made, and that in future, in addition to the annual index, a quinquennial one be issued.

Mr. J. BRINDLEY JAMES will move:

That the British Medical Association shall give active support and assistance to any scheme that has in view the establishment of hospital co-operation with a view to the better conducting of the out-patient department of our general hospitals, raising thereby the standard of hospital practice and extinguishing the *raison d'être* of so-called provident dispensaries and open surgeries, thus enabling general practitioners to gain an honourable livelihood.

Dr. OGILVIE GRANT gives notice that at the first evening general meeting at Leeds he will move:

That the travelling expenses of representatives of Branches incurred in attending meetings of the Council in London be defrayed out of the funds of the Association.

FRANCIS FOWKE,
Thursday, July 11th. General Secretary.

SPECIAL CORRESPONDENCE.

PARIS.

[FROM OUR OWN CORRESPONDENT.]

Movable Stoves.—Ainhum.—Prevention of Contagion in Children's Hospitals.—Laparotomy.—The Electric Light and Hysteria.

DR. LANCEREAUX, physician to the Hôpital de la Pitié, has begun a vigorous campaign against the movable stoves which have of late years come into such general use, and which are apt to cause carbonic oxide poisoning. M. Lancereaux has met with numerous instances of the kind. Amongst others may be cited the case of a robust man, aged 38, who, after sleeping in a room next to one in which a movable stove had been wheeled for the night, was found unconscious at 7 in the morning. The patient's little daughter, aged 9, who slept in the same room, was found dead, and his wife, who occupied another room in the same flat, awoke with violent headache. Dr. Lancereaux recorded several other cases, two of which proved fatal. Leblanc's investigations have shown that the really dangerous element in the combustion of carbon is carbonic oxide. A sparrow placed in an atmosphere containing $\frac{1}{1000}$ of this gas will very quickly die, and an atmosphere containing $\frac{2}{1000}$ or $\frac{3}{1000}$ of carbonic oxide will kill a dog. The principle of these stoves is to burn as small a quantity of coal as possible, and

this is only done by constructing them so that there may be hardly any draught. The smaller the quantity of oxygen which enters the stove, the smaller is the amount of fuel consumed. Dr. Vallin has shown that in an ordinary movable stove the current of air drawn into the hearth is only 4 cubic mètres per kilogramme of coke burned, whereas this amount of fuel requires 9 cubic mètres of air, in order that the carbon should be transformed into carbonic acid. These stoves, therefore, which produce principally carbonic oxide, are, in fact, machines for generating poisonous gas, and the more economical they are, the greater is the danger. The strongest proof of this fact may be obtained by comparing the analysis of the gases produced by an American stove, with that of the gases produced by an ordinary open fire :

Gases produced by an open fire.		Gases produced by an American stove.
Carbonic acid ...	6	9.34
Carbonic oxide ...	1 to 3	16.70
Oxygen ...	12	0
Nitrogen, hydrogen water ...	80	73.95
	100	99.99

It is an error to suppose that it is only the atmosphere of the room in which the movable stoves are placed that is rendered toxic. The gases pass through the cracks of the doors, and are prevented from escaping by the currents of cold air which they meet. Cases of poisoning at a distance by these stoves have been reported by MM. Boutmy, Henri de Boyen, and Ducor. Chronic poisoning by carbonic oxide also causes various kinds of mischief, such as a œdema, neuralgia, neuritis, vasomotor disturbance, eruptions, intellectual disturbances, etc. Claude Bernard showed that carbonic oxide acts on the red corpuscles of the blood, and forms, in conjunction with hæmoglobin, a stable compound which may become crystallised. Hæmoglobin, which absorbs and carries into the circulation the gases which are indispensable to existence, presents a greater affinity with carbonic oxide than with oxygen ; consequently in an atmosphere containing these two gases, carbonic oxide takes the place of oxygen. M. Lancereaux suggested the following measures :—1. The sale of stoves which do not produce a sufficient draught to transform all the carbon burnt into carbonic acid, and thus occasion the formation of carbonic oxide, should be prohibited. 2. The chimney of a movable stove should only be adjusted in fireplaces which draw sufficiently to allow the vapours to escape with facility. 3. Before placing the movable stove in a fireplace the neighbouring chimneys should be examined to prevent the possibility of the gases passing from one chimney to another, and to avoid poisoning at a distance. 4. The public should be warned of the danger of allowing movable stoves to remain in a bedroom or an adjoining chamber during the night. Dr. Brouardel, who confirmed the truth of M. Lancereaux's statement, referred to the error made by many persons in supposing that if the air in the room in which a movable stove is placed is renewed the danger is averted. An emanation of carbonic oxide, even in the open air, is quite sufficient to cause poisonous symptoms in persons close to the source of the emanation. With regard to the diagnosis of this form of poisoning, Dr. Brouardel insisted on the advisability of examining the blood with a spectroscope.

At a recent meeting of the Surgical Society M. Reclus read notes forwarded by Dr. José Pereira Guimares, of Brazil, on ainhum and congenital amputation, which have been regarded as identical by M. Proust and different authorities. They are, however, quite distinct. The characteristic sign of ainhum is a fibrous longitudinal circle ; in congenital amputation it is a fibrous circular transverse ring. The characteristic lesions of ainhum never appear before the age of 15 ; in amputation they are congenital. The former affection divides the phalanx, whereas complete amputation is very rare in congenital amputation. The pathogeny of ainhum is so far obscure. Collas regards it as a kind of lepra, P. Guimares associates it with Raynaud's disease.

At a recent meeting of the Société Médicale des Hôpitaux the following measures were proposed by M. Comby for the prevention of contagion in children's hospitals :—A house-surgeon will be instructed to select from the patients who come for treatment those affected with contagious diseases and any doubtful cases. Separate rooms are to be kept for doubtful cases. Single-bedded rooms adjoining the diphtheria pavilions, but isolated from these, will be reserved for cases of diphtheria complicated with other affections. M. Gaucher inquired why measures for isolating whooping cough, which is far more contagious than scarlatina or measles were not adopted, as is the case in Russia and Austria, and at the Enfants-Assistés in Paris. M. Bucquoy and M. Lailler suggested the establishment of a special hospital for this purpose. The Society recognised the necessity of isolating whooping-cough, and approved the last measure proposed by M. Comby, namely, the organisation of small wards, containing six or eight beds at most, instead of the large wards which are employed at present.

M. Terrillon has performed laparotomy fifty times for the purpose of removing different forms of salpingo-ovaritis. Two deaths only resulted. The patients suffered from purulent salpingitis, which ruptured, and pus escaped into the peritoneum. In thirty-two cases the Fallopian tubes were removed ; five cases of purulent salpingitis were cured by operation ; three cases of tubercular salpingitis were greatly ameliorated.

M. Féré has observed a case of hysteria induced by the influence of electric light. The patient served in a shop lighted by the electric light ; she contracted amblyopia, and exhibited different paralytic symptoms, all proceeding from hysteria.

EGYPT.

[FROM OUR OWN CORRESPONDENT.]

Small-pox and the "Capitulations."—How Small-pox is Disseminated.—The Typhus Epidemic.—Inspection of Lunatic Asylums.

As the Nile falls, the death-rate rises, but, the mortality being chiefly confined to infants and young children, very little notice seems to be taken of it. It is not, however, to bad water alone that this fatality must be ascribed, for other causes are also in operation, one of the chief being measles. At Chibin-el-Kom, a large town of Lower Egypt, the death-rate for the four weeks ending May 23rd was at the rate of 124 per 1,000 per annum, the vast majority of the deaths being referable to measles and its sequelæ. The disease is also prevalent in Cairo and Alexandria, as well as in most of the other towns which furnish statistical returns; and everywhere the mortality from it is excessive, owing no doubt to the ignorance of the people and their neglect of the precautions necessary to obviate chills during convalescence.

Small-pox also continues to be prevalent in the country. In Cairo, since the commencement of the year, there have been 76 deaths from it among natives and 18 from Europeans, the proportion of the latter to population being about four times greater than the former. The reason for this excessive mortality among Europeans must be sought for in the fact that the Egyptian Government cannot enforce vaccination among foreigners. Natives are compelled to have their children protected, but Greeks, Italians, etc., are amenable only to their own consuls, and the result is the almost total neglect of vaccination. The evils caused to the public health by the "capitulations" is well exemplified in the following case which has just occurred at Damanhour, a large town of the Delta. Two inmates of the French consular agent's family having been attacked with small-pox were at once segregated in a tent for treatment by the energetic native sanitary inspector of the district; but the consular agent (also a native, but "protected"), considering that his dignity was thereby affected, protested, and the result is the two persons affected have been removed from the tent, and are to be transferred, without apparently any precautions whatever, to Alexandria. In Cairo there are at present thirteen British soldiers suffering from small-pox, and there have been some deaths from the disease. The Alexandria garrison will be fortunate if it escapes a similar infliction. The seventy-six fatal cases of small-pox among natives mentioned above occurred chiefly among Soudanese who had never been vaccinated, and it is to these people and to foreigners that the spread of the disease must in general be attributed, for the Egyptians themselves are fairly protected now by vaccination.

Cases of typhus are still occurring at Abbassieh, but the death rate is now almost *nil.* The medical officer in charge of the ambulance (Dr. Abbas Effendi), has a theory that all Egyptians in their infancy suffer from enteric fever, and that in consequence of this when typhus breaks out the mortality is much less than in Europe. There does not seem to be much solid foundation for this theory, but it would be interesting to note whether in temperate climates the recoveries after typhus were more numerous among those who had previously suffered from enteric than among those who had never had the latter disease.

Sir James Dormer, K.C.B., commanding in Egypt, paid his

annual visit to the Lunatic Asylum during the Bairam holidays, and distributed his customary gift of cigarettes among the inmates. Notice of the General's visit had not been given, but everything was found in order, and perfectly clean and well kept. In Egypt, where there are no official visitors in lunacy, it is just as well that similar visits by people in authority should be made periodically.

SHEFFIELD.

[FROM OUR OWN CORRESPONDENT.]

The Housing of the Poor.—Lead Poisoning at Chesterfield.—Death from Hydrophobia.—Meeting of the Yorkshire Branch.

THE housing of the poor is a question exciting some interest just now. Meetings and conferences have been held, and the press is taking the matter up. The editor of the *Sheffield Daily Telegraph* has published a series of articles on the subject, illustrated with specimens of the deplorably wretched dwellings found in the crofts and elsewhere. In a special article he most forcibly calls the attention of the authorities to the needless amount of smoke emitted from the many chimneys, and the wastefulness of the practice, a subject very worthy of consideration, especially in connection with the dwellings of the working classes, who are more or less compelled to live near their work, and, consequently, in the smokier parts. It is to be hoped that his vigorous pen will produce some effect.

At a recent meeting of the Chesterfield sanitary authority, Dr. Mackintosh, the medical officer of health, reported an outbreak of lead poisoning at Killamorst and Holbrook, in the parish of Eckington. He mentioned that one medical man had twelve cases in the beginning of May, and that another informed him that he had had several cases. New limestone had been inserted at the inlets of the reservoirs.

The death of a boy is reported at Woolley, near Barnsley, from hydrophobia. He was aged 14; was bitten by a dog on April 4th. He continued well until July 2nd, and died on the 5th.

The meeting of the Yorkshire Branch at this place on the 26th was largely attended. As many as forty-seven partook of the luncheon provided by the President and friends, and many others joined the meeting later on.

CORRESPONDENCE.

OVARIOTOMY IN TENERIFFE.

SIR,—In the JOURNAL of to-day, page 43, my friend, Dr. Perez, of Orotava, records six successful cases of ovariotomy in the beautiful island where he practises. Allow me to add a seventh. When I was at Orotava in April, 1887, I had gone on from Madeira, where I had stopped expressly to operate on a patient of Dr. Grabham's there, and thus had all the necessary instruments for ovariotomy with me; so that when I was asked to operate on a single lady, a native of Teneriffe, I was able to do so on the morning of the day I left Orotava. She was 23 years of age. Dr. Soler, of Icod, administered chloroform, and I was assisted by Drs. Zerolo, Perdigan, and Morilla. All the usual antiseptic precautions were adopted with the exception of the spray. There were no adhesions. As there was no large cyst, after emptying the principal cavity, the mass of multilocular cysts was broken up in the usual way, and the whole tumour removed as the contents escaped. There were no adhesions. A short pedicle on the right side was transfixed and tied with silk in the usual manner. About an inch of the Fallopian tube was removed with the tumour. The uterus, left ovary, and tube were normal. The wound was closed and dressed as usual. The fluid removed measured 9 pints and the semi-solid mass weighed 3lbs. The patient remained in charge of Dr. Zerolo, and recovered without causing him any anxiety.—I am, etc.,

T. SPENCER WELLS.

London, July 6th.

SOME CASES IN PRACTICE BEARING UPON THE FUNCTION OF THE PROSTATE.

SIR,—In the JOURNAL of July 6th Mr. Harrison relates several cases of surgical affections of the urinary organs, with the view of proving that the prostate gland acts as a sphincter and a support to the bladder. He bases his view chiefly upon the observation that incision through the prostate, as in lithotomy, is followed by incontinence of urine.

In none of the cases is there any proof of any kind that incision or destruction of the prostate itself—that is, of it alone—was the cause of the varying degree of incontinence that ensued. Rather, he assumes that incision into the prostate accounts for all the phenomena observed. In the operation of lateral lithotomy, for instance, be it observed, not only is the prostate incised, but the neck of the bladder with the tissues, elastic and others, intervening between the prostate and the mucous membrane are also divided; and it is quite as reasonable to attribute the incontinence to division of these tissues as to that of the prostate.

In the cases of rupture of the membranous part of the urethra referred to by Mr. Harrison, the retaining agencies must be the same as under ordinary conditions, and there is no evidence that they are, under these circumstances, prostatic. In the instances of carcinoma and tubercle of the prostate the neck of the bladder is usually involved as well as more or less destroyed; and in the latter the irritability of the bladder is usually much increased from extension of the disease in the vesical mucous membrane.

That the function of the prostate cannot be, as Mr. Harrison supposes, that of a sphincter appears to me to be clearly proved by the following facts amongst others:—

(*a*) In the female urinary apparatus there exists neither a prostate nor any substitute near the neck of the bladder which could act as a sphincter, yet the normal retaining mechanism of the bladder is as efficient as in the male.

(*b*) In my paper[1] referred to by Mr. Harrison I have pointed out that the prostate at the time of birth is merely a small mass behind the urethra, and that not until puberty or adult life does it surround the urethral tube. Urine is therefore normally retained in the bladder long before it is possible that the prostate can act as a sphincter. Incontinence occasionally occurring in children can scarcely be attributed to its want of development, as suggested by Mr. Harrison.

(*c*) Cases in which the generative organs remain throughout life in a rudimentary state of development, and in which the prostate remains very small, so that it can hardly be felt *per rectum*, the urine is retained just as well as in the fully-developed male. This I have lately seen to be the case.

(*d*) Cases in which the prostate diminishes in size and undergoes degeneration into fibrous tissue after castration of both testicles, the normal retention of urine is not in any way interfered with, either in man or in the domesticated animals.

These facts clearly show that even without a prostate, and also with only a degenerated prostate, the urine is retained in the bladder just as well as when the fully-developed prostate exists, and that under normal conditions the presence or absence of the prostate has little or no relation to the retention of urine or of its incontinence. Indeed, it is merely a matter of convenience, in connection with its generative function, that this organ is situated so near to the neck of the bladder. Seeing, therefore, that the prostate is not the normal sphincter of the bladder, it is hardly necessary to discuss its relation to the diseased conditions Mr. Harrison refers to.

For further exposition of my views on this subject I must refer to forthcoming papers on the prostate gland which will appear in the *Journal of Anatomy and Physiology*.—I am, etc.,

JOSEPH GRIFFITHS, M.B., C.M.Edin.

Surgical Department, Cambridge.

THE MANCHESTER MEETING, 1877.

SIR,—The desire expressed by a large number of influential members of the Association that some alteration should be made in the management of the JOURNAL, and the appointment of a Committee of Reference in consequence of their action, induces me to recall to the minds of my fellow members some suggestions I made at the annual meeting at Manchester in 1877. At that meeting I proposed the following resolution:—

"That a committee be appointed consisting of members eminent in the several departments of medicine, surgery, midwifery, etc., who shall endeavour to make the JOURNAL a perfect epitome of the science as well as the practice of medicine, and, at the same time utilise the members in clearing up disputed points in the diagnosis or treatment of disease, so as to increase the value of the JOURNAL, and, if possible, raise it to a higher place in the medical literature of the day, such committee to be responsible for the management of the JOURNAL and any correspondence admitted to its columns."

The arguments I advanced in support of my resolution may be

[1] *Journal of Anat. and Phys.*, vol. xxiii, p. 374.

read in the JOURNAL of August, 1877, page 192; and though the report of the discussion is not accurate, seeing it leaves out much that was said, and puts in a good deal that was never said, still its perusal will give anyone some idea of the reception my resolution received.

Looking back over the twelve years that have passed since that resolution was brought forward, I begin to think that it might have been well if it had been adopted, instead of rejected by the Association. Two of its suggestions have already been carried out.

1. A Committee has been in existence some years, known as the Collective Investigation Committee, which we may suppose has done its best to utilise the members in clearing up disputed points in the diagnosis and treatment of disease, but if we compare the amount of money it has spent with the value of the results it has arrived at, few will deny that it would be well if it were adjourned for a season.

2. A committee of reference has at last been appointed to act in consultation with the Editor, and be responsible for anything that appears in the JOURNAL.

The only part of my resolution which has not been carried out, is that which suggests that the members of committee should be eminent in the several departments of medicine, and each be responsible for all that appeared in his special department in the JOURNAL.

Another suggestion which I made in speaking to the resolution was, that an annual volume should be published, containing a report of the work done at the annual meetings, so that all might benefit by such meetings, and the columns of the JOURNAL be left free for other, and fresher matter. Something must be done to make our annual meetings of more value to the members.

The Sections being now very numerous, and all going on at the same time, the general practitioner finds it so difficult to hear those papers in which he feels interested, that many never think of trying, and spend their time in some other way.

Having thus lived to see two of my suggestions carried out, I do not despair—seeing that there seems to be an awakening, even of the dead bones, in the Association—of the others being adopted in good time.—I am, etc., JOHN HADDON, M.D.

Marsh House, Canobie, N.B.

THE ROYAL MEDICAL BENEVOLENT COLLEGE.

SIR,—I crave your special indulgence for a short retrospect of the annual election, just past, of pensioners and foundation scholars of the Royal Medical Benevolent College. The result will, I am sure, prove anything but satisfactory to the two thousand and upward of governors of the College, who ten years ago laboured long and earnestly to bring about a reform in the method of election, and for the abolition of the canvassing system. This year, whether from the more strenuous efforts of outside canvassers, or from lukewarmness on the part of the majority of governors, who object to being canvassed, I am unable to say, but it is quite disheartening to find that the recommendation of the Committee of Examination appointed by the Council, and whose duty it was to carefully investigate the relative claims of the several candidates, was, on the whole, entirely ignored.

On comparing the list of candidates recommended for election, what do we find? That, of the six pensioners, only three were among the more fortunate; while of those recommended to fill ten vacancies for scholarships, the names of only three appear on the successful list. What a day of bitterness and disappointed hopes to very many of the old people must May 24th have been! The hope deferred will not only have made them heart-sick, but it must, I fear, have broken the hearts of some of the number of those who, I notice, have been waiting for eight, seven, six, five, and four years for the attainment of what all stand so much in need of to keep them from the workhouse. On analysis, the list of foundation scholars presents an equally heart-rending picture, for, of the fifty candidates, one-half of these have stood, six, five, four, and three elections, while several altogether fall under the inexorable rule of "ineligibility on account of age," and which means for these, perhaps, more than for others among the candidates, large expense, wearing toil, pangs of anxiety and disappointment, and no one in the least benefited by it at all, save and except the post office and the printer.

Your correspondent, Mr. Dow, in his letter on "Canvassing Charities," puts his finger on what all will admit is a grievous evil in connection with our London charities—namely, that a great many more candidates are admitted to the voting lists than can ever hope to be successful. I have on several occasions proposed to deal with this difficulty in the Royal Medical Benevolent College by greatly restricting its benefits to those, or the orphans of those, who subscribed at some time or other for, say, not less than three years towards its maintenance. If such a rule had been in force, then the whole of the candidates recommended by the Committee of Examination for election this year would have had their hearts made glad. Indeed, the want of such a rule seems to operate somewhat harshly on the thrifty and the provident, for of the twenty-two candidates for pensionerships I find six only are described as governors and subscribers, and only two were successful; while of the fifty boys on the list the friends of nine only were either governors or subscribers, and the names of only three of these appear in the successful list. I am of opinion, therefore, that the administration of the charity as at present effected tends in a measure to defeat the objects of those who initiated the benevolent side of the College. There is no doubt that full liberty must be allowed to every subscriber to place his or her vote to the credit of any candidate whom he or she may select; but that "full liberty," it must be taken to mean, is the liberty of a subscriber to an institution, not the liberty of a private benefactor, nor such as will interfere with the proper working of the whole.—I am, etc., JABEZ HOGG.

Bedford Square.

THYROTOMY FOR FOREIGN BODY IN LARYNX.

SIR,—With regard to this very interesting case, published by Dr. Beverley in the JOURNAL of July 6th, I should like to mention that, with the kind permission of Dr. Beverley, I examined his larynx this morning with the following results, namely: slight obliquity of the glottis to the left, vocal cords on the same level, both cords abduct well, the left rather better than the right; there is decided defect of adduction, all the adductor muscles being affected; vocal cords somewhat thickened and irregular, more especially the right at the junction of the posterior and middle thirds; some thickening below the vocal cords anteriorly, especially towards the anterior commissure. The patient's voice is hoarse, but not very so, and he says there is a great tendency for cold to fly there.

Taking into consideration that the case was one of complete thyrotomy, I think both operator and patient are much to be congratulated on the very successful result, to secure which a most accurate division of the thyroid cartilage in the middle line, and exact adaptation of the two halves must have been effected.—I am, etc., S. JOHNSON TAYLOR.

Norwich, July 10th.

ELECTION OF COUNCIL AT THE ROYAL COLLEGE OF SURGEONS.

SIR,—I most cordially thank all those gentlemen who have recorded votes in my favour, and all those also (many of them previously unknown to me) who have written me very kind and encouraging letters. I venture to hope that a large number of Fellows who have on this occasion voted for particular candidates will, if I am spared to come forward next year, favour me with their support, and that a much larger proportion will avail themselves of the new power of voting by proxy papers.—I am, etc.,

Clifton. CHARLES STEELE.

MALTA HARBOUR.

SIR,—I should like to corroborate the statements about Malta Harbour being a very good approach to a cesspool, for not only in addition to the excretions of the thousands of sailors in all navies, merchant vessels, and boat population, there is an immense quantity of vegetable matter thrown overboard from all the ships. At the ends of French Creek and Dockyard Creek these are floating, and, in course of time, naturally sink and ferment in hot weather. The harbour might be scavenged like a street, and the refuse burnt in a furnace. These vegetables, especially the cruciferal, must give rise to a quantity of sulphuretted hydrogen, etc., when added to the tons of excreta.—I am, etc.,

FLEET SURGEON, R.N.

DISPOSAL OF LEPER PATIENTS.

SIR,—If you can give, or obtain for me, advice in the following case, I shall be extremely obliged. A leper, who is now in the wards of a large general hospital, was formerly a soldier, and is in receipt of a small pension. He wishes to return to India, where

his mother lives. He has some money, but it is difficult to get a ship to take him. The authorities at the War Office decline to interfere, and the shipping companies refuse to give him a passage. Can any of your readers assist in this matter? If some medical man who is going to India would undertake to keep an eye on the case, it might be possible to induce a shipping company to grant a passage. The present condition of the disease is not, I understand, under ordinary conditions, contagious.—I am, etc.,

15, Buckingham Street, Adelphi, July 2nd. C. S. LOCH.

NAVAL AND MILITARY MEDICAL SERVICES.

THE VOLUNTEER MEDICAL SERVICE.

THE two volunteer battalions of the Yorkshire (North Riding) Regiment have been under canvas at Beverley for their annual training. The bearer company attached to the 2nd Battalion was commanded by Surgeon-Major Taylor, Surgeon Bruce Low, Acting Surgeons Colby and Porter. The inspection of the bearer company was made by Surgeon Sullivan, M.S., who expressed his high approval of the smartness and efficiency of the bearers in their stretcher and ambulance drill. Five men examined for the army ambulance certificate were successful. At the annual inspection, Col. Sir Wm. Horsley, Bart., was congratulated on the satisfactory work of the ambulance detachments. It is very satisfactory to note that more importance is now being attached to the organisation and equipment of regimental stretcher bearers.

SECOND DIVISION VOLUNTEER MEDICAL STAFF CORPS, EDINBURGH.

THE Edinburgh Company of this corps was inspected by Deputy Surgeon-General C. Graves-Irwin, the Principal Medical Officer in North Britain, on Friday, July 5th. Surgeon Cathcart was in command, and all the officers were present. The ambulance wagon was driven by a member of the corps. The usual drill was gone through, followed by the field manœuvres of a bearer company, tent pitching, etc. Surgeon Hepburn commanded the stretcher detachments. The Principal Medical Officer, in addressing the officers and men, said it had given him much pleasure to note the marked improvement in the efficiency of the corps, and it was a great satisfaction to know that the Edinburgh Company was likely to become the model company of the Volunteer Medical Service in the kingdom.

JUNKERISM.

PRO REGE, LEGE, GREGE writes: Your recent incisive memoranda on the subject of so-called "Junkerism" will go far to enlighten your civilian readers on the socio-military-medical situation, which just now threatens seriously to affect the relations of the army medical officer: none the less seriously because its development is due, more or less, to concerted action, the direct result of lofty inspiration.

There is, perhaps, a melancholy satisfaction attending the exhibition of the refined "boycottism" you allude to, in knowing that it is extended to all departmental officers.

The outcome of it in the case of the commissariat has been the concession of actual rank, inasmuch as it was found that no officers would enter and few remain in a position where an implied inferiority of social and military status was ever being forced on them.

In the Pay Department, many of whose officers have fought and bled for their country while in the "combatant" ranks, it is a sad outlook to find that the pursuit of light half-sovereigns, checking of travelling claims, and similar duties of their new career in the service, will for the future debar them from the society and the sympathy of those in whose company they have fought and bled.

In exemplification of the subject, as affecting the army medical officer, take the case of one, in his fourth decade of service, with a career undimmed by censure, the actual sharer of many a danger in many a clime and on many a hard-fought field, the recipient of honours, decorations, rewards, noted for his courtesy, *bonhomie*, and tact, and of proved professional skill, deservedly a *persona grata* with all whom he may have to deal with, arriving at some large station as the representative of his new department. He receives no notice—nay, even no acknowledgment—whatever from the various military institutions and functionaries to whom he has, as in duty bound, accorded the recognised amenities of society.

Further, invited to a professional banquet, presided over by an eminent physician, the guests including many men of note, culture, and high degree, he attends clad in the distinctive garb of his rank rigidly prescribed for such occasions by regulation, and finds himself called on to speak to a toast, while seated several places below a very junior "combatant" officer, also wearing the insignia of his rank, and who was probably struggling with the tube of his feeding bottle when he—the "non-combatant," save the mark—was going into his first action with his battalion.

SELECTION IN INDIA.

UNDER the pretext, a correspondent writes, of "selection of the fittest," the most deliberate injustice is often inflicted in India. There have been notorious instances of this quite recently. A medical storekeeper suddenly blossoms into a sanitary commissioner. But the local Governments play the same pranks in selection as the supreme one; some of the best senior officers are continually driven out by the indignity of having juniors put over them.

EXAMINATION OF SURGEONS-MAJOR.

MEDICAL STAFF hopes this most objectionable examination will be done away with, and we have every reason to believe it will be.

EXAMINATION FOR ADMISSION AS ACTING SURGEON FOR VOLUNTEER REGIMENT.

INQUIRENS.—See *Volunteer Regulations*, 1887, para. 144, and the JOURNAL of June 4th, 1887, page 1224.

AYRSHIRE YEOMANRY AMBULANCE DRILL.

THE Ayrshire Yeomanry was inspected on June 25th by Colonel Duncombe. The Ambulance Section, numbering twenty-one men and a trumpeter, were under the command of Surgeon W. J. Naismith, M.D. The stretcher detachments were paraded and extended at proper intervals. The wounded were carried on "sword stretchers"—formed by four swords, two on each side, clamped at the ends, and a piece of blue canvas—and dressed for fractures and wounds. The inspecting officer, before their dismissal, was pleased to express his complete approbation of the manner in which the drill had been performed.

"MANUAL FOR THE MEDICAL STAFF CORPS" (1885).

DR. A. T. BRAND, Surgeon, 2nd Volunteer Battalion East Yorkshire Regiment (Driffield, East Yorkshire) writes: This *Manual* has long been out of print, with the result that much inconvenience has been caused to many Volunteer surgeons, who wished to have a copy to read for their Proficiency examination, as well as for drilling their company bearers. I have just discovered that a new edition has been issued this year under the title, *Regulations for the Medical Services of H.M. Army. Part II: Manual for the Medical Staff Corps.* There are many changes, chiefly improvements. The price is reduced from 2s. to 1s. 6d. The drill is considerably altered and improved, and the new infantry drill is followed. Prominence is given to the new stretcher (Faris', Mark V) and ambulance wagon (Mark III), while the paragraphs relating to the Mark I stretcher and wagon are within brackets. The instructions for stretcher drill are also considerably altered and simplified, and points hazy in the old edition are clearer. The book is evidently entirely rewritten. A distinctly retrograde step is the omission of an index.

THE NAVY.

THE following appointments have been made at the Admiralty: WILLIAM E. HOME, Surgeon to the *Britannia*, July 3rd; WILLIAM GRAHAM (lent), Fleet-Surgeon, to the *Warspite*; EDWARD W. DOYLE (lent), Fleet-Surgeon, to the *Rodney*; JOHN C. FERGUSSON, B.A., M.B. (lent), Surgeon, to the *Warspite*; GEORGE WILSON, M.B. (lent), Surgeon, to the *Rodney*.

THE MEDICAL STAFF.

SERGEANT-MAJOR GEORGE MERRITT, Medical Staff Corps, is appointed Quartermaster, with the honorary rank of Lieutenant, *vice* J. McSwiney, retired.

Surgeon-Major RICHARD W. O'DONNELL died in London on the 1st instant, at the age of 37. He entered the Army Medical Service as Assistant-Surgeon, March 30th, 1872; became Surgeon, March 1st, 1873; and Surgeon-Major, March 30th, 1884. He was placed on half-pay on October 13th last. He served with the Nile Expedition in 1884-85, in charge of the hospital at Assouan, and with the River Column, and was awarded the medal with clasp, and the Khedive's bronze star.

ARMY MEDICAL RESERVE.

SURGEON E. W. WILLETT, M.B., London Division Volunteer Medical Staff Corps, to be Surgeon, ranking as Captain.

INDIAN MEDICAL SERVICE.

THE services of Brigade-Surgeon A. BARRY, M.D., F.R.C.S., Bombay Establishment, have been replaced at the disposal of Government in the Military Department.

Surgeon-Major W. G. H. HENDERSON, Bombay Establishment, is appointed Civil Surgeon of Ahmednugger, *vice* Surgeon-Major E. Colson, retired.

Surgeon W. H. QUICKE, Bombay Establishment, is directed to act as Medical Officer to the Kattywar Political Agency, and will be in charge of the West Hospital at Rajkote, during the absence of Surgeon-Major F. C. Barker, M.D., or pending further orders.

The undermentioned Surgeons-Major, all of the Bengal Establishment, are allowed leave of absence for the periods specified: G. J. KELLIE, 4th Cavalry Hyderabad Contingent, for 151 days on private affairs; T. MOLONEY, M.D., 3rd Sikh Infantry, for one year on medical certificate; A. DEANE, M.D., Residency Surgeon, Cashmere, for two years on private affairs; D. W. D. COMINS, Protector of Emigrants and Superintendent of Emigration, Calcutta, for three months.

THE MILITIA AND VOLUNTEERS.

SURGEON-MAJOR R. BRADSHAW is transferred from the 8th Battalion Rifle Brigade (late the Leitrim Rifles), which corps is disbanded from July 31st, to the 5th Battalion Connaught Rangers (formerly the Roscommon Militia).

Surgeon G. P. BARTON, 1st Volunteer Brigade Western Division Royal Artillery (late the 1st Devon Artillery), is promoted to be Surgeon-Major, ranking as Major.

Acting-Surgeon W. MOORE, M.B., 1st Ayr and Galloway Artillery, has resigned his appointment, which was dated May 26th, 1883.

Acting-Surgeon C. W. MACDOWELL, M.D., 22nd Middlesex (Central London Rangers), is promoted to be Surgeon.

Acting-Surgeon W. DRYSDALE, 1st Dumbartonshire, has resigned his appointment, which bore date July 2nd, 1887.

Surgeon J. W. JACKSON, 1st Tower Hamlets (the Tower Hamlets Rifle Volunteer Brigade), has also resigned. His commission dated from February 1st, 1889.

Acting-Surgeon W. M. HARMER, of the 2nd Volunteer Battalion East Kent Regiment (late the 5th Kent), is appointed to be Surgeon.

MEDICO-LEGAL AND MEDICO-ETHICAL.

COURT OF APPEAL.

H. A. ALLBUTT v. THE GENERAL MEDICAL COUNCIL.

JUDGMENT was given in this appeal by Lord Justice Lopes (the Lord Chief Justice and Lord Justice Lindley concurring), on July 6th. Lord Justice Lopes said that the object of the action was really to review the decision arrived at by another tribunal, which had an exclusive jurisdiction of their own. The General Council of Medical Education had a duty cast upon them to interfere in certain cases. He desired to express no opinion whatever upon the decision arrived at by the Medical Council, or whether the low price of a book rendered it objectionable from a public point of view. He held that the Court of Appeal had no right to directly review the judgment and decision of the General Council, and, that being so, their decision could not be questioned indirectly by raising the side issue as to the price at which the book was issued being the only cause of offence. The Council had acted within their jurisdiction; the resolution they passed was privileged, and must be taken as in the public interest.—The Judge below was right, and the appeal would be dismissed with costs.

ADVERTISING CIRCULARS.

FULHAM.—It is with more than mere regret that we have of late years observed an increasing ratio of young practitioners who appear disposed to sacrifice the dignity and status of the profession to their assumed personal exigencies, and seek to obtain practice by illegitimate and trade-like devices. That a firm of practitioners should under any circumstances publicly issue a degradingly low-priced tariff of fees cannot but be regarded as a regrettable act; but tacitly to sanction such being thrust under the doors of other practitioners' patients in the district in which they have elected to open a new "surgery" is still further objectionable; and, in the true interest of the profession, we would suggest that our correspondent would do well to forward a copy of the tariff in question, with a brief narration of the attendant circumstances, signed by himself and one or two other resident practitioners, to the Presidents of the Royal Colleges of Physicians and Surgeons in Ireland, of which the practitioners alluded to are Licentiates.

ARTICULATION AFTER CUT THROAT.

DR. ARTHUR F. PARKER (Lismore, New South Wales) writes: A woman cut her throat standing in front of a looking-glass placed upon a low table, dividing the trachea between the first and second ring for two-thirds or three-fourths of its circumference by a very clean incision. The internal jugulars and carotids were unwounded, and the woman remained standing for some time, eventually falling and dying from the effects of hæmorrhage and asphyxia in about fifteen or twenty minutes after the wound was inflicted. The husband and daughter of the deceased swear that after the deed she spoke many times, saying: "I'm not drunk." 1. Is it possible that the deceased really spoke? 2. Are there any recorded cases of a similar nature?

*** To take the second question first, cases have been recorded in which the trachea was divided, whilst the carotids and jugulars escaped injury, but we do not find in those to which we have been able to refer any mention of the effect on the voice. To the first question we think the reply must be in the affirmative, although in Taylor's great work it is distinctly asserted that if the trachea is divided the voice is lost. But in the case before us we have the evidence of two people, who could have had no conceivable motive for inventing it, that the deceased spoke several times, and we have no right to ignore that testimony without very strong grounds; moreover, the trachea was not entirely divided, and it does not seem at all impossible that when the woman bent her head the two parts of the trachea should be brought into such close proximity as to permit her to speak with an audible voice. The case is one of very great medico-legal interest.

FEES FOR INSURANCE CERTIFICATES.

DR. C. H. WELD (Sandhurst, Kent) writes: With regard to your remarks on fees for insurance certificates, insurance offices and the Post Office prefer the certificate from the registrar of the district (nowadays), and it is obtained for a small fee. The medical attendant who supplies the original certificate by Government demand (gratis) is passed over, and reaps no benefit from information derived entirely from him. This is not satisfactory, and if means can be contrived should be rectified.

ADVERTISING IN NEW SOUTH WALES.

R. M. S.—In response to our correspondent's note and enclosures, we regretfully observe that the sad defection from the time-honoured traditions of the faculty evinced by the four practitioners in question (two being reputed surgeons to the district hospital) advertising in the daily *Riverine Herald* of New South Wales their respective medical qualifications and hours for consultative, advice at home, etc., reveals but too clearly the fact that the decadence of the old chivalrous professional principle has rapidly extended to and among our Antipodean brethren. Were the several practitioners alluded to—all of whom would appear to hold British or Irish diplomas—residing within a reasonable distance, we should suggest to our correspondent that he would be acting in the interest of the profession and the public by forwarding the derogatory advertisements to the heads of the specified colleges and universities, and solicit their attention thereto.

SUBSCRIBER.—In supplying a lady with chloral without the knowledge of her husband, and under the apprehension, moreover, that she will sooner or later possibly take "an overdose,"—which we take to mean a fatal one—our correspondent is incurring an undesirable responsibility.

HOSPITAL AND DISPENSARY MANAGEMENT.

ALLEGED ABUSE OF OUT-PATIENT DEPARTMENTS.

SIR,—The labours of Dr. Rentoul to expose what he believes to be a great injustice to the profession have been very considerable, and deserve courteous acknowledgment and not ridicule. If his facts are unreliable let the mistakes be pointed out; if his conclusions are faulty let them be challenged and refuted; or if, though his facts are acknowledged and his conclusions admitted to be just, his remedy is not approved, by all means let someone say so; but for anyone to call hard names, even though he can unfortunately quote high professional authority for the term "crotchetmonger," is not fair, and as used by an anonymous "Critic" serves only to irritate, and risks the acceptance of so much of truth as there is in his contention. It may be quite true that under the present out-patient system there is opportunity for the exercise of true charity, but at the same time this may be at a cost to the medical profession in the neighbourhood which calls for full and searching examination. The *naïveté* with which the authority quoted confesses that but for "the experience gained by himself as physician in an out-patient room it would have been simply impossible" for him to have attained his present exalted position will not weigh much with Dr. Rentoul and his hungry clients. "Robbing Peter" is not justifiable even though it be to "pay Paul." May I also suggest, at this stage of what may possibly be the commencement of a prolonged controversy, that writers will do well to be cautious in quoting high authority on one side or the other. Sir Andrew Clark, on the side of "Critic," is pretty well balanced, even in his own letter, by Sir Spencer Wells and Mr. Timothy Holmes.

By a happy coincidence I came upon a record the other day which shows that this question was under serious consideration in London more than thirty years ago, and the circumstances may be worth recalling to memory. It was a meeting (April 9th, 1858) held at 57, Park Street, Grosvenor Square; Drs. Chapman, Druitt, Morris, Richardson (B. W.), Hamilton Roe, Stewart (Middlesex), Messrs. Jay, Love, Sawyer, Squibb, and Spencer Wells were there. The object was to consider the necessity and advantage of association, whereby persons might be encouraged to provide for themselves efficient medical attendance, and without sacrifice of the spirit of honest independence. I was as enthusiastic then as Dr. Rentoul is now, and spent a great deal of time, as he has done, in collecting information. There was, however, a difference between us, and, as I have grown old in my conviction, the difference remains. Dr. R. approaches the question from a professional standpoint. I began with that, but, happily as I think, passed into looking at the question as one that concerns the patient most of all, and that therefore the patient ought to be considered first. The out-patient system was, and is, to me in need of reform, primarily because of its inefficiency; and this inefficiency, arising from overcrowding, is to be met in the first instance, not by closing the doors, by wage limit or otherwise, but by devising, or at least seeking to devise, some more efficient medical aid outside. This has been done since then to a great extent in one department of medical service, and with the result that the pauper class do not come as they used to do. Let the same course be followed for those in the next higher grade, and so on; yes, and so on; until not only Sir Andrew Clark's "clerk with twenty-eight shillings a week, having a sick wife and six children," is properly provided for, but many another to whom a doctor's bill is a fearful reality, and that by a system of co-operation, on the principle of providence. To this the hospital system would be supplementary. And then, but not till then, if necessary, the out-patient department might be closed.

I venture to submit these remarks not to those who write in the spirit of "Critic," but to those who, like Dr. Rentoul, are bestowing labour upon a question which is worthy of all the thought and pains which they can bestow upon it. His suggestions, though falling far short of what is wanted, and necessarily

so, because he has not risen above the professional aspect of the question, are yet well worthy of careful consideration.—I am, etc.,
Derby, July 9th. WILLIAM OGLE.

SIR,—"Critic," who wisely withholds his name, has done a real, though perhaps unintentional, service to the cause of truth and of hospital reform in drawing attention, in your columns, to the speech of Sir Andrew Clark at the Mansion House on a subject on which the speaker's position as President of the Royal College of Physicians gives additional weight to his public utterances, and renders them, at the same time, fair objects of that criticism which your correspondent appears to have directed only against Dr. Rentoul.

It is, I believe, due to such speeches, and to the action of such high-minded and high-placed men as Sir Andrew Clark that we have not, long ago, had a reform of the great hospital out-patient abuse in London, which has been admitted to exist by every committee or other organisation, whether wholly or partially composed of medical men, that has examined into the subject for the last twenty years, from the time of Sir William Fergusson's Committee of Hospital Physicians and Surgeons in 1870-71 down to the Medical Attendance Committee, which is still in existence, and of which Sir Andrew Clark is, or was, one of the members.

In this Mansion House speech Sir Andrew Clark states that he will only say three things about the out-patient department—"First, that it would have been simply impossible for him to have practised his profession with anything like a pretension to efficiency unless he had had experience in out-patient work at the hospital." The second and third points have apparently got lost in the report of the speech with which we are favoured, for this is absolutely all that the leading advocate of out-patient departments, "as they are," has, according to "Critic," to say in their favour. But, if he has only one thing to say for them, Sir Andrew Clark, as President of the Royal College of Physicians, has plenty to say against those of his humbler brethren who are endeavouring—honestly, as he admits, though mistakenly of course in his view—to reform the out-patient departments.

They are crotchetmongers, very odd, but very true. They have an unfortunate faculty of seeing only what is wrong. They get angry because people will not listen to them, and assail the hospital in every direction. They often rob the hospital of half its out-patient income (whatever that may be), and that upon the foundation of a mere mistake (in other words, by false representations). They are "narrow-minded but good men," who, if they have their way, will inflict "a cruel, irreparable wound upon practical medicine in this country."

I leave it to Dr. Rentoul and Mr. Nixon to settle with Sir Andrew Clark the question whether 50 per cent. is the correct "abuse rate" at the hospital which he has so long adorned; but, in the name of those general practitioners who have for years been earnestly working at this question in all parts of London, I do most strongly protest against this abuse-the-opposite-attorney style of speech being introduced into the out-patient controversy.—I am, etc.,
July 6th. H. NELSON HARDY.

SIR,—Medical men who do not believe in the existence of gross abuse of the hospital out-patient departments are now so rare that it seems almost a pity to hasten the complete extinction of a class which so clearly exhibits the interesting phenomenon of mind-blindness.

Dr. Rentoul has proved the existence of gross abuse by carefully collected statistics, and his results are in accordance with the universal experience of general practitioners in the large towns. "Critic" has only to go with a general practitioner on his rounds and ask his patients whether they have ever made use of the hospitals, and he will obtain abundant evidence of the abuse complained of. I will simply mention one example. A lady, whose husband has an income a good deal over £1,000 a year, told me that, wishing a child of hers, which was suffering from eczema, to see a particular physician who had cured a similar case at hospital, she sent a servant with the child to the hospital. This was done several times, and after the child recovered the mother made a donation to the hospital. I mention this case chiefly to show the hospital doctors that they sometimes suffer as well as ourselves.

"Critic" gives a quotation from a speech of Sir Andrew Clark in which he strives to minimise the abuse of the hospital out-patient departments. The chief value of Sir Andrew Clark's remarks consists in this, that they show how utterly unacquainted the leaders of our profession are with the feelings and difficulties of the mass of their brethren. Sir Andrew Clark speaks with a tender reproachfulness of the crochetmongers, very odd, but very true, who charge the hospitals with abuse and corruption. Does he consider all who have signed the petition drawn up by the Charity Organisation Society crochetmongers? Verily we are a profession of crochetmongers. Sir Andrew Clark says that, without the experience of the out-patient department, he could not have practised with that efficiency which has made him honoured by us all. But was the experience gained from patients with incomes over £1 a week necessary to his success? Besides the efficiency of the whole bulk of the profession cannot be sacrificed to the supposed interests of a select few.

I venture to say that the out-patient departments, as at present conducted, are inflicting a cruel irreparable wound on practical medicine in this country. We do not wish to do away with the out-patient departments. We wish to restrict them to the very poor, who are, unfortunately, more than the hospitals can properly attend to.

Sir Andrew Clark mentions a clerk earning 28s. a week as an instance of hardship which a wage-limit would involve. It is, in fact, an excellent instance of the harm wrought by the present system. Such a man, deluded by the idea that he will be better treated by an eminent hospital physician, loses time, money, and perhaps the good will of his employers by going to hospital at an inconvenient hour. The physician there knows nothing of him or his circumstances, and, consequently, his treatment is little more than a mere prescription of drugs. On the other hand, that clerk going to a general practitioner in his neighbourhood, after the hours of his work, would have found a man able and willing to interest himself in his physical and general welfare. Even if he had to pay a fee of 1s. or 2s., his attendance at hospital costs him more directly or indirectly. Sir Andrew Clark thinks that he is doing a kindness by treating such a man gratuitously at hospital. I think that he does him an injury.

Hospital physicians and surgeons must recognise the fact that, although they have attained high distinction in their profession, still there are, in the humbler ranks of their brethren, men of ability quite equal to their own. Patients need not go to hospital to obtain efficient treatment. The treatment of patients in the hospital out-patient departments is, in my opinion, not equal to that which they obtain at the hands of respectable general practitioners. Hospital doctors think much too well of themselves.

Sir Andrew Clark seems to suggest that we are trying to wreck the hospitals. It is the bad management of the hospitals which is driving them on the rocks. Sir Andrew Clark says that the perfection of a work is begotten of its imperfections. If so, surely the hospitals will speedily attain perfection.—I am, etc.,
Highgate, N. HUGH WOODS.

SIR,—With your permission I should like to address a few words to your correspondent, "Critic," or, rather, I should say to Sir Andrew Clark, since "Critic" does not give us the benefit of any of his own arguments, but, in order to prove his point, depends solely on a lengthy quotation from a speech lately made by Sir Andrew Clark, who maintains that there is no appreciable abuse of our out-patient departments, and who considers himself justified in applying the term "narrow-minded" to all those who differ from him on this point. Sir Andrew bases his argument on two points, first an individual case (which, of course, in itself proves nothing); and, secondly, what he has been "told" with regard to Manchester, where he says the proportion of patients who ought not to have attended was only 8 per cent.; but this proportion is very different from what has been found to be the case in most other hospitals, as shown in the letter you publish this week from Dr. Rentoul. I can speak from experience of St. Bartholomew's Hospital, Chatham, where the out-patients amount to about 15,000 in the year, and of this number I am able to say from my own observation that a very considerable proportion consists of tradespeople and others who cannot possibly be considered as belonging to the ranks of "the poor," and I have no reason to believe that matters are different here from other hospitals.

Now will your correspondent, "Critic," or will Sir Andrew Clark maintain that this is not an abuse of the hospital system? Why do generous persons give their money freely for the support of hospitals? Is it not in order to relieve the sufferings of those who are so poor that they cannot obtain relief elsewhere? What

does the preacher say when he appeals to his congregation on Hospital Sunday? He asks for contributions to enable the hospitals to relieve the suffering of the necessitous poor. Now, if it is for the benefit of the poor that people put money into the hands of hospital authorities, it is clearly a breach of faith on the part of those authorities if they do not take steps to ensure the whole of the money being spent on the class for whom it was intended. If such steps are not taken, then the money is obtained under false pretences.

It has been with feelings akin to indignation that I have so often seen really poor people—those who could ill afford the time—sit for hours in our hospitals awaiting their turn to be seen, while the attending physicians and surgeons were occupied in seeing patients many of whom could show no claim whatever for receiving charity. By all means let our hospital doors be thrown open without let or hindrance to those who are really poor, but let some steps be taken to prevent money being spent on a class of people for whom it was not intended by the donors.—I am, etc.,

Ramsgate. R. T. BOWDEN, M.D.

THE PROPOSED PUBLIC MEDICAL SERVICE.

SIR,—In answer to Dr. H. Woods in the JOURNAL of June 29th, p. 1496, I would say that I do not see why some well-to-do patients should even receive *first* treatment at the out-patient department. This first treatment refers, I suppose, to accident cases. I should gladly agree to Dr. Woods's suggestion, therefore, that first treatment be refused to those patients who are above the 25s. wage limit, and who do not require urgent treatment. I dare say the principle of first treatment was given so that the mouths of a screaming minority of subscribers might be closed. At one time we were being always referred to the fact that the Good Samaritan did not take time to refer to the social circumstances of the stranger who fell among thieves. It will be seen that their case for illustration was not perfect. However, our proposed rule that *all* urgent cases must receive immediate treatment meets the objection. I could not agree with Dr. Woods's suggestion to include the visiting of patients at their homes, or to fix a midwifery fee. My wish is to insist on the abuse of the out-patient department being remedied, and for us medical practitioners to be ready with our scheme by which those patients who shall be turned away from the hospitals may receive immediate treatment. If we can gain this great and chief point, then all the others can readily be attained. Out-patient hospital abuse being remedied, we shall be able to run off bogus clubs, sixpenny doctors, prescribing and visiting chemists, and at the same time give the wage-earner "fair treatment for a fair fee." I fear, also, the chemists would be unwilling to dispense a prescription for home patients for fourpence. My own idea was that the patient who was treated well by the doctor of the Public Medical Service would send for this doctor when ill at home, and that the doctor could then charge his usual fee, and the same with the confinement. I think it is always well to have "feeders" to such a proposal. Supposing even we agreed to arranging "home" visits, there would be a great difficulty in obtaining *immediate* payments. However, one good point might be insisted on; we could pass a rule requiring that no doctor of the Medical Service shall pay a visit at the home of the patient for *less than* a certain sum. This would fix the *minimum* fee.

As regards making "an equal division of profits," I fear this would never fit in, as the doctor who was lazy and did no genuine work would receive just the same amount of salary as the hard-working and industrious man.

As regards admission of the non-medical public on the Branch Committees, I think it would be best if medical practitioners, dentists, and chemists really tried to manage—for once—their own affairs. I cannot see why we want business men. Besides, chemists and dentists have not arrived at the low level of unbusiness-like condition which we doctors have. These will therefore help to keep us right. Moreover, I would as soon think of introducing them, as of suggesting that because a man purchases half a pound of tea, he should be admitted into the management of the tea firm. I think we doctors are already too much "bossed" by hospital, tontine, and provident dispensary committees. Let us have a little that we may call our own. It was an oversight of mine to say that the chemist was to retain the prescription, unless the doctor wrote it in any other than the Service-book.

In the JOURNAL of July 6th, p. 48, "Critic" asks if there is an abuse of our hospitals. I hope my letter in the same issue will fully answer. I have written to Sir A. Clark, and called his attention to the most misleading statement he has made. Sir A. Clark says that "the abuse rate" in Manchester was about 8 per cent. It was in reality 43.32 per cent. I trust Sir Andrew Clark will at once correct his statement, as there is no difficulty in obtaining the official report. Even at Sir Andrew Clark's hospital, the London, before the inspection of patients began, the yearly number of out-patients was 28,236. This was reduced by 6,970 in twelve months! And it is to be remembered many are frightened away by knowing that their social circumstances will be inquired into.

If "Critic" will ask any hospital committee to let a public inquiry be made into the social circumstances of their out-patients he will, I think, be met with a blank refusal. On this refusal hangs the thread to the abuse question. If they had nothing to hide they would court, nay challenge, an open inquiry.

Already four Branches of the Association have called special meetings to discuss the proposal. Let other Branches follow. The public are on our side, and the hospital question is now a coming one. We only require co-operation, fair discussion, and no misrepresentation of facts.—I am, etc.

Liverpool. ROBERT R. RENTOUL, M.D.

DR. JOHN DAVY writes: Dr. Rentoul's scheme for establishing a Public Medical Service for patients whose average earnings are between 25s. and 45s. a week is one which deserves the careful perusal and consideration of the profession who are interested in the financial welfare of the general practitioner. It seems to me, however, that his plan, if adopted, will simply develop into a general and superior cheap dispensary, unless its safeguards against imposition are rigidly enforced, and so will add another to the already numerous inducements to prostitute medical charities. And what guarantees are or can be given? If the hospital authorities can be induced to adopt and enforce a wage limit for their clients, Dr. Rentoul's scheme would no doubt meet the wants of those who were so rejected; but, unfortunately for the success of his scheme, the public, the committee, the medical staff are all quite satisfied with things as they are, and, while human nature is as it is, and so long as medical charities can get the chief article they have to dispose of—medical services—for nothing, it is not likely they will decline the agreeable *rôle* of distributors of other services, or make too searching inquiries into the circumstances of those who, whatever else they are, are ill. How to secure the co-operation of hospitals is the problem Dr. Rentoul has to solve. Can it be done?

OBITUARY.

WILLIAM LAX, M.R.C.S.Eng., L.S.A., Ormskirk.

A LINK with the past has been severed by the removal by death of Mr. W. Lax, of Ormskirk. Born near Harrogate in the early years of the century, he studied medicine at the Middlesex Hospital and the Liverpool Royal Infirmary, and obtained the membership of the Royal College of Surgeons of England and the licence of the Apothecaries' Hall in the year 1827. In the same year he came to Ormskirk, and was appointed resident surgeon to the dispensary, an institution with which he continued to be connected up to the time of his death, being successively visiting surgeon and consulting surgeon.

During half a century he carried on one of the largest practices in the country. He worked hard because he loved his profession, and to the last he strove, with no mean success, to keep abreast of modern methods and improvements, until his failing eyesight prevented his reading with comfort.

He carefully abstained from meddling with public matters, holding firmly to the principle that a medical man should be free to devote all his time to his profession; and though on more than one occasion offered the position of Justice of the Peace, he preferred to leave this, as other public duties, to others.

In practice he was highly successful, both as regards his own position and the well-being of his patients. By these he was held in great honour and respect, and many of them were his personal friends. His manner with patients was just what a doctor's ought to be, firm but kind, and he had the happy faculty of knowing just how much to tell the patient and his friends without, on the one hand, seeming to conceal anything, or, on the other, causing unnecessary alarm. He continued to see patients till within a week of his death.

JAMES BEDDARD, M.B., F.R.C.S., L.S.A.

WE regret to announce the death of Dr. Beddard, who has for some years been one of the leading practitioners in Nottingham, which took place at his residence in Park Row on June 21st, after a long and painful illness. The deceased gentleman, whose loss

will be much lamented, was 49 years of age, and leaves a widow, with two sons and one daughter. He was educated at Guy's Hospital, was an M.B. of London University, a University scholar in surgery, gained first-class honours in medicine, was a Fellow of the Royal College of Surgeons by examination, and became a Member of the College of Surgeons in 1861. He was one of the surgeons to the General Hospital, was consulting surgeon to the Children's Hospital, and took an active interest also in other medical charities and public institutions. At one time he acted as President of the now defunct Literary and Philosophical Society, before which he read several able papers. For this task he was well fitted, being a man of thought and culture. The deceased had a large and lucrative practice in Nottingham and the outlying districts, and inspired both confidence and attachment on the part of his many patients.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

BIRMINGHAM AND MIDLAND BRANCH OF THE SOCIETY OF MEDICAL OFFICERS OF HEALTH.

A MEETING of the above society was held at the Council House, Birmingham, on July 4th. There were present Mr. Hollinshead (Selly Oak), President, Dr. A. Hill (Birmingham), Dr. A. Underhill (Tipton), Mr. H. May (Aston), Dr. Page (Redditch), Honorary Secretary.

Dr. Underhill read a paper on "The Ptomaines, Leucomaines and Extractives, their Position as Possible Originators of Disease."

On the motion of Mr. May, seconded by Dr. A Hill, it was unanimously resolved: "That this branch of the Society of Medical Officers of Health approves of the principle of the Notifications of Infectious Diseases Bill of Mr. Ritchie, now under notice of the House of Commons."

CARDIFF RURAL SANITARY AUTHORITY v. MANURE WORKS, ETC.

THE above case was referred to in the JOURNAL on July 8th, p. 1328, under heading, "The Law as to Offensive Trades." On appeal the counsel for the sanitary authority thought they had only to prove identity of the processes carried on at these works with those mentioned in Clause 112, Public Health Act, 1875, and, therefore, only called two expert witnesses, leaving uncalled their medical officer of health (Dr. Prichard), their inspector, and several witnesses who complained of having suffered severe indisposition from the smell arising from the works. In consequence the sanitary authority failed to sustain the conviction obtained before the magistrates with regard to bone boiling by steam, but the conviction of the meat boiling process was upheld, the case being proved by the admissions of the defendant company's witnesses.

MILK TYPHOID IN LEEDS.

A SERIOUS outbreak of typhoid fever is reported to have occurred in Leeds, the cases being mainly at Headingley and Woodhouse, one of the best residential parts of the borough. Upwards of twenty cases are reported in the hospital and several deaths are stated to have occurred. Dr. Goldie, medical officer of health, has further stated that he has ascertained the starting-point of the outbreak, and that he is led to the conclusion that the milk supply, if not the sole cause of the outbreak, certainly has had the major share in the production of a number of cases in Headingley and Woodhouse. This, in his opinion, is a typical case of the misfortune of not having Imperial compulsory notification of all infectious diseases, and a much larger, wider, and keener inspection of cowsheds and dairies beyond the district of an officer's area. In towns such as Leeds, large supplies of milk are brought from outside, and, in his opinion, sufficient sanitary inspection is wanting.

MEDICAL NEWS.

IN the village of Cotta, near Dresden, and its neighbourhood, some 120 persons have been made seriously ill by eating the flesh of a diseased cow. Several deaths have occurred, and a medico-legal inquiry will be held.

WE are informed that Dr. Prosser James has resigned the lectureship of materia medica and therapeutics in the London Hospital Medical College.

THE new (seventh) edition of the Austrian *Pharmacopœia*, the publication of which has been long delayed, is expected to appear this month.

ST. MARY'S HOSPITAL MEDICAL SCHOOL.—The annual distribution of prizes will take place on Thursday, July 18th, at 4 P.M., when Sir J. Crichton Browne, M.D., F.R.S., Lord Chancellor's Visitor, will preside.

THE epidemic of small-pox which has been raging at Ostend since the latter part of 1888 has now ceased. It is estimated that in the course of seven months and a half the number of deaths from small-pox amounted to 400 in a population of scarcely 25,000 souls. In March there were from 36 to 37 deaths a week. No death has occurred since May 11th.

AMBULANCE CLASSES FOR RAILWAY MEN.—Certificates for proficiency in first aid work have been awarded by the St. John Ambulance Association to thirty-one *employés* of the Mersey Railway Company. This company maintains stretchers and other appliances at hand, in case of accident, a practice that might be adopted with advantage on other railways. On the occasion of the distribution of the certificates, Dr. George Walker and Dr. Francis Johnston, of Birkenhead, who had instructed the class, were the recipients of handsome presentations.

A FAMILY at Chatham have narrowly escaped death from poisoning by eating tinned rabbit. They were seized with violent pain, vomiting, and purging; they became unconscious, and their lives were almost despaired of. Under treatment, however, they are now progressing favourably towards recovery, though in a very weak condition.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen passed the Second Examination of the Board in Anatomy and Physiology, at a meeting of the Examiners on July 4th.

A. L. Breen, W. Bubb, J. H. Rivers, and W. Selby, students of St. Bartholomew's Hospital; J. B. Cox, of St. Bartholomew's and Mr. Cooke's School of Anatomy and Physiology; Frederic W. Edwards and F. O. Grant, of St. Thomas's Hospital; T. A. Goard, E. F. Mortimer, and R. McIver Paton, of Charing Cross Hospital; A. B. Duprey, of St. Mary's Hospital; R. H. Way, of University College; J. P. Lightfoot and G. Ramsay, of King's College.

Passed in Anatomy only.

A. Fadelle, P. V. Hughes, and H. B. Wilmot, of King's College; S. H. Birt, of London Hospital; T. H. E. Meggs, of Westminster Hospital; H. J. L. Wales and T. W. Eastment, of Guy's Hospital; P. W. Keytel, of St. Thomas's and Mr. Cooke's School of Anatomy and Physiology; H. A. Kynsey, of University College and Mr. Cooke's School of Anatomy and Physiology.

Passed in Physiology only.

C. H. Chapman and J. H. Crawshaw, of University College; W. T. B. Donnelly, of Guy's Hospital; L. W. Bathurst and C. W. Grant, of St. Bartholomew's Hospital; R. D. Waghorn, of Westminster Hospital.

Passed in Anatomy and Physiology on July 5th.

W. A. Haslam and R. L. Wason, of Guy's Hospital; W. R. Smith, H. Macnaughton Jones and J. R. Russell, of King's College; H. E. Cooper, of St. Bartholomew's Hospital; F. S. Noble, of University College; C. C. Jeffery, of Charing Cross Hospital.

Passed in Anatomy only.

H. E. Worthington, H. E. Sharman, E. P. H. Lulham, and M. Jenkins, of Guy's Hospital; S. H. Perry, of King's College; J. Morrison, W. R. Knightley, J. H. Griffiths, and H. T. Parker, of St. Bartholomew's Hospital; T. E. Smurthwaite and H. R. Power, of St. Mary's Hospital; H. D. Bishop, C. A. Wessels, J. S. Matthews, and W. Watkins, of London Hospital; A. T. Wysard, of St. Thomas's Hospital; G. H. Procter, of University College.

Passed in Physiology only.

W. S. Langworthy and F. W. Gange, of University College; I. E. Owens and S. R. Nicholls, of London Hospital; E. J. T. Jones, of St. Thomas's and Mr. Cooke's School of Anatomy and Physiology; R. F. Chance, C. H. Rock, R. Fawssett, and H. H. L. Patch, of St. Thomas's Hospital; E. S. Hemsted, of St. Mary's Hospital; F. Lewarne, R. J. Hillier, J. B. Collins, and H. E. Simpson, of St. Bartholomew's Hospital; G. H. Longton, of King's College; G. J. Rutherford, of Middlesex Hospital; F. B. Rockstro, of Charing Cross Hospital.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having passed the necessary examinations and having obtained a medical qualification, were, at the quarterly meeting of the Council on July 11th, admitted Members of the College.

Boning, A. W., L.S.A., c.o. Dr. Bishop, Elham, Canterbury.
Le Riche, P. J., L.S.A., University College.
Stephens, D. R. P., M.B.Cantab, St. Bartholomew's Hospital.

MEDICAL VACANCIES.

The following Vacancies are announced:

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—Assistant Physician. Applications by August 6th to the Secretary, 24, Finsbury Circus, E.C.

CLAYTON HOSPITAL AND GENERAL DISPENSARY, Wakefield.—House-Surgeon. Salary, £120 per annum, with residence, etc. Applications by July 18th to the Honorary Secretary.

CUMBERLAND INFIRMARY, Carlisle.—House-Surgeon. Salary, £70 per annum, with board, lodging, and washing. Applications by July 20th to the Secretary.

CUMBERLAND INFIRMARY, Carlisle.—Assistant House-Surgeon. Salary, £40 per annum, with board, lodging, and washing. Applications by July 20th to the Secretary.

GENERAL HOSPITAL, Birmingham.—Assistant House-Surgeon. Board, lodging, and washing. Applications by July 27th to House-Governor.

GLENTIES UNION, Carrick Dispensary.—Medical Officer. Salary, £115 per annum, and fees. Applications to Mr. Arthur Brooke, Honorary Secretary, White House, Killybegs, Co. Donegal. Election on July 19th.

HOSPITAL FOR CONSUMPTION, Brompton.—House-Physicians. Applications by July 13th to the Secretary.

HULL ROYAL INFIRMARY.—Junior Assistant House-Surgeon. Salary, £50 per annum, with board and lodging. Applications by July 15th to the Chairman of the House Committee.

KING'S COLLEGE HOSPITAL.—Professor of Dental Surgery and Dental Surgeon. Applications to the Secretary.

NORFOLK AND NORWICH HOSPITAL. — Assistant to House-Surgeon. Board and lodging. Applications by July 16th to the House-Surgeon.

NORTH STAFFORDSHIRE INFIRMARY, Stoke-upon-Trent. — Assistant House-Surgeon. Board, apartments, and washing provided. Applications by July 15th to the Secretary.

NORTHUMBERLAND COUNTY ASYLUM.—Clinical Assistant. Board and residence. Applications to Dr. McDowall, Northumberland County Asylum, Morpeth.

QUEEN'S HOSPITAL, Birmingham.—Honorary Physician. Applications by July 27th to the Secretary.

QUEEN'S HOSPITAL, Birmingham.—Honorary Obstetric Officer. Applications by July 27th to the Secretary.

ROYAL ALBERT HOSPITAL, Devonport.—Honorary Surgeon. Applications by July 19th to the Chairman of the Selection Committee.

ROYAL BERKS HOSPITAL.—Assistant House-Surgeon. Salary, £40 per annum, with board and lodging. Applications by July 23rd to the Secretary.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road.—House-Physician. Appointment for six months. Salary at the rate of £50 per annum, with board and lodging. Applications by July 9th to the Secretary.

RUBERY HILL ASYLUM, Bromsgrove, Worcestershire.—Clinical Assistant. Board and residence. Applications to Dr. Lyle.

ST. GEORGE'S HOSPITAL.—Assistant-Physician. Applications by July 13th to the Secretary.

ST. MARK'S HOSPITAL FOR FISTULA, ETC., City Road, E.C.—House-Surgeon. Salary, £50 per annum, with board and residence. Applications by July 18th, to the Secretary.

VICTORIA UNIVERSITY, Yorkshire College, Leeds.—Demonstrator of Physiology. Salary, £120. Applications by July 13th to the Registrar of the College.

WARWICK COUNTY LUNATIC ASYLUM.—Clinical Assistant. Board and residence. Applications by July 20th to the Medical Superintendent.

WHITEHAVEN AND WEST CUMBERLAND INFIRMARY.—House-Surgeon. Salary, £120 per annum, and £30 for dispensing, with apartments and attendance. Applications by July 27th to the Secretary.

WOLVERHAMPTON EYE INFIRMARY.—Resident Assistant. Board and washing. Applications by August 12th to the Chairman.

MEDICAL APPOINTMENTS.

ADAMS, W. C., M.B.Lond., M.R.C.S.Eng., appointed Additional Medical Officer to the Haverstock Hill Dispensary.

BARFORD, A. M., M.R.C.S.Eng., L.R.C.P.Lond., late House-Physician, appointed Senior House-Surgeon to the Liverpool Northern Hospital, *vice* V. Permewan, M.D.Lond., resigned.

BRAINE, C. Carter, M.R.C.S., L.R.C.P., appointed Assistant Anæsthetist to the Charing Cross Hospital.

CAMPBELL, A. K., F.R.C.S., appointed Clinical Assistant to the Royal Westminster Ophthalmic Hospital.

CLOWES, H. F., appointed Clinical Assistant to the Royal Westminster Ophthalmic Hospital.

CORNER, H., M.R.C.S., L.R.C.P., appointed Resident Clinical Assistant to the St. Luke's Hospital.

DE RENZI, H. C., appointed Clinical Assistant to the Royal Westminster Ophthalmic Hospital.

DODD, H. W., F.R.C.S., appointed Clinical Assistant to the Royal Westminster Ophthalmic Hospital.

FOLKER, H. H., appointed Clinical Assistant to the Royal Westminster Ophthalmic Hospital.

FOWLER, P., M.R.C.S., L.R.C.P., appointed House-Surgeon to the Westminster Hospital, *vice* H. S. Hughes, M.R.C.S., L.R.C.P., resigned.

HAGUE, J. L., B.A.Oxon., L.R.C.P.Lond., appointed Senior House-Physician to Westminster Hospital.

HAMILL, Samuel, B.A., M.D., M.Ch.R.Univ.Irel., appointed Medical Officer and Public Vaccinator of the Burnham District, Docking Union, Norfolk.

LLOYD, Rickard William, M.R.C.S.Eng., appointed Anæsthetist to the Dental School of Guy's Hospital.

MORGAN, G. B., jun., M.B., B.Ch., appointed House-Surgeon to the Sunderland Infirmary, *vice* C. F. Seville, M.R.C.S., L.S.A., resigned.

MURPHY, A., L.R.C.S.I., L.K.Q.C.P.I., appointed Medical Officer to the Balrothery Union (Holmpatrick Dispensary), *vice* W. Symes, M.B.Dubl., F.R.C.S.I.

NECKLIN, S., appointed Assistant House-Surgeon to the General Hospital, Birmingham, *vice* G. Freer, L.R.C.P.Lond., M.R.C.S.Eng., resigned.

PARKES, Louis C., M.D., D.P.H.Lond., elected Assistant Professor of Hygiene at University College, London.

POWELL, W., M.R.C.S., L.R.C.P.Lond., appointed Junior House-Physician to Westminster Hospital.

RANDALL, E. B., M.B., M.R.C.S., L.R.C.P., appointed Junior House-Surgeon to the North-Eastern Hospital for Children, Hackney Road, *vice* E. L. de Chazal, M.B., M.R.C.S., L.R.C.P., resigned.

REILLY, W. R. O., appointed Clinical Assistant to the Royal Westminster Ophthalmic Hospital.

ROUGHTON, E. W., F.R.C.S., appointed Demonstrator of Anatomy to St. Mary's Hospital Medical School.

RUSSELL, James, M.A., M.B., C.M.Edin., appointed Medical Officer to the Keighley Union, *vice* F. Wilson, L.R.C.P., L.R.C.S., resigned.

SHEPPARD, Charles Edward, M.D.Lond., F.R.C.S.Eng., appointed Anæsthetist to the Dental School of Guy's Hospital.

SLOMAN, F., M.R.C.S.Eng., L.S.A.Lond., appointed Resident Assistant Medical Officer to St. Leonard, Shoreditch, *vice* F. S. Toogood, M.B.Lond., M.R.C.S., resigned.

STEPHENSON, S. H. A., M.B., M.S., appointed Clinical Assistant to the Royal Westminster Ophthalmic Hospital.

TAYLOR, F. R. P., M.R.C.S., L.R.C.P.Lond., appointed Junior House-Surgeon to Westminster Hospital.

TRESIDDER, W. E., M.B., B.S.Lond., M.R.C.S., L.R.C.P., appointed Senior Resident Medical Officer to the General Hospital, Nottingham, *vice* E. C. Kingdon, M.B., C.M.Edin., resigned.

WALLER, A. W., appointed Assistant House-Surgeon to the General Hospital, Birmingham, *vice* W. Nason, M.B.Edin., resigned.

WELLS, G. Lee, M.B., B.S.Lond., F.R.C.S., appointed Honorary Demonstrator of Anatomy to the Yorkshire College, Leeds.

WOODBURN, W. H., L.R.C.P.Edin., appointed Clinical Assistant to the Royal Westminster Ophthalmic Hospital.

DIARY FOR NEXT WEEK.

WEDNESDAY.

THE COLLEGE OF STATE MEDICINE, 4 P.M.—Professor C. Meymott Tidy: On a Remarkable Poisoning Case: a Review.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the announcement. The first post on Thursday mornings is the latest by which advertisements can be received.

BIRTH.

MACGREGOR.—At Denholm, Hawick, on June 29th, the wife of Donald MacGregor, M.A., M.D., of a son, who survived only half an hour.

MARRIAGE.

COWEN—DAWSON.—On July 3rd, at St. Jude's, Southsea, William Amherst Cowen, Army Medical Staff, to Annie Kemp, youngest daughter of Major Dawson, J.P. (late Suffolk Regiment), of "Nohaville," West Meath, and Suffolk Lodge, Southsea.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the office of the JOURNAL, and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

ANSWERS.

DR. P. S. ABRAHAM.—The absurdity of the charge brought forward being made plain, the matter is, so far as we are concerned, at an end.

W. P. F.—We do not feel justified in selecting any particular society for recommendation.

A CORRESPONDENT writes to inform us that Dr. Collins, who objects to be described as an antivaccinator, appears on the list of the vice-presidents of the Antivaccination Society.

THE DIPLOMA IN STATE MEDICINE.

M. O. H. writes: I am a medical officer of health, and would like to take a diploma in State medicine. I have made inquiries at my own university, Glasgow, and have been informed that a three months' course of lectures was a *sine quâ non*. This, of course, is out of the question. Can you inform me (1) where I can get a qualification without having to attend lectures? (2) what the examination consists of, and what textbooks I should read?

*** The quantitative analysis of water and milk can, for any useful purpose, be acquired only in a well-furnished laboratory. But in examinations for diplomas at present written questions only are given on these, the practical work being restricted to qualitative tests and microscopical detection of gross adulteration of food and pollution of air and water, which one who is fairly expert in manipulation may with great advantage practise at home with a Marsh's apparatus, a Bunsen or spirit lamp, test tubes, etc., and a clinical microscope.

The diploma best known in England is, we believe, that of Cambridge (examination in October); but the London College of Physicians holds an examination in December. Consult for subjects the Students' Number of the JOURNAL, and apply to the Registrar of the College or to Dr. Anningson, Cambridge. There is no need to read all the books recommended by the Cambridge regulations, but we would advise Parkes's, Wilson's, and Willoughby's *Hygienes;* Bell's *Food Analysis;* Wanklyn's *Water, Milk, and Bread Analyses;* Robinson's *Sewage Disposal;* Hime's *Public Health;* Galton's *Healthy Dwellings;* Hellyer's *Lectures on the Science and Art of Sanitary Plumbing;* and the Acts indicated in Willoughby's and Hime's books. The former contains all the physics and the mathematical work required. Newsholme's *Vital Statistics* would be useful for reference. Neither of the bodies mentioned requires compulsory lectures.

MEDICAL PRACTICE IN INDIA.

YOUNG MEMBER asks for information regarding appointments in India, either under Government or as surgeon to railway, tea, or other companies. What are the chances of private practice?

*** "Young Member" will do a very foolish thing if he goes to India as an "adventurer." There is not the smallest chance of his obtaining employment under Government; to go there on the mere chance of employment as surgeon to railway or tea companies would be a rash step. Private practice in the great centres of wealth and business in India is in the hands of Government servants of reputation, and among natives is fast passing into those of native practitioners trained in the medical schools of India.

COUNTY MEDICAL OFFICERS OF HEALTH.

J. M. asks where he can get information respecting the new appointment of medical officer of health under the County Councils.

*** There is no separate work published on the duties of the medical officer of health of a county, if this is the purport of the question. Our correspondent ought to study Sections 17 and 18 of the Local Government Act, 1888.

NOTES, LETTERS, ETC.

MR. EDMUND OWEN writes expressing the view that, on a question on which there is a division of opinion, the JOURNAL should express none. That is his particular form of *muzzle*, which is as capable of application to himself as to anyone else. When he has learnt, however, to express himself with due civility and proper observance of the forms of public discussion, we shall be happy to endeavour to obtain a hearing for him in our columns.

COMMUNICATIONS, LETTERS, etc., have been received from:

Mr. E. Burchell, London; Mr. A. Miller, London; Dr. C. W. Hayward, Liverpool; Mr. J. Y. MacAlister, London; Mr. N. Hanhart, London; Mr. J. Thomas, Cardiff; Dr. A. Henry, London; Mr. S. Murphy, London; Dr. W. Sykes, Mexborough; Mr. J. S. Wilkinson, Wellington; Mr. C. H. Byers, London; Dr. R. P. Smith, London; Mr. W. R. Williams, London; Mr. A. M. Barford, Liverpool; Mr. J. W. Taylor, Barmouth; Mr. F. W. Burton, Cambridge; Mr. W. Powell, London; Mr. W. W. Kelly, London; Mr. H. A. Mais, Brighton; Mr. H. C. Rose, London; W. T. Gardner, M.B., London; Professor J. Attfield, London; Dr. J. Christie, Hillhead; Sir William Stokes, Dublin; Mr. S. W. North, York; The Secretary of the Balloon Society of Great Britain, London; Sir Spencer Wells, London; Mr. J. W. Measures, Todmorden; Dr. J. W. Moore, Dublin; Dr. Sheen, Cardiff; Mr. H. J. Nance, Norwich; Mr. H. McCarthy, Kilfinane; Dr. G. Harley, London; Mr. W. R. P. Jones, Wrexham; Dr. J. C. McVail, Kilmarnock; Surgeon-Major T. E. Hale, Nantwich; Dr. W. T. Hingston, London; Dr. Willoughby, London; Dr. R. Stockman, Edinburgh; Mr. C. A. Brigstoke, Haverfordwest; The Rev. F. Lawrence, York; Sir Henry Roscoe, London; Mr. R. J. Collie, Sunderland; Mr. A. Frost, London; Dr. S. Martin, London; Dr. Brett, Watford; Dr. A. F. Parker, Lismore, N.S.W.; Mr. A. C. Jackson, Brighton; Dr. R. Bowden, Ramsgate; Mr. F. A. Neal, Longhope; Mr. W. S. Kay, Sheffield; Mr. G. Hartridge, London; Sir Guyer Hunter, London; Mr. H. A. English, London; Dr. Dreschfeld, Manchester; The Board of Health, New South Wales; Dr. H. Woods, London; Dr. Page, Redditch; Mr. A. W. Mayo Robson, London; Our Egyptian Correspondent; Dr. R. Lee, London; Dr. T. Laffan, Cashel; Mr. H. Nelson Hardy, London; Verb. Sap.; Dr. Brodie, London; Dr. W. Pearce, London; Dr. J. Lewtas, Murdan, Punjab; W. M. Myers, M.B., Formosa; Dr. J. R. Kealy, Gosport; Mr. E. A. Doyle, Trinidad; Mr. L. E. Anderson, Barbadoes; Dr. A. E. Salter, Thursday Island; Dr. Lush, Weymouth; Dr. Norman Kerr, London; Mr. W. M. Harmer, Hawkhurst; Mr. G. Cartland, Windsor; Dr. G. H. Savage, London; The Medical Officer of the Local Government Board, London; Dr. F. N. Otis, New York; Mr. J. Abbey, London; Dr. J. Cameron, Innerleithen; Dr. T. G. Nasmyth, Cowdenbeath; Mr. H. Taylor, Cottishall; Dr. Farquharson, London; Dr. A. T. Brand, Driffield; Dr. G. J. Johnston, Cork; Mr. J. M. Bennett, Sheffield; Dr. G. W. Crowe, Worcester; Dr. Abercrombie, London; Mr. C. H. Welch, Sandhurst; Dr. Fairweather, London; Professor V. Horsley, London; Messrs. Thompson, Ritchie and Co., London; Mr. K. D. Dobbs, Nantyglo; Mr. Page, London; Mr. E. T. Clifford, London; Mr. G. E. Williamson, Newcastle-on-Tyne; Dr. Kelly, Taunton; Mr. E. Thompson, Omagh; Mr. E. Owen, London; Dr. L. Parkes, London; Dr. S. Phillips, London; Dr. P. S. Abraham, London; The St. Bede Chemical Company, Newcastle-on-Tyne; Dr. Rentoul, Liverpool; Dr. S. Coupland, London; Mr. J. Mitchell, Wellington; Our Liverpool Correspondent; Mr. T. Sharples, Preston; Messrs. Burroughs, Wellcome and Co., London; E. J. N.; Professor Charteris, Glasgow; Mr. J. Griffiths, Cambridge; Dr. C. Steele, Clifton; Dr. Elliston, Ipswich; Dr. G. Herschell, London; Dr. J. S. Holden, Sudbury; Mr. J. B. Smith, Talk-o'-th'-Hill; Mr. N. Porritt, Huddersfield; Dr. Davies, Tilbury; Dr. A. W. Whitley, H.M.S. *Colossus;* Mr. R. Walker, London; Brigade-Surgeon E. Boulton, Bury St. Edmunds; Messrs. Street and Co., London; Mr. E. T. Thompson, Brailes; Mr. A. C. Dixey, Great Malvern; Mr. H. O. Grenfell, Southend; Mr. F. Simms, London; Messrs. Woodhouse and Rawson, London; Dr. William Ogle, Derby; C. L. Scanlan, M.B., London; Dr. Myrtle, Harrogate; Dr. J. Johnston, Bolton; Dr. H. C. Fox, Strathpeffer Spa, N.B.; Mr. T. Kitchin, Whitehaven; Mr. R. D. Patterson, Caledon; Mr. C. M. Jessop, London; Dr. C. M. Chadwick, Leeds; Dr. J. H. Jackson, London; Mr. S. Murphy, London; Mr. C. C. Braine, London; Mr. E. Powell, Nottingham; Dr. E. C. Perry, London; Dr. A. E. Barrington, Guernsey; Mr. T. Sick, London; Mr. M. Style, Bromyard; Mr. A. W. Nankivell, Chatham; Dr. S. Hamill, Burnham; Dr. S. J. Taylor, Norwich; Dr. Gowers, London; The Lord Mayor of London; Dr. J. E. Burton, Liverpool; Dr. Woodhead, Edinburgh; Dr. J. Roche, Kingstown; Dahl's Agency, London; Mr. G. P. Field, London; Mr. B. L. Powne, Chard; Mr. E. M. Sympson, Lincoln; Mr. N. F. Davey, Abergavenny; Our Vienna Correspondent, etc.

BOOKS, ETC., RECEIVED.

Cyclopædia of the Diseases of Children, Medical and Surgical. Edited by John M. Keating, M.D. Vol. I. Illustrated. Philadelphia: J. B. Lippincott and Co. Edinburgh and London: Y. J. Pentland. 1889.

A Ramble Round France. By J. Chesney. London: Cassell and Co., Limited.

Royal Academy Pictures. London: Cassell and Co., Limited.

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NOTICE.—Advertisers are requested to observe that it is contrary to the Postal Regulations to receive at Post-Offices letter addressed to initials only.

PRESIDENTIAL ADDRESS
ON THE
GEOGRAPHICAL DISTRIBUTION OF DISEASE IN SOUTHERN INDIA.

Delivered at the Annual Meeting of the South Indian and Madras Branch of the British Medical Association.

By Surgeon-General GEORGE BIDIE, M.B., C.I.E.,

The Physical Geography of the Madras Presidency.—The Demography of the Presidency.— Incidence of Cholera.—Malarial Fevers.— Typhoid Fever.— Small-pox.—Phthisis.— Beri-beri.— Mycetoma, Fungous Disease, or Madura Foot.—The Prevalence of Leprosy understated by Statistics.—Elephantiasis.

The Madras Presidency, when viewed on the map, presents rather a broken appearance, owing to the patchwork of Native States. It forms a considerable portion of the Indian Peninsula, and is bounded on every side, except the north, by the sea. The length of its eastern seaboard is about 1,200 miles, and of its western coast 540. The interior of the Peninsula forms a table-land occupied to a large extent by the Hyderabad and Mysore dominions, and on the south-west coast we have the Native States of Cochin and Travancore. The climate differs considerably in the various parts of the Presidency, and is governed very much by the physical conformation of the country. Running along the western coast, at a distance of 30 or 40 miles from the sea, we have the Western Ghats with their abrupt forest-clad slopes facing the setting sun, and their eastern sides sloping gradually down into the great central plateau. The effect of these hills is to catch nearly the whole of the rain of the south-west monsoon, and the water thus precipitated, after rushing down the western sides of the mountains, finds its way back to the Indian Ocean. The Eastern Ghats begin in the extreme north of the Presidency, and run in a south-west direction, until lost in the Nilgiri range. They are much farther from the coast than the Western Ghats, attain a lower elevation, and have much less influence on the climate. The central table-land is elevated from 1,000 to 3,000 feet above the sea-level, and is the Alma Mater of the great rivers which flow eastwards fructifying the soil, carrying fleets of boats, and finally draining into the Bay of Bengal. The climate of the whole of the narrow strip of western coast is perennially moist, the rainfall being over 120 inches, and both its flora and its fauna, including man, differ somewhat from those of the east coast.[1] Although the air is moist, the country is undulating, and the soil of a porous character and well drained, so that we have not to contend with water-logged ground. On the eastern coast, on the other hand, there is a wide tract of low-lying land between the hills and the sea, and the deltas and alluvial deposits of various rivers, in all of which the water stagnates more or less below the surface, and is detained in tanks and slowly dispersed over the terraced flats of the rice fields. Here the average rainfall is about 41 inches. On the central table-land the rainfall is about 30 inches, and rather uncertain, although rain falls in both monsoons. Two periodical winds prevail in Southern India, and chiefly influence the rainfall, namely, the south-west and north-east monsoon. The former, which prevails on the west coast, begins in May and ends about October, and brings up the heavy rain. The north-east monsoon is the rain-wind of the east coast, and sets in about October, but does not bring up so many clouds as the monsoon of the other coast. Practically the food supplies of the people depend upon the rain clouds which accompany these winds, especially on the table-land and eastern coast. Any marked failure of seasonable rain means drought, famine, and pestilence, although by irrigation works, especially in the deltas of the three great rivers, a fair amount of crop is always ensured, while our canals, railways, and roads facilitate the dispersion of food to the remotest districts. Lying between 8 and 20 degrees of north latitude, the temperature of the Madras Presidency is always high. In the city of Madras the mean temperature is 82° F., at Vizagapatam 82.8°, Trichinopoly 82.1°, Bellary and Salem 80.4°, Cochin 79.6°, and Kurnool 81.2°.

[1] Those who wish to get further information on these points may consult the papers by me, which have been incorporated in the article, "Madras," vol. ix of Hunter's *Imperial Gazetteer of India*.

Amongst other agencies which apparently influence our climate are the sun-spot cycles. When the sun-spots are at a minimum there is a tendency to prolonged excessive air-pressure throughout India, and when at a maximum to an unusual descent of rain in the winter months and a great fall of snow in the Himalayas—phenomena which are usually followed by a light south-west monsoon. The population of the Presidency numbers over 34 millions, dispersed at the rate of 229 per square mile; but of course this is merely the average, as the density ranges from 91 in Kurnool to 583 in Tanjore, and density, it may be remarked, has, especially in towns, a very important bearing on public health. The total area of Madras is about 149,000 square miles, and, as the climate and natural features differ in various parts of it, so do diseases both as to nature and frequency. It is a fact patent to all that certain districts and places are perennially haunted by fever, cholera, or bowel complaints, while others year after year enjoy a comparative immunity. These peculiarities in the distribution and prevalence of diseases are not only interesting, but also instructive, as they point to determining causes, and it is for this reason that the attention of our up-country fellow-labourers is specially directed to the subject. And not only do particular diseases show a preference for certain localities, but particular organs are apt to suffer from the climate of some districts. Season has also a marked influence on disease, the cold weather being the most fatal to natives and the dry hot months the healthiest. The amount of moisture in the air and the daily range of temperature have a notable influence on disease, and so has the configuration of the land. There is a marked difference in the prevalence of some ailments in flat as compared with undulating country, and on mountains and plateaus as compared with low-lying plains. The nature of the soil is also a powerful determining cause of disease. Clay soils are cold and damp and their inhabitants liable to pulmonary diseases, and residence on the alluvial soils of large rivers involves the frequent risk of cholera and the heritage of bowel complaints. On the other hand, sandy and gravelly soils with sufficient slope are dry, easily drained, and healthy. The influences of town and country in predisposing to disease also differ. Thus, for the five years ending 1886, the mean annual death-rate of the population of the Madras Presidency was in towns returned as having been at the rate of 24.9 per 1,000, and in rural districts in the ratio of 19.9 per 1,000. Registration is, of course, more accurate in towns than in villages, but, allowing for this, the difference is still marked. The same fact is borne out by the incidence of the mortality of our chief epidemic diseases. Thus, cholera, small-pox, and bowel complaints are always much more fatal in towns than in the country, but fevers, on the contrary, are most fatal in rural districts. And now, having prefaced the subject, I will offer a few remarks on the distribution of some of our more remarkable diseases.

Cholera.—Some years ago I had a return for 20 years prepared, showing the cholera death-rate month by month, and also the total mortality, for each district in the Presidency. This table is very instructive, as it shows in what months cholera may, in an epidemic season, be expected in any given quarter, and so enables us to take precautions before the storm bursts; and not only so, but we may, from the figures it contains, form some estimate of the probable intensity of the outbreak in any given month. In other words, this table is a sort of cholera barometer.[2]

Districts.	Ratio per 1,000.	Districts.	Ratio per 1,000.
Tanjore	62.8	Godaveri	44.1
Cuddapah	59.6	Madura	41.5
Salem	58.6	Madras	40.8
Bellary	57.8	Kistna	33.4
Trichinopoly	54.8	Vellore	31.3
South Arcot	54.7	Chingleput	25.1
North Arcot	51.6	Vizagapatam	23.4
Coimbatore	50.2	Malabar	17.1
Ganjam	48.9	Nilgiris	10.4
Tinnevelly	47.5	South Canara	9.01
Kurnool	45.4		

From this it appears that during the 20 years the mortality from cholera throughout the Presidency was at the mean rate of 44.02 per 1,000 inhabitants, but it varied in the several districts from 62.8 in Tanjore to 9.01 in South Canara. In the alluvial flats of Tanjore we have a miniature copy of those parts of Lower Bengal where the disease is endemic, and from which

[2] Those who wish to consult it will find it on page 17 of the Report of the Sanitary Commissioner of Madras for 1885.

it stalks forth to ravage the world. The liability of Tanjore to cholera is due to the following circumstances, namely, that it consists largely of water-logged alluvial land, that the population is dense, 583 to the square mile, that the villages and towns are mostly very dirty, and that the people draw water from filthy irrigation channels and shallow wells. That the water question, both as regards the soakage of the soil and the potable supply, has a good deal to do with the prevalence of cholera in Tanjore is obvious from the fact that the greatest cholera mortality is coincident with freshets in the river and the periodical rains. The lowland districts of the Presidency showing the fewest deaths from cholera are Canara and Malabar; in these the ratios of mortality are respectively 9.01 and 17.1 per 1,000. These low rates are no doubt partly due to the manner in which the rural population live—namely, in patriarchal groups instead of in villages. The country, too, is undulating, and the soil mostly porous and well drained, consisting largely of laterite resting on decayed gneiss, while the water-supply is abundant and comparatively pure. To these conditions Canara and Malabar are, in my opinion, largely indebted for their comparative immunity from cholera epidemics. These remarks refer exclusively to the rural parts of the district, as the town population is densely packed, their surroundings very filthy, and their water-supply mostly drawn from shallow wells sunk in sandy soil saturated with organic filth. It will be interesting to note here the relative mortality of cholera in Madras, as compared with other provinces of India. The following figures give the mean annual mortality per 1,000 of population for the five years ending with 1886:

Punjab	0.03	Central Provinces... ...	1.52
N.W. Provinces and Oude	1.06	Berar	2.80
Bombay	1.18	Bengal	2.11
Madras	1.40	Assam	3.81
Lower Burmah	1.45		

These results show that Madras is not, as supposed in some parts of India, more liable to cholera epidemics than her neighbours. To those who will consider these figures in connection with the climatic peculiarities and physical geography of the districts, they will afford abundant field for reflection and speculation.

Fevers of the malarious type prevail all over the country, but still it is some comfort to know that the mortality from these ailments is usually less in the Madras Presidency than in any other province of India. At times, however, we have epidemic waves of fever in Ganjam and the Northern districts, which travel like a cyclone, causing panic and death far more serious than cholera. In 1887 the death-rate from fever in Berhampore was 43.2 per 1,000. The haunts of malaria in the tropics are low-lying districts, with a soil charged with organic matter, badly drained river valleys in which the air stagnates, jungle-covered hills of low elevation, and tracts of land at the base of mountain ranges where the soil is rich and covered with forest. Malaria, too, sometimes clings to elevated, open, and apparently dry tracts of country as in Mysore, but it will usually be found that in these there is a rocky or other dense substratum which holds up the ground water and keeps the subsoil moist. As a rule malaria shuns the coast, but there are exceptions to this where, as in Madras city, the ground is saturated with organic filth and water-logged. A notable circumstance in connection with fever mortality is that it runs highest in such districts as Cuddapah, Ganjam, Kurnool, Nilgiris, and Vizagapatam, in which there is a large amount of uncultivated land, and the country is of a hilly nature. On the other hand, districts such as Tanjore, Tinnevelly, and Trichinopoly, in which a large proportion of the soil is under rice culture, show a very low death-rate from fevers. These two facts would *primâ facie* seem to indicate that fever is not due to irrigation, as has more than once been asserted. The mean ratio per 1,000 of deaths registered from fevers in the several districts of the Presidency for the five years ending 1886 were as follows:

Anantapore and Bellary...	4.4	Nellore	6.7
Chingleput...	6.1	Nilgiris	11.2
Coimbatore	7.0	North Arcot	6.8
Cuddapah	11.5	Salem	6.9
Ganjam	10.6	South Arcot	5.8
Godaveri	9.2	South Canara	8.1
Kistna	8.9	Tanjore	1.7
Kurnool	15.0	Tinnevelly	3.3
Madras Town	9.3	Trichinopoly	4.8
Madura	7.2	Vizagapatam	2.5
Malabar	9.6		

Another remarkable feature in the natural history of fevers is that they are more prevalent amongst the rural population than in towns. In 1887 the death-rate in towns was at the rate of 6.0 per 1,000 against 8.6 in the country. This would seem to show that the sanitary operations in progress in towns have already had some influence in protecting the public health. That fever is due to some germ or material substance seems clear from the fact that it has been conveyed in water used on board ships at sea, and from the circumstance that the poison is carried in currents of air from marshes for a long distance in a horizontal and also to a considerable elevation in a vertical direction. One popular cause of malarial fever not hitherto explained is that of fogs. In various districts fogs prevail at the season at which ague is most common, and recent researches have shown that to have fog we must have dust. Without dust we can have no fog, as molecules of water do not combine with each other to form a fog particle, but require some material nucleus, however minute, on which to condense. It is highly probable, therefore, that the watery vapour in the air or rising from the ground seizes on the minute organisms which constitute the fever poison, and the fog thus formed may be conveyed to a great distance, while the germs in that position will be kept more active and be much more likely to enter into the system than if floating in dry air. In dry air the heat of the lungs and also the evaporation from their air-tubes repel dust, but in moist air the lungs are apt to get clogged with dust and germs. These facts will also help to explain the recognised efficacy of mosquito net in warding off fever.

Typhoid Fever.—While speaking of fevers it may be mentioned that at one time it was believed that the natives of India possessed an almost complete immunity from typhoid fever, but recent experience has shown that this assumption was not quite justified. At the same time it must be said, assuming that our ideas as to the causes of enteric fever are correct, that natives do not suffer nearly so much as they ought to do from this ailment, considering the insanitary conditions which exist in all our towns and villages. It is quite possible, therefore, that the less marked liability of the native to typhoid fever may be partly due to some peculiarity of race, or to an acquired tolerance of the poison. Even in Europe some persons seem impregnable to typhoid, while others take it readily, and this liability to contract typhoid runs in families.

Small-pox.—The mean annual ratio of deaths from this disease in the Madras Presidency ranges from 1 to 4 per 1,000 of the population, and it destroys about twice as many in towns as in villages. It prevails everywhere, and may be said to be endemic in some parts of the west coast, being rarely, if ever, absent from some of the larger seaport towns there. During the five years ending 1886 the average annual death-rate per 1,000 in the several districts varied from 0.4 in three circles to 3.2 in Madras city. But these figures give a very inadequate idea of the ravages of the disease in certain quarters, as in various towns a death-rate ranging from over 5 to over 7 per 1,000 is not uncommon. Of districts on the east coast next to Madras, the Godaveri, Kistna, and South Arcot suffer most. Every form of the disease, including occasionally the hæmorrhagic, is to be met with. The vaccine virus was introduced into Madras in 1802, and ever since that time the Government have been spending money in trying to get the people to accept its protective influence, but with poor results. Even at the present day, of all the children born, probably not more than from 16 to 17 per cent. are protected by vaccination.

Phthisis is a common ailment amongst our population, and was undoubtedly increased in some districts by the debilitating influences and mental depression due to the late famine. I am also inclined to think that the widespread prevalence of syphilis, especially amongst the habitual criminal class of the population, predisposes to, if it does not actually develop, the disease. It is very difficult to obtain any reliable facts as to its relative prevalence in the various districts, but from casual observation it would appear to be more common on the moist west than the dry east coast.

Beri-beri.—From my own observation I am inclined to think that this formidable disease, of which for a series of years we did not hear very much, has again become more common. It is endemic in various places, and sometimes assumes an epidemic form, especially in the wet season, or from July to December. It is almost confined to the male sex, and is rarely seen in persons under 17, or in individuals in advanced life. It occurs in an acute and also a chronic form, and cases of it are always the source of grave anxiety to the medical attendant, as the patient often dies suddenly as the

result of some slight exertion. It is sometimes diagnosed as heart affection by those unfamiliar with the disease. In districts in which it is endemic an attack may be induced by improper or insufficient food, mental depression, or other lowering influences, and it not infrequently follows fever or rheumatism. When the patient is apparently cured a relapse is not uncommon, and an immediate transfer to a non-endemic locality seems to offer the best chance of recovery. A disease resembling it in its more prominent symptoms is caused by the intestinal parasite anchylostomum duodenale, and a medical man in Ceylon was led by his observations to believe that the two ailments are identical. In this Presidency, however, the parasite has not been observed in some fatal cases of beri-beri although carefully looked for. From some very interesting observations carried on by Dutch physicians in Batavia we learn that the mysterious disease is due to certain bacteria in the blood which induce degeneration of the peripheral nerves; the nerves of motion and the muscles connected with them being first affected. The nerves of sensation also suffer, but in a less degree. These changes in the nerves "diminish as they pass from the circumference toward the centre." "In the spinal cord it is only by very close examination that any deviations from the normal state can be discovered." The nerves and structures of the heart also undergo degeneration. Rabbits and dogs may be infected with the disease by injecting the specific micrococci into the blood or under the skin. The Dutch observers further think that these germs are bred in the soil and carried in the air. When the ground remains damp, after inundation or rain, the bacteria multiply on the surface and are dispersed in large numbers as soon as it begins to get dry. In localities in which these germs are prevalent in the soil, they consider that the earth should be left at rest and well drained. But although the bacteria live in the ground they "develop most in human dwellings," especially in buildings, such as gaols and barracks, in which many persons are brought together. They therefore suggest that all temporary buildings in which beri-beri has appeared should be burnt, and all permanent structures thoroughly cleaned, and then disinfected with a wash of solution of corrosive sublimate of the strength of 0.1 per cent. They also recommend the thorough disinfection of clothing, and although they do not consider that a beri-beri patient will directly infect others, still he may carry the bacteria on his dress, or other belongings, and thus spread the disease. The endemic area of beri-beri in this Presidency comprises the Kistna, Godaveri, Vizagapatam, and Ganjam districts, and it also occurs in Nellore, and somewhat rarely in Cuddapah and Kurnool. Although most frequent in natives, still it sometimes attacks Europeans. It is more common on the coast than inland, but low-lying places in the valleys of rivers, like Rajahmundry, also suffer. In the districts south of Nellore it is very rare, and so far as my observation goes is unknown on the west coast. In former years it was very common in the gaols of Masulipatam and Rajahmundry, and I am sorry to say that there was a sudden outbreak of it in the fine Central Gaol of Rajahmundry in 1887. The localities in which at the present day the civil population suffer most from beri-beri are the old Masulipatam and the Rajahmundry districts.

Mycetoma or Fungus Disease.—This disease occurs most frequently in the foot, and is, so far as we know, confined to natives. While civil surgeon at Guntoor I saw a good deal of the disease, and according to my observation it attacks chiefly the labouring classes of the people, who go barefooted. In nearly every instance its origin is attributed to the prick of a thorn or something of that kind, and most of my patients came from parts of the district in which black soil is common. After much laborious investigation with imperfect appliances, I became convinced so long ago as 1860 of the fungoid nature of the parasite. The great centres of mycetoma in Southern India are Guntoor, Bellary, and Madura, and so common is it in the last named district that it is sometimes termed "Madura foot." It also occurs in most of the other districts of the Presidency but is not common.

Leprosy.—According to census returns, the proportion of lepers amongst the population of Madras is 4.4 per 10,000 against 5.2 in Bengal and 8.5 in Bombay; but there is reason to believe that these figures fall short of the actual extent of the disease. In Madras it is on the whole slightly more prevalent in coast districts than in inland, the ratios being 4.9 in the former and 4.4 in the latter per 10,000 of population. The proportion of lepers in the several districts ranges from 2.0 in Coimbatore to 10.5 in Madras city. The districts showing the highest ratios next to Madras are Nilgiris 8.0, Tanjore 7.0, and Chingleput, Malabar, and North Arcot each 6.0 per 10,000. The disease attacks Europeans and Eurasians as well as natives, but is most common in natives. The propagation of leprosy is no doubt largely influenced by heredity, but recent observations appear to show that it is also contagious. In localities in which lepers are at large with the disease in an active state, and having open sores, there seems to be an increased tendency to fresh cases amongst the general population. As regards the part which heredity plays in the transmission of leprosy, we know that persons with the disease in an active state have diminished fecundity, and that mortality runs high amongst the offspring of lepers. These two peculiarities, therefore, tend to keep in check the leprous population, but I have no doubt that it is increased by contagion and probably other influences. That segregation is of value in holding the disease in check seems well established, but to be of much value in India it would require to be carried out on a more extended scale than at present.

Elephantiasis.—This disease is endemic throughout the Presidency but is most prevalent on the coast, in localities in which there is a subsoil saturated with organic filth from which the inhabitants draw their water-supply. Cochin, on the west coast, has long been notorious for elephantiasis, but there is a place—Streeharikota in the Nellore district—in which its manifestations are even more remarkable. This village lies between the canal and the sea, and in speaking of it the district surgeon, Dr. Price, remarks:—"Strange to say the Yanadies, 'a jungle tribe' who live there, are almost, if not completely, free from this disease, while it is the exception for any others to escape after the years of puberty. The police are kept there only for six months at a time, but even they do not always escape. The water in Streeharikota is very bad, being taken from shallow ponds filled merely by surface drainage, full of decaying vegetable matter, and overgrown with reeds."

Elephantiasis rarely occurs in the pure European, but is not uncommon in Eurasians, and chiefly attacks the native races. Both sexes are equally liable, and young children are attacked, although it is not common before 15 or 16 years of age. The immunity of the Yanadies at Streeharikota is a fact of great value, and deserving further investigation. One point of particular interest will be, whether the Yanadies draw their water-supply from the same sources as the other inhabitants. I have been told on good authority that they do not, but dig separate holes as reservoirs in the sand, and that these are frequently changed or renewed. According to Lewis, elephantiasis is associated with filariæ in the blood, and Manson has shown that these filariæ are sucked up by the mosquitoes, and get into water with the larvæ of the insect. As the medical history of this endemic centre of elephantiasis will be of great scientific interest, I have asked Government to invite the attention of the sanitary department to the subject.

It was my intention, had time allowed, to have referred to syphilis, pointing out how it prevails everywhere in town and country, amongst rich and poor, how reckless the people are as to its ravages, and how it is sapping the vital powers of the great mass of the population, the only people who are comparatively free from it being some primitive aboriginal tribes, who are treated as outcasts by the other sections of the community. It would have been interesting also to have noticed the local distribution of vesical calculi, bowel complaints, cancer, skin diseases, guinea worm and intestinal worms, but these must remain unnoticed for the present, as I have already trespassed too long on your time. I must also ask you to treat leniently these hurried notes which I have ventured to bring before you.

THE new Jubilee Cottage Hospital for Epsom and Ewell, which has been erected at a cost of £1,700, was opened last week by the Duchess of Teck. The architect was Mr. J. R. Harding, C.E.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—At the quarterly court of the Society, held on July 10th, Sir James Paget, president, in the chair, two members were elected and the deaths of two reported. Sixty-one widows and seventeen orphans were recommended for relief, and a sum of £1,358 10s. was voted for distribution among them. The death of a widow was announced who had received grants for the last forty years. A fresh application for assistance was received from a widow for herself and two children, and a grant was made. A legacy of £50 duty free had been received from the executors of Miss Sophia M. Wilson. The expenses of the quarter were £39 5s.

SUMMARY OF THREE LECTURES
ON
TRANSFUSION:
ITS
PHYSIOLOGY, PATHOLOGY, AND PRACTICE.

Delivered at the Royal College of Surgeons.

By WILLIAM HUNTER, M.D., M.R.C.S., F.R.S.E.,
John Lucas Walker Student in Pathology, Cambridge; Arris and Gale Lecturer, Royal College of Surgeons.

Lecture I: Introductory.

The first real advance in our knowledge of the physiology of transfusion was made when Leacock in 1817 and Blundell in 1825 drew attention to the marked difference in the result, according as the blood transfused was obtained from an animal of the same species—"similar" blood, or from an animal of another species—"dissimilar" blood. The later researches of Panum, Ponfick, Landois, and others fully established that this difference was due to the poisonous action of the hæmoglobin of dissimilar blood on the organism. The investigations made in recent years have, therefore, had reference more particularly to the behaviour of similar blood, and the fate of its different elements—corpuscles, hæmoglobin, organic constituents of the plasma—after transfusion. As the result of these, much light has been thrown on many important points connected with the physiology and pathology of transfusion; on the importance of proper oxygenation of the blood by Bischoff and Brown-Séquard; on the differences between pure blood and blood after defibrination, and the relative advantages of each for purposes of transfusion by Dumas and Prévost, Martin, Panum, Ponfick, Landois, Hayem, von Ott, Armin Köhler, and others; on the fate of the red corpuscles after transfusion by Panum, Worm-Müller, Hayem, von Ott, myself, and others; on the fate of the organic constituents of the transfused blood by Worm-Müller, Lesser, Tschiriew, and Forster; and, lastly, on the physical properties of transfused blood and of saline solutions by Kronecker and Sander, Schwarz, von Ott, Maydl, and many others.

Nevertheless, the question as to the value of transfusion seems ever to remain an open one, and still retains its interest both for the lay and for the medical mind. The present attitude of medical opinion may be described as one of healthy scepticism. The advocacy of transfusion is left in the hands of a few; and the frequency with which one meets with descriptions of new instruments instead of reports of successful cases may be regarded as lending some colour to the suspicion that even in the minds of these few there is some lurking doubt as to the safety or value of the operation. Much of this hesitancy is traceable to two circumstances. First, that after taking all due precautions, the operator feels himself liable at any moment to be confronted with certain dangers of whose nature he has but imperfect knowledge, and which he is, therefore, not in a position to avoid or confidently grapple with. Secondly, that even when these have been avoided or overcome he is, to a great extent, ignorant of the *rationale* of the operation; he is ignorant how far or in what way his interference has contributed to the result, even when successful; and he cannot explain why the operation fails under conditions that, so far as he can judge, are equally favourable to success.

The problems presented by a study of transfusion are thus partly physiological, partly pathological. The physiological problem is to determine the fate of the different elements of the transfused blood, and to ascertain the functions they severally or collectively discharge in the body of their host. A knowledge of these is essential whether the operation of transfusion is to be advocated or rejected. The pathological portion of the problem is to explain the nature of the disturbances, such as dyspnœa, violent action of the heart, tendency to syncope, and other symptoms, objective and subjective, frequently presented by the patient during the performance of the operation.

Lastly, there always remains the important practical question, What is the value of transfusion and in what conditions is its performance indicated? The answer to this question implies a knowledge of the nature of the changes in the blood in disease, and it is this portion of the problem of transfusion which has hitherto received an attention altogether inadequate to its real importance.

Physiology of the Blood.

Attention was then directed to some points connected with the physiology of the blood, a knowledge of which is essential to a right understanding of the principles on which transfusion is based.

The ground idea of transfusion is that we are replacing a structure incapacitated by loss or disease for the discharge of its functions by one of similar nature, presumably capable of taking up these functions.

What are the functions of the blood in health, and how is it fitted by structure or composition to discharge them?

The physiology of the blood presents problems of peculiar difficulty, arising from its fluid nature and its close relation to all other tissues of the body—a relationship peculiar to it alone. What is the behaviour of the blood under such circumstances? Its quantity and quality appear to be constantly varying. Are we then entitled to regard it as a tissue at all, seeing that it apparently has no stable composition? When we speak of the blood, do we speak not so much of a tissue as of a mass of fluid of varying quantity and quality, holding certain corpuscular elements in suspension, and presenting merely a certain average composition in virtue of the united action of all the tissues? Unlike all other structures to which we give the name of "tissue," it appears to possess no single characteristic property, its composition being determined solely by the quantity and quality of the material poured into it by the various tissues. Hence it is considered "far more profitable, indeed necessary, to treat of the blood, not as a tissue by itself but as the great means of communication of material between the tissues properly so called" (Foster). It is usual to regard it as a mass of material by which the tissues are bathed. Hence the title frequently given to it of "the nutritive fluid of the tissues."

To regard the blood in this light seems reasonable enough in health, where we have to do with a certain average activity of all the organs of the body. Even as a working hypothesis—and it is as such that this view chiefly recommends itself—this view completely breaks down in the presence of the far more difficult problems presented by the blood in disease. So far from the blood being a mixture of water, proteids, carbohydrates, fats, etc.—from being "the nutritive fluid of the tissues,"—a consideration of all the evidence afforded by a study of its behaviour in health and disease points irresistibly to the conclusion that it is no more the "nutritive fluid" than it is the "respiratory fluid" of the tissues. In both cases alike the material, whether gaseous or solid, contained in the blood and used up by the tissues is in the blood simply in virtue of its carrying function—is in the blood simply in course of transit to the tissues.

The most remarkable feature presented by the blood is not, as is usually supposed, its varying composition, but the remarkable power it possesses of maintaining a composition as rightly entitled to be termed stable as that of any other tissue of the body, and that notwithstanding that its close relation to all the other tissues renders it peculiarly subject to such changes.

The evidence pointing to this conclusion is of a twofold kind: (1) that derived from a study of the behaviour of the blood both in health and disease, under conditions tending to alter its composition both in quantity and quality; (2) that derived from a study of the nature and composition of the plasma.

The former evidence—functional evidence—shows that the blood possesses one of the most characteristic properties of living tissues, namely, great irritability; evidenced in its case by its intolerance of the presence of bodies, even those normally present in it, such as water, sugar, peptones, salts, that do not reach it by the ordinary channels, or that reach it in too great quantity, even by the ordinary channels.

The latter evidence—structural evidence—goes to show that not only in the corpuscles, but also in the plasma, we have to do with proteid material built up into organised form, and differing from the proteid material introduced into the blood from the food.

The key to the solution of the problems presented by the blood, both in health and disease, is to be found in the recognition of this fact, that what are termed changes in its composition are in the great majority of instances merely changes in virtue of its function as the carrying tissue of the body. A clear distinction is to be drawn between changes in the blood as a tissue—structural changes—and changes in virtue of function—functional changes. The latter, however marked—sugar in diabetes, uric acid in gout—do not constitute disease of the blood; the former, however slight—deficiency in hæmoglobin, in the number of corpuscles,

etc.—do constitute disease, and their cause must always be sought, not in the tissues as a whole, but in certain organs specially concerned in the fate of the blood, the so-called blood-organs.

The conclusions arrived at from a study of the behaviour of the blood in health and disease were the following:

1. That the blood is in all respects a living tissue of highly specialised structure, adapted for the performance of certain specialised functions—namely, the conveyance of food material, gaseous and solid, to all the tissues of the body.

2. That it possesses, in common with all tissues, the power which is the characteristic feature of living tissue—the power, namely, of maintaining a certain physical structure and a certain chemical composition in the presence of the most varying physical conditions.

3. That the peculiar fluid nature of its matrix necessitates in its case special arrangements for the regulation of its composition not required by the other tissues.

4. That this mechanism is to be found partly in itself—its white corpuscles and the endothelium of its capillary walls—partly in certain organs in specially close relation to the blood, which are so situated that its composition even as a carrying tissue is regulated at certain convenient points in the circulation—namely, gastro-intestinal mucous membrane, more especially the follicular tissue around the portal radicles, the spleen, liver, bone-marrow, and lymphatic glands. With the exception of the latter, all these blood-organs possess in varying degree certain features more or less common to them all—namely, (1) slowness of circulation—common to all; (2) closeness of relation of cells to the blood—spleen and bone-marrow; (3) power of accommodating large and varying quantities of blood, chiefly venous, which the portal system, including the spleen, possesses in special degree.

Physiology of Transfusion.

Nutritive Properties of Blood.—In transfusing blood we are thus transfusing a living tissue presumably capable of carrying on all the functions of healthy blood. It is necessary now to consider more particularly what these are; and, first of all with regard to the nutritive properties so generally ascribed to the blood.

In Health.—Any nutritive value the blood may have must depend on the presence of its proteid constituents. Of these the blood contains about 20 per cent., distributed unequally between the corpuscles and the plasma, rather more than 15 per cent. being contained in the corpuscles, rather less than 5 per cent. in the plasma.

How is the blood affected in starvation? As the so-called "nutritive fluid of the tissues," does it suffer in any special degree at a time when the waste of the tissues is not being replaced by food material from without? We know that, under such circumstances, the loss of substance does not affect all tissues equally. Some, as the heart muscle and the brain, suffer but little; others, as the muscles, generally lose much. Does the blood become poor in albuminous constituents out of all proportion to the loss in the other tissues, as might be expected if its substance is in the first instance used up as food? On the contrary, the observations of Voit, Panum, and Heidenhain show that the loss in weight of the blood is proportional to the general loss in weight of the tissues generally, and that the proportion of its various constituents remains unaltered. In starvation, as in health, the blood suffers quantitatively and qualitatively as other tissues. It behaves, not as a mass of nutritive material, but as a tissue. Its carrying function, nutritive and respiratory, remains the same to the last. The fact that some tissues, such as skeletal muscle, suffer much, while others, such as the heart muscle, functionally active to the very last, lose but little in weight, implies that the latter must have been nourished at the expense of the former; that food material must have been conveyed by the blood from the muscles to the heart. The nutritive function which the blood thus subserves in virtue of its carrying function remains the same as in health. The same holds true of its respiratory function. Lastly, the quantity of blood never falls below the point at which the circulation is unable to be maintained; so that the great function of circulation which the blood is enabled to discharge in virtue of its physical properties—volume, viscosity, etc.—remains unaffected.

After Transfusion.—Since the blood has no nutritive value in itself in health, apart from the material it carries, we should hardly expect it to have any after transfusion. Nevertheless, it is one of the many properties claimed for transfused blood that, even if it be destroyed, it may subserve some purpose of nutrition in the organism.

Any nutritive value the blood may have must depend on the presence of its proteid constituents. Now, the one fact definitely established with regard to the fate of proteids introduced as food by the ordinary channels is that their utilisation as food by the tissues implies their breaking up in the first place, and the excretion from the body of a quantity of nitrogen, chiefly in the form of urea, closely corresponding to the amount contained in the food. No such process is known in the body as a building up without a breaking down. Anabolism and catabolism always go hand in hand.

If to an animal in a state of starvation—whose excretion of nitrogen is entirely at the expense of its own tissues, and after a time remains fairly constant—we give a certain amount of proteid material as food, we might expect that the greater part of the material thus given would be built up into the tissues and but little be excreted. What we do find, however—as will be seen by reference to the accompanying charts, in which I have represented graphically the results obtained by Forster in his experiments—is that the whole of the nitrogen thus introduced is excreted from the body at once; there is an increased excretion of nitrogen corresponding to the quantity given in the food.

If to an animal in a similar condition a certain quantity of blood be given by the mouth, we have a similar result; the increased excretion of nitrogen corresponds to the quantity of nitrogen in the blood administered. Thus, Tchiriew found that, in a period of three days, during which 13.19 grammes of nitrogen were given in the form of blood by the mouth, the excretion was 14.55 grammes; in another period of three days, the excretion was 14.43 grammes as compared with 14.38 grammes in the food; in a third period, the excretion was 15.42 grammes as compared with 15.28 in the food.

The proteid material, whether in the form of meat or in the form of blood, had undergone disintegration; its nutritive value corresponded to the quantity of nitrogen it contained, and was expressed by the excretion of nitrogen after its administration.

Very different is the result after transfusion, when the blood is introduced directly into the vessels instead of by the mouth. As will be seen (Figs. 1 and 2), there is little or no increase in the

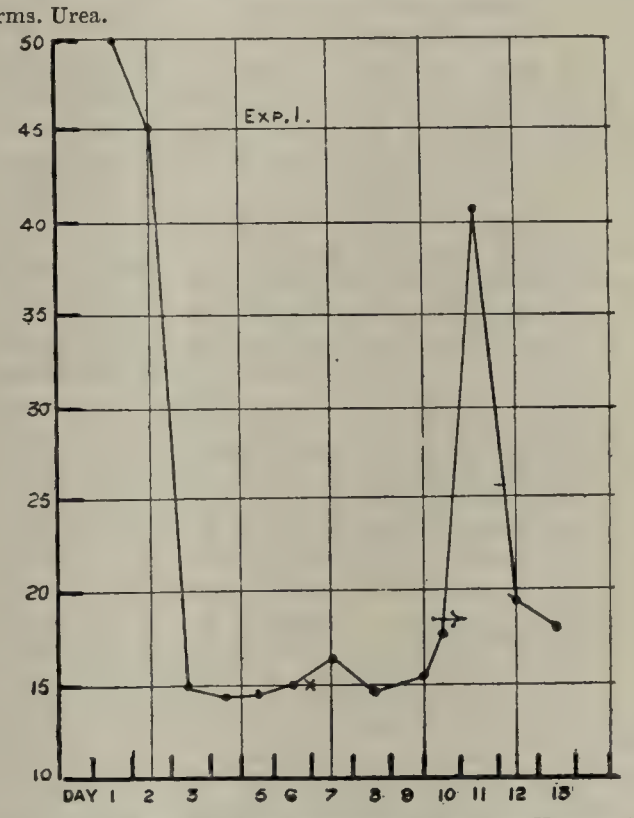


Fig. 1. ×=394 grm. Blood transfused (15.06 grm. Nitrogen).
+=375 grm. Meat by the Mouth (12.75 grm. Nitrogen).

nitrogen excreted. Some slight increase there always is, but it in no way corresponds to the quantity of nitrogen contained in the injected blood. Thus, of 19.09 grammes of nitrogen in the blood transfused, only 6.85, and of 18.53 thus given only 10.60, of 7.84 only 4.39 grammes appeared in the urine in the periods over which the transfusions were made.

We must conclude, then, that blood transfused is not immediately destroyed, and its nutritive value is therefore correspond-

ingly less than the same quantity of blood given by the mouth. The two functions frequently ascribed to it at one and the same time—namely, that of discharging the functions of a living tissue and that of serving as nutritive material for the tissues—are incompatible with each other. Life of the blood implies absence of nutritive value.

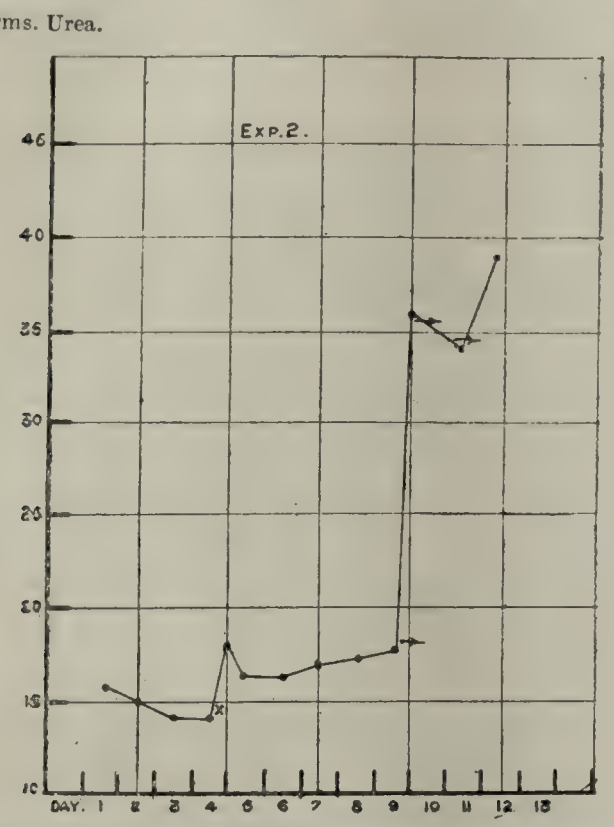


Fig. 2. ×=611 grm. Blood transfused (19.92 grm. Nitrogen).
→=600 grm. Meat by the Mouth.

Under the conditions in which such experiments can lest be made—namely, in starvation—the metabolism of the body is at its lowest. We shall see when we come to study the fate of the corpuscles after transfusion that starvation is particularly favourable to a lengthened stay of the red corpuscles in the circulation of their host. Hence it may be urged, and with some justice, that the more rapid destruction of blood when transfused under conditions more closely approximating those of health than the state of starvation, is, or may imply, a greater nutritive value of the blood under such circumstances than that above indicated. This is doubtless true; but in no case can the nutritive value be greater than that of a similar quantity given by the mouth, and in the small quantities transfusible in man this is so small compared with that of the food required daily by the tissues, that it may be entirely overlooked. To transfuse blood on account of any nutritive properties it may be supposed to possess is an operation entirely devoid of any physiological basis. Hence we find that the loss of weight in starvation is unaffected by transfusion of blood in whatever quantities and however often repeated; and this is the case even although at death the blood may be not only increased in quantity, but actually richer in quality, than in health. Thus in one of Tchiriew's experiments in which transfusion had been repeatedly made, and in which the weight had fallen steadily from 6.928 to 4.583 kilos., the quantity of blood obtained from the body amounted to about 8.7 per cent. of the body weight as compared with the 7 per cent. usually obtainable in health; and this blood contained 27.11 per cent. of solids with 4.21 grammes of nitrogen as compared with the 21 per cent. of solids containing about 3.2 grammes of nitrogen, usually found in healthy blood. Similar results were gained by Panum—by a method, however, not so free from objection as that of Tchiriew, on whose results, as on those of Forster, the greatest reliance can be placed.

What we have found to apply to pure blood applies in great degree to *defibrinated blood.* Its nutritive value is greater when given by the mouth than when transfused; this being due to the same cause, namely, that its red corpuscles—and they contain three-fourths of its organic constituents—continue to live for a certain time within the blood of their host. The slight rise in the excretion of urea following on the injection of defibrinated blood is probably due to the disintegration of the proteids of the serum. This rise is never great, since the serum only contains a small percentage of organic constituents. In virtue of the change in the character of the proteids from the organised form in which they are present in the plasma to the unorganised form in which they are to be found in the serum, defibrinated blood may be regarded as possessing more immediate nutritive value for the tissues than pure blood; but this is so small that it may be neglected altogether.

Defibrination is often spoken of as harmless towards the blood; defibrinated blood is often regarded as blood minus its fibrin. Defibrination is indeed harmless towards a great number of the red corpuscles, simply on account of their firmer periplastic structure. But it kills the plasma of the blood as certainly as the removal of myosin from muscle would be equivalent to its death.

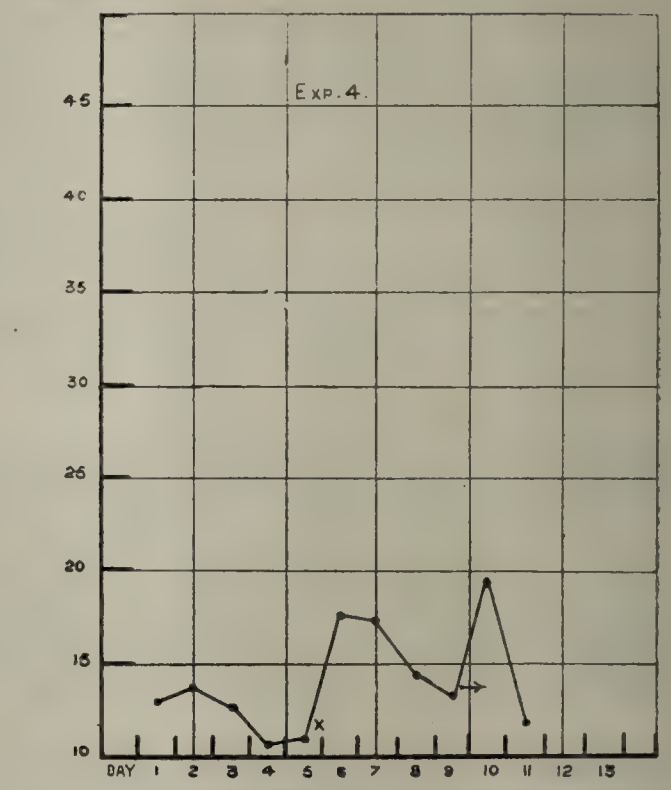


Fig. 3. ×=430 cc. Blood Serum transfused (6.88 grm. Nitrogen)
→=200 grm. Meat by the Mouth.

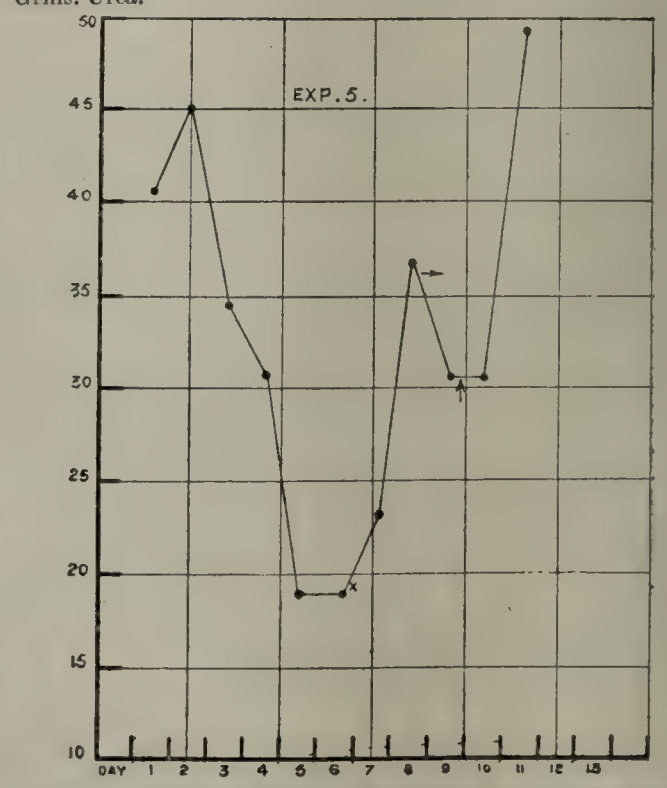


Fig. 4. ×=662 grm. Serum transfused (6.38 grm. Nitrogen).
→=600 grm. Meat by the Mouth.

The nutritive value of *blood serum* is the same whether given by the mouth or by injection into the blood-vessels (Figs. 3, 4, 5, and 6); but this is so small that the chief value of serum for

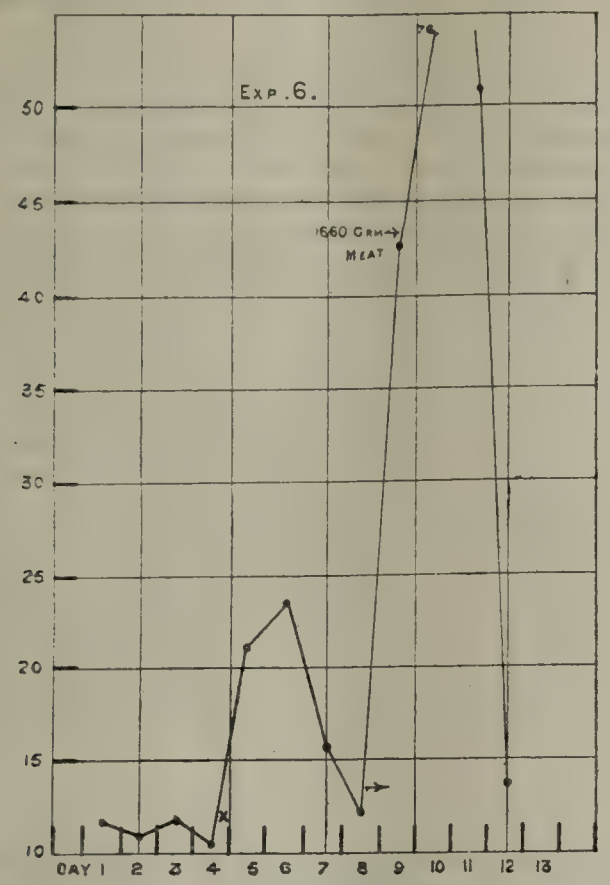


Fig. 5. ×=950 cc. Serum transfused (15.08 grm. Nitrogen).
→=500 grm. Meat by the Mouth.

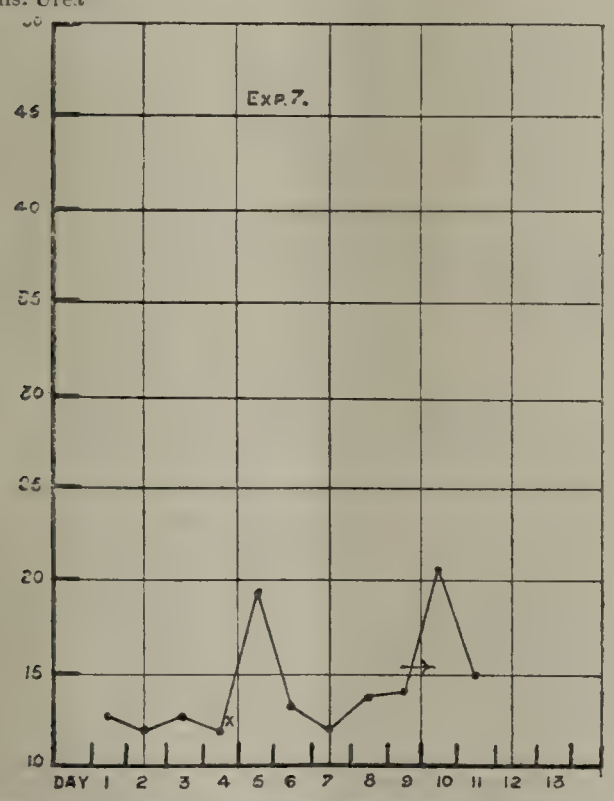


Fig. 6. ×=522 grm. Serum transfused (30 grm. albumen).
→=150 grm. Meat by the Mouth (32 grm. albumen).

transfusion purposes must depend upon its physical properties; and these are in no respect greater than those belonging to a corresponding quantity of neutral saline solution, such as ¾ per cent. sodium chloride solution.

Transfusion of pure blood is the transplantation of a living tissue made up of cellular elements floating in a fluid matrix. Transfusion of defibrinated blood is the transplantation of certain cellular elements, the red corpuscles, and also some white corpuscles, floating in a medium, the serum, which is not living. We might describe it therefore as the implantation of certain elements of a tissue into the living matrix of another tissue of the same kind, the plasma of the host's blood; the implantation being rendered possible by the resistant character of the red corpuscles and the fluid nature of their matrix. In either case the transfused blood has a respiratory value so long as the red corpuscles remain within the circulation of their host, and this is the only respect in which it differs from or offers any immediate advantages over a corresponding volume of a neutral saline solution, since the small percentage of organic solids it contains apart from its red corpuscles serves but little nutritive purpose, and disappears in the course of a few hours.

ABSTRACT OF THREE LECTURES ON TUBERCULOSIS IN SOME OF ITS SURGICAL ASPECTS.

Delivered at the Royal College of Surgeons of England.

By HOWARD MARSH, F.R.C.S.,

Senior Assistant-Surgeon and Joint Lecturer on Surgery at St. Bartholomew's Hospital; Hunterian Professor of Surgery and Pathology at the Royal College of Surgeons.

Lecture II.

At the end of the last lecture I was about to discuss the value of excision as a method of treating tubercular joint disease.

The principle upon which the operation rests is easily grasped. It is the cutting away of a part instead of the cure of the disease in which the part has become involved. It is like removing the eyeball or the testis instead of curing the disease by which these organs may have been attacked. However favourably or safely repair may be accomplished, the fact remains that the patient has suffered a serious mutilation in the loss, in the case of a large joint, of one of the most important organs in the body.

Of course this principle may be perfectly sound, and the treatment the best that can be adopted. But this much may be said, that it is not the principle which has guided recent progress in other fields of surgery, where every effort has been made to preserve the natural structures, and to turn to the best account any which, although impaired, are not irretrievably diseased. At all events, it is a method which should be reserved for cases in which it is believed that no means of less severity will suffice.

It may be useful to recall the circumstances under which the operation of excision was introduced, now about forty years ago, by Sir William Fergusson and his school. At that date comparatively little attention had been paid to diseases of the joints, which frequently grew worse and worse, until amputation was all that remained. Under these conditions it undoubtedly was, as it was held at the time, a great advance in conservative surgery, when Fergusson and his contemporaries resorted to excision as a substitute for amputation; but although excision has had the important effect of largely diminishing the number of amputations for joint disease, it rests upon a principle which many confidently anticipate is only a link in the chain of progress.

As to the grounds on which excision is recommended, Mr. Croft thus defines the cases in which excision of the hip-joint should be performed.[1]

1. When there is fluid in the joint, antiseptic incision should be made, as if the surgeon intended to excise, and he should only desist on finding the articular structures in a condition from which they could rapidly recover, and yield a movable joint.

2. When pus is known to be present, even if the surgeon is uncertain as to the condition of the joint, he should excise.

3. If the surgeon is certain that necrosis has occurred he should decidedly excise.

Mr. Barker, in his lectures here, last year, remarks: "It is most important to draw the clearest distinction between the liquefaction of caseation and true suppuration, not only as an abstract pathological axiom, but also for practical purposes. If a surgeon adopts the view that no operation is proper until suppuration has taken place in the tissues of a joint, he will always operate in

[1] *Transactions of the Clinical Society*, vol. xiii.

very advanced disease. Tubercular affections are not associated with true suppuration, except in what may be called an advanced stage, so that, if the surgeon waits until it is present, much valuable time will have been irrevocably lost. But if the rule is made to operate as soon as there is evidence of the commencement of caseation, the conditions of operation are totally different. We shall be interfering in such a case, relatively early, with all the consequent advantages. We must, therefore, in the future, watch for and endeavour to recognise early the doughiness of commencing caseation, rather than wait for the distinct formation of suppuration." And further on, he says: "I venture to think it would be a wholesome rule that, in cases where general tuberculosis does not contraindicate it, the infected tissues of a joint should be thoroughly removed as soon as it is suspected that caseation is advancing in it."

Thus Mr. Croft would excise as soon as matter has formed, even without making himself certain as to the condition of the joint, while Mr. Barker would not wait for suppuration, or for a certainty that caseation has commenced, but he would operate as soon as he even suspected that this condition had set in.

I will now endeavour to indicate the grounds on which its advocates recommend early operation. For this purpose, I turn first to Mr. Barker's lectures, because they afford the most recent and most elaborate exposition of the subject that I am acquainted with. I think I am right in saying that Mr. Barker founds his advocacy of excision for early disease—that is, as soon as caseation is suspected—mainly on the nature of the tubercular process. Thus, in the first place, after giving a clear and full summary of the grounds for holding that tuberculosis is a disease of parasitic origin, and remarking that, in the manner in which the disease spreads by continuous infection, through the lymphatics, and by entrance into veins, it offers a close parallel to the modes of generalisation of the so-called malignant neoplasms, he adds: "Indeed, there is much to justify our regarding tubercle in the light of a malignant growth and our dealing with it accordingly." This appears to me to define his position in a single sentence, for I suppose every surgeon agrees that malignant disease should be freely removed as soon as its presence is detected.

The prospect which opens before us when we look closely at the consequences involved in this conclusion of Mr. Barker's, as also when we remember his view that excision should be performed as soon as caseation is suspected, is one which must, to say the least, inspire us with some hesitation. He is, it is true, speaking of hip disease; but what tubercle is in the hip it is elsewhere. If free removal is called for in the caseating stage of hip disease, it is called for in the case of all the other joints, of the carpus and tarsus, of cancellous bone, of the testis and the lymphatic glands. All these structures must be freely removed; and, to be logical, we ought if possible, to devise methods for removing the bodies of the vertebræ and the bronchial and lumbar glands. But secondly, Mr. Barker dwells on the danger that, unless the local centre is removed, systemic infection may occur, and general tuberculosis be developed.

Mr. Croft recommends early operation on the following grounds: *a*, that it affords the best prospect of cure; *b*, that it shortens the duration of suffering and illness; *c*, that the shortening of the limb is only a trifle more than it is, in the most favourable cases of ankylosis, after destructive disease of the joint. In his work on *Hip Disease in Children* with special reference to excision, Mr. Wright substantially agrees with Mr. Croft. I propose to examine these different arguments for early excision, and the evidence on which they rest.

The view that there is much to justify our regarding tubercle in the light of a malignant disease, and our dealing with it accordingly, is I think, derived from two considerations: *a*, that tuberculosis is now known to be due to the presence of a parasitic organism, and *b*, that tubercular disease, phthisis, etc., has so often run an inveterate and destructive course.

The fact, however, that a parasitic growth is present affords no indication that the disease is inveterate. Some parasitic microorganisms are virulent and persistent in their action, while others are comparatively innocuous and short lived. But it may be urged that a full warrant for regarding tubercle in the light of a malignant growth is found in the *post-mortem* room and in microscopic anatomy. Some of the evidence met with in these departments of research no doubt points in this direction and, if taken alone, might appear sufficient for this conclusion.

Yet the evidence of the laboratory and *post-mortem* room must not be taken alone. There is another kind of evidence to which it must be kept subordinate—that, namely, which is derived from a careful clinical observation of a large number of instances of tuberculous disease, the great majority of which, happily, escape the *post-mortem* room. But, indeed, the *post-mortem* room itself affords conclusive evidence that the tubercular process is often entirely arrested, and that the tissues implicated undergo recovery. This is the case in those numerous instances in which cicatrices are found in the lungs, and in the glands of the posterior mediastinum and other parts, indicating former tubercular disease which has been completely repaired.

An interesting paper[2] confirmatory of these views was lately read before the Islington Medical Society by Dr. Sansom, who, after an analysis of twenty cases, in which he was satisfied that phthisis had been arrested, expressed the opinion that the bacillus tuberculosis has a tendency to die out like other germs when placed under unfavourable circumstances. And a writer in reviewing this paper, reminds us of the following words of the late Dr. Hughes Bennett: "The careful dissections of morbid anatomists have recently shown that this arrestment (of the deposit of tubercle) really happens with extreme frequency;" as frequently Dr. Bennett himself believed as in one third to one half of all the individuals who die after the age of 40.

As to the estimate of the inveterate nature of tuberculous disease which has been formed from clinical evidence, I may say at once that it urgently requires revision.

The evidence derived from the history of the disease in the past must be thrown aside, and we must take a comprehensive survey of these cases in their early as well as in their advanced and aggravated stage, and include those in which adequate treatment has been applied as well as those which have been allowed to go on from bad to worse, practically without treatment, and then to sum up and weigh the evidence afresh. I shall deal with this part of the subject in the next lecture.

As to the view that early excision should be performed in order to prevent the occurrence of systemic infection. I do not for a moment question the pathological doctrine of the production of acute general tuberculosis through the diffusion, from a local source, of tuberculous material along the lymphatics and the venous system. The fact is perfectly well established. Such a result is, I believe, far from rare in children in whose bronchial glands tuberculous deposits occur after whooping-cough or prolonged bronchitis. Many children under these circumstances die of tubercular meningitis, and, on *post-mortem* examination, their internal organs are found loaded with recent tubercle.

It is also established that general infection may occur when the primary tuberculous disease is situated in the testis. I will, however, remark that this result, in my experience, has been decidedly rare. In the out-patient department of St. Bartholomew's Hospital I have, in the last fifteen years, had a considerable number of cases of tuberculous testis under observation; and I can recall but very few instances indeed in which the patients have been attacked with acute general tuberculosis resulting from systemic infection. Not a few of the patients have had tubercular phthisis; but this has been chronic, and I have seen no reason for believing that it was due to diffusion from the testis. And I feel convinced that the risk of general infection is certainly not so great as to render it advisable to remove, or even to justify the removal, of the testis in the early stage of caseation.

Nor, again, do I question that systemic infection may take place when it is one of the joints that is the seat of the primary deposit. But the point is to estimate in what percentage of cases does systemic infection occur? My own conviction is that its frequency, in proportion to the total number of cases of local tuberculosis, has been greatly over-estimated.

That infection from the joints is comparatively rare becomes evident when a sufficient number of cases are examined. This appears, if we turn to the statistics of the Alexandra Hospital for Hip Disease. The cases treated in this hospital, from its foundation in 1867 to 1879, were tabulated by a committee of the Clinical Society in 1880. From these tables it appears that in 260 suppurating cases in which no operation was performed there had been, at the time of the report, sixteen deaths (that is, 6.15 per cent.) from tubercular meningitis—in other words, as I suppose we may consider, from acute general tuberculosis—and in 124 non-suppurating cases there had been seven deaths (that is, 5.6 per cent). A careful analysis of the cases treated in the hospital since 1879 shows that the mortality from general tuberculosis in suppurating cases has fallen to less than 5 per cent.

Lancet, April 6th, 1889.

An estimate of the frequency of general infection may also be derived from Mr. Croft's 45 cases, and Mr. Wright's 100 cases of hip disease treated by excision, for in many of these the disease was well advanced before the operation was performed, and after the operation convalescence was in many retarded, or was never reached, so that the conditions favourable to general infection were present for a considerable period. In Mr. Croft's 45 cases the mortality from tubercular meningitis was only 4.4 per cent., while in Mr. Wright's series of 100 cases there was apparently only one case of acute general infection. From these figures it appears that, although the possibility of general infection from a tubercular joint is a distinct element of danger, the risk is so small that it cannot be regarded as affording any substantial support to the practice of early excision; for, let us grant that in every hundred cases of tubercular joint disease going on to caseation there are five in which systemic infection will occur, this means that in every twenty children one will fall a victim, and that the remaining nineteen will escape; or, to state it otherwise, that the chances of escape in any given case are twenty to one in the patient's favour. The question, therefore, is, are we justified in resorting to excision in twenty cases in order to rescue the one case in which general infection would otherwise occur? Are we justified in excising the joint of a patient, in order to avert the danger of general infection, when the chances that he will escape are already twenty to one in his favour? I believe we are not.

This would seem to be the proper view to take even if the operator could ensure (*a*) that no tubercle was be left behind; (*b*) that there was no deposit elsewhere from which infection might still occur. But there is nc guarantee that all the tubercle in the neighbourhood of the joint has been removed, or that the lymphatics leading from the invaded structures are not involved, or, again, that there is no tubercle at some other part.

But there is a further and very important point to be taken into consideration. Mr. Barker has shown that the operation may precipitate the very result it is intended to prevent. Cases have occurred—amounting, according to his figures, to no less than 10 per cent. of the total number of deaths following excision—in which "rapid general miliary tuberculosis supervened in such a way as to suggest strongly, if not to prove, that the surgical interference was the exciting cause of the generalisation of the disease." I have myself seen this result follow operations in a few cases. I should, however, say from my own experience that this rapid generalisation after operative interference is much less common than Mr. Barker thinks it is. Still, whether it is rare or common, it is a danger which those who often resort to excision must be prepared to encounter.

Thus, after carefully weighing the evidence we at present possess respecting systemic infection from tubercular joints, I am led strongly to the conclusion that the number of cases in which it takes place is so limited that the prospect of its occurrence constitutes no valid reason for early excision; and this opinion is confirmed by the fact that there is no certainty that, after excision, there may not remain other tubercular centres, from which infection may still be developed, nor any certainty that the operation may not itself precipitate the result.

When we leave this part of the subject, and, turning to clinical experience, ask what actual results have been obtained by early excision, we are met with a serious and, it may be to some, an unexpected difficulty. This consists in the small amount of evidence that has yet been produced. Mr. Barker, who has carried his advocacy of the operation further than any other English surgeon, gives, in his college lectures, no results of this form of treatment. He has an entirely different object in view. He defines his position by saying: "I am anxious, in the first place, to emphasise the need there is of attending to the reduction of the mortality from tubercular disease of joints before we have anything to say as to the preservation of their functions." Such an attitude as this will occasion no surprise when we remember that, in his opinion, "there is much to justify our regarding tubercle itself in the light of a malignant growth, and our dealing with it accordingly." Of course, if this is the correct view, tubercle must be treated as we treat carcinoma and sarcoma. A tuberculous joint must be excised, and the sooner the better, just as we excise a cancerous breast. We cannot arrest disease which presents the characters of malignancy; we can only remove the part upon which disease has fastened itself. It is impossible, however, to shut one's eyes to the fact that this is an estimate of tuberculosis which the great majority of surgeons would not for a moment entertain. The estimate formed by Brodie, endorsed by Paget and Hilton, and accepted by a very large proportion of those who have studied the subject from a clinical point of view, is that though often intractable and destructive in its later stages, tuberculosis, on a general survey, wears the aspect of merely an obstinate inflammatory process, the whole course and the tendencies and results of which are widely divergent from those of malignant disease. And to such as hold these views excision presents itself not as a strict necessity, as it is when we have to deal with cancer or sarcoma, but as a method which may possibly yield better results than can otherwise be obtained. But this is plainly an open question, and one which can only be settled by ample and thoroughly sifted clinical evidence. Those who advocate excision must prove their case by the results which they produce. But since his lectures were given, Mr. Barker has shown a case at the Royal Medical and Chirurgical Society. In this instance, in regard to the operation itself, an admirable result had been obtained, for the wound healed by primary union, and the case was an excellent example of the progress which has lately been made in the treatment of wounds. When, however, the limb was examined at the meeting, it was found to be flexed and adducted, and there was considerable lameness. Thus, while the great and quite undeniable advantage of immediate repair of the wound had been secured, the condition of the limb, in regard to the patient's power of walking, was not appreciably superior to the average results hitherto obtained by excision.

On the same evening Mr. Bilton Pollard showed three cases in which the same excellent result of primary union had been secured; but as he was careful to point out, the cases were all recent, and the patients, who were still wearing splints, had made no attempt to walk, so that what the future condition and powers of the limb would be was as yet undecided.

If, in examining the results of excision performed for more advanced disease, we turn to Mr. Croft's original table[3], we find the mortality was 35.5 per cent. His present results would, however, I do not doubt, be much more favourable; but, as they have not yet been published, they are not available as evidence in the present inquiry. I hope, however, we may have them soon.

An analysis of 100 cases of excision of the hip by Mr. Wright gives the following results, up to the time at which the patients were last seen: 17 soundly healed, 57 unhealed, 13 dead, 5 dying or going down hill, 2 in a bad condition, 1 might need amputation, 4 had undergone amputation, 1 recent case doing well. As this table includes just 100 cases, the percentage results are apparent at a glance.

Now as all these cases occurred within the last ten years, that is, since the management of wounds has been so much improved, and as they were in the hands of a surgeon of well-known ability and ample experience, I do not think they can be regarded as affording strong evidence in favour of excision; for, of the whole number, 17 only were satisfactory, that is, had healed; and against these successes must be placed 17 in which the operation had completely failed, that is, there were 13 deaths and 4 amputations; and 8 in which there seemed no hope that failure could be averted, for 5 were reported to be dying, or going down hill; 2 were in a bad condition, and 1 was reported as a case in which amputation might be required. In other words, while 17 per cent. were successful in regard to sound healing of the wound, 25 per cent. ended in failure; and the remaining 57 (one case being excluded as too recent to be classified) were still unhealed. In many of these the patients were in good health, and the wound appeared to be merely superficial, and discharge was slight; but, on the other hand, in several discharge was free, and the general health defective. I think, in short, that anyone who studies these cases will be driven to the conclusion that about 20 per cent. were successful and that about 80 per cent. were unsatisfactory.

In this 100 cases of Mr. Wright's there are 30 in which the disease had been in progress either nine months or less than nine months when excision was performed, the average period being six months, so that they afford us some information as to the ultimate results of early excision, a point upon which, as I have already said, evidence is at present very meagre. Of these 30 cases, 1 died of pyæmia, 1 died of measles and tuberculosis, 1 died of exhaustion, 1 was dying of lardaceous disease, and 2 underwent amputation; that is to say, 6 (20 per cent.) entirely failed; 6 (20 per cent.) healed soundly; 7 (20 per cent.) were unhealed at the end of one year; 6 (20 per cent.) were unhealed at the end of two

[3] *Clin. Soc. Trans.*, vol. xiv.

years; 5 (20 per cent. about) were too recent to be classified; that is, omitting the 5 recent cases, about 20 per cent. were successful, and 20 per cent. ended either in death or amputation of the limb, and another 40 per cent. were unsatisfactory.

I may here mention two points referred to by Mr. Croft: 1, that excision shortens the duration of suffering and illness; 2, that the shortening of the limb is only a trifle more than it is in the most favourable cases of ankylosis after destructive disease of the joint.

1. As to the comparative duration of illness in excision and non-excision cases, it is difficult to speak except in general terms. Undoubtedly, the cases in which primary union has been obtained by Mr. Barker and Mr. Pollard are conclusive, as far as they go, in favour of Mr. Croft's view. In a considerable number of Mr. Wright's cases, however, the wound was still unhealed at the end of two years. In the report of the Clinical Society the average period of treatment in fifty-four suppuration cases at the Alexandra Hospital was a little under two years and a half. But this question cannot be altogether separated from another, namely, how long is it before the patients are finally cured, and are able to use the limb freely in the ordinary occupations of life? This, in excision cases, is, I think, at present undetermined. In the 37 suppuration cases recently examined at the Alexandra Hospital it was found, on the average, to be five years.

2. Mr. Croft estimates that the shortening of the limb is only a trifle more than it is in the most favourable cases of ankylosis after destructive disease of the joint.

In the 13 of Mr. Croft's 45 cases in which measurements are given, the average shortening was two inches and three quarters; while, in the Alexandra Hospital cases, in 24 good cures (after suppuration) the shortening was one inch and a quarter; in 2 (also after suppuration) there was no shortening, and in 7 moderate cures the average was three inches and a quarter. Here the balance is in favour of non-excision; for though in 7 cases the average shortening exceeded that in Mr. Croft's 13 cases by half an inch, yet in 26 cases of non-excision the shortening was less than half the average amount in Mr. Croft's excision cases. In Mr. Wright's 100 cases of excision, the shortening is given in only 30. In them the average amount was only one inch and a half. In some it was only a quarter of an inch, and in several it was under one inch. These results are the best I have seen recorded, and they are not only very much better than those of Mr. Croft, but also than any I have observed in cases under the care of other surgeons that have come under my notice. The average shortening in cases of suppuration recently treated at the Alexandra Hospital is one inch (see next lecture).

While I am speaking of excision I may be allowed to express a hope that Mr. Howse, who has, I believe, performed more operations of this kind than anyone else in England, but who has not yet published the results he has obtained, may shortly find time to give us his experience. The statistics he could lay before the profession would be of the greatest value, and would furnish us with facts in regard to many important and still warmly debated questions upon which we possess at present but very meagre information.

Before leaving this part of the subject, I wish to allude to Mr. Croft's view that "when pus associated with panarthritis (or strumous disease of joints in children) is known to be present, even if the surgeon is uncertain with regard to the state of the bones he would excise."[4] I cannot but regard this rule, when it is thus made absolute, and stated without qualification or reservation, as altogether misleading, because it ignores cases that are frequently met with in which the formation of an abscess is intimately connected with the curative process, and takes place as the immediate precursor of sound and permanent recovery.

The cases I allude to are those in which the tuberculous process has come to an end, and in which the tuberculous material, having become necrotic, plays the part of a sequestrum. Around this effete material an abscess forms, and with its evacuation the necrotic products are also swept away, with the result that the tissues are enabled to return to a normal condition. Such abscesses as these belong to the general class which Sir James Paget has termed "residual." They form, in chronic joint disease, quietly, without pain or fever, and often very rapidly. If left, they frequently attain a large size, and, if evacuated with due care, they frequently heal without any further formation of pus; or they heal in five or six weeks, often at last secreting no pus, but merely clear, amber-coloured serum. Some, indeed, cease to increase, and remain quiet, and are at length completely absorbed.

[4] *Clin. Soc. Trans.*, vol. xiii, p. 78.

Others, if left, burst spontaneously and then quickly and safely heal. Thus, as I have remarked already, an abscess often constitutes the last step in repair. Obviously to excise a joint in such cases as these would be a calamity to the patient and a reprehensible step on the part of the surgeon.

The cases met with at the Alexandra Hospital contain, I think, conclusive evidence upon a point of much importance bearing on the employment of excision. I mean the frequency with which necrosis in mass occurs in hip disease so that sequestra are produced of such a size and consistence that an operation is required for their removal. It has been maintained, not only that such sequestra are often present, but that the whole head frequently undergoes necrosis and is detached.

Now that both this necrosis of the whole head and necrosis of any part of the head of the femur or of the floor of the acetabulum —so that firm sequestra, requiring operative interference for their removal, are formed—is rare, becomes clear when the evidence before us is carefully examined.

First, as to the necrosis of the whole head and its separation as a sequestrum, my own experience is that it is a very rare occurrence. So far as I can remember I have met with only four examples of it; and Mr. Bowlby informs me that neither at the Alexandra Hospital nor at St. Bartholomew's Hospital, where he has been surgical registrar for several years, has he ever seen it in a patient or found it in the *post-mortem* room.

Secondly, the table I have drawn up (see next lecture) contains 37 cases of suppuration, in many of which discharge continued for some months and several sinuses formed. And I lately examined 16 cases in Mr. Bowlby's ward, in many of which suppuration had extended over a considerable period. In these two groups of cases, upwards of 50 in number, the sinuses were all soundly healed with four exceptions, in which they were quite trivial. But in no single instance among them had any sequestrum been either removed by operation or extruded in the discharge.

Now, in a very large proportion of these cases there can be no question that the bones were extensively diseased; while in many of them the situation of the sinuses above Poupart's ligament indicated that the pelvis was involved. Thus, in upwards of 50 cases there was not one in which the presence of sequestra prevented the sound closure of any sinuses that had formed. I have met with the same experience in numerous other instances, so that it is evident either that sequestra are rarely produced, or that they are so soft and friable that they are readily disintegrated and removed in the discharge. The true explanation, I believe, is to be found in the fact that the bones are composed of cancellous substance, rich in marrow and blood vessels. When this vascular structure is involved in chronic inflammation its earthy constituents are removed and the bone is reduced to a soft material. Such a structure may, like any of the soft parts, be destroyed by ulceration and undergo complete removal. In some cases, no doubt, considerable masses of bone lose their vitality, but they are so soft that they are easily broken down and got rid of.

The results to be obtained without operative interference will be discussed in the next lecture.

THE ETIOLOGICAL IMPORTANCE OF GONORRHŒA IN RELATION TO SOME OF THE MORE COMMON DISEASES OF WOMEN.[1]

By CHARLES J. CULLINGWORTH, M.D., F.R.C.P.,
Obstetric Physician to St. Thomas's Hospital.

THERE is little doubt that, although gonorrhœa in the female is still regarded in this country as a comparatively unimportant affection, it really destroys the health of a larger number of women than does even the poison of syphilis. As a rule, the earlier indications of the disease pass unregarded. They are attended with but little pain, probably none when the urethra is not involved, and the significance of the purulent discharge is not understood. Hence it frequently happens that medical advice is not sought until a later stage, when the infection has had time to inflict serious, and sometimes life-long, damage on important organs. And even if advice is sought earlier, it is seldom that the disease is regarded seriously,

[1] Read before the Metropolitan Counties Branch (South London District).

or that vigorous treatment is adopted. It is because I am convinced that this state of matters is one greatly to be deplored that I have selected the subject for my address this evening, especially as I am able to illustrate what I have to say by several highly instructive cases that have been under my care during the past few months at St. Thomas's Hospital.

Attention has been already called to this question by several well-known writers, amongst whom may be specially mentioned Noeggerath,[2] of New York; Sänger,[3] of Leipzig; Schwarz,[4] of Halle; the late Angus Macdonald,[5] of Edinburgh; Mr. Lawson Tait,[6] of Birmingham; and Dr. W. J. Sinclair,[7] of Manchester, to whose excellent monograph I have been particularly indebted.

Acute gonorrhœa in the female is generally described as consisting mainly of an acute vaginitis. This, however, is not in accordance with ordinary clinical experience. It is even doubtful whether vaginitis occurs at all in the majority of cases; if it does, it is usually slight in degree, and of very little importance. The lesion most constantly present is inflammation of the ducts of the vulvo-vaginal glands, and of the parts immediately surrounding their orifice. In a considerable number of cases there is urethritis, and not uncommonly there is redness with swelling, and, occasionally, superficial ulceration of the nymphæ. But a more frequent lesion than either of the two last-mentioned is inflammation of the cervical mucous membrane, with more or less catarrhal erosion on the portio vaginalis and a purulent discharge.[8] It is this liability of the cervix to early infection that gives to gonorrhœa in women so serious a character; for when once the disease has established itself in the cervix, and it may do so at the outset, the infection easily travels, or is conveyed, to the interior of the corpus uteri, and thence to the Fallopian tubes, pelvic peritoneum, and ovaries, parts quite beyond the reach of local treatment.

And it must not be supposed that only those women who lead an evil life become the victims of these internal inflammations of gonorrhœal origin. On the contrary, it is to their occurrence that the breakdown in health, following marriage, in previously healthy girls, is often traceable. The views of Noeggerath as to the latency and incurability of gonorrhœa have been treated with too much contempt. As to its incurability, no doubt, he was wrong; he himself has admitted as much. Nevertheless, the credit is due to him of having first drawn attention to the fact that a gonorrhœa in the male, supposed to have been long cured, may be roused by marriage into renewed activity, and so may be unwittingly transmitted to the wife.

The usual results of gonorrhœal infection in the newly married are seen in the following case:

CASE I. *Gonorrhœa Contracted immediately after Marriage: Salpingitis, Pelvic Peritonitis, and Cellulitis.*—M. B., aged 19, admitted into St. Thomas's Hospital, under my care, October 15th, 1888, was a strong healthy girl, never having had a day's illness until her marriage, three months previously. About a fortnight after her marriage she began to suffer from a thick yellow vaginal discharge, followed by painful micturition. On ten different occasions, during the past three months, there had been a discharge of blood from the vagina, lasting three or four days at a time. The patient complained of pain in the right hip, shooting inwards to the vulva, and downwards to the calf of the leg.

On examination no signs of inflammation were found about the vulva beyond a little redness around the orifices of the gland ducts of Bartholini. The vaginal mucous membrane was natural in appearance. A purulent discharge was seen to be issuing from the os uteri, surrounding which there was a narrow zone of catarrhal erosion. Bimanually there was a hard swelling to be felt, occupying the region of the left broad ligament, depressing the vaginal roof on that side, and pushing the uterus towards the right of the middle line. The mobility of the uterus was impaired.

Twelve days later the uterus was more fixed, and the swelling had extended to the front of the uterus. There had been a good deal of pain during the last few days in the left iliac region. The temperature was generally under 100°; it rose, however, on two occasions a few hours after examination. On October 31st the anterior swelling had extended downwards along the upper part of the anterior vaginal wall, which bulged considerably, pushing the cervix backwards and upwards as well as to the right. On November 3rd there was felt, for the first time, thickening on the right side. Four days later the swelling in front had diminished, and there could now be clearly made out, in the left fornix, a tense oval swelling, which was thought to be a hydrosalpinx. For some days the patient had complained of pain and tenderness in the right iliac region. On November 5th she had aching down the left leg. These pains gradually disappeared, and on November 13th she expressed herself as feeling well. On the 20th she began to menstruate, and the following day was allowed to sit up a little. A week afterwards she was made an out-patient. I last saw her on February 2nd, 1889; an irregular thickening was then still perceptible in the left fornix.

This patient's husband had gonorrhœa twelve months before marriage, and believed himself to be cured.

A very common result of a gonorrhœal salpingitis is the sealing up, by adhesive inflammation, of the fimbriated extremity of the Fallopian tube. This condition is beautifully shown in a specimen on the table, in which the outer portion of the occluded tube has become distended, forming a large hydrosalpinx. This very accurate and carefully coloured drawing of the preparation, as it appeared on removal, was made for me by Mr. Holding. When both tubes are thus closed, which they frequently are, it is evident there must be sterility. It is pretty certain that this is at least one of the reasons why prostitutes are so often sterile. But this sealing up of the free extremity is not the only or the worst effect of gonorrhœal infection upon the Fallopian tube. The whole mucous membrane lining the tube becomes inflamed and swollen, and a purulent secretion is poured out, which is liable to become encysted in the closed tube or in portions of it, forming a pyosalpinx, with its attendant miseries and dangers. In fact, pyosalpinx appears to be generally of gonorrhœal origin. I shall show presently that gonorrhœal salpingitis may also be attended with destructive ulceration.

The peritonitis induced by gonorrhœal infection is not usually very acute, or attended with severe symptoms. It is at first limited to the parts contiguous to the free extremity of the diseased tube, where thickening takes place, with adhesions and matting together of the contents of the pelvis, especially of the tube, ovary, and broad ligament. The functions of these parts become seriously disturbed, and there is produced, on the affected side, a mass of irregular and ill-defined thickening, which can be readily made out on bimanual examination. The mobility of the uterus is also impaired.

The case which furnished this specimen of hydrosalpinx is of such exceptional interest as to be worth relating.

CASE II. *Gonorrhœal Salpingitis: Hydrosalpinx of Right Tube Removed by Abdominal Section: Death: Necropsy: Ulceration of Intra-Uterine Portion of Both Tubes, with Perforation at Each Cornu of Uterus: Old and Partially Cicatrised on Left Side, Recent on Right: Pus Lying in Pelvis.*—M. C., aged 19, single, was admitted into Magdalen Ward in May, 1888, and transferred to Adelaide August 20th, 1888.

At the latter part of 1887 she had a yellow vaginal discharge, with pain in both iliac regions, lasting for eleven weeks. After being better for a month these symptoms recurred in March, 1888 when a swelling developed in the left side, which varied in size from time to time. On admission to Magdalen she complained of pain only on the left side; she had a thick purulent discharge which was more profuse when the swelling was less marked, and less so when it became hard and well-defined. Sometimes the

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[2] Noeggerath (E.), *Die latente Gonorrhoe im weiblichen Geschlecht*, Bonn, 1872 Latent Gonorrhœa, especially with Regard to its Influence on Fertility in Women, *Trans. Amer. Gynecolog. Soc.*, vol. i, 1876, p. 268.

[3] Sänger (M.), Ueber die Beziehungen der Gonorrhöischen Infektion zu puerperal-Erkrankungen, *Verhandl. der deutschen Gessellsch. f. Gynäk.*, Leipz., 1886; Etiology, Pathology, and Classification of Salpingitis, *Amer. Journ. Obst.*, March, 1887.

[4] Schwarz (E.), Die Gonorrhöische Infektion beim Weibe, *Samml. klin. Vorträge*, Leipz., 1886.

[5] Macdonald (A.), Latent Gonorrhœa in the Female Sex, with special Relation to the Puerperal State, *Trans. Edinb. Obst. Soc.*, see *Obst. Journ. Gt. Brit.*, vol. i, 1873-4, p. 254.

[6] Tait (Lawson), *Diseases of Women*, London, 1877, pp. 19, 88, 114, and 211.

[7] Sinclair (W. J.), *On Gonorrhœal Infection in Women*, London, 1888.

[8] The following case well illustrates the conditions usually met with when the disease is seen at an early stage. M. J. R., aged 32, a lady's maid, was admitted into St. Thomas's Hospital, September 3rd, 1888. Her last menstrual period ceased a week ago. During the flow she noticed that micturition was painful, and when menstruation ceased she observed a thick yellow vaginal discharge. On examination a purulent discharge was seen issuing from the vaginal orifice. The mucous membrane surrounding the openings of the vulvo-vaginal gland ducts was red and slightly swollen. The meatus urinarius was normal in appearance, but on pressing upon the urethra through the anterior vaginal wall, a drop of pus could be made to exude. The vaginal mucous membrane, as seen through the speculum, had a healthy appearance. A muco-purulent discharge was seen issuing from the os uteri, which was surrounded by a complete ring of erosion of a bright red colour, and a quarter of an inch in width. Pus was seen exuding from the swollen orifices of two or three glands in the erosion.

discharge was blood-stained. There was no pain on micturition. During her stay in Magdalen she had an attack of very severe pain in the left side, with a high temperature and extreme prostration, thought at the time to be due to acute ovaritis. [The sequel makes it probable that these symptoms were due to perforation of the intra-uterine portion of the left tube, from ulcerative salpingitis].

On admission to Adelaide Ward, August 20th, there was discovered a slight lateral displacement of the uterus to the left. Lying behind and to the right of the uterus was a not very tense smooth oblong swelling, equal in size to an egg, and giving a sense of fluctuation. I was of opinion that this was a hydrosalpinx of the right tube, and that the tube had become occluded at its fimbriated extremity and bent upon itself, so that the outer distended portion lay behind the inner portion and the uterus. There was still a purulent discharge from the vagina. On the evening of September 12th, after having been examined bimanually, the patient was sick, and complained of acute pain in the right iliac region. The temperature rose to 103.4°, and the pulse to 134. The patient looked ill and somewhat collapsed. The right iliac region was swollen and tender. It was thought that the swollen tube had probably been ruptured, and it was decided, if the symptoms did not improve, that the abdomen should be opened. Next day, however, the patient was much better, and the temperature fell to what it was before the attack. The swelling and tenderness gradually disappeared. On September 22nd, I ventured for the first time since the attack to make a vaginal examination. The result was that I found the retro-uterine swelling unaltered, or, if anything, a little fuller and more tense.

On October 18th abdominal section was performed for the removal of the dilated tube, which the illness of the previous month led me to regard as a source of danger. The dilated tube was pyriform in shape, measuring three inches and three-quarters in length, two inches and a quarter in breadth at its widest, and one inch and a quarter at its narrowest part. The broadest part was at the fimbriated extremity, which was closed. The dilated portion was confined to the outer part of the tube, and was lying behind the uterus, the undilated part of the tube being bent upon itself. There were no adhesions about the swollen tube, and it was removed without difficulty along with the ovary. The contents of the dilated tube were serous. The left tube felt as though it contained hard nodules in the substance of its walls; the left ovary was adherent. There was an adhesion of omentum to the left cornu of the uterus, and another less firmly adherent to the right cornu and adjacent portion of the Fallopian tube.

The patient died of septic peritonitis fifty-seven hours after the operation.

At the necropsy there were some recent peritoneal adhesions in the lower part of the abdomen; a small quantity of thick pus was found in the pelvis. There were two black spots on the peritoneal aspect of the fundus uteri, one at each cornu.[9] The tissues beneath were disorganised. A band-like process of great omentum passed to the gangrenous spot on the left side, and was firmly adherent there. The cavity of the uterus was of average size; the mucous membrane was coated with fluid blood (menstrual?). On opening the remains of the right Fallopian tube from within, the first half of the intra-uterine portion was normal, the second or outer half was ulcerated, and a perforation, seven millimètres in length, existed on its upper surface, corresponding to the gangrenous spot already described on the right cornu of the uterus. From the outer border of the uterus to the point where the tube had been divided the lining membrane appeared healthy. The left tube was a little dilated, especially at its distal part, which contained some pus. On opening the intra-uterine portion of the tube the inner half of that portion was healthy in appearance; the outer half was either occluded, or at any rate so constricted that a fine wire would not pass. Between the constriction and the black spot on the peritoneal surface the tissues were softened and of a deep red colour. No perforation could be detected. Beyond this were two hard nodules (gummata?) which, on section, were seen to be pale circumscribed masses of exudation, completely surrounding the mucous membrane. The left ovary was of normal size and much softened.

This case offers several points for comment. Here was a girl of 19, otherwise in excellent health, totally incapacitated by pelvic disease resulting from gonorrhœal infection. In the earlier part of the clinical history it will have been noted that the symptoms were all on the left side; so decidedly was this the case, that the diagnosis was inflammation of the left ovary. Read in the light of the *post-mortem* appearances, the course of pathological events at that time would seem to have been as follows: Gonorrhœal salpingitis on the left side, with pyosalpinx, complicated by ulceration at one portion of the tube, namely, at the outer half of the intra-uterine portion; extension of the ulceration into the surrounding uterine tissue, and eventual perforation at the left cornu, with escape of the purulent contents of the tube into the peritoneal cavity, causing peritonitis and dangerous collapse; recovery from the attack, absorption of the extravasated contents of the tube, occlusion of the tube at the site of the perforation during the subsequent cicatrisation, and roofing in of the aperture in the uterus by a band of omentum becoming adherent over it. It may be objected to this theory that it is contrary to general belief that pus can be absorbed by the peritoneum. There is, however, good reason for believing that, whatever happens in the case of ordinary pus, gonorrhœal pus, when extravasated into the cavity of the peritoneum, excites a local peritonitis, and then under ordinary circumstances becomes encysted and gradually absorbed. There was here abundant evidence of local peritonitis in the numerous adhesions on the left side of the pelvis, by which the ovary was entirely buried, and the free extremity of the tube completely occluded. The two hard masses of exudation in the left tube were probably syphilitic gummata, though I am not able to adduce any evidence of syphilis in other parts of the body. So far as regards the left side. Now let me direct attention to the condition of the right. The tumour formed by the hydrosalpinx was the only pelvic lesion discoverable on bimanual examination, and this I quite hoped might subside. Weeks, however, passed, and the tumour increased in size rather than diminished.

Moreover, the patient had an attack of intense pain on the right side, similar to the one that had occurred some months previously on the left, and attended, like that, with symptoms of dangerous collapse. She recovered quickly, and a month later I opened the abdomen. I only found peritoneal adhesions, a thickened and nodulated left tube, and, on the right side, a hydrosalpinx in the position that had been diagnosed. The uterine perforations I did not see; they were concealed by omental adhesions. I removed the hydrosalpinx, and expected my patient to make a good recovery. Instead of this, she died on the third day from septic peritonitis. I was greatly distressed at this occurrence, fearing that it meant some oversight in my antiseptic precautions. Most minute inquiry was made on this point, but without result. My belief is that the perforation found after death on the right side occurred when the patient had the sudden attack of localised peritonitis, with collapse, a month before the operation, and that the omentum had become adherent to the uterus, and had closed the aperture, the extravasated matter becoming absorbed. The adherent band of omentum was no doubt disturbed by my manipulations, allowing further escape of pus and *débris* from the diseased tube, which, instead of being absorbed, became septic, and so set up the fatal peritonitis. That is the most reasonable explanation I feel able to give of the fatal termination of the case. Two other points I wish to call your attention to, before I pass on, namely, (1) the occurrence in the same tube of a hydrosalpinx at one end and a pyosalpinx at the other, and (2) the fact that rupture of the Fallopian tube may take place at a part where there is no appreciable dilatation. If Dr. Lewers had not happened to mention to me the possibility of rupture occurring under such circumstances, and to recall to my recollection a case of the kind that he had published,[10] I should not have been led to make so careful an examination of the interior of the Fallopian tubes, and the ulcerations and perforations I have described would have remained undiscovered.

I must not, however, forget that I undertook to speak this evening of the relation of gonorrhœa to some of the more common diseases of women. Full of interest as the foregoing case undoubtedly is, it cannot be pretended that perforation of the Fallopian tube is a common affection. I hasten, therefore, to give a brief outline of one or two cases of a more ordinary kind. Take, for example, the following, where the woman became infected after having been married five years and borne two children:

Case III.—K. B., aged 27, a straw-worker, was admitted into Adelaide Ward June 14th, 1888. The younger of her two children was 2 years and 4 months old. For the past nine months she had suffered from a thick, yellow, vaginal discharge, accompanied with pain in the hypogastric and left iliac regions, and discomfort

[9] See coloured plate in the *Trans. Obst. Soc.*, vol. xxx, p. 406.

[10] *Trans. Obst. Soc.*, vol. xxvii, p. 298.

both in micturition and defæcation. The uterus was much impaired in its mobility, and a brawny thickening was felt in the left fornix. The posterior and right lateral fornices were normal. There was a slight laceration of the cervix, posteriorly and to the right. After a fortnight's treatment in hospital the thickening had almost disappeared, and when discharged, after having been in a month, she was free from pain, and felt quite well.

There can be little doubt here about the course of events. The gonorrhœal infection spread to the left tube, and so to the peritoneum, causing a pelvic peritonitis, with adhesions, strictly confined to the parts about the left broad ligament. That the inflammation was not of an intense character was shown by the rapidity with which both the discomfort and physical signs disappeared under treatment.

The next case is one in which the patient became infected at an earlier period of her married life, with the usual results of sterility and recurrent attacks of pelvic peritonitis.

Case IV.—S. W., aged 19, residing at Walworth, was admitted into Adelaide August 8th, 1888, complaining of pain in the lower part of the abdomen and in the right leg. She had been married three years and had not been pregnant. About two months after her marriage she noticed a vaginal discharge, and about the same time began to suffer from pain in the lower part of the abdomen, which had frequently recurred, lasting longer each time. The present attack commenced three weeks ago. The pain was relieved by lying with the knees flexed. The pain down the right leg was a new feature. The temperature was normal in the morning, and varied from 99° to 99.8° in the evening. On bimanual examination, a hard, irregular mass was felt to the left of the uterus and behind it. The symptoms quickly yielded to treatment, and the patient left the hospital on the tenth day declaring herself well.

In the next case, the mischief in the pelvis was of a much more serious character than in the instances last mentioned.

Case V.—E. R., aged 30, was transferred from Christian Ward to Adelaide June 1st, 1888. She was married twelve years ago to a man of loose character, whom she was obliged to leave on account of his ill-treatment of her, and who has now been dead seven years. She has never been pregnant. Nine years ago she had a swelling of the right labium, and has felt ill, and has had a vaginal discharge ever since. For the past six weeks she has had severe pain in the lower part of the abdomen, especially in the right iliac region. A fortnight ago she had an attack of shivering. She was admitted into the medical wards supposed to be suffering from enteric fever.

On bimanual examination the uterus was found displaced forwards, and immovably fixed; cervix immediately behind pubes and diverted to the right. There was a large hard swelling behind the uterus, bulging backwards into the rectum and downwards into the vagina. On the third day after being transferred the evening temperature reached 103.2°, and soon afterwards a profuse discharge of pus took place *per rectum*, followed by signal relief. The abscess continued to discharge for some time; and when the patient left the hospital, on July 8th, her temperature was normal and her condition generally much improved.

I have before me notes of other cases not less instructive, but I must not weary you. I have carefully examined the notes of all the cases of pelvic inflammation admitted into Adelaide during the nine months I have been in charge, and I find that in nearly one-half of them there is a history pointing more or less clearly to a gonorrhœal origin. This may be, and probably is, an unusual proportion. There can be little doubt that septicæmia, following parturition or abortion, occupies the first place amongst the causes of pelvic inflammation. Next in importance comes, in my opinion, the poison of gonorrhœa. These two sources of infection are together responsible for an overwhelming majority of the cases, a small minority being due to cold, tubercle, injury, internal hæmorrhage, etc.

I have said nothing about the bacteriology of gonorrhœa. I do not in the least underrate the importance of Neisser's discovery of the gonococcus—a discovery which I think has a direct bearing on the question of treatment—but it has been my aim to keep within the lines indicated in the title of my paper, so as to restrict any discussion which may take place within practicable and useful limits.

It will, however, no doubt be expected that, having expressed a strong opinion on the importance of energetic treatment in every case of acute gonorrhœa in the female, I should state my views as to what that treatment should be. Regarding, as I do, the evidence of the bacterial origin of gonorrhœa as indisputable, I naturally rely for its cure on remedies that have the power of destroying pathogenic micro-organisms. The old system of instructing the patient to syringe the vagina with lotions of lead, borax, or zinc is, or ought to be, obsolete. The local treatment should be undertaken by the medical attendant himself. The patient being placed in front of a window, in the dorsal position, with knees flexed and separated so as to expose the vulva, all discharge is to be wiped away by means of pledgets of cotton-wool, which are to be at once burnt. If there is any abrasion on the nymphæ, it should be swabbed by means of pledgets of lint dipped in strong carbolic acid; as also should the mucous membrane surrounding the orifices of the vulvo-vaginal gland-ducts, after pressing out and removing any pus that may be lying in the ducts themselves. The urethra should then be pressed systematically from the neck of the bladder to the meatus externus by means of a finger in the vagina. If a drop of pus exudes, the urethra is known to be implicated. The method I adopt under such circumstances is to wrap a film of cotton-wool around a Playfair's uterine probe, and, having dipped it in strong carbolic acid and removed any superfluous moisture, pass it along the urethra. I also administer copaiba by the mouth. If that remedy is ever indicated in the gonorrhœa of women, it is when the urethra is infected, and my own belief is that it is then useful.

With reference to the cervix, my treatment is, having removed all discharge from the canal and scraped any erosions that may be present, to apply strong carbolic acid to the scraped surface by means of a pledget of lint, and to the interior of the cervix by means of Playfair's probe. If there is reason to believe that the infection has reached the interior of the body of the uterus, the probe should be passed its full length, so as to bring the application in contact with the entero-mucous membrane of the body as well as the cervix. There only now remains the vagina to be dealt with. Its surface is too large and too sensitive for the application of strong carbolic acid. I, therefore, adopt the plan, suggested by Schwarz, of swabbing the whole vaginal surface through a speculum, with large pledgets of cotton-wool saturated with solution of corrosive sublimate (1 in 1000). These manipulations take much longer to describe than to carry out. They are not really very formidable, and, theoretically, they ought not to need repeating, though, in practice, they often do. I merely mention here the method of treatment I have myself been led to adopt. I am not in a position to dogmatise on the matter, for my experience is not large. Cases rarely come under our notice in this early stage. Whatever treatment be adopted, it should be capable of destroying pathogenic micro-organisms, and of penetrating the tissues to a certain extent, so as to reach any that may be just below the surface. When the infection has passed beyond the uterus, to the tubes, peritoneum, and ovaries, we can only deal with its results as we should with similar conditions of the same parts however caused.

Postscript.—There appeared after the above address was written, and therefore, unfortunately, too late for me to notice it at length, a valuable paper by Professor White, of Philadelphia, entitled, "Oöphorectomy in Gonorrhœal Salpingitis."[11] The author's main conclusions do not materially differ from my own.

ON THE INFLUENCE OF PERMANGANATE OF POTASSIUM ON MENSTRUATION.

By W. STEPHENSON, M.D.,
Professor of Midwifery in the University of Aberdeen.

In a paper on the Treatment of Amenorrhœa by Manganese,[1] published in 1883, Drs. Ringer and Murrell drew attention to what promised to be a rich vein of ore, well worthy of the attention of specialists. Since that time, however, the work remains pretty much as they left it. A few cases have now and again been recorded confirmatory of the opinions advanced, but contrary views have also been expressed, notably by Dr. Braithwaite, of Leeds.[2] He says he "has given the remedy in not less than forty suitable cases. Any benefit from its use was very seldom met with." My own first impressions, formed from casual observations, were likewise unfavourable. This led me to investigate the subject systematically, with the view of ascertaining the truth. The result

[11] JOURNAL, February 19th, 1889.
[1] *Lancet*, January 6th, 1883.
[2] JOURNAL, April 30th, 1887.

has been to show that Drs. Ringer and Murrell have but broken the surface ground, and that this is not a bogus remedy floated on a too credulous public.

The present investigation has extended over a period of three years. The cases have all been under my personal care, and the large majority of them have been seen in the consulting-room; in all, notes were taken at each visit. As is the usual experience, many of the cases in which the remedy was prescribed have been found imperfect, but I have been able to collect 105 cases in which reliable results were obtained.

In the present series the permanganate of potassium alone has been used. It was prescribed in the form of pill, containing two grains of the salt with sufficient kaolin ointment; one pill three times a day after meals; in a few cases twelve grains a day were taken. Many of the patients continued to take the pills regularly for two and three months. In only three cases did they complain of any pain after the medicine, and in these reducing the number of pills per day or the dose in each was sufficient. My experience, therefore, is different from that of Dr. Döering,[3] of America, who found that "the administration of the drug in doses large enough to be effective is accompanied by severe pain, which frequently necessitates a discontinuance of the remedy, and hence impairs its value as an emmenagogue." This result is explained by the mode of administration. He recommends it to be given in "capsules, taken midway between meals, and followed by large draughts of some pure mineral water." The drug is thus thrown rapidly in solution on the stomach, whereas the pills undergo very slow disintegration.

Amenorrhœa is the test which has mainly been used for the action of the permanganate, and, therefore, naturally leads to a condition which tends to right itself. Unfortunately, it is deceptive. The greater part of the evidence adduced is, nevertheless, composed of such cases. The authors of the paper first referred to state: "Our most striking results have been obtained in young women between the ages of 18 and 25, who from some accidental or trivial cause, such as catching cold or getting wet, have missed once or twice after having been regular."

Evidence of this character must be accepted with caution; and did the belief in the action of the permanganate rest on such alone, it would require a very large number of successive cases (not cases taken here and there) to eliminate the uncertainty that is inseparable from the affection. Two of my cases were instructive in this respect, for they both menstruated before they had taken the pills.

In so-called emmenagogue remedies I have no belief, and that such is not the action of permanganate of potassium is evident, for I have found it as serviceable in restraining the menstrual flow when in excess as in promoting its recurrence when suppressed.

Of the beneficial effect of the drug in amenorrhœa I have no doubt, but this opinion is not based on the result of the treatment of such cases alone. Corroborative tests can be used. First, where menstruation has not been suppressed, but the intervals between the periods have been irregular, does the permanganate promote regularity? Secondly, where the periods have been regular, but the quantity has been scanty, does the permanganate increase the amount of the discharge? And, thirdly, has the remedy any influence in modifying the amount of suffering experienced at the periods?

An analysis of the 105 cases gives the following results on these points: Of amenorrhœa, where menstruation had previously been fully established, there are 22 cases. Of these the flow was re-established in 12 cases, and no such effect in 8; in 2 the remedy acted well at first, but on a subsequent amenorrhœa it failed. Of primitive amenorrhœa, or where menstruation had been imperfectly established, there are 10 cases; in 6 good results were obtained, and in 4 none. In 7 cases the interval was too long, but otherwise menstruation was natural; in 5 of these there was marked improvement, in 2 the character remained the same. In 21 cases menstruation was scanty in amount, and too long between the periods; in 11 there were good results, in 10 no improvement. In 18 cases there was very marked improvement in the amount of pelvic pains, and frequently the patients stated that they felt much stronger during the periods, and were not "so pulled down."

In estimating the value of these general results it must be remembered that in the inquiry the permanganate of potassium was prescribed indiscriminately, with the view of testing its action; the failures are, therefore, more numerous than they otherwise would have been had cases deemed most suitable been selected. Thus a number of them were cases of chlorosis, where iron should first have been employed or given in conjunction with the manganese.

Together with the above tests, there is another which should be taken along with them, that is the marked action of the remedy in checking leucorrhœa. This effect I observed early in the investigation, and I find Dr. Ringer also mentions it. The action is very reliable, and generally immediate, but in some cases it is obtained only after the first menstrual period; in two cases only there was no improvement in the leucorrhœa, and as both were unmarried no examination was made.

Whilst treating a case of long-standing amenorrhœa, I found that without menstruation being restored, she had been relieved of severe headaches from which she had suffered for four years. This directed my attention to the subject of menstrual headaches. Since that time I find amongst my notes 29 cases in which headaches were a prominent symptom; in only 4 of these was no relief obtained.

There is one striking case where the patient, aged 35, had suffered from headaches all her menstrual life. They occurred on the first, and occasionally the last, day of each period, but for three years they have returned every fortnight, at the mid-period. Since taking the permanganate (now nine months) she has not had a headache.

The headache of the menstrual period was not always removed, but generally greatly moderated. The best results were obtained in cases where the headaches had begun to return in the intervals, once a fortnight, then weekly, and, at times, two or three times a week.

In a similar manner I was gradually led to the fact that the permanganate has a marked influence in relieving ovarian pain. Amongst the notes there are 22 cases in which the ovarian spot pain was a special symptom. They were all more or less relieved, some in a very marked manner. I now prescribe the remedy in all cases of functional ovarian pain with as much confidence as I do in leucorrhœa. The relief is not always complete or permanent, but there is ample proof that the drug exerts a beneficial influence over this very intractable symptom.

As the subject thus became widened, another point demanded attention. Has the permanganate any influence over menstruation when it is in excess either in time or in quantity? I have notes of 27 cases where this condition was present, and in 2 only was there no improvement. The beneficial effect in this respect is even more marked and reliable than in the opposite condition of suppressed or scanty menstruation. There is here less likelihood of wrongly attributing the improvement to the medicines, and some of the cases leave no room to doubt the action of the remedy. Thus one patient, aged 44, had for nine months menstruated every fortnight, and any excitement would bring it on. For the first four days of a period the discharge was very free, and thereafter moderate for other six days, making ten in all. The first menstrual period came on a week after beginning the medicine, with but little improvement; the second menstruation, at twenty-eight days' interval, quantity less, but still free, lasted five days, instead of ten; third menstruation, twenty-six days' interval, lasted six days, "not so pulled down," general health improved; fourth menstruation, twenty-eight days; fifth menstruation, twenty-four days, quantity normal. The effect is thus observable both as to time and quantity.

Each of the above points merits and would require a separate paper for its consideration. Time at our disposal permits general statements of results only. It is, however, evident that in the permanganate of potassium we have a remedy which has a considerable influence upon the function of menstruation when that function is deranged. In the matter of time, it tends to promote the normal periodicity both when the periods are too long and when too soon. It aids in restoring the menstrual flow when suppressed, to increase it when scanty, and to moderate it when in excess. It relieves much of the menstrual suffering, has a direct influence on some forms of ovarian pain and the headaches of menstrual origin. It has a remarkable influence in checking leucorrhœa.

The questions naturally arise, then, how does the permanganate act, and what are the cases suitable for its administration? It might be argued that manganese has, as its emmenagogue action implies, a direct influence on the generative organs, as ergot has on the uterus, and digitalis on the heart; but the evidence at our

[3] *American Journal of Obstetrics* for 1885.

disposal does not warrant any such conclusion. As yet the action of the drug has been studied only in relation to disease, and we have no evidence to prove its physiological effect in health. A study of the cases seems to point to the view that its beneficial action is due to its correcting the *constitutional* states which give rise to menstrual derangements, rather than to any specific effect on the uterine structures. It might equally well be stated that lime-juice has a direct action on the gums because it removes the scorbutic lesions of these parts.

The action of manganese has generally been supposed to be similar to that of iron, and accordingly at one time it was given in chlorosis and anæmia, but "failed to be of service." It does not act on the blood, its action is totally different from iron, but yet I have found it of decided use in chlorosis for its effect on menstruation, and of late I have added the carbonate of manganese to Blaud's pill.

The study of my cases, from a constitutional point of view, apart from its action on menstruation, tends to indicate that manganese acts on the vasomotor system, improving and giving tone to the circulation. This is well seen in a constitutional state met with in young girls. They are not anæmic, rather the reverse, full blooded with languid circulation; the chief characteristic is that the face and extremities are hoven, with a tendency to blueness; there is a great loss of energy and a disposition to drowsiness in the daytime. Under the permanganate this constitutional state steadily improves. At first there may be a loss of weight, the colour becomes clearer, the fulness of the tissues subsides, and the energy returns. The loss of weight I have several times observed in patients taking the permanganate is not due, in my opinion, to increased combustion of the tissues, but to the diminution of the watery elements of the blood and tissues. The condition is not œdema, but a vascular fulness.

Much of the relief to menstrual suffering afforded by the permanganate is doubtless due to the improvement in vascular action. Several of the cases, which time will not permit to quote, clearly indicate that some forms of menstrual pain are caused by vascular distention and increased venous blood-pressure. It is in these cases the remedy may be relied upon to afford relief, and so improve the system that the suffering does not return at subsequent periods. The influence of the remedy on leucorrhœa is likewise, in all probability, due to the improvement in the circulation. The effect in affording relief to the ovarian pain admits of the same explanation.

The vascular changes associated with menstruation are, however not merely local but are truly systemic. The relief obtained in headaches can therefore be also understood by an improvement in the general circulation. But, as we have seen, the remedy influences not only the amount of the discharge but also the time, by restoring the normal periodicity. This points to an influence on the nervous system. Laschkewitsch has shown that in toxic doses "manganese causes general paralysis, at the same time the heart's action ceases, owing to the direct effect of the drug on the motor apparatus."[4] From these pharmacological experiments, together with the results of clinical observation, we may confidently infer that the direct action of the remedy is on the vasomotor centres, and from the marked influence on menstruation it is probable that it stimulates especially the centres regulating the generative system.

A NEW METHOD OF EXCISING THE WRIST-JOINT.

By EDWARD THOMPSON, F.R.C.S.I.,
Surgeon to the Tyrone County Infirmary.

Excision of the wrist-joint, even in these days of antiseptic surgery, is an operation not much in favour with most surgeons. It is comparatively seldom practised, probably because, as a rule, the amount of disease which would justify such a very serious proceeding is too extensive to render success probable, while in slighter cases efforts are made to remove limited diseased portions of bone, a proceeding which I have often seen attended with very unsatisfactory results. The operation as perfected by Sir Joseph Lister is, notwithstanding all that can be said in its favour, clumsy and difficult of performance, and includes removal of the whole carpus, resection of the ends of the metacarpal bones, as well as of the ulna and radius. The following case, which has been under treatment in the Tyrone Infirmary, illustrates the change which I propose in the method of performing this operation.

Mrs. I., a strong, healthy, middle-aged woman, living near Dungannon, in the county Tyrone, was admitted into the Tyrone County Hospital, about two years ago, suffering from caries of some of the carpal bodies of the left hand. The diseased and loosened portions of bone were removed by careful gouging, and although there was some improvement, the woman went home very little better than when I first saw her. About five months ago she returned to the Infirmary in a very much worse state of health. She had lost greatly in flesh and strength; the lower part of the forearm and hand were swelled and much inflamed. The slightest motion, even of the fingers, caused intense pain. There were numerous sinuses both on the back and front of the hand and forearm, all of which communicated readily with carious bone. There was also a constant discharge of thin unhealthy pus. The patient was most anxious to have her forearm amputated, as her sufferings were intense. I determined, however, to try and save the hand by removing the diseased bone by a method quite different from the proceeding generally adopted in excision of the wrist. On the back of the hand, and within about half an inch of its ulnar border there was a large shallow ulcer about the size of half-a-crown. I selected the outer edge of this sore as the site of the incision, which ran between the tendons of the extensor communis and minimi digiti, and was about four inches in length. The edges of the wound were kept apart by retractors, the joint freely opened into, and a full and accurate view obtained of its inner aspect. The disease seemed to be confined to the first carpal row of bones, and to the lower extremity of both the radius and ulna.

A gouge was first introduced into the joint, and the semilunar bone gouged completely away; then each of the neighbouring bones was firmly caught by a strong forceps, slowly twisted from its connections and removed. The diseased ends of the radius and ulna were removed by gouging. Subsequently, as there was no difficulty in shoving the extremity of the radius and ulna through the wound, I thought it better to saw both bones straight across immediately above the seat of disease. In order to allow free drainage, a small incision was made on each side of the joint as close as possible to the level of the floor of the joint, and a drainage-tube inserted. The wound was stuffed firmly with iodoform gauze, and dressed antiseptically. A straight splint was placed under the forearm and hand, the palm being supported and raised on a roller bandage instead of a piece of cork as usually recommended. The case made an uninterrupted and speedy recovery, and the patient has now a good useful hand instead of an unsatisfactory mechanical contrivance.

This case seems to me of some importance, because it well illustrates the success of a plan of treatment which I believe has not been hitherto recommended. The method employed differs widely from the usual operation of excising the wrist-joint. It is easy of performance, free from danger, does not tear or injure any of the tendons, vessels, nerves, or deeper structures. It is quite bloodless, and does not require removal of any portion of bone which is sound and healthy. The opening on each side of the joint I consider essential, as free exit is thus given to any discharge that might possibly collect in the cavity left after removal of the diseased bones. Arthrectomy of joints, with removal of diseased masses of bone by gouging and the chisel, has a large field before it. Quite recently in the Tyrone Infirmary I opened freely into the knee-joint, and gouged away nearly the whole of the head of the tibia, draining the joint freely by two large drainage-tubes inserted above and below, and crossing in the joint. The case was a most unfavourable one in every respect, yet recovery was complete, the boy being out of bed in a few weeks, his limb being well supported in a plaster-of-paris case, which was put on immediately after the operation.

CASE OF POISONING BY NEW "SICHERHEIT" EXPLOSIVE.

By WILLIAM SYKES, M.R.C.S., L.R.C.P., and F. GRAHAM TWIGG, L.S.A.,
Mexborough, near Rotherham.

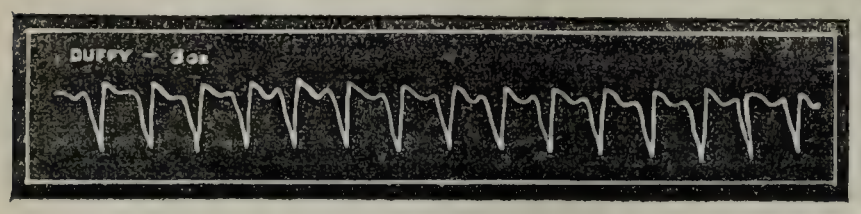
P. D., male, aged 33, presented himself at the surgery on July 3rd, in the evening.

History.—Previous health excellent. Commenced mixing in-

[4] Binz's *Therapeutics.*

gredients of "Sicherheit" explosive on Friday, June 28th, but Saturday and Sunday being holidays did not work a full day until Monday, July 1st, and since then worked regularly until the time of attending at the surgery. On Monday evening, July 1st, he began not to feel well, and his wife noticed that he was very blue.

Symptoms.—(1) Subjective: Has much headache of a dull and heavy character, chiefly frontal. Feels very short of breath on exertion. Is "muddled in his mind." (2) Objective: Is cyanosed all over. His appearance can only be compared to that of an infant with patent foramen ovale. The cheeks, naturally ruddy, are of deep purple-blue; hands blue except nails, which are of a yellow-white. The pulse is quick and jerky, 99 per minute. Sphygmographic tracing as below. The blood from prick of finger is of a



Pulse-tracing; pressure, 3 ozs.

dirty purplish-black colour; presents no remarkable features under the microscope, except that the red corpuscles are crenated. The heart-sounds are normal, except that the first sound is indistinct. Ophthalmoscopic appearance: Blood-vessels unusually dark in colour and dilated. Temperature at 9 P.M., 99.9° F. Urine dark orange-brown in colour, clear; specific gravity 1030, acid, no sugar.

Treatment.—Beyond a heart tonic by way of placebo the treatment was confined to free exposure to fresh air and sunlight, and absence from the mixing-room. The patient slowly amended, and had regained his normal health and colour in about two days.

OBSERVATIONS.—The "Sicherheit" explosive is a German patent, intended for blasting in coal mines and other places where a flameless explosive is indicated. A manufactory has been recently established at Denaby, by Mexborough, where P. D. works. His duty is to mix the ingredients in a steam bath, during which process noisome fumes are given off. The composition of the explosive is kept a profound secret, and the patient either is, or pretends to be, ignorant of its nature. Other cases with similar symptoms have arisen at the works, as we gather, but we have not been able to get particulars of them. The points of greatest note and interest appear to be the cyanosis (produced most probably by the rather stable combination of some gas with the red corpuscles of the blood) and the raised temperature. The subjective symptoms appear to bear proportion to the objective ones. The patient was able to walk to the surgery each day. His appetite was not interfered with; his only complaints were, as before stated, severe headache and "muddiness," with shortness of breath. It was his wife's alarm at his blue appearance, and not his own symptoms, which induced him to seek medical relief. So far as we are aware the case is a unique one.

TWO CASES OF MALIGNANT DISEASE OF THE THYROID GLAND.

BY PROCTER S. HUTCHINSON, M.R.C.S.

A CASE of malignant disease of the thyroid, which came to Mr. Hovell's clinic at the Throat Hospital, and which, owing to his absence in Germany, he did not see, is, I think, worth recording, on account of such cases being rare.

The patient, R. P., a schoolmaster, aged 53, came complaining of a swelling occupying the right lobe of the thyroid, which he had noticed three months; it was very hard, tender on pressure, and immovable. It had come on rapidly, and was causing severe pain, shooting to the arm, dysphagia, and a husky voice. Laryngoscopic examination showed absolute fixation of the right cord in the cadaveric position. There was great pain at night, preventing sleep. He was a thin man, and had lost flesh. I saw the patient during two or three weeks, the enlargement always remaining as hard as a wood board. The patient died from exhaustion about six weeks from the first time I saw him, that is, about four months and a half from the time of first noticing the tumour.

I obtained a necropsy at his house. I found that since my last seeing the patient, a fortnight before, the tumour had swollen to double its size. The whole gland was infiltrated with pus, and cut on section like liver. It had pressed closely on surrounding structures, but had not grown into them. Microscopic examination showed such a marked alveolar arrangement that the idea that the changes were merely inflammatory was negatived. The cells also in the alveoli had a more definite arrangement and outline than pus cells, though they were somewhat smaller than the usual size of soft cancer ones.

It is probable that the tumour, which had entirely replaced in the part examined the normal thyroid structure, was a small-celled cancer, though it had many of the characteristics of an alveolar sarcoma.

This case illustrates the difficulty, so often found in thyroid tumours, of determining whether the growth is sarcomatous or cancerous. Owing to the necropsy being done under disadvantageous circumstances, I was unable to examine the other organs, but he had no symptoms of disease elsewhere.

I am indebted to Mr. Hovell's kindness for permission to publish the case, and to my brother, Mr. J. Hutchinson, jun., for the microscopical examination. The dysphagia and aphonia were caused by pressure and not by the growth having involved either trachea or œsophagus. No enlarged glands were found.

The second case occurred in a woman, J. H., aged 56. She came to the hospital complaining of swelling on the right side of the neck, which had been present about five months. It caused some dyspnœa and dysphagia. The swelling occupied the position of the right lobe of the thyroid, was about the size of an orange, and was apparently only a simple goîtrous enlargement. She was a florid, otherwise healthy-looking woman, and not in any way emaciated. She attended as an out-patient for some few months, during which time the goître got gradually harder, and dyspnœa began to be more troublesome. On June 6th, 1887, she was admitted into the hospital, and an endeavour was made to remove the gland in order to relieve the dyspnœa. It was found, on cutting into the tumour, that it was too firmly attached to surrounding structures for removal to be possible. It cut like an unripe potato, and was very hard. A piece was removed for microscopical examination; it was not vascular. In the sections examined there seemed to be but little tendency to an alveolar arrangement; nevertheless, the occasional small groups of large nucleated cells suggested that the growth was of the nature of a scirrhus, or, at any rate, a cancer. The difference in size between the cells was very marked, the small round ones largely predominating in number. There was very little fibrous tissue present. The patient went home again, and died about five months afterwards; no necropsy was obtained. As in this case it was probable that malignant disease had developed in an old goître, it is difficult to date its duration. I am indebted to Dr. Wolfenden's kindness for permission to publish this case. I have seen one other case, in a clergyman, aged 49, which came on in an old goître, and proved fatal in rather over a year from the time of appearance of malignant symptoms. The glands were extensively involved later; no necropsy was obtained. The following is a summary of cases recorded in the *Pathological Transactions*, to compare the course of the disease.

Case recorded by	Nature of Disease.	Duration.	Sex.	Age.
Dr. Moxon	Encephaloid cancer	4 months	Woman	46
Dr. Payne	Medullary cancer	?	,,	66
Dr. Church	?	7 months	Man	48
Mr. Bowlby	Infiltrating fibroma	3 years	Woman	42
Dr. Carrington	Epitheloid cancer	?	Man	47
Dr. Gulliver	Malignant, complicated by myxœdema	?	Woman	46
Dr. Norman Moore... ...	? epithelioma or sarcoma	5 months	,,	46

I find in Mr. James Berry's Jacksonian prize essay of 1886 that he records altogether thirty-seven museum specimens. Of these, thirty were cancer (three being scirrhus) and seven were sarcoma. Thirteen occurred in one museum, that of Berne, in Switzerland; the other twenty-four in Great Britain. He thinks that malignant disease occurs more frequently in patients who are already the subjects of existing goître than in others.

THE Minister of the Interior has given a thousand francs to the Paris Ambulance Organisation.

THERAPEUTIC MEMORANDA.

IODOFORM ERUPTIONS.

THE following case may throw some light on the questions raised by Mr. Arthur Cooper in the JOURNAL of June 15th.

Mr. C., aged 72, came under my care in April, 1888, suffering from an epitheliomatous ulcer situated behind the lobe of the ear. The pain was intense, and all idea of radical treatment being negatived by the patient's age, at a consultation on May 2nd it was decided to apply iodoform, with the idea of allaying the pain. I provided the patient with some iodoform, "the crystalline variety," and on May 5th the pain was much less severe. So it continued until May 18th, when the pain was much worse; and on inquiry I found that the patient had used all the iodoform I had provided him with, and had procured some for himself, which on examination proved to be "the pulverised variety." From the date of using this he noticed the pain increase.

I procured some more of the crystalline variety, with the effect that the pain was speedily allayed; but three days afterwards I noted "an erythematous blush spreading over the side of the face and head." There were no signs of iodoform poisoning, and I regarded it merely as an evidence of local irritation. Shortly after this the patient passed out of my care, and I saw no more of him.

The case indicates that, as far as regards the effect on pain, the crystalline is superior to the pulverised variety. In this case the drug was continuously applied for three weeks before any sign of an eruption appeared, while its beneficial action was manifest; and in the treatment of painful ulceration of any kind I am inclined to use the crystalline variety in preference to all others.

Brighton. GEORGE C. PEACHEY.

PILOCARPINE IN DEAFNESS.

SEEING in the JOURNAL recently a suggestion made by Mr. Field that the hypodermic injection of pilocarpine was worth a trial in bad cases of deafness, especially where labyrinthine mischief was suspected, I have adopted this treatment in five cases, which may, perhaps, be interesting to recount.

CASE I.—J. C., an old man, suffering from locomotor ataxy, whose ear history is this: A year or two ago he could hear a clock ticking in his room, but has gradually lost this little amount of hearing. One has to shout to him to make him hear at all. Drumming tinnitus in both ears. No discharge at any time. Watch not heard in contact with either ear. Tuning-fork heard on vertex, mastoids, and teeth but not close to concha, but bone conduction markedly deficient. Right Eustachian tube blocked; left pervious. Some wax was found in the right meatus, which was syringed out and pilocarpine treatment commenced (gr. $\frac{1}{15}$ once a day) on March 26th. The injection was gradually increased to gr $\frac{1}{4}$. This caused profuse sweating and, after a time, salivation. Result no good whatever, although the treatment was continued seventeen days.

CASE II.—Miss A. M. W., aged 65. Deaf thirty years, coming on gradually after a shock. Bone conduction impaired. Both Eustachian tubes free. Injection begun March 20th and continued until April 27th. Profuse salivation and sweating, but no good was effected.

CASE III.—Mrs. M. P., aged 60, can hear conversation if she is spoken to close by. Uses a speaking-tube. Had inflammation of left tympanic cavity in 1887, followed by perforation. Tinnitus; giddiness. Watch not heard in contact with either ear. Tuning-fork faintly heard on vertex and both mastoids. The Eustachian tube of the worse ear, the right, was pervious, the left was apparently obstructed. Profuse salivation and sweating were produced. Treatment continued a month. The general result was not encouraging. For a time she thought she heard better, but the effect, if any, soon passed off, and she heard no better at the end. The tinnitus was as bad as ever.

CASE IV.—Mrs. A. W., aged 68. Chronic rheumatic arthritis. This patient's hearing varies. Bone conduction a minus quantity. Before she began the treatment she could hear the ticking of a clock in the room. Pilocarpine injections were continued about three weeks. During the treatment she thought there was great improvement. She could hear the church bells and the rooks outside her window, but the improvement was very transient, and at the end she could not hear the clock which she formerly heard.

CASE V.—Miss J. L., aged 44. Can hear only by shouting into the left ear. Has been deaf nine years. Deafness appears to be a family complaint. Watch not heard in contact with either ear. Tuning-fork not heard on vertex, mastoids, nor teeth. Tinnitus both ears, especially in the right; giddiness occasionally. Cerumen in both ears, which was removed by the syringe, and the treatment commenced and continued three weeks. The result was very extraordinary, and was recorded by her in a humorous way. She said her nurse had become very noisy, and she knew all the secrets of the fire-place—when the poker dropped, and even when a coal fell out of the fire. She appeared to hear sounds better, but not conversation, except once or twice, when she heard what her nurse and attendant said. Once or twice, too, to her great satisfaction and joy, she heard the tuning-fork, not only on her mastoid but even a short distance from the concha. The improvement, however, was not maintained, and she became as deaf as ever.

This was the only case which can fairly be said to have given a glimmer of hope; but it was very transient, and no real good was effected. THOMAS JAMES WOODHOUSE, M.D.

11, Putney Hill.

SURGICAL MEMORANDA.

THE OPENING OF BUBOES.

IN concurring with Dr. Boileau in his opinion on this subject, I beg to say that for five-and-twenty years I practised aspiration, and in all cases patients have expressed satisfaction. Instead of using the bistoury, I use a very small trocar and cannula. In no case have I had a sinus to open afterwards, and the patients have not been kept away from their duties for more than two or three days, which to clerks and business gentlemen is a matter of great import.

A. C. JACKSON, M.R.C.S.E., L.R.C.P.Ed., late of Cape Town.

Brighton.

I MOST thoroughly endorse every word Dr. Boileau says in his communication to the JOURNAL of July 6 on the opening of buboes.

I have for some years adopted the plan of merely making a small puncture into the bubo as soon as I have thought there was a sufficiency of pus formed, and by doing so I am convinced that the patients so treated have made a more rapid and satisfactory recovery than when treated by the old method of free incision.

The puncture, no doubt, is very apt to heal over, but can easily be reopened with a probe inserted into the original orifice, made by the bistoury. The old plan of making free incisions is certainly harmful in the different ways mentioned by Dr. Boileau, and in my humble opinion does not lead to a rapid recovery but much more to a retarded one; I am very glad Dr. Boileau has put the matter so clearly before the profession.

Coltishall, Norwich. HUGH TAYLOR.

A CASE OF CARBUNCLE TREATED BY CARBOLISED SPRAY.

MR. H., aged 65 years, was visited by me on June 15th for a tense, red, hot, and painful swelling, mainly situated over the right scapula, but extending upwards towards the neck, downwards towards the lower ribs, outwards towards the shoulder and chest side, and inwards limited at the middle line. At three points—one at the superior angle and two at the inferior angle—there was distinct fluctuation.

Having recently read Professor Verneuil's report to the Academy of Medicine of Paris on the above treatment, I tried it, with the following result: I used a spray of 1 to 12 carbolic acid and distilled water, followed by the application of a linen square 8 inches by 8 steeped in carbolised oil 1 in 20, over which a linseed poultice was laid.

June 16th. Temperature, 99.7° F.; pulse, 90. Ordered potassium bromide gr. xv and chloral hydrate mixture gr. xv, with tincture of tolu ♏x in water ℥j at bedtime for sleeplessness.

June 17th. Temperature, 99.2°; pulse, 84. The upper point over superior angle of scapula was discharging a sweet, healthy pus through about a dozen perforations like pinholes.

June 18th. Temperature, 98.8°; pulse, 84. Discharge very profuse.

June 21st. Temperature, 98.4°; pulse, 64. Discharge still free; both the lower points had subsided.

June 28th. Temperature normal; pulse, 84. Tongue clean; on

the 25th slight sanious discharge, after which no further discharge. Back regaining its former suppleness; no swelling; upper wound almost healed. The patient's appetite was voracious, and he looked in every way improved; his skin was soft, his tongue clean, and his spirits good and sleep undisturbed.

EDWARD H. RYAN-TENISON, A.A.Oxon., M.R.C.S.Eng.

Bexhill.

GUNSHOT WOUND OF AXILLARY ARTERY.

ON June 10th, J. P., aged 15, while climbing a fence, received a discharge of shot from a gun which he had been incautiously carrying. I saw him in about a quarter of an hour from the time of the occurrence. His clothes were saturated with blood; he was blanched and almost in a state of collapse. The accident had occurred about one hundred yards from his home, to which he immediately ran. When I arrived the hæmorrhage had ceased; there was a jagged wound in the axilla, from which afterwards about a teaspoonful of small shot was removed. While examining the wound the spouting from the axillary artery recommenced. Owing to the height at which it was injured I was unable to secure the vessel from the axilla. Assisted by Drs. H. C. Bevan and Lowe, of Brynmawr, I ligatured the subclavian in its third stage. I thoroughly cleansed the wound with ordinary "tap-water," brought the edges together with wire, and applied a pad of boric lint. The collateral circulation was fully established in fourteen hours. The boy made an uninterrupted recovery, and on the tenth day he was up and walking about, having perfect feeling in, and almost perfect use of, his arm.

Nantyglo, Mon. K. DIXON DOBBS, L.K.Q.C.P., L.R.C.S.I.

CLINICAL MEMORANDA.

MILIARY PYURIA.

THE two cases of pyuria recently reported by Dr. H. Handford have brought in review a subject much neglected in textbooks. I have in mind a case of pyuria in which miliary bodies were found similar to those mentioned by Dr. Handford, and this was diagnosed as a case of tubercular kidney involving the pelvis. It is a very easy matter to regard these as simple and accidental globules of pus, muco-pus, flat cells, and blood corpuscles agglutinated in their transit down the ureter or ureters, and subsequent rolling in the bladder; but what we need is a discourse in the JOURNAL by a competent observer of long experience, treating of tubercular disease of the bladder in its relation to urinary deposits.

Doubtless most practitioners believe that tubercular cell-structure is broken down into pus and granular *débris* at the kidney before entering the bladder; but it appears rational to believe that in tubercular pelvis or ureter we may have a shedding of the epithelial layer, exposing the granules of tubercular disease, which start in the submucous layer, and these tubercular deposits when exposed and about to degenerate may be washed down into the bladder, and show under the microscope the greater part of their primary structure.

It should be remembered that primary tubercular disease of the kidney may be far advanced without showing pus in the urine, and but little albumen. BENJAMIN WALKER, M.B.

Kirkby-Stephen.

REPORTS

ON

MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

ST. MARY'S HOSPITAL.

CLINICAL NOTES OF VARIOUS CASES.[1]

(Under the care of Mr. PAGE.)

CASE IX. *Foreign Body in Right Bronchus: Tracheotomy.*—A boy, aged 9, was brought up to St. Mary's Hospital on July 9th, 1888, by Dr. Austin, of Lingfield, with a history that on June 30th he was catching pebbles in his mouth, when one of them suddenly disappeared. He had an immediate and violent fit of coughing, and from that time onwards he had been frequently subject to similar attacks. The cough was always worse when he was sitting or standing up and when he lay on his left side more than when he lay on his right side or back. He had some pain in the episternal notch. For two or three days before admission his temperature had shown a tendency to rise, and from the physical signs Dr. Austin had come to the conclusion that a foreign body was lodged in, but did not completely block, the right bronchus either at its bifurcation or in the branch to the upper lobe. As to the correctness of this diagnosis there could be no question, for the breath-sounds were markedly diminished in the whole right chest, the subclavicular region more especially; and at a point over the centre of the second right costal cartilage there was to be heard a curious rustling or blowing sound, as of air passing through a narrowed tube. Furthermore, the left side of the thorax expanded much better than the right, and the breathing was distinctly puerile. The boy gave a description of the pebble which had vanished, and although the extracted stone was larger than he thought, yet, nevertheless, his statement was confirmatory of the diagnostic import of the physical signs, for such a stone as he described might very readily have stuck at the place named. He was in so little distress on his arrival that no immediate attempt was made to dislodge the stone; but on July 10th, the diagnosis having been confirmed by Dr. Broadbent, tracheotomy was performed, and the stone was at once felt with a long curved probe at the spot where the diagnosis had placed it, about 5 inches below the tracheal opening. With hooks, with coiled wire, and with various-shaped forceps attempts were then made to seize the stone, but it was so firmly fixed and so slippery as to be quite immovable, and after one hour and a half the attempt had to be abandoned. Once it was thought that the stone had been dislodged by pressure with the probe, but if this surmise was right its appearance at the tracheal orifice was only momentary, and again it was fixed in exactly its old position as tightly as before. At any rate, it was obvious that the tracheal opening was too small, and accordingly another ring, the fourth, was divided, and the opening was still further widened by stitching its margins to the skin. Nevertheless, we failed to move the stone.

The boy, fortunately, seemed none the worse for this manipulation, and therefore on the next afternoon he was again anæsthetised. Again no forceps would grasp, and again failure seemed to be imminent, when a much more forcible, and as it was feared at the time an almost dangerous, use of the long probe succeeded in dislodging the pebble. Violent coughing instantly ensued, but the tracheal orifice seemed to be even now too small, and the weight and smoothness of the stone were such as to give it an uncontrollable tendency to fall back into its old place. The stone moved rapidly up and down, but luckily was caught at last in a pair of fine forceps held open in the trachea. It turned out to be an oval and symmetrical piece of perfectly smooth cornelian, $\frac{5}{8}$ inch long, $\frac{1}{2}$ inch wide, and $\frac{3}{8}$ inch thick, of just such size and shape as to become fixed edgewise in the bronchus, and yet allow some air to pass on either side of it. The boy rapidly improved without untoward symptom, and left the hospital on July 30th.

It was well remarked by Mr. Hulke, in recording a case which he brought before the Royal Medical and Chirurgical Society in 1876,[2] that "the difficulties attending the extraction of a foreign body from the lower part of the air-passages are only fully estimated when they actually confront us." In the case just given, the difficulties of extraction were no doubt much less than have often attended the extraction of foreign bodies, especially those which have been tubular; yet, nevertheless, the firm fixation of the stone and its exceeding smoothness created obstacles by no means small. Clearly the right thing in such instances is to persevere day by day until the body be dislodged, for the manipulations of the operator are a source of far less danger than the continued lodgment of the foreign body. Doubtless much depends on the physical characters of the body itself; one that is rough and sharp-edged will cause more injury and set up more inflammation than the smooth pebble from a running brook, but the records of cases clearly show that it is only a question of time when the consequences become serious, and life is placed in danger. The foreign body must somehow be got out, and towards this end a free opening in the trachea and stitching of its edges to the skin give the surgeon great additional facilities in his efforts at extraction. Thus Mr. T. Smith writes in his account of the remarkable case brought by himself and Dr. Cheadle before the Royal Medical

[1] Continued from the JOURNAL of October 28th, 1888.

[2] *Trans.*, vol lx.

and Chirurgical Society last session[3]: "I would venture to recommend the plan of attaching the edges of the tracheal wound to the skin while searching for foreign bodies in the air-passages below; it keeps the trachea widely open throughout the operation, which is a great help to the surgeon and a source of safety to the patient."

For an account of many cases of great interest and importance, the reader will do well to consult a clinical lecture by Dr. George Johnson on "Foreign Bodies in the Air-passages.[4]"

CASE X.—*Injury to Lower Epiphysis of Radius: Acute Osteomyelitis: Amputation of Arm*.—The following case is worthy of record as an example of those somewhat uncommon injuries to epiphyses, to the importance and serious nature of which Mr. Hutchinson called attention some years ago, which even now are somewhat inadequately dealt with in the textbooks of surgery, but of which we shall hope to hear something more when his son's Jacksonian Essay on these injuries has been published.

On June 27th, 1887, A. R., aged 17, a groom, was lifting a horse-collar down from its peg in the stable, when, because of his insecure hold of it, the collar slipped back and his right wrist was, as he thought, sprained. In about three hours his wrist began to be painful, but he continued at his work both on that and the next day. On the evening of the 21st he first noticed swelling of the wrist, and then also he began to have headache. On the 22nd he felt very ill, and by the advice of a doctor came to St. Mary's on the 23rd. The lad was then obviously very ill; his temperature was 103.4° F., and he was complaining much of headache. There was some swelling on the flexor side of the wrist, which was also hot and tender. Into this swelling Mr. Sharpe, house-surgeon, made an incision on June 24th, but he evacuated only a small quantity of clear serous fluid from the sheath of one of the tendons. He did not open the periosteum. This incision was made under the most careful antisepsis, and to some extent it relieved the pain, but in himself the lad was rather worse than better on the following day. His temperature had not gone down, and his whole aspect was very suggestive of typhoid fever.

On June 26th the arm itself had begun to swell, but examination of the wound discovered no indication of pent-up discharge. Hot boracic fomentations relieved his pain for a time, but there was no real improvement, and the strongest suspicion was felt that he had acute inflammation of the radial epiphysis as the result of some injury sustained by it when the wrist was supposed to have been merely sprained. It was not, however, until June 30th that distinct fluctuation, and with it extension of redness and swelling to the dorsum of the limb, indicated the necessity of a much freer opening than had been previously made. A two-inch incision was accordingly made on the back of the wrist, and pus was let out from beneath both skin and fascia. It was then found that the whole lower end of the radial shaft was quite bare. Drainage-tubes were inserted, and the limb was ordered to be constantly irrigated. After this he was for some days rather better; his tongue began to clean, and he was able to enjoy his food. The improvement, however, did not last long. The pus increased in amount, and soon began to burrow up the limb, the elbow became swollen, next there was suppuration in the upper arm, then the elbow-joint became involved, and there was no sign of his being really better until after the amputation of his arm in the middle third on July 19th. Then he rapidly got well.

Examination showed that the periosteum had been stripped up from the shaft of the radius to a distance of five inches, but there was no inflammation of this part of the bone. The epiphysis, however, was quite detached, and what remained of it presented all the indications of having been affected by an acute destructive septic inflammation. It was soft, completely broken down, and infiltrated with pus. It was indeed abundantly clear that in the epiphysis itself had been the beginning of the mischief, and that in all probability there had been some separation of it from the shaft, and that the unhealthy character of the boy's occupation had determined the virulent septicity of the inflammation which so speedily supervened. Whether at the time of the accident there had been likewise detachment of periosteum, it is impossible to say with certainty, but in many of the cases where there has been very obvious separation of an epiphysis, as the result of violence greater than in this case, it is by no means uncommon for the periosteum to be stripped up from the shaft. Thus, in the description of one of his cases of detachment of the lower epiphysis of the femur, Mr. Hutchinson says[5]: "It is to be observed that the periosteum has been completely stripped from the end of the shaft. This is, I believe, invariable in cases of detachment of an epiphysis with displacement. The periosteum is always left as a sleeve in connection with the epiphysis, and the shaft is denuded. This condition is well shown in a beautiful specimen of detached upper epiphysis of the humerus in the Musée Dupuytren." Here, then, is one cause for the severity of these injuries, but it cannot in all cases be the only factor in producing the suppuration which is so common. The epiphysial separation no doubt differs greatly in extent in different cases, but in any case the injury affects a part where the physiological processes of bone growth are active, and where pathological changes are only too ready to be set up under the influence of some slight provoking cause. And if, as in the case of this lad, the surroundings are unhealthy, and the patient is himself therefore in more or less of a septic state when the injury is received, inflammation, acute and septic, of the bone is very likely to arise. Grooms and stablemen generally are exceptionally liable to suppuration after the receipt of injury, and it can hardly be doubted that in this particular instance the lad's occupation and surroundings had a considerable share in inducing the severe inflammation which ultimately led to the loss of his arm.

[3] *Trans.*, vol. lxxi., p. 119.
[4] *Lancet*, October 12th and 19th, 1878.

[5] *Illustrations of Clinical Surgery*, vol. ii, p. 3.

METROPOLITAN HOSPITAL OF LONDON.

A CASE OF ACUTE TUBERCULOSIS, AND A CASE OF SUSPECTED FIRST STAGE OF PHTHISIS, WITH REMARKS.

(Under the care of Dr. C. R. DRYSDALE.)

[From notes made by Dr. THOMPSON, House-Surgeon to the Hospital.]

CASE I.—T. W. age 21, was admitted into the wards of the Metropolitan Hospital on February 19th, 1889. This patient had been in the same hospital from December 10th February to 1st, on account of hæmoptysis and incipient phthisis. He then went to Bournemouth, but, after remaining there four days, he had an attack of vomiting, and was sent back to London. On admission it was found that there was some comparative dulness on percussion below the right clavicle, with increased vocal resonance, and muco-crepitant *râles* as far down as fourth rib heard both in front and back of the chest. Diagnosis: small cavity at right apex; the sputum was found to contain numerous bacilli. The patient was put on cod-liver oil and took a pill containing one grain iodoform twice daily. The temperature was 99·5 on February 19th and remained nearly normal until February 23rd, when it began to rise, and on February 25th it was 102° in the evening. It again sank to normal on the 27th and rose to 101° on February 28th. On March 1st. it fell to normal and continued so till the evening of March 3rd. when it rose to 101°. On March 5th, the temperature fell to 97°, but after that date it was always over 99° up till the death of the patient. On March 7th it was 103·5° The case did well until March 17th, when he complained of a good deal of dyspnœa, and fine crepitation was heard at both bases. On March 21st he had several attacks of dyspnœa—crepitation heard over both lungs. March 23rd his face was much cyanosed. He was very weak. Death on March 28th. The *post-mortem* examination disclosed the existence of a cavity the size of a small walnut at the right apex, and universal tuberculosis of the lungs and other organs. This was evidently a case of auto-inoculation of tuberculosis, as the cavity was so small that the patient might have been expected to live a considerable time, had it not been for this invasion of the bacilli which existed in large numbers in the cavity in the right lung.

CASE II.— E.B., age 23. This patient who as well as T.W., was married and was a sawyer by trade, working in the same workshop, was admitted on February 16th, 1889, suffering from hæmoptysis. Patient had had a winter cough for two years. Four months ago he spat blood for the first time, about a tablespoonful, and since then clots of blood . Had lost flesh lately: sweated at nights for two months, and had had some dyspnœa for a short time, so that he had been thrown out of work. His father, he said, had died of consumption at 47. His mother died aged 42. His brothers and sisters were pretty strong. He was thin on admission, but no well-marked sounds could be heard at the apices of the lungs; the sputum was always tinged with blood. The sputum was examined every two or three days, but no bacilli could be detected in any instance. He was put on cod-liver oil

and good diet, and took a pill containing one grain of iodoform twice daily. The temperature on the day of admission was 100° F. but it fell to normal on Feb. 18th, and remained so all the time the patient was in hospital. On March 5th, the pulse was 76, but on several occasions it was as high as 130 and often above 100. He was sent to a convalescent home at the end of April, still retaining a slight tendency to hæmoptysis.

REMARKS.—These two cases exhibit first an instance of the great uncertainty of the prognosis of phthisis owing to the possibility of rapid tuberculisation being set up wherever bacilli are present; and secondly, the great importance of examining the sputum in all cases of hœmoptysis. In all probability the latter patient was not suffering from phthisis pulmonalis, but this could not have been so distinctly asserted, had it not been for the entire absence of tubercle bacilli from his sputum.

HULL ROYAL INFIRMARY.

A SEVERE CASE OF OPIUM POISONING: RECOVERY.

(Under the care of FRANK NICHOLSON, M.D.Lond., Physician to the Infirmary.)

H. C., a widow, aged 42, was admitted at 2.45 P.M. on May 21st 1889. She had at about 12 midday swallowed one ounce of laudanum—a drug she was not in the habit of taking—for the purpose of committing suicide. She was able to walk to the hospital, about a quarter of a mile, supported by the police. She did not vomit before admission, but felt very drowsy.

When admitted she was drowsy, but could be roused to answer questions. The pupils were contracted to pins' points; the conjunctivæ were sensitive; the pulse very small, and 132; the breathing very shallow, and 12. The breath smelt strongly of opium and alcohol (she had swallowed about five ounces of whisky before taking the opium).

The stomach was freely washed out with warm water, and whilst this was being done one-sixtieth of a grain of sulphate of atropine and one-tenth of a grain of apomorphine were given hypodermically. The vomit and the fluid returning through the syphon were a brownish fluid smelling of opium slightly. In half an hour, in spite of the patient being walked about and flicked with a towel, she became more drowsy, and the respirations fell to 8. One-thirtieth of a grain of sulphate of atropine was then given hypodermically, a pint of strong coffee by the rectum, and the interrupted current was applied to the sides of the neck and over the heart. In spite of this the drowsiness increased to total unconsciousness; the pupils were freely dilated (owing, presumably, to the atropine); and the conjunctivæ were insensitive, the breathing sinking to 4 per minute, the pulse being 112. Another one-sixtieth of a grain (making one-fifteenth in all) was then given hypodermically. The patient continued for the next four hours and a half in a similar condition, the battery being kept constantly applied. Two drachms of ether were given subcutaneously at 7 P.M., and the battery continued. At about 8.15 P.M. she began to revive, and objected to the treatment, and at 9 P.M. seemed fairly roused. A pint of strong coffee was then given her, and she was kept engaged in conversation till 12 midnight, when another pint of coffee was given her and she was allowed to go to bed, being roused at intervals through the night. In the morning she seemed quite well. The satisfactory termination of the case was mainly due to the energetic attention of Mr. Savery, Dr. Watson, and Mr. Hosegood, the house-surgeons.

REPORTS OF SOCIETIES.

BRITISH GYNÆCOLOGICAL SOCIETY.

WEDNESDAY, JUNE 12TH, 1889.

A. V. MACAN, M.D., President, in the Chair.

Hysterectomy for Uterine Fibroids.—Dr. BANTOCK showed a soft fibroid tumour of the uterus which had developed in the anterior portion. The tumour was found loosely covered with peritoneum, and was easily shelled out except at the base, where there was much difficulty in separating it from the bladder. This was, however, uninjured, but on completing the separation of the tumour a communication with the vagina was found. The patient had done very well. Dr. Bantock also showed a uterus with multiple fibroids. It was a good illustration of the value of the elastic ligature, which contracts on the tissues as they shrink, and without it he thought it would have been impossible to control the bleeding. It also showed that it was sometimes necessary to make the pedicle, for the incision was nearly three inches from the place where he expected to be able to apply the *serre-nœud*. He succeeded in applying the *serre-nœud* as usual, and now, a month after the operation, the hole left by the stump would not hold more than ten drops of fluid.—Dr. EDIS showed a fibroid removed from a patient, aged 50 years, for menorrhagia. He said while hæmorrhage was in some cases the justification of the operation, in many others the size of the tumour, and the functional distress caused thereby were equally valid reasons.—Mr. LAWSON TAIT said these views had been put forward again and again, but it seemed like a voice crying in the wilderness if they might judge from a recent paper in the JOURNAL from a gentleman whom they all respected or had respected. The pathology there expressed was that of forty years ago. Mr. Tait asserted that myomatous and fibroid disease were much more common diseases now, and much more serious than when he assisted Sir James Simpson. A discussion had been open for eighteen months past, yet no one had so far shown a case cured by electrolysis. He had that very day seen a lady in whom electrolysis had seemed to himself to have done good, but now she was worse than ever, although she had had thirty-five applications, thirty-one under anæsthetics.—Dr. ROUTH said that formerly hæmorrhage was the justification, now discomfort, and even, as Dr. Edis had said, fibroids associated with amenorrhœa ought to be removed. His mind was open to see the value of electrolysis, although he quite admitted there were cases which required surgical operation.—Dr. BARNES suggested that these diseases might not in reality be more frequent, but they were more frequently observed.—Mr. TAIT said this argument did not meet the case, for the clinical records of some of the old authors were so clear and perfect, he felt sure these cases would have been described if then existent.—The PRESIDENT still believed in enucleation in some cases; he very much preferred the extra-peritoneal treatment of the pedicle in cases of hysterectomy. He thought it would be a great improvement if fibroids could be removed from the uterus, and then the cavity in the uterus be closed by suture, as in Cæsarean section.—Dr. HEYWOOD SMITH, Dr. R. T. SMITH. and the PRESIDENT made some further observations.

Case of Porro's Operation.—Dr. FANCOURT BARNES reported a case of Porro's operation. The patient was aged 32 years. An abdominal incision was made, and a hard tumour could be felt on the right side attached to the uterus; the omentum and intestines were adherent to the tumour. This tumour was drawn out of the abdomen, and proved to be attached not to an extra-uterine sac, but to the pregnant uterus itself. The pedicle was almost sessile; it was transfixed, and the tumour was cut off. Drs. Edis and Fenton concurred with him that it would be safer to remove the uterus and ovaries after the manipulation, which had been, so far, a necessity. This was effected by the use of Dr. Fenton's *serre-nœud*, and the pedicle was treated extra peritoneum. The case had recovered satisfactorily. The tumour on section proved to be a myoma, and was in process of disintegration.—Dr. HEYWOOD SMITH said that he had known an ovarian tumour, and even a cornu of the uterus, to be removed, and yet pregnancy had run its course.—Dr. EDIS thought the wisest course had been adopted, as did also Dr. BANTOCK, for it was quite evident the pedicle was very unsafe; probably there would have been speedy and violent hæmorrhage.—Dr. FENTON and the PRESIDENT also made some remarks, and Dr. FANCOURT BARNES replied.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

FRIDAY, JULY 5TH, 1889.

W. TRAVERS, M.D., President, in the Chair.

ANNUAL MEETING.

President's Address.—In his valedictory address, Dr. TRAVERS congratulated the Society upon the very satisfactory progress it had made during the session just ended, both as regarded the interest taken in its proceedings and the increase in its numbers. He noted with much regret the loss of four members by death, especially mentioning Mr. Hemmings as having been a foundation member and an early president. He remarked upon the very unsatisfactory condition of the medical charities in respect to the fewness of the number of their subscribers, taking as an example the fact that whilst there were 4,000 practitioners of medicine in the London postal district, the Society for the Relief of Widows

and Orphans of Medical Men residing within twenty miles of London, formed over a century ago, had only 325 names in its list of subscribers, and of this small number, 183 only were now paying annual subscriptions. The other societies were in a somewhat similar state. In conclusion, he again very heartily thanked the Society for having placed him in the presidential chair, and tendered his warmest acknowledgment to the Council, and especially the secretaries, for the courteous and valuable assistance he had always received at their hands.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

WEDNESDAY, JULY 3RD, 1889.

JOHN SMITH, M.D., LL.D., President, in the Chair.

Transplantation of Bone after Compound Fracture and Trephining.—Mr. FRANCIS CAIRD drew attention to a most interesting result obtained in a case, where, after trephining for a depressed comminuted fracture of the skull, he had successfully carried out bone-grafting. The patient, whom he showed, was a soldier, who, on admission to the Royal Infirmary at the end of March, 1889, was found to be suffering from a depressed comminuted fracture of the right side of the skull, and a depressed fracture on the left side. There were well marked paralytic symptoms, and the patient was aphasic. Trephining was performed twice on the right side, and portions of bone were planted on the dura mater. The wound healed satisfactorily without drainage. Palpation showed that the young bone was growing. On the left side, where transplantation was not attempted, the pulsation of the brain could be felt. The patient was in perfect health, all paralytic symptoms having gone.

Specimens.—Dr. MAXWELL ROSS, on behalf of Dr. BANNERMAN, Indian Medical Service, showed the Larynx of a patient who had died suddenly from the bursting of an abscess in connection with evident malignant disease of the organ.—Dr. HARVEY LITTLEJOHN showed the parts from a case of sudden death due to Rupture of an Aneurysm into the Œsophagus.

Minute Anatomy of the Placenta in Extra-Uterine Gestation.—Dr. BERRY HART read a paper on the minute anatomy of the placenta in extra-uterine gestation. The relation of the villi to the other tissues, and especially to the peritoneum were beautifully illustrated by means of microphotographs and microscopical preparations.

REVIEWS AND NOTICES.

THE PRIMITIVE FAMILY IN ITS ORIGIN AND DEVELOPMENT. By C. N. STARCKE. London: Kegan Paul. 1889.

PERHAPS not one of the great problems of anthropology is as yet near its solution; and this is certainly true of those connected with the origin and development of the primitive family. Vast masses of material bearing on them have been collected, and several attempts have been made to weave them into a coherent system; but none of these can be said to have achieved success.

The author of the present work has devoted much study and thought to his subject, and his volume is without doubt a valuable contribution thereto. He has aimed at brevity and compression, with the result of making his work somewhat indigestible; but those who wish to be abreast of current knowledge and thought in this department of anthropology, cannot afford not to read it.

The author's method is comparative and inductive, and in a great portion of the book geographical; but the very brief discussion of a large number of doubtful or even contradictory examples leaves but a hazy impression on the mind of the reader. It is true that the author very early indicates some of the principal conclusions, to which, in his opinion, these wide inductions lead. He disbelieves in the universality of promiscuous sexual intercourse in the primitive human community: and he is almost as decided in his disbelief of the existence of Amazonian or distinctly gynocratic tribes. He starts with two assumptions, the first, that civilization has been progressively developed, and that primitive man was at the bottom of the scale; the second, that the primitive condition of all human communities was virtually the same. This latter is in a manner necessary for the validity of the comparative method adopted by the author; but it is obviously very open to dispute, especially if we reject, as he himself does, the notion that all mankind sprang from a single pair. He says fairly that "the distinction between the animal and the human community does not appear to depend on the larger or smaller number of useful acts performed by the individuals, since there are human communities which are far less firmly established than those of animals. It may even be asserted that the social faculty is positive in animals and negative in man. The social instinct of animals attaches them to their community, while man is generally restrained from breaking social bonds by fear of the dangers which threaten the race from without." "Man," he proceeds, "is less subservient to his instincts than animals are, and although he is also influenced by inclination and inherited impulses, at any rate the underlying motive assumes the form of reason. The reasons may be insufficient, yet he finds them convincing." In fact, the chief difference between our author and most others is this—they think that primitive man was swayed almost exclusively by appetite, and particularly by the sexual impulse, while he thinks that man at the earliest conceivable period was alive to the value of personal or family property, that sexual desire was not his strongest or most abiding motive, that even if it were, jealousy would have been powerful enough, as in most mammals, to prevent anything approaching to promiscuous intercourse; in fine, that he was already a reasoning creature rather than one of instinct and impulse.

Children among uncivilised races (and, indeed, among those who think themselves civilised) are very generally looked on as belonging exclusively or mainly to one parent. Where the child is referred to the father, it has been customary to suppose that marriage has been more or less permanent and stable, and the paternity not doubtful, as a rule; but there are many tribes where descent is counted by the female line. It has been supposed that this was owing, in all cases, to the paternity being doubtful; and the weak or unstable matrimonial tie thus implied has been looked upon as an early stage in the rise from that of promiscuous intercourse. STARCKE, however, in the course of his geographical survey, finds numerous instances in which the use of the female line of descent appears to depend on the facts, that the husband on marriage is received into the family of the wife, and that his children are born into, or received into, the clan to which that family or household belongs. In such a case the distribution of property follows rules which are inexplicable if we consider only the ties of blood, but which become intelligible when we consider what have been the dwelling places of the several kinsfolk. "This custom may be formulated in general terms by saying that the inheritance falls to those who dwell together in one place." Thus, among the Iroquois, after a man's death, the brothers, sisters, and mother's brothers divide his property among themselves; but if a woman dies her property is inherited by the children and sisters, not by the brothers. "The man who, when married, has lived as a stranger in the house of another clings to his early household companions, and they become his heirs. But the wife's brother, who has wandered elsewhere, stands in a more remote relation to his sister than do the sisters and the children living with her in the parental home; and he is therefore excluded from the inheritance." "The female line of descent does not imply ignorance of the child's paternity, but only the invalidity of its legal rights: the female line does not sever the child from its father, but only from the father's clan." The singular institution of the "Couvade," which obliges the father to occupy the lying-in bed, after the birth of the child, instead of the mother, is explained by Lubbock as an assumption by the father of the position of the mother, dating from the time when the transition from (reckoning by) the female to (reckoning by) the male line of descent took place. But Starcke points out that the Arowaks and Macusis in Guiana observe the ceremonies of the Couvade, although both these tribes adhere to the female line, facts strongly opposed to Lubbock's explanation. There is no doubt that the confinement, the rigorous fasting, and other observances of the father, are intended for the benefit of the child, between whom and the father a secret mystical connection is supposed to exist—the father, they say, contributes the seed, the mother the soil.

The extraordinary Fijian institution of the Vasu, whereby the sister's son of a landed chief can appropriate whatever he chooses belonging to his uncle, or to his uncle's subjects, is also handled by Starcke. It has also been supposed to be a proof of the existence of the female line, but support for this view is wanting; a chief is succeeded by his brother, or, failing brothers, by his own sons. The author thinks the institution arose out of the respect with which the subjects regarded the king's sister's son (who

usually dwelt in his own father's house) when he visited his uncle, whom the honour paid to his nephew enabled to rob his people freely. The institution once firmly established was turned by the nephew against the uncle himself. A chief who was at war with his mother's brother has been known to supply himself with ammunition from his uncle's stores without hindrance.

Starcke acutely remarks that agriculture is favourable to the female line, a pastoral life to the male. It is to the interest of an agricultural community or family group to increase its labouring strength by enrolling the husbands of its daughters, whereas a pastoral family prefers to sell its daughters outright for payment in cattle.

The author seeks to prove that, as between reputed father and child, juridical relations are often quite as important and prominent as the tie of blood. "Father and child," he says, "are united by certain privileges, and the latter is usually, but not necessarily, begotten by the former. In addition to this legal relation and to the stream of ideas deduced from it, there was a sense of the influence of the actual father on the child's character, and as time went on these two groups of ideas, originally distinct, necessarily became intermingled." The *jus primæ noctis*, and similar customs, become much more intelligible on this basis.

Starcke does not believe, with McLellan, that polyandry was at any period universal. Nor does he think such institutions as the Levirate (of which we nowadays hear so much in connection with the question of the deceased wife's sister) are a relic of polyandric times. He sees no good reason against the prevalent opinion that the duty of raising up seed for the deceased brother was prompted by the desire to have a son who might offer the needful sacrifices to the dead man.

An elaborate examination of the laws of nomenclature of kindred leads the author to the same conclusion as do other lines of argument, namely, that the male rather than the female line of reckoning was the primitive. He criticises Morgan's work on this department of the subject with great severity. The common household, in which each had a given work to do, and the common interest of obtaining and rearing children, were the foundations, he thinks, upon which marriage was originally built. "Primitive marriage was as hard and dry as primitive life itself." But "from the sympathy which inevitably springs from the interests which they have in common, that love is developed" in later and more advanced stages of society, apparently, "which effects a perfect and stable marriage. The point of contact consisted in the children."

A very good bibliography is appended to the work, and there is a tolerable index.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS,
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

THIOCAMF—A NEW DISINFECTANT MATERIAL.

In "Notes on Science in Practice" Professor Emerson Reynolds, M.D., F.R.S., gave an account of this new agent at the last meeting of the Royal Dublin Society on June 22nd. He said: "Since writing the chapter on Disinfection in the *Manual of Public Health for Ireland* I have sought some simpler means than is there recommended for disinfection of rooms, so that any intelligent person could attain the end in view without risk of fire, without the use of corrosive materials, or of large quantities of any agents, and without involving the presence of the operator in the room, or the employment of special apparatus. This search has been successful, and I have now the pleasure of bringing under your notice the singular liquid which fulfils the conditions I have just specified, and to which the name of 'thiocamf' has been given. The basis of this novel disinfectant is a very curious liquid which results when sulphur dioxide gas is brought in contact with camphor. At ordinary temperatures the gas alone requires a pressure of more than two atmospheres to liquefy it; but camphor, owing to chemical attraction, can liquefy the sulphur dioxide gas without any pressure whatever. In this liquid are dissolved several powerful substances, but I am not free to enter into further particulars, as the patent specification for thiocamf has not yet been published. A quantity of the liquid has been preserved in my laboratory for nearly two years in a corked bottle, and has not undergone sensible alteration during that time.

"Thiocamf possesses almost unique properties, for while it can be preserved without pressure in ordinary bottles at mean temperature, mere exposure of the liquid in a thin layer to the air determines the steady evolution of relatively enormous volumes of sulphur dioxide gas from it, charged with the vapours of other powerful disinfectants. These gases and vapours diffuse through the whole of the air of a well-closed room, and therefore must reach everything in the room if given reasonable time. The question then arises whether the sulphur dioxide gas can destroy the bacteria, particularly infective forms, when it reaches them. The evidence on this point has hitherto been of a rather loose kind, though the results lead to the conclusion that sulphur dioxide gas is a powerful bactericide. Happily the truth of this conclusion has now been placed beyond doubt by a critical investigation of the subject aided by modern methods of bacteriological study. This examination has been carried out in Paris by MM. Dubief and Bruhl, under the direction of Dr. Dujardin-Beaumetz, and the results have been recently communicated to the Academy of Sciences.[1] Starting with air rich in germs, and combining Miguel's method of numbering the bacteria with alkaline culture, Dubief and Bruhl found that the germs were always reduced in number after the action of dilute sulphur dioxide gas; therefore the latter destroyed the vitality of the germs. It was further found that the number destroyed increased with the duration of the action of the gas, and that this destructive action was accelerated when the humidity of the air was increased. In all the experiments with the rather dilute sulphur dioxide gas used the latter proved particularly fatal to micrococci and allied bacteria, whether diffused through the air of a chamber or attached to its walls. As these are organisms of the class which true disinfection seeks to destroy, this testimony to the value of sulphur dioxide is of exceptional importance. Lastly, these investigations have shown that sulphur dioxide gas is a true bactericide even in a dry state, though longer time is then required for the production of its full effect.

"The bearing of these results on the value of thiocamf is obvious, for if sulphur dioxide gas alone be so powerful a bactericide, the mixture of sulphur dioxide with vapours of other disinfectants of acknowledged value is a combination of exceptional power. Moreover, there is no material that I know of except thiocamf which can give off so large a relative volume of sulphur dioxide gas (the contents of a small six-ounce bottle can afford over 20,000 cubic centimètres) without any special treatment save exposure in a very thin layer on an old tray or dish to the air of a room to be disinfected. Further, one ounce of thiocamf shaken up with a quart of water forms a powerful disinfectant for ordinary purposes, such as sprinkling over various matters, purifying drains, etc.; while a still more dilute solution (one ounce to a gallon) can be used for soaking clothes which have been in contact with infected persons. The residue of thiocamf has a pleasant aromatic odour.

"This concentrated disinfectant can now be produced at a cheap rate, and an apparatus has been erected for its manufacture which can afford several hundredweight of thiocamf per week."

GLASGOW POOR CHILDREN'S FRESH-AIR FORTNIGHT.—Under this scheme, since May 10th, no less than 2,147 of the neediest of the poor children of Glasgow have been sent away to the country or coast for a fortnight's holiday. Large numbers are still applying for the privilege, and during this summer the scheme seems likely to receive more extended and widely useful application than during any previous year, provided the generosity of its supporters does not reach its limits before the season ends.

ADMISSION to probate of the will of a lady residing in Long Island was recently opposed on the ground of incapacity to make a will from the excessive use of opium. Evidence was given that it was not unusual for her to drink a pint to a quart of laudanum in a day. It was held that indulgence in the opium habit, even though to excess, cannot be sufficient to establish want of testamentary capacity. This opinion was founded, according to the report in the *Boston Medical and Surgical Journal*, on the fact, or supposed fact, that many "lawyers, physicians, judges, and statesmen ..... were addicted to the habit, and yet attained great eminence."

[1] *Comptes Rendus*, t. cviii, p. 824.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1889.

Subscriptions to the Association for 1889 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, JULY 20th, 1889.

THE LUNACY ACTS AMENDMENT BILL.

Thus far, during the current parliamentary session, the Lunacy Acts Amendment Bill has undergone several changes. The Lord Chancellor had introduced clauses providing that mechanical means of bodily restraint shall not be applied to any lunatic unless a medical certificate shall have been previously signed, describing the means to be used and certifying that the restraint is necessary for purposes of surgical treatment, or to prevent the lunatic from injuring himself. Against this provision, so hostile to the best interests of the patient in a few cases, suggestions were made in a leading article of the Journal of March 30th, and in the recommendations in the Parliamentary Bills Subcommittee ;[1] and thereupon the Lord Chancellor vastly improved the provisions by clauses enabling restraint to be applied when necessary for purposes of surgical or medical treatment, or to prevent the lunatic from injuring himself or others ; and also enabling the certificate in relation to mechanical restraint to be signed after the restraint has been applied ; a most necessary alteration of the original provision, when urgent cases are being dealt with.

Although nothing short of an entire reconstruction of the Bill could have brought it into harmony with medical opinion, its progress through the Standing Committee on Law has done its constitution some good, and it has come out in a decidedly improved condition. At the meeting on July 11th, Sir John Dorington successfully moved the rejection of that part of Clause 44 which provides that letters written in asylums shall under specified conditions be sent up to and inspected at head quarters. It was pointed out to the Committee that such a process of examination must necessarily be perfunctory and routine, and that the epistolary efforts of the unfortunate mad folk will either be consigned unread to the waste paper basket, or become the subject of flippant and unsympathetic comment by the office clerks ; agreement was general that the medical superintendent is the proper person to regulate the correspondence of his patients, and that the visiting Commissioner can constitute himself on the spot into by far the most satisfactory court of appeal, in case of difficulty.

The amendments adopted on this point are in accordance with the recommendations of our Parliamentary Bills Committee, and were adopted on the suggestion of Sir J. Dorington and Dr. Farquharson, M.P., to both of whom the medical profession is indebted for their action and efforts with regard to the Bill.

Following up this success, Sir John Dorington next proposed the rejection of Clause 45, which introduced a new and irritating arrangement into asylum life by insisting that notices shall be placed in some conspicuous place to the effect that every private patient has the right to request a personal interview with the Commissioner or Visitor, and to have any letter forwarded to the Commissioner or Master. The facilities already provided in this direction were considered, however, to be amply sufficient, and medical testimony conclusively showed that the machinery of the clause would prove a constant source of agitation and unrest, and might materially retard the recovery of the patients. The clause was lost by a large majority, but we may warn our readers that a determined attempt will be made on report to replace it in the Bill.

A Scotch grievance was next removed by the insertion of a new clause, to the effect that a *curator bonis* in that country shall count as sufficient procedure towards the appointment of a Committee of the estate in England. As the matter now stands, the acquisition of property in the south by a lunatic living north of the Tweed is followed by cumbrous and costly legal procedure, which may too surely consume the oyster and leave only the shell to the unfortunate proprietor. This anomalous state of matters will now be rectified by the Bill.

Dr. Farquharson, acting on the lines suggested also by our Parliamentary Bills Committee, sought to improve the position of county and borough asylum medical officers (who have been transferred from one county to another) as regards pension. We greatly regret that this very reasonable proposal, that the service of medical officers in two or more counties should count cumulatively towards pension, was rejected. The justice of such a claim can hardly be denied, but practical difficulties connected therewith stood in the way, and the opportunity of rectifying a real and pressing grievance was thus unfortunately lost.

The private asylums clause slipped past without comment, and it was thought best, in the present state of public feeling, to abstain from any attempt to show up its defects. Many members of the Committee were strongly of opinion that the monopoly about to be created must work badly sooner or later, and that no case has been made out to justify any alteration in the present law. But advice was sought in high quarters, and it was pointed out that inflammable material is not far off, and that a spark from a heated discussion might lead to dangerous and even fatal consequences.

Remembering that the proposed arrangements represent a fairly judicious compromise between two strongly held phases of public opinion, this was just one of the occasions when silence was golden, and we may fairly congratulate ourselves on the probable settlement of a question which must have been deeply agitating those who have large material interests at stake.

We must not forget, however, that the harbour is not yet reached. On the report stage every clause of the Bill may be brought up and rediscussed, and, while attempts will be made to minimise beneficial alterations already made, it is also open

[1] Journal, April 6th.

to the friends of progress to try a final struggle in the interest of their own views.

Amendment was also made, increasing the proposed penalty for a criminal assault upon a female lunatic from one year's imprisonment to two years' imprisonment, or penal servitude for any period not exceeding five years; and any male person, other than the superintendent, proprietor, or medical officer of the asylum, is to be forbidden to take the personal custody of any female lunatic.

Power was also given, by amendment, to any union, county, or borough, to recover the expenses of a lunatic's maintenance whenever he has more than sufficient property to support his family.

The existing partial exemption of public asylums from paying rates was discontinued by the provisions of an amendment that, for the future, all lands and buildings already or to be hereafter purchased or acquired for the purposes of any county or borough asylum shall be assessed to county, parochial, district, and other rates on the same basis, and to the same extent, as other lands and buildings in the same parish, township, or district.

LOCAL GOVERNMENT (SCOTLAND) BILL: IMPORTANT AMENDMENT.

WE are glad to see that one of the most important amendments in the Local Government Board proposed by the Parliamentary Bills Committee has been accepted by the Government. The Lord Advocate held out a little at first against that "blessed word compulsion," but the "evident sense of the House" soon dislodged him from his position of sympathetic hostility, and he agreed with a very good grace that *every* County Council *shall* appoint a medical officer of health. This is a matter of great importance, and establishes a valuable principle which is far in advance of that accepted in the English Local Government Bill, or in the Public Health Acts generally. The other important amendment for the strengthening of the Board of Supervision by one or more medical commissioners was unfortunately ruled out of order by the Chairman.

PEPTONES AND NUTRITION.

A GREAT deal of attention has of late years been paid to the chemical changes occurring in the stomach and intestine, both in health and in disease. It cannot be said that our knowledge on these points is at all complete. In artificial digestion it is well known that the action of pepsin in the presence of free hydrochloric acid consists in the transformation of soluble albuminoids into peptones, a series of intermediate products, such as acid albumin and albumoses, being at the same time produced. The end-product of gastric digestion, namely, the peptone, has been almost universally considered as the form in which the proteids are absorbed, and with this idea peptones are administered to patients whose digestion is deficient. The idea, however, that proteids are absorbed as peptones to any great extent has been strongly combatted by Brücke even as late as 1885; and if Brücke's idea is correct, there really does not seem much rationale for administering peptones to invalids. There is, however, much more evidence for than against the idea of the nutritive value of peptones. Thus, Plósz showed that in dogs peptones could be substituted for other proteids in the food, and with beneficial results. In an experiment lasting eighteen days, a dog received altogether 560 grammes of peptone (made with pepsin), 422 grammes of sugar, and 309 grammes of fat; all the functions of the body remained normal, and the animal gained 3.75 per cent. in weight. Voit, however, has shown that although peptones can maintain the nitrogen-equilibrium, they have not the nutritive value of the ordinary proteids taken in as food; after seven months, rats fed with peptones instead of ordinary proteids, die. The question is evidently a very important one to determine. If the peptones formed in the stomach are not nutritive to the animal, they must be considered as decomposition products of the proteids taken in as food, if however they are nutritive, they would be considered as hydrated products, the proteids taken in as food undergoing this change in order, by increasing the solubility of the substance, to increase its absorbability. Indeed, Hofmeister and Henninger, by dehydrating peptones, have been able to obtain a proteid resembling the proteids taken in as food, being coagulated by heat.

There is, therefore, more accurate evidence in favour of peptones having a great nutritive value than against; that they are, in fact, the modifications in which proteid food is absorbed in the stomach and intestine. This being so, what becomes of the peptone? None, or perhaps only a trace, is found in the lymphatics of the mesentery, only a trace is found in the portal blood, and in the blood of the general system it is extremely doubtful whether any is present. Hofmeister asserts that a trace is found in arterial blood, while none is present in venous blood. At any rate, there is a concurrence of opinion that peptones are not present in the blood and lymphatic vessels of the body in sufficient quantity to account for the proteid taken in as food, supposing the peptones are absorbed as such. An interesting experiment of Hofmeister's points to the fact that in traversing the wall of the living intestine, peptones undergo an important change. In the first place, during digestion, peptones are found in quantity in the mucous membrane itself, but are not found deeper down in the intestinal wall. Secondly, an animal was killed in full digestion, and two pieces of intestine removed; one piece was heated to destroy the living tissues, while the other piece was kept for a short time at the temperature of the body. The first piece of intestine contained peptone in abundance in its walls, while the second piece contained none. This piece of intestine still lived, and was able to transform the peptone it contained, while the first piece, being killed, was unable to do this.

Here, then, is a case of "vital" absorption; the peptones do not simply diffuse through the wall of the intestine, but are taken up by the mucous membrane and transformed by it. Transformed, but into what? This is the next question to decide. Presumably it is transformed into serum albumin, as this is the chief proteid found in the liquid part of the blood. To the elucidation of this question experiments have been undertaken in Professor Kronecker's laboratory in Berne by two ladies, Fräulein Nadine Popoff and Fräulein Julia Brinck. The results are published in the *Zeitschrift für Biologie*. The fact which was the basis of these experiments was first dis-

covered by von Ott, namely, that peptone, when placed in the stomach of a living dog, was transformed into serum albumin before it entered the walls of the digestive tract. There are obviously many difficulties at arriving at a correct conclusion on this point. Large quantities of peptone which would facilitate chemical analysis cannot be used, as the conditions would not be natural. At no time during natural digestion is there a large quantity of peptone in the stomach. With small quantities of peptone it is difficult by chemical analysis to be certain of the form of proteid present. Then, even if part of the peptone were changed into serum albumin, it would be difficult of detection by chemical means, although not impossible. Fräulein Popoff and Brinck have not applied this chemical test, but have employed a physiological one. The frog's heart, as is well known, may be separated from the animal and be kept pulsating for many hours if a proper nutrient liquid be supplied to it. One of the best nutrient fluids is 0.6 per cent. salt solution, to which a certain proportion of serum is added ; this liquid will keep the heart beating for many hours. If, however, only salt solution be used, the heart comes to a standstill after a short time ; and if peptones be added to the salt solution, the heart may be stimulated to beat for a short period, but soon becomes quiescent.

Now the chief fact brought out by Fräulein Popoff's experiments is that if a solution of peptone be placed in the stomach of a living dog and removed after fifteen minutes, it is found capable of sustaining the activity of the frog's heart, while previous to being placed in the stomach it was incapable of doing this This change in the peptone solution is more marked if it be placed in the small intestine instead of the stomach. A curious fact brought out by the research is that while the peptone formed by pepsin can be changed in the manner described by the stomach and intestine, that formed by the pancreas is unaltered ; in other words, pancreas peptone, both before and after the exposure to the action of the intestinal wall, does not act as a nutrient fluid for the heart.

Fräulein Brinck has repeated and confirmed Fräulein Popoff's experiments, and has extended them. She has shown, for example, that the effect on the peptone is not simply due to temperature, for a solution kept in the incubator at the temperature of the stomach does not sustain the cardiac beat. Moreover, the stomach and intestine seem to retain their regenerating power for a short time after the circulation of the blood has been stopped : a fact previously discovered by Hofmeister. The regenerating effect is, therefore, ascribed to the epithelial cells lining the stomach and intestine, and so it was naturally suggested that other epithelial cells might have the same power. It was found, indeed, that the frog's heart could change the peptone solution, rendering it nutritive to itself. Thus, if the solution be passed four to ten times through the heart, it then becomes capable of sustaining the cardiac activity. Another interesting aspect of the subject was shown by the fact that a pepsin-peptone solution, which had just begun to decompose, was a powerful sustainer of the heart's action ; while if the decomposition be allowed to progress, the liquid becomes a cardiac poison, instead of a cardiac food. Fräulein Brinck suggests that the first effect is due to the special organism she describes, *micrococcus restituens*, forming serum albumin from the peptone ; while in the later stages of the action of another organism growing in the liquid, a poison is developed. The first effect would, therefore, be another instance of the formation by a cell of serum albumin out of albumose and peptone. Here the matter at present rests. Although the researches discussed are extremely interesting, until the body formed from peptone in the stomach and intestine is separated and chemically tested, it seems premature to call it "serum albumin." Moreover, if peptones are the end-products of proteolytic digestion, being formed to aid the absorption of proteid food, it is difficult to see the *rationale* of their transformation into serum albumin within the cavity of the stomach and intestine ; one would rather expect the change to occur in the walls. No doubt future researches will elucidate these points.

THE MEDICAL MARINE OF THE UNITED STATES.

The annual report of the Supervising Surgeon-General of the Marine Hospital Service of the United States, which service, as our readers are aware, concerns itself with all matters pertaining to the health of the mercantile marine and ports of the republic, for the past year now lies before us. From this carefully prepared document it would appear that the beneficent operations of the department have been extended during the last twenty years from sixty-four localities at which medical relief was provided in the year 1868 to the large number of two hundred and ten stations now existing ; and that whereas in the former year only between eleven and twelve thousand sick and disabled seamen were relieved, now no fewer than forty-eight thousand men receive the benefits of medical care and attention at a cost of 528,844 dollars, exclusive of expenses of repairs, fuel, lights, water and furniture of marine hospitals, which are defrayed out of special appropriations.

An interesting feature of Surgeon-General Hamilton's report is to be found in his account of the establishment, some eighteen months ago, in New York, of a laboratory of hygiene and bacteriology, provided with apparatus modelled on that used in the laboratory of Dr. Koch, of the Imperial German Board of Health, and supplied with animals for experimental purposes. In this admirable institution valuable experimental studies have already been made from cases of Asiatic cholera among emigrant passengers, and at the present moment investigations are being pursued on the supposed micro-organisms of yellow fever, and on the power of the waters of New York Bay to sustain the life of the cholera spirillum.

As is most proper, a large space of the volume before us is devoted to the history of the epidemic of yellow fever in Florida, which broke out at Key West in the year 1887, and which at the date of the issue of the report still prevailed at Jacksonville, the principal city of the State. As was to have been expected, the Surgeon-General clearly traces the malady to the island of Cuba, which is the principal source from which it is shipped to the United States, and directly to a family of hotel-keepers in Havana, who removed to Key West with furniture and bedding which had been infected by persons who had died of yellow fever. The sanitary inspector stationed at Havana by the United States Government gives as the key to the causes of infection of some of the vessels frequenting the

port, and the exemption of others, the fact that the foul sewers of the city empty themselves under the pile-built wharves, and that vessels at or near them are greatly exposed to invasion by yellow fever, while those on the opposite side of the harbour are much less so, and those visiting only the open bay are practically never infected at all. In addition to his other duties, this gentleman, on account of the devastating character of the small-pox epidemic now prevailing in Cuba, has gratuitously vaccinated over four thousand persons *en route* to the United States, and so contributed largely to the protection of Florida from a second most grievous affliction. The Surgeon-General gives a most interesting account of the measures adopted by his department for the localisation, circumscription, and suppression of the yellow fever epidemic whenever it shows itself, and illustrates the subject by a series of photographs depicting the general appearance of the fever and refuge camps which have been established to shelter those poor people who are driven out of infected localities. The Board of Health of Jacksonville, writing on October 19th, 1888, earnestly deprecates the return to the city of unacclimatised refugees before and until notification from the board that it is reasonably safe to do so; and states that, although the list of cases was being largely diminished, there were no probable grounds upon which to base an expectation that that time would arrive earlier than the beginning of December, when frosty weather might be looked for.

In view of the fact that, up to November 20th, 4,643 cases of yellow fever occurred in Jacksonville, of which number 403 died, it is painful to observe that the Surgeon-General gives it as his opinion that the sanitary condition of the city in respect of its sewage drainage is unsatisfactory—a state of things evil enough anywhere, but surely inexcusable in the case of a large community which is continually menaced by one of the most deadly scourges that afflict humanity.

In concluding our notice of the work we remark that it includes valuable papers, by officers of the Marine Hospital Service, on yellow fever and on the food-supply of seamen frequenting American ports, besides giving an interesting series of selected cases from the hospital practice of the department generally, together with tabulated nosological statements of a most compendious and elaborate character.

Dr. Alan Herbert, Physician to the British Embassy at Paris, has recently received the decoration of the Legion of Honour.

The Prince of Wales will be present at the St. Bartholomew's Hospital banquet on July 24th.

The Director of the Assistance Publique has distributed among the *infirmiers* and *infirmières* of the Paris hospitals 2,000 tickets for the Paris Exhibition.

Dr. Whitelegge, Medical Officer of Health for Nottingham, has been appointed Medical Officer of Health for the West Riding, at a salary of £800 per annum. There were seventy-two applicants.

The Prince of Wales has consented to lay the memorial stone of the new buildings of the Samaritan Free Hospital. The ceremony will take place on July 24th, and the Princess of Wales will receive purses for the Building Fund.

The Birmingham Hospital Saturday Fund amounts this year to £8,658 19s. 1d., of which sum the proceeds of collection in industrial establishments furnished £8,447 5s. 7d. The expenses amounted to £451 11s. 2d.

The French Society for the Advancement of Science will hold its next Congress from the 8th to the 15th of August. M. Ulysse Trélat, President of the Section of Medical Sciences, has issued a circular asking medical men to forward the titles of their papers either to the General Secretary, 28, Rue Serpente, or to the 12th Section, 18, Rue de l'Arcade.

The London Hospital has, we are informed, become affiliated to the National Pension Fund for Nurses, on the basis of a maximum payment of half premiums for their staff, of from £600 to £700 per annum out of the profits on the Private Nursery Home. This admirable example, added to those already set by Guy's Hospital and St. Mary's Hospital, will no doubt be widely followed, and will greatly aid in securing the extension to a most deserving class of public servants of the advantages of a provident assurance.

AN INSANITARY EXHIBITION.

Our Paris correspondent writes: "Six people who drank some 'Syrian drink,' sold in the Rue de Caire of the International Exhibition, manifested symptoms of poisoning. A strict inquiry proved that the drink was prepared with inoffensive colouring substances which had been placed the previous evening in a zinc pail. The persons affected quickly recovered. The practical sanitation at the Exhibition is harshly and deservedly criticised. In some of the large restaurants attached to the Exhibition the water-closets are in the middle of the kitchens! A less dangerous expedient for economising space might have been found, and one which would not have thus outraged all sense of decency, common cleanliness, and the elementary precepts of hygiene."

THE BIRMINGHAM CORPORATION AND WORKMEN'S DWELLINGS.

The Birmingham Corporation is about to take a new and an important step by erecting dwelling-houses for workmen or poor clerks near the centre of the town. In the development of the improvement scheme a large number of poor tenements have happily disappeared from the central area, and, after long waiting to see whether private enterprise would replace these, the Corporation has determined by a large majority to undertake the matter. In this experiment it is proposed to erect twenty-two dwellings, at a cost of £3,900; and though, as a private speculation, it is very doubtful whether it would pay, in the hands of the Corporation the scheme may be carried out without an actual loss to the ratepayers. This is owing to the ability of the Corporation to borrow at a low rate of interest for building purposes, to the exemption of corporate property from the Improvement Rate, and to the fact that the land to be built upon is the property of the ratepayers, who will benefit even by a low ground rent in the place of none at all, as at present.

DEGREES FOR LONDON MEDICAL STUDENTS.

The Committee of the Senate appointed to report on the scheme of the Royal Commission for the reconstitution of the University of London met the Committee of Convocation on Wednesday. The feeling entertained by some graduates that the scheme involved an injustice to them found expression, but it was pointed out that under it they would be entitled to describe the degrees obtained under existing conditions as honours degrees, and that there

would thus be very much the same distinction as there is now at Oxford and Cambridge between an ordinary and a tripos degree. On the whole, there was less disposition on the part of the representatives of the graduates to object to the proposed reform than had been generally anticipated; and there is reason to expect that the objections which have been advanced may be met by slight modifications in the scheme without affecting its general character.

THE TWIN PRESIDENTS.

SIR ANDREW CLARK'S address at the interesting celebration at the London Hospital Medical College, which we report elsewhere, refers with equal modesty and fitness to the interesting fact that the President of the College of Surgeons and the President of the College of Physicians at the present moment are both members of the staff of the London Hospital. Of both it may be said that they have won their way to the highest rank in their respective departments in the medical profession by untiring industry, conspicuous ability, and indefatigable labour and skill in the utilisation of the vast clinical material which that great hospital and school so abundantly supply. Of both it may be said that the personal esteem and regard in which they are held throughout the profession fully equal the eminent position which they have achieved in the scientific and official annals of their profession. Neither owe their success to any adventitious circumstances, but both have fairly won the highest honours and the most distinguished positions in the republic of medicine; it will be the wish of everyone that they may live long to enjoy the distinguished positions which they have attained by means so honourable to themselves and satisfactory to their profession.

THE PRINCESS OF WALES AND THE NATIONAL PENSION FUND.

THE acceptance by the Princess of Wales of the Presidency of the National Pension Fund for Nurses, and the accession of the Prince of Wales as patron, mark a distinct and important stage in the development of that institution. Upwards of 1,000 nurses have now made proposals, and the Fund is therefore established on a permanent basis. It has been objected in certain quarters against the founder of the Fund, Mr. Henry C. Burdett, that he is not a medical man nor a hospital official. Mr. Burdett has, however, as is widely known, spent the greater part of his life in connection with hospitals, in the capacity of medical student at Birmingham and Guy's Hospital for the full curriculum, and as secretary and house-governor, first at the Queen's Hospital, Birmingham, and then at the Seamen's Hospital, Greenwich, the latter appointment having been held until within the last few years. His untiring interest in all that relates to hospitals and everything connected with them is amply proved by his many published works on hospital questions, his connection with the Hospital Sunday Fund and the Hospitals' Association, and the fact that a medical contemporary not long ago declared him to be the greatest living authority on hospital affairs generally. Nurses and hospital officials for generations to come will have reason to remember Mr. Burdett's name with gratitude, as the founder of the Pension Fund, and as the indefatigable organiser who started it with a cash balance of nearly £30,000.

REPORT OF THE ROYAL COMMISSION ON THE BLIND AND DUMB, Etc.

THIS Commission was first appointed in 1885; the exact terms of reference were: "To investigate and report upon the condition of the blind in our United Kingdom, the various systems of education of the blind, elementary, technical, and professional, at home and abroad, and the existing institutions for that purpose; the employment open to and suitable for the blind; and the means by which education may be extended so as to increase the number of blind persons qualified for such employment. To investigate and report similarly upon the condition of the deaf and dumb, as well as such other cases as from special circumstances would seem to require exceptional methods of education." The report of this Commission has now been presented, and will soon be ready for circulation. The Commission visited many institutions in the United Kingdom, Paris, Germany, Switzerland, and Italy, and the notes are embodied in a supplementary report.

DR. THOLOZAN AND THE EPIDEMIOLOGICAL SOCIETY.

ON July 11th Dr. Tholozan, Physician to the Shah of Persia, and one of the oldest and most distinguished foreign correspondents of the Epidemiological Society, was entertained at a complimentary dinner by the Society. Dr. Thorne Thorne, President, who was in the chair, presented Dr. Tholozan, on behalf of the Society, with the diploma of honorary membership, to which he had that day been elected by special resolution.

PROGRESS OF SANITATION IN EGYPT.

THE journal *El Ahram*, published in Turkish at Cairo, contained in its issue of July 2nd a paragraph calling attention to the favourable reports which the Public Health Department received from its inspectors. The instructions of the department with regard to sanitary requirements are now much better carried out than was until recently the case. "These improvements," our contemporary states, "are undoubtedly due to the praiseworthy energy of His Excellency Greene Pasha, Director of the Public Health Department, who deserves to be congratulated on the success of his efforts to enforce necessary prophylactic measures, and to induce obedience to the orders given." If one result of the occupation is to teach the authorities of Egyptian towns some of the elementary principles of cleanliness and of hygiene, we shall not have gone to Egypt in vain, whatever the political consequences may be.

RABIES.

THE Privy Council on July 9th issued an order dealing with the prevalence of rabies in the City and Metropolitan District only. Under this order all dogs are to be muzzled except those actually at work during sport or the capture of vermin, these exemptions, however, being conditioned further by the animals being also "in charge of competent persons." All dogs unmuzzled are to be seized, and, if not claimed, to be slaughtered. All dogs affected with or suspected of rabies, or having been bitten by a rabid dog, are to be slaughtered. These are the principal points in the order, and they will provide, no doubt, for the speedy but temporary annihilation of rabies in the home district. But this relief can only be temporary, for the Privy Council have limited the operation of the order to the current year. It is hardly conceivable that the public department which instituted the inquiry into the subject in 1887 by a Select Committee of the House of Lords can have so failed to understand the significance of the report of that committee upon the voluminous evidence. The report clearly proved that patchwork legislation of the kind embodied in the present order can only meet with partial success. However, we may hope that once the muzzle is on the department may be induced to keep it on until we really have abolished this disgrace from among us. The Executive Committee of the Middlesex County Council reported at its last meeting that a serious outbreak of rabies had occurred in the county during the past quarter, no fewer than twelve cases having been reported to them; while it was very probable that many animals had been attacked without notice being received by the committee. During the corresponding quarter of last year no cases were reported, and in the quarter ending March 31st, only two animals were reported as having

been attacked with the disease. Under these circumstances the committee had adopted a resolution in the following terms, a copy of which had been transmitted to the Privy Council:—"That this authority, considering the terrible character of hydrophobia and the great increase in the disease of late, and that there is grave danger of a still greater increase in hydrophobia and rabies, desires to urge most strongly upon the Privy Council the necessity for such prompt action and legislation as will insure the proper muzzling of dogs and their proper control in other respects throughout the whole of the United Kingdom, and the protection of the public against the importation of dogs from other countries unless under quarantine regulations, and that will make owners always responsible for injuries done by their dogs." The report was adopted in its entirety.

CANADIAN MEDICAL ASSOCIATION.

BANFF, the place selected for this year's meeting of the Canadian Medical Association, is a station on the Canadian Pacific Railway in the heart of the Rocky Mountains, and at the entrance of the "Canadian National Park," a large tract of mountain, forest, and valley set apart, and now being opened up as a tourist and health resort. About the railway station a village or township is springing up, and at a little distance the Canadian Pacific Company has erected a large hotel, not unlike some of those in the Highlands, where the members of the Association will be accommodated, and where the sectional and other meetings will be held. In the vicinity also are thermal springs, which have as yet not been sufficiently investigated or tested to allow of any definite or accurate judgment being given as to their value and use. The meeting will be held on August 12th, 13th, and 14th, and a cordial invitation has been issued to members of the British Medical Association, as well as to many of the medical societies in the United States. It is expected that not a few will take advantage of this opportunity of visiting an interesting and exceptionally picturesque portion of Canada, as well as of contributing to the success of the annual meeting of a very enterprising Association, many of whose members will travel two thousand miles from the eastern provinces of Canada in order to be present. Special trains will leave Montreal on August 6th to convey members and visitors to the rendezvous, and greatly reduced fares are offered by the railway company to all applying for them through the General Secretary of the Association, Dr. Bell, whose address is Union Avenue, Montreal.

ENGLISH CONTRIBUTION TO THE PASTEUR INSTITUTE.

THE Royal Society have voted £100 to the Lord Mayor's Fund in connection with the Pasteur Institute in Paris, and the Earl of Rosebery has sent a donation of £100. Among other donors are Mr. George Matthey, who contributes £21; Mr. W. S. Savory, President of the Royal College of Surgeons, £5 5s.; Mr. Joseph Watson, £10; Dr. George Harley, £5 5s.; Mr. A. C. Barclay, £10 10s.; Sir Joseph Lister, £20; Sir W. W. Gull, £10; Messrs. Macmillan and Co., £10 10s.; Sir T. Spencer Wells, £5 5s.: General R. Strachey, £5; Mr. John Snelgrove, £5 5s.; and Dr. Philip Frank, £5. M. Pasteur has addressed a letter to the Lord Mayor, acknowledging the receipt of the resolutions passed at the recent Mansion House meeting, in which he says:—

If the aphorism that science has no country has never received authoritative sanction, it did so at this meeting, in which the leading *savants* in biological and medical science of the United Kingdom took part. I wish I could thank them individually for having attended this gathering. I was filled with gratitude on learning that the Prince of Wales himself had accorded his high approbation of your initiative. Modesty compels me to pass over in silence the kind words of which my labours and those of the Institut Pasteur have been the subject, but I have a right to rejoice with all friends of the progress of humanity at the great moral effect of the meeting. The manifestation of July 1st had not only for its object the question of the treatment and possible extinction of hydrophobia in England, but in the nature of things it was also a protest against that false sentimentality which led certain persons, not—which was already a strong point with them—merely to put on the same footing the life of men and that of animals, but even to prefer the existence of animals to the salvation of human life. When this view is taken, what is the limit? We must become firm vegetarians. We must even extend our scruples so that no living being is sacrificed. We must endure the importunities of a mosquito, the daring of a mouse, the stings of a flea—false ideas or excuses for a tirade which one finds is most often at the bottom of all attacks on experimental physiology. Certain credulous souls—by I know not what tales—imagine that our laboratories are chambers of torture. They ignore the fact that the rabbit or the guinea-pig is rendered insensible by chloroform before it is subjected to the most insignificant operation. As for me personally, the suffering of an animal affects me so much that I would never shoot a bird, and the cry of a wounded skylark pierces me to the heart; but if the investigation of the mysteries of Nature and the acquisition of new truths be at stake, the sovereignty of the object justifies all. Who, then, having the least regard for the pursuit of the knowledge of the mysteries of Nature, would put in the balance the sacrifice of a few fowls and rabbits with the discovery of the attenuation of virus and prophylactics, which have resulted from such sacrifice. No one, my Lord Mayor, will have contributed more than you have done to rectify the errors which, under a show of compassion, can only hinder the progress of science and compromise even the most legitimate interests of humanity.

ACROMEGALY.

ALTHOUGH there may be not much virtue in a name, yet the man who first gives a name, even though it be his own patronymic, to a clinical group of signs and symptoms, confers a real benefit on clinical medicine and pathology. Acromegaly, considered as a word, is cacophonous, but Dr. Pierre Marie did a service to medical science, if not to philology, by its introduction. So long as some unusual complex of symptoms has no name, each case is apt to be regarded by its observer as an isolated case of merely curious interest. As soon as a name is applied, a knowledge of the condition is popularised. A reader who will not be at the trouble to read "a report of a case in which there was hypertrophy of the head, hands, and other parts" may yet have his curiosity aroused by the novel term acromegaly, and he will be prepared to recognise a case of what has now become for him a distinct disease. The name is not yet more than three years old, yet the number of cases since recorded is considerable. In this country we may refer to the two cases reported to the Clinical Society by Mr. Godlee and Messrs. Hadden and Ballance respectively last year, and the two cases shown to the Birmingham and Midland Counties Branch of the British Medical Association by Drs. Saundby and Simon. The most recent case recorded abroad is one observed by Dr. Farge, of Angers, and reported by him with illustrations in *Le Progrès Médical* for July 6th. The patient was a man, aged 31, who dated the development of his deformity from a severe accident while tree-felling in his twenty-fourth year. He was confined to his bed for six months, and when he got up he found that his head was increased enormously in size, and that his back was humped. He was admitted into the Hôtel Dieu in Angers for slight bronchitis last February. He then stood 5 ft. 1in., had an enormous head sunk between his high shoulders, and projected forward by the curvature of the spine, which was uniformly kyphotic from the vertebra prominens to the sacrum. His limbs were short and large. His face suggested that of an animal but was not without intelligence, and he spoke distinctly in a deep hoarse voice, though the tongue and lips were much enlarged. There was no hypertrophy of the thyroid. He complained most of stiffness and discomfort in the back, and these symptoms were considerably relieved by suspension.

TREATMENT OF THE DIARRHŒA OF PHTHISIS.

THE diarrhœa which occurs in phthisis, as the result of tuberculous ulceration of the small—and often of the large—intestine, is a condition which acts as a rapid drain on the patient, and is also one of the most intractable to treat. It is always to be stopped if possible. In many cases opium with logwood extract seems to be beneficial, but in others no drug seems to be of any avail. The futility of treatment probably depends on the fact that no drug capable of being taken internally acts for a sufficient length of time on the foci of chronic ulceration. There are many factors which aid in producing the diarrhœa; the presence of the ulcers tends to set up a condition of surrounding chronic congestion and of irritable weakness in the musculature of the gut, and there is a watery exudation from the open sores. Some of the drugs administered in tuberculous ulceration of the intestine, seem to act by affecting and regulating the muscles of peristalsis, and by diminishing the chronic congestion of the mucous membrane. Debove recommended silicate of magnesium, an insoluble powder which seemed to be beneficial by acting as a mechanical protective to the ulcers, and by diminishing (or absorbing) the watery secretion. Polyàk administered it in a daily dose of 200 grammes (about 7 ounces), mixed with half a litre (under a pint) of milk. The dose may be increased to between 400 and 600 grammes. Beneficial results were experienced after two days, but on the fifth to the seventh day of treatment heavy pains were experienced in the abdomen. These were ascribed to the irritation caused by concretions of the insoluble powder; a conclusion which seems to contra-indicate the treatment. Polyàk says, that it does not cause healing of the ulcers, and, in his hands, the treatment by lactic acid has proved more successful. Tuberculous ulceration of the larynx has been said to be cured by scraping the ulcer and applying lactic acid; and, though not always curative, there seems no doubt that the application of lactic acid is beneficial in laryngeal phthisis. For intestinal ulceration in phthisis, Polyàk begins with a daily dose of lactic acid of about 20 minims, dissolved in 4 ounces of water; after two days the dose is increased to 40 and 50 minims daily. Under this treatment the diarrhœa and abdominal pain cease in three days, and in four or five days the motions begin to assume a normal appearance. The acid must be continued for a long time, but after the cessation of the diarrhœa the daily dose may be reduced to 10 or 20 minims. At first there is no effect on the appetite. The tuberculous ulcers may be cured by this treatment; but no pathological evidence is adduced to corroborate this statement.

RESECTION OF VERTEBRÆ.

DR. DAWBARN, of New York, has reported [1] a case of resection of the spine for fracture. The patient was a man, aged 29, who sustained a fracture of the spine involving the eleventh and twelfth dorsal vertebræ. He was immediately treated with plaster splints, but he remained paraplegic, and when he came under Dr Dawbarn's treatment there was complete paraplegia, beginning a few inches below the ribs; involuntary passage of fæces; retention of urine, and cystitis, with overflow. The back showed a kyphotic twelfth dorsal spinous process, and the eleventh was deflected to the left about one inch, and somewhat flattened down. There was complete anæsthesia as high as the umbilical level, except over the toes and front of the feet, where tactile sensations were very imperfectly perceived. After a month's delay, to allow a thorough trial of electricity, it was determined to expose the spinal cord. Operations on the cadaver in this situation (dorso-lumbar junction), led Dr. Dawbarn to adopt an H-shaped incision; the vertical strokes, as they were deepened, were directed obliquely inwards towards the median line, and the laminæ were sawn through with a Hey's saw directed inwards towards the middle line; the upper flap was then turned obliquely upwards, and the lower flap obliquely downwards. The laminæ of the eleventh dorsal vertebra was firmly adherent to the theca and was removed piecemeal with great difficulty. It was then found that the vertebral bodies had been displaced at this level so that the cord made an angle of about 15 degrees with its apex backward; the intention to replace the spinous processes was, therefore abandoned, and the posterior arches of the tenth, eleventh, and twelfth dorsal vertebræ were dissected away. The operation took three hours. The wound, which was dressed antiseptically, soon healed. A note made ten weeks after the operation shows that the patient was improved in certain respects; he had ceased to suffer pain in the spinal column, which had previously been severe on movement; he had regained some power over the bladder and rectum; the muscles of the lower limbs responded more readily to electricity, and he had regained some power over the sartorii. The legs, which had been generally blue and cold, became warm a few hours after the operation. In commenting on the case, Dr. Dawbarn refers to the remarkable series of cases mentioned by Dr. William Macewen, in his address to the British Medical Association, at Glasgow last year; one of those operations was for a lesion very nearly in the same situation as that in Dr. Dawbarn's case, and the benefit derived from the operation was very remarkable.[2] The long delay—six months—in operating in Dr. Dawbarn's case materially diminished, as he points out, the patient's chances of recovery. He urges that whenever, following traumatism, even a slight abrupt irregularity of the spinal column is observed to coexist with paraplegia from this level, a cutting operation is indicated to determine whether the paralysis is not, by bony pressure, made incapable of spontaneous relief. This operation should be deferred no longer than recovery from the original shock of the injury demands. "If needed at all," he writes, "it is needed early; and we make a mistake if, as in my case, we wait until electricity and time have alike proved futile before attempting what I may call exploratory resection."

[1] *New York Medical Journal*, No. 552.

ANTIQUITY OF CÆSAREAN SECTION.

THE idea of removing a child which cannot be born by natural labour through a wound made in the uterus is so simple that it is not remarkable that Cæsarean section is a very old operation. All standard works on midwifery dwell upon the antiquity of the proceeding. The traditions concerning Scipio, Cæsar, and Macduff prove that the untimely or timely removal of a child through an incision in the uterus was long ago known to the vulgar as one of the resources of our art. Much discussion has taken place concerning the expression "jotze-dophen," which repeatedly occurs in the Talmud. As long ago as 1845 Israel maintained that it signified "born by the Cæsarean section;" Mansfeld, after further study, corroborated this interpretation in 1884. Since that date Rawetsky has attempted to show that the term really referred to those interesting cases where a central rupture of the perineum occurs, the child being born through the rent. Pinkhof, of Amsterdam[1] has carefully compared all the passages in the Talmud, where the term "jotze-dophen" occurs, and concludes that it signifies nothing more nor less than Cæsarean section, which was systematically undertaken whenever deemed necessary. As Chaldean science brought astronomy to a high degree of perfection no doubt other sciences, medicine included, were far better understood in Babylon than is generally suspected, and the ancient Israelites must have profited accordingly during the Captivity, although they may have already possessed much knowledge of medicine and obstetrics before the fall of their monarchy. In the nineteenth century much has been found out that is essentially, if not absolutely, new. Hardly less important is the fact that

[2] JOURNAL, August 11th, 1889, p. 309.
[3] *Nederl. tijdschr. van Geneeskunde*, 1888, No. 8.

chiefly through the exertions of Leopold and Sänger, one of the most ancient of all operations has been rehabilitated, after lying for centuries in more or less discredit.

MEDICAL EDUCATION IN CHINA.

Dr. W. Wykeham Myers has issued a report, printed in Shanghai, on the medical education scheme supported by foreigners of all nationalities, resident chiefly in China, which was framed to prove the possibility of educating native Chinese surgeons in China "in similar manner and up to the average standard required for medical qualifications in Western lands." The progress of this scheme has been noted from time to time in these columns. Many difficulties had to be encountered; one by one these have been overcome, and in July last year three young Chinese students, who had passed through the curriculum at the David Manson Memorial Hospital, Takow, Formosa, where Dr. Myers is surgeon, submitted themselves to a board of examiners comprising English, French, German, and American practitioners in Shanghai, and were all successful in obtaining the diploma of competency to "practise medicine, surgery, and midwifery, according to Western theories, amongst the natives of China." At first sight this seems a rather small result, as it is ten years since the scheme was first sketched. The friends of the scheme have, however, very wisely avoided making the diploma too easy to be obtained. No student is accepted unless he is familiar with the English language; this restriction alone makes the number of possible applicants very limited, but appears to be necessary as no modern textbooks are available in Chinese, and the language does not contain equivalents for Western scientific terminology; further, applicants are required to possess a fair elementary education before commencing medical studies, and then to spend not less than four years in their prosecution. After the first two years they are examined by an independent board of examiners in anatomy, physiology, inorganic chemistry, and elementary surgery; and at the end of the curriculum in medicine, pharmacy and therapeutics, surgery and midwifery, special importance being attached to the clinical test. The interest of the enlightened Viceroy Li Hung-Chang has been enlisted, and he has directed that a civil (literary) distinction should be given to those who obtain the diploma, thus putting them on equal terms with other scholars in their own country. The viceroy witnessed an inspection of a cadet detachment, consisting of the three surgeons and the hospital-sergeant, who had received training in ambulance drill, and for a time it seemed that these four men would at once become the nucleus of an army hospital corps. This expectation, however, has not come to pass, though there is reason to hope that its fulfilment is only postponed. The future of this movement for providing China with Chinese surgeons trained in European methods will be watched with great interest: so much appears to depend on the energy of one man and the good will of the viceroy, that it would be unwise, remembering the curious alacrity with which the Chinese have before now extirpated Western methods which had apparently taken firm root, to write too sanguinely of this scheme. Whatever happens, however, Dr. Myers will have earned the deepest gratitude of the Chinese nation.

PARASITIC FŒTUS IN A MULTIPAROUS WOMAN.

Early in 1888 we published an account of Laloo, the Indian boy who bears a parasitic fœtus attached to his epigastrium, consisting chiefly of the four extremities and nates. Messrs. Sutton and Shattock reported the case in the *Pathological Transactions* for the same year. Another case of parasitic fœtus is described by Dr. E. Bugnion in the *Revue Médicale de la Suisse Romande* for June, 1889. The patient, whose photogravure adorns the paper, is a well-developed young woman with regular features. She was born in 1869. In front of the pubes is attached a rudimentary pelvis bearing two long, deformed, and partly atrophied lower extremities. Rudimentary nipples were found in the integument of the autosite's groin on each side of the attachment of the pedicle of the parasite. There were no signs of any external genitals on the parasite. The vulvar orifice of the autosite is anteriorly encroached upon by the parasite, and is pushed backwards so that the perineum is reduced to a thin septum. The autosite, Louise L., of Reims, walks well; the monstrosity shows but little. She married three months before her fifteenth birthday. In March, 1885, her first, and in December, 1888, her second, child was born. She was suckling the latter when Dr. Bugnion examined her. He describes her as a dipygus parasiticus, or more strictly as a *pubimèle* or *pygomèle pubien*. She is known as the *dame à quatre jambes*, and has been on show for some time, after the fashion of most monsters.

SCOTLAND.

The Duke of Westminster's Select Committee of the House of Lords, after an eight days' inquiry, have passed the Water of Leith Purification and Sewerage Bill, an extensive scheme promoted by the Corporations of Edinburgh and Leith to prevent in future the pollution of the water of Leith by neighbouring tanneries and paper mills. The present state of the water was proved to the Committee to be dangerously foul. The House of Commons Committee have already passed the Bill.

THE SCOTTISH UNIVERSITIES COMMISSION.

A well-informed Edinburgh correspondent writes: "Grave comment has followed the statement that the names of more than one occupant of Scotch professorial chairs were to be submitted to Parliament, with a view to filling the four vacant places on the Uuiversities' Commission. Objection is advanced, on the ground that the functions of the Commission are executive and that the scope of their inquiry ought to be unlimited. How, it is asked, can one fairly be witness and judge at the same time? The Commission will have power to call before it any person or persons who may be likely to aid them in their difficult and delicate investigation. These powers cannot be used with the desirable freedom if members of the body, whose duties and privileges are to come up for particular review, themselves occupy seats on the bench. Questions of medical education will bulk largely in the work before the Commission, and, in this view, it must be confessed that the list of experts is unwarrantably meagre. The profession, to which Edinburgh has contributed far more members than she has to any other, and whose educational future (so far, at least, as Scotch influence is concerned) lies in the hands of the Commission, can well offer and emphatically demands much better representation."

ROYAL SOCIETY OF EDINBURGH.

The last meeting of the Royal Society of Edinburgh for the present session was held on Monday, July 15th; Professor Chrystal, Vice-President, in the chair. Various papers of medical interest were submitted. Dr. Felkin read the first of a series on the Geographical Distribution of Tropical Diseases. The paper was illustrated by maps and charts. Generally speaking, it might be stated that the greatest area of endemic distribution corresponded with certain well-known physical phenomena, such as the prevalence of rainy seasons, electrical disturbance, excessive heat, etc. Dr. J. Berry Haycraft communicated the results of a series of experiments undertaken by himself and Mr. C. W. Duggan, M.B., with regard to the Coagulation of Serum Albumen, Serum Globulin, Egg Albumen, and Vitellin. Their conclusion was that it was not possible to fix a definite coagulation point for albuminous sub-

stances. Dr. Alexander James made a further communication as to the Latent Period of Muscle Contraction. His results had gone to show that the time intervening between the tapping of a muscle and the resulting contraction varied according to the distance of the muscle from the spinal cord. Dr. Alexander Bruce submitted a paper describing the Segmentation of the Nucleus of the Oculo-motor Nerve, in which certain novel points regarding function were suggested. Dr. Bruce also communicated a paper on the Upward Continuation of the Spinal Cord. Professor Chrystal shortly reviewed the work of the session, during which eighty-seven papers had been read. This included twenty-three physiological, twenty-one physical, sixteen mathematical, seven chemical, six zoological, six botanical, three meteorological, two astronomical, and two geological. In speaking of the large number of physiological papers, the Vice-President referred to the fact that a good many of these came from the newly-instituted Research Laboratory of the Royal College of Physicians of Edinburgh. The Royal College was to be congratulated on the interesting result. He also referred to the Ben Nevis observations, and announced that negotiations had been completed for a site on which to erect a low level observatory on Ben Nevis, whereby the full benefit of the observations might be obtained. The Society had also achieved another important object. They had succeeded in making the Treasury reverse their decision regarding the *Challenger* reports, which it had been proposed to discontinue. They had also been actively interesting themselves in the question of the Government grants, but although some little change had taken place in the administration and management of these, he feared workers in the provinces would be little benefited. Some further changes must be effected if men outside London were to have their fair share. There was need for union among scientific men towards such an end. Nowadays, to be heard, people must be noisy, rich, or numerous. Scientific men had not these qualifications, and they must make the best of it by combining. One of the main uses of such a Society was to bring scientific men together.

GLASGOW OPHTHALMIC INSTITUTION.

Dr. Wolfe's summer clinical course on ophthalmic medicine and surgery to students and practitioners was brought to a close on July 10th. Including those who attended the post-graduate course held in the spring, the total number of students was 44. The success which has attended these courses has induced Mr. Campbell White, one of the directors of the institution, to offer two microscopes and other instruments as prizes, awarded after examination, and these were handed to the most successful students at the closing meeting. Some alterations are about to be made in the institution, with the view of equipping it more thoroughly for teaching purposes.

THE PREVENTION OF CRUELTY TO CHILDREN.

The Glasgow Society for the Prevention of Cruelty to Children has forwarded a memorial to the Secretary for Scotland, pointing out certain defects in the Bill for the Prevention of Cruelty to Children at present before Parliament, and making suggestions for its amendment. The memorialists call attention to the phraseology of the Bill as being in many respects foreign to Scotch law, and to certain details of procedure as also requiring amendment. They further suggest that great good would result from the compulsory registration of all societies for the prevention of cruelty to children. Such registration "would put a stop to institutions of a most injurious kind, which, while professing to exist for the good of boys and vagrant children, are really conducted for purposes of profit, and harbour children who have run away from home, and are entering upon evil courses." As regards the employment of children in the streets, the memorialists believe that it is not desirable that it should be stopped, but rather that it should be placed under regulation, all children so employed being registered, and distinguished by a badge. The third suggestion of the Society is perhaps the most important, that "The subject of child life-assurance might be definitely dealt with in the Bill." The Society has embodied its own views in the following clause which it proposes should be added to the Bill: "After the passing of this Act, it shall not be competent to insure the life of a child so that on its death occurring before it is 10 years of age any money shall become payable on the policy, without prejudice, however, to any insurance to the effect of providing decent and proper burial for such a child."

GLASGOW CORPORATION AND SANITARY LEGISLATION.

The Glasgow Corporation are considering the necessity of promoting in next session of Parliament a private Bill, which will confer additional sanitary powers. These powers were sought in the Glasgow Police Bill of 1882, withdrawn because the subjects were dealt with in the Burgh Police and Health (Scotland) Bill, which, however, did not succeed in becoming law, though it passed select committees of both Houses. The additional powers sought deal with compulsory notification of infectious diseases, compulsory removal to the reception house of healthy persons from overcrowded houses where infectious disease exists, power to provide hospitals, washing and disinfecting and reception houses *outwith* the city, power to compel owners or occupiers to clean filthy houses, and to compel occupiers to cleanse clothing and bedding injurious to health by filth, to prevent wakes over bodies of persons dead of infectious disease, to prevent removal of bodies from fever hospital except for immediate interment, and removal of body of person dead of infectious disease by any public conveyance unless with certificate of medical officer. The additional powers have also to do with infectious diseases and the attendance of children at school, regulation of milk supply in view of infection, use of common washing houses in infectious cases, cisterns and water-supply, smoke testing of suspected drainage system, regulation of common lodging-houses, and of ticketed houses. Power is sought to close houses unfit for habitation, to make by-laws for regulation of cemeteries, to extend powers of dealing with diseased meat, etc.

THE CLIMATOLOGY OF GLASGOW.

An interesting letter from Professor Grant, of the Glasgow Observatory, appears in the *Glasgow Herald* of July 12th, regarding the weather of May and June, which, he says, has been of unsurpassed genial warmth, that will be memorable in the annals of the climatology of Glasgow. The old prophecy respecting the fruitfulness of the season was revived when it was found that the leaves of the oak had anticipated in birth the leaves of the ash, and towards the end of May there might be seen the very rare and beautiful phenomena of the birch and the lime on the one hand, and the ash and the oak on the other, all at the same time in their virgin foliage. The mean temperature of May was the highest, amounting to 52.9°, since 1868, when the system of self-recording apparatus was established at the Observatory. The average mean of the month for twenty-two years included between 1868 and 1889 is 49.2°. The mean of June, 57.2°, was 2.4° greater than the average for the same twenty-two years period The mean of the two months, May and June, was 55.1° against the average mean of 52° of the same months of twenty-two previous years. The temperature during the two months never fell for even a single night to 40°, and only during one night in June did it descend so low as 45°. The average minimum for the period of twenty-two years is 42.7° for May, and 47.8° for June, while this year it has been 47.2° for May, and 49.6° for June. "A

hundred years, and probably far more," says Professor Grant, "may have passed away before the months of May and June, viewed in their totality, shall present such a favourable combination of climatological features as that which has distinguished the year 1889."

THE VACANT CHAIR OF ANATOMY AT ABERDEEN.

OUR Edinburgh Correspondent writes:—The announcement of the resignation by Professor Struthers of the Chair of Anatomy at Aberdeen University was received in Edinburgh with regret and surprise. Professor Struthers's early connection with the Edinburgh School of Medicine, and the many movements in the furtherance of which he either represented Edinburgh or worked along with her representatives, have given him there a position of esteem and respect attained by very few. The vacancy of one of the most important anatomical posts in the kingdom has caused considerable flutter in Edinburgh scientific circles, and already more than one possible candidate has been suggested whose professional claims would have the additional support that such an election would be likely to preserve the best traditions of the Edinburgh School of Anatomy.

PROFESSOR STRUTHERS.

AT the close of the summer session this week at Marischal College, Aberdeen, Professor Struthers intimated to his class of Anatomy that this was the last time he would meet them in the capacity of their teacher. This intimation was received with the deepest possible regret. Professor Struthers has been connected with the Anatomical School for forty-four years, and has earned the affection, respect, and esteem of successive generations of students. For many years he was connected with the Edinburgh School of Anatomy, first as carrying on the work of the extra-mural school. During 1853-54 he conducted the duties of the chair of Professor Goodsir. In 1863 he was appointed by the Crown to the chair of Anatomy in Aberdeen; and to his energy was due the erection of the present buildings, including the museum, lecture, and dissecting rooms, and laboratory for histological work. The museum which he has been chiefly instrumental in creating is one of the best and most complete of its kind in the country with specimens fully illustrating, not only the anatomy of man but also of the higher animals, and, as Sir Andrew Clark recently stated, Professor Struthers's department now occupies a first place among the anatomical schools of the world. His lectures have always been remarkable for their clearness and for the interest which they have excited. He contributed largely not only to the reputation, but to the general prosperity of the college; it being greatly due to his initiative that the professorship of pathology was founded in 1882, by Sir Erasmus Wilson. As convener of the Committee of the University Council he has taken an active part in medical legislation, and frequently given evidence before Royal Commissions and Select Committees of the House of Commons. He has contributed no fewer than seventy papers on human and comparative anatomy to the literature of the profession, and has taken a leading part not only in the extension of the College, but in the remodelling of the infirmary. Professor Struthers has long been a prominent member of the British Medical Association, as well as of the British Association. His work on the Medical Council, as well as his other scientific and professional relations, have frequently brought him to London, and have made him well known and much beloved and respected in professional circles in the metropolis and throughout Great Britain. After so long a career of arduous labour, he has well earned the right to a temporary repose; but all will hope and anticipate that he may yet have before him many years of public usefulness and professional honour.

IRELAND.

MR. JOHN DYSART M'CAW, F.R.C.S.Ed., Portglenone, is a candidate for the vacant coronership in the district of the County Antrim. We regard it of high importance to the public as well as to the profession that the office of coroner should be held by a member of the medical profession. It is only in this way, with the present constitution of the Coroner's Court, that the medical evidence given can be adequately sifted, or that the causes of death can be properly traced out in cases where no expert evidence is forthcoming.

AMALGAMATION OF MEDICAL SCHOOLS.

THE Council of the College of Surgeons has passed a resolution directing the College solicitor to proceed with the arrangements for the amalgamation of the medical schools. The trustee of the Carmichael College has agreed that the President of the College shall be associated with him, and, when the necessary new buildings have been erected, the Carmichael will be sold. Everything, therefore, points to the completion of the scheme before the beginning of the new session.

COUNTY ANTRIM DISTRICT LUNATIC ASYLUM.

DR. NUGENT, inspector of lunatic asylums, inspected this institution on July 5th, and expressed his approval at its clean and orderly appearance and the care bestowed on the inmates. The Commissioners of Control intend holding a meeting on August 8th with the object of inquiring into the subject of providing additional accommodation for the insane poor of the Belfast District, and will communicate their views on the subject to the governors immediately afterwards. The governors, on receipt of the communication, will summon a special meeting to discuss the matter

CHARGE AGAINST A MEDICAL MAN.

ONE of those charges, with which we are too familiar, was heard at the recent Tyrone Assizes, before Baron Dowse. Dr. Matthew J. C. Marmion, of Dungannon, a Justice of the Peace for the County, was charged with an indecent assault upon his servant girl, Mary Ann Donaghy. The case rested wholly upon the evidence of the complainant. After hearing the evidence and the judge's charge, the jury at once acquitted the prisoner the verdict being received with applause in court.

ST. JOHN AMBULANCE ASSOCIATION: BELFAST CENTRE.

THE annual report of the Belfast Centre of the St. John Ambulance Association just issued shows that the work of the Association has been prosecuted with much vigour and success during the past year. Ten male first aid classes were held, which were attended by 287 men, of whom 163 entered for the examinations, with the result that 136 obtained first aid certificates, 10 re-examination vouchers, and 4 medallions. Seven female first aid classes were held, attended by 244 women, of whom 123 entered for the examinations, and 118 obtained first aid certificates. Four nursing classes were held, attended by 163 women, of whom 46 entered for the examinations, and all were successful. Five women gained the medallion. The total shows that there have been 21 classes, attended by 694 persons. It is worthy of note that three classes were held for the police and one for the *employés* of the Northern Counties Railway. These classes were among the most successful of all, and no doubt supply a very real and pressing want. The work of the Belfast Centre has grown greatly in popularity and usefulness under the present secretary, Dr. W. Calwell, who has been zealously seconded by a committee largely composed of ladies.

TOPICS OF THE DAY.

(AN OCCASIONAL COLUMN.)

By the Editor.

One hundred and seventy-one new members were elected into the Association at the meeting of the Council on Wednesday last.

It has once more become necessary to extend the publication of the British Medical Journal, which has now reached to a weekly issue of 15,550 copies.

I have spent a few days this week in Paris examining the objects of medical, scientific, and sanitary interest in the great International Exhibition in the Champ de Mars. I need not attempt to add anything to the expressions of admiration and surprise which have echoed throughout Europe from those who have been able to appreciate *de visu* this gigantic collection of the last products of cosmic genius and labour. Its astonishing proportions, the marvellous lucidity of arrangement, and the victorious skill in organisation which have assembled the contents of these acres of buildings, gardens, and constructions are in themselves a triumph hitherto unapproached, and which everyone can estimate for himself. In the scientific departments, English exhibits are few but fine. The microscopes of Ross, and of Watson, of Holborn, are especially good, as are the instruments of precision of Elliott Brothers. The British exhibits in the Section of Hygiene and Social Economy are—thanks especially to the industry and intelligence of Dr. Louis Parkes, the able honorary secretary of that section of which I am the *fainéant* and unworthy chairman—very representative, and are attracting much attention in the sanitary world. In the department of Medical and Surgical Instruments, Great Britain hardly shows, and there are few but good British exhibits in the pharmaceutical section; but the French exhibits are admirable in both departments. Of these, reports will appear in these columns shortly, from more competent hands than mine. Meanwhile I may say that those who can, without difficulty, should certainly take their holiday (or part of it) this year in Paris. No exhibition hitherto held will give an idea of the magnitude of this giant show; and it would be bold to prophesy when such another can be held.

People who go to Paris must at least eat to live; and as Pourtales long since demonstrated, from the metaphysical point of view, the importance of remembering that "man is not an abstract animal," I may do a good turn to those who are gastronomic as well as scientific by a hint as to where "one dines well" in Paris now, or some of the places. The famous names are known of the restaurants where one can "eat gold and drink pearls." They are not for us to recapitulate; but I may mention in the Exhibition the Restaurant de France at the Trocadéro (upper terrace), where the view and the *cuisine* are alike excellent, or chez Brebant on the Tour Eiffel, whence the illuminations are well seen. In the city there is a new luminary whom I recommend as a genius of a high order—a *cordon bleu*—who will rapidly become of European fame. Frédéric, at the Hotel and Restaurant de la Tour D'Argent, 15, Quai de la Tournelle. It is a simple old-fashioned sort of place near the Quartier Latin, with sanded floor, and unassuming; but M. Frédéric can boast more "*créations*" than any other *maître d'hôtel* in Paris, and it is difficult to feel sure that you know how perfect the results of artistic skill in this direction can be until you have lunched and dined once or twice at the Silver Tower and placed yourself in the hands of M. Frédéric. I asked his wife, "Where has M. Frédéric made his education as *chef?*" The answer was, "*Monsieur, il n'a jamais été chef: il travaille de sa tête.*" The reply is charming, and may become historic. He was *maître d'hôtel* at the celebrated *Maire* at the corner of the Boulevard de Strasbourg. Pardon these frivolous details; but "the doctor in the kitchen" is not necessarily out of place, and *dulce est desipere.*

I had the pleasure of accompanying Sir Jacob Wilson, Mr Gilbey, and Mr. Ernest Clarke, a deputation from the Royal Agricultural Society of London, to the Pasteur Institute. M. Pasteur is away, but Dr. Roux unlocked the utmost mysteries of this home of research. I am authorised to say that they were profoundly interested and deeply impressed with the enormous benefits which the researches of M. Pasteur have conferred on agricultural industries, and gratified with the humane care with which every precaution is taken to minimise pain. They found that in the matter of the prevention of anthrax (since 1882) 500,000 animals had last year, in France, been rendered immune to that pestilence (known here as "quarter ill"); whole districts in the Beauce have recovered their agricultural value; the agricultural societies will not insure beasts unless previously vaccinated; the mortality from anthrax has been reduced nine-tenths. These facts speak for themselves.

It is very satisfactory to notice the prosperous course of the subscription to recoup Mr. Malcolm Morris his out-of-pocket expenses in punishing the blackmailers who endeavoured, by conspiracy and terrorism, to extort money from him by trumping up a base and baseless charge. Many a medical man has suffered tortures at the hands of this class of nineteenth century bandits; the more sensitive the victim the greater the temptation to succumb. Mr. Morris showed a courage and resource which not only baffled his persecutors, but brought upon them a punishment which will help to terrify evil doers of like character, but at the cost to himself of months of anxiety, as well as legal expenditure amounting to several hundreds of pounds. This latter, at least, will, it may be hoped, be made up to him. He was fortunate to fall into the hands of a legal adviser whose skill, sympathy, and sound advice were a tower of strength. "A doctor in distress, under the pressure of an infamous conspiracy, has the first claim upon my time," said Mr. George Lewis, and with unerring sagacity and untiring labour, amid the pressure of other overwhelming engagements, he personally directed all the details of the proceedings by which the truth was triumphantly vindicated. For that saying and for that labour, as for other proof of sympathy, a word of hearty acknowledgment is due to him.

The "movement" in favour of shorthand for medical students is evidently not at all likely to be snuffed out by the extinguisher which the General Medical Council put upon Sir Dyce Duckworth's motion in favour of it. Those who believe in shorthand as a useful adjunct of medical study and practice are enthusiastic and energetic, and will probably have the success which their enthusiasm deserves. Opinion is not unanimous in support of their view, even among those physicians who have become accomplished in phonetic shorthand, and are past masters of Pitman's system. I have for the last twenty years got through nearly all my literary work and correspondence by the aid of dictation to a shorthand writer; indeed, for many years I have kept him constantly employed, and sigh at the thought of the ink shed and waste of paper of which I have been the vicarious cause. I am often surprised at the loss of time and exertion which men in large practice go through in writing with their own hand in lieu of dictation. I found when I was most busy in literary work that I could get through an average of two leaders a day and forty letters in a little over two hours. If I were to write them with my own hand this would involve at least four hours, probably five, of an exhausting combination of mechanical and mental work. I believe the time is not far off when men much employed in writing will do their work entirely by dictation to a phonographer.

Writing your own shorthand is a sort of half-way house to the paradise of dictating from a library chair, with a cigarette to inspire and soothe your pleasing labours. It has the advantage of being more economical if you do your own transcription; but then it is also more costly if you do not. To hand your shorthand to another to transcribe is poor economy whether of time or money. Edison's "improved phonograph" offers a pleasing vision of the future settlement of the difficulty, for what will be more useful and convenient than to speak your notes, or letters, or essays into a machine which will indelibly record them, and give them out again when required for the edification of yourself, your amanuensis, or your correspondent? Meantime I may say that many lecturers hotly discourage voluminous note-taking, and argue that if taken at all they should be of the briefest, and filled out from memory. The Japanese art workers, who work chiefly in iron and lacquer, and like inexpensive materials, had a proverb "That he who works in gold puts his brains into the melting pot," and he who takes servile shorthand reports of the *ipissima verba* of his teacher is apt, perhaps, sometimes to put his brains into a notebook where they are not

always available at need. These are reserves, not objections, to the extension of phonetic stenography.

PERHAPS even more useful to the student than stenography is that other branch of the graphic art, drawing. It is a second (and the most primitive) form of writing, and that which is still brief and understood of all men. The art of writing is imperfectly taught unless drawing is accepted as an essential division of caligraphy. There is a foolish notion that drawing is a department of art, and its teaching an "æsthetic" question, a phrase which is enough to condemn it; but surely it is a mode of elementary expression without which the alphabetic script is apt to be imperfect and incomplete. In France it is a part of elementary education of the poor, and until a lad knows how to draw, his caligraphic capacity is mutilated and incomplete. I think drawing more important than shorthand, but, on the other hand, it is not so much neglected.

THE annual gathering of the Workhouse Infirmaries Nursing Association, held recently in the Grosvenor Gallery, was a very interesting and hopeful little ceremony. By the kindness of Lady Colebrooke a profusion of flowers and suitable entertainment gave charms of art and hospitality to a gathering intended for the cheering and encouragement of the trained workhouse nurses, and each nurse as she left, after spending a pleasant evening among the pictures and flowers, received one, or oftener two, large bouquets to carry away with her. Medals and gratuities were awarded to twenty nurses, some of whom had remained at their posts for more than eight years. Lady Montagu gave some account of her recent experiences in the improvement of nursing and medical training of women in the Indian hospitals. Lady Wantage, Miss Twining, Mrs. Bonham Carter, and other tried friends of the nurses were present; among them Sir Edward Sieveking and Dr. Symes Thompson. It is very interesting to note the changes which time has made in the treatment of the sick poor in workhouses, and how surely and silently such sound reforms progress when once established on a sound basis.

THAT bit of work, the reform of the workhouse infirmaries, is one to which the medical profession and the medical journalists may look back with the utmost satisfaction. It was wholly carried out by medical initiative and determined effort on the part of medical men, who succeeded in rapidly arousing public attention, and within eighteen months in carrying a scheme of reform which was embodied in Gathorne Hardy's Bill, creating the metropolitan asylums and establishing the system of workhouse infirmaries which formed a precedent which has been acted upon throughout the country. Of my medical fellow-workers in that great work, which occupied me closely for nearly two years, all are now gone—Anstie, Carr, and Joseph Rogers, who were the three who most actively co-operated, Anstie especially taking the largest share in the work of inspection.

FRESH from the reading of Dr. Rogers's memorials I cannot but vividly recall the time when Anne Peabody made to me, as hon. secretary of the Workhouse Infirmaries Reform Association, her historic confession, which I placed in the hands of the then President of the Poor Law Board, Mr. Pelham Villiers, who agreed it would form a just basis for a public inquiry. That inquiry lasted three days, during which I acted as counsel for the prosecution, as our association never employed lawyers, although Q.C.'s were plentifully employed on the other side, and we succeeded in arousing public attention to the incredible state of things. Shortly afterwards I received similar information, and had a like duty in connection with the Paddington Workhouse Infirmary, which was conducted with terrible deficiency by a most inestimable body of gentlemen who were themselves amongst the most shocked and surprised at the evidence given. One of the so-called night nurses had been a street hawker, and being aged, infirm, and thoroughly illiterate, although not completely worn out, was promoted in the infirmary to the office of night nurse, she was familiarly called in the infirmary "Pots and Pans," to which name she always answered. When I questioned her as to her understanding of the duties of a night nurse in the extensive ward to which she was posted, and asked her whether, for instance, she thought it part of her duty to give a thirsty patient water to drink in the night, as to which I had a complaint, she answered naively, "Lor' bless yer, no, sir; if I was once to begin to give 'em water there would be no end to it. I tried it once, and half of them raised their heads like birds in a nest and all called for water, so I soon left it off." In another infirmary at the east of London I did not find one nurse who had been trained, and a very large percentage of them could not even read the written directions on the medicine bottles. To Miss Twining, among others, is very largely due the establishment of a training association for workhouse infirmary nurses. At this gathering there were upwards of eighty nurses present, besides matrons, as the report before me truly states.

À PROPOS of this reform, I am very glad to see that the College of Physicians and the General Medical Council are pursuing actively the recommendation that the workhouse asylums and infirmaries should be open to medical students and take their places in the sphere of medical education. That was the original intention. When I drew the scheme for the metropolitan asylums and workhouse infirmaries I laid it down as a principle that that should be one of their not least important functions In the article on Hospitals of the State, in which I drew the whole scheme, and of which 10,000 copies were reprinted from the *Fortnightly Review*, I expressly devised as a staff a resident medical officer, with visiting physician and surgeon, as in other hospitals, being convinced it was only by such an organisation that the medical treatment could be brought up to the highest level, that progress in medical knowledge could be achieved, cases duly studied and classified, and the students could give and receive the immense benefit which patients and students alike derived from such an organisation. In the first instance this scheme was accepted; subsequently, owing to the jealously of vestrydom, and to guardian bodies, and to anything like outside criticism or interference, and the fear that the excess of students might break down something of that *quasi*-prison discipline which at that time still hung about workhouse institutions, this element was eliminated.

I HAVE repeatedly called public attention both in these pages and elsewhere to the importance of returning to the original constitution. It has taken twenty years to overcome official prejudices in this respect, and even now it does not seem probably that visiting physicians and surgeons will be appointed, but in any case it will be a great advantage that students should, under whatever restriction, be granted access to the hospitals of the State, and I naturally feel some personal satisfaction that this mutilation of my original scheme has now, partially at least, been made good by the restitution of the amputated parts.

NOTES ON A CASE OF ANÆSTHETIC LEPROSY.

BY GEORGE THIN, M.D.

CIRCUMSTANCES to which it is needless more particularly to refer have caused a considerable amount of interest to be taken in the case of Edward Yoxall, an unfortunate man at present under Dr. Larder's care in the Whitechapel Infirmary. It has been suggested to me that I might do useful service by giving a description of this man's present condition, so that observers who are familiar with the symptoms of leprosy may be able to form their own opinion regarding the disease from which he now suffers. I am indebted to Dr. Larder for the opportunity of seeing the patient, and for kind and valuable assistance in examining him. Dr. Larder is himself preparing a full and detailed account of the case, which will include his history from the beginning, so far as it can be ascertained, and which will be illustrated by drawings. This enables me to confine myself to a brief sketch of the man's present condition.

Edward Yoxall, married, a butcher, is the father of fifteen children, of whom six are now alive, the eldest being 39, and the youngest 13. Of the nine who are dead, triplets and twins born dead and in infancy account for six. His wife and the living children are, I understand, healthy. Yoxall, who looks quite his age, forty years ago made several voyages to Riga, and five or six voyages to Corfu. With these exceptions, he was never out of this country.

The patient states that about six years ago he experienced numbness in the left hand, his attention being specially called to it by a knife dropping from his grasp—a very characteristic symptom. About six months afterwards he felt a numbness in his

left foot, and at about the same time his right hand became numb. About two years ago he lost a part of the fingers of the right hand, the ring finger suffering first.

Present State.—Left arm: Anæsthesia is complete as far as the elbow, reaching on the flexor surface two inches above the bend of the elbow and on the extensor surface several inches above the olecranon. The zone of complete anæsthesia above the elbow passes gradually into the region of skin with normal sensation.

Right arm: It is anæsthetic up to the elbow. The zone of complete anæsthesia ceases about the bend of the elbow on the flexor surface and on the extensor surface reaches to about three inches above the olecranon, the anæsthesia passing gradually into the sensitive area.

The left ulnar nerve is slightly thickened over the inner condyle. The right ulnar nerve is not appreciably thickened. No sensation produced by pricking the skin deeply over these nerves.

Left hand: The fingers and thumb are drawn down *en griffe*. Nails represented on all the fingers, but on the fore and middle fingers they are represented only by thin fragments. On the forefinger the distal phalanx is represented by a short stump, and on the middle finger this phalanx is shrunken to one-half. On the radial side of the forefinger and the ulnar side of the thumb the skin is pigmentless, the white patches extending in streaks into the darker pigmented surrounding skin. The ulnar surface of the little finger is also pigmentless; the skin over the metacarpal phalanx is red, swollen, and at one part scaly, and as if it had been ulcerated. The pigmentless areas connected with the thumb and little finger are continued upwards towards the wrist-joint, but the absence of pigment is not complete at that part. On the flexor surface of the forearm there are several large scars produced by burns. There is an irregular pigmentless patch, three-quarters of an inch by half an inch, situated an inch and a half above the wrist-joint. There are superficial abrasions over the outer surface of the thumb and the first phalanx of the forefinger.

Right hand: The distal phalanx of the thumb is shrunken to about half its length, but is still covered by skin and by nail. Of the forefinger, all that is left is the proximal phalanx, the remaining skin of the phalanx being represented by hard, fibrous tissue. In the middle finger the distal phalanx is lost, the end being covered by a rough substance which looks like the remnants of a nail. Of the ring finger, the first phalanx only remains, the rest having been amputated at St. Bartholomew's Hospital on account of ulceration. Only the first phalanx of the little finger remains. On the back of the thumb and of the forefinger there are parts free from pigment, and there are several other pigmentless spots on the back of the hand about the knuckles. There are minute pigmentless patches on the skin that covers the remains of the other fingers. Over the ends of all the mutilated fingers the skin is firmly drawn, the bone being covered by what feels like fibrous tissue. There is no actual ulceration at present except under the stump of the forefinger, where there is a small ulcer the size of a split pea. In both hands the muscles of the thenar and hypothenar regions are much shrunken. The palmar fascia seems inelastic and contracted, and the flexor tendons project against it.

There is a curious condition on the nape of the neck and upper part of the back which deserves more observation than I have been able to give it. That part of the skin which extends from the hair over the back of the neck and down the centre of the back between the scapulæ, ending about the level of the middle of the scapulæ, is covered by an irregularly distributed brown pigmentation. On minute examination this pigmentation is seen to be composed of groups of minute rounded patches, mostly about the size of a pin's head, and as there are very slight portions of skin between these patches unpigmented a certain mottling is produced. The appearance at first sight is not unlike that presented by tinea versicolor, although its distribution and limitation distinguish it from the usual characteristic appearances in that parasitic affection. The trunk is free from anæsthesia, but on examining the lower extremities, the following condition is observed:

Right Leg: The large toe is shrunk to about one-third its size, but the end of the toe is still entire, and is covered with nail, the shrinking being due to the disappearance of the proximal phalanx and of the head of the metacarpal bone. On the back of the second toe there is is a superficial ulcer of about one-third of an inch, by one-fourth of an inch. The ball of the foot is superficially ulcerated across the whole breadth, the affected part being one-third of an inch in depth. There is very little mobility of the head of the metatarsal bone of the little toe, the mobility being very slight in all the toes. The skin of the foot is brawny and hard up to the middle of the leg and scaly over its whole area.

In the left leg the big toe has disappeared, no cicatrix being left. The distal phalanx of the second toe has disappeared, and is represented by a mass of fibrous tissue. The other toes are still entire, although presenting an appearance of shrinking at the ends. The joints of the left foot are also stiff; the foot being covered with a hard unyielding skin, which is not scaly. On the ball of the foot there in an area of superficial ulceration similar to that on the right foot.

Anæsthesia is complete on both legs as far as the knee, being lost gradually above the knee, and extending higher on the left than on the right. In both feet he is not able to move the toes. He can flex slightly the fingers of both hands, but cannot extend them. On the left hand he cannot undo the *griffe*. At present he is suffering from ulcerative inflammation of the cornea, an affection from which he has suffered from time to time, I am informed by Dr. Larder, during the last two years. He suffers from severe lancinating pains in both legs. One point to which I have not directed my attention, but which will, I have no doubt, be fully elucidated by Dr. Larder, is the condition of the sweat glands over the anæsthetic areas and the temperature of the anæsthetic parts.

It has been my object in these brief and incomplete remarks to offer data which may be sufficient to enable my readers, who are competent in such matters, to form their own diagnosis. For my own part I have no hesitation in stating that I consider the disease to be undoubtedly a marked example of anæsthetic leprosy. I found my opinion on the lancinating pains, the atrophic condition of the fingers, which is very different from that produced by gangrene, and above all by the fully developed complete anæsthesia. It does not, however, by any means follow that the diagnosis is necessarily an easy one. The diagnosis in cates of pure anæsthetic leprosy, in which there is the absence of the development of bullæ and of the characteristic groups of patches, is often somewhat difficult. The errors of nutrition produced particularly in the early stages of the disease by the diminution of nerve-power produce appearances that are, and in my own experience have been, mistaken, as I consider, by competent observers for skin diseases of quite a different kind. In such cases it would be well to bear in mind that the anæsthesia is a very characteristic symptom.

It must be remembered that in these cases we are not assisted in making the diagnosis by the presence or absence of the leprosy bacillus. In anæsthetic leprosy the bacillus is found, as was first shown by Dr. Arning, in the nerve trunks, and it is not found in the affected parts of the skin. I have repeatedly examined sections of skin from patches of anæsthetic leprosy for the bacillus without finding it, whilst, at the same time, and by the same methods, it was found abundantly in tubercular leprosy. This of course is a well recognised fact by those who are familiar with the subject. In portions of affected nerve, which I have received from abroad, I have verified the observations of other workers, and have found the bacillus in the connective tissue between the nerve fibres. The change in the nerve affected by leprosy is remarkable. The nerve trunk becomes sometimes so completely altered that a longitudinal section of it would deceive a most experienced observer, who, unless he were instructed to the contrary, would have no difficulty in coming to the conclusion that he had before him a section of tendon.

These remarks on the relations of the bacillus to anæsthetic leprosy are worth bearing in mind in connection with the present case. There is no reason to believe that the leprosy bacillus has been present at the surface of this man's hands, a fact which ought to dispel the fears of those nervous persons who have been led by exaggerated statements to fear an outbreak amongst those with whom this man has been associated. The man's own family, with whom he has been in constant relations, are, it appears, quite free from the disease, and I see no reason to believe that the persons with whom he has been trading have incurred risk. The parasite from which he is suffering, finding its nidus in the nerve trunks and not on the surface, has not had the opportunity of which, even in the favourable circumstances of tubercular leprosy, it so seldom avails itself of being transferred to other persons.

BEQUESTS.—The Marquis of Ely bequeaths by his will £200 each to the Seamen's Hospital at Greenwich and the Hospital for Consumption, Brompton, and £100 to St. George's Hospital.

PRESENTATION TO SIR ANDREW CLARK AT THE LONDON HOSPITAL.

A LARGE gathering of friends of the London Hospital and medical school met in the library of the college on Monday last, under the presidency of His Royal Highness the DUKE of CAMBRIDGE, to witness the presentation to Sir Andrew Clark of his portrait, and the distribution of prizes to the students and the nursing probationers. The portrait, which was subscribed for by the members of the staff and other friends, was painted by the late Mr. Frank Holl, R.A. The presentation was duly made by the President.

Sir ANDREW CLARK, after returning his thanks for the gift, proceeded to take a brief review of the five-and-thirty years of his professional life, and gave an interesting history of the London Hospital medical school, with which he has been connected through most of that period. Sir Andrew Clark continued: Happily the interest of this day does not turn upon any individual; happily it does not turn upon the distinctions which my younger brethren have obtained; nor upon the distinctions which have been gained in the great school for the training of nurses, which has been so long and so well established at this hospital. These are just, so to speak, incidents and accidents in the great work, the life and work, of the schools in which they have occurred. Let me ask your patience for a moment while I speak to you of the interesting story of the great medical school in the library of which we are now assembled. It was, I think, in 1742 that this hospital first recognised the great moral truth that it could not live to itself alone any more than a man can live to himself alone. The staff of the hospital felt that the knowledge which they were gaining in its wards by the treatment of the sick and the diseased was not their own alone; they felt that it ought to be communicated to others, so that they might get like benefit for themselves. It was, I think, in 1742 that the first practical teaching of medicine and surgery began in this hospital; that was the germ and embryo of the school whose history I am asking you to follow in rough outlines. After a while lectures began to be delivered here. That was, I think, in 1749. A little later, the staff, feeling the necessities of their position and their duty to the profession and the public, to use a common phrase, clubbed together, and built a little school at the east end of the hospital; and my heart is closely intertwined with the memory of that little school, and many of my happiest days were associated with it, for it was there that I began my service in this hospital. In 1854, the governors and the committee of this hospital, waking to the necessities of their position, feeling the full force of the duty of promoting medical education, and of utilising the large stores of knowledge which were running to waste in this hospital, and following the enlightened and liberal policy which has always actuated them, erected college buildings at a cost of over £12,000, and the college erected by them was handed over to the staff in my presence in 1854. That was the fourth stage in the history of this college. Now the work increased, and grew rapidly, and after a time it was found that the prosperity of the college required that it should be entirely remodelled and rebuilt. This was done in 1885, at a cost of £10,000, and the new building was furnished and handed over to the staff. I want to remind you here that the first stage in the history of this college was a stage that belonged entirely to the staff. The committee and the governors stood aloof for a time, and allowed the staff to erect and continue the school, which, as I have shown, was superseded by their act in 1885. The college which had been erected at the east end of the hospital, and which was transferred to the spot in which we are met, had by 1854 acquired a marked individuality of character—an individuality of character which has since spread over the civilised world. It has often been alluded to in Edinburgh and in Paris as a practical school *par excellence*, and I am quite sure that this is because it tries to apply the knowledge which it possesses in practice, and to make it immediately subservient to the practical business of life. So true is this, that I think I may venture to remind his Royal Highness that on one occasion, just after the Crimean War, he said he had found in the London Hospital the most practical working surgeons in the kingdom. I don't like boastfulness, but this is an exceptional occasion, and I think one may be permitted occasionally to boast. I say that this school has acquired a great individuality, and that its individuality has been of the most useful kind. But it has done a great many other things worthy of recognition at the present time. In the first place, I think it was here that medicine was first taught in England as a handicraft. Here, too, it is admitted clinical lectures were first delivered. Here, it is admitted, the first complete medical school was established. Here, too, was first taught by the humble person who addresses you the use of the microscope in the diagnosis of disease. On these lines the work of the college has grown and prospered. In 1885 the Committee began to erect a new building, at a cost of over £15,000, and in 1887 that building was opened by his Royal Highness the Prince of Wales. Now, such is a very meagre outline of the external life and history of this hospital. Its inner life would be much more interesting if there were time and opportunity for telling it. How many amicable conflicts it has passed through, how many ambitious projects it has cast aside, what great things it can boast of having achieved, and what it is doing now, all that would form a most interesting story. The time is not long past when there were people who turned up their noses in speaking of practical men. They would say of a person, "Oh, he is a practical man," meaning probably that he was a man who was empirical and not scientific. I believe that if the London Hospital has acquired a practical character, it has no less acquired a scientific character, and, although I cannot allude to names, yet I am not forbidden to say that some of the scientific knowledge that has emanated from the London Hospital is among the best scientific knowledge of the age. There is one thing which I allude to with slight reluctance, but I do not see why I should not mention it. By a curious coincidence, unparalleled I believe, at any previous period, the chief representative of the Royal College of Physicians and the chief representative of the Royal College of Surgeons, our illustrious friend Mr. Hutchinson, are both members of the staff of this hospital. I think it is not a light thing to be proud of that we have on our staff two gentlemen who are respectively at the head of medicine and surgery at the present time.

THE AMERICAN MEDICAL ASSOCIATION.

THE fortieth annual meeting of the American Medical Association was held at Newport, Rhode Island, on June 25th, 26th, 27th, and 28th.

THE GENERAL MEETINGS.

The President's Address; Medical Education in America; The Beneficial Influence of Medical Journals; "The British Medical Journal;" Dr. J. S. Billings.—The Address in Medicine; The Proposed Rush Monument.—The Address in Surgery; The Increasing Mortality from Cancer.—Address by Sir James Grant.—The Address in State Medicine.

THE PRESIDENT, Dr. W. W. Dawson, of Cincinnati, delivered an inaugural address, in which he reviewed the present position of medicine in America. He touched upon the subjects of medical education, and observed that in criticising its defects, it ought in justice to be remembered that all financial responsibility in connection with medical colleges had been assumed by the teachers, for medical education had been from the beginning unendowed. It was only recently that the wise, the generous, the favourites of fortune, and a few of the States had conceived the idea of endowing medical schools; institutions where medicine and surgery could be cultivated without the embarrassments of financial responsibility. In the metropolitan colleges every physician might feel just pride; their graduates, for the most part, would compare favourably with those educated anywhere. Turning next to the influence of medical journals, he said that they were the heralds, the vanguards of medical progress, the exponents of professional culture. Referring to the *Journal of the American Medical Association*, he looked forward to the time when it would possess twelve thousand subscribers, and quoted with approval the following passage from the pen of Dr. Comegys: "The BRITISH MEDICAL JOURNAL, in fifteen years, has fourteen thousand subscribers, and an income of 125,000 dollars. May we not hope to reach this? and when we do, who can compass the good which the American Medical Association will accomplish?" He mentioned with just pride the great work which has been done in the library and museum at Washington, under the direction of Dr. John S. Billings. In conclusion, he pointed to some of the dangers which surrounded the profession in America, and threatened to retard its progress.

Dr. WILLIAM PEPPER devoted the greater part of his address in medicine to the life of Dr. Benjamin Rush, who, he said, had been a true social reformer, a denouncer of slavery, and an opponent of the

use of ardent spirits, though not insisting upon total abstinence While Rush had been active in philanthrophy, education, and religion, still he had been, above all else, a physician.

Dr. ALBERT L. GIHON, U. S. N., made a spirited appeal for more generous and general contributions to the Rush Monument Fund.

Dr. PHINEAS S. CONNOR, who delivered the address in Surgery, reviewed the progress achieved in the present century. The concluding portions of his address dealt with tuberculosis and cancer, and he expressed the hope that our increasing knowledge of the former would be of use in indicating the best methods of treating the latter. In the eight largest cities of America—New York, Brooklyn, Boston, Philadelphia, Baltimore, Chicago, St. Louis, and Cincinnati—during the five years ending with 1888, out of 579,684 deaths from all causes, 13,094, or 2.18 per cent. were due to cancer. If regard was had only to the mortality of those within the cancer age (over 35), then about 1 in 20 of the deaths would be found to be due to it. Among the selected adult lives of insurance offices who were supposed to be free from family predisposition from 2.5 to 3.5 per cent. of the mortality was due to cancer. He was convinced that the disease was increasing in frequency both in America and in Great Britain.

Sir JAMES GRANT, M.D., of Ottawa, Canada, was invited to deliver an address in which he especially urged the importance of members of the medical profession taking an interest in public affairs.

The address in State medicine, delivered by Dr. WILLIAM H. WELCH, of Baltimore, dealt chiefly with the present state of bacteriology, and the practical deductions to be drawn from the experimental facts. It was not, he urged, by prophylactic measures in one particular direction or another that we could hope to control the prevalence of disease, but by securing sanitary arrangements perfect as far as possible in every particular.

It was arranged that the next meeting should be held in Nashville, Tennessee, in May, 1890, under the presidency of Dr. E. M. Moore, of New York.

MALCOLM MORRIS INDEMNITY FUND.

THE following additional subscriptions have been promised, and those who desire to contribute are requested to communicate without delay with Mr. G. P. Field, 34, Wimpole Street, or Dr. Sidney Phillips, 21, Upper Berkeley Street.

	£	s.	d.
Amount previously acknowledged	245	18	6
J. Knowsley Thornton, Esq.	5	5	0
Woodhouse Braine, Esq. ...	5	5	0
John Eric Erichsen, Esq. ...	5	5	0
J. W. Morison, Esq. (Pembroke)	5	5	0
Dr. Russell Reynolds ...	2	2	0
Dr. Cumberbatch	2	2	0
S. W. Sibley, Esq.	2	2	0
A. E. Cumberbatch, Esq. ...	2	2	0
W. Morrant Baker, Esq. ...	2	2	0
Henry Power, Esq.	2	2	0
Dr. Brooke (Manchester) ...	2	2	0
Dr. Miller (Norwood) ...	2	2	0
G. Buckston Browne, Esq....	2	2	0
H. Howard Hayward, Esq....	2	2	0
Dr. Walter Pearce	2	2	0
Dr. Burney Yeo	1	1	0
Dr. Langdon Down	1	1	0
Dr. Savage	1	1	0
Dr. Easton	1	1	0
Dr. Sharkey	1	1	0
A. Napper, Esq. (Guildford)	1	1	0
Dr. W. H. Platt	1	1	0
T. Sympson, Esq. (Lincoln)	1	1	0
J. Gregory Forbes, Esq. (Bromley)	1	1	0
Dr. Cullingworth	1	1	0
J. J. Tweed, Esq.	1	1	0
A. Pearce Gould, Esq. ...	1	1	0
Dr. Walter Smith (Dublin)	1	1	0
John S. Bartrum, Esq.(Bath)	1	1	0
F. C. Bryan, Esq. (Littlehampton)	1	1	0
Dr. Stowers	1	1	0
Dr. Sansom	1	1	0
Minnie and Charlie	1	1	0
Dr. J. J. Pringle	1	1	0
Dr. Allan Jamieson (Edinburgh)	1	1	0
Dr. Wallace Beatty (Dublin)	1	1	0
Victor Horsley, Esq.... ...	1	1	0
Dr. Kent Spender (Bath) ...	1	1	0
Dr. William Duncan... ...	1	1	0
Lewis Morris, Esq.	1	1	0
Charles Vasey, Esq.	1	1	0
Dr. Royston	1	1	0
S. H. Byam, Esq.	1	1	0
Keith S. Young, Esq. ...	1	1	0
Dr. G. C. Jonson	1	1	0
Dr. M. Baines	1	1	0
Dr. Tyson (Folkestone) ...	1	1	0
Dr. W. Cayley...	1	1	0
Dr. Byrom Bramwell (Edinburgh)...	1	1	6
Dr. John Phillips	1	1	0
Dr. G. Mackesy (Waterford)	1	0	0
Dr. W. Mackesy (Waterford)	1	0	0
Dr. J. P. Wills (Bexhill) ...	0	10	0

THE PROPOSED REGISTRATION OF NURSES.

WE are requested to publish the following Memorial of Nurse-Training School Authorities:

To the Editor of the BRITISH MEDICAL JOURNAL.

We, the undersigned, beg the favour of your insertion of the following statement, which we think it desirable to make, in view of a paragraph which has been published on the subject of the registration of nurses, in which we note with surprise the statement that the main object of the British Nurses' Association "is in conformity with a great public want and a widespread professional demand."

We would wish to point out that those who represent the largest nursing interests in the metropolis and throughout the country, and who have the most to do with the training and examination of nurses, have not only declined to take part in the Association, but consider that its proposed enrolment of nurses in a common register, if carried out, would (1) lower the position of the best trained nurses, (2) be detrimental to the advancement of the teaching of nursing, (3) be disadvantageous to the public, and (4) be injurious to the medical practitioner.

We hope that a final judgment upon this important matter will be postponed until the views of those who are opposed to the aims of this Association have been expressed and examined. We further consider it our duty to state that if a charter be applied for on the lines stated in the prospectus of the British Nurses' Association, we shall feel it to be incumbent upon us to offer thereto all legitimate opposition in our power.

(Signed)

St. Thomas's Hospital and Nightingale Fund Training School.
D. H. STONE, Treasurer of the Hospital.
HARRY VERNEY, Chairman of the Nightingale School.
W. BOWMAN, F.R.S., Member of Council of Nightingale Fund, and of Council of St. John's House and Sisterhood.
W. RATHBONE, Trustee and Member of Council Nightingale Fund; President of Liverpool Training School and Home for Nurses.
H. BONHAM-CARTER, Secretary of the Nightingale Fund.
J. S. BRISTOWE, M.D., F.R.S., Senior Physician of St. Thomas's Hospital, and Lecturer in Nightingale School.
A. L. PRINGLE, Matron of St. Thomas's Hospital, and Superintendent of Nightingale Fund Training School.
M. S. CROSSLAND, Sister in Charge of the Nightingale Training School.
Guy's Hospital and Training School.
E. H. LUSHINGTON, Treasurer.
E. C. PERRY, M.D.; G. NEWTON PITT, M.D., Assistant-Physicians and Instructors of Probationer Nurses.
J. C. STEELE, M.D., Superintendent and Instructor of Nurses.
Westminster Hospital and Training School.
WESTMINSTER, Chairman.
RUTHERFORD ALCOCK, Vice-Chairman.
J. J. TROUTBECK, D.D., Hon. Treasurer.
MARY E. THYNNE, Hon. Secretary of Committee of Management of Training School.
W. H. ALLCHIN, M.B., Physician to the Hospital; THOMAS BOND, F.R.C.S., Surgeon to the Hospital; Lecturers to the Nursing Staff.
MARY J. PYNE, Matron of Hospital and Lady Superintendent of Nurses.
St. Bartholomew's Hospital and Training School.
NORMAN MOORE, M.D., Assistant-Physician; HARRISON CRIPPS, F.R.C.S., Assistant-Surgeon, Instructors of Probationary Nurses, St. Bartholomew's Hospital.
Charing Cross Hospital and Training School.
JOHN B. MARTIN, Treasurer and Chairman of Committee.
STANLEY BOYD, F.R.C.S., Senior Assistant-Surgeon, and Lecturer to Nursing Staff.
HUGHINA A. C. GORDON, Lady Superintendent.
King's College Hospital and Training School.
HENRY WACE, D.D., Chairman of Committee of Management.
RICHARD TWINING, Treasurer.
NATHANIEL BROMLEY, A.K.C., Secretary.
JOHN CURNOW, M.D.; NESTOR TIRARD, M.D., Physicians to the Hospital, and Examiners and Lecturers to the Nursing Staff.
KATHERINE H. MONK, Matron.
CLARA S. A. PEDDIE, House Sister and Teacher to the Nursing Staff.
London Hospital and Training School.
F. C. CARR-GOMM, Chairman of House Committee.
J. H. BUXTON, Treasurer.
A. ERNEST SANSOM, M.D.; FREDERICK TREVES, F.R.C.S.; JAMES ANDERSON, M.D., Examiners and Lecturers to the Nursing Staff.
EVA C. E. LÜCKES, Matron.
St. Mary's Hospital and Training School.
T. PYCROFT, Chairman of House and Finance Committee.
M. HANDFIELD JONES, M.D., Assistant Obstetric Physician; A. J. PEPPER, F.R.C.S., Assistant-Surgeon; S. PHILLIPS, M.D., Assistant-Physician; A. Q. SILCOCK, F.R.C.S., Assistant-Surgeon; Lecturers to the Nursing Staff and Examiners.
E. M. MEDILL, Matron.
St. Marylebone Infirmary and Training School.
JOHN R. LUNN, F.R.C.S., Medical Superintendent.
ELIZABETH VINCENT, Matron.

Many other metropolitan and provincial hospital authorities have already signed this memorial, and names are being sent in daily to Dr. Steele, Guy's Hospital, S.E. It is proposed to publish a complete list later on, but meanwhile considerations of space must confine it to the managers and teachers of the great London hospitals and nursing schools.

THE BRITISH NURSES' ASSOCIATION.

AT the invitation of the Lord Mayor and the Lady Mayoress a meeting, attended by Princess Christian and a large number of ladies and gentlemen, was held on Wednesday last at the Mansion

House to hear an account of the work of the British Nurses' Association.

The LORD MAYOR said he understood that the object and aim of the Association was to elevate the status of the best trained nurses, and to give a better guarantee to the public in regard to their qualifications.

Mr. SAVORY, in supporting the movement, referred to the improved character of the nursing of the present day, when nurses were properly trained and educated for their office.

Sir J. CRICHTON BROWNE said the register would enable the public to select properly qualified nurses, and some check on nurses was necessary. The objections which had been urged against the Association were urged in 1858 against the medical register, which, it was said, would produce a dead level of mediocrity—a prediction which had been falsified.

Mr. BRUDENELL CARTER spoke of the advantages of a holiday house for nurses.

Dr. PRIESTLEY stated that, with the exception of the United States, Great Britain was the only country in the world which had no register of midwives.

ASSOCIATION INTELLIGENCE.

NOTICE OF QUARTERLY MEETINGS FOR 1889. ELECTION OF MEMBERS.

A MEETING of the Council will be held on October 16th, 1889. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting, namely, September 26th, 1889.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member *by the Council* or by any recognised *Branch Council*.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No member can be elected by a Branch Council unless his name has been inserted in the circular summoning the meeting at which he seeks election.

FRANCIS FOWKE, *General Secretary*.

COLLECTIVE INVESTIGATION OF DISEASE.

THE series of Maps forming the Report of the Collective Investigation Committee on the GEOGRAPHICAL DISTRIBUTION OF RICKETS, ACUTE RHEUMATISM, CHOREA, CANCER, AND URINARY CALCULUS are deposited in the Library of the Association, and are open to the inspection of members. A descriptive commentary appeared in the JOURNAL of January 19th, 1889.

An inquiry into the ORIGIN AND MODE OF PROPAGATION OF EPIDEMICS OF DIPHTHERIA is in progress.

Memoranda and forms for communicating observations may be had on application to the Secretary of the Collective Investigation Committee, 429, Strand, W.C.

GRANTS FOR SCIENTIFIC RESEARCH.

THE Scientific Grants Committee of the British Medical Association desire to remind members of the profession engaged in researches for the advancement of medicine and the allied sciences, that they are empowered to receive applications for grants in aid of such research. Applications for sums to be granted at the next annual meeting should be made without delay to the General Secretary, at the office of the Association, 429, Strand, W.C. Applications must include details of the precise character and objects of the research which is proposed.

Reports of work done by the assistance of Association grants belong to the Association.

Instruments purchased by means of grants must be returned to the General Secretary on the conclusion of the research in furtherance of which the grant was made.

BRANCH MEETINGS TO BE HELD.

OXFORD AND DISTRICT BRANCH.—The annual meeting will be held in the Council Chamber, Abingdon, on Friday, July 26th, when the President-elect, Mr. Slade Baker, will entertain the members of the Branch at luncheon. Notice of any communications which members intend to make should be sent to the Honorary Secretary, W. LEWIS MORGAN, 42, Broad Street, Oxford, on or before Friday, July 12th.

NORTH WALES BRANCH.

THE annual meeting was held at the Waterloo Hotel, Bettws-y-Coed, on July 11th, when there were thirty-five members and two visitors present; E. J. LLOYD, M.D., Bangor, in the chair. Letters of apology for non-attendance were received from fourteen members.

New Members.—Messrs. James Taylor, F.R.C.S. (Chester), and Kenrick Davies, M.B. (Llandudno), were admitted members of the Branch, and Messrs. H. H. Davies (Cerrig-y-druidion) and Charles Yeoman, M.B. (Beaumaris), of the Association and Branch.

Report of Council.—The Council, in presenting the fortieth annual report, had pleasure in congratulating the Branch on its prosperity numerically and financially. During the year they had lost four members through death—namely, Mr. R. Davies (Llanfair), who was one of its oldest members, and had filled the presidential chair in 1873; Mr. R. Prothero (Amlwch); Mr. W. Parry Lewis (Beaumaris); and Mr. J. T. Davis Hughes (Menai Bridge), who had been a most loyal member of the Branch, had repeatedly served on the District Council, and was for some years its representative on the Parliamentary Bills Committee. The meetings of the year had been well attended, and some able papers had been read, which had appeared in the JOURNAL and other periodicals.

Vote of Condolence.—It was resolved that the Honorary Secretary should forward a letter of condolence to Mrs. Davis Hughes.

Intermediate and Annual Meetings.—Rhyl was decided upon as the place to hold the intermediate meeting, and Portmadoc the annual meeting in 1890.

Election of Officers.—Mr. Robert Roberts, J.P. (Isallt, Blaenau-Festiniog), was unanimously elected President for 1890. Mr. W. Jones-Morris and Mr. John Richards were unanimously re-elected Honorary Secretary and Treasurer respectively. Messrs. Eyton-Lloyd and Girdlestone (Rhyl), J. Craig (Llandudo), H. Evans (Portmadoc), Richard Jones (Blaenau-Festiniog), and Mr. H. G. Hughes (Criccieth), were elected the District Council for 1890. Mr. Jones-Morris was re-elected representative on the Council of the Association. Dr. Emrys-Jones was re-elected representative on the Parliamentary Bills Committee.

President's Address.—The PRESIDENT then called upon his successor, Mr. EVAN WILLIAMS (Llangefni), to take the chair), after which he delivered the annual address. He selected for his subject "Lactation," which he treated in various aspects.—A vote of thanks was accorded, on the motion of Mr. ROGER HUGHES, seconded by Mr. J. THOMAS JONES (Corris).

Public Medical Service and Provident Clubs.—The SECRETARY read communications from Dr. Rentoul, of Liverpool, and from Dr. Crowe, from the Gloucestershire and Worcestershire and Herefordshire Branches, and also a *resumé* of Mr. W. Moore's paper read before a meeting of those Branches on May 7th, and a most interesting discussion followed. The following resolutions were unanimously passed:

"That the North Wales Branch of the British Medical Association, having regard to the disproportionate growth of the out-patient department of public hospitals, and the consequent pecuniary loss to the profession owing to those not entitled to the benefits of such charities availing themselves of them, begs to call the attention of the Council of the Association to the matter, and that it take such steps as it may think advisable to remedy or mitigate the evil."

"That the North Wales Branch of the British Medical Association, while in every way anxious to meet the genuine working classes in their endeavours to promote provident medical clubs and associations, most emphatically protests against admitting those well able to pay for medical advice to such benefits, and would earnestly urge upon its members to decline attendance upon such clubs, and would advise that competition for such appointments be regulated by due professional courtesy and demeanour."

Illegal Practice and Irregular Practitioners.—Mr. T. L. KENRICK DAVIES read a paper on this subject, in which he detailed the manner in which his services had been ignored by the committee of a cottage hospital, who retained on their staff an unregistered practitioner; and the history of an action in which he was the defendant, and in which the colleagues of the illegal practitioner gave evidence against him. A discussion followed, and the following resolutions were passed:

"That this meeting of the North Wales Branch, while sympathising with Dr. Kenrick Davies for the trouble, inconvenience, and expense he has been put to, heartily congratulate him on the

signal and decisive victory he obtained in an action which reflected so much on his professional character and ability, and that it considers that the best thanks of the profession at large are due to him for so courageously defending a charge which may, through the influence of some evil-disposed person, be brought against any qualified registered medical practitioner."

"That the Secretary of the Branch be directed to communicate with the Secretary of the General Medical Council, calling attention to the fact that at Llandudno an unregistered medical practitioner, with only an American qualification, carries on an extensive practice, which would be impossible were it not that he is protected by certain local medical men;" and also

"That the attention of the Registrar-General be called to the fact that the local registrars are in the habit of receiving certificates of death from unqualified practitioners."

Papers, etc.—Mr. RICHARD JONES, M.B. (Blaenau-Festiniog) read an interesting paper giving the history of a severe Epidemic of Pneumonia that had occurred in his district.—Mr. LLOYD WILLIAMS, M.B. (Llanberis) read notes of cases where Antifebrin and Antipyrin had been of most signal service.—Mr. DAMER HARRISSON (Liverpool) communicated a case of Bronchocele treated most successfully by Electrolysis.—Votes of thanks to the readers of the papers, and also to Dr. Lloyd, the retiring President, were passed.

Annual Dinner.—After the meeting the members and their guests sat down to dinner at the Waterloo Hotel, to the number of fifty.

Excursions.—After dinner, those who waited for the late trains accompanied the contingent from Bangor as far as the Swallow Waterfalls in brakes, and were highly delighted at the historically charming spot. A thoroughly enjoyable day was spent, and this must be considered one of the best meetings ever held.

SOUTH-EASTERN BRANCH: WEST KENT DISTRICT.

A MEETING of the above District was held at St. Bartholomew's Hospital, Chatham, on July 5th, Dr. J. V. BELL, late President of the Branch, in the chair.

Next Meeting.—It was decided unanimously that the next meeting be at Maidstone in November, and that Dr. White be requested to preside.

Subcommittee.—A small subcommittee of the District, consisting of representatives from Chatham, Rochester, Maidstone, Gravesend, and Charlton, with Mr. Jessett as chairman, was appointed to consider Dr. Rentoul's scheme of a Public Medical Service, and the resolutions of the Worcester, Hereford, and Gloucester Branches. The committee to report thereon to the executive Council of the Branch.

Communications.—The following were read and discussed:—Dr. PACKMAN: (*a*) Notes of a Case of Pulsating Tumour of the Orbit; spontaneous cure. (*b*) Notes of a Case of Ununited Fracture of the Thigh of over Fifty Years' Standing. (These patients were exhibited.)—Mr. F. B. JESSETT: A Novel Mode of Operating on the Intestine for Intestinal Obstruction.—Mr. A. W. NANKIVELL: The Employment of Plaster-of-paris in the Treatment of Fractures of the Lower Extremity.

Dinner.—Twelve members and friends dined at the Bull Hotel, Rochester.

BATH AND BRISTOL BRANCH.

THE annual meeting of this Branch was held at the Museum and Library, Bristol, on Wednesday, June 26th.

President for the Ensuing Year.—The retiring President, Mr. HINTON, made a few remarks and resigned the chair to Dr. W. J. FYFFE, who delivered the presidential address.—A vote of thanks to Dr. Fyffe for his interesting and valuable address was moved by Dr. HARRISON, seconded by Dr. SPENDER, and carried by acclamation.

Report of Council.—Dr. E. MARKHAM SKERRITT, Honorary Secretary for the Bristol District, read the following report of the Council:—The Council had pleasure in again recording the continued prosperity of the Branch. The total number of members was 243; 17 new members had been elected—5 in the Bath section and 12 in the Bristol; there had been 4 resignations in the former district and 6 in the latter, chiefly owing to the removal of members from the neighbourhood. The Branch had sustained unusually grave losses during the year by death. Mr. Frederick Mason, who died in August last, had been a member of the Branch for thirty-eight years. He occupied the president's chair in 1874, and for the last eleven years of his life he was the Bath representative of the Branch upon the Council of the parent Association. In an obituary notice which appeared in the JOURNAL of September 1st it was recorded of him: "There was no more regular attendant at the Council meetings than Mr. Mason, whose clearness of insight and solidity of judgment made him respected by all his colleagues, whilst the unfailing courtesy of his manner won for him the personal liking of all with whom he was associated"—and no member of this Branch would hesitate emphatically to confirm this testimony. Mr. William Powell Keall was an old pupil of the Bristol Medical School, and for many years surgeon to the Bristol General Hospital, and also Lecturer on Operative Surgery at the Medical School. He was a pretty constant attendant at the meetings, and a warm supporter of the Branch. He took a thorough and earnest interest in everything that tended to increase its scientific and professional status. His kind and genial nature gained for him friends wherever he was known; he was a good surgeon and a skilful operator; he was also a man of many accomplishments, but so modest and retiring that only those who knew him best could appreciate his varied attainments. He was held in great repute by the public, and much respected and esteemed by his colleagues for his professional abilities and his perfect integrity in all the relations of life. Mr. Christopher Henry Dowson, of Clifton, received his medical education in the Bristol School and Royal Infirmary. He was elected surgeon to the Bristol Royal Infirmary in 1873; and in this capacity he continued to perform active duty till within a few months of his death. In spite of failing health he carried on a large practice until the summer of last year, when a profuse hæmoptysis entirely prostrated him; and from that time he never sufficiently recovered to attempt any duty whatever, but expired on January 14th, 1889, from general tuberculosis of the lungs and brain. He was much regretted by a very large circle of friends and patients, to whom his natural talent, kindness of heart, and self-sacrificing devotion had greatly endeared him. He will be long remembered by those who knew him best as a good friend whose kind assistance and excellent judgment were always at the disposal of those most in need of counsel and advice. Mr. Frederick Morton, of Bristol, a practitioner of much promise, a former student of the Bristol Medical School and the Bristol General Hospital, died after a very short illness. Well versed in all the branches of his profession he had been unusually successful as an operating surgeon; and his early death was deeply regretted by his many friends. Mr. George Smith, of Axbridge, was for very many years one of the most popular and successful practitioners on the Mendip Range. He was a good operator and a thoroughly observant and skilful medical man; every work of public utility in his neighbourhood found in him a warm supporter. Mr. Nathaniel Crisp, of Keynsham, the son of a learned father, the Rev. Mr. Crisp, Principal of the Baptist College in this city, was educated at the Bristol Medical School and Infirmary. Before long Mr. Crisp was elected Assistant House-Surgeon to the Infirmary, and afterwards was promoted to the senior post; he proved a most valuable and energetic officer. He made the first accurate catalogue of the calculi in the museum, and also the first catalogue of the books in the library. He practised at Swallowfield, near Reading, for many years, and ultimately took up his abode at Keynsham, where he died suddenly in the summer of 1888. Mr. Crisp was a man of an active and determined nature; he was a good practitioner, knowing well all the branches of his profession, and held in much esteem. The congratulatory address to Dr. Marshall and Dr. Shaw on the successful issue of the late lunacy case had been signed by the members of the Branch with the warmest expressions of sympathy and goodwill. The financial condition of the Branch was satisfactory, the balance-sheet showing a balance in hand of £6 16s. 3d., and the Council therefore recommend a donation of three guineas to the Royal Medical Benevolent Fund. The following gentlemen have been elected to the local Council: For Bath: Dr. Brabazon, Dr. A. W. Fox, Mr. Fowler, and Dr. Hensley. For Bristol: Dr. Beddoe, Mr. Dobson, Dr. Burder, Mr. Prichard, and Mr. Collins. The Council had had under consideration the subject of the revision of the mode of election to the Council, and after careful deliberation they recommended the adoption of Dr. Marshall's amendment to Rule VI, whereby one-fourth of the members of the Council retire annually, and are ineligible for re-election for one year.

Adoption of Report.—It was proposed by Dr. CROSSMAN, seconded by Dr. BONVILLE FOX, and resolved unanimously: "That

the report and financial statement now read, with the exception of the recommendation for the alteration of the mode of election to the Council, be adopted and entered on the minutes."

Election of Officers.—Mr. FOWLER proposed, and Mr. DOBSON seconded, the resolution: "That Dr. Brabazon, of Bath, be appointed the President-elect." This was carried by acclamation. It was proposed by Dr. GOODRIDGE, seconded by Dr. SWAYNE, and resolved unanimously: "That Mr. R. S. Fowler, of Bath, and Dr. E. Markham Skerritt, of Clifton, be elected the representatives of the Branch on the General Council." On the motion of Dr. R. S. SMITH, seconded by Mr. LANSDOWN, Dr. A. J. Harrison was unanimously elected the representative of the Branch on the Parliamentary Bills Committee.

Vote of Thanks to the Retiring President.—It was proposed by Dr. BEDDOE, seconded by Dr. HARPER, and carried by acclamation: "That the best thanks of the Branch are due, and are hereby tendered, to Mr. Joseph Hinton for his able conduct in the chair during the year."

Vote of Thanks to the Council and the Honorary Secretaries.—Mr. HARSANT proposed, and Mr. HANCOCKE WATHEN seconded a vote of thanks to the Council and the Honorary Secretaries for their services during the past year, and a request to the Secretaries to continue in office. This was carried unanimously.

Congratulatory Address to Drs. Marshall and Shaw.—The PRESIDENT then presented to Dr. Marshall and Dr. Shaw the address from the Branch congratulating them upon their success in the recent lunacy action, which these gentlemen suitably acknowledged.

Proposed Alteration of Rules.—Dr. MARSHALL then brought forward his proposals for the alteration of the rules; and after discussion it was proposed by Dr. MARKHAM SKERRITT, seconded by Dr. SPENDER, and resolved unanimously: "That the further consideration of this subject be postponed until the next meeting in Bristol, which shall be made special for the purpose."

Annual Dinner.—The members afterwards dined together at the Clifton Down Hotel.

BRITISH MEDICAL ASSOCIATION.

FIFTY-SEVENTH ANNUAL MEETING.

THE fifty-seventh Annual Meeting of the British Medical Association will be held at Leeds, on Tuesday, Wednesday, Thursday, and Friday, August 13th, 14th, 15th, and 16th, 1889.

President: Professor W. T. Gairdner, M.D., LL.D., Professor of Medicine in the University of Glasgow.

President-elect: C. G. Wheelhouse, F.R.C.S., J.P., Consulting Surgeon, Leeds General Infirmary, Hillary Place, Leeds.

President of the Council: Thomas Bridgwater, M.B., LL.D., Harrow-on-the-Hill.

Treasurer: Constantine Holman, M.D., Reigate.

An Address in Medicine will be delivered by J. Hughlings Jackson, M.D., LL.D., F.R.S., Physician to the London Hospital, and to the National Hospital for Paralysed and Epileptic, Queen Square, W.C.

An Address in Surgery will be delivered by T. Pridgin Teale, M.B., F.R.C.S., F.R.S., Consulting Surgeon to the Leeds General Infirmary, Leeds.

An Address in Psychology will be delivered by Sir J. Crichton Browne, M.D., LL.D., F.R.S., Lord Chancellor's Visitor in Lunacy London.

PROGRAMME OF PROCEEDINGS.

TUESDAY, AUGUST 13TH, 1889.

9.30 A.M.—Meeting of 1888-89 Council.
11.30 A.M.—First General Meeting. Report of Council. Reports of Committees; and other business. Coliseum.
4 P.M.—Service in Parish Church. Sermon by the Right Rev. the Lord Bishop of Ripon.
8.30 P.M.—Adjourned General Meeting from 11.30 A.M. President's Address. Coliseum.

WEDNESDAY, AUGUST 14TH, 1889.

9.30 A.M.—Meeting of 1889-90 Council.
10 A.M. to 2 P.M.—Sectional Meetings. Mechanics' Institute.
3 P.M.—Second General Meeting. Address in Medicine by J. Hughlings Jackson, M.D., LL.D., F.R.S. Coliseum.
4.30 to 6 P.M.—Afternoon Reception at the Yorkshire College by the President, Council, and Senate of the College.
8.30 P.M.—*Conversazione* by the President of the Association and Local Executive Committee in the Art Gallery and Municipal Buildings.

THURSDAY, AUGUST 15TH, 1889.

9.30 A.M.—Meeting of the Council.
10 A.M. to 2 P.M.—Sectional Meetings. Mechanics' Institute.
3 P.M.—Third General Meeting. Address in Surgery by T. Pridgin Teale, M.A., F.R.S., F.R.C.S.
7.30 P.M.—Public Dinner of the Association in the Town Hall.

FRIDAY, AUGUST 16TH, 1889.

10.30 A.M. to 1.30 P.M.—Sectional Meetings. Mechanics' Institute.
3 P.M.—Concluding General Meeting. Address in Psychology by Sir James Crichton Browne, M.D., F.R.S. Coliseum.
4.30 to 6 P.M.—Garden Party at the W.R. Asylum, Wakefield.
8 P.M.—Reception and Ball by the Mayor of Leeds in the Town Hall.

SATURDAY, AUGUST 17TH, 1889.

Excursions.

PROPOSED EXCURSIONS.

1. *The Scarborough Excursion.*—A special train will leave Leeds 9.5 on Saturday morning, August 17th, arriving at Scarborough at 11.15. At 1 P.M. luncheon will be given by the profession of Scarborough to 100 members of the Association. In the afternoon excursions by sea and land will be arranged for; a Garden Party will also be given in honour of the visit of members of the Association. In the evening the grounds of the Cliff Bridge Company will be thrown open to the members and especially illuminated for the occasion. Sunday will be spent as a day of rest, but various small social entertainments will be given. A fee of one guinea will be charged, which will cover all expenses of the excursion, namely: Special train from Leeds to Scarborough, hotel accommodation at two of the best hotels from mid-day on Saturday, August 17th, till mid-day on Monday, August 19th (with the exception of wine). The Cliff Bridge Company will admit members of the Association free to their grounds on the three days, August 17th, 18th, and 19th. All excursions arranged for during the visit of the Association will be free of expense. Any further particulars with regard to the Scarborough Excursion can be obtained on application to Charles F. Hutchinson, M.D., Honorary Secretary, May Lodge, Scarborough.

2. *The Ilkley and Bolton Abbey Excursion.*—The route of this excursion runs from Leeds in a north-westerly direction, leaving the Midland Station at 9.35 A.M.; it passes by way of Armley, Kirkstall (with a view of the old abbey of that name), and continues along the Airedale Valley to Apperley Bridge.

After passing Kirkstall forge, the vale opens out, showing Calverley to the south and on the north, giving a fine view of the slope of the hill from Rawdon, on which, as prominent objects, stand the Rawdon Convalescent Home (founded, for poor patients, by the late Sir H. W. Ripley, Bart.) and the Rawdon Baptist College. These and the numerous villa residences of Leeds and Bradford merchants, embowered in trees, form a pleasant and striking landscape. Passing Apperley Bridge, the line curves temporarily towards the north, up a steep incline, affording a glimpse of the upper portion of the Airedale Valley, with Shipley and Bradford in the distance; it then enters a wooded and tunnelled portion, curving back to the west and reaching Guiseley; here, and at Ilkley, the members of the excursion will be joined by their entertainers, and the train will proceed along the south side of the Wharfedale Valley, towards Ilkley.

Just before the valley opens there lies, on the south side of the line, the New Menston Lunatic Asylum, to which the Psychological Section intends to pay a visit. Beyond this the line divides, one branch turning to the east to Otley, the other pursuing its course to Ilkley and Bolton. In the angle made by this division lies the burial place of the late Right Hon. W. E. Forster. The spot affords a view of the extent of Wharfedale, which, following the course of the river Wharfe from Bolton on the west, runs to where the North Eastern line, on its way to Harrogate, crosses the valley at Arthington, on the east. The dale is one of the most beautiful in Yorkshire, offering at certain points almost unique views, as that at Otley Chevin, Brimham Rocks, and the Cow and Calf. The town of Otley lies at the east end, on the north side of the valley, opposite the Chevin; the village of Burley lies embedded in foliage in the middle of the dale, while Ben Rhydding and Ilkley lie on the cliff or south side of the dale, at the edge of Rumbold's Moor.

The train, proceeding, passes the Burley Station, and at this

point on the rising ground of the north of the dale may be seen Denton Hall and Park, formerly the residence of the famous Fairfax, now the seat of Mr. Wyville, J.P.; and, further west, Myddleton Lodge, the home of the Middletons, one of the oldest Yorkshire county families. The ground now rises precipitously to the south, and the first object which strikes the eye is the splendidly situated hydropathic establishment of Ben Rhydding. Further to the west of it are seen the massive rocks called the Cow and Calf, and the Ilkley district opens out, extending almost from the edge of the moor for a mile or more down a gentle slope to the river Wharfe. As the train moves past Ilkley, a good general view will be obtained of its spa establishments and villa residences. The train goes on past the village of Addingham (with Beamsley Beacon behind) till it reaches Bolton Bridge at 10.49; at this station waggonettes will be in readiness to take the party to the Priory and Bolton Woods. Most people have seen the beautiful print of "Bolton Abbey in the Olden Time." The remains of the Priory are charmingly situated, and form a grand adjunct to the restored church. To strangers the history of the structure will be freely afforded by some of the gentlemen accompanying the party. From the Priory the party will be conveyed to Bolton Woods and the Strid in the waggonettes.

The woods and stream will afford their own beautiful commentary; and the romantic story of the "boy of Egremond" checked in his spring across the "Strid" by the leashed hound, and drowned in the torrent; the despair of the mother, "Alice de Romille," and her subsequent founding of the Priory, can all be told on the spot. Time will not afford more than a distant view of "Barden Tower," the home of the Cliffords, and walk through the woods, nor can a visit to the Valley of Desolation, with its waterfall, be risked; but these will scarcely be missed amid the surrounding beauties. The waggonettes will return from the Strid about 12.45 to the Devonshire Hotel, where, if the day be propitious, lunch will be served on the lawn at 1.30 P.M.

The train will leave Bolton Abbey Station at 2.47 P.M. on its return to Ilkley; and here the rest of the day, till dinner-time, will be spent visiting the points of interest in its immediate precincts. Ilkley and its neighbouring "Rombald's Moor" have their aboriginal and Roman history, with their "Cairns," "Barrows," Roman stations and roads. Monumental relics have been found abundantly, and one is to be seen at the back of the Rose and Crown Inn, and three ancient crosses in Ilkley Churchyard. The old Parish Church will repay a visit. All that the antiquarian will require to indicate the ancient history of Ilkley may be obtained from "Lund's 6d. Guide." Modern Ilkley, as a spa and health resort, as well as Ben Rhydding (which was the first of the large hydropathic establishments in the neighbourhood), owes its celebrity not to any medicinal virtue in its water but to the wonderful purity and abundant supply of that water, and to the charming situation of the place. There is a valuable chalybeate spring at the side of the moor at Heber's Gill, past the Semon Convalescent Home, but this is quite apart from the main "Ilkley Water." This Ilkley water seems specially adapted for drinking and for all such purposes as are comprised under the head of "Hydropathy;" hence the abundance of these establishments. All, or a choice number, of these may be visited; from the original "Old White Wells," which everyone will observe high up on the hill side, through the grand structure of Ben Rhydding (Medical Officer, Dr. Johnstone); the palatial Ilkley Wells (Medical Officer, Dr. Scott); the well-known "Craiglands" (Medical Officer, Dr. H. Dobson); the Elizabethan structure, "Troutbeck;" the "Spa" establishment in the Grove, to Rockwood House, Marlborough House, and Stoney Lea. Besides these there is above the Grove, on the slope of the hill, the Ilkley Hospital (Medical Officer, Dr. Johnstone), established in 1829 as the Ilkley Bath Charitable Institution. This institution has from 700 to 800 patients passing through it in a year; these are recommended by subscribers; and it can be said with truth that the simple treatment and capital Ilkley air materially reinvigorates many of them. Another admirable institution, founded by the late Mr. Charles Semon, of Bradford, and bequeathed by him to the town of Bradford, is the Semon Convalescent Home, situated quite on the edge of the moor, south-west above Ilkley, and intended for the convalescent and weakly of the working class, clerks, and warehousemen; the whole charge for board and lodging is 12s. 6d. a week, the extra cost being furnished by the fund left by Mr. C. Semon. The people can wander on the moor at will, and convalescents are carried up from the railway by omnibus. The Home is open to others beside the inhabitants of Bradford. There are a number of hotels at Ilkley, the principal of which are the Middleton, the Crescent, etc.; but the hydropathic establishments also accommodate visitors even for a few days. Between the return arrival of the train at Ilkley and the hour at which the party will dine (5.30 P.M.), beside the places enumerated and the general exploration of Ilkley, if the day is fine, a walk to the "Cow and Calf" (on the way to Ben Rhydding) will yield a magnificient view from those rocks. Also 1½ mile from the station south-south-west, another splendid view is obtained from the "Panorama Rocks." Again, the walk to Myddleton Moor, 1½ mile north over the Ilkley bridge, will afford many interesting views. To any of the party who may prolong their stay over the excursion, the points of interest in the locality are many and varied, as Skipton town and castle, Keighley and Howarth (home of Charlotte Brontë, 14 miles), Denton Park, Otley and the Chevin, Farnley Hall (2½ miles from Otley, full of interesting historical records), Burley, Harewood House, Harrogate, Ripon, and Fountains Abbey, etc. After dinner, time sufficient will be afforded for a leisurely stroll to the Ilkley station, from which the train will start on its return journey promptly at 8.35 P.M. for Leeds and Bradford.

3. *York, Helmsley, Rievaulx Abbey.*—The party will leave the North Eastern Railway Station (New) at 9.5 A.M., reaching York at 9.45, where they will be met by the representatives of the profession of York, who have hospitably undertaken to entertain the party, and to show them the various objects of interest. The party will be conducted by the Walls to the Mansion-house and Guildhall (with the old municipal plate), by St. William's College, and thence to the Minster, where it is hoped that the Dean will personally conduct the party. St. Mary's Abbey and the Museum Gardens, with the numerous objects of interest, will, it is hoped, be seen under the guidance of Canon Raine. Luncheon will be served at the Station Hotel at 12.45, after which the party will be conveyed by special train to Helmsley. Here carriages will convey them to Rievaulx Terrace, whence, having seen the beautiful view, they will proceed to the Abbey, driving through Duncombe Park to the Home Terrace, and thence by the ruins of Helmsley Castle to the Black Swan for dinner. The train will leave Helmsley for York in time to catch the night mail from York, and the 9.35 for Leeds.

4. *The Harrogate Excursion.*—The party will proceed by special train from the North Eastern Railway Station (New) about 9 A.M. to Pannal, where they will be met by carriages. The beautiful grounds and rocks of Plumpton, will then be visited, where light refreshment will be provided; afterwards the party will drive to Knaresborough Castle, the Dripping Well, and the caves memorable as connected with Eugene Aram. Thence by Scriven and Ripley Castle to Harrogate. Here the members of the profession in Harrogate will entertain the party at lunch in the New Bath Hospital about 3 P.M., afterwards carriages will be provided, so that places of interest may be visited. Various other entertainments will be organised, and in the evening the houses of the various medical men will be thrown open to visitors, and members can return to Leeds either by the special train, or by one of the numerous trains leaving Harrogate for Leeds in time to catch the night mails. It is expected that many will arrange to stay in Harrogate over the Sunday.

5. *The Brimham Rocks, Fountain Abbey, Studley Royal, and Ripon Excursion.*—Special train will leave the North Eastern Station (New) about 9 A.M. for Nidd Bridge, where carriages will meet the party to convey it by Ripley Castle up the north side of Nidderdale to the fantastic rocks at Brimham; thence to Castlestead, where the party will be entertained at luncheon by Mr. George Metcalfe. After luncheon the party will proceed over the moors to Fountains Abbey and Studley Royal, the grounds being specially laid open by the Marquis of Ripon. Having viewed this, the finest of the Cistercian abbeys, the party will proceed to Ripon, where, having seen the cathedral, they will be received and entertained at the Palace by the Bishop of Ripon and Mrs. Boyd-Carpenter. The train will leave Ripon for Leeds at 8 P.M., reaching Leeds about 9 o'clock.

6. *The Washburn Valley and Farnley Excursion.*—The object of this excursion is to show the waterworks in connection with Leeds, the beautiful scenery of the Mid-Warfe and Washburn Valleys, and the unique collection of Turner paintings at Farnley Hall. The whole journey will be by carriage. The party will first be conducted to Adel Church, when the Rector will show this most perfect specimen of Norman architecture; thence past Creskeld by Arthington and Port Bridge, through the picturesque village of Leathley, with its old church and village stocks, through

Ludley Wood to the Reservoir, where Messrs. Greenwood and Batley will show some interesting torpedo experiments. The party will then proceed over Norwood Edge, whence a splendid view of the whole valley can be obtained by Swinsty Reservoir to Fewston (the Sinking Village). Here lunch will be provided by the Chairman of the Leeds Waterworks Committee, Mr. Alderman Woodhouse. The party will then drive by Snowdon Moors to Farnley Hall, the seat of Mr. Ayscough Fawkes, who has kindly consented to exhibit his unrivalled collection of paintings by J. M. W. Turner, as well as his Cromwellian relics. Thence to Otley, where dinner will be served at the White Horse Hotel, the party reaching Leeds in time for the night mails.

7. *Malham Cove, Gordale Scar, and Settle.*—The object of this excursion is to show the remarkable scenery produced by the Great Craven Fault in the Mountain Limestone, one of the grandest examples in England. A special train will leave the Midland station about 9 A.M., reaching Bell Bush about 10.20 A.M. Here carriages will be waiting to convey the party by Calton Hall, the birthplace of General Lambert, and Kirkby Malham, with its interesting church and registers, to Gordale Scar, described by Wordsworth as "one of the grandest objects in Nature." The party, having been refreshed at a farmhouse, will divide into two, the more adventurous going over the cliffs to Malham Cove, where they will meet the party who have driven round. Having viewed this magnificent amphitheatre of rocks, the party will return to Kirkby Malham, and will here again divide. The lighter carriages, with those who prefer a walk with an ascent of 700 feet, will go over Highside, where a magnificent view of both Airedale and Ribblesdale can be obtained; thence by Scaleber Force to the Ashfield Hotel at Settle, where, being joined by the other party, who have driven round by Otterburn and Long Preston, dinner will be served. After dinner they will drive up Ribblesdale to Great Stainforth Force, returning by Giggleswick, where may be seen the ebbing and flowing well, and the Royal Victoria Cave Remains in the museum at the school. They will then return by Settle to Leeds, which will be reached about 9 P.M.

8. *The Hull Excursion* most generously offered by the members of the East York and North Lincoln Branch has had most regretfully to be abandoned.

The fee for each of the above excursions will be 10s. 6d., except in the case of the Scarborough excursion, for which one guinea will be charged. All applications for tickets, with remittance, to be made to me. Tickets will be sent August 1st.

CHARLES M. CHADWICK, Honorary Secretary,
Excursions Subcommittee.

SPECIAL CORRESPONDENCE.

EGYPT.

[FROM OUR OWN CORRESPONDENT.]

A New Epidemic of Small-pox.

AFTER an increase in 1885, in consequence of the arrival of refugees from the Soudan, many of whom were attacked with small-pox, the number of deaths from this disease gradually diminished in Cairo till the present year, and at one time it seemed as if the malady were about to disappear completely from the city. The deaths from small-pox in Cairo for the last seven years have been as follows:—

Years.	No. of Deaths.	Years.	No. of Deaths.
1882	190	1886	44
1883	136	1887	50
1884	138	1888	26
1885	304		

During the week ending January 3rd, 1889, one death took place, and then for five weeks none were reported. In the beginning of February, however, the disease reappeared, a death or two occurring weekly during the month. In March the number of fatal cases began to be augmented, and for some weeks they continued to increase till, by June 13th, 122 deaths from small-pox had been registered.

In the last eighteen weeks, out of a total of 121 fatal cases, namely, 96 natives and 25 Europeans, 68 of the former and 13 of the latter were aged upwards of 5 years, being at the rate of 70 and 48 per cent., respectively. This points either to neglect of revaccination, or to the immigration of unvaccinated persons. As regards the "natives," the latter is probably the case, for the deaths reported were mostly of Soudamese, who bore no marks of vaccination; but for the Europeans there are no means of judging, as the patients were treated by private practitioners, who furnish no particulars to the statistical department.

The Egyptian Government is unfortunately powerless to enforce vaccination among European residents, or even among natives who are "protected" by any foreign Power; nor is registration of births compulsory for these classes. The problem, therefore, of stamping out small-pox in Egypt is not easy of solution.

In the country generally, since the beginning of the year, small-pox has been reported from eleven towns, in addition to Cairo, and seven provinces, with fatal cases as follows:

Assouan, 76 deaths; Alexandria, 24 (including 6 foreigners); Minia, 7 (including 1 foreigner); Tantah, 6; Mansourah, 5; Maufalout, 4; Assiout, 4; Ghizeh, 3; Zagazig, 2; Chibin-el-Kom, 1; Fayoum, 1. Total, 114 deaths.

Gharbieh province, 16 villages, 80 deaths; Charkieh province, 4 villages, 57 deaths; Fayoum province, 1 village, 14 deaths; Dakahlieh province, 8 villages, 7 deaths; Ghizeh province, 4 villages, 5 deaths; Menoufieh province, 1 village, 2 deaths; Behera province, 3 villages, 1 death.

During the past three years the mortality from small-pox in Egypt was thus returned:—1886, 12 towns and 14 villages, 336 deaths; 1887, 15 towns and 20 villages, 324 deaths; 1888, 11 towns and 25 villages, 170 deaths.

Whereas up to June 13th, this year, there have been reported 356 fatal cases in the 12 towns and 40 villages, and the true number is even greater, for at Assouan there was an interruption in the despatch of the weekly returns from February to April, in consequence of the transfer of the sanitary administration of a portion of the province of Esneh to the war department; and the deaths that took place during seven weeks were not recorded. In the remainder of the period there were 76 deaths; it is probable therefore that at least 22 occurred during the interval, which would bring the total up to date to 378, a sufficiently alarming figure.

On the whole it is probably at Assouan that the hotbed of the disease must be looked for; and it would be well if the authorities were to order that no native should be allowed to proceed northward unless properly vaccinated. In this way the introduction of small-pox into Egypt might probably be checked, if not entirely prevented.

CORRESPONDENCE.

THE RECENT ELECTION AT THE COLLEGE OF SURGEONS.

SIR,—I have had a large number of letters from voters complaining of the complexity of the method of proxy adopted in the recent election, and I am certain much of the apparent apathy amongst the electorate is capable of this explanation. If it is not so, then the Fellows have provided the strongest argument yet adduced in favour of the extension of the franchise to the Members, for in spite of an exciting contest and most active canvassing, barely one-half of the constituency was brought to the poll. Still more remarkable it is that, whilst nearly every metropolitan vote was recorded, not quite one-third of the provincial Fellows reached the ballot box. If this is mere apathy, then the Fellows cannot very highly value their one privilege, that of electing a Council out of harmony with their constantly expressed wishes.

If it is—and I believe it is—very largely due to the complexity of the method adopted for the proxy voting, let that be reduced to the ordinary and simple method of issuing the proxy vote to every Fellow at the same time the list of candidates is sent round. Why each Fellow should be obliged specially to ask for a proxy paper, when it is his right, I cannot imagine, unless it is to be regarded as an ingenuous piece of obstruction for the purpose of diminishing the number of provincial voters. This effect in the election just over it most certainly has had.—I am, etc.,

7, The Crescent, Birmingham, July 15th. LAWSON TAIT.

CHLOROFORM AND ALCOHOL.

SIR,—In the JOURNAL of July 13th, another case (at University College Hospital) is reported of death from chloroform. The report does not state, however, whether, among "the precautions that could have been taken in the case," that of giving alcohol before the operation was adopted.

Though unable to offer logical proof that alcohol so given

counteracts any dangerous tendencies of chloroform inhalation, I am strongly of opinion that it does so.

The following case, which seems to me worthy of record, impressed me with the belief. A boy was admitted a few years ago into the St. Marylebone Infirmary, with periostitis of nearly the whole of the shaft of one femur, and an enormous abscess in connection therewith formed a large swelling, occupying nearly all the length of the thigh. The boy was very ill, pale, and emaciated, but the abscess was speedily opened, under chloroform, without any ill effects. A few days afterwards, the patient being already better, another slight operation was required under an anæsthetic. Chloroform was again used; but before he was fully under, and before the operation had been begun, respiration stopped, he became collapsed, and only came to after performance of artificial respiration for many minutes. The operation was abandoned on this occasion.

In the further course of the case, amputation of the thigh became necessary, and was performed under chloroform without any accident. Some time later, chloroform was again given in order to open a small sinus; but he became collapsed and appeared moribund just as on the second occasion, and was again revived with difficulty.

Being puzzled why the same anæsthetic should behave so differently on different occasions in the same patient, I made inquiries as to his condition at the various times. It certainly did not depend on his general health; but I ascertained that on the first and third occasions, a dose of brandy-and-water had been administered shortly before the operation; on the second and fourth, this had been omitted. A slight subsequent operation being necessary in the stump shortly afterwards, the precaution of giving brandy beforehand was duly taken, and this time no evil consequences happened.

Before this case, I had not attached much importance to the matter, but since then I have always, either from reason or superstition, taken care to give brandy before administering chloroform; the anæsthetic I usually prefer. I cannot call to mind any untoward effects at any time in which I know alcohol and chloroform have been given together, and should like to know if other men can cite cases bearing on the point.

It harmonises with the fact (if the common belief be true), that bichloride of methylene (which is supposed to be a mixture of alcohol and chloroform) and the A.C.E. mixture are safer than chloroform alone; but it seems to me that giving liquid alcohol by the mouth, shortly beforehand, in the form of an ounce or two of brandy with water, is the readiest and most satisfactory method of mixing the two substances.—I am, etc.,

F. Lucas Benham, M.D., M.R.C.P.

MICRO-ORGANISMS IN EMPYEMA.

Sir,—In the Journal of July 13th Mr. Maylard draws attention to a case of empyema on account of the existence of fœtid pus containing numerous dead micrococci, and expresses surprise "that a patient should survive with such a quantity of putrid material in his body, in which even microbes were unable to live."

It has long been known that the pus of acute abscesses contains micrococci, and Ogston, of Aberdeen, in 1880[1] found, as the result of many observations, that micrococci were always present in acute abscesses, but absent in chronic. Watson Cheyne[2] confirmed these conclusions, and explained them by showing that the micro-organisms very soon exhausted the nutritive material in a fluid, and then fell to the bottom and died. "In an abscess they live as long as they find nutriment, and then they die, and cannot be obtained on attempting cultivation, though they may still be seen on microscopical examination." Hence it is plain that the presence of dead micrococci in pus is not evidence of the special virulence of the fluid in question, but is simply in accordance with the known life history of these organisms.

Further, all who have had much experience of pleuritic effusions will know that the condition of the fluid by no means always determines the state of the patient; that a serous effusion may persist with symptoms that are usually met with in empyema, and that pus may exist while the temperature is normal. I have even seen an intensely fœtid empyema in a patient with a persistently normal temperature.—I am, etc.,

E. Markham Skerritt, M.D.Lond., B.A., F.R.C.P.

Clifton, July 15th.

[1] Langenbeck's *Archiv*, Bd. xxv, p. 3.
[2] *Antiseptic Surgery*, p. 254.

THYROTOMY.

Sir,—In the Journal of the 6th inst., Dr. Beverley, of Norwich, in the course of some remarks on an interesting case of thyrotomy for foreign body in larynx, refers to the conflicts of opinion regarding the degree of danger attendant upon the operation. I have several times performed the operation during the last few years, and have never witnessed any bad results ensue from it. An important point for consideration is, its effect upon the voice. This appears to be always good, that is to say, although vocal recovery is probably never complete, it is always sufficient for ordinary conversation purposes.

There are two points in connection with the operation which require special mention: the risks and results of fracture of an ala of the thyroid cartilage and the consequences of an undue upward extension of the skin incision. As the space for working, or further operating, after splitting the thyroid cartilage in the middle line is very limited, the alæ are usually held apart as much as possible. In one of my cases, this resulted in fracture, but with ordinary care complete union of the fractured portion soon took place without trouble of any kind.

If the incision through the skin be carried too high, that is, too near the chin, the consequence will be that a cicatricial band or web is formed in the submental region, which renders the tissues tense, and limits the degree of extension of the head and neck.—I am, etc.,

Edinburgh. G. Hunter Mackenzie, M.D.

PERILS OF PRACTICE: AN APPEAL.

Sir,—I have been asked, as one of the District Secretaries of the Metropolitan Counties Branch of our Association, to make an appeal to raise a sum of money to meet the legal expenses incurred by Dr. Jones, of Edmonton, in his late trial, and, after consultation with the present and the late President of the Branch and the Honorary Secretaries, I gladly consent to do so.

Under the heading "Perils of Practice," an account of the case is given in the Journal of June 1st, page 1257. It will there be seen that Dr. Jones was accused of indecently assaulting a servant girl 18 years old, who had come to consult him, but that the grand jury, acting under the direction of the judge who was to have tried the case, unanimously ignored the bill of indictment. The chairman said it appeared to him there was not the slightest foundation for the charge. Moreover, both the Society for the Protection of Women and that for the Protection of Juveniles had investigated the case, and had declined to have anything to do with it.

Notwithstanding that the trial thus came to an abrupt conclusion, Dr. Jones's legal expenses were necessarily heavy, amounting to some £60; and it is felt by a number of medical men that, as they themselves might at any time be placed in a similar position, they should do their utmost to aid a brother in misfortune. Dr. Ord, President of the Branch, Dr. Brodie Sewell, the late President, Sir W. Mac Cormac, the President-elect, and the following past Presidents, Drs. Bridgwater, Bristowe, Dickson, and Hare, and Messrs. Durham, Macnamara, and Sibley, support this appeal, and either have already subscribed or promised to do so.

Subscriptions may be sent direct to me, and will, with your kind permission, be published in your columns.—I am, etc.,

101, Queen's Road, Dalston, N.E. J. W. Hunt.

MEDICO-LEGAL AND MEDICO-ETHICAL.

ADVERTISING CIRCULARS.

X. Y. Z. writes: A practitioner in my district (an M.B.) has been issuing handbills from house to house with the following printed on them: "Surgery. Dr. ——, M.B., Physician and Surgeon." Then follow the hours of attendance, and in large letters—"Advice (with medicine) at surgery, sixpence; for one week, one shilling." Then he gives his midwifery and vaccination fees, 10s. 6d. and 1s. These bills he distributes, or causes to be distributed, throughout the district, dropping them into the letter-boxes.

Is this wholesale advertising illegal? Does he not run the risk of being cautioned by the General Medical Council, or even of getting his name erased from the *Register?* I have heard of other cases in Birmingham of a similar nature, and am anxious to do what I can to uproot the whole system. Would you kindly inform me what course I ought to take in the matter? One of my own patients gave me the handbill.

*** The advertisements complained of are certainly contrary to medical etiquette, but we cannot say that they are illegal. The General Medical Council only, we think, interfere in cases of infamous conduct in a professional respect, or where there has been a conviction.

WHAT OUGHT HE TO DO?

MEDICUS writes: I need hardly say that I was extremely gratified to find my views in the letter with the above heading supported by your high authority. I would crave space for a few lines of explanation in regard to the object of communicating with the police in a case of suspected abortion. I assumed that the hypothetical case would not do more than justify a suspicion, and the real object of informing the police would be to cause them to watch the suspected abortionist, and perhaps lay a trap for him.

Since I wrote my former letter another problem has come under my notice, which I venture to submit for an authoritative expression of opinion from you. It is this: Is it the duty of a medical man to report to the police that a patient of his has attempted suicide? In the event of the attempt proving successful, of course he must communicate with the police and the coroner, but what ought he to do in a slight case? Many young people, from jealousy or other equally foolish motive, attempt to do away with themselves. When they attempt drowning they always find their way to the police court—ought they not also to do so when they have taken poison? The particular case I have in my mind was this. A woman, wearied of continual ill-treatment at the hands of a drunken husband, took poison. A doctor in the neighbourhood was called in, and, under appropriate treatment, the woman recovered. Ought he to have communicated with the police, and, if so, when?

*** The problem submitted by "Medicus," though seemingly somewha perplexing, is not, as we view it, *de facto* a difficult one; to aid in its solution, however, it may be well, in the absence of any defined rule, to appeal to the faculty of reason and the "still small voice within." Before attempting, therefore, to reply to his question "Is it the duty of a medical man to report to the police that a patient of his has attempted suicide?" we are naturally tempted to ask what would our correspondent deem it his duty to do if the patient in question were a near relative or personal friend of his own; and, further, what benefit would be likely to accrue to public morality were such an intimation to be made to the authorities? Would, moreover, a public exposure of the demented act tend in any degree to deter others from committing a like sin, or have other than a baneful influence on the present and future well-being of the would-be suicide and her disconsolate family? To such questions we reply: Let "conscience" dictate the answer, and the practitioner's action in the matter be guided thereby.

Looking at it, however, from a strictly professional point of view, we should personally decline to accept it as a duty devolving upon the attendant practitioner to act as a "medical detective" and delator of the frenzied action of an unhinged mind. Far better that he should, amid such scenes of mental anguish, regard it as a moral obligation to guard against all avoidable disclosure, and, with a feeling of true humanity, seek to alleviate the distress of mind and body of his suffering fellow creatures, and in no way to administer to public morbidity by a revealment of domestic calamities. Medical detectivism in such and like cases is, in our opinion, wholly foreign to the duty of the practitioner in attendance.

AGREEMENT NOT TO PRACTISE IN A DISTRICT.

ETIQUETTE writes: An assistant, upon his engagement, signs a paper binding him in £500 not to practise in a certain district for seven years. Soon discovering that a good opening existed in the neighbourhood, the assistant makes an offer to the principal for a share in the practice, which is refused. Would it be a breach of etiquette on the part of the assistant to pay £500 to the principal, and start on his own account?

*** Although payment of the amount specified in the bond for breach of covenant would release him from all legal obligation, the contemplated act would nevertheless be morally wrong; and further, notwithstanding that our medico-ethical view of the case might be more or less modified by the fact that such an adddition to the profession in the district was, *de facto*, greatly needed, the suggested step is not one that, under the circumstances, recommends itself to our favourable judgment.

SUPPLANTATION.

MEDICUS writes: A. is called in to see a child of X., and diagnoses ——. X. expresses a desire for the opinion of B., with whom A. is on very friendly terms. A. calls upon B., explains the matter, and consents to his visiting the patient if requested by X. This he does, and, without communicating with A. in any way, tells X. that he can see no signs whatever of ——, and keeps the case. Was this in accordance with medical etiquette?

*** If the above statement be an accurate representation of the facts of the case, the conduct of B. in relation to A. is in direct contravention of the rules of the profession, and is especially to be regretted, inasmuch as not only has a wrong been done to a brother practitioner and a friend, but the public encouraged to disregard an important moral principle of life.

FEES TO LOCUM TENENS.

E. J. N. asks: Has a *locum tenens* a right to the fees for making *post-mortem* examinations ordered by a coroner?

*** The tradition and the general custom of the profession is, we believe, that a *locum tenens* has no moral or legal claim to such or like fees, unless it was mutually agreed upon between the principal and the temporary assistant on the engagement being entered into.

DOUBLE QUALIFICATIONS.

A MEMBER.—A person holding the L.R.C.S.Edin. and M.D. of Brussels, if duly registered in respect of both degrees under the Medical Acts, is a doubly qualified man, and is qualified for the appointment of parish medical officer or medical officer of health, subject to the provisions of Section 18 of the Local Government Act, 1888.

VERIFICATION OF A DIAGNOSIS.

VERITAS writes: A. and B. are neighbouring practitioners. A. is attending a case of scarlet fever, which he reports; B., the medical officer of health, calls and sees the patient, and examines him (taking the temperature, etc.) without in any way consulting A. B. explains this course of action by saying that he adopts it so as to "verify" the diagnosis, and to act on his own "responsibilities." Would you kindly give your opinion on the above?

*** Accepting our correspondent's statement as containing the whole of the facts, it is evident that B. has been guilty of a breach of professional etiquette. It forms no part of the duties of a medical officer of health to "verify" the diagnosis in a case of infectious disease reported to the local authority under a notification clause; and even supposing the medical officer of health was, for reasons satisfactory to himself, anxious to confirm the diagnosis by a personal examination of the patient, he could only do so, with due regard to professional etiquette, after obtaining the consent of the practitioner in attendance, and putting him in possession of the reasons for his desire to make a personal examination.

LUNATICS IN SINGLE CHARGE.

A MEMBER asks whether a medical man can have a patient who is suffering from delusions, and who was once in a private asylum, without a licence? The patient in question was recently seen by a celebrated alienist in London, and hopes were given that the delusions would in all probability pass off, and undoubtedly the patient is better mentally and physically. The delusions are that he is watched, what for it is difficult to arrive at, and with that exception the individual under care is a man of great mental vigour and attainments, and a most agreeable and kind companion.

*** One such patient as described can be received by a medical man without his residence being licensed. But the usual "order," "statement," and two "medical certificates," all in the forms prescribed by law, must be received with or before the patient; and a copy of these must be sent to the Commissioners in Lunacy within twenty-four hours after the patient's reception; and the patient will be visited by the Commissioners in Lunacy regularly. Otherwise, the person receiving such patient for profit is liable to prosecution and penalties.

THE DIGNITY OF THE PROFESSION.

VINDEX writes: With reference to "Inquirer's" letter in the JOURNAL of July 6th (p. 45), I hope you will allow me, as medical officer to the National Medical Aid Society in a small agricultural town where I have resided about eighteen months, to express my strong disapproval of the agent's conduct in the case "Inquirer" alludes to. I am happy to say I am on the best of terms with all my professional brethren in this town and neighbourhood. At the same time I think that the appointment I hold is quite as compatible with the dignity of the profession as a parochial medical officership, for which the payment is very much less per head, and which compels one to knuckle under to a rustic board of guardians. I at least am my own master.

ARTICULATION AFTER CUT THROAT.

DR. E. J. RYAN-MACMAHON (Cheltenham) writes: In reply to Dr. A. F. Parker, I can answer his first question in the affirmative. Some four years since I was called to a case of cut throat very similar to the one he describes. On my entering the room the patient said, "Of course I'll die;" this in a whisper. Not being satisfied that I understood what he said, he bent forward, placed his fingers on the wound, and then spoke quite audibly. The case recovered.

MR. JAMES R. PURDY (Oulton) writes: On November 17th, 1888, I saw a case of cut throat in which the trachea was divided between the second and third rings for three-fourths of its circumference, the jugulars and carotids being unwounded. I had positive evidence from four people (one being an intelligent policeman) that the man had spoken three or four times after the injury. He made a good recovery.

NAVAL AND MILITARY MEDICAL SERVICES.

INTERNATIONAL COMPETITIVE EXHIBITION OF FLYING FIELD HOSPITALS.

THE experience of recent wars has shown that one of the things most urgently needed for the proper care of the sick and wounded in a campaign is a supply of movable hospitals which can be easily transported from place to place as required. At the suggestion of the Empress Augusta of Germany, a competitive exhibition of structures adapted for this purpose was held at Antwerp in 1885, at which several useful models were shown. Her Majesty further offered prizes for the best plans for the internal arrangement and organisation of these flying field hospitals, and several competitors exhibited models and designs at Brussels in 1888. None of these, however, was considered satisfactory by the judges, and Her Imperial Majesty accordingly offered prizes this year of 10,000 marks to the candidate who should produce a scheme of organisation satisfying all the requirements of a movable hospital in active service, and other money prizes and medals to the candidates who should deal most successfully with certain specially indicated details of the problem. These included such matters as the arrangement of wards, the construc-

tion of the beds, bedclothes, and furniture, quarters for the medical staff and attendants, arrangements for cooling, heating, and lighting, surgical instruments, drugs, etc.

The exhibition was held at Berlin on June 13th, 14th, and 15th, under the auspices of the German Red Cross Society, and the jury, which was international in character, included the following gentlemen: Herr Sigart, General Secretary of the Belgian Red Cross Society (Belgium); General von Thomsen (Denmark); Mr. John Furley (England); Baron de Hardenbrock de Bergambacht (Holland); Dr. von Cessner and Dr. A. Loew (Austria); General F. von Müller (Russia); Dr. von Farkas (Hungary), with Professor von Bergmann, Surgeon-General von Coler, Chief of the Military Medical Department of the Prussian War Office, Professor Gurlt, Surgeon-General Mehlhausen, and Dr. zur Nieden (Germany). MM. Ellissen and Pozzi (France), Baroffio (Italy), and Edholm (Sweden) were prevented by illness from attending. Sir Thomas Longmore, who had been invited to take part in the proceedings, was unable to be present. General von Thomsen was President, and General von Müller and Chevalier von Cessner Vice-Presidents of the jury.

The prize of 10,000 marks was not awarded, but prizes of 2,000 marks, with a gold medal stamped with the portrait of the Empress Augusta, were awarded to Messrs. Christoph, Doogs, and Goldschmidt, of Berlin; Mr. Arthur Trehern Norton, of London, and Captain A. S. Tomkins, of Caterham, Surrey; and Dr. L. Gutsch, Carlsruhe. Prizes of 1,000 marks and a silver portrait medal were awarded to Herr C. Prinz, of Vienna, and Dr. Nicolai, of Berlin; of 1,000 marks to Dr. Haase and Herr R. Peters, of Berlin; and of a silver medal to Herr Weber-Falkenberg, of Cologne, Dr. von Hase, of Hanover, Herr Schlesinger and Herr Cohn, of Berlin. Messrs. Eschebach and Hausner, of Dresden, Herr Odelga, of Vienna, and M. Walter-Biondetti, of Basle.

On the first evening of the exhibition the jury were entertained at dinner by the Empress Augusta, Her Majesty being represented by her Chamberlain, Count Perponcher.

CHANGES OF STATION.

THE following changes of station among the officers of the Medical Staff of the Army have been officially notified as having taken place during the past month:—

	From	To
Brigade-Surgeon C. S. Close ...	Chester ...	Preston.
Surgeon-Major J. P. Rooney ...	Cork ...	Fermoy.
,, G. J. Gibson, M.D.	Madras ...	York.
,, W. S. Pratt, M.B.	Netley ...	Home District.
,, B. W. Fowler ...	Barbadoes	Jamaica.
,, G. B. Hickson...	— ...	York.
Surgeon W. T. Johnston, M.D.	Strensall Camp	Stratford-on-Avon.
,, C. A. Webb ...	Devonport	Brecon.
,, R. O. Cusack	Weedon ...	Derby.
,, J. Watson, M.D.	Londonderry	Antrim.
,, J. M. Jones ...	York ...	Carlisle.
,, D. L. Irvine ...	Newcastle...	Whitby.
,, T. P. Woodhouse	Bengal ...	Woolwich.
,, T. R. Lucas, M.B.	Devonport	Okehampton.
,, R. J. Fayle ...	Cirencester	Devonport.
,, T. A. P. Marsh	Madras ...	Aldershot.
,, G. F. Gubbin	Egypt ...	Home District.
,, W. E. Berryman	Hulme ...	Leicester.
,, J. J. O'Donnell, M.B.	Trinidad ...	Barbadoes.
,, B. H. Scott ...	Devonport	Hay Camp.
,, S. Macdonald, M.B. ...	Edinburgh	Lanarkmuir.

THE MEDICAL STAFF.

BRIGADE-SURGEON T. F. O'DWYER, M.D., Malta, has leave of absence to November 3rd, to proceed to Belgium, Germany, and France, on private affairs.

Surgeon CHARLES HAYDEN, M.D., whose retirement on half-pay we announced in the JOURNAL of June 8th, died on July 11th. He entered the service as Surgeon, August 1st, 1885, and went in the following year to the West Coast of Africa, whence he was but recently invalided home. He was in his 26th year.

INDIAN MEDICAL SERVICE.

BRIGADE-SURGEON H. POTTER, M.D., Bengal Establishment, 18th Native Infantry, is appointed to be Medical Storekeeper at Allahabad, *vice* Surgeon-Major G. Hutcheson, M.D., appointed Sanitary Commissioner North-West Provinces and Oude.

Surgeon-Major E. A. BIRCH, Bengal Establishment, on furlough, is appointed to be Civil Surgeon of Hooghly.

Surgeon-Major F. C. NICHOLSON, M.B., Bengal Establishment, Civil Surgeon of Moorshedabad, on deputation as officiating Civil Surgeon of Patna, is appointed to be Civil Surgeon of Dacca; he will, however, continue to officiate as Civil Surgeon of Patna till further orders.

Surgeon-Major T. E. L. BATE, Bengal Establishment, Civil Surgeon of Delhi, is appointed to officiate as Inspector-General of Prisons, Punjab, *vice* Brigade-Surgeon R. Gray, M.B.

Surgeon G. F. NICHOLSON, M.D., Bengal Establishment, is transferred from Sealkote to Delhi.

Surgeon-Major E. SANDERS, Bengal Establishment, Civil Surgeon of Noakhully, on deputation as officiating Civil Surgeon of Moorshedabad, is confirmed in the latter appointment.

Surgeon-Major J. WILSON, M.D., Bengal Establishment, officiating Civil Surgeon of Bancoorah, is appointed to be Civil Surgeon of Noakhully; he will, however, continue to officiate as Civil Surgeon of Bancoorah till further orders.

Surgeon D. G. CRAWFORD, M.B., Bengal Establishment, officiating Civil Surgeon of Backergunge, is appointed Civil Surgeon of Jessore; he will, however, continue to officiate as Civil Surgeon of Backergunge till further orders.

Surgeon-Major W. A. GILLIGAN, Bengal Establishment, Civil Surgeon of Durbhunga, is allowed to leave for three months. Dr. W. FORSYTH, Civil Medical Officer, Beerbhoom, will act as Civil Medical Officer, Durbhunga, during the absence of Surgeon-Major Gilligan.

THE VOLUNTEERS.

SURGEON S. P. SMITH, 1st Volunteer Battalion Royal Fusiliers (late the 10th Middlesex), is promoted to be Surgeon-Major, ranking as Major.

Surgeon W. JOHNSTONE, Galloway Rifles, is promoted to be Surgeon-Major, ranking as Major; and Surgeon W. LORRAINE, M.D., of the same corps, to be Surgeon-Major, ranking as Lieutenant-Colonel.

Acting-Surgeon J. HUME, 1st Roxburgh and Selkirk (the Border) Rifles, has resigned his appointment, which was dated June 10th, 1878. He is permitted to retain his rank and uniform.

Acting-Surgeon J. H. WALTERS, 1st Volunteer Battalion Royal Berkshire Regiment (late the 1st Berkshire), is promoted to be Surgeon.

Surgeon-Major (ranking as Lieutenant-Colonel) T. J. BENNETT, M.D., 1st Wiltshire, has resigned his commission. He dates as Surgeon from August 9th, 1864, and as Surgeon-Major from February 1st, 1889. He retains his rank and uniform.

Acting-Surgeon C. H. PHILLIPS, 1st Volunteer Battalion North Staffordshire Regiment (late the 2nd Stafford), is promoted to be Surgeon.

The undermentioned gentlemen are appointed Acting-Surgeons to the corps specified: HENRY C. LAMPORT, M.B., 5th Lancashire Artillery; ALEXANDER COSGRAVE, 9th Lancashire Artillery; WALTER HUME, M.B., 1st Roxburgh and Selkirk (the Border) Rifles; THOMAS L. CROOKE, 2nd Volunteer Battalion King's Own Scottish Borderers (late the 1st Berwick).

EXAMINATION FOR PROMOTION.

ONE OF THEM writes, that there are two sides to this question—the point of view of the individual and of the department. The State has a perfect right to test the competency of its officers, but it must do so in a fair and consistent manner. The examination and the examiners have all along been improperly constituted, but the whole are now reduced to an utter absurdity by the substitution of a civil fellowship for a service examination; the force of foolish and fatuous administration could scarcely further go than that. It is most necessary that the administrative grades should be filled by competent men, but there are many ways of arriving at a proper selection of them for promotion to the higher grades other than by examination.

LORD CAMPERDOWN'S COMMITTEE.

MEDICAL STAFF writes: From all one can learn, the present military influence at the Horse Guards is too powerful and hostile to permit concession of the just claims of army medical officers. Our course, however, is clear. We have through the Association formulated what we want; let us nail that flag to the mast, and take nothing less; and as it will involve no extra expense to the taxpayers, it will be granted in time, if not by the Government now in office, by their successors, or by some future Government. Compromises have been always the ruin of the medical service. Let us have all or nothing. If the medical schools, as in duty bound, point out to intending candidates the actual state of the question, I shall be much surprised if members of the profession will subject themselves to insults and vituperation which a small clique at the Horse Guards is now endeavouring to inflict on them.

AN extensive exhibition of electrical apparatus of all kinds will be open in Birmingham during the months of August, September, and October, and great efforts are being made to ensure its success. The building is the same as that used for the exhibition of arts and manufactures at the last meeting of the British Association in Birmingham. Those who are in the habit of using electricity for medical purposes, especially for lighting and cautery, will devoutly hope to see some developments here in the direction of cheapening the apparatus used and of making electricity a more reliable servant than it is at present; who that has used it often for either of the purposes mentioned has not had his temper tried beyond measure by the eccentricities of the battery and its continuations?

MYOPIA IN SCHOOL CHILDREN.—Dr. J. L. Miner, of Memphis Tennessee, has examined the eyes of 682 children in the schools of that town. He found the refraction to be normal in 523, hypermetropic in 128, and myopic in 32. The myopia was found only in children of the fourth class, no less than 15 per cent. of these being affected. His paper is published in the *Memphis Journal of the Medical Sciences.*

MEDICAL MAGISTRATE.—The Lord Chancellor has placed the name of T. E. Brooks, M.R.C.S., L.R.C.P., on the Commission of the Peace for Ludlow, Shropshire. Mr. Brooks was Mayor of the Borough for the two years 1885 and 1886.

HOSPITAL AND DISPENSARY MANAGEMENT.

SIR ANDREW CLARK AND THE ABUSE OF OUT-PATIENT DEPARTMENTS.

SIR,—One would have thought that the abuse of our hospitals had been proven up to the hilt. In the JOURNAL of July 6th, 1889, p. 47, I show that the Manchester Committee proved an "abuse rate" of 43.32 per cent., they taking a "poverty scale" of 18s. per week's wage. The London Hospital Governor tells us that in 1883, 28,236 out-patients were treated, and that in twelve months (owing to an inspector, and to the notice that the social circumstances of patients would be inquired into) this number was reduced by 6,970; St. Bartholomew's reduced theirs by 25,349. These are official figures, and cannot be doubted. Again, the "abuse rate" at the Children's Hospital was 57 per cent., even although the "poverty scale" was 30s. per week's wage. The Royal Free Hospital was found to be even worse, for 61½ per cent. were ineligible. The Devonport Hospital and Leicester Dispensary were so greatly abused that they were converted into provident dispensaries.

Is it likely that the "abuse rate" has become less? What hospital Committee will have the honesty to come forward and challenge an investigation into the social circumstances of their patients. Occasionally one of the medical staff is put up to say that there is no abuse, but we now know that this brotherhood is losing ground day by day. In the JOURNAL of February 2nd, 1889, I pointed out by means of a table of statistics that at 130 London hospitals 1,179,661 out- and over 50,000 in-patients received treatment in one year, that Liverpool treated 224,831 out- and 11,376 in-patients, while Glasgow treated 72,217 out-patients.

There are now 877 hospitals and infirmaries in England. I have taken the trouble to find out the number of patients treated at 759 of these. There are 208,768 in- and 2,619,530 out-patients, or a total of 2,828,298 patients treated at these 759. How many are treated by the remaining 118 I cannot say. Moreover, it is to be carefully noted that these figures do not include those persons treated by the 737 workhouse infirmaries and district parochial medical officers, it being impossible to obtain these from the Local Government Blue Book.

There are, however, other ways by which our hospitals are greatly abused. Take, for instance, the present new fangled idea of "pay wards." Look at the condition of affairs at St. Thomas's Hospital. There they have tried to make a little financial speculation out of the patients, and have set up "pay wards." From 1885 to 1887 they had 1,114 pay patients, or, on an average, 371 each year. These 371 cost £4,691, and gave an income of £5,339, leaving thus a balance of £641. Each patient costs £12 12s., and gives £14 9s. 3d., thus giving a profit only of £1 17s. 3d. on each patient per annum, and, to make this, the hospital—not charity!—authorities have to keep 45 beds going, charging from 21s. to 8s. per diem. The resident medical officer—who in reality does not reside in the hospital—is paid £500 a year for looking after these "pay" patients. Now mark the class of people taken in. See what the official statement says: "It has been a very great convenience to clergymen, officers of the army and navy, clerks, etc." This stealing of well-to-do patients by hospital authorities is as humiliating as it is disgraceful; and why those medical practitioners acting on the staff of St. Thomas's Hospital allow it, it is difficult to state. The only reason seems to be that they wish to starve out the general practitioner. Take two more cases. At Guy's Hospital there are 20 "pay" beds at 21s., and 12 beds at 63s., per week. These 32 beds gave an income to the "charity" of £1,874 6s. 4d. in the year, or at the rate of £1 2s. 0½d. per bed, per week. Taking the cost of each bed at £1 7s. 3½d. per week, this financial transaction entails a loss of 5s. 3d. per week to the charity. Why, then, go on treating a class of the community, who never refused to pay for private medical treatment until the *soidisant* philanthropists at our hospitals took it on them to invite the "clergy and officers of the army and navy" to become objects of charitable relief? Are our hospital authorities losing their heads? At the German Hospital there are six "pay" beds, and the average sum paid per week per pay patient is £1 16s. 2d., while each costs £1 3s. 6d., thus leaving a profit of 12s. 8d. So that in this speculation we would require 3 "pay" beds to pay for one free, or charity, bed. That is, supposing a hospital has 80 beds, 60 would have to be given up to "pay" patients, and 20 to free patients. Is it little wonder some hospital committees ask for more beds? And, sadder still, is it to be wondered at that the public are becoming tired of supporting such unsatisfactory financial concerns? Depend upon this, that if it is a swindle to sell medical relief to the in-patient, it is also wrong to sell it to the out-patient. Our hospitals are ploughing deeper and deeper into difficulties each year, and it would almost seem that they will not accept the arm of help from those who wish to see our medical charities purged of all these elements of barter, trade, and selling of charity. The serious charges made during the last few years against the gross abuse of hospitals must be met. The clergy tell us that our medical charities "are the outcome of Christianity." For my part, I hope the abuses are not. One can only think that if the commercialising spirit goes on, people will soon take as little interest in our hospitals as they now do in the workhouse infirmaries. Mr. Frewer, the Secretary of the London Hospital Saturday Fund, has shown that the trade element in the medical profession is fairly to the front, for he has stated in a pamphlet that at 67 London hospitals the doctors are paid nearly sixpence per patient. Is this acceptance of coppers not rapidly prostituting a profession whose aim has ever been to do good? One's earnest hope is that those who take this sixpence will soon cease to soil their fair fame by accepting pay for labour done which no fee can pay for, but which will, it is to be hoped, gain the "well done" hereafter. But a leader in the profession has said that he could not have practised his profession unless he had had that work at the hospital. Nice doctrine this—the end justifying the means.

Sir A. Clark, speaking of the ranting of so-called hospital reformers, says: "In Manchester.....they were determined to get rid of the abuse of the out-patient department. They investigated the matter carefully, I am told, and what do you think was the conclusion they came to. 'It was that about 8 per cent. were found to be ineligible for relief.' Eight per cent." I give direct denial to the correctness of this statement, for it is a poor cause which has to be sustained by wrong statements. If any reader will send to James Smith, 6, Queen Street, Albert Square, Manchester, and ask for the 53rd Annual Report of the Manchester Provident Society, and will refer to page 55, he will find: "The following figures will show the percentages, from year to year of those applicants to the medical charities co-operating with this Association who were found, on investigation, to be ineligible for gratuitous medical relief, and who were in consequence referred to the branch of the provident dispensaries:

"1875	42.32	1881	14.48
1876	24.50	1882	13.51
1877	24.00	1883	12.12
1878	19.74	1884	14.19
1879	13.61	1885	13.57."
1880	14.76		

It would further seem that there was, and is, no abuse of charity at the London Hospital. Then why do they pay an inspector 54s. per week, and how is it that in 1883—the year before the inspection began—the number of out-patients was 28,236, while in 1887 they amounted to 20,905. Why again is it, that since then, the numbers have remained about the same, while the figures have been running up and up each year at other hospitals? What is the deterrent? Why the inspector. Even at the London Hospital, the patient who is rejected by the inspector has the power to appeal to the committee, but this is not often accepted. Again, how many patients have been prevented from coming to this hospital, knowing they would be refused? Even beggars and tramps know where outdoor parochial relief is rigidly managed. If we take the 1887 London Hospital Report, page 6, we find a classified list giving the result of inspection of 647 cases; 26 withdrew voluntarily, owing to social unfitness; 89 did not return after the first visit, being notified of their unfitness, 25 made false statements; 16 returned again but withdrew; 44 were referred to private practitioners; others were pauper cases, while some were retained "for clinical purposes." Let us discuss this question of hospital abuse manfully, and avoiding cant we shall gain the approbation of all honest workers and thinkers.—I am, etc.,

ROBERT R. RENTOUL.

Liverpool.

SIR,—I would direct the notice of your correspondent, "Critic," and of many others who are, like him, probably Fellows of the Royal College of Physicians of London, to the fact that there is a by-law (No. clxxiv) to the following effect:—

"No Fellow or Member of the College shall officiously, or un de colour of a benevolent purpose, offer medical aid to, or prescribe for, any patient whom he knows to be under the care of another legally qualified medical practitioner."

A physician who does not take the trouble to make himself acquainted upon such a point when he is acting so ostensibly "under colour of a benevolent purpose," as at a hospital, is not behaving in accordance with the spirit of the above law. It is gratifying to see that the great body of general practitioners are at last beginning to realise how selfish has been the motive which has governed the actions of those who have brought into existence this most disgraceful out-patient system, a system of public advertising, or, as some are pleased to call it, "competition." By all means let us compete, in the advancement of medical knowledge, in upholding the dignity of our profession, and, above all things, in being just to all men.—I am, etc., ANTI-CRITIC.

MR. COTTENHAM FARMER (London) writes: There are two aspects of hospital abuse. No doubt from Sir Andrew Clark's point of view the whole affair is *couleur de rose*, philanthrophy in its purest form. He is supplied with splendid material for clinical work, and it matters not to him from where or how collected, and from amongst them he occasionally finds a case to add to his reputation or to form matter for a clinical lecture; and all this means to him an enormous professional income. But to the hard-worked general practitioner how very different the consequences; he sees his fairly-earned income gradually diminishing, and the bulk of his patients thoroughly demoralised; for if hospitalism teaches anything, it inculcates dishonesty; people who have once visited a hospital never afterwards recover their proper self-respect. They look upon almost any fee as an extortion, and will use every means to escape payment. They become, in fact, an improvident, and very frequently a low, dissolute class, extravagant in all matters excepting the payment of their doctors' bills.

As regards the treatment, the less said the better; no doubt a few select cases are carefully registered and cared for; for the bulk, the treatment is simply quackery. A bottle of medicine to last a week or a fortnight in the case of children stands condemned by any properly-trained mind. We meet constantly in practice poor creatures dragging up to consumptive hospitals in the last stage of their disease, waiting hours for their turn, cases which any intelligent practitioner would recommend careful home nursing until death terminated their sufferings. Children recommended no doubt by senior students condensed milk and similar trash, that most experienced men have long since condemned from sad results, and so on. How hospital men can refuse to listen to these earnest protests from their own brethren is a mystery and a scandal: a mystery, seeing that they cannot possibly derive any personal benefit by following their present course of conduct; and a scandal, seeing that this state of things is damaging the status of medical men generally. However, we are also to blame for so long allowing its existence, and not showing a bolder front or taking stronger action.

In my own practice I have made it a rule not to pay night calls to patients who are under treatment in hospitals, and I think if this was generally followed people would begin to feel that there were some disadvantages attached to these institutions, and perhaps be more chary of accepting pauperising aid, when with a little care they could well afford to do without it; and would find themselves better treated, and above all retain that self-respect which is a point of the first importance in every highly-civilised community.

G. P. writes: In any inquiry which may take place, whether inter-professional or extra-professional, it is highly important to remember:

1. That there is a very great difference between "scholastic" and "local" hospitals. Much of the friction which has arisen has occurred in consequence of the endeavour to apply to local hospitals the same rules in respect to staff appointments as obtains in hospitals to which a medical school is attached. Such an idea is absurd; either the average general practitioner is sufficiently well educated to fill such posts, or he is not; if not, the whole system of medical education is a fraud, and requires instant reformation. Local hospitals (including, of course, suburban hospitals) should be officered by men resident and practising in the district for the benefit of which the hospital was originally established. It is subversive of the best interests, not to say of the dignity, of the profession, to encourage the public to believe that in matters medical there is no salvation outside of Cavendish Square, or that the possession of a diploma to which a pecuniary rather than an intellectual value is attached, is absolutely essential to the making of a good physician.

2. Eminent as is the position of Sir A. Clark, I respectfully deny that he in any way represents the opinion of the great bulk of the profession upon this subject. Even if his figures were correct, which seems more than doubtful, his opinion in the matter is worth exactly as much, and no more, than would be the opinion of a Bishop concerning the Baptists Union; we can therefore, as general practitioners, afford to neglect the *ex-cathedrâ* utterances of even such a great man. I think, however, that we must insist that no inquiry will be satisfactory, or will get to the root of the matter, unless the *bonâ fide* general practitioner is thoroughly and efficiently represented.

QUEEN'S JUBILEE HOSPITAL.

SIR,—I am credibly informed that on the Saturday before Hospital Sunday the passengers in Kensington, on the tops of omnibuses and in the streets, were solicited for alms by boys holding large boxes with "Hospital Sunday" labelled on them, and wearing badges with a similar inscription. This collection was mistaken for the "Hospital Sunday Fund" collection, though it had no connection at all with it, but was made on behalf of the Queen's Jubilee Hospital, Richmond Road, South Kensington.

Much attention has recently been drawn to the increase and status of special hospitals, and to the contrivances adopted by some of these hospitals for raising funds. Does a collection such as I have described accord with the commonly accepted standard of professional etiquette?—I am, etc.,

C. S. LOCH, Secretary.
Society for Organising Charitable Relief and Repressing Mendicity, July 13th.

*** Such a proceeding, obviously tending to mislead the public, is one which calls for distinct condemnation. It is a great pity there is no central authority to which the proceedings of this institution could be referred.

THE NEW COUNTY LUNATIC ASYLUM FOR LANARKSHIRE AT HARTWOOD.

WE are glad to observe that in building this asylum a step has been taken in the right direction, and that, instead of one large asylum for upwards of 1,100 patients being provided as originally intended by the late Glasgow District Board, the large area under that Board has now been split up into four divisions, each with its own District Board of Lunacy and a much smaller asylum.

The county of Lanarkshire, which forms one of these divisions, has with commendable despatch proceeded to carry out the important duty of providing proper accommodation for its insane population, and in the comparatively short space of nine months a suitable site has been procured; plans have been prepared by Mr. Murray (the architect of the Hamilton County Buildings and Court House), which have been approved by the District Board and the Commissioners in Lunacy; contracts have been entered into, and the work has been commenced.

According to the plan, the architectural features of the building seem to be characterised by great simplicity of design. The central block, however, is lofty, and with its two towers in the early Scottish style presents a somewhat imposing appearance. With this exception, the elevation of the south front shows a long, low range of buildings, though evidently arranged with due care to the requirements of an institution which will ultimately contain accommodation for 600 patients.

The buildings are arranged in blocks. The associated dining and recreation halls are in the centre facing south, and communicate by means of corridors having roofs of glass and iron with the official blocks, containing offices and rooms for the various officials, the males on one side and the females on the other. Beyond these official blocks are other corridors connecting them with the hospitals and blocks for acute cases, and we note the infectious hospital occupies with them a considerable area of frontage space. Usually the blocks for infectious diseases are more completely detached from the main building than appears to be the case in the plan before us. The blocks for acute cases stand somewhat in the rear of the hospitals, and look almost due east and west.

The hospitals and wards for the aged and infirm very properly have a south aspect. The hospitals are one-storey buildings, and will have, no doubt, the advantage of top light and ventilation, which are important matters in this connection. We are glad that each hospital will be a complete building in itself, with dining room, kitchen, and all the necessary offices.

The blocks for chronic cases are situated behind, and are calculated to accommodate 100 patients each. They rise on either side a considerable height above the south elevation, and appropriately balance the central block before mentioned. Their style of architecture is simple and unpretending.

The customary arrangement of laundry, workshops, central kitchen, and administrative offices maintains. The whole of the buildings will be heated by steam and hot water, and lighted by electricity.

We understand the entire cost is expected to be comparatively moderate, but we have not been able to arrive at the amount estimated.

BELFAST HOSPITAL FOR SKIN DISEASES.

THE annual meeting of this institution took place upon July 9th, Professor Hodges, J.P., in the chair. The report showed that during the past year the number of persons treated had been 1,194, making a grand total of 22,671 patients under treatment since the foundation of the charity in 1865. The total receipts for the year were £348, and the expenditure £325. Reference was made in the report to the interest at present being taken in the subject of leprosy. A case was treated in the hospital some years ago and much relieved. The chairman thought there could be no doubt

that leprosy was dying out in Ireland, as in the year 1492 two hospitals, one at Kilchief and the other at Downpatrick, existed for the treatment of the disease, whereas, at the present time, only two cases were known to exist in the entire country.

LIVERPOOL HOSPITALS.

OUR Liverpool Correspondent writes:—The fancy fair and gala recently held for the benefit of the Stanley Hospital has realised the sum of £5,186. This will place the institution out of debt, and enable the committee to carry out some improvements in the hospital that are urgently needed. Not long ago £4,200 was raised by a similar undertaking in aid of the Bootle Borough Hospital, so that the medical charities, which together minister to the wants of the sick poor of the north end, have benefited during the present year to the extent of upwards of £9,000.

EXTENSION OF THE SEAMEN'S HOSPITAL.

The New Branch at the Victoria and Albert Docks.

ON Monday, July 15th, H.R.H. Prince George of Wales, laid the foundation stone of a Branch Hospital of the Seamen's, late "Dreadnought," Hospital, at the Victoria and Albert Docks. This extension is rendered necessary by the increasing strain bearing upon the institution. Dispensaries for seamen of all nations have already been established in connection with it at the London Docks and at Gravesend. The Branch Hospital about to be built will accommodate twelve patients, together with a medical and nursing staff, and there will also be an out-patient department. It was stated that there is no other hospital within three miles of this site; and, therefore, accidents occurring in the docks, and urgent cases arriving in vessels, have now to be carried a long distance at great suffering and danger to the patients. The Bishop of Colchester, the clergy of the district, the chaplain, and the Mayor of West Ham assisted at the ceremony. Dr. Robert Barnes, Consulting Physician, and Dr. Curnow, Visiting Physician, representing the medical staff, were presented to the Prince.

MEDICO-PARLIAMENTARY.

HOUSE OF LORDS.—Monday, July 15th.

Cruelty to Children (Prevention) Bill.—This Bill was brought up and read a first time.

HOUSE OF COMMONS.—Thursday, July 11th.

Vivisection—Mr. MATTHEWS stated, in reply to Mr. JOHN ELLIS, that specific returns were issued of experiments under the Vivisection Act, and that the information given to him by scientific gentlemen showed that valuable results had been obtained as to the means of relieving numerous diseases in consequence of these experiments.

Friday, July 12th.

Cruelty to Children (Prevention) Bill.—This Bill was read a third time.

The Universities (Scotland) Bill.—The CHANCELLOR OF THE EXCHEQUER having said, in reply to Mr. WALLACE, that he would prefer not to state the maximum of the increase which he was prepared to recommend the Government to make to the annual sum of £42,000 proposed to be voted to the Scottish Universities in the Universities (Scotland) Bill, Mr. Wallace gave notice that he would move the rejection of the Bill, on the ground of the inadequacy of the pecuniary arrangements.

Monday, July 15th.

Local Government (Scotland) Bill.—This Bill passed through Committee.

Local Government Scotland Supplementary Provisions Bill.—The House went into Committee on this Bill. On Clause 19, providing that "the county council of any county may appoint" a medical officer or a sanitary inspector, who shall not engage in private practice without the express written consent of the council, Dr. FARQUHARSON moved to amend the clause by substituting the word "every" for the word "any."—The LORD ADVOCATE said that there seemed to be a strong wish that the county council should appoint a medical officer. But it was questionable whether it would be advisable to proceed by compulsion.—Mr. CAMPBELL-BANNERMAN said that in Acts of Parliament "may" meant "shall," and if the Lord Advocate would leave out the words "if it think fit," the word "may" might stand. He could not conceive of a case where it would not be desirable to have a medical officer.—Mr. FINLAY said that a recent case had decided that "may" meant "may" and nothing else, unless some antecedent words showed that a duty was imposed.—Sir W. FOSTER said that permissive legislation had not proved satisfactory.—Mr. FIRTH pointed out that by Section 20 district sanitary officers would be responsible to the county councils, and it was obviously necessary that the county councils should have an officer qualified to advise them.—The LORD ADVOCATE said that the Government would not stand in the way of so peremptory an indication of opinion. Arrangements might be made, subject to the approval of the Secretary for Scotland, for the medical officers of the smaller counties or areas to engage in private practice notwithstanding their appointment.—Dr. FARQUHARSON said in England the arrangement of one medical officer for several counties was often found to work well.—The amendment was agreed to, and the consequent substitution of "shall" for "may" was also agreed to. The clause as amended was added to the Bill. Clause 20 (medical officer and sanitary inspector to send periodical reports to county council, etc.; Clause 21 (qualifications of medical and sanitary officers, etc.); Clause 22 (powers to enforce Rivers Pollution Act, 1876), were agreed to.—The LORD ADVOCATE moved an amendment extending the power of the county council to make by-laws for the prevention of vagrancy, as well as the prevention of nuisances.—The amendment was agreed to.

Muzzling of Dogs.—Sir H. ROSCOE asked the First Lord of the Treasury whether any order had yet been issued by the Privy Council as to the general muzzling of dogs throughout the country in face of the fact of the large number of cases of rabies which had recently occurred, and what powers existed for the destruction of stray dogs by local authorities.—Mr. W. H. SMITH said it had not been deemed expedient to pass a general order at present, but the Privy Council had issued an order requiring the muzzling of all dogs within the metropolitan police district (a radius of fifteen miles from Charing Cross) from August 1st to December 31st. The returns of rabies in the metropolis and neighbourhood during the first six months of 1889 showed a steady increase of the disease. The police in the metropolis had power to destroy stray dogs, but local authorities generally had no such power under the Dogs Act of 1871, unless a mad dog, or a dog suspected of being mad, was found within their jurisdiction. It was possible that some local Acts might give local authorities greater power, but the Privy Council had no information on the subject. Under the Contagious Diseases (Animals) Act of 1878, the Privy Council could only sanction the detention, but not the destruction, of stray dogs.

Tuesday, July 16th.

Local Government (Scotland) Supplementary Provisions Bill.—The House went again into Committee on this Bill. Upon Clause 44, which provides that the district committees should consist of the county councillors for the electoral divisions comprised in the district, and also two representatives from the parochial boards of each parish, Dr. CAMERON moved to omit the words "giving two representatives to the parochial boards."—Sir W. FOSTER said that in public health administration the greatest difficulty was caused by the interference of local interests with the general interests of a district. Under the scheme proposed by the Lord Advocate, in some counties parishes would be too strongly represented, in other cases too feebly. He hoped that the clause would be postponed.—The amendment was lost.—Sir A. ORR-EWING moved to substitute "one" for "two."—The amendment was accepted.—On the motion of the Lord Advocate, the Local Government (Scotland) Bill, and the Local Government (Scotland) Supplementary Provisions Bill were ordered to be consolidated in one Bill.

Wednesday, July 17th.

Universities (Scotland) Bill.—The Bill as amended was considered. A motion of Mr. HUNTER, altering the number of assessors from three to one, was negatived.—On the motion of Mr. J. CAMPBELL, the number of representatives of affiliated colleges to be appointed by the Commissioners or the Universities Committee was reduced to four. On the motion of the same gentleman, the University Court was empowered (Clause 6) to elect the representative on the General Medical Council. An effort was then made to place the name of Professor Alexander Bain upon the Commission as one of the representatives of the University of Aberdeen. The proposal was not accepted by the Government.—Mr. BALFOUR suggested the names of Mr. Hunter and Mr. Asher, late Solicitor-General for Scotland, but both declined to serve. Eventually the closure was carried, and, after some further discussion, in the course of which Mr. HUNTER said a division would be taken as a protest against the inclusion of Sir F. Sandford among the members of the Commission, the motion was negatived by 222 to 127.—The LORD ADVOCATE moved to add to the clause the name of Sir W. Thomson, and, after some remarks from Mr. HUNTER, Dr. CLARK spoke until half-past 5, when, according to the rules of the House, the further proceedings were postponed until next day.

INDIA AND THE COLONIES.

INDIA.

THE *Times of India* states that the repeal of the Contagious Diseases Acts has been attended with such disastrous results among the troops in India that an urgent representation will probably be made to the Home Government on the subject. The practical effect of the repeal so far is the loss of the services of an entire brigade of the Indian army.

ANOTHER soldier of the Rifles has died at Bareilly of enteric fever. This will make twenty-one deaths during the last five months owing to the unhealthiness of the station, caused by the want of systematic skilled sanitation.

THE LEPER BILL.—The Leper Bill, which has been drafted by the Government of India, proposes to confer upon district magistrates power to order the arrest of any leper who is found begging or wandering about without means of subsistence. Such lepers may be detained in a retreat for life, or until their discharge is sanctioned, and, if they escape, may be recaptured by the police. No retreat is to be sanctioned unless provision is made for the segregation of the sexes, and the local governments are to be empowered to establish retreats with any money placed at their disposal for hospitals, dispensaries, and lunatic asylums. Complete religious freedom will be secured to the lepers in such institutions, and the local government may make rules for the management, discipline, and inspection of retreats.

AUSTRALIA.

COMPULSORY NOTIFICATION IN VICTORIA.—A law enforcing compulsory notification has come into force in Victoria this year, and a medical man was recently proceeded against by the Central Board of Health, for failure to notify a case of typhoid fever.

There had been no attempt at concealment, and as this was the first case under the new Act the prosecution withdrew.

NEW SOUTH WALES.

LEPROSY.—The Coast Hospital, Little Bay, to which the majority of the cases of infectious disease arising in Sydney are sent, has in recent years been used also as a home for lepers. The report for 1888 states that during that year the hospital sheltered eleven cases of leprosy, of which number four were new cases admitted during the year. The medical adviser to the Government states that the lepers' quarters are now overcrowded, and occupy a most objectionable site, close to the main water supply of the hospital. In agreement with almost every person who has had practical experience of leprosy, he recommends the compulsory detention and treatment of lepers.

NEGLECT OF VACCINATION.—The annual report of Dr. F. Norton Manning, the medical adviser to the Government, shows that the population of New South Wales is practically unvaccinated. Not more than one child in nineteen is vaccinated, so that there are estimated to be 130,000 unvaccinated children under five years of age in the colony. Vaccination is not compulsory, and the neglect of vaccination and revaccination appears to be attributable to apathy rather than to any active dislike. "A few cases of small-pox at the quarantine station, a single case in Sydney or its suburbs, or even one or two newspaper articles on the subject is sufficient," the report states, "greatly to increase the number of persons presented for vaccination; but there is an increasing number of persons in the colony who have never seen small-pox, and to whom its very existence is only a vague belief, who are not imbued with either the dread of the loathsome and fatal malady which renders vaccination a prudent and safe necessity, or the wholesome English tradition which prescribes it as a duty."

UNIVERSITY INTELLIGENCE.

EDINBURGH.

UNIVERSITY COURT.—At a meeting of this Court on Monday last there was submitted a proposed alteration of Ordinance No. 16, Aberdeen No. 6, sections 10 to 14, and section 22, providing for a rearrangement of the divisions of the examinations for graduation in medicine in the University of Aberdeen, a copy of the report on which had been received from the Lord President of the Council for remarks. In connection therewith the Court had before them a minute of Senatus of date June 28th, 1889, approving a report by the Faculty of Medicine, expressing much satisfaction that the general effect of the proposed alterations would be to bring the ordinances regulating the examinations in medicine and surgery in the University of Aberdeen into close harmony with the ordinances relating to such graduation in the University of Edinburgh, and with changes thereon that have been recommended by the Senatus; and reporting that in their opinion there was no reason for the University of Edinburgh to take any objection to the proposals of the University of Aberdeen. The Court directed that these views of the Senatus should be communicated to the Lord President of the Council, and that there should also be sent to him a copy of the following minute of the Court of March 11th last, adopted after taking evidence and hearing parties on alterations and proposed alterations of the regulations for graduation in medicine in Edinburgh, similar to some of those now proposed by the University of Aberdeen:—

That the time which has elapsed since the approval by Her Majesty in Council of the alteration of February 8th, 1888, in the arrangements for the examinations in the subjects of the first examination for graduation in medicine is as yet too short to admit of a definite conclusion being formed as to the effect it may have on the further course of medical study; and that the near prospect of the whole subject of university examination and graduation in Scotland being under the consideration of an Executive Commission renders it undesirable to make any alteration in the existing arrangements for the examinations for graduation in medicine.

SCHOOL OF MEDICINE.—Dr. A. A. Matheson has been recognised by the University Court as a teacher of medicine in Edinburgh, whose course of lectures on midwifery should qualify for graduation in medicine in the University of Edinburgh. Recognition has also been continued to Dr. William Craig, lecturer on materia medica and teacher of practical materia medica in Edinburgh, and to Dr. Scott Lang, lecturer on surgery in Edinburgh, on change of their teaching rooms.

The Final Professional Examinations at Edinburgh University are over. It is estimated that 58 per cent of the candidates have passed successfully. A few have been remitted till October merely. The First and Second Professional Examinations are in progress. The Summer Session terminated this week.

DURHAM.

MEDICAL GRADUATES ASSOCIATION.—The annual meeting of this association, which consists of a large proportion of the 500 graduates in medicine of Durham, was held at the Holborn Restaurant on June 27th. The following officers were elected for the ensuing year:—*President:* Dr. C. J. Cullingworth. *Vice-Presidents:* Drs. D. Drummond and Morton. *Council:* Professor Philipson, Drs. Armson, Adams, Beatley, Day, Goldsmith, Milburn, Powell, Robinson, Thompson, Travers, and W. T. Wilson. *Honorary Secretary for North and Treasurer:* A. Mantle, M.D. *Honorary Secretary for South:* R. H. Milson, M.D. A most successful reunion of Durham men took place at the annual dinner held at the same place after the meeting, and presided over by the president, Dr. C. J. Cullingworth, of St. Thomas's Hospital. Amongst other visitors were Sir William Roberts, Mr. Christopher Heath, and Mr. Croft, who responded to the visitors' toast.

OBITUARY.

CHARLES ELAM, M.D.LOND., M.B., F.R.C.P.

DR. ELAM, whose death we briefly announced last week, was born in Birstall, near Leeds, in May, 1824, where his father was a Wesleyan minister. He was educated entirely at the school kept by his father, and gave early promise of that marked ability which distinguished him as a student at the Leeds School of Medicine and the University of London, where he took the degree of M.B. in 1846. At that examination he obtained honours in all the subjects in which he was examined, and was awarded three gold medals. He took the degree of M.D. in 1850. Returning to Leeds, he became House-Surgeon of the Infirmary, and after two years commenced practice in Sheffield, and subsequently was appointed Lecturer on Physiology and Medicine in the Medical School. He was elected Physician to the Dispensary in 1854, and Physician to the Infirmary two years later—a post which he held until he left Sheffield. He was at one time an active member of the Literary and Philosophical Society of that town, of which he was President in 1863. He took up his residence in Harley Street in 1868, where he practised until within a short time of his death. He was elected F.R.C.P. in 1870. Dr. Elam was at one time Physician to the National Hospital for Epilepsy and Paralysis.

He was a strong anti-evolutionist. His writings, which were voluminous, were marked by great originality of thought and extensive reading. He was the author of *Medicine, Disease, and Death; being an Inquiry into the Progress of Medicine as a Practical Art*, 1870; *A Physician's Problems*, 1870; *On Cerebria and other Diseases of the Brain*, 1872; and *Winds of Doctrine: being an Examination of the Modern Theories of Automatism and Evolution*, 1876; *Moral and Criminal Epidemics; Civilisation; Illusions and Hallucinations; Liberty and Licence in Science; The Gospel of Evolution;* and *Man and Science.*

One who knew him well writes: "Socially Dr. Elam's life was admirable. In his domestic circle he was honoured and devotedly loved; and he gained the esteem and affection of all his friends. He was honest, upright, and reliable, with a kind heart and a generous sympathy. His encyclopædic knowledge made him an interesting and instructive companion, and his unusually brilliant mental faculties induced him to seek recreation in amusements which exercised the mind rather than the body. He was a skilful electrician, and far above the average as a chess and whist player. He was very fond of music, and played the piano with great taste. He was essentially a town man, and was never happy out of London. His friends often deplored that he had no sporting tastes to induce him to spend more time in the country. In fact, his one great mistake in life was in not having educated himself to pass some weeks every year out of town. Had he done this his life might have been prolonged for years to come, and those who love him would not now have cause to mourn his loss.

"Perhaps the most remarkable of Dr. Elam's literary productions were the articles which appeared in the *Contemporary Review* on the Law of Evolution. In these contributions he contested the teachings of Darwin, Huxley, Spencer, and Tyndall. Everyone, whether he agrees or not with Dr. Elam, must acknowledge that

his attack upon the evolution theory was most able and spirited, and that the distinguished men whose writings he attacked found in him no mean antagonist. Dr. Elam, in his essays, intended to show that, 'Those purely physical theories of life and mind that have of late years been promulgated on high authority, and with unhesitating confidence, and have obtained such extensive credence, even amongst thoughtful men, are simply unreliable and unscientific, and are exercising a mischievous and benumbing influence in every domain of thought.'

"That Dr. Elam succeeded in convincing many there can be no doubt, but it must be admitted that the evolution theory still maintains its ground, and seems destined to live as a provisional hypothesis, for how long none can say."

Deputy Surgeon-General FRANCIS DAY, F.R.S., LL.D., C.I.E.

Great regret will be felt at the death of this distinguished officer and naturalist, which occurred on July 10th at Cheltenham. It has been said with truth that, excepting the venerable Dr. Henry John Carter, who survives him, he was the greatest of Indian naturalists of the passing generation. He was appointed to the Madras Establishment in 1852, and took part in the military operations then in progress in Burmah, for which he received the medal. His attention was subsequently almost exclusively devoted to the study of the fishes of India; and as Inspector-General of Fisheries in India he examined the rivers and seas of that country from the coast of Mekran on the west to the Straits of Malacca on the east, and the results of his fruitful researches have found permanent record in his reports to the Government of India from 1865 to 1877, and in numerous scientific journals.

The following are among his best known publications: "The Fishes of Malabar," 1865; "The Fishes of India," 1868; "The Fishes of the Andaman and Nicobar Islands," etc., 1870; "The Fresh-water Fish and Fisheries of India and Burmah," 1873; "The Fishes of India," second edition, 1875-79; and "The Fishes of the Nilghiri Hills and Wynaad," 1876.

He contributed collections also to the Natural History Museums of Sydney, Leyden, Berlin, and Florence, as well as to the British Museum, where he sent a remarkable collection of Indian crabs.

After his retirement from the Madras Medical Staff in 1877, he devoted himself to the study of the fishes and fisheries of the United Kingdom, and published a large work on the subject entitled "The Fishes of Great Britain and Ireland."

In recognition of his eminent services to Indian ichthyology Dr Day was created a Companion of the Order of the Indian Empire in 1885, and was presented about the same period with the cross of the Order of the Crown of Italy.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

PROPOSAL OF THE LONDON COUNTY COUNCIL TO BUY THE EAST KENT ASYLUM.

On July 31st the Kent County Council will be called upon to consider a proposal to sell the East Kent County Lunatic Asylum at Chartham Down, near Canterbury, to the London County Council for the sum of £260,000. It is now fourteen years since this asylum was opened for the reception of the insane poor of East Kent. The justices of that division of the county felt it was not right to send their pauper lunatics so far from their homes as the West Kent Asylum at Maidstone, where they could not be visited by their friends and relatives, and they therefore provided an asylum for them which was more accessible.

Now that the London County Council require asylum accommodation for their pauper lunatics coming from those portions of West Kent which have fallen under their jurisdiction, they propose to buy the East Kent Asylum for them. As these patients are, however, already inmates of the West Kent Asylum, if this proposal is accepted they must be removed to East Kent, and the East Kent patients removed to Maidstone, thus inflicting a great hardship upon a large number of poor people who deserve and who ought to receive every kindness and consideration.

Should the London County Council think the Maidstone Asylum is too large to be taken over *en bloc*, we venture to suggest there need be no difficulty in arranging to board a certain number of their patients in that asylum, whilst the remainder—say, the curable cases—could be provided for by the erection of a smaller asylum, such as the Committee, of which Mr. Brudenell Carter is chairman, have under consideration.

Apart from the questions of convenience and expediency, it is a matter well worth the consideration of the London County Council whether they could not provide an asylum within easy reach for a less sum, and maintain their patients for a much lower rate per head per week than by paying £260,000 for an asylum close upon seventy miles from Charing Cross.

We understand the proposal will be strongly opposed by the East Kent members when it comes up for confirmation.

A YEAR'S SANITARY WORK IN GLASGOW.

Mr. Peter Fyfe, Sanitary Inspector, has issued his report on the operations of the Glasgow Sanitary Department for the year 1888. This report shows that a large amount of good work has been done by the department during the year, but it also shows how much yet remains to be done, especially in such districts as Bridgegate and the Wynds, High Street and its closes, and Cowcaddens. In these districts nuisances of all kinds still abound, and the habits of the people are correspondingly filthy. Mr. Fyfe's report, however, shows that these filthy habits are not altogether the result of innate depravity, but are to a large extent the outcome of the insanitary conditions of their dwellings. The buildings in these districts are amongst the oldest in the city, and they have been erected apparently without the slightest attention to sanitary requirements. Mr. Fyfe's description of the present state of things is simply dreadful, and makes us shudder to think that such plague spots are in our midst. It is to be hoped that his report will stir up the authorities to further and decisive action in the matter, and that either by the terrors of the law, or otherwise, owners of insanitary houses shall be promptly compelled to convert them into healthy dwellings.

THE METROPOLITAN ASYLUMS BOARD.

The Board at their meeting on Saturday last expressed satisfaction at the introduction of the Government Notification of Infectious Diseases Bill. Attention was again directed to the "anomalous and unsatisfactory position of the Board in regard to the admission of patients into the asylums" (in respect to the non-pauper cases, which the managers cannot refuse to admit, and have not the power legally to charge for). The committee recommend that the President should be asked to introduce a measure to remedy these defects in the law.

REGISTRATION OF DEATH.

Mr. W. J. Meharry (Belfast) writes: The Registrar-General for Ireland has just issued a circular to the registrars of the Belfast Union, informing them that in future they cannot register deaths on the information of a medical man who has seen the body only after death, and that such certificates are illegal. The right of the Registrar-General to issue such a circular cannot for a moment be questioned, acting, as he no doubt is, under legal advice; but the benefit to be derived from it, either by the Government or the public, is open to doubt. It is a fact, and one of course to be deplored, that a number of persons do die in a large community who have not been seen prior to death by any medical practitioner. How then, is the cause of death to be ascertained in those cases? Of course, a *post-mortem* and coroner's inquest would be the best and most satisfactory method of finding it out, but would the country agree to the expense of this in every instance? Of course not. Certainly the next best course then is that which has hitherto been the practice—for the doctor to visit, inspect the corpse, inquire into every particular from persons on the spot, and give a certificate according to his knowledge and belief, after having all the facts and symptoms placed before him.

In the absence of the inquest, then, or a medical certificate, the registrar will require to take the information from a person who very often gives at best but a garbled history of the case, and he will require to come to some conclusion as to the cause of death, and enter the name of a disease at random in the register. This he is not legally entitled nor competent to do, especially when (and this is often the case) the person so registering is not a medical man. Instead of giving more facilities for the registration of these "uncertified" deaths, it would be well if the law was altered, so that a coroner's or medical certificate was necessary in every case of death, as attempts have been made by unscrupulous persons to register deaths which have not taken place, for the purpose of defrauding insurance and other burial societies.

HEALTH OF ENGLISH TOWNS.

In the twenty-eight large English towns, including London, which have an estimated population of 9,555,406 persons, 5,576 births and 3,249 deaths were registered during the week ending Saturday, July 6th. The annual rate of mortality in these towns, which had risen from 16.6 to 17.3 per 1,000 in the three preceding weeks, further increased to 17.7 during the week under notice. The rates in the several towns ranged from 11.2 in Nottingham, 11.6 in Brighton, 12.1 in Oldham, and 13.8 in Derby to 25.3 in Manchester, 26.9 in Leeds, 29.0 in Preston, and 29.2 in Newcastle-on-Tyne. In the twenty-seven provincial towns the mean death-rate was 19.0 per 1,000, and exceeded by 2.8

the rate recorded in London, which was only 16.2 per 1,000. The 3,249 deaths registered during the week under notice in the twenty-eight towns included 377 which were referred to diarrhœa, 97 to measles, 81 to whooping-cough, 58 to diphtheria, 55 to scarlet fever, 32 to "fever" (principally enteric), and not one to small-pox: in all, 700 deaths resulted from these principal zymotic diseases, against 399 and 477 in the two preceding weeks. These 700 deaths were equal to an annual rate of 3.8 per 1,000; in London the zymotic death-rate was 3.3, while it averaged 4.3 in the twenty-seven provincial towns, and ranged from 1.3 in Blackburn, 1.6 in Bristol, and 1.8 in Oldham to 6.9 in Leicester, 7.3 in Leeds, 8.3 in Salford, and 9.0 in Preston. Measles caused the highest proportional fatality in Hull, Manchester, Bolton, Halifax, and Preston; scarlet fever in Salford and Plymouth; whooping-cough in Cardiff, Oldham, and Newcastle-on-Tyne; and diarrhœa in Sunderland, Bradford, Birkenhead, Salford, Leeds, Preston, and Leicester. Of the 58 deaths from diphtheria recorded during the week under notice in the twenty-eight towns, 38 occurred in London, 4 in Manchester, 3 in Salford, and 3 in Birmingham. No fatal case of small-pox occurred during the week either in London or in any of the provincial towns, and no small-pox patients were under treatment in any of the Metropolitan Asylums Hospitals on Saturday, July 6th. These hospitals contained, however, 552 scarlet fever patients on the same date, against 538 and 547 at the end of the two preceding weeks; 69 cases were admitted during the week, against 30, 42, and 61 in the three previous weeks. The death-rate from diseases of the respiratory organs in London during the week under notice was equal to 1.7 per 1,000, and was considerably below the average.

In the twenty-eight of the large English towns, including London, which have an estimated population of 9,555,406 persons, 5,323 births and 3,937 deaths were registered during the week ending Saturday, July 13th. The annual rate of mortality in these towns, which had increased in the four preceding weeks from 16.5 to 17.7 per 1,000, further rose to 21.5 during the week under notice. The rates in the several towns ranged from 12.9 in Huddersfield, 14.5 in Wolverhampton, 15.9 in Brighton, and 16.0 in Norwich to 28.1 in Leicester, 30.3 in Sunderland, 30.5 in Preston, and 31.8 in Newcastle-on-Tyne. In the twenty-seven provincial towns the mean death-rate was 23.4 per 1,000, and exceeded by 4.1 the rate recorded in London, which was 19.3 per 1,000. The 3,937 deaths registered in the twenty-eight towns during the week under notice included 640 which were referred to diarrhœa, 104 to measles, 80 to whooping-cough, 43 to scarlet fever, 39 to "fever" (principally enteric), 38 to diphtheria, and not one to small-pox; in all, 944 deaths resulted from these principal zymotic diseases, against 476 and 700 in the two preceding weeks. These 944 deaths were equal to an annual rate of 5.2 per 1,000; in London the zymotic death-rate was 4.3, while it averaged 5.9 per 1,000 in the twenty-seven provincial towns, and ranged from 0.9 in Bristol, and 1.1 in Norwich to 11.3 in Sunderland, 11.4 in Salford, and 11.5 in Preston. Measles caused the highest proportional fatality in Halifax, Hull, and Preston; diarrhœa in Preston, Bradford, Leeds, Leicester, Salford, and Sunderland; whooping-cough in Bradford, Plymouth, and Newcastle-on-Tyne; and "fever" in Birkenhead. Of the 38 deaths from diphtheria recorded during the week under notice in the twenty-eight towns, 25 occurred in London, 3 in Manchester, 2 in Plymouth, 2 in Birmingham, and 2 in Newcastle-on-Tyne. No fatal case of small-pox was registered either in London or in any of the twenty-seven provincial towns; and no small-pox patients were under treatment in any of the Metropolitan Asylums Hospitals on Saturday, July 13th. These hospitals contained, however, 572 scarlet fever patients on the same date, against numbers increasing from 538 to 552 at the end of the three preceding weeks; 81 cases were admitted during the week, against 41, 58, and 69 in the three previous weeks. The death-rate from diseases of the respiratory organs in London was equal to 1.9 per 1,000, and was below the average.

HEALTH OF SCOTCH TOWNS.

During the week ending Saturday, July 6th, 862 births and 545 deaths were registered in the eight principal Scotch towns. The annual rate of mortality, which had declined from 20.5 to 18.4 per 1,000 in the three preceding weeks, rose again to 21.3 during the week under notice, and exceeded by 3.6 the mean rate during the same period in the twenty-eight large English towns. Among the Scotch towns the lowest rates were recorded in Perth and Leith, and the highest in Greenock and Glasgow. The deaths registered in these eight towns during the week under notice included 81 which were referred to the principal zymotic diseases, equal to an annual rate of 3.2 per 1,000, which was 0.6 below the mean zymotic death-rate during the same period in the large English towns. The highest zymotic death-rates were recorded in Glasgow and Aberdeen. The 261 deaths registered in Glasgow during the week under notice included 18 from whooping-cough, 13 from measles, and 13 from diarrhœa. Nine fatal cases of measles were recorded in Aberdeen, and 4 of diphtheria in Edinburgh. The death-rate from diseases of the respiratory organs in these Scotch towns was equal to 3.1 per 1,000, against 1.7 in London.

During the week ending Saturday, July 13th, 785 births and 476 deaths were registered in the eight principal Scotch towns. The annual rate of mortality, which had been 18.4 and 21.3 per 1,000 in the two preceding weeks, declined again to 18.6 during the week under notice, but was 2.9 per 1,000 below the mean rate during the same period in the twenty-eight large English towns. Among the Scotch towns the lowest rates were recorded in Perth and Dundee, and the highest in Glasgow and Paisley. The 476 deaths registered in these towns during the week under notice included 91 which were referred to the principal zymotic diseases, equal to an annual rate of 3.6 per 1,000, which was 1.6 below the mean zymotic death-rate during the same period in the large English towns. Among these Scotch towns the highest zymotic rates were recorded in Paisley and Glasgow. The 227 deaths registered in Glasgow during the week under notice included 21 from diarrhœa, 16 from whooping-cough, and 8 from measles. Eight deaths from measles occurred in Aberdeen, and 5 from whooping-cough in Dundee. The death-rate from diseases of the respiratory organs in these towns was equal to 1.9 per 1,000, against 1.9 in London.

HEALTH OF IRISH TOWNS.

In the eight principal town districts of Ireland the deaths registered during the week ending Saturday, July 6th, were equal to an annual rate of 20.4 per 1,000. The lowest rates were recorded in Wexford and Londonderry, and the highest in Lisburn and Armagh. The 154 deaths registered in Dublin during the week under notice were equal to an annual rate of 22.8 per 1,000 (against 18.6 and 23.2 in the two preceding weeks), the rate for the same period being only 16.2 in London and 17.3 in Edinburgh. These 154 deaths in Dublin included 8 which were referred to the principal zymotic diseases (equal to an annual rate of 1.2 per 1,000), of which 3 resulted from diarrhœa, 2 from measles, and 2 from "fever."

In the sixteen principal town districts of Ireland the deaths registered during the week ending Saturday, July 13th, were equal to an annual rate of 17.4 per 1,000. The lowest rates were recorded in Waterford and Drogheda, and the highest in Dundalk and Londonderry. The 110 deaths in Dublin during the week under notice were equal to an annual rate of 16.3 per 1,000 (against 23.2 and 22.8 in the two preceding weeks), the rate for the same period being 19.3 in London and 16.6 in Edinburgh. These 110 deaths included 11 which resulted from the principal zymotic diseases (equal to an annual rate of 1.6 per 1,000), of which 5 were referred to diarrhœa, 4 to "fever" (principally enteric), and 2 to whooping-cough.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Port of London.—*Treatment of Infectious Disease among Emigrants: Liability of Ship-owners for Hospital Expenses.*—Dr. Collingridge reports that the health of the port during the six months ended December 31st, 1888, was most satisfactory. Practically no disease of any importance existed. Only 10 cases of infectious disease came under the notice of the authority, namely: enteric fever, 3; malarial fever, 2; small-pox, 1; chicken-pox, 1; measles, 1; intermittent fever, 1; and erysipelas, 1. In one instance only the master of a ship failed to report a case of infectious disease, and was duly cautioned. All the vessels on which these cases occurred were duly fumigated, as were also three parcels of deceased seamen's effects sent home without any proof of disinfection having taken place. The number of vessels inspected was 10,050, of which number 8,738 carried the British flag. With regard to the discovery of cases of infectious disease among emigrants and the question of liability for their maintenance upon compulsory removal to hospital, it has been decided that by the return of the passage money the owner of the vessel is relieved of all liability. This is one more step in the direction of free hospital treatment in cases of infectious disease. "The patient is isolated for the public good, and it seems only just and logical that the public should be called upon to pay for its own protection."

Brighton (Population, 119,983).—*Decreased Death-rate: Parental Mismanagement in Cases of Whooping-cough: Overcrowding in Relation to Tubercular Disease: "Boil all Milk."*—In point of general health, the year 1888 was one of the most favourable ever known in Brighton, and its death-rate, 16.0 per 1,000, the lowest ever recorded. Dr. Newsholme claims for his district the highest place in the list of the twenty-eight great towns, but in regard to zymotic mortality it has to yield precedence to Hull and Halifax, while for infant mortality it stands seventh on the list. The seven chief infectious diseases caused 161 deaths, or a rate of 1.3 per 1,000. There was a satisfactory decrease under most headings. Whooping-cough is the chief exception, and this is a disease which is perhaps the most hopeless of all infectious diseases from a preventive standpoint. It is infectious for some time before the characteristic cough appears, and the infection probably lasts longer than in other infectious disease. But, apart from the prevention of its spread by efficient isolation, its fatality might, in Dr. Newsholme's opinion, be reduced to a mere fraction of its present amount, if parents could be made to realise the fatuity of the "outdoor" treatment so frequently resorted to, with its consequent fatal pulmonary complications. Several cases of enteric fever and diphtheria were proved to have been imported from other districts. An outbreak of diphtheria in one family was traced to the drinking of impure water in a village near Brighton, where the family had been spending their summer holiday. In another case lodgings were taken in a village by the father of a family of young children in a house where it was subsequently discovered that the children were suffering from whooping-cough. All tubercular diseases together caused 12.7 per cent. of the total number of deaths. "It is now well established," adds Dr. Newsholme, "that overcrowding, producing a vitiated state of the atmosphere, is a common exciting cause of tubercular disease. The question of the housing of the working classes, and especially of those of a lower grade than the skilled artizan class, is of vital importance in connection with this matter. It is also highly probable that in young children tubercular disease may be produced by the drinking of milk derived from consumptive cows. This is confirmed by the well-known fact that consumption in children under 5 years of age much more commonly affects the bowels than the lungs. Thus, in Brighton during 1888, of children under 5 years of age, only 3 died of phthisis, while 14 died of tabes mesenterica (tubercular

disease of the bowels). It is satisfactory to note that the boiling of infected milk effectually destroys its infective power. The drinking of 'raw' milk ought to be as much an anomaly as the eating of raw flesh, and will probably become so in a few years."

TORQUAY (Population, 25,000). *Deaths among Visitors: Measles Mortality, mostly "Unnecessary:" Scarlet Fever introduced by Letters.*—During 1888 the number of deaths was 408, as compared with 388.7, the average for the previous ten years. Mr. Karkeek attributes this increase to the influence of the cold and wet spring upon the weakly and delicate people who frequent Torquay as a winter resort, and this is borne out by the fact that, out of 59 deaths among visitors and strangers, 49 occurred in the early months of the year. The death-rate for 1888 was, therefore, 16.32 per 1,000, or deducting these 59 deaths of non-residents, 13.9 per 1,000. Only 15 deaths can be ascribed to preventable diseases, or 0.6 per 1,000, and of these 12 were due to measles. These deaths are looked upon by Mr. Karkeek as by no means unavoidable; indeed, he characterises them as "unnecessary." In by far the majority of these cases medical advice was sought only when the patients were *in extremis*. The poor do not know the dangers their children run; they do not believe in isolation, nor, in many instances, could they adopt it if they did. The other zymotic deaths were caused by whooping-cough, enteric fever, and diarrhœa. Of 7 cases of scarlet fever, 2 were direct importations, and in 1 the infection was communicated by letters written and sent from an infected family outside the district.

TUNBRIDGE WELLS (Population, 27,384).—*Favourable Rates of Mortality: Prevalence of Whooping-cough: Usefulness of "Sanatorium" Demonstrated.*—Dr. Stamford's returns for 1888 are again exceptionally favourable, the death-rate from all causes being 14.5 per 1,000, or, if the deaths of 15 strangers in the General Hospital be excluded, 13.5 per 1,000. This rate was somewhat in excess of that of the previous year, as was also the zymotic rate; but the increase was so slight as only to represent what may be considered a "natural variation." Only one death occurred from measles, though during the latter part of the year that disease was epidemic. There was no mortality from scarlet fever, small-pox, or typhoid fever. Diphtheria and whooping-cough were the largest contributors to the zymotic mortality, the latter disease having been very prevalent. Dr. Stamford considers that the cold damp seasons predisposed to this disease and favoured its progress, but where it occurred prompt measures were taken in respect of drainage and water-supply, and in many instances its spread prevented. Only one death was caused by diarrhœa. Speaking of the "sanatorium," Dr. Stamford remarks that the importance of that useful institution could not have been more forcibly evidenced than it has been during the last few years. The isolation afforded by it has materially checked the spread of scarlet fever, and though, fortunately, it had to be but little used last year, its effectiveness was more than usually apparent.

REDDITCH (Population 10,000).—*High Infantile Mortality; its Causes.*—The annual report of Dr. C. C. Smith for 1888 states that during the year there were 216 deaths, equal to a rate of 19.4. The number of deaths was increased by the high rate of mortality amongst infants in the third quarter, which was due to some extent to an epidemic of whooping-cough, though a considerable number of children died within a few days or weeks of their birth from constitutional weakness. There was one case of typhoid fever at Headless Cross, and two slight cases of diphtheria. Two deaths occurred during the year from scarlatina, but the cases generally were of a mild type. In the first quarter there was an epidemic of "German measles," many of the patients being adults. In the last quarter measles was epidemic in the Beoley Road district, and there were four fatal cases. Since the end of the year the disease had extended to other parts of the town. Whooping-cough caused sixteen deaths. Want of proper care during the illness, especially of protection from exposure, was the chief cause of the mortality. Diarrhœa was not so prevalent in the summer as usual, owing probably to the absence of very hot weather. The deaths among infants were unusually high during the year. In explanation of this Dr. Smith states that the population is an essentially manufacturing one, women being employed as well as men. By reason of their close and sedentary occupations the parents are constitutionally very inferior to those of an agricultural district, but in addition to that there is the still more important fact that the children are artificially fed, and deprived of a mother's care during the day, and consequently they are predisposed to "struma," convulsions, and respiratory diseases. Feeding with bread is still too common in spite of people being told of its harmful effects. The deaths from respiratory diseases were 69 21 of which were from phthisis.

WATFORD (Population 16,000).—*The Protective Value of Vaccination and Revaccination.*—Some cases of small-pox, cited by Dr. A. T. Brett, in his annual report for 1888, are interesting, as showing the natural history of small-pox and the influence of vaccination. Three women only were sorting rags in a paper mill. They were foreign rags, and came from the Baltic. Twelve days after the women had finished the rag-sorting two of them developed the rash of small-pox. Of the three women, one had had small-pox some years before; she escaped. The second woman had been vaccinated in infancy, but did not show good marks. There was reason to believe the third had not been vaccinated. This last woman died, and gave the disease to her father, who also died. Others in the house, among them several children, escaped. They had been vaccinated and revaccinated. The second woman was nursing a baby three months old not yet vaccinated. As soon as the case was reported the baby was vaccinated; nevertheless, with three other children, it contracted a modified form of the disease, and the husband also caught the complaint. All did well. Dr. Brett is emphatic as to the importance of good vaccination, and of revaccination once at the age of 12 or 14 years. He speaks from experience, having acted for forty years as public vaccinator, though now no longer holding that post. In his opinion no men should be admitted to benefit clubs or to any public employment unless they have been revaccinated. The year's history, as regards other infectious diseases, was comparatively uninteresting. A high death-rate from these causes (2.12 per 1,000) was due to whooping-cough, which prevailed to a great extent. The general death-rate was 17.2 per 1,000.

ROTHERHAM RURAL (Population, 18,653).—*Small-pox and Vaccination.*—Scarlet fever was the most fatal of zymotic diseases in this district during 1888, though Dr. W. J. Le Tall reports that the locality suffered to some extent from small-pox. Thirteen cases of that disease came under notice in the Beignton district and six in Rotherham, three proving fatal. None of the fatal cases had been vaccinated. The statistics of the year show a general improvement upon late years, the death-rate having fallen from 17.58 per 1,000 in 1886 to 16.3 in 1887 and 14.74 in 1888.

LIVERPOOL (Population, 592,991).—*How Typhus is Spread.*—Seeing that Liverpool is the most densely populated city in Great Britain, and subject to all the risks attendant on a constant influx of emigrants, Dr. Stopford Taylor may well be congratulated on its increasingly favourable statistics of mortality. The death-rate in 1887 (23.6 per 1,000), the lowest on record, was 2.6 per 1,000 less than the average rate for the last ten years, and 5.7 less than that of the ten years 1867-76. This, too, would have been yet more favourable but for an increase of deaths from zymotic diseases, which was principally due to the prevalence of measles and whooping-cough during the first half of the year, and of scarlatina during the latter half. The unenviable notoriety of Liverpool as a home of typhus is being gradually removed by the efforts of the Corporation in demolishing insanitary property, and opening out the crowded parts of the city, but the inflammable material still exists, as shown by the following series of cases: On May 7th a man named Logan died in a cellar at 23, Menai Street, the real nature of the illness not being suspected, and death was attributed to that form of disease which the symptoms most closely simulated. Logan's children, girls from 9 to 14 years, had been ailing for some time before the father became ill, and this fact, coupled with the circumstance that sweets were sold in the cellar, may account for the presence of a number of young girls, who lived in the neighbourhood, and who attended Logan's wake from May 7th to 10th, some of them actually remaining a whole night in the cellar. Eleven of the girls and one adult, who had been attracted to the cellar, contracted the disease, and in due course communicated it to the inmates of their respective homes. Within two months after the wake was held on Logan's body 51 cases of typhus were removed to hospital from Menai and the neighbouring streets, and there is no doubt a number of cases escaped observa-

tion, as there were occasional outbreaks reported in the same district for a few months afterwards. Had it not been for the constant supervision and seeking out for the sufferers, who, when discovered, were immediately removed to hospital, there is every probability that the disease would have spread over a large area with epidemic virulence.

MEDICAL NEWS.

MEDICAL MAGISTRATE.—Dr. Michael Callan has been appointed a Justice of the Peace for the County Louth.

FINE FOR SELLING TUBERCULOUS MEAT.—At Heywood, a horse dealer, named Fletcher, was fined £10 and costs, or a month's imprisonment, for having prepared as human food, the carcase of a cow which had died from tuberculosis.

FOR the vacant post of Obstetric Officer to the Queen's Hospital, Birmingham, there are reported to be several candidates. There appears to be some doubt whether the appointment will be a purely medical one, or whether the officer will be a gynæcological surgeon as well as physician.

ON Tuesday, July 2nd, Sir Henry Doulton, one of the governors, distributed the prizes to the successful students of St. Thomas's Hospital medical school, and congratulated the Dean (Mr. Nettleship), the staff, and lecturers on the present prosperity of the school.

IT is said that Milwaukee, which was one of the first cities to dispose of garbage by cremation, is about to abandon that process in favour of desiccation. The garbage is passed through a series of drying chambers for ten hours. The oily matter is pressed out, and the resulting dry brown powder is said to possess some value as a manure.

PRESENTATION.—Dr. Malet, medical officer of health to the borough of Wolverhampton, has, on the occasion of his approaching marriage, been presented by the members of the Sanitary Committee of the Wolverhampton Town Council with a very handsome Chippendale arm chair, "as a mark of their appreciation, and in token of their good wishes on so auspicious an occasion."

EPSOM COLLEGE.—The annual examination for scholarships at this school has resulted in the election of the following:—Seniors: H. Boulton, A. C. Knight. Juniors: T. Chetwood, F. D. Crosthwaite. Entrance (£40): S. M. Smith, from Mr. Tomkins's, Yarmouth. Entrance (£20): C. E. Child, from Cranleigh School. Prize of £10; T. Pritchard (to be raised to £20 Scholarship conditionally another year).

CHARGE AGAINST A HOSPITAL.—Sheriff Rampini has issued a decision in an action against the trustees, managers, and officials of Dr. Gray's Hospital, Elgin. The action was at the instance of James Hendry, railway surfaceman, New Elgin, and damages were assessed at £500 for injury caused by alleged bad surgical treatment and culpable neglect of pursuer while a patient in the hospital. His lordship has assoilzied defenders, and states that the charges against the institution had completely broken down.

OLD PRIMIPARÆ.—Dr. Truzzi, of Milan, has studied the statistics of a lying-in hospital in that city from 1852 till last year, with a view to ascertain the truth of certain statements respecting first labours comparatively late in life. Most of these statements, familiar to readers of obstetric manuals, were confirmed. The rate of morbidity was found much higher than in younger primiparæ. This well-known fact was ascertained, so far as Dr. Truzzi's cases were concerned, to be due in the majority of cases to renal disease. Puerperal convulsions were found to be more frequent than in younger subjects. A slight degree of contraction of the pelvis caused far more trouble than in more youthful cases. The period of dilatation of the os was long; lacerations of soft parts frequent. Instrumental labour was very often necessitated, especially the forceps, which had frequently to be applied to remedy simple uterine inertia.

GUY'S HOSPITAL MEDICAL SCHOOL.—The annual prize-giving on July 12th was specially interesting, because the building of the new college is approaching completion in readiness for the coming winter session. The Dean, Dr. E. C. Perry, read his report, in which feeling allusion was made to the recent loss of the junior member of the Medical Staff, Dr. C. D. Wooldridge. He congratulated the school on the fact that the present year had witnessed the largest entry since 1879 and on the teaching successes during the present year five candidates out of six had passed the Fellowship Examination of the Royal College of Surgeons of England: eleven out of a list of nineteen at the Bachelor of Surgery; and three out of four at the Master of Surgery Examinations of the University of London were Guy's men. Allusion was made also to the new Laboratory of Bacteriology, and to the active competition which the newly founded Arthur Durham prizes for dissection had aroused. Dr. Pavy moved a vote of thanks to the Treasurer for presiding, which was seconded by Mr. Arthur Durham. The chapel, museum, and wards, the latter very gay with flowers, were afterwards visited, and the proceedings in the park were enlivened by an admirable band.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.—The following Licentiate in Medicine of the College, having complied with the by-laws relating to Membership, pursuant to the provisions of the Supplemental Charter of Victoria, dated December 12th, 1878, has been duly admitted a Member of the College:

A. V. Lane, Lic. Med. 1878, Surgeon, Medical Staff, Army.

The following Licentiate in Medicine, having passed the examination for Membership, took the declaration and signed the roll of Members of the College on Friday, July 12th, 1889:

J. F. O'Carroll, Lic. Med. 1881, M.D.R.U.I., Dublin.

At the July examinations for registered medical practitioners, held on Monday, July 8th, and three following days, the undermentioned candidates were successful:

For the Licences to Practise Medicine and Surgery:—F. C. Butt, L.S.A.Lond., Hampton; W. J. Corrigan, L.R.C.S.I., Loughall, Co. Armagh; J. H. Gwynne, L.S.A.Lond., London; J. Keys, L.R.C.S.I., Dublin; J. J. Langston, L.S.A.Lond., Sittingbourne, Kent; R. C. Richards, M.R.C.S.Eng., Shotley Bridge, Co. Durham; P. Stephenson, L.R.C.S.I., Carrick-on-Suir.

For the Licence to Practise Medicine only:—H. C. Drury, M.B.Dubl., Dublin; F. Johnson, M.R.C.S.Eng., Beaconsfield, Hants; J. O'Connor, L.R.C.S.I., Oughtibridge, Yorkshire.

For the Diploma of Midwife and Nurse Tender: Agnes Craig, Whiteabbey, Co. Antrim.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—Fellowship Examination. The following gentlemen have been admitted Fellows by the President of the College:

T. G. Bolster, Surgeon-Major, Medical Staff; J. Holmes, Limerick; and G. Stoker.

MEDICAL VACANCIES.

The following Vacancies are announced:

ANCOATS HOSPITAL, Manchester.—Honorary Physician. Applications by August 1st to the Honorary Secretary.

BOROUGH OF NOTTINGHAM.—Medical Officer of Health. Applications by August 2nd to S. G. Johnson, Esq., Town Clerk.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—Assistant Physician. Applications by August 6th to the Secretary, 24, Finsbury Circus, E.C.

CUMBERLAND INFIRMARY, Carlisle.—House-Surgeon. Salary, £70 per annum, with board, lodging, and washing. Applications by July 20th to the Secretary.

CUMBERLAND INFIRMARY, Carlisle.—Assistant House-Surgeon. Salary, £40 per annum, with board, lodging, and washing. Applications by July 20th to the Secretary.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell, E.—House-Surgeon. Applications by August 1st to the Secretary.

GENERAL HOSPITAL, Birmingham.—Assistant House-Surgeon. Board, lodging, and washing. Applications by July 27th to House-Governor.

HOSPITAL FOR WOMEN, Soho Square, W.—House-Physician. Salary, £75 per annum, with board, etc. Applications by August 3rd to the Secretary.

LEEDS FRIENDLY SOCIETIES' MEDICAL ASSOCIATION.—Surgeon. Salary, £200 per annum, with fees, house, etc. Applications by July 31st to Mr. Wilson, 8, South Parade, Leeds.

NORTHUMBERLAND COUNTY ASYLUM.—Clinical Assistant. Board and residence. Applications to Dr. McDowall, Northumberland County Asylum, Morpeth.

QUEEN'S HOSPITAL, Birmingham.—Honorary Physician. Applications by July 27th to the Secretary.

QUEEN'S HOSPITAL, Birmingham.—Honorary Obstetric Officer. Applications by July 27th to the Secretary.

ROYAL BERKS HOSPITAL.—Assistant House-Surgeon. Salary, £40 per annum, with board and lodging. Applications by July 23rd to the Secretary.

ROYAL LONDON OPHTHALMIC HOSPITAL, Moorfields.—Junior House-Surgeon. Salary, £50 per annum, with board and residence. Applications by July 29th to the Secretary.

WARWICK COUNTY LUNATIC ASYLUM.—Clinical Assistant. Board and residence. Applications by July 20th to the Medical Superintendent.

WHITEHAVEN AND WEST CUMBERLAND INFIRMARY.—House-Surgeon. Salary, £120 per annum, and £30 for dispensing, with apartments and attendance. Applications by July 27th to the Secretary.

WIRRAL HOSPITAL AND DISPENSARY FOR SICK CHILDREN.—Honorary Acting Medical Officer. Applications by July 27th to the Honorary Secretary.

WOLVERHAMPTON EYE INFIRMARY.—Resident Assistant. Board and washing. Applications by August 12th to the Chairman.

MEDICAL APPOINTMENTS.

ARKWRIGHT, J. A., L.R.C.P., M.R.C.S., appointed House-Surgeon to the West London Hospital, Hammersmith Road, W., *vice* E. B. Randall, M.B.Lond., L.R.C.P., M.R.C.S., resigned.

BOWDEN, Reginald T., M.D., appointed Honorary Surgeon to the Ramsgate and St. Lawrence Royal Dispensary.

BRAINE, C. C., M.R.C.S., L.R.C.P., appointed Assistant Anæsthetist to Charing Cross Hospital.

DRABBLE, G. W., M.A., M.B., B.S.Cantab., appointed House-Physician to the West London Hospital, Hammersmith Road, W., *vice* S. A. Bontor, M.B., B.S.Durham, L.R.C.P.Lond., M.R.C.S.Eng.

GOODALL, E. W., M.D.Lond., appointed Medical Registrar to, and Teacher of Practical Medicine at, Guy's Hospital.

GRIFFITHS, M'C. A., M.R.C.S.Eng., L.R.C.P.Lond., appointed Assistant House-Surgeon to the Bristol General Hospital, *vice* Mr. B. R. T. Trevelyan, L.R.C.P.Lond., M.R.C.S.Eng., resigned.

HAWKINS, Cæsar Frederick, M.R.C.S.Eng., L.S.A.Lond., appointed District Medical Officer and Public Vaccinator for the North Petherton District of the Bridgwater Union, *vice* W. J. Todd, M.R.C.S.Eng., L.R.C.P.Lond., deceased.

HAYDON, F., M.B., appointed Clinical Assistant to the Royal Westminster Ophthalmic Hospital.

HOPKINS, F. G., M.B., B.C.H., B.A.O., appointed Resident Medical Officer to the City of Liverpool (Infectious Diseases) Hospital, Netherfield Road, *vice* E. H. Allen, L.K.Q.C.P.I., deceased.

HUGHES, H. S., M.R.C.S., L.R.C.P., appointed Clinical Assistant to the Royal Westminster Ophthalmic Hospital.

HUNT, A. H. W., L.R.C.P.Lond., appointed Senior House-Surgeon to Westminster Hospital.

IRWIN, S., M.B., B.Ch., B.A.O.Ire., appointed Assistant-Surgeon to the Liverpool Dispensaries. *vice* F. Liddell, M.B., resigned.

JECKS, C., L.S.A., appointed Resident Medical Officer to the University College Hospital, *vice* C. J. Arkle, L.S.A., M.R.C.S.Eng.

JOHNSTON, G. J. Waldron, M.D., M.Ch., M.A.O.R.U.I., L.A.H.Dubl., appointed Honorary Physician and Honorary Secretary to the Royal Cork Sailors' Home, *vice* W. Haines, L.R.C.P.& S.Edin., deceased.

JOHNSTON, W. A., L.K.Q.C.P., L.R.C.S.I., appointed Resident House-Surgeon to the Chorlton-upon-Medlock Dispensary, *vice* E. E. Jones, L.R.C.P.Edin., L.R.C.S., resigned.

JOSLEN, H., M.R.C.S.Eng., L.R.C.P.Lond., appointed Junior House-Surgeon to the Macclesfield General Infirmary, *vice* F. R. B. Hinde, M.B., M.S., resigned.

MORGAN, George Blacker, jun., B.A., M.B., B.Ch., B.A.O.Dub., appointed House-Surgeon to the Sunderland Infirmary, *vice* C. F. Seville, resigned.

PENROSE, F. G., M.D., M.R.C.S.Eng., appointed Assistant-Physician to St. George's Hospital, *vice* A. Gamgee, M.D., M.R.C.P.Lond., resigned.

PERMEWAN, W., M.B. M.D.Lond., M.R.C.S.Eng., L.S.A.Lond., appointed Head Surgeon to the Liverpool Dispensaries, *vice* A. Stookes, M.B., C.M., L.R.C.S. Edin.

SIMPSON, J. Christian, M.B., C.M., late Senior Resident Surgeon, Royal Infirmary, Edinburgh, appointed Medical Officer of Health in the Parish of Fettercairn.

SMITH, H. Archbold, M.R.C.S., L.R.C.P.Lond., appointed Honorary Demonstrator of Anatomy in the Medical Department of the Yorkshire College (Victoria University), Leeds.

WHITELEGGE, B.A., M.D., M.R.C.S.Eng., appointed Medical Officer of Health to the West Riding of Yorkshire.

WOODHAMS, S., L.R.C.P.Lond., M.R.C.S.Eng., appointed House-Surgeon to the Gravesend Hospital, *vice* C. Nash, M.R.C.S.Eng., L.S.A., resigned.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the announcement. *The first post on Thursday mornings is the latest by which advertisements can be received.*

BIRTHS.

CHURCHOUSE.—On July 15th, at Long Buckley, the wife of W. J. Franklin Churchouse, L.R.C.P.Edin., etc., of a daughter.

SYMPSON.—At 3, James Street, Lincoln, on July 13th, the wife of E. Mansel Sympson, M.B., B.C.Cantab., M.R.C.S., of a son.

MARRIAGES.

SYMONDS—SHAW.—On Wednesday, July 10th, at St. Mary Abbot's, by the Rev. Main S. A. Walrond, M.A., Rector of St. Lawrence Jewry, Charters James Symonds, of Weymouth Street, Portland Place, to Fanny Marie, youngest daughter of Major-General David Shaw, Madras Staff Corps. No cards. At home Wednesdays after September 1st.

WICKHAM—WADHAM.—On July 17th, at the Catholic Church, Duncan Terrace, N., by the Rev. L. Pyke, O. A. Wickham, M.R.C.S., L.R.C.P.Lond., of Arundel Square, N., to Lydia, daughter of F. Wadham, Esq., of Tottenham, and adopted daughter of the late David Howell, Esq., solicitor.

DEATHS.

LEWERS.—On July 16th, at Blairgowrie, Frank, son of Arthur H. N. Lewers, M.D.Lond., of Wimpole Street, London, aged 6 months.

METZGAR.—On July 10th, at Fairlight, St. Saviour's Road, Brixton, Charles Metzgar, F.R.C.S.Eng., aged 25.

OPERATION DAYS AT THE LONDON HOSPITALS.

MONDAY.....10 A.M.: Royal London Ophthalmic.—10.30 A.M.: Royal Free (Ophthalmic Department).—1.30 P.M.: Guy's (Ophthalmic Department); Royal Westminster Ophthalmic.—2 P.M.: Central London Ophthalmic; Hospital for Women; Royal Orthopædic; St. Mark's; London.—2.30 P.M.: Chelsea Hospital for Women.

TUESDAY.....10 A.M.: Royal London Ophthalmic.—1.30 P.M.: Guy's; Royal Westminster Ophthalmic; St. Bartholomew's (Ophthalmic Department); St. Mary's.—2 P.M.: Cancer Hospital, Brompton; Central London Ophthalmic; London; Westminster.—2.30 P.M.: St. Mark's; West London.—4 P.M.: St. Thomas's (Ophthalmic Department).

WEDNESDAY....10 A.M.: National Orthopædic; Royal London Ophthalmic.—11 A.M.: St. Mary's (Orthopædic).—1 P.M.: Middlesex.—1.30 P.M.: Royal Westminster Ophthalmic; St. Bartholomew's; St. Thomas's.—2 P.M.: Central London Ophthalmic; Great Northern Central; London; Royal Free; University College; Westminster.—2.30 P.M.: St. Peter's; Samaritan Free Hospital for Women and Children.—3 to 4 P.M.: King's College.

THURSDAY.....10 A.M.: Royal London Ophthalmic.—1 P.M.: St. George's.—1.30 P.M.: St. Bartholomew's (Ophthalmic Department); Guy's (Ophthalmic Department); Royal Westminster Ophthalmic.—2 P.M.: Central London Ophthalmic; Charing Cross; Hospital for Diseases of the Throat; Hospital for Women; London; University.—2.30 P.M.: Chelsea Hospital for Women; North-West London.

FRIDAY .....9 A.M.: Metropolitan; St. Mary's (Ophthalmic Department).—10 A.M.: Royal London Ophthalmic.—10.30 A.M.: Royal Free (Ophthalmic Department).—1.15 P.M.: St. George's (Ophthalmic Department).—1.30 P.M.: Guy's; Royal Westminster Ophthalmic.—2 P.M.: Central London Ophthalmic; East London Hospital for Children; King's College; London; St. Thomas's (Ophthalmic Department).—2.30 P.M.: West London.

SATURDAY.....9 A.M.: Royal Free (Department for Diseases of Women).—10 A.M.: Royal London Ophthalmic.—1 P.M.: King's College.—1.30 P.M.: Royal Westminster Ophthalmic; St. Bartholomew's; St. Thomas's.—2 P.M.: Cancer Hospital, Brompton; Central London Ophthalmic; Charing Cross; London; Middlesex; Royal Free; University.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 1.30; Skin, M. 1.30; Dental, M. W. F., 9.

CHELSEA HOSPITAL FOR WOMEN.—M. Tu. W. and F., 1.30.

GREAT NORTHERN CENTRAL.—Medical and Surgical, M. Tu. Th. F., 2.30; Obstetric, W., 2.30; Eye, Tu. F., 10; Ear, M. F., 2.30; Diseases of the Skin, W., 2.30; Diseases of the Throat, Th., 2.30; Dental Cases, W., 2.

GUY'S.—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F. 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu. 1; Skin, Tu., 1; Dental, Tu. Th. F., 1.30.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th. S., 1.30; o.p., W. F., 1.30; Eye, M. Th., 1.30; Ophthalmic Department, W., 2; Ear, Th., 2; Skin, F., 1.30; Throat, F., 1.30; Dental, M. Th., 9.30.

LONDON.—Medical, daily, exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p. W. S., 1.30; Eye, Tu. S., 9; Ear, S., 9.30; Skin, Th., 9; Dental, Tu., 9.

MIDDLESEX.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 9.30; o.p., W. 1.30; Eye, W. S., 9; Ear and Throat, Tu., 9; Skin, Tu., 4, Th. 9.30; Dental, M. W. F., 9.30.

NATIONAL ORTHOPÆDIC.—M. Tu. Th. F., 2.

NORTH-WEST LONDON.—Medical and Surgical, daily, 2; Obstetric, W., 2; Eye, W., 9; Skin, Tu., 2; Dental, F. 9.

ROYAL ORTHOPÆDIC.—Daily, 1.

ROYAL FREE.—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Dental, Th. 9.

ST. BARTHOLOMEW'S.—Medical and Surgical daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, W. Th. S., 2.30; Ear, Tu. F., 2; Skin, F., 1.30; Larynx, F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9.

ST. GEORGE'S.—Medical and Surgical, M. T. F. S., 12; Obstetric, Th. 2; o.p., Eye, W. S. 2; Ear, Tu., 2; Skin, W., 2; Throat, Th., 2; Orthopædic, W., 2; Dental, Tu., S., 9.

ST. MARK'S HOSPITAL.—Fistula and Diseases of Rectum, males, W., 8.45; females, Th., 8.45.

ST. MARY'S.—Medical and Surgical, daily, 1.45, o.p., 1.30; Obstetric, Tu. F., 1.45; Eye, Tu. F. S., 9; Ear, M. Th., 3; Orthopædic, W., 10; Throat, Tu. F., 1.30; Skin, M. Th., 9.30; Electro-therapeutics, Tu. F., 2; Dental, W. S., 9.30; Consultations, M., 2.30; Operations, Tu., 1.30; Ophthalmic Operations, F., 9.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, Tu. F., 2; o.p., W., 1.30; Eye, M. Tu. W. Th., F, 1.30; o.p., daily, except Sat., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Tu. F., 1.30; Children, S., 1.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1.30; Obstetrics, M. Th., 1.30; Tu., W. F., 2; Eye, Tu. F., 2; Ear, M. F., 9; Skin, W., 1.45, S., 9.15; Throat, Th., 1.30; Dental, W., 9.30.

WESTMINSTER.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1; Eye, M. Th., 2.30; Ear, M., 9; Skin, W., 1; Dental, W. S., 9.15.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the office of the JOURNAL, and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

QUERIES.

MEMBER wishes to hear of a home where the daughter of a deceased medical man could be taken in. She is suffering from spinal disease, and her means are very limited.

PROFUSE SALIVATION DURING PREGNANCY.

"INQUIRER" (Bombay) writes: I have lately had to deal with a troublesome case of this affection in which the various remedies recommended in obstetric and other medical works were tried without much benefit. Atropine given internally was the only remedy which appeared to do any good. Will some of your numerous readers kindly state what treatment they have found most efficacious in such cases?

ANSWERS.

A. B. C. AND OTHER CORRESPONDENTS: *Life and Education of Laura Dewey Bridgman.* By Mary Swift Larmor. Boston: N. E. Publishing Company. 1878. *The Writings of Laura Bridgman.* By E. C. Stanford. San Francisco: Overland Publishing Company. 1887.

COLONIES.—We believe that a person holding the diplomas of M.R.C.S. and L.S.A. could practise either in Pennsylvania or New Zealand without further examination. In both, however, it would, we understand, be necessary to prove the possession of the diplomas.

DIPLOMA IN STATE MEDICINE.

D. writes: If "M. O. H." writes to the Secretary of the Faculty of Physicians and Surgeons, Glasgow, which gives a diploma in State Medicine without having to attend lectures, he will be informed of what the examination consists, etc.

D. P. H. (CONJOINT) writes: Permit me as a recent candidate to assure yon that the knowledge of the quantitative analysis of water is practical. All essentials for estimating chlorides and ammonia quantitatively are provided, and I do not think any candidate would stand a chance who could not show some practical knowledge of the work required. I should be sorry that candidates should suppose that a mere theoretical knowledge of water analysis will take them through the D.P.H. of the united London colleges. It will not.

HOME FOR INEBRIATES.

M.D. writes: I have had under my care a female inebriate who is willing to go into an institution and able to pay a moderate board, provided I can point one out in the north of England, preferably Durham.

*** We cannot recommend any individual institution or person. Various papers and works treating of inebriety as a disease have been published.

SHORTHAND FOR MEDICAL STUDENTS.

IN order to ascertain the number of students who actually use phonography at the present time, Dr. Gowers will be glad if each student who uses it will send a postcard notifying the fact in shorthand to him at 50, Queen Anne Street, W.

DR. NORMAN PORRITT.—As will be observed from the notice published in the JOURNAL of July 13th, p. 93, the Medical Shorthand Examination Committee have, after careful consideration, decided that their examination shall be limited to Pitman's phonography. Under these circumstances, it does not seem desirable to enter into a further discussion of the merits of rival systems of phonography.

HARVEST BUMPS.

DR. LOUIS PARKES (London) writes: I have found hazeline (Burroughs and Wellcome's preparation) useful in allaying the irritation produced by mosquito and gnat bites. It may possibly be of equal service in relieving the pain and swelling produced by the bite of the harvest bug; but it is not likely to be more successful in preventing the attacks of this pest than the other preparations which in the hand of "Rural Doctor" have failed. As the application of hazeline to the surface of the body is cleanly and unproductive of stains on underclothing, whilst the fluid itself has not an unpleasant smell, it is possibly deserving of trial as a prophylactic in the manner suggested by "Rural Doctor."

SEA VOYAGES.

JUNIOR writes to inquire as to the best direction and season in which to send for a sea voyage a tall, overgrown boy of 16, with a phthisical tendency.

*** A sea voyage to Australia is about the best thing to be recommended. As there seems to be no positive disease, the actual date of sailing is not of much importance. A sailing vessel is preferable to a steamer, and it is now somewhat difficult to get a good one. If a good sailing ship is met with, the sailing of the patient must be regulated by the sailing of the ship. The variety of climate will be great, whatever the time of starting may be. There are various papers in the *Practitioner* worth looking at.

NOTES, LETTERS, ETC.

MALTA HARBOUR.

MELITA writes: Your remarks about Malta Harbour are quite correct. Much has been done to divert the sewage of Valletta from the Grand Harbour, but when it is remembered that six or seven thousand vessels of all sizes enter the harbour in a year, it will be readily understood that they must pollute the water to a very considerable extent. The Quarantine Harbour, as it is called, where the steamers of the Peninsular and Oriental Company embark and disembark passengers, still receives a large amount of sewage, as anyone can see for himself by visiting the Pieta end of that harbour near the hydraulic dock.

THE TREATMENT OF PERTUSSIS.

DR. ROBERT LEE (Savile Row) writes: Letters appear occasionally in the medical journals on the advantages of using carbolic acid in the treatment of whooping-cough. It is not always quite clear how the acid has been administered. In the JOURNAL for July 6th Dr. C. R. Illingworth states that he gives carbolic acid with iron, chloral, and belladonna. The proper mode of administering the acid is in the form of vapour, and by inhalation; and the only way of doing this effectively is by boiling a solution of carbolic acid in water (in the proportion of from 1 to 1.5 per cent.). When such a solution is boiled, the vapour is found to contain the acid in the same proportion—a fact not generally known. Singular mistakes occur in the administration of other agents as well as carbolic acid when ordered in the form of vapour, and I venture to draw attention to the importance of clear description of method when a therapeutic question like the above is being treated of.

In 1875 I reported to the meeting of the Association at Edinburgh the brief results of observations of 600 cases of whooping-cough, and their treatment with carbolic acid. Since then experience has confirmed the opinion I had then formed that carbolic acid is the best remedy for relief of the cough and other laryngeal symptoms; but only when used in the way referred to.

DR. E. BOULTON, Brigade-Surgeon M.S. (Bury St. Edmund's), writes: With reference to recent correspondence in the JOURNAL regarding the treatment of pertussis, the treatment (advocated years ago in the JOURNAL) by inhalation of vapour of coal tar appears to have been lost sight of. In 1877 and 1878, when stationed at Woolwich, I treated all uncomplicated cases—over 100 in number—by sending the patients daily to the gas works at the Royal Arsenal and exposing them for half an hour, or sometimes an hour, to the vapour of coal tar in the "refining room," never administering any drug; and had the satisfaction of finding all the cases ameliorated after the first visit, and cured in from twelve to fifteen days.

Shortly after arrival here in 1887, several cases of pertussis occurred amongst the officers' and soldiers' children; and there being no "refining room" available in the local gasworks, through the kindness of the manager I caused the little patients to be held over the trap of the gas liquor drain daily, with the same satisfactory curative results, although the latter plan was not found so agreeable, owing to the presence of sulphuretted hydrogen in the vapour arising from the trap, which caused nausea, and in some instances actual vomiting. In uncomplicated cases of pertussis, and with careful medical supervision, I consider this treatment certain and speedy in its curative effects. The manager of the gasworks here assured me that he had never seen a case resist the treatment longer than ten days or a fortnight, the children seeming to improve from the very first inhalation, though some of them appeared suffocating when first brought to the gasworks.

THE VALUE OF HEALTH.

IT is a good thing to accumulate pithy sayings by eminent men on the vast importance of public and private hygiene. In a recent address by Professor Tyndall, he quotes two valuable paragraphs which may at any time afford useful texts to medical men who have to preach on this subject: "There have been men who by wise attention to this point might have risen to eminence, might have made great discoveries, written great poems, commanded armies, or ruled States, but who by unwise neglect of this point have come to nothing. Imagine Hercules as an oarsman in a rotten boat; what can he do there but by the very force of his stroke expedite the ruin of his craft?" Health is a priceless boon. When once we are in possession of it no effort or care should be spared in its preservation. When lost it may never be regained. In one of Mr. Emerson's essays, he says: "Get health. No labour, pains, temperance, poverty, nor exercise that can gain it must be grudged, for sickness is a cannibal which eats up all the life and youth it can lay hold of, and absorbs its own sons and daughters."

THE ETIOLOGY OF LEPROSY.

DR. R. GLASGOW PATTESON (Dublin) writes: In connection with Mr. Hutchinson's interesting "Notes on Acquired Leprosy in England," and his views as to the relation of food to the disease, the following passages from Gilbert White's *Natural History of Selborne* seem to be deserving of attention. They occur in a letter to the Honourable Daines Barrington, dated January 8th, 1778. Having given the particulars of the case of a "pauper who, from his birth, was afflicted with a leprosy," though both his parents were healthy, and who evidently had never been away from his native village, he proceeds to inquire into the causes of the decay of the disease.

"Some centuries ago," he writes, "this horrible distemper prevailed all Europe over; and our forefathers were by no means exempt, as appears by the large provisions made for objects labouring under this calamity. There was a hospital for female lepers in the diocese of Lincoln, a noble one near Durham, three in London and Southwark, and perhaps many more in or near our great towns and cities.....It must, therefore, in these days be, to a humane and thinking person, a matter of equal wonder and satisfaction

when he contemplates how nearly this pest is eradicated and observes that a leper is now a rare sight. He will, moreover, when engaged in such a train of thought, naturally inquire for the reason. This happy change, perhaps, may have originated and been continued from the much smaller quantity of salted meat and fish now eaten in these kingdoms; from the use of linen next the skin; from the plenty of better bread; and from the profusion of fruits, roots, legumes, and greens so common now in every family.....One cause of this distemper might be, no doubt, the quantity of wretched fresh and salt fish consumed by the commonalty, at all seasons as well as in Lent, which our poor now would hardly be persuaded to touch."

In fact, White regarded the improved hygienic conditions under which people lived as the main factor in accounting for the decay of the disease; and the stress he lays on fish as an article of diet is interesting in connection with the views held by some modern authorities as to the causation of leprosy and its relation to littoral regions.

Treatment of Obesity.

Mr. W. Towers-Smith (Chancery Lane, W.C.) writes: I have read Dr. Davies's letter with great interest. He says meat diet is attended with risk, and means starvation and nauseates the stomach.

Since January, 1888, I have treated 193 obese patients; the average loss varies from 2 to 3 stones in weight and 12 to 16 inches in abdominal measurement. In no single case has any risk to health occurred, every patient saying: "I feel infinitely relieved, and my health greatly improved." As to the starvation theory, three pounds of meat and one pound of fish, with an ounce of whisky where stimulants are required, cannot mean an approach to want of nutrition. This diet is limited to fourteen days, and no doubt requires some self-denial; the second and third period by gradation permit of considerable variation of food, including rusk, Leman's captain's biscuits, green vegetable, poultry, fish, fruit, whisky, hock, and claret. In fact, the third period differs very little from the ordinary diet of any careful man.

Obviously sugar abstention must be permanent, and saccharin may be substituted. I have found as a general rule where once the taste for sugar is lost very few patients ever care for it again. Dr. Davies gives his loss of weight by Banting's process at 12 pounds in eight months; he omits to mention his loss in girth. His weight for height is not very excessive. I should like him to try his method on a 20-stone man. I expect the result would be unsatisfactory to his patient and himself.

Obesity is a growth which is gradual, and takes years to develop in most cases. I contend by a rapid reduction I put my patient ten years back in weight and girth, and that it will only require partial treatment every six months for a week or so to keep the tendency to obesity down, taking ordinary rational food in between.

I still hold that "Spartan" treatment, judiciously carried out, is safe and thoroughly satisfactory in results. Dr. Davies, in a letter in the Journal of November 17th, 1888, characterises my treatment as "Spartan and needlessly severe." My experience proves to me that, if rapid reduction is to be obtained, some sacrifices are essential. I shall be very glad to see Dr. Davies's book, as it is more than likely I may get some valuable hints. At the same time, I should like him to test my treatment on some healthy 20-stone man, and I feel sure I shall convert him to my ideas.

Reciprocal Transfusion.

T. H. W. writes: Dr. Lauder Brunton, in his learned Croonian Lecture, quoting Ringer, suggests washing the leucomaines out of the blood in fevers by injecting saline solutions. What would be the effect of mutually transfusing the blood of a fever patient—say typhoid in early stage—and that of a person who has had the fever? The bacilli cannot, as a rule, develop in the blood of such a person, either because the bacillus of the previous attack has left as a final product an autopoison, or else because the pabulum on which the bacillus feeds is exhausted.

Now, if, as is probable, the first is the true explanation, it militates very much against the idea of washing out the leucomaine, but greatly favours the transfusion idea; for, if a large quantity of blood containing this bacillus poison could be exchanged for the original blood, it is reasonable to hope that the bacillus would be destroyed in the veins of the patient, and, of course, could not develop on the person supplying the exchange.

If the second explanation be the correct one—that the pabulum is exhausted—of course the thing would not work so well; for, although we might hope to diminish the intensity of the fever, etc., in our patients, there would be the probability of inducing it again in the giver of the blood—in fact, we should divide the fever between the two. Doubtless it would be still better if we could inject the bacillus poison directly, or gradually produce it in the blood by inoculation of attenuated bacilli; but this latter could only be preventive and not curative.

The Consulting Room Sneak.

Bitter Experience warns the readers of the Journal against a respectably dressed young woman, of a countrified appearance. This young person, on Wednesday, July 3rd, made a professional call at his house in his absence, and, under pretence of waiting, stole a solid silver snuff-box and a silver-mounted umbrella. *Verbum sap.*

Complete Autobiographical Information.

The craze for prying into every detail of the lives of celebrated persons, and for publishing the whole of their most private and personal correspondence, threatens to fill our biographies with details only fitted for medical publication. In the *Early Letters of Jane Welsh Carlyle*, recently published by Messrs. Swan Sonnenschein and Company, and edited by Mr. Ritchie, we have at page 27 the information that "Betty's mama's hens stand very much in need of pills. However, she means to look about on Monday to see if the hens are more laxative in another quarter;" and, at p. 265, we have the more personal reference: "This stirring life is more to my mind, and has, besides, a beneficial effect on my bowels." Surely it is the part of an editor to suppress such paragraphs as these, which, had the writer been alive, could only have covered her with confusion, and serve no good purpose now.

To Correspondents.

Our correspondents are reminded that prolixity is a great bar to publication and, with the constant pressure upon every department of the Journal, brevity of style and conciseness of statement greatly facilitate early insertion We are compelled to return and hold over a great number of communications, chiefly by reason of their unnecessary length.

COMMUNICATIONS, LETTERS, etc., have been received from:

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BOOKS, etc., RECEIVED.

Medical Handbook of Life Assurance for the Use of Medical and other Officers of Companies. By James Edward Pollock, M.D., and James Chisholm, London: Cassell and Co., Limited. 1889.

The Canaries for Consumptives. By E. Paget Thurstan, M.D., B.A. London: W. H. Allen and Co. 1889.

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REPORTS
TO THE
SCIENTIFIC GRANTS COMMITTEE
OF THE
BRITISH MEDICAL ASSOCIATION.

REPORT ON INTESTINAL SURGERY.[1]

By FREDERIC B. JESSETT, F.R.C.S.Eng.,
Surgeon to the Cancer Hospital, Brompton.

Results obtained from an Experimental Investigation into a novel mode of operating, suggested by Professor Senn, of Milwaukee.

The following paper is based upon my clinical experience, and also upon an experimental investigation into the operative procedures suggested by Dr. Senn, of Milwaukee.

Having no licence to perform such experiments, I was obliged to seek the assistance of Mr. Victor Horsley, by whose help I am enabled to lay before you a critical examination of the above-mentioned original and novel lines of treatment.

To my friend, Dr. Dove, Pathologist to the Cancer Hospital, I am indebted for valuable assistance during my investigations, also for the pathological specimens which I am enabled to place before you. Mr. W. B. Carter, Surgical Registrar to the Cancer Hospital, has enabled me by his artistic skill to illustrate my paper with numerous drawings and diagrams.

I propose first to describe the mode of operating as suggested by Dr. Senn in the several operations of (1) *Gastro-enterostomy;* (2) *Jejuno-ileostomy and ileo-ileostomy;* (3) *Enterorrhaphy;* (4) *Ileo-colostomy.*

I shall then narrate my experience as shown by the investigations I have conducted, and compare them with Dr. Senn's experiments, and with the results of similar operations conducted on the lines, at present, followed in this country and on the Continent. I shall discuss how these operations can be applied in practice, and in what forms of obstruction the several operations are applicable; and, finally, I shall make some remarks upon the advantage of operations conducted in this manner over the methods practised at present.

The idea of establishing a fistulous communication between a portion of bowel above and below the seat of an obstruction originated with Maisonneuve, who operated on two patients, but with fatal results in both instances. The operation met with violent opposition at the Surgical Society of Paris—surgeons assuming that the excluded portion of intestine would become the seat of fæcal accumulations which would ultimately destroy the life of the patient, even if he survived the operation. In the year 1863, Hacken, under the direction of Adelmann, made some experiments on dogs, but with no success; and the subject seems to have been completely forgotten until E. Hahn, of Berlin, drew attention to it again in commenting on his two cases of excision of the colon, when circular enterorrhaphy could not be performed, and an artificial anus was established. Both his patients recovered from the operation, but all attempts to close the preternatural opening proved futile.

Now the results of the investigations conducted by Senn, and confirmed by myself, are such as to show that had Hahn practised ileo-colostomy in these two cases, he would not have been driven to form an artificial anus. Further, my investigation proves that in intestinal anastomosis there is no fear of any fæcal accumulation forming in the excluded portion of intestine. If, then, these two points can be established, it becomes evident that the treatment of intestinal obstruction by anastomosis must in the future be the recognised operation in the majority of, if not in all, cases of obstruction of the bowel which cannot be overcome otherwise than by opening the gut.

Mode of Operating.

Gastro-enterostomy and jejuno-ileostomy are performed identically in the same way by means of decalcified bone plates such as that shown in Fig. 1. It may be well, before describing the different steps of the operation, to state how these bone plates are prepared.

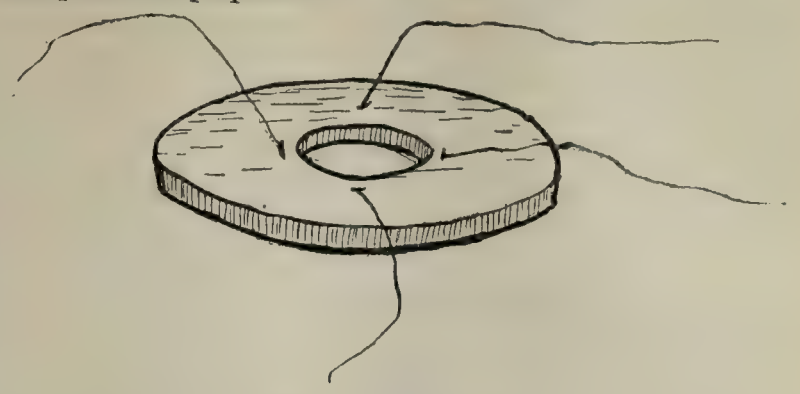


Fig. 1. (About half size.)

The plates are, in the first instance, cut of the requisite size. I have had the ones I used made of uniform dimensions, namely, $2\frac{1}{2}$ inches long by 1 inch wide and $\frac{1}{4}$ inch thick. When decalcified these plates can be easily cut to the size required at the time of the operation. They should have an oval opening in the centre $\frac{3}{4}$ inch long by $\frac{1}{2}$ inch in width. To decalcify them let them be placed in a 10 per cent. solution of strong hydrochloric acid, and allow them to remain in this until they are quite soft and pliable; the acid solution requires to be changed about every second day, and usually the plates are thoroughly decalcified in the course of a week. They are then washed, and allowed to lie in plain water for some hours to get rid of the superfluous acid, and finally they are preserved in rectified spirit until required for use, when they should be placed in a 20 per cent. solution of carbolic acid for an hour before using them. In preparing these plates for operative purposes, four holes have to be drilled in them close to the edge of the central oval opening, namely, one on either side and one at each end. Through these openings four threads at least 12 inches long of No. 1 chromicised catgut or Chinese silk, each armed with a fine sewing needle, are passed and fastened to a circular thread at the back, of the same material, which is formed so as to be a trifle larger than the oval opening. The plates being now ready for use are placed in a solution of carbolic acid.

Gastro-enterostomy.—In performing this operation, an opening some three inches in length is made in the middle line of the abdomen, between the ensiform cartilage and umbilicus, the omentum being pushed on one side; a piece of jejunum, as near to its origin as practicable, is drawn into the wound and held by an assistant; a portion of the stomach, about two inches from the greater curvature and as near to the pyloric end as possible, is also drawn into the wound. Two pieces of india-rubber tubing are next passed through the mesentery, about four inches apart, one on either side of the portion of gut to be opened, and, after this has been emptied of its contents by gently squeezing it, these india-rubber tubes are fastened sufficiently tightly to prevent the contents passing. This end might be also attained by the use of Makin's or some other clamp, or, indeed, by an assistant's thumb and fingers, but I prefer the india-rubber tube as described.

The portion of the stomach and intestine being now well outside of the wound, are packed round with sponges to catch any of their contents that might escape on their being opened. An opening about an inch in length is now made in a longitudinal direction into the convex surface of the jejunum, and one of the bone plates slipped in; the needles of the two lateral threads are then passed through all the coats of the bowel close to the cut edge, and unthreaded, the two end threads being brought out at either end of the wound in the gut; these threads are then given to an assistant to hold, while the surgeon makes another incision into the stomach parallel to the greater curvature; the other bone plate is then passed into this viscus through the incision, the needles of the lateral threads are passed through all the coats of the stomach, the end threads being, as in the jejunum, brought out through the wound. (Fig. 2).

The two openings are next accurately adapted to each other, and the bone plates held firmly in position by an assistant while the surgeon ties the corresponding threads of either plate tightly. The lower lateral threads should be tied first, then the end ones, and finally the upper lateral. Should the ends of the bone plates be found to tilt it is wise to insert a Lembert suture at each end, but this is not always necessary. The jejunum being now firmly fixed

[1] Read before the Royal Medical and Chirurgical Society.

to the stomach, the parts are dropped back into the abdominal cavity, the toilet of the omentum attended to, and the abdominal wound closed in the usual manner.

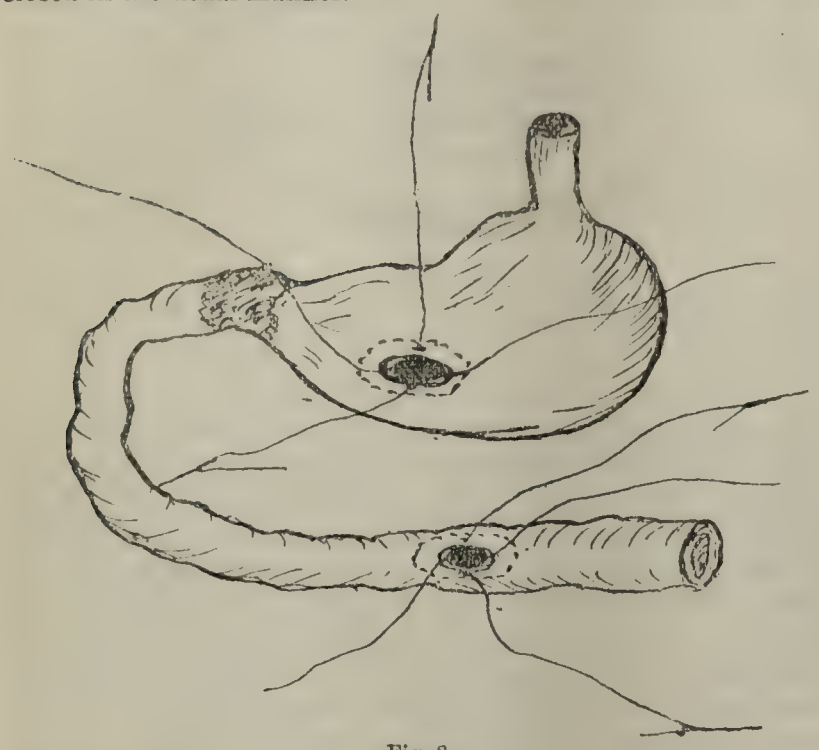


Fig. 2.

This operation can be performed easily in from fifteen to twenty minutes, instead of an hour and a half to two hours, as is usual under the system at present practised. In two cases in which Mr. V. Horsley and I performed gastro-enterostomy on dogs, the operation was accomplished with great ease and rapidity, and, in both cases, the dogs made an uninterrupted recovery, never having displayed the slightest pain or inconvenience. These specimens showed the operation in both cases was perfect. (Fig. 3). (*Vide* notes of cases Appendix).



Fig. 3.

Jejuno-ileostomy.—If it is not desired to remove any portion of the diseased intestine, but simply to form an artificial communication between a portion of intestine above an obstruction and another portion below, the operation is conducted exactly in the same manner as that described for gastro-enterostomy. Should it, however, be deemed necessary to excise a portion of the gut, the operation will have to be modified somewhat. In this case, the intestine being drawn well out of the abdominal wound and gently squeezed at the seat of the operation, to empty it of its contents as far as possible, should be clamped, either by means of india-rubber bands or one of the numerous clamps devised for the purpose, about four inches on either side of the portion of diseased or injured bowel to be removed. Sponges should be carefully packed round the opening into the abdomen to prevent any fæcal matter that may escape from the divided intestine entering into the peritoneum, and the bowel cut directly across with scissors, and a V-shaped piece of mesentery also removed. All bleeding points being secured with fine catgut ligatures, the two ends of each portion of bowel are to be invaginated into themselves, and, when invaginated to the extent of one inch, the serous and muscular coats of each are stitched together by means of a continuous catgut or Chinese silk suture. The two ends of the gut are next placed parallel to each other (Fig. 4),

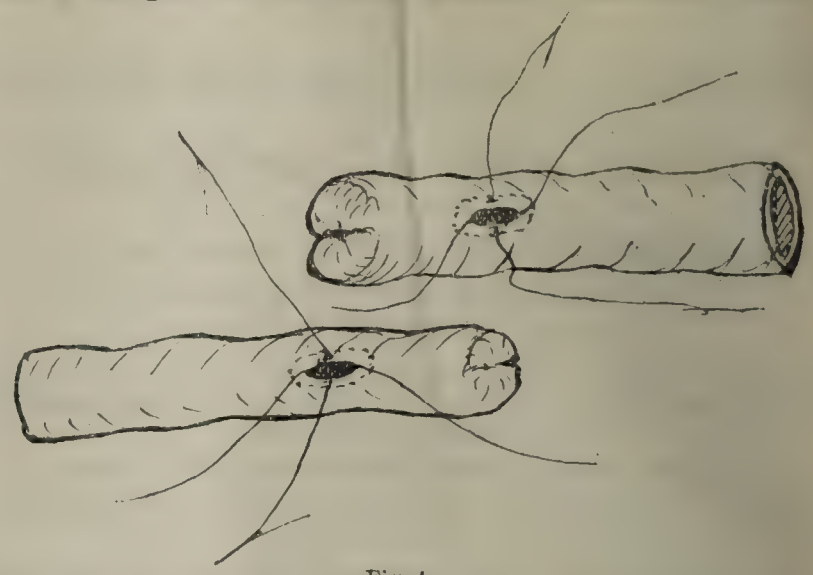


Fig. 4.

with their convex surfaces in apposition. It is of importance to notice that the two portions of intestine are applied end on, so as not to interfere with the peristaltic action of the bowels. An opening about an inch long is made longitudinally in each portion of the gut on its convex surface, and the bone plates passed in and fastened in the same manner as already described for gastro-enterostomy. The divided mesentery is united by a few stitches of catgut. This operation can be easily performed in twenty minutes.

I have performed jejuno-ileostomy or ileo-ileostomy on dogs in six cases. In every case portions of intestine varying in length from three to twelve inches were removed; the two ends of the divided bowel were invaginated into themselves, and in five cases the convex surfaces of the intestines above and below the excised portion were brought into apposition by means of decalcified bone plates. All these dogs made an uninterrupted recovery, and never seemed to suffer the slightest pain or inconvenience from the operation.

At the *post-mortem* examination the omentum was found to be adherent to the bowel at the seat of operation. The two portions of intestine were united (Fig. 5.), and there existed a good and sufficient opening between them to allow of the contents of the bowel passing. In every case the dogs increased in weight after the operation. (*Vide* Appendix.)



Fig. 5.

The sixth case was operated on in a similar manner to that to be directly described for ileo-colostomy—namely, by implantation of the proximal into the distal portion of the divided intestine. This dog unfortunately died on the third day, through the misfortune of one of the ligatures slipping from a vessel in the mesentery, hæmorrhage resulting. There was no leakage at the point of union of the two portions of gut, which were united by plastic lymph.

Circular Enterorrhaphy.

This method suggested by Senn and adopted in the investigations we are considering is really a modification of Jobert's operation. In both operations, the proximal portion of the divided gut is invaginated into the distal end, and the sutures are passed through all the coats of the intestine, but Senn's operation differs from Jobert's in that he lines the upper end of the bowel with a soft pliable india-rubber band, which is cut the required length at the time of the operation and formed into a ring by fastening the

ends together with two catgut sutures. The rings that I have used have been formed of a broad flat band of india-rubber, one quarter to a half inch in depth; this is pushed into the lumen of the proximal end of the gut, which it should fit accurately. The ring is to be fastened to the lower end of the proximal portion of the bowel by a continuous catgut suture which prevents the bulging of the mucous membrane. Two chromicised catgut sutures about 18 to 24 inches long and threaded at either end with an ordinary sewing needle are next prepared, and the needle passed from within outwards, transfixing the upper portion of the rubber ring and all the coats of the bowel. The posterior threads are passed one on either side of the mesentery, and the anterior needles at equal distances apart through the convex surfaces of the bowel.

The intestine above and below the seat of operation is either compressed between the thumb and fingers of an assistant, or by an india-rubber band passed round and lightly tied, or by one or other of the clamps made for this purpose.

The needles are next passed through the peritoneal and muscular coats of the lower portion of the intestine at corresponding points about one third or half an inch from the cut edge. An assistant now makes gentle traction upon all the threads, while the operator manipulates the two ends of the divided gut, so that the upper end becomes invaginated into the lower (Fig. 6). Care must be taken that the margins of the lower end are turned completely and evenly in, so that the serous surface of the intussuscipiens is in close contact to that of the intussusceptum. The operator having satisfied himself that the upper portion of gut is completely invaginated, proceeds to tie the catgut sutures with sufficient firmness to prevent disinvagination.

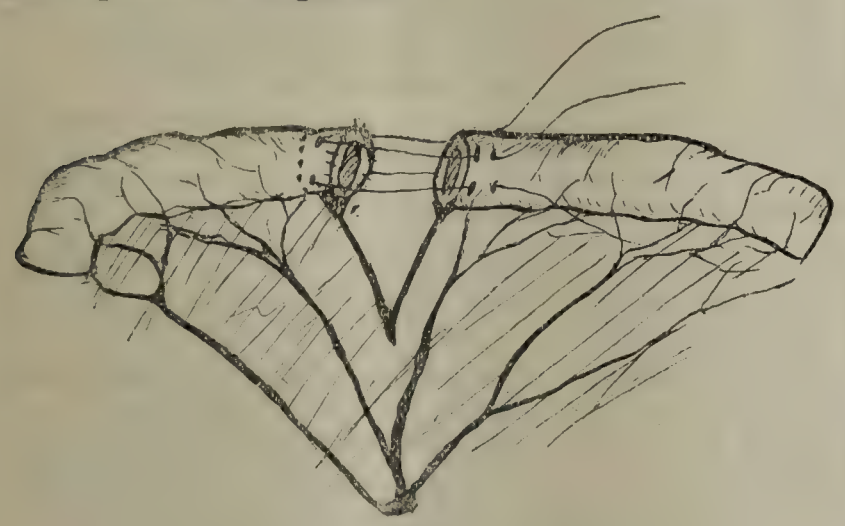


Fig. 6.

The divided mesentery is next fastened together with a few interrupted catgut sutures, and great care should be paid to the mesenteric attachment of the gut at the point of operation, as it is here that the greatest difficulty is experienced in the invagination; in my experience it is always well to place a couple of Czerny-Lembert sutures, one on either side of the mesenteric attachment. After a few days the rubber-ring becomes detached, by the absorption of the catgut sutures, and passes *per anum*.

The success of this operation can be greatly increased, I think, by applying either an omental flap or an omental graft around the seat of operation.

An omental flap adopted by Senn and others, may be applied by cutting a strip of omentum about two inches wide and wrapping it round the gut, fastening it in place by a couple of stitches, one on either side of the point of union of the intestine, and passing through both surfaces of the flap and the mesentery, care being taken to ensure that the sutures are passed parallel to the mesenteric vessels. The cut edge of the omentum from which the flap has been excised, after all bleeding points have been secured, should be united by a continuous catgut suture. In the case of an omental graft a piece of omentum about two inches wide is entirely cut away of sufficient length to wrap easily round the bowel; this then being washed in a weak solution of carbolic acid is fastened round the seat of operation in the same manner as the flap, the cut omentum being united by a continuous catgut suture. Dr. Weir, of New York, suggests that a peritoneal graft might be formed out of the mesentery which has been cut away. In some of my specimens it is seen how well this method has answered (Fig. 7).

Of the seven investigations of this mode of performing circular enterorrhaphy, the two first died from peritonitis due to leakage at the mesenteric attachment three days after the operation. In one of these the distal portion of intestine was invaginated into the proximal by accident. The third case died on the fourteenth day. In this case an omental flap was applied; at the *post-mortem* examination union of the gut was found to be perfect, as also of the omental flap, but the upper end of the bowel was filled with small pieces of hay mixed with other food which the animal had eaten. This had formed a complete block. The india-rubber ring had disappeared, and on removal of the accumulation, the lumen of the gut was found to be perfect.

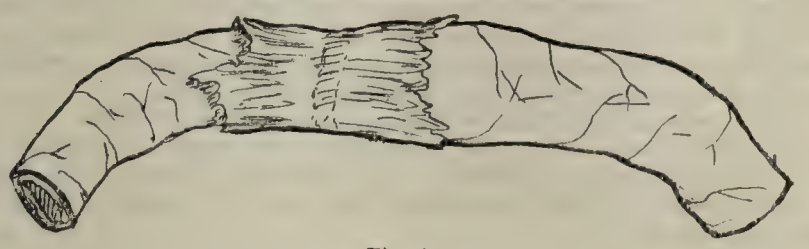


Fig. 7.

The remaining four cases all recovered, although in the last one, in which the omental graft had been applied, the dog wasted considerably, and when killed two months after the operation it was discovered that the portion of bowel above the seat of operation in this dog was also enormously distended and filled with pieces of hay and *débris*.

This operation is very much more difficult in dogs than in human beings. I have performed it a number of times on the dead body with perfect ease; and in one case, that of removal of a sarcomatous ovary in which a large portion of small intestine was involved, I was obliged to remove some twelve inches of intestine; in this case I performed circular enterorrhaphy by this method with perfect ease in a few minutes. This patient was in so exhausted a condition that it would have been impossible to have allowed time to suture the two ends by the Czerny-Lembert method.

The patient did remarkably well for eight days, taking her food freely, and her bowels acting regularly, when she suddenly developed peritonitis, and died on the tenth day after operation. In this case there had been ulceration along one of the sutures. At the *post-mortem* examination it was found that the invagination was perfect, but a small pinhole existed in the mesenteric side of the gut due evidently to ulceration. The india-rubber ring was *in situ*; the catgut sutures fastening the lower edge of the upper end of the intestine to the rubber band were not absorbed, thus forming a valve. From this lesson one learns, the desirability of using plain, not chromicised, catgut sutures for stitching the ring to the margin of the bowel.

Ileo-Colostomy.

This operation may be accomplished either by approximation plates, the same as described for jejuno-ileostomy, or by the following method:—

The ileum being divided a short distance from its junction with the



Fig. 8.

cæcum, and all bleeding points ligatured, the divided end of the lower

portion of bowel is invaginated into itself and secured by a continuous catgut suture passing through the serous and muscular coats only. The upper portion, being held by an assistant or secured by an india-rubber ring or clamp to prevent the escape of its contents, is lined with a thin india-rubber ring and two long sutures armed at each end with a needle passed in a similar manner to that described for circular enterorrhaphy. Next a slit an inch in length, or sufficiently long to allow the portion of intestine to be implanted, is made on the convex surfaces of the ascending colon (Fig. 8). The needles of the sutures connected with the small bowel are next passed through the perineal and muscular coats of the colon at either end of the opening and the small bowel inserted into the slit; the two sutures are next firmly tied to prevent the bowel slipping out, and it is as well to introduce two lateral Czerny-Lembert sutures, one on each side, between the small gut and colon. The operation, which is now completed, can be very quickly accomplished.

The result of the three investigations of this operation that I have made were all successful; the dogs made excellent recoveries and showed no sign of illness. The specimens showed that the results (Fig. 9)[2] were everything that could be desired (*Vide* cases in Appendix.



Fig. 9.

So much for the method of performing the different operations, I will now pass to an analysis of the operations as performed by Dr. Senn and compare them with my own experience.

Gastro-Enterostomy.

Dr. Senn has reported five cases in which he performed the operation of gastro-enterostomy by means of decalcified bone plates. Three of these recovered without any bad symptoms and one died, the cause of death being attributed to the dog's stomach being full at the time of the operation. The omentum became soiled, and much of it was cut away. At the *post-mortem* one of the ligatures was found to have slipped, and hæmorrhage ensued. In two cases operated on by Mr. V. Horsley and myself both recovered without bad symptoms.

In no case was any injury caused to the mucous membrane by the pressure of the plates.

Table of Cases (Dr. Senn).

Result.	No.	Animal.	Weight.	Remarks.
S.	1	Dog	25 lbs.	Killed 7th day; plates disappeared.
D.	2	,,	50 lbs.	Died next day; hæmorrhage from omental flap.
S.	3	,,	—	Killed 34th day; plates disappeared.
S.	4	,,	—	Killed 14th day; plates disappeared.

The Author's Cases.

Result.	No.	Animal.	Weight.	Remarks.
S.	1	Dog	15 lbs.	Killed 21st day; plate disappeared.
S.	2	,,	26 lbs.	Killed 28th day; plate disappeared.

[2] A series of pathological specimens of these operations are now in the Museum of the College of Surgeons.

In the second case the jejunum was fastened to the posterior wall of the stomach by tearing through the gastro-colic omentum and transverse meso-colon, and drawing a portion of the jejunum through the meso-colic opening.

Jejuno-Ileostomy.

In the operation of jejuno-ileostomy performed by Dr. Senn, in seven cases the divided intestine was united by Czerny-Lembert sutures; five of the dogs died, three directly from the operation, and two from obstructions caused by enterolith; the remaining two made good recoveries. Senn then operated upon eight dogs by means of approximation plates; of these, seven recovered, and one died fourteen days after the operation, from the obstruction caused by the presence of an enterolith, the result of the dog eating his bed.

The five dogs operated on by Mr. V. Horsley and myself by means of approximation plates all recovered; and the one case in which the operation was performed by means of implantation of the upper segments into the lower, the dog died from hæmorrhage due to the slipping of one of the ligatures on the third day.

Table of Dr. Senn's Cases of Jejuno-Ileostomy, in which the Visceral Wounds were United by Czerny-Lembert Suture.

Result.	No.	Animal.	Weight.	Remarks.
D.	1	Cat	—	Died same day.
D.	2	Dog	65 lbs.	Died third day.
D.	3	,,	17 lbs.	Died third day.
S.	4	,,	23 lbs.	Killed 67th day; perfect union.
D.	5	Cat	—	Died 19th day: obstruction.
D.	6	,,	—	Died 11th day; perforation.
S.	7	Dog	—	Killed 20th day.

Operations by Approximation Plates.

Result.	No.	Animal.	Weight.	Remarks.
S.	1	Dog	15 lbs.	Killed 75th day; perfect union.
S.	2	,,	18 lbs.	Killed 35th day; perfect union.
D.	3	,,	10 lbs.	Died 14th day; obstruction.
S.	4	,,	30 lbs.	Killed 18th day.
S.	5	,,	24 lbs.	(Double operation.) Killed 13th day; both operations perfect.
S.	6	,,	54 lbs.	Killed 23rd day; union perfect.
S.	7	,,	Small	Killed 29th day; union perfect.
S.	8	,,	12 lbs.	Omental flap; killed 23rd day; union perfect.

Cases Operated on by Approximation Plates.

Result.	No.	Animal.	Weight.	Remarks.
S.	1	Dog	32 lbs.	Killed 14th day; perfect union.
S.	2	,,	15 lbs.	Killed 14th day; perfect union.
S.	3	,,	18 lbs.	Killed 18th day; perfect union.
S.	4	,,	26 lbs.	Omental flap; killed 14th day; perfect union.
S.	5	,,	23 lbs.	Killed 56th day; perfect union.

One Case of Intestines United by Implantation.

Result.	No.	Animal.	Weight	Remarks.
D.	1	Dog	15 lbs.	Died third day; hæmorrhage.

These cases are very significant and instructive, for here we have fifteen cases operated on by Dr. Senn, exactly under the same circumstances, and, I presume by the same operator, in seven of which the divided intestines were united by suturing the two ends together by means of Czerny-Lembert sutures, and in the remaining eight the ends were united by approximation plates. Of the dogs operated on by the former method, five died, while in all of those operated on by means of the approximation plates, only one died, and that not directly from the operation, and this experience is fully confirmed by Mr. V. Horsley and myself, as in five cases operated on by us in which the ends of the intestines were united by approximation plates all recovered.

Taking, then, into consideration the excessively low mortality

of this operation when performed by approximation plates, the very short time the operation takes to perform, namely, only about twenty minutes, and comparing it with the results of the same operation carried out by suturing after Czerny-Lembert's method, which operation cannot be done under an hour and a half to two hours, I think there cannot be any question as to the value of the operation as proposed by Senn.

Enterorrhaphy by Invagination.

This operation is undoubtedly more difficult to perform than the operation by means of approximation plates, and the mortality after the operation is certainly larger, as will be seen by the accompanying tables. It will be noticed, however, by the report of cases performed by Mr. V. Horsley and myself, that two factors play an important part in the success of the operation, viz.: First, practice, for out of the seven cases that were operated upon, it was the first two which died immediately from the effects of the operation; the third died from the bowel above the seat of operation being blocked by an accumulation of hay and *débris*, while the remaining four all recovered. The second factor is undoubtedly the use of the omental flap or graft, wrapped round the seat of operation.

Another point I would draw attention to in this operation, as experience has taught me, is that in all future cases on the human subject, I would advise the use of ordinary catgut sutures for fastening the india-rubber ring to the end of the bowel, and also for passing through the coats of the intestines; and, finally, I would suggest that three Chinese silk Czerny-Lembert sutures should be inserted to unite the two ends of the divided bowel, one on each side of the mesentery, and one in the convex surface of the intestine, to prevent the possibility of the bowel becoming disinvaginated.

The use of ordinary catgut sutures would prevent the possibility of the india-rubber ring being retained too long, and thus becoming a source of obstruction, and yet they would last a sufficiently long time to allow of plastic lymph being thrown out between the two approximated serous surfaces.

I would here like to point out that in all cases of obstruction there would be considerable difficulty in performing enterorrhaphy by invagination, as in such cases the proximal end of the bowel is of necessity greatly dilated, while the portion of bowel below the obstruction is correspondingly contracted, so that the difficulty of invaginating the dilated into the contracted portion would be very great. This objection would not apply to union by means of approximation plates.

Dr. Senn's Cases of Enterorrhaphy by Invagination.

Result.	No.	Animal.	Weight.	Length of Invagination.	Remarks.
S.	1	Dog	15 lbs.	1 inch	Killed 14th day; omentum adherent.
D.	2	,,	20 lbs.	,,	Large enterolith found.
D.	3	,,	40 lbs.	,,	Died 3rd day; lower end invaginated by mistake into the upper.
D.	4	,,	,,	,,	Died 36 hours; gangrene.

Cases in which Omental Flap was Used.

Result.	No.	Animal.	Weight.	Length of Invagination.	Omental Flap.	Remarks.
S.	5	Dog	40 lbs.	½ inch	1 inch	Killed 14th day; omental flap found adherent.
D.	6	,,	20 lbs.	,,	2 inches	Died 5th day; perforation.
S.	7	,,	15 lbs.	,,	,,	Killed 25th day; omental flap adherent.
S.	8	,,	22 lbs.	,,	,,	Killed 23rd day; omental flap adherent.
S.	9	,,	15 lbs.	,,	,,	Killed 44th day; omental flap adherent.

The Author's Cases.

Result.	No.	Animal.	Weight.	Length of Invagination.	Omental Flap.	Remarks.
D.	1	Dog	15 lbs.	½ inch	—	Died third day; perforation.
D.	2	,,	12 lbs.	,,	—	,, ,, ,,
D.	3	,,	20 lbs.	,,	om. flap	Died 14th day; enterolith.
S.	4	,,	16 lbs.	,,	—	Killed 14th day; perfect union.
S.	5	,,	20 lbs.	,,	—	Killed 21st day; perfect union.
S.	6	,,	18 lbs.	,,	om. flap	Killed 56th day; perfect union.
S.	7	,,	27 lbs.	,,	—	Alive and well 3 months after operation.

It will be seen, then, that in the nine operations reported by Dr. Senn four were performed without an omental flap, three of which died. It is right to point out, however, that only one died directly from the operation, the other two dying one from the pressure of an enterolith eighty-one days after the operation, and the other from a faulty operation, the lower end of gut being invaginated into the upper by mistake. Of the remaining five operations—all had either an omental graft or flap; of these, only one died of perforation.

Of the seven operations performed by Mr. Horsley and myself, the two first died directly from the operation, the first from the lower portion of bowel being invaginated into the upper by mistake, and the third succumbed to obstruction caused by an enterolith, the result of the dog eating his bed, the remaining four making excellent recoveries.

Ileo-Colostomy.

Of this operation Dr. Senn has reported sixteen cases, six of which were performed by implantation, the end of the ileum being lined with india-rubber band; of these two died, one of septic peritonitis and the other of perforation; in seven dogs the operation was performed by lateral approximation, the two portions of gut being united by Czerny-Lembert sutures; of these two died of septic peritonitis; in the remaining three the union of the ileum and colon was accomplished by means of approximation discs; of these one died of peritonitis.

Mr. Victor Horsley and I have performed this operation in three cases, adopting in each case the method by implantation. All three cases made a perfect and speedy recovery; one dog was not killed until twenty weeks after the operation. The dogs always had perfect health, and got very fat.

Dr. Weir, of New York, has collected and reported thirty-five resections of the large intestine, the mortality from which, when the symptoms of obstruction demanded laparotomy, amounted to 100 per cent. Surely in many of these cases had the operation

Dr. Senn's Cases.

First Series by Implantation, the end of the Ileum being Lined with a Band of India-rubber.

Result.	No.	Animal.	Weight.	Remarks.
D.	1	Dog	50 lbs.	Died on fifth day; septic peritonitis.
S.	2	,,	35 lbs.	Omental flap; killed 13th day; union perfect.
S.	3	,,	16 lbs.	Omental flap; killed 43rd day; union perfect.
S.	4	,,	—	None; killed 23rd day; union perfect.
S.	5	,,	14 lbs.	Omental flap; killed 18th day; union perfect.
D.	6	,,	—	Omental flap; died 3rd day.

Second Series by Lateral Approximation; Czerny-Lembert Sutures.

Result.	No.	Animal.	Weight.	Remarks.
S.	1	Dog	25 lbs.	Killed 37th day; union perfect.
S.	2	Cat	—	Killed 162nd day; union perfect.
D.	3	,,	—	Died 4th day; peritonitis.
S.	4	Dog	—	Killed 31st day; union perfect.
S.	5	,,	—	Killed 41st day; union perfect.
S.	6	,,	27 lbs.	Killed 31st day; union perfect.
D.	7	,,	17 lbs.	Died 5th day; septic peritonitis.

Third Series, Lateral Union by Approximation Plates.

Result.	No.	Animal.	Weight.	Remarks.
D.	1	Dog	20 lbs.	Died 5th day; peritonitis.
S.	2	,,	15 lbs.	Killed 24th day; union perfect.
S.	3	,,	15 lbs.	Killed 18th day; union perfect.

The Author's Cases by Implantation.

Result.	No.	Animal.	Weight.	Remarks.
S.	1	Dog	18 lbs.	Killed 140th day; union perfect.
S.	2	,,	20 lbs.	Killed 18th day; union perfect.
S.	3	,,	18 lbs.	Killed 21st day; union perfect.

of ileo-colostomy been performed, either with or without resection of the diseased portion of intestine, the patients might have derived considerable relief, their lives might have been prolonged, and, in some cases, complete cure might have been effected.

It will be seen from the above tables that the operation by implantation and by apposition of the two portions of intestine by means of Czerny-Lembert sutures were about equally successful, but we must not lose sight of the fact that the former operation was performed in something less than a quarter of the time occupied by the latter mode of operating, and in most cases in which such an operation was necessary, the patient being reduced greatly in strength either by prolonged malignant disease or by acute suffering from intussusception or gangrene, the factor of time must necessarily play a most important part.

The operations performed by lateral apposition and approximation discs is not nearly so successful here as in operations on the small intestine, and therefore in the performance of ileo-colostomy I should always recommend the method by implantation to be adopted.

ENTEROSTOMY.

There only remains, then, now one more question to consider, and that is, in operating on the intestine, how much of the small intestine may be removed without appreciably interfering with the nourishment of the subject operated on. Dr. Senn has operated on seven cases, removing from 12 inches to 96 inches of intestine. Three of these died immediately from the result of the operation; one died twenty-one days after the operation from marasmus (in this case 34 inches of bowel were removed); and in the three that were killed marasmus is reported to have been extreme.

Table of Dr. Senn's Cases of Enterostomy.

No.	Animal.	Weight.	Length of Intestine Removed.	Result.	Remarks.
1	Dog	22 lbs.	30 inches	Died 5th day	——
2	Cat	—	12 ,,	,, same night	——
3	Dog	36 lbs.	72 ,,	Killed 161st day	Marasmus extreme.
4	,,	—	96 ,,	Died 3rd day	——
5	,,	10 lbs.	50 ,,	Killed 47th day	Marasmus extreme.
6	Cat	29 lbs.	29 ,,	,, 12th day	,, ,,
7	,,	24 lbs.	34 ,,	Died 21st day	,, ,,

The result being that, in seven cases, two died from the operation, two died from marasmus caused by the operation, and three were killed at different dates, all suffering from extreme marasmus.

To sum up the result of the different operations above described it will be found to be as follows, namely:

Gastro-enterostomy by approximation plates: 6 cases, 1 death, death-rate =16.6 per cent.

Jejuno-ileostomy by approximation plates: 13 cases, 1 death, death-rate =7.69 per cent.

Jejuno-ileostomy by Czerny-Lembert sutures: 7 cases, 5 deaths, death-rate =71.5 per cent.

Enterorrhaphy by invagination without omental flaps: 4 cases, 3 deaths, death-rate =75.0 per cent.; with omental flaps: 12 cases, 3 deaths, death-rate =24.99 per cent.

Ileo-colostomy by implantation: 9 cases, 2 deaths, death-rate =22.2 per cent.

Lateral apposition by Czerny-Lembert sutures: 7 cases, 2 deaths, death-rate = 28 per cent.; by apposition with approximation plates: 3 cases, 1 death, death-rate =33.0 per cent.

And again, by omitting the cases in which the Czerny-Lembert suture was adopted, we have 47 cases operated on either by approximation discs or invagination, with 11 deaths, or at the rate of 23.4 per cent.

Now, let us for one moment compare these results with those cases which are published, and with statistics collected of similar operations performed on the human being. The largest number of cases have been collected by Reichel, who, in the *Deutsche Zeitschrift für Chirurgie*, 1883, p. 230, furnishes the result of 121 cases of resection of the bowel in which the ends were united by Czerny-Lembert sutures; of these, 58 recovered, 58 died, and 5 recovered with fæcal fistulæ, the death-rate being at the rate of 48 per cent. Ill has reported 47 cases, with 25 deaths, being at the rate of 53.1 per cent., while Weir, of New York, has furnished statistics of 33 completed cases of resection of cancerous intestine, with a mortality of 51.5 per cent.

Sir W. Mac Cormac, in his oration delivered at the Medical Society in May, 1887, on Abdominal Section, gives particulars of 13 cases of abdominal section performed for supposed traumatic rupture of the intestines and other abdominal viscera; all these cases died, some from injury to other viscera besides the bowel, some from shock.

Dr. B. Farquhar Curtis, of New York, in a paper read to the New York Medical Society at Albany in February of last year, in connection with a discussion on acute intestinal obstruction, has arranged a table of 308 cases to show the result of the various methods of treatment adopted by the surgeon, or forced upon him by the exigencies of the case with especial reference to this factor. From a study of this table it will be seen that the obstruction was removed and an artificial anus formed in 15 cases, with a mortality of 10, or at the rate of 66.6 per cent. In 45 cases the portion of intestine was resected and the ends sutured; 39 of these cases died, showing a mortality of 86.6 per cent. The obstruction in these 60 cases was caused by either intussusception, volvulus, adhesion, bands or internal incarceration in 42 instances. Dr. Curtis, in referring to the 45 cases in which an attempt was made to suture the wound in the intestines whether it involved the entire circumference of the wound or not, says that the mortality reached the extreme point of 86.6 per cent.; only 10 per cent. of the deaths were from sepsis due to the operation, while more than the usual number—50 per cent.—were due to the condition of the patient, and 23 per cent. were due to the duration of the operation and to shock.[3]

This is surely a strong argument for making the operation occupy as short a time as possible, and I submit that the methods which I have described are those which will in the future, by enabling the surgeon to perform these operations in a quarter or a third of the time occupied by the system at present practised, be the means of saving many valuable lives, and will reduce the mortality to that which is now obtained in ovariotomy and hysterectomy. In most extreme cases many surgeons are contented to perform enterostomy and creating a fæcal fistula or artificial anus. But I contend by performing one of the several operations I have described of ileo-colostomy, jejuno-ileostomy, or enterorrhaphy, any one of which can be accomplished in quite as short a time as that required for the formation of an artificial anus, the surgeon performs a radical operation in the place of a palliative one, and the risk to the patient is not so great, for I have already shown that in the cases in which an artificial anus was formed, reported by Dr. Curtis, the mortality amounted to 66.6 per cent., and then the patient was left either with a permanent fæcal fistula, or would have at some future time to submit to a further operation for its closure.

Now, if we compare the mortality as shown by these statistics with that obtained by Senn's operation as performed by him and confirmed by myself, you will find that, excepting the 7 cases of jejuno-ileostomy performed by Senn by the Lembert suture, 48 operations were performed, with 12 deaths, or a mortality of 25 per cent.; but, again, if you omit the 14 cases in which the operation was performed, but afterwards abandoned for a safer one, the mortality is reduced to 17.6 per cent.

If, then, these figures can be accepted as correct, the mortality from these operations should be reduced from 86.6 to 20 per cent., by adopting the method of operating I have described, and

[3] *Vide* Appendix No. I. Table of cases collected or reported by different observers.

I have no doubt by further experience and practice the death-rate will be reduced very much lower. But it will be argued that these figures are all very well, and we are willing to accept them for what they are worth, but it must not be overlooked that in all the cases you have recorded and in which you claim such brilliant results, the operations were performed on healthy animals, and the analogy between such operations and similar ones performed on a human being exhausted by disease or pain cannot for one moment hold good! True, but Senn has performed the operation of enterorrhaphy by the Czerny-Lembert system on seven healthy animals, five of which died, giving a mortality of 71.5 per cent., or a death-rate within a fraction of what the same operation is credited with on the human subject.

Again, can it for one moment be doubted if two surfaces of peritoneum can be brought into sufficiently close apposition by the operation I am advocating, and this I think I have proved, it cannot make any difference in this respect whether the patient be in health or wasted by disease, and further if these operations can be done in twenty to thirty minutes instead of an hour and a half to two hours, does it not follow that the chances of success must be enormously increased?

We now, then, arrive at the third point for our consideration, namely, *in what form of obstruction of the intestinal tract are these operations applicable?* I think I may say that there is no form of obstruction which cannot be relieved by ordinary manipulation, in which either one or the other of these operations may not be practised with every hope of success.

Gastro-Enterostomy.

This operation may be practised for an obstruction arising at either the pylorus, the duodenum, or upper part of the jejunum. The principal form of obstruction in which this operation is to be recommended is undoubtedly malignant disease or stricture of the pylorus. In both these forms of disease the patients as a rule are much emaciated and exhausted before they apply for relief; it is then of all importance that any operation should be conducted so as to cause as little shock as possible, and in this case such an end can only be attained by shortening the duration of the operation to its minimum; and this can be attained by the operation I have described, namely, by uniting the stomach and jejunum by approximation plates. The same may be also said with regard to the operation when required for obstruction arising in the duodenum.

It is true that in some forms of fibrous stricture of the pylorus Loreta's operation of opening the stomach and forcibly dilating the stricture has been practised apparently with success, but I would submit that this operation is quite as formidable as that of gastro-enterostomy as practised with approximation discs, and the permanent nature of the relief cannot, I think, be so reliable by the former operation as by the latter.

Jejuno-ileostomy and Enterorrhaphy by Invagination.

These are operations both of which are applicable to cases of obstruction which necessitate the excision of a portion of small intestine either for gangrene of the gut, direct strangulation (for example, hernia, volvulus) fæcal fistula, or contraction of some portion of the intestine due either to simple stricture or an epitheliomatous growth. Until quite lately, in nearly all such cases the surgeon has been contented to remove the diseased portion of bowel and establish a fæcal fistula, waiting until a future day for the performance of enterorrhaphy by means of Czerny-Lembert sutures, thus exposing the patient to the risk of two operations; and, as I have already shown, each operation is attended with an extremely high mortality.

Of late years, however, surgeons have in several cases excised the diseased portion of intestine, and if circumstances allowed, at once sutured the two ends together either by the Lembert method or Jobert's, or some one of the other numerous plans that have been devised for this purpose by different surgeons.

From the success attained by Professor Senn and myself in our investigation, I venture to think that there is no case, when enterostomy is performed, in which the continuity of the bowel may not be restored at once, with every chance of success, by adopting one of the operations I am now advocating—namely, either by approximation of the two surfaces of the intestine, after their ends have been invaginated into themselves, by approximation discs, or by enterorrhaphy—by invagination of the upper into the lower segment of bowel, after the plan I have laid down. I would further here say that, in my opinion, in very few cases is the surgeon justified in forming a fæcal fistula.

With respect to the choice of these two operations in special cases, I should say, from my experience, that of re-establishing the continuity of the bowel by means of lateral apposition and approximation discs commends itself mostly to my favour, for in all cases of obstruction of the intestine which has lasted for any time the upper portion will be always found to be much dilated, and that portion below the stricture contracted so that it would be most difficult and, in many cases, impossible to invaginate the upper into the lower, whereas the approximation of the convex surfaces of the two ends would be comparatively easy to accomplish.

Again, in cases in which the obstruction is the result of adhesion or matting together of the intestine, which adhesion cannot be broken down without injury to the coats of the bowel, there would usually be no difficulty in adjusting the portion of the intestine above the seat of obstruction in apposition with that below, and securing by means of approximation plates, without the necessity of excising the portion of intestine so bound down or matted together, thus materially diminishing the risk to the patient.

Again, it has been shown that the mortality after this operation is very much less—namely, only at the rate of 7.69 per cent., as against 24.99 per cent. after invagination. This surely, then, must be a convincing proof of the superiority of the one over the other operation.

And, lastly, from the rapidity with which this operation can be performed, occupying as it does considerably less time than would be taken in stitching the open ends of the divided intestine to the abdominal walls to establish a fæcal fistula, it must in the future occupy the most prominent position in all operations for the relief of intestinal obstruction of the small intestine.

Ileo-colostomy.

This is perhaps the most interesting of all the operations I have described, and it is likely to play a very important part in future surgery for the relief of irreducible intussusception of the ileum into the cæcum and malignant disease of the colon.

Hitherto the only operative means for relief in such cases, if resection be not performed, supposing the abdomen to be opened and, in the one case, the invagination found to be irreducible, or, in the other, the growth such as cannot be removed, has been enterostomy, and the establishing of an artificial anus; but this operation, performed under these circumstances, has been found to offer less chance of recovery than enterostomy for simple stricture of the smaller intestine. As Treves has pointed out (referring to this operation for relief of intussusception), "not only is the obstruction relieved, but a portion of gut is left in the abdominal cavity that may cause fatal mischief. The unreduced intussusception may, in spite of the artificial anus above it, become gangrenous, or its walls may ulcerate, or the inflammation existing in its tissues may lead to fatal peritonitis. It is only by an excision of the involved segment that these evils can be obviated." In thirteen cases of enterostomy, or enterectomy, for intussusception, collected by Mr. M'Ardle, Dublin, ten died, four from gangrene, three from septic peritonitis, and two from exhaustion.

Now, by performing ileo-colostomy by implantation, these difficulties may be overcome, the continuity of the bowel be re-established, and a fæcal fistula avoided. Moreover, in many cases it would not be difficult to remove, through the opening in the colon, the invaginated portion of small intestine.

As we have seen, the mortality of this operation is exceedingly small. Ileo-colostomy might be had recourse to also in all cases where colectomy has to be performed, as it is equally easy to implant a portion of small intestine into the sigmoid flexure, or, indeed, into the rectum, as it is to implant it into the ascending colon, as shown in the specimen in my possession.

Finally, the conclusions to be drawn from what I have said are obvious, namely:

1. Gastro-enterostomy, jejuno-ileostomy, and ileo-colostomy should always be performed by lateral apposition, by approximation decalcified bone plates.

2. But when enterorrhaphy is performed, it should always be by invagination of the upper into the lower portion of the gut, and that continuity of the peritoneal surfaces of the ends of the bowel to be united should be procured, where the mesentery is detached by stitching the peritoneum together over the denuded surface of intestine with fine catgut sutures before the bowel is invaginated.

3. In cases of complete division of the bowel, circular enterorrhaphy is not to be recommended, but the ends of the divided

bowel should be closed by invagination, and the continuity of the canal established by means of lateral apposition and approximation discs.

4. That a fistulous opening should be established between the bowel above and below the seat of obstruction by lateral apposition and approximation discs in all cases where it is deemed inadvisable to remove the obstructed portion of intestine.

5. That an artificial anus should never be formed unless it is found to be absolutely impracticable to re-establish the continuity of the intestinal canal by one of the operations named.

6. That ileo-colostomy or ileo-rectostomy, either by means of approximation discs or implantation, should always be performed in cases of ileo-cæcal invagination which cannot be reduced by gentle traction, or malignant disease of the colon.

7. That omental grafts some two inches wide, or omental flaps, should be adopted in all cases of circular enterorrhaphy, as experience shows these grafts retain their vitality, and become adherent in a few hours.

List of Authorities Referred to.—Agnew, *Med. and Surgical Report. Phil.*, 1888, lx, 321; Barker. *Lancet*, 1888, vol. ii, 262; Barton, *Med. and Surgical Report, Phil.*, 1888, 16; Ball, *Dublin Journal of Med. Sciences*, 1888, 3, s. lxxxvi; Robertson, *Glasgow Med. Journal* [4] s. xxx, 215, 18; Bull, *Gaillard Med. Journal, New York*, 1888, xiv, 254; Penrose, *Med. and Surg. Report. Phil.*, 1888, lviii, 273; M'Ardle, *Dublin Journal Med. Scien.*, 1888, 3, s. lxxxv, 1—123; Morton, *Med. News, Phil.*, 1887, li, 729; Robertson, *Med. News, Phil.*, 1888, xviii, 431; Robertson, *Med. News, Phil.*, 1888, xviii, 429; Barton, *Liverpool Med. and Chir. Journal*, 1888, viii, 309; Curtis, *Med. Record, New York*, 1888, xxiv, 233; Park, *Med. Record, New York*, 312-15; Gaston, *Med. Record, Atalanta*, 1888, xviii, 201; Homan, *Inter. Med. Congress*, 1887, vol. i, 486-535; Senn, *Annals of Surgery*, vol. i, 1888, and *Inter. Med. Congress*, 1887, vol. i; Von Dunluff, *Smith Med. Record, Atalanta*, 1888, 209; Schebe, *Archiv klin. Chir.*, 1887, xxxvi, 646; Fühe, *Münch. med. Wochenschr.*, 1887, 156.

APPENDIX A.

Statistics of Operations for Diseases and Obstructions of Intestines.

Table of Cases of Enterectomy and Enterostomy with Artificial Anus. Collected by Mr. F. B. Jessett.

No.	Authority.	Operation.	Result.	Reference.
1	Barton	Excision of three inches of intestine for epithelioma of ileo cæcal valve; artificial anus	Recovered	*Med. and Surg. Report. Phila.*, 1888, p. 16.
2	,,	Laparotomy; artificial anus for obstruction of bowel by encephaloid growth	Died 14th day, peritonitis	,,
3	Mayne	Abdominal section for acute intestinal obstruction; artificial anus. Operation five days after first symptom	Recovered	*Lancet*, 1888, vol. ii, p. 512.
4	Bennett	Laparotomy; artificial anus for cancer of cæcum	Died	*Lancet*, 1888, vol. ii, p. 869.
5	Bull	Abdominal section; artificial anus for cancer of sigmoid flexure	Recovered	*New York Med. Journ.*, vol. xiv, p. 254
6	—	Abdominal section; artificial anus; cancer of rectum	,,	*New York Med. Journal*, vol. xxxiii, p. 205.
7	—	Abdominal section; artificial anus; cancer of sigmoid flexure	Died	,,
8	—	Abdominal section; artificial anus; acute intestinal obstruction by peritoneal band	Recovered	,,
9	President of Pathol. Section, Dublin	Abdominal section; artificial anus; excision of portion of cancerous intestine	Died	*Dublin Journ. of Med. Science*, 1888, p. 145.
10	,,	Abdominal section; artificial anus; cancer of intestine	,,	,,
11	Homan	Abdominal section; artificial anus; gunshot wound and intestinal obstruction	,,	*Int. Med. Congress*, 1887, vol. i, p. 533.
12	,,	Abdominal section; artificial anus; cancer of intestine	,,	,,
13	,,	,, ,, ,,	,,	,,
14	,,	,, ,, ,,	Recovered	,,
15	Penrose	Abdominal section; artificial anus; cancer of descending colon; resection of diseased intestine.	,,	*Med. and Surg. Report. Phila.*, 1888. vol. lviii, p. 273.

15 Cases, 8 Deaths = 53.3 per cent.

Enterectomy and Union of Divided Ends of Intestine by Czerny-Lembert Suture.

No.	Authority.	Operation.	Result.	Reference.
1	Agnew	Excision of 14 inches of ileum with V-shaped piece of mesentery	Died next day; stitches broke down.	*Med. and Surg. Report Phila.*, vol. lix, 321.
2	Atkinson	Rupture of intestine; portion excised and ends united	Died 2nd day; purulent peritonitis	*Lancet*, 1888, vol. i, p. 1295.
3	Sinclair	Enterectomy for artificial anus; portion of bowel resected	Recovered	British Med. Journal, 1888, vol. i, p. 1158.
4	Bennett	Cancer of colon; excision of diseased portion	Died	*Lancet*, 1888, vol. ii, p. 869.
5	,,	Acute intestinal obstruction; excision of portion of bowel	,,	,,
6	Bull	Acute intestinal obstruction; loop of 8 inches of intestine removed	Died 20 hours after operation	*New York Med. Journal*, vol. xxxiii, p. 205.
7	,,	Acute intestinal obstruction; loop removed	Died	,,
8	,,	Acute intestinal obstruction; excision of loop	,,	*New York Med. Journal*, vol. xiv, p. 254.
9	Park	Gunshot wound	,,	*Medical News, Phila.*, p. 1888, vol. liii, p. 116.

9 Cases. 8 Deaths = 88.8 per cent.

Cases of Enterostomy and Enterectomy with Lembert Suture for Gangrenous Hernia.

Authority.	No. of Cases.	Results.		Mortality.	Reference.
		Recovered.	Died.		
Collected by M'Ardle	76	35	41	54 per cent.	*Dublin Journal of Medical Science*, 1888, s. lxxxv., pp. 1-123.

Cause of Death.	No.
From yielding of sutures	11
,, exhaustion	8
,, carbolic poisoning	2
,, asphyxia	2
,, septic peritonitis	12
,, simple ,,	3
Not noted	3
Total	41

Cases of Enterostomy and Enterectomy for Intussusception.

Authority.	No. of Cases.	Died.	Mortality.	Reference.
Collected by M'Ardle	13	10	77 per cent.	*Dublin Journal of Medical Science*, 1888, s. lxxv., pp. 1-123.

Cause of Death.	No.
From gangrene of suture line	4
,, septic peritonitis	3
,, exhaustion	2
Not specified	1
Total	10

Cases of Laparotomy for Intussusception.

Authority.	No. of Cases.	Died.	Mortality.	Reference.
Collected by A. Barker	73	60	82.2 per cent.	*Lancet*, 1888, vol. ii, p. 262

Cause of Death.	No.
From bowel released	22
,, intussusception irreducible	5
,, ,, resected	7
,, artificial anus formed	10
,, ,, ,, without laparotomy	10
Not mentioned	6
Total	60

Cases of Acute Intestinal Obstruction Treated by Resection and Lembert Suture.

Authority.	No. of Cases.	Died.	Cause of Death.	Reference.
Collected by M'Ardle	5	4	Not mentioned.	*Dublin Journal of Medical Science*, 1888, s. lxxxv, pp. 1-123.

Cases of Enterectomy or Enterorrhaphy for Intestinal Obstruction caused by Cancer or other Cause.

Authority.	No. of Cases.	Died.	Cause of Death.	Reference.
Collected by M'Ardle	27	14	Mostly with pyæmic symptoms; 5 of the cancer cases had secondary deposits.	*Dublin Journal of Medical Science*, vol. lxxxv, pp. 1-123.

Cases of Resection for closing Artificial Anus.

Authority.	No. of Cases.	Died.	Cause of Death.	Reference.
Collected by M'Ardle	49	6	Septic peritonitis.	*Dublin Journal of Medical Science*, vol. lxxxv.
		4	Simple ,,	
		4	Collapse.	
		3	Obstruction.	
		2	Pulmonary embolism.	
		19		

Laparotomy: Excision of Portion of Intestine for Typhoid Ulcer by Lembert Suture.

Authority.	No.	Result.	Reference.
Morton ...	1	Recovered.	*Medical News, Phil.*, vol. li, p. 729.
Barlet ...	1	Died on 2nd day; opening not found.	
Kussmaul ...	1	Died; portion of gut excised and united.	
Martin ...	1	Died in 6 hours; ulcer stitched to parietes by Lembert suture.	

From the statistics of enterostomy collected by Dr. B. Farquhar Curtis, of New York, occurring between the years 1873-87,[4] it appears that, of 62 cases of enterostomy for acute intestinal obstruction, 46, or 72 per cent., were relieved by the operation; 6 were not relieved (in 3 of these a fistula was formed below the obstruction); in the other 2 there is no definite statement whether relief was obtained or not.

Thirty-two cases recovered; in 19 the fæces resumed the natural passage *per anum* generally in a few days, 3 within twenty-four hours, 9 during the first week, and 4 during the second week; the longest record before resumption of passage of fæces *per anum* in these cases was ten weeks. The fistula closed spontaneously in 7 cases, and in 6 cases by operation.

Thirty cases died, showing a mortality of 48.3 per cent., thus:

Cause of Death.	No. of Cases.
Sepsis of wound	5
Failure to reach the distended bowel	3
Gangrene of gut subsequent to operation	4
From shock	4
Bad condition of patient	7
Heart failure	1
Perforation of gut on the thirteenth day	1
Gangrene of gut existing at the time of operation ...	1
Extensive adhesions (infant)	1
Causes unknown	3
Total	30

[4] *New York Medical Record*, 1888, vol. ii, pp. 8 and 233.

Statistics of Cause of Death after Laparotomy for Acute Intestinal Obstruction.[5]

Cause of Death.	No. of Cases.
Sepsis due to gangrene of gut	17
Prolonged operation	3
Shock	13
Cause of obstruction overlooked or not found ...	19
Poor condition of patient	101
Complicated (peritonitis, gangrene, etc.)	41
Cause of obstruction irreducible	9
Unknown or wanting	23
Total	226

Statistics of Cases of Enterostomy with Artificial Anus.[6]

Result	No. of Cases.
Recovered	11
Died	4
Unrelieved	1
Total	16

One other case died subsequently of delirium tremens.

The passage *per anum* was resumed in 7 cases, including the case just mentioned; the fistula closed spontaneously in 2 cases, and in 4 cases it was closed by operation.

APPENDIX B.

DETAILS OF CASES OF INTESTINAL OBSTRUCTION CONDUCTED BY THE AUTHOR, WITH THE KIND ASSISTANCE OF MR. VICTOR HORSLEY AND DR. DOVE.—TWO CASES OF GASTRO-ENTEROSTOMY.

CASE I.—Successful. On June 11th, 1888. Rough-haired terrier, weight 15lbs., having been placed fully under the influence of ether, an incision was made in the middle line of the abdomen between the ensiform cartilage and umbilicus; two fingers of the left hand were introduced into the abdominal cavity through the wound, and a portion of the stomach withdrawn; this was held by an assistant, while, the fingers being again passed into the abdomen, a loop of intestine was drawn into the wound; this was done by pushing the omentum to the right and seizing a portion of the jejunum as near to its origin with the duodenum as possible. The portion of the stomach and intestine being now both outside of the wound, and supported by carbolised cotton-wool pads, a longitudinal incision about three-quarters of an inch in length was made through all the coats on the anterior wall of the stomach, about one inch from the greater curvature; a decalcified bone plate, prepared after Senn's method, with an opening in the centre three-quarters of an inch long by half an inch across, and armed with four chromicised catgut sutures, as already described, was slipped into the viscus through the opening, then the needles of the two lateral threads were passed through the entire coats of the stomach, close to the edge of the opening, the end threads being brought out through the incision. The threads were then given to an assistant to hold, while an incision was made in a longitudinal direction through the entire coats of the jejunum for three-quarters of an inch, another decalcified bone plate was then slipped into the intestine, and the lateral sutures passed through all its coats. The two plates were next approximated and held firmly in place by an assistant, and the corresponding threads of the opposing plates tied tightly, the lower lateral threads being tied first, then the end ones, and finally the upper lateral. The stomach and jejunum were then dropped into the abdominal cavity, the toilet of the omentum attended to, and the abdominal wound united by a few chromicised catgut sutures in the ordinary way. The operation was completed in twenty minutes. The dog on the next day was apparently perfectly well, and was fed on milk for the first two or three days, after which he had his ordinary diet. There were no bad symptoms, and the abdominal wound was perfectly healed by the first intention by the end of the week.

July 2nd. Three weeks after the operation the dog was killed with chloroform.

Post-mortem.—Wound perfectly healed, omentum firmly adhered to peritoneal surface of the wound; no trace of peritonitis; jejunum seen to be firmly adherent to stomach on its anterior wall; omentum also adherent to the junction of the two viscera.

[5] Collected by Dr. B. Farquhar Curtis, New York. *New York Medical Record*, 1888, vol. ii, pp. 8 and 234.

[6] Reported by Schebe and Fühe in *Münch. med. Wochensch.*, 1887, p. 856, and *Archiv klin. Chir.*, 1887, vol. xxxvi, p. 646.

No trace of the bone plates was found. On removal of the stomach and upper part of intestine from the body, I applied a ligature round the pylorus, and on pouring water into the œsophageal ends of the stomach, it at once passed freely through the gastro-jejunal opening into the intestine. The jejunal end was now tied firmly, the viscus filled with spirit, and the whole immersed in spirit.

Case II.—Successful, June 18th. A dog, weighing 26 lbs., was placed fully under ether, and an incision between two and three inches long made in the middle line of the abdomen between the ensiform cartilage and umbilicus. The transverse colon and omentum were drawn out through the wound and turned up, the transverse meso-colon was next torn through for the length of an inch and a half; the posterior wall of the stomach was then brought through the opening in the meso-colon and the abdominal wound; a piece of jejunum, somewhat low down, was also withdrawn through the wound, and the two viscera supported with carbolised cotton-wool pads. An opening was made into the stomach and jejunum as in Case I, and decalcified bone plates introduced and firmly tied, as in that case. The parts were then dropped back into the cavity of the abdomen, the transverse colon replaced, and the toilet of the omentum attended to, and finally the abdominal wound was united in the usual way with chromicised catgut sutures. The operation lasted thirty minutes. The dog was quite brisk and well the following day. He was kept for three days on milk, after which he was fed on his usual food. The abdominal wound was perfectly healed on the 25th. He was killed with chloroform on July 16th, one month after the operation.

Post-mortem.—The omentum was as usual adherent to the abdominal wound, but not to the seat of juncture of the stomach and jejunum. The union between these, as you see, was perfect. There was no sign of peritonitis. No trace of the bone plates was to be found. On removing the stomach and portion of gut below the pylorus, water passed freely through the artificial opening. The viscus was subsequently filled with spirit and treated as the other.

Six Cases of Ileo-jejunostomy.

Case I.—Successful. On June 25th a dog, weighing 32 lbs., was placed fully under the influence of an anæsthetic, and an incision about three inches in length was made in the middle line of the abdomen below the umbilicus; a portion of the ileum was then withdrawn, and some three or four inches of the intestine removed, also a wedge-shaped piece of the mesentery. The divided vessels were secured and tied with chromicised catgut. The two ends of the gut were each invaginated into itself for about one inch, and the serous surfaces stitched together with a continuous catgut suture passing through the serous and muscular coats only. The divided ends were now brought outside of the wound and supported by carbolised cotton-wool pads. An incision was next made in the convex surfaces of the two cut ends of intestine an inch and a half from the extremities and three-quarters of an inch long. Two decalcified bone plates, threaded as already described, and with an opening in the centre of each three-quarters of an inch long by half an inch wide were slipped through the openings into each portion of the gut, and the lateral threads passed through the whole of the coats of the intestines close to the edge of the opening, the end threads being brought through the wounds. The openings were then accurately applied to each other, the bone plates held firmly in position by an assistant, and the corresponding threads tied tightly. In this case I scarified the peritoneal surfaces between the plates with a needle. The intestine was dropped into the cavity of the abdomen, and the abdominal wound closed in the usual manner. The dog made a good recovery, and was killed fourteen days after the operation.

Post-mortem.—The omentum was firmly adherent to the wound and to the juncture of the intestine, union between the two portions of gut was perfect, and water flowed freely through the opening.

Case II.—Successful. On July 6th a dog, weighing 15 lbs., was placed under an anæsthetic, and a similar incision to that of the last made. A portion of the ileum was removed some three inches in length, the ends invaginated into themselves, and fixed by a continuous catgut suture. An incision was made into the convex surface of each end, about an inch and a half from the extremities, and decalcified bone plates introduced into the intestines through the openings and fastened firmly as in last case. As the plates seemed to tilt a little, a Czerny-Lembert suture was inserted at each end, and the intestine was then dropped into the cavity of the abdomen, and the abdominal wound closed in the usual manner. This dog took his food well from the first, and passed fæces perfectly naturally; there never was any rise of temperature, and the abdominal wound was quite healed on the seventh day.

On July 20th, fourteen days after the operation, the dog was killed. The omentum was firmly adherent to the abdominal wound, and also around the wound in the intestine. The blind ends of the gut were firmly united. Dog had not lost flesh. Water passed freely through artificial opening.

Case III.—Successful. On July 9th a dog, weighing 18 lbs., was put under an anæsthetic, and the ileum divided. This case was treated exactly in a similar manner as the last two. The animal took his food well from the first, and had no rise of temperature; passed fæces naturally.

July 27th he was killed. Omentum adherent to wound in parietes and at juncture of gut. On removing the portion of the intestine and pouring water through the proximal end, it flowed freely through the artificial opening.

Case IV.—Successful. On July 26th a dog, weighing 18 lbs., was placed under an anæsthetic, and the usual incision made in the middle line below the umbilicus, the omentum pushed up, and the small intestine traced back to the duodenum. I then divided the gut, and removed some three or four inches, and endeavoured to perform enterorrhaphy by invagination, as I shall describe presently, but found it not practicable, as the mesentery here was so short; so I invaginated the two ends, and treated the case with decalcified bone plates as in the last cases. In this case I wrapped an omental flap round the whole, and stitched the portion of the omentum round by passing two stitches on at either end opposite the ends of the bone plates, which transfixed the two layers of omentum and mesentery, the stitches being placed parallel to the vessels. The dog never had a bad symptom or rise of temperature, and was killed on August 9th, fourteen days after the operation. The omentum was adherent to parietes, and the omental flap was firmly adherent round gut. Opening between the ends of gut perfect.

Case V.—Successful. On July 27th, a dog, weighing 23 lbs., being anæsthetised, the usual incision was made in the middle line of the abdomen, a portion of the intestine withdrawn through the wound and a piece cut away. The ends were treated in the same manner as previously stated, and joined with decalcified bone plates. The dog made an uninterrupted recovery, and was killed on September 2nd, two months after the operation. The union between the two portions of gut was perfect, and a free passage existed from the one to the other by the artificial opening. No trace of the plates to be found. The dog had increased in weight.

Case VI.—Died. On August 2nd a dog, weighing 15 lbs., being anæsthetised and the usual incision made, a portion of intestine was withdrawn and divided, and a piece removed, all bleeding points being ligatured. In this case I intended to perform enterorrhaphy by invagination, but owing to the smallness of the intestine I was prevented from doing so, and the bone plates had become spoilt, so I determined to invaginate the end of the distal portion into itself, and then implant the proximal end into the convex surface of the distal end in the following manner. I lined the proximal end with a thin piece of india-rubber, stitched the lower edge to the end of the intestine with a continuous catgut suture, and then with two long threads about eighteen inches long, armed at either end with an ordinary sewing needle, I passed one thread through the upper end of the india-rubber and all the coats of the intestine, passing a needle through on either side of the mesentery, and the other thread was passed through the india-rubber, and all the coats of intestine on the convex side of the gut equal distant from the first. A slit was next made on the convex side of the distal end, and the fine needle armed with the threads that had passed through the proximal end of the gut made to pass through the serous and muscular coats of the distal portion at either end of the slit. The threads were then drawn firmly, and the proximal end of the gut slipped into the opening below, and the fine threads tied firmly; a Czerny-Lembert stitch was inserted on either side to keep the lateral surfaces secure, and an omental graft was placed round the whole. The dog was very poorly for the next few days, and died on August 8th, six days after the operation. The abdominal wound was firmly united and the juncture of the intestine was likewise quite firm, but unfortunately a ligature had slipped from one of the vessels

in the omentum, and there was a quantity of blood in the abdominal cavity, accompanied by general peritonitis.

SEVEN CASES OF ENTERORRHAPHY BY INVAGINATION.

CASE I.—Died. On June 11th, a dog, weighing 15 lbs., was placed under an anæsthetic, and an incision made through the abdominal parietes, between two and three inches in length. A coil of small intestine was withdrawn through the wound, and about three inches removed with a V-shaped piece of the mesentery. All bleeding points were then ligatured. The upper portion of the intestine was lined with a thin band of india-rubber, half an inch wide, which was formed into a ring the size of the lining of the gut, by a few stitches of catgut. The lower end of the ring was then stitched to the end of the gut by a continuous catgut suture. Two catgut sutures 24 inches long, armed at each end with an ordinary sewing needle, was then passed through the india-rubber ring at its upper part and all the coats of the intestine. The posterior thread was passed one on either side of the juncture of the mesentery with the intestine, and the anterior thread at corresponding points on the convex portion of the gut. The posterior needles were next passed through the peritoneal and muscular coats only of the lower portion of intestine about half an inch from its cut edge, one on either side of the mesentery attachment. The anterior threads were similarly passed through the peritoneal and muscular coats of the convex portion of bowel. An assistant then made steady traction upon all the four threads, while the operator with a little manipulation invaginated the upper portion of intestine into the lower, care being taken to turn the edges of the lower end well into the intussuscipiens, thus bringing the serous surfaces of the two ends into close approximation for the distance of half an inch. The mesentery was not stitched. The gut, appearing to be firmly closed, was now dropped back into the abdominal cavity, and the parietal wound closed in the usual manner. Time of operation twenty minutes. The dog took his milk fairly well and passed fæces, on the following day; he however, was very poorly, and died on the 14th, three days after the operation.

Post-mortem.—Extensive general peritonitis, due to a leakage at the seat of operation at the mesenteric attachment. On tracing the intestine up it was found that through an accident the lower portion of bowel had been invaginated into the upper portion, thus the tendency of the peristaltic action of the bowel was to force the invaginated intestine out.

CASE II.—Died. On June 18th a dog, weighing 12 lbs., being anæsthetised, the usual incision was made, and a portion of intestine withdrawn through the wound. An attempt was made by Nothnagel's method to determine the upper from the lower. Sodium chloride was applied to the peritoneal surface, but there was no effect whatever produced beyond some contraction at the seat of application. I then traced the lower segment to the cæcum to be sure of not making the same mistake as in the last case. I then removed about three inches of intestine and a wedge-shaped piece of mesentery. The remaining steps of the operation were identical with those described in the last case, but there was great difficulty, owing apparently to the smallness of the bowel, to invaginate it; and I also thought it wise to introduce the Czerny-Lembert sutures, one on each side of the mesentery, and the divided mesentery was also stitched together. The intestine was dropped back into the abdomen, and the parietal wound closed in the usual way. The dog was apparently very well the next day, but on the day following he refused his food, and appeared poorly and died on the 21st, three days after the operation.

Post-mortem.—Abdominal wound healed, omentum adherent, sero-purulent fluid and general peritonitis present; intestine matted together: the cause of this was found to be a leakage, as in the previous case, at the juncture of the mesenteric portion of intestine.

CASE III.—Lived fourteen days. Omental flap. On June 20th a dog, weighing 20 lbs., being anæsthetised, an incision was made on the outer edge of the right rectus muscle for two inches. A piece of gut was withdrawn, and three inches removed, and the lower end traced to its insertion into the cæcum. The same difficulty was experienced here as in the last cases in invaginating the gut. This was, however, done after a little trouble, but the mesenteric side did not appear satisfactory, so I introduced another stitch through all the coats of the bowel, and the india-rubber ring from one side of the mesentery to the other; this was caught through the peritoneal and muscular coat of the lower portion and tied, making all secure. The cut edges of the mesentery were stitched together, and finally, to make matters more secure, an omental flap was wrapped round the seat of union, and fastened by a couple of stitches passing through the two folds of omentum and mesentery parallel to the vessels. The dog did very well, and took his food regularly until July 3rd, when he began to flag, and on July 5th, fifteen days after the operation, he died.

Post-mortem.—Parietal wound quite healed, omentum adherent to wound. Intestine seen to be distended down to seat of operation, and below this point the bowel was contracted and nearly empty. Omentum firmly adherent around invaginated portion; no leakage or peritonitis. On removing the portion of gut at the seat of operation, the upper part was found to be filled with hay, which the animal had eaten, and which formed a hard mass completely blocking the intestine. On removing this the lumen of the gut at operation was found to be quite patent, readily admitting the finger. The india-rubber ring had disappeared, and must have been passed *per anum*. This dog would undoubtedly have recovered had he not eaten his bed.

CASE IV.—Successful. On July 6th, a dog weighing 16 lbs. was anæsthetised, and the usual incision made; a knuckle of intestine was withdrawn, and Nothnagel's test applied to discover the upper from the lower portion of the bowel, with no result. The intestine was then traced down to the cæcum, and a piece of gut removed. The india-rubber ring was introduced and secured into the upper segment in the usual manner. I next, with four catgut sutures, one on either side of the mesentery and two on the convex surface of the bowel, stitched the two free borders of the intestine together, and by taking the upper portion lined with the ring between my right thumb and finger, and the lower portion between my left, I very easily invaginated the one portion into the other. I then passed four Czerny-Lembert sutures through the two parts, so as to prevent disinvagination; and finally, I cut a piece of omentum off and wrapped it round the seat of union, and fastened it in position with two sutures through the mesentery. There was not any bad symptom, and the dog made a perfectly good recovery, taking his food well and passing fæces in a normal manner. On July 21st, the dog was killed.

Post-mortem.—Abdominal wound quite healed, omentum adherent to wound. The omental graft was firmly adherent round juncture of gut, union between intestine perfect. On removal of portion of bowel operated on, water was found to have passed readily through. The india-rubber ring had disappeared, and the finger passed freely through seat of juncture, where there was felt to be a slight constriction.

CASE V.—Successful. July 16th. A dog; weight 20 lbs. The usual median incision was made, and a piece of small intestine withdrawn; an end was traced to its insertion into the cæcum. Two inches of intestine were removed, the upper end lined with india-rubber ring, and the edges of two cut ends of intestine fastened by four catgut stitches, as in the last case, and the upper end slipped fairly easily into the lower; then two Czerny-Lembert sutures were inserted on each side of the mesentery and one on the convex surface to prevent disinvagination. No omental flap or graft was used. The intestine was dropped back into the cavity of the abdomen, and the parietal wound closed. The dog made a perfectly good recovery, and was killed on August 9th, three weeks after the operation. The omentum was, as is invariably the case, firmly united to the abdominal wound. There was no peritonitis, and the union at the seat of operation was found to be perfect. Water passed freely through gut.

CASE VI.—Successful. July 27th. A dog; weight 18 lbs. The usual incision being made and a piece of intestine removed and the lower end traced to its insertion into the cæcum, I, instead of lining the upper portion of gut with india-rubber, formed a ring of round india-rubber slightly smaller than the lumen of the gut. I then stitched this with a continuous catgut suture to the upper portion of the bowel. I next fastened with continuous suture another ring, slightly larger than the first, into the lower portion of bowel, wrapping it completely round with the coats of intestine. I then slipped the upper into the lower, and introduced two Czerny-Lembert sutures at the mesenteric side, fastened on an omental flap round the seat of union and dropped it back into cavity, and united the abdominal wound. The dog recovered perfectly from the operation, and I killed him on September 28th, two months after the operation. He had lost a considerable amount of flesh, and did not feed well.

Post-mortem.—Wound in parietes firmly united. Intestine

above the seat of operation much distended and below somewhat contracted. A hard mass was discovered in the upper part, which on examination proved to be a mass of hay which he had eaten. On removal of this the lumen of the gut was found to be perfect. There was no trace of the rubber ring. The finger passed freely through the opening.

CASE VII.—Successful. August 10th. Dog weighing 27 lbs. After the usual preliminaries a portion of intestine was withdrawn through the wound and a piece removed. The upper end was lined with india-rubber, and the operation performed in the same way as in Cases IV and V. The dog had no bad symptom. On November 26th, three months after the operation, the dog was killed in the usual manner. The union of the intestine was perfect, and it is not easy to distinguish the site of the operation. The dog had gained 2 lbs. in weight since the time he was operated on.

THREE CASES OF ILEO-COLOSTOMY (ALL SUCCESSFUL).

CASE I.—Successful. July 9th. A dog weighing 13 lbs. Incision made in middle line below the umbilicus. The cæcum was drawn out through the wound, and the ileum divided about three inches from the ileo-cæcal valve. The distal end was invaginated into itself, and fixed by a continuous catgut suture. The peritoneal end of the gut was lined with a thin piece of india-rubber in a similar manner to that described for enterorrhaphy. Two threads of catgut, some 24 inches long, each thread being armed with two needles, were used. The posterior thread was passed through all the coats of the intestines, one thread on either side of the mesentery, and the other thread was passed through the opposite convex surface of the intestine in two places; these threads were then given to an assistant to hold, while a longitudinal incision was made on the convex surface of the ascending colon. The sutures connected with the ileum were then passed through the serous and muscular coats of the ascending colon at either end of the opening. The mesenteric sutures at the lower and the anterior threads into the upper were about an inch apart, and half-an-inch from the extremities of the incision; the ileum was then pushed into the slot, and the ligatures tied securely at either end. A Czerny-Lembert stitch was inserted on one side where the edge did not appear to be closely approximated. The dog had not the least inconvenience from the operation, and had thriven up to the time he was killed. On November 26th, twenty weeks after the operation, the dog was killed. He had gained 4 lbs. in weight since the operation. The union of the ileum with the ascending colon at the seat of operation was perfect, and allowed a full stream of water to pass. [The specimen was shown.]

CASE II.—Successful. July 16th. Dog weighing 20 lbs. Operation performed exactly in the same manner as last, excepting that the abdominal incision was made outside of the rectus muscle on the right side. The dog made an uninterrupted recovery, and was killed eighteen days after operation.

CASE III.—Successful. July 26th. Dog weighing 18 lbs. Abdomen opened by median incision; all other steps of the operation the same as in last two cases. The dog was killed three weeks after operation.

REPORT ON AN INQUIRY INTO THE ETIOLOGY OF SUMMER DIARRHŒA.

BY HENRY TOMKINS, M.D., B.SC., SAN.SCI.DIP., ETC.,
Medical Officer of Health, Leicester.

THIS inquiry into the etiology of summer diarrhœa had its origin in the excessive infantile mortality which occurs annually from it in Leicester, this town suffering more than any other community in England.

It is scarcely necessary to consider here the objections that have been raised to the term diarrhœa as denoting any one definite disease. Undoubtedly diarrhœa exists as a symptom in many diseases, and deaths from "diarrhœa" are the results of probably very varying pathological conditions. But after making due allowance for all these, there undoubtedly does exist a specific disease prevalent during the summer weather, in which one of the most marked and obvious symptoms is an excessive watery, offensive, discharge from the intestinal canal.

Many observers have previously turned their attention to the causes at work in Leicester in producing this ailment, but without getting much beyond the fact that, in some way or other, the heat of the sun was the important factor in its production, but the exact manner in which an increase of temperature brought about the disease has been matter of much dispute.

It has been argued that improper feeding, maternal neglect from mothers being at work, teething, density of population, damp subsoil, sewer emanations, etc., were factors in the production of the disease, but it is easy to show that many of these causes affect infants only, whilst the disease attacks persons of all ages. Out of 24,157 cases of which I have record during the past four years, 16,506 were over 10 years of age; whilst only 1,219 were under 1 year of age. Yet when we turn to the *deaths* occasioned by the disease in Leicester, during the above period, we find that out of a total mortality of 837, no fewer than 725 were infants under 1 year. These figures should once for all dispel the popular impression that the disease *is chiefly confined to infants and young children.* The *mortality* is almost entirely confined to them, but persons of all ages, occupations, and position suffer, though happily with non-fatal results. Again, many of the *alleged causes* are in action the whole year round, but the disease prevails only for a very limited period. Many of these, such as density of population, damp subsoil, the employment of mothers in factories, etc., exist to an equal extent in other towns and places where the same excess of diarrhœa is not met with.

After arranging and analysing a large amount of statistical and other information at my disposal, two important facts were soon apparent: first, that prior to 1850 Leicester showed no such excess of diarrhœa mortality as at the present day, but since that date the disease has apparently been steadily, and uninterruptedly on the increase; secondly, and of considerable importance, the prevalence of the disease at the present time is very largely in excess in certain districts of the borough, and comparatively absent in other parts.

Old Leicester lies low down in the valley of the Soar, but with the increase in population of the last twenty years it has gradually extended itself on either side of the river to the adjoining higher districts. Speaking generally, the town is situate upon clay, beneath which is the new red sandstone, but, following the bed of the river, stretching out for a variable distance on either side, alluvial deposit is found, consisting of sand, gravel, etc., of varying thickness. Overlying all these is, of course, a variable amount of soil or common mould.

Now the district where diarrhœa most prevails is the low-lying one following the river, and which consists also of all the older parts of the town; this, for convenience, I shall speak of as the "diarrhœa area." I have already pointed out that within this area persons of *all ages, stations, and occupations* are attacked, and one is immediately led to ask, What agency is there at work in this diarrhœa area, which apparently is much less active in other districts of the town? The cause must be one which is common to all the dwellers there, and must therefore apparently be either in the food, the water, or the air. The food and water supplies are practically the same throughout the borough, and I therefore naturally turned my attention to an examination of the air in the various districts. Previous observers in Leicester had already suspected a contaminated air to be connected with the causation of the disease, and further presumptive evidence was afforded me from the fact that during the summer of 1885 and 1886 large numbers of children were under my care at the Borough Hospital, situate on a slightly elevated site about a mile from the centre of the town, and yet, though most of these children came from the "diarrhœa area" and the temperature practically the same at the hospital as in the town, no diarrhœa occurred amongst them.

In examining the air of the various parts of the town, I set before myself the task first to ascertain approximately the number of microbes or their germs which existed therein prior to the onset of the disease and during the time when the disease was at its height, using for this purpose Hesse's apparatus, with sterilised nutrient gelatine. The details of the working of this are now so well known to bacteriologists that there is no need to describe the operations in minute detail. There are, no doubt, certain objections to be made to this method, but if used in the same manner and under the same conditions, the results obtained from it are reliable and comparable the one with the other. The nutrient gelatine used was neutral or with the faintest trace of an acid reaction.

The results obtained show that at the time when the disease is prevalent the atmosphere contains at least double or treble the

number of microbes or their spores compared with periods before or after the epidemic, when the aërial temperature is much lower. Further, in the diarrhœa area of the town *they were fourfold as numerous* as in those districts of the borough where the disease does not prevail. Thus it ranged from 6,000 to 7,000 per cubic mètre in the former, whilst not more than from 600 to 1,400 existed in the latter. But, further, in their growth and multiplication in the nutrient media the liquefaction of the gelatine was more rapid and complete, and a much more offensive odour was produced by the organisms obtained from the "diarrhœa area" than with those from other districts.

During the summer of 1888, which was notable for its absence of sunshine and continuous rainfall, the disease prevailed to a much less degree than in the two preceding summers, and the number of organisms found to be present were correspondingly smaller in number.

Secondary cultivations made from the original growths into test tubes of nutrient gelatine grew and developed in the manner depicted in the accompanying figures. A needle charged from the primary growth was inserted to about an inch, and the tubes maintained at a temperature of about 65° F. On the second day the needle track was distinctly visible; on the fourth day a small white patch had developed, as seen in Fig. b. On the sixth day this had extended, and the gelatine was becoming liquefied in a cup-shaped manner, as seen at Fig. c. On the eighth day this process had extended, as at Fig. d; whilst on the twelfth day the whole of the gelatine to the depth of the original insertion of the needle was liquefied, as at Fig. e.

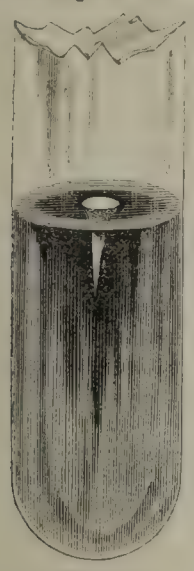


Fig. b.



Fig. c.

During the summer of 1888, in addition to the cultivations from Hesse's tubes, I made a series of plate cultivations by simply exposing plates of glass, covered with nutrient gelatine, to the air for ten minutes each, and then keeping them in moist chambers at the same temperature as the above. The results obtained agreed approximately with the other observations. In the "diarrhœa area" a much larger crop of growths was obtained than in the non-diarrhœa localities, and they again developed a much stronger and more offensive odour as the result of their growth.

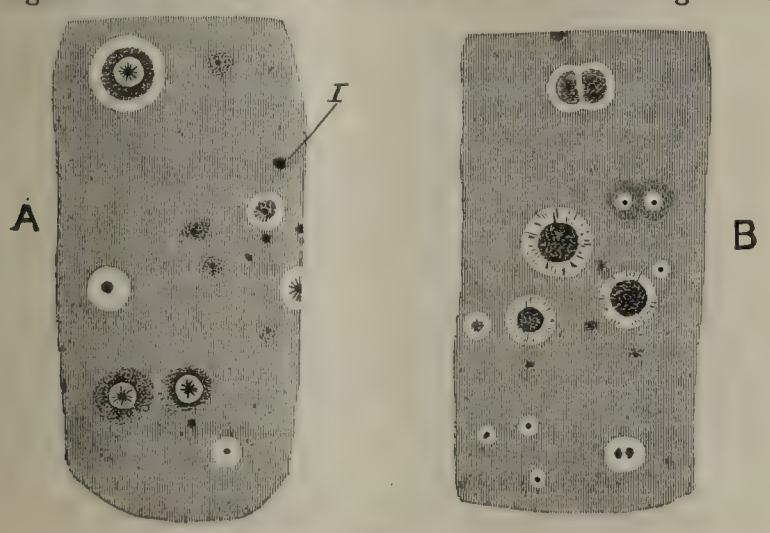


Fig. 1.

The accompanying drawing (Fig. 1) shows some of these growths on plates; the gelatine of the patch A was faintly alkaline, that of B was faintly acid before use. Of course, after-growths had taken place on them, both were strongly alkaline.

A point in connection with these plate cultivations is worth noting. During the summer of 1888 I observed a number of growths of a bright red colour, such as shown at 1 on the gelatine A.

Microscopic examination showed these to be large micrococci, of which Fig. 3 is reproduced from a photograph. It appears to be micrococcus prodigiosus, and possibly of no pathological significance, but the point I wish to bring out is that, in former years, I have not met with this particular organism in such abundance as last summer, a fact which would seem to indicate that different bacteria, like vegetables of larger growth, have their seasonal prevalences, though at present we know but little as to the conditions which are especially favourable to individual varieties.

In addition to examination of the air, I have, during last summer, subjected the soil of the various districts of the town to a bacteriological examination, the method adopted being as follows: A small quantity of the earth to be examined was dried at a gentle heat in a water bath and triturated to a fine powder; of this, half a gramme was shaken up with five cubic centimètres of sterilised distilled water, and ten drops of the mixture added in a test tube to liquified nutrient gelatine. This was then poured out upon glass plates, and growths and cultivations obtained therefrom in the usual manner. The samples of soil were taken at

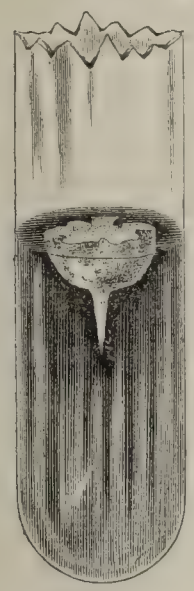


Fig. d.



Fig. e.

various depths varying from six inches to six feet below the surface. In all those places where the earth was taken from the older parts of the town, and within the "diarrhœa area," the growths were from three to six times as numerous as in those samples of earth taken in the higher and newer districts of the town. Especially was this the case where the earth was evidently polluted by leakage from defective sewers into the surrounding soil, a condition which obtains largely in the old parts of the town. Further, as in the case of the cultivations obtained from aërial microbes, in these polluted soils the liquefaction of the gelatine was more rapid, more complete, and developed a much stronger and offensive odour than was the case with the other soils.

I have endeavoured during the course of my observations to obtain some corroborative evidence as to the bacteriological origin of this disease from the bodies of those suffering from it, but the few results I have obtained are unsatisfactory. In the first place, it is with the utmost difficulty that I have been able in three or four instances to obtain permission to make a *post-mortem* examination in a sufficiently short time after death to be of any service in this respect; for, occurring as these deaths do in the very hottest season of the year, unless the examination be made within a very few hours of death, it is useless for any bacteriological purposes. In three cases I examined the bodies within six hours of death, and in each of these obtained an abundant cultivation from the kidneys; in two cases growths were obtained from the spleen and mesenteric glands. I made also abundant cultivations from the contents of the intestinal canal,

but which, in our present knowledge, or want of knowledge, of the bacteria contained therein under normal conditions, are not of much value.

In the growths obtained from the kidneys, as well as those from the intestines, the liquefaction of the gelatine was more rapid and the odour developed much stronger than in those from the spleen and glands. In each case swarms of micrococci and bacilli were present, of various sizes.

One important fact may here be alluded to: that in all those cultivations, whether from the air, the soil, or the body, where the gelatine was rapidly liquefied with a disagreeable odour, a very small dose sufficed to bring on in the adult subject a sharp attack of diarrhœa, lasting some hours.

One other observation of some importance was made during the past summer, that is, the cultivation of one or more of these bacteria in milk. I conducted two sets of experiments with this important article of food; in the first I merely sterilised the milk, and added just sufficient pure gelatine to solidify it, and then made test tube cultivations in the usual manner. In the other I used only the whey of the milk, the curds being abstracted therefrom; the whey was added to nutrient gelatine. In both cases the bacteria obtained from the primary cultivations of both the air and the soil of the diarrhœa districts grew and multiplied almost as well as in the pure nutrient gelatine itself, proving that milk is a favourable soil for their growth and development.

Having thus so far arrived at conclusions which point strongly to the presence of one or more forms of microbic life as being concerned in the production of diarrhœa, one has still to adduce reasons why Leicester should suffer so much above all other towns.

Prior to 1850 diarrhœa does not appear to have been unduly prevalent here, but since that time the mortality has steadily and continually increased. By references to past records of the sanitary condition of the town, it is amply proved that since that time the soil of the town, especially in the older parts, has been undergoing a constant pollution with organic filth from insufficient and defective sewers, which, even up to the present day, are polluting the ground in which they are laid. A new scheme, however, involving a large expenditure, is now being carried out in the borough, the old privies and cesspits also, which formerly existed in the town in large numbers, are now almost all abolished. Until very recently, too, the low lying parts of the borough were subject to periodical floodings by overflow from the river, itself not too clean, from all of which causes the soil of the older and lower parts of the borough has been more or less polluted with organic filth. Given the condition of the earth, *plus* the heat from the rays of the summer sun, and we find ample explanation for the coming into existence of vast numbers of microbes and their germs.

Many of the observers alluded to above as having studied this problem had directed their attention to meteorological conditions in connection with the disease, and as before stated, had shown, that whatever other causes might be at work, a high temperature was the one *sine quâ non*, without which it did not exist; and in those summers when the temperature was below the average, then diarrhœa was also below the average. Most of the actual observations made upon the temperature referred, however, chiefly to *the temperature of the air*. During the last three years, I have in additon recorded twice daily, at 9 A.M. and 3 P.M., the temperature of the earth at depths of one foot and four feet, during the months of June, July, August, September, and October, and these observations bring out very clearly the fact, that not until the earth at the depth *of one foot has reached about* 60° *F., or some four degrees less than this at four feet* deep, does diarrhœa begin to prevail in Leicester to any marked degree. Last year it was not until August that diarrhæa really began to prevail, and not till then did the one-foot thermometer register continuously 60° of heat in the earth, or some 56° or 57° at four feet from the surface. In some preceding years this degree of heat in the soil has been reached early in July, and the epidemic has burst out at a correspondingly early period.

Whether the geological formation of the district on which Leicester is built has any influence in intensifying the incidence of the disease I am not in a position to say, but I am strongly of opinion that its geographical position is an important factor. Lying in the hollow of a valley, which runs north and south, the low-lying districts of the town scarcely feel whatever slight breezes may exist during the sultry heat of midsummer, and the air in the confined streets of these districts tends to become stagnant. To this also, as a factor of considerable importance, must be added the habits of the people. The population is composed largely of artizan and "factory hands," a large amount of female labour is employed, and, as in other manufacturing towns, much crass ignorance and carelessness prevails in the proper management and feeding of infants and young children. This, together with early marriages, tends to produce a large proportion of weakly, ill-nourished infants, amongst whom the *bulk of the fatal cases occur*.

I have purposely avoided saying anything as to the particular bacteria probably concerned in producing the disease, because at present I have not sufficient evidence to warrant me in making any positive statement thereon. In all the growths hitherto obtained micrococci of various sizes, together with a number of small bacilli, have been present. In those cultivations which most quickly liquefied the nutrient material in their growth, and where the more offensive odour was generated, these latter existed in largest numbers. Secondary and purer cultivations from these induced diarrhœa within six hours after being swallowed. In Fig. 2 (which is produced from a photograph) the small bacilli are shown.



Fig. 2.



Fig. 3.

Again, a wide field of research opens itself out as to whether this or any other micro-organism be the direct cause of the disease, or whether, as is most likely the case, it be not due to something in the nature of an alkaloid or ptomaine, produced by the growth and development of the microbe in the material, wherever it may be, which furnishes it with pabulum and nourishment.

REPORT ON CEREBRO-SPINAL FLUID.

By W. D. HALLIBURTON, M.D., B.Sc., M.R.C.P.,
Assistant Professor of Physiology, University College, London.
(From the Physiological Laboratory, University College, London.)

I AM indebted to the Scientific Grants Committee of the British Medical Association for assistance in defraying the expenses involved in my work. I have examined a large number of various pathological transudations, but shall defer the publication of the results obtained from the examination of dropsical fluids until I have repeated my experiments on a larger number of specimens. The present paper relates to a few specimens of cerebro-spinal fluid which I have been fortunate enough to obtain. The fluid was removed either during life or immediately after death from cases of hydrocephalus or meningocele.

This account of my experiments is an abstract of a full communication which has been sent to the *Journal of Physiology*, vol. x, No. 4.

I am indebted for my specimens chiefly to Mr. R. W. Parker; these were removed from cases occurring in his practice at the East London Hospital for Children. I have also received a few specimens from Dr. Ringer, Mr. A. E. Barker, and Mr. V. Horsley from cases in University College Hospital; from Dr. Penrose from cases at the Hospital for Sick Children, Great Ormond Street; and from Mr. S. G. Shattock; to all of these gentlemen I beg to offer my sincerest thanks for the assistance they have thus given me.

The fluid is clear and colourless, faintly alkaline, and of low specific gravity (1006 to 1008). The first specimens I examined were from cases of spina bifida; they were examined some years ago, and the results published in the report of the Spina Bifida Committee.[1] I, however, insert them here.

	Case I.	Case II. 1st Tapping.	Case III. 4th Tapping.
Water in parts per 1,000 ...	989.75	919.877	991.658
Solids	10.25	10.123	8.342
Proteids	0.842	1.602	0.199
Reducing substance (reckoned as dextrose)	0.002	Traces	0.165
Extractives	9.624	0.631	2.865
Salts		7.890	5.115

The general results here obtained agree very well with analyses previously published.[2] Tabular statements of this kind, however, do not show anything characteristic of the fluid examined; they show (1) a very small percentage of proteids, (2) a proportion of inorganic salts approximately equal to that in the blood, lymph, and transudations generally, (3) a small proportion of a substance which reduces alkaline solutions of copper salts like sugar. But all these characteristics might be equally well possessed by a dilute transudation, such as occurs in œdema of the subcutaneous tissues. The peculiarity of cerebro-spinal fluid lies in the quality, not the quantity, of proteids that are present, and in the fact that the reducing substance present is not sugar, but something else.

The Proteids.—Of previous investigators, Hoppe-Seyler is the only one who recognises that there is something peculiar about the proteids present; he says that boiling gives a cloudiness only, because the quantity of proteid is small and the liquid is alkaline. There is nothing peculiar about that; a weak alkaline solution of any albumin or globulin does not give a flocculent precipitate on heating until it is rendered faintly acid. Hoppe-Seyler then goes on to say that although he had at one time considered that the proteid present was of the nature of casein, later investigation had led him to believe that it was a globulin. He further states that fibrinogen is absent; there is no coagulum on heating to 56° C., and no formation of fibrin on admixture with serum. This is, so far as I can find, the only trustworthy statement previously made with regard to the nature of the proteids.

Let me now give a summary of the investigations, so far as they relate to the proteids, which I have made.

Case.	Quantity of Proteid.	Kind of Proteids Present.
1. S. B.[3]	0.0842 per cent.	Globulin; albumose of doubtful variety.
2. S. B.	0.1602 ,,	Not investigated.
3. S. B.	0.0199 ,,	Globulin.
4. S. B.	—	Globulin; proto-albumose; deutero-albumose.
5.[4]	—	Albumose present; other reactions doubtful (mucin absent).
7. H.[3]	0.65	Fibrinogen; serum globulin; serum albumin; proto-albumose (acute case).
8.[5]	—	Globulin; proto-albumose.
9. S. B.	—	—
1st tapping	—	Globulin; albumin; proto-albumose.
2nd ,,	Proteids more abundant than in first tapping	,, ,, ,,
10. H.[3]	—	Globulin; proto-albumose; peptone.
11. S. B.	—	Globulin.
12. H.[3]	—	—
1st aspiration	0.045	Globulin (traces); proto-albumose.
2nd ,,	0.069	Globulin; proto-albumose.
3rd ,,	0.272	Globulin; albumin; proto-albumose (traces).
13. H.[3]	—	Globulin; proto-albumose; peptone (traces).

In two cases the proteid present consisted wholly of globulin. In six cases, the proteids consisted of globulin and albumose. The albumose present was generally proto-albumose; in one case deutero-albumose was present also; in two cases peptone was present in addition to albumoses, that is true peptone in Kühne's sense—a proteid which is not precipitable by saturation with ammonium sulphate. In three cases albumin was present, but two of the three cases may be excluded from the general classification; Case 7 was a case of acute inflammation, and in Case 12 (third tapping) there was also doubtless a chronic or subacute inflammatory condition; that leaves us with Case 9 as the only instance in which apparently normal cerebro-spinal fluid contained albumin.

Fibrinogen was absent throughout (except in Case 7, which, as before mentioned, was not an instance of the normal fluid, but is useful for the sake of contrast with the normal fluid). Addition of cerebro-spinal fluid to serum never caused the formation of fibrin; heating the cerebro-spinal fluid to 56° C. also caused no precipitate. The globulin present is one which, like serum globulin, is coagulated at a temperature of 75° C. It is not cell globulin,[6] as when tested with dilute magnesium sulphate plasma it has none of the properties of fibrin ferment.

The interest, however, of the proteids seems to me to be the presence of albumoses and peptones; on investigating the question as to whether the fluid contains any digestive ferment to produce these, the experiments I have performed gave in all cases a negative result.

Peptone has from time to time been described as a normal constituent of blood, milk, pus, and other fluids and tissues of the body. As Neumeister[7] has recently pointed out, such observations were made previous to the discovery of the use of ammonium sulphate as a means of separating peptones from other proteids, and are therefore untrustworthy. He also considers it possible that in the heat coagulation of albumins and globulins, a small amount of primary albumoses (that is proto- and hetero-albumose) may be formed by the hydrating action of the acidified hot water. This action must, however, be very small when the acidification is so slight, and the heating is prolonged for so short a time (two or three minutes) as it was in my experiments. I, however, in several cases obtained evidence of albumoses in the original fluid and, in Case 12, separated the albumoses from other proteids by the use of alcohol; alcohol precipitates all the varieties of proteid present, and its prolonged action coagulates (that is, renders subsequently insoluble in water) the globulin, and leaves the albumoses still freely soluble.

I tested the question as to the presence of albumoses in other fluids, by first filtering off the proteids coagulable by acidulation and boiling, and then testing for albumoses by the nitric acid and biuret reactions. In this way I examined seven specimens of blood (man, horse, sheep, and rabbit), two specimens of pericardial fluid (horse), one specimen of pleuritic fluid, four of ascitic fluid, four of fluid removed from blisters, and three of hydrocele fluid. As a rule the filtrate gave a faint xanthoproteic reaction; in a few cases there was not sufficient proteid to give even that; but in all cases albumoses were absent.

Reducing Substance.—The existence of a reducing substance in cerebro-spinal fluid has long been known. Claude Bernard[8] spoke of it as sugar. Bussy and Deschamps[9] found a reducing substance in the normal cerebro-spinal fluid of the horse and dog, as well as in a specimen obtained from the ear of a man who had sustained a fracture of the base of the cranium. In none of their experiments, however, were they able to induce the alcoholic fermentation. The idea that the substance in question was not sugar, but something else, did not strike them; and it was Turner[10] (who examined the fluid removed from a case of spina bifida by Sir James Paget) who made the suggestion that probably it was not a carbohydrate at all, but some derivative of albumin that possessed the reducing action.

Since that time the existence of a reducing substance in cerebro-spinal fluid has been a matter of common observation. In addition to not undergoing the alcoholic fermentation, the fact has also been observed that it has no action on the plane of polarised light. This negative evidence I have been able to confirm, and to add to it the additional point that it does not give the phenyl-hydrazine test for sugar.[11]

Gorup-Besanez[12] suggested that the substance was the same as Bodeker's alcapton,[13] a statement to which my attention was first drawn by a paper by G. Thiéry;[14] but I am not aware that this supposition has ever before been put to the test of experiment. Alcapton was the name given by Bodeker to a reducing substance

[1] *Clinical Society's Transactions*, 1885.
[2] See Hoppe-Seyler's *Physiol. Chem.*, p. 601.
[3] S. B. means spina bifida. H. means hydrocephalus.
[4] Case of myxœdema.
[5] Case of cerebral meningocele.
[6] See my paper on the Nature of Fibrin Ferment, *Journal of Physiol.*, vol. ix, p. 229.
[7] Neumeister, *Zeits. f. Biol.*, vol. xxiv, p. 272.
[8] Quoted by Gorup-Besanez, *Lehrbuch*, vol. ii, p. 397.
[9] *Bulletin de l'Académie de Médecine*, December, 1852.
[10] *Royal Society Proceedings*, vol. vii (1854), p. 89.
[11] A fact which also excludes glucosamine, a nitrogenous reducing substance (see F. Tiemann, *Berichte d. Berlin. Chem. Gesellschaft*, vol. xix, p. 49). Glycuronic acid is excluded by several reactions.
[12] *Loc cit.*
[13] *Zeitschr. f. rat. Med.*, vol. vii, p. 128.
[14] Thiéry, *Progrès Médical*, vol. xiv, p. 283.

occasionally occurring in urine, and which has since been shown to consist of pyrocatechin or allied aromatic substances. The observations which I have made in two cases (7 and 12) have convinced me that the substance is pyrocatechin; though whether this substance is present free, or in some combined condition, I am unable to say.

Hoppe-Seyler states that the reducing substance (which he speaks of as sugar) is not a normal constituent of cerebro-spinal fluid, but only appears subsequent to the irritation set up by tapping. In my own work I have never failed to find the reducing substance; its quantity, however, is very much increased by repeated tapping or aspiration. The fluid removed by the first operation may require to be concentrated before it gives the test in question.

Salts.—C. Schmidt made several analyses of hydrocephalus fluid, and remarked on the high percentage of potassium salts present. Hoppe-Seyler quotes three analyses.[15]

In two out of the three cases there is certainly a high percentage of potassium salts. Subsequent investigations have, however, shown that this is quite exceptional; the following are a few analyses that I have been able to find:

Lassaigne[16] gives the following numbers: In fluid removed from an old woman, the total quantity of salts in parts per 1,000 was 8.54, of which 8.01 consisted of sodium chloride; in the cerebro-spinal fluid of the horse he found total salts per 1,000 6.89, of which 6.10 consisted of sodium chloride.

Yvon[17] examined the fluid from a case of hydrocephalus, and found total salts per 1,000 8.90, of which 7.098 consisted of sodium chloride.

Fr. Müller's[18] case was also one of hydrocephalus; he found the total salts per 1,000 to be 8.80; and the ratio NaCl : KCl = 21.5 : 1.

In the one case (Case 13) in which I have investigated this question, the ratio of the two salts was nearly the same as in Müller's case, namely, NaCl : KCl = 95.15 : 4.85, and I would specially draw attention to two points in the method adopted: (1) that a large quantity of liquid, 300 cubic centimètres, was taken, and thus errors due to manipulation were minimised; (2) organic matter was destroyed, not by ignition, but by means of fuming nitric acid; by this means the passing off of volatile salts, like sodium chloride, was entirely prevented. Ignition was employed in a later stage to destroy the last traces of organic matter; but it is when incineration is performed in the presence of a larger quantity of carbonaceous matter that the danger of saits like sodium chloride being carried off is especially to be feared. As regards the saline constituents, it can therefore be said that there is no peculiarity in cerebro-spinal fluid. It is in the exceptional character of the proteids, and in the presence of pyrocatechin, that this fluid stands clearly marked off from serous or lymph-like fluids, and would be more correctly classified with secretions.

[15] *Physiol. Chemie*, p. 604.
[16] Quoted by Thiéry.
[17] Yvon, *Journ. de Pharm. et de Chimie*, série iv, vol. xxvi, p. 240.
[18] Müller, *Mittheil. a. d. Würzburger med. Klinik*, vol. i, p. 267.

REPORT ON PROTEID POISONS, WITH SPECIAL REFERENCE TO THAT OF THE JEQUIRITY (ABRUS PRECATORIUS).

By SIDNEY MARTIN M.D.Lond., M.R.C.P.,
British Medical Association Research Scholar, Assistant-Physician to the Victoria Park Chest Hospital.

It is only within the last thirty years that the fact has been established that a proteid, when introduced into the circulation of the blood, is poisonous. This fact, remarkable as it is in itself, becomes of greater significance when it is considered that these poisonous proteids are not distinguishable by any well-marked chemical reactions from the non-poisonous proteids, and that proteids are not only essential as food to animals, but also have an important nutritive relation to protoplasmic cell-life both in the animal and vegetable kingdoms. During the last two years I have been engaged, as British Medical Association Research Scholar, in the investigation of the properties and action of certain of these proteid poisons. Those that have specially occupied my attention are the jequirity (abrus precatorius), the papaw juice (papain), and the animal albumoses and peptones.

The list of the proteid poisons is extending more and more, and may be subdivided into two groups—those found in animals and those found in plants.

Animal Proteid Poisons.—1. First and foremost stands the *venom of snakes*, both colubrine and viperine; 2. The *serum of the eel*—the conger eel and the muræna; 3. Poisons formed during natural digestion in the stomach and small intestines—*albumoses and peptones*; 4. Proteid poisons found in certain spiders. To these may be added the body, which produces coagulation of the blood *intra vitam* (Wooldridge).

The Vegetable Proteid Poisons.—5. Jequirity (abrus precatorius); 6. Papain (carica papaya); 7. Lupinotoxin (?) (lupinus luteus).

The Poison of Jequirity (abrus precatorius).—The seeds of jequirity contain a substance which, as is well known, when extracted as in a watery infusion, produces a local irritation and inflammation of the conjunctiva, which has been utilised in practical medicine for the cure of granular lids and of pannus. Its employment in these conditions has not, however, been found to be so beneficial as at one time was thought probable, so that at the present time jequirity may be said to possess chiefly a scientific interest—one, as I shall indicate, of possibly great signficance. Investigations into the exact nature of the poison have not been wanting, and the knowledge obtained from them has gone through many curious phases.

From the researches of Sattler, Cornil, and Berlioz, it was concluded that the irritant action of jequirity was due to a special bacillus which grew in the infusion of the seeds, and was called the jequirity bacillus. Contrary, however, to the behaviour of liquids containing specific bacteria, the physiological activity of the infusion of abrus seed was totally destroyed by heating it to the boiling point of water (Klein); and, following this result, Warden and Waddell[1] separated from the seed a body they called "abrin," which was a proteid body, and which possessed the physiological properties of jequirity. Furthermore, although these observers found bacteria in the local lesions produced by jequirity, these organisms were of various kinds, and, after cultivation and separation, were found to have none of the poisonous properties of jequirity. To dispose at once of this idea of the bacterial nature of jequirity poison, I may say that in my experiments, using a pure product, I have found no bacteria present in the local lesions, either in those produced at the seat of injection or in those produced internally in the peritoneum or alimentary canal. The sections were stained by Gram's method.

We must look, therefore, to the proteid or proteids present in the seed for the poison of jequirity. Warden and Waddell's "abrin," as described by them, did not possess very definite characteristics; it was called a vegetable "albumin," but evidently did not belong to this class, as it was precipitated by acetic acid. In 1886, I separated and examined the proteids present in the seeds, and obtained the following results[2]—both of the proteids separated possessing poisonous properties.

Nature of Jequirity Poison.—The seeds contain two proteids—a globulin and an albumose. The globulin is soluble in 15 per cent. sodium chloride solution, and coagulates by heat between 75° and 80° C. Like other members of its class, it is precipitated from solution by saturation with sodium chloride and magnesium sulphate. It belongs to what I have described elsewhere as the vegetable paraglobulins.[3] The albumose is soluble in water, is not precipitated by boiling, but is thrown down by nitric acid, the precipitate being soluble on heating the solution, and coming down again on subsequent cooling, this being the characteristic reaction of the albumose class. This body also gives the "peptone" reaction, namely, a pink coloration with copper sulphate and caustic potash.

For the investigation of the physiological action of these two proteids, the mode of separation from the seed is important, because, as I shall discuss subsequently, it is a question whether these proteids are of themselves poisonous, or produce their toxic effects by having a non-proteid body, as it were, tacked on to them—in fact a body, possibly alkaloidal in nature, not completely separated from the proteid in the preparation of the pure poison.

The globulin is separated by extracting the crushed and decorticated seed with 15 per cent. sodium chloride solution, and precipitating the clear filtrate by saturation with solid sodium chloride after acidulating with acetic acid. The precipitate of globulin with part of the albumose is mixed with distilled water, and dialysed in running water for several days. The globulin is in

[1] *The Non-Bacillar Nature of Abrus Poison*, Calcutta, 1884.
[2] *Proc. Roy. Soc.*, vol. 42, p. 331.
[3] *Proc. Physiolog. Soc.*, 1887.

great part thrown down in the dialyser, while the albumose remains in solution. The globulin is now removed by filtration, and washed with distilled water (previously boiled to sterilise it) for two days, in order to remove any albumose or sodium chloride clinging to the precipitate, the absence of the albumose being tested by the washings giving no reactions for a soluble proteid, and the absence of the salt by a negative reaction with silver nitrate. The globulin is then removed from the filter and dried over sulphuric acid. Prepared in this way, it is a whitish-yellow, amorphous powder, soluble for the most part in 15 per cent. sodium chloride, and giving the reactions previously described. In the dried state, it may be kept for a long time without losing its physiological properties. Specimens prepared for more than fifteen months are as active now as when first dried. This fact is, indeed, only in accordance with the behaviour of other dried proteids; they can be kept an indefinite time in the dried state without undergoing any chemical change.

The albumose was prepared by making a concentrated watery extract of the seeds, and filtering the clear infusion direct into an excess of absolute alcohol, thus throwing down both proteids as a white precipitate. After a few days the precipitate was removed, redissolved in water, and reprecipitated by alcohol, this process being repeated at intervals of a few months. The precipitate was allowed to stand under alcohol for about eight months or longer, at the end of which time the globulin was completely coagulated, while the albumose was still soluble in water. Dried over sulphuric acid, the residue was a yellowish-brown, amorphous powder, consisting of coagulated globulin and unaltered albumose.

Physiological Action of the Proteids of Jequirity.[4]—For subcutaneous injection and for instilling into the eye, a solution of the proteids was made. The globulin was dissolved in 15 per cent. sodium chloride solution, and the albumose in distilled water or normal saline solution (0·75 per cent. NaCl). Previous to using these liquids or solvents, they were well boiled to sterilise them, and then cooled. A weighed quantity of the proteid was then dissolved and used in the experiment; or a solution of the proteid was made, and the quantity present was estimated.

Local Action on the Eye.—A watery infusion of the seeds when instilled into the eye produces, as is well known, severe inflammation with purulent discharge; and it is this action which is beneficial in the treatment of granular lids and of pannus. Both the globulin and the albumose of jequirity possess this property. Thus in one experiment 2 milligrammes of the solid globulin (containing some coagulated proteid) were placed on the inner surface of the left eyelid of a large rabbit. In seventeen hours and three-quarters the conjunctiva was reddened and slightly swollen; there was no chemosis, but there was a clear serous discharge. In twenty-four hours, there was intense purulent ophthalmia, with subconjunctival ecchymosis; the cornea being quite clear. The purulent discharge lasted till the death of the animal, eighty-three hours after inoculation; the animal being apparently ill for about four hours before death. At the *post-mortem*, there was severe subconjunctival hæmorrhage, with œdema round the eyeball. If the dose be smaller, the animal does not die after eye inoculation, nor does it suffer from any general symptoms; but local inflammation and œdema with purulent discharge always follow in about sixteen or seventeen hours.

One milligramme of the albumose dissolved in two minims of sterilised distilled water, when placed on the eye of a rabbit, produced in less than twenty-four hours severe conjunctivitis with chemosis, and left at the end of six days a steamy cornea with leucomata and subconjunctival ecchymosis. The animal showed no symptoms of poisoning. Both globulin and albumose therefore possess this property of producing severe conjunctivitis.

General Action on the Body.—The symptoms produced by the subcutaneous injections of the proteids of jequirity are those which have been described by Drs. Warden and Waddell. The action of the globulin is not, however, quite identical with that of the albumose. In the first place, the globulin is more poisonous than the albumose. In rats, for example, 10 milligrammes of globulin per kilo of body-weight is a fatal dose, and in the same animals 60 miligrammes of albumose per kilo of body-weight.

If the above mentioned dose of globulin be injected into a rat, symptoms of poisoning begin to appear in about six hours; the animal then seems a little languid, and in a condition impossible to distinguish from sleepiness. It continues in this state, making no voluntary movement, irresponsive to slight external stimuli, and with half shut eyes. It lies huddled up in its cage, the breathing becomes more rapid and bloody motions are passed shortly before death, which occurs in about twenty-four hours after inoculation. If the animal is with young, it aborts. *Post mortem*, there are signs of œdema and punctiform ecchymoses at the seat of injection, and punctiform ecchymoses also beneath the peritoneum, and sometimes in the lungs. The intestines are congested, and sometimes greatly inflamed; the adenoid patches in the mucous membrane are swollen, and submucous ecchymoses are often seen. The blood sometimes remains fluid for a long time, and is sometimes coagulated. The symptoms of poisoning by the albumose and the *post-mortem* signs are similar to those described as produced by the globulin.

It may be pointed out that there are no symptoms referable to definite lesions of the organs, except the occurrence of bloody motions due to gastro-enteritis. The sleepiness in gradually increasing coma may be explained by an effect on the cerebrum; as there is not sufficient dilatation of the vessels of the abdominal organs to explain the occurrence of coma by drainage into the "splanchnic area." The occurrence of rapid breathing, which is produced chiefly by the globulin, may be explained by an affection of the respiratory centre. The only early symptom of abrus poisoning is a fall of body temperature, and this is produced both by the globulin and the albumose. In the two following charts, this effect is represented, as well as the effect on the breathing. The first chart (Fig. 1) represents the effect on the temperature of the pigeon, the temperature being taken every half hour in the rectum, and the respirations counted at the same time. The dose given was very large, but the same phenomena were noticed with smaller lethal doses.

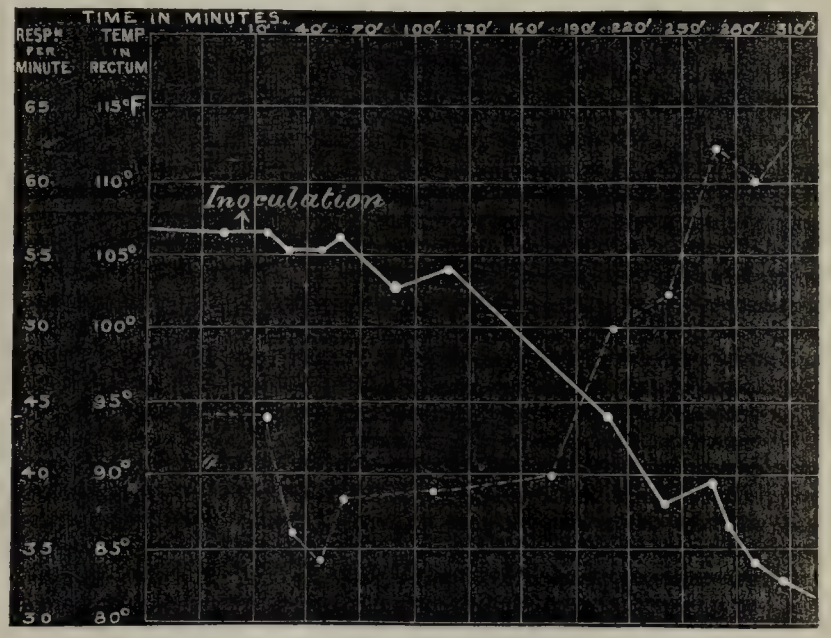


Fig. 1.—Pigeon weighing 216 grammes: 0.2 gramme abrus globulin injected over pectoral muscle (0.925 gramme per kilogramme of body weight). Death in 5 hours 45 minutes. Temperature curve, thick line; respiration curve, dotted line.

It will be seen from the chart that the temperature, which was 106.8° F. before inoculation, began to fall in less than half an hour after the poison had been injected; that this fall was gradual until two hours after the inoculation, after which time there is a rapid fall until death. The fall of temperature until death was from 106.8° to 83° F., that is, 23.8° F. or 12.6° C.

The respirations are seen from the curve to diminish more rapidly than the temperature falls for 55 minutes after inoculation; there is then a stationary period until 115 minutes, after which the number of respirations per minute rapidly rises until death. The curves, therefore, show a fall of temperature with an increase in the number of respirations.

The second chart (Fig. 2) shows a similar effect of the albumose on the temperature; but, as is seen, the respirations do not rise before death, but fall.

A pigeon weighing 335 grammes was given hypodermically a dose of 20 milligrammes albumose, equal to 60 milligrammes per kilogramme of body weight. In four hours and a half the animal

[4] The action of the globulin was investigated in co-operation with Dr. Wolfenden; for the account of the albumose I alone am responsible. The results are published in two papers in *Proc. Roy. Soc.*, May, 1889.

began to show symptoms of poisoning, and died in about six hours or rather longer. The temperature began to fall from the first, and, with a few rises, continued to fall until the animal was nearly dead, when the observations ceased. The curve of the number of respirations per minute follows very closely the temperature curve, until just before symptoms of poisoning appeared, when, as will be seen in the chart, the respiration curve does not follow the temperature curve.

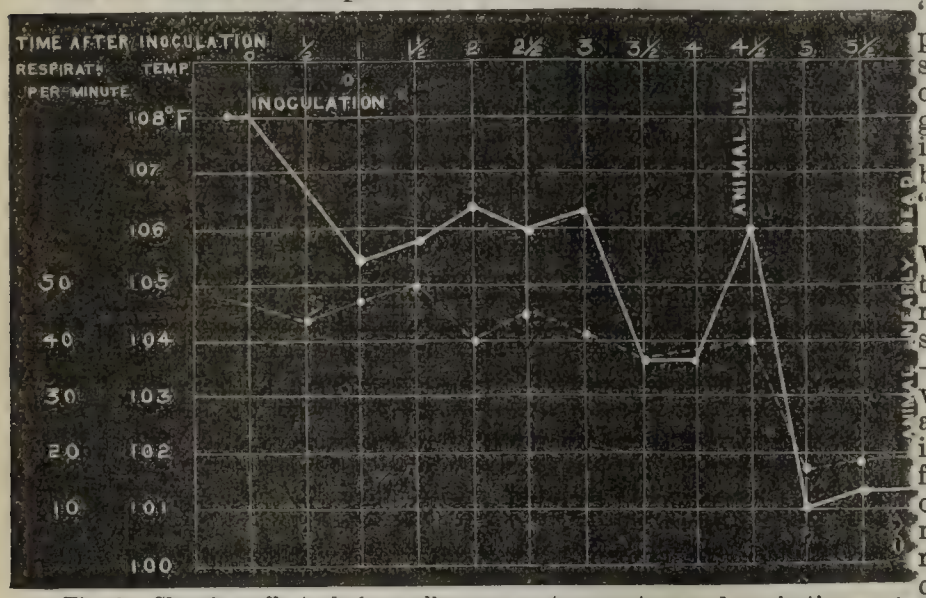


Fig. 2.—Showing effect of abrus albumose on temperature and respirations of the pigeon. Temperature taken in rectum every half-hour. Dotted line, respirations; thick line, the temperature.

This lowering effect of the jequirity proteids on body temperature was noticed in cats by Warden and Waddell. It is important, when taken in consideration with the fact that rattlesnake venom produces a similar effect (Weir-Mitchell and Reichert), and that, on the other hand, animal albumoses and peptones have been shown by Ott and Collmar [5] to produce fever in mammals.

Effect of Heat on the Activity of Jequirity Proteids.—Boiling the liquid destroys the activity of the infusion of jequirity seeds. This, as has been mentioned, is an argument against the bacterial nature of the poison. It was desirable to test, however, with exactness at what temperature this activity was permanently destroyed. For this purpose solutions of the globulin and albumose were momentarily heated up to 50°, 60°, 75°, 80°, 85° C. before being used for inoculation. In each separate series of experiments an unheated solution of proteid was also inoculated, in order to have a control, and a lethal dose was always used. For the details of these experiments the papers in the *Proceedings of the Royal Society*, already quoted, must be referred to. Suffice it to say here that the results obtained were—(1) that the activity of the globulin was permanently destroyed by momentarily heating its solution to between 75° and 80° C., that is, about its coagulation temperature, while the solution of albumose had to be heated up to 85° C. before the activity of the proteid was destroyed; (2) that momentary heating of the solution to above 50° C. but below 75° in the case of the globulin, and 85° in the case of the albumose, weakened the activity of the proteid without destroying it.

The conclusions therefore arrived at regarding the jequirity poison may be thus summarised:—

1. The toxic action of the jequirity (abrus precatorius) resides in two proteids—a globulin and an albumose.

2. Both these proteids produce nearly the same effects, namely, local œdema and ecchymosis at the seat of inoculation, with ecchymoses in the serous membranes, and gastro-enteritis, the blood in many cases remaining fluid. The general symptoms are a gradual sleepiness, ending in coma, with rapid onset of rigor mortis.

3. That both portions have a remarkable lowering effect on the body temperature; the globulin, at the same time, producing rapidity of breathing, while the albumose does not have this effect to the same degree.

4. That the activity of both proteids is destroyed by a temperature below the boiling point of water; the globulin between 75° and 80° C. and the albumose at 85° C., while temperatures below these points but above 50° C. diminish the poisonous activity.

Relation of the Abrus Poison to Snake Venom.—It is chiefly due to the researches of Weir-Mitchell that the poisonous principles of snake venom have been shown to be of an albuminoid nature. In the latest publication on the subject Weir-Mitchell and Reichert [6] affirm as the result of their analyses and experiments that the poisonous proteids present are of two kinds—a globulin and a peptone, or peptone-like body; that all kinds of venom contain these two bodies, although in varying proportions, speaking generally, the globulin being greater in proportion to the "peptone" in viperine snakes (such as the rattlesnake), and the peptone being in greater proportion in the venom of colubrine snakes, such as the cobra; that both the globulin and peptone of the venom are poisonous, producing practically the same general symptoms, but with this exception (and a noticeable one it is), that the great local ecchymosis and inflammation of snake-bite is due to the globulin present in the venom and not to the "peptone."

For reasons which I have detailed elsewhere,[7] it seems to me that Weir-Mitchell and Reichert's venom "peptone" is not a true peptone, but belongs to the albumose class of proteid bodies. The relation of abrus poison to snake venom is now apparent. Abrus seed contains two poisonous proteids—a globulin and an albumose—which both produce local œdema and ecchymosis. Rattlesnake venom also contains a globulin and a peptone-like body (probably an albumose), the former of which produces local ecchymosis and inflammation. The resemblance is further strengthened by the fact that heat diminishes the activity of both abrus poison and of snake venom; but in this respect abrus poison seems to be more sensitive than venom. Thus, even after boiling and filtering, rattlesnake venom, if given in sufficient dose, is fatal; and cobra venom is still active (although permanently destroyed by boiling for half an hour), while, with abrus proteids, a momentary heating of the globulin in a solution up to 80° C. is sufficient to destroy its activity, while with the albumose the destroying temperature is 85° C. Rattlesnake venom, like abrus poison, also lessens the body temperature. The great difference, however, between snake venom and abrus poison rests in the fact that venom produces local paralysis and general convulsions while abrus has no such effect. Abrus seems to affect the cerebral hemispheres, producing stupor, ending in coma.

It is evident, therefore, that while abrus poison bears some resemblance to snake venom it is far from being identical with it.

Nature of Abrus Poison.—At present it is not explicable why proteids should be poisonous; why, when injected subcutaneously or into the venous system, they should cause death. And so anomalous does the toxic power of these bodies seem that we are bound to consider whether a proteid is of itself poisonous or possesses toxic properties by virtue of some agent or body tacked on to it or formed from it. Such an agent associated with a proteid would be called a "ferment." We know that the ferments used in digestion are normally associated with proteids, although Cohnheim claimed that he had separated ptyalin from all associated proteid, and Brücke stated the same of pepsin; and even granting that these two ferments may be separated from their associated proteids the fact remains that ferments are in nature closely linked with albuminoid bodies. What characteristics of unorganised ferments, we may fairly ask, are present in abrus poison which would lead to the supposition that what might be called a "toxic" ferment is present? The unorganised ferments known alter the constitution of the bodies on which they act, the digestive ferments acting on proteids, amyloids, and fats, while other ferments, such as the fibrin ferment and the curdling ferments, cause the proteids on which they act to assume a solid form. All these ferments have certain characteristics common to all; their action is increased by a moderate heat and permanently destroyed by boiling their solutions; and their activity is not apparently diminished after they have produced their effect.

From this it will be seen that the fact which would point to abrus poison being a "toxic" ferment is the fact that its activity is permanently destroyed by a moist heat below 100° C. Farther than this we cannot at present go. Abrus globulin and albumose possess neither a proteolytic nor amylolytic action, whatever the reaction of the digestive mixture may be. The fact that the activity of the globulin is destroyed at about its coagulation temperature would seem to point to an alteration in the constitution of the proteid as the cause of the loss of poisonous activity; but this again is the temperature at which ferments are destroyed. No evident effect, chemical or physical, is noticed if the albumose

[5] *Journal of Physiology*, vol. viii, p. 218.

[6] *Researches upon the Venom of Poisonous Serpents.* Philadelphia, 1885.

[7] *Proc. Roy. Soc.*, May, 1889.

be heated up to 85° C. or even boiled, yet its toxic activity is at once and for ever destroyed. This may point to a ferment associated with the albumose; but until we know the chemical constitution of the proteid molecule we cannot assert that this degree of heat does not so alter the construction as to prevent the development of the toxic action. In this uncertain condition the matter must at present rest. It may be considered that the toxic action is not due to the proteid nor to a ferment attached to it, but to some chemical toxic body carried down with the proteid in its preparation. The effect of heat on the toxic activity of abrus would seem at once to dispose of this view. Toxic bodies, such as ptomaines and leucomaines, formed from proteids, are not so sensitive to heat as the abrus poison; and if the details of the preparation of abrus globulin and albumose be referred to[8] it will be seen that the prolonged dialysis in running water and the long extraction of the albumose by alcohol preclude the presence of any crystalline product in the residue obtained.

REPORT OF INVESTIGATIONS IN FOURTEEN SCHOOLS IN LONDON, TO BE PRESENTED TO THE COMMITTEE APPOINTED BY THE PSYCHOLOGICAL SECTION OF THE BRITISH MEDICAL ASSOCIATION.[1]

PREPARED BY

FRANCIS WARNER, M.D.Lond., F.R.C.P.,
Honorary Secretary to the Committee.

Two applications having been made by the Committee to the School Board for London, and on each occasion the reply having been received that the Board regretted that they must decline our request to be allowed to visit their schools for the purposes of this investigation, the London members of the committee were obliged to confine their observations to other elementary schools.

The following summary of a draft report on fourteen schools in London has been prepared by Dr. Hack Tuke, Dr. G. E. Shuttleworth, Dr. Fletcher Beach, and Dr. Francis Warner.

A form of schedule was drawn up, upon which the facts noted concerning every child who appeared in any way exceptional were recorded; the report of the teacher concerning each child was included.

Ten public elementary schools; two certified industrial schools the district pauper schools, Hanwell; and the Asylum for Deaf and Dumb Children in Old Kent Road, were examined. In every case the members of committee visiting the schools were received with uniform courtesy, and they desire to acknowledge the intelligent assistance received from the managers and teachers. The committee also desire to express their thanks to Dr. Littlejohn, of Hanwell, and to Dr. Martyn, medical officer to the School for Dumb Children. Mr. Rowland Hamilton, a Vice-President of the Statistical Society, has rendered most able and generous assistance in tabulating these results.

Mental Dulness was observed or reported to us in 231 cases.—It is probable that many more children were mentally dull; of those noted, some attracted attention in other ways, and some were presented to us by the teachers. The method of examining children by facts observed without questions asked may indicate the condition of development and state of brain, but it is necessary to question the pupil in order to demonstrate mental aptitude or its absence.

[8] *Proc Roy. Soc., loc. cit.*

[1] Towards the expenses of this inquiry a grant was received from the Scientific Grants Committee of the British Medical Association.

The ten public elementary schools contained at the time of our visits 3,931 children; these are arranged according to standard and sex in Table A.

TABLE A.

	Boys.	Girls.	Totals.
Infants	759	764	1,523
Standard I ...	265	223	488
,, II ...	213	236	449
,, III ...	220	212	432
,, IV ...	180	213	393
,, V ...	152	141	293
,, VI ...	93	97	190
,, VII ...	46	70	116
,, ex.VII ...	16	31	47
Totals	1,944	1,987	3,931

The children seen were distributed as follows in the schools thus:

TABLE B.

—	Seen in the Schools.			Noted on the Schedules.		
	Boys.	Girls.	Totals	Boys.	Girls.	Totals
Fourteen London schools, namely: In 10 public elementary schools:—						
Borough Road School	239	—	239	60	—	60
Stockwell Girls' School	—	451	451	—	82	82
,, Mixed School	103	66	169	11	10	21
,, Kindergarten	42	42	84	5	1	6
St. Andrew's National School, Wells Street, W.	204	189	393	23	19	42
St. Mary's National School, York Street, W.	270	234	504	36	27	63
St. Mary's National School, Whitechapel	274	202	476	31	20	51
Hanwell National School, W.	326	278	604	44	20	64
Mill Hill National School, N.W. ...	76	59	135	11	4	15
Jews' Infant School, Whitechapel ...	410	466	876	33	31	64
Total	1,944	1,987	3,931	254	214	468
In four special schools:—						
District Pauper School, Hanwell ...	637	440	1,077	85	44	129
St. Vincent's Industrial School	182	—	182	132	—	132
St. Margaret's Industrial School ...	—	103	103	—	29	29
* School for Deaf-and-Dumb	31	20	51	31	20	51
Total	2,794	2,550	5,344	502	307	809

* See Table L.

In special schools:—Boys, 850; girls, 563; Total, 1413.
Of which on schedules: Boys, 248; Girls, 93; Total, 341.

The following table (C) is given to indicate the principal facts observed. Several special conditions often coexisted in the same case. Further analysis and descriptions of combined conditions are given in succeeding tables.

TABLE C.

—	—	Boys.	Girls	Totals
	We took notes of 809 cases in the schools ...	502	307	809
See Table E	Cases showing signs of nervousness, nerve-weakness, or defect	207	144	351
,, F	Cases in which nutrition appeared to be defective	100	84	184
,, G	Cases in which mental dulness was reported or observed by us	153	78	231
,, H	Cases presenting cranial abnormalities ...	166	65	231
,, I	Cases with disease or defect of eyes ...	74	75	149

TABLE D.—*Showing the Distribution of the Various Pathological Conditions in the Different Schools, also Relations to Sex.*

School.	Nervousness or Nerve Weakness.			Low Nutrition.			Mental Dulness.			Cranial Abnormalities.			Eye Cases.		
	Boys.	Girls.	Total.	Boys.	Girls.	Total.	Boys.	Girls.	Total.	Boys.	Girls.	Total.	Boys.	Girls.	Total.
Borough Road College Practising School	30	0	30	11	0	11	17	0	17	10	0	10	5	0	5
Stockwell College Practising School *	0	60	60	0	17	17	0	10	10	0	4	4	0	14	14
,, ,, Mixed School	4	4	8	4	4	8	4	2	6	2	1	3	3	3	6
,, ,, Kindergarten	0	0	0	0	0	0	3	1	4	1	1	2	0	0	0
St. Andrew's, Wells Street, W.	7	9	16	10	5	15	11	4	15	8	3	11	4	5	9
St. Mary's, York Street, W.	14	11	25	8	8	16	9	6	15	14	4	18	7	12	19
St. Mary's, Whitechapel	12	7	19	7	6	13	8	1	9	10	7	17	3	6	9
National School, Mill Hill, N.W.	3	2	5	3	3	6	1	2	3	3	1	4	3	1	4
National School, Hanwell, W.	8	8	16	15	4	19	15	6	21	17	8	25	14	3	17
Jews' Infant School, Whitechapel	11	10	21	14	13	27	11	10	21	17	8	25	8	8	16
	89	111	200	72	60	132	79	42	121	82	37	119	47	52	99
District Pauper Schools, Hanwell, W.	37	13	50	6	7	13	38	15	53	32	14	46	15	12	27
School for Deaf and Dumb, Old Kent Road	15	6	21	5	4	9	4	2	6	14	4	18	2	3	5
St. Vincent's Certified Industrial School, Dartford	66	0	66	17	0	17	32	0	32	38	0	38	10	0	10
St. Margaret's Certified Industrial School, Mill Hill, N.W.	0	14	14	0	13	13	0	19	19	0	10	10	0	8	8
	118	33	151	28	24	52	74	36	110	84	28	112	27	23	50
As above	89	111	200	72	60	132	79	42	121	82	37	119	47	52	99
Total	207	144	351	100	84	184	153	78	231	166	65	231	74	75	149
	See Table E.			See Table F.			See Table G.			See Table H.			See Table I.		

* This school was visited immediately after the annual inspection by Her Majesty's Inspector. The Standards III to VII, containing 302 girls, were seen by us five months later, when 29 showed nerve-signs.

Cases in which we observed Signs of Nervousness, Nerve-Weakness, or Nerve-Defect are Analysed in Table E.—It is probable that in some of these cases the signs of nervousness or nerve-weakness were only temporary in character.

TABLE E.

Distribution of Nerve Conditions.	Boys.	Girls.	Totals	Low Nutrition. Boys.	Girls.	Totals
Infants	14	18	32	6	8	14
Standard I	20	7	27	10	4	14
,, II	11	9	20	6	2	8
,, III	6	14	20	2	5	7
,, IV	6	17	23	2	4	6
,, V	13	9	22	2	2	4
,, VI	11	14	25	4	4	8
,, VII	6	18	24	0	1	1
,, ex. VII	2	5	7	—	—	—
Ten public elementary schools	89	111	200	32	30	62
Pauper school	37	13	50			
Two industrial schools	66	14	80			
School for deaf and dumb	15	6	21			
	118	33	151			
Ten public elementary schools as above	89	111	200			
Fourteen London schools	207	144	351			

—	Boys.	Girls.	Totals.
As coincident conditions, we found in the 200 cases in 10 public elementary schools:			
Defective nutrition	32	30	62
Mental dulness	23	20	43
Cranial abnormalities	28	16	44
In the 50 cases observed in the pauper school:			
Defective nutrition	2	5	7
Mental dulness	15	5	20
Cranial abnormalities	12	3	15
In the 80 cases observed in the two industrial schools:			
Defective nutrition	10	4	14
Mental dulness	18	4	22
Cranial abnormalities	13	4	17
In the 21 cases observed in the school for deaf and dumb children:			
Defective nutrition	2	3	5
Mental dulness	4	1	5
Cranial abnormalities	6	2	8

Signs of Defective Nutrition were seen in 132 cases.—We do not suppose that we noted defective nutrition in all the cases in which it may have been present. The distribution of these cases, according to standards and sex, is shown in Table F.

TABLE F.

—	Boys.	Girls.	Totals.
Infants	21	19	40
Standard I	16	7	23
,, II	12	11	23
,, III	5	4	9
,, IV	6	9	15
,, V	8	3	11
,, VI	2	5	7
,, VII	2	2	4
Ex. VII	—	—	—
Ten public elementary schools	72	60	132
Pauper school	6	7	13
Two industrial schools	17	13	30
School for deaf and dumb	5	4	9
	28	24	52
For 10 public elementary schools (as above)	72	60	132
For 14 London schools	100	84	184
As coincident conditions, we found in the 132 cases in 10 public elementary schools:			
Signs of nervousness, nerve-weakness or defect	32	30	62
Mental dulness	30	17	47
Cranial abnormalities	28	15	43
In the 13 cases observed in the pauper school:			
Signs of nervousness, nerve-weakness or defect	2	5	7
Mental dulness	2	2	4
Cranial abnormalities	3	2	5
In the 30 cases observed in the two industrial schools:			
Signs of nervousness, nerve-weakness or defect	10	4	14
Mental dulness	7	9	16
Cranial abnormalities	8	5	13
In the 9 cases observed in the school for deaf and dumb children:			
Signs of nervousness, nerve-weakness or defect	2	3	5
Mental dulness	1	1	2
Cranial abnormalities	4	2	6

TABLE G.—*Cases of Mental Dulness.*

—	Boys.	Girls.	Totals.
Infants	26	17	43
Standard I	12	5	17
,, II	6	8	14
,, III	11	2	13
,, IV	6	4	10
,, V	14	1	15
,, VI	1	3	4
,, VII	3	2	5
Ex. VII	—	—	—
In the 10 public elementary schools	79	42	121
Pauper school	38	15	53
Two industrial schools	32	19	51
School for deaf and dumb	4	2	6
	74	36	110
For the 10 public elementary schools (as above)	79	42	121
For the 14 London schools	153	78	231
As coincident conditions, we found in the 121 cases in 10 public elementary schools:			
Signs of nervousness, nerve-weakness, or defect	23	17	40
Defective nutrition	29	17	46
Cranial abnormalities	21	6	27
In the 53 cases observed in the pauper school:			
Signs of nervousness, nerve-weakness, or defect	15	5	20
Defective nutrition	2	2	4
Cranial abnormalities	17	5	22
In the 51 cases observed in the 2 industrial schools:			
Signs of nervousness, nerve-weakness, or defect	18	4	22
Defective nutrition	7	9	16
Cranial abnormalities	10	7	17
In the 6 cases observed in the school for deaf and dumb children:			
Signs of nervousness, nerve-weakness, or defect	4	1	5
Defective nutrition	1	1	2
Cranial abnormalities	4	1	5

TABLE H.—*Cranial Abnormalities.*

—	Ten Public Elementary Schools.			Pauper School.			Two Industrial Schools.			Deaf and Dumb School.			Totals.
	B.	G.	T.	B.	G.	T.	B.	G.	T.	B.	G.	T.	
Probably rickets	24	5	29	5	3	8	—	—	—	—	—	—	37
Head large, cause not known	17	7	24	8	1	9	—	1	1	1	—	1	35
Head small, ,, ,,	5	3	8	1	—	1	1	3	4	2	1	3	16
Dolichocephalic or scaphocephalic	7	2	9	3	—	3	1	3	4	1	—	1	17
Forehead narrow or shallow, not included in other groups	14	9	23	10	6	16	12	2	14	3	1	4	57
Bosses on frontal bone or at fontanelle; not included in other groups	12	9	21	3	3	6	18	1	19	5	2	7	53
Other defects of skull not included in other groups	3	2	5	2	1	3	6	—	6	2	—	2	16
	82	37	119	32	14	46	38	10	48	14	4	18	231

—	Boys.	Girls.	Totals.
As coincident conditions we found the 82 boys, 37 girls—total, 119 cases, in 10 public elementary schools:			
Signs of nervousness, nerve-weakness, or defect	28	16	44
Defective nutrition	28	15	43
Mental dulness	21	6	27
In the 46 cases observed in the pauper school:			
Signs of nervousness, nerve-weakness, or defect	12	3	15
Defective nutrition	3	2	5
Mental dulness	17	5	22
In the 2 industrial schools:			
Signs of nervousness, nerve-weakness, or defect	13	4	17
Defective nutrition	8	5	13
Mental dulness	10	7	17
In the 17 cases observed in the school for deaf and dumb children:			
Signs of nervousness, nerve-weakness, or defect	6	2	8
Defective nutrition	4	2	6
Mental dulness	4	1	5

TABLE K.

Total of Cases presenting each Nerve-Sign Respectively.				Nervous Hand.			Weak Hand.			Lordosis.			Frontals Over-acting.			Orbicular Muscle of Eyelids Toneless.			Finger Twitches.			Number of Nerve-Signs not in Combination.			
Nervous Hand.	B.	G.	T.	B.	G.	T.	B.	G.	T.	B.	G.	T.	B.	G.	T.	B.	G.	T.	B.	G.	T.	Nervous Hand.	B.	G.	T.
In 10 public elementary schools	44	69	113		×			—		10	28	38	9	1	10	5	4	9	15	16	31	In 10 public elementary schools	21	28	49
,, 4 special schools	25	5	30		—			—		*6*	*2*	*8*	*7*	*0*	*7*		—		*6*	*2*	*8*	,, *4 special schools*	*11*	*3*	*14*
	69	74	143																						
Weak Hand.																						Weak Hand.			
,, 10 public elementary schools	10	22	32		—			×		1	6	7	3	0	3	1	3	4	3	5	8	,, 10 public elementary schools	5	9	14
,, 4 special schools	16	6	22		—			×		*3*	*3*	*6*	*6*	*1*	*7*	*2*	*1*	*3*	*3*	*3*	*6*	,, *4 special schools*	*5*	*2*	*7*
	26	28	54																						
Lordosis.																						Lordosis.			
,, 10 public elementary schools	15	41	56	10	28	38	1	6	7		×		3	1	4	0	2	2	1	10	11	,, 10 public elementary schools	4	6	10
,, 4 special schools	18	5	23	*6*	*2*	*8*	*3*	*3*	*6*				*3*	*0*	*3*	*1*	*0*	*1*	*6*	*1*	*7*	,, *4 special schools*	*6*	*2*	*8*
	33	46	79																						
Frontals Overacting.																						Frontals Overacting.			
,, 10 public elementary schools	41	2	43	9	1	10	3	0	3	3	1	4		×		2	0	2	3	0	3	,, 10 public elementary schools	25	0	25
,, 4 special schools	68	13	81	*7*	*5*	*12*	*6*	*1*	*7*	*3*	*0*	*3*					—		*8*	*2*	*10*	,, *4 special schools*	*48*	*10*	*58*
	109	15	124																						
Orbicular Muscle of Eyelids Toneless.																						Orbicular Muscle of Eyelids Toneless.			
,, 10 public elementary schools	14	11	25	5	4	9	1	3	4	0	2	2	2	0	2		×		3	3	6	,, 10 public elementary schools	9	3	12
,, 4 special schools	4	1	5		—		*2*	*1*	*3*	*1*	*0*	*1*		—						—		,, *4 special schools*	*1*	*0*	*1*
	18	12	30																						
Finger Twitches.																						Finger Twitches.			
,, 10 public elementary schools	20	27	47	15	16	31	3	5	8	1	10	11	3	0	3	3	3	6		×		,, 10 public elementary schools	3	3	6
,, 4 special schools	25	10	35	*6*	*2*	*8*	*3*	*3*	*6*	*6*	*1*	*7*	*3*	*2*	*10*		—					,, *4 special schools*	*8*	*5*	*13*
	45	37	82																						
Total 10 public elementary schools				39	49	88	8	14	22	15	47	62	20	2	22	11	12	23	25	34	59		67	49	116
,, *4 special schools*				*19*	*4*	*23*	*14*	*8*	*22*	*19*	*6*	*25*	*24*	*3*	*27*	*3*	*1*	*4*	*23*	*8*	*31*		*79*	*22*	*101*
Final total				58	53	111	22	22	44	34	53	87	44	5	49	14	13	27	48	42	90		*146*	*71*	*217*

Note.—The additions at the foot of the columns include the cases of combinations with one or more of the other defects noted. The numbers in the right-hand margin indicate defects *not* in combination and might be placed in the diagonal square marked ×.

Diseases and Defective Conditions of Eyes.—When a child was seen wearing spectacles, with a squint or other obvious defect, the fact was noted, but many cases must have had errors of refraction not known to us.

TABLE I.

—	Ten Public Elementary Schools.			Pauper School.			Two Industrial Schools.			Deaf and Dumb School.			Totals.
	B.	G.	T.	B.	G.	T.	B.	G.	T.	B.	G.	T.	
Squint	32	26	58	9	3	12	4	4	8	2	1	3	81
Hypermetropia	3	15	18	1	3	4	—	—	—	—	—	—	22
Myopia	3	5	8	2	—	2	—	—	—	—	—	—	10
Disease of Cornea	3	2	5	2	3	5	4	4	8	1	1	2	20
Disease of lids	1	2	3	—	—	—	—	—	—	—	—	—	3
Cataract	—	1	1	—	—	—	—	—	—	—	—	—	1
Eye lost	—	1	1	—	1	1	2	—	2	—	—	—	4
Nystagmus	2	3	5	1	2	3	—	—	—	—	—	—	8
	44	55	99	15	12	27	10	8	18	3	2	5	149

Analysis of 361 cases (Table K) which showed signs of nervousness, nerve weakness, or defect, namely:

	Boys.	Girls.	Total.
In 10 public elementary schools ...	89	111	200
„ 4 special schools	123	38	161
	212	149	361

The association of these signs is exhibited in Table K, *q. v.*

Analysis of 51 Deaf and Dumb Children.—In this school each child was examined separately, and the condition of the palate was noted. Particulars as to head measurements and conditions of general physical heath were most kindly filled in by Dr. Martyn, medical officer to the institution. The secretary of the institution very kindly filled in some particulars of the history of each pupil from the records kept. The ages of these children varied from $7\frac{1}{2}$ to 11 years; average age 8 years. The following table indicates the cause assigned for the deafness:—

TABLE L.

Deaf and Dumb Children.	Boys.	Girls.	Totals.
Congenitally deaf	21	11	32
Sequent to measles	2	1	3
„ „ whooping cough	1	1	2
„ „ scarlet fever...	—	1	1
„ „ sunstroke	1	—	1
Fits or brain disease	3	2	5
Effects of a fall	2	—	2
First dentition	—	3	3
Cause not stated	1	1	2
	31	20	51

In 3 cases the children were the offspring of first cousins. In 5 cases deafness was acquired between the ages of 3 and 6 years; in two instances without cause assigned. The palate was examined in all these cases: in 2 cases it was "vaulted," in 2 "narrow," in 3 "arched." Of these 7 cases 5 occurred among the congenitally deaf pupils, and 3 coincided with other defects of the cranium. In 7 boys and 7 girls the teeth were found ground. The various conditions found in these children are given in preceding tables.

REPORT ON THE MEDICO-LEGAL DETECTION OF HUMAN BLOOD,

BY S. MONCKTON COPEMAN, M.A., M.B.CANTAB.,
Demonstrator of Physiology and of Morbid Histology at St. Thomas's Hospital, late Scholar of Corpus Christi College, Cambrige.
(From the Physiological Laboratory of St. Thomas's Hospital.)

Up to the present time, the only method which has been proposed for the purpose of distinguishing human blood from that of the lower animals is one which depends on the detection and subsequent measurement of the red blood corpuscles.

In all the textbooks will be found measurements, originally made by Gulliver, of the diameter of the red corpuscles of man and of various animals in fresh blood, since the publication of which, Richardson, of Philadelphia, U.S.A., Seiler, and others, have claimed that they are able by this means, and with the aid of high powers of the microscope, to distinguish human blood from that of the domestic animals. This, however, has reference only to fresh blood and not to dried, or partially dried, stains; while, moreover, most English and foreign skilled microscopists are agreed that it would be unsafe, by this method, to testify before a jury at a criminal trial that even a sample of fresh blood was undoubtedly human, since there are several animals (more particularly the guinea-pig, dog, hare, and rabbit) whose blood corpuscles are so precisely similar to those of man in size, that even with the highest powers of the microscope they could not with any certainty be distinguished. In addition, the factor of disease might have to be taken into consideration, since we know that in such case the size of the corpuscles may vary in the same animal within wide limits. Much more, then, would the results be open to criticism in the case of corpuscles obtained from a dried stain, since it would be impossible to say that their size had not been altered by the solvent employed, particularly as a series of experiments on the specific gravity of the blood, conducted by Dr. Sherrington and myself, has shown us that not only does the density of the blood vary in man between considerable limits, but that it has a different range, apparently, for every animal; and, consequently, it is impossible to state what should be the specific gravity necessary for a solvent which should absolutely prevent any alteration in the size of the corpuscles obtained.

What has just been stated applies particularly to mammalian blood; but it should not be forgotten that, in certain cases, valuable evidence may possibly be obtained if we have to deal with the blood of birds, fishes, reptiles, or amphibians, in which the corpuscles are oval and nucleated, since undoubtedly, with the aid of suitable solvents, they may be obtained without sufficient alteration to conceal their characteristic shape. If such evidence were forthcoming, we could at any rate be certain that we had not to deal with mammalian—inclusive, of course, of human—blood, a point which has before now been of importance in a criminal trial, where a prisoner may have accounted for certain spots of blood by the statement that he had been handling fish or game; while, on the other hand, supposing always that corpuscles can be obtained, we might equally be able to say that a given stain did not consist of the blood, for instance, of a bird; but further than this we should not be justified in going.

In 1887 I published in *St. Thomas's Hospital Reports*[1] the results of an investigation into the pathology of the blood in pernicious anæmia, most of which were embodied in a paper read before the Medical and Physical Society of St. Thomas's Hospital in November, 1886. During the two years previously Dr. Bristowe had had a number of cases of this somewhat rare disease under his care in the wards of St. Thomas's Hospital, and through his kindness I had the opportunity of examining the blood on a considerable number of occasions.

I was able in great measure to confirm the conclusions previously arrived at by Eichorst, Byrom Bramwell, and others; but, in addition, I found what had not been previously noticed, that when a drop of the blood was removed from the finger and allowed to fall on a glass slide, and then when the edge of the drop had dried somewhat a cover-glass was gently placed upon it, crystals of hæmoglobin gradually formed in the film of blood in from ten to forty-eight hours, without any further preparation. The only exception to this was in the case of patients who had been treated with arsenic for some days, after which crystals could not be obtained, although if then the arsenic were discontinued for an equal length of time, they again put in an appearance. As I stated at the time, it thus appears that arsenic has a very immediate effect for good on the blood, even though for a time it may not show any very considerable change in the number of corpuscles or in the amount of hæmoglobin present.

These observations were of the greatest interest to me, because up to this time I had not been able to crystallise human blood, although crystals were obtained from the blood of some of the lower animals, whose hæmoglobin has almost precisely the same composition as in man, with the greatest ease, notably from the guinea-pig and rat. Human hæmoglobin, however, is very soluble, and, consequently, is much more difficult to obtain in the crystalline form. Rollett states that he obtained it, but although

[1] *St. Thomas's Hospital Reports*, New Series, vol. xvi, p. 155.

the crystals are figured in all the textbooks, no English physiologist to whom I have applied has been able to furnish me, from personal experience with any method of obtaining them directly from the blood, while Dr. Allchin informed me that when working at the subject of blood with Dr. Michael Foster at University College, they were quite unable to obtain any. Stirling and Brito, however, obtained them from the stomach of leeches which had fed on human blood, after a lapse of several weeks, a method which I have also followed with success.

It seemed to me, however, that it might be possible to procure crystals from human blood, in a more direct manner, by imitating as much as possible the conditions which obtain in pernicious anæmia. I was particularly struck, when examining the specific gravity of the blood in some of the later cases, by means of a modification of the method originally introduced by Professor Roy, of Cambridge, to find to what a low degree it had fallen, the specific gravity usually ranging between 1028 and 1038, while in health it should be about twenty degrees higher than the maximum of these observations.

In the disease under consideration, the low specific gravity is obviously due to the extremely small number of red corpuscles present; the plasma, therefore, being in proportionately much greater quantity than in health. Acting on the supposition that this, together with the lessened consistence of the red corpuscles, as evidenced by their abnormal shapes, might account for the formation of crystals of hæmoglobin, when the blood was removed from the body and treated in the manner described, I tried the effect of diluting normal human blood with serum, that obtained from sheep's blood being used, since it is well known that the serum of one animal tends to destroy the corpuscles of another animal into whose circulation it may be introduced, or whose blood is brought into contact with it after removal from the body.

At first my success was not great, although in a few instances crystals were formed; but on one occasion, having used some serum which had been set aside in the laboratory for some days in rather warm weather, and which had consequently become decomposed, I found that crystals appeared in every instance in which it was used.

This being the case, twenty-five members of the pathology class at St. Thomas's were selected, who seemed particularly healthy, and whose blood consequently might be supposed to be perfectly normal. Each of these gentlemen kindly allowed a few drops of blood to be abstracted from a finger, and from the blood of every one, from three to six preparations were made, which, after an interval differing slightly in each case, and apparently depending somewhat on the amount of serum added, all showed crystals of hæmoglobin.

A method, almost identical with this, was published by Mr. Bond, of Leicester, who, however, used putrid human serum, the idea in his case being an attempt to imitate the processes of septicæmia, in which, as well as in pernicious anæmia, he found the crystals of hæmoglobin formed spontaneously in the blood when allowed to dry after removal from the body, as I had formerly described, the reason for their appearance, in his opinion, being the presence in the blood of certain ferments, the result of the life-action of various micro-organisms. He further noted that the crystals, as shown by the microspectroscope, presented the bands of reduced hæmoglobin, but he does not appear to have attached any importance to the observation, neither did he give any comparative observations as to the application of the same method to the blood of the lower animals.

The crystals obtained by the method just described, are usually rectangular plates of a pink or pale claret colour when formed in a fairly thick layer of blood, or a greenish tint when the film is very thin, this agreeing with the statement of Foster, that "in dilute solutions, or in a thin layer, the reduced hæmoglobin lets through so much of the green rays that they preponderate over the red, and the resulting impression is one of green;" and there can be no doubt, both from the microscopic and spectroscopic appearances, that they really do consist of reduced, and not of oxy-hæmoglobin. This, although its significance seems to have been overlooked by Bond and others, is a point of considerable interest, since it is usually stated that although crystals of oxy-hæmoglobin may have their superfluous oxygen removed by exposure to a vacuum, they never crystallise as reduced hæmoglobin.[2] Consequently the fact that in attempting to obtain crystals of hæmoglobin from human blood reduction has not been allowed to take place, may account for the absence of success in previous endeavours.

In the paper of Stirling and Brito, quoted above, the crystals were stated to be of a pink colour, and the diagrams given in illustration show that they must have consisted of reduced hæmoglobin, although no mention is made of this fact, and in repeating the experiment this supposition has been verified.

This, then, evidently forms a diagnostic point of great importance, since there is a universal consensus of opinion, as has already been shown, that the blood of the lower animals invariably crystallises as oxy-hæmoglobin only. In order, however, to test the question satisfactorily, a number of experiments were made on the blood of various animals, by treating them with decomposing serum, and for some time the method appeared quite ineffectual, as in the case of the bullock, sheep, pig, dog, and cat no crystals could be obtained, although repeated trials were made, not only with sheep's serum, but with that of other animals; thus, for example, bullock's blood was treated with sheep's serum, sheep's blood with bullock's serum, pig's blood with both, and so on, to see whether the result was the same in all cases. In later experiments, however, it was found that crystals could be obtained by this method from the blood of the monkey, rabbit, and squirrel, but except in the case of the monkey, the crystals were found to consist, not of reduced, but of oxy-hæmoglobin, and this notwithstanding that the addition of decomposing serum invariably brought about reduction of the hæmoglobin, as it became extruded from the corpuscles and diffused through the plasma as they broke down. As stated by Bond, in his paper, this takes place to the greatest extent in a circular area just inside the edge of the coverglass, but not extending quite to the edge, where there is a layer which is kept in the oxidised condition, probably by absorption of oxygen from the outside air. It is in this intermediate zone of fully reduced hæmoglobin that crystals are to be found in greatest quantity, both in the case of human blood and of those animals in which the method succeeds, but in these latter the crystals which, as stated above are of oxy-hæmoglobin, stand out in a most marked manner from the ground-work of reduced hæmoglobin; the contrast between the uniform pale-claret coloured basis and the scarlet or more often yellow colour (from the thinness of the layer) of the crystals being most remarkable.

In the specimens of squirrel's blood prepared in this manner, it was found that in every case the resulting crystals presented the form of fine needles or rhombic prisms, the needles sometimes being collected into bundles, while in no case were the usual hexagons, so easily obtained by other methods, seen.

As far, then, as is known at present, the blood of the monkey is the only exception to the rule that when crystals are obtained from the blood of the lower animals, it invariably consists of oxy-hæmoglobin, while those which can be obtained from human blood by the use of putrid serum as invariably consist of reduced hæmoglobin. At first sight it might appear that the fact of monkey's blood acting like human, when treated with decomposing serum was a serious objection to the foundation of any method of diagnosis between the blood of man and that of other animals; but on consideration, it will, I think, be found that the obstacle is not altogether an insurmountable one; the shape of the crystals being quite different in the two cases—those of man, as I have before stated, being almost invariably rectangular plates, while the crystals obtained from monkey's blood are for the most part diamond-shaped plates, of which two adjoining sides are longer than the other two.

The blood of many animals, however, particularly of those which come under the term "domestic," altogether refuses to crystallise by the method that has been advocated for human blood, and consequently unless we can control such negative experiments with some of a more positive kind, it would obviously be unfair to base any definite opinion upon the results obtained, for although, if we find that crystals are formed, and that they consist of reduced hæmoglobin, we may say, after excluding the possibility of the blood being that of a monkey, that it undoubtedly is human; still, on the other hand, if crystals are not obtained, it would, in the absence of evidence to the contrary, be unsafe to assert positively that it was not human.

Fortunately, however, we possess also a method for carrying out such control experiments. After careful trial of the various means suggested by different observers for obtaining hæmoglobin crystals from the lower animals, I have come to the conclusion

[2] Burdon-Sanderson, *Handbook*, p. 180; Landois and Stirling, *Physiology*, second edition, p. 27; Foster, *Physiology*, fourth edition, p. 336.

that the most reliable one is that given by Gamgee,[3] which is briefly as follows: to defibrinated blood add about one-sixteenth of its volume of ether, and shake the mixture for some minutes until it becomes perfectly transparent or laky. It is then to be set aside in a cool place for a period varying from a few hours to two or three days, when crystals form in abundance. There are, however, one or two points of importance in connection with the method which have not apparently been previously noticed, and which I communicated to the Medical and Physical Society of St. Thomas's Hospital in 1887; one is that care should be taken that the blood, after it has been made laky, should be kept under an atmosphere of ether for some time, which may be accomplished by performing the agitation of the blood with ether in a stoppered bottle, and gradually allowing the air to escape as the ether is volatilised. By this means the contained air is gradually replaced by ether vapour, while at the same time the small portion of blood which is forced out around the stopper of the bottle, on drying, fixes it in its place, and so prevents ingress of air again. It appears that it is better to leave the bottle in a room at the ordinary temperature than to put it in a cool place as advised by Gamgee.

It is curious to note the discrepancies among authors who have written about the blood as to the comparative readiness with which the blood of various animals crystallises. Thus, for instance, Foster[4] states that the blood of the rat, guinea-pig, squirrel, hedgehog, horse, cat, dog, goose, and some other animals crystallises readily, while that of the ox, sheep, rabbit, pig, and man does so with difficulty. On the other hand, Yeo[5] states that the blood of the cat, dog, horse, man, ape, and rabbit crystallises readily, although he allows, with most other authorities, that the blood of the sheep, cow, and pig does so with difficulty. Both Landois and Stirling[6] and Yeo agree that coloured crystals are not obtained from the blood of the frog, a statement, however, which I have been able to disprove.

These differences of opinion are doubtless to be accounted for by the different methods employed in various instances, but, as will be noticed, there is one point of agreement in common, namely, that the blood of some of the domestic animals, such as the bullock, sheep, and pig, which in medico-legal work we are most likely to be required to distinguish from human blood, is just that which is with most difficulty crystallisable.

By employing Gamgee's method, however, in the way I propose, this apparent difficulty is altogether overcome; for I have found that, as the results of my experiments, the blood of all these animals is with certainty crystallisable, if it be allowed to remain for a sufficient time in contact with the ether. The right period is readily hit upon by removing a drop of the blood to a slide, after varying lengths of time (in the case of the animals mentioned, two days at least); and then, when the edges of the drop are slightly dry, gently lowering a thin cover-glass on the surface of the drop. The cover soon becomes fixed by the drying of the blood at the edge, and then, if the preparation be examined under the microscope, the commencing formation of radiating crystals of oxy-hæmoglobin will often be seen in an hour or so, while they gradually enlarge in size to such an extent as sometimes to occupy the whole of the space beneath the cover-glass. If, when they first become visible, the slide be "ringed" with Canada balsam or asphalte varnish, they retain their shape, often for a very considerable length of time. The crystals obtained by this method are all very similar in shape, but they all agree in differing in this respect from the right-angled plates which are obtained from human blood.

It is advisable, as I have stated, not to cover the drops at once, as, if this point be not attended to, the large vacuoles caused by the presence of the ether seriously interfere with the formation of the crystals.

In this manner, the blood of all the commoner animals has been crystallised, the list comprising the blood of the following:

1. Horse.
2. Bullock.
3. Sheep.
4. Pig.
5. Dog.
6. Cat.
7. Rabbit.
8. Squirrel.
9. Guinea-pig.
10. Rat.
11. Mouse.
12. Chicken.
13. Pigeon.

[3] *Physiological Chemistry*, p. 87.
[4] Foster, *Physiology*, 4th edition.
[5] Yeo, *Physiology*, 1884, p. 187.
[6] Landois and Stirling, *Physiology*, 2nd edition, 1886.

which suffices to show that the method has a wide range of applicability. I am quite aware that there are other animals whose blood it would be advisable to submit to the same test, but the exigencies of teaching have prevented the possibility of the expenditure of much time on the work, which has been done at scattered intervals, so that the matter cannot be said to have been by any means completely threshed out as yet. The list, however, practically includes all the domesticated animals whose blood is at all likely to be confounded with that of man, and consequently the value of the method as a comparative one may fairly be said to have been demonstrated.

As a matter of precaution, human blood was subjected to the same test, with the result that usually no crystals could be obtained, although in a few instances they put in an appearance, but, again, with the important difference on which stress has already been laid so much, that when found, they invariably presented the appearances of reduced hæmoglobin, so that the fact of their occasional appearance does not in any way militate against the value of the method.

It will thus be seen that by the employment of the two tests described, we are able to state with certainty, not only that a given specimen of blood is human blood when we find crystals of reduced hæmoglobin as the result of the addition of decomposing serum, but also, if they cannot be obtained in this way, by then treating the blood with ether in the proper manner we may obtain proof positive that it must be blood other than human.

There is yet another method by which human hæmoglobin may be crystallised. Burdon-Sanderson[7] states that "on the addition of a dilute solution of bile-crystals, that is, crystals of glycocholate and taurocholate of soda to blood, a great number of the corpuscles are dissolved, so that the blood becomes distinctly laky, and if it be derived from a suitable source, and not too much diluted, the colouring matter crystallises. On this fact one of the numerous methods of obtaining hæmoglobin (in bulk) is founded." Gamgee[8] gives two methods based on this principle, which, however, he says are not to be recommended. By the injection of a solution of bile-salts into the circulation, also, the corpuscles may be broken up to a certain extent, in consequence of which hæmoglobinuria may result.

Now of course the bile itself is a "dilute solution" of bile-salts, and in the early part of last year one of my assistants in the Physiological Laboratory, Mr. Frederick, made some experiments for me on the action of bile on the blood of various animals, as we were then investigating a most interesting case of biliary fistula which was at that time in the wards of the hospital, under the care of Dr. Bristowe. He found as the result of his experiments that a drop of human blood, when treated on a slide with a drop of bile, preferably cat's bile, usually showed, in the course of a few days, well-marked crystals of hæmoglobin, a fact which I demonstrated to my histology class at the time.

On examining the specimens thus formed, I found that here again the crystals were composed of reduced and not of oxy-hæmoglobin; so that it seems perfectly certain that this must be the normal state in which alone hæmoglobin crystallises in man—a point which, as I have before stated, probably accounts for the fact that former observers, who, in accordance with the directions of the textbooks, took care to keep the blood well oxygenated when endeavouring to obtain crystals of the colouring matter, invariably failed in their attempts with human blood.

This method I have not used to any great extent, because the supply of the requisite material, cat's bile, is necessarily somewhat limited; and indeed, although it is very interesting as corroborating some of the points already insisted on, I should hardly have mentioned it, but for the fact that a paragraph appeared, strangely enough, in one of the penny weekly papers, under date January 19th, 1889, to the following effect: "A Spanish physician gives a new method of distinguishing between human and animal blood. Mixed with a little bile small crystals form in the blood, which, in man, are right-angled prisms; in the horse, cubes; in dogs, right-angled prisms, very similar to those in human blood; in sheep, rhomboidal plates; in pigs, rhomboids; and in chickens, more or less regularly, cubes." On inquiry of the editor, it appears that the paragraph was copied from an American paper of date unknown.

It is curious, to say the least, that no mention of the Spanish physician and his work should have appeared in any of the medical papers, and it is difficult to judge of what he may

[7] *Handbook*, p. 179.
[8] *Physiological Chemistry*, p. 86.

have done from a scant paragraph in a lay paper; but if this presents a true summary of his work, we can safely say that it is not of much import. In the first place, as can be seen by preparing a number of specimens of the blood of an animal other than man by any of the methods that have been given, the resulting crystals are not by any means invariable in their shape, although the different shapes present will all belong to the same crystallographic system. According to his own showing, moreover, the crystals from dog's blood are very similar to those in that of man —a point which, if true, would at once condemn the method; while he has apparently not observed what I take to be the point of fundamental importance, the differing degree of oxygenation of the crystallised hæmoglobin in man and in the lower animals.

The methods which up to the present, then, have been successful in demonstrating crystals of hæmoglobin in human blood, and which all agree in the point just mentioned, the presence in the crystalline form of reduced hæmoglobin, may be recapitulated as follows: 1, the addition to the blood of decomposing serum, or, apparently even better, pericardial fluid; 2, treatment with bile; 3, agitation with ether; 4, semi-digestion in the stomach of the common leech; of which the first is the only one to be recommended as being invariably successful.

Thus far I have only spoken of the blood as obtained immediately from the animal; but the methods advocated have possibilities beyond this, although I must candidly confess I do not think that they are capable of demonstration with such infinitesimal quantities as are sufficient for showing conclusively the presence of blood by means of the hæmin test. If the blood be present in fair quantity and has been recently effused, there would be probably no difficulty in discovering whether it is human or not; but, if the quantity be but small, and the stain be not very recent, the difficulty is much increased.

The results of a few experiments copied from my notebook will, perhaps, best show the *modus operandi* and the extent of the capabilities of the methods I propose.

1. Two drops of sheep's blood were placed in a small stoppered specimen tube, three-sixteenths of an inch in width and two inches long, and prepared with ether in the usual manner. After three days preparations, made on slides as described, showed abundant crops of crystals the next day, so that it is obvious that small quantities of blood can be operated with.

2. Two drops of sheep's blood were placed in a specimen tube with twice the amount of water, and prepared with ether as before. Preparations made on slides showed good crops of crystals, so that they can be obtained from minute quantities of diluted blood. This is of importance with regard to the removal of the colouring matter of stains by what would probably be a comparative excess of solvent.

3. A few drops of sheep's blood were purposely spilt on a handkerchief and left to dry. Three days later a small piece of blood-stained rag, about a quarter of an inch square, was cut out and divided into tiny slips. These were placed in one of the tubes with two drops of water until the colouring mater was dissolved out, this being hastened by expression against the side of the tube with a fine glass rod. The bits of rag were then removed, and the resulting infusion was divided into two parts, *a* and *b*; *a* was treated with decomposing serum on a slide, which gave no result; *b* was shaken in a tube with ether after the usual plan, and when what was judged to be a sufficient time had elapsed, a couple of preparations were made on slides, a hair being inserted under the edge of the cover-glass on one side, so as to obtain a thicker stratum of fluid. In these, next day, a scanty crop of crystals was noticed, which appeared, however, quite characteristic, thus showing (what, of course, was known before) that it could not be human blood.

Experiments carried out on the same lines with the blood of other animals, and also with human blood, gave equally successful results. Up to the present, I have not had sufficient opportunity of carrying out an exhaustive series of these experiments; but, from what has been said, it will be seen that in a given stain, at any rate, provided it be fairly recent, it is quite possible to prove the required point.

On theoretical grounds, for I have not as yet been successful in my attempts, we ought to be able to recognise human blood in even old stains almost as well as in recent, for it is well known that after an initial change of most of the oxy-hæmoglobin into meth-hæmoglobin, a stain under ordinary circumstances may undergo no further alteration, even after the lapse of years. It has been shown by Gamgee[9] and other observers that meth-hæmoglobin, at first thought by Sorby to be a per-oxy-hæmoglobin, but more probably a stage in the decomposition of hæmoglobin into hæmatin and a proteid, can[10] be converted by the action of reducing agents into reduced hæmoglobin, the form in which alone the colouring matter crystallises in man, so that we might expect that the addition to the colouring matter of a stain, which had become by age converted into meth-hæmoglobin, of decomposing serum or pericardial fluid, which act as most efficient reducing agents, should be successful in bringing about the formation of crystals almost as well as in the case of more recent blood. In such a case we should have all the proof that was necessary, provided crystals formed, although, as before stated, in the opposite case, we should only be justified in saying that probably it was not human.

Some specimens of putrid serum undoubtedly act much more energetically than others in bringing about the crystallisation of human blood. Whether this be due, at any rate in part, to the stage to which decomposition has advanced, is at present uncertain, but a series of observations is being carried out on the bacteria present in the decomposing serum, and also on certain pathogenic bacteria known to possess reducing powers, the results of which, however, must be left for a future communication.

REPORT ON THE RELATION OF THE PTOMAINES OR ANIMAL ALKALOIDS TO SOME OF THE INFECTIOUS FEVERS.

By ARTHUR P. LUFF, M.B., B.Sc., F.I.C., F.C.S.,
Lecturer on Medical Jurisprudence and Toxicology, and Warden of the College, St. Mary's Hospital; Assistant-Physician to the North-West London Hospital.

THE object of the research has been to ascertain whether any ptomaines or animal alkaloids are present in the urine of patients suffering from the infectious fevers. Up to the present time I have solely worked on the urine of typhoid fever and of scarlet fever. The process that I have employed for the extraction from the urine of any animal alkaloids that may be present is in many of its details a new one, and has occupied me some time in its elaboration. A large quantity of the urine is rendered alkaline with solution of sodium carbonate, and is then thoroughly agitated with half its bulk of ether; after standing for some time, the ethereal solution is removed, filtered, and agitated with solution of tartaric acid, which settles to the bottom of the vessel, carrying in solution any animal alkaloids in the form of soluble tartrates; the tartaric acid solution is separated from the ether, is rendered alkaline with solution of sodium carbonate, and is again agitated with half its bulk of ether. After standing, the ethereal solution is removed, the ether is allowed to evaporate spontaneously, the residue is dried over strong sulphuric acid, and is then examined for animal alkaloids. The advantages of this method of extraction are: (1) no stronger alkali than sodium carbonate is brought in contact with any animal alkaloid that may be present, (2) no stronger acid than tartaric acid is used, (3) no heat is employed in the process. Judging by analogy with some of the vegetable alkaloids, it is extremely probable that the animal alkaloids would be decomposed by contact with the stronger alkalies and the mineral acids, and also that heat might be a factor in their decomposition. The process employed would therefore offer the best chance of extracting in a pure state any animal alkaloids that might be present in the urine, provided always that they were soluble in ether. Several experiments were made with this process of extraction on normal urines; in no case was anything alkaloidal extracted; the inference is therefore a fair one, that if any animal alkaloid is extracted by this process from the urine of a patient suffering from one of the infectious fevers, that alkaloid has been produced within the system during the course of the fever. I have been extremely careful that all the urines upon which I have worked have been collected from patients who neither previously nor at the time of collecting the urine were taking any alkaloidal or antipyretic medicines. It is on this account that I have been considerably delayed in my researches, especially with regard to

[9] *Physiological Chemistry*, p. 107.
[10] Hoppe-Seyler.

obtaining sufficient quantities of the urine of typhoid fever patients.

I now give an account of the actual results obtained by me up to the present time.

Urine of Typhoid Fever.—Patient: female adult. Temperature: 102.5° to 104° F. during time of collection of urine. The urine passed during four days while the fever was its height was collected, and was extracted by the ether process described above. A small quantity of a white crystalline substance was obtained, which exhibited all the properties and gave all the reactions of an animal alkaloid; it was converted into the hydrochlorate by dissolving in very dilute hydrochloric acid, and gave the following reactions:

Phosphomolybdic acid	White precipitate
Phosphotungstic acid	*Nil*
Mercuric and potassium iodide	Dense yellow precipitate
Iodine solution	Brown precipitate
Tannic acid	Yellowish-brown precipitate
Picric acid	Dense yellow precipitate
Platinic chloride	*Nil*
Gold chloride	Dense yellow precipitate.

These reactions, as far as I have been able to ascertain, are not given by any previously known animal alkaloids. The substance is probably an animal alkaloid hitherto undiscovered in the urine of typhoid fever.

Patient: Male adult. Temperature: Intermittent, varying from 99.5° F. to subnormal during time of collection of urine. The urine, passed during the twenty-second and twenty-third days of the fever, was collected and extracted by the ether process. No animal alkaloid was obtained.

Urine of Scarlet Fever.—The urine was collected from patients at the London Fever Hospital during the height of the fever. Four gallons of urine were extracted by the ether process, and a small but very appreciable quantity of an animal alkaloid was obtained. It was white, semi-crystalline, soluble in water, and faintly alkaline. It was converted into the hydrochlorate by dissolving in very dilute hydrochloric acid, and gave the following reactions:

Phosphomolybdic acid	Pale yellowish-white precipitate
Phosphotungstic acid	White precipitate
Mercuric and potassium iodide	Pale yellowish-white precipitate
Iodine solution	Brown precipitate
Tannic acid	*Nil*
Picric acid	Yellow precipitate
Platinic chloride	*Nil*
Gold chloride	Slight yellow precipitate

This animal alkaloid is also, to the best of my knowledge, one hitherto undiscovered. In neither case was sufficient of the alkaloid obtained to allow of its composition being determined by organic analysis. I am at present engaged in extracting a large quantity of scarlet fever urine, with the view of obtaining a further quantity of the animal alkaloid for experiments.

I propose to continue my researches on the urines of typhoid and scarlet fevers, and shall endeavour to obtain sufficient quantities of the animal alkaloids so as to fix their exact chemical composition and constitution by organic analysis and other means.

THERAPEUTIC MEMORANDA.

A METHOD OF TREATING PRURITUS AND IRRITABLE SKIN.

PRURITUS, whether occurring as an accompaniment of some other affection, or manifesting itself as a symptom without tangible cause, not infrequently taxes all a practitioner's resources for its relief.

In three cases lately under my care, I have used, with good results, a cone composed of cacao butter impregnated with 2 per cent. of cocaine. This is rubbed over the part affected. The warmth of the skin melts off a layer of the cacao butter, which forms a soothing emollient shield over the irritable patch.

The remedy has been put up in the form of cones, enclosed in boxwood cases with screw-tops, something after the manner of menthol cones.[1] These can be carried about by the patient, ready at any moment for self-application. The boxwood being a non-conductor of heat, prevents the heat of the body from melting the cone whilst it is carried in the patient's pocket.

CASE I.—A feeble gentleman, over 80 years of age, whose rest was disturbed by pruritus ani. Behind the anus was a small patch of chronic eczema, which had been increased by scratching. Oleum deelinæ, cooling lotions, and emollient ointments did little or no good. The cocainised theobroma was the first remedy that gave any relief, although the relief afforded by it was only partial.

CASE II.—In a nearly similar case, that of a clergyman of about 50 years of age, of sedentary habits, the relief afforded was immediate and complete.

CASE III.—A lady who, in addition to shooting pains in the legs, complained of a burning, itching sensation in the front and upper part of the chest. There was no affection of the skin, and no irritating underclothing was worn. There was a suspicion that the pains in the legs were caused by lead-poisoning. In this case the relief the remedy gave was immediate and complete.

In irritable affections of the skin, in cases of insect bite, in pruritus and various forms of hyperæsthesia, the remedy is worthy of trial, and its use has distinct advantages over the more usual applications. Although containing cocaine, I regard the manner in which the cacao butter is spread out over the affected part as having a share in the curative process. It is a method of topical application capable of further development.

NORMAN PORRITT,
Honorary Surgeon, Infirmary, Huddersfield.

[1] Messrs. Reynolds and Branson, of Leeds, have efficiently carried out my wishes, and have prepared the remedy in a very convenient and portable, as well as a cheap and elegant, form.

OBSTETRIC MEMORANDA.

QUADRUPLETS.

I SEND you the following short notice of a case of multiple pregnancy which occurred recently in my practice; and as quadruplets are of extreme rarity, it may be of interest as a matter of record if published.

The patient, a collier's wife, aged 35, dark complexioned and of medium size, was first seen by me during the first week of February. She then complained of difficulty of breathing and other symptoms arising from her large size, and the very swollen condition of her lower extremities. Generally she appeared like a person approaching her full term, though her opinion was that she had to go till May. Her heart was weak, with a distinct mitral *bruit*, the lungs slightly emphysematous; the kidneys, considering her condition, acted fairly well, and there was not a trace of albumen in the urine. Her symptoms resisted all our efforts in trying to relieve them, and she continued propped up in bed in a half sitting posture, getting from bad to worse from cardiac dyspnœa till her confinement. On March 5th, about 1 A.M., feeling inclined to micturate, she got herself placed on the utensil, and there, without having had any preliminary labour pains, gave birth to her first child. In an hour the second child was born, and the third and fourth with about a quarter of an hour between each.

It was about half an hour after the last child was born when I reached the house, but I gathered from the nurse "that she tied the cord of the first and second child. The third was born with its placenta attached; and the fourth was born along with the large coalesced placenta of itself and the first two." The first, second, and fourth were girls, and born alive; and, judging by the usual signs of maturity—the nails, etc.—had reached the full term. The fourth succumbed almost directly, the second only lived twenty-seven hours, and the first died in ten days. The third was stillborn, and seemed smaller and arrested morphologically in its development, having its lower extremities so completely webbed that it was not possible to ascertain the sex.

As to the mother, she also succumbed in about six hours after the last birth, from shock, brought on principally through cardiac inadequacy. There was little or no hæmorrhage, and the uterus contracted fairly well. Patient had been married twelve years, and had three previous confinements, all normal.

Ystalyfera. D. THOMAS, M.D.

MYOPIA IN SCHOOL CHILDREN.—Dr. J. L. Miner, of Memphis, Tennessee, has examined the eyes of 682 children in the schools of that town. He found the refraction to be normal in 523, hypermetropic in 128, and myopic in 32. The myopia was found only in children of the fourth class, no less than 15 per cent. of these being affected. His paper is published in the *Memphis Journal of the Medical Sciences.*

REVIEWS AND NOTICES.

On Bronchial Asthma, its Pathology and Treatment. By J. B. Berkart, M.D., late Physician to the City of London Hospital for Diseases of the Chest. Second Edition. London: J. and A. Churchill. 1889.

Spasmodic asthma is a disease which has for many years attracted an amount of attention somewhat out of proportion to its frequency or its importance as an element in the bills of mortality. It is not difficult to see several reasons why this is so; the character of the attacks, the sudden onset of symptoms, so pronounced and peculiar, in the midst of apparent health, would alone suffice to arrest attention; the inveterate character of the disease, its apparently capricious appearances and disappearances, the uncertainty of its reaction to treatment; and perhaps, also, to some extent, the fact that it is most commonly observed among the educated classes, all combine to excite the scientific curiosity. The pathological theories which have been advanced to explain the symptoms observed are many. The most generally accepted, the most specious, but when closely examined the most difficult to accept, is the neurotic, which has been thus expressed by the writer of the able article in Quain's *Dictionary of Medicine*: "Spasmodic asthma may therefore be considered as a neurosis of the pulmonary branches of the plexus of that name, similar to other neuroses, as hemicrania and sciatica, and giving rise through the motor nerves of the plexus to spasm of the bronchial muscle." It is not necessary here to point out all the arguments which may be adduced in favour of this view, but one of the objections which may be urged is well expressed by Dr. Fagge in the following passage,[1] which also contains a statement of an alternative theory: "On the other hand, it is by no means clear that spasm can account for such considerable narrowing of the tubes as must be present in asthma; nor that it is possible for spasm to be kept up for so great a length of time as that which is sometimes occupied by a prolonged paroxysm of the disease. The alternative hypothesis is that the mucous membrane of the tubes becomes very rapidly swollen by what German writers term a 'fluxionary hyperæmia,' or (as Weber has put it) by a 'dilatation of its blood-vessels through the influence of the vasomotor nerves.'" Curschmann, who carefully studied the peculiar expectoration generally observed at the termination of a paroxysm, saw in those spiral cylinders and bands, which bear his name, evidence of a peculiar form of fine bronchitis, to which he applied the term bronchiolitis exsudativa. This bronchiolitis was liable, he supposed, to be complicated by bronchial spasm, and he thus accounted for the sudden onset and sudden disappearance of the dyspnœa.

Dr. Berkart, in the very interesting essay which he has recently published—for, though called a new edition, it is really a new book—puts forward another theory, a further development of Curschmann's thesis. According to him, asthma is due to a progressive inflammatory process affecting the air passages; starting from the pharynx, "it rapidly spreads upwards to the nose and eyes; whereas its downward extension is, for a time at least, arrested by the larynx, just as erysipelas is arrested by a projecting fold of skin. That resistance, however, is subsequently overcome, and the air passages are then invaded. Gradually also the tissues are structurally altered, and their reaction differs. The sero-fibrinous exudation becomes more and more fibrinous, where such is wont to occur; and the consequent mechanical interference with the respiratory function now constitutes the most striking of all its symptoms." The agent which brings about the progressive inflammation Dr. Berkart is inclined to see in a streptococcus, which he has invariably found in the characteristic expectoration, associated with Curschmann's spirals, and more abundantly present in recent than in old specimens. Dr. Berkart leaves us in some doubt as to the species of this streptococcus, but appears to consider that it is nearly allied to, if not identical with, the streptococcus erysipelatos. This hypothesis as to the pathology of asthma, for it is admittedly nothing more, is defended with much ability; and the reader, even if he fails to be convinced by the evident earnestness and conviction with which the author writes, cannot but admire the care with which his facts are marshalled and the wealth of clinical illustrations which he has at his command.

Leaving aside for the present the question of bacteriology, it will be worth while to see how Dr. Berkart's theory will work out when applied to the explanation of the clinical facts which no one will dispute. The symptoms may be taken as enumerated by Dr. Fagge. He notes the constant occurrence of premonitory symptoms—drowsiness, flatulence, sneezing, itching under the chin, and "the passing of a quantity of pale, limpid urine, like that which is secreted in hysteria and in other nervous diseases;" it is, however, "in the first place, a paroxysmal affection," setting in generally with remarkable suddenness, most frequently in the middle of the night. The symptoms of the developed attack are mainly those of dyspnœa, and the percussion-note over the chest generally is hyper-resonant; cough comes on later, "leading to the expectoration of a few greyish-white pellets of mucus, about as large as peas.....The occurrence of expectoration generally indicates that the symptoms are about to subside." Finally, the disappearance, sometimes complete, but often only partial, of all symptoms between the paroxysms, and the fitful or periodic recurrence of these, must be mentioned. The premonitory drowsiness and copious micturition, Dr. Berkart traces to the diminution of the respiratory exchanges, owing to the gradual throwing out of work of increasing areas of the lung; he believes that sometimes the inflammatory process is so intense in the large bronchi that a considerable number are obstructed by the exudation. The gradually increasing obstruction does not at once produce dyspnœa, he thinks, because asthmatics have learnt to get on with a comparatively small respiratory surface. When any considerable area, however, is occluded, the asthmatic is very liable to the sudden onset of a paroxysm; laughing, coughing, and sneezing may lead to the sudden detachment of a fibrinous plug, which is rolled up by the first efforts at expiration, and may become impacted in a larger bronchus owing to the change of form and the tenacious nature of the material of which it is composed. Thus impacted it acts as a valve, permitting some air to pass at first during inspiration but not during expiration; it also acts as a foreign body, producing what the author proposes to call "bronchial tenesmus." The frequency with which the paroxysms come on after a few hours' sleep he attributes mainly to the favourable influence of the recumbent posture on the movements of the fibrinous plugs. "Along the inclined plane, into which the surface of the bronchi is thus converted, the progress of the exudation from the periphery towards the centre is greatly facilitated; and even the shallow movements of asthmatics then succeed in effecting what they fail to do in the erect position, when the direction is nearly perpendicular." The sneezing and coryza are, of course, easily explained in Dr. Berkart's theory, and as to the influence of certain articles of food, it is explained on the supposition that it is the quantity and not the quality of the food which produces the attacks, the respiratory wants being considerably greater immediately after a full meal. As to the alleged periodicity of the attacks, he states that he has not been able to verify its presence in any case. The rapid disappearance of the dyspnœa after the expectoration of characteristic mucous masses is, of course, easily explained on this theory, which, indeed, finds its main ground in this fact. As further positive evidence in favour of the theory of a bronchiolitis exsudativa, Dr. Berkart states that "the temperature always rises, even in the chronic form of the disease, and generally fluctuates between 99.5° F. and 104° F.; 101° F. and 103° F. were not frequently noticed." Upon this point it is to be regretted that the author has not given fuller details; his assertion is so sweeping and so little in accord with current experience, or at any rate with current opinion, that he would have done well to have given his readers the data upon which it is founded. To the minds of many the definite establishment of this fact would do more to establish the validity of the theory of an exsudative bronchiolitis than any other argument adduced.

Dr. Berkart applies his theory to explain the symptoms of hay fever also; they present, he urges, nothing peculiar, either as regards their kind or their grouping. They are those of a severe form of coryza, such as occurs at all times of the year, either as a local affection or as part of an acute infectious disease. He points to the fact that typical attacks of "spasmodic asthma" also are frequently preceded by sneezing and other signs of irritation of the upper portion of the respiratory tract. The chief peculiarity of the affection, he argues, is its occurrence in a limited number of individuals at a time of year when it cannot reasonably be attributed to exposure to cold. He asserts, however, that attacks perfectly identical with hay fever occur in those subject to it at all times of the year, only the diagnosis being dependent upon the time of year is somewhat arbitrary. He hazards the asser-

[1] *Medicine* (1st edition), vol. i, p. 1012.

tion that, upon the whole, coryza is much more prevalent in the summer than in the winter, the contrary opinion being due to the rash assumption that fits of sneezing are to be identified with attacks of coryza. Coryza occurring in summer is more likely to attract attention than in the winter season, when many people look upon it as an unavoidable accident. He thinks that the influence of heat to which hay fever was originally attributed has been too much disregarded, and he argues against the prevalent opinion that it is due to pollen. He does not deny that the inhalation of pollen causes sneezing, the more intense the larger the quantity inhaled, and the less the resistance of the tissues. But he argues that if pollen were the cause of the disease there would be no reason why the disease should invariably commence in the pharynx, as he believes is the case, and not in the eyes or nose, the parts with which the irritating body first comes into contact. He urges, further, that the pollen theory fails to explain why the disease is often protracted for weeks, long after the patients are withdrawn from its influence. He also argues that the copious serous exudation which the pollen provokes would serve to wash off the irritating substances from the surface of the mucous membrane. The symptoms of hay fever are, he considers, those of a progressive form of inflammation, commencing in the pharynx, and gradually extending upwards to the mucous membrane of the nose and eyes, and later downwards to the bronchi. He thus brings the pathology of hay fever into line with his theory of ordinary asthma, and appears inclined to maintain that it is an abortive form of that disease.

As to the treatment of the paroxysms, the author places the greatest reliance on the subcutaneous injection of morphine, which produces speedy relief, probably by relieving the "bronchial tenesmus." In the treatment of chronic cases he attaches most importance to rest; of iodide of potassium he speaks in very lukewarm terms of praise, but highly commends jaborandi or its alkaloid, pilocarpine. "They are," he writes, "especially indicated when the exudation is firmly impacted, and where something is required to start it, as it were." In hay asthma, and in asthma where the acute attacks begin with sneezing and a burning sensation at the back of the soft palate, he recommends the use of a gargle or spray of borax in concentrated solution with a few drops of liquor hydrarg. perchlor. He also speaks favourably of quinine in large doses (gr.xv in one dose).

The essay, which is illustrated by some excellent coloured lithographs of the spirals and micro-organisms in the sputum, will well repay perusal; even if the author's theory is not accepted, his arguments cannot fail to arouse new and profitable lines of thought.

NOTES ON BOOKS.

Merck's Bulletin. (New York, London, Darmstadt: E. Merck).—This is a monthly list of newly proposed or discovered remedial agents. It is only sufficient to serve as an index.

Extra-Uterine Pregnancy, a Discussion. Reprinted from the *Transactions of the American Association of Obstetricians and Gynæcologists*, vol. i, 1888, with an Appendix reviewing Mr. Lawson Tait's *Ectopic Gestation and Pelvic Hæmatocele.* (Philadelphia: W. J. Dornan, 1889).—This pamphlet includes useful summaries of the pathology, diagnosis, and treatment of extra-uterine pregnancy, by different authors, who, of course, put forth their personal opinions on the relative value of operative and expectant treatment, electricity, etc. The appendix is in reality an abridgement of Mr. Tait's *Lectures on Ectopic Gestation*, taken from an American paper, and a panegyric on that distinguished surgeon and his well-known book. "His treatment," says the author of the Appendix, "marks a new era in the handling of this condition, and may be taken as a starting-point of its real surgery." One of the writers in the pamphlet scouts the idea that there are no Taits and Martins in America. In his paper, which, like the remainder, is the reprint of a discussion before an association, he patriotically maintained that there were probably twenty men listening to him who were competent to deal surgically with an extra-uterine pregnancy. The same writer, Dr. Baldy, indicates that electricity is as dangerous a remedy in ignorant hands as abdominal section. Whether, however, the former process be safer or more dangerous than the latter in skilled hands is a different question.

Traité Pratique d'Antisépsie. Parts III and IV. By Drs. Barette and Lepage. (Paris: G. Steinheil. 1888).—This volume forms the conclusion of a work on antiseptics as applied to medicine, surgery, and midwifery. The surgical part has been written by Dr. Barette, and commences with a description of the history and principles of antiseptic surgery. This is followed by a discussion of the various methods of carrying out these principles generally, and lastly, the application of antiseptic surgery to various diseases and injuries, and the mode in which treatment has been thus modified is described. The part on antiseptics in obstetric work has been written by Dr. Lepage on the same lines as the above. The work gives an excellent idea of the subject, and is well worth reading. It deals with a matter which is not sufficiently appreciated, namely, the modifications which can be introduced in the treatment of cases if the aseptic method is carefully employed.

Mikrophotographischer Atlas der Bakterienkunde. Von Dr. Karl Fraenkel and Dr. Richard Pfeiffer. Parts I and II. (Berlin: Aug. Hirschwald. 1889).—In this work the authors give a sketch of the most recent methods of photography as applied to microscopic objects, more especially to bacteria; and they propose to issue further numbers, which will form a complete atlas of bacteria. The photographs, which have been made by means of isochromatic plates and the new apochromatic lenses, are very excellent, and are better than any which have as yet been published. The description of the methods ought to be read by all who are intending to work at photomicrography, and the work, when completed, will form an admirable atlas of bacteria.

Surgical Bacteriology. By Nicholas Senn, M.D. (Edinburgh: Young J. Pentland. 1889). In this work the author gives a summary of the various facts known with regard to the relation of bacteria to various surgical diseases in man, such as suppuration, tuberculosis, anthrax, glanders, etc. The book does not profess to be original, but refers in considerable detail to the facts which have been published bearing on this subject. It will be useful as a book for reference.

New Teacher of Vaccination in London.—The Local Government Board have just appointed, by order, Mr. John Francis Staines, L.R.C.P.Edin., L.F.P.S.Glasg., L.S.A., of 42, Bloomsbury Square, W.C., to be an official Teacher of Vaccination at the Public Vaccination Station, 47, Endell Street, in the place of the late Mr. R. W. Dunn, whose station was in Surrey Street, Strand. This last-named station is no longer one where the special certificate of proficiency in vaccination required by the Local Government Board to be possessed by public vaccinators can be obtained.

The new buildings of the Bath Hospital and Convalescent Home at Harrogate were opened by Prince Albert Victor on July 18th. These have been erected at a cost of about £30,000 from designs by Messrs. Worthington and Elgood, of Manchester. The hospital has accommodation for 40 males and 35 females; the convalescent home for 30 males and rather fewer females. It is intended that the convalescent home should be self-supporting.

Dr. Tatham, the medical officer for Manchester, and for fifteen years medical officer for Salford, has been presented by the officers of the Salford Corporation with a beautiful epergne, with side and centre pieces. The presentation was made at the Salford Town Hall, in the presence of a large number of officials, by the Mayor of Salford (Mr. Alderman Dickins).

At a special meeting of the Sanitary Committee of the Leeds Town Council held on July 22nd, a recommendation of the Subcommittee of Inquiry into the circumstances connected with the recent typhoid epidemic was adopted, requesting the medical officer of health to send in his resignation of that post.

Messrs. Cook and Co. announce a series of tours, arranged conveniently for members of the Association who may attend the meeting at Leeds, of which particulars are published in the usual way in the advertising columns.

Donations.—The recent Cookery and Food Exhibition has resulted in a profit of £314 15s. 6d., which sum has been apportioned as follows: To the Great Northern Hospital, Holloway, £100; the French Hospital, Leicester Square, £100; the Hospital for Sick Children, Great Ormond Street, £10 10s.; the Evelina Hospital for Children, Southwark Bridge Road, £10 10s.; the French Benevolent Society, Poland Street, £37 7s.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1889.

SUBSCRIPTIONS to the Association for 1889 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, JULY 27TH, 1889.

THE SCOTCH LOCAL GOVERNMENT BILL AND SANITARY ADMINISTRATION.

ON Wednesday last the Local Government (Scotland) Bill was read a third time in the House of Commons, and there is now but little doubt that the measure will become law during the present session. It has passed through the most critical stages, and has been much modified in the process, some of the most material of the modifications being amendments of its provisions relating to sanitary administration. Those who desire to see established in Scotland a more energetic and systematic enforcement of the Public Health Acts will have observed with satisfaction that the sanitary bearings of the measure have not been altogether overlooked in the discussion of the many questions involved in the Bill. Most of the Scotch members have shown an interest in the matter, and the Lord Advocate himself has more than once reiterated his anxiety to secure good sanitary administration. It has, indeed, been in consequence of his enlightened support that most of the important amendments which the Parliamentary Bills Committee of the British Medical Association have used their best efforts to secure have been adopted by the House and incorporated in the Bill.

The most important of these amendments is that which was moved by Dr. Farquharson, and supported by the bulk of the Scotch Members, rendering it compulsory, instead of optional, on every County Council to appoint a medical officer of health; and, although there was some hesitation on the part of the Government to support the compulsory principle, the amendment was eventually accepted. The only tenable argument against this amendment would be that it might press somewhat heavily on the smaller counties, but the phraseology of the clause is such that it will be competent to adjoining counties to arrange between themselves for the joint employment of the same officer. It would have been well if Parliament had allowed a somewhat similar provision to be included in the English Local Government Bill of last session.

Closely connected with the whole question of sanitary reform is that of the tenure of office by medical officers of health—a matter which is at present in as unsatisfactory a position in Scotland as it is in England. On this point the Lord Advocate deserves the thanks of the community as well as of the medical profession for his firm stand against Mr. Caldwell's proposal that the medical officer and sanitary inspector should hold office at the pleasure of the County Council. The Lord Advocate held that it is of vital importance that there should be such an amount of independence in the medical officers and sanitary inspectors as would give them the consciousness that, unpopular and invidious as their duties must often be, they would not be subject to dismissal merely on the ground of the unpopularity of their proceedings. He therefore strongly deprecated risking the system of enforcement of the sanitary laws, which all are agreed are too laxly administered in Scotland, by weakening the sense of independence in the officers. This is the view for which the Parliamentary Bills Committee have long contended—although it, perhaps, does not go quite far enough—and it is satisfactory that the principle has been further affirmed and put into practical shape by the adoption, by a majority of 103, of the clause which Dr. Farquharson subsequently proposed, with the view of requiring the sanction of the Board of Supervision, as the central public health authority, to the dismissal of a medical officer or inspector. The new clause in question, according to the official "Votes and Proceedings," is that "every medical officer and every sanitary inspector appointed under this Act, or under the Public Health Acts, shall be removable from office with the sanction of the Board of Supervision." But, from the debate which ensued, it is evident that the word "only" has been accidentally omitted from these official records, and that the clause should read, "……*only* with the sanction….," etc. If, however, there is now any doubt as to this point, it is sincerely to be hoped that the error will be speedily rectified before the Bill reaches its final stage. The Board of Supervision will, we have no doubt, exercise very judiciously and impartially the discretion which it is proposed to give them, but it is to be regretted that the clause which stood in Sir Walter Foster's name for strengthening the Board of Supervision was ruled out of order by the Chairman. Doubtless, however, at no distant date, an opportunity will be found for effecting the reform of the Board of Supervision which is on all hands admitted to be required.

Another question of some importance arose in connection with the constitution of the District Public Health Committees which are to be appointed under the Bill for the administration of the sanitary laws. Objection was felt to the inclusion of representatives of parochial boards on the new Committees, and there is much force in Sir Walter Foster's remarks that the parochial element would obstruct necessary sanitary improvements in rural districts where the parochial representatives would be in a majority, and that it would be well if it could be provided that the elected councillors should be in a majority in the rural districts as well as in the towns, so that sanitary work might in both cases be carried on with uniform efficiency. The objection, however, has not been met by amendment of the Bill.

It was a well-deserved compliment which was paid to the Lord Advocate by Mr. Campbell-Bannerman on the Bill being read a third time. His ability, tact, and courtesy have been constantly conspicuous, and the conciliatory spirit in which he has met the various suggestions put forward regarding the multitude of matters dealt with in the Bill has tended greatly

to the smoothness with which the measure has passed through its various stages in the popular Chamber.

CHRONIC POISONING BY ARSENIC.

In a recent communication to the Académie de Médecine of Paris, Professor Brouardel gave the results of a very careful inquiry into the symptoms of chronic poisoning by arsenic, basing his investigations mainly on an outbreak of arsenical poisoning which recently occurred at Hyères, owing to the accidental poisoning of some wine with arsenic. Professor Brouardel lays great stress on the fact that the symptoms of chronic poisoning are precisely the same as those of the acute form, only more spread out, as it were; and the symptoms are remarkably uniform, no matter what the cause or mode of entry of the poison into the body may be. Every medical man is alive to the fact that wall-paper is a common source of chronic arsenical poisoning, though probably all are not equally cognisant of the fact that the colour of the paper is no criterion as to whether it contains arsenic, for the notorious green colour is due to the presence of copper, not of arsenic; other sources of arsenical poisoning are quite common, witness the cases at Loughton, in Essex, a few years ago, where violet powder containing arsenic gave rise to rapidly fatal symptoms, various coloured sweetmeats, the papers used for wrapping them in, cretonnes and various articles of millinery have in numerous instances been the cause of symptoms of poisoning. In the latter instances it is generally the people engaged in making up the dresses and so forth who suffer; how the wearers fare we often do not learn, their ailments presumably go completely unrecognised.

The symptoms will at the onset depend somewhat on the cause; in criminal cases they will be less gradual than in those of accidental origin, and they will be found to bear a definite relation, if a sufficiently close inquiry be made, either to the taking of certain articles of food or medicine, or to the times of attendance of a particular person. A simple *malaise*, with slight indications of gastric disturbance, perhaps trivial, perhaps accompanied with symptoms suggestive of typhoid fever, will usually be the first indication. The vomiting is more or less spontaneous; at any rate, it is independent of, and unaccompanied by, pain in the stomach; it is generally copious, and, when accompanied by diarrhœa, and especially if the stools should be tinged with blood, we have a condition which in the adult should at once suggest the possibility of arsenical poisoning. The coexistence of vomiting and diarrhœa, with or without febrile symptoms, is in an adult indicative of poisoning, rather than disease; in a child such a combination of symptoms would not have this import. Constipation is, however, in the early stages more common than diarrhœa. In the second period catarrh of the respiratory tract generally makes its appearance; there is a certain amount of mucous expectoration, and the patient has symptoms of laryngitis. Coryza, more or less lachrymation and injection of the conjunctiva will probably also be present, with swelling of the eyelids. Patches of erythema, a vesicular eruption, urticaria, and a branny desquamation are amongst the manifestations that may be expected at this stage, as also the tendency to pigmentation to which attention has frequently been drawn in this country in the case of choreic children treated by arsenic. A persistent headache, numbness in the legs and feet, and sometimes cramps in the legs will also be generally found; the special senses are unaffected. Up to this period it is more than probable that the case will have been misinterpreted, but when, in addition to the above phenomena, paralytic symptoms are developed, the true nature of the case should at once suggest itself to the careful observer.

At this stage the patient is easily tired, has a difficulty in going upstairs, and gradually loses all power in his legs, so as to be unable to stand without assistance. The group of muscles on the front and outer side of the leg are the ones principally affected, and after a time they waste, their faradic excitability in advanced stages is lost, and the response to galvanism is diminished. The muscles of the arms are also affected, but to a less extent; the muscles of the face and the sphincters always escape. The tendon reflexes are absent, and the plantar reflexes diminished. Even when the condition is recognised it does not always follow that recovery will take place, death sometimes occurring suddenly from heart failure when the patient appeared to be doing well. Cases in which paralysis has supervened are always tedious. The paralytic symptoms have been shown to be due to peripheral neuritis.

In a doubtful case, examination of the vomited matters or the motions might, of course, reveal the presence of poison, but in a criminal case it might not be possible to obtain these, or we might not wish our suspicions to be known. The examination of the urine is quite as efficacious as the examination of the vomit, as arsenic is sure to be present in it if the case is one of arsenical poisoning. Arsenic has been found in the urine a few minutes after its ingestion, and Professor Brouardel states that in one case he found arsenic in the urine forty days after its administration had been stopped. He also recommends that the hair should be cut and examined; in one case in 100 grammes of hair he found 1 milligramme of arsenic. As regards the discovery of arsenic in the tissues after death, authorities have been by no means agreed. Scolosoboff and others have asserted that arsenic accumulates to the greatest extent in the brain and spinal cord. Ludwig found that it was most persistent in the liver; the bones, according to him, might retain the poison for some time, but not so long as the liver. Professor Brouardel, however, finds that when the poison has been taken into the body slowly in small repeated doses it is apt to be deposited in the spongy tissue of the flat bones, for example, of the cranium, vertebræ, and scapula, and that it is eliminated from these very slowly indeed; in the more rapid cases it is found in the bones rich in compact tissue, that is, the femur, and this fact no doubt explains the apparent discrepancy between his results and those of Ludwig.

INVESTIGATIONS AS TO THE PHYSICAL DEVELOPMENT AND BRAIN STATE OF SCHOOL CHILDREN.

At the meeting of the British Medical Association in Glasgow, the Section of Psychology appointed a Committee to conduct an investigation as to the average development and condition of brain function among the children in primary schools. This Committee has done good work, and has pioneered the way for the medical inspection of schools. Elsewhere in the

JOURNAL a draft report is given, drawn up by Dr. Francis Warner, and this presents some of the results of observations made in fourteen London schools; it presents the results of the examination of 5,344 children seen, and contains an able analysis of 809 cases in which notes were taken of the facts observed. The main conditions tabulated are—(1) Cases presenting signs of nervousness, nerve-weakness, or defect; (2) Cases presenting low nutrition; (3) Abnormalities of the skull; (4) Mental dulness; and (5) Obvious eye defects. The distribution of such conditions in the various schools, as also their relation to age and sex, is also indicated; the frequency of the coexistence of these conditions in the same case is also shown in tabular form. We thus see that it is possible to ascertain the distribution of the various types of children, both in a school and among the population. This is a new mode of investigation; and information thus gained is likely to prove a valuable addition to our vital statistics, and to aid the management of each school, thus examined, by indicating in some degree the direction in which the special endeavours of the managers and the teaching staff should be directed. In some schools the number of children with defective development appears to be high, while in others the signs of nerve conditions predominate.

The facts are presented in this draft report very clearly in tabular form; some indications as to causation of the principal defective states are apparent in the statements as to coincident conditions. Thus, in the case of children with obvious indications of low nutrition, want of food appears to be by no means the only cause; a large number of these cases had also badly made heads, suggesting defective inheritance and unfavourable antecedents. Teachers will be interested in the tables on mental dulness, a condition that appears to be very unequally distributed. Here, again, both defects in development and low nutrition appear as marked factors in causation. Again, it is interesting to know that it is among the boys that the largest number of badly made heads and cases of mental dulness are found, while, as might have been presupposed, the largest number of nervous children appears among the girls.

Many other important deductions might be made from the tables before us, which have not yet been completely summarised; but it is not our present purpose to give a full review of this draft report of the London schools, as we understand that other reports will be presented by members of the Committee to the meeting at Leeds in August, when a general discussion will be held on this subject in the Section of Psychology.

We have often urged that the medical inspection of schools is a duty devolving upon the Government, and that a Scientific Commission of Inquiry should undertake an investigation of the condition of school children, as well as the conditions under which they work. An extended knowledge of such facts as those before us might prepare the way for the introduction of special classes or schools for exceptional children, such as exist in many towns in Germany and in Norway, where children who are found unable to work under the ordinary national system are educated in day schools, the classes being small and the teachers specially trained, while the number of subjects of study is limited. Among the 285 children seen in certified industrial schools, the conditions found were very different from those in the public elementary schools; the antecedents and inheritance of these children vary widely, but in these schools they are under constant control. In truant schools, it seems probable that many children of defective development and low brain-power might be found; here they are removed from parental control, and are liable to severe corporal punishment; this is not the way to remove defective conditions.

Much anxiety has been expressed in many quarters, both in this and in other countries, as to the effects of educational pressure upon the brain stability of children; the report shows that about 1 child in 20 for the public elementary schools presented some indication of nervousness, nerve weakness or defect, and as we follow the distribution of such conditions, the proportion rises to 1 in 10 for the highest class school, or 1 in 7.5 immediately after the Government examination, falling, in the pauper industrial school, to 50 in 1,077; in the latter school the low figure must not be solely attributed to the class of children found there, it is probably in part due to the fact that the school arrangements are in some degree under the supervision of the resident medical officer.

Many results of great importance to society may follow the pursuance of such investigations as those before us. In summarising the census records, certain important conditions in the population are attributed to concurrent causes; it has not been possible thus far to apply any corrections for the circumstances of the school period of life. It would be very satisfactory to be able to compare these observations in elementary schools with others made in the public schools for boys, and the high schools for girls, and also to know the conditions that might be found in other countries, and under different methods of school training.

It is, for many reasons, an urgent matter that we should know the average condition of our school population, the relative proportion of cases of defective development, nerve cases, and children with low nutrition, as well as those with eye defects, both in London and elsewhere, and that we should discover and remove their cause. This kind of medical inspection of schools need not be feared on the ground of expense; it might be instituted gradually in certain districts; and there is reason to believe that it might be carried on at much less cost than the present Government inspection.

THE TUBERCULOSIS QUESTION.

AT a recent meeting of the Scottish Metropolitan Veterinary Medical Association a Committee was appointed to draw up a memorial to the Government, recommending that the sale of milk of tuberculosed animals should be stopped; that only veterinary surgeons should be employed as inspectors to decide on the meat to be passed for food; and that compensation should be given for animals condemned as being affected.

Such a resolution should have been passed by the veterinary associations some time ago; and though we are glad to welcome its appearance even at this late hour, we cannot but think that the necessary stimulation to action was forthcoming in Sheriff Berry's recent decision in the now famous Glasgow diseased meat case. All the clauses of this recommendation

are admirable, but it is rather a significant fact, in view of the presence of the second clause, that the Secretary of the Association should state that, if on forwarding the memorial to a similar effect passed at a former meeting, the Government had asked him for their reasons for sending the memorial he could not have given them.

Individual members of the veterinary profession have made most valuable contributions to the literature of tuberculosis, but as was only too apparent from the nature of the evidence tendered at the trial at Glasgow, especially that on behalf of the defence, that the veterinary surgeon is not as a rule the man best qualified to judge as to the fitness of carcasses for human food.

Enormous strides have been made in recent years by the veterinary schools, not only in the completeness of their course and the thoroughness of their teaching, but in the character of the qualifying examination, and it is not going too far to say that the next generation of veterinary surgeons will be fully competent to undertake the duties assigned to them in the above recommendation; but for the present it is to be feared that, with few brilliant and outstanding exceptions, they do not possess the necessary qualifications. We are sorry to write this, for we do not think that such work falls within the province of medical officers of health. Their duties and responsibilities are already sufficiently onerous, but, except in large teaching centres, they are the only men who are at all able to give a reliable opinion.

Sheriff Berry, we have said, is to be held, in part at any rate, responsible for this action of the Scottish Metropolitan Veterinary Medical Association, and we cannot but congratulate those interested in the subject of tuberculosis, that the evidence, both good and bad, of what is known at present on the subject, should have had to pass in review before such a logical legal mind, one that evinces an acuteness of reasoning, and an appreciation of the relative value of different theories and statements such as may well be envied by those who pose as scientific authorities. Not a point seems to have been missed by the Sheriff. He is absolutely impartial. In some instances the evidence given by a witness was condemned out of his own mouth. It was a battle of the bacilli, and as such it must be fought out to the end. In this connection it is interesting to note what effect the evidence had on the non-medical mind. First, as to the relation of the bacilli to the disease, the Sheriff says, "To the significance and the importance of the bacilli of tuberculosis having been seen in different parts of the animal, it is hardly necessary for me specially to advert. I take it to be established by the evidence as now the accepted view of most scientific men who have investigated the subject, that the disease known as tuberculosis is not only accompanied but caused by.....the bacillus tuberculosis, and that the bacillus in the tuberculosis of oxen, as well as in the tuberculosis of some others of the lower animals, is the same as that which is found in tuberculous diseases in human beings."

He then goes on to point out that, although few or no bacilli are found in the muscles of animals even markedly tubercular, they are frequently present, as demonstrated by the aid of the microscope, in the glands which are used for food, and he says, "Whether ingestion be, or be not, the common way in which the disease is communicated, it must certainly be regarded as one mode of its communication;" and in support of this opinion he quotes the evidence from the report of the Departmental Committee. He further says, "It was admitted at the debate on the part of the counsel for the defence that the disease may be communicated by the drinking of milk, and if that be so it is impossible to maintain that it cannot be communicated by the eating of flesh. Indeed, one need not look further than to the practice of condemning the meat of tuberculous animals, as hitherto practised in Glasgow and elsewhere, in order to see that the transmissibility of the disease by ingestion has long been recognised. Except on the footing that the meat was the medium of the transmission of the disease, it would be unnecessary and wasteful to exclude from the food supply the carcasses of animals which had suffered from tuberculosis, however generalised and extensive."

Another most important point insisted on by Sheriff Berry is that stripping away the pleura and the internal organs and then allowing the rest of the carcass to be sold, as is the practice in Glasgow, is not a sufficient protection against the risk of communication of the disease by ingestion. He very pertinently adds: "There may be no appearance visible to the naked eye of the action of the tubercular bacillus in a particular part of the animal, and yet it may not improbably be there. The presence of the agent of the disease must precede the visible results of its action; indeed, the present case affords an illustration of the danger of inferring from the absence of symptoms visible to the naked eye that the disease is localised. As far as could be judged by such symptoms, there was but little indication of disease beyond the internal organs; yet, on examination under the microscope, bacilli were seen in the prepectoral gland—a part of the animal which, although the carcase had been stripped, would have been passed out into the market as fit for the food of man."

After pointing out that he did not necessarily take up the position that the carcass of every animal that had suffered from tuberculosis should be condemned, he stated that in this instance the presence of tubercle alone, and not the condition of the flesh, had guided him in arriving at his decision, as he could not agree with Dr. Littlejohn in "the view that the appearance of the flesh of the bullock to the naked eye was such as would justify its being condemned." This is a most important utterance, because it shows that the rule-of-thumb inspection of meat must soon be superseded. There is only too much reason to believe that in many cases the inspectors wink at "stripping" and even well-advanced tubercle, if the flesh itself is in fairly good condition. A more accurate and scientific inspection is needed, and Sheriff Berry has contributed very largely to this result by his dictum on this point. He concludes an exceedingly able "interlocutor" by referring to the diminution of the food supply that will follow the more careful inspection of meat, but he thinks that there is a disposition on the part of some to overestimate the extent "to which the condemnation of carcasses under the new rule adopted by the local authority will operate." Only about one-half per cent. of the Glasgow beef cattle are tuberculosed, and of these he thinks one-half are already condemned, so that there remains only one-quarter per cent. to be further dealt with. He adds:

"The loss even of that proportion of the food supply is much to be regretted. But in weighing its importance I am of opinion that it is insufficient to overcome these considerations in the interest of the public health which must be regarded as paramount."

THE subject of the Bradshawe Lecture, which will be given by Dr. Norman Moore on August 19th, at 4 P.M., is "The Distribution and Duration of Visceral New Growths."

MR. E. B. WHITCOMBE, Medical Superintendent of the Birmingham City Asylum and Professor of Psychological Medicine in Queen's College, has been appointed Ingleby Lecturer for next year.

NO meeting of the Executive Committee of the General Medical Council will be held this July. The chief business referred to the Committee was the question of diminishing the expenditure entailed by the plenary meetings of the Council, and the opinions and experience of members upon this point are now being collected by correspondence.

WE are glad to learn that there is a prospect of the early appearance of the work on *Diseases of the Lungs*, which occupied the late Dr. Wilson Fox during many years. We understand that it presents the thorough and exhaustive method which characterises all the writings of its author, and that it is receiving careful and appreciative editing at the hands of one of the many pupils of Dr. Fox who have achieved distinction, Dr. Sidney Coupland. It has been decided to publish it through Messrs. Churchill by subscription, and it will probably go to press before the end of the year.

PROPOSED COMMISSION OF INQUIRY ON HOSPITAL MANAGEMENT.

LORD SANDHURST has set down a notice of motion in the House of Lords, for Monday, July 29th: "To present a petition signed by members of the medical profession, and also on behalf of charitable institutions, praying for inquiry with regard to the financial and general management and common organisation of medical institutions, endowed and voluntary; and with regard to the administration of poor-law institutions for the aid of the sick in the metropolis; and to move that the petition be granted." We have already published a copy of the petition in the JOURNAL, and expressed the opinion that the Commission asked for would serve a very useful purpose.

DEGREES FOR LONDON MEDICAL STUDENTS.

THE Committee of the Senate of the University of London met on Wednesday for the further consideration of the proposed scheme for the reconstruction of the University of London. We understand that this will probably be the last meeting before the Long Vacation. A deputation from the Councils of University and King's Colleges had an interview with Lord Cranbrook on Thursday afternoon, and presented a memorial, which will be found at p. 209. The Royal Commission, it will be remembered, practically rejected the request of these two colleges for the formation of a "teaching University," to be formed by the combination, for university purposes, of colleges in London, recommending in place of that scheme the radical reforms of the University of London, which are now under the consideration of the Senate of the University, and upon which the Royal Colleges of Physicians and Surgeons have been asked to express an opinion. The memorial to the Lord President states that University and King's Colleges do not desire to offer any opposition to the reconstruction of the University of London, but urges that, even if carried out in its entirety, it will not meet the wants of London or invalidate their application. At the first glance, at least, this position appears to be untenable, and these colleges will, we believe, have to show very strong grounds, of a kind not yet apparent, before public opinion will be disposed to sanction the creation of a second University in London, competing with a university such as the University of London would become if the very drastic reforms recommended by the Royal Commission are carried out.

PAYING PATIENTS IN INFECTIOUS HOSPITALS.

ONE portion of the Bill introduced by Mr. Ritchie provides that the managers of the Metropolitan Asylums District are empowered to receive persons suffering from fever, or small-pox, or diphtheria as paying patients into their asylums. This power is, however, subject to such regulations and restrictions as the Local Government Board may from time to time make. The Bill also contains a power for the managers to purchase lands adjoining an asylum. They are also authorised to allow their ambulances to be used for the conveyance of persons suffering from any dangerous infectious disorder to and from places other than their own asylums, and to make reasonable charges for such use.

THE PASTEUR INSTITUTE.

TOWARDS the Lord Mayor's Fund, which is being raised in connection with M. Pasteur's Institute in Paris, the Merchant Taylors' Company, has given £31 10s.; Mr. Alderman Evans, £21; Dr. Hugo Müller, F.R.S., £10; Sir Prescott Hewett, F.R.S., £10; Dr. Pye-Smith, F.R.S., £10 10s.; Sir Frederick Bramwell, F.R.S., £5 5s.; Mr. Lennox Browne, £5; Mrs. Edmund Potter, £10; Sir Henry Roscoe, M.P., £10; Dr. George Johnson, F.R.S., £5 5s.; and Mr. C. B. Pitman, £5.

LUNACY ACTS AMENDMENT BILL.

WE are glad to see that Mr. Matthews has put down notice of some further amendments, which will materially improve the Lunacy Acts Amendment Bill; the effect of one of these will be to remove the restriction on the reception, not only of single patients by medical practitioners in their houses, as had already been done, but in respect to the reception of such further patients as may be duly authorised. The wording of the amendment is as follows: "In the case of any person having charge of a single patient, if the Commissioners are satisfied that it is desirable, under special circumstances, and for the interest of the patient, that another patient, or more than one other, should reside in the same house, that person may, with the approval of the Commissioners, receive such other patient or patients on the same terms and conditions in all respects as if each of them were a single patient." Some further amendments are also proposed by the Government, with which we shall deal in an early number.

ST. BARTHOLOMEW'S HOSPITAL.

THE "Stewards' Feast," annually given by twelve of the Governors, took place at the hospital on Wednesday last, when H.R.H. the Prince of Wales, as President, occupied the chair. Sir James Paget in proposing "The Health of the Prince and Princess of Wales and the other members of the Royal Family," referred to the fact that the first King Henry gave to St. Bartholomew's Hospital their original charter, the last King Henry gave them the charter under which the institution was now conducted, and the Prince of Wales maintained its Royal character by his presidency. His Royal Highness, in proposing "Prosperity to St. Bartholomew's Hospital," called attention to the fact that

during the last eighteen years the income of the hospital had increased more than 50 per cent., and its work as an institution for the relief of the sick poor and as a school of medicine and surgery had concurrently advanced. The permanent medical and surgical staff had increased from thirty to fifty-seven. Separate and special departments had been opened for the treatment of ophthalmic, orthopædic, skin, ear, and throat diseases, and also an electrical department with the most improved appliances, and with a medical officer in charge. The school buildings, including the library, museum, class rooms, dissecting rooms, and lecture theatres, had been rebuilt at a cost of £50,000. The number of students had more than doubled, having increased from 223 to 469. The sanitary arrangements had been reconstructed at a cost of £22,000. Isolation rooms and improved accommodation had been provided. A convalescent home with seventy beds, at Swanley, in Kent, had, through the generosity of Mr. Kettlewell and a few other governors, been presented to the hospital. Since 1875 the nursing staff had been completely re organised, a training school for nurses had been established, and a nurses' home for their residence had been provided. The female staff had been doubled, having been increased from 116 to 232. Sir Lyon Playfair, M.P., proposed "The Medical and Surgical Staff of the Hospital," mentioning that 6,000 in-patients and 160,000 out-patients were annually treated at the institution. The toast was acknowledged by Dr. Andrew (the senior physician) and Mr. Savory (the senior surgeon).

THE ABUSE OF HOSPITALS.

THE correspondence concerning the abuse of hospitals, dispensaries, and clubs, which is being carried on in our columns by energetic and public-spirited members of the profession deals with a subject of high public and medical importance. We willingly devote to it a large space commensurate with its importance. Obviously, however, if the discussion and the steps which may follow it are to be productive of any united action—which alone can be fruitful in good practical results—the tone in which the debate is carried on should be one of moderation and mutual respect. Hard words will rather alienate than persuade those from whom our correspondents so stoutly differ. We have felt compelled to modify some of the more heated phrases and paragraphs from letters already published. We trust that this hint may help to bring the debate into that calm and considerate order of ideas which best befits a professional discussion of so much moment. There are passages in some of the letters published, so hotly expressed that but for the desire to favour the utmost liberty of debate we should have hardly felt justified in printing them. Unnecessary cause of offence may well be avoided in so complex a question by guarded courtesy of language.

THE SAMARITAN FREE HOSPITAL.

THE memorial stone of the new building in the Marylebone Road was laid by the Prince of Wales, accompanied by the Princess of Wales and the Princesses Victoria and Maud, on Wednesday, July 24th. The thoroughfares leading up to the hospital, along which the Royal party passed, were gaily decorated with flags and venetian masts. A spacious tent was erected on the site of the new hospital building, the floral decorations were provided gratuitously by Mr. Green, of Crawford Street, the furniture for the daïs by Messrs. Druce and Co., of Baker Street. Under the tent were collected several hundred visitors, with the staff, the matrons (Miss Butler and Miss Tidy), and some of the nurses of the hospital. Their Royal Highnesses and party were received, on arriving at 4 o'clock, by members of the Reception Committee, and a bouquet was presented to the Princess by Miss Susan Grosvenor, granddaughter of Lord Ebury. The Earl of Selborne, Vice-President, on behalf of the President, Lord Leigh, unavoidably absent through a death in his family, presented to the Prince and Princess the members of the Committee, which consisted of Sir John H. Johnson, Lord Charles Beresford, C.B., Mr. F. Seager Hunt, Sir T. Spencer Wells, Drs. Henry Savage, C. H. F. Routh, Day, Boulton, and Bantock, and Mr. Knowsley Thornton. The Earl of Selborne then read, and the Prince replied to, an address, which explained the character of the hospital, and the necessity which had arisen for erecting on a new site a building more commodious than the houses in Seymour Street and the Marylebone Road. After a brief service, conducted by Canon Barker and the Rev. Mr. Jomini, the Prince of Wales laid the foundation stone. The Benediction was given by the Bishop of Marlborough. Lastly, the Princess received purses collected during the ceremony; the names of the donors were announced by the Secretary, Mr. Scudamore, and the purses were committed to the charge of the Honorary Treasurer, Sir J. Johnson. The Royal party then left amidst hearty acclamations from within and without the tent. Two military bands performed selections of music during the ceremony. Over £1,200, subscriptions to the building fund, were collected.

THE TOURIST SEASON.

WE are at a period of the year when most town residents who can afford it are thinking with varied feelings about the summer holiday that they wish to take or have to undergo. Perhaps the most interesting type of holiday-maker is the true tourist—that is to say, the man who spends his vacation going about from place to place. The tourist class includes young men who go touring because they love exercise and novelty, and men of mature years who get depressed in lodgings at the seaside, and do not care for the habits of the public who throng to inland "waters." The elder tourist generally finds a tour far better as a remedy against professional fatigue and anxiety than a wearisome, sham repose for three weeks or over in a dull watering-place properly suited for children. The tourist proper, when in congenial company or in his own company, follows his tastes; we put aside unfortunate men who tire themselves out feasting in Paris, or clambering over mountains in the company of younger companions who like those forms of relaxation, and we likewise dismiss from the true tourist class young gentlemen who travel with elder companions versed in old masters and archæology. Such unhappy men are victims, not tourists; their journey is a penance, not a relaxation. As for the touring Briton who hurries on as far as possible for his money, he enjoys himself after his fashion, and, so far, his tour does him good. The advantage of a good walking tour in the country or abroad is self-evident in the case of young men who will not exhaust themselves, and in respect to elder men still vigorous and endowed with prudence. Great, undoubtedly great, is the benefit of those more intellectual excursions so often undertaken by English gentlemen. Few pleasures are purer or more wholesome than a ramble through cathedral towns and cities, where architecture and historical associations can delight the mind fatigued by monotonous or absorbing intellectual work. Such men are often held up to ridicule; they are reminded that the country is the place for a holiday. This reminder includes a theory true in the main, but liable to misapplication; for such men have often lost the power of enjoying the country. Place one, or even a congenial brace, of these gentlemen for a fortnight in a secluded pastoral district, and he or they will soon become depressed and think of business too much, or possibly eat, drink, or smoke to excess. The first requisite in the tourist who can afford time and money is that he should follow his tastes.

UNIVERSITY COLLEGES AND STATE AID.

THE report of the Committee appointed to advise as to the allocation of the grant of £15,000 for university colleges in Great Britain has no direct bearing on medical education. The Committee, which consisted of Sir John Lubbock, Sir Henry Roscoe, Dr. Percival, Head Master of Rugby, the Rev. G. F. Browne, and Mr. R. G. C. Mowbray, was practically instructed to exclude the medical branch of education from consideration and to have regard only to the work of colleges in the arts and in science. The recommendations of the Committee, which have been adopted by the Government, are that the sum should be allotted as follows:—To Owens College, Manchester, £1,800; to University College and King's College, London, £1,700 each; to Liverpool University College, £1,500; to Mason College, Birmingham, the Yorkshire College, Leeds, and Nottingham University College, £1,400 each; to Bristol University College, the Durham College of Science, Newcastle-on-Tyne, and Firth College, Sheffield, £1,200 each. These amounts, together with the proposed grant for the present year of £500 to the Dundee University College, make up the sum of £15,000 proposed to Parliament by the Government. The grants are specially intended to stimulate, while temporarily supplying the deficiencies of local munificence; and, it is to be hoped, will have the effect of impressing upon the public mind the importance of the work carried on, with very slender means, by the bodies named. They have occupied a field which the older university system of the country had left untilled. They have, in particular, done much for scientific education; but very much still remains to be done. We want more laboratories, better equipped, and more inducements to young men to devote, at any rate, some years of their life to original research. In this way only can teaching be maintained at a high level, and in this respect we are still far behind Germany and France.

PRESCRIBING BY MACHINERY.

THAT we live in an age of mechanical ingenuity is no doubt a matter for congratulation. To be able to get a box of matches by putting a penny into a slit is sometimes convenient, and it affords the same kind of pleasurable excitement to the young man from the country as the never-failing "confidence trick," while the risk is insignificant. But "man wants but little here below, nor wants that little long." He is apparently tired of chocolates, pencils, and dabs of scent. Even the weighing-machine palls; trials of strength against an iron antagonist who, with an immovable face, records the result in pounds, are apt to prove humiliating, and it is difficult to hit an unoffending cushion with a malevolence which does the hitter justice. An automatic machine has now been invented which undertakes to test the sight. The trustful one deposits the necessary penny in the usual way, and then stares through two holes with both eyes at once, while he revolves a handle until he can read the test types with ease. He then reads off the number which appears below the types, preceded by the word "convex" or "concave," opens the magic drawer, and, amid the jeers of the spectators, draws out—not the spectacles, but a blank card. Most persons will glide this surreptitiously into a pocket and walk away with an expression of satisfaction. But the instructions are that the number, with the word "convex" or "concave," are to be written on the card, with the name and address of the sender, and the card is to be posted in a slit provided for the purpose. A pair of spectacles will then be sent, on receipt of a price which is somewhat higher than is charged by many spectacle-makers. We fail to see what the loiterer gets for his penny. Any jeweller would give him glasses that are at least not likely to be more wrong than those prescribed by the machine, and, although these persons seldom take the trouble to see that spectacles fit properly, few purchasers would leave the shop without seeing that they could get them on to the face. The machine makes no provision for even this modest requirement. Moreover, the human machine is amenable to various means of persuasion, and can generally be induced by some of these to take back a pair of glasses that prove to be useless or injurious; but the automatic machine appears to afford no facility for returning spectacles. It may however, be doubted whether this apparatus will do much harm; the "penny-wise and pound-foolish" folk will not incur the preliminary expense, and few the much larger class of "penny-foolish" will go further than this. Of the few who go through the whole process, the larger proportion will probably find that they are unable to wear the glasses.

THE KOLA NUT.

THERE has just been printed, by order of the Surgeon-General of Her Majesty's Forces, a report by Surgeon R. H. Firth, Medical Staff, on the dietetic and therapeutic value of the kola nut. The observations on which the report is based were made on English soldiers at the Mian Mir Camp of Exercise during January, 1889. The kola nut is largely used in the interior of northern Africa as a stimulant, and has been found to have the following percentage composition:—Caffeine 2.4, theobromine 0.02, water 11.9, proteids 6.7, starch 33.7, sugar 2.8, fats 0.68, tannin 1.6, colouring matter 3.7 cellulose 30, ash 6.5. As the result of a series of observations, Surgeon Firth has come to the following conclusions:—1. That kola nut is in no sense a food. 2. That in man it increases the total urinary water, with a slight reduction of its total solids, and a marked reduction of the extractives eliminated by the urine. Such action is probably due to its contained caffeine. It in no way affects the nitrogen output of the body. 3. That there is a stimulant action on the nervous system, the heart-beat is temporarily strengthened, and the arterial tension increased. Taken continuously during times of exertion and fasting, it possesses some power of warding off the sense of mental or physical depression or exhaustion, this power not being, however, so marked as some observers have reported. 4. That it might be employed on service as an issue to troops in the form of broken up nuts, the same being issued with instructions that a piece be constantly kept in the mouth and chewed, and the saliva swallowed. 5. That as an infusion with milk and sugar, kola powder is an efficient substitute for tea or coffee, especially for those suffering from diarrhœa, owing to its astringency. 6. That as a therapeutic agent in the convalescence from long sickness, its value is not apparent. 7. That its alleged antagonistic action to alcoholic sequelæ is not capable of proof. 8. That as a purifier of water its action is purely mechanical, and not superior to many mucilaginous seeds. 9. That seeds from species of sterculia which contain no caffeine must be carefully excluded. 10. That continued mastication of the solid nut is the best way to take it.

DEATH FROM HYDROPHOBIA.

THE following particulars of a case of death from hydrophobia in Birmingham have been forwarded to us by Dr. Richard Drury. The sufferer, a lad aged 15, who had lately resided in Ceylon, arrived three weeks ago in Birmingham. In November, 1888, he and his brother (a baby) were bitten by a stray dog. As a precautionary measure, the wounds were sucked and cauterised. It is not known that the dog was rabid, as before that fact could be ascertained it was drowned. On July 13th the elder lad complained of not feeling well. The following day he kept the house and had a slight shivering fit. On July 17th Dr. Drury was summoned. He was told there was difficulty in swallowing, and that the patient seemed in danger of being choked. He found a very well-developed young fellow in bed, who had a sullen and appre-

hensive aspect and was very reticent. To test his vocalisation he was asked his name, which was not clearly heard until he had repeated it several times. No redness or swelling of the fauces was perceptible, and nothing abnormal was revealed to the touch. On the right side there was a slightly swollen submaxillary gland. A cup of water was then handed him to drink to try his powers of deglutition, and here the first suspicion was aroused, for the moment he saw the water he was seized with spasm of the pharynx, and it was only on pressing him to drink after much protestation on his part that he managed to take two or three gulps. There was no headache, no heat of skin, and the pulse was calm. As the pharyngeal spasms kept constantly recurring chloroform inhalations were ordered. During the day he had short intervals of sleep, and took some solid food. His condition at night did not seem worse. He passed a bad night, but took nourishment freely; and in the morning he stated he had drunk easily two cups of tea, and said if he could only get "this lump' out of his throat he would "feel as happy as a bird." He made frequent attempts to vomit and to eject the viscid mucus from his fauces. His mind was perfectly clear. Receiving a hurried message saying the lad was worse, Dr. Drury on his arrival found the patient struggling for breath. The spasms of the throat had greatly increased. He was vainly attempting to get rid of the glairy mucus that kept constantly filling his throat, which could not be removed by any effort on his part, and had to be wiped away from time to time with a handkerchief. Later on Mr. Bennett May saw the case in conjunction with Dr. Drury, when the lad was found to be in great anguish and distress, excessively restless, at times struggling with maniacal frenzy, but lucid at intervals, recognising those surrounding him, and able to articulate clearly. His features were of a dusky leaden hue, and the pupils widely dilated. The spasms commencing in the pharyngeal muscles affected also those of respiration. The muscles of the trunk and limbs were flaccid. There was no trismus. The tenacious mucus became excessively copious and deeply stained with a coffeeground-looking material. Gradually the pulse began to fail, the extremities became cold, and in a few hours death ended a most painful scene.

NON-INFECTIOUS FEVERS IN THE PUERPERAL STATE

To many obstetricians the proposition that there are non-infectious puerperal fevers maintained by Professor Hirst[1] will appear heterodoxical. For some time past the theory that puerperal fever is septicæmia and nothing else has held almost absolute sway. As is commonly the case when a dogma embodying an important truth is advocated warmly, even passionately, as this septicæmic dogma has been, all opposing facts and arguments are condemned as heresy. No alternative, howsoever true, is tolerated. The mind, wholly possessed by one idea, is, of course, incapable of entertaining another idea. "*Haud bene conveniant nec in unâ sede morantur*" is a very good maxim as applied to truth and error. One or the other must give way. But the septicæmists assume, without deigning to attempt to prove, that everything but septicæmia is error. For them there is no room for anything else. As Dr. Hirst says, it is often difficult to convince a medical man that fever in childbed can have another origin than sepsis. He cites cases showing that fever arose from emotional causes, from exposure to cold, from constipation, from reflex irritation of any kind, from cerebral disease, from eclampsia, from insolation, from syphilis, from the exacerbation or persistence of an acute or chronic disease contracted before or during pregnancy. He gives an example of each of the above relations, with diagrams, showing the rise of fever under its influence. The cases are instructive, but it must be admitted, not very complete. Dr. Hirst refers to syphilitic fever critically, rather than clinically. He does not think the evidence in support of the proposition that it is frequent or even clearly established trustworthy. With regard to phthisis, he questions the opinion at one time held, that the disease makes no progress, or at least is very much retarded after delivery. That, he says, "is certainly not my experience." Phthisis frequently runs a rapid downward course after labour, and even during gestation. Although the clinical matter brought forward by Dr. Hirst is not abundant, it is enough to suggest reflection, and to show that there are other causes of fever that may assail the lying-in woman besides the ingestion of poison. There are already other signs of a reaction. The cases cited by Dr. Hirst illustrate more especially what Dr. Barnes describes as the endogenetic form of autogenetic fever, in which it is unnecessary to invoke absorption of septic matter, either from without or from the parturient canal. These are cases in which the normal equilibrium between involution and its products and excretion is disturbed, so that noxious stuff of its own creation accumulates in the system. The acceptance of this theory, well borne out by clinical observation, does not involve the denial of the septicæmic theory. Both are true, "*bene conveniunt;*" they supplement without contradicting each other.

[1] *Philadelphia University Medical Magazine*, June, 1889.

SPONTANEOUS RUPTURE OF THE HEART.

Dr. Mallet, of Paris, described before the Société Anatomique of that city a case of this accident which occurred last May in the Hôpital Tenon. The patient was a man aged 79, with pulmonary disease. He died suddenly after rising to micturate. A rent, almost vertical and over two inches long, was discovered in the anterior aspect of the wall of the left ventricle. The pericardium was full of blood, the aorta atheromatous, and the left coronary artery nearly obliterated. All the valves were normal. Dr. Mallet quotes Odriozola's statistics of spontaneous rupture of the heart. That observer could only collect 176 authentic cases. In many instances the patient was old, being between 60 and 70 in thirty-six, and between 70 and 80 in forty-five. The accident appears most frequent in women. As a rule, the escape of blood into the pericardium is considerable. The rent in the wall was unusually large in Dr. Mallet's case. In nearly every instance in Odriozola's statistics, the rupture was in the anterior part of the left ventricle. The original report of the case deserves study. The rupture apparently took place fifty-three hours before death, when the patient was seized with dyspnœa and epileptiform convulsions marked in the upper extremities; his face turned pale. The exertion of rising to micturate caused immediate death, probably by sudden escape of blood into the pericardium. A similar history has been recorded in other cases of spontaneous rupture of the heart.

ARRESTED DEVELOPMENT OF THE GENITALS.

At the Leipzig Obstetrical and Gynæcological Society, in January, 1889, Professor Sänger exhibited three instructive cases of this kind. In the first pregnancy occurred, although the vagina was congenitally closed. A transverse septum was found in the vagina; it bore a minute perforation sufficient, as facts proved, to allow of impregnation. In the second case the patient was aged 28, and single, no "show" had ever been seen, but from the age of 13 she had suffered from molimina, which grew more and more painful. The outer organs were normal; an oval septum of mucous membrane, quite impervious, lay in the place of the hymen. On examination under narcosis, the uterus and vagina could not be detected. The ovaries could be felt, they were about the size of almonds. The patient in the third case was a woman of almost gigantic frame, and aged 26. Her figure and general conformation were perfectly feminine. For many years she had lived with her husband, a very powerful man. Neither menstrual flow nor "molimen" had ever been observed. The outer

organs were infantile and without hair, the clitoris very small. The urethra was fissured posteriorly, and laterally enveloped in a pair of wattles formed of mucous membrane. An ill-developed crescentic hymen was detected. The perineum was short, and invested with mucous membrane close up to the anus. Above the hymen was a vaginal blind pouch one inch deep. No ovaries nor uterus could be detected on digital examination. The hypospadias was an interesting feature in this case.

SODIUM DITHIOSALICYLATE II.

DR. H. LINDENBORN, Frankfurt-am-Main Town Hospital, reports on this substance in a preliminary communication,[1] and thinks it is destined to supplement salicylate of soda in the treatment of acute articular rheumatism. The dithiosalicylic acids Nos. I and II are two isomeric bodies, each of which consists of two molecules of salicylic acid linked together by two molecules of sulphur. No. II (sodium salt) is a greyish-white powder, very hygroscopic, and easily soluble without residue in water. According to Hüppe, a 20 per cent. solution kills anthrax bacilli in forty-five minutes, in which time the ordinary salicylate has no perceptible effect; similarly with other bacteria. Four cases of polyarticular and one of monoarticular rheumatism were treated, also one of gonitis gonorrhoica complicated with irido-choroiditis; the dose was 0.2 gramme (3 grains) morning and evening—oftener in the more severe cases. The slighter cases showed disappearance of joint-swelling, pain, and fever in two days, the more severe cases in six days. One case was a relapse after salicylate treatment; nausea and noises in the ears were complained of, severe sweating occurred only when 0.8 gramme (12 grains) were taken *pro die*. The last mentioned of the above cases was from another hospital, and the patient left cured in ten days. The advantages of this drug over salicylic acid are: stronger action, therefore smaller doses; tolerance by the stomach (the insoluble dithiosalicylic acid is precipitated from the sodium salt in an acid solution); and absence of unpleasant after-effects.

LONG INTERVALS BETWEEN BIRTHS OF TWINS.

DR. ENGSTRÖM, of Helsingfors, describes, in the *Finska Läkare sällskapets Handlingar*, January, 1889, three cases of twin labours, where the interval between the births of the twins was unusually long. In the first case the second child was not born till thirty hours after the first had been delivered. Uterine contractions had ceased, the membranes were ruptured, and the child, ten pounds in weight, was delivered by turning. In the second case the interval was twenty hours. The waters were fœtid, yet the second child, which weighed nine pounds, was delivered alive, by the aid of forceps. In the third instance the second child, weighing five pounds and a half, was delivered twenty-six hours after the first. In all the above cases both twins were saved. An interval of even twelve hours is not frequent in twin deliveries.

LORETA'S OPERATION.

AN addition to the list of cases in which Loreta's operation of digital dilatation of the pylorus has been successfully performed has been made [2] by Drs. Francis T. Kinnicutt and William T. Bull, of New York. The patient, a man, aged 38, was in a cachectic condition when he came under the treatment of Dr. Kinnicutt. The stomach was much dilated, and was emptied by vomiting once daily. Careful chemical examination of the contents of the stomach, removed by means of the stomach tube about four hours and a half after a test meal, showed that hydrochloric acid was constantly present, though in slightly diminished quantity, and it was therefore considered highly probable that the dilatation of the stomach was due to pyloric stenosis of a cicatricial character. Dr. Bull performed Loreta's operation on June 11th, 1888. The pylorus was found much narrowed, cicatricial tissue half surrounding the lumen of the contracted orifice. It was gradually dilated, first with bougies and then with the fingers, until its diameter was about two inches. The patient made an excellent recovery; he was transferred to the medical wards on the ninth day, and "discharged apparently well, having gained fifteen pounds in weight from the day of the operation" on June 31st. Later, in the summer, he had a recurrence of some disturbance of digestion attributed to imprudence in diet, but was easily relieved by treatment. Eleven months after the operation he was in good condition, and the dilatation of the stomach had sensibly diminished.

[1] *Berlin. klin. Wochenschr.*, No. 25, 1889.
[2] *New York Medical Record*, No. 970, p. 617.

DYSMENORRHŒAL MEMBRANE.

Is membranous dysmenorrhœa a little more than menstruation and less than pregnancy? Can dysmenorrhœal membrane always be distinguished from the decidua in early pregnancy? These questions are of high import and deserve the attention of practitioners and histologists. The subject was raised at the July meeting of the Obstetrical Society of London, where some decidua-like fragments were exhibited. They had been discharged from the uterus some time after removal of the appendages. The theory that membranous dysmenorrhœa represents periodical abortion within one month after impregnation is very plausible. It is supported by Dr. Cory's case, published in the *Transactions of the Obstetrical Society*, vol. xx, 1878, where no membranes were passed at period whenever the patient lived apart from her husband. The phenomenon might, on the other hand, be explained by the sexual rest which temporarily cured a true "dysmenorrhœa," as distinguished from an incipient pregnancy. All cases of membranes passed from the uterus at regular intervals deserve the most careful clinical record, and, at the same time, the membranes ought to be preserved in spirit and sent to a competent histologist. The habits of the patient should be investigated; the effects of separation from her husband very closely watched. On the other hand, the histologist, as a man of science, should feel sure that he can correctly interpret the microscopical appearances of the membranes. Above all, he must not give an opinion unless he knows, from practical research, the appearance of the endometrium at and between the catamenia, and also in early pregnancy. Much light has been thrown on the subject by Dr. Minot's monograph "Uterus and Embryo," published in the April number of the Boston *Journal of Morphology*.

IRELAND.

DUBLIN HOSPITALS.

AT the North Dublin Union last week, a motion was made to the effect that the guardians should petition against any Bill intended to effect the closing of the Richmond, Whitworth, and Hardwicke Hospitals. The principal ground upon which the motion was urged was, that the proposed change would, if carried into effect, throw additional charges upon the rates. In opposition, it was stated that the guardians had not the Bill before them, and did not know what its provisions were. The motion was lost by 12 to 8. We have already stated that it was not intended to introduce a Bill this session; and this, on further inquiry, we find was a correct representation of the views of the Government at the time. But we understand that, if the terms of a Bill can be agreed on, it will now be introduced. There are very active forces at work to bring about a change, as some hospital authorities believe that they will benefit under the rearrangement of distribution.

QUEEN'S COLLEGE, CORK.

DURING the session, 1888-89, the number of new students entered was 76, making a total of 229 on the books of the College. The Report refers to the death of Dr. O'Connor, who, since the opening of the College, occupied the Chair of Medicine, and has been succeeded by Dr. E. R. Townsend. The Pathological Museum has received several additions during the year, and as regards the Chemical Laboratory, we learn that one of the Secretaries of the Royal University, having been deputed to report to the Vice-Chancellor on Medical Institutions in Cork, called attention to the utter inadequacy of the present Chemical Laboratory to the requirements of the professor, who has been compelled to divide his class, thereby causing considerable inconvenience to himself and to his students. The Biological and Physiological Laboratories also require enlargement, and, although the President this year asked to have provision made for increased accommodation in both laboratories, nothing has been done in the matter.

NEW PRIVATE HOSPITAL IN BELFAST FOR SURGICAL CASES.

AN addition has just been made to the medical institutions of Belfast. The want has long been felt there of adequate accommodation for patients, especially operation cases, whose means and position rendered it undesirable for them to take advantage of the existing charities. This want has now been supplied in a manner that promises to command the confidence both of the profession and the public. A new private hospital has been opened in a very central position, at the corner of Howard Street and Queen Street. The premises were formerly occupied as a hotel, and with some alterations have been very efficiently adapted to the purposes of a hospital. There is a spacious and well-lighted operating theatre, with all the necessary equipments; eight bedrooms for the reception of patients furnished with all the comforts of a private house; a waiting-room for extern patients, besides the rooms of the lady superintendent, nurses, etc. A special feature of the hospital is a large room fitted up with gymnastic appliances for cases of spinal curvature, the suspension treatment of locomotor ataxy, etc. The sanitation of the buildings has been entirely remodelled on the most modern principles. The hospital has a frontage both to the south and west, and gets plenty of light and warmth. The institution is under the direction of Mr. John Fagan, F.R.C.S.I., and Professor Sinclair, F.R.C.S.Eng. Miss Tulloch, of Perth, is the lady superintendent. The hospital is intended solely for surgical cases, or for medical cases where surgical methods are recommended. An extern department is open three mornings in the week for the performance of minor operations. The scale of fees is arranged on the principle that patients shall pay a certain sum for maintenance, according to the accommodation desired, a separate arrangement being made with the surgeons for their professional services.

MALCOLM MORRIS INDEMNITY FUND.

THE following additional subscriptions have been promised, and those who desire to contribute are requested to communicate without delay with Mr. G. P. Field, 34, Wimpole Street, or Dr. Sidney Phillips, 21, Upper Berkeley Street.

	£	s.	d.
Amount previously acknowledged	329	6	0
Lawson Tait, Esq.	10	10	0
J. C. Rollin, Esq.	5	5	0
Dr. John Williams	3	3	0
Dr. Buzzard	3	3	0
Dr. Gairdner (Glasgow) ...	2	2	0
F. Treves, Esq.	2	2	0
Dr. Waller	2	2	0
Dr. Fancourt Barnes ...	2	2	0
John Tweedy, Esq.	2	2	0
Dr. Lauder Brunton	2	2	0
Dr. Edward Clapton... ...	2	2	0
Reginald Harrison, Esq. (Liverpool)	1	1	0
George Cowell, Esq.	1	1	0
Dr. Farquharson, M.P. ...	1	1	0
W. J. Pitcher, Esq. (Boston)	1	1	0
Dr. Stanley Murray (Putney)	1	1	0
A Friend	1	1	0
Dr. Lewers	1	1	0
Dr. R. W. Burnett	1	1	0
Dr. Frederick Taylor ...	1	1	0
Dr. Staples	1	1	0
Dr. Prickett	1	1	0
Dr. Felce	0	10	6
Dr. Walters (Reigate) ...	0	10	6
Dr. Robert Blair (Goole) ...	0	10	6
Dr. Alfred Clarke (Brigade-Surgeon)	0	10	6
Dr. W. A. Smith (Newport)	0	10	0

TOPICS OF THE DAY.

(AN OCCASIONAL COLUMN.)

BY THE EDITOR.

"As for me personally," wrote M. Pasteur last week to the Lord Mayor, "the suffering of an animal affects me so much that I would never shoot a bird, and the cry of a wounded skylark pierces me to the heart." To M. Pasteur's humanity and tenderness of heart emphatic testimony has been borne by all who know him, including Sir James Paget and others, whose testimony would be overwhelming if testimony were needed, and this notwithstanding Lord Coleridge's unfavourable reading of his photographic presentment, and the hasty conclusions which he drew therefrom in the judicial *obiter dicta*, which will long be remembered against him.

M. PASTEUR, however, is in error in supposing that English sportsmen are in the habit of shooting skylarks. When *la chasse* is open, the French sportsman is credited with a general war upon small birds by the aid of the most imposing apparatus of sport. We may hope that skylarks are excluded even from their wide-reaching instincts of destruction. In the amusing memoirs of Tartarin of Tarrascon, we read of an estate the value of which is greatly enhanced owing to the existence on it of one hare—a celebrated animal of such distinguished speed as to have acquired local fame as *la rapide*. Skylarking is a phrase not unknown in English literature, but we can assure the Gallic sportsmen that it does not imply the shooting of skylarks; and that the English sportsman would echo the protest from the French men of science against exciting the cry of "the wounded skylark."

A propos of M. Pasteur, it would be as well to put on record what probably most people will have suspected, namely, that the recommendation which was to be found in the English text of the letter read by Sir Henry Roscoe at the Mansion House, for compulsory recourse to inoculation in a case of a bite from a rabid dog, was an accidental and unfortunate error of the translator. The phrase actually used by M. Pasteur was "such persons will necessarily have recourse to inoculation" and not that they "should be compelled to have recourse to it"—a proposition which obviously could never have suggested itself to him or to anyone else.

IT will have been seen that M. Pasteur has just received the first patient despatched to his Institute at Paris at the expense of the Lord Mayor's Fund. It was a little girl, aged 8, daughter of an excavator hailing from Rotherhithe, who was recently bitten in the wrist by a dog suffering from rabies. The death is announced of the son of Captain J. Main, of the Army Service Corps, who has just returned from Ceylon to assume his duties at the Birmingham station, from hydrophobia. This young man (Captain Main's second son) was bitten by a mad dog in November last in Colombo while saving his younger brother, who was also bitten by the same animal. Hydrophobia appears to be very prevalent at the present moment in Odessa, as an Odessa correspondent writes that one day alone twenty-one cases of bites from rabid dogs were received at the station; and during the last twenty days no fewer than thirty-eight cases, occurring within the city, were treated by Pasteur's system of inoculation.

JEFFREYS related in his memoirs that when the band of choice spirits who started the *Edinburgh Review* came to select an epigraphic sentence, they halted between two quotations: the one was "Tenui musam meditamur avenâ," the other "Dum nocens absolvitur damnatur judex." The latter was chosen, and subsequently figured on the blue and yellow covers, a terror to the presumptuous and a caution to the literary culprit. Either motto is equally applicable to the medical practitioner, and might furnish a device to our own profession. They are by no means "gilded oats" with which the medical porridge is mixed, and the means of sustenance for the young doctor is often neither spontaneous in growth nor over-abundant. "*Tenuis avena*" is the early common lot of the profession. But just now the condemnation which follows him who allows the escape of the guilty is falling heavily on more than one practitioner.

In the case of the Deptford arsenical poisonings Dr. Macnaughton has had to defend himself against the verdict of the jury, charging him with neglect in giving certificates of death from natural causes in the three cases inquired into, and all of which proved to be cases of arsenical poisoning. He has made a statement so suggestive and so full of warning that I shall quote it here at length as a matter of record. He says that the symptoms of poisoning are similar to those of many natural diseases, and remarks that in the Cross case and in the present Liverpool case the poisoning was not detected by the symptoms, but by suspicious circumstances. He asks, in the name of common sense, on what ground he could have withheld certificates in the cases of the deaths under notice. Giving a statement of facts, Dr. Macnaughton says:—"On February 3rd, 1888, I was called in to see Eliza Frost. She presented symptoms which might have been due to a variety of causes. She had the appearance of a woman addicted to drink. Mrs. Winters and Mrs. Frost were always present while I was examining the patient. If they are guilty of the crime alleged against them, was I likely to obtain a true account from these people? I was totally deceived, and every circumstance which might have aroused suspicion in my mind was carefully concealed from my knowledge. If, as Mrs. E. Delemain said at the inquest, the beef-tea, etc., disagreed with the patient, why did she not inform me? Surely I was the proper person to be told of these suspicious circumstances. But she withheld from me, either through ignorance or gross carelessness, this information of vital importance, a knowledge of which on my part might have been the means of saving her mother's life; and she now tries to pose before the public as an ill-used woman."

The chapter of clinical comparison of the diseases which arsenical poisoning simulates with the actual symptoms of the poisoning itself is one of profound and tragic interest. British medical men are, of course, not alone in experiencing the difficulty. The extensive series of accidental poisoning with wine at Hyères, the series of poisoning cases connected with the pharmacy at Havre, have drawn attention recently in France also to the desirability of careful study of the symptoms of acute and chronic arsenical poisoning, and to the methods and duration of the elimination of arsenic and its compounds from the body. M. Brouardel has made this week an important communication to the Academie de Medecine on the manifestations of subacute arsenical poisoning lasting over months, which, he observes, have, it is true, been described, but are so vaguely determined that, when an author calls attention to them afresh, he seems almost to have made a discovery. M. Brouardel's valuable paper will deserve a much more full review in these columns than I can find room for here. The subject is one well deserving renewed attention from our medical jurists and lecturers. It is a matter on which it is very important that no mistake should be made, and among reasons for the one exemplified in a little story which I read in an American medical newspaper: "'Do you rectify mistakes here?' asked a gentleman as he stepped into a drug store. 'Yes, sir, we do, if the patient is still alive,' replied the urbane clerk."

UNIVERSAL EXHIBITION, PARIS.

I.—CHEMICAL AND PHARMACEUTICAL PRODUCTS.

The chemical and pharmaceutical products exhibited in Class 45 are worthy of the character of this great Exhibition, and deserve the attention of all persons technically interested. It would be difficult to imagine a collection more varied in the number of rare products, or more perfect in respect of their variety and beauty. The French *pharmaciens*, to whom especially this part of the Exhibition is due, have surpassed themselves. It should be remembered that the diploma *de Pharmacien de 1re Classe* is a university degree for which many years of study are required, and the examinations by which it is obtained are very severe; so that it is, in its way and for its own purpose, on a footing almost equal to that of the Doctorate in Medicine. The grade of the second class is, on the other hand, less esteemed.

It is impossible to cite all those exhibits which deserve to be mentioned, and it is only possible in these columns, and within the limits of space at our command, to proceed a little at random, while, however, still seeking to indicate those products which seem to us most worthy of notice.

First in the French Section must, in our opinion, be mentioned the exhibit of M. Tanret, which is remarkable not only because his products are of high beauty, but especially because they are the result of his own discoveries and of his personal study. By the side of the four alkaloids of the pomegranate; ergotinine, and ergosterine are seen the double salts which he has prepared from caffeine. It is due to the extreme solubility of these salts that caffeine may be easily administered in a large dose, and that the consumption of it has increased in notable proportion. Terpinol is also shown, which M. Tanret introduced into medicine.

Here and there one stops to admire the *coupes* containing analgesin; exalgin of M. Petit; digitalin and the crystallised products of MM. Duquesnel and Adrian; the alkaloids of MM. Hardy and Gallois, anagyrin, adonidin, pilocarpin; and a fine crystallisation of saccharin, due to Professor Peligot. The whole range of pharmaceutical products is brilliantly represented by the firms of Génévoix, Vee, Adrian, H. Fournier, Darrasse, and also by the producers of specialities; pharmaceutical tissues, pepsins and peptones, granules, extracts, MM. Dubosc, Fumouze, Catillon, Chassaing, Poulenc.

But what especially strikes the visitor is the abundance and perfection of the crystallised products. We have already mentioned some of them; to this list should be added the plates of chlorate of potash, measuring more than an inch, shown by MM. Pechinez and Cerkel; tufts of sulphate of lime, measuring from five to six inches, exhibited by M. Labarre; superb blocks of alum, by M. Pourmier; a gigantic crystal of erythrite, by M. Marquet de Vasselot; large crystals of antipyrin, by the Parisian Aniline Colour Company; fine crystals of exalgin, by MM. Brigounet and Naville; plates of sulphate of silver, a block of selenium, and specimens of the platino-cyanides, by M. Billault, which resemble precious stones.

A circular glass case of large dimensions especially arrests attention; it is that in which, under the name of "collective exhibition," the firm of M. André Pontier has carried out the excellent idea of bringing together the most remarkable results of the labour of French pharmacists in this century. Among the apparatus shown may be recognised the aerometers of Beaumé, of Bouchardat, of Marchant, of Adam, and of MM. Regnault and Adrian; the apparatus of Professor Berthelot, for the synthesis of acetylin; of Professor Jungfleisch, for the practical application of that gas; of Professor Riche, for electrolysis; of M. Moissan, for the isolation of fluorine; the stove of M. Coulier; the aerometers of Yvon, Boymond, etc. By the side of them are ranged the products which recall the discoveries of the great chemists of the period: Pelletier and Caventou, Robignet, Balard, Bussy, Sérullas, Soubeiran, only to cite those who are no longer living.

Among the exhibits in foreign sections, the British section may be mentioned as the only one which—we cannot say rivals, but which deserves to figure alongside of the French display. They are but few in number, it is true, although very superior to those of other nations, and including firms of the first rank, not only amongst us, but in the world. Among them may be cited Messrs. Chance Brothers, whose process for the recovery of sulphur is one of the greatest discoveries of the kind of our time. Then come the chromes of Messrs. Stevenson and Carlisle, and of the Eglinton Chemical Company, which are highly appreciated by all connoisseurs.

After these establishments come houses such as those of Messrs. Burroughs and Wellcome, whose pharmaceutical products, tabloids, extracts, liquids, etc., have nothing to envy in their neighbours. Messrs. Oppenheimer, Christy, Bishop, and Sir James Murray also do not pass unnoticed. Much attention is given to the extracts of malt, a preparation almost unknown in France, and of which Messrs. Burroughs and Wellcome and the Standard Malt Extract Company show specimens of a high degree of perfection. Near this last stall, in the Gallery of Agriculture, is found the remarkable exhibition of Newfoundland cod-liver oil of M. Hogg; M. Hogg is the oldest of the English pharmacists in France, and the first who obtained a diploma of the first class. Established for more than forty years, he is a worthy representative of the pharmaceutical art amongst our neighbours, and has acquired an important industrial position as well as high esteem in that country.

Passing along the Gallery of Agriculture, we arrived at the Norwegian section, which includes a great number of producers of cod-liver oil. Among these may be cited the firms of Dahl, of Molde; Isdahl, of Bergen; Jervell, of Adlesund, whose products appear excellent. Among these exhibits, however, may be seen a certain number of brown

oils, which seem to indicate that many of the Norwegian makers are not on the highest level of modern technical skill and science, by which these preparations, due to the economical but defective practice of obtaining the oil by putrefaction of the livers, are at the present day condemned. Moreover, it should be remarked that there exists in Norway the custom (with the object of rendering the oil more fluid) of submitting it to a certain degree of cold and holding back the fixed parts by filtration; the medicament is thus, so to speak, mutilated and changed in its composition, and this renders the quality, from the medical point of view, inferior to the oil of Newfoundland. It has already been said that many countries represented in the Exhibition do not shine there in the manifestation of their pharmaceutical art. We may, however, cite in Belgium the bicarbonates of soda, the sulphites, and the phosphates of Messrs. David and Debouche, of Moustier-sur-Sambre; the chemical products of the firm of Solvay and Co., of Brussels; the chlorides of tin of M. Lambotte of Brussels; the vaselines of Messrs. Racgniackers and Co., of Shaerbeck. In Bolivia the pharmaceutical products of M. Quiroga; in Brazil, amongst extensive collections of simple drugs and compound medicines, those of MM. Marques, of Hollandas and Lepage; in the United States we find the Solvay Process Company established in Syracuse; in the Netherlands the chemical factory of Rotterdam; in Roumania MM. Konia Frères; in Russia the wool extracts of MM. Kneuemann, Baudet, and Co., of St. Petersburg. Switzerland is remarkable for very fine specimens of sugar of milk, shown by the firm of Pestalozzi, of Zurich, and the great manufacture of gelatin of Winterthür, which is so highly appreciated by the makers of gelatino-bromide photographic plates.

It would be necessary to add considerably to the length of this article if we desired to pass in review the industries comprised in Class 45—the soaps, the varnishes, the colours, and derivatives of tar—but that would lead us too far, and would be but of slight interest for our readers. Nevertheless, we cannot conclude without complimenting the house of Isidore Thomas, colourmakers, for papers, artificial flowers, etc., whose innocuous green, intended for substitution for the green of Schweinfurt, has numerous partisans, and has created for itself a considerable reputation.

AMERICAN MEDICAL ASSOCIATION.

(Continued from page 149.)

SECTIONAL PROCEEDINGS.

Section of Surgery.—The Surgery of the Spinal Cord; The Surgery of Peripheral Nerves; "Concussion of the Spine;" The Selection of an Operation for Vesical Calculus; Statistics of Abdominal Section for Traumatism; Rate of Absorption of Bone Dowels; Drainage of Pulmonary Cavity. Section of Medicine.—Hot-Air Treatment of Phthisis.

DR. N. P. DANDRIDGE (Chairman) gave an address on the surgery of the spinal cord. He referred to the excellent results of extension in Pott's disease, and recommended resection of the spinal arches to relieve pressure in certain cases. He asserted that fractures of the vertebræ were not as fatal as they were once believed to be; 21 per cent. survived, and of this number 10 per cent. made a good recovery, while 11 per cent. were completely disabled. His conclusions were thus summarised:[1] 1. In fractures of the cervical vertebræ there is indicated immediate reduction of any displacement by extension and manipulation under an anæsthetic, followed by continuous extension and immobilisation. 2. In all fractures of the lumbar or dorsal spine involving the bodies or the arches, reduction is effected, with or without the plaster jacket, by the hammock suspension, preceded, if there is evident displacement, by extension under an anæsthetic. 3. When symptoms indicating injury of the cord persist without improvement resection is indicated. 4. Immediate operation would be indicated when there is marked depression of the arches, with symptoms of paralysis. 5. Long continuance of the symptoms is not in itself a contra-indication to operation. 6. We have, in suspension, the means of alleviating some of the sequelæ of fracture of the spine.

Dr. J. WILLIAM WHITE read a paper on the same subject. He considered that resection of portions of vertebræ in fractures, and possibly also in dislocations, was an eminently proper operation in suitable cases. It might now be accepted that the paralysis of Pott's disease was often due to connective tissue proliferation forming a mass between the dura mater and the interior surface of the laminæ, which it was possible to remove. He considered that every case of focal lesion, apparently due to a tumour which was not distinctly malignant and generalised, should be submitted to operation, no matter how marked or long-continued the symptoms of pressure might be.

Dr. M. H. RICHARDSON, of Boston, read a paper on the cases, fifty-seven in number, in the Massachusetts General Hospital, of neurectomy and nerve-stretching for neuralgia and painful muscular spasm. In thirty-five cases neurectomy had been performed for neuralgia, and in most instances prolonged relief was only obtained by excising a considerable length of the nerve. In sciatica and in neuralgia of the inferior dental nerve, nerve-stretching had sometimes done good; it had also sometimes relieved painful spasm. The median, ulnar, and musculo-spiral nerves had all been sutured, and in the seven cases thus operated on there had been a gradual return of motion and sensation. In two cases of paralysis from pressure good results were obtained by cutting down upon and removing the growth by which pressure was exerted.—Dr. GORDON, of Portland, spoke favourably of stretching the sciatic for the lightning pains of locomotor ataxy.

A brisk discussion took place on concussion of the spine in its medico-legal aspects. It was raised by Dr. H. H. SMITH, of Philadelphia, who affirmed that "concussion of the spine" was very rare, whereas fraud was very common. Serious organic disease very seldom followed concussion. A severe shock to the spinal cord may give rise to hæmorrhage or effusion, to some form of myelitis, with more or less paralysis and muscular atrophy; but in such cases there were objective symptoms, and these ensued soon, in a few hours or days, not months, after the injury. Other speakers generally coincided with these views, speaking very strongly of the dishonesty of most of the claims made, and the unfairness and injustice of juries.

Several interesting papers on the treatment of vesical calculus were read. Dr. D. P. ALLEN dwelt on the advantages of litholapaxy in male children—the absence of a cutting operation, the rapid convalesence, and the freedom from offensive discharge.—Dr. W. T. BRIGGS coincided in this opinion so far as small and moderate sized stones were concerned; for very large stones he recommended suprapubic cystotomy, while those of intermediate size were best extracted by the lateral operation. In adult life litholapaxy was by far the best operation when the size of the stone permitted it to be adopted; for very large and hard stones the suprapubic operation was best. Of the perineal operations he preferred the medio-bilateral; the incision in the median line did not encounter any structure of importance, and the same might be said of the slight bilateral section of the deeper parts.—Dr. CABOT, of Boston, also spoke in favour of litholapaxy, and observed that the great test of an operation was not the brilliancy with which it might be performed, but the death-rate which attended it.

Dr. THOMAS MORTON, of Philadelphia, contributed a paper, in continuation of a previous communication, on the statistics of abdominal section for traumatism. He dealt only with cases of primary section, that is, within, at most, two or three days. He had collected 234 cases, with a general mortality of 58.97 per cent. Analysing the causes of death, he found that in 43 it was due to peritonitis owing to delaycd operation, in 16 it was due to peritonitis arising after operation, in 11 to overlooked perforations, and in 4 to inefficient suturing of wounds; 3 died upon the table, 10 immediately after leaving it, and 40 within twelve hours. In 18 cases abdominal section was performed, and no intra-peritoneal injury requiring treatment found; 2 of these patients died. Analysing the nature of the injury and the consequent mortality, he found 110 gunshot wounds, showing a mortality of 67.2 per cent.; 79 stab-wounds, with a mortality of 39.2 per cent.; 27 cases of ruptured bladder, with a mortality of 62.9 per cent.; and 18 cases of ruptured and contused intestine, with a mortality of 88.8 per cent. Resection of intestine was performed 17 times in 15 cases, with but 2 recoveries. He believed that these, as well as many other figures, would be greatly improved by the employment of Senn's methods of intestinal anastomosis and suture. Senn's hydrogen test was used in 11 cases; it proved the presence of wounds in 8 cases, and their absence in 2; in the other case it failed to reveal perforations. He thought that every case under fair surroundings, where penetration could be proved, ought to be opened and searched, as well as cases where there were reasonable grounds for diagnosing rupture of the bowel or bladder. He sug-

[1] *New York Medical Record*, June 29th.

gested that hydrogen insufflation might be useful as a test of rupture of the bladder.

A paper on an experimental inquiry as to the rate of organisation and absorption of sterilised dead bone was communicated by Drs. W. BARTON HOPKINS and C. B. PENROSE, of Philadelphia. They found that sterilised dead bone when in contact with living bone was organised, when in contact with periosteum was absorbed, and that when introduced into the medullary cavity both processes took place. The absorption or organisation took place most actively between the fifth and eighth week, and were not necessarily associated with inflammatory action. They therefore concluded that when dowels were employed to pin together fragments of bone after fracture, to fix the extremities of bone after resection, or for any other mechanical purpose in surgery to which they were adapted, they might be relied upon to do their work for a period of one month or six weeks, and hence to give ample time, as a rule, for union to occur.

Dr. CHARLES DENISON, of Denver, Colorado, related a case in which a large pulmonary cavity was drained through an opening made by resecting portions of the sixth and seventh ribs. A solution of salol (10 per cent.) in liquid vaseline was injected daily, and the patient ultimately did very well. The duration of treatment after operation was about four months. The portions of rib were exsected with a rib-cutter specially designed for the purpose.

Dr. SHATTUCK, in the course of his address[2] as chairman of the Section of Medicine, gave his experience of the hot-air treatment of phthisis, which he observed was founded on the fact that the development of the tubercle bacillus is arrested at a temperature of 107° F. His experience fully confirmed the statement that air of a surprisingly high temperature could be breathed with impunity. He had himself inhaled air at 320° F., and had seen persons inhale it at 428° F. without notable inconvenience. The method had been tested upon some of his patients in the Home of the Good Samaritan, by Dr. G. G. Sears, of Boston. The apparatus used had been designed by Mr. G. L. Kingsley, of the Harvard Medical School; it could be made by any coppersmith for five dollars, whereas that patented by Weigert cost seventy-five dollars. The results of the test would shortly be published, but they were such that Dr. Shattuck had been satisfied "that the problem of intra-pulmonary direct germicidal action is still unsolved.

THE PROPOSED UNIVERSITY FOR LONDON.

THE following statement of the Councils of University College, London, and King's College, London, signed by Mr. J. E. Erichsen, President of University College, and by the Bishop of London on behalf of King's College, was presented to the Lord President of the Council by a deputation from the Councils of the two Colleges on July 25th:

1. The Councils of University College, London, and King's College, London, have had under their consideration the report of the Royal Commission on a University for London, to which was referred the joint petition of the Colleges presented July 1st, 1887, to Her Majesty in Council, together with the petitions in support of its prayer, presented by the Lord Bishop of London, dated September 1st, 1887, and by the Association for Promoting a Teaching University for London, dated July 21st, 1887, and the letter of the University of London, dated August 3rd, 1887, opposing the joint petition of the Colleges.

2. Besides a principal report signed by six of the seven Commissioners, there is also a dissentient or qualifying report, signed by those three of the six who are most practically conversant with the work of education. This second report differs from the principal report in a sense favourable to the prayer of the petitioners.

3. A University such as is contemplated by the petitioners is that of which the purpose is not examinations, but education and the advancement of knowledge. It is needed in London as a centre for efficient colleges and institutions doing university work, where, while their several traditions are mutually respected, they may take measures in common for organising and economising their teaching power, for supplying its deficiencies and extending its usefulness. This University ought not to be burdened with obligations towards external candidates for degrees, or towards institutions of imperfect efficiency, or it will be unable to adapt its examinations to its teaching, and will fail to utilise as it should the special gifts and studies of eminent men, whose presence and influence make the success of a University.

4. The recommendations of the principal report are limited to suggestions for the reform of the University of London considered as an examining body, and for its assumption of teaching functions, the scope of which is not clearly indicated. In the event of the adoption of these recommendations by the University of London, it is further recommended that the prayer of the petitioners be not granted. Some considerations of a public nature may arise when it is proposed to institute in London a new staff of university teachers. But apart from these considerations, it is not the desire of the petitioners to assume an attitude of hostility to reforms in the constitution of the University of London which are perfectly compatible with their petition. Such reforms, however, would not supply what, in their opinion, is now required in the interests of education in the metropolis, and, if accepted by the University of London, would not render it less expedient that the prayer of the petitioners should be granted.

[2] *Boston Medical and Surgical Journal*, July 4th, 1889.

REG. *v.* KERR.

THIS case was tried at the Cumberland Summer Assizes, held at Carlisle on Saturday, July 6th, before Mr. Justice Stephen. The prisoner, William Kerr, aged 25, was charged with "feloniously, wilfully, and of his malice aforethought murdering and killing one Sebra Troughear, at the parish of Dalshan, on the 2nd day of June, 1889." As there are many points of great medical interest in the case, it seems desirable that a somewhat extended report should be given. The prisoner was arrested at 4 A.M. on June 3rd. He was a blacksmith by trade, of slender but muscular build. The deceased was 54 years of age, about 5 feet 3 inches in height, housekeeper to a farmer; a single woman, but sober and respectable. In early life she had two illegitimate children. On the afternoon of Sunday, June 2nd, she left home to visit a friend, with whom she had tea and supper, partaking of bread and butter, cheese, and dried-currant cake. She left to return home at half-past 9, being then in her usual health. She was subsequently seen by another witness walking in the direction of her home a little after 10 o'clock. This was the last time she was seen alive. Two men found her dead body at a quarter-past 11, on the roadside, 162 yards from a roadside public-house called the Horse and Farrier Inn, at Lingey Close Head. She was lying on a grassy bank, with her legs separated and stretched out over the gutter, and her petticoats turned up as far as they would go. About a yard from the body was a heap of her clothing, consisting of her dress-skirt, fur cape, false hair, umbrella, and pocket-handkerchief. The body was removed to the inn for the *post-mortem* examination. The prisoner had visited several public-houses in the course of the day. He was turned out of one at 10 o'clock (closing time), 1,600 yards from where the body was found. At half-past 10 he was seen outside Lingey Close Head public-house. He knocked at the door, and as he could not get in he threw a stone at the door and ran away in the direction where the body was subsequently found. One of the witnesses who saw him here said he fell, and she thought him drunk. He must have passed the spot where the deceased woman was subsequently found, for he was met soon after 11 by the two men who found her. This was 395 yards from where the body was found. He was staggering, and one of the men had to support him. His clothes were seen to be very dirty. There had been a heavy downpour of rain during the day, and the roads were very muddy. No one else was seen on the road. When arrested, some dried blood was noticed on the left cheek, which he said was nothing. His coat and vest were wet, and were hanging in front of the fire. His trousers were in the bedroom, and were wet and dirty. He admitted wearing these clothes the night before. The medical evidence was given by Dr. Barnes and Dr. Maclaren, of Carlisle. The bulk of it was contained in four reports. These reports dealt with (1) the *post-mortem* examination; (2) the examination of the prisoner Kerr; (3) the examination of the prisoner's clothing, and especially of the mud found upon it, as compared with that removed from the place where the deceased was found and that where the prisoner was seen to fall; and (4) the examination of the deceased's clothing. With regard to the *post-mortem* report, the following is a summary: The examination was made sixteen hours after the body was found. A slight superficial smearing of blood was found on the left cheek; no wound was found to account for it; frothy matter was escaping from mouth; eyes congested; cheeks, face generally, ears, and back of neck of dark

purple colour; no solid food in mouth; no marks of strangulation in neck; between shoulders, patch six inches by four inches covered with dark purple spots; a small abrasion on abdomen; front of both thighs smeared with mud; the outer surface of both hands also smeared with mud. The backs of both thighs were also mudstained. On separating thighs, blood found smeared over genitals, and fæces coming from bowels. On examining genitals, bruising found just within orifice, all round, but more marked on left side. A small tear just within passage and a larger tear, three-quarters of a inch long, a little further in passage, but more to left. Several small effusions of blood in the lining of passages; no seminal fluid found; uterus healthy, and contained no blood. On removing scalp marks of bruising were seen on right side of head, above right ear. The tissue of the scalp and the muscle infiltrated with blood. No injury to bone. Left lung adherent; both lungs congested; air tubes contained an undue amount of fluid, and lining membrane of dark red colour; evidence of former pericarditis; right side of heart full of dark liquid blood; left side empty; valves on right side healthy, left side diseased (incompetence of aortic valves and contraction of mitral valves). Heart structure healthy; the gullet was full of food, consisting of partly digested bread, fragments of cheese, and several currants. A small piece of hard food was found above the vocal cords, and two currants below the cords in the windpipe. The stomach contained a considerable quantity of partly digested food. Its contents had no peculiar odour. The spleen and liver healthy. Both kidneys were diseased and the capsules adherent. The conclusions in the report were as follows: 1. That the injury which caused the bruising on the right side of the head may have been a blow or a fall, and might have produced unconsciousness. 2. That the appearances on and injuries of the genitals were such as would be produced by forcible sexual intercourse. 3. That the immediate cause of death was suffocation, due to the presence of food in the windpipe. The examination of the prisoner, on the afternoon of the day of his arrest, showed the pressure of several abrasions on the face, one on left cheek near the temple, and one on right cheek, each about the size of a pea, and probably inflicted within twenty-four hours. These abrasions were such as might have been caused by scratches. No marks were found on his genitals, and his shirt was free from stains. His clothes, when examined, showed four different kinds of stain. *a.* Stains resembling dried blood. Numerous small spots were found on waistcoat, eighteen spots on left front of trousers, and eight on right front. Chemical and microscopical examination showed that these were due to blood. *b.* Stains resembling dried blood and mud. A stain of this kind was found on fly of trousers, and from its position must have come there when fly was open. Chemical and microscopical evidence of blood was obtained. *c.* Stains resembling mud stains. All the articles of clothing were mud stained. A portion of mud was scraped from the knees of trousers where the mud was thickly coated. This had the appearance of a sandy clay. It contained fragments of decayed beech leaves, and scales from the leaf bud of the beech. Under the microscope a number of minute crystals were seen, some coloured and some uncoloured. A portion of mud was obtained from a depression in the gutter where the woman was found, and which had the appearance of being caused by a knee mark. This mud presented all the characters noted above. Some mud taken from the place where the prisoner was seen to fall was found to be different in character. It was much darker in colour; its particles were larger; it would not bind together when wet; it contained no fragments of decayed leaves, and its crystals were generally coarser. *d.* Stains which had the naked-eye appearance of dried vomited matter. These were found on front of vest, on collar of coat, and one sleeve, and also on back of coat. These stains had an acid reaction, and gave the chemical and microscopical characters of starchy food and fatty matter. The deceased woman's clothing had five different kinds of stain on them, which were submitted to chemical and microscopical examination. *a.* Blood stains were found on chemise and on silk handkerchief which she wore round her neck. *b.* Blood and vomit stains were found on the silk handkerchief. *c.* Mud-stains were found on all the articles examined, consisting of dress body, dress skirt, striped petticoat, two red flannel petticoats, chemise, and silk handkerchief. *d.* Vomit stains were found on dress body and skirt and silk handkerchief. These had the same characters as stains found on man's clothing. *e.* Stains of fæcal matter and blood were found on chemise.

After reading the reports, Dr. Barnes was examined as to the discovery of some red woollen hairs, which formed an important link in the chain of evidence connecting the prisoner with the crime. Before making the *post-mortem* examination the medical witnesses visited the place where the deceased was found, and noticed an impression on the wet clay, which looked as if it had been made by some ribbed article of clothing, such as a pair of corduroy trousers or a pair of stockings. At their suggestion a plaster cast was taken of this. It was found that the prisoner's trousers could not have produced the impression. During the magisterial inquiry the cast was submitted to Dr. Barnes, and he discovered upon it black and white woollen hairs similar to the worsted of the stockings of deceased, and also a few red hairs similar to those of the flannel petticoat. He also measured the ribs on the cast and compared the measurements with those of the stocking, and found them to correspond. Similar red hairs were subsequently found on the stockings, and also imbedded in the mud on the trousers. They were not readily visible to the naked eye, but required a lens for their detection. On being examined on the question of the deceased being a consenting party to the outrage, he stated that in his opinion the points against consent were (1) the injury to the head, which was severe in character, and probably caused loss of consciousness; (2) the blood on the face and on the handkerchief round the neck; and (3) the character and severity of the injuries to the genitals. If the woman had been conscious, such injuries must have caused severe pain, and signs of a struggle would have been present. He therefore inferred that the woman must have been unconscious or restrained when the injuries were inflicted. As to the cause of sickness, witness was of opinion that it might have been due to the injuries either of the head or of the genitals. There was nothing to show any natural cause for vomiting.

Dr. Maclaren agreeds with the reports and evidence given above. The prisoner was defended by Mr. Shee, who contended that the prisoner was too drunk to have committed the rape, that he had passed the woman without seeing her, and that someone else had committed the crime. The judge summed up strongly against the prisoner, and the jury, after ten minutes' deliberation, found the prisoner "Guilty." In sentencing the prisoner, the judge said it was a most brutal murder, without any mitigating circumstance, and he held out no hope of mercy. It is an open secret that medical witnesses were in court on behalf of the prisoner who were prepared to contend that no rape had been committed, and that the woman was a consenting party. They were not called, as the prisoner's counsel evidently thought the evidence on this point too strong to attack. After the verdict, however, the defence that no rape was committed was set up by some of prisoner's friends, and a petition for a commutation of the capital sentence on this ground obtained numerous signatures. It was stated that there was no satisfactory evidence that the diseased was raped, and that the internal injuries might have been caused by the man's finger. According to a circular issued on behalf of the prisoner, it is asserted that medical men of high standing are of opinion that this is more probable than the way suggested by the prosecution; but no other theory than rape satisfactorily accounts for all the appearances in this case. The Home Secretary, however, did not wait for the petitions to make up his mind. He evidently thought the case was on all fours with that of Charles Parton, who last year was convicted and sentenced to death at Manchester for administering chloral to an old gentleman for the purpose of robbery, and, regarding this case as a precedent, he respited Kerr with a view to a commutation of his sentence to penal servitude for life.

DEATH UNDER CHLOROFORM.—Thomas Craven Hodgkinson Brook, aged 36, described as an actor, died last week at the Middlesex Hospital when under the influence of chloroform. The evidence given at the inquest by Dr. H. R. Creswell, the house-surgeon, was that the deceased was first admitted in March last, when he remained in the hospital a month. Meanwhile, chloroform was administered to him twice. On July 15th he again sought assistance. He was put to bed, and subsequently witness had administered about a drachm and a half of chloroform, when the deceased expired quite suddenly. Before he died he struggled violently. A *post-mortem* examination showed he had congenital malformation of the heart. Death was due to syncope while the deceased was under the influence of chloroform and suffering from a malformation of the heart and extensive kidney disease. The jury returned a verdict of "death from misadventure."

ASSOCIATION INTELLIGENCE.

NOTICE OF QUARTERLY MEETINGS FOR 1889.

A MEETING of the Council will be held on October 16th, 1889. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting, namely, September 26th, 1889.

FRANCIS FOWKE, *General Secretary.*

COLLECTIVE INVESTIGATION OF DISEASE.

THE series of Maps forming the Report of the Collective Investigation Committee on the GEOGRAPHICAL DISTRIBUTION OF RICKETS, ACUTE RHEUMATISM, CHOREA, CANCER, AND URINARY CALCULUS are deposited in the Library of the Association, and are open to the inspection of members. A descriptive commentary appeared in the JOURNAL of January 19th, 1889.

An inquiry into the ORIGIN AND MODE OF PROPAGATION OF EPIDEMICS OF DIPHTHERIA is in progress.

Memoranda and forms for communicating observations may be had on application to the Secretary of the Collective Investigation Committee, 429, Strand, W.C.

BRANCH MEETINGS TO BE HELD.

METROPOLITAN COUNTIES BRANCH.—A special general meeting will be held at the rooms of the Medical Society of London, 11, Chandos Street, Cavendish Square, W., on Tuesday, August 6th, at 5 P.M., to reconsider the resolution passed at the annual meeting of the Branch on July 5th respecting the annual meeting of the British Medical Association in 1890.—NOBLE SMITH, 24, Queen Anne Street, W., and H. RADCLIFFE CROCKER, M.D., 121, Harley Street, W., Honorary Secretaries.

METROPOLITAN COUNTIES BRANCH: ANNUAL MEETING.

THE thirty-seventh annual meeting of this Branch was held at the Holborn Restaurant on Friday, July 5th, at 5.30 P.M. The chair was taken by the retiring President, Dr. C. BRODIE SEWELL, who afterwards resigned it to his successor, Dr. W. M. ORD. The minutes of the previous meeting of the Branch were read and confirmed.

Report of Council.—Mr. NOBLE SMITH, one of the Honorary Secretaries, read the report, which stated that, since the annual meeting in June, 1888, 33 members had left the Branch from resignation or removal, 16 had died, and 224 new members had been elected, leaving the number at present 1,205, or 175 more than last year. The members who died during the year were Dr. Asher Asher, Dr. H. J. Barron, Mr. C. T. Carter (Hadley), Dr. C. Davidson, Mr. R. W. Dunn, Dr. J. Milner Fothergill, Dr. G. T. Gream, Mr. W. B. Hemming, Dr. Samuel Hill, Mr. A. O'Brien Jones (Epsom), Dr. J. S. Lavies, Dr. Joseph Rogers, Dr. J. W. Sanders, Mr. H. L. Sequeira, Inspector-General S. S. D. Wells (Plymouth), and Dr. F. J. Wright (Stoke Newington). All had done good work, and many had served upon the Council in former years; the Branch could ill afford to lose their valuable services. The great increase of the number of members was a subject for considerable satisfaction, since, by raising the number of members to a total of over 1,200, it gave the Branch an additional representative upon the Council of the Association. In the report for the previous year it was stated that the Council had taken active steps to facilitate the obtaining of medical degrees by London medical students, and a small sub-committee of the Council had been deputed to place the views of the Council before the Royal Commission which was then sitting. This they did in a lengthy communication, and the Royal Commissioners had since reported; and it was satisfactory to know that, if their recommendations were carried into effect, the medical teachers and students of London were likely in the course of a few years to find this vexed question settled in conformity with their wishes. Should such a result eventuate, it would come to pass to a great extent in consequence of the agitation and the work carried on during a series of years by the Metropolitan Counties Branch. The Council were of opinion that the best thanks of the Branch were due to Dr. Bridgwater, Dr. Bristowe, Dr. Walter Dickson, Mr. Edmund Owen, Dr. Gilbart Smith, and Mr. Durham, the Chairman of the sub-committee, for their considerable labours in the matter. The *conversazione* of the Branch, which, in accordance with previous custom, was held in May at the South Kensington Museum, was attended by nearly 1,700 guests, and was generally considered a decided success. These social gatherings had such a marked effect in promoting friendly intercourse amongst the members of the profession that the Council considered the expense incurred and the trouble involved amply repaid. The Council had the continued gratification of remarking upon the good work which in this, as in former years, had been done by the Districts of the Branch, and felt that the very best thanks of the entire Branch were due to the various local secretaries who had used their best energies in developing the resources of their districts. It had been suggested by Dr. J. W. Hunt that those members of this Branch who for their services to the whole Association had been elected Vice-Presidents to the Association should *ex-officio* be members of the Branch Council. A resolution to that effect, which had the full approval of the Council, would be proposed as an addition to the by-laws. The Worcestershire and Herefordshire and Gloucestershire Branches had passed a resolution to the effect that the disproportionate growth of the out-patient department in all hospitals demands a general inquiry, as well as the subject of provident dispensaries, medical aid associations, and sick clubs. A copy of this resolution was sent to the Council, with the request that they would discuss the matter, and report the result to the Councils of the above mentioned Branches. As the whole subject of hospital expenditure and administration will probably be inquired into shortly by a Committee of the House of Lords, in response to a petition from the Charity Organisation Society, it had been decided to wait the result of such inquiry before dealing with the matter, which was one of the first importance to the medical charities and the public generally, as well as to the members of the medical profession. As had been stated in last year's report, the Council resolved in October, 1887, that the Association should be invited to hold its general meeting in 1889 in London. When that invitation was placed before the Council of the Association it was found that an invitation to Leeds had already been given and virtually accepted for 1889. As no annual meeting had been held in London since 1873, it had recently been suggested that the annual meeting of 1890 should take place in the metropolis, and so much encouragement had been given by members of the Metropolitan Counties Branch to the proposal, that the Council have passed a resolution "that in their opinion it is desirable that the annual meeting of 1890 should be held in London." Since the affair was one of the highest importance, it was requisite that the sanction of the members of the Branch generally should be obtained to enable the Council to give the invitation.—On the motion of Dr. WALTER DICKSON, seconded by Mr. BRINDLEY JAMES, the report of Council was received, adopted, and entered on the minutes.

Election of Officers.—The result of the ballot for the election of Officers and Council and of Representatives of the Branch on the Council of the Association was as follows:—*President:* William M. Ord, M.D.; *President-Elect:* Sir William Mac Cormac; *Vice-Presidents:* Mr. Arthur E. Durham, Stephen Mackenzie, M.D., W. O. Priestley, M.D., C. Brodie Sewell, M.D.; *Treasurer:* Mr. Septimus W. Sibley; *Secretaries:* Mr. Noble Smith, H. Radcliffe Crocker, M.D.; *Eighteen Ordinary Members of Council* (The names to which an asterisk is prefixed are those of members nominated in place of seven who retire.): Charles T. Aveling, M.D., J. Mitchell Bruce, M.D.; *W. Watson Cheyne, Mr. G. Anderson Critchett, Thomas B. Crosby, M.D., *W. Howship Dickinson, M.D., David Ferrier, M.D., Mr. George P. Field, *Thomas Henry Green, M.D., Major Greenwood, jun., M.D., *F. De Havilland Hall, M.D., *Mr. Henry W. Kiallmark, Mr. John Langton, *Mr. G. H. Makins, *Brig.-Surg. A. B. R. Myers, Mr. Edmund Owen, Mr. St. Clair B. Shadwell, *Samuel West, M.D.; *Representatives of the Branch on the Council of the Association:* J. Syer Bristowe, M.D., Mr. Henry T. Butlin, George Eastes, M.B., W. Chapman Grigg, M.D., Mr. Septimus W. Sibley, Mr. Noble Smith (*ex officio*), Mr. Frederick Wallace.

Retirement of Honorary Secretary.—The Council expressed regret at the loss of the services of Mr. Eastes as one of the Honorary Secretaries, and desired to express the deep obligations which they considered the Branch owed to Mr. Eastes for the great care and energy which he has devoted to the duties of his office.

Treasurer's Report.—Mr. SIBLEY, Treasurer, presented the financial reports.—Dr. BRISTOWE proposed, Dr. GRIGG seconded, and it was resolved: "That the Treasurer's report be received, adopted, and entered on the minutes, and that the best thanks of the Branch be given to Mr. Sibley for the able and efficient manner in which he had discharged the duties of Treasurer during the past year.—Mr. SIBLEY acknowledged the vote of thanks.

Alteration of By-Laws.—Mr. NOBLE SMITH proposed, on behalf of Dr. J. W. HUNT, who had been called away, and Dr. STEPHEN MACKENZIE seconded, the following addition to the by-laws: "That any member of the Branch, being a Vice-President of the Association and residing within the area of the Branch, shall be *ex officio* a member of the (Branch) Council."—Carried unanimously.

Annual Meeting in London in 1890.—After some discussion, in which Dr. BRISTOWE, Dr. DICKINSON, Dr. GRIGG, and Mr. EASTES took part, a resolution was carried unanimously confirming the invitation proposed by the Council that the Association should hold its annual meeting in London in 1890.

Vote of Thanks to the Retiring President.—Dr. BRODIE SEWELL, in resigning the chair to Dr. ORD, took occasion to thank the members for their support during the year.—Dr. STEPHEN MACKENZIE proposed, and Dr. HENTY seconded, and it was unanimously resolved: "That the cordial thanks of the Branch be given to Dr. C. Brodie Sewell for his efficient and courteous conduct as President during the year, and especially for his able and judicious guidance and assistance in the consideration of those matters of professional importance which have been brought under the notice of the Branch."—Dr. BRODIE SEWELL returned thanks for the vote.

President's Address.—Dr. ORD delivered an address, and touched upon various points connected with the action of the Branch in forwarding the interests of the profession at large, as well as those who lived within the districts of the Branch.—Dr. STEPHEN MACKENZIE proposed, and Dr. HENTY seconded, a vote of thanks to the President for his address.—Carried unanimously.

Dinner.—Members and their friends, to the number of seventy-nine, dined together under the chairmanship of Dr. W. M. ORD. Among the guests present were Director-General Dick, C.B., R.N., Brig.-Surg. Simson Pratt, representing the medical department of the army. Mr. Dan Godfrey's band performed an excellent selection of music during the dinner. Mr. Olver and Dr. Collins very kindly assisted with some songs after dinner.

SOUTHERN BRANCH: ANNUAL MEETING.

THE annual meeting of the Southern Branch was held at Salisbury on Thursday, June 27th; H. B. NORMAN, F.R.C.S., in the chair.

Election of Officers.—The following gentlemen were elected officers for the ensuing year: *President-Elect:* Dr. J. Groves; *Vice-Presidents:* Brigade-Surgeon C. H. Godwin, Dr. J. M. Pletts; *Members of Council:* Dr. W. H. Axford, Dr. C. J. Beaumont, Mr. Darke, Mr. W. E. Green, Dr. G. H. Snowden, and Dr. H. Hemsted; *Representative on the Parliamentary Bills Committee:* Dr. D. Nicolson; *Representatives on the Council of the Association:* Dr. T. W. Trend, Dr. Ward Cousins.

Abuse of Out-Patient Departments.—The following resolution, proposed by Dr. AXFORD, and seconded by Dr. J. GROVES, was carried:—"That the disproportionate growth of the out-patient department in all hospitals demands a general inquiry, as well as the subject of provident dispensaries and sick clubs." Dr. Axford, in moving the resolution, referred to the abuse of out-patient departments of all hospitals by persons who could afford to pay a practitioner, and expressed the opinion that they were really of no benefit either to the hospitals themselves, to the poor, or to medical men. That while lightening the work of Poor-law doctors, they gave an excuse for the miserable payment of these gentlemen, and that, by their system of free relief, they pauperised the recipients of the charity, and took fees from medical men who, but for their existence, might earn a competence—instancing the fact that, when King's College Hospital was opened, many practitioners in the neighbourhood were entirely ruined. Free out-patient departments should be entirely done away with, except for patients sent by doctors for the sake of consultations, and their place should be taken by well-regulated provident dispensaries.

[A report of the clinical papers read will be published subsequently.]

Annual Meeting for 1890.—The next annual meeting will be held at Carisbrooke, and Dr. J. Groves is the President-elect.

NORTH OF ENGLAND BRANCH.

The twenty-fifth annual meeting was held at Durham on Tuesday, July 16th. In the absence of the President (Dr. McLagan), Dr. GOWANS was, on the motion of Dr. DRUMMOND, voted to the chair.

President's Address.—Dr. GOWANS introduced the new President, Dr. BARRON, who took the chair, and then delivered the annual address. In it he dealt in a masterly and interesting way with the subjects of convalescent hospitals and of cremation. Dr. BROADBENT proposed, and Dr. ELLIS seconded, a vote of thanks to the President for his able and exhaustive address, and that he be requested to print it. This was carried by acclamation.

Votes of Thanks to Retiring President.—On the motion of Dr. DAVIS, seconded by Dr. SMITH, a vote of thanks was accorded to the retiring President, and the Secretary was directed to send a note of sympathy to him on account of his recent accident.

Meeting for 1890.—Dr. DRUMMOND proposed, Dr. ELLIS seconded, and it was resolved that the annual meeting for 1890 be held at Darlington, and that Dr. Middlemiss be the President-elect. Dr. Booth, on behalf of the Master of Sherburn Hospital and himself, invited the Branch to hold a meeting there next year; this was cordially accepted.

Election of Officers.—It was proposed by Dr. CRISP, seconded by Dr. RIDLEY, and carried that the Council be re-elected with the addition of Dr. Hedley, of Middlesbrough, and that Mr. Williamson be re-elected Honorary Secretary and Treasurer. It was resolved on the motion of Dr. Foss and Dr. SMITH, that Dr. Philipson represent the Branch on the Parliamentary Bills Committee, and that Dr. Drummond and Mr. Williamson represent the Branch on the Council of the Association.

Vote of Thanks to Durham University.—Dr. GOWANS proposed a vote of thanks to the authorities of the University of Durham for their kindness in granting the use of a lecture room for the meeting, and for the use of the Castle Hall for the dinner.

Annual Dinner.—The dinner after the meeting took place at the Castle Hall, and twenty-five were present. As it was a beautiful summer evening there were no speeches, the members spending the time in the Fellows' Garden of the University.

CAMBRIDGESHIRE AND HUNTINGDONSHIRE BRANCH.

A MEETING of this Branch was held in the Anatomical School, Cambridge, on Friday, July 5th, the President, Mr. F. W. BECKETT, (Ely) in the Chair.

Proposed Combined Meetings.—The minutes of the last annual meeting having been read, the SECRETARY explained the circumstances under which the projected combined meeting with the South Midland Branch had fallen through. The question of any subsequent meeting was referred to the Council of the Branch.

Election of Representatives.—Mr. D. B. Balding, of Royston, and Dr. Bushell Anningson, of Cambridge, were reappointed representatives on the Parliamentary Bills Committee and on the Council of the Association respectively.

A Medical Defence Union.—On the motion of Dr. MEAD, of Newmarket, seconded by Dr. ROPER, of Cambridge, the following resolutions were unanimously adopted:—1. "That it is desirable that a Medical Defence Union be formed." 2. "That the list of the Provincial Committee presented be approved, with power to add to their number." 3. "That a Union extending over Great Britain and Ireland will be preferable to small local societies, and that the committee be recommended to arrange terms of union with the Central Society at Birmingham." 4. "That while *pro tem.* accepting members from all parts in which no society exists, special efforts be made to induce all medical men residing in East Anglia and the parts adjacent, extending from Sleaford to Peterborough and Bedford, to join the Society, with the view of forming a strong local branch or society. An annual general meeting to be held in some convenient locality in East Anglia, and another in or near Cambridge, Bedford, or Peterborough, such committee having separate presidents, etc." 5. "That the plan found to work so admirably in the British Medical Association of a Central Association, with branches for counties or groups of counties, be recommended for addition." 6. "That Mr. Beckett, Mr. Balding, and Dr. Grove be appointed presidents of districts."

YORKSHIRE BRANCH.

THE annual meeting of this Branch was held at Sheffield, in the Medical School, on June 26th, 1889, under the presidency of Mr. S. SNELL.

President's Address.—The PRESIDENT read an address, which was published in the JOURNAL of July 13th, p. 57.—A vote of thanks to the President for his address was unanimously passed.

Vote of Thanks to Retiring President.—A vote of thanks was

passed to the retiring President, Dr. Ramsay (York), who was also elected a Vice-President of the Branch.

Report of Council.—The following report was adopted: "The Council of the Yorkshire Branch have pleasure in reporting the increased success of the meetings of the Branch during the past year. They have not only been more numerously attended, but have also been more fully supplied with papers. The conjoint meeting of the East York and North Lincoln Branch and the Yorkshire Branch, held at York last autumn, was particularly successful and very pleasant. Your Council have appointed nine members of the Branch to be assistant secretaries. The members who have kindly undertaken the office are: Dr. Adolf Bronner, of Bradford; Dr. Chadwick, of Leeds; Dr. Turner, of York; Mr. Drury, of Halifax; Mr. Lawford Knaggs, of Huddersfield; Mr. Haley, of Wakefield; Dr. Cuff, of Scarborough; Dr. Green, of Ripon; and Dr. J. Gordon Black, of Harrogate. Your Council cannot meet you to-day without offering their Leeds friends their hearty congratulations on the fact that the annual meeting of the Association is to be held at Leeds in August next, and that our distinguished Vice-President, Mr. Wheelhouse, is the President-elect. Your Council are certain that the meeting will be one of the most successful on record, worthy of the best traditions of Leeds, and worthy of the reputation of those who have done so much, not only for their town, but also for the British Medical Association. Your Council have pleasure in informing you that they have accepted an invitation to hold the annual meeting in 1890 in Leeds; and Dr. Eddison has been appointed President-elect."

Alleged Abuse of Out-Patient Departments.—Communications from Dr. Crowe, the Secretary of the Worcestershire and Herefordshire Branch, relative to the abuse of the out-patient department of hospitals, and from Dr. Rentoul (of Liverpool) relative to a "Proposed Medical Service of England," were adjourned to a special meeting to be held at Leeds on July 17th, 1889.

Election of Officers.—The following officers of the Branch for 1889-90 were elected. *President:* Mr. Snell, Sheffield. *President-Elect:* Dr. Eddison, Leeds. *Secretary and Treasurer:* Mr. Arthur Jackson. *Permanent Vice-Presidents:* Dr. Allbutt, F.R.S., Mr. Ball, Dr. de Bartolomé, Dr. Burnie, Mr. W. F. Favell, Dr. Goyder, Mr. Arthur Jackson, Mr. Thomas R. Jessop, Dr. Keeling, Mr. Knaggs, Dr. Matterson, Mr. Meade, Mr. Miall, Mr. North, Dr. Ramsay, Mr. Pridgin Teale, Mr. Wheelhouse. *Council:* York: Mr. Galland. Bradford: Dr. Rabagliati, Dr. Major. Sheffield: Dr. Dyson, Dr. Martin. Scarborough: Dr. Hutchinson. Halifax: Dr. Dolan, Dr. Solomon C. Smith. Leeds: Mr. Atkinson, Mr. C. J. Wright. Wakefield: Mr. Walker. Barnsley: Dr. Sadler. Ripon: Mr. Bowman. Harrogate: Dr. Oliver. Rotherham: Mr. Knight. Huddersfield: Dr. Cameron. Hemsworth: Dr. Leak. Heckmondwike: Dr. F. B. Lee.

Election of Representatives.—Mr. Jessop (Leeds) and Dr. Cameron (Huddersfield) were elected representatives of the Branch on the Council of the Association; and Dr. Cameron a member of the Parliamentary Bills Committee.

Papers.—The following papers were read: Mr. W. Makeig Jones: Short Notes of a case of Trichinosis. Dr. Adolf Bronner: On the Treatment of the Common Affections of the Lachrymal Apparatus. Mr. Charles Atkin: Fatal Aural Cases.

Annual Dinner.—After the meeting the members dined together at the Wharncliffe Hotel.

Abuse of Out-patient Departments.—A special meeting of the members of this Branch was held at Leeds, under the presidency of Mr. SNELL, to consider the resolution passed by the Worcestershire and Herefordshire, and Gloucestershire Branches: 'That the disproportionate growth of the out-patient department in all hospitals demands a general inquiry, as well as the subject of provident dispensaries, medical aid associations, and sick clubs;" and also an article on "Proposed Medical Service of England," by Robert R. Rentoul, M.D., which appeared in the JOURNAL, June 22nd, 1889. The resolution of the Worcestershire and Herefordshire, and Gloucestershire Branches was carried by 18 to 12. Dr. Rentoul's proposed scheme was adjourned for future consideration. An animated discussion took place, in which the President-elect, Mr. Wheelhouse, Dr. Holdsworth, Dr. Rentoul, Dr. Jacob, Dr. Churton, Dr. Davy, Mr. Watt, Mr. Browning, Dr. Martin, Mr. Knaggs, Dr. Goyder, Dr. Rabagliati, and others took part. The Secretary was instructed to send a copy of the resolution to the Council of the Association, and to the Secretaries of the various hospitals in the Yorkshire Branch.

EAST YORK AND NORTH LINCOLN BRANCH.

Public Medical Service of England.—At a meeting of this Branch held at the Royal Infirmary, Hull, to discuss this scheme, the following resolution was adopted:—"That this meeting while not committing itself to the details of Dr. Rentoul's scheme, wishes to express its approval of his efforts to provide a Public Medical Service."

DORSET AND WEST HANTS BRANCH.

THE summer meeting of this Branch was held at Bournemouth on Wednesday, July 17th, Mr. PHILIP WILLIAM GOWLETT NUNN, President, in the chair. There were also present thirty-seven members and visitors.

Vote of Condolence.—It was resolved unanimously "That the members of the Dorset and West Hants Branch of the British Medical Association express their sincere sorrow at the loss they have sustained in the death of their former President, Dr. William Stewart Falls, and desire to convey to Mrs. Falls and the other members of his family their sympathy in their sad bereavement."

New Members.—Mr. B. P. Bartlett, of Bourton, Mr. H. G. Lys, and Dr. W. R. Thomas, of Bournemouth, and Mr. W. P. Wilton, of Weymouth, were elected.

Communication from the Worcestershire and Herefordshire and Gloucestershire Branches.—It was resolved unanimously "That the disproportionate growth of the out-patient department in all hospitals demands a general inquiry, as well as the subject of provident dispensaries, medical aid associations, and sick clubs."

Dr. Rentoul's Proposition.—It was resolved "That this meeting generally approves of Dr. Rentoul's 'Proposed Medical Service of England.'

Medical Aid Societies.—It was resolved unanimously "That in the opinion of this Branch it is incompatible with the interests of the British Medical Association and the dignity of its members that any of its members should be connected with any so-called Medical Aid Society, which employ their own doctor to the injury of private practitioners."

Next Meeting.—It was resolved "That the autumn meeting be held at Weymouth."

Dinner.—The members and friends dined together at the Royal Bath Hotel.

WORCESTERSHIRE AND HEREFORDSHIRE BRANCH.

THE annual meeting was held at the Infirmary, Hereford, on July 2nd.

Alleged Abuse of Out-patient Departments.—The HONORARY SECRETARY read a number of letters relating to the questions of hospital out-patients and medical aid societies. Letters from Dr. R. Rentoul regarding proposed public medical service were read, when the following resolution was carried: "That the discussion of this question be deferred for the present."

Election of Officers.—The following gentlemen were elected officers of the Branch for the ensuing year:—*President:* Dr. T. A. Chapman. *President-Elect:* Mr. Lawson Tait. *Honorary Secretaries:* Dr. Crowe and Mr. H. C. Moon. *Representative on the Council of the Association:* Dr. Crowe. *On the Parliamentary Bills Committee:* Dr. Strange and Dr. Crowe. The Council was re-elected, with the addition of Dr. Oscar Lane.

Papers.—Dr. LANE read a short paper on Myxœdema.—Mr. T. TURNER read notes of a case of Hip Disease.

Dinner.—The members afterwards dined together at the Green Dragon.

DENTAL HOSPITAL OF LONDON.—A *conversazione* was held at this hospital, Leicester Square, on Wednesday. The guests were received by Sir John Tomes, F.R.S. The Dean, Mr. Morton Smale, having read the annual report, the prizes were distributed by the Right Honourable Lord Kinnaird, who gave an eloquent address, in the course of which he dwelt on the necessity for combining scientific knowledge with mechanical skill in dentistry. A vote of thanks to Lord Kinnaird was proposed by Mr. Septimus Sibley, seconded by Sir J. Tomes, and carried unanimously. Miss Fergusson then exhibited Edison's phonograph, and the proceedings terminated by a selection of music, vocal and instrumental, performed by the musical society of the hospital.

BRITISH MEDICAL ASSOCIATION.

FIFTY-SEVENTH ANNUAL MEETING.

THE fifty-seventh Annual Meeting of the British Medical Association will be held at Leeds, on Tuesday, Wednesday, Thursday, and Friday, August 13th, 14th, 15th, and 16th, 1889.

President: Professor W. T. Gairdner, M.D., LL.D., Professor of Medicine in the University of Glasgow.

President-elect: C. G. Wheelhouse, F.R.C.S., J.P., Consulting Surgeon, Leeds General Infirmary, Hillary Place, Leeds.

President of the Council: Thomas Bridgwater, M.B., LL.D., Harrow-on-the-Hill.

Treasurer: Constantine Holman, M.D., Reigate.

An Address in Medicine will be delivered by J. Hughlings Jackson, M.D., LL.D, F.R.S., Physician to the London Hospital, and to the National Hospital for Paralysed and Epileptic, Queen Square, W.C.

An Address in Surgery will be delivered by T. Pridgin Teale, M.B., F.R.C.S., F.R.S., Consulting Surgeon to the Leeds General Infirmary, Leeds.

An Address in Psychology will be delivered by Sir J. Crichton Browne, M.D., LL.D., F.R.S., Lord Chancellor's Visitor in Lunacy London.

Head Mistress's Room, Mechanics' Institute.

A. MEDICINE.—*President*, John Edwin Eddison, M.D. *Vice-Presidents*, Charles Parsons, M.D.; Robert Saundby, M.D. *Honorary Secretaries*, Alfred George Barrs, M.D., 22, Park Place, Leeds; Theodore Dyke Acland, M.D., 7, Brook Street, Grosvenor Square, W.

The proceedings of this Section will be opened by the President on Wednesday, August 14th, at 10 A.M., after which Dr. R. Douglas Powell will read a paper on The Clinical Aspects of Chronic Tubercular Diseases of the Serous Membranes and their Treatment. Sir Andrew Clark, Drs. Vincent Harris, Roberts, Samuel West, Churton, Cheadle, Handford, More Madden, and Burney Yeo have promised, if possible, to take part in the discussion.

On Thursday, August 15th, a paper will be read by Dr. Pavy on the Prognosis of Cases of Albuminuria, with Special Reference to Life Insurance. Sir W. Roberts, Drs. Goodhart, Maguire, Pye-Smith, Ralfe, Rabagliati, C. R. Drysdale, Robert Barnes, De Havilland Hall, N. Tirard, Joseph Ewart, T. Cranstoun Charles, and Saundby hope to take part in the discussion.

The following papers are promised:

BATEMAN, F., M.D. (Norwich). On the Jurisprudence of Aphasia.
BROWN-SÉQUARD, C. E. The Toxicity of Expired Air and its Connection with Pulmonary Tuberculosis.
CHURTON, T., M.D.
CUTTER, Ephraim, M.D. (New York). Thirty Years' Work in the United States in the Treatment of Tuberculosis Pulmonalis, with Statistics of 100 Cases Illustrated by Lantern Slides of Microphotographs of Healthy and Tuberculous Lungs.
DRYSDALE, C. R., M.D. The Alleged Rarity of Phthisis among the Jews in London.
ECCLES, A. Symons, M.B. The Influence of Massage on the Rate of Absorption from the Intestines.
FINUCANE, T. D., M.D. (Blackrock). On Asiatic Cholera.
FLOOD, A. W. On Ringworm and its Treatment.
GREENE, G. E. J. (Ferns, Co. Wexford). Notes on Rötheln.
HAIG, A., M.D. On the Connecting Link between the High Tension Pulse and Albuminuria.
HANDFORD, H., M.D. On the Relations of Arterial Hypoplasia to Cardiac Disease.
HARLEY, Vaughan, M.B. Abscess of the Liver: Treatment.
JOHNSTONE, Thos., M.D. 1. Case of Massage. 2. Ilkley as a Resort for the Asthmatic.
LITTLE, J. Fletcher, M.B. The Modern Treatment of Palsies.
MCNAUGHT, Dr. A Case of Dilatation of the Stomach accompanied by the Eructation of Inflammable Gas.
MADDEN, T. More, M.K.Q.C.P.I. Clinical Experiences of the Chronic Tubercular Diseases of Childhood.
MAGUIRE, R., M.D. Presystolic Murmur without Organic Mitral Disease.
PEARSE, T. F., Esq. The Use and Abuse of Soap.
THOMAS, W. R., M.D. On Phthisis, with Remarks on the Varieties of Climatic Treatment.
THUDICHUM, J. L. W., M.D. On the Demodex Folliculorum, the Parasite of the Acne Punctata of Man and the Mange of the Dog.
TIRARD, N., M.D. Peptonuria and the Fehling Test.

Lecture Theatre No. 13, School of Science.

B. SURGERY.—*President*, Thomas Richard Jessop, F.R.C.S. *Vice-Presidents*, Edward Atkinson, M.R.C.S.; Arthur F. McGill, F.R.C.S.; Henry Morris, F.R.C.S.; *Honorary Secretaries*, Arthur W. Mayo Robson, F.R.C.S., Hillary Place, Woodhouse Lane, Leeds; Edward Ward, M.B., 22, Park Place, Leeds.

Arrangements have been made in this Section for the consideration of four special subjects, and the gentlemen whose names are appended have promised, if possible, to take part in the discussions.

The President of the Surgical Section will give an Opening Address on the Treatment of Cancer of the Rectum. The following gentlemen will take part in the discussion:—Mr. Mitchell Banks (Liverpool), Mr. Bond (Leicester), Mr. Bryant (London), Mr. Harrison Cripps (London), Mr. Christopher Heath (London), Mr. Whitehead (Manchester), Dr. Alexander (Liverpool), Mr. H. Allingham (London), Mr. Alfred Cooper (London), Dr. Ward Cousins (Southsea), Mr. Vincent Jackson (Wolverhampton), Mr. Jordan Lloyd (Birmingham), Mr. F. Marsh (Birmingham), Dr. James Murphy (Sunderland), Mr. Bennett May (Birmingham), and Mr. F. B. Jessett (London).

Mr. Henry Morris will open a discussion on the Surgery of the Kidney. Professor Annandale (Edinburgh), Mr. Rickman Godlee (London), Mr. Bennett May (Birmingham), Dr. Newman (Glasgow), Mr. Lawson Tait (Birmingham), Mr. Bruce Clarke (London), Mr. Kendal Franks (Dublin), and Mr. R. Lawford Knaggs (Huddersfield) will take part in the discussion.

Mr. Frederick Treves will open a discussion on The Surgical Treatment of Typhlitis after the discussion on Renal Surgery.

Mr. A. F. McGill will open a discussion on the Treatment of Retention of Urine from Prostatic Enlargement. Mr. Edward Atkinson (Leeds), Mr. A. E. Durham (London), Mr. Reginald Harrison (Liverpool), Mr. Berkeley Hill (London), Mr. Bruce Clarke (London), Dr. Ward Cousins (Southsea), Mr. Vincent Jackson (Wolverhampton), Mr. Jordan Lloyd (Birmingham), Mr. Bennett May (Birmingham), and Mr. W. Whitehead (Manchester) will take part in the discussion.

The following further papers are announced:

ADAMS, W., Esq. (London). On the Successful Treatment of Cases of Congenital Displacement of the Hip-joint by Complete Recumbency with Extension for two years.
ALEXANDER, W., M.D. (Liverpool). The Surgical Treatment of Epilepsy.
BISHOP, E. Stanmore (Manchester). 1, Some Points in the Technique of Morton's Operation for Spina Bifida. 2. Will show a Splint Cradle for Excision of the Hip-Joint and Osteotomy.
CRIPPS, Harrison, Esq. (London). A Series of Cases of Cancer of the Rectum treated by Excision or Colotomy.
FRANKS, Kendal, F.R.C.S. Subcuticular Suture.
HERN, John, M.D. (Darlington). The Advisability of Aspiration of the Protruded Gut in Recently Strangulated Hernia, with Notes of Cases.
HUME, G. H., M.D. (Newcastle). On Combined External and Internal Urethrotomy in the Treatment of certain cases of Stricture.
JONES, Robert, Esq. (Liverpool). 1. The Treatment of Joint Disease by Prolonged fixation. 2. The Treatment of Certain Cases of Peri-rectal Abscess by Partial Removal of the Sacrum.
KEETLER, C. B., Esq. (London). Compression of the Abdominal Aorta by an Instrument passed through a Small Opening in the Anterior Wall of the Abdomen.
KELLER, Otto E., M.D. (London). Trephining in a Case of Actinomycosis of Brain.
LLOYD, Jordan, Esq. (Birmingham). Abdominal Section for Acute Intestinal Obstruction.
MARSH, F., F.R.C.S., will Exhibit a Patient after Madelung's Operation, with subsequent Excision of Rectum.
OTIS, F. N., M.D. (New York). A *Resumé* of the Experience of Seventeen Years in the Operation of Dilating Urethrotomy.
PARKER, Rushton, Esq. Cerebral Tumour removed Successfully.
PARSONS, J. Inglis, M.D. (London). On the Arrest of Growth in Cancer by a powerful interrupted Voltaic Current.
PEARSE, T. Frederick, Esq. (London). The Treatment of Empyema.
ROBSON, A. W. Mayo (Leeds). 1. Two Hundred Consecutive Cases of Abdominal Section, with remarks. 2. Successful Case of Cholecystenterostomy for Biliary Fistula. Patient shown.
SILK, J. F. W., M.D. (London). Ether as an Adjunct to Nitrous Oxide Anæsthesia in Minor Surgery; with some general remarks upon Ether Narcosis and the teaching of Anæsthetics.
SPICER, Scanes, M.D. Note on a Case of Progressive Induration of Cervical Glands Simulating Malignant Disease, but readily yielding to the Treatment of Chronic Post-Nasal Catarrh.
STOKES, Sir Wm. Thyrotomy in the Treatment of Laryngeal Cancer.

Engineering Class Room, Mechanics' Institute.

C. OBSTETRIC MEDICINE AND GYNÆCOLOGY.—*President*, Charles J. Cullingworth, M.D. *Vice-Presidents*, James Braithwaite, M.D.; J. W. Byers, M.D. *Honorary Secretaries*, F. Hall, M.D., St. Mark's House, Leeds; Peter Horrocks, M.D., 9, St. Thomas's Street, S.E.

Dr. Braxton Hicks, F.R.S., will open a discussion on the treatment of Placenta Prævia. Drs. Robert Barnes, Murdoch Cameron, Gervis, W. Goodell (Philadelphia, U.S.), Robert Harvey (Bengal), Aust Lawrence, Malins, Murphy, Playfair, Priestley, Macnaughton Jones, Robert Bell, William Walter, Wallace, and Messrs. Hall and Wright are expected to take part in the discussion.

Dr. Herman will open a discussion on Corporeal Endometritis,

its Frequency, Diagnosis, and Treatment. Drs. Braithwaite, Byers, Murdoch Cameron, Halliday Croom, Duke, Elder, Gervis, Goodell (Philadelphia, U.S.), A. W. Johnstone (Danville, U.S.), Handfield Jones, Aust Lawrence, Playfair, Robert Bell, William Walter, Priestley, Wallace, Macnaughton Jones, Aveling, Graily Hewitt, and Messrs. Pridgin Teale and More Madden are expected to take part in the discussion.

The following further papers are announced:

ARMSTRONG, J., M.B. The Use of Antiseptics in Midwifery.
BELL, R., M.D. On the Relation of Endometritis to Ovarian Disease, and will also show some instruments.
CAMERON, Murdoch, M.D. Cæsarean Section, with Notes of a Second Successful Case.
CROOM, J. Halliday, M.D. 1. On the Shedding of the Decidual Membrane late in the Puerperium. 2. On Encysted Tubercular Peritonitis Simulating Ovarian Tumour.
CUTTER, Ephraim, M.D. (New York). Eighteen Years of Work in the United States in the Treatment of Uterine Fibroids by Galvanism with Demonstration of Methods of Operating and some Statistics of Treatment of Uterine Fibroids by Food for the same length of time.
DUKE, Alexander, F.K.Q.C.P.I. 1. Additional Traction in Forceps Cases as an Alternative to Craniotomy. 2. New Plan of Plugging the Cervix Uteri in Metrorrhagia.
HANDFIELD-JONES, M., M.D. On Cardiac Insufficiency in its Relation to Abortion.
JOHNSTONE, A. W., M.D. (Danville, U.S.A.) The Mechanics of Puberty.
LAWRENCE, A. E. Aust, M.D. (Bristol). Notes on Cases of Concealed Post-partum Hæmorrhage.
MADDEN, T. More, M.K.Q.C.P.I. On Some Points in the Treatment of Uterine Cancer.
NAIRNE, J. Stuart, Esq. Some Practical Points in the Surgical Treatment of Cancer of the Uterus.
PLAYFAIR, W. S., M.D. An Estimate of the Value of Electricity in Gynæcology.
ROBERTS, Arthur, M.D. (Keighley). Concealed or Ante-partum Hæmorrhage.
SINCLAIR, W. J., M.D. (Manchester). 1. Vaginal Hysterectomy for Cancer with Notes of Ten Cases. 2. Oöphorectomy in the Treatment of Certain Neuroses; with Cases.
WALTER, Wm., M.D. A Case of Total Extirpation of Uterus for Cancer.

Philosophical Hall.

D. PUBLIC MEDICINE.—*President*, Edward Ballard, M.D., F.R.C.P., F.R.S. *Vice-Presidents*, George Goldie, L.R.C.P.Edin.; Shirley F. Murphy, M.R.C.S. *Honorary Secretaries*, George Eastes, M.B., F.R.C.S., 35, Gloucester Place, Hyde Park, W.; Arthur Stopford Underhill, M.D., D.P.H., Great Bridge, Tipton, Staffs.

The following special subjects will be considered in this Section:

1. Medical Officers of Health: their Training, and the Conditions on which they should hold Office. The President of the Section will introduce this subject. Dr. John Brown (Bacup), Mr. D. E. Flinn (Kingstown), Mr. G. E. J. Greene (Ferns), Mr. J. Brindley James (London), and others have promised to read papers or take part in the discussion.

2. Disinfection and Isolation: with special reference to the Control of Epidemics. Dr. C. H. Allfrey (St. Mary Cray) will read a paper on The Management of Infectious Diseases in Hotels. Dr. W. Squire will read a paper on Disinfection and Isolation as necessary to the Control of Epidemics. Dr. C. R. Drysdale (London), Dr. E. W. Hope, and Dr. Joseph Loane (London) will take part in this discussion.

3. Town Refuse: its Treatment and Disposal. Excremental Matter: its Treatment and Disposal by other Methods than that of Sewers. Dr. E. Slade-King (Ilfracombe) will read a paper on Town Refuse: its Collection and Disposal in the Smaller Towns. Dr. M. Greenwood, jun., will read a paper on Dusting in our Large Towns, and will take part in the discussion on Town Refuse: its Treatment and Disposal. Dr. D. E. Flinn (Kingstown), Dr. G. E. J. Greene (Ferns), and others will also take part in this discussion.

4. Diseases and Injuries caused by Special Occupations: with reference to their Prevention. Dr. T. Churton (Leeds), Dr. J. T. Arlidge, Dr. G. E. J. Greene (Ferns), and others will take part in the discussion.

5. Contamination of Drinking-water by Lead: its Causes and Prevention. Dr. Sinclair White (Sheffield) will read a paper on this subject. Dr. John Brown (Bacup) and Dr. T. Churton (Leeds) will take part in this discussion.

The following further papers are announced:

ARLIDGE, J. T., M.D. (Newcastle-under-Lyme). On Diseases in Some Occupations Produced by Noxious or Poisonous Dusts.
CHURTON, T., M.D. (Leeds). Results of Twelve Months' Systematic Inquiry into the Sanitary State of the Homes of Hospital In-patients.
DRYSDALE, C. R., M.D. (London). Class Mortality Statistics.
FLINN, D. E., F.R.C.S.I. (Kingstown). On the Public Cleansing of Towns viewed in Relation to Public Health.
JAMES, J. Brindley, M.R.C.S. (London). (1) Town Refuse: its Treatment and Disposal. (2) A Cabinet Minister of Public Health.
KING, E. Slade, M.O.H. (Great Torrington.) Town Refuse; its Collection and Disposal in the Smaller Towns.

Class Room 3, School of Science.

E. PSYCHOLOGY.—*President*, D. Hack Tuke, F.R.C.P., LL.D. *Vice-Presidents*, W. Bevan Lewis, L.R.C.P.; Ringrose Atkins, M.D. *Honorary Secretaries*, John Greig McDowall, M.D., Menston Asylum near Leeds; Robert Percy Smith, M.D., Bethlem Royal Hospital, S.E.

Presidential address, Dr. Hack Tuke, on The Past and Present Provision for Pauper Lunatics in Yorkshire, introducing for discussion the question, Ought the Future Provision for this Class to be on the Same Lines?

Dr. W. W. Ireland will open a discussion on the Double Brain, and the Discordant Action of the Two Hemispheres in Insanity.

Dr. F. Warner, as Secretary of the Committee (appointed at the Glasgow meeting in 1888), will read their report, and introduce a discussion on the Draft Report of the Committee appointed to conduct an Investigation as to the Average Development and Condition of Brain Function among the Children in Primary Schools. Drs. Fletcher Beach, Savage, Ireland, and Shuttleworth will join in the discussion on Dr. Warner's report.

The following papers are promised:

BEACH, Fletcher, M.B. Some further facts respecting the Causation of Idiocy and Imbecility.
BATEMAN, F., M.D. On Hypnotism, with special reference to Certain Experiments at La Salpêtrière.
BULLEN, F. St. John, M.R.C.S. An Analysis of 1,565 *Post-Mortem* Examinations of the Brain performed at the Wakefield Asylum during a period of eleven years.
ROBERTSON, George, M.D. Melancholia from an Evolutionary and Physiological Point of View.
SAVAGE, G. H., M.D. Massage Treatment of Some Forms of Melancholia.
SHUTTLEWORTH, G. E., M.D. (1) A Contribution to the Etiology of Idiocy. (2) Remarks on a Series of Idiot Brains.
VOISIN, Professeur Aug. (of the Salpêtrière). On the Use of Hypnotic Suggestion as a means of Treatment in the Insane, and the Results he has obtained by this Method.
WIGLESWORTH, J., M.D. Note on Optic Nerve Atrophy Preceding the Mental Symptoms of General Paralysis.

Physics Lecture Room No. 11, School of Science.

F. PATHOLOGY AND PHYSIOLOGY.—*President*, Joseph Coats, M.D. *Vice-Presidents*, Thomas Churton, M.D.; De Burgh Birch, M.D. *Honorary Secretaries*, Ernest Henry Jacob, M.D., 12, Park Street, Leeds; T. Wardrop Griffith, M.D., 23, Park Square, Leeds.

A discussion on the subject of Fever will be opened by Dr. T. J. Maclagan. Dr. Gairdner, Dr. Dreschfeld, Dr. Handford, Dr. Broadbent, and Dr. Sims Woodhead will take part in the discussion.

The following further papers are announced:

BIRCH, De B., M.D. On the Nature of some Pressure Phosphenes.
COPEMAN, S. A. M., M.A. The Detection of Human Blood.
CROOKE, G. F., M.D. The Histology of Bright's Disease.
DRUMMOND, D., M.D. The Pathology of Acute Lead Poisoning.
HANDFORD, H., M.D. Visceral Changes in Enteric Fever.
HAYCRAFT, J. B., M.D. (Title not received.)
MOTT, F. W., M.D. The Pathology of Cardiac Failure.
POPE, F.M., M.D. Case of Thrombosis of Vertebral Artery: Pressure on Glosso-pharyngeal Nerve: Unilateral Loss of Taste.
WILLIAMS, Roger, Esq. The Neoplastic Process from an Evolutional Standpoint.
WOODHEAD, G. Sims, M.D.

The Pathological Museum will be held in the Chemical Laboratory of the Leeds School of Science (Mechanics' Institute). Dr. Beaven Rake will show a series of preparations illustrative of the various lesions of Leprosy.

Class Room 5, School of Science.

G. OPHTHALMOLOGY.—*President*, George Anderson Critchett, F.R.C.S.Edin. *Vice-Presidents*, John Albert Nunneley, M.B.; George A. Berry, M.B. *Honorary Secretaries*, Gustavus Hartridge, F.R.C.S., 65, Green Street, Grosvenor Square, W.; R. N. Hartley, M.B., 29, Blenheim Terrace, Leeds.

Mr. Jonathan Hutchinson will open a discussion on the Treatment of Glaucoma. Messrs. Couper, Frost, Evan Jones, Green, Griffith, Hutchinson, Little, Mackinlay, Macnaughton Jones, Prichard, Scougal, Sympson, Tweedy, Cant, and Lloyd Owen have promised to take part in the discussion.

The following further papers are announced:

BENSON, A. H., M.B. Pulsating Tumour of Orbit cured by Digital Pressure.
BERRY, G. A., M.B. St. Petersburg Operation for Entropion and Trichiasis.
BICKERTON, T. H., M.R.C.S. Criticism of the various Tests for Colour-Blindness, with special reference to the Board of Trade Tests, and further examples of Defective Eyesight occurring in Sailors.
BRONNER, Adolf, M.D., will show a Hook for Removing Remains of Lens Capsule,
CANT, W. J., M.R.C.S. A Case of Paralysis of the Right External Rectus Muscle after Injury to the Left Temple (*contre coup?*).
COLLINS, W. J., M.D. The Composition of the Human Lens in Health and in Cataract, and its Bearing upon Operations for the latter.

Cross, F. Richardson, M.R.C.S. Muscular Advancement.
Emrys-Jones, A., M.D. The Value of Galvano-Cautery in the Treatment of Conical Cornea (6 cases).
Ford, Vernon, M.R.C.S. The Value of Peritomy in Ulcers of the Cornea, etc.
Frost, W. Adams, F.R.C.S., will show a series of Ophthalmoscopic Drawings thrown on to a Screen.
Hartley, R. N., M.B., will show 1. Modification of Sichel's Knife for Cataract Operations. 2. Cases of Soft Cataract treated by Suction. 3. Cases of Hard Cataract extracted without Iridectomy.
Hern, John, M.D. Sclerotitis from Dental Irritation.
Hewetson, H. B., M.R.C.S. 1. Series of Cataract Operations without Iridectomy. 2. Series of cases of Interstitial Keratitis treated by Syndectomy.
Jessop, W., M.B. Some Experiments on New Drugs.
Johnson, G. L., F.R.C.S. Observations on the Therapeutical Action of the Violet and Ultra-violet Rays of Light on Vision.
Money, Angel, M.D. Sudden Transient Ocular Phenomena in Children.
Mules, P. H., M.D. Peripheral Neuritis of the Ophthalmic Division of the Fifth Nerve, and its Clinical Bearings.
Snell, Simeon, M.R.C.S. Extraction of Cataract without Iridectomy.
Teale, T. Pridgin, M.B., F.R.S. Description of the Operation he employs for Extraction of Cataract without Iridectomy.
Thompson, J. T., M.B. 1. A Note on a case of Superficial Keratitis induced by Aniline Violet. 2. Necrosis of Cornea from Contact with Crude Creasote.

Class Room 1, School of Science.

H. Diseases of Children.—*President*, Thomas Scattergood, M.R.C.S. *Vice-Presidents*, Richard Favell, M.R.C.S.; A. H. Carter, M.D. *Honorary Secretaries*, Walter Henry Brown, F.R.C.S.I., 19, Queen Street, Leeds; Angel Money, M.D., F.R.C.P., 24, Harley Street, Cavendish Square, W.

A discussion on the following subject will take place: The paralyses of the first two years of life. What is the relative frequency of paralysis from brain, cord, and nerve disease? What is the nature of the changes in the centres and nerves? This will probably be opened by the Honorary Medical Secretary. Papers will be read on the various forms of infantile paralysis: spastic paraplegia, congenital chorea, infantile palsy, and diphtheritic paralysis.

Surgical Portion.—Subject for discussion: The Surgical Treatment of the Various Congenital Malformations. Mr. Walsham and Mr. Morgan will take part in the discussion.

The following further papers are announced:

Ashby, Henry, M.D. A case of Softening of an Infant's Brain due to Vascular Obstruction. Also a case of Acute Polio-myelitis; death six weeks after the Acute Attack. The specimens will be shown.
Ballantyne, J. W., M.B., F.R.C.S.Ed. Sclerema and Œdema of the Newborn Infant.
Barrs, A. G., M.D., will show some Cases illustrative of Palsy in Infants.
Brown, John, M.B. (Bacup). Unsuspected Lead-poisoning in Children.
Bury, Judson S., M.D. On a Case of Microcephalus with Spastic Paralysis, and will show a Specimen.
Churchill, F. M.D. Hare-lip Operations.
Morgan, J. H., F.R.C.S. Congenital Malformations.
Squire, W., M.D. Cases of Infantile Palsy, Spastic Paraplegia, and Diphtheritic Paralysis in Children.
Sympson, Mansel, M.B. (1) A Case of Cerebral Birth Palsy with Epileptoid Convulsions. (2) A Case of Infantile Palsy, with comments.
Walsham, W. J., F.R.C.S. Ectopia Vesicæ.
Warner, F., M.D. The Frequency of Coincidental Defects in Development as seen in Children.

Class Room 2, School of Science.

I. Laryngology.—*President*, Henry T. Butlin, F.R.C.S. *Vice-Presidents*, Francis de Havilland Hall, M.D.; Richard A. Hayes, M.D. *Honorary Secretaries*, Greville Macdonald, M.D., 47, Queen Anne Street, Cavendish Square, W.; Barclay J. Baron, M.D., 16, Whiteladies Road, Bristol.

The following subjects are proposed for special discussion:

1. Tonsillitis: its Varieties and Association with Rheumatism.
2. Perichondritis of the Larynx: its Etiology, Pathology, Symptoms, and Treatment.

Dr. R. Hingston Fox and Dr. Barclay J. Baron will take part in the discussions.

The following gentlemen have promised papers on these subjects: Dr. C. W. Haig-Brown, Dr. P. McBride, Dr. G. Macdonald, Dr. David Newman, Dr. Scanes Spicer; and the following will take part in the discussions: Dr. Dundas Grant, Dr. Hodgkinson, Mr. T. Mark Hovell, Dr. C. J. Lewis, Dr. S. Moritz, Dr. G. Hunter Mackenzie, Dr. Scanes Spicer, Mr. G. Eland Stewart, Dr. Archibald Garrod, Dr. Warden, Dr. A. Mantle, and Dr. de Havilland Hall.

The following further papers are announced:

Baron, Barclay J., M.B. A Case of Bilateral Paralysis of Abductors of the Vocal Cords.
Hailes, W. J., M.D. (Albany, N. Y.). Intubation of the Larynx: 60 Cases; 20 Recoveries, with Instruments.
Lawrence, L. H., F.R.C.S. Granular Pharyngitis.
Macdonald, Greville, M.D. Empyema of the Maxillary Sinus, with an analysis of twelve cases.
Mackenzie, G. Hunter, M.D. Cases of Infraglottic Laryngeal Disease: (1) a Web removed by Laryngotomy; (2) a Growth a Sequel of Acute Laryngitis; (3) Intubation of the Larynx.
Moritz, S., M.D. A Case of Acute Rheumatic Bilateral Paralysis of the Abductors of the Vocal Cords.
Murphy, James, M.D. A Retractor for Use in Tracheotomy.
Newman, David, M.D. A Case of Laryngeal Carcinoma complicated by Chronic Pulmonary Tuberculosis, with remarks respecting the rare coincidence of these diseases.
Robertson, W., M.D. Two Cases of Rhinoscleroma. (With Exhibition of Patients.)
Spicer, R. H. Scanes, M.D. Throat and Nose Affections in Children as Causes of Functional Nervous Disorders.
Stewart, G. Eland, M.R.C.S. Tonsillitis as a Cause of Abscess in the Neck.
Stoker, George, M.K.Q.C.P.I. Laryngitis and Rhinitis in Diabetes.
Zwaardemaker, H. M.D. (Utrecht). New Olfactometers for estimating Degree of Loss of Smell (shown and described for the author by Dr. Scanes Spicer).

Elementary Division, Mechanics' Institute.

J. Otology.—*President*, George P. Field, M.R.C.S. *Vice-Presidents*, Frederick Morrish Pierce, M.D.; Henry Bendelack Hewetson, M.R.C.S. *Honorary Secretaries*, Adolf Bronner, M.D., 33, Manor Row, Bradford; G. William Hill, M.B., 24, Wimpole St., W.

The following subjects are proposed for formal discussion:

1. The Causes, Varieties, and Treatment of Osseous Growths of the Ear.
2. The Influence of Diseases of the Nose and Pharynx on Affections of the Middle Ear.
3. The Diagnosis, with special reference to Localisation, of Intracranial Lesions the result of Aural Disease.

The first of these discussions will be opened by the President, Mr. G. P. Field, the second by the Vice-Presidents, Dr. F. M. Pierce and Mr. H. B. Hewetson, and the third by Mr. Cumberbatch and Dr. William Macewen, of Glasgow; Dr. Hughlings Jackson, Dr. Broadbent, Professor Ferrier, and Professor Horsley will probably speak on the latter subject.

The following otologists have also intimated their intention of joining in one or more of the discussions: Clarence J. Blake, M.D. (Boston, U.S.A.), Professor Urban Pritchard, M.D. (London), H. Macnaughton Jones, M.D. (London), J. Dundas Grant, M.D. (London), W. R. H. Stewart, F.R.C.S.Ed. (London), Donald Stewart, M.D. (Nottingham), Dr. Charles Warden (Birmingham), Mr. Lennox Browne, G. J. Mackesy, M.B., W. L. Mackesy, M.B., J. Erskine, M.B. (Glasgow), and Mr. Richard Williams.

The following further papers are announced:

Barr, Thomas, M.D. (Glasgow). On Non-operative Treatment of Aural Exostoses; and will show Sections of Temporal Bones from Cases of Intracranial Disease illustrative of the various directions by which Disease of the Middle Ear may extend to the Interior of the Cranium.
Bronner, Adolf, M.D. (Bradford). Notes on the Use of Menthol in the Local Treatment of Diseases of the Middle Ear; and will show (1) a Catheter for the Injection of Fluids, and (2) a Capsule for the Introduction of Vapours into the Middle Ear.
Cousins, J. Ward, M.D. (Portsmouth). On a New Antiseptic Ear Drum. (Specimen shown.
Dalby, Sir Wm, M.B. (London) and Sheild, Marmaduke, M.B. (London). On Treatment of Aural Exostoses.
Davis, Henry, M.R.C.S. (London). On the question of Anæsthetics in Operations for Adenoid Growths of the Naso-Pharynx.
Ellis, Richard, F.R.C.S.Ed. (Newcastle). On an Osseous Growth of the Auditory Meatus simulating a Foreign Body and Causing Deafness. (Removal with restoration of hearing. Specimen.)
Guye, Professor (Amsterdam). On Aprosexia, being the inability to fix the attention, and other allied troubles in the cerebral functions caused by nasal disorders.
Hartley, R. N., M.B. (Leeds). Abscess of Right Temporo-Sphenoidal Lobe following Old Middle Ear Disease. (Trephined and drained: Recovery: Patient shown.)
Hill, William, M.B. (London). On some Causes of Backwardness and Stupidity in Children; and will show Intranasal Guards for the safer application of Chromic Acid to the Nasal Cavities.
Lee, Charles G., M.R.C.S. (Liverpool). A case of Cerebral Tumour complicated with Symptoms of Acute Otitis.
Lees, David B., M.D. (London). On the Connection between Aural Disease and Meningitis in Children.
Matheson, Farquhar, M.B. (London). On Some Subject connected with Deaf-Mutism.
Nunneley, John A., M.B. (Leeds).
Politzer, Professor, M.D. (Vienna) (per Mr. G. Stone, Liverpool). On Osseous Growths of the Ear. (With specimens.)
Stone, George, L.R.C.P. & S.Ed. (Liverpool). A Case of Severe Unilateral Tinnitus due to Stricture of the Eustachian Tube cured by Persistent Bougieing.

Class Room 10, School of Science.

K. Pharmacology and Therapeutics.—*President*, Sir William Roberts, M.D., F.R.S. *Vice-Presidents*, T. Cranstoun Charles, M.D.; I. Burney Yeo, M.D. *Honorary Secretaries*, John B. Hel-

lier, M.D., 1, De Grey Terrace, Leeds; Dawson Williams, M.D., 25, Old Burlington Street, W.

The proceedings of the Section will be opened at 10A.M. on Wednesday, August 14th, by an address by the President on Certain Practical Points in the Use of Antacid Remedies in Dyspepsia and Gravel.

At 10 A.M. a discussion on Hypnotics and Analgesics, with special reference to remedies recently introduced, namely, Paraldehyde, Hypnone, Amylene Hydrate, Methylal, Sulphonal, will be opened by Dr. D. J. Leech, Professor of Therapeutics in the Victoria University, Manchester. Dr. Charteris, Professor of Therapeutics in the University of Glasgow, Sir J. Crichton Browne, Dr. W. H. Broadbent, Dr. Frederick Needham (Gloucester), Dr. Macnaughton Jones, Dr. T. Cranstoun Charles, and Dr. John Gordon (Aberdeen) have signified their intention of taking part in the discussion.

At 10 A.M. on Thursday, August 15th, a discussion on Foods for Invalids and Infants will be introduced by Dr. Burney Yeo; and Dr. Sidney Martin, Dr. E. D. Mapother, Dr. T. Cranstoun Charles, Mr. R. W. Parker, and Dr. S. McBean (Newcastle) will take part in the discussion.

The following papers have been promised:

CHARLES, T. Cranstoun, M.D. (London). 1. The Hot-air Treatment of Pulmonary Consumption. 2. Some Cases of Diabetes. 3. Notes on the Use of Paraguay Tea. 4. On Ichthyol.

CHARTERIS, Professor M., and MACLENNAN, W., M.B. Experimental Research on the General Comparative Action of the Natural and Artificial Salicylic Acids and their Salts of Sodium.

CROCKER, H. Radcliffe, M.D. On Anthrarobin and the Sozoiodols in the Treatment of Skin Diseases.

GORDON, John, M.D. (Aberdeen). On the Pharmacology of Urethane.

GREENE, G. E. J. (Wexford). Lychnis Floscuculli in Renal and Vesical Affections.

HAIG, A., M.A., M.D. The Influence of Opium and Morphine on Uric Acid considered with reference to the Action in Health and Disease.

ILLINGWORTH, C. R., M.D. (Accrington). The Therapeutics of the Biniodide of Mercury.

MURRAY, W., M.D. (Newcastle-on-Tyne). On the Removal of Renal Calculi by Toxic Doses of Belladonna.

PEARSE, T. F., M.R.C.P., M.R.C.S. On the Use and Abuse of Soap.

SOLLY, Samuel E., M.R.C.S., L.S.A. (Colorado Springs). On the Climate of Colorado.

WOODS, Hugh, M.D. (Highgate). The Oxyiodides of Calcium and Bismuth.

YEO, I. Burney, M.D. (London), and SCHETELIG, Arnold, M.D. (Nervi). On the Treatment of Phthisis by Hypodermic Injections of Guaiacol.

N.B.—All gentlemen who, up to the present, have promised papers, have also intimated their intention of taking part in one or other of the discussions.

Honorary Local Secretaries, Charles J. Wright, M.R.C.S., Lynton Villa, Virginia Road, Leeds; Charles M. Chadwick, M.D., 3, Park Square, Leeds; G. Herbert Rowe, M.R.C.S., Hillary Place, Leeds.

Honorary Local Treasurer, William Hall, M.R.C.S., Moorham, Headingley.

PROGRAMME OF PROCEEDINGS.

TUESDAY, AUGUST 13TH, 1889.

9.30 A.M.—Meeting of 1888-89 Council. Council Room, Mechanics' Institute.
11.30 A.M.—First General Meeting. Report of Council. Reports of Committees; and other business. Coliseum.
4 P.M.—Service in Parish Church. Sermon by the Right Rev. the Lord Bishop of Ripon.
8.30 P.M.—Adjourned General Meeting from 11.30 A.M. President's Address. Coliseum.

WEDNESDAY, AUGUST 14TH, 1889.

9.30 A.M.—Meeting of 1889-90 Council. Council Room, Mechanics' Institute.
10 A.M. to 2 P.M.—Sectional Meetings. Mechanics' Institute. Public Medicine. Philosophical Hall.
3 P.M.—Second General Meeting. Address in Medicine by J. Hughlings Jackson, M.D., LL.D., F.R.S. Presentation of Stewart Prize to Dr. Klein, F.R.S. Coliseum.
4 to 6.30 P.M.—Reception given by Colonel Wilson and the officers 3rd Volunteer Battalion West Yorkshire Regiment to members in the Services at the Carlton Barracks.
4.30 to 6 P.M.—Afternoon Reception at the Yorkshire College by the President, Council, and Senate of the College.
8.30 P.M.—*Conversazione* by the President of the Association and Local Executive Committee in the Art Gallery and Municipal Buildings.

THURSDAY, AUGUST 15TH, 1889.

9.30 A.M.—Meeting of the Council. Council Room, Mechanics' Institute.
10 A.M. to 2 P.M.—Sectional Meetings. Mechanics' Institute. Public Medicine. Philosophical Hall.
3 P.M.—Third General Meeting. Address in Surgery by T. Pridgin Teale, M.A., F.R.S., F.R.C.S. Coliseum.
4 to 6.30 P.M.—Garden Party at Gledhow Hall given by Sir James Kitson, Bart.
7.30 P.M.—Public Dinner of the Association in the Town Hall.

FRIDAY, AUGUST 16TH, 1889.

10.30 A.M. to 1.30 P.M.—Sectional Meetings. Mechanics' Institute. Public Medicine. Philosophical Hall.
3 P.M.—Concluding General Meeting. Address in Psychology by Sir James Crichton Browne, M.D., F.R.S. Coliseum.
4 to 6.30 P.M.—Garden Party at Roundhay Mount given by T. R. Jessop, F.R.C.S.
4.30 to 6 P.M.—Garden Party at the W.R. Asylum, Wakefield.
8 P.M.—Reception and Ball by the Mayor of Leeds in the Town Hall.

SATURDAY, AUGUST 17TH, 1889.

4 P.M.—Garden Party at the Palace, Ripon, given by the Bishop of Ripon and Mrs. Boyd-Carpenter.
Excursions.

ANNUAL MUSEUM.

IN connection with the fifty-seventh annual meeting of the British Medical Association, the Museum and Exhibition will be held in the Mechanics' Institute, in which the Sectional meetings are held, and grounds of the Leeds School of Science. The Museum will be arranged in the following Sections:

SECTION A.—Foods and Drugs, including Antiseptic Dressings and other Chemical and Pharmaceutical Preparations. (Honorary Secretaries, Dr. J. Hellier, 1, De Grey Terrace, Leeds; Mr. C. V. Newstead, 40, Headingley Lane, Leeds.) In the Albert Hall.

SECTION B.—Pathology, comprising Casts, Models, Diagrams, Apparatus, Microscopical and Spirit Preparations, etc. (Honorary Secretaries, Dr. J. Dobson, 27, Burley Lawn, Leeds; Dr. E. H. Jacob, 12, Park Street, Leeds.) In the Chemical Laboratory.

SECTION C.—Anatomy and Physiology, comprising Special Dissections, Methods of Preparation, Drawings, Models, Microscopes, Microtomes, and Microscopic Preparations. (Honorary Secretaries—Physiology, Dr. De Burgh Birch, 16, De Grey Terrace, Leeds; Anatomy, Dr. T. Wardrop Griffith, 23, Park Square, Leeds.) In the Chemical Laboratory.

SECTION D.—Instruments and Books, including Appliances, Medical, Surgical, and Electrical. (Honorary Secretaries—Instruments, Mr. W. H. Brown, 19, Queen Street, Leeds; Books, Mr. F. H. Mayo, 49, Otley Road, Leeds.) In the Albert Hall.

SECTION E.—Sanitary and Ambulance Appliances. (Honorary Secretaries—Sanitary, Mr. J. S. Loe, Grafton Street, Leeds; Ambulance, Mr. R. N. Hartley, Blenheim Terrace, Leeds.) In the basement of the Boys' School.

In consequence of the great and increasing cost of these exhibitions, charges will be made to exhibitors (other than members of the medical profession), according to the space occupied.

Regulations Regarding Exhibits.

1. Intending exhibitors must communicate with the Secretaries of each Section in which they propose to exhibit, and a brief description of each exhibit, for insertion in the Museum Catalogue, must be in the hands of the respective Secretaries before July 8th.

2. All exhibits should be addressed to the "Secretary of the Museum, British Medical Association, Mechanics' Institute, Cookridge Street, Leeds," with the name of the Section for which they are intended.

3. Communications on general matters connected with the Museum to be addressed to the Museum Secretary, Dr. Jacob, 12, Park Street, Leeds.

All communications respecting advertisements in the Catalogue must be made to Messrs. Goodall and Suddick, Cookridge Street, Leeds.

PROPOSED EXCURSIONS.

1. *The Scarborough Excursion.*—A special train will leave Leeds 9.5 on Saturday morning, August 17th, arriving at Scarborough at 11.15. At 1 P.M. luncheon will be given by the profession of Scarborough to 100 members of the Association. In the afternoon excursions by sea and land will be arranged for; a Garden Party will also be given in honour of the visit of members of the Association. In the evening the grounds of the Cliff Bridge Company will be thrown open to the members and especially illuminated for the occasion. Sunday will be spent as a day of rest, but various small social entertainments will be given. A fee of one guinea will be charged, which will cover all expenses of the excursion, namely: Special train from Leeds to Scarborough, hotel accommodation at two of the best hotels from mid-day on Saturday, August 17th, till mid-day on Monday, August 19th (with the exception of wine). The Cliff Bridge Company will admit members of the Association free to their grounds on the three days,

August 17th, 18th, and 19th. All excursions arranged for during the visit of the Association will be free of expense. Any further particulars with regard to the Scarborough Excursion can be obtained on application to Charles F. Hutchinson, M.D., Honorary Secretary, May Lodge, Scarborough.

2. *The Ilkley and Bolton Abbey Excursion.*—The route of this excursion runs from Leeds in a north-westerly direction, leaving the Midland Station at 9.35 A.M.; it passes by way of Armley, Kirkstall (with a view of the old abbey of that name), and continues along the Airedale Valley to Apperley Bridge.

After passing Kirkstall forge, the vale opens out, showing Calverley to the south and on the north, giving a fine view of the slope of the hill from Rawdon, on which, as prominent objects, stand the Rawdon Convalescent Home (founded, for poor patients, by the late Sir H. W. Ripley, Bart.) and the Rawdon Baptist College. These and the numerous villa residences of Leeds and Bradford merchants, embowered in trees, form a pleasant and striking landscape. Passing Apperley Bridge, the line curves temporarily towards the north, up a steep incline, affording a glimpse of the upper portion of the Airedale Valley, with Shipley and Bradford in the distance; it then enters a wooded and tunnelled portion, curving back to the west and reaching Guiseley; here, and at Ilkley, the members of the excursion will be joined by their entertainers, and the train will proceed along the south side of the Wharfedale Valley, towards Ilkley.

Just before the valley opens there lies, on the south side of the line, the New Menston Lunatic Asylum, to which the Psychological Section intends to pay a visit. Beyond this the line divides, one branch turning to the east to Otley, the other pursuing its course to Ilkley and Bolton. In the angle made by this division lies the burial place of the late Right Hon. W. E. Forster. The spot affords a view of the extent of Wharfedale, which, following the course of the river Wharfe from Bolton on the west, runs to where the North Eastern line, on its way to Harrogate, crosses the valley at Arthington, on the east. The dale is one of the most beautiful in Yorkshire, offering at certain points almost unique views, as that at Otley Chevin, Brimham Rocks, and the Cow and Calf. The town of Otley lies at the east end, on the north side of the valley, opposite the Chevin; the village of Burley lies embedded in foliage in the middle of the dale, while Ben Rhydding and Ilkley lie on the cliff or south side of the dale, at the edge of Rumbold's Moor.

The train, proceeding, passes the Burley Station, and at this point on the rising ground of the north of the dale may be see Denton Hall and Park, formerly the residence of the famous Fairfax, now the seat of Mr. Wyville, J.P.; and, further west, Myddleton Lodge, the home of the Middletons, one of the oldest Yorkshire county families. The ground now rises precipitously to the south, and the first object which strikes the eye is the splendidly situated hydropathic establishment of Ben Rhydding. Further to the west of it are seen the massive rocks called the Cow and Calf, and the Ilkley district opens out, extending almost from the edge of the moor for a mile or more down a gentle slope to the river Wharfe. As the train moves past Ilkley, a good general view will be obtained of its spa establishments and villa residences. The train goes on past the village of Addingham (with Beamsley Beacon behind) till it reaches Bolton Bridge at 10.49; at this station waggonettes will be in readiness to take the party to the Priory and Bolton Woods. Most people have seen the beautiful print of "Bolton Abbey in the Olden Time." The remains of the Priory are charmingly situated, and form a grand adjunct to the restored church. To strangers the history of the structure will be freely afforded by some of the gentlemen accompanying the party. From the Priory the party will be conveyed to Bolton Woods and the Strid in the waggonettes.

The woods and stream will afford their own beautiful commentary; and the romantic story of the "boy of Egremond" checked in his spring across the "Strid" by the leashed hound, and drowned in the torrent; the despair of the mother, "Alice de Romille," and her subsequent founding of the Priory, can all be told on the spot. Time will not afford more than a distant view of "Barden Tower," the home of the Cliffords, and walk through the woods, nor can a visit to the Valley of Desolation, with its waterfall, be risked; but these will scarcely be missed amid the surrounding beauties. The waggonettes will return from the Strid about 12.45 to the Devonshire Hotel, where, if the day be propitious, lunch will be served on the lawn at 1.30 P.M.

The train will leave Bolton Abbey Station at 2.47 P.M. on its return to Ilkley; and here the rest of the day, till dinner-time, will be spent visiting the points of interest in its immediate precincts. Ilkley and its neighbouring "Rombald's Moor" have their aboriginal and Roman history, with their "Cairns," "Barrows," Roman stations and roads. Monumental relics have been found abundantly, and one is to be seen at the back of the Rose and Crown Inn, and three ancient crosses in Ilkley Churchyard. The old Parish Church will repay a visit. All that the antiquarian will require to indicate the ancient history of Ilkley may be obtained from "Lund's 6d. Guide." Modern Ilkley, as a spa and health resort, as well as Ben Rhydding (which was the first of the large hydropathic establishments in the neighbourhood), owes its celebrity not to any medicinal virtue in its water but to the wonderful purity and abundant supply of that water, and to the charming situation of the place. There is a valuable chalybeate spring at the side of the moor at Heber's Gill, past the Semon Convalescent Home, but this is quite apart from the main "Ilkley Water." This Ilkley water seems specially adapted for drinking and for all such purposes as are comprised under the head of "Hydropathy;" hence the abundance of these establishments. All, or a choice number, of these may be visited; from the original "Old White Wells," which everyone will observe high up on the hill side, through the grand structure of Ben Rhydding (Medical Officer, Dr. Johnstone); the palatial Ilkley Wells (Medical Officer, Dr. Scott); the well-known "Craiglands" (Medical Officer, Dr. H. Dobson); the Elizabethan structure, "Troutbeck;" the "Spa" establishment in the Grove, to Rockwood House, Marlborough House, and Stoney Lea. Besides these there is above the Grove, on the slope of the hill, the Ilkley Hospital (Medical Officer, Dr. Johnstone), established in 1829 as the Ilkley Bath Charitable Institution. This institution has from 700 to 800 patients passing through it in a year; these are recommended by subscribers; and it can be said with truth that the simple treatment and capital Ilkley air materially reinvigorates many of them. Another admirable institution, founded by the late Mr. Charles Semon, of Bradford, and bequeathed by him to the town of Bradford, is the Semon Convalescent Home, situated quite on the edge of the moor, south-west above Ilkley, and intended for the convalescent and weakly of the working class, clerks, and warehousemen; the whole charge for board and lodging is 12s. 6d. a week, the extra cost being furnished by the fund left by Mr. C. Semon. The people can wander on the moor at will, and convalescents are carried up from the railway by omnibus. The Home is open to others beside the inhabitants of Bradford. There are a number of hotels at Ilkley, the principal of which are the Middleton, the Crescent, etc.; but the hydropathic establishments also accommodate visitors even for a few days. Between the return arrival of the train at Ilkley and the hour at which the party will dine (5.30 P.M.), beside the places enumerated and the general exploration of Ilkley, if the day is fine, a walk to the "Cow and Calf" (on the way to Ben Rhydding) will yield a magnificient view from those rocks. Also $1\frac{1}{2}$ mile from the station south-south-west, another splendid view is obtained from the "Panorama Rocks." Again, the walk to Myddleton Moor, $1\frac{1}{2}$ mile north over the Ilkley bridge, will afford many interesting views. To any of the party who may prolong their stay over the excursion, the points of interest in the locality are many and varied, as Skipton town and castle, Keighley and Howarth (home of Charlotte Brontë, 14 miles), Denton Park, Otley and the Chevin, Farnley Hall ($2\frac{1}{2}$ miles from Otley, full of interesting historical records), Burley, Harewood House, Harrogate, Ripon, and Fountains Abbey, etc. After dinner, time sufficient will be afforded for a leisurely stroll to the Ilkley station, from which the train will start on its return journey promptly at 8.35 P.M. for Leeds and Bradford.

3. *York, Helmsley, Rievaulx Abbey.*—The party will leave the North Eastern Railway Station (New) at 9.5 A.M., reaching York at 9.45, where they will be met by the representatives of the profession of York, who have hospitably undertaken to entertain the party, and to show them the various objects of interest. The party will be conducted by the Walls to the Mansion-house and Guildhall (with the old municipal plate), by St. William's College, and thence to the Minster, where it is hoped that the Dean will personally conduct the party. St. Mary's Abbey and the Museum Gardens, with the numerous objects of interest, will, it is hoped, be seen under the guidance of Canon Raine. Luncheon will be served at the Station Hotel at 12.45, after which the party will be conveyed by special train to Helmsley. Here carriages will convey them to Rievaulx Terrace, whence, having seen the beautiful view, they will proceed to the Abbey, driving through Duncombe Park to the Home Terrace, and thence by the ruins of Helmsley

Castle to the Black Swan for dinner. The train will leave Helmsley for York in time to catch the night mail from York, and the 9.35 for Leeds.

4. *The Harrogate Excursion.*—The party will proceed by special train from the North Eastern Railway Station (New) about 9 A.M. to Pannal, where they will be met by carriages. The beautiful grounds and rocks of Plumpton, will then be visited, where light refreshment will be provided; afterwards the party will drive to Knaresborough Castle, the Dripping Well, and the caves memorable as connected with Eugene Aram. Thence by Scriven and Ripley Castle to Harrogate. Here the members of the profession in Harrogate will entertain the party at lunch in the New Bath Hospital about 3 P.M., afterwards carriages will be provided, so that places of interest may be visited. Various other entertainments will be organised, and in the evening the houses of the various medical men will be thrown open to visitors, and members can return to Leeds either by the special train, or by one of the numerous trains leaving Harrogate for Leeds in time to catch the night mails. It is expected that many will arrange to stay in Harrogate over the Sunday.

5. *The Brimham Rocks, Fountain Abbey, Studley Royal, and Ripon Excursion.*—Special train will leave the North Eastern Station (New) about 9 A.M. for Nidd Bridge, where carriages will meet the party to convey it by Ripley Castle up the north side of Nidderdale to the fantastic rocks at Brimham; thence to Castlestead, where the party will be entertained at luncheon by Mr George Metcalfe. After luncheon the party will proceed over the moors to Fountains Abbey and Studley Royal, the grounds being specially laid open by the Marquis of Ripon. Having viewed this, the finest of the Cistercian abbeys, the party will proceed to Ripon, where, having seen the cathedral, they will be received and entertained at the Palace by the Bishop of Ripon and Mrs. Boyd-Carpenter. The train will leave Ripon for Leeds at 8 P.M., reaching Leeds about 9 o'clock.

6. *The Washburn Valley and Farnley Excursion.*—The object of this excursion is to show the waterworks in connection with Leeds, the beautiful scenery of the Mid-Warfe and Washburn Valleys, and the unique collection of Turner paintings at Farnley Hall. The whole journey will be by carriage. The party will first be conducted to Adel Church, when the Rector will show this most perfect specimen of Norman architecture; thence past Creskeld by Arthington and Port Bridge, through the picturesque village of Leathley, with its old church and village stocks, through Ludley Wood to the Reservoir, where Messrs. Greenwood and Batley will show some interesting torpedo experiments. The party will then proceed over Norwood Edge, whence a splendid view of the whole valley can be obtained by Swinsty Reservoir to Fewston (the Sinking Village). Here lunch will be provided by the Chairman of the Leeds Waterworks Committee, Mr. Alderman Woodhouse. The party will then drive by Snowdon Moors to Farnley Hall, the seat of Mr. Ayscough Fawkes, who has kindly consented to exhibit his unrivalled collection of paintings by J. M. W. Turner, as well as his Cromwellian relics. Thence to Otley, where dinner will be served at the White Horse Hotel, the party reaching Leeds in time for the night mails.

7. *Malham Cove, Gordale Scar, and Settle.*—The object of this excursion is to show the remarkable scenery produced by the Great Craven Fault in the Mountain Limestone, one of the grandest examples in England. A special train will leave the Midland station about 9 A.M., reaching Bell Bush about 10.20 A.M. Here carriages will be waiting to convey the party by Calton Hall, the birthplace of General Lambert, and Kirkby Malham, with its interesting church and registers, to Gordale Scar, described by Wordsworth as "one of the grandest objects in Nature." The party, having been refreshed at a farmhouse, will divide into two, the more adventurous going over the cliffs to Malham Cove, where they will meet the party who have driven round. Having viewed this magnificent amphitheatre of rocks, the party will return to Kirkby Malham, and will here again divide. The lighter carriages, with those who prefer a walk with an ascent of 700 feet, will go over Highside, where a magnificent view of both Airedale and Ribblesdale can be obtained; thence by Scaleber Force to the Ashfield Hotel at Settle, where, being joined by the other party, who have driven round by Otterburn and Long Preston, dinner will be served. After dinner they will drive up Ribblesdale to Great Stainforth Force, returning by Giggleswick, where may be seen the ebbing and flowing well, and the Royal Victoria Cave Remains in the museum at the school. They will then return by Settle to Leeds, which will be reached about 9 P.M.

8. It has now been decided that Hull may be included in the range of places to which special return tickets may be issued from Leeds at a single fare for the double journey during the time that the Association is staying at Leeds.

The fee for each of the above excursions will be 10s. 6d., except in the case of the Scarborough excursion, for which one guinea will be charged. All applications for tickets, with remittance, to be made to me. Tickets will be sent August 1st.

CHARLES M. CHADWICK, Honorary Secretary,
Excursions Subcommittee.

RAILWAY TICKETS.

Members of the Association, on application at the booking office at Leeds, and on production of their cards of membership, can have issued to them return tickets at single fares, available from Leeds to any station within a radius of fifty miles. The same facilities will be afforded to ladies accompanying members if they require to do so. Periodical tickets (first class) to Harrogate or Ilkley, available for seven days, will be issued to members of the Association at a charge of 10s. each on production of the voucher above named. These facilities will apply strictly to Leeds, and there will be no reduction in the fares charged to the members of the Association on their journey to Leeds for the meeting. Similar facilities will not be extended to Hull.

CARDS OF MEMBERSHIP.

The cards of membership can be obtained on personal application at the Reception Room and Reading Room of the Mechanics' Institute, Leeds, on Monday, when it will be opened from 12 noon till 8 o'clock, and the other days of the meeting from 9 o'clock till 6 o'clock.

NOTICES OF MOTION.

Mr. RIVINGTON gives notice that he will move, on the reading of the report of the Council:

That it is the opinion of this meeting that the Members of the Royal College of Surgeons should have a voice in the management of the College and the election of the Council, and that it approves of the draft Bill to amend the constitution of the College to be submitted to Parliament, and that it be an instruction to the Council to further this object through the action of the Parliamentary Bills Committee, or such other as they may appoint for the purpose.

Dr. EDWIN RICKARDS hereby gives notice that, at the Annual Meeting to be held at Leeds in August next, he will move:

That it be a recommendation to the Council of the British Medical Association that a decennial index of the contents of the BRITISH MEDICAL JOURNAL from its commencement up to the present time be made, and that in future, in addition to the annual index, a quinquennial one be issued.

Mr. J. BRINDLEY JAMES will move:

That the British Medical Association shall give active support and assistance to any scheme that has in view the establishment of hospital co-operation with a view to the better conducting of the out-patient department of our general hospitals, raising thereby the standard of hospital practice and extinguishing the *raison d'être* of so-called provident dispensaries and open surgeries, thus enabling general practitioners to gain an honourable livelihood.

Dr. OGILVIE GRANT gives notice that at the first evening general meeting at Leeds he will move:

That the travelling expenses of representatives of Branches incurred in attending meetings of the Council in London be defrayed out of the funds of the Association.

DR RENTOUL gives notice that he will move:

That, recognising the fact that there is an abuse of the out-patient department of our medical charities, this meeting of the British Medical Association resolves:

1. That medical practitioners and the managers of our medical charities in the various towns and cities meet together and decide who are eligible for out-patient medical aid. This meeting suggests that the following "wage limit" be adopted:—When a man and wife make 25s. per week and over, or a single person 20s. per week and over, that these shall be ineligible for out-patient treatment at the medical charities—except in cases of accident—and that those earning a similar rate of wage be ineligible for "home visits;" that is, visits paid by the staff of the medical charities to sick persons at the patient's home. Further, that either the Manchester system of checking abuse, or that used at the London, and St. Bartholomew's Hospitals be put into force, but that preference be given to the plan used in Manchester.

2. In order that those who shall be excluded from the out-patient department of our medical charities (by the working of the previous resolution) may have the means of obtaining immediate and efficient medical, surgical, and dental treatment, and medicines, this meeting resolves, that a Public Medical Service—such as that suggested in the JOURNAL of June 22nd, 1889—be formed, and that this service embrace those wage-earners who are making under 45s. per week per family, and single persons under 30s. per week. And that the medical practitioners, dental surgeons, chemists, and hospital managers are requested to bring about this hospital reform, and establish a Public Medical Service with as little delay as possible.

3. That having secured hospital co-operation, and having established a Public Medical Service, the members of this Association appoint a Committee, com-

posed of two representatives elected by each Branch, and that this Committee draw up a series of rules for the formation and working of a provident system, whereby wage-earners receiving up to 45s. per week per family, and single persons 30s. per week, may, by making periodic payments during health and sickness, provide themselves, their wives, and children with efficient medical and surgical treatment, and medicines.

4. That the principle of a "wage limit" be adopted, and worked by friendly societies, tontines, and sick insurance companies; or that a "sliding scale" of payments be made to their medical practitioners, so that the present abuses may be rectified. This scale of payments to be drawn up by the Committee constituted as by Resolution 3. This meeting suggests that the minimum medical fee paid by such sick clubs shall be 6s. per annum, per member; that the person proposed for membership pay a fee of 3s 6d. for the medical examination (whether admitted to membership or not) to the practitioner who so examines; that the sum of 1s. be paid for each certificate to the practitioner by the person who obtains it; and that the sum of 8d. be paid for each prescription dispensed. This meeting earnestly requests the various authorities of friendly societies, tontines, and sick insurance companies, to make provision for surgical and dental treatment, and to draw up a scale of fees for the same, so that they may not be depending on the medical charities for relief.

5. That this meeting, recognising the fact that there are a great number of beds in the Poor-law infirmaries (there being no less than 12,000 in 25 metropolitan Poor-law infirmaries), and many in the various fever hospitals at present unused for the clinical teaching of students, and giving due weight to the statement made in the Metropolitan Asylums Board Report of 1889, page 18, that: "Your Committee cannot fail to observe the large proportion of mistakes which are made in the diagnoses of cases of small-pox and fever," desire to express their regret that the Poor-law infirmaries and fever hospitals are not open for the clinical instruction of medical students, and hope that the various authorities will direct their attention to the removal of the present restrictions, so that the educational standard may be improved, it being essential to the health of cities and towns that medical practitioners may be able to recognise fever cases at the earliest possible period.

6. That the Council and JOURNAL of the Association help in every legitimate way to bring the above resolutions to a successful issue.

FRANCIS FOWKE,
Thursday, July 11th. General Secretary.

CORRESPONDENCE.

VOTING PAPERS AT THE COLLEGE ELECTIONS.

SIR,—In connection with Mr. Lawson Tait's very reasonable proposal that, at the election of Councillors of the Royal College of Surgeons of England, a voting paper should be sent unasked to every Fellow with the list of candidates, it may be of interest to record the following circumstance: On July 6th, I addressed a letter to the Council, suggesting that this should be done both for the convenience of the Fellows and the saving of expenditure; and, further, that the voting papers should be returnable up to ten o'clock on the day of election, as there did not appear to be any real necessity for the deduction of forty-eight hours from the Fellows who might wish to record their votes through the post. Although the fact is not ascertainable from the published minutes, my letter was submitted to the Council on July 11th; and Mr. Trimmer was desired to acquaint me that "the points which I raised were fully considered by the Council when application was made for the by-laws by which the present mode of election is governed." The restrictions imposed by these by-laws are peculiar to the College. In the election of the representatives of the profession in the General Medical Council, voting papers are sent, as a matter of course, to every registered practitioner; and, at the sister College in Dublin, voting papers are sent unasked to every Fellow whose address is known.—I am, etc.,

Finsbury Square, July 22nd. WALTER RIVINGTON.

MEDICAL DEFENCE.

SIR,—Actions against medical men show a disposition just now to become epidemic. The JOURNAL of July 20th contains notices of three cases, criminal or civil, in which practitioners play the chief parts. In East Anglia, a case has just been decided against a surgeon. Damages were assessed at £250 with costs, which will amount to another £250 or thereabout.

The object we have in addressing you is once more to point out, that from our standpoint at any rate, repeated appeals to the charity of their professional brethren to reimburse medical men for legal costs is as anachronous as would be an appeal for assistance by a man who had omitted to insure his house against fire, and which had been burnt down.

The Medical Defence Union is an institution managed on insurance principles, by medical men for medical men. Its executive is subject to annual election. Its officers are honorary. It has a membership of 500 odd, which is daily increasing; an annual income of £250, a good balance at the bank, and a guarantee fund of £662, which never has been touched, and is not likely to be. Apart from the financial soundness of the union, the moral support which it gives to assailed medical men is enormous; and as its machinery can be put into motion at any moment by the emergency committee, it may, and has crushed attempts at blackmailing in the bud. It is needless to say, its policy is to help its members, and this it has done effectively in many instances. There can be no doubt that the scope of influence of the Medical Defence Union should be conterminous with the British Medical Association, and this is the object for which we sincerely hope and labour.—We are, etc.,

Birmingham. LESLIE PHILLIPS, M.D. } Hon. Secs.,
A. GEORGE BATEMAN. } Medical Defence Union.

P.S.—It may be well to state the information that by our articles of association the union cannot defend any action the cause of which commenced prior to the date of membership.

PILOCARPINE IN DEAFNESS.

SIR,—I have been interested to see Dr. Woodhouse's report of some cases in which he has unsuccessfully tried pilocarpine injections for the relief of deafness. Dr. Woodhouse wrote to me some time ago on this subject; I gave him the desired information, but have heard nothing further from him until I saw his paper in the JOURNAL last week. I certainly did not recommend that this treatment should be adopted almost exclusively in old people over 60 years of age.

I did not for a moment maintain that every deaf patient taken at haphazard will derive benefit, for in those cases I selected as likely to improve I pointed out many failures, as well as some successes. Dr. Woodhouse submitted five cases to this treatment, no less than four of which were 60 years of age or over.

Professor Politzer, who first brought pilocarpine injections for deafness under the notice of the profession, has long taught that it is of little use in elderly persons, and he makes it almost a rule never to prescribe it in patients over 60 years of age, who have been gradually getting deaf, and in whom senile changes may be reasonably suspected. I do not think any aurist would have expected very favourable results from the injection treatment in Dr. Woodhouse's first four cases. The fifth case was more promising, and in such a one I have often continued the treatment for six weeks with ultimate improvement.

I would ask the profession to suspend their judgment for a time on this question, as to the efficacy of pilocarpine injections in labyrinthine disease, and even in chronic catarrh of the middle ear without Eustachian obstruction. I have had more successes than failures in my own selected cases, and I am continually hearing of encouraging results from others.

I am sorry I did not lay sufficient stress on senility as an obvious counter-indication in my paper to the JOURNAL, though it was referred to in the section I edit for the *Year Book of Treatment*, 1889.—I am, etc., GEORGE P. FIELD.

Wimpole Street, July 24th.

P.S.—The following cases speak for themselves:

1. A medical man consulted me some time ago, and said he was so deaf that he was afraid he must give up practice. I suggested he should try pilocarpine injections for six weeks. He now writes (July 7th): "I used the nightly injection for six weeks, with almost a complete cure; you cannot think how thankful I am for the restoration of my hearing."

2. A lady, aged 34, very deaf for fifteen years, writes: "I am glad to say I have received much benefit from your treatment. I can now hear general conversation and take part in it; I can also hear musical instruments playing in the streets and the minister speaking from the pulpit, and also have less noise in my ears."

3. A lady who had been deaf for seventeen years, unable to hear without a trumpet, writes: "On the first day I was injected I was unable to hear a watch or clock tick. On the ninth day, noticed sound in my own voice; on fifteenth day, could hear my own watch tick for the first time for eight years; twenty-second day, noticed immense improvement, heard bells, knocks, watch two inches distant from right ear, and faintly at left; fiftieth day, continued improvement; fifty-seventh day, heard sermon with trumpet; sixty-fourth day, heard sermon without trumpet." She remarks on the general result: "Immense improvement in hearing; can now hear all the clocks in the house tick. Much easier to maintain conversation with one person. Much more conscious of sounds in the house."

NAVAL AND MILITARY MEDICAL SERVICES.

THE SURGEON-GENERAL, HER MAJESTY'S FORCES IN INDIA.

We hear from a trustworthy source, that a scheme was lately propounded to abolish the head of the British Medical Service in India, by incorporating it with the civil Indian head. Fortunately the responsible military authorities would not listen to such a monstrous proposal. The ostensible plea for the proposal was probably the financial saving which would follow; but this could hardly have been all. At any rate, there could have been no thought for the efficiency or well-being of the medical service, or of fair play towards it. It is even rumoured the astounding scheme is not yet dead, and may be revived: but we trust that if any such attempt is made, it will be closely watched and resolutely resisted.

BAD MEAT RATIONS.

A surprise visit paid last week by a Government meat inspector to the camp of the 3rd Battalion York and Lancaster Regiment of Militia, in Pontefract Park, resulted in the mid-day's rations being condemned as unfit for human food.

VOLUNTEER AMBULANCE SCHOOL OF INSTRUCTION.

The following medical officers, who have attended the lectures of this School of Instruction on the Proficiency Examination, under Surgeon Walter Pearce, M.D., 20th Middlesex (Artists) R.V., have been successful in obtaining the proficiency certificate, this being now required of all acting surgeons of the Volunteer Force:

Surgeons-Major Pocklington, 2nd V.B. the East Surrey Regiment; T. Joyce, 2nd V.B. "The Buffs," East Kent Regiment; Culver James, H.A.C.; S. P. Smith, 1st V.B the Royal Fusiliers. Surgeons T. L. Gentles, 1st V.B. (the Sherwood Foresters) Derby Regiment; O. M. White, W. D. Waterhouse, and J. W. Jackson, the Tower Hamlets Rifle Brigade; L. Ogilvie, M.B., and G. Ogilvie, M.B., London Scottish R.V.; H. A. Des Vœux, M.D., 13th Middlesex (Queen's Westminster) R.V.; H. F. Stokes, the London Rifle Brigade; S. H. Moore, 2nd (South) Middlesex R.V.; E. J. Hunter, 3rd V.B. Hampshire Regiment; E. Stewart, M.D., Middlesex Yeomanry Cavalry; R. M. P. Low, 1st Middlesex Engineer Volunteers; H. W. Roberts, 2nd V.B. "The Queen's Own," Royal West Kent Regiment; J. H. Walters, 1st V.B. the Royal Berkshire Rtgiment; C. Anol, 3rd V. Brigade Cinque Ports Division R.A.; W. Gandy, 2nd V.B. the East Surrey Regiment; D. Playfair, M.B., 2nd V.B. the "Queen's Own" Royal West Kent Regiment; J. F. Porter, 2nd V.B. East Yorkshire Regiment; R. H. Hodgson, the Tower Hamlets Engineer Volunteers; J. W. Davies, M.D., 3rd V.B. the South Wales Borderers.

A new course of lectures for this examination will commence on Monday, September 30th, at 4.30 P.M., at the headquarters of the Queen's Westminster R.V., Buckingham Gate, S.W. The details of army medical administration, equipment, and hygiene will be fully explained an illustrated, and arrangements will be made to suit the convenience of officers residing at a distance from London. Medical officers joining this class can also attend the lectures and drills for regimental stretcher bearers, which will be held at the headquarters of the Queen's Westminster R.V., London Scottish R.V., Buckingham Gate, S.W., and of 4th V.B. "The Queen's," Royal West Surrey Regiment, New Street, Kennington Park, S.E.

Further particulars can be obtained on application to the Honorary Secretary, R. Reginald Sleman, 7, St. Benet Place, Gracechurch Street, E.C.

THE ARMY MEDICAL DEPARTMENT.

Sir Thomas Crawford writes: In an editorial note on page 86 of the Journal of July 13th, relative to the existence of discontent in the Army Medical Service, I find the following:—"Surely after the absolute denial which was given officially by the late head of the Army Medical Department, to the existence of this discontent," etc. As I presume I am the late head alluded to, and as I have no recollection of ever having made such a statement, I beg you will favour me with an early reference to the official or other document or evidence on which you attribute this statement to me.

*** At the annual meeting at Dublin Sir Thomas Crawford stated, by way of denial to the statement of the Chairman of the Parliamentary Bills Committee, that the Army Medical Service was "boiling with discontent": "There is not within my knowledge one single representation either to the Director-General, or the Commander-in-chief, or the Secretary of State for War from any officer."[1]

SURGEON OR SERGEANT.

Verb. Sap sends us an amusing story illustrating the hopeless confusion which the titles Surgeon-Major and Sergeant-Major seem to create in the pure civilian mind. A friend whom he calls Surgeon-Major "Nobbs," was invalided home and placed on half pay, to the utter ruin of his prospects; he sought for health in a delightful part of England, and soon came to be known there to all sorts and conditions of men, including a railway porter named "George," an ardent teetotaller. Poor Nobbs, with his bad liver, was then an abstainer himself, and was asked to take part in a village temperance meeting, at which the worthy rector was in the chair. George managed the programme, and in due course the chairman announced that: "Sergeant-Major Nobbs will now address the meeting, and give his experience of the evils attendant on the use of alcohol in the Army."

Nobbs, who was in the body of the hall, was at first somewhat taken aback, but being a man of ready resource, proved equal to the occasion; on a sign from George, he made his way to the platform, and he delivered a most thrilling and eloquent address, descriptive of his career from the time he enlisted as a private until he was pensioned as a sergeant-major, with medal for meritorious conduct and gratuity. Especially were his barrack room and canteen anecdotes listened to with wrapt attention, broken only by bursts of applause. Nobbs wound up by thanking the rector and the audience for their kind attention, and to avoid awkward questions hastily left the room; a sadder and wiser man, deeply impressed with the idea that he had mistaken his career, and ought probably to have been a real sergeant-major. Nobbs recovered his health, and still lives to tell his experiences in the ranks.

[1] Journal, August 6th, 1887, page 310.

THE NAVY.

Staff-Surgeon J. D'A. Harvey has been promoted to be Fleet-Surgeon. His commission as Surgeon is dated August 17th, 1869, and that of Staff-Surgeon, March 23rd, 1880.

Surgeon J. W. Slaughter has been appointed to the *Forester*, temporarily, July 23rd.

THE MEDICAL STAFF.

Surgeon-Major Nathaniel M'Creery has received the Queen's permission to accept and wear the insignia of the 3rd class of the order of the Medjidieh, which has been conferred on him by the Khedive of Egypt in recognition of his distinguished service before the enemy during the recent operations at Suakin.

It was stated in the Journal last week that Brigade-Surgeon C. S. Close had been transferred from Chester to Preston. We are asked to say that the reverse is the fact, Brigade-Surgeon Close having been transferred from Preston to Chester, where he has assumed the duties of Senior Medical Officer of the district.

ARMY MEDICAL RESERVE.

Surgeon A. E. Odling, 1st Volunteer Battalion Lincolnshire Regiment (late the 1st Lincoln Volunteers), is appointed Surgeon, ranking as Captain.

INDIAN MEDICAL SERVICE.

The undermentioned Surgeons, all of the Bengal Establishment, are appointed to the officiating charge of the regiments specified: G. T. Mould, 4th Bengal Cavalry, *vice* Surgeon-Major Calthrop, appointed Medical Storekeeper at Meean Meer; L. G. Fischer, 7th Bengal Cavalry, *vice* Surgeon-Major Finder, transferred to civil employment; A. Coleman, 12th Kelat-i-Ghilzai Regiment, *vice* Surgeon Macleod, transferred to the 1st Battalion 3rd Goorkhas; D. G. Marshall, 14th Sikhs, *vice* Surgeon Deare, transferred temporarily to civil employment; J. C. Lamont, 16th Lucknow Regiment, *vice* Surgeon Roberts, transferred for temporary employment under the Foreign Department; W. J. Buchanan, 20th Punjab Infantry, *vice* Surgeon-Major McGregor.

Surgeon B. K. Basu, M.D., Bengal Establishment, is appointed to the medical charge of the 18th Native Infantry, *vice* Brigade-Surgeon Potter, M.D.

Surgeon-Major A. W. Mackenzie, Bengal Establishment, is appointed to the officiating medical charge of the 3rd Sikh Infantry, *vice* Surgeon-Major T. Moloney, proceeded on sick leave.

Deputy Surgeon-General G. C. Chesnaye, Bengal Establishment, is posted to the administrative medical charge of the Lahore District.

Deputy Surgeon-General E. O. Tandy is posted to the administrative medical charge of the Bundelcund and Nerbudda Districts.

Brigade-Surgeon J. Duncan, M.D., Bengal Establishment, is permitted to retire from the service, which he entered as Assistant-Surgeon February 10th, 1859; he attained the rank of Brigade-Surgeon September 1st, 1886. He has no war record in the *Army Lists*.

Surgeon A. Milne, Bombay Establishment, who is on sick furlough, has been granted an extension of leave without pay until his arrival in India.

The date of rank of Deputy Surgeon-General A. H. Hilson, M.D., and Brigade-Surgeon J. Cleghorn, M.D., both of the Bengal Establishment, is altered from the 19th to the 20th December, 1888.

Surgeon-Major George King, M.B., and William Carter, M.B., both of the Bengal Establishment, and who entered the service as Assistant-Surgeons October 2nd, 1865, are now promoted to be Brigade-Surgeons, the former from April 2nd, 1889, and the latter from April 19th.

Deputy Surgeon-General O. W. Sutherland, of the Bengal Establishment, has retired from the service. His commission as Assistant-Surgeon is dated May 6th, 1854, and that as Deputy Surgeon-General December 18th, 1883.

Surgeon-Major Edward Colson, of the Bombay Establishment, has also retired. His first commission bears date April 1st, 1869; that of Surgeon-Major April 1st, 1881.

The retirement of Deputy Surgeon-General A. J. Cowie, Bengal Establishment, announced some time since in the Journal, has received the approval of the Queen.

Her Majesty has also approved that the retirement of Brigade-Surgeon H. V. Carter, M.D., of the Bombay Establishment, be antedated to July 13th, 1888.

THE VOLUNTEERS.

Mr. Robert Wrigley is appointed Acting-Surgeon to the 1st Volunteer Brigade Eastern Division Royal Artillery (late the 1st Norfolk Artillery).

Surgeon-Major (ranking as Lieutenant-Colonel) J. P. Purvis, 2nd Volunteer Battalion West Kent Regiment (late the 3rd Kent), has resigned his commission, which was dated October 3rd, 1885; he is permitted to retain his rank and uniform.

Mr. W. J. Morris is appointed Acting-Surgeon to the 2nd Volunteer Battalion Welsh Fusiliers (late the 1st Flint and Carnarvon).

Acting-Surgeon G. H. Mackay, M.B., 3rd Volunteer Battalion Seaforth Highlanders (late the 1st Elgin), is promoted to be Surgeon.

Acting-Surgeon W. Gill, 19th Middlesex (St. Giles's and St. George's, Bloomsbury), has resigned his appointment, which dates from February 26th, 1879; he is permitted to retain his rank and uniform.

Acting-Surgeon W. D. Waterhouse, 1st Tower Hamlets (the Tower Hamlets Rifle Volunteer Brigade), is promoted to be Surgeon.

Surgeon H. Bennett has resigned his commission (dated April 1st, 1887) in the Maidstone Division of the Volunteer Medical Staff Corps.

MEDICO-LEGAL AND MEDICO-ETHICAL.

ACTION FOR DAMAGES FOR ALLEGED UNSKILFUL TREATMENT.

At the recent Suffolk summer assizes an action was heard before the Lord Chief Justice which affords another illustration of the serious risks to which members of the medical profession are exposed when charges of unskilful treatment are brought against them. The plaintiff was a farmer, who sustained an oblique fracture of the femur; he was attended by Mr. A. H. Leech, M.R.C.S., of Bury, whose father has long been in practice in that town. Union ultimately occurred, according to Professor Humphry's evidence, in an oblique position, and there was two inches shortening, due to overlapping of the bone. The plaintiff alleged that this result was due to unskilful treatment. Mr. A. H. Leech, in his evidence, stated that the patient was restless, and that he had difficulty in retaining the splint in position; and counsel for the defendant said that the unfortunate result was solely due to this restlessness. This action was brought against Mr. Leech, sen., as the employer of his son, and damages were laid at £500. The jury found a verdict for the plaintiff, damages £250.

A MEMBER.—The incoming partner is not entitled, in the absence of express agreement, to share in the earnings made prior to his entering the firm, although received after his admission.

SUCCESSOR.—Unless there was some provision in the contract, A. does not appear to have any remedy. B. has an undoubted right to collect his debts in any way he thinks fit. A. should have made arrangements to collect the debts himself, or made it a condition that he should have a voice in the mode of collection.

JUNIOR PARTNER.—A copy of any document is not a duplicate, and therefore is not signed or stamped. Articles are sometimes made in duplicate or triplicate, as there may be two or three partners, and then each part is signed and stamped. In case only one part is signed and stamped, the partner holding it would be bound to produce it in the event of litigation arising.

DR. OR M.D.

ALIQUIS.—The prefix of "Dr." and the suffix of "M.D.," are alike legitimate; the former being the traditional custom, the latter a modern adoption. The question of selection, however, in view of the changed academic relations of the members of the medical profession of the present day, is somewhat difficult to decide, and in most cases will probably best be determined by the nature of the locality, and the especial line of practice selected by the graduate. It is sometimes said that a consulting physician uses the suffix of M.D., which may serve to indicate that the customary fee of a physician will be expected, and so deter would-be patients unprepared therewith; while a "general practitioner," uses the universally recognised prefix of Dr.

AN AMBITIOUS PRACTITIONER.

A. E. L. writes: My partner and myself are attending a case which has been under treatment for nearly a fortnight with no marked improvement; a communication is made to the friend of the patient by another practitioner in the town, that he knows "what is the matter with the patient, and that he can cure the patient in a week, and that the patient must be satisfied," etc. This communication is carried to the patient by the friend. I must add this same practitioner has not seen the patient either professionally or otherwise during the course of the illness. I shall be greatly obliged with an opinion as to the behaviour of above practitioner.

*** A medical man guilty of disingenuous hints relative to the nature and treatment of the disease of another practitioner's patient, as alleged in the above statement, thereby seeking to directly or indirectly to diminish the confidence reposed in the family attendant, not only contravenes the honourable principles of the profession, but fails to obey the moral law of doing unto others as he himself would wish to be done by.

THE DUTY OF THE MEDICAL ATTENDANT AS TO DEATH-CERTIFICATES IN SUSPICIOUS CASE.

DR. SOLOMON C. SMITH (Halifax) writes: I wish to ask a question arising out of your leader on Infant Life Assurance, July 13th, in which the following paragraph occurs: "It is believed that medical men sometimes give, unduly and without thought, certificates of death where their knowledge as to the primary cause of death is necessarily imperfect, and we think that it would be a great check upon neglect if medical men more often declined to give certificates until the matter had been reported to the coroner, who would then make inquiries, and in his discretion hold an inquest." Now, I should like to know what right a medical man has, under any circumstances, to refuse a certificate. The wording of the act is perfectly distinct: "In case of the death of any person who has been attended during his last illness by a registered medical practioner, that practitioner shall sign.....A certificate stating to the best of his knowledge and belief the cause of death." The question of exemption is nowhere entered into, and even when, among the "suggestions to medical practitioners," it is directed that "in every case of death from violence, or suspected violence, the medical practitioner should advise the friends of the deceased to bring the case to the knowledge of the coroner," the obligation to give a certificate is in no way removed. My advice has been asked many times by medical friends as to what they should do under these circumstances, and I have recommended that the certificate be so worded as to draw the attention of the registrar to the necessity of informing the coroner, but if I were to fill up a certificate stating that the secondary cause of a child's death was diarrhœa, and giving no primary cause, I doubt much whether any registrar would refuse to accept it. What then am I to do when my "knowledge of the primary cause of death is necessarily imperfect?" It is clear from the wording of the Act that I cannot safely follow the advice given in your leader; a certificate of some sort I am bound to give.

ARTICULATION AFTER CUT THROAT.

DR. GEO. GRAY (Castlewellan, Co. Down) writes: A case occurred in my practice on April 16th last, bearing on this subject. I was sent for to see a man who in the "Horrors" after a drinking bout had cut his throat, I found the trachea divided to rather more than half its circumference between the first and second ring, and the large veins on both sides of the neck bleeding freely. The cut was a clean one, caused by a razor, and did not gape much. At every expiration bloody froth issued from it with a hissing sound. During the few minutes that the man lived after my arrival, while I was trying by pressure to arrest the venous hæmorrhage, I clearly heard him say three times "I am choking." So distinctly was this said, that several bystanders heard it and repeated it to others farther away. I think whether articulation is lost or not depends in these cases on the extent of the wound, and whether it can be closed by bending of the head forwards or otherwise, sufficiently to allow enough air for articulation to be forced through the rima glottidis, in the same way as a patient wearing a tracheotomy tube puts his finger on it when he wishes to speak, and, although not to the same extent, I see no reason why one should lose the power to speak and the other not.

HOSPITAL AND DISPENSARY MANAGEMENT.

THE ALLEGED ABUSE OF OUT-PATIENT DEPARTMENTS.

SIR,—I am glad that my letter has called forth so copious a response; it shows that professional interest is active on this question, in some quarters at least. I could have wished, however, that the comments had been a little more to the point, and couched in more moderate language. Most of the correspondents have altogether missed my points; I will repeat them.

1. I did not express any opinion one way or the other on the subject of the alleged "abuse of hospitals." I quoted only the strongly-worded statement of the most authoritative representative of the hospital physicians of England, Sir Andrew Clark, the President of the Royal College of Physicians, made in the most public manner at a great meeting under the presidency of the Lord Mayor at the Mansion House, to the effect that there was no such abuse worthy of public attention, and that those who thought, spoke, and acted on an opposite assumption were crotchetmongers. It should be noticed that neither Sir Andrew Clark nor any metropolitan hospital physician has come forward in your columns since the matter has been discussed to repudiate that opinion, or to modify or explain it.

2. I desired to point out—and still do so—that until that matter can be settled by mutual agreement between the denunciators of alleged "hospital abuse," who are for the most part general practitioners—though by no means wholly of that class—and the President of the College of Physicians and those hospital physicians whom he represents, any other proceeding to limit or abolish such abuse is evidently predestined to meet most serious difficulties.

3. There are three parties who must be brought to act together before any practical settlement can be considered near at hand: (1) the subscribers, governors, and managers of hospitals; (2) the hospital physicians and surgeons; (3) the general practitioners who are complainants in the case.

The administrative power rests largely with the first class; they would have to be persuaded in any case, and that is a large business which has not hitherto been found a very easy one to manage, even in detail. But if the hospital physicians and surgeons were agreed (1) that there is an abuse of hospitals large enough to call for their interference, (2) that they are called upon to interfere, (3) in what way they should act, there might be some reasonable expectation of their influencing satisfactorily a considerable portion of the governors and administrators of hospitals. But at present very few of them have made any sign, and so far as the President of the College of Physicians is their spokesman and their representative, they deny the data on which Dr. Rentoul proceeds, and do not accept his conclusions. On the contrary, they must so far be assumed to be actively hostile to them. The first step in the matter from this point of view is to ascertain, say, from the members of the metropolitan hospital medical staffs (1) whether they agree that there is a serious hospital abuse, or whether they adhere to the published statements of the President of the College of Physicians; (2) whether they approve of a combined effort of the profession to abate or put an end to such

abuse; (3) what plan—whether that of Dr. Rentoul or any other—they approve of.

Until and unless Dr. Rentoul, or any other projectors of hospital reform, can secure the assent of at least one series of the two classes of hospital executive—the medical staff or the managers and subscribers—the discussion of such plans is academic but not practical. Seeing that the managers and subscribers are mainly laymen and largely working men, it is not likely that they will feel strongly moved by the complaint that hospitals are "stealing the patients" of medical men who would wish to be paid for attending them in illness; or that any particular class of medical men have a vested interest in the illnesses of a certain class of the community to deprive them of which by a liberal administration of hospital relief amounts to "a swindle."

If help and co-operation are to come they must probably come from the unanimous, or practically unanimous, assent and support of the medical officers of the hospitals and dispensaries in the first instance. Resolutions, whether passed at district or branch or general meetings, are likely to be mere *brutum fulmen*, mere empty protests and beating of the air, until the first practical step is taken of ascertaining (by circular, perhaps, in the first instance) what is the state of opinion among hospital medical men and whether they will give their assistance, in what way, and to what extent.—I am, etc.,

CRITIC.

SIR,—The correspondence on this subject, now being carried on in the JOURNAL, holds out reasonable hope that we may be on the eve of a great and much-needed reform. As a whole, the profession is gradually becoming pauperised by "charitable medical aid," and by the introduction of the co-operative system into the practice of medicine. Month by month, and year by year, the number of those joining our ranks is increasing to an alarming extent, and more mouths have to be filled, and what is the result? Fees rule lower as competition increases; more "shop" is introduced into the profession; we are losing prestige in the eyes of a discerning public, as it notes our *modus operandi* and the weapons we make use of in our fight for a "bread-and-cheese" existence. Add to this our unique position as the only profession (virtually) unprotected from the aggression of quacks and other unqualified pirates; and the lookout is, indeed, a gloomy one.

The matter of hospital abuse needs handling in a bold and practical manner, and will only find solution in the suppression of individual interests, and a combination on the part of the whole medical profession.

Three questions arise: 1. Wherein does the evil consist? 2. How has it come about? 3. How can it be remedied?

The first is easily answered. It consists in the indiscriminate use of our hospitals, founded by benevolent persons for the relief of the suffering poor and maintained out of the pockets of the charitable public, by people who are well able to pay for medical advice.

The answer to the second question lies with the profession itself. When we find medical gentlemen enrolling under them anyone who wishes to "go on their club" (no matter what his financial position may be) at 1d. per week—that is, 4s. 4d. per annum, including medicine; or where friendly societies, numbering 10,000 members, can engage well-qualified senior and junior drudges for £200 and £150 a year (with house, coal, and gas) respectively, to attend to the whole lot of them, small wonder if the work of these "officers" is at times of a perfunctory nature, and their members are desirous of seeking further advice. This (while well able to pay a physician's or a surgeon's fee) they elect to do by procuring an out-patient order for one or other of our hospitals, generally through a friend, and presenting themselves in due course among the paupers waiting for charitable medical relief. Of what use is it for us sitting physicians or surgeons to remonstrate with them? They are too much piqued and annoyed by our remonstrance to favour us with a private consultation; while, if we are bold enough to report such cases to our "governing board," we are blandly told that we must attend to everyone who presents an out-patient order, lest by refusing to do so we offend the subscriber giving the ticket, and so lose his subscription!

The third question, and the most crucial of all: "How can the evil be remedied?" takes more answering. Reform can only be brought about by combination among professional men, supported by the powerful influence of our governing boards—a scheme of "unionism" which, alas! will never see fruition. The penny-a-week practitioner will never combine action with the hospital official; while the governing boards, usually with a debit balance to face, are too anxious for "money, money, at any cost," to dare to dictate to their individual subscribers upon the subject of the indiscriminate distribution of their out-patient orders.

We must combat the evil thus: (1.) Orders must be dispensed with, and charitably disposed persons given to understand that, when they give their contributions to our hospitals, they must not expect a *quid pro quo* for themselves or their friends out of these institutions. (2.) We must have a wage limit. And (3.) An infirmary clerk or inspector, whose duty it must be to attend on every in-taking day, and receive the declaration of each applicant for relief that his or her total earnings come within the prescribed limit. And (4.) The said clerk or inspector alone must pass on the applicants to the care of the sitting medical officer; and, in any case where he suspects misrepresentation, he must make due inquiry into the applicant's circumstances and surroundings. The salary of this official would be more than saved by the check thus kept upon the abuse of the funds of the institution; the presiding medical officer would find his out-patient work kept down within reasonable limits; and more "wasted fees" would find their way into the pockets of those who expend so much time and energy in administering their gratuitous aid to suffering humanity.

So much for hospital reform; now for the profession at large. "Bogus" private clubs must be suppressed as examples of spurious philanthropy; while the penny-a-week business must be alone carried on by provident institutions, manned by properly qualified and properly paid officers, and subjected to periodical Government inspection.

I give these suggestions to my brother practitioners for what they may be worth.—I am, etc.,

A PROVINCIAL HOSPITAL PHYSICIAN.

SIR,—I have read with great interest the correspondence now appearing in your columns on the subject of hospital abuses. I think the profession at large owe a debt of gratitude to Drs. Rentoul and Woods for the able manner in which they have drawn attention to the matter, and initiated a discussion which, it is to be hoped, may lead to some permanent reform. As those on the other side seem indisposed to enter the arena of argument, I think we should feel obliged to your anonymous correspondent "Critic" for revealing to view the flimsiness of the grounds on which the present system is upheld. It seems to me that Sir Andrew Clark's argument may be paraphrased thus: "Under the present arrangement of the out-patient department, I and other great consultants have been able to acquire enormous experience of disease. We have thus reaped honour, riches, and renown. As long as we continue to do so, it matters not whether we are taking the bread from the mouths of hundreds of struggling members of our profession, whose patients we treat under the guise of charity, but in reality to add to our own enormous experience."

Sir, I submit that this is not by any means a strained interpretation of the argument of Sir Andrew Clark as quoted by "Critic." The incomes of the humbler ranks of the profession are reduced by the competition of the hospital staffs, who take their patients in what I consider is a most selfish manner. Many of those patients, while able to afford a small fee, are unable to pay the fees charged by the consultants, who thus are no losers by the transaction, the loss of which falls entirely on those practising among the middle classes. Some of those latter quite equal in ability many in consulting practice, but are excluded from the higher rewards of professional skill by the system of nepotism and exclusiveness which prevails in the making of hospital and other appointments.

The disregard of the leaders of the profession for the welfare of the general practitioners is further exemplified by the manner in which the licensing bodies, which are entirely under their control, are yearly flooding the ranks of a calling which is already overstocked to a deplorable degree. From the inefficiency of their examinations, due to the downward competition of the different corporations, they are every year qualifying hundreds of men, numbers of whom it is a crime to let loose on the public, and who then compete with others who already find it sufficiently difficult to make a suitable income. The examiners, whose reputations and practice are already made, care nothing, as they have nothing to fear from the rivalry of those young practi-

tioners, while the more they pass the more is added to the coffers of the corporation from which they draw their fees. If the number on the *Medical Register* continues to increase at the rate it has done for the past few years, the profession will soon be reduced to the status of costermongers or labourers.

I think, Sir, the time has come when the general practitioners of these kingdoms should form an association for their own protection, and should adopt three all-important points as their programme:—1. The reform of the hospital system. 2. The raising of the standard of examinations, so that the numbers of those yearly entering the profession should not exceed the numbers of those removed by death or retirement. 3. Stringent enactments against unqualified practice. If the above programme be not carried out, I shudder to think to what depths of degradation our noble profession will sink in another twenty years. The responsibility for the discredit brought on it by sixpenny dispensaries, advertising, etc., is, I consider, really on the shoulders of those who first recklessly flood the *Register*, and then, in the name of charity, take their patients from those whom they have already injured. Hoping, Sir, that this matter will be vigorously fought out to the end, I am, etc.,

JOHN P. HENRY, M.D., B.Ch.Dub., L.M.K.Q.C.P.I.

St. Mary Cray, Kent.

SIR,—I hope the letter of "Anti-Critic" will be noted by general practitioners, and that they will not hesitate to call the attention of the College of Physicians to instances of breach of the by-law mentioned. These are, undoubtedly, of frequent occurrence in connection with the hospitals. I would, however, further suggest that general practitioners should not unnecessarily call into consultation those medical men who, in their connection with the hospitals, take part in what we consider to be grossly unprofessional conduct.

We have pointed out gross abuses of the hospitals. We have challenged those who regulate the hospitals to refute our charges. Their silence admits their guilt. Unfortunately, they know that the public never read the medical papers, and they still contrive to delude the public. We must take trouble to instruct the public, or we shall be defeated by the crafty policy of passive non-resistance.

Your correspondent "G. P." alludes to the unjust monopoly of hospital appointments which is met with even in hospitals where the last vestige of an excuse for it has vanished. The way in which hospital doctors are elected is a disgrace to the profession. This has been pointed out time after time. The whole mass of the profession is usually ineligible from the first, and, even among the favoured few, the selection is not made on the ground of merit, but far oftener by the influence of interest or money. I do not for a moment say that there are not very able men on the hospital staffs, but I do say that their ability had very little to do with their election.

If these assertions are founded on error, let the supporters of the present system come forward and prove their inaccuracy. It is a very bad cause for which something cannot be said. Let our adversaries meet us openly in fair argument, and not content themselves with saying hard words of us behind our backs.—I am. etc.,

Highgate, N. HUGH WOODS.

THE QUEEN'S JUBILEE HOSPITAL.

SIR,—Referring to a letter which appears in the JOURNAL of July 20th, containing a statement by a Mr. C. S. Loch, who styles himself Secretary of the Society for Organising Charitable Relief and Repressing Mendicity, I am requested to ask you to publish the following replies:—

Mr. C. S. Loch says that on the Saturday preceding Hospital Sunday a collection was made on behalf of this hospital by persons carrying boxes in the streets. To this I reply, the Queen's Jubilee Hospital made no collection whatever on the Saturday preceding Hospital Sunday, and no collection boxes were used on its behalf on that day.

Mr. C. S. Loch says that boys collecting for this hospital on the Saturday preceding Hospital Sunday wore badges inscribed "Hospital Sunday Fund." I reply that never has anyone carrying a collection box in aid of this hospital worn a badge of any description.

Mr. C. S. Loch suggests that by the alleged device the public had been induced to mistake this collection for the one instituted by the Hospital Sunday Fund. To this I reply, that, apart from the fact of there having been no collection on our part on that day, never has there been on our collection boxes any writing calculated to mislead the public, nor have we pretended in any of our collections that they have been in connection with the Hospital Sunday or any other fund.

As regards Mr. C. S. Loch's statements concerning the increase and status of special hospitals, they are obviously quite inapplicable to this institution, inasmuch as this is not a special but a general hospital.

I enclose our last annual report, by which you will see that we are treating over 400 cases weekly, and yet do not participate in either the Hospital Saturday or Sunday Funds.—I am, etc.

GEO. A. BEVAN, Secretary,
Queen's Jubilee Hospital.

*** We are glad to publish Mr. Bevan's contradiction of the definite allegations made by the Secretary of the Charity Organisation Society. It is a question of fact, and the *onus probandi* rests on the Society. With reference to Mr. Bevan's claim that the Queen's Jubilee Hospital should be regarded as a general, and not as a special, hospital, we notice that it is described in the annual report as existing "for the treatment, chiefly, of diseases of the Throat, Nose, Ear, Eye, Skin, Rectum (including Fistula), and the various Deformities of the Human Frame."

THE PROPOSED PUBLIC MEDICAL SERVICE.

SIR,—I think all who have studied closely the present unsatisfactory conditions of trying to supply the wage-earning classes with medical aid will have come to the conclusion that those practitioners who practise in the country districts are suffering as much from the underselling by sick clubs and tontines as are those practitioners who have, in our towns and cities, to struggle against the unwholesome competition of our medical charities.

I shall refer to two cases. In Liverpool we have the "Clerks' Association." It has 3,229 members and 33 doctors. Among other benefits it provides its members with medical treatment and medicines. Last year it paid £600 to its 33 doctors. The point I wish to bring out is that some of these clerks are making up to £800 per annum, and still pay only about 3s. 6d. per annum per member. It may be said that the doctors of this club can make a good bid for the wife and family of the sick clerk, and so extend their practice. But is this a fair way of competing? I have the pleasure of knowing some of the doctors to this club, and I think I can fairly say that they are not so near the verge of privation and want as to be compelled to treat men with an income of from £200 to £500 per annum for next to nothing. In a club of this kind there should be a "sliding scale" of payments; and I feel certain, if these 33 doctors were to send in a request for an increased rate of pay, not only would they get it, but other doctors would refuse to take their place if they resigned. However, the above condition of affairs is far from creditable, and it would be much better to treat the clerks as pure charity cases, instead of letting them go mouthing through the town with such debasing and degrading statements as: "Oh, Dr. So-and-so treats me for 3s. 6d. per annum; why do you bother paying another doctor the usual fees?" This is indeed humiliating.

The other case I wish to refer to is that of the General Hospital, Birmingham. There they have the following rules: Every subscriber of 10s. 6d. shall be entitled to recommend three out-patients! Additional out-patient tickets can be bought for 3s. 6d. each! Each ticket provides for six weeks' treatment! Did anyone ever read of such prostitution of charity? Is it not a disgrace to those doctors who encourage it? Can the great body of the profession not deliver itself of so odious a state of affairs? This "charity"—spare the name!—sells about £5,000 worth of tickets to well-to-do people each year—for the genuine sick poor are unable to pay—and pays four doctors a total of £400 for looking after these "charity cases." Is it little wonder, then, that we have all our towns covered over with cheap dispensaries, with notices stating: "We treat patients at the usual fees charged at the hospitals?" Yet our seniors—our Fellows of the Colleges of Physicians and Surgeons—hold up their hands, and with mock piety tell the younger doctors that these cheap dispensaries are

bringing disgrace on the profession. Yet these dispensaries are not as cheap as some of our hospitals. A truce, then, to cant and rant, and let each man stick to the truth; for if we cannot practise honesty for the love of it, let us carry it out as "the best policy."

I wish to further prove the necessity of having a Public Medical Service. According to the last census the population of the United Kingdom was about 36,000,000. It is calculated that out of these human beings, 1 in every 5 is a breadwinner—that is to say, there are more than 7,000,000 heads of families; out of this 36,000,000 fully 30,000,000 are depending on incomes of less than £3 a week, or £150 per annum, so the income tax returns show. Are these people able to pay the usual medical fees of 3s. 6d. to 5s. and for medicines also?

Again, Sir James Paget, with the aid of Mr. Sutton, actuary to the Registry of Friendly Societies, has shown that the 7,375,874 males between the ages of 15 and 65 suffered 9,692,505 weeks' sickness, or on an average of 1.314 weeks each; while 7,941,330 women between the same ages suffered 10,592,761 weeks' illness, or 1.334 weeks each.

The last census returns showed that there were 5,772,092 males between the ages of 15 and 65 tabulated under the headings of "Domestic," "Agricultural," and "Industrial," and 2,877,176 females under the same headings. Can these 8,649,259 men and women of the industrial classes pay the usual medical fees, more especially when reduced by sickness? And it is to be carefully remembered that I am speaking of those between the ages of 15 and 65; for if one included those below 15 and above 65 the sick rate would be enormous, and therefore calling for more urgent action.

It is proposed that the resolutions printed on page 219 of the JOURNAL be discussed at the annual meeting of our Association at Leeds, and, if thought worthy, to be passed.

I ask that those who approve of these, or any of the resolutions, will send me a postcard, with name and address, stating that they support them. I shall then, if in order, forward such list to the JOURNAL for publication.—I am, etc.,

Liverpool. ROBERT R. RENTOUL.

ALL SAINTS' CONVALESCENT HOSPITAL, EASTBOURNE.

THE Duchess of Albany laid, on July 19th, at Eastbourne, the foundation stone of a new children's hospital, which is to be added to the All Saints' Convalescent Home. The building will be erected at a cost of £2,000 and afford accommodation for 130 patients.

MEDICO-PARLIAMENTARY.

HOUSE OF COMMONS.—Thursday, July 18th.

Rabies and Hydrophobia.—Mr. MATTHEWS, in reply to Dr. FARQUHARSON said that the bite or scratch of a rabid cat could convey hydrophobia, but happily cases of rabies in cats were comparatively rare, it was not practicable to muzzle cats; and, in answer to Lord H. BRUCE, said he had no information as to the alleged defect in the wire muzzles in use. It would be beyond the province of Government to appoint a committee of sportsmen to investigate the subject. There was nothing to prevent a private inquiry being made.

Friday, July 19th.

The Burgh Police and Health (Scotland) Bill.—Mr. W. H. SMITH, questioned by Mr. ESSLEMONT, said he could not enter into any engagement to again introduce the above Bill next session.

Roburite.—Mr. MATTHEWS, in reply to Mr. J. S. BALFOUR, said there was a growing use of roburite in the Lancashire collieries, which was a useful explosive, and practically safe for use in fiery mines. He gathered from newspaper reports that its use had been condemned by miners as injurious to health. The result of an inquiry by a committee of experts was that with proper care the use of roburite would not add to the harmful conditions under which the miner worked. Means were being devised for removing the fumes by ventilation before persons re-entered, and for keeping persons out of the returning air. Under these circumstances he did not consider any further inquiry at present desirable.

Amending Bills.—Mr. RITCHIE introduced a Bill, which was read a first time, to amend the law respecting children in workhouses, and respecting the borrowing of money by guardians and managers of district schools, and respecting the managers of the Metropolitan Asylums District.

Monday, July 22nd.

Muzzling of Dogs.—Mr. MATTHEWS, in reply to Mr. LAWSON, said that under section 41 of the Animals Diseases Act, 1878, and section 40 of the Local Government Act, 1888, the London County Council were the local authority in the metropolis by whom and at whose expense the muzzling order issued by the Privy Council had to be executed and enforced.—Mr. W. H. SMITH, replying to Mr. MORRIS, said the order of the Privy Council applied to the City of London and to the district of the Metropolitan Police. The police had power under the order to seize and detain stray dogs, but the power to destroy (which was under the Metropolitan Streets Act, 1867, and not under the Order in Council) extended only to the county of London. It was not contemplated at present to issue a general order for the whole country.

The Local Government (Scotland) Bill.—On Clause 17, which deals with the transfer of the powers of parochial boards under the Public Health Act, and gives a right of appeal from a district committee to the County Councils in certain cases, the LORD ADVOCATE moved to insert the following amendment: "But the power of appeal hereby given shall not apply to any order for the removal of a nuisance; and nothing in this Act contained shall affect or prejudice any proceedings to enforce the provisions of the Public Health Acts, save only that when necessary such proceedings shall be taken by or against the district committee instead of against the parochial board as local authority under the said Acts." He said it was meant to apply to a case where great promptitude was required, and to obviate the delay which an appeal would involve.—Dr. CLARK moved to insert after the word "nuisance," "dangerous to public health."—The LORD ADVOCATE deprecated anything which would tend to detract from the stringency of the law of public health which the suggested amendment would do.—The LORD ADVOCATE'S amendment was agreed to, the other being withdrawn.—Mr. CALDWELL moved to insert the following amendment: "The medical officer or the sanitary inspector of the county or district may appeal to the County Council from any order made or refusal to make any order by a district committee, and the County Council may review, confirm, vary, alter, or rescind such determination or order, or may make an order under the Public Health Acts." This was agreed to.—Mr. CALDWELL moved an amendment in Clause 17, to provide that the medical officer or sanitary inspector should hold office at the pleasure of the County Council.—The LORD ADVOCATE said he could not accept the amendment, which raised a point of serious importance. They were dealing with the existing machinery of the public health system, and he held that it was of vital importance that there should be that amount of independence in the medical officers and sanitary inspectors as would give them the consciousness that, unpopular and invidious as their duties must often be, they would not be subject to dismissal merely on the ground of the unpopularity of their proceedings. He therefore strongly deprecated their risking the system of enforcement of their sanitary laws, which they all agreed were too laxly administered in Scotland, by weakening the sense of independence in those officers.—Dr. FARQUHARSON concurred, and said it was of paramount importance that those medical officers should be so entirely independent of local feeling and local prejudice as to be able to do their duty without any fear of possible danger to themselves from faithfully performing it.—The amendment was negatived.

Tuesday, July 23rd.

Bad Meat under an Army Contract.—Mr. E. STANHOPE, in reply to Mr. HANBURY, said that Captain Stackpole, an officer of the Army Service Corps, whose duties included the inspection of meat supplied to troops, for which he had been specially instructed, had inspected the meat supplied to the troops of the 3rd Battalion York and Lancaster Regiment on July 16th, and rejected it; but his power did not extend to its destruction. The contractor, Mr. Summers Gill, of Carleton, Pontefract, as to whom action would be taken when a report was received from the general officer commanding, had held nine contracts for the supply of meat.

Wednesday, July 24th.

Poor-Law Bill.—This Bill was read a second time.

Local Government (Scotland) Bill.—The consideration of this Bill, as amended, was resumed, and the Bill was read a third time.

Scotch Universities Bill.—A prolonged discussion again ensued with regard to the constitution of the University Commission. After Sir W. Thomson had been added to the Commission, Mr. HUNTER moved that the further proceedings be postponed in order to renew his protest against the composition of the Commission. In the end he withdrew his motion, after which the remaining names, moved by the LORD ADVOCATE, were added to the Commission, namely: Mr. S. H. Butcher, Mr. P. H. Watson, and Mr. F. Fuller.—Dr. FARQUHARSON then proposed to add the name of Professor Bain, but this was rejected by 179 to 143; and a proposal by Dr. Farquharson to add the name of Dr. Bruce, which was opposed by Mr. CAMPBELL-BANNERMAN and Dr. CLARK, was negatived without a division.—Some other amendments were discussed, and Clause 14 was under consideration when the further proceedings were postponed until the following day.

UNIVERSITY INTELLIGENCE.

OXFORD.

THE following are the pass-lists for the recent M.B. examinations:

Final M.B., B.Ch.—C. Bowes, New College; W. H. Davis, University College; A. Evans, Exeter College; E. A. Edelstein, New College; R. A. Farrar, Keble College; J. Gordon, New College; J. G. Ogle, Keble College; G. H. Pennell, Lincoln College; B. M. Rogers, Exeter College; G. J. Schorstein, Christ Church; A. B. Stevens, Brasenose College.

Materia Medica, Final M.B.—A. F. Bill, Brasenose College; A. Butler-Harris, Trinity College; J. G. Fairbairn, Magdalen; G. W. Farmer, Balliol College; H. R. Hickman, Christ Church; J. L. Jenner, Trinity College; G. Jones, Oriel College; M. Monier-Williams, Christ Church; H. A. Munro, New College; W. Overend, Keble College; L. E. Parkhurst, Jesus College; L. S. Partridge, Magdalen College; R. Porter, Pembroke College; E. A. Saunders, St. John's College; W. J. Turrell, Turrell's Hall; H. R. Welsh, Trinity College; W. H. Wilson, Keble College; E. T. Withington, Balliol College.

Anatomy and Physiology, 2nd M.B.—B. G. Baskett, Queen's College; J. F. Broadbent, Magdalen College; H. R. Brown, Keble College; A. Campbell, Hertford College; R. K. Ellis, Magdalen College; G. P. Glyn, New College; L. E. Parkhurst, Jesus College; H. Romer, Christ Church; D. Shearer, New College; E. H. Cartwright, Exeter College; W. Overend, Keble College; G. E. Pritchard, Hertford College; W. H. Wilson, Keble College.

Organic Chemistry, 2nd M.B.—B. Baskett, Queen's College; A. F. Bill, Brasenose College; J. F. Broadbent, Magdalen College; A. Butler-Harris, Trinity College; N. Elrington, Wadham College; J. Fairbairn Mag-

dalen College; H. Hickman, Christ Church; J. L. Jenner, Trinity College; L. Partridge, Magdalen College; R. Porter, Pembroke College; W. Ramsden, Keble College; E. A. Saunders, St. John's College; F. Walton, Keble College; F. Woolacot, Queen's College.

CAMBRIDGE.

CAVENDISH COLLEGE.—The success of the students of this College in the recent examinations for medical and surgical degrees having been very marked, Mr. Griffiths has been reappointed Medical Tutor, so that the students will again have the advantage of his close personal supervision.

ROYAL UNIVERSITY OF IRELAND.

FIRST EXAMINATION IN MEDICINE.—The examiners have recommended that the following should be adjudged to have passed this examination.

Upper Pass Division.—T. J. Connolly, Queen's College, Galway; M. L. Dobbie, University College, London; W. D. Donnan, Queen's College, Belfast; H. Fisher, Queen's College, Belfast; A. Jamison, M.A., Queen's College, Belfast; J. B. Johnson, Queen's College, Belfast; A. P. McMurtry, Queen's College, Belfast; R. A. Parkhill, Queen's College, Belfast; W. A. Rountree, Queen's College, Cork; J. C. Rowan, Queen's College, Belfast; W. J. Woods, Queen's College, Belfast.

All the above candidates may proceed to the further examinations for honours:

Passed.—J. J. Ahern, Queen's College, Cork; M. H. Aicken, Queen's College, Belfast; M. L. N. Atkins, Queen's College, Cork; Eliza G. Bell, Royal College of Science, Dublin; C. Blue, Queen's College, Belfast; J. A. Clements, Queen's College, Galway; J. Colville, B.A., Queen's College, Belfast; J. S. Dick, Queen's College, Belfast; V. G. L. Fielden, Queen's College, Belfast; T. W. Fitzpatrick, Catholic University School of Medicine; I. J. Flynn, University College, Dublin; A. Fulton, B.A., Queen's College, Belfast; T. T. McKendry, B.A., Queen's College, Cork; J. McMullen, Queen's College, Belfast; J. Mathewson, Queen's College, Belfast; W. B. Norcott, Queen's College, Cork; A. A. Peel, Queen's College, Belfast; H. Reid, Queen's College, Belfast; J. Reid, Queen's College, Cork; L. F. Rowan, Catholic University School of Medicine and Royal College of Science; W. Scott, Queen's College, Cork; J. Shine, University College, Dublin; A. A. Stewart, Queen's College, Belfast.

Diploma in sanitary science:

J. G. Deacon, M.D.; R. L. Heard, M.B.

OBITUARY.

CHARLES METZGAR, F.R.C.S.

THE news of the unexpected death of Mr. Charles Metzgar at the early age of 25 years will come as a painful shock to his very large circle of friends.

Mr. Metzgar was born at Kingston, Jamaica, in 1863. He received his early education at Dulwich College; he came up to Guy's Hospital in 1881, and during his career there he took especial interest in surgery. Having taken the F.R.C.S. in 1888 he held the post of house-surgeon, and left his old school early in this year to accompany a shooting party in South Africa. Fond of sport from boyish days, comfortably off, and able to take life easily, he had previously joined shooting parties in Austria, and now looked forward with keen zest to his African trip. It is a grievous fact to his many friends that this proved an entire failure. He returned to England much disappointed and cast down on June 23rd, and it is believed that the illness which brought his promising career to so untimely an end was contracted on the homeward voyage. He had been feeling ill and depressed for some days before landing. On July 4th, feeling much worse, he took to his bed, and was seen by Dr. Taylor and Dr. Washbourn, who continued to attend him throughout the illness, which proved to be typhoid fever. Weakness of the pulse was noticed throughout, and the disease proved fatal on July 10th.

His kindly and genial temper, his character eminently manly and straightforward, greatly endeared him to all with whom he was brought into contact, and his sudden death is very keenly felt by his many friends at Guy's and elsewhere.

The funeral took place on July 13th at Christ Church, Forest Hill, those around the grave including some of the staff and many of the students of his hospital.

THE SMOKE NUISANCE.—There were last year only 49 convictions under the Smoke Nuisance Acts. The Commission explains that the fines usually inflicted (which average £3 18s. 7d.) are too small to operate as a deterrent to the use of improper ovens, or even to induce the parties to burn non-bituminous coal.

INDIA AND THE COLONIES.

INDIA.

DEFECTIVE ORGANISATION OF SEPOY HOSPITALS.

SURGEON G. M. J. GILES, M.B., I.M.S. (Koohungabad) writes: In the JOURNAL of June 8th, 1889, is a short note on the defective organisation of Sepoy hospitals, which contains certain quite undeserved strictures on the action of the Indian Government. In point of fact, infantry hospitals have a cook paid by Government, and it is only in cavalry hospitals that one is not provided. Even, however, where a cook is found, he is of little good. The caste question is by no means so simple as you appear to think, for it is quite a mistake to imagine that any man will eat food prepared by a man of a higher caste. There are many low castes which will not accept food even from a Brahmin.

Again, many of our Sepoys will eat meat, and the possibility of prescribing soup is of immense advantage in the treatment of cases occuring among them; but a Brahmin cook would not on any account touch such food, much less cook it. It is, of course, quite impossible for Government to make anything but general rules, but I am sure that if anything were practicable, it would be done by that invaluable agent regimental enterprise. Generally nothing can be done, but where it can be it usually is done; for example, in a certain frontier cavalry regiment to which I once had the honour to belong, the men were, practically speaking, all either Mahomedans or Sikhs, which latter caste is particularly liberal in its ideas, and bears somewhat the same relation to orthodox Hinduism that Unitarianism does to the older Catholic churches. The question being thus usually simple was easily met. Two cooks, one a Mahomedan and the other a Sikh, were appointed and paid from a regimental fund. The two men were carefully instructed under the eye of the surgeon in the mess-kitchen, how to prepare good nourishing soup, and other invalid dishes, and the result was, I am sure, the saving of many lives every year. That something of this kind is not more often done, is simply owing to the fact that in nine regiments out of ten it is utterly impracticable.

CANADA.

AT the annual session of the American Medical Association Sir James Grant, M.D., of Ottawa, Canada, delivered an interesting address, in the course of which he referred to the recent advances in the status and organisation of the medical profession in Canada. He observed that in the Commons of Canada there were at least fifteen to twenty medical men, and in the Senate also quite a number of members of the medical profession. In the local provincial parliaments the medical profession was ably represented. Thus they had been enabled to guide and direct public opinion towards the important question of medical education. Having been upwards of twenty-two years consecutively in the medical council of Ontario he had had opportunities of observing the importance of a high standard of preliminary education and subsequent academic study. The local parliament of Ontario passed a Bill for the formation of a council, giving it the power to appoint examiners in medicine, irrespective of the teaching bodies, and thus guard the portals of entrance into the medical profession. Prior to this time the entrance of homœopathists and eclectics into the profession was very considerable, but now that matters had been placed on a uniform basis of examination, except in special subjects such as homœopathy and eclectic materia medica, they found that this elevated standard had improved very materially the entire status of their profession; in fact, to-day there were very few graduating homœopathists or eclectics compared to the regular profession, greatly brought about by the introduction of the elevated standard of medical education.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

MEDICAL OFFICERS OF HEALTH AS MAGISTRATES.

THE York City Council have objected to the appointment of Mr. S. W. North, medical officer of health, as one of the city magistrates, on the ground that as medical officer of health it would sometimes be his duty to give evidence in cases heard before the city Bench. Mr. North's appointment would have been a popular one.

FEES FOR LUNACY CERTIFICATES.

A MEMBER asks what fee a poor-law medical officer is entitled to for lunacy certificates otherwise than under a magistrate's order, "both for lunatics in a workhouse and outside," there being no contract as to certificates; and, in the event of the guardians refusing a fee, "how can it be recovered?"

*** The case is very imperfectly stated; many different forms of lunacy certificates are occasionally required. Lunatics in a workhouse are of necessity paupers, or must be treated as such; lunatics outside a workhouse are not necessarily paupers. We suppose, however, the question has reference only to the statutory form of medical certificate which enables pauper

lunatics to be sent to an asylum under 16 and 17 Vict. c. 97, Schedule F. There is a provision by Clause 104 in the same Act, which enables guardians or overseers who would be liable under this Act to have an order made upon them for the payment of any money to pay the same without any such order. It is evident, therefore, that the guardians can pay without the magistrate's order, and we know they very frequently do so. By a previous (and curious) clause in the same Act, though the magistrates are compelled to call to their assistance a medical practitioner, they are not compelled to order a fee to be paid him for the assistance rendered, but have the power to do so if they think fit. The medical practitioner thus called in is consequently quite at the mercy of the magistrates to whom he renders professional assistance. Should the magistrates decline to make the order for payment, and should the guardians refuse to pay without the order, we apprehend no fee could be recovered, except under contract with the guardians, or unless the certificate was given in accordance with a resolution of the Board, or by written order of the relieving officer or overseer. The amount of fee is not fixed, but is usually is one guinea.

MEDICAL NEWS.

MEDICAL MAGISTRATE.—Mr. Henry Studd Fletcher, M.R.C.S.E., of Lydbrooke, Gloucestershire, has been appointed a Justice of the Peace for that county.

VACCINATION.—It is stated that in India it is intended gradually to cease using lymph taken from human subjects, and to depend solely upon calf lymph.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen having passed the necessary examinations of the Board received the Diploma in Public Health at a meeting of the Royal College of Physicians on July 25th:

Name.	Qualification.	Medical School.	Address.
Bevan, Richard	L.R.C.P. & M.R.C.S.	Guy's	Cobb's Hall, Lydd.
Bond, Frederick Fielding	M.D.Edin.	Edinburgh	Rastrick, Yorkshire.
Bulstrode, Herbert Timbrell	M.D.Camb., L.R.C.P. & M.R.C.S.	St. Thomas's	134, York Road, Lambeth, S.E.
Copeman, Sydney Arthur Monckton	M.B.Camb., L.R.C.P. & M.R.C.S.	St. Thomas's	134, York Road, Lambeth, S.E.
Hope, George	L.R.C.P. & M.R.C.S.	St. Thomas's	1, Flora Villas, Hanwell, W.
James, Arthur Wm.	L.R.C.P. & M.R.C.S.	St. Barts.	6, Booris Place, Plymouth
Lawless, Edmund James	L.R.C.P.Edin.	London	The Victoria Dock Dispensary, E.
Manley, John Herbert Hawkins	M.B.Camb.	Guy's	West Bromwich.
Muspratt, Charles Drummond	M.B.Lond., F.R.C.S.	Guy's	The Infirmary, East Dulwich Grove. S.E.
Scatliffe, Arthur William	L.R.C.S.Edin.	St. George's & London	Cliftonville, Margate
Southcombe, Arthur George	L.R.C.P. & M.R.C.S.	St. Barts.	29, Cassland Road, South Hackney, E.
Wheaton, Samuel Walton	M.D.Lond., L.R.C.P. & M.R.C.S.	St. Thomas's	52, The Chase, Clapham Common, S.W.
Yarrow, Eugene	L.R.C.P. & M.R.C.S.	St. Barts.	87, Old Street, E.C.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—The following candidates, having conformed to the by-laws and regulations, and passed the required examinations, were at a meeting of the College on July 25th admitted Licentiates:

*Aaron, D. J., King's College
Aylward, W. C., London
Barber, S. F., Sheffield
Barkworth, H. S., St. George's
*Bartlett, W. F. C.
Beauchamp, S., St. Bartholomew's and Cambridge
Bennett, C. H. W., St. Bartholomew's
Bennett, C. E. W., Middlesex
Berryman, H. A., St. Bartholomew's
Bishop, R. W. S., Sheffield and St. Mary's
Bokenham, T. J., St. Bartholomew's
*Bowlby, G. H., Toronto
Bowman, H. M., St. Bartholomew's
*Brenton, W. H., Guy's
Brown, D., London
*Brown, F. N., St. Bartholomew's
Carpenter, E. G., St. Bartholomew's
Challis, H. T., London
*Clarke, J. K., Middlesex
Clarke, J. T., St. Thomas's
Clemson, T. F., Manchester
Colyer, J. F., Charing Cross
*Cooper-Pattin, W. H., Camb. and St. Thomas's
Creswell, J. E., University College
*Crompton, E., St. Bartholomew's
Crook, A., London
*Cross, J. A., Toronto
Crosse, R. E., St. Bartholomew's
Crump, T. G., Cambridge and Birming.
Curwen, E., Cambridge
Dallas, S. A. C., University College
Daniel, H., Middlesex
*Dawson, E., Westminster.
*Dennison, T. S., Leeds
De Jersey, W. B., Camb. and St. Thomas's
Dodwell, P. R., University College
Eaves, W. V., University College
Farrington, J., Manchester
Fazan, C. H., Middlesex
Fitz-Gerald, E. D., St. Bartholomew's
Forward, F. E., St. Thomas's
Foster, A., St. Mary's
Folker, H. H., Charing Cross
Frossard, E. E., King's College
Gravely, R. T., St. Mary's
Griffith, J., St. Mary's
Habbijam, E. T., Charing Cross
Hale, E., Liverpool
Hall, W., St. Bartholomew's
Hamilton, H., University College and Bristol
*Harrison, J. H. H., University College
Haslett, W. J., London
*Heberden, W. S., St. George's
Henniker, J. G., St. George's
Hicks, E. J., London
Hill, L. E., University College
Hinds, T. W., University College
Hitchon, H. H. I., Manchester
*Hodgson, G. G., University College
*Holman, H. J., Guy's
Holmes, J. W., Charing Cross and Sheffield
Horden, H. H., University College
Hore, E. W., University College
Hume, F. N., St. Thomas's
Hutchinson, R. J., London
Jackson, B. F. F., Charing Cross
Jacobsen, G. O., St. Bartholomew's
Jessop, J. W., St. Bartholomew's
Johnson, H. P., St. George's
Johnstone, J. L., Manchester
Jones, A. W., Oxford and St. Thomas's
Jordan, H. M., Guy's
Kent, C. A., University College
*Kent, R. T., Edinburgh and Middlesex
Kerr, G. D., St. Thomas's
Lambert, T. W., St. Thomas's
*Lander, F. J., London
Lange, A. P., King's College
Lea, A. W. W., Manchester
Lemon, E. H., St. Bartholomew's
*Le Riche, P. J., University College
Lloyd, J. W., Liverpool
Lodwidge, W. C., St. Mary's
Long, E. C., Middlesex
Mack, C. G., St. Mary's
*Molyneux, E., Liverpool
Morgan, S. W., Bristol
Munday, R. C., St. Bartholomew's
*Murray, G., St. Mary's
Oakeshott, W. F., St. Bartholomew's
Offord, J. A., London
Oldham, G. F., London
Osburn, H. B., St. Thomas's
Parham, H. C. H., Charing Cross
Paton, E. P., St. Bartholomew's
Pearce, F. W., Guy's
*Phillips, E. J. M., Liverpool and St. Thomas's
*Ramsden, H., Manchester
Robinson, E. H., Manchester
*Russell, W. A., Charing Cross
Saul, V. S., London
Sellers, A. E., Leeds
Sharpin, A. L., St. Bartholomew's
*Sheldon, R. G., Liverpool
Smith, R. A., University College
Spratly, E. R. W., Liverpool
Stocken, L. M., University College
*Stephen, G. C., Montreal
Stocker, W. W., St. Mary's
Swallow, A. J., St. Thomas's and Durham
Swift, S. S., Liverpool
Sykes, J. H., Manchester
Vise, A. B., Westminster
Walker, G., St. Bartholomew's
Wallace, R. T., Guy's
*Ware, E. E., St. Thomas's
*Weld, O., Toronto and Middlesex
Wickham, G. H., St. Thomas's
Wilkinson, J. H., London
Worboys, T. S., St. Bartholomew's
*Yeld, W. H., Manchester

* Candidates who have not presented themselves under the Regulations of the Examining Board.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS, EDINBURGH, AND FACULTY OF PHYSICIANS AND SURGEONS, GLASGOW.—The quarterly examinations in Edinburgh for the Triple Qualification took place in July, with the following results:

First Examination.—Of 65 candidates, the following 45 passed: F. Nuttall, Bury; E. B. M'D. Atkins, Queenstown, Co. Cork; A. S. Duke, Lucan, Co. Dublin; G. T. Kingston, Bandon, Co. Cork; J. H. D. Stephenson, Blackburn, Lancashire; R. J. Blackham, Belfast; W. P. Hilliam, Lincolnshire; J. A. Walsh, Kilkenny; W. R. Beck, Denbigh; W. H. Villange, London; J. A. Milne, Kent; A. J. Richards, Bangor, North Wales; R. Fair, Co. Galway; F. W. Mason, Leicester; D. Donald, Aberdeen; M. F. O'Donnell, New York; Emily Charlotte Thomson, Lahore, India; Jane Marsh, Bath; T. J. Selby, Cumberland; Mary Helen Cumming, Wigtownshire; Elizabeth Christie, Glasgow; Jessie MacLaren Macgregor, Edinburgh; J. F. Robertson, Edinburgh; H. Webster, York; C. G. Rae, Glasgow; M. P. Coghlan, Kilkenny; G. M. Drury, Cork; E. F. E. Baines, Hampshire; A. Dryden, Edinburgh; W. H. Stephenson, Whitby; W. H. Anderson, Burton-on-Trent; J. T. Helm, Cape Colony; T. Bennett, Clonakilty; J. C. Smith, Guytown, New Zealand; J. J. Fanning, Roscrea; M. F. Sinclair, Kinmore; B. F. Powell, Madras; Alice Margaret Moorhead, Maidstone; Alice Marion Umpherston, Lasswade; J. L. M. Govan, Woolwich; M. Lavan, Co. Mayo; G. H. Peake, Madagascar; T. J. Hall, London; Edith Grace Collett, Madras; and Catherine Mabel Blackwood, Edinburgh.

Second Examination.—Of 44 candidates, the following 19 passed: R. W. Crooke, Tasmania; P. C. B. Swanseger, Bombay; D. W. Wright, Mallow; T. P. Wells, Blackburn; J. E. H. Gentil, Mauritius; A. T. Kember, Palamcottah, South India; Margaret Elizabeth Pearse, Madagascar; E. Edwards; Llangefni; P. R. Crofton, Co. Roscommon; J. Cumming, Portsoy; W. H. Richardson, Manchester; Annie Wardlaw Jagannadham, South India; A. Jackson, Cork; R. H. Bland, Penrith; J. Smith, Montrose; A. L. Smith, Hamilton; E. G. M'Sweeney, Cork; G. A. Ings, Canada; and S. H. Heald, Wakefield.

Final Examination.—Of 79 candidates, the following 40 passed, and were admitted L.R.C.P.E., L.R.C.S.E., and L.F.P. and S.G.: W. H. Fawcett, Dublin: J. E. Sang, Edinburgh; A. E. Taylor, Cardiff; J. Duncan, Aberdeenshire; F. G. Heard, Co. Cork; L. V. Parry, Barmouth; A. Dowling, Cork; P. C. Evans, London; J. Cowe, Roxburghshire; R. Marr, Randalstown, Co. Antrim; E. C. Foston, Penang, Straits Settlements; H. Blackburn, Lancashire; G. A. Wollendale, Staffordshire; B. S. Johnson, Tunbridge Wells; D. B. Foley, Killeagh; R. F. Granger, Fylingdales, Whitby; R. V. Sutton, Cork; H. E. Scott, Edinburgh; Grace Clementina Charlotte Mackinnon, Lerwick; G. Hargreaves, Brantford, Canada; C. E. H. West, Liverpool; M. E. H. Wale, Cambridge; W. H. Bulger, Kates Hill, Dudley; T. C. D. J. Cathcart, Kells, Co. Antrim; A. C. Wilson, Liverpool; G. Tocher, Aberdeen; P. C. Smith, Sedgefield, Durham; G. Sidley, Perth; T. M'Elwaine, Ballieborough, Co. Cavan; G. T. Tuke, Edinburgh; P. O'Donoghue, Co. Cork; A. G. Vernor, Musselburgh; E. R. Carroll, Co. Cork; J. Duff, Co. Frontenac, Canada; S. W. Wolfe, Co. Cork; J. T. C. Johnson, Montserrat; W. H. Rankin, Ontario, Canada; G. F. Emery, Marble Rock, Ontario, Canada; J. Brown, White Hill, Co. Donegal; and W. H. Hillyard, Co. Down.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—At the preliminary examination, held on July 17th, the following candidates were granted certificates:

First Class.—M. Betty, C. Browning, C. S. Cahill, D. J. Carroll, A. Chadwick, S. M. Dooley, H. Eardley, J. W. Frazer, G. L. Freeman, P. Good, J. Gorman, C. P. Hannan, L. W. Harvey, A. J. Kearney, P. Lyons, E. P. Magee, J. S. Maher, H. F. Martyn, H. H. Moffat, D. Morrissy, J. Murphy, J. J. A. Sherry, S. Watson, M. E. White, and W. A. Woodride.

Second Class.—J. Black, A. W. N. Bowen, M. Breen, J. Campbell, P. P. Casey, T. V. Conway, W. S. Crosthwaite, T. E. Dobbs, S. C. Elgee, B. F. Eustace, F. M. Farmer, R. T. Fox, J. Graham, F. Hamilton, R. Hassard, R. J. Harvey, H. S. Henderson, R. Jennings, C. Kapp, J. C. Lloyd, P. J. MacHale, D. Molyneaux, J. J. Morrissey, A. Odbert, L. O'Donnell, A. N. O'Neale, F. T. W. T. O'Rorke. M. P. O'Shaughnessy, C. N. O'Sullivan, F. O'Sullivan, G. E. Palmer, T. Phelan, W. H. Pidgeon, D. C. S. Potterton, E. Pyne, J. M. Quirke, R. E. Smith, A. F. Studdert, T. F. Smith, and W. T. Wood.

Unclassed.—R. C. Boland, T. Considine, J. W. Jenkins, E. R. Kellett, T. Lauder, F. Little, Miss H. F. M'Card, R. Murphy, J. Nolan, D. A. O'Connor, C, J. Powell, G. G. Roe, A. O. Slocock, G. R. Stritch, J. F. Sutcliffe, and F. W. Woods.

Additional Certificates in Physics.—C. Browing, A. Chadwick, J. W. Frazer, G. L. Freeman, R. J. Harvey, H. H. Moffatt, G. E. Palmer, D. C. S. Potterton, A. F. Studdert, J. F. Sutcliffe, and S. Watson.

The following candidates entered for elementary mechanics only, and were granted certificates:

J. Behane, R. Cahir, R. A. R. Dobyns, and J. F. Downey.

SOCIETY OF APOTHECARIES OF LONDON.—The following candidates, having passed the Qualifying Examination in Medicine, Surgery, and Midwifery, have received Certificates entitling them to practise in the same, and have been admitted as Licentiates of the Society in July, 1889:

On July 12th:

Seccombe, Samuel Herbert, Guy's Hospital.
Loveday, Ernest, St. Bartholomew's Hospital.

On July 17th:

Ellaby, Charlotte Louisa, M.D.Paris, Paris.
Knight, Mary Adela McCulloch, Royal Free Hospital.
Clarke, Joseph John, Queen's College, Cork.
Verano, Louis Lawrence, St. Bartholomew's Hospital.
Barrs, John Harry, St. Thomas's.
Costine, William Courter, Royal Infirmary, Liverpool.
Porter, Frederick Joseph William, London Hospital.

On July 18th:

Wallington, William Tratman, L.S.A. 1884, Charing Cross Hospital.
Hurst, Walter, Owens College, Manchester.
Appleyard, Walter Rooke, University College, Liverpool.
Winter, George Mitchell, St. Mary's Hospital.

MEDICAL VACANCIES.

The following Vacancies are announced:

ANCOATS HOSPITAL, Manchester.—Honorary Physician. Applications by August 1st to the Honorary Secretary.

BIRMINGHAM WORKHOUSE INFIRMARY.—Senior Resident Medical Officer. Salary, £150 per annum, with board and lodging, etc. Applications by August 3rd to Mr. W. Bowen, Clerk to the Guardians, Birmingham.

BIRMINGHAM WORKHOUSE INFIRMARY.—Assistant Resident Medical Officer. Salary, £100 per annum with board and lodging, etc. Applications by August 3rd to Mr. W. Bowen, Clerk to the Guardians, Birmingham.

BOROUGH OF NOTTINGHAM.—Medical Officer of Health. Applications by August 2nd to S. G. Johnson, Esq., Town Clerk.

CARLOW UNION.—Pharmaceutical Chemist for Carlow Dispensary. Salary, £30 per annum. Applications to Mr. John Kelly, Honorary Secretary, Wellington Square, Carlow. Election on August 2nd.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—Assistant Physician. Applications by August 6th to the Secretary, 24, Finsbury Circus, E.C.

DEACONESSES' INSTITUTION, Tottenham.—Resident Junior House-Surgeon. Salary, £25 per annum. Applications by August 1st to the Director.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell, E.—House-Surgeon. Applications by August 1st to the Secretary.

GENERAL HOSPITAL, Birmingham.—Assistant House-Surgeon. Board, lodging, and washing. Applications by July 27th to House-Governor.

HOSPITAL FOR WOMEN, Soho Square, W.—House-Physician. Salary, £75 per annum, with board, etc. Applications by August 3rd to the Secretary.

LEEDS FRIENDLY SOCIETIES' MEDICAL ASSOCIATION.—Surgeon. Salary, £200 per annum, with fees, house, etc. Applications by July 31st to Mr. Wilson, 8, South Parade, Leeds.

LONDON TEMPERANCE HOSPITAL, Hampstead Road, N.W.—Registrar and Chloroformist. Salary, 50 guineas. Applications by August 10th to the Secretary.

NORTHUMBERLAND COUNTY ASYLUM.—Clinical Assistant. Board and residence. Applications to Dr. McDowall, Northumberland County Asylum, Morpeth.

NORTH CAMBRIDGESHIRE HOSPITAL, Wisbech.—House-Surgeon. Salary, £130 per annum, with house, etc. Application by August 10th to the Honorary Secretary.

QUEEN'S HOSPITAL, Birmingham.—Honorary Physician. Applications by July 27th to the Secretary.

QUEEN'S HOSPITAL, Birmingham.—Honorary Obstetric Officer. Applications by July 27th to the Secretary.

RIPON DISPENSARY AND COTTAGE HOSPITAL.—House-Surgeon and Dispenser. Salary, £70 per annum, with board and lodging. Applications to the Honorary Secretary, F. D. Wise, Esq., Ripon.

ROYAL LONDON OPHTHALMIC HOSPITAL, Moorfields.—Junior House-Surgeon. Salary, £50 per annum, with board and residence. Applications by July 29th to the Secretary.

SOMERSET AND BATH LUNATIC ASYLUM, Wells.—Junior Assistant Medical Officer. Salary, £100 per annum, with board, lodging, and washing. Applications to Dr. Wade, Superintendent.

TOWCESTER UNION.—Medical Officer. Salary, £110 per annum and fees Applications by July 29th to Mr. W. Whitton, Town Hall, Towcester.

WESTERN GENERAL DISPENSARY, Marylebone Road, N.W. Honorary Dental-Surgeon. Applications by August 2nd to the Honorary Secretary, F. Norton, Esq., 13 Hilgrove Road, South Hampstead.

WHITEHAVEN AND WEST CUMBERLAND INFIRMARY.—House-Surgeon. Salary, £120 per annum, and £30 for dispensing, with apartments and attendance. Applications by July 27th to the Secretary.

WIRRAL HOSPITAL AND DISPENSARY FOR SICK CHILDREN.—Honorary Acting Medical Officer. Applications by July 27th to the Honorary Secretary.

WOLVERHAMPTON EYE INFIRMARY.—Resident Assistant. Board and washing. Applications by August 12th to the Chairman.

MEDICAL APPOINTMENTS.

BALDWIN. H., M.R.C.S., L.D.S.Eng., appointed Medical Tutor to the Dental Hospital of London, Medical School, *vice* B. B. Paterson, F.R.C.S., L.D.S.Eng., resigned.

BROWN, J. K., M.B., C.M.Edin., appointed Resident House-Surgeon to Ayr County Hospital.

GOODMAN, R., M.B.Cantab., M.R.C.S., appointed House-Physician to the Hospital for Consumption, Brompton, *vice* Dr. Barlow.

HARKIN, J. C., M.B., appointed Medical Officer to the Carrick Dispensary of the Gleutics Union, *vice* S. H. Halahan, M.B., B.S., deceased.

HART, F. J. Lorimer, M.B.Ed., C.M., L.M., appointed Medical Officer and Public Vaccinator to the Wansford district of the Stamford Union, and Surgeon to the Oddfellows and other friendly societies.

JECKS, Cyril, M.D., appointed Resident Medical Officer to University College Hospital, *vice* C. J. Arkle, M.D., M.R.C.P., resigned.

LYTLE, J., M.D., M.Ch., Queen's University, Ireland, appointed Surgeon to the Foresters' Medical Aid Association, Shrewsbury.

MELLAND, B., M.Sc., M.B.Lond., M.R.C.S., appointed Senior Resident Medical Officer to the Children's Hospital, Pendlebury, Manchester, *vice* J. H. Thompson, M.D., resigned.

PATERSON, B. B., F.R.C.S., L.D.S.Eng., appointed Assistant Dental Surgeon to the Dental Hospital of London, Medical School.

ROBERTS, Reginald, M.R.C.S.Eng., L.S.A., appointed Assistant House-Surgeon to the Royal South Hants Infirmary, *vice* Sydney Herbert, M.R.C.S., L.R.C.P., resigned.

ROW, F. E., M.R.C.S., L.R.C.P., appointed Honorary Surgeon to the Royal Albert Hospital, Devonport, *vice* C. Bulteel, F.R.C.S., L.S.A., resigned.

SHEPPARD, Edward Thomas, L.R.C.P., L.R.C.S.Edin., appointed Medical Officer and Public Vaccinator for No. 1, Clifton district, of the Barton Regis Union, *vice* C. F. Hawkins, resigned.

SIBLEY, W., B.A., M.B.Cantab., M.R.C.S., appointed House-Physician to the Hospital for Consumption, Brompton, *vice* Dr. Wilkie.

SUGDEN, H. C., M.R.C.S.Eng., L.R.C.P.Lond., L.S.A.Lond., appointed Junior House-Surgeon to the Bury Dispensary Hospital, *vice* U. K. Dutt, L.S.A., M.R.C.S., resigned.

UNDERWOOD, Arthur Swayne, M.R.C.S., L.D.S., appointed to the Chair of Dental Surgery at King's College, and Dental Surgeon to King's College Hospital, *vice* Ashley Gibbings, resigned.

WORBOYS, T., appointed Assistant House-Surgeon to the North Staffordshire Infirmary, *vice* A. E. Nuttall.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the announcement. *The first post on Thursday mornings is the latest by which advertisements can be received.*

MARRIAGES.

BROADBENT—BRANSTON.—On the 18th instant, at the parish church, Newark, by the Rev. Marshall Wild, vicar of Newark, assisted by the Rev. R. K. Snowdon, vicar of Clifford, Yorks, Frank Broadbent, of South Collingham, Notts, to Harriette Elizabeth, daughter of Henry Branston, Esq., J.P., the Friary, Newark.

FERGUSON—HUNTER.—On July 6th, at St. Andrew's Church, Cutch Bhuj, by the Rev. W. Scott, B.A., Surgeon-Major J. E. Ferguson, M.B., Bombay Medical Service, eldest son of the late John Ferguson, M.D., Nigg, Kincardineshire, to Grace Alexa, eldest daughter of Lieutenant-Colonel F. M. Hunter, C.B., C.S.I., Political Agent, Cutch.

FLUX—MANN.—On July 16th, at St. James's, West Hampstead, by the Right Rev. the Bishop of Colchester, D.D., assisted by the Rev. A. W. Flux, M.A., brother of the bridegroom, George Belben Flux, M.R.C.S.Eng., L.R.C.P.Lond., M.D.(Brux.), etc., of Highworth, Wilts, to Florence, daughter of the late G. Mann, of Hamilton Terrace, N. W.

OUGHTON—OGILVIE.—On June 26th, at St. Andrew's Presbyterian Church, Kingston, Jamaica, by the Rev. James Cochrane, assisted by the Rev. Andrew Baillie, Thomas Bancroft Oughton, LL.B.Lond., Barrister at Law of the Inner Temple, son of Thomas Oughton, Esq., advocate, etc., to Nettie Ogilvie, M.D., C.M., L.R.C.P., L.R.C.S.Edin., etc., eldest daughter of James Ogilvie, M.D., F.R.C.S.Edin., etc., Kingston.

OPERATION DAYS AT THE LONDON HOSPITALS.

MONDAY.....10 A.M.: Royal London Ophthalmic.—10.30 A.M.: Royal Free (Ophthalmic Department).—1.30 P.M.: Guy's (Ophthalmic Department); Royal Westminster Ophthalmic.—2 P.M.: Central London Ophthalmic; Hospital for Women; Royal Orthopædic; St. Mark's; London.—2.30 P.M.: Chelsea Hospital for Women.

TUESDAY.....10 A.M.: Royal London Ophthalmic.—1.30 P.M.: Guy's; Royal Westminster Ophthalmic; St. Bartholomew's (Ophthalmic Department); St. Mary's.—2 P.M.: Cancer Hospital, Brompton; Central London Ophthalmic; London; Westminster.—2.30 P.M.: St. Mark's; West London.—4 P.M.: St. Thomas's (Ophthalmic Department).

WEDNESDAY....10 A.M.: National Orthopædic; Royal London Ophthalmic.—11 A.M.: St. Mary's (Orthopædic).—1 P.M.: Middlesex.—1.30 P.M.: Royal Westminster Ophthalmic; St. Bartholomew's; St. Thomas's.—2 P.M.: Central London Ophthalmic; Great Northern Central; London; Royal Free; University College; Westminster.—2.30 P.M.: St. Peter's; Samaritan Free Hospital for Women and Children.—3 to 4 P.M.: King's College.

THURSDAY.....10 A.M.: Royal London Ophthalmic.—1 P.M.: St. George's.—1.30 P.M.: St. Bartholomew's (Ophthalmic Department); Guy's (Ophthalmic Department); Royal Westminster Ophthalmic.—2 P.M.: Central London Ophthalmic; Charing Cross; Hospital for Diseases of the Throat; Hospital for Women; London; University.—2.30 P.M.: Chelsea Hospital for Women; North-West London.

FRIDAY.....9 A.M.: Metropolitan; St. Mary's (Ophthalmic Department).—10 A.M.: Royal London Ophthalmic.—10.30 A.M.: Royal Free (Ophthalmic Department).—1.15 P.M.: St. George's (Ophthalmic Department).—1.30 P.M.: Guy's; Royal Westminster Ophthalmic.—2 P.M.: Central London Ophthalmic; East London Hospital for Children; King's College; London; St. Thomas's (Ophthalmic Department).—2.30 P.M.: West London.

SATURDAY.....9 A.M.: Royal Free (Department for Diseases of Women).—10 A.M.: Royal London Ophthalmic.—1 P.M.: King's College.—1.30 P.M.: Royal Westminster Ophthalmic; St. Bartholomew's; St. Thomas's.—2 P.M.: Cancer Hospital, Brompton; Central London Ophthalmic; Charing Cross; London; Middlesex; Royal Free; University.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the office of the JOURNAL, and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

ANSWERS.

DR. J. W. BALFOUR (Moniaive, Dumfriesshire) will find information as to rules for employment of a parish nurse, in the JOURNAL of March 16th, page 633.

PROFUSE SALIVATION.

H. S. writes: Profuse salivation often depends upon the presence of carious teeth, and disappears on their removal.

THE CAPER SPURGE.

MR. R. N. CARNANA.—We take it that the caper leaves referred to are not those of the capparis spinosa (nat. ord. capparidaceæ) which furnishes us with capers, but the leaves of the caper spurge, euphorbia lathyris (nat. ord. euphorbiaceæ). The seeds and probably other parts of this plant contain an oil closely allied to croton oil in its properties, but scarcely so powerful. It is an irritant and purgative, therefore we see that the application of the leaves caused "a sort of blister," and probably the neuralgia has been benefited by this counter-irritant action.

Caper spurge oil can be obtained in commerce, and the best method of applying it would be to make up a preparation something like the linimentum crotonis of the *British Pharmacopœia*. The juice of the caper spurge is sometimes employed by country people to remove warts also. The exact species of "caper," however, could only be determined by getting specimens of the plant. Several species of euphorbia have similar properties.

TREATMENT OF SWEATING FEET.

A MEMBER (Cheapside) will find a number of suggestions for the treatment of this distressing condition made by numerous correspondents in the JOURNAL for March 9th, 1889, page 575, and March 23rd, page 693. The powder used in the German army for sifting into the shoes and stockings of the foot soldiers, called "Fuss-streupulver," is said to consist of 3 parts salicylic acid, 10 parts starch, and 87 parts pulverised soapstone. It keeps the feet dry, prevents chafing, and rapidly heals sore spots. Finely pulverised soapstone alone is also said to be very good.—HIBERNICUS (in answer to the previous query) said that he treated one case, a nursemaid, with a lotion of pure carbolic acid, 1 in 3. The feet were bathed with this; next morning they greatly inflamed, she was put to bed and dilute lead lotion applied; in three days she was able to resume her duties, and down to the time of writing (3½ years) had been free from the affliction. Another correspondent recommended a special preparation of eucalyptus, called eucalyptol cream, the formula for which was not given.

COLONIES.

YANKEE writes: Before anyone can practise in Pennsylvania State he must be registered, and unless he is a graduate of a college in the State, he must at least have the diploma endorsed by either of the chartered medical colleges in the State. Each college examines the candidate, and charges him £5 for doing so, with the exception of the Homœopathic College, which simply charges a fee of £1 for endorsing the diploma granted by any homœopathic college, from all other candidates this college demands £5 and an examination. From above it will be seen that each college can make its own rule respecting endorsing diplomas.

NOTES, LETTERS, ETC.

MR. EDMUND OWEN.

ON July 8th the following letter was addressed to the JOURNAL by Mr. Edmund Owen.

The Election at the College of Surgeons.

SIR,—The election at the College of Surgeons being over, I would express the hope that the JOURNAL of the British Medical Association will henceforth recognise the duty and expediency of refraining from giving support, direct or indirect, to any particular candidates for the honour of a seat on the Council. As, for the most part, all candidates are members of this Association, such support cannot fail to interfere with that harmony which it should be our constant effort to foster.

Dr. Farquharson, as we are informed, "has backed Lord Randolph Churchill's Bill to amend the constitution of the College." No one can object to that; but, as assessor to the Publication Committee of our JOURNAL, he may be expected to keep its columns impartial on a matter which, forsooth, concerns neither him nor them.

Probably one effect of the JOURNAL taking upon itself to advise the Fellows how to vote has been to fetter the candidates, and to disturb the electors, with strange "Addresses." But this year is in many respects exceptional.—I am, yours faithfully, EDMUND OWEN, F.R.C.S.

July 8th, 1889.

*** This letter speaks for itself. It was considered by the Editorial Reference Committee to be out of order, in that it sought to discuss in the pages of the JOURNAL the duty and expediency of the existing line of conduct adopted by the Editorial Committee in fulfilment of their functions—an administrative and executive question open to discussion in the Council of the Association which entrusts that duty to the Committee, or in the general meeting of the Association, but not a suitable topic of debate by the correspondents of the JOURNAL in its pages. The imputation conveyed in the letter and the peremptory discourtesy of its wording were considered to call for sharp comment. As Mr. Owen, however, while willing to wound the feelings and attack the judgment and impartiality of others, has shown himself very susceptible to the sharpness of a retort, and considers that the notice in the JOURNAL of July 13th may lead to the conclusion that he has been guilty of moral or professional misconduct—a suggestion which appears to be quite gratuitous—it is thought right to publish the text of his letter, in order that there should be no possibility of any such conclusion being drawn from it.

THE RECENT EXPERIMENTS OF DR. BROWN-SÉQUARD.

A CIRCULAR has been issued by a member of the medical profession, protesting in very urgent language against the nature and objects of the recent experiments carried out by Dr. Brown-Séquard, on the effects produced on man by the subcutaneous injection of a liquid obtained from the testicles of rabbits and guinea-pigs. We have already, on June 22nd and July 6th, indicated the obvious objections to some of the methods pursued, and the character of the communications in question. It is to be regretted that in lieu of making partial quotations from our text the author of this printed letter did not quote the whole texts, as his quotations give but a very imperfect view of what was published in our columns on the subject. With reference, however, to the alleged extreme barbarity and unjustifiable character of the mutilation involved in the removal of the testes, the author seems to leave out of view the millions of cases in which precisely that mutilation is carried out in sheep for the purpose of improving the flavour of the mutton chop; and he would do well to inquire as to the manner and frequency with which that agricultural operation is habitually carried out throughout Great Britain and in all other civilised countries.

ERRATA.—In the case of poisoning by the new Sicherheit explosive, published by Messrs. Sykes and Twigg in the JOURNAL of July 20th, the pulse-tracing was accidentally inverted, owing to the name and pressure scratched on the

diagram (which was sent loose) having been written wrong side up.—In the paragraph "Medical Magistrate," JOURNAL, page 157, for T. E. Brooks, read J. E. Brooks.

THE JONES INDEMNITY FUND.

THE following subscriptions have either been received or promised in response to the appeal made last week on behalf of Dr. Jones, of Edmonton.

	£	s.	d.		£	s.	d.
Dr. W. M. Ord	1	1	0	E. English, Esq.	0	7	6
Dr. Brodie Sewell ...	1	1	0	Dr. A. T. Gibbings ...	0	10	6
Sir W. Mac Cormac ...	1	1	0	Dr. J. W. Hunt	1	1	0
Dr. Bridgwater	1	1	0	Messrs. Jackson and Ward ...	2	2	0
Dr. Bristowe	1	1	0	E. Nettleship, Esq. ...	1	1	0
Dr. Dickson	0	10	6	Sir E. Saunders	1	1	0
Dr. Hare	1	1	0	T. Smith, Esq.	1	1	0
A. Durham, Esq. ...	2	2	0	W. P. Warren, Esq. ...	1	1	0
C. Macnamara, Esq. ...	1	1	0	St. Clair Shadwell, Esq. ...	0	10	6
S. Sibley, Esq.	2	2	0				
Dr. J. O. Adams ...	1	1	0		21	18	0

Dr. Jones's legal expenses amounted to over £60.

WHAT WAS THE CIRON.

DR. F. WILLIAM COCK (London) writes: Perhaps the enclosed extracts from ancient authors on the "Ciron" may be of interest.

Bailey's Dictionary, 2nd edition, 1724.—"Sirones, little pushes in the palm of the hand or sole of the foot, containing small insects or worms."

Peter Lowe, *A Discourse of the Whole Art of Chirurgerie*, London, 1634. Black letter. Third edition. Page 126-27, Chapter iv, Lib. v. Of lice, morpions and nyts which *often do use the skin and roots of the haire*.—"There is yet a fourth kinde called chyrons, they likewise take life and corrodes betwixt the flesh and the skinne, and are ingendered of a more drie matter than the other, and are chiefly found in the hands of idle people; the cause externall of those animous, is evill regiment of eating and drinking, of such as engendereth rotten humors, surfeiting of fruits, figges, nastinesse, idlenesse, and seldom change of cloathes, as I have oftentimes remarked in armies and camps, men of good temperature and dyet vered with vermin, negligence in combing of the head is a great cause," etc., and goes on to tell of the usual causes of lice, and evidently makes out that the chyron is of the insect tribe, consequently it seems probable that he speaks of the itch here, or some variety of louse. Page 129: "The chyrons which come in the hands or other parts are cured by washing of those parts with salt water, or water wherein salt fish hath been sodden; or rub them with the juice of hedder or henbane or strong vinegar mixed with a little aloes. If you would know more diversitie of remedies for vermine, take advise from Viccarus, Petrus Hispanus, Vigo, Alexis, and Lebot. There is of those chyrons or little lyce found in the membraine conjunctive or white of the eye, which maketh great paine and itching, for the which you must very cunningly with a stable hand and a silver needle, such as we abate the cataract with, picke them out one by one, then wash the eye with rose and enfrage water."

Daniel Turner, in his *Treatise on Diseases of the Skin*, 4th edition, 1731, page 233 *et seq.* of the lousy evil.—"4. Are those generated (according to some) under the cuticle being found in the hands and feet of a round form like the small eggs of butterflies, some of them so minute as to escape the sight; although by their creeping under the scarf skin they often stir up a most intolerable itching, and sometimes break forth and discover themselves, yet for the most part they lie hid and conceal themselves. Some authors mention them and treat of them as I suppose under the names of acari, cyrones and pedicelli."

I take it that under the head of cyrones the itch, various lice, and acne have been described by the older authors, as well as possibly some of the "foreign worms." The itch insect was described by Lewenhoek, and a figure given in the *Philosoph. Transactions* (condensed edition) by Benjamin Motte, 1721.

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BOOKS, ETC., RECEIVED.

A Textbook of General Therapeutics. By W. Hale White, M.D. London and New York: Macmillan and Co. 1889.

The Clinical Uses of Prisms and Decentering of Lenses. By Ernest E. Maddox. M B. Bristol: John Wright and Co. London: Hamilton Adams and Co. 1889.

Father Damien: a Journey from Cashmere to his Home in Hawaii. By Edward Clifford. London: Macmillan and Co. 1889.

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PRESIDENTIAL ADDRESS
ON
THE HISTORY AND WORK OF A COTTAGE HOSPITAL DURING TWENTY YEARS.

Delivered at the Annual Meeting of the East Anglian Branch of the British Medical Association, at Sudbury, Suffolk.

By J. SINCLAIR HOLDEN, M.D.,
Sudbury, Suffolk.

When I consented to accept the honourable position of President of this important Branch of the British Medical Association, I did not sufficiently consider the grave responsibility I was incurring in having to select a subject for my address which would possess some elements of novelty or interest. In my perplexity I remembered an old motto, "Choose the easiest." I have therefore acted upon it, and hope I may succeed in interesting you in the history and work of a cottage hospital during twenty years.

Since the first establishment of a cottage hospital at Cranleigh, Surrey, in 1859, these little institutions have sprung up all over the kingdom, evidently because they supply a want which has a real existence. Situated in villages and small towns that are beyond the convenient reach of large hospitals and county infirmaries, they form a welcome refuge for the sick and injured among the labouring poor, who find in them not only the medical and surgical care they require, but also good nursing, suitable diet, along with clean and healthy surroundings, essentials which are impossible to be obtained in their cramped and crowded houses, and for want of which the most skilful doctor often finds his advice impracticable and his remedies unsuccessful.

The increasing extension of cottage hospitals is a very important movement; there are at the present time about 400 at work, furnishing nearly 4,000 beds; if this aggregate were centralised in one place, it would exceed in accommodation eight of the largest London hospitals, but each being a detached and independent unit, it is almost unknown beyond the limited radius of its unpretending usefulness.

There are some local advantages which cottage hospitals possess, and not the least is their rural situation; the command of fresh and pure air is a factor not to be despised in medical and surgical treatment. They are popular because the patients keep in the vicinity of their friends, and can frequently see them; whilst the small cheerful rooms are more homelike than the spacious wards of a large hospital.

Eventually cottage hospitals must, to some extent, affect the county infirmaries, as they receive not only the accidents and emergencies of their neighbourhood, but have generally the first selection of curable cases, while the chronic and incurable are passed on to these most excellent and more commodious institutions.

The cottage hospital, whose history and work I purpose to describe, originated from the efforts of a few philanthropic gentlemen who had long felt the necessity of having a small hospital in Sudbury, as this town is situated sixteen miles from the county infirmary at Bury St. Edmunds, and the same distance from the one in Colchester. Their efforts met with willing response, both in help and money, so that the building was commenced in 1867, and completed the following year, at a cost of £1,500, including the purchase of the ground.

The hospital is prettily situated, and has separate grounds for the use of male and female patients. It is built in the form of two pavilion wards, one on each side of a two-storied tower, This central part contains below, two separation wards, matron's room, surgery and operating room; and above, bedrooms and kitchen. It is a great advantage in a small hospital to have the kitchen in the upper part of the building, and well away from the wards. The two pavilion wards are 30 feet long by 17 feet wide, with a span roof rising to 17 feet; the ceiling is woodwork and varnished, and the walls are cement and painted. Each of these wards, male and female, contains seven beds, with a floor-space per bed of 74 feet square, and a cubic space each of 1,200 feet. The vital importance of sound sanitary arrangements was recognised from the first in the construction of the hospital. The ventilation in the large wards is naturally provided by opposite windows, three on each side with lattice openings, and on the ceiling by four ventilating shutters worked by pulleys. The water supply is derived from the town reservoir, and the service is continuous. This water is steam-pumped from a deep boring in the chalk, and like all such is both pure and hard. Adjoining each of the wards is a bath-room with hot and cold water, and also a water-closet. Originally this latter was the pail and dry earth system, and its wise adoption, I have no doubt, has prevented the sewer gas of the town from being laid on to the hospital wards. Nevertheless the dry earth closet is not perfection, if it is harmless it is not always odourless, and the constant attention required to keep it from becoming a nuisance is often too exacting for humanity. So last year I induced the Committee of Management to substitute flush water closets with open air traps. Every sanitarian has a pet trap, and the one I recommend differs from most others in being simpler. It effectually cuts off the entrance of sewer gas, while at the same time it forms the key to the whole system of house-drainage.

Our cottage hospital is named St. Leonard's, as there once existed here a lepers' hospital of that name, which was founded as a charity by Simon of Sudbury, the Archbishop of Canterbury, who was beheaded in Wat Tyler's insurrection in 1381, and whose venerable head is still to be seen in St. Gregory's church, close by. The hospital and the lepers have long since disappeared; of the income devoted to them, about £40 per annum managed to survive the good old days of municipal irresponsibility, and this was handed over to our hospital by the Charity Commissioners.

St. Leonard's Hospital was established for the relief of poor persons suffering from accidents or curable diseases; chronic and incurable cases are not eligible as patients, though occasionally they may be received, if likely to be temporarily benefited by a few weeks' residence. Infectious diseases are entirely excluded, and an out-patient department has been purposely avoided. The hospital has accommodation for twenty beds, but keeps only sixteen ready for use, which are equally divided between the sexes; the average number kept occupied during each year being eight. The highest number of patients admitted in any one year was 145 in 1883, and the lowest number, 103 in 1873. The average for the last twenty years is 127. The average duration of each patient's stay in hospital was 24 days, average cost £3 12s. per patient.

The financial position of the hospital has always been satisfactory. Its income and its expenditure annually average £460. The income is derived from four sources.

1. Annual subscriptions, which amount to £200. This is the sheet anchor of support, and if any necessity arose, I have no doubt this sum would be largely increased.

2. Parish offertories, amounting to £100. These are the collections made at harvest thanksgiving services in the churches of the town and the surrounding twenty-six parishes. The labouring classes in these parishes take this opportunity of contributing to the support of the hospital in which either they or their friends have derived benefit.

3. Payment by patients amount to £50. No patient is admitted free, the lowest charge is 2s. a week, which, if neither the patient nor friends can pay, is paid by the Board of Guardians. The majority of the patients belong to the 2s. class; others are charged in proportion to their means.

4. Endowments, which bring in about £110. These are derived from the lepers' charity, the rent of a cottage on the ground, and the interest on investments. The capital which now belongs to the hospital amounts to £1,700, and as it is entirely derived from legacies, it is an excellent testimony to the fact that the work of this little institution has been appreciated.

The success of any hospital depends very much upon its officials. At St. Leonard's the chief official body is the Committee of Management, who are gentlemen selected by the subscribers, twelve in number, one-third of whom retire every year. The Committee have always taken a hearty interest in every department of the hospital, and the institution owes much to the secretary, the Rev. T. L. Green, the rector of the parish, who was one of its original founders, and has continued ever since to guide its successful career. There are two medical officers appointed to the care of patients, who are subject to annual election. They are Mr. J. C. Lynch, who has been attached to the hospital since its foundation, and myself, who was appointed four years later. We take alternate weeks for admitting patients, whom we retain until their

discharge, and we invariably assist each other in difficult cases and operations. We have the benefit of a consulting physician and surgeon; up to last year these were Dr. Ogle and Mr. Timothy Holmes, of St. George's Hospital, who have on several occasions received patients from us for further treatment or operation. I must especially mention the kindness of Mr. Holmes, who has four or five times come down from London to assist us by his skill and advice. Since the retirement of Dr. Ogle and Mr. Holmes from St. George's Hospital, Professor Humphry and Professor Latham, of Cambridge, have kindly undertaken the office of consultants.

The resident staff consist of only three persons, a matron, an under-nurse, who also has to act as housemaid, and a cook. In every hospital very much of the smooth and easy working of the machinery depends on the matron. This, however, is less the rule in a large hospital, where there is much subdivision of labour, than in the small hospital, where the duties are concentrated in one person. The matron, therefore, of a cottage hospital must be a person possessing many and varied qualifications. She must be a good nurse, strict and kind with patients, and able to act promptly and wisely in emergencies; she must be an experienced dresser, attending the doctors on their visits, anticipating their wants, and taking charge of the patients in their absence; she will prepare beforehand what is requisite for operations, and will assist at them; she will have learnt to dispense the medicines prescribed by the doctors, to take care of the surgical instruments and appliances, and to know their names and uses. She must be a good housekeeper, and careful in superintendence of the dietary stores, and furniture. The cleanliness, neat appearance, and sanitary condition of the hospital depend on her; she has to keep the monthly accounts of expenditure, and of the payments made by patients. Besides all this, she will be ready to interview visitors of all ranks who are interested in patients, and will be able to furnish them, if necessary, with a clinical history and prognosis of any case. Failure in any of these qualifications renders a matron unfit for the charge of a cottage hospital, though she might be able to fulfil perfectly well the duties of a large one. In the selection of a matron I consider it a mistake to choose an elaborately trained and experienced person, as she is not likely to possess that elastic adaptibility so necessary to a cottage hospital, where she still has a good many things to learn. For nineteen years we were fortunate in having a matron who possessed all the qualifications I have enumerated. She commenced with only a few weeks' training in St. George's Hospital, and then took charge of St. Leonard's, where her careful management and attentive nursing contributed much to the success and popularity of the institution. Since she left we have had two changes of matron.

Our nursing staff of two persons is small, and, though sufficient to meet the average work, it is overstrained in times of maximum pressure; we have sometimes, therefore, to obtain temporary help, and particularly so when night duty is required.

Having said so much respecting the organisation of the hospital, I shall now refer to the work among the patients.

The hospital was opened for the reception of patients on July 13th, 1868. From that time up to the end of 1888 the number who have been admitted amounted to 2,543; of these, 1,657, or nearly two-thirds, were discharged cured; 566 were discharged more or less relieved; 264 were discharged unrelieved, or left at their own request, or were sent to other hospitals; 56 died.

The number of medical cases treated was 1,395, and in this number are included instances of most of the diseases met with in country practice. A large proportion, 274 in number, were cases of debility and anæmia, and in cases of this kind the active good done by a cottage hospital is very apparent. Convalescence in the homes of the labouring poor is, we know, a very slow affair; the unappetising and scanty food, the close, unaired rooms, the worries and cares of a family—all tend to keep back the return of health. Then there is the debility and anæmia which precede an illness, and which often lead to years of misery if not arrested. For all these cases a few weeks' residence in the hospital, with nourishing food, pure air, cheerful companionship, and spirit of briskness, work marvels of restoration.

The number of patients admitted for pulmonary diseases was 318; of these, 151 were suffering from phthisis, generally in the incipient stage; most of the cases derived marked benefit from the care and treatment. Other lung diseases were principally bronchitis and pneumonia. Eight patients were admitted with pleuritic effusion; these were successfully aspirated, all recovering except one, who died afterwards from empyema and phthisis. The instrument we have always preferred using for aspirating is the simple adaptation of the stomach-pump to this purpose. In a recent case we used Allen's pump, which worked so very satisfactorily that in future we intend resorting to it entirely.

Only two cases were admitted with existing empyema. One was aspirated seven times in three weeks, a diminishing amount of pus being drawn off each time, until the abscess healed. The patient, a man aged 30, was discharged quite cured, and has ever since—for now nine years—continued in active work and robust health. The other case, a man aged 35, was not so fortunate; when admitted, spontaneous perforation of the empyema had already occurred just below the right nipple, the part of the chest which possesses the least resistance; aspiration was made four times behind in the usual site, and afterwards a drainage tube was inserted; relief was obtained, but the pectoral fistula kept open for some months; he never recovered, as phthisis set in the following year.

There were 47 patients admitted with rheumatic fever. The treatment with salicylic acid combined with soda and ammonia was generally adopted, and proved successful in relieving the pyrexia and pain.

Twenty-four cases of chorea were treated; some of these were severe attacks. Where the jactitations were much exaggerated, we found that the influence of chloral was most effective; when administered in continued doses sufficient to maintain sleep for two or three days, the choreal violence ceased and the habit of quietude was restored. Progressive doses of arsenic gave the best results in other cases.

In the year 1870, 17 cases of relapsing fever occurred in the hospital. This rather unusual infectious disease was then prevalent in the neighbourhood; the cases all recovered without any complication or fatality.

In 1871 we experienced a warning with regard to erysipelas. A patient was admitted suffering with extensive burns, followed by erysipelas, which proved fatal; 6 other patients were successively attacked with the same complaint, one, a woman in weak health, so seriously that she died from meningitis. After this the hospital was closed for a week, well cleansed and disinfected, and no further cases occurred.

Since then it is one of our rules not to admit anyone suffering from erysipelas. Rules, however, are not much of a safeguard, as there is no knowing when the complaint may arise in connection with some other disease or injury. We therefore took the precaution of having a small ward fitted up in a detached building next the washhouse, capable of containing two beds. This has been used on several occasions, for as soon as any case of erysipelas, gangrene, pyæmia, or other offensive or septic disease arises, it is at once removed from the general wards to this isolated ward, and separately treated. Since we adopted this necessary precaution we never have had any difficulty in maintaining the wards in a pure and sanitary condition. Three cases of tetanus were treated, all of which were of traumatic origin; one recovered when nearly moribund by removing a spicula of bone from an injured hand. Other medical cases admitted included a large proportion of dyspeptic, hepatic, and uterine disorders, eye diseases and skin affections.

The patients admitted suffering from surgical diseases numbered 1,148; of these 295 were for recent injuries or accidents. Though this is an agricultural district, the great increase of machinery and mechanical implements in all farming operations has considerably augmented both the number and the severity of accidental injuries; and such cases in this neighbourhood are, as a rule, brought to St. Leonard's Hospital.

There were 161 persons admitted suffering from fracture of various bones, of whom 28 had fracture of the thigh, 2 being compound. The majority of these fractured thighs were treated with Mr. Buckston Browne's extension splint, which always gave excellent results, especially in cases of oblique fracture, the shortening being almost imperceptible on recovery. The only drawback to this useful splint is that the perineal band is necessary for counter-extension. In order to avoid this source of so much discomfort and pain, we have for the last few years used the combination of long splint and weight extension; that is, the ordinary stirrup of adhesive plaster, extending above the knee, is fastened below to a block wood, to which the cord and weight is attached; the pulley is adjusted in a line with the axis of the limb by means of a board passing beneath the mattress; counter-extension is effected by raising the foot of the bed 6 inches. A well-padded long splint, with a crosspiece below to prevent tilt-

ing, is applied, with short splints strapped round the seat of fracture. The results have always been most satisfactory.

Of leg fracture 50 cases were admitted, 7 of which were compound, 2 so severe that amputation of the thigh was necessary. The treatment of this fracture, if confined to the tibia and uncomplicated, was usually the plaster-of-paris bandages applied directly; otherwise, the leg was put up in the box splint, which, though rather clumsy looking, is most convenient for the observation or dressing of this injury, whether simple or compound.

All fractures were put up in plaster-of-paris bandages after the removal of the splints.

The other fractures amounted to 58, and included fracture of arm, forearm, fingers, clavicle, patella, etc.

Besides fractures, there were 134 other accidental injuries admitted; 8 of these were gunshot wounds, 1 of which ended fatally. Among the rarer accidents I might mention the case of a man whose axilla was gored by a bull; the wound exposed the large vessels without injuring them. Another man had the posterior length of his thigh laid open by a ploughshare which his frightened horses had drawn over him. Another case was that of a lad who was admitted asphyxiated by having fallen from a height into a wheat granary; inflammation of the lungs ensued from numerous wheat grains having got into the bronchial tubes. for a fortnight afterwards he kept expectorating bloody sputa along with soft swollen, and even sprouting wheat grains. All these cases recovered.

Of the surgical cases, 417 required operations to be performed; of these 89 were amputations, namely, 8 of the thigh, 8 of the leg, 11 of the arm, 5 of the forearm, 37 of parts of hand or foot, and 20 of the breast, all of which recovered except 4; 1 amputation of the thigh died from gangrene, 1 of the leg from pyæmia, and 2 of parts of the foot from gangrene.

In 1878 Mr. H. C. Burdett, the historian of cottage hospitals, collected and afterwards published the results following major amputations in small, as compared with those in large, hospitals. He showed that while in cottage hospitals the death-rate was 17 per cent., in the large hospitals of London and Edinburgh it was 40 per cent. Since that time the general adoption of the antiseptic treatment of wounds marked a new departure in surgery, so that the mortality after amputation is now reduced in both large and small hospitals to an equality of something about 4 per cent.

In 1876 we began to follow the principles of antisepsis in all operations. Before that time we had 24 amputations and 4 deaths, since that time we have had 65 amputations and no deaths. We at first used Lister's sprays, and followed all his antiseptic precautions and appliances, but of late years have omitted the spray, while more carefully continuing surgical cleanliness and antisepsis.

I may say we have had equally good results in the dressing of wounds with carbolised glycerine, iodoform, perchloride of mercury solution, and surrounding them with Lister's gauze or salicylic wool.

In two cases of amputation, one of the thigh and one of the arm, performed this year, and therefore not included in the twenty years' work, we adopted a dry mode of dressing as described in our JOURNAL of January 19th, 1889, by Mr. Jordan Lloyd, of Birmingham, the main point of which is before closing the wound to thickly salt the raw surfaces with powdered boracic acid, and to remove the drainage tubes without disturbing the antiseptic dressings, so that for two or three weeks, if no necessity arises, the wound is left untouched. In the thigh case the dressings were removed on the twelfth day, and the wound was found healed by first intention. In the arm case, which had suffered great contusion, a rise of temperature necessitated the removal of the dressings on the fifth day; the wound was found to be healing most satisfactorily, but suppuration occurred higher up, which, however, only delayed recovery. I mention this method of treating wounds as one well worthy of our attention. Among our cases of amputation was one in which both arms were removed close to the shoulder-joint. We had three excisions of joints, one of the hip, and two of the elbow, all of which did well.

In 1884 two cases of recent fracture of the patella were admitted. The previous year Sir Joseph Lister had described his operation for this injury by uniting the fragments with a metallic suture. We, therefore, performed this operation in both cases, strictly following the aseptic lines which he laid down. The operation has been severely criticised and even condemned, owing to the risks of opening and draining the knee-joint, as instances have occurred of suppuration, ankylosis, and even death following. However, our two cases did remarkably well, and at the end of four weeks they had sound osseous union, and were beginning to use gentle flexion of a perfect joint, results which could not be obtained by any of the usual methods of treating this troublesome fracture. I find among my notes at the time a few hints of some importance, not mentioned by Sir Joseph Lister. One is to pierce and wire the smaller of the two fragments first; the apposition is then effected more easily. Another is to twist the wire over the larger fragment and not over the line of fracture, as the ends can be hammered down more firmly on to the bone without disturbing the tightness of the suture. Another is to avoid having the cicatrix of the first incision immediately over the twisted wire.

Among other surgical operations, there were 47 for caries of various bones; 44 for anal diseases, chiefly fistula and hæmorrhoids; for the latter we always used the clamp and cautery. Eight cases were operated on for strangulated hernia, 2 femoral and 6 inguinal; in 2 of the latter, finding the sac thick at its base and somewhat adherent to the ring, after returning the gut, we performed the radical cure. The sac was drawn forward and a double catgut ligature passed through its centre, as high as possible, and the two halves tied; the outer portion of the sac was then cut off, the wound was sutured and carefully kept aseptic. Both did well; one, an old man, has quite discarded the truss; the other wears one occasionally. One of our eight cases was unsuccessful, as gangrene of the strangulated part had set in before admittance; this patient lived for six weeks after the operation with artificial anus.

Cases of cancer are numerous in this neighbourhood, as we have the misfortune of being in a district which ranks second in England with regard to its prevalence. Fifty-six persons were admitted, seeking relief from some of its various forms, 40 of whom underwent operation for its removal; of these 20 were women with scirrhus of the breast, and of this number only 3 are still living, the periods since the operation being twelve years in one, three years in the second, and nine months in the third. No secondary deposits have yet appeared. There were 8 cases of cancer uteri admitted; in 4, where the disease appeared limited to the cervix, it was destroyed by cautery, but only with temporary benefit. Epithelioma of the lip was removed in 9 instances, reappearing in one case in the glands of the neck, and in another in the rectum, with fatal results.

There is a form of cancer which is not unusual here, and of which 4 cases were treated in the hospital. It commences like an epithelioma wart, but, instead of ulcerating, develops a fungoid growth, which is encrusted with a dark scab and bleeds freely when disturbed. This form is most effectually extirpated by an old remedy—the arsenical paste, made by mixing mucilage with arsenious acid; one or two applications, followed by poulticing, causes the tumour to slough away, leaving a healthy granulating surface, which soon heals. In no instance was there any return of the disease. The pain of the application may be considerably ameliorated by cocaine. The parts affected in the four cases mentioned were the thumb, the wrist, the thigh, and cheek.

Among the other operations were 2 of lateral lithotomy. Calculus in the bladder is a very rare complaint in this neighbourhood, why it should be so it is quite impossible to say, as our drinking water and dumplings are quite as hard as those of our neighbours in Norfolk. Of the two operations one was successful, the other, a case of great debility from the disease, died.

There were 4 cases of polypus of the uterus, in which the growths of a large size were successfully removed by the *écraseur*.

One ovariotomy was performed; in this case we had the benefit of Professor Humphry's assistance, the tumour unfortunately was both multilocular and adherent, and the patient died four days after the operation. Six cases of bronchocele were admitted for operation. Enlargement of the thyroid gland is rather a common disease among women in this district. The determining causes appear generally to be menstrual irregularity at first, and intermarrying afterwards; along with these there is some endemic influence, as the majority of the cases occur along the valley of the Stour. All the patients were suffering from the fibrous form, four were benefited by subcutaneous injections of iodine, one died from dyspnœa and anæmic exhaustion shortly after admittance, and one had the gland removed to try to prevent impending suffocation; in this case the operation was performed by Mr. Timothy

Holmes, but the woman only survived three days. The tumour weighed 7 lbs.

Out of several cases of anthrax which have recently occurred among the workers in the horsehair factories of the neighbourhood, two were sent by Mr. Horsford, of Melford, into St. Leonard's Hospital. In both cases the pustule was situated on the left side of the neck, and was excised as soon as admitted; the wounds were dressed antiseptically. The first case recovered. The second case had a temperature of 103° before the operation, with much swelling of the adjacent tissues; the operation was too late, as it failed to arrest the progress of the bacilli, and, within thirty-six hours, delirium, coma, and death occurred.

With regard to the treatment of this malignant disease, I might mention that in March last I saw, with Mr. Sheenan, of Lavenham, another horsehair worker with anthrax, in a very similar condition to the one who died in the hospital; his temperature was 103°, and there was inflammatory swelling round the pustule. I considered excision would be useless, and therefore freely incised the anthrax, applying strong carbolic acid, which Mr. Sheenan repeated, but, what was probably of more importance, prescribed drachm doses of the liquor hydrarg. perchloridi every three hours, which he took for four days, and quite recovered.

There were 38 eye operations performed; 8 were excision of the eyeball, all for injury, except one case of a child aged 3, who had both eyes removed for glioma. The other operations were for strabismus, hypopyon, lachrymal obstruction; 5 were iridectomies, and 5 for cataract. The latter complaint would furnish many operations if we had room for an ophthalmic ward, but, not having the accommodation, these cases are sent to London.

What constitutes the constant surgical work of a small hospital is not the more important cases I have mentioned, but the larger number of minor ones; such as wounds, ulcers, abscesses, urethral disorders, various tumours, etc., which it would be too tedious to particularise.

With regard to anæsthetics, we generally keep to chloroform, though we do occasionally use ether and the A.C.E. mixture. I regret to say that we have to record one death from chloroform in 1879; the case was that of a girl with caries of the elbow, who twice previously had taken this anæsthetic without exhibiting any distress.

The total mortality in the hospital during these twenty years has been 56, equal to 2.2 per cent. As occurs at all hospitals, patients are often brought in when they are in a hopeless or dying condition; of these, 17 were admitted who died within a few hours or days afterwards; such cases largely augment the death-rate. The deaths after all operations were 11, or 2.6 per cent.

Such, then, is the account I have to give of the history and work of a cottage hospital; and I should hardly have ventured to have brought the narrative of its simple annals so prominently before you, but that it affords an illustration of the origin, mode of working, and results attained by these little institutions in their retired spheres of usefulness.

REPORTS
TO THE
SCIENTIFIC GRANTS COMMITTEE
OF THE
BRITISH MEDICAL ASSOCIATION.

REPORT ON THE STRUCTURE OF THE VERTEBRATE LIVER (ABSTRACT).

By T. W. SHORE, M.D., and H. LEWIS JONES, M.D.

This research has had for its object the elucidation of the structure of the mammalian liver by an attack upon the subject from the side of comparative anatomy. We have attempted, by examining the liver in a series of types, to trace the steps between the undoubtedly tubular liver of the lower vertebrates and the apparently parenchymatous arrangement of cells which constitutes the proper tissue of the lobule of the liver of the mammal.

It has long been known that the livers of many of the lower vertebrates are tubular glands, and Eberth,[1] in 1867, figured and described the microscopical appearances of the liver in *Cyprinus Triton*, *Gallus*, and several other genera; and the literature of the subject shows that the problem of explaining the appearances seen in sections of the mammalian liver on the hypothesis that it also is a modified tubular gland, has been several times taken in hand by histologists, but with no satisfactory results, so far as we can learn.

Heidenhain[2] copies from Hering[3] a drawing of the liver of a snake to show that it is composed of a system of anastomosing gland tubules, and gives several schemes of the mammalian liver, arranged as a network of tubules densely packed together, and he points out that in some mammals the minute bile channels are situated at the angles of the liver cells, and in others are found on the flat side between two neighbouring cells. This point has also received attention from Hering and Peszke,[4] and we believe that its significance will shortly become apparent.

In the course of our investigations we have made as complete an examination as possible into the structure of the liver in the following animals:—

Fishes: Lamprey, dogfish, skate, eel, flounder.
Amphibians: Frog, newt, cœcilian.
Reptiles: Snake, tortoise.
Birds: Pigeon, fowl.
Mammals: Rat, mole, pig, cat, dog.

We have made use of mature and of young animals, and in several cases of embryos also.

Briefly we may say that in all of these animals, below mammals, except the lamprey and the newt, the liver shows quite plainly that it consists of a network of tubules, lined by four, five, or six rows of cells, with capillary blood spaces between the tubules. In the adult bird the density of the liver obscures the appearances, but in the newly-hatched chick the tubular arrangement is very clear. In the liver of the newt there are evidences of a network of tubes, although these evidences are not very distinct, and the large liver cells of this animal appear at first sight to have a parenchymatous arrangement resembling that of the mammal.

The liver of the lamprey differs remarkably in structure from all the others which we have seen, and we shall therefore describe it fully. In this creature (*Petromyzon*) the liver cells are very small, and are disposed in solid anastomosing cylinders of several layers of cells, with fine blood channels sparsely scattered among them. The relative proportion of blood-vessels to cell-cylinders is extremely small, the number of layers of cells composing the solid cylinders reaching five or six. The cells can be divided into (1) a parietal layer immediately adjacent to the blood-vessels, and having the form and arrangement of a columnar epithelium; and (2) central cells situated within the cell cylinders, polyhedral or slightly elongated in shape, disposed in a spongy manner, and showing in hardened specimens a series of fine channels running between them. Thus the liver of the lamprey may be regarded as a mass of cells permeated to a slight extent only by a network of narrow capillary blood channels which divide the organ into a number of anastomosing broad cylinders.

In the mammal we find that at an early stage of development the liver bears a very close resemblance to that of the lower types, for in an embryo cat measuring 15 millimètres in length the liver is composed of a network of anastomosing tubules measuring 30μ in diameter with five rows of cells around a small lumen; in fact the section has a close resemblance to one of the liver of the eel. The appearance of the adult mammalian liver is so well known that any detailed description of it is unnecessary. In sections of a mammal's liver, the bile capillaries of which have been injected, the closeness of the meshwork of the bile channels can be well seen. This is important as showing that the changes through which it has passed in its development have been in the direction of increased production of secretion channels with the formation of a finer anastomosis.

In none of the livers which we have examined have we been able to find any distinct basement membrane.

The most striking feature brought out by an examination of the series of vertebrate livers is that this organ, even in the lowest types, is a meshwork of anastomosing tubes, and that its structure is remarkably uniform throughout, from the selachian fishes upwards through amphibia, reptiles, and birds, to the embryo

[1] Eberth, *Arch. f. mik. Anat.*, 1867.
[2] In Hermann's *Hndb. der Physiologie*. 1883.
[3] In Stricker's *Manual of Histology* (Eng. translation), 1867.
[4] Peszke, *Beitr. zur Kenntniss der fein. Bau d. Wirbelthierleber*, Dorpat, 1874.

mammal. It might have been expected that somewhere low down in the scale a liver would be met with consisting of tubes which did not anastomose so as to form a network, but no such liver has been found, for a meshwork occurs in all that we have examined. This raises a doubt whether it is right to believe that the network has been formed by the fusion of originally distinct processes, tubules or rods of cells, in the manner described by Balfour[5] in his account of the development of the liver, or whether it is not better to consider that the network may have arisen in another way, namely, by the formation *in an originally solid mass of cells of a series of communicating interspaces.*

If it be allowed that a fusion of the extremities of originally distinct branches of a tube can occur, then it is easy to understand that by a repetition of the same process a meshwork of any degree of closeness may arise. In support of the possibility of the occurrence of such anastomoses, one would seek for analogous processes elsewhere in the body.

In the development of blood-vessels there is a union of previously distinct mesoblast cells to form a network of capillaries, and in the course of the formation of the vertebrate excretory system the extremities of the segmental tubes unite with the previously formed segmental duct, and it is believed by Lockwood[6] that the developing tubes of the testis become united at their extremities with the ends of those tubes of the Wolffian body which are about to form vasa efferentia.

On the other hand, no such fusion of the ends of tubules is seen in the course of the development of the pancreas, although it arises at about the same time as the liver, and, like it, is an outgrowth from the gut; nor is such an anastomosis known in the adult structure of any other tubular gland, and it is difficult to see why such should occur in the case of the liver only.

There is nothing in the known history of the development of the liver which opposes the idea that the gland may have arisen from a solid mass of hypoblastic cells formed at the extremity of the primitive hepatic diverticulum, and which, growing and forcing its way into the surrounding mesoblast, becomes itself penetrated by ingrowing mesoblast cells. By the development of these latter into blood capillaries the hypoblastic mass would be broken up into a network of solid anastomosing rods, in which secretion channels would subsequently form, and which would be more or less fine according to the completeness with which the ingrowth of developing blood-vessels took place. We venture to put forward this as the correct view of the development of the liver, and as an explanation of the uniform presence of anastomoses in all vertebrate livers.

The anomalous appearances seen in the liver of the lamprey become not only intelligible upon this theory, but also prove to be of great importance, inasmuch as they present an earlier phase of this process of development than is known to occur elsewhere. In the lamprey the ingrowth of blood-vessels has been very imperfect, and consequently there are found between their meshes relatively large masses of hepatic cells containing biliary channels in a rudimentary condition.

In the mammal, on the other hand, the appearances are those of a very complete penetration by blood-vessels and a fine subdivision of the mass of secreting cell elements, so that the anastomoses of the bile capillaries are extremely numerous, and they are enclosed, not as in the lower vertebrates by four, five, or six rows of liver cells, but by three, or even by only two rows. When the bile capillary is enclosed by two rows of cells only, then its position is on the flat side between two cells, as has been described in the rabbit and some other mammals, in which it would appear that the process of subdivision and penetration by blood-vessels has reached its maximum.

In sections of the liver of any of the types we have examined, it is remarkable how extremely few small bile ducts can be seen, and whatever ducts are present have distinct walls of connective tissue lined by an epithelium quite different in character from that composing the liver tubules. This suggests that the primitive hepatic diverticula alone have developed into bile ducts, and that the solid cell mass formed at their extremities, and from which the proper liver tissue is developed, is to a great extent distinct from them. It also suggests that the bile capillaries are not formed by any extension of the lumen of the primitive diverticulum, but rather by the production of finer channels in the midst of solid rods of cells, and that the extent to which the branches of the primitive diverticula have penetrated into the proper liver substance has been but limited. The way in which the bile capillaries terminate in the finest bile ducts at the periphery of the lobules has been described by Asp[7] and Klein.[8]

An important feature peculiar to the mammalian liver is the subdivision of the organ into lobules, a condition which is uniformly absent in the liver of the other types we have examined; although in some of these a radiating arrangement of an imperfect kind can be distinguished, notably so in the liver of the eel, yet we feel that these are not examples of incipient lobulation.

We imagine that the lobule has arisen at a rather late period in the growth of the organ by the formation of foci of exit for the blood in the general capillary network, and by the consequent tendency for the plexus of fine vessels to converge to these points. In some mammals the formation of the lobule has progressed but little beyond this condition, for sometimes the margins of the lobule are (in the absence of injection) only very indefinite. Following upon this condition, there appears to have taken place a more complete and intimate ingrowth of bile ducts and branches of the portal vein, carrying with them more or less connective tissue, so as to form a Glisson's capsule. The extent to which the marking out of the lobules has taken place varies in different mammals; in the camel and the polar bear it has reached a high degree of perfection.

To sum up; We can picture the vertebrate liver as having been evolved by some such steps as the following:—

1. The formation from the gut of a hollow diverticulum, constituting at first a simple tubular gland, lined by specially modified secreting endoderm. This stage is represented by the simple hepatic diverticulum of *Amphioxus.*

2. The multiplication of the endoderm cells at the cæcal extremity to form a solid mass of cells, slightly penetrated by minute channels for escape of secretion, the original diverticulum becoming a duct.

3. The further multiplication of the cells of this mass, and its penetration by blood-vessels, so as to divide it into solid anastomosing rods of secreting cells, drained by a system of intercellular canals. This stage is probably preserved in the liver of the lamprey.

4. The more complete penetration of blood-vessels between the cylinders of hepatic cells, so as to form a well-marked system of broad blood-channels, separating a network of rods of cells, which come to be arranged in a single layer round bile capillaries. This is the permanent condition in fishes, amphibians, and reptiles, and is repeated in the development of the mammal.

5. A still finer penetration by blood-vessels, and further subdivision of the hepatic cylinders, associated with a rearrangement of the blood capillaries around foci of exit for the blood (hepatic vein radicles), so as to form hepatic lobules. This is the condition found in the adult mammalia.

[5] Balfour, *Compar. Embryology*, vol. ii, p. 632.
[6] Lockwood, *Hunterian Lectures*, 1888.

"THE MANCHESTER MURDER."

HOMICIDAL CHLORAL POISONING, WITH ITS MEDICO-LEGAL RELATIONS.

BY ERNEST REYNOLDS, M.D.LOND., M.R.C.P.,
Resident Medical Officer, the Royal Infirmary, Manchester.

THE so-called "Manchester Cab Mystery" being, so far as I know, the first case on record of homicidal chloral poisoning, a detailed account may be of some interest. In addition, I have ventured to add a few remarks on chloral poisoning in its medico-legal relations.

Mr. J. F., a wealthy and well-known manufacturer, living at Southport, came to Manchester on Tuesday, February 26th, 1889, on business. He met several friends during the course of the day, and imbibed such an amount of alcohol that, at about 4.30 P.M., his usual genial disposition had changed to one of bad temper, but, although not thoroughly drunk, he was certainly partially so. At 6.20 he entered a cab with a young man named Charles Parton, and they were driven to a public-house called "The Three Arrows," where they each had a glass of beer. They re-entered the cab about 7.10, and, according to the cabman, Mr. J. F. walked quite steadily, and, in his opinion, was quite sober. At about 7.25 the cabman found the cab door open, and inside was Mr. J. F. alone, with his head fallen forward on to the front seat, and un-

[7] Asp, *Ber. d. Sächs. Ges. d. Wiss. Math. Physik*, 1873.
[8] Klein, *Atlas of Histology.*

conscious, but able to be roused, and could then just speak. All his valuables were found to be missing. He was driven to the Manchester Royal Infirmary, but died just before entering the building at 8.5 P.M. He was examined by Mr. J. H. Barker, M.B.(Vict.), the house-physician, who found him quite pale, death evidently having been immediately due to syncope. There was no smell of chloroform or prussic acid, and the breath expressed from the lungs gave no reaction with silver nitrate, but smelt strongly of alcohol.

I made the *post-mortem* examination at 3 P.M. on Wednesday, February 27th (weather very cold), assisted by Mr. Barker, and found as follows: The body was that of a heavy man, weighing about 15 stones, and was well covered with fat. There were no external marks of violence. Rigor mortis general, *post-mortem* staining dorsal. Face quite pale. On opening the body there was a strong smell of alcohol. There were old pleuritic adhesions on the right side. Lungs slightly congested, otherwise normal. The heart weighed 17 ounces, and was covered over by a fair layer of fat, which to a slight extent, but especially at the apex, had extended into the muscular wall. The muscle was contracted, and the cavities of the heart, which were very slightly dilated, contained a little fluid blood, dark in colour. The muscular substance appeared quite normal to the naked eye, but a microscopic examination showed a few fat-granules infiltrating the muscular fibres, the striation of which, however, was well marked. There were a few patches of atheroma on the mitral valve, and also in the aorta, but all the valves were in good working order. The mouth and œsophagus were normal, showing no signs of irritation. The stomach was slightly congested, and showed a few small submucous ecchymoses. It contained about 10 ounces of yellowish fluid like gruel, smelling strongly of beer. The intestines, as far down as the sigmoid flexure, contained semi-fluid material, smelling strongly of alcohol. A small quantity of semi-solid fæces was found in the rectum. There was much fat in the omentum, and also round the kidneys. The latter were normal. The liver was very large, weighing 7 lbs., and was markedly fatty and cirrhotic. There was no ascites. The bladder contained only a few drops of urine. The brain was congested, but otherwise normal.

The immediate cause of death was evidently syncope, which was obviously, taking into account the mode of death and the changes found after death, not due to disease. I concluded that it must be due to some poison—either alcohol, chloral, or some vegetable alkaloid. All other common poisons could practically be eliminated, and, knowing that chloral had been used by thieves to drug their victims, I determined to have the stomach and intestines analysed for this body. The stomach and contents were put into one jar, the contents of the upper three yards of the small intestines into a second jar, and about 15 ounces of bloody fluid from the body cavity into a third jar, all being sealed and labelled. They were handed over to Mr. Charles Estcourt, the analyst for the city of Manchester, who found traces of chloral in the first two jars but not in the third.

The subsequent history of the case is interesting. It was proved that Charles Parton had robbed the deceased, that he had stolen a bottle containing one pound of chloral from a Liverpool chemist about a fortnight before, and also that he had been seen putting a liquid out of a small bottle into one of the glasses of beer at the "Three Arrows." Moreover, two other cases of drugging and robbing of exactly a similar kind to that of Mr. J. F. were proved against Parton. He was tried at the Liverpool Assizes on March 20th, found guilty, and condemned to death, this sentence being subsequently commuted to penal servitude for life.

Several important questions arise in this case. First, was the death due merely to alcohol? Alcohol may cause death in one of three ways: (*a*) If taken in a very large dose, such as a pint of brandy, drunk off at once, death may result in a very few minutes from shock; (*b*) when taken in a large total amount, but its administration spread over several hours, it may cause death by syncope preceded by prolonged coma; or (*c*) the patient, having passed through a comatose stage, may rarely suddenly relapse and die after apparent recovery. Obviously, Mr. J. F. died in none of these three ways. For death to occur after only such a short period of coma as three-quarters of an hour, as in this case, must be extremely rare. I have seen considerably over two hundred cases of alcoholic coma, but none in which death even threatened within so short a time of the patient becoming comatose, except in two or three cases where large quantities of alcohol had been taken just before coma setting in, which was not the case here. Moreover, to imagine that in a person already only so far poisoned with alcohol that he could walk straight and appear perfectly sober, the administration of the additional amount of alcohol contained in a glass of beer would cause rapid coma and death would appear almost impossible to most medical men, and certainly so to a jury. Lastly, the most constant *post-mortem* sign of acute alcoholic poisoning—namely, a deep cherry-red colour of the gullet, stomach, and intestines—was not present.

Secondly, would the previous administration of alcohol tend to lessen or to increase the chances of death by syncope from chloral? This is entirely a matter of dosage. A small quantity of alcohol—say an ounce of brandy—is very frequently given with chloral with good effect, as tending to lessen the depressing influence of the latter on the heart. But the case is different with large doses of alcohol previously administered, as here the heart would be much weakened, as evidenced by the very feeble and rapid pulse so commonly seen in cases of alcoholic coma. Whether this cardiac depression from alcohol had occurred in this case before the chloral was administered it is impossible to say, but it is quite probable that this was so.

As regards the taste of chloral. When dissolved in water, it has a most objectionable pungent, burning taste, which, however, is almost entirely absent when it is taken in beer, all that is perceived being an acrid sensation at the back of the throat, occurring after the beer has been swallowed. When prescribing for the insane, I found that sherry was a most excellent medium for disguising the taste of chloral.

The dose given in this case is unknown: but it must be remembered that 30 grains are reported to have caused death in a woman[1] and it is always said to be an uncertain drug. Personally, I have always found chloral to be very regular in its action and very safe, having frequently given 30 or 40 grains in a single dose without any bad effects. I have always, however, used it with great care, never giving it when there was feeble cardiac action, or when the patient is very cold.

The fatal period of chloral poisoning is given as fifteen minutes to ten or more hours. Twenty grains given with 20 grains of bromide of potassium cause sleep, as a rule, within half an hour, and in many people sleep comes on within fifteen minutes.

The symptoms and *post-mortem* appearances in this case exactly corresponded with all that we know of this drug. The fluidity of the blood found has been before noticed by Richardson, and Dr. Dreschfeld tells me that it was a marked feature in a case of fatal chloral-poisoning observed by himself. Of course, it is not pathognomonic, but merely one of detail.

Action of Chloral in the Body.—It was, as is well known, first imagined by Liebreich that chloral was decomposed into chloroform by the alkaline blood, and so produced its effects. This theory has now, however, been thoroughly disproved by Hammarsten, Amory, Rajewsky, and Lewinson. It is partly excreted undecomposed in the urine, which should therefore be carefully preserved (if any can be found) in all medico-legal cases. Musculus and Mering state that a certain quantity is excreted as urochloral acid, which occurs in colourless groups of needles similar to tyrosin, is soluble in alcohol and water, insoluble in ether, turns the ray of polarised light to the left, colours yellow an indigo solution rendered alkaline with soda, and does not react with the aniline and soda test.

In small doses, chloral stimulates the vagus centre and the motor cardiac ganglia. In larger doses, however, there is a paralysis of the vagus centre, and more especially of the motor cardiac ganglia and of the vasomotor centre, causing the cutaneous vessels to dilate, the temperature to fall, the pulse becoming very feeble, and the heart finally stops from this paralysis. The cause of death is thus cardiac failure, and not asphyxia. In a heart already weakened by slight fatty degeneration, and by a large dose of alcohol, the tendency of even moderate doses of chloral will be undoubtedly to cause death more readily by heart failure.

In addition to the usual test for chloral, namely, that in which the chloral, being first extracted from the contents of the stomach, is then decomposed into chloroform by the addition of an alkali, there are two others, perhaps, not so well known. The first is the soda and aniline test, in which aniline and caustic soda are mixed with the suspected fluid, when, either immediately or on heating, a peculiar and penetrating smell of benzo-iso-nitrile ($C_7 H_5 N$) is given off. A similar reaction, however, is also given with chloroform, trichloracetic acid, bromoform, and iodoform. The second test is one first proposed by Ogston in 1879. The con-

[1] Fuller, *Lancet*, 1871, p. 226.

tents of the stomach are filtered or dialyzed, and sulphide of ammonium is added to the clear fluid thus obtained. If chloral is present an orange yellow colour is formed, which gradually becomes more and more brown, then turbid, and finally an amorphous precipitate falls, and a peculiar odour is developed. Ten milligrammes in 1 cubic centimètre of water give a marked reaction and a precipitate, 1 milligramme in 1 cubic centimètre a yellow colour, the odour, but no precipitate, and 0.1 milligramme in 1 cubic centimètre a slight pale straw colour and no odour. This reaction may be distinguished from that of antimony by adding an acid, when the latter falls as an orange yellow precipitate; but if chloral alone is present, there is only a light whitish precipitate of sulphur.

One apparent flaw in this case is the fact that the analyst said he only found a "trace" of chloral. But it must be remarked that he did not try to estimate the actual amount present, but merely showed its presence by decomposing and obtaining the reactions for chlorine and hydrochloric acid. Now, as he got each of these tests three times, it is, perhaps, hardly accurate to speak of a "trace." But taking it for granted for a moment that only a trace was found, this does not in the least alter the arguments in favour of chloral having caused the death; for it must be remembered as a fundamental principle in all analyses of the contents of a stomach in poisoning cases that the portion of poison found in the stomach is only the residue of what has been administered, and is not the actual part which has caused death, this, of course, having been absorbed. This principle is well pointed out by Guy and Ferrier, who state: "When poison is found in very small quantity, the objection is sure to be advanced that it was not enough to account for death; but to this the reply is obvious that the quantity found must needs fall short of that actually taken ..... and that the quantity found in the stomach is only the surplus of what may have been sufficient to cause death by absorption. The discovery, therefore, of a quantity of poison insufficient to destroy life is scarcely even a presumption that the substance was not administered in a poisonous dose." Woodman and Tidy also state that: "The discovery of a very small portion in the stomach is no criterion of the quantity taken." With a body so rapidly absorbed as chloral, this principle is all the more important to remember.

Finally, all the symptoms, the *post-mortem* examination, and the analysis coincided with the fact that chloral had been administered. Taking this for granted, no one can for a moment doubt that the administration of this body to a man whose heart was already enfeebled with alcohol and slight fatty degeneration most certainly hastened the death if it did not actually cause it. Now, if in this manner death was accelerated even by a single minute, then it is perfectly correct to say that the administrator of the chloral caused the death.

SUMMARY OF THREE LECTURES ON TRANSFUSION: ITS PHYSIOLOGY, PATHOLOGY, AND PRACTICE.

Delivered at the Royal College of Surgeons.

By WILLIAM HUNTER, M.D., M.R.C.P., M.R.C.S., F.R.S.E.,
John Lucas Walker Student in Pathology, Cambridge; Arris and Gale Lecturer, Royal College of Surgeons.

Lecture II.

Respiratory Properties of Transfused Blood.

Life Duration of the Red Corpuscles.—We have now to consider what value is possessed by transfused blood in virtue of the presence of the red corpuscles. So long as they remain within the circulation of their host, they will act as carriers of oxygen, and will thus have a certain respiratory value. What, then, is their life duration after transfusion? This subject I have discussed at length elsewhere.[1] After transfusion of large quantities of blood, there is a gradual and steady fall in the number of corpuscles till the normal is reached two to three weeks later. This lengthened life duration is only found when large quantities are injected, and only applies to rabbits. With smaller quantities the life duration is correspondingly shorter. In dogs a longer life duration than ten days was not observed. The two factors influencing it in all cases are—(*a*) the quantity of blood transfused; (*b*) the condition of the animal at the time of the transfusion and subsequent to it. As regards the latter, the following conclusions could be drawn from a study of the results obtained in the different experiments:

1. Any condition in which metabolism is diminished, as in starvation, tends to prolong the life of the red corpuscles. This applies both to the animal's own corpuscles and to the corpuscles of transfused blood (Fig. 7).

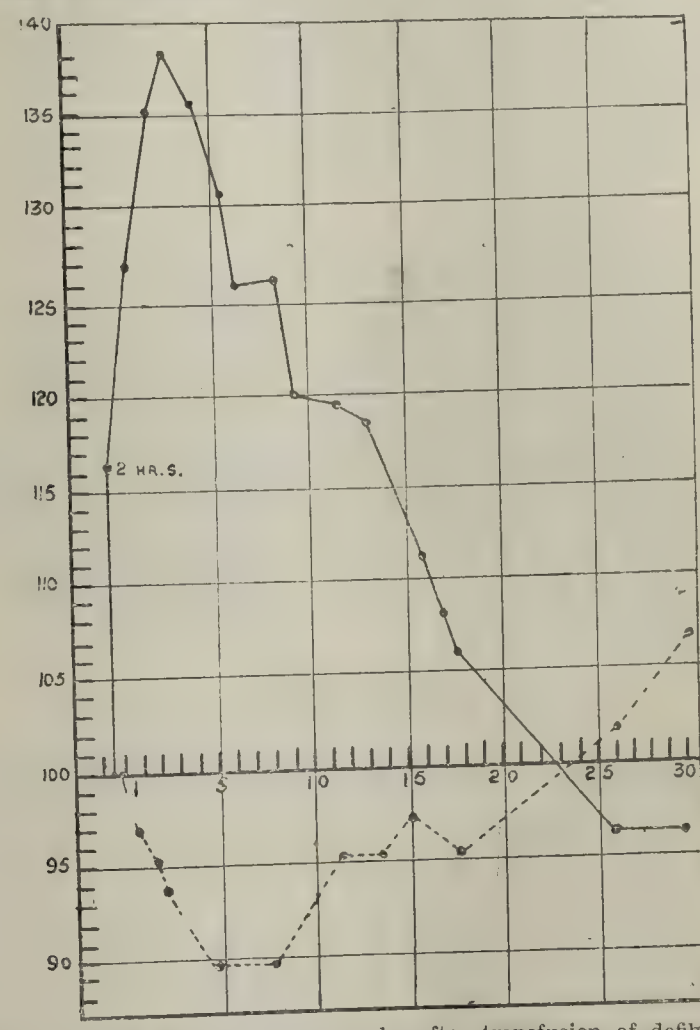


Fig. 7.—Life-duration of red corpuscles after transfusion of defibrinated blood into the peritoneal cavity (Experiment 10). The animal remained in good health throughout, although the original weight was not regained till close of the experiment. The weight is represented by the interrupted line.

2. Any condition approaching that of health, in which metabolism is active, tends to shorten the life duration of the transfused corpuscles (Fig. 8).

3. In any condition in which metabolism is increased, the life duration of the red corpuscles is shortest of all (Fig. 9).[2]

The quantities of blood transfusible in man are so small that, under the most favourable conditions, the life duration of the red corpuscles is probably rarely longer than two to three days.

Effect of Defibrination.—Defibrination destroys the character of the blood as a tissue by destroying its matrix. On the red corpuscles, however, it has little or no injurious effect. Their life duration after defibrination is, under favourable circumstances, the same as when pure blood is transfused. (Fig. 7.) This conclusion is opposed to the one arrived at by Hayem, according to whom the corpuscles are by the act of defibrination doomed to a certain death—"are killed, beaten to death." So long as they remain within the circulation, they act as carriers of oxygen. They are ultimately destroyed as the animal's own corpuscles are, but that they are not killed is clear from the circumstance that they remain within the blood for days, sometimes even for weeks, whereas red corpuscles killed by the action of poisons—for ex-

[1] Life Duration of Red Corpuscles after Transfusion," etc., Journal, i, 1887.

[2] For fuller discussion of these curves see my paper in *Journal of Anatomy and Physiology*, vol. xxi, 1887.

ample, by pyrogallic acid—are seized upon by the leucocytes and removed from the circulation in the course of a few hours.

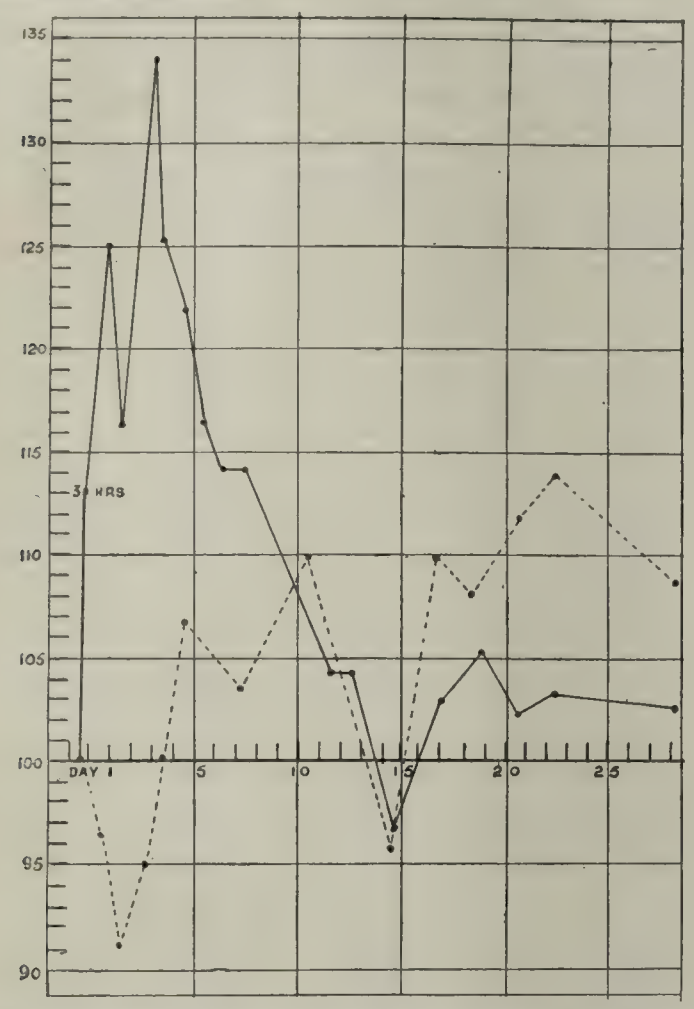


Fig. 8.—Life-duration of red corpuscles after transfusion of pure blood into peritoneal cavity. The health of the animal exceptionally good throughout.

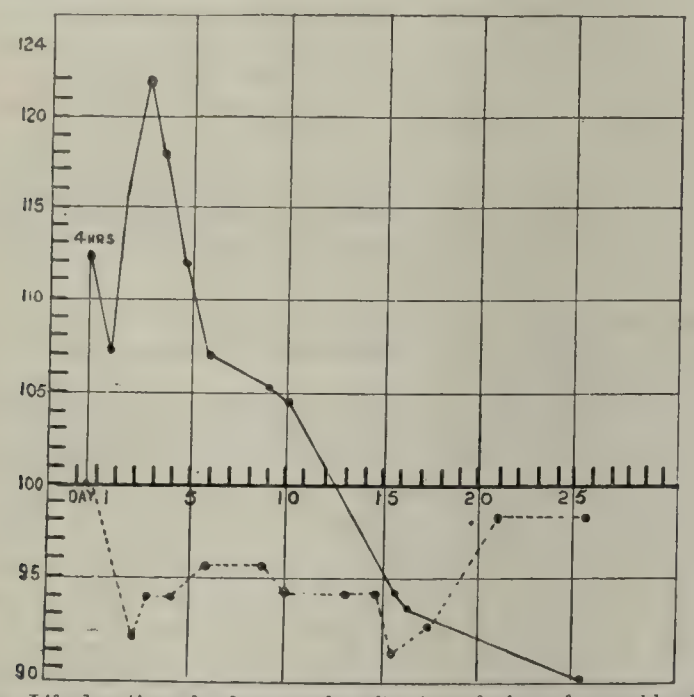


Fig. 9.—Life-duration of red corpuscles after transfusion of pure blood into peritoneal cavity (Experiment 9). The animal remained in poor health from the time of the experiment.

Ultimate Fate of Transfused Blood.

The red corpuscles are thus the only elements of transfused blood that remain within the system for any length of time. After a time even they disappear. What becomes of them? Where and in what manner are they destroyed? Like all other tissues, the blood must be affected by the discharge of its functions as the carrying tissue of the body. A certain wear and tear is connected with this process, which must affect in varying degree the various elements—plasma, white corpuscles, and red corpuscles.

Fate of the White Corpuscles.—The white corpuscles are most active during digestion. The changes in the blood at this time are, as we have seen, most marked within the portal blood and the organs connected with it. It is in this system that the changes in the leucocytes are also most marked at this period. There is an increase in their number, and their activity is otherwise shown by the number and variety of the karyokinetic changes presented by their nuclei. Since increased metabolism implies increased disintegration, we should expect to find some evidence of this latter change in the blood. Such evidence is, I believe, to be found in the greater tendency of the portal blood to coagulate. After transfusion of blood, as my experiments show, it is not infrequent to find large compact thrombi in certain of the branches of the portal vein within the liver at periods varying from ten days to several weeks after the transfusion. This thrombosis was found most marked when the destruction of blood had been most rapid. It was, in all probability, connected more particularly with the breaking up of the white corpuscles.

A similar thrombosis was found by Wooldridge to follow the injection into the blood of an extract he obtained from the lymph glands, testis, and thymus gland. The intravascular clotting was usually instantaneous and complete throughout the whole vascular system, causing sudden death; but under certain circumstances it was limited to the blood of the portal system. Wooldridge credited the leucocytes with but little share in this process; the "tissue fibrinogen," by whose union with the fibrinogen of the blood fibrin was formed, was derived from the lymph corpuscles, not from the leucocytes. I find no reason to believe that such a difference of structure or function exists between the leucocytes and the lymph corpuscles as Wooldridge supposed. Both of them are extremely active cells, and there is, therefore, some degree of probability in the view now advanced that the greater liability of the portal blood to coagulate both after transfusion and to a less degree in health is connected with the great activity and correspondingly greater disintegration of the cells, whether leucocyte or lymphoid, in and around the portal radicles. This conclusion is of some importance, as serving in part to explain the peculiar distribution of the thrombosis which so often occurs after transfusion of blood. The gastro-intestinal tract and the mesenteric veins are its chief seats.

Fate of the Red Corpuscles.—The evidence of any destruction of white corpuscles in health is thus but slight. The case is very different with the red corpuscles. The source of the bile pigments is the hæmoglobin of the blood, and the daily excretion of these pigments points to the existence of some cause at work in the blood leading to a certain destruction of hæmoglobin, and presumably therefore to a certain daily destruction of red corpuscles. The first question which naturally arises is why there should be any such destruction. The *rôle* of the hæmoglobin in respiration is a comparatively passive one; the mere carrying to and fro of oxygen does not appear to demand the exercise of much functional activity, or necessitate very great metabolism on the part of the red corpuscles. Nevertheless, change is involved in this process. There is evidence that even if the sole function of the blood were respiratory, the red corpuscles would after a time become unfit for their work, relatively slight though it be. Their hæmoglobin cannot carry oxygen for an indefinite period. Hence it is that the outworn hæmoglobin has to be got rid of. The appearance of the red corpuscles in the animal scheme is contemporary with the appearance of an organ—the liver—one of whose special functions it is to remove pigment matters from the system.

When blood destruction is spoken of, we refer more particularly therefore to the destruction of the red corpuscles. What is the nature of this destruction? What are its seats, the agencies by which it is effected, and the conditions influencing it? The subject is one of no little complexity. In the following account, based on the results of a lengthened series of investigations, I shall confine myself to a consideration of such facts as bear more especially on the ultimate fate of the red corpuscles after transfusion.

The Nature of Blood Destruction.

Two forms of blood destruction are to be recognised, distinguishable alike by their character, the conditions influencing them, and their relative importance to the organism.

1. The first is a slow and gradual decay of the red corpuscle, manifested chiefly by changes in colour and shape, and

its resistance to the action of reagents. The hæmoglobin remains within the corpuscle to the last, and becomes gradually converted into a globule of inert blood pigment, retaining the size and spherical shape of the red corpuscle. To this form of blood destruction I propose to give the name of *Passive destruction.* It is the mode of death of the red corpuscles which would occur were the blood subjected to no other changes than those involved in carrying on its respiratory functions. It is to a great extent independent of the action of cells. The final conversion of the hæmoglobin into effete blood pigment is, however, the result of the activity of cells. The chief evidence of passive destruction is the presence of pigment in certain organs of the body, chiefly in the spleen, capillaries of the liver, and bone marrow. The chief character of this pigment is the large and varying size of the individual pigment particles, and their irregular shape. This feature is best seen in animals in which the red corpuscles are normally very large; for example, in frogs and birds. The larger the animal's red corpuscles, the larger the pigment particles resulting from their passive destruction.[3] (Figs. 10 and 11.) When once formed this blood pigment is remarkably resistant to the action of reagents; it can be recognised long after the death of the original red corpuscles. Hence the amount of pigment found in the organs specified affords a most reliable indication as to the amount of passive destruction that has occurred. Its absence from these organs can also be relied upon as showing that but little passive destruction has occurred—that the conditions have not been favourable to the persistence of the red corpuscles within the circulation for a sufficient length of time to allow them to undergo a process of natural decay.

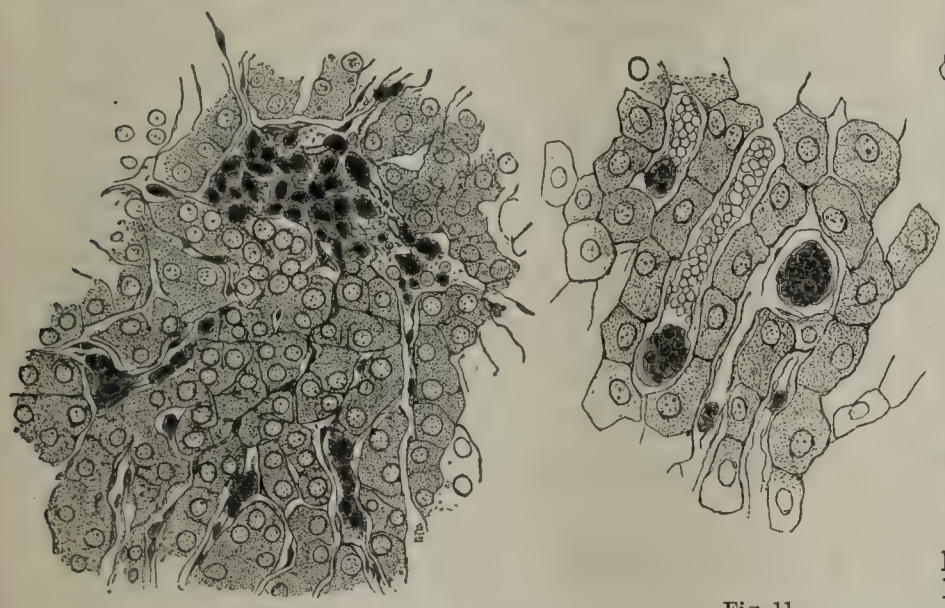


Fig. 10. Fig. 11.

2. The second form of blood destruction is one in which the hæmoglobin, instead of remaining within the red corpuscles, escapes frem them into the plasma, and is in great part excreted by the liver as bile pigments. To this form of blood destruction I propose to give the name of *Active destruction.* It is the change in the blood corpuscles caused by the action of water, various salts, etc. It differs from passive destruction in being closely dependent upon the activity of cells. The chief evidences of this active destruction are—(1) the formation of bile pigments by the liver, to which organ the hæmoglobin is mainly carried; (2) to a less and altogether subsidiary extent in health, the formation of blood pigment. The chief character of this pigment is the small uniform size and spherical shape of its individual particles. (Figs. 12 and 13). The assumption of this form by the pigment is independent of the action of the cells; but the conversion of the hæmoglobin into blood pigment is as much the result of cellular activity as in passive destruction.

The size of the red corpuscles has no influence on the size of the pigment particles resulting from active destruction. It is the same in mammals as in birds or amphibians. The pigment is formed from free hæmoglobin.

No trace of blood pigment is usually found in the liver cells as the result of the breaking up in and excretion of this free hæmoglobin from the body. Under certain conditions of excessive active blood destruction in disease—for example, in pernicious anæmia—pigment may be found in great abundance in the liver cells; sometimes, also, in the capillaries of the liver. In both cases alike it possesses the features already described as characteristic of pigment resulting from active destruction. The presence of this kind of pigment within the liver cells is in a special degree an evidence of excessive active destruction, and a further characteristic is that it is always most abundant in the liver cells of the portal zone of lobule. (Figs. 12 and 13.) Pigment resulting from passive destruction, however great it may be, is never found within the liver cells, but always lies enclosed in leucocytes within the capillaries, and it possesses the character belonging to pigment resulting from passive destruction. (Figs. 10 and 11.) This distinction is one of great importance. In the spleen and bone-marrow the character of the pigment is our only guide as to the nature of the blood destruction that has occurred. In the liver we have to consider not only the character of the pigment, but also its situation, whether within the liver-cells or within the capillaries.

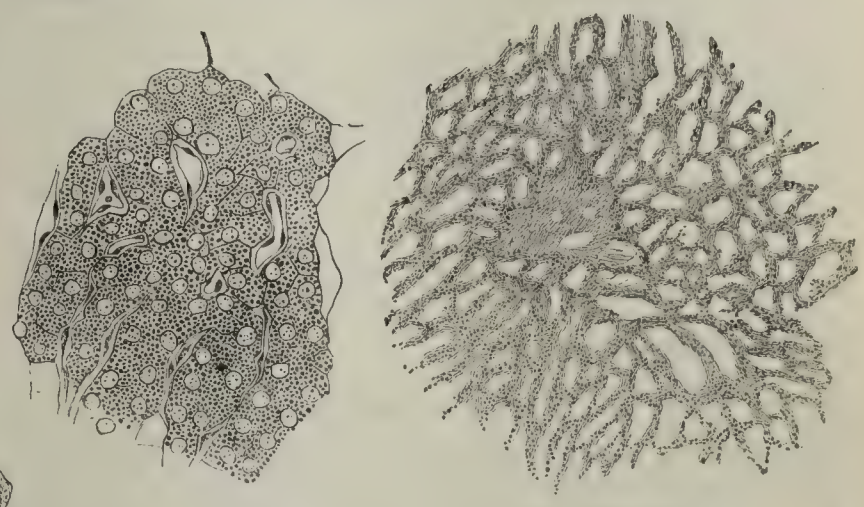


Fig. 12. Fig. 13

[3] The pigment formed from extravasated blood or as the result of congestion presents the characters of that resulting from passive destruction. The description about to be given of this process has no reference to the occurrence of extravasation or congestion, the pigment resulting from which can at once be recognised by certain other features which need not here be specified.

Conditions Influencing Blood Destruction.

Age.—What is the relative amount of active and of passive destruction in health? It varies first of all according to the age. The spleen and bone marrow in young healthy animals—for example, in rabbits, dogs, cats—contain but little pigment. The amount of pigment tends to increase with age, and in old animals, especially in dogs, it may be found very abundant, not only in these two organs, but also in the capillaries of the liver. We must conclude, therefore, that in the young animal there is but little passive destruction; it is, indeed, at a minimum in young healthy animals, at a maximum in old animals. The significance of this is that in the former the conditions are not favourable to the slow and gradual decay of the red corpuscles; whereas, as age advances, the conditions become more favourable. With active destruction the very reverse is the case. It is greatest in youth, and diminishes gradually with advancing age. The proof of this is that the formation of bile pigments is most active in young and healthy animals; *and this process is entirely subserved by active destruction of blood.*. There is, in fact, no relation between the amount of passive destruction and the formation of bile pigments, a conclusion differing from that come to by previous observers (Quincke, Kunkel, Naunyn, and Minkowski). On the other hand, there is an extremely close relation between active destruction and the latter process.

Food.—The liberation of hæmoglobin from the red corpuscles in active destruction implies the existence of conditions unfavourable to the continued existence of the corpuscles. What are these? The first fact to be noted regarding them is that they are not in equal operation at all times. We have a guide to the amount of active destruction that occurs at any time in the quantity of bile pigments formed. In starvation the formation of bile pigments never entirely ceases, but it is at a minimum. In health it is much greater, varying, however, from time to time, according to the amount and quality of the food. It is greatest during digestion, and is most marked of all five or six hours after the ingestion of food. Since we cannot conceive of an increased formation of bile pigments without a correspondingly greater supply of hæmoglobin to the liver cells, we must conclude that the ingestion of food is followed by increased active destruction,

Seats of Blood Destruction.

Active destruction must therefore depend on certain changes in the blood, most marked during digestion. We have seen in our study of the physiology of the blood that the changes in the blood at this period are by no means great, and that any changes met with are most marked in the blood of the portal system, in the spleen, liver, and radicles of the portal vein.

Active destruction in health is almost entirely limited to the same system. The hæmoglobin set free is carried to the liver, where it is broken up and excreted in the form of bile pigments. The spleen is *par excellence* the seat of active blood destruction. The same structural features that favour the active destruction of red corpuscles—namely, slowness of circulation, closeness of relation of the cells of the pulp to the blood flowing through it, capacity for accommodating large and varying quantities of blood—favour also the seizure of red corpuscles in process of becoming effete by slow and gradual decay. The spleen is thus also the great seat of passive destruction. This circumstance explains the presence of blood pigment in that organ when it is entirely absent from the liver, a condition found in many of my experiments after transfusion. Next to the spleen the red bone marrow is the most important seat of passive destruction. It is the only tissue outside the portal circulation in which a destruction of blood of any consequence takes place. Within the liver the seats of active destruction are the capillaries.

The changes in the blood within the spleen, radicles of portal vein, and liver are compatible with the liberation of hæmoglobin in so small a quantity at a time, that it is impossible to recognise free hæmoglobin within the blood of the portal vein.

Active destruction of blood is not a mere physical process. It is not the result of the action of the constituents of the food on the red corpuscles, but is dependent on the activity of cells in the various situations in which it occurs, and on the changes in the plasma induced by this activity.

Summary.—The foregoing may be regarded as the first systematic attempt to bring the various facts connected with this subject into relation with one another. According to Voit, in Hermann's *Physiologie*, we have hitherto had no knowledge as to whether the corpuscles are destroyed in greater number in health than in starvation: "There is no reason why there should be a greater destruction of red corpuscles during digestion than during the fasting state." We have seen that it is precisely during digestion that the greatest and most active destruction of blood occurs. The greater accumulation of pigment in the spleen and other organs in old age, in the fasting state, in conditions of wasting disease, is not an evidence of greater destruction of blood, but indicates that the conditions have been peculiarly favourable to the slow and gradual decay of the red corpuscles. In all these conditions blood destruction is at a minimum. The changes in the red corpuscles are most marked at the period of greatest activity of the leucocytes of the blood, and of the cells of the spleen and follicular tissue of stomach and intestine. The activity of these cells is regulated by the character and amount of the food given. With a rich supply of food their metabolism is greatest and the destruction of blood is also greatest. Since, however, with a rich supply of food the process of blood formation is most active, it follows that in the blood, as in all other tissues, anabolism and catabolism are closely associated. The conditions that favour its building up lead also to its breaking down. The final argument is thus supplied in support of the conclusion previously arrived at, that the blood is in all respects a tissue—in structure and behaviour, in its formation and its destruction.

Ultimate Fate of the Transfused Corpuscles.

The appearances presented by the various organs most intimately concerned—great accumulation of pigment within the spleen and bone marrow, its absence altogether from the liver, or presence in only slight amount within the liver-cells—point to the conclusion that their fate is precisely the same as that of the animal's own corpuscles. Transfusion of red corpuscles is a real implantation. Their destruction is effected in the same way and by the same agencies as in health. It is partly active, partly passive. The existence of the latter form of destruction is important, pointing as it does to the conclusion that the conditions may be so entirely favourable, that the corpuscles transfused are allowed to undergo a process of natural decay. The seats of their destruction are the spleen, the radicles of the portal vein, the capillaries of the liver, and the bone-marrow. The agencies by which this is effected are the same as in health.

Lastly, the conditions influencing its character and amount are the same; it is specially affected by the amount and character of the food. Passive destruction is favoured by abstention from food, active destruction is favoured by increasing the supply of food. The bearing these conclusions have on the utility of transfusion will be seen when we come to consider the *rationale* of this operation. So far as transfusion of blood may be supposed to serve any respiratory purpose, any value it possesses depends on the life-duration of the red corpuscles, hence the importance of determining precisely what the most favourable conditions are for prolonging their existence within the circulation of their host.

Hæmogenic Properties of Transfused Blood.

Fate of the Hæmoglobin.—Its fate varies according as the destruction of the red corpuscles is active or passive. Passive destruction is conducive to the storing up of a large quantity of blood pigment within the body, chiefly within the spleen and bone-marrow. This pigment contains all the iron of the original hæmoglobin. Anything that tends to render destruction more active than passive favours the removal of the hæmoglobin from the body in the form of bile pigments, and along with the bile pigments a certain proportion of the iron is always excreted in the bile. The chief advantage of having iron in the system is that it may afterwards be used for purposes of blood formation. This object is best served when the iron is deposited in the organs concerned in that process, namely, the bone-marrow, and to a less extent the spleen. The presence of iron in large quantities within the liver cells, as in some forms of anæmia in which the destruction is very active, does not serve any useful purpose. It is in process of excretion, and must interfere to some extent with the proper action of these cells.

Transfusion of blood may thus have a certain hæmogenic value in virtue of the presence of hæmoglobin in the form best suited to enable its iron to be stored up in the body. Free hæmoglobin introduced into the blood is removed at once as a foreign body; mainly by the kidneys, and in part also by the liver. Hæmoglobin introduced in the form of red corpuscles remains within the circulation for a period commensurate with the life duration of the corpuscles. Under favourable conditions, it is afterwards stored up in the spleen and bone-marrow in the form of blood pigment. Little or none of it is then removed from the system.

ABSTRACT OF THREE LECTURES ON TUBERCULOSIS IN SOME OF ITS SURGICAL ASPECTS.

Delivered at the Royal College of Surgeons of England.

By HOWARD MARSH, F.R.C.S.,

Senior Assistant-Surgeon and Joint Lecturer on Surgery at St. Bartholomew's Hospital; Hunterian Professor of Surgery and Pathology at the Royal College of Surgeons.

Lecture III.

In describing the results to be obtained in the treatment of surgical tuberculosis, by means short of excision, I shall keep chiefly to hip disease, because this is the instance in which operative interference has been most strongly advocated. But, in the first place, I may briefly allude to the case of the other joints, and of the spine. Speaking of the general group of tubercular diseases met with in surgery, I believe that when they are detected early and are adequately treated by prolonged rest, in not more than at the most 10 per cent. do they develop to any formidable degree. It is a rule to which I have seen but few exceptions that when, for example, a knee, or an elbow, which is the seat of tubercular disease of less than three months duration, is enclosed in well-fitted splints, and is kept at rest, the case gives no further real trouble. The symptoms begin at once to subside, and the improvement, though it is slow, goes on without material check until the joint is apparently free from disease; while, after a longer period of rest, complete recovery is secured. I am confident that the period

required for treatment in early cases does not, as a rule, exceed twelve or eighteen months. I have met with many instances in which, after this time no trace of disease, beyond slight muscular wasting, has remained. In more advanced cases, though the period occupied is longer, the same treatment will lead to good repair. As the degree of repair that takes place is not apparently credited by the advocates of excision, I would point to the cases already related, and I may offer the following instance as a further illustration.

A. P., a girl aged 7, had had tubercular disease of both knees for more than twelve months. The joints presented a typical appearance, and were flexed and enlarged, the synovial membrane was pulpy, and the muscles of the thigh were much wasted. She wore leather splints for two years, and was kept entirely off her feet. Her general health remained perfectly good. As the degree to which the joints could be extended increased, splints were renewed and straightened to a corresponding amount. At the end of two years all trace of the disease, except muscular atrophy (and this was not very marked), had entirely disappeared, and the movement of the joints was perfect. Two years later this patient was still quite well.

Many cases of a like degree of disease in the other joints could be given, but those I have related will be sufficient. Nor will time allow me to enter into details respecting caries of the spine; and I will only remark that my experience of this disease closely accords with what I have seen in the joints. When prolonged rest is secured, though these cases are tedious (for tubercle, when once deposited, cannot be got rid of quickly), there is nothing inveterate about them. They respond at once to treatment, and steadily improve; and in the great majority complete recovery, although often with some degree of deformity, takes place. They become unmanageable only when they have been allowed to advance for a twelvemonth and upwards before treatment is commenced.

In fact, it is with caries of the spine as it is with diseases of the joints. Early diagnosis and adequate treatment will lead to recovery; but if the process is allowed to advance month after month, or as is sometimes the case, year after year, neither present nor future surgery will be able to bring about satisfactory results.

General tuberculosis occurs in some instances as the result of infection either from any of the joints, or from the spine. I have seen occasionally such cases. But I feel convinced that the percentage here is very much the same as that obtained in the case of the hip-joint.

I will now return to the instance of hip disease. The treatment adopted has been that of prolonged rest in the horizontal position combined with weight extension of the affected limb. This method, although of course it involves some important details, is, in principle, so simple and so well known that it is needless to describe it; but the method of dealing with suppuration claims more particular notice. All abscesses have been opened as soon as they have been detected. An incision from an inch to an inch and a half in length is made, matter is evacuated by gentle pressure, and a small drainage tube, just long enough to enter the cavity, is used for two or three days. The dressing has consisted of carbolic gauze, next the wound, and this has been covered superficially with alembroth wool. The dressing is changed according to the case. In many instances the wound closes in a fortnight or three weeks, sometimes even sooner; in others it becomes a sinus, which discharges for a month or six weeks, and then heals; in others, again, suppuration remains free for several weeks, or even longer, and further openings have to be made; but at length, in a large majority of cases, the wound heals, and no further suppuration, except in a very few instances, takes place.

I am aware that the question whether abscesses should be opened at once is still under discussion. It is well known that, if left to burst spontaneously, they often do so quietly and without accession of fever or constitutional disturbance; but they have been opened in the cases I am alluding to (1) because, as abscesses which are connected with tubercular disease, and charged with tubercular material, it seems advisable that their contents should be evacuated as early as possible; (2) because, as experience amply shows, if left they frequently steadily enlarge, and lead to wide infection of the surrounding structures, and to the development of long devious sinuses, which become themselves lined with tubercular growth, and the seat of long-continued and exhausting suppuration, attended with the maintenance of a high temperature; (3) because, by the method of incision, draining, and careful dressing, these abscesses may be safely evacuated without the occurrence of those septic changes and their results—hectic, high temperature, and wasting which formerly were so liable to be met with—so that the period, and also the dangers, of suppuration are very materially curtailed. It is true that such abscesses may be absorbed; indeed, their absorption, I believe, is more frequent than some observers might think; but this event is, after all, so rare that it ought not to be allowed to interfere with any general rule of practice. I am sure, from considerable experience of both methods, that evacuation by free incision and drainage is much to be preferred to aspiration; for although some abscesses, when once emptied by the aspirator, will never refill, this is not the case with the majority; the majority commonly fill up again every week or every fortnight, and at length have to be incised; while, in not a few, septic changes occur after aspiration, so that this method is certainly not materially, if it is at all, safer than the free incision I have described.

I must now state how the cases I propose to analyse, and which have been treated at the Alexandra Hospital, were obtained. The report of the Committee of the Clinical Society, published in 1880, dealt with the cases that had been treated at this hospital between 1865 and 1879.

The present investigation has been conducted by Mr. Bowlby, now surgeon to the hospital, and myself. And I must take this opportunity of acknowledging his invaluable help. Without it I could not have carried out the inquiry, or felt confident of the correctness of the conclusions at which I have arrived.

We went back to cases which had been discharged from the hospital for at least a year, and we then took the names in the order in which they stand in the admission book, and we worked backwards, towards 1879.

One hundred and sixty cases, which had been discharged for a year and upwards, were written to, and 76 came for inspection. Many cards were returned "gone away" or "not known" and to many there was no response. In no instance has a case which presented itself been excluded from the report, and in no instance in the 160 cards sent out, was a notice returned that the patient was dead. These 76, therefore, include every case, in the 160 written to, that could be traced.

Of these 76 patients, 37, or a little less than half, were cases which had suppurated, and 39, or a little more than half, had not suppurated. Among the 37, there were 2 cases of double disease, and in the 39 there was 1 double case. A careful examination showed the following results:—

Of the 37 suppuration cases, only 4 still had sinuses. Of these sinuses all were single and quite small and superficial, and were discharging very slightly. As to the general result. We classified the cases under four headings: Perfect, excellent, good, moderate.

1 was a perfect recovery
6 were excellent
17 were good
} that is 24, a little under 65 per cent.

13 were moderate, a little over 35 per cent.

Period after Discharge.—When the examination was made, 7 had been discharged under 2 years, 9 between 2 and 3 years, 5 between 3 and 4 years, 16 over 4 years. So that sufficient time had elapsed to indicate what the ultimate result had been.

As to the Amount of Shortening of the Limb.—3 had no shortening, 17 had under an inch, 12 had between 1 and 2 inches, 3 had 2 inches or over; the average being 1 inch. Two were double cases.

As to Movement.—1 had perfect movement in every direction, 10 had free movement, 7 had slight movement: 50 per cent.; 18 were fixed: 50 per cent.; 1 was not noted.

As to Power of Walking.—2 walked perfectly, 22 walked well: 65 per cent.; 13 walked indifferently: 35 per cent.

Of the 39 non-suppurating cases (one being a double case) the general result was: 9 perfect recoveries, 9 excellent recoveries, 12 good recoveries: 77 per cent.; 9 moderate: 23 per cent.

Period after Discharge.—14 had been discharged between 1 and 2 years; 5 between 2 and 3 years, 5 between 3 and 4 years, 10 over 4 years; 5 were not noted, but they had been discharged upwards of a year.

Amount of Shortening.—8 had no shortening, 19 had under 1 inch, 11 had over 1 inch (one a double case). Average two-thirds of an inch.

As to Movement.—9 had perfect movement, 10 had free movement; about 50 per cent; 10 had slight movement, 10 were fixed: about 50 per cent.

As to Power of Walking.—12 walked perfectly, 20 walked well: 84 per cent.; 6 walked indifferently: 16 per cent.; 1 was not noted.

If we now take out the 33 cases which were admitted within nine months of the onset of the disease—the average duration being six months—we find that 16, that is about half, suppurated, and 17 did not suppurate. Of the 16 cases that suppurated (two were double cases) the general result was: 2 excellent, 5 good: not quite 50 per cent.; 9 moderate, a little more than 50 per cent.

As to Shortening of the Limb.—7 had under 1 inch, 4 between 1 and 2 inches, 1 was $2\frac{1}{4}$ inches, 1 was $3\frac{1}{2}$ inches, 1 was 4 inches; 2 were double cases. Average shortening $1\frac{1}{2}$ inch.

As to Movement.—5 had free movement, 4 had slight movement, 7 were fixed, 1 not noted; 1 was a double case.

As to Power of Walking.—11 walked well, 5 walked indifferently.

Of the 17 non-suppurating cases among the early admissions, the general result showed that 7 were perfect recoveries, 4 were excellent, 4 were good: 88 per cent; 2 were moderate: 12 per cent.

As to Shortening.—4 had no shortening; 7 under 1 inch, 5 between 1 and 2 inches, 1 was a double case. Average shortening, half an inch.

As to Movement.—5 had perfect movement, 5 had free movement, 2 had slight movement, 4 were fixed, 2 were not noted, 1 was a double case.

As to Power of Walking.—7 were perfect, 9 walked well, 1 walked indifferently.

If we compare the results obtained in the 16 cases of suppuration in which the patients had been admitted within nine months of the commencement of the disease, with the cases in which Mr. Wright excised the joint within nine months after the disease set in, we see that whereas of the excision cases, as I mentioned in the last lecture, 20 per cent. entirely failed, 20 per cent. were unhealed a year afterwards, and 20 per cent. two years afterwards (the remaining 20 per cent. being too recent for classification); in the cases of non-excision, all the sinues had healed soundly, and the general result was satisfactory, the patients being able to walk well, on a limb shortened, on the average, by only $1\frac{1}{2}$ inch.

The average duration of the 37 cases of suppuration up to the time at which all symptoms of disease disappeared and the children were walking freely on the limb and without crutches—that is, until they were apparently finally cured—was a little under 5 years. In the non-suppurating cases it was just over 3 years.

I think it important and, also, only right, to make a distinct statement as to the time occupied in recovery in these two sets of cases; those, namely, in which the disease had progressed to suppuration, and in many of which it had advanced, almost without treatment, for upwards of a year; and in those in which the disease had been adequately treated before suppuration occurred. I think it important, first, in order that all possible care may be taken with the early treatment; and, secondly, because it is desirable to have clear data upon which to found prognosis, and to regulate the period during which treatment must be carried out; for undoubtedly many cases relapse and end badly because sufficient time is not allowed.

If we turn to the question of mortality, we find that the number of instances in which death had occurred, so far as we could learn, as the result of the disease, in the 614 cases that had been discharged since the beginning of 1880 (76 of the total number of 690 being still in the hospital) was 35. Of these 35 deaths the causes were as follows: Meningitis, 12; disease of the lungs, 5; amyloid disease, 9; following amputation, 3; exhaustion, 2; uncertain, 4.

This mortality in 614 cases amounts to nearly 6 per cent., the deaths from meningitis to a little under 2 per cent., and from tuberculous disease of the lungs to less than 1 per cent.

It is interesting to compare these figures with those in the Clinical Society's Report in 1880. In that report the mortality reached 30.4 per cent. in the suppurating, and about 7 per cent. in the non-suppurating cases, the deaths from meningitis amounting to 6 per cent. Thus there is a great reduction of mortality. This is distributed under all the headings, but it is due largely to the diminution under the head of amyloid disease and exhaustion in the suppurating cases—a result attributable to the improved method of treating abscesses by early incision and drainage.

In 13 other instances in the total of 614 cases the patients were apparently incurable when they were discharged, or when they were last seen, and in 4 cases amputation was performed. If these are added to the deaths we have 52 cases, that is, about 8.4 per cent., in which the treatment pursued is known to have failed.

These figures being taken as a basis, the following conclusions may be drawn in regard to hip disease when it is treated by continued rest, and without operative interference except the opening of abscesses as soon as they are discovered.

1. In the first place, the anticipation which would naturally be entertained that suppuration adds largely to the immediate danger of the case, and is injurious to the ultimate condition of the limb, is confirmed. In the stage at which cases are brought to the hospital suppuration is either already present, or it occurs after admission in about half of the total number of patients. In the previous report the proportion of suppurating cases was much higher (69 per cent.), and this decrease is a source of marked improvement in the general result.

In order to prevent suppuration it is of the highest importance that the disease should be recognised early, and be treated while it is still incipient. The more perfectly these conditions are fulfilled, the more limited will the proportion of suppurating cases become; and it is in this direction that the greatest improvement in the treatment and results of hip disease will, in the future, be attained. My own estimate, from what I have seen in the hospital and elsewhere, is that the formation of abscess may be averted by early treatment in at least 80 per cent. of the total number of cases.

2. In suppurating cases which recover about 65 per cent. are good, and 35 per cent. moderate, cures. The average shortening is 1 inch; 50 per cent. are movable and 50 fixed; 65 per cent. walk well and 35 indifferently.

3. In cases without suppuration which get well 77 per cent. are good and 23 per cent. moderate recoveries; the average shortening amounts to two-thirds of an inch; 50 per cent. are freely movable; 25 per cent. have slight movement, and 25 per cent. are fixed; 80 per cent. walk well and 20 per cent. indifferently.

4. The mortality due to the disease, as far as it can be ascertained in the cases I have reviewed, amounts to about 6 per cent., or if a wide margin be allowed for cases that may have ended fatally since they were lost sight of, although, when they were last seen, they were doing well, it may be safely said to be well under 10 per cent., while the mortality from general tubercular infection arising from the joint disease as a primary centre is well under 5 per cent.

A question that may naturally present itself is whether the figures I have quoted are representative, or whether they are exceptional, and such as would not be confirmed were a larger number of instances taken into account.

I believe, from all I know of the subject, that they may be accepted as typical; and I will add my conviction that the next group of a similar or larger number of cases that is published will show, not only as good, but still better results.

Now if we place the results of excision, so far as they have been recorded, side by side with the results of continued rest, I think there can be no doubt as to the conclusion at which we must arrive. Mr. Barker, in his lectures last year, dwelt emphatically on the necessity of reducing the mortality attending tubercular joint disease; but the figures he quotes have reference to the mortality that follows excision. Thus, he gives Sach's table of 144 excisions of the knee, with 25 deaths (of which 13 were due to tuberculosis); Mr. Croft's 45 excisions of the hip with 18 deaths, 6 caused by tuberculosis; and Grosch's analysis of 120 excisions of the knee, with a mortality of 36.7 per cent. more than half of which depended on tuberculosis. The mortality here is undoubtedly so high that Mr. Barker's desire to reduce it is both natural and praiseworthy. In Mr. Wright's cases, again, the mortality cannot be estimated at less than 20 per cent. On the other hand, in cases of suppuration treated without operation the mortality, I am confident, is not more than half this amount—that is, not more than 10 per cent. My strong impression is that it is materially less than this.

As to the ultimate condition of the limb, our information respecting the results of excision is limited. But, if we take Mr. Wright's table, we find that in less than 20 per cent. of his cases had the wound healed, while in 37 suppurating cases, treated without operation, and taken without selection, there were only four in which sinuses were still discharging; and in 65 per cent. the patients walked well and firmly, and without material lameness, on the limb. As to shortening, the average amount in 30 of Mr.

Wright's cases was $1\frac{1}{2}$ inch; in 35 cases treated without operation the average amount was 1 inch.

I do not doubt that, as operative surgery improves, the immediate results of excision will be greatly superior to those I have referred to. This is foreshadowed by the results reported by Mr. Barker and Mr. Pollard. They will be so good indeed, especially when the operation is performed early, that unless the results to be obtained without operation are kept well in view, excision will, as I venture to think, be much too commonly performed. It must be remembered that the mere healing of a wound does not show that an operation was the best thing for the patient, or afford any proof that it ought ever to have been undertaken.

The main defect of excision will lie in the ultimate result, as regards the usefulness of the limb, when this is compared with a limb in which no operation has been performed, and in which the joint, instead of having been removed, has been restored to that considerable degree of usefulness which can generally be secured by rest.

I believe it is now recognised by most surgeons that, although the immediate result of excision of the knee, in children, may be all that could be desired—the wound often healing by primary union, or at least very quickly—the ultimate result is unsatisfactory. The union between the bones gradually, in many instances, yields; the bones do grow imperfectly, deformity ensues, and the functions of the limb are materially interfered with. It will, I venture to think, be much the same in the case of the hip. The wound may heal by primary union, and the earlier the operation the more probable will this form of union be; but deformity will often ensue, and the limb in many cases will be weak and deficient in usefulness. In short, it will be seen in both cases alike—in the knee and in the hip—that when one of the principal joints of the lower extremity has been removed during childhood, the patient has been seriously crippled.

CLINICAL MEMORANDA.

HERPES ZOSTER.

Mr. Henry Taylor's letter on herpes in the Journal of July 6th makes me think that this case may be of interest to some of your readers, as it occurred within a few miles of Guildford.

On June 20th a young man came complaining of tenderness over the front of the left thigh, but not of pain except on pressure: a cold sponge felt hot and burning.

In twenty-four hours hyperæmia appeared over a patch an inch and a half in diameter, followed by eruption of vesicles in the line of distribution of the middle cutaneous nerve. This was followed by similar conditions in succession, lasting through six days, in the lines of the internal and external cutaneous and small sciatic nerves of the same thigh. One patch of hyperæmia developed, not into vesicles, but a discoloration as of a bruise.

Accompanying the whole attack there was tenderness and pain over the long sciatic nerve from the left side of the sacrum to the foot; there was also deep-seated pain in the hip.

The interest lies in the number of cases which have occurred in this neighbourhood, in the formation of the bruise, in the affection of all the cutaneous nerves in the thigh, and in the absence of vesicles in the leg, although the sciatic nerve seemed to be affected.

Frederick N. Brown.

Woking.

TWO CASES OF GONORRHŒAL ARTHRITIS.

Case I.—A sailor, aged 22, contracted gonorrhœa a week before sailing from India; was much exposed during the last three weeks to severe weather, clothes often saturated for days together; on reaching port, went into hospital for two months, at the end of which he was sent to Harrogate; both knees affected, the right much more than the left; anæmia; muscles of thighs and legs gone to nothing; right knee enormously distended; joint full of fluid; peri-articular surface œdematous; no movement possible; pain, dull aching, increasing at night. Urine loaded with lithates and uric acid; bowels confined; no fever, no urethral discharge. Both knees were smothered in cotton wool, and a six-yard flannel bandage firmly applied. He took two twelve-ounce tumblers of the old sulphur water an hour before breakfast as an aperient, and an eight-ounce glass of the mild sulphur water at midday; in a week the swelling and effusion had greatly diminished and the pain had ceased. Passive motion of joints with slight massage employed. At end of second week was able to go to the baths, where the hot sulphur douche was played on both knees for three minutes to each; after the douche, joints were well rubbed with camphorated oil. This treatment was carried out for six weeks with the most satisfactory result; left knee well, right slightly enlarged but fairly movable. He left Harrogate, and in twelve months returned, after a voyage round the world as second mate, as strong and active as if he had never had arthritis.

Case II.—Gentleman, aged 32, of highly nervous temperament and delicate constitution, contracted gonorrhœa three months before he was sent to Harrogate in March, 1889; had slight gleet, was perfect cripple, and unable to be dressed. Right knee only affected; presented the same anatomical characters as Case I; there was the same wasting of muscular substance from hips downwards; no pain; no fever; all the functions were healthily performed and appetite moderate, still he looked bloodless and felt depressed; could not do more than crawl from his bed to his sofa, and whilst the left knee was free from disease, the muscles of the thigh and leg were just as much atrophied as those of the right. The same treatment was enforced. After my second visit I left for a fortnight's holiday, my son taking charge of the case. On my return I was astonished to find my patient up and dressed, with patent leather boots on, and walking about with comfort, although cramped in knee action. At the end of five weeks he returned to town, and resumed his place as a business man, perfectly restored in health. The only point I would call attention to is the extraordinary trophic changes we find in gonorrhœal rheumatism; locally we have the same train of structural changes which may arise from a blow, chill, pyæmia, or ordinary rheumatic arthritis, but except in gonorrhœal rheumatism I never have seen such loss of nutrition in the groups of muscles above and below the affected joint, and the wasting is both sudden and persistent, and to my mind points clearly to the view expressed by various authorities that here we have certain centres of the cord and brain somehow or other partially paralysed by the reflex sympathy existing between them and the inflamed urethra; the wasting in the muscles of the limb not affected with the special joint mischief is decidedly in favour of that opinion.

Harrogate. A. S. Myrtle, M.D.

CASES OF "LARVÆ" PASSED *PER ANUM*.

With reference to the article by Dr. James Finlayson in the Journal of June 8th, I have met with a case in which larvæ somewhat similar to those figured were passed from the bowels; in my case they were more like maggots of half the natural size, and were passed in large quantities. I reared a couple, and, after a week or more, they hatched. The flies were similar in outline to those figures; they had bluish bodies and more delicate outline; the wings more set back, and very transparent.

I regret I lost sight of the specimen, owing to the vagrant existence one lives in this country. I attributed their existence to the drinking of impure water. By the free use of purgatives and injections of strong quassia infusions the patient was soon freed, and has not had a recurrence. The fly is very common here, and can often be seen at any stagnant pool; agile and wary, it is a difficult matter to catch one. I do not believe that entrance to the bowel could have been obtained by deposition on the anal orifice.

Jas. A. L. Calder.

Jamaica.

The interesting cases recently published by Drs. Finlayson and Fleming reminded me that I had met with a case of living larvæ passed by a child ten months old. I preserved one of them as a microscopic specimen. The child had several severe convulsive fits. A brisk calomel purge acted copiously. The motion consisted of the spinach-like matters so often passed after calomel, and of some very slimy-looking mucus, in which six or seven larvæ were actively wriggling. I selected three of them, and took them home in a bottle of water.

The child recovered, and passed no more. The larvæ were all alike in size, and very much resembled the maggots of the blow-fly, though I remember that their segments did not seem to be so strongly marked. After some soaking in turpentine, I mounted the most transparent one in Canada balsam, with pressure, in the usual way. The balsam has become very yellow, but the speci-

men is quite as good as at first. In its present compressed state it is exactly three-eighths of an inch in length; the head pointed and the anal extremity truncated.

I do not remember upon what authority I suspected it to be musca vescaria, but I showed it to no expert, being unaware of the rarity of the case.

Abergavenny. NORRIS F. DAVEY.

SURGICAL MEMORANDA.

CASE OF TYPHLITIS CAUSED BY A DATE STONE SWALLOWED SIX MONTHS PREVIOUSLY.

H. F., farmer, aged 35, sent for me at 9 P.M. June 26th, 1889. I found him in bed suffering from the usual symptoms of obstruction of the bowels, abdominal pain, vomiting, etc. There was evidently an accumulation at the cæcum, and great tenderness on pressure at this point. He attributed his illness to catching cold from going to sleep on a damp fermenting haystack, and a few days previously he had eaten a quantity of cherries, but was quite certain he had not swallowed any stones. He had, moreover, for some time felt far from well, had had constant uneasiness in the bowels, and had had to take quantities of aperients. The day before my visit he took some strong pills, which gave him, as he expressed it, quite a "turn out."

The treatment consisted in opiates and hot application, followed by castor oil. The first dose or two of oil was vomited, but persevering with it he kept a dose down, and on June 28th a large accumulation of fæces was passed, which gave immense relief to all the symptoms. Sinking to the bottom of the vessel was a date stone; it was quite black, slightly eroded at the ends, and had evidently been some time in the bowel. Unfortunately, the improvement was only transient, an abscess formed very slowly, bursting into the bowel on July 5th. After this my patient made a rapid recovery.

REMARKS.—There is nothing remarkable about this case but the time the date stone must have been caught at the cæcum and remained there without producing very serious symptoms. The latest date at which H. F. partook of dates was at Christmas, 1888, which gives the stone six months' residence in the bowels. He also had no recollection of swallowing one.

Feltwell, Brandon. ERNEST G. ARCHER, M.R.C.S., L.S.A.

TOXICOLOGICAL MEMORANDA.

POISONING BY "SICHERHEIT" EXPLOSIVE.

A SIMILAR case to the interesting one reported in the JOURNAL of July 20th by Dr. Sykes, of Mexborough, was brought to me by the manager of the "Flameless Explosive Company" on July 6th.

The man, E. P., aged 37, had always enjoyed good health, with the exception of occasional rheumatic attacks, and up to the present time had been an engine driver. He was first employed at the "Sicherheit" works on July 2nd, and was then quite well, and continued so on the 3rd; on these two days he was crushing and sieving the ingredients, and worked nine hours on each day. On Thursday and Friday, the 4th and 5th, he was "steaming" the mixture, and on the Thursday night he felt languid and did not sleep well, but had no sickness, diarrhœa, or headache. On Friday night he felt more languid, and had to stop on his way home several times "to get his wind;" he had pains across his chest and at back of head and neck, and "thumping" of his heart. He still feels weak, especially in his legs. His face had a bluish appearance, lips purple, and the mucous membrane of gums and inside of mouth blue and somewhat pale. The tips of his fingers and nails were white, bloodless, and cold, the bases of the nails purple. The heart's action was excited, sounds normal; respiration normal; expansion under clavicles somewhat deficient. The urine was very dark coloured; specific gravity 1006, acid, free from albumen, sugar, blood, or bile pigment. Careful analysis gave distinct evidence of nitro-benzene in the urine.

REMARKS.—I believe the vapour given off during the process of steaming the "Sicherheit" is either nitro-benzene or dinitro-benzene; a case of poisoning by the latter vapour is recorded in the *Lancet* of July 13th, as occurring during the manufacture of roburite. I gave my opinion that the man, E. P., was suffering from the poisonous effects of the inhalation of nitro-benzene vapour, and pointed out its dangerous effects upon man; and, doubtless, the company will adopt means, either by ventilation or some mechanical process, to prevent the danger produced by its inhalation. The difficulty of breathing, langour, and weakness of the legs, together with the "thumping" and excited action of the heart, seem to point to a paresis of the respiratory and other nerve centres; but I have as yet heard of no case passing on to coma or death in this neighbourhood, although a fatal case is recorded in Dr. Swaine Taylor's work.

Rotherham. HENRY JOHN KNIGHT, M.R.C.S., L.S.A.

REPORTS
ON
MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

GENERAL HOSPITAL, BIRMINGHAM.

CASE OF FRACTURED STERNUM: DOUBLE PLEUROPNEUMONIA IN A MAN AGED 64: RECOVERY.

(Under the care of Sir WALTER FOSTER.)

[Reported by T. SYDNEY SHORT, M.B., Resident Medical Officer, from the Hospital Notes]

D. C., aged 64, was admitted on May 20th, 1889, with urgent dyspnœa and pains in both sides of the chest. Pulse 120; respirations 58; temperature 103°. On examination it was found that he was suffering from pleuropneumonia of both sides; the lower part of the chest behind and at the sides was dull with bronchial breathing and crepitations. A loud friction could be heard and felt in the lower axillary region on the left side. He coughed violently and with pain in both sides, but that on the left side seemed to be the more severe. The lower part of the sternum from the upper border of the fourth costal cartilage moved with each inspiration on the upper, with distinct crepitation. Patient was a spare but fairly developed man, conscious, and answered questions, as far as his breathing would allow, rationally. He was very deaf, and, being greatly distressed, a woman, his landlady, who brought him in, gave the details of his illness. It appeared that four days before admission he fell downstairs, and afterwards complained of great pain in the front of the chest, in the back of the neck, and in the left side. His breathing was bad, and he got steadily worse until he was brought to the hospital. He had been feverish, very thirsty, and blue about the face, with loss of appetite and constipation.

On further examination it was noted that his tongue was large, white, and flabby, with dirty fur at the back. The abdomen was normal in appearance, without tenderness. Liver dulness reached from the sixth rib to the costal margin in the vertical nipple line, measuring vertically about three inches. Spleen appeared normal. Cardiac dulness was not increased upwards; the apex beat was in the fifth interspace, just internal to the vertical nipple line. Second sound much accentuated at the base on the left side. No murmur was heard. Pulse irregular, intermittent, full, and of good tension. Wall somewhat thickened. He was put to bed with hot bottles, and ordered a drachm of brandy every hour, with a morphine linctus for the cough and pain.

During the night his breathing became stertorous, and his face and hands dusky and blue. He was wandering and making a good deal of noise, but understood what was said to him when shouted into his ear. He was able to cough up sputum, which was muco-purulent; and he did not pass evacuations into the bed.

The next morning he was in much the same condition. His urine was of specific gravity 1020, acid in reaction, and contained a faint trace of albumen and an excess of phosphates. It was found that a pad of lint, with a piece of strapping about two inches wide, passing from between the fourth and sixth ribs on one side to the same position on the other side of the chest, to keep the pad in position, lessened to some extent the movement of the lower part of the sternum, and this was ordered to be applied and readjusted from time to time.

On the third day he was still in a very precarious condition. His pulse, however, remained of fair tension, though not so good as on admission; and he was ordered a drachm and a half of brandy every hour, and a mixture containing acetate and carbonate of ammonia and squill. There had been no evidence of

pericardial effusion. Both lung bases were still dull, with crepitation, and the grating friction could still be both heard and felt at the left base in the lower axillary region. He could not spit up the thick phlegm so easily, and there was a continuous rattle in his throat. His temperature was between 101° and 102°. Morning, respirations 52, pulse 104; evening, respirations 56, pulse 104.

From the third to the eighth day the temperature fell steadily to 99°. He had strength to get out of bed occasionally if not prevented, and talked nonsense the greater part of the night. The pulse deteriorated, and on May 25th (the fifth day) it was decidedly weaker, and an ounce of brandy-and-egg mixture was ordered every three hours. His mouth was very foul, the smell most offensive in spite of repeated cleansings, and he became more unconscious, the continuous rattling in the throat masking the auscultatory signs. By the eighth day his pulse was still 108 to 120, but respirations had dropped to 44. He was quieter, but weaker; the suffused and blue look about the face was disappearing, and his heart was acting more steadily, and with increased force. The lung-sounds were clearer in front. The sternum still producing crepitation, but with less movement, and the grating friction in the left side was still evident, and a faint trace of albumen had been detected in the urine each time it had been examined. From the eighth to the tenth day he seemed to improve a little, but was much weaker, and wandering each night; the pulse fell in quality again, and he twitched his arms and hands about on the bedclothes, but at the same time his colour and breathing improved. From June 1st (the eleventh day) he steadily improved, and on the 5th was put upon quinine and digitalis in an effervescing mixture, with the brandy-and-egg mixture every four hours. There had been no movement detected between the pieces of the sternum during the last few days.

On June 16th he had a rise of temperature, with a fresh extension of pneumonia at the left base. He was delirious and noisy at night, and passed evacuations into the bed. This attack passed off, and on the 21st he was free from pain and breathing easily.

From this date he made a good recovery. The brandy-and-egg mixture was stopped on the 21st, and the quinine mixture continued. A faint trace of albumen was detected in the urine on almost every occasion on which it was examined.

On July 11th, the day before he was discharged, it was noted that the chest moved fairly in respiration; the breath-sounds at the bases were good, and accompanied occasionally by dry creaking sounds; these were particularly well heard in the left lower axillary region. At the level of the fourth costal cartilage, the sternum was thickened with perfect continuity; the lower portion of the sternum was rather prominent, as compared with the upper.

REVIEWS AND NOTICES.

A Textbook of Pathology, Systematic and Practical. By D. J. Hamilton, M.B., Professor of Pathological Anatomy University of Aberdeen. Copiously illustrated. Vol. i. London: Macmillan, 1889.

We congratulate Professor Hamilton on having had the courage and enterprise to undertake the writing of a complete textbook of pathology on his own foundations. This is indeed a task which, at the present day, could hardly be carried out by anyone but a professor of the subject, undistracted by the claims of practice, and supported by the resources of a laboratory and of daily pathological experience. Not all the teachers, however thus favourably situated, would have the zeal to begin and energy to complete so serious a piece of work. A glance at his first volume is enough to show that it aims at a standard of comprehensiveness and thoroughness higher than that attained by any other English work on the subject.

The difficulty of such a task is moreover greatly enhanced by the wide extension which Dr. Hamilton, in common with some other recent writers of textbooks, gives to the field of pathology. It is not so very long since, in this country at least, the main task of pathology was thought to consist in the comparison of *post-mortem* appearances with clinical symptoms, and certainly such comparisons will never lose their importance. But this is not the whole of pathology. Next came the epoch of histology through which we are still living; for even now it may be necessary to remind students (if not in some cases their teachers) that the making of fine sections, though a refined and beautiful art, has no more claim to represent the whole science than the coarser anatomy of the dead-house. Indeed, candidates who are strong on spindle-cells and proliferation are sometimes found quite unable to give an accurate description of the naked-eye characters of morbid specimens. Something more is yet wanting. As Dr. Hamilton says, "morbid anatomy and pathological histology will not carry the earnest inquirer beyond a certain point;" and no competent teacher will differ from the dictum that "the pathology of to-day is not delimitable merely as a matter of pure morbid anatomy, pathological histology, pathological physiology pathological chemistry, or clinical medicine; but these are simply the members of a great body, and are indissolubly bound together."

With all these branches of the subject Dr. Hamilton makes a vigorous and, on the whole, a successful attempt to grapple, and the only doubt one feels is whether the whole subject is not somewhat too vast for the limits of one book. However, the wider and more scientific conception of pathology now beginning to prevail, which we trace here as in some other recent textbooks, cannot but have a favourable influence on pathological teaching.

The first part of the work, occupying more than 150 pages, is devoted to technical methods. It contains copious directions for performing *post-mortem* examinations, a very good model of report for note-taking, remarks on medico-legal necropsies, and other valuable matter. Perhaps the most noteworthy point is the method given for examination of the brain. It must be admitted that no theoretically perfect method has yet been devised for this important part of a *post-mortem* examination, and great diversity of practice will be found in different institutions. Dr. Hamilton's method seems rather elaborate, but would be well worth testing practically.

In speaking of microscopical examination, we are glad to see that Dr. Hamilton lays great stress on the immediate examination of fresh specimens, a method now far too much neglected. Many points in the structure of cells are actually much better seen in unmounted specimens than in the finest sections of hardened tissues; and even if this were not so, there is always a certain loss when specimens are set aside for elaborate preparation. As the tissue hardens the clinical interest is apt to evaporate. This part of the work concludes with a tolerably complete account of bacteriological methods.

The sections on hypertrophy, degeneration, and the like, seem rather meagre as compared with other parts of the work. Atrophy is one of the subjects very summarily dealt with. It is defined as "the diminution in size or absolute destruction of a part which results from direct and continuous overpressure where the blood-supply is not deficient." Now a definition is doubtless always an easy target for criticism, and the definitions given by other authors are probably not unassailable, but this of Dr. Hamilton's strikes us as singularly narrow. It would exclude most instances of what is called, clinically, atrophy, and especially what some would regard as the most typical forms; for instance, hemiatrophia facialis. And to lay down that in atrophy the blood-supply must not be deficient seems to savour of paradox.

The great theme of inflammation is naturally a cardinal topic in pathology, and Dr. Hamilton's account of this subject is one of the most elaborate and valuable parts of his book, while it is copiously illustrated with very beautiful figures. The physical causes of the vascular disturbances are fully explained on the basis, partly, of the author's well-known researches in this field. His explanation of them is mainly mechanical, or at least physical, and differs widely from that given by most recent writers. Whether we agree with him or not—and for our own part we are disposed not to agree—it cannot be denied that Dr. Hamilton has earned the right of stating his own conclusions. The least satisfactory part seems to be the account of the changes in the fixed elements, other than connective tissue, in vascular parts; but this point may receive further consideration in treating of special inflammations.

On the other hand, the description of inflammation in non-vascular parts, such as the cornea, is very full, and is based on a minute account of the normal histology. The author's conclusions harmonise as well as could be expected the opposing views of different schools, and give, as it seems to us, the most satisfactory account yet published of this extremely perplexing subject.

The one thing which we miss in Dr. Hamilton's account of inflammation is some general conception giving a synthesis of the

whole subject. We doubt whether anyone reading without previous knowledge his copious exposition would get any clear conception of what inflammation after all really means. Possibly the author holds that the processes thus named have not any real unity, and that, as he says, each kind has to be "considered upon its own special merits." But we must confess we have still a difficulty in understanding exactly what Dr. Hamilton considers to be the proximate cause of the differences between a healthy organ and the same organ inflamed; that is, in what way injuries produce the phenomena observed.

The chapter on healing of wounds is excellent and original, but we miss any explicit statement on the vexed question of the relations of repair and inflammation.

The third part is devoted to diseases of tissues and organs, or broadly to special pathology, though we find also here an account of new growths. This is generally the best illustrated chapter in a pathological textbook, and Dr. Hamilton's figures of tumours are very good. Without going further into criticisms of definition, we might ask whether Dr. Hamilton's definition of sarcoma as "a tumour composed of an embryonic connective tissue which shows no inclination to fulfil its ultimate developmental intention" is any improvement on the older one of Virchow as a tumour of the connective tissue series distinguished by the predominant development of cellular elements, which seems better to account for the very common occurrence of mixed sarcomas.

The origin of glandular cancer from simple glandular overgrowth, or, in other words, cancer passing through an ædenomatous stage, is well illustrated, and is a point not yet sufficiently emphasised in many pathological textbooks. This consideration gives increased importance to the local origin of cancer, and the old terms, such as cancer of the breast, or cancer of the stomach, are now used with more of the significance which formerly belonged to them, and which was somewhat lost while cancer was regarded as a more universal process. Such an unmeaning epithet as carcinoma vulgare, though it still lingers in some textbooks, finds very rightly no place in Dr. Hamilton's pages. The chief omission noticeable in this part is that of any discussion of the causes of new growths, a subject not yet settled, it is true, but well worthy of consideration.

We must pass over a full account of the blood, physiological and pathological, including methods of examination and notices of several diseases known or supposed to be due to blood changes, to speak of the concluding part of the volume—that relating to the pathology of the heart and circulatory system.

This will naturally attract special attention, as a sample of what we have to expect in the second volume. Of this section we can speak in very high terms. Cardiac lesions are worked out very thoroughly, both from the clinical and the anatomical point of view, and altogether a more complete summary is given of cardiac pathology than we know of elsewhere, at least in the same compass. The most original part consists of statistics relating to the size of the orifices and thickness of the walls, drawn from the author's own systematic observations, though these results might, perhaps, be more conveniently arranged. We confess we cannot altogether agree with Dr. Hamilton that he has demolished the embolic theory of pulmonary infarctions. He seems to overlook the fact generally recognised by pathologists, that the branches of the pulmonary artery leading to or near the blocks are nearly always obstructed by clots, a fact for which his own explanation does not account. But fully to discuss the question would occupy more space than can be given here.

Looking on this volume as a whole, we regard it as a work calculated to raise the reputation of the British school of pathologists, and as bearing on every page testimony to the author's immense experience and indefatigable energy. Dr. Hamilton's watchword is "thorough." He has spared no pains to give the latest and most accurate information on every part of the subject, while the abundant literary references greatly add to its usefulness for teachers and investigators. The strong side of the book is detail; its weak side generalisation. It is not always easy (as was remarked in speaking of inflammation) to gain a clear notion of each topic as a whole; and a certain deficiency in the art of continuous exposition makes the book more suitable for reference than for reading through. But notwithstanding these objections (which could only be urged against a book deserving to be judged by a high standard) it will doubtless form, when completed, the most important work of reference on pathology produced by any English author.

NOTES ON BOOKS.

The Essentials of Physical Diagnosis of the Chest and Abdomen. By J. WALLACE ANDERSON, M.D., Physician to the Royal Infirmary, Glasgow, and Lecturer on Medicine to the Royal Infirmary Medical School. (Glasgow: James Maclehose. 1889).—The number of students' handbooks of physical diagnosis is now very considerable, but Dr. Wallace Anderson's book will compare very favourably with its rivals. The tabular form of presenting facts is avoided, and the book is, therefore, far more readable than when this dryasdust method is adopted. Moot points are briefly discussed, and the student is allowed to see the grounds upon which current opinion rests. The chapter on the respiratory sounds will be found especially useful on this account. The work is accurate and well arranged, and ought to be popular with students.

Bäder-Almanach, etc. 8vo, pp. 378. (Berlin and Frankfort-a-M.: Rudolf Mosse. 1889. Vierte Ausgabe.)—This book gives an account of all the baths, health resorts, and health institutions of Germany, Austria, and Switzerland. Some good preliminary therapeutic directions are given at the commencement by well-known practitioners respecting the use of particular waters. The bulk of the book is occupied by the official accounts of the various stations arranged systematically. Although the character of such statements is improved of late years, still they are always the better for being criticised impartially. In this consists the superiority for ordinary readers of such works as Flechsig's *Dictionary of Baths*, of which a new edition has just appeared, as he generally pronounces some opinion on the places which he reviews. There is no doubt that the *Bäder-Almanach* contains much useful information, and it is appreciated in Germany, where it has reached a fourth annual issue. It also contains a very elaborate map of health resorts.

Proceedings of the New York Pathological Society, 1888. Pp. 170 with an Appendix.—This small volume of *Proceedings* contains accounts of many interesting specimens and clearly demonstrates that very useful and earnest work is done by the members of this Society. Among the cases described may be mentioned particularly two sets of specimens exhibited by Dr. H. M. Biggs, illustrating disease of the vermiform appendix. In two of the cases death was due to sloughing of the tip of the process; in two the appendix was perforated. There is also an ulcerated and perforated appendix, from a case of typhoid fever, in which the ileum was also perforated and diseased. In two specimens death was due to impaction of solid fæcal matter in the vermiform appendix, and one case is described as tubercular ulceration. An abnormal appendix was exhibited, 9 inches long, and this instructive series is completed by a case in which the opening in the cæcum became obstructed, and the appendix was dilated into a cyst, 4 inches long and 1 inch in diameter. With regard to perforation of the appendix Dr. Biggs had seen ten or twelve cases in two years. Brief records of two cases of actinomycosis are furnished. One of the cases occurred in the mediastinum of a boy; the second was instructive, the patient, a butcher, asked if his disease was like the "little pearls" seen in the lower jaw of cattle. The disease seemed to have commenced in a carious tooth. Among the remaining specimens may be mentioned suppurating ovarian cyst in a child of 4 years, renal calculus in a dog, dermoid cysts of the kidney, and two cases of accessory pancreas in the wall of the duodenum; one from a newborn child, the other from a man aged 35, in whom it simulated a tumour. It is a pity that the descriptions of some of the above specimens are not illustrated by sketches. Appended to the volume is the Middleton Goldsmith Lecture, by Dr. J. M. Da Costa, "On the Relation of Diseases of the Kidneys, especially the Bright's Diseases, to Diseases of the Heart;" and a biographical sketch of the late Middleton Goldsmith, M.D., LL.D., by Dr. John C. Peters.

PRESENTATIONS.—Dr. Peter Yates, on resigning the post of house-surgeon to the Bolton Infirmary and Dispensary, has been the recipient of several handsome presents from the officers, the nursing staff, and patients.—Mr. John Acton Southern, L.R.C.P., of the Derbyshire General Infirmary, was presented by the staff and nurses, on July 19th, with a gold watch as a mark of their esteem and regret at his resignation as house-surgeon, after being in the Infirmary three years and a half.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1889.

SUBSCRIPTIONS to the Association for 1889 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, AUGUST 3RD, 1889.

HISTORICAL ASPECTS OF THE WORK OF THE ASSOCIATION AND THE "JOURNAL."

THERE are unhappily but very few left among us who can recall the origin of the British Medical Association, the incidents of its early struggles, the historical sequence of the reforms which it has been an active agent in bringing about, and the large part which the Association, its Councils and Committees, and its JOURNAL, have had in bringing about the improved though still defective organisation of the profession, and the enlarged though still imperfect privileges which the rank and file of the profession enjoy in their relations to the chartered governing bodies, to the public services, and to the State institutions of the country. To all who seek to form an opinion or to pronounce a judgment it would be interesting and advisable to follow up the history of any one of the questions now open in professional life by reference to the indices of a file of the JOURNALS of the Association in their various transformations.

There are a few persons of weight just now, chiefly, we believe, in the metropolis, who profess the creed that the Association is essentially a scientific body, who take offence at the discussion of subjects affecting the material welfare, the administrative interests, the social relations, and the corporate organisations of the profession, and who denounce the espousal in these pages of measures for the advancement of particular reforms in the questions, and of the support of the representatives of such reforms. To them especially, as indeed to all of us, a review of the files of the JOURNAL would be instructive. There will be found recorded the incessant and hard battles which the Association fought for twenty years before even a rag of medical reform was secured. The wisdom, the far-reaching foresight, the indomitable perseverance of men like Hastings, Cowan, Husband, Southam, Sibson, Waters, laid down the lines on which the battle was slowly won, but won only in part. Had their plan been adopted, nearly all the existing anomalies, delays, inconveniences, and injustice would have been avoided. The General Medical Council would from the first have been a compact, inexpensive, and even representative body; the Colleges of Surgeons and Physicians would, forty years since, have united to give a joint diploma; the Members of both Colleges would have representation on their Councils; proxy voting would have been conceded forty years ago to Members; and the abuse of competition in examinations for diplomas would long since have ceased.

The extracts which are given in another page as to the forty years' struggle with the College of Surgeons illustrate one phase of their work. Their gallant and successful fight with the Poor-law Commissioners, with the authorities of the army and navy, and with hospital authorities; their prescient assertion of the claims of provincial schools and hospitals; their struggle for the equalisation of privileges throughout the kingdom, are all recorded in pages which deserve to inspire an historian. The position is much altered in degree but the same in principle to-day. The topics of to-day are, among others, the prevention of abuse in the distribution of medical relief by hospitals, sick clubs, infirmaries, and dispensaries; the development of an equitable scheme for university degrees for English medical students; the defence of medical men from injustice under the lunacy laws; the adjustment of the relations of private lunatic asylums to the law and the public; the organisation of our sanitary service in the three kingdoms; the defence of the just rights and claims of our medical brethren in the army, and the amelioration of the prospects of those who are about to enter that service; the watching the conduct of Poor-law authorities to their medical officers; the prevention of friction and adjustment of differences between practitioners of various classes; the suppression of illegal practice and the discountenancing of professional misconduct; the yet further improvement of the position of members of the corporations and universities and the extension of their representative powers. These are all matters of more or less vital interest to one or other section of the profession; for it is one of the functions of the JOURNAL to carry an epitome of medical news to the furthest quarters of the globe and throughout all English-speaking nations, among whom we count now a large number of members, and they look to the JOURNAL, not only for completeness of news, but for accurate analysis and for assistance in forming conclusions on all the leading professional questions of the day, as well as on those which concern their own immediate and local interests. They are questions which, with greater or less vigour, the Association has always held within its purview, and with which the weekly JOURNAL has always had concern. We yield to none in our earnestness for the scientific interests of medicine, in our strong endeavours to promote those interests, and readiness to make large sacrifices and unceasing efforts for that purpose. Of that no other testimony is needed than the pages of these and of past volumes, and the history of the Scientific Grants Committee and of the Research Scholarships. Never have the scientific objects of the Association been held more prominently in view than of late years, or cultivated with equal diligence and liberality. It would be idle to pretend that they should be the sole business of the Association or should be the sole concern of the JOURNAL. Nor does it seem to us more reasonable to suggest that the JOURNAL can now more than heretofore carry out the reforming and progressive duties entrusted to it, and to which it is bound by every tradition and interest of the Association and its members, without the same fearless advocacy of the interests entrusted to its charge which has characterised its progress for

fifty years, and its rise from a small and obscure sheet to its present volume and extended influence.

A great and constantly-increasing number of the members are in the habit of looking to the JOURNAL for advice and assistance, and for arbitration and decision in innumerable questions; such as their legal relations to the local authorities; their difficulties in attracting the attention of the licensing authorities to the misconduct of their licentiates; in the arbitration of moot points of conduct between each other; the best means of obtaining redress under numerous circumstances of individual or general hardship; and, indeed, under a variety of circumstances which defy classification, and in which they seek from and through the JOURNAL the definition and application of general principles to all the professional difficulties, doubts, and struggles of their own professional life, and of general professional organisation. To carry out these among other duties has been no slight addition to ordinary editorial responsibilities. But it has been a task of great nobility, and one in the due fulfilment of which great sacrifices and even some obloquy may be cheerfully endured.

LUNACY ACTS AMENDMENT BILL: PROPOSED FURTHER AMENDMENTS.

THE Lunacy Acts Amendment Bill was read a third time in the House of Commons on July 30th. Various amendments standing in the name of the Home Secretary, Mr. Matthews, were adopted. One provided for the removal from the Bill of the provision that the medical man who has signed an "urgency order" for the reception of an alleged lunatic under care and control shall not in any case be one of those who shall sign the two medical certificates accompanying the petition for continuance of the lunatic's detention under care and control in the next subsequent stage of the proceedings. This amendment removes an annoying and unnecessary disability enacted by the existing Bill, and provides a desirable modification which it is to be hoped will find permanent place in the Bill.

Another good amendment was that which expunged from the Bill the subsection which discriminates against medical men among those persons who undertake the charge of "single cases," by limiting them to the reception of three specified classes of single patients, namely, those suffering from temporary unsoundness of mind, decay of mind in old age, or those desirous of voluntarily submitting to care and treatment. The amendment which expunged this subsection was quite in accordance with the recommendation of our Parliamentary Bills Committee.

Another amendment moved by the Home Secretary provided that if, in the case of any person having charge of a single patient, the Commissioners are satisfied that it is desirable, under special circumstances and for the interest of the patient, that another patient, or more than one other, should reside in the same house, that person may, with the approval of the Commissioners, receive such other patient or patients on the same terms and conditions in all respects as if each of them were a single patient.

We draw especial attention to the words "or more than one other," the practical tendency of which will be to increase the number of small private asylums by the addition of unlicensed ones. It would seem to be desirable that, if several persons of unsound mind are received in the private residences of medical men, or of other than medical men, some further checks should be devised for such houses than those applicable to houses where one such patient, or, at the most, two patients is or are to be received in the future. The privileges extended to such houses by the proposed amendment are the privileges extended to houses licensed for the reception of lunatics, and surely demand that the same checks and control and procedure should be maintained in the one case as in the other. The optional character of the exercise of the power proposed to be vested in the Commissioners in this matter affords some check to possible abuses; but we see no reason to empower an indefinite increase in the number of persons of unsound mind residing in a house not under the full control and supervision of a licensing authority, and of all the powers vested in such authority.

On this subject Mr. W. A. Macdonald proposed that all single patients shall be received into private dwellings on the same conditions as those applicable to the admission of patients into private asylums, and of private patients into public hospitals and asylums; and that medical practitioners who have sufficient accommodation shall be permitted to receive, without a licence, two private patients instead of one, as hitherto; and that instead of "once," as provided in the Bill, the visits of Commissioners shall be made "twice" yearly to patients in unlicensed houses. To these amendments we could only give very qualified approval. Where more than one patient of unsound mind is received the arrangements for visitation and supervision should not be less than they are at present; whereas they would be much less under these proposed amendments.

Mr. W. A. Macdonald proposed to abbreviate the possible delay, so inimical to the best interests of the patient in some cases, between the presentation of a petition for an order for the reception of a lunatic under care and control; by enacting that "three days" should be substituted for "seven days" as the space of time during which the petition must be, at least, begun to be considered. He also proposed to omit Clause 9—cast in a complicated form—giving the alleged lunatic the right, in certain cases, to have a personal interview—after his reception under care—with a county court judge, magistrate, or justice, who would thereupon report to the Commissioners; this has been opposed by our Parliamentary Bills Committee as a measure fraught with useless and pernicious irritation and disturbance to all concerned, and especially to the lunatic.

He wished also to omit the whole clause relative to the continuance of private asylums, and Mr. Atherley Jones wished to omit the subsection of that clause which prevents the creation of new private asylums, and prevents also any increase in the number of patients for which any existing asylum is licensed. The Parliamentary Bills Committee approved in a general way of the clauses on this subject, as they stand in the Bill, and therefore has not suggested any amendments thereto.

Several members had amendments on the clause relating

to pauper lunatics who are allowed to go out of county and and borough asylums to reside with friends, who are to receive allowances of money for the care and maintenance of such lunatics. This is a provision good in some cases. It requires to be closely regarded and most scrupulously supervised by the county and borough asylum authorities, in the carrying of it out practically, as otherwise it would easily be abused.

The amendments standing in the name of Mr. Macdonald were withdrawn, it having been found that most of them were covered by those proposed and passed by the Home Secretary. On the motion of Mr. John Ellis, Clause 45, relating to patients' letters, was reintroduced, in spite of the able protests of Sir J. Dorington, Dr. Farquharson, and Sir W. Foster, as well as of others; but the sting was taken out by a subsequent amendment accepted by the Government, which leaves the whole matter to the discretion of the Lunacy Commissioners. Some of those members who supported the reintroduction of the clause were labouring under grievous errors as to matters of fact; for example, those whose advocacy of the clause was bolstered up by the statements that no objection had ever before been urged to the clause, and that the Commissioners in Lunacy were entirely opposed to the Bill.

Mr. Atherley Jones's amendment for the rejection of Subsection 6 of Clause 55, as mentioned above, was withdrawn by leave, after discussion. As reported, he appears to have been under the misapprehension that the clause provided for increase in the number of private patients for which a private asylum may be licensed, whereas the Bill expressly excludes and prevents any such increase. Other statements were made on the clause which were the result of misapprehension.

LORD SANDHURST'S COMMISSION AND DR. RENTOUL'S RESOLUTIONS.

THE important though brief debate in the House of Lords on Lord Sandhurst's motion for inquiry into the distribution of public medical relief in the metropolis by hospitals, dispensaries, and poor-law infirmaries, and other like institutions, was brought to a not unsatisfactory termination by the statement of the President of the Privy Council that the Government recognises the necessity for an inquiry, and will during the recess consider the best method of inquiry and the scope which can be given to it. This undertaking, which Lord Kimberley from the other side of the House emphasised, is promising, if inconclusive. Nothing short of an exhaustive public inquiry can lead, we will not say to an adequate solution of the question and a final settlement of this complicated and much vexed question, but to any settlement in which the managers of such institutions, the medical officers who take part in their daily work, and who are the executive and efficient agents of the relief administered, the subscribers, and the vast population relieved will all have their various points of view considered, so that some general basis of agreement can be elucidated. The proposed inquiry and the movement now being initiated in our pages move in nearly parallel lines, but actuated by very different forces; so that one may aid but in no way supersedes the other.

Anyone who cares to turn over the pages of the JOURNAL for the last forty years will see that this subject has, from one point of view or another, occupied at frequent intervals, and, indeed, almost incessantly, the attention of various sections of the community; at one time, of the metropolitan profession, as at the meetings presided over some twenty years since by Sir William Fergusson; at another time, of the energetic committee initiated by the Midland Counties Branch, and carried on at great personal sacrifice and with masterly ability by Dr. Heslop, of Birmingham; since then by a committee of hospital managers and physicians in London, prominent among whom were Sir Charles Trevelyan, Sir Fowell Buxton, Mr. Timothy Holmes, Dr. Joseph Rogers, and others of like eminence and public spirit; and most recently by the conferences on provident dispensaries, and the best means of organising them, so as to limit the abuse of hospital out-patient departments and of the dispensaries, presided over by Sir T. Spencer Wells, with the assistance of Dr. Glover, Mr. Nelson Hardy, and many practitioners of all classes and of considerable experience. No doubt all these conferences, discussions, and reports have helped to ripen public and professional opinion, and to forward the solution of the questions involved. Some hospitals have adopted the expedient of limiting the number of their out-patients, some of requiring a small payment, some of establishing an inquiry officer. It is however sufficiently apparent that but slight progress has been made in the directions which are desired by those who view with regret and alarm the continued extension of the distribution of medical relief on terms absolutely gratuitous, or of almost nominal payment. The concurrent movement in the provincial hospitals is viewed with similar feelings in the provinces. The energetic efforts made by Dr. Rentoul to arouse the active co-operation of his fellow practitioners of all classes throughout the country to the growing and widely extended evils of the present system, or want of system, have all our sympathy, and will have all the support which it is in our power legitimately to give. The objects in view will, we feel assured, commend themselves to the great bulk of the profession, and could hardly fail to secure a considerable mass of support among the lay public, when once the profession has thoroughly thrashed out not only the principles involved, but the methods to be adopted.

It must however always be remembered that this is a vast question in which the profession must help themselves. We know of no Hercules who can lift the wheel out of the rut, unless each one of us puts his own shoulder to the wheel. Of paper resolutions and of eloquent letters and published speeches we have had reams upon reams, and oceans more of ink will be shed and waggon-loads of paper covered before the end desired is attained. We grudge neither the one nor the other to help so great an issue. But action is necessary, at least as much as the words which are its necessary preliminary. The question is one which can be solved, not by any decree from above, not even, we fear, by any general resolutions, but by the formation of Branch committees, which shall discuss the executive proceedings adequate to carry out any such comprehensive scheme as that which Dr. Rentoul has sketched, and which shall state in adequate detail their reasons for and against any or all of its parts, the modes in which they propose to carry it out, or any scheme like it or in substitution for it. They would then probably appoint delegates

to a central committee, which might be suggested to the Council. If ever there was a subject for the consideration of the professional groups embodied in our Branches, and to be ultimately dealt with by the Association as a whole, this appears to be one. But it may not be unwise to remember that it is one which will have to be dealt with *in loco*, and which will tax all the enthusiasm, all the tact, and all the energy of those who take it in hand. The interests are diverse; opinions which, so long as we dwell in generalities, appear to show a general concurrence, are apt to split up into very hostile and diverse groups when we come to practical settlement affecting individual interests or the vital constitution of particular clubs, dispensaries, hospitals, or infirmaries. It would be well if someone would tell us what was the subsequent history and ultimate issue of the unanimous action which Dr. Heslop succeeded in inducing the profession in the Midlands to take (through the action of the Birmingham and Midland Counties Branch) towards raising to a reasonable figure the rates of medical remuneration by sick clubs. That was a limited, vigorous, and effective movement. Did it ultimately succeed, or was it in the end defeated, as we have recently heard it stated? It depended on the unanimity of medical men, and considerable pressure was exerted throughout the district by the action of the Branch and the profession to secure such unanimity. On what rock did it split? Is it true that a very small minority, who refused to be bound by it, sufficed to bring it to grief?

Information on this subject would be very valuable. Meantime it will be interesting to read Lord Sandhurst's able summary of the existing evils in the metropolis alone in our parliamentary column—not at all new, but full of valuable truth—and to note Lord Cranbrook's cautious indication of the difficulty which he feels in interfering with public institutions set up and wholly maintained by those "who were breaking no law and infringing no rule of society, and who themselves found the means by which these institutions were carried on."

Thers are other important practical questions which will have to be considered? What is to be the sanction for the Public Medical Service? What is to be the ban or penalty on these who stand outside it, and who disregard or infringe its rules? Suppose that a general meeting of the Association accept these resolutions *en bloc*, and that the great network of friendly societies, sick clubs, hospitals and dispensaries take no notice of them; or that not more than one in twenty assent to or act upon them. What authority is to enforce them? How is the authority to be constituted? What penalties can it enforce on those who disregard them, and how? It is not a matter in which to be daunted by "lions in the path;" but we must face them if we wish to reach the end. The ill-wishers of the cause could desire nothing better than to see an elaborate series of resolutions carried which it was found ultimately impossible to bring to a practical end, and which ended in no workable scheme.

Dr. Rentoul, in his letter of this week, indicates one of the difficulties in referring to the relatively limited numbers in attendance at the annual meetings of the Association who can be persuaded to sit out a long debate. It is, of course, by no means purely a "general practitioners' question"—although they have a very vital interest in it; it is one for all classes of the profession, if for no other reason than that all must be induced to concur in some sort before any fruitful action can be taken. Nor, we should hope, would hospital physicians and surgeons generally, in the metropolis or in the country at large, in the end, or indeed at any stage, remain aloof. Throughout the country they have at various times taken active part in past movements of reform in the direction indicated, and many hundreds of members of that section of the profession have signed the memorial of the Charity Organisation Society which Lord Sandhurst on Monday presented to the House of Lords. Hence the importance of ripening the questions for solution by conference and debate, and endeavouring to work out in local circles all the advantages and disadvantages of any given mode of action. We feel assured that the sympathy of the Association as a whole will be assured for any well-considered scheme; but more than sympathy is required; the action of the Branches and the loyal concurrence of all the members will be needed for any form of action. The machinery will need to be created in each district for carrying out any scheme proposed. The undertaking is a great one, and any false or premature step might seriously retard the ultimate success which we earnestly desire for it.

REPORT OF THE ROYAL COMMISSION ON THE EDUCATION OF FEEBLE-BRAINED AND EXCEPTIONAL CHILDREN.

Last week we published a report of the Committee appointed by the Psychological Section of the Association to investigate the brain condition of children in primary schools, and by an unforeseen coincidence the *Times* of the same date published an extract of the Report of the Royal Commission on Blind, Dumb, and Exceptional Children, in which, after citing the evidence given by Dr. Francis Warner, the Commissioners say: "Besides imbeciles and idiots, there is an intermediate class of backward and feeble-minded children who require different treatment to that of ordinary children, and who are at present simply excused from school attendance."

They then make the practical recommendation "That, with regard to feeble-minded children, they should be separated from ordinary scholars in public elementary schools in order that they may receive special instruction, and that the attention of school authorities be particularly directed towards this object." We have for some years directed attention to the social importance of taking special care, in the public elementary schools, of those children whose defects in development and low brain power render them more liable to mental deficiency and social failure, and at the same time the absurdity of supposing that all children, under a system of compulsory national education, can be satisfactorily trained in a similar manner.

To give practical effect to the recommendation of the Royal Commission, it is necessary that the "exceptional and feeble children" in each school should be known to the management, and this can only be done by some kind of medical inspection of schools. It has now been established, by the report published, that children can be classified by scientific observation in schools without undue interference with school routine.

To complete the physiologist's work in the matter, more extended observations are needed to establish some definite understanding as to the relative value of the signs observed; a larger number of children in public elementary schools need be noted to determine the average condition of our school population, and the number of exceptional children for whom provision is needed. Besides the condition of children who must be considered as "exceptional" from the educational point of view, we are concerned, as a public matter, to know the causation of the frequent occurrence of "nervousness" and defects of development. To make a further study of "exceptional children," it would be very desirable to have records of the blind, of the truants, and cases summoned for non-attendance of school. It is on these grounds particularly that the action of the London School Board is to be regretted in preventing any inquiries being made in their schools by the Committee.

It is sometimes assumed that defects among a body of children of the poor are due to poverty; it remains to be seen what results would be obtained by an investigation conducted in public schools for boys, and in the high schools for girls. The recommendation of the Royal Commission is that the "exceptional children" should receive special instruction. It will be the duty of the Education Department to find out what modes of special instruction are best suited to the different groups of feeble children. This will probably be best effected by scheduling these children for a certain area, and appointing a competent authority to watch the effects of the methods pursued, and report thereon. When once it is determined that certain social questions are capable of analysis by observation of facts, there is good reason to believe that an increasing body of observers will throw much light upon the matter, and that satisfactory solutions may be found for problems that have long remained visionary owing to a want of analysis by scientific methods.

THE MOODS OF THE SANE.

It has been said that, "speaking scientifically, we cannot affirm that anybody is perfectly healthy." If the pathologist can detect the symptoms of disease in the most apparently healthy body, no less certainly can the neurologist indicate subtle manifestations in the mental states of the sanest amongst us, which serve to warn us how perilously near we may all come at times to mental derangement. Just as it is impossible to set up a standard of bodily health of universal application, so is it with the mind; one man's measure of mental health cannot be taken as that of another. "Health" and "whole," are both derived from the same Anglo-Saxon term, *hâl*, and no one man has the completeness of either bodily or mental soundness at any one time. We may be sane (safe, sound), but at best only relatively, and the varying moods of our sanity may often be strangely like the true persistent phases of the acknowledged alien. There are few of us who have not moments of depression or abnormal excitement, which, if unduly prolonged, would make us the objects of unpleasant attentions at the hands of our friends, and not one of us can say at any time that we shall never find those unhappy moods persist. Apart, however, from any such painful forebodings, it is an interesting subject to consider some of those mental attitudes of the perfectly sane, and trace their causes to their actual source. There is a posthumous paper in a recent number of the *Neurologist*, by Dr. Milner Fothergill, which deals—in the pleasant and instructive manner for which its distinguished writer was so celebrated—with this interesting question. If we would rightly know the workings of the human mind in their varied conditions, we must study them, as the brilliant author tells us, in the insane asylum. What angry man amongst may not find food for reflection, and learn the habits of self control from the incoherent ravings of frenzy? What garrulous self-centred man may not be rebuked when he sees his infirmity a little magnified in the flow of the talkative maniac?

The delusions of the over-sanguine, the groundless fancies of the visionary, the baseless conceptions of the jealous, and the morbid religiosity of the despondent man, all find their legitimate projections in some fixed conditions common enough in the dread abodes of the insane, and all have lessons for us. The asylum held up the mirror to the observant eye of Dr. Milner Fothergill, showing him our natural and healthy moods when perverted by disease mismanagement or neglect into forms of mental disorder. A bad habit or the dominance of an unfortunate predilection may disturb the balance of an otherwise healthy mind as effectually as the touch of a magnet on the balance wheel of an exquisite watch will impede its regular motion.

How easily is our mental balance disturbed! A single serious reverse may blight a man's hopes for life, yet with another and a sterner habit of thought the advancing phthisis of a Richard Jeffreys will not have the least ill effect. What a variety of moods are caused by food alone! A hungry man can scarcely be termed quite sane in comparison with one who is comfortably digesting the dinner of one of the "city companies."

A cynic might turn upon us, and declare that the man who has just dined well evidences his cerebral disturbance by the ease with which a liberal subscription can be obtained from him, and that his less replete moments are his prudent and normal ones. When the Church desire to reduce us to a proper sense of our deserts and shortcomings, she bad us fast, and as fasting has always been associated with penitence it might be argued by a theologian that we are more truly our real selves when hungry than full. Andrew Boorde, the monk-physician, in his quaint book *The Dyetary of Helth* rather inclines to the "city company" idea of sanity when he advises his readers to "Fyrste lyue out of syn, and folowe Christes doctrine, and than vse honest myrth and honest company, and vse to eate good meate, and drynke moderatly."

Shakespeare thought that the "lean and hungry" looking Cassius must naturally be dangerous, and the general testimony of English writers at any rate is to the close connection existing between fat folk and good temper. Dr. Fothergill was a grand example in himself, and we can picture the relish with which he wrote, "When the brain is well fed, it has a sense of well being; when it is ill-supplied with blood, it is irritable, miserable, and despondent." But alas, the very process of feeding the brain and making general contentment in the body too often vitiates the blood, and as the old writers would say "disturbs the humors." The good feeder gives a

standing invitation to the gout, and the gouty material in the blood makes a man "choleric," that is to say, hasty and irritable. The over-fat amiable man has fits of "the blues," he often descends to the melancholy mood, and then as old Burton says, "he is the cream of human adversity, the quintessence, and upshot." A disordered liver has made many a one think he has sinned the unpardonable sin, and a good purge has often lifted a burden from the conscience as heavy as that of Bunyan's Pilgrim. Dr. Fothergill thought that the atmospheric conditions of Bath and Bournemouth are distinctly answerable for their religious tone, whilst the tonic effects of Clifton have much to do with its intellectual activity. It would be interesting to compare Margate and Brighton with the special moods of their visitors, but these theories may easily be pushed too far, and we might find ourselves inquiring what are the characteristics of Monte Carlo which foster the gambling spirit, and what make the Neapolitans so light-hearted and frivolous. Perhaps diet has even more to do with the moods of the sane than atmospheric conditions. An old adage says that, "he who drinks beer thinks beer," but there is beer and beer. The German philosopher stimulates his brain to the highest intellectual exercises on beer, while our working classes deaden their not over active cerebral organisation on something called by the same name. Whether we are as sane as we might be in creating any sort of mood by alcohol is extremely doubtful, for most competent observers agree that the best sorts of intellectual as of other work cannot be done under its influence. "The accursed hag dyspepsia," as Carlyle called it, has been answerable for a good deal of the gloomier theology of the past and present. What a victim must have been that monk who wrote *Hell Opened to Christians*, with its appalling pictures of demons driving bolts into men's skulls, and toasting them on great forks! The author of *The Imitation of Christ*, on the other hand, must have been blest with a good digestion, and a liver which gave him no "moods." His biographers say he was "a placid, kindly, fresh coloured old man;" and, indeed, his books reveal all that. Probably our best moods are always tinged with a shade of melancholy. Montaigne says, "The most profound joy has more of gravity than gaiety in it;" and Dr. Fothergill wrote of the mental attitude of "feeling delightfully low spirited." "The rainbow of our thought life," as the author of *Thorndale* so beautifully expresses it, "is made of joy and tears, the light and storm." The dark and the bright threads of our life are so interwoven, that our healthiest attitude can never be unalloyed joy. The highest music, painting, and poetry most truly express the sanest moods of man when they exhibit joy chastened by the "sadness which is not akin to pain."

The lesson which we should endeavour to learn from a study of the moods which so easily possess us is the importance of a firm will-control acting like the inhibitory nerves. If our mental states are so often caused by pathological conditions, it is no less true that the mind can control the body; and the man or woman who, in popular phraseology, "gives way" to his moods, runs imminent risk of becoming their slave.

THE Baly Medal, of the Royal College of Physicians, has been conferred on Professor Heidenhain, of Dresden.

THE summer meeting of the Anatomical Society will be held at Leeds on August 15th, at 4.30 P.M. A large number of interesting papers will be read.

A REUTER'S telegram from Simla states that Deputy Surgeon-General Rice has been appointed to succeed Sir Benjamin Simpson as Sanitary Commissioner and Surgeon-General to the Government of India upon the latter's retirement.

DR. HENEAGE GIBBES, who has been Professor of Pathology in the University of Ann Arbour, Michigan, since January, 1888, has recently been appointed to the Chair of Histology in addition to that of Pathology. By this appointment, Dr. Gibbes will have a splendid laboratory with trained assistants and every facility for carrying on original work.

THE Municipal Council of Rome has decided to devote a sum of money to the formation of a Pasteur Institute. Confidence in M. Pasteur's treatment of hydrophobia is said to be increasing in Italy, as is shown by the fact that little by little all the principal towns are providing buildings for the treatment of the disease by inoculation.

LADY KORTRIGHT, formerly of Philadelphia, but now living in England, has presented 100,000 dollars to the Presbyterian Hospital at Philadelphia to found a Convalescents' Retreat. She has also given to the same hospital 40,000 dollars to build a male surgical ward, and 10,000 dollars to endow two perpetual free beds.

THE LECTURES AT THE ROYAL COLLEGE OF PHYSICIANS.

THE Milroy Lectures on State Medicine will be delivered next year by Dr. Ransome, of Manchester, the Goulstonian Lectures by Dr. G. N. Pitt, and the Lumleian Lectures by Dr. Hughlings Jackson. The Croonian Lectures, for 1890, will be given by Dr. Ferrier, and those for 1891 by Professor Burdon Sanderson.

INTERNATIONAL MEDICAL CONGRESS AT BERLIN.

WE have received a circular from Professors Bergmann, Virchow, and Waldeyer, stating that according to the resolution passed at the Washington meeting, September 9th, 1887, the tenth International Medical Congress will be held in Berlin, and be opened on August 4th and closed on August 9th, 1890. Detailed information as to the order of proceedings will be issued after the meeting of the delegates of the German medical faculties and medical societies at Heidelberg on September 17th.

STEAMING IN WEAVING SHEDS.

WE are glad to note that the question of steaming in weaving sheds to an extent injurious to the health of the operatives, to which we have called attention recently on more than one occasion, has been satisfactorily settled by a conference between the employers and operatives. The Cotton Factories Bill, which aims at settling the question on lines in conformity with those of which, after investigation, we had expressed approval, will now proceed as an unopposed measure, and there is reason to hope that it may pass this session.

BRITISH NURSES' ASSOCIATION.

ON Wednesday, July 31st, the British Nurses' Association held their first annual meeting in Cambridge. Professor Humphry presided at the general meeting in the Guildhall, placed at the services of the Association by the courtesy of the Mayor and Town Council. The members of the Association, to the number of some

120, were entertained at luncheon in the Hall of St. John's College, the Vice-Chancellor presiding; and, afterwards, in the Combination Room, Professor G. F. Browne gave a short address on the history of the University and the colleges. The nurses were then taken in small parties round the various sights of interest by graduates of the University, and afterwards were received at a garden party by the Vice-Chancellor (Dr. Searle) in the charming grounds of Pembroke College. The weather was perfect, and a very successful and pleasant day was spent.

COLOUR BLINDNESS AND DEFECTIVE VISION IN THE MERCANTILE MARINE.

At the last annual meeting of the British Medical Association, Mr. Bickerton, of Liverpool, directed the attention of the Ophthalmological Section to the prevalence of colour blindness in the mercantile marine, and the insufficiency of the tests now employed for its detection. He proved by the inexorable logic of facts that not only has this particular variety of impaired vision been productive of serious mischief, but that defective "far sight" in officers and look-outs must clearly be held responsible for numerous disasters at sea. The time seems to be now ripe for parliamentary action, and Dr. Farquharson will ask the President of the Board of Trade to-day (Friday) whether it is the case that a departmental committee has been appointed to consider the whole subject, and whether their report will be presented to the House before the end of the present session.

THE SANITARY INSTITUTE.

The autumn Congress of the Sanitary Institute will, as has already been announced, be held in Worcester, under the Presidency of Mr. G. W. Hastings, Q.C., M.P., on September 24th and three following days. The work of the Congress will be conducted in three sections:—I. Sanitary Science and Preventive Medicine: President, Dr. George Wilson. II. Engineering and Architecture: President, Mr. Henry J. Marten, C.E. III. Chemistry, Meteorology, and Geology: President, Dr. J. W. Tripe. The country meeting of the Society of Medical Officers of Health, including a general Conference of Medical Officers of Health, will be held on Thursday, September 26th, under the Presidency of Professor W. H. Corfield. A Health Exhibition, including sanitary apparatus and appliances, in connection with the Congress, will be open from September 24th to October 19th. Addresses to the working classes will be given by Professor Corfield, Mr. Henry Law, and Dr. J. S. Sykes. Further particulars may be obtained from the Secretary, Sanitary Institute, 74A, Margaret Street, W.

NOXIOUS GASES.

Sanitary legislation has no small difficulty in keeping up with the inventiveness of science and the activity of chemical industries. Mr. Alfred Fletcher, Chief Inspector of Alkali and Chemical Works, points out that almost all the noxious gases and vapours which are now discharged into the atmosphere in various manufacturing processes escape the influence of the existing Act, inasmuch as they belong to categories not named in the existing schedules. He suggests that it would be proper to schedule at present the acid compounds of chlorine, fluorine, sulphur, and nitrogen with chlorine and metallic fumes, and recommends that the list should be extended from time to time by provisional orders. This is obviously a valuable suggestion, and one which, it may be hoped, will be acted upon without delay. In the end manufacturers would no doubt find it economical, as well as for the advantage of the health of the neighbourhood, if they were to consume their waste products, instead of discharging them into the air.

DOES SMOKING PROTECT AGAINST INFECTION?

This subject has been closely investigated by Dr. S. Hajek, of Vienna. Tassinari, of Pisa, has already demonstrated by experiment that tobacco smoke destroys germs. Hajek found, by consulting statistics, that men who smoked were far less susceptible to the infection than the remainder of a population during an epidemic of diphtheria. Professor Oser has noted that in a certain outbreak of typhus three times as many women as men were attacked. It has already been pointed out that men, especially in cities, get more fresh air, as a rule, and follow healthier avocations than women. This fact must not be overlooked during the consideration of Dr. Hajek's theories. Again, very robust men, who resist infection, being "eupeptic," as Carlyle said of Field-Marshal Daun, can also tolerate a large amount of tobacco. It is true that Dr. Neudorfer has found that tobacco smoke contains pyridine, a destroyer of bacteria. If, however, persons not accustomed to smoke were to take to pipes, cigars, or cigarettes on the outbreak of an epidemic, they would probably make themselves very unwell and especially predisposed to fall victims to the prevailing pestilence. The mental condition of a man who has smoked tobacco too strong for him is a state of extreme depression, most unfavourable for his welfare during an epidemic. We advise non-smokers not to put their trust in pyridine during the prevalence of fevers, and to remember that their tobacco-loving friends owe their immunity to good health and strength, which enables them to stand tobacco and, at the same time, to resist infection.

THE HEALTH RESORTS OF THE BRITISH ISLES.

The Committee appointed by the Royal Medical and Chirurgical Society to investigate the climatology and balneology of Great Britain and Ireland will be presided over by Dr. Ord. Dr. Archibald E. Garrod will act as Honorary Secretary. It is proposed to obtain, as far as possible, precise and accurate information as to the medical value of the various health resorts, both inland and seaside, and to report fully upon the subject to the Society. By this means it is hoped that the profession generally may become more thoroughly acquainted with the importance and special uses of different baths and watering places, which may sometimes indeed supply to many sufferers all that can be obtained by more expensive journeys to foreign spas. Medical practitioners at the various baths and watering places of Great Britain and Ireland will further the work of the Committee by contributing information. Such information should be sent to Dr. Archibald E. Garrod, 9, Chandos Street, Cavendish Square, London, W.

DEATHBED CONFESSIONS.

A protest was not long since raised against a too ready acceptance of a dying declaration as necessarily true, and it was urged that, owing to his enfeebled condition, the mind of the dying person could seldom be in that clear state so necessary for a strict adhesion to absolute facts. But a distinction must be made between dying declarations and dying confessions. In the former, the person can have but little motive for not speaking the truth, and, if the medical man who received the declaration thought that the dying man was not in full possession of all his mental faculties, he ought to say so; but, in regard to deathbed confessions, motives often do play a very important part. A single instance recently narrated in an American contemporary by Dr. Benjamin Cotting will suffice. A man under sentence of death for murder confessed to having committed another murder two years previously. In this case the victim's skull had been beaten in, and the murderer stated where he had hidden the hammer with which he had done the deed. The discovery of a hammer at the spot indicated by the criminal seemed to lend great plausibility

to the confession; but Dr. Cotting had examined minutely the wounds on the murdered woman, which were peculiar, consisting of numerous clean, sharply cut, crescentic wounds, such as might have been inflicted with a turner's gouge, but could not by any possibility have been produced by the hammer in question. The criminal had in reality had nothing to do with this first murder, and it was evident that he had only made the statement in the hope that some well-disposed but foolish people would take up his case and urge that a monster who could be guilty of such atrocious crimes could not be in his right mind, and thus obtain an acquittal for him on the ground of insanity. Such a train of events had, indeed, happened a short time before his conviction in the case of another murderer. It may be urged that such a confession as this ought not to be compared with one made by a person dying from disease; but to this we would say that to the condemned criminal the fear of death must be quite as near and as real as to the person on his deathbed from a natural cause. It can easily be understood that other motives might be at work to influence the dying person to make an untrue statement in his confession; and, indeed, it might well be said that a person who could alone or in consort with others take the life of a fellow-man would not be likely to stick at a lie on his deathbed if it could save a companion or confederate from the gallows.

THE ERADICATION OF RABIES.

In a stirring appeal issued by the Society for the Prevention of Hydrophobia and the Reform of the Dog Laws, they point out once more that an Act of Parliament which would provide for the enforcement of the muzzle, and a system of registration and licensing, of which a practical scheme is drawn, would absolutely eradicate rabies. In Prussia, where these precautions are taken, there died in a given period of hydrophobia only two persons; in Great Britain, with about the same population, there died in the same period eight or nine. The muzzling edict of the winter of 1885 reduced the mortality from hydrophobia in London alone from twenty-seven persons, at which it stood for that year, to nine in 1886. It has now gone up again, and threatens to rise as high as ever.

LAW AND MEDICINE.

Mr. Clark Bell, president of the Medico-Legal Society of New York, was entertained at a reception by the President and Council of the Society for the Study of Inebriety, on July 26th, in the rooms of the Medical Society of London. The President, Dr. Norman Kerr, moved, and Dr. Walter Dickson, R.N., seconded, a resolution congratulating Mr. Bell on his services to legal medicine; on the effect of the discussions at the Medico-Legal Society of New York, on criminal procedure in cases in which persons sentenced to death have been ultimately respited on the plea of insanity; on his efforts to abolish physical restraint in the treatment of insanity in the United States; and on his pleas for a reconsideration of criminal procedure in the case of inebriate criminals, who were often really irresponsible and subjects of a true disease calling for medical and not penal treatment. Mr. Bell, in reply, spoke of the excellent state of English asylums for the insane, and dwelt strongly on the urgent need for a more humane and intelligent interpretation of the law as to inebriate responsibility.

THE CURETTE AND PARALYSIS OF THE UTERUS.

Curetting the uterine cavity is an operation not unpopular with many gynæcologists, and, therefore, frequently performed. It is not without danger, and requires several precautions; above all, strict precautions against sepsis. Operators have occasionally noted during the scraping process that the curette seems suddenly to go through into a space, as though it had perforated the uterine wall. Doléris has described this phenomenon, which he has found to arise from total paralysis of the uterus, due to the "minor" operation in question. Dr. Geijl, of Utrecht, confirms this theory, having observed the phenomenon in five cases. He also noted complete paralysis of the vesical walls after removal of two tumours from the bladder, and injection of boracic acid. In the case of the uterus, the curette can be passed back till it strikes against the posterior wall of the uterus, and, on introduction of the finger, the paralysed organ feels not like a flaccid bag, but rather like a distended sac. Fluids and air injected into the uterine cavity under these circumstances apparently resisted the pressure of the abdominal muscles. The question, discussed in the *Archiv für Gynäkologie*, vol. xxxi, part 3, is of high importance, and demands further investigation.

THE EXCRETION BY THE STOMACH OF MORPHINE INJECTED SUBCUTANEOUSLY.

Dr. Conrad Alt resumes from his experiments as follows: 1. After hypodermic injections of morphine, the drug is excreted by the stomach. 2. This excretion begins perceptibly 2¼ minutes after injection, persists distinctly for half an hour, and gradually ceases within an hour. 3. Vomiting after hypodermic injection begins when morphine is already present in the stomach, and it is avoided by washing out the latter. 4. The quantity thus excreted is a considerable one, it may be estimated at half the amount injected. 5. Symptoms of poisoning are decidedly ameliorated by long-continued washing out, doses otherwise certainly fatal are by this means tolerated without injury. In one experiment, a dog weighing 5 kilo., received hypodermically 20 cg. (3 grains) of "morphium," and twenty minutes afterwards 600 cubic centimètres of a 4 per cent. HCl solution were passed into the stomach, from which 5.30 cubic centimètres of fluid were then withdrawn. Dr. Baumert, Privat-Docent in Chemistry, Halle University, examined this liquid, and reported on it as follows: "The liquid handed over to me contains a substance which can be isolated by the usual method for morphium, and which shows the true morphium reactions. Estimated by calorimetry, the quantity was at least 0.063 grammes (nearly one grain)." These experiments, undertaken on Professor Hitzig's instigation, confirm completely the conclusions of Marmé, Leineweber, and others, and their practical application is self-evident.

TYPHOID FEVER IN DOGS.

Dr. J. R. Roberts, of the Indian Medical Service, has published[1] an interesting note on the occurrence in dogs of lesions resembling those of enteric fever in the human subject. While stationed at Sialkot during the last cold weather, he was led, by the occurrence of a heavy mortality among dogs of European breeds, to make a series of *post-mortem* examinations. In a certain proportion of cases he found the following coincident lesions: (1) an enlarged, dark-coloured, friable spleen; (2) swollen, inflamed mesenteric glands; (3) large oval ulcers in the ileum; (4) swollen oval patches; (5) points of submucous hæmorrhages; (6) large intestine with submucous hæmorrhages along the crests of the longitudinal rugæ seen in the dog; (7) inflamed vermiform appendix. The animals presenting these lesions had suffered during their illness from continued indisposition, increasing debility, distaste for food, vomiting, and stools which, if passed by a human patient, would be at once pronounced typhoid, though this was by no means invariable, as constipation might be present. The temperature might be high—in one case it was 104.5°—but temperature in dogs, though normally about 100°, can easily be raised to 103° or higher by exercise. About four years ago Mr. Bland

[1] *Indian Medical Gazette*, June, 1889.

Sutton communicated to the Pathological Society of London[2] a paper on the occurrence of a disease in monkeys and in beavers, which he identified with the typhoid fever of man; he also observed the lesions in a tiger in a solitary case. The only symptoms observed during life were diarrhœa and hæmorrhage, but it was not possible to make careful clinical observations. He pointed out that M. Serres had recorded the occurrence of typhoid fever in monkeys, dogs, and cats, and had made some extended observations during an epidemic which occurred among the monkeys in the Musée d'Histoire Naturelle, in Paris; the symptoms observed were diarrhœa, increased frequency of pulse, and fever, ending almost always in death. Dr. Roberts suggests that if further examination should prove that dogs, as he suspects, are liable to typhoid fever, that fact would help to explain the continued prevalence of the disease in Indian cantonments, in spite of the sanitary precautions taken.

LEPROSY IN NOVA SCOTIA AND NEW BRUNSWICK.

It would seem that the south-western portion of the Dominion of Canada has more importance as a centre of leprosy than has been generally supposed. As is well known, it was found necessary some time ago to establish a leper hospital at Tracadie, in New Brunswick. Three suspected cases having been reported in Cape Breton Island, Nova Scotia, Dr. Smith, the medical attendant of the Tracadie Leper Hospital, was commissioned by the Canadian Agricultural Department to make an inquiry; he fully confirms the diagnosis, adding that one of the three cases is in a very advanced stage of the disease. It is further reported that the cases in the hospital at Tracadie do not comprise all the lepers in New Brunswick, but that a considerable number of other cases are believed to exist, especially among the French residents in the northern part of the province.

ENGLISH PATIENTS AT THE PASTEUR INSTITUTE.

The number of patients under treatment at this institute continues large, and is maintained by new arrivals daily. The number treated last week has varied from 80 to 100 daily, the new arrivals one day numbering thirteen. Five patients from England are in attendance under the charge of Dr. Hime, as three out of four who were bitten in or near Bradford on July 17th. All these three are dangerously bitten, two badly on the hands, one on the knee and buttock. The dog travelled from Bradford to Keighley, nearly fourteen miles, and on his return journey bit a cow. The dog was at length killed, and its body unfortunately thrown down a disused coal pit, past hope of recovery. At the commencement of Pasteur's public treatment, Dr. Hime brought ten persons for treatment from Bradford, all of whom are still well. The only person who died of rabies, bitten by the dog which wounded these ten, was a man who did not undergo treatment.

TREATMENT OF ALOPECIA PRÆMATURA.

Dr. Oscar Lassar has contributed to the *Therapeutische Monatshefte* an interesting paper on the nature and treatment of alopecia (præmatura) furfuracea. This, the commonest form of baldness, is, according to the author, extremely contagious, and can be experimentally communicated from man to the lower animals, while every day it is unconsciously being spread widely among the general population. No specific organism has as yet been isolated, but a number of cases is given to prove the contagious nature of the disease. The following treatment is recommended as being efficacious in most cases:—The hair is washed daily with tar or other soap for 10 or 15 minutes, after which the soap is carefully removed with abundance of water. It is then rubbed with the following lotions: (1) hydragyri perchloridum ($\frac{1}{2}$ per cent. sol.) 150 parts, glycerine and eau-de-cologne of each 50 parts; (2) β-napthol 1 part, absolute alcohol 200 parts. After careful drying, the following pomade is to be used: acid salicylic 2 parts, tincture of benzoin 3 parts, olive oil to 100 parts. The cure may take six weeks or longer, and careful prophylaxis with regard to brushes and combs must be carried out.

2 *Transactions*, vol. xxxvi, p. 528; and Journal, vol. i, 1885, p. 944.

AMYLOID DEGENERATION OF THE PANCREAS.

At a recent meeting of the Kazan Medical Society, Dr. A. I. Podbelsky read an interesting paper[1] on amyloid degeneration of the pancreas, in which he drew attention to the fact that the morbid lesion is by no means uncommon. Having lately made 122 consecutive necropsies (in 71 chronic and 51 acute affections), he found degeneration of the gland in 12 (9.83 per cent.). Among the cases were 6 men and 6 women, aged mostly from 40 to 50. Most frequently it accompanied tuberculosis (in 40 per cent. of all cases of the disease), and somewhat less so syphilis. Waxy degeneration of other organs was found in 25 out of the 122 cases. Macroscopically the gland was always more or less anæmic. In cases where the amyloid degeneration was well advanced, or where it was complicated with cirrhosis, the consistency of the gland was distinctly increased, while in the presence of but relatively slight waxy changes, combined with intense fatty degeneration, the organ was rather soft. Its weight was invariably found to be augmented in comparison with the standard. The same held good in regard to the dimensions of the viscus, except in two cases complicated with cirrhosis and atrophy. Under the microscope the degeneration was found to affect the walls of the arteries and periacinar capillaries, the membrana propria and fibres of the interlobular connective tissue. Fatty degeneration of the secretory cells and Renaut's *points folliculaires* was always present. Dr. Podbelsky believes that the disease may be diagnosed, with probability during life, provided any new growths of the organ or obstruction of its duct can be excluded, from a chemical analysis of the patient's fæces with regard to fats and starchy matters.

LIVERPOOL HOSPITAL FUND.

The collections made on Hospital Sunday and Saturday amount this year to £10,009, being about £650 more than in 1888. The Committee have allotted £9,750 in grants, of which the principal are the following:—The Royal Infirmary receives £2,242 10s., the Royal Southern Hospital £1,560, the Northern Hospital £1,365, Dispensaries and District Nursing Society £682 10s. each, Infirmary for Children £585, Stanley Hospital and Eye and Ear Infirmary £487 10s. each. The remainder is divided between a number of smaller institutions.

ARTIFICIAL FEEDING AND INFANTILE DIARRHŒA.

Dr. Hope, Assistant Medical Officer of Health for Liverpool, in a statement to the Health Committee, has pointed out that there is at present a very high mortality in that city amongst children, chiefly due to diarrhœa and disorders of the stomach and bowels, and their consequences. Of 463 deaths from diarrhœa in infants under six months of age, which had been personally investigated, only 23 of the infants had been fed on the breast alone, the remainder having been wholly or partially reared on artificial diet. Dr. Hope said it was a fair estimate, based upon a careful inquiry, that in Liverpool the deaths from diarrhœa of infants under six months of age who are wholly or partially artificially reared are twenty times as numerous as the deaths of infants reared upon the breast alone. This experience of the officers of the Health Department will be fully confirmed by that of all practitioners who are engaged working among the poor, either in hospitals or elsewhere.

1 *Dnevnik Kazanskaho Obshtchestva Vratchei*, June and July, 1889, p. 2.

CLINICAL INSTRUCTION IN MENTAL DISEASES.

WITHIN the last year or two, the Lancashire County Asylum at Rainhill has been largely extended by the erection of a new building, about half a mile from the old one, capable of receiving about one thousand inmates. The old and new buildings together can accommodate upwards of two thousand inmates, and constitute a field that could scarcely be surpassed in extent and variety for the study of those mental diseases that are most common in this country. Dr. Joseph Wiglesworth, the newly appointed Superintendent, exercises a general supervision over the inmates and manages the estate, which is pretty extensive, with great success, being aided in the first duty by four assistant medical officers, who reside two in the old building and two in the new. Recognising the splendid opportunities at hand for the systematic study of psychological medicine, Dr. Wiglesworth has instituted a course of lectures and clinical instruction at the asylum in connection with Victoria University; and though, unhappily, practical acquaintance with mental diseases is not compulsory, a fair average of students have availed themselves of his teaching.

CANCER AND AGE IN ANIMALS.

AN instructive monograph on tumours in the lower animals, by Dr. Plicque, appeared recently in the *Revue de Chirurgie*. Amongst the more interesting definite facts included in his paper are the subject of melanosis and the relation of cancer to age. Melanosis, so malignant in man, is far nearer the innocent type of tumour in animals, especially in the horse. A melanotic nodule on a spot subject to irritation by harness sometimes disappears when the harness is adjusted so as to rub the new growth no longer. This phenomenon has even been observed after the growth has begun to ulcerate. Other tumours, especially sarcoma and carcinoma, are often more intensely malignant in animals, especially the horse, than in man. Animals protected by the resources of civilisation, so as to live to an old age rarely, if ever, met with in Nature, are epecially subject to cancer. Indeed, Dr. Plicque finds distinct evidence that age is far more predisposing to cancer in beasts than in man. Bouley, a French veterinary authority of experience, believes, on the ground of long observation, that dogs are doomed to cancer if they live to old age and are not killed by some acute pulmonary or gastro-intestinal affection. The cat, often cherished and kept alive when old and miserable, is also very subject to cancer in age. Statistics show that cancer is far more frequent in the carnivora than in vegetable eaters. This statement, as Dr. Plicque is careful to explain, is liable to mislead the pathologist, indeed it is a capital example of a statistical doctrine eminently calculated to deceive the thoughtless. For, if we only note what animals are mentioned above in this paragraph, the truth will become apparent. Old cats and dogs, carnivorous animals, are kept alive through a somewhat misguided philanthropy or rather zoophily. But an old horse is seldom favoured in this doubtful way, and cattle are killed, or ought to be killed, when they are young and tender. The herbivora have little chance of living long enough to have cancer.

PREGNANCY AND ABDOMINAL TUMOURS.

THIS subject is of equal importance to the practitioner and to the surgeon. Though the medical profession is better educated, and patients perhaps less reticent and less ignorant than formerly, error in diagnosis of abdominal swellings is still far from unfrequent. The overlooking of pregnancy is most liable to occur when a large tumour exists and is examined early in gestation, the patient concealing the fact, or being deceived by recent uterine hæmorrhage taken for menstruation. The cursory examination of a single woman who denies pregnancy is a fertile source of error. Lastly, multiparæ often ignore late pregnancies till gestation is far advanced, some of the symptoms which they experienced in earlier labours being suppressed. Dr. A. Vander Veer, of Albany, read a paper last month on "Concealed Pregnancy and its Relations to Abdominal Surgery" at the last annual meeting of the American Medical Association. He tabulated with great care seventy cases of abdominal section in which pregnancy existed as a complication not diagnosed. It was observed that the most eminent operators, as well as those of few opportunities, had made the same error relative to pregnancy. With the zeal for full and accurate reference which so distinguishes American medical writers Dr Vander Veer has not only searched the great library of the United States Surgeon-General's office, but dispatched several hundred letters to surgeons interested in the recorded cases, in order to gain as full details of every case as possible. Amongst other conclusions, Dr. Vander Veer is convinced that errors of diagnosis frequently depend upon conditions which make it absolutely impossible to avoid the same diagnostic conclusions should the same conditions recur in other cases. *Caveat operator!*

IRELAND.

KING'S PROFESSOR OF MIDWIFERY.

A MEETING of the College of Physicians was held on Friday, July 26th, when Dr. Macan, Master of the Rotunda Hospital, was elected King's Professor of Midwifery in the University of Dublin, in room of the late Dr. J. R. Kirkpatrick. There were several candidates, and of these Dr. A. Horne was second. The emoluments of the office are between £300 and £400 a year.

BATHING FATALITIES IN THE NORTH OF IRELAND.

WITHIN the last few days two fatal bathing accidents have occurred in the neighbourhood of Belfast, one at Groomsport and the other at Crawfordsburn. The victim in each case was a boy, and the cause of the fatalities foolhardiness and the absence of adequate life-saving apparatus. The watering-places of Ulster, which afford in many cases admirable deep-water bathing accommodation, are very imperfectly supplied with the requisite machinery for rescuing the drowning. It may be hoped that these accidents may serve to draw public attention to these deficiencies.

CENTRAL ANTRIM CORONERSHIP.

A CORRESPONDENT writes to us:—The contest for the vacant coronership in the county of Antrim is exciting great attention. The district, which includes four baronies, is very extensive. An active canvass is being prosecuted by the candidates and their numerous agents. There are now only two gentlemen in the field—a medical practitioner and a lawyer. The medical candidate, Dr. Dysart McCaw, Portglenone, is reported in the daily papers as being most cordially received everywhere he goes, and his election is confidently anticipated.

ULSTER MEDICAL SOCIETY: ANNUAL MEETING.

THE annual meeting of the Ulster Medical Society was held in the Museum, Belfast, on July 24th, the President, Dr. Burden, in the chair. The annual reports, which were presented and approved of, were of a satisfactory character. The balance in the treasurer's hands amounts to £112 5s. 1d. The annual election of office-bearers was proceeded with, the results being as follows:—*President:* Dr. McConnell. *Vice-Presidents:* Dr. Kevin and Dr. Dempsey. *Honorary Secretary:* Dr. McCaw. *Honorary Treasurer:* Dr. O'Neill. *Honorary Librarian:* Dr. Strafford Smith. *Pathological Secretary:* Professor Sinclair. *Council:* Professor Dill, Dr. Whitla, Dr. Byers, Dr. Lindsay, Dr. Calwell, and Dr. Bigger. A proposal to establish a medical club in Belfast was

brought forward, and after considerable discussion, in which the project was favourably received, a representative committee was appointed to consider the question and report to the next general meeting of the Society. On the motion of Dr. Lindsay, it was resolved that in future sessions the meetings of the Society be held regularly on the first Wednesday in each month from November to May, additional meetings to be arranged for when required.

THE AMALGAMATION OF MEDICAL SCHOOLS.

CONSIDERABLE progress has been made in the technical arrangements connected with the amalgamation of Dublin medical schools. The draft agreement has been before the Council of the College of Surgeons, and has been approved after certain minor emendations. It will be at once perfected, and will then be submitted for signature by the parties to the amalgamation. It is, therefore, almost certain that the new united school will open on October 1st.

THE ROYAL BARRACKS, DUBLIN.

WHEN the report on the sanitary state of the Royal Barracks was made last year by Sir C. Cameron and Dr. Grimshaw, Registrar-General, we referred at some length to the defects which had been found, and to the remedies which were proposed. Since that time occasional cases of typhoid fever have appeared, but within the last few weeks there has been a distinct increase. The improvements which are being carried out may be responsible for this, because of disturbance of the soil; and it seems a pity that the place was not completely cleared of troops early in the summer before repairs began. So far the occupants of the Royal Square have been removed to other barracks, but other blocks are still occupied. The Secretary of State for War has declared that the men will be put under canvas. There ought to be no more tinkering of these barracks. If they cannot be put into a thoroughly good condition, they ought to be closed before more money is wasted.

LOCAL GOVERNMENT BOARD FOR IRELAND: ANNUAL REPORT.

IN the last annual report attention was drawn to the decrease in the average daily number of persons relieved in the workhouses in the year ended January, 1888, as compared with the number relieved in the year preceding. The returns for the year under consideration show a further decline in the average daily number of persons relieved in the workhouse, while there was also a considerable decrease in the average daily number of persons who received outdoor relief. The average daily number of persons who received indoor relief during the year 1888-89 was the smallest number thus relieved in any year since 1882. There was an increase of 1,830 in the total number admitted in sickness to the workhouses, and an increase of 6,965 in the number admitted who were not sick, thus showing an increase of 8,795 in the total number admitted during the year as compared with the previous return. The number suffering from fever (or other contagious disease) was greater by 415, and the total number of persons relieved in workhouses shows an increase of 9,622. The total number of deaths in workhouses during the year was 9,892. In the preceding year the number was 10,187; there has, therefore, been a decrease of 295 deaths. Deaths by fever were 356, as against 383; by lung disease 1,717, as against 1,754; by phthisis 993, as against 1,083; and by small-pox 1, as against 3 deaths in the previous year. Dispensary medical officers attended 594,660 new cases, of which 186,106 were attended at the patients' homes, vaccinated 92,493 persons, and gave certificates in the cases of 1,644 dangerous lunatics. During the year ended September 30th 92,498 persons were vaccinated, showing a decrease amounting to 3,991, while 950 persons were vaccinated in the various workhouses. Thirty cases of small-pox were treated by dispensary medical officers, showing an increase of 12, while there were 3,800 cases of scarlet fever (a decrease of 19), and 4,357 cases of fever, being a considerable decrease as contrasted with the previous year. The total amount expended under the Parliamentary grant for medical and educational purposes during the year ended March 31st, 1888, namely, £82,596 10s. 10d., was less by £1,039 1s. 2d. than the amount during the previous year.

ROYAL COLLEGE OF SURGEONS.

AN ordinary meeting of the Council took place on August 1st, when the minutes of the last Quarterly Council were read and confirmed.

The PRESIDENT reported that Mr. Thomas Bryant had been elected the Bradshawe Lecturer for the present year, and that the lecture would be delivered at some convenient date in December, of which due notice would be given.

A motion was carried that the Library and Museum be closed as usual during the month of September.

The PRESIDENT reported, on behalf of himself and the Vice-Presidents, that they had considered the recommendations of the Executive Committee of the "Father Damien" Memorial Fund, and that, to give effect to them, they begged to nominate for election by the Council, Sir James Paget, Bart., as a Trustee, and Mr. Jonathan Hutchinson, President, and Sir William Mac Cormac as members of the standing Committee of the Fund. They reserved to a future occasion, when the scheme had been further developed, the nomination of the members of the proposed Commission.

It was resolved that the annual meeting of Fellows and Members of the College be held on Thursday, November 7th, at 3 P.M.; and that the notices respecting it and the contents of the report of the Council be the same as laid down in the minutes of the Council of August 6th, 1885, and of April 12th, 1888.

The PRESIDENT stated that in order to give effect to the new by-laws relating to the dental diploma, an appointment would be made, at the next Quarterly Council, of two new members of the Dental Board, one from the members of the Court of Examiners, and the other a Licentiate in Dental Surgery.

A letter was read from Mr. Wilde stating that in *re* Steele *v.* Savory, Mr. Justice Stirling had refused the plaintiffs' application for discovery of documents at this stage of the action, but had granted them three weeks further to deliver their statement of claim.

A resolution was carried *nem. con.* that a copy of the by-laws be given to each candidate before his admission to the Membership at such time as may be judged convenient.

The next Quarterly Council was fixed for Thursday, October 17th, instead of the usual date.

THE Library of the Royal Medical and Chirurgical Society will be closed from August 1st to an early date in October.

TUMOURS OF THE URETHRA AND PROLAPSE OF THE BLADDER.—Diseases of the female bladder are common; new growths in the urethra are, with the obvious exception of vascular caruncle very rare. An instructive case of a fibroma of the urethra was recently reported by M. Temoin before the Société Anatomique de Paris. The patient suffered from local pain and difficulty in micturition. A swelling the size of a hen's egg occupied the greater part of the vulvar orifice. This swelling proved to be a fibrous tumour of the urethra; it was removed by M. Tillaux. M. Thiéry noted, when the specimen was exhibited, that tumours of this kind sometimes undergo cystic degeneration. In that case they simulate prolapse of the bladder through the urethra. Erroneous diagnosis in the opposite direction might be followed by very grave results. The expliation of the entire vesical mucous membrane of the bladder, which sometimes occurs after lingering labours, with remarkably trifling local symptoms, must also be borne in mind in association with bodies of a doubtful nature found projecting from the urethra.

HISTORICAL EXTRACTS.

It has been recently suggested that the JOURNAL, in supporting the policy of progressive reform in the constitution of the Council of the College of Surgeons, and in advocating the support at the recent College elections of the new candidates who publicly declared themselves in favour of that policy, as against the re-election of the retiring candidates who had declared against it, was in some sort departing from the path of "duty and expediency," and was entering upon a new course, or at any rate adopting a policy which should henceforth be abandoned. It may be well, therefore, to examine this contention from the historical point of view, and to ascertain what has been the policy in this respect, and the course pursued by the JOURNAL of the Association in the past. A few extracts are therefore subjoined from leading articles of the JOURNAL during the last forty years and throughout its various transformations. They might have been multiplied indefinitely, for the subject is one which has, from the very first creation of the Association and the establishment of its JOURNAL, been repeatedly treated in its editorial columns. They will, however, suffice to show that from the very outset the policy now favoured, and the course now pursued, have been adopted in an unbroken chain of tradition from the very earliest days of the JOURNAL and of the Association down to the present moment. There has been no innovation, no change, no new line of departure. The paths of duty and expediency have hitherto been considered to be the same, and both have been trodden in the direction of continuous and progressive reform; nor has the JOURNAL at any stage of its existence ever hesitated to recommend candidates who favoured progressive reform as against its opponents.

Extract from the *Provincial Medical Journal*, edited by Dr HENNIS GREEN and Dr. STREETEN, 1842, pp. 356, 357.

"THE ROYAL COLLEGE OF SURGEONS AND MEDICAL REFORM."

"No sooner was it generally understood that Sir James Graham intended seriously to consider the question of medical reform, and endeavour to reduce the chaotic condition into which the sundry medical corporations have thrown the profession, than suddenly the corporations set about reforming themselves, all at once displaying the most apparent zeal for the interests and welfare of their Members and Licentiates. Amongst the most prominent of the twenty trading institutions in medical and surgical degrees which adorn the history of medicine in these kingdoms, none was more extravagant in its movements than the Royal College of Surgeons; and accordingly no time was lost in announcing, through the mouthpieces of the College, that the most liberal enactments were forthwith to be conceded in favour of a large portion of the Members. A number of Fellows was immediately to be made, and invested with extraordinary powers; the Council of the College was to be increased to double or treble its present number; the Court of Examiners was also to undergo a similar augmentation; and all Members of the College, who were not Licentiates of the Company of Apothecaries, were to be eligible to the highest offices in the corporation, and were to have a voice in all its affairs. Other intended acts of liberality towards the Members of the College, by the self-elected one-and-twenty, were roundly asserted to be all but completed; and, as if in ratification of these proceedings, tea-parties were given within the very walls of the College, to which all the Members were invited without payment, and the urbanity and condescension of the self-elected upon these occasions were strikingly characteristic of the whole.

"When, after repeated interviews with Sir James Graham, that distinguished statesman found it more difficult than he had imagined to deal with the question of medical reform in an honest and upright manner, and at the same time to preserve any of the extraordinary powers with which the irresponsible members of the Council of the College of Surgeons in London have invested themselves, he very prudently deferred the further consideration of the question until the next session of Parliament; and no sooner is this determination of Sir James Graham known, than all the promised reforms are put in abeyance, and the scanty privileges about to be conceded to the Members are scattered to the winds. The intended Fellows are no longer thought of—the augmentation of the Council is looked upon as a chimera—and as for increasing the members of the Court of Examiners, it is now spoken of as never having been seriously contemplated. Now this chicanery, although not uncommon in the movements of the Council for the last few years, will not do at the present time, and there are many long heads in the Council who know it as well as we do.

"The Members of the College, great and small, should bestir themselves during the recess, and if changes are proposed to be made in the constitution of the College in anticipation of the proceedings in Parliament next session, in reference to medical reform, those intended alterations should at once be demanded to be made known, and the opinion of the Members at large be expressed upon them. There never was a more favourable opportunity for the Members of the College of Surgeons to demand a participation in the affairs of their College than at present; and as a refresher to their memories, we reprint the following extract from the report of a public meeting of the Members of the Royal College of Surgeons, held at the Freemasons' Tavern, on February 18th, 1826, at which 1,200 were present. Mr. Lawrence having taken the chair, on the proposal of Mr. Tyrrell—

"Mr. Lawrence: 'Looking at the early charters, we find that the management of the art of surgery was entrusted to a master or governor, assistants, and the commonalty; by which latter expression I am to understand the general body of Members of the College. The Members at large are not recognised as possessing any connection with the administration of the affairs of the College. They have no voice in the election of the ruling powers of that institution; they have no control over the expenditure of its funds.'"

Extract from the *Provincial Medical Journal*, October 1st, 1842, p. 16.

"In the second place, the number of students who visit the capitals of England, Ireland, and Scotland, is very considerably influenced by the competition of the provincial schools; and this influence, as we predicted long ago, is increased with every passing year. The Council of the College of Surgeons endeavoured to check the progress of the provincial schools as long as they were able; but the injustice became too crying, and they were forced to yield. At these schools the student may now complete his surgical education without attending a single lecture in London; and it is not to be wondered that parents should prefer keeping their children under their own immediate control, rather than expose them to the temptations and corruptions of a distant metropolis."

Extract from the *Provincial Medical Journal* of December 31st, 1842, p. 271.

"The political press has been recently, and in a very sudden manner, inspired by a strange kind of zeal to uphold the privileges of the London College of Surgeons. For some months past various mysterious paragraphs have been going the round of the public papers, intimating to all whom it may concern, 'that the Poor-law Commissioners have recently dismissed all those who held Scotch or Irish diplomas from their offices under them as unqualified.'

"Nobody knew whence this kindly intimation came, although it was evident enough whither it was directed. The effect, however, has been to bring a golden harvest to the Council of the College, who, about the same period, generously threw open their portals to all comers, and have now appointed a special day (Monday) for the reception of elderly gentlemen whose bowels yearn for the garbage of the Poor-law Commissioners."

Extract from the *Provincial Medical Journal*, March 18th, 1843, p. 494.

"MEDICAL REFORM. PROPOSED CHARTERS OF THE COLLEGES OF PHYSICIANS AND SURGEONS."

"In the 32nd of Henry VIII, c. 40, we find the following section: 'And forasmuch as the science of physic doth comprehend, include, and contain the *knowledge of surgery, as a special member and part of the same*, therefore, be it enacted, that any of the

same company or fellowship of physicians, being able, chosen, and admitted, by the said president and fellowship of physicians, may from time to time, as well within the city of London as elsewhere within this realm, practise and exercise the said science of physic *in all* and every his members and parts, any act, statute, or provision made to the contrary notwithstanding.' Such were the sentiments of the founder of the College of Physicians; selfish and shortsighted men may now repudiate them, but they bear the indelible stamp of common sense, and must prevail.

"We may, therefore, assume that the union of medicine and surgery into one 'science of physic' is not only a return to the natural state of things, but also to the ancient and 'time-honoured' practice of our forefathers. The general practitioner should therefore be equally qualified in medicine and surgery; this qualification should be the same for all entering the profession throughout the United Kingdom, and the privileges of all thus equally qualified should be the same. Having obtained, under these just and simple principles, a body of medical practitioners fully but equally qualified, enjoying the same privileges and governed by the same laws, the next and natural step would be to incorporate them into one body—to create good feeling by union, and to raise the respectability of the profession by elevating the character of each individual member of it.

"A reform founded upon these principles would be a reform for the benefit of the profession and the public; and to the attainment of this object we earnestly entreat the members of the profession to direct their efforts, firmly and without delay. If the corporations obtain the new charters which they are now seeking in secret, a great obstacle will be thrown in the way of the right adjustment of medical reform; the independence and respectability of the profession will, as heretofore, be sacrificed to the shortsighted views of a few insignificant but wily monopolists, and the ostensible attempt to satisfy our demands will terminate in the infliction of a 'heavy blow and a great discouragement' to the progress of our science and the practice of our art."

Extract from the *Provincial Medical Journal*, October 28th, 1843, pp. 70, 71.

"THE NEW CHARTER OF THE COLLEGE OF SURGEONS."

"The abstract of the new charter of the Royal College of Surgeons of England, which we gave last week, will have put our readers in possession of the provisions of that document. In expressing any opinion upon these provisions, we were desirous to treat the charter with all respect on several accounts, and especially because it professes to be a first step towards that full reform of our medical institutions which must ultimately come. Whether the placing of the corporate rights of medical practitioners upon a sound basis be early or protracted, we cannot but see in this measure a step in advance; and whatever may have been the intention of those who framed it, and however they may have endeavoured to guard against future encroachments upon the detestable system of monopoly which lurks but ill-concealed behind the verbiage of liberality, the adoption of the elective system, imperfect as it is, and the extension of the numbers of those from among whom the elections are to take place, will in time work out a cure to the evil.....Before another quarter of a century, we venture to predict that the present attempt at retaining power and emolument in the hands of the few, disguised as it is by the apparent extension of that power to certain additional Members, will result either in the total overthrow of the College, or in such farther change of its chartered privileges as shall render it a fitting institution for the reception, on equal grounds, of every qualified surgeon in the kingdom.

"The members of the Provincial Medical and Surgical Association are well aware that the three leading principles of reform sought by the Association are: 1, uniform and efficient primary qualification in every branch of the profession; 2, equal right to practise for all so qualified through every part of Her Majesty's dominions; 3, the adoption of the representative system in the formation of the governing body or bodies.....

"In short, almost every provision relative to the election of the Council is faulty in the extreme. One-third or one-fourth of the Council ought to have gone out in rotation, instead of one-eighth, and the present members of Council should not have been excepted from the operation of the rule. Those going out ought not to have been eligible for immediate re-election. There is no reason, also, excepting only the system so evidently adopted of excluding the provincial Fellows, if such there should be, from the exercise of their rights, for the exclusion of proxies. As to Clause 18, which we produce here entire, we do not profess to understand it. 'That when any eligible Fellow shall have been passed by for want of any such nomination as aforesaid, or, having been balloted for, shall not be elected a member of the Council, he shall cease to be eligible to be elected, except upon such special terms of nomination as shall, by the Council by by-law, be for the time being provided for such cases; and upon such special terms, any Fellow so passed by or not elected may be re-nominated for, and be elected a member of, the Council; but if he shall be, on such second occasion, either passed by or not elected, he shall for ever thereafter cease to be eligible for election upon the Council.'

"We are willing, as we have before said, to receive the charter as a step in advance, for nothing could have been worse than matters as they are, or rather were; but to us it appears that, although, under its provisions, time may, and indeed must, gradually introduce the leaven of something better into the College, so that a new and more durable edifice shall arise out of the ruins of that which is rotten to its core, and must crumble into dust, the whole measure has been framed on an exclusive system, to keep, as long as possible, all power in the hands of the present Council and their nominees, to throw the provinces into the background, and to foster that system of centralisation which is prostrating before it and destroying all the energies of the country."

1844.

Special general meeting of the Association at Derby on Thursday, November 14th, 1844: present, William Hey (Leeds), T. P. Teale (Leeds), J. S. Soden (Bath), H. Terry (Northampton), Thomas Martin (Reigate), W. White Cooper (London), Robert Ceely (Aylesbury), Charles Hastings, M.D. (Worcester), W. D. Husband (York), Francis Sibson (Nottingham), Thomas Paget (Leicester), W. Jackson (Sheffield), and a large number of other leading men.

Mr. CEELY (Aylesbury) moved, and Dr. BRIGSTOCK (Derby) seconded, on behalf of Mr. R. Hey (York):

"That while the Association is sensible of the advantages which the profession will derive from a direct connection with the Government, they cannot but consider the proposed constitution of the 'Council of Health' as deficient in affording no express representation either of the physicians and surgeons resident in the provinces, or of the great body of general practitioners throughout the country."

Mr. WRIGHT (Derby) moved, and Mr. TURTON (Sheffield) seconded:

"That some provision ought to be made, either in the Bill or in amended charters to be granted to the Colleges of Physicians and Surgeons, for a more direct acknowledgment of the representative system in the councils or governing bodies of the corporations."

The resolution was carried unanimously.

The report of this meeting is in every way highly instructive, and would well repay perusal from beginning to end.

1845.

Extract from the *Provincial Medical and Surgical Journal*, Wednesday, March 12th, p. 165.

"We do trust that the Members of the College will unite at once in the endeavour to obtain an effective reform in this noble institution, rather than seek to humble or in any way injure its efficiency. But let them not apply to the Council of the College; such a course would be equally a waste of time and derogatory to themselves. Let their applications be addressed in sufficient number and force to Sir James Graham, for we cannot but believe that the Right Honourable Baronet is really desirous, so far as circumstances will permit, of doing what he deems to be for the benefit of the whole profession."

1846.

Extract from the *Provincial Medical and Surgical Journal*, p. 174.

Petition of the Gloucestershire Medical and Surgical Asscciation for a supplemental charter of the Royal College of Surgeons.

"1st. That the Council be, in the full meaning of the term, a representative body, and that to this end every Member of the

College, after ten years' possession of its diploma, and being of unblemished character, be allowed to vote in the election of the Council."

1849.

Extract from the *Provincial Medical and Surgical Journal*, edited by W. H. RANKING, M.D.Cantab, and J. H. WALSH, Esq., F.R.C.S., p. 710.

"Nothing can be more self-evident than that a gross injustice was committed in the carrying out the charter of 1843; but it is equally clear that nothing can now undo the act of the Council at that time in office, short of an entire abandonment of the *principles* upon which that charter was granted. It is now too late to inquire whether those principles were good or bad—whether it was just to make the distinction at all into the two classes of Fellows and Members; and therefore we can only expect the present Council to make what atonement may lie in their power for the mal-administration, by their predecessors, of the powers given them by the charter, which, if fairly carried out, would, we think, have been accepted as a boon by the whole profession."

1850.

Extract from the *Provincial Medical and Surgical Journal*, p. 275.

Resolutions of the Council respecting certain alterations deemed necessary in the charters and by-laws, and to which they request the sanction of the Secretary of State for the Home Department.

"That the voting for the election of Fellows into the Council shall be by marked lists; and every Fellow shall be at liberty personally to deliver in at the meeting appointed for the election the list of candidates forwarded to him, as before directed, or to transmit such list to the Secretary, provided the same, if transmitted, shall be received by the Secretary two clear days before the day of election."

Signed "by order of the Council, EDMUND BELFOUR, Secretary."

Resolution of the Gloucestershire Medical and Surgical Association, p. 299, 1850:

Resolved: "That in the proposed alterations in the charter of the Royal College of Surgeons of England this Association extremely regrets to perceive that the right of voting for councillors is not extended to Members of the College in general, irrespectively of their holding the Fellowship."

The report of the Council, carried unanimously, 1850, annual meeting of the Association at Hull, p. 455:

"Firstly.—That the only principles which will be satisfactory to the profession are the following, viz.:—

'Uniform and sufficient qualification in every branch of medical science; equal right for all so qualified to practise throughout Her Majesty's dominions; and the adoption of the representative principle in the formation of the Councils or governing bodies.'

"Secondly.—That in order to carry out these principles it is desirable that the Colleges of Physicians and Surgeons should be remodelled, giving to all Members, without other restriction than that of respectability and good character, a vote in the election of officers, and in the general management of their affairs."

In 1851 we find, nevertheless, Mr. South, then President of the College, attending the annual dinner of the Association in that capacity, and "honestly and sincerely expressing the feeling of gratification of the Council of his College at receiving the invitation of the Association to be present on the occasion." In the JOURNAL of 1853, then edited by Dr. Rose Cormack, we find the most urgent complaints against the management of the College. Condensed in the course of a long leader, is the following paragraph:—

"Their imperfect curriculum, their superficial examinations, the repulsive coldness with which they treat comprehensive schemes of medical reform (such as the Bill of our Association), and the sale of midwifery diplomas, all are very plainly the shifts and devices of men who dread impecuniosity."

The latter phrase was with reference to the expenditure on the museum. Not to dwell tediously upon incidents which mark the whole conduct of the JOURNAL for the last forty years, we find, in 1861, the JOURNAL, under the editorship of Dr. Markham, calling attention to the forthcoming election as one of "unwonted importance," and pointing out that, whereas "in the good old times, before the charter of 1843, the Council of the College of Surgeons consisted of eighteen or twenty members, who (as was the practice with corporate bodies in those days) judiciously elected themselves;" and that whereas "the old members of Council who were elected under the old system, and in possession of the honours and the pisces when the charter was obtained, were left in quiet possession" of a life membership, yet the members of Council under the new charter had established the practice of re-election "as a matter of course of the three gentlemen who went out by rotation; and, consequently, members of the Council under the new charter have hitherto looked upon their tenure of office as being as secure under the new as it was under the old *régime*." Under these circumstances the JOURNAL insisted that, for the first time in the history of the College, the retiring members—Mr. Bishop, Mr. Mackmurdo, and Mr. Solly—"whose only misfortune is that they happen to be the triumvirate on the occasion of whose retirement the new experiment happens to be tried," but for whom it professed personal esteem—should not be re-elected, and that Mr. Paget, Mr. John Adams, and Mr. Fergusson should be elected in their place. Mr. Solly, Mr. Fergusson, and Mr. Mackmurdo were actually elected. The JOURNAL of July 13th, 1861, pointed out, however, in very strong language indeed the unfair operation of the mode of election, and complained that in its opinion the Council had "contradicted and frustrated the meaning and especial object of their new charter."

These extracts would run on to intolerable length if we were to continue to make extracts from articles in such short succession; we will therefore refer in abstract and by date only, chiefly to the period when that eminent and much respected physician, Dr. Markham, was editor of the JOURNAL.

Thus we may refer to leading articles in the JOURNAL of Saturday, June 7th, 1862, p. 604, editor, Dr. Markham, on "The Medical Council and the College of Surgeons;" *ibid*, June 21st, 1862, p. 656, "Royal College of Surgeons;" July 5th, 1862, p. 14; August 23rd, 1862, p. 204; July 11th, 1863, p. 36, "The late Election of Councillors at the College of Surgeons" leader; and p. 37, *ibid*, "The College of Surgeons: its Mode of Electing Councillors;" October 31st, 1863, p. 476, leader on "The College of Surgeons;" *ibid*, November 7th, 1863, p. 510, Memorial of the President and Members of the British Medical Association, urging that Non-resident Fellows of the College may be enabled to Vote by Proxy at the Annual Election of Members of Council, signed J. A. Symonds, M.D., President, and T. Watkin Williams, General Secretary. Reply of the Council, November 24th, 1863, p. 590, *ibid*, that "it is not thought expedient, by applying for a new or supplementary charter, to endeavour to effect the object to which the memorial relates"—the ground indicated by the JOURNAL being the alleged expense involved. July 2nd, 1864, p. 12, leader, urging "that no examiner shall be member of the Council, except the President of the Court and *ex officio;* that no examiner shall hold office for more than five years; that country members shall have the power of voting by proxy at the election of councillors." JOURNAL, July 13th, 1864, p. 115, editor, Dr. Markham, leader, "The Court of Examiners of the Royal College of Surgeons:" "Let it be clearly understood that the indictment we lay against the Council is that, up to the present moment, they have done their very best to evade the meaning of the charter; and that, in the case of the Court of Examiners, they have hitherto done it effectually." Thirty-second annual meeting of the British Medical Association, August, 1864, further memorial ordered to be addressed to the Council of the College of Surgeons to render it

lawful for the election of councillors to be conducted by means of voting papers which might be filled up by non-resident electors; *ibid*, January 21st, 1865, further refusal by the Council of the College; *ibid*, May 27th, 1865, leader, headed "The Coming College Election," urging the election of Mr. Turner, of Manchester; *ibid*, June 10th, 1865, p. 593, urging the election of Mr. Charles Hawkins and Mr. Barnard Holt, in place of retiring members; *ibid*, June 17th, 1865, p. 618; *ibid*, June 24th, 1865, p. 645, leader, headed "The College of Surgeons:"

"That the position assumed by this JOURNAL, in reference to the management of the College of Surgeons, should not be to the taste of all members of the Council, we can readily believe. One kind of objection, however, which has been thrown at us, we most distinctly demur to. It has been stated that we are interfering with matters which do not concern us, and which are the proper business of the Council only. Also, it has been said that we have incorrectly stated the case against the College management. Ever since this JOURNAL undertook an inquiry into the doings of the College, these things have been said. But the fact is, that no single one of the statements made by us has ever been disproved; and we believe that no one of them is capable of being disproved.

"This JOURNAL, it must be remembered, was the first to investigate seriously the management of the College, to show its unsuitableness, and to demand its reformation; and we think we may fairly claim from the profession no small amount of thanks for having now for several years consistently and persistently prosecuted the question—not making it a matter of narrow personal interests, but arguing it on the broad and general basis of the rights and interests of the profession at large. From the very first we pointed out the evils and demanded the reform, which we now point out and still demand; but with this difference, that at the present moment the reform is manifestly near at hand. When we first demanded a vote by written papers for country Fellows, we were laughed at. When we first demanded that examiners should have no seat in the Council, we were laughed at. When we demanded that examiners should be elected by merit out of the whole body of Fellows, we were also laughed at. But now all this is altered. Now candidates for the Council appear on the platform pledged to support all these innovations! Could any greater illustration of the correctness of the views adopted and steadily pursued by us in this very important matter be given?"

JOURNAL, July 1st, 1865, leader, "Is the College of Surgeons properly governed?"; *ibid*, July 8th, 1865, p. 13, announcing the election of Mr. Turner; *ibid*, August 12th, 1865, p. 166, annual meeting of the British Medical Association, further memorial asking for voting papers; *ibid*, December 23rd, 1865, p. 661, answer of the Council, signed Edward Trimmer, secretary, "that such a mode of election would thereby be detrimental to the welfare of the College."

Presidential Address of Dr. SIEVEKING (*ibid*, July 8th, 1865, p. 1).

"Many years ago, Sir Charles Hastings sowed in our profession the seed of unity, unknown to our ancient corporations; and I ask the older members of our Association whether or not the tree that has sprung from it is putting forth branches to shelter, flowers to cheer and perfume, fruit to strengthen and uphold us in our pilgrimage. I cannot but think that, while the greatness of this country depends essentially upon the freedom with which individuals and individual corporations are permitted to develop, the 'vested' rights of both frequently arrest unduly the progress of civilisation."……

"If we look to more recent days, we still find in the British Medical Association, and not the least in the Branch which I now have the honour of addressing, numerous evidences of that watchful activity, zealous in the protection of the interests not less of its own members than of those medical men who possess no means of bringing their grievances before a proper tribunal; and I conceive that the motives which have actuated the gentlemen who have been most prominent on those occasions have been of the highest quality, because they were impelled by the conviction that, in advocating the advancement of certain sections of the profession, they were seeking to promote the best interests of our countrymen at large. Need I remind you of the labours of my friend Dr. Stewart in behalf of the medical officers of the army and navy, which have already resulted in considerable improvement of their position, for which I cannot but think that our acknowledgments are due to the authorities? Is it necessary to point to the good work done by Dr. Gibbon and his coadjutors in watching over parliamentary Bills, in suggesting to members of Parliament and to heads of the Government improvements in regard to the treatment of medical topics? It is in the columns of our JOURNAL that these and allied matters, to which it would be tiresome to allude more in detail, have always received such able consideration, not only from our esteemed and learned editor, but from many pens of which we may well be proud. May I be permitted to say here, that without such an organ—without such a vehicle for the due expression of the opinions of our members—none of those measures could have been been ventilated and promoted as they have been; and that I regard the existence of a journal like our own, issued at weekly intervals, as an essential and integral constituent of our body? In the rapid intercommunication established by its means lies one of the elements of our strength; and so long as it is conducted with the ability and fearlessness which has characterised it of late years, so long I should regard any organic change in that quarter undesirable."

JOURNAL, vol. i, 1886, leaders on the election of members of Council, pp. 559, 612, 668, recommending Mr. Charles Hawkins as candidate for the Council; *ibid*, p. 693, on paper voting; *ibid*, July 7th, 1866, p. 19, announcing the election of Mr. Charles Hawkins, in the room of Mr. Luke, who was also a candidate.

With this volume terminated the able editorship of Dr. Markham; and as the only object of this cursory examination of the past volumes of the JOURNAL was to show what had been the policy of the Association and the JOURNAL in the past, and prior to the commencement of the present editorship, it is unnecessary to continue these extracts further.

As a further contribution to the history of this subject, it may be of interest to note the following proceedings at a meeting of the Fellows and Members of the Royal College of Surgeons summoned by the President, and held in the College on April 22nd, 1870, under the chairmanship of the President of the College. Mr. Christopher Heath moved, and Mr. Hodson Rugg seconded, "That if representatives of the medical corporations should be continued by a new Medical Act, the Fellows and Members of the Royal College of Surgeons have, as a corporation, the right to elect a representative." Amendment moved by Mr. Gant, and seconded by Mr. Rogers Harrison: "That this meeting regrets the omission from the proposed Medical Act of any amended scheme of representation in the Medical Council; and that, to secure the direct representation of the general body of Fellows and Members of the Royal College of Surgeons, provision should be made distinctly empowering them to elect the representatives of the College in the said Council." The amendment was carried.[1]

BRITISH MEDICAL BENEVOLENT FUND.—The attention of members may be called once more to the great work accomplished by the British Medical Benevolent Fund, which, started in 1836 in connection with the Association, has, during its fifty-three years of existence, distributed £70,000 amongst afflicted members of the profession, their wives and children, either in immediate relief or annuities. The secretaries of the Metropolitan, South-Eastern, and other Branches add to the funds materially by inviting subscriptions on behalf of this charity when applying for their own subscriptions, and it is greatly to be desired that this example should be followed by the Branches generally. The cordial co-operation of the Branch secretaries with the Committee of the Fund would greatly increase the usefulness of the charity, and make its benefits more generally available.

A PAYING home for children requiring medical or surgical treatment will be opened next October in connection with the Victoria Hospital for Children.

MEDICAL MAGISTRATE.—Councillor Dr. W. J. Beatty, youngest son of Dr. Beatty, of Seaham Harbour, has been appointed by the Lord Chancellor a justice of the peace for the borough of Stockton.

[1] JOURNAL, April 30th, 1870, p. 449.

TOPICS OF THE DAY.

(AN OCCASIONAL COLUMN.)

BY THE EDITOR.

THE note of last week on the rejected motto of the *Edinburgh Review*—"*Tenui musam meditamur avenâ*"—has brought me much correspondence, partly philological, of which the enclosed from an eminent metropolitan physician is an illustrative example:—"*Tenui.....avenâ.*—When Jeffreys thought of this as a motto, I take it that he was punning; for certainly the Virgilian use of the "*tenuis avena*" was in the sense of a musical instrument, certainly not in the sense of exiguous nourishment or reward; so I cannot resist the temptation of sending you a line of 'chaff.'" Quite so; the suggestion was from Sydney Smith, and the phrase only a witty adaptation of the original, which, as our schoolboy reminiscences reminds us, ran "*tenui musam meditaris avenâ*," and contemplated the scrannel oaten reed of the musical shepherd. *Ridendo verum;* it was, however, too pitifully true not to be sincerely applicable to some of its authors; and being thin-skinned, like many a Thersites, they feared the double cutting edge of their own reed. It is in the sense of its bitterly true application to their own experience that some of my other correspondents address me. They have suffered or still suffer in the straitened struggle of professional life. I know not how to comfort them. Some of them attribute it to "hospital abuses," to cheap dispensaries, to cutting and internecine competition. This is the sad and sordid side of life, in and out of professions, which dulls many noble aspirations and blights many high capacities. It is not peculiar to this country.

I READ only this week of the suicide in Paris of a medical man aged 60 because, after years of struggle, he was unable to pay his rent. In Paris there is less "hospital abuse," I think, than in most other cities, the "*policliniques*" or out-patient departments being for the most part relatively limited in number and extent, governors' letters being unknown, and the hospitals provided with inspectors, who claim payment when, on investigation, the patients are thought able to contribute to their keep. Nevertheless, the bitter *quatrain* of Amédee Latour, the witty and sympathetic editor of *L'Union Médicale*, is still celebrated and mournfully true:

Le médecin savant et sans intrigue,
A Paris meurt de faim,
Ou, s'il arrive enfin,
Savant ou non, meurt de fatigue.

THE *Concours Médical* of last week devotes an article to the deplorable results of the plethora of medical men in terms not less bitter than does Mr. Wood, although the only examination is for a university degree, requiring at least five, and usually not less than fourteen, years of study. In central Paris it says there is one medical man for every eight houses, and the young doctor is reduced to treating the *concierges* of the neighbourhood for nothing in order that their address may be given to the sick residents in cases of urgency. The most recent *société de secours mutuels* requires only a subscription of 1s. 10d. a year. It sees only before it the gloomy prospect of increasing competition; education becoming every day cheaper and business less remunerative. "Que de déclassés en perspective, que de ventres et de bourses vides." It warns the young students of arts (for only bachelors of arts can become students of medicine in France) that cruel deceptions await them at the outset, and invites them to turn their thoughts in another direction.

MANY of the evils which we deplore do not exist in France. The chemist does not compete with doctor, and the prescribing pharmacist is pursued with the utmost rigour of the law; the sick club is much less developed, the out-patient department is barely a disturbing element; there is only one degree, which requires a preliminary degree in arts, and five to six years' study; the sham dispensary does not exist; yet the struggle for existence is deplorably severe, and Dr. Grellety is not less urgent than our correspondents of to-day in claiming relief from its pressure. The moral is that even when we have succeeded, with the help of Dr. Rentoul and all who will give him the earnest aid which he deserves, in securing remedies for the evils which he points out, there will still remain the need for discouraging the influx of excessive numbers into the profession. The plethora of doctors is one of the many causes of underbidding. The October orators, whose addresses fill the daily papers, are apt to draw too roseate pictures. Perhaps they will do well to urgently direct public attention to the reverse of the medal.

"DOCTORS differ" was not originally a dictum in applying to medical men, although it is commonly so used. The glorious uncertainty of law is almost as great as that of medicine, although in the one case all the elements of judgment are of a plain and agreed character, and contain only legal formulæ, behind which there is something hidden from observation or matter of conjecture. Nevertheless, courts of appeal are kept in constant occupation, and decisions reversed and re-established with startling frequency. An Act of Parliament, however, has no personal equation; it is entirely objective. So that, even if in so subjective a study as medicine anything like exactly scientific data or laws can be ultimately established, of uniform application to changing individualities, it will still be open to medical doctors to differ without reproach.

"No smoke without fire" is the old dictum; but "No fire without smoke" appears to be the converse proposition approved by the Select Committees of the House of Lords. Lord Campbell's Bill for the abatement of the smoke nuisance has twice been subjected to the ordeal of Select Committees, and each time it has been more severely mutilated. It reached last year a second reading in a satisfactory form, and passed through the ordeal of a Committee (which took evidence), emerging in a relatively satisfactory form. This time, however, it has been completely disemboweled, and has very wisely been dropped altogether for the session. It had secured the assent of the Duke of Westminster and other large London house-owners and ground landlords for its very mild propositions, which were of a permissive character,, and left everything to the option of local councils. It applied only to new buildings, but it seems as if the smoke demon was yet destined to a long and unimpeded despotism over the health, comfort, and domestic economy of Londoners, who growl at the recurrent winter smoke clouds, and ask, "What is the Smoke Abatement Institution doing?" but lift no finger to help themselves.

MEANTIME the domestic use of gas is making continuous progress, and electric lighting may cheapen the use of coal gas as fuel, while the mistresses of households may learn to imitate Professor Frankland, who has found the golden way to smokelessness by throttling his chimney mouth with a piece of sheet-iron, which narrows the smoke way, and using only coke, broken small, with results so pleasing to the household that the "servants would now refuse to use anything else." There remains the expedients, the using free-burning steam coal or anthracite, of "under-feeding" or "back-feeding" open grates, such as that in use at the rooms of the National Health Society, 43, Berners Street. In short, where there is a will there are a great many ways; but it is pretty clear that at present an Act of Parliament is not likely to be one of them.

IN respect to the muzzle, I have before me an interesting pamphlet by Mr. Alfred Cawdle, M.R.C.V.S., who has had much to do with dogs in the course of his professional career, and who writes, "Full well I know how very cruel many people consider this process of muzzling our canine pets, but from much observation I can assure them that a properly adjusted muzzle causes no pain, and in the majority of cases no inconvenience, to the animal, else, indeed, so intelligent a creature would scarcely come to one and stand perfectly quiet to have the instrument put on. Furthermore, I have found that those dogs who were most opposed to the process at first, from its strangeness probably, got thoroughly accustomed to it after two or three times wearing. Allowing, however, for the sake of argument, that there are animals who always find it inconvenient, surely to stamp out an affection which causes annually so many agonizing death-beds, it were better for the space of a few months to sacrifice the feelings of one of our most valued pets during his daily walks, than to hear of a stranger, or it may be see a near relation, writhing under the influence of hydrophobia."

MR. EDWARD JESSOP, of Hampstead, writes to the *Spectator* as follows:

"Sir,—I do not hope to convert Dr. Bell Taylor, and those who think with him, from the view that M. Pasteur's treatment is not

only inadequate, but harmful; but a case such as I will relate as simply as possible ought to have weight with them. In February, 1888, my dog was bitten by a dog with every appearance of rabies; immediately afterwards the animal rushed on and bit a boy very severely through the unprotected hand, the wound taking two months to heal; the dog had previously bitten its mistress and other dogs. All the animals were destroyed, with the exception of mine, at once. I kept mine, partly from affection for the animal, and partly to prove that the first dog was rabid. I may say that within three minutes after the bite I thoroughly washed the wound in my dog; but, in spite of this, he died of typical rabies on the fourteenth day after being bitten.

"Through the kindness of a patient of mine, the two people were at once taken to M. Pasteur, underwent the treatment, and are now (nearly a year and a half afterwards) in perfect health. I went to Paris sceptical as to the results of M. Pasteur's treatment; but, after seeing the scientific principle and the openness or all the great Frenchman's work, I returned firmly convinced, as every unbiassed person has done, of its efficacy and its harmlessness.—I am, Sir, etc.,

"EDWARD JESSOP, M.R.C.S., L.R.C.P."

To this the Editor of the *Spectator* subjoins the following merciful note:

"[Surely the cases are very numerous in which the virus of rabies has lain dormant much longer than a year and a half. One eminent surgeon vouches for thirteen years as the maximum known duration of dormancy in the virus.—ED. *Spectator.*]"

So that the tender mercies of this most humane and kindhearted of zoophilists are so far perverted by the strong prejudice which he entertains on the subject of the advance of scientific knowledge and healing power by experiments on animals, that, when driven from any other position, he comforts himself by publicly suggesting that possibly Mr. Jessop's patients may yet die of hydrophobia. Happily there is not the slightest possible ground for this painful suggestion, and it is one which, to say the least, is in such cases gratuitously cruel, since the final suggestion which he makes is one which has no accepted scientific basis, is contrary to all experience, and tends to keep alive in the minds of those who have been definitely cured a most agonising but unreasonable feeling of suspense.

MALCOLM MORRIS INDEMNITY FUND.

THE following additional subscriptions have been promised, and those who desire to contribute are requested to communicate without delay with Mr. G. P. Field, 34, Wimpole Street, or Dr. Sidney Phillips, 21, Upper Berkeley Street. Mr. Malcolm Morris's costs amount to £480.

	£	s.	d.
Amount previously acknowledged	381	2	0
E. R. Bickersteth, Esq. (Liverpool)	5	5	0
E. W. Hulse, Esq., M.P. ...	5	5	0
Dr. Felix Semon	2	2	0
Dr. Clement Godson ...	2	2	0
Rev. W. Venn	2	2	0
Edward Newton, Esq. ...	2	2	0
Dr. Heron	1	1	0
Lennox Browne, Esq. ...	1	1	0
Dr. Pye-Smith	1	1	0
Dr. William Keen	1	1	0
Waren Tay, Esq.	1	1	0
W. Knight Treves, Esq. (Margate)	1	1	0
Frank M. S., Esq.	1	1	0
F. Carter Braine, Esq. ...	1	1	0
Dr. Dolan (Halifax)	1	1	0
Charles Lewis, Esq. (Folkestone)	1	1	0
Messrs. Curtis and Co. ...	1	1	0
Dr. Owen Daly (Hull) ...	1	1	0
Dr. W. E. Porter (Wood Green)...	1	1	0
Dr. E. Markham Skerritt (Clifton)	1	1	0
Dr. H. Charlton Bastian, F.R.S....	1	1	0
Dr. F. T. Roberts	1	1	0
Edward East, Esq.	1	1	0
Surgeon-General Gordon, C.B.	1	1	0
Dr. Beevor	1	1	0
Dr. Brandt (Royat)	1	1	0
Thomas A. White, Esq. ...	1	1	0
F. Augustus Cox, Esq. ...	1	1	0
Dr. Amand Routh	1	1	0
John Mould, Esq.	1	1	0
Dr. Greville Macdonald ...	1	1	0
C. W. Chaldecott, Esq. (Dorking)	0	10	6
F. B. Hallowes, Esq. (Redhill)	0	10	6
Dr. Whitcombe	0	10	6
E. K. Thorpe, Esq. (Sheffield)	0	10	6

MEDICAL SICKNESS ANNUITY AND LIFE ASSURANCE SOCIETY.

THE Medical Sickness Annuity and Life Assurance Society has made arrangements to hold the sixth annual general meeting in the Philosophical Hall, Leeds, at 2 o'clock on Wednesday, August 14th, facility for doing so having been afforded the Society by the Council of the British Medical Association.

A copy of the very satisfactory first report of the actuary has been sent to each member, with a notice of the meeting. The Committee has, in addition, issued an interesting report on the work of the year, with the detailed accounts. The following is the text of the report:—

GENTLEMEN,—With this (our sixth) report we have the pleasure of presenting a copy of the first quinquennial valuation, which we trust will command your attention—containing as it does the results of the application to the affairs of the Society of the only tests from which trustworthy deductions can be drawn, and furnishing the basis for a sound judgment of its position. It is especially gratifying to us to find the conclusions we have arrived at each year, as to the success and safety of the work, which were based on careful observation of the Society's operations, coincide so closely with and receive such ample confirmation from examination and calculation of a more precise, complete, and technical character.

Numerical Progress.—With regard to the work of the year immediately under review, there has during the period been a satisfactory increase of membership—the proposals received numbering 124. Of these we are able to accept all but three—careful inquiry into several of the cases resulting in full and satisfactory particulars being readily supplied. Owing to non-payment 14 memberships have been allowed to lapse; one has been terminated by payment of a surrender value; and two members have died. If the whole number of these (20) be deducted from the proposals received, there remains a net increase of 104, bringing the total membership at the close of the financial year up to 985. The number of deaths (2) is unusually small—and it is noteworthy that neither of the deceased members had availed himself of the Life assurance branch of the Society. The net increase, though satisfactory, is three fewer than that of the previous year. Although the position of the Society is fortunately such as to render it in no sense dependent on the influx of new members—the present members amply providing for themselves—the constant extension of its work, especially among the younger members of the profession, is very desirable, as a matter of public usefulness, and we take this opportunity of inviting the co-operation of the members in making the advantages and stability of the Society more fully known and increasing its numbers.

Sickness and Accident Pay.—It will be noted the amount disbursed for sickness-pay is considerably in excess of that for the previous period, which was a peculiarly favourable one. This increased expenditure represents, however, payments on over 100 more lives at risk, and is further accounted for by the gradual addition to the risk of sickness as the ages of the members advance—a factor which was contemplated and provided for in the calculation of our tables. Payments were made during the year to 130 members, for 636 weeks' 6 days' illness (as compared with 125 members, and 524 weeks' 1 day's illness in the preceding year). The result is therefore not so much due to any appreciable increase of the number of members sick, as the incidence of several prolonged claims on account of severe and serious illnesses. Such cases are an important part of the Society's work, and afford striking proof of its usefulness, while it must be a pleasant reflection to members fortunate in the possession of good health that their mutual assurance has helped to alleviate at least some of those mental anxieties that only too frequently accompany and aggravate severe physical suffering. The illnesses have been very diverse in character, and the localities in which they occurred widely distributed as usual—the only feature calling for special remark being the comparative frequency of claims, on account of the results of accidents. The annuity fund accounts do not call for comment, and the only noteworthy point in the figures relating to the life assurance fund is the fact of not a single claim having arisen during the year.

Economy and Efficiency of Management.—The expenses of management have naturally increased with a constantly increasing membership, and there has been a moderate rise in the cost of the official work, which would probably be expected after over five years' growth. There is one item, however—that for valuation—not of a normal nature, and involving an expenditure of £88 5s. 0d., besides some addition to the cost of printing, which really belongs to the whole quinquenium. Charging all this, however, to the current year, there still remains a saving on the period of £502 3s. 1d., while the 10 per cent. deduction for premiums yielded £983 10s. The cost of management has thus been under 5 per cent. of the premium income, and there is now an accumulated fund of £2,498 18s. 7d. as the result of administrative care and economy. It is right to remember, how-

ever, that this gratifying state of things is largely, if not wholly, due to the able service constantly rendered by the committees, and in an even larger degree by the officers, without payment. The latter exercise a constant and active supervision over the transactions of the Society, the particulars of its disbursements being submitted to them each week. The great value of such a system must be obvious, and doubtless promotes efficient control over the sickness claims, as well as secures economy in management. Further help in this direction is afforded by the ready manner in which notices and reports of the work of the Society are published by the medical press of the metropolis and the provinces—the Society being especially indebted in this respect to the Editor of the BRITISH MEDICAL JOURNAL. Our acknowledgments are also due to the Council of the British Medical Association for the facilities afforded each year for the annual meeting, and to its officials for numerous courtesies.

Increase of Reserves.—Taken on the whole, we think the financial operations of the year may be regarded as eminently satisfactory, while the increase on the reserves is the largest yet made in a similar period—£7,866 15s. 3d.; the invested capital now amounting to £32,247 12s. 1d., and the total funds of the Society to £32,561 13s. We append a statement of the amount of the funds at the end of each year, with the annual increase from the commencement:—

Date.	Amount of Reserves.	Increase of Years.
June 30, 1884	... £1,434 16 3 ...	—
„ 1885	... 6,433 0 10 ...	£4,998 4 7
„ 1886	... 11,330 7 6 ...	4,897 6 8
„ 1887	... 17,645 3 0 ...	6,314 15 6
„ 1888	... 24,694 17 9 ...	7,049 14 9
„ 1889	... 32,561 13 0 ...	7,866 15 3

The Annual General Meeting.—With reference to the business to be considered by the annual general meeting, it will be noted that this comprises two important items in addition to what may be regarded as the usual and ordinary matters.

The Quinquennial Valuation.—The first of these is the very interesting and complete report on the valuation of the affairs of the Society, for which we are greatly indebted to our actuary, Mr. F. G. P. Neison. Into the details of this particularly clear statement it is not necessary for us to enter, beyond congratulating the members on the substantial surplus exhibited thus early in the existence of our organisation. The question naturally arises as to the policy to be pursued with regard to this surplus, and we strongly recommend you to follow the prudent advice of the actuary, and allow it to remain unappropriated until the next valuation, at the close of 1893, brings you a further five years' experience. This course can be the more readily recommended as the sum in question will remain under the care of the trustees and the control of the members, accumulating at compound interest, and in the meantime steps can be taken to prepare alternative proposals for its appropriation for the advantage of the members, which it will no doubt be the duty of the Committee to submit after the next valuation. It is, however, equitable that the *interim* rights and the length of membership of all should be fairly considered in any future plan, and when an appropriation of surplus does take place, that due allowance should be made to the representatives of any of the present members who may unfortuately die in the meantime. We think this should be understood as a general condition attached to the adoption of this report; and, if this be done, the only obstacle to following the course indicated by the actuary, and recommended by us, will have been removed.

Amendment of Rules.—With regard to the proposed amendment of Rules, those in VIII, IX, XI, and XII are such as the results of our experience of the administration of the sickness fund show to be necessary for the exact and punctual performance of the official work, and for that equality among the various classes of claimants which is especially essential in a mutual society. The addition to Rule VII, dealing with retirement from practice, is found to be a necessary one, as under such conditions the true test of a sickness claim—namely, enforced abstention from customary professional work—is naturally absent. Further, as in such cases the full value of a member's interest is to be paid him on the cessation of his contract, no loss will be inflicted on him. The restriction introduced into the same rule as to the period of membership before a surrender value can be granted follows an approved practice in insurance work, and should further promote the stability and permanence of the Society. The alteration proposed in Rul XV, providing for the payment of a single sum at age 65 (when desired), in place of an annuity, will, we anticipate, secure your ready approval, affording as it does an opportunity for increased option by the members in this branch of the Society's work. It should, however, be clearly understood that, if the alteration be adopted, such option must be exercised strictly within the period stipulated for in the proposal, as any attempt to allow the selections to be made late in life and near the annuity age would be an extremely dangerous experiment, which would certainly prove prejudicial to the annuity fund.

Any explanation of the proposals possible in this report must necessarily be brief, and, if requisite, will be supplemented when they are submitted to the annual meeting. We venture to hope that in the meantime the amendments proposed—and, indeed the whole work of the Society—may receive your full and careful consideration, and that the results arrived at, being equitable and advantageous to all the members, will add to the very large measure of success already achieved, and further increase the usefulness and popularity of the Society.

Arrangements have been made for the Secretary to attend at Leeds during the meetings of the British Medical Association, and he will be prepared to give any further particulars and full information. Papers, reports, prospectuses, etc., will also be supplied (free of cost) at a table in the Reception Hall; or these will be forwarded to any address on application to the Secretary, Mr. C. J. Radley, 26, Wynne Road, Brixton, London, S.W.

ROYAL COLLEGE OF PHYSICIANS.

THE adjourned meeting of the Fellows of this College was held on Tuesday, July 30th, Sir ANDREW CLARK presiding.

J. L. Whitehead, M.B., St. And., was admitted to the Membership of the College, and C. Meymott Tidy, M.B., was appointed Examiner in Chemistry.

The quarterly report of the Finance Committee, the annual report of the Library Committee, and the annual report of the Curators of the Museum were received and adopted.

A report was received from the Committee on the Extension of the Examination Hall Buildings, which stated that the plans had been modified in accordance with the recent legal decision, and that the Colleges had agreed not to carry the east wing higher than the roof of the second floor, and to pay all the costs of the action.

A report was received from the Leprosy Committee, on which considerable discussion took place. Certain modifications having been introduced with the consent of the members of the Committee, the report as amended was adopted, and the Registrar was directed to send a copy of it, with a letter expressing the willingness of the College to co-operate in the matter, to the Committee of the "Father Damien Fund."

The Committee appointed to consider the Report of the Royal Commission (1888) on a University for London sent in a report.

The PRESIDENT pointed out that the College had now to look at the question from an entirely new standpoint, and it was agreed that there should be an opportunity of discussing the whole subject before asking for the further co-operation of the Royal College of Surgeons. The Committee, consisting of the President, the Registrar, Sir Risdon Bennett, Drs. Pye-Smith, Allchin, MacAlister, and Andrew, was reappointed, and to it were added the names of Drs. Norman Moore and Coupland.

DELIVERY OF A MACERATED FŒTUS.—DR. SARA POST, of New York, relates, in the pages of the *Medical Record* for July 13th, an instructive case of this kind, likely to prove of interest to the practitioner and obstetrician. A primipara, quickened in October, 1888, had a fall, wounding her knee badly, in January. The movements of the child ceased in February. In March, about the calculated time, labour came on. A bag, feeling leathery and very unlike the amniotic sac, presented. Labour was much prolonged; no waters came away. Dr. Post thought of rupturing the membranes, but the bag felt muscular or fleshy, and a monstrosity was suspected. Suddenly, when the patient learnt that a consultation was intended, labour pains came on again, and some loose cranial bones were felt in the presenting bag. At length a macerated eight-months' fœtus was delivered. The integuments of the scalp and face formed a bag, containing the brain reduced to a thick, red fluid, in which floated the relics of the cranial bones. The specimen was free from offensive odour.

ASSOCIATION INTELLIGENCE.

COUNCIL.

NOTICE OF MEETINGS.

A MEETING of the Council 1888-89 will be held in the Council Room, Mechanics' Institute, Leeds, on Tuesday, the 13th instant, at half-past nine o'clock in the forenoon.

Meetings of the Council 1889-90 will be held in the Council Room, Mechanics' Institute, Leeds, on Wednesday, the 14th instant, at half-past nine o'clock in the forenoon, and on Thursday, the 15th instant, at half-past nine o'clock in the forenoon.

FRANCIS FOWKE, *General Secretary.*

August, 1889.

NOTICE OF QUARTERLY MEETINGS FOR 1889. ELECTION OF MEMBERS.

A MEETING of the Council will be held on October 16th, 1889. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting, namely, September 26th, 1889.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member *by the Council* or by any recognised *Branch Council.*

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No member can be elected by a Branch Council unless his name has been inserted in the circular summoning the meeting at which he seeks election.

FRANCIS FOWKE, *General Secretary.*

COLLECTIVE INVESTIGATION OF DISEASE.

THE series of Maps forming the Report of the Collective Investigation Committee on the GEOGRAPHICAL DISTRIBUTION OF RICKETS, ACUTE RHEUMATISM, CHOREA, CANCER, AND URINARY CALCULUS are deposited in the Library of the Association, and are open to the inspection of members. A descriptive commentary appeared in the JOURNAL of January 19th, 1889.

An inquiry into the ORIGIN AND MODE OF PROPAGATION OF EPIDEMICS OF DIPHTHERIA is in progress.

Memoranda and forms for communicating observations may be had on application to the Secretary of the Collective Investigation Committee, 429, Strand, W.C.

BRANCH MEETINGS TO BE HELD.

METROPOLITAN COUNTIES BRANCH.—A special general meeting will be held at the rooms of the Medical Society of London, 11, Chandos Street, Cavendish Square, W., on Tuesday, August 6th, at 5 P.M., to reconsider the resolution passed at the annual meeting of the Branch on July 5th respecting the annual meeting of the British Medical Association in 1890.—NOBLE SMITH, 24, Queen Anne Street, W., and H. RADCLIFFE CROCKER, M.D., 121, Harley Street, W., Honorary Secretaries.

SOUTH-WESTERN BRANCH.

THE fiftieth annual meeting of this Branch was held on June 18th, at the Guildhall, Bodmin, and was attended by between forty and fifty members. The Council met at 11.30, after which the members were hospitably entertained to luncheon by Mr. W. Pearse, the President-elect.

Retiring President.—At the general meeting the chair was taken by the President, Dr. JOHN WOODMAN.—The HONORARY SECRETARY read the minutes of the last annual meeting at Exeter, and of the intermediate meetings at Tiverton and Paignton.—The PRESIDENT, in resigning the chair, introduced the President-Elect, Mr. PEARSE, who took the chair.—Dr. THOMPSON, Launceston, proposed a vote of thanks to Dr. Woodman for the ability with which he had discharged the presidential duties during the year. This was seconded by Mr. GOULD, Hatherleigh, and carried by acclamation.

Presidential Address.—Mr. PEARSE then delivered his inaugural address, which, after a welcome to the members, and a sketch of Bodmin and its history, was devoted to a review of some of the great changes which had taken place in the practice of medicine and surgery, and of the enormous progress which had been made during the fifty years which had elapsed since the South-Western Branch was inaugurated.—On the motion of Dr. WOODMAN, seconded by Dr. DEAS, a cordial vote of thanks was accorded to the President for his interesting and suggestive address.

Report of Council.—The HONORARY SECRETARY read the report of the Branch Council as follows: The Council are glad to be able to report that the number of members attached to the Branch has been well maintained, in spite of a larger number of resignations than usual. Twenty-three new members have joined the Branch, of whom eighteen were already members of the parent Association. Three members have been removed by death, fifteen have resigned (of whom eight were leaving the district), and four have been removed from the list of members of the Association. The actual number now on the roll is 216, being one more than at date of last report. The number of members of the Association resident in Devon and Cornwall, who are not members of the South-Western Branch, is still considerable, although it has been much diminished during the last two or three years; and the Council would again express the hope that individual members in different parts of the district will use their influence to induce more to enrol themselves as members of the Branch. The annual meeting at Exeter was in every way a most excellent and enjoyable one, and the Council would also express their gratification that since then intermediate meetings have been held at Tiverton and at Paignton, which were well attended and markedly successful. The Council are satisfied that the success of the Branch as a means of promoting medical work and discussion depends largely on these district meetings, and trust that every effort will be made to continue them regularly. Early in the present year a circular letter, signed by many prominent members of the Association was forwarded to the Presidents of all the Branches, criticising in several respects the manner in which the JOURNAL was conducted, and suggesting certain changes, the chief of which were that all articles, reviews, etc., should have the author's signatures appended, and that the character of the advertisements should be more carefully controlled. This question was brought forward at the Paignton meeting, when the feeling was unanimous that this matter was essentially one to be discussed by the Council of the Association, and that the memorial in question ought to have been presented to the Council in the first place as the elected governing body of the Association. This matter has since been thoroughly discussed by the Council in London, and, while it was decided that the suggestion that all articles should be signed could not be entertained, an important step was taken to relieve the Editor of some individual responsibility, and to introduce a more representative element into the management of the JOURNAL, by deciding that a Committee of Reference be appointed, to act in consultation with the Editor, to which all articles, etc., should be submitted before publication, the Committee to consist of the President of the Council and the Treasurer of the Association, with two gentlemen to be nominated by the Journal Committee and submitted for approval to the Council. Your Council highly approve of the change thus made; they believe it will tend to inspire more confidence in the management of the JOURNAL and to remove some grounds of dissatisfaction. The annual meeting in 1890 falls to be held in some place in Devon other than Exeter or the three towns, and as no meeting has been held in North Devon for some years, your Council recommend that the next annual meeting be held at Ilfracombe, and suggest the name of Dr. Slade-King for President-Elect. In regard to the financial position of the Branch, it is reported that there is a balance on the credit side of £30 7s. 3d.—On the motion of Mr. J. ELLIOT SQUARE, Plymouth, seconded by Mr. J. B. KERSWILL, St. Germans, the report of the Council was adopted.

Election of Officers.—Mr. SOMER, Broadclyst, moved that the next annual meeting be held at Ilfracombe, and that Dr. Slade-King be nominated as the President-Elect. This was seconded by Mr. M. H. BULTEEL, Stonehouse, and agreed to.—Dr. WOODMAN, Exeter, in proposing that the President, Mr. Pearse, and the Honorary Secretary, Dr. Deas, should be elected as the two representative members on the Council of the Association, advocated the principle of electing the President of the year as one of the representative members.—Dr. Woodman's motion was seconded by Dr. THOMPSON, Launceston, and unanimously agreed to, Dr. Woodman's opinion that the precedent thus set should be followed in future years, being generally endorsed.—On the motion of Dr. ALEXANDER, Paignton, seconded by Dr. DEAS, the following six gentlemen were selected as new members of the Branch Council: F. C. Berry, M.B., Lynton; J. W. Cooke, Barnstaple; J. Gould,

Hatherleigh; A. L. Morgan, Torrington; E. Rouse, Bideford; E. J. Slade-King, M.D., Ilfracombe. Dr. Deas was re-elected as Secretary and also as representative member on the Parliamentary Bills Committee. Dr. Blomfield, Exeter, was appointed Local Secretary to the Collective Investigation Sub-Committee, *vice* Mr. J. E. Square, Plymouth, resigned.

Alleged Abuse of Out-Patient Departments.—Mr. E. H. EDLIN, Plymouth, in connection with a communication from the Gloucestershire and Worcestershire and Herefordshire Branches, opened a discussion on the subject of the abuse of hospital charities to the professional detriment of medical practitioners, and moved the following resolution: "That the members of the South-Western Branch of the British Medical Association protest against not only the abuse of the charitable funds of hospitals by the treatment of well-to-do patients gratuitously, but also against the injustice done towards the profession in connection therewith, and pledge themselves to do all in their power to prevent the injury which is thus being done to the medical profession." The motion was seconded by Dr. J. ROLSTON, Stoke, and after a number of members had joined in the discussion, was unanimously carried.

Papers.—The following papers were then read and discussed: Mr. M. H. BULTEEL, Stonehouse: Two cases of Abdominal Section for Ectopic Gestation.—Dr. A. KEMPE, Exeter: Notes of a case of Lithotomy.—Mr. C. H. WADE, Chudleigh: A case of Acute Ascending (Landry's) Paralysis.

Annual Dinner.—The annual dinner was held at Sandoe's Royal Hotel, when a very large company assembled, comprising most of the members attending the meeting and a number of guests.

Excursions.—A number of the members were driven to Lanhydrock, the seat of Lord Robartes, and conducted over the house and grounds, and afforded an opportunity of inspecting the church. On the following day about twenty members enjoyed a most delightful driving excursion to Tintagel and neighbourhood. The innovation of extending the annual gathering over two days met with general approval, and the hope was expressed that the precedent would be followed in future years.

READING AND UPPER THAMES BRANCH.

THE annual meeting of this Branch was held in the Library of the Royal Berks Hospital, Reading, on July 18th, W. B. HOLDERNESS, M.R.C.S., in the chair.

Election of Officers.—The following officers were elected:—*President:* Dr. Price, Reading. *President-Elect:* Dr. Dunbar Dickson, Marlow. *Council:* The President, the President-Elect, Dr. Shettle, Dr. Banham, Mr. O. C. Maurice, Mr. Royds, Mr. Young, Dr. Tench, Mr. Holderness, Dr. Bateman, and the Honorary Secretary. *Representative of the Branch on the Council of the Association:* Dr F. Bateman, Whitchurch, Oxon. *Representative on Parliamentary Bills Committee:* Dr. Heygate Phillips. *Honorary Secretary and Treasurer;* Dr. Heygate Phillips.

President's Address.—The President (Dr. PRICE) delivered an interesting address on eye symptoms in relation to general disease.

Alleged Abuse of Out-patient Departments.—A discussion then took place on the subject of the overgrowth of the out-patient departments of hospitals and other cognate subjects.

Annual Dinner.—The annual dinner was held at the Queen's Hotel the same evening.

SOUTHERN BRANCH: ISLE OF WIGHT DISTRICT.

AN ordinary meeting of the Isle of Wight District of the Southern Branch was held at Daish's Hotel, Shanklin, on July 18th, J. M. PLETTS, M.D., President, in the chair.

Vice-President.—A vacancy existing, Mr. W. E. Green, of Sandown, was unanimously elected to this office.

New Member.—Mr. T. D'O. Pain, of Bembridge, was made a member of the Association and of the Branch and District.

Amendment of By-laws.—Notice of alteration of Law 13 was given by DR. SINCLAIR COGHILL.

A Visit to Apostoli's Clinique.—Dr. COGHILL gave an account of the apparatus and methods employed by Apostoli in his use of electricity in the treatment of certain uterine diseases, and stated his own former and recent experience of the value of this therapeutic agent.

Guaiacol Hypodermically in Pyrexia.—Dr. COGHILL also contributed notes of cases in which, after reading an unpublished paper by Dr. Schetelig, of Nervi, he had employed guaiacol hypodermically in doses of 15 to 30 minims. He had found it one of the most potent of antipyretics and something more, for in one case of double pleuro-pneumonia—probably of septic origin—it had at once terminated the febrile movement in the temperature and arrested the progress of the disease when the condition of the patient had already given rise to grave fears as to the issue of her illness.

Fatal Case of Thoracic Aneurysm.—Dr. ROBERTSON described the symptoms during life, and exhibited the aneurysm and adjacent structures of a patient who had died from rupture of the aneurysm into the left bronchus.

Death in Early Tubal Pregnancy.—Dr. COGHILL exhibited a specimen from a fatal case of tubal pregnancy, and gave a brief account of the case.

Hot-air Inhalations in Consumption.—Dr. ROBERTSON showed microscopic specimens of sputa of phthisical patients before and after inhalations of hot air. And it was pointed out that no material diminution in the abundance of tubercle bacilli present had resulted from inhaling for six weeks for an hour twice a day air at a temperature of between 200° and 250° Centigrade.

Dinner.—The members dined together after the meeting.

PROCEEDINGS OF COUNCIL.

AT a meeting of the Council, held in the Council Room of the Association, 429, Strand, W.C., on Wednesday, July 10th, 1889; present:—

Dr. T. BRIDGWATER, President of the Council, in the chair,
Mr. C. G. WHEELHOUSE, Leeds (President-Elect).
Dr. HOLMAN, Reigate (Treasurer).

Dr. B. Anningson, Cambridge
Dr. J. S. Bristowe, F.R.S., London
Mr. H. T. Butlin, London
Dr. Alfred Carpenter, Croydon
Surgeon-General W. R. Cornish, London
Dr. J. Ward Cousins, Portsmouth
Mr. T. W. Crosse, Norwich
Dr. P. M. Deas, Exeter
Dr. J. L. H. Down, London
Mr. George Eastes, London
Dr. C. E. Glascott, Manchester
Dr. Bruce Goff, Bothwell
Dr. O. Grant, Inverness
Dr. W. C. Grigg, London
Dr. T. W. Grimshaw, Carrickmines
Mr. J. H. Hemming, Kimbolton
Mr. G. F. Hodgson, Brighton
Professor G. M. Humphry, F.R.S., Cambridge
Mr. T. V. Jackson, Wolverhampton
Mr. T. R. Jessop, Leeds
Mr. Evan Jones, Aberdare
Mr. H. R. Ker, Halesowen
Dr. W. G. V. Lush, Weymouth
Mr. C. Macnamara, London
Dr. W. Withers Moore, Brighton
Dr. C. Parsons, Dover
Dr. R. Saundby, Birmingham
Dr. A. Sheen, Cardiff
Mr. S. W. Sibley, London
Dr. E. M. Skerritt, Clifton
Mr. T. Sympson, Lincoln
Dr. T. W. Trend, Southampton
Mr. F. Wallace, London
Dr. A. T. H. Waters, Liverpool
Dr. Edward Waters, Chester
Dr. G. E. Williamson, Newcastle-on-Tyne
Mr. Alfred Winkfield, Oxford

The minutes of the last meeting having been printed and circulated, and no objection taken, were signed as correct.

Read letters of apology for non-attendance from Dr. J. W. Byers, Dr. Henry Barnes, Dr. J. Mackenzie Booth, Dr. A. H. Bampton, Dr. W. Strange, Mr. J. Hardie, Mr. W. D. Husband, Dr. G. B. Barron, Mr. Jones-Morris, and Dr. McIntyre.

Read letter from Dr. R. D. Nicolls, of which the following is a copy:—

The Square, Navan, May 16th, 1889.

To the Council of the British Medical Association.

GENTLEMEN,—I beg to bring under your consideration the fact of a very great injustice done me, viz.: I was appointed early in 1870 to attend regular troops stationed here, as civil medical officer. This was at a time when there were not any army doctors available. In accepting the appointment at the low pay given, I did so naturally expecting that I should get remuneration in case of sickness. I have served seventeen years. In 1887 I was superseded by an army doctor, consequently I don't come under the law passed by Parliament that year, excluding a civil medical officer getting compensation. My length of service and my case being exceptional should entitle me remuneration; indeed, civil medical officers are the only branch of civil service who do not get a pension or even remuneration. I lay my case in your hands, my medical brothers, trusting that your powerful influence will obtain for me justice.—I am, gentlemen, yours truly,

RICHARD D. NICOLLS, M.D.

Resolved: That the letter be referred to the Parliamentary Bills Committee, asking if it may be taken into consideration to see if anything can be done to prevent the continuation of that injustice to the medical profession by the Government.

Resolved: That the 124 candidates whose names appear on the circular convening the meeting, together with the supplementary list of 37, be, and they are hereby, elected members of the British Medical Association.

Resolved: That the minutes of the Journal and Finance Committee of to-day's date be received and approved, and the recommendations contained therein carried into effect, with the exception of the alteration of the fees to the provincial member of the Editorial Reference Committee, of which notice was then given.

The minutes of the Journal and Finance Committee contain report approving accounts for quarter, amounting to £6,205 6s. 7d. The auditors' quarterly report.

Resolved: That the minutes of the Premises and Library Committee of the 9th inst. be received and approved, and the recommendations contained therein carried into effect, with the exception of providing curtains for the windows.

The minutes of the Premises Committee contains report upon completion of council room as library, and a request for a grant of £300 for the purchase of books of reference, and a recommendation that the windows be draped; and report of Library Committee, of which the following is a copy:—

REPORT OF THE LIBRARY COMMITTEE.

The Library Committee are glad to be able to report that the number of volumes belonging to the Library has increased by donation during the year from 300 to 1,500 volumes. They had thus outgrown the accommodation provided in the smaller reading and committee room. Your Council, on the recommendation of this Committee, granted on April 17th of this year the sum of £300 for fitting up the large Council Room in a suitable manner for use of the members as a library, newspaper, and reading room. This work has been satisfactorily accomplished, and accommodation has thus been provided for several thousand more volumes. The very commodious apartments thus set aside for the Library and for use of the members will, it is hoped, prove to be an additional stimulus to the rapid growth of this new feature in the development of the advantages which the Association seeks to afford to all its members. It may be anticipated that the generosity of members of the Association will assist the Council in rapidly forming a valuable and extensive collection of books, ancient and modern, for the common use of all, and thus enable them to form an important nucleus for what will, it is hoped, prove before long to be an extensive and valuable collection of books.

The Library Committee recommend the Council to make a further grant of £300 for the purchase of books of reference and other standard works.

Arrangements are in progress for furnishing the reading room with a liberal supply of current medical serials, British and foreign. The Honorary Librarian expects to be able to arrange this at but little cost by a system of exchanges with the BRITISH MEDICAL JOURNAL.

Amongst the volumes presented to the Library are some 200 published during 1888, and nearly 100 during 1889. All these books are duly catalogued and arranged.

The Library Committee desire to draw the attention of members of the Association to the fact that they can have letters addressed to the Library of the Association.

The list of donors to the Library include the following names:—Mrs. Arnott, Wm. Adams, Cresswell Baber, Joseph Bell, Heather Bigg, J. S. Bristowe, Lennox Browne, T. Lauder Brunton, H. T. Butlin, T. Buzzard, E, Bryan (of Idle), Dr. Bastian, Alfred Carpenter, C. W. Cutler, Cassell and Co., F. E. Cockell, jun., Jas. Charlesworth, Dr. Casey, W. Bruce Clark, H. Radcliffe Crocker, Sir Charles Cameron, W. H. Day, J. Matthews Duncan, Clement Dukes, W. Ebstein, Fannin and Co., Professor Gairdner, Reginald Harrison, Graily Hewitt, Jonathan Hutchinson, W. J. Harris, Ernest Hart, C. J. Holman, J. D. Hellier, T. Holmes, Jukes de Styrap, Prosser James, C. B. Keetley, Norman Kerr, H. K. Lewis, C. Macnamara, Wm. Martindale, New Sydenham Society, H. W. Page, F. W. Pavy, Douglas Powell, Robson Roose, F. T. Roberts, W. H. Sankey, A. E. Sansome, Wm. Squire, W. E. Steavenson, H. R. Swanzy, James Sawyer, J. V. Shoemaker, Wm. Stewart, R. Saundby, J. C. Thorowgood, E. J. Tilt, A. Waterworth, C. Theodore Williams, A. T. H. Waters, Mrs. Wardell.

Resolved: That the report of the Council be received, approved, and published in the JOURNAL for presentation to the Annual Meeting at Leeds on the 13th proximo. (See page 268).

Resolved: That the minutes of the 9th inst. and report of the Inebriates Committee be received and approved, and the recommendations contained therein carried into effect, and that the report be published in the JOURNAL for presentation to the Annual Meeting at Leeds on the 13th proximo. (See page 273).

Resolved: That the minutes of the Scientific Grants Committee of the 9th instant, together with the annual report, be received and approved, and the report published in the JOURNAL for presentation to the Annual Meeting at Leeds on the 13th proximo for report. (See page 274).

The minutes of the Scientific Grants Committee contain applications for grants to the amount of £820, and recommendations that grants be made for £418.

Resolved: That the annual report of the Collective Investigation Committee be received, approved, and published in the JOURNAL for presentation to the Annual Meeting at Leeds on the 13th proximo. (See page 277).

Resolved unanimously: That the thanks of the Council be given to Dr. Isambard Owen, for the labour he has bestowed in drawing out the excellent and instructive maps illustrative of the geographical distribution of disease, as well as for the admirable and zealous manner in which as Secretary to the Collective Investigation Committee he has contributed to the work of the Association.

Resolved: That the annual report of the Therapeutic Committee be received, approved, and published in the JOURNAL for presentation to the Annual Meeting at Leeds on the 13th proximo. (See page 278).

Resolved: That the minutes of the Trust Funds Subcommittee be received, approved, and the recommendations contained therein carried into effect.

The minutes of the Trust Funds Committee contain the awards of the Stewart Prizes. The Stewart Prize was awarded to Dr. E. E. Klein, F.R.S., for his very valuable and prolonged researches on Micro-organisms and especially for his work in connection with the Etiology of Scarlet Fever. The Middlemore Prize was not awarded, but will again be offered for competition next year. The minutes also contain a legal opinion upon the use of the Hastings Fund.

Resolved: That the report of the Parliamentary Bills Committee be received, approved, and published in the JOURNAL for presentation to the Annual Meeting at Leeds on the 13th proximo. (See page 269).

Resolved: That the application of the Medical Sickness Society to hold a meeting at 2 o'clock on Wednesday, August 14th, at Leeds, be granted subject to the usual conditions.

Resolved: That permission be granted to the Anatomical Society to hold its meeting at 4.30 P.M. instead of 4 P.M. on August 15th.

Read abstract of letter from Dr. Byers, Honorary Secretary to the North of Ireland Branch, a copy of which is as follows:

At a meeting of our Branch, held on April 25th, Dr. Donaldson and Dr. Byrne (Derry) presented a memorial signed by twenty-two members of the North-West Section of the North of Ireland Branch, requesting to be allowed to withdraw from the North of Ireland Branch, in order that they might form a separate Branch having its headquarters in Derry. A resolution was passed unanimously approving of this memorial, and instructing me to forward it to the General Secretary, which I now do.

Resolved: That the formation of a separate Branch in the North-West of Ireland be approved and, subject to the approval of the by-laws, that the Branch be recognised.

Read minutes of meeting of the Medical Practitioners of the Cape of Good Hope, held on Friday, September 28th, 1888, and application for recognition of a Branch at Cape Town.

Minutes of a meeting of the Medical Practitioners of the Cape Peninsula, held on Friday, September 28th, 1888, in the rooms of the Y.M.C.A., Long Street, Cape Town, at 5 P.M.

Present:—Drs Charlton, Scholtz, Anderson, Chiappini, Baird, Silk, Falkiner, Cox, Murray, Kohler, Manikus, Dyer, sen., Dyer, jun., Douglas, Peterson, Hewat, Herman.—Dr. Murray in the chair.

The notice calling the meeting having been read, Dr. Anderson proposed, and Dr. Silk seconded: "That a Branch of the British Medical Association be now established in Cape Town."—Carried *nem. con.*

Dr. Charlton said he was requested by Surgeon-General Faught to express his regret at being prevented from attending.

Dr. Murray stated that the Committee appointed at the last meeting had revised the rules of the S. A. Medical Association, and he thought that the revised rules might be adopted as they stood.

Dr. Baird proposed that the title page be amended and the word "rules" struck out and the word "constitution" employed instead. After some discussion, it was proposed by Dr. Falkiner, seconded by Dr. Silk, and carried by 8 votes to 3, that the words on the title page read:—

"Memorandum and Articles of Association of the Cape of Good Hope Branch of the British Medical Association." Dr. Manikus proposed that the Branch be called "The Cape of Good Hope Branch of the British Medical Association."—After discussion, the motion was carried by 7 votes to 6.

The new rules were then read and discussed *seriatim*, and duly carried as per enclosure.

Dr. Anderson proposed that the by-laws of the S. A. Medical Association be incorporated as they stood in the by-laws of this Association. Dr. Dyer seconded.—Carried *nem. con.*

The meeting then proceeded to the election of office-bearers with the following result:—President, C. F. K. Murray, Esq., M.D.; Vice-President, P. A. Chiappini, Esq., M.D.; Honorary Secretary, Geo. B. Silk, Esq., M.B. and C.M.; Hsnorary Treasurer, G. E. C. Anderson, Esq., M.D., M.R C.S. Council, C. L. Herman, Esq., M.B. and C.M., M.R.C.S.; J. F. Manikus, Esq., M.D., Utrecht (Staats Examen); J. Baird, Esq., M.D.Brussels, L.R.C.P., L.R.C.S.; T. F. Falkiner, L.R.C.S.I., L.K.Q.C.P.I.

The above gentlemen were accordingly declared office-bearers for the ensuing year.

The meeting then closed. Confirmed.

(Signed) C. F. K. MURRAY, M.D., Chairman.

Resolved: That the Council of the British Medical Association have pleasure in recognising the Cape of Good Hope Branch, and approve the by-laws, and tender their thanks and congratulations to Surgeon-General Faught, Dr. Chiappini, Dr. G. B. Silke, Dr. Herman, and others, on the formation of the Branch.

[*The following Reports of the Council, and of the Committees, will be presented at the Annual Meeting at Leeds on August 13th, 14th, 15th, and 16th, and are published in accordance with the regulations for the conduct of Annual Meetings, which require that all Reports of Committees of the Association shall be printed in the* JOURNAL *before the Annual Meeting.*]

REPORT OF COUNCIL.

Fifty-seventh Annual Meeting of the British Medical Association, Leeds, August, 1889.

In meeting you again in Leeds, your Council would call attention to the fact that this is one of the towns in which the Association will now have been entertained for the third time. Those of you who were present when the Association met here twenty years ago will remember the brilliant and hospitable reception then given, and your Council feel assured that this meeting, under the presidency of Mr. Wheelhouse, will not be less successful than those which have preceded it.

A comparison of the Association, the number of its members, and its position on the occasion of its first visit in 1843, with those of the present time, shows that its members at that time numbered only a little over 1,600; the income was £2,102; and the expenditure, £1,488; leaving a balance of £613 in favour of the Association.

In 1869, the occasion of the second visit to Leeds, the Association had increased to 4,095 members, but the income had scarcely risen in proportion; the receipts were £5,571, the expenditure £5,371, leaving a balance in the Treasurer's hands of £200, and the estimated excess of assets over liabilities was at that time put down at £166. The Association now numbers more than 12,000 members, and the balance of assets over liabilities is £35,617.

Inclusive of the present, the Association will have held fifty-seven annual meetings in thirty-five towns and cities; it will thus be noticed that many towns will have entertained the Association more than once. As a fact several have received it three times since the first foundation; for example, Birmingham, Bath, Leeds, Manchester, Liverpool; while others of importance have only been visited once, and many not at all. It appears almost as though the Branches, while doing good work socially and scientifically by their meetings, tend rather to centralise their efforts in one or two localities, and leave others out of close or direct contact with the parent Association. There may also be another reason why the Association has not been invited by some important places, namely, the questions of expense and accommodation. Your Council would point out with regard to the first objection that the Association has been well entertained with a reception fund of £400 to £500; and with regard to the latter, that the meeting is small in a small town, and usually averages about 500 members.

Again your Council have to congratulate you upon the formation of new and important home and Colonial Branches. First of these in the order of recognition is one established at Malta, called the Malta and Mediterranean Branch. This is the first formed for the combined services. Branches have also been formed in the Punjab, Griqualand West, Bombay, Barbadoes, and Tasmania. From Cape of Good Hope a request to have a formal recognition of a most important Branch, starting with forty members, has been received. All these Branches, it is hoped, will form active and important centres of the Association in their respective localities. A Branch has also been added in Scotland, for Stirling.

The members residing in Derry, finding it so long a journey to Belfast, have asked permission to form a separate Branch; this request has been complied with, and the recognition by the Council of the Association has been granted. This, no doubt, gives facilities for members in that part of Ireland to meet more frequently for scientific and social intercourse, and so to add to the good work of the Association in that country.

Your Council regret that at present no steps have yet been taken to re-establish the important Branch of Cork and South of Ireland. It will be remembered that an Annual Meeting of the Association was held there in 1879, over which Dr. Dennis O'Connor presided. Your Council grieve to report his death during the past year.

Your Council have the pleasure to report a successful financial year. The expenditure has been £27,691, while the revenue has been £31,785, leaving a surplus balance of £4,093. £3,200 of this has been expended on the leases of 2 and 3, Agar Street. These will give the extra rooms required for committees, and also further space for the compositors on the top floor. Now that the Association can afford it, your Council consider that the time has arrived when the subscription of members resident abroad may fairly be reduced to £1 1s., the same as that of the home members, and that the extra postage of the Journal to the Colonies need be no longer charged. This they hope will be regarded as a boon to the colonial members, and the amount formerly charged for postage of 2s. 6d. to the Colonies and of 5s. to India will now be borne by the Association. More especially your Council hope that Indian members will appreciate the alteration, as, not only is the extra postage of the Journal heavy, but there is also a serious charge for exchange in remitting subscriptions home. The present cost to the Association is about £400 per annum.

The organisation of a Library and Reading Room for the use of the members of the Association is making good progress. As the result of handsome donations from private individuals, members of the Association, and from authors and publishers, the collection of books has already considerably outgrown the accommodation first made available. The large Council Room has now, therefore, in virtue of a grant of £300, been fitted with bookcases and shelves which can accommodate several thousand further volumes. Steps will be taken to obtain a considerable supply of current periodical literature of all countries for reference, which may be acquired by a system of exchanges set on foot by the Editor of the Journal, and it is hoped that the Reading Room will be made a useful, popular centre for the purpose of study and reference by members of the Association, who will there also have the opportunity of carrying on and receiving correspondence when in London. While thanking members of the Association, authors, and publishers who have already so generously contributed to form the nucleus of a library, it is hoped that now this extensive accommodation has been supplied, these donations will in the future be considerably increased.

The Council propose this year to make a grant of £300 for the purchase and acquirement of books of reference for the use of readers.

The number of members on the books last year was 12,265; during the year 954 have been elected, 110 have died, and 212 have resigned, leaving on the books 12,897.

It is, again, with grateful thanks that your Council would call your attention to the efficient work of your Honorary Secretaries to the Branches; their effective help, given without stint of labour or of time, tends to the material advancement of the Association. It is with regret your Council have to report the resignations of Dr. Ormsby, of the Dublin Branch; of Mr. Vincent Jackson, of the Staffordshire Branch; of Mr. W. E. Green, of the Isle of Wight District of the Southern Branch; Mr. Cureton, of the Shropshire and Mid-Wales Branch; and of Dr. Eastes, of the Metropolitan Branch.

Dr. C. Norman, Dr. C. Reid, Dr. R. Robertson, Mr. James Allen, Bratton, and Dr. Crocker, have been elected to fill the respective vacancies.

In compliance with the trust deeds of the Middlemore and Stewart funds these prizes have again been offered in accordance with the wishes of the donors. Only one Essay has been received for the Middlemore Prize. The adjudicators report that this essay is not of sufficient merit to justify the award. The Stewart Prize has been awarded to Dr. Klein, for good work done. Your cordial thanks are due to Dr. Littlejohn, Dr. Grimshaw, and Dr. Corfield, who have acted as adjudicators in the Stewart Prize, and to Dr. Swanzy, Dr. Reed, and Mr. Priestley Smith, who have acted in like manner for the Middlemore Prize.

The work of the Parliamentary Bills Committee has been chiefly directed towards (1) resisting proposals which had been made from factory owners to the Home Secretary for reducing or abolishing the part taken by certifying surgeons in carrying out some of the most important provisions of the Factory Acts; (2) in taking steps to bring under the notice of the Commission appointed to consider the question of rank, title, etc., of army medical officers, the views ascertained to be held by a large number of the members of the Service, as was proved by the former action of this Committee. This Commission has been mainly appointed in consequence of the past exertions of the Parliamentary Bills Committee on behalf of that service, of which due record has been made in past reports and in the reports of that Committee, and of the annual meetings of the Association. Thanks are due to Mr. C. Macnamara for the valuable assistance which, as a member of the Commission, he has rendered in bringing the documents and facts connected under the notice of the Commission. (3) The other work of the Parliamentary Bills Committee has been to secure further amendments in the Lunacy Acts Amendment Bill in its course through the House of Lords and the House of Commons, with the object of protecting alike the interests of the medical profession and of the public. Those efforts have been made with considerable success in some important particulars.

Finally, great attention has been given to the consideration of the Local Government (Scotland) Bills, and a series of amended clauses have been prepared by the Chairman of the Committee after much correspondence with leading authorities in Scotland, and have been submitted to the Committee with the assistance of Dr. Farquharson, M.P., and other parliamentary friends. A full report of the work of the Committee will be presented separately.

The Scientific Grants Committee, in consequence of the numerous and large applications for aid in scientific research, asked for and obtained £100 as an addition to the usual grant of £300. Unusually good work appears, by the report of the Committee, to be in progress.

Your Science Scholars are at present Dr. Sidney Martin and Dr. Ralph Stockman; the latter was appointed to investigate the chemical changes which menthol, camphor, and similar bodies undergo after absorption, and the action of the camphor group on the heart and circulation; also an investigation into a new body which acts like digitalis; and other researches. Dr. Sidney Martin was appointed to investigate the toxic albumens, and on the pathology (experimental) of diseases of the stomach.

The Inebriates' Legislation Committee have, with the aid of the Society for the Study of Inebriety, succeeded in securing permanent legislation with a few minor though useful amendments.

Having thus obtained permanence to the Inebriates Acts, the Committee have been devoting their energies to forming such a strong public opinion as will be likely to secure from Parliament more effective provision for the compulsory admission to retreats of inebriates unwilling to apply voluntarily; for the less forbidding reception of voluntary patients; and for provision for special medical care and treatment of the impecunious.

A peculiarly gratifying tribute to the work of the Committee has been the drafting of a Bill for Scotland (insisting on these among other provisions) by a Crown official supported by many of the most eminent legal authorities in that country.

These leading principles of the proposed measure have been approved by the Medico-Chirurgical Society of Edinburgh, and by your Inebriates Legislation Committee.

The Collective Investigation Committee has been engaged winding up the inquiries which were still in progress at the end of last year, and has not entered on any fresh undertaking. It has presented to the Council an elaborate Report upon its inquiry into the Geographical Distribution of Certain Diseases, in the form of a series of detailed maps, accompanied by a commentary. The latter was published in the JOURNAL of January 19th; the former are deposited in the Library of the Association; they have been exhibited by the Secretary of the Committee at the meetings of various Branches, and will be on view at the Annual Meeting in Leeds. A report, supplementary to that on Habits of Intemperance, upon the Causes of Death Among Gouty Men, was also published in the JOURNAL of January 19th.

During the past year pharmacological researches have been initiated under the personal direction of members of the Therapeutic Committee. Details of these will be forthcoming in the Report which the Committee brings forward. In their report they will also make suggestions by which it is hoped that their work will be extended in the investigation of strictly therapeutical questions.

At the Annual Meeting held in Glasgow last year, the Psychological Section appointed a Committee to consider the state of children unfit, from mental and nervous conditions, for ordinary school teaching. Since the appointment of the Committee 14 schools have been visited, 5,344 scholars have been personally examined; a grant of £50 was made to the Committee for expenses, which they ask to be renewed. The Committee will place the result of their investigations before the meeting at Leeds.

Questions relating to the conduct of the JOURNAL have been more than once under discussion during the year. A remonstrance from many leading medical men concerning the publication in the JOURNAL of a certain script document appeared to the Council to be well founded in principle, and, after receiving explanations as to the circumstances of its publication, the Council thought it right to express their regret that this document had been made public. Subsequently a memorandum was brought to the notice of the Council which had been prepared and issued for communication to the Branches of the Association of which the main suggestions was that all articles, reviews, letters, etc., in the JOURNAL should be signed. After careful inquiry and full consideration, the conclusion was arrived at, expressed in the memorandum published in the JOURNAL of May 4th, 1889 (page 1025), that in view of the functions which the JOURNAL has to fulfil as a weekly newspaper called upon to defend the interests of all classes of the profession, and to furnish early information to its many thousands of readers in all parts of the world, and, having regard to its large staff of official and unofficial contributors, to whom the signing of their articles would be impossible, it was absolutely necessary that the confidential character of their communications should be protected under the shield of editorial responsibility as heretofore, and as is customary in all the leading journals and newspapers of this country.

In respect to advertisements it was found that great and very special care was taken to exclude all objectionable matter, and, in going into detail, the objections raised were found to be very few in number, and such as could be satisfactorily dealt with.

It is unnecessary to insist on the vast importance to the Association and to the profession of the efficiency of the JOURNAL and its popularity with all classes, at home and abroad, as a means of sustaining the numbers and widening the sphere of influence of the Association as well as of maintaining its finance in a sound and prosperous condition. These objects the Council are glad to say are shown to have been accomplished by the facts and figures published during the past as in previous years; and during no period have the evidences at home and abroad been more marked, of the high opinion which is entertained of the literary, scientific, professional and social value of the JOURNAL, and of the extent to which it is everywhere valued as standing in the front rank of medical journalism.

The Council think it right to renew on this occasion their expression of confidence in the ability and devotion of the Editor and General Secretary to all the best interests of the Association, and to the marked success with which the JOURNAL of the Association has for many years been conducted.

The Editor suggested in a memorandum submitted to the Council that, with a view of assisting him in his onerous responsibilities in the management of the JOURNAL, he should have the support henceforth of a Reference Committee meeting weekly at the office, and which should include the President of Council and the Treasurer of the Association for the time being, together with specially appointed members. Of this suggestion the Journal Committee and the Council have approved, and it has been carried into effect.

The Council has appointed as special members of the Committee Dr. Farquharson, M.P., of London, and Dr. Donald MacAlister, of Cambridge. Provision has been made for the due payment of the two special members for their attendance. The President of the Council and the Treasurer of the Association give their services without fee. The arrangement has been found to work well, and the weekly meetings of the Committee have taken place regularly since May 2nd.

Amongst others your Council grieve to have to report the loss to the Association by death of the following members: Dr. J. M. Fothergill, W. N. Price, Esq., Dr. J. N. McCulloch, N. Crisp, Esq., Dr. E. J. Barker, F. Mason, Esq., Dr. J. K. Milne, James Symes, Esq., the Rev. David Bell, M.D., Dr. L. Armstrong, Deputy-Surgeon General R. A. Chapple, Dr. G. H. Barfoot, E. G. Francis, Esq., Dr. J. Chalmers, J. Hall, Esq., Dr. E. Jackson, Dr. Dennis O'Connor, Dr. George Duff, M.A., R. Davies, Esq., Dr. A. Asher, Dr. E. Davidson, Surgeon J. Bulfin, Dr. R. Keith, Dr. P. B. Tucker, M. Brumell, Esq., Dr. A. J. Sinclair, Dr. W. H. Walker, Dr. G. T. Budd, Plymouth, F. W. Brown, Esq., Dr. Sankey, Dr. C. J. B. Williams, Dr. John Mackenzie, W. P. Keall, Esq., Dr. J. Rogers, Dr. J. Maclaren, C. T. Carter, Esq., G. Woods, Esq., Dr. R. McDonnell, Surgeon M. Gaisford, I.M.S., Dr. W. M. C. Watson, Dr. A. Nickson, B.A., Dr. W. S. Falls, E. R. Perks, Esq., Dr. W. M. Burslem.

THOMAS BRIDGWATER,
President of the Council.

REPORT OF THE PARLIAMENTARY BILLS COMMITTEE.

THE Parliamentary Bills Committee beg to report their proceedings as subjoined:

CERTIFYING FACTORY SURGEONS.

The following is a short statement of the position of the Committee in the matter: On February 3rd a deputation from the Manchester United Cotton Spinners' Association, representing, it was said, 430 firms, and employing 20,000 people, waited upon the Home Secretary on the question of dispensing with the office of certifying surgeons in factories. It was argued among other

things that since the Elementary Education Act had come into force there was no need for the certifying surgeon to attend at the factories in order to certify as to the ages of children working as half-timers; it was, they argued, a needless expense, as the School Board furnished certificates. A large number of factory surgeons, finding their interests and position attacked, put themselves into communication with the Chairman of the Parliamentary Bills Committee, meetings were held, and they banded themselves into an Association of Certifying Factory Surgeons, with Mr. Francis H. Walmsley as President, and Dr. Holmes as honorary secretary. A summary and review of their present position, as well as a reply to the statements made by the Cotton Spinners' Association, were printed and circulated, and on March 25th a deputation of the Association of Factory Surgeons waited upon the Home Secretary, being introduced by the Solicitor-General for Scotland. Dr. Alfred Carpenter was good enough to attend and represent the Committee in the Chairman's absence. A full report of the meeting was published in the JOURNAL for March 30th, p. 735. The Home Secretary replied that the statements made by the certifying surgeons should have his most careful consideration before any change was made in the law. Leaders on the subject have been published in the JOURNAL after consultation with persons most interested in the subject and copies of these leaders, with letters on the subject, have been sent to the Home Secretary. A communication was afterwards received from the Home Office asking for copies of subsequent articles on the subject, which were duly forwarded and acknowledged. A request was made by the Association of Certifying Factory Surgeons for 5,000 reprints of the leaders and for copies of the report of the deputation. That request was complied with.

In order to influence public attention in the matter, a question was put in the House of Commons on April 8th, when Mr. Matthews stated that the representations had been under his consideration, and he hoped to be able to introduce a Bill amending the Factory Acts this session, and he would take that opportunity of stating the decision of the Government on the subject. The memorial was before them for discussion and alteration.

A memorial, of which the following is a copy, was drawn up for presentation to the Home Secretary, and submitted to the members in an unrevised form. Having undergone considerable revision, it was adopted, after discussion, at a meeting of the Committee, held on June 27th, and duly forwarded to the Secretary of State for Home Affairs:

To the Right Honourable the Secretary of State for Home Affairs.

This memorial respectfully shows:—

That the employment of medical men as certifying surgeons was resorted to in the first instance because of the alarming prevalence of disease and deformities among factory operatives.

That as the true interest of the employers is to obtain the greatest efficiency among those they employ, the medical supervision of the physical ability and soundness of those entered for work is contributory thereto.

That no effectual and persistent supervision of the physical condition of those employed in factories is to be got except by the introduction of a neutral person from outside, instructed in the recognition of disease, and able to act in a completely independent manner.

That to rely upon the carefulness and discretion of the parents is altogether futile. Their interests are too intimately bound up with the gain to be obtained by the employment of their children, whose possible unfitness for work is either not recognised, or is purposely disregarded. The whole past history of factories demonstrates this fact, and the every-day experience of the certifying surgeons furnishes illustrations of it.

That it is important to the general sanitary interests of the operatives in a factory that no contagious or infectious disease be introduced from without by those engaged for work; while the principle goes farther, for it affects the general public, who are the ultimate recipients of the goods manufactured.

That it is essential that persons disabled by deformity or by imperfections of the special senses be not employed where the work is calculated to augment the disablement, or where defects of sensory organs expose the sufferers or their fellow-workers to peril or accident.

That in the interests of humanity it is a primary duty to reject as unfit for work those who exhibit signs of organic disease, whether of lungs or other internal organs.

That it is important in manufactories, where many diverse processes are carried on, as frequently happens, that some competent authority exist to determine not only the general question of fitness for labour, but that also of fitness for the particular work to be undertaken.

That compulsory medical examination acts as a deterrent to parents and others from presenting for employment unfit hands.

That experience shows a marked improvement has been brought about in the physical well-being, the cleanliness and order of children and young persons, which is largely attributable to the action of the certifying surgeons.

That the certifying surgeons, by reporting on the nature and the causes of accidents, and investigating them on the spot, exercise an important function in respect of future action to be taken by the factory inspectors.

That in all the preceding matters it is in their character as medical men that the certifying surgeons are proved to be essential to the due administration, and to the fulfilment of the sanitary purposes of the Factory Acts.

That it is contrary to reason to contend that a certificate of age is in itself sufficient as a guarantee of fitness for work—that is, any sort of labour that may be imposed. For age and physical ability are not convertible terms.

That the vigilance of the certifying surgeons is constantly called into requisition to detect wilful alterations of the dates showing the age, or the fraudulent substitution of certificates of age, or the forgeries of the numbers showing the standard of education reached—for, in many factories, the services of the surgeon are sought for to watch over the observance of the educational conditions of labour.

That the weekly or very frequent visits of certifying surgeons to factories contribute greatly to the proper keeping of the registers—upon which hinges all action to be taken by the inspectors in enforcing the Act.

That, moreover, such visits keep constantly in the view of masters and managers the operation and requirements of the Factory Act, and afford opportunities to all concerned in the management of factories to seek the solution of any questions respecting the requirements of the Act. In fact the surgeons are perpetually called upon to act as expositors or interpreters of the legislative provisions. This happens by reason of their being at hand, and also by the comparative infrequency of the visits of the inspectors, whose districts are of so great extent that an annual visit to every factory is out of the power of those officers.

That these considerations demonstrate the great value of the services of the certifying surgeons as complementary of the duties specially belonging to the inspectors, and that, as a corollary, the abolition of the surgeon's office would, if the Act is to be administered as efficiently as at present, necessitate a vast addition to the staff of inspectors, at great cost to the country, and, not improbably, with increased friction to the manufacturers. That it is a known fact in small factories, where frequent visits by the surgeon are not arranged for, that there are almost always grave irregularities and omissions in the observance of the law.

That, considering the Factory Act to be established not solely for the benefit of the employed, but likewise for that of the manufacturers, it is a correct principle to charge some part of the cost of its administration upon the latter.

That the revision of fees made by the present Act leaves no valid grounds of complaint, the basis of payment being fixed on the lowest terms. To illustrate: a certificate is to be had at the house or office of a certifying surgeon at the cost of sixpence. This includes the examination of the document produced to show the age; the entry in the register from that document of the assigned date, and the names of parents; the signature to the certificate asserting fitness for work and freedom from disease and deformity, the notice of objection, if any be found, and the date at which the certificate is granted. In the case of factories employing five or more hands coming under the Act, the certificate has to be given at the factory itself; one object of which is to detect personation, and to identify the candidate with the factory in which he is to work. Here, too, the payment is based on the same standard; for although the law allows two shillings and sixpence for the visit to the factory, the surgeon may, and often is, called upon to examine five individuals for that amount.

In these particulars the surgeons' fees present a strong contrast with those allowed to registrars of births; viz., half-a-crown for a copy of a birth register.

That the earnings of the surgeons are in direct proportion to the number of certificates given and the visits made. That if the sum total reaches, in some instances, a considerable amount, it represents a large district, numerous factories, and much time and labour expended in the duties.

That the re-examination of children, passing from half to full time, or exchanging their places of employment, is as necessary to assure fitness on their part as the primary examination required in commencing work, and on precisely the same grounds.

That instead of curtailing the medical supervision of factory hands, there is a need of its extension. All places of associated labour, whether termed factories or not, should be subjected to like conditions, and the protective influence of the surgeons should not be exercised only at the entrance of a factory, but should, under certain limitations and conditions, be extended to the operatives engaged in it. Moreover, their aid should be available to carrying out to the full those sanitary clauses of the Act at present entrusted to the inspectors.

Lastly, that the special information acquired by the certifying surgeons, relative to disease in factories, might with advantage be communicated to the sanitary department of the State, and be rendered contributory to the repression of disease.

THE LOCAL GOVERNMENT (SCOTLAND) BILLS.

As the result of a number of communications with leading health authorities in Scotland, and with persons in this country well acquainted with the working of the English Acts, the Chairman has had drawn at considerable labour the following new clauses and amendments in the Bill, which were adopted at a meeting of the Committee on June 27th, and, in accordance with a resolution then passed, steps have been taken to ensure their introduction in Committee by various members of Parliament.

LOCAL GOVERNMENT (SCOTLAND) SUPPLEMENTARY PROVISIONS BILL.

PROPOSED NEW CLAUSES AND AMENDMENTS.

[*N.B.—The New Matter and Proposed Modifications are in Italics.*]

PART IV.—SUPPLEMENTAL.

PROVISIONS RELATING TO THE BOARD OF SUPERVISION.

21(a).—(1) *The Board of Supervision shall henceforward include in addition to the persons named in the Act passed in the sessions of the Eighth and Ninth years of the reign of Her Present Majesty, Chapter eighty-three, intituled an "Act for the amendment and better administration of the Laws relating to the Relief of the Poor in Scotland," one or more Medical Commissioners, to be appointed by Her Majesty and to hold office during Her Majesty's pleasure, such Medical Commissioner or Medical Commissioners to be of not less than ten years' standing in the Medical Profession, and possess in each case the qualifications required, for the time being, to be possessed by a medical officer appointed under the provisions of this Act.*

(2.) *The Board of Supervision shall have power to appoint in writing such medical*

inspectors and other officers as the Board may from time to time, with the sanction of the Treasury, deem to be necessary.

(3.) *There shall be paid to such Commissioner or Commissioners, and to such inspectors and officers out of moneys provided by Parliament, such salaries or remuneration as the Treasury may from time to time determine.*

REASONS FOR PROPOSED NEW CLAUSE—21 (*a*).

(1.) The constitution of the Scotch Board of Supervision has, on a variety of different grounds, given rise to oft-repeated expressions of dissatisfaction, notwithstanding the fact that good work in various directions has been accomplished by it. The Board was established in 1845 by the "Act for the Amendment and Better Administration of the Laws relating to the Relief of the Poor in Scotland," and consists of the Lord Provost of Edinburgh, the Lord Provost of Glasgow, the Solicitor-General of Scotland, the Sheriffs depute of the counties of Perth, Renfrew, and Ross and Cromarty, together with three other persons to be appointed by Her Majesty by warrant under the sign manual. But although this provision would seem to admit of the appointment of a medical man to the Board, no such appointment has been made.

This Board was by the same Act empowered to appoint "all such..... officers as they shall deem necessary," and under this provision two "superintendents of the poor," and two "visiting and inspecting officers," have been appointed. But not one of these officers is a medical man, and thus it will be seen that, although innumerable medical questions arise in the administration of the Poor Laws, there is no medical man on the Board, nor is there any medical man among its poor-law officials.

In 1867 the Public Health (Scotland) Act was passed, and under it the Board of Supervision became the central controlling authority for the administration of the sanitary laws throughout the country. There was, however, no modification made in the constitution of the Board. It was to remain just as it had been formed, in 1845, for supervision and relief of the poor, although the new responsibilities which were placed on its shoulders involved the application of a number of principles which were then only beginning to be rightly appreciated and could only be properly interpreted by an experienced student of preventive medicine. It would almost seem as if pains had been taken, however inexplicable it may appear, to exclude medical influence from the Board's councils; for, on looking into the Act, we find that even in the presence of a formidable epidemic threatening the country, when it might have been expected that the assistance of medical training and experience would have been specially useful, it is provided (Section 32) that "the Sheriff of any County in Scotland, other than Renfrew, Perth, or Ross and Cromarty, may be appointed an additional member of the Board."

The intention of the first sub-section of the proposed new clause is to secure the presence on the Board of one or more competent and experienced medical members who could speak with authority and exert proper influence on all matters affecting the public health.

It may be here noted that these considerations were not overlooked by Parliament when the Irish Local Government Board was established; for it is expressly provided (14 & 15 Vict., ch. 68, secs. 1, 2, etc.; and 35 & 36 Vict., ch. 69, sec. 3) that the Queen may from time to time appoint two members of the Board, but that one of the persons so appointed "SHALL BE A PHYSICIAN OR SURGEON OF NOT LESS THAN TEN YEARS' STANDING, AND SHALL HAVE THE TITLE OF MEDICAL COMMISSIONER."

(2.) As regards the medical advice for sanitary purposes at the disposal of the Board of Supervision, it must be admitted that the Board have power under Section 14 of the Act of 1867 "to appoint all such officers.....as they shall deem necessary." But as regards medical officials, they have not exercised this power to any great extent. They have, it is true, secured part of the services of Dr. H. D. Littlejohn, the able health officer of Edinburgh, and under his influence much good work has been accomplished. But Dr. Littlejohn is the only medical official (beside the Superintendent of Vaccine) connected with the Board.

The procedure adopted by the Board, in respect of their sanitary functions, was thus described by Mr. (now Sir W. S.) Walker, the Chairman of the Board, in his evidence before the Royal Sanitary Commission, in May, 1870, and the description holds good at the present time:—

> "The Board appointed no additional inspectors or visiting officers. We had three such officers under the Poor Law,[1] and we thought it sufficient in the meantime to give them separate instructions with regard to the Public Health Act, because in the course of their duty they were continually travelling about in their districts and visiting villages and towns, and they would almost necessarily see, or could very easily inquire into, what was being done and what was required to be done, and we directed them to report to us ..... When these reports come to the Board we proceed to transmit a copy of them to the local authority for their observations ..... (Q. 12,089.)

This is still the method of procedure, and, apart from the consideration that the reports are made by more or less unskilled observers, the system is obviously defective and insufficient. If it is to be inferred that sanitary administration is subordinated to that of the Poor Laws, some alteration is obviously needed.

It is desired by the proposed clause to secure the nucleus of a strong useful medical department under the central Board, and this endeavour is supported by the knowledge of the value of the small but able staff attached to the English Local Government Board, and of the great services that have been rendered by that staff, not only to individual localities throughout the country, but also in the promotion of sanitary science and preventive medicine.

PROVISIONS AS TO POWERS OF COUNCIL.

22.—(1) The council of *every county shall, except where otherwise allowed by the Board of Supervision*, from time to time appoint and pay a medical officer or medical officers and a sanitary inspector or sanitary inspectors, who shall not hold any other appointment or engage in private practice or employment without express written consent of the council.

Provided that the Board of Supervision may, for reasons brought to their knowledge, allow any County Council to make and carry into effect arrangements with any other County Council for the employment, jointly, of the services of one and the same medical officer, on such terms as to the contribution to the salary of the officer, or otherwise, as may be agreed.

(2.) The County Council *or County Councils, as the case may be*, and any District Committee, as the local authority under the Public Health Acts, may from time to time make and carry into effect arrangements for rendering the services of such officer or officers regularly available in the district of the District Committee, on such terms as to the contribution by the District Committee to the salary of any medical officer or sanitary inspector, or otherwise, as may be agreed, and the medical officer or sanitary inspector shall have within such district all the powers and duties of a medical officer or sanitary inspector appointed by a District Committee.

(3.) *Such an arrangement, when once made and carried into effect, shall not be altered, except with the consent of the Board of Supervision, given after full investigation of all the circumstances of the case; and* so long as such an arrangement is in force, the obligation of the District Committee under the Public Health Acts *(as amended by this Act)*, to appoint a medical officer or sanitary inspector shall be deemed to be satisfied without the appointment of a separate medical officer or sanitary inspector.

(4.) *The provisions of the Public Health Acts relating to the appointment of officers are hereby varied so as to provide that henceforward it shall be the duty of every district Public Health Committee from time to time to appoint and pay a medical officer and a sanitary inspector. The powers, duties, and rights of the medical officer, and of the sanitary inspector, shall be those prescribed for such officers respectively by the Public Health Acts, and by any regulations made in that behalf, from time to time, by the Board of Supervision.*

(5.) *Every medical officer and every sanitary inspector appointed under this Act, or under the Public Health Acts, shall be removable from office only by the Board of Supervision.*

REASONS FOR AMENDMENTS PROPOSED TO CLAUSE 22.

(1.) The clause as originally drafted would leave the appointment by a county authority of a medical officer or a sanitary inspector an entirely optional and permissive question. But having regard to the great importance from a public health point of view of every county authority having proper skilled advice in their supervision of the local administration of the sanitary laws, and having in view the hesitation that is at present apparent in England on the part of many of the new County Councils to avail themselves of the similar permissive powers to appoint county medical officers of health, it is obviously a preferable plan to render compulsory the appointment of a medical officer and sanitary inspector by every County Council, it being left to the discretion of the Board of Supervision as Central Authority to make exceptions where special circumstances show such exceptions to be reasonable, and not disadvantageous from a public health point of view.

The chief exceptions which it is contemplated should be made by the Board are those where two adjacent small counties desire to combine in the appointment of one and the same medical officer, and where a single officer, devoting all his time to the work, could satisfactorily undertake the duties of both counties.

With the view of facilitating such joint action, the proposed PROVISO has been suggested.

The chief objection to the proposal to make the appointment of a medical officer of health compulsory on every Council will no doubt be based on the additional expense that would be involved; but this additional expense is more apparent than real. If the adoption of the proposal did in some cases involve an initial additional expenditure, it should be remembered that judicious combination of adjoining districts for the appointment of sanitary officers would be encouraged, and as vacancies occurred among existing officers such combinations would be extended. Eventually the initial slight additional expense would disappear, and in some cases an actual saving would probably ensue. Moreover, it must be remembered that at present there is a large number of districts in Scotland without a medical officer of health, as the appointment of such officers by local authorities under the Act of 1867 was not, as in England, compulsory. Such districts undoubtedly need medical supervision, and this could at once, without difficulty or great expense, be supplied by a county officer.

There is also the further contention that sanitary authority is more likely to listen to the advice of an officer appointed by themselves than to that of an officer appointed by a superior authority. But this objection falls to the ground when it is remembered that the medical officer of health is altogether an ADVISING officer and that the responsibility for adopting or rejecting his advice rests directly with the local authority, and indirectly with the County Council.

(2.) The addition of the words "OR COUNTY COUNCILS AS THE CASE MAY BE," is rendered necessary by the preceding PROVISO to sub-section 1.

(3.) The proposed addition to this sub-section (3) is suggested with the view of preventing the breaking up of satisfactory combinations, in consequence of unjustifiable opposition on the part of an ignorant or capricious constituent authority. If a conscientious medical officer calls attention to sanitary defects in the district of such an authority, and recommends action which would involve expenditure, he is very liable to arouse the hostility of the authority, who might in their anger endeavour to secede from the combination, and appoint for themselves a more pliable adviser. The need for some such safeguard as that proposed has been proved to demonstration in English experience.

(4.) It is very desirable that every district Public Health Committee should have proper skilled advice on sanitary matters. Hitherto the appointment of medical officer and sanitary inspector has been optional, although the Board of Supervision have the power of requiring such appointments to be made if they think fit; and, as a result, in a large number of districts no medical officer has been appointed. It is now thought that the appointments should be made compulsory on the local authorities, and there is the less appearance of hardship now in this proposal, as, for a comparatively trifling contribution, such authorities will be able in future to avail themselves of the services of the county officers.

The second part of this new subsection (4) is a modification of Clause 17 (3) of the other Bill [Local Government (Scotland) Bill], and is rendered necessary by the proposed amendment of that clause (*q.v.*).

(5.) Under Section 8 of the Public Health (Scotland) Act, 1867, it is provided that the sanitary inspectors "shall be removable from office only by the Board" of Supervision, "except in the case where the local authority is the Town Council or Police Commissioners or Trustees in any burgh in Scotland having a local Act for police purposes, or having a population of ten thousand or upwards according to the census last taken, in which case the inspectors shall be removable from office by the local authority."

[1] Now (June, 1889) there are four such officers, but not one of them is a medical man.

But by a strange anomaly, no such protection is afforded to medical officers appointed under that Act. In his evidence before the Royal Sanitary Commission on March 31st, 1870, Mr. E. S. Gordon, Q.C., who as Lord Advocate had framed and was mainly responsible for the Bill of 1867, stated that—

> "The sanitary inspector is not removable without the consent of the Board of Supervision. I rather wished also that the medical officer should be in the same position, but I found that there was a strong disinclination to the power of dismissal being vested in the Board of Supervision alone; and, not being in Parliament at the time, I was obliged to come to a compromise." (Q. 11,092.)

That compromise is not satisfactory or just to the medical officers.

On the same occasion Mr. (now Sir W. S.) Walker, the Chairman of the Board of Supervision, threw further light on this matter in his evidence, when he admitted that the medical officer is much more dependent upon the local Board than the inspector is, and added—

> "I may observe that in Scotland the Board of Supervision have not the same power with reference to medical officers that the Poor-law Board have in England. The tenure of office of a poor-law medical officer in Scotland is not permanent, and the Scotch members or their constituents did not wish to place the medical officers under the Public Health Act in a different position from that of medical officers under the Poor-law Act." (Q. 12,103.)

It requires no elaborate arguments to show that it is of the utmost importance from every point of view to obtain reasonable security of tenure, during good behaviour, for the medical officer as well as the sanitary inspector, and for the officers of the new County Councils as much as for those of the old local authorities. Without such security of tenure perfect independence in the advice given by the medical officer cannot be ensured, and great hardship may fall on the head of an officer who, fearlessly doing his duty, points out the sanitary defects of his district. The need for such security has long been seen in English experience, and recently Bradford, Ruthin, and many other places have afforded striking evidence of this statement. Hence the proposal to add the new subsection (5) to Clause 22 of the present Bill.

23.—(1.) Every medical officer and sanitary inspector under the Public Health Acts for a district in any county shall send to the County Council a copy of every [*periodical*] report of which a copy is for the time being required by the regulations of the Board of Supervision (which they are hereby authorised to make) to be sent to that Board, [*and if a medical officer or sanitary inspector fails to send such copy the County Council may refuse to pay any contribution, which otherwise the Council would in pursuance of this Act pay, towards the salary of such medical officer or sanitary inspector.*]

(2.) If it appears to the County Council from any such report, *or from any other information or representation*, that the Public Health Acts have not been properly put in force within the district to which the report relates, or that any other matter affecting the public health of the district requires to be remedied, the Council may cause a representation to be made to the Board of Supervision on the matter.

REASONS FOR AMENDMENTS PROPOSED TO CLAUSE 23.

(1.) The County Council should have a copy of EVERY report of importance made by the local health officers, and not merely those that have to be PERIODICALLY made. It frequently happens that the "special" occasional reports on particular outbreaks of disease or on pressing local matters, are of the greatest importance. If the County Council are to exercise any effectual supervision over sanitary proceedings in their county, they should have copies of those reports in their hands at the times they are made, and should not have to wait for their incorporation in some "periodical" (probably annual, or at most, quarterly) report.

The clause as at present drafted, has been copied from the English Act of last session, but the defect referred to has already been discovered in the working of that Act. The word [PERIODICAL] should therefore be omitted.

The second part of this subsection (1), which has been copied from the English Act of last session ("AND IF A MEDICAL OFFICER OR SANITARY INSPECTOR FAILS TO SEND SUCH COPY, THE COUNTY COUNCIL MAY REFUSE TO PAY ANY CONTRIBUTION WHICH OTHERWISE THE COUNCIL WOULD, IN PURSUANCE OF THIS ACT, PAY TOWARDS THE SALARY OF SUCH MEDICAL OFFICER OR SANITARY INSPECTOR"), seems to be inapplicable to Scotland, as in that country there has been no repayment from the Parliamentary Grant of a moiety of the salaries of sanitary officers under the Public Health Acts. It should therefore be omitted.

Moreover, in any case, the stoppage of a moiety of some of the paltry salaries paid to the average health officers in Scotland would be but a very trifling punishment.

(2). The insertion of the words "OR FROM ANY OTHER INFORMATION OR REPRESENTATION" after the words "FROM ANY SUCH REPORT," is desirable in order to enable the County Council to take action (if so disposed) on complaints or on information other than that afforded by the report of the local health officer.

24.—(1.) Except where the Board of Supervision, for reasons brought to their notice, may see fit in particular cases specially to allow, no person shall hereafter be appointed the medical officer of any county or district, unless he be legally qualified for the practice of medicine, surgery, and midwifery.

(2.) No person shall after the first day of January one thousand eight hundred and ninety-three be appointed the medical officer under the Public Health Acts for a county, or district, or a parish which contained, according to the last published census for the time being, a population of fifty thousand or upwards, unless he is qualified as above mentioned, and also either is registered on the *Medical Register* as the holder of a diploma in sanitary science, public health, or State medicine under Section 21 of the Medical Act, 1886, or has been during the three consecutive years preceding the year one thousand eight hundred and ninety-three a medical officer under the Public Health Acts *as defined by this Act, or under the Public Health Act, 1875, or under the Public Health (Ireland) Act, 1878*, for the district of a local authority under the said Acts containing a population according to the last published census of not less than twenty thousand.

(3.) No person shall, except with the express consent of the Board of Supervision, be appointed as the sanitary inspector for a county unless he *possess a certificate or diploma in sanitary science from a body competent to give such certificates or diplomas*, or has been during the three consecutive years preceding his appointment the sanitary inspector of a local authority under the Public Health Acts, *as defined by this Act, or under the Public Health Act, 1875, or under the Public Health (Ireland) Act, 1878*, the district of which contained a population, according to the last published census, of not less than twenty thousand.

REASONS FOR AMENDMENTS PROPOSED TO CLAUSE 24.

(2.) The words proposed to be added seem to be necessary to ensure that the important post of medical officer of health shall be open to competition from all parts of Great Britain and Ireland.

(3.) The first amendment to this subsection (3) is designed to secure that preference shall be given to holders of special sanitary certificates or diplomas.

The second amendment is necessary in order to secure that the post of sanitary inspector shall be open for competition to candidates from all parts of the United Kingdom.

50.—(1.) The clerk of supply in office at and after the passing of this Act shall discharge all the duties of county clerk until the appointed day, and upon such day the clerk of supply in office shall become the clerk of the County Council (in this Act referred to as the county clerk or clerk of the County Council), and shall continue in office for twelve months after the first meeting of the Council, unless he shall sooner vacate office by death, resignation, or disqualification. At the expiration of such period he shall continue in office during the pleasure of the County Council.

(2.) In addition to any other rights and duties conferred or imposed on him by the Council, the county clerk shall have and discharge the rights and duties now belonging to or devolving on the clerk of supply, and all things authorised or required to be done by or to the clerk of supply may be done by or to the county clerk.

(3.) Subject to the provisions of sub-section (1) of this section, the County Council may from time to time appoint a county clerk, treasurer, collector, assessors, surveyors, and such other inspectors, officers, and servants as may be necessary and proper for the efficient execution of the duties of the County Council, and may make regulations with respect to the duties and conduct of such county clerk, treasurer, collector, assessors, surveyors, inspectors, officers, and servants. If it is deemed expedient one person may be appointed to fill two or more offices, and two or more persons may be appointed jointly to fill one office.

(4.) It shall not be lawful to appoint a county councillor or the partner in business of a county councillor to any office or place of profit under the County Council; and the disqualification shall apply to any person and his partners in business during six months next after such person has ceased to be a county councillor.

(5.) The Council shall pay to the county clerk, treasurer, collector, assessors, surveyors, inspectors, officers, and servants appointed or employed by them such reasonable salaries, wages, or allowances, and may award to them such pensions, not exceeding those which may be awarded to civil servants of Her Majesty under the like circumstances, as they think proper, and every such county clerk, treasurer, collector, assessor, surveyor, inspector, officer, and servant shall hold office during the pleasure of the Council [*subject, as regards medical officers and sanitary inspectors, to the provisions of section 22 (5) of this Act.*]

(6.) The Council may at any time (*subject, as regards medical officers and sanitary inspectors, to the provisions of section 22 (5) of this Act*), discontinue the appointment of any [*inspector,*] officer, or servant appearing to them not necessary to be reappointed; and may from time to time make such arrangements as they think necessary as to the offices required to be created or abolished.

REASONS FOR PROPOSED AMENDMENT TO CLAUSE 50, SUBSECTION 6.

The proposed saving clause in sub-section (5) and (6) appears to be necessary in view of the proposed new subsection 5 of Clause 22 (*q.v.*). Otherwise there would be a serious inconsistency between the various provisions in the Act relative to the tenure of office of the sanitary officers.

Under these circumstances the word "inspector" had also better be omitted. The word "officer" would seem to include "inspector," and possible confusion may be avoided by omitting the latter word altogether.

LOCAL GOVERNMENT (SCOTLAND) BILL.

17. With respect to the transference to the County Council of the powers and duties of parochial boards as local authorities under the Public Health Acts, the following provisions shall have effect:—

(1.) For the purposes of the administration of the laws relating to public health, the county shall be divided into districts in the manner provided in the Acts of 1889, and there shall be a district public health committee for each such district constituted as provided in the said Acts.

(2.) A district public health committee shall, subject to the provisions of the said Acts, be the local authority under the Public Health Acts, and as such shall have and may exercise within its district all the powers and duties by the Acts of 1889 transferred to or conferred on the County Council with respect to the administration of the laws relating to public health, except those relating to medical officers or sanitary inspectors for the county, and subject to the provisions following:

(*a*). A district public health committee shall have no power of raising money by rate or loan.

(*b*). The County Council may make general regulations for the government of a district public health committee, and such committee shall conform to those regulations.

(*c*) *If not less than one-tenth of the ratepayers in a district appeal to the County Council from a determination or order of the district public health committee, the County Council shall take such appeal into condition, and shall have power to confirm or vary or rescind such determination or order; and such determination or order shall be stayed pending the appeal.*

(2*c*.) It is felt that "five" is too small a number of ratepayers to be entrusted with the right of appeal against, and consequent power of delaying the execution of, an order of the local sanitary authority. If the proposal in the Bill were enacted every sanitary improvement would almost certainly lead to an appeal and delay. The appellants should be at least some percentage of the interested ratepayers, and in the clause suggested for substitution for Clause 17(2*c*) ten per cent., or one-tenth, is proposed.

(3.) *Except as regards medical officers and sanitary inspectors* the power of appointing officers under the Public Health Acts is hereby varied, so that it shall be lawful to appoint such officers either for the whole district or any

part thereof or parish therein as shall be deemed expedient. The officers so appointed shall have, as nearly as may be, within the areas respectively assigned to them the same powers, duties, rights, and tenure (if any) as the officers, as the case may be, of the existing local authority, have within the area of the parish. The district public health committee shall have power to appoint and remove a district committee clerk, who shall, whenever possible, be the same person appointed by the district committee of the same district for any other purpose under the Acts of 1889.

REASONS FOR PROPOSED AMENDMENT OF CLAUSE 17 (3).

(3.) This subsection as drafted would apparently continue a faulty arrangement as to the tenure of office of medical officers, which it is proposed to deal with fully in the "Suplementary Provisions" Bill (*q.v.*). These officers should therefore be excepted from the operation of the Clause 17 (3).

LUNACY ACTS AMENDMENT BILL.

This Bill was fully discussed before the Subcommittee in the spring, and a number of resolutions were printed in the JOURNAL of April 6th, page 799. The Lord Chancellor had modified the clauses respecting medical restraint, in accordance with the recommendations of the Parliamentary Bills Committee; that was to say, he had so modified them that a patient could be restrained for any medical or surgical reason, which was, he thought, nearly as far as it was desirable they should go, and covered most of the ground asked for.

The following are the more important additional suggested amendments, with reasons for the same, on which it was decided that insistance should be more strongly made while the Bill was before this Law Committee (the Bill as ordered to be printed, February 25th):—

Sect. 29, Subsect. 4, p. 18, line 30, to omit "a special report," and the words following to include the word "with" in line 33, and to make the necessary alterations in this and subsequent subsections to harmonise with this alteration.

The medical certificate of unsoundness, to be sent periodically, is thought to be sufficient, and the "special reports" will impose a large amount of extra routine work on the medical superintendent, to the detriment of more important duties.

Sect. 3, Subsect. 7, p. 2, and Sect. 33, Subsect. 1 p. 20. It is suggested that these be omitted, as singling out for restrictive legislation medical men from among those who now receive "single patients."

Sect. 37, p. 22. It is suggested that this section be omitted. If this section be not omitted it is suggested that the person making application for discharge of a patient under this section should give adequate security for the payment of all necessary expenses, and that persons be disqualified to sign any medical certificate under this section who hold to the applicant under this section the same relations as the persons disqualified to sign under Section 14 hold to the "petitioner" for an order for reception of an alleged lunatic into an asylum, etc.

It is to be anticipated that, under this section, vexatious, wholly unnecessary proceedings would sometimes be instituted, and that it is likely to lead to the discharge of persons who are in an unfit state for discharge.

Sects. 43 and 44. It is suggested that these sections be omitted, or, failing this, that Sect. 44 be omitted and the part of Sect. 43 following the word "be" in line 22, p. 26.

The correspondence of patients in private asylums is thought to be already duly protected, inasmuch as all letters to certain authorities must be forwarded unopened, and any letter written by a private patient and not forwarded to the person to whom it is addressed must be endorsed to that effect, and be laid before the Visiting Commissioners or the Committee of Visitors, as the case may be, at their next visit.

Sects. 54 to 60, p. 33, *et seq.* It is suggested that the provisions of the Bill be so altered as not to subject the registered lunatic hospitals to special restrictions and disabilities.

Sect. 65, p. 36, line 38. It is suggested to omit the words "wholly or in part belonging the same local authority," so that the services of medical officers in any two or more county or borough asylums should count accumulatively towards pension as if all such service has been in one asylum, each such local authority to contribute its appropriate share.

It is also suggested that officers and servants in county and borough asylums should be entitled to claim pensions as a right after a certain length of service with good conduct; and that the medical officers should be placed, as regards this matter, on a footing analogous to that of members of the Civil Service.

Copies of these resolutions have been forwarded to the Home Secretary, and placed in the hands of members of Parliament, with a view to securing their adoption in the Bill now before the Law Committee.

[It will be seen that many matters herein referred to are still in course of action, and further details as to the working of the Committee will be available before the annual meeting. The Committee, however, propose that, in making their final report, the necessary additions and alterations should be made to explain the course of events subsequent to the present interim Report.]

ERNEST HART, *Chairman.*

REPORT OF INEBRIATES LEGISLATION COMMITTEE.

YOUR Committee have pleasure in reporting various indications of increased interest, alike on the part of the Legislature and the people, in the scientific treatment of the diseased inebriate.

The enactment of permanent legislation, which was mainly the work of the Association, aided by the Society for the Study of Inebriety, has contributed sensibly to the beneficial working of the Inebriates Acts.

It has been found that the change of title from "Habitual Drunkards" to "Inebriates" Act has smoothed the way to some individuals to avail themselves of the compulsory detention provisions of this instalment of sound legislative treatment, and that the new title is more accurate, as there are not a few inebriates whose indulgence is not habitual, but periodical or occasional.

The removal of the restriction of the justices attesting the applicant's request for admission and detention to one county has also rendered entrance on curative treatment less forbidding.

The limited power of appointment of a deputy to the licensee or medical superintendent has also been of service in sustaining and improving discipline.

Your Committee have been cheered in their efforts to arouse the Legislature to a due sense of the need for more thorough-going legislation by the drafting of a proposed Scottish Bill (of which an analysis is appended) by a former Crown Agent for Scotland, Mr. Charles Morton, W.S. The remarkable importance of this Bill lies in the fact that, with all its drastic provisions, it has originated from a legal source, and that its principles have been approved by many of the most distinguished members of that profession in Scotland. An abstract of the Bill is appended to this report.

While your Committee do not feel warranted in approving of all the provisions in this draft Bill, many of which are peculiar to Scotland, your Committee desire to record their high sense of the importance of such an influential legal demand for so thorough-going a measure. Your Committee have, however, heartily and formally approved of the leading features of the proposed Bill (1) The compulsory reception and detention of inebriates in properly conducted homes for the curative treatment of their diseased condition, (2) the payment of a portion of the necessary expenditure at the public charge, and (3) voluntary admission to a home without appearance before justices.

Your Committee also propose to issue a third circular to boards of guardians to ascertain their opinion as to the power of detention, for purposes of cure, of destitute habitual drunkards, and as to payment in certain cases for their residence in properly conducted and authorised homes.

The Committee recommend their re-election as follows:—The President and President-Elect, *ex-officio*; Dr. T. Bridgwater, President of Council; Dr. Norman Kerr, Chairman; Mr. D. B. Balding, J.P.; Mr. H. Branthwaite; Dr. C. Cameron, M.P.; Dr. Alfred Carpenter, J.P.; Dr. G. B. Clark, M.P.; Dr. C. R. Drysdale; Mr. George Eastes; Dr. J. W. Eastwood, J.P.; Dr. R. Farquharson, M.P.; Sir Walter Foster, M.P.; Mr. W. C. Garman; Dr. J. Hill Gibson; Dr. A. Grant; Mr. F. J. Gray; Dr. C. J. Hare; Mr. R. H. B. Nicholson; Surgeon-Major G. K. Poole, M.D.; Mr. J. Prankerd; Surgeon-Major Pringle, M.D.; Fleet-Surgeon G. Robertson, M.D.; Dr. G. Danford Thomas, Coroner; Dr. H. W. Williams; Dr. Wynn Westcott: Dr. E. Hart Vinen; and Mr. H. R. Ker.

NORMAN KERR, M.D., *Chairman.*

Abstract of Scotch Bill.

The care and treatment of persons who, although not exhibiting such symptoms as would warrant a medical practitioner to grant a certificate for their confinement in a lunatic asylum, are yet labouring under a special form of mental disorder, the chief distinguishing features of which are,—excessive and secret indulgence in intoxicants, the craving for which is more or less persistent or occurring in fits, with remissions at intervals of time and a marked change in the mental powers and moral character.

CLAUSE I. Provides for repeal of existing Inebriates Acts, so far as relates to Scotland.

II. The Restorative Homes (Scotland) Act.

III. "District Homes," premises, other than a lunatic asylum, licensed under this Act, under the management of District Boards of Lunacy.

"Private Homes," licensed as above, but in the occupancy of private persons.

"Superintendent," manager or principal officer of a District Home, and the licensed owner or owners of a licensed Private Home, and any manager or other principal officer appointed by him for the management thereof.

"Sheriff," the sheriff and sheriff-substitute of county of patient's residence, and also sheriff of county where Home is situated.

IV. and V. The Board of Commissioners in Lunacy to inquire of each District Board whether separate District Homes, or one General District Home, or one or more Private Homes, should be established, and to report to the Secretary of State for Scotland, who can order the Board to carry out their decision. The report and the Scottish Secretary's order to be laid before both Houses of Parliament. If no objection in Parliament during 40 days, the Scottish Secretary's order to take effect. Estimates for sites, equipment, &c., of Homes to be subject to approval by General Board the work being executed under the management of the District Board.

VI. The necessary charges for the establishment and carrying on of approved Homes to be borne on the landward part of counties and upon the burghs (if for one General District Home) of all Scotland, (if for a separate District Home) of the district, according to the real rent of the lands and heritages. The proposed assessments to be raised under the same Acts as the assessment for Lunacy establishments.

VII. Board empowered to grant a licence for general or separate Distric Home.

VIII. When patient is from another district, District Board to have power to charge proportion of cost to district of patient's prior residence.

IX. and X. District Homes to be vested in the District Board, which Board can acquire lands and borrow on security of the assessment.

XI. Private Homes may be licensed by District Board on payment of a fee of £2 to the Board.

XII. Board to frame rules and regulations for District and Private Homes, for medical attendance, &c., also for scales of payment for patients not entering voluntarily, subject to approval by the Scottish Secretary of State.

XIII. and XIV. Secretary to appoint an Inspector with salary. Each Home to be inspected at least twice a year.

XV. Register of Patients, along with such other books as Board may direct, to be kept. A copy of Register to be transmitted in each December to the Board.

XVI. Provides for admission (and detention for a limited time) to a Home on voluntary application. The superintendent, within two days of admission, to report to the Board. The superintendent of a Private Home may make special arrangements for board and fees. If no such agreement, the scheduled charges to be exigible.

XVII. If patient refuses to apply voluntarily, any member of his family, or any other near relative, or a friend taking interest in him, or a magistrate in the public interest, may present an application to the Sheriff to grant an order for reception and detention in a District or Private Home. The application to be accompanied by a Statutory Declaration by the Applicant, and, if the patient have such friends, by a Statutory Declaration by two private friends, who shall have personally seen him within seven days, and also a certificate on soul and conscience by a registered medical practitioner, who shall have seen patient within seven days. If the patient have no private friends, there must be two medical certificates. The application may be for reception into a Home and for detention for a period not exceeding twelve months. On receiving the order from the Sheriff, the applicant, with the assistance (if necessary) of any of the attendants of the Home, or of officers of the law, can remove the patient to the Home. The Board to fix the scale of payment when there is no private arrangement.

XVIII. Any patient can at any time apply to the Board by letter, or to the Sheriff by petition. The Board and the Sheriff have both power to grant or refuse a discharge, subject to review by the Superior Courts. The patient can also apply to the Secretary for Scotland.

XIX. Patient, unless discharged by the Board, the Sheriff, a Superior Court, or the Secretary, shall be detained for twelve months. The Board may postpone discharge for an additional three months on application either from original applicant or from any relative, with the consent of the persons who made the relative declarations. The Board may also dismiss any patient for insubordination, misconduct, disobedience to regulations, disturbance or annoyance to the officers or inmates of the Home.

XX. Patient and his estate liable for patient's board and treatment in District and Private Homes, and for all contingent expenses, as decerned for by the Sheriff on a summary petition by applicant, superintendent, or guarantor.

XXI. The Board can transfer a patient from one home to another.

XXII. The Board may grant occasional leave of absence, subject to withdrawal. In the event of escape, any Justice or Magistrate with jurisdiction in place where patient is found, or in the district from which he escaped, can, on summary application by the Superintendent, issue a warrant for the apprehension of the patient; and, after apprehension, the patient shall be taken back to the Home.

XXIII. Any person aiding a patient to escape, or supplying anyone known to such person as being an inmate of a licensed "Home," with wine, beer, spirits, or other alcoholic stimulant (unless by order of the Medical Attendant), shall be liable to a penalty of £10, on application of the Superintendent to the Sheriff or a Justice of the Peace.

XXIV. A penalty not exceeding £20 for any officer or attendant failing to comply with the provisions of the Act, or supplying stimulants or narcotics (except by order of the Medical Attendant) to any patient.

The Board may revoke a licence to a Private Home if the licensee prove to be unqualified or negligent.

XXV. The Summary Procedure (Scotland) Act to be incorporated with this Act.

XXVI. Power to Members of the Board and Inspectors to visit all District and Private Homes, and to employ medical advice and assistance. Such expenses to be charged to the Board.

XXVII. The Sheriff and any of the Visiting Justices can visit and inspect Homes.

XXVIII. Any minister of the parish, and the patient's own minister, also any relative, can visit under such conditions as Superintendent and Medical Attendant, with sanction of the Board, lay down.

XXIX to XXXI. No action to lie against any medical or other person for applications, certificates, or declarations, unless on specific averment of falsehood and malice, or of reckless and careless granting without inquiry, and of being untrue and unwarrantable. No action can be laid after the expiry of six months after the patient's discharge. No action to lie against the Commissioners, or against a Superintendent of a District or Private Home, or occupant or owner of a Private Home, or against any Attendant, acting under orders of the Sheriff or the Board. No document to be invalid for defect in form.

REPORT OF THE SCIENTIFIC GRANTS COMMITTEE.

THE Scientific Grants Committee have to report that during the past year 1888-89 the sum of £419 has been granted in aid of scientific research, of which the following are particulars:

	£	s.	d
Ashdown, Dr. H. H., 49, Upper Bedford Place, Russell Square, W.C., a Research upon Absorption from the Bladder	15	0	0
Ballance, Dr. C. A., 56, Harley Street, W. (renewed grant), to Inoculate Antiseptically a large Variety of Animals with Cancer, and to keep them subsequently under observation for a period of not less than two years. In addition, it is proposed to continue and extend cultivation experiments	15	0	0
Cash, Dr. J. T., 25, Dee Street, Aberdeen, Investigations with Regard to the Action of some Nitrites which differ from those already examined	10	0	0
Copeman, Dr. S. M., Physiological Laboratory, St. Thomas's Hospital, S.E., a Research to find a Method of Definitely Determining whether a Blood Stain consists of Human Blood or that of one of the Lower Animals	10	0	0
Haldane, Dr. J. S., Cloanden, Auchterarder, to defray expenses in obtaining assistance in the carrying out of the Chemical Analyses connected with the Calorimetrical Work	34	0	0
Halliburton, Dr. W. D., 25, Maitland Park Villas, Haverstock Hill, N.W., an Investigation into the Chemical and Physiological Fluids of the Body (Blood, Milk, Exudations, etc.)	30	0	0
Haycraft, Dr. J. B., F.R.S., 20, Ann Street, Edinburgh, in aid of two Researches, the Chemico-Physical Character of Certain Proteids, and another which deals with the question of Capillary Hæmorrhage	25	0	0
Horsley, Professor V., the Brown Institution, Wandsworth Road, S.W., and Dr. Charles Beevor and Mr. Walter Spencer, for two researches: 1. Professor Horsley and Dr. Beevor, on a Minute Analysis on the so-called Motor Cortex in the Monkey, and an Investigation into the Function of the Divisions of the Internal Capsule. 2. Professor Horsley and Mr. Spencer, on Cerebral Compression, the Symptoms it Produces, and Diagnosis of the Seat and Nature of the Compression	50	0	0
Jessett, F. B., Esq., 16, Upper Wimpole Street, W., in conjunction with Professor Victor Horsley, on some Experiments in Intestinal Surgery	12	0	0
Jones, H. Lewis, M.D., 6, West Street, Finsbury Circus, E.C., an Investigation into the Structure of the Liver of the Lower Vertebrates, with the object of finding out, if possible, the Significance of the Tubular Structure of the Mammalian Liver, and its Derivation from the Tubular Liver of the Lower Animals. The application is for a grant for the purchase or hire of a microtome and for material	10	0	0
Lockwood, Mr. C. B., 19, Upper Berkeley Street, W., Pathology of Syphilis	25	0	0
Luff, Dr. A. P., St. Mary's Hospital, Paddington, W., an Investigation to Determine the Connection (if any) of the Ptomaines or Animal Alkaloids with Infectious Fevers	38	0	0
Reid, E. W., Esq., M.B., the Physiological Laboratory, St. Mary's Hospital Medical School, Paddington, W., in aid of an Investigation to Determine to what Extent the Vitality of the various Epithelia covering the Cavities of the Body influence the Absorption of Different Substances, and to Observe the Effects of various Drugs tending to Exalt or Depress the Irritability of Protoplasm upon the Power of Absorption of these Cavities, the Vascular Factor being excluded	20	0	0
Robertson, Dr. R., West Hill House, Ventnor, Isle of Wight, the Respiratory Incapacity in Pulmonary Consumption. 1. To Determine its Extent in Relation to Obvious Physical Changes and Symptoms. 2. To Estimate as far as possible the Relative Extent and Influence of Changes in Pulmonary Tissue in the Blood, and in Muscular Vigour, and the Influence of such other Factors as Inquiry may discover or show to be important	15	0	0
Spencer, W. G., Esq., M.B., 94, Wimpole Street, W., in aid of Experiments to Observe whether the Treatment by Drugs affects the Course of Tuberculosis artificially set up, etc.	10	0	0
Tomkins, Dr. Henry, Leicester, Researches (largely bacteriological), Causes of Summer Diarrhœa, particularly its Fatality and Prevalence in Leicester	20	0	0
Tubby, A. H., F.R.C.S., mit Herrn Oberst. v. d. Heyde, Parkstrasse 13 II, Halle, o/S., *a*. To Ascertain the Limits of Toleration of the Peritoneal Cavity to Irritants, Chemical and Putrefactive (Micro-organic). *b*. To Ascertain the Length of Time necessary, and the Nature and Amount of the Irritant needful, to induce Morbid Change, and the Nature of those Morbid Changes. *c*. To Ascertain the Time necessary for the Formation of such Union between the Parts of Resected Intestine as will suffice to Prevent the Passage of Foreign Material from the Gut into the Peritoneal Cavity under varying conditions into Intestinal Activity. *d*. To Discover, if possible, a more Practicable Method of Suturing Resected Intestines, and one involving less time in its Application than that now in vogue	30	0	0
White, Dr. W. Hale, 65, Harley Street, W., in aid of a Research upon the Influence of the Central Nervous System upon the Production of Pyrexia	50	0	0
	£419	0	0

The following amounts have been returned as unused:—

	£	s.	d.
Dr. H. H. Ashdown	6	9	7
Dr. S. M. Copeman	2	19	3
Dr. J. S. Haldane	34	0	0
Dr. W. D. Halliburton	9	9	9
Dr. J. B. Haycraft	10	0	0
Dr. H. L. Jones	5	13	3
Dr. A. P. Luff	18	6	8
Dr. R. Robertson	15	0	0
Dr. G. H. Savage	29	1	1
Mr. A. H. Tubby	27	14	1
Dr. H. Tomkins	4	9	3
Dr. W. H. White	38	17	0
Total amount returned	£201	19	11

Dr. Herbert H. Ashdown, who has received a grant for the purpose of conducting a research in the physiological laboratory of University College, London, upon the functions of the kidney, has found by quantitative analyses of urine secreted after section of the renal nerves, that a true paralytic secretion is caused; and, further, that by the injection of different chemical substances into the blood an activity may be established in the organ, the nerves of which have been divided, entirely out of proportion to, and unrepresented by, that aroused in the unaffected organ. He has also shown that a reducing substance may make its appearance in the urine secreted by the kidney with divided nerves which cannot be found present in the secretion of the uninjured organ. This substance he has found to be a form of glycuronic acid, and that it is similar to the reducing substance which may be present in the urine after the administration of chloral, chloroform, morphine, and some other drugs. He has also been able to obtain this same reducing substance in quantity in the urine of otherwise apparently healthy individuals.

Messrs. C. A. Ballance and S. G. Shattock's investigations into *the intimate pathology of cancer* have been continued on the same lines as have been followed during the previous years in which a grant has been received by them from the Scientific Grants Committee of the British Medical Association. Many tumours have been examined microscopically, whilst others have been employed for culture experiments on various media, especially human serum. Further transplantation experiments have been carried out upon different kinds of animals, so as to discover, if possible, one in which the disease would grow, and might thus be studied. Up to the present time all the results have been negative, but the lifetime of cancer in the human subject is so long, that, until at least two years have elapsed, Messrs. Shattock and Ballance believe that no safe judgment could be hazarded about the transplantation experiments or the bacteriological cultivations.

The research with regard to *the action of some nitrites* in furtherance of which Professor Cash, of Aberdeen, received a grant in the autumn of 1888 is still in progress, but it is expected that it will be published in the course of this year. The nitrites of amyl, butyl, propyl, and ethyl, separated in a pure condition by Professor Dunstan, have been carefully examined, with regard to their physiological action upon man and the lower animals, and certain variations in their action ascertained, which will be fully described in the report, together with the methods employed in the investigation.

Dr. S. Monckton Copeman has been engaged in *a research on the medico-legal detection of human blood.* The research was undertaken with the object of determining whether it was possible to distinguish human blood from that of the lower animals when dried on clothes, etc., the method followed depending on the different manner in which the hæmoglobin of the blood crystallises in different animals. Human hæmoglobin is usually stated to be non-crystallisable, but it was formerly found that if a drop of blood taken from a patient suffering from pernicious anæmia, who had not been treated with arsenic, was mounted on a glass slide, crystals of hæmoglobin always appeared in from ten to forty-eight hours without further preparation. Following out what appeared to be the condition here present, normal human blood was diluted with foreign (for example, sheeps') serum and mounted in the same manner. If the serum were fresh, usually no crystals formed; but if it had become decomposed, they appeared readily, when it was found that they consisted of *reduced* hæmoglobin. This was also the case when they were obtained by other methods, whereas the blood of all other animals except the monkey appears to crystallise as *oxy-hæmoglobin*, while the blood of this animal can be distinguished from that of man by the different shape of the crystals. Further experiments showed that they could be obtained from very minute quantities of blood, and also from blood which had been allowed to dry on clothes; so that, if the stain be fairly recent and in not very minute quantities, it appears possible to prove the desired point. The report of the method was published in detail in the JOURNAL on July 27th.

Dr. J. S. Haldane has sent the following report on the progress of a research on *the physiology of temperature regulation in animals*, for the purpose of which research he received last year a grant of £34 from the British Medical Association. At the outset of the work last summer Dr. Haldane found that the methods hitherto employed for the measurement of respiratory exchange of material were insufficient for the purposes of the present research. A new method had therefore to be devised; and he devoted considerable time to perfecting and very thoroughly testing it. The method will, it is believed, be equally valuable in these researches, involving accurate measurement of the respiratory exchange. Dr. Haldane found it necessary to make a considerable number of further experiments with a view to perfecting the calorimetric method employed. In consequence of the results of these experiments, and in view of the desirability of having apparatus suitable for larger animals than those hitherto employed, a new calorimeter had to be obtained. Considerable delay occurred before it could be made, and the progress of the work has been much hindered from this cause. Dr. Haldane hopes, however, shortly to have ready for publication a paper containing the results of a first series of observations on animals and a description of the methods employed, and the experiments which have been made with a view to testing them.

Dr. Halliburton has during the year been engaged in investigating the *chemical properties of certain exudation and transudation fluids.* A paper on *cerebro-spinal fluid* has been sent to the *Journal of Physiology*, of which an abstract was published in the JOURNAL on July 27th. The chief substances in this fluid to which Dr. Halliburton has directed his attention are (1) the proteids, which are found to consist chiefly of the peptone-like bodies known as albumoses; (2) the reducing substance, which is found to be pyrocatechin, and not sugar; and (3) the salts, which do not apparently differ from those of the blood and lymph, in spite of Schmidt's statement to the contrary. The peculiarities of this fluid in regard to its organic constituents separate it markedly from ordinary dropsical fluids, and justify its being classified as a secretion. Dr. Halliburton has done a good deal of work with dropsical fluids, but defers publishing his results until he has examined a greater number of these transudations.

Dr. J. Berry Haycraft has made experiments in connection with *capillary hæmorrhage*, which have progressed satisfactorily, and have yielded important results. The experiments in connection with the *alkalinity of the blood*, continued from last year, will be ready for publication in a month or so. In connection with these Dr. Haycraft has performed already over a hundred estimations of blood alkalinity. Dr. Haycraft reports that the research upon the *chemico-physical character of certain proteids* has cost him little money, and returns with thanks the £10 kindly voted him. Dr. Haycraft is anxious, however, to work at another branch of the same subject, in which case he would require the help of a skilled assistant who understands some chemical manipulation, as his own time is much broken up.

Professor Victor Horsley has been engaged in the continuation of experiments on the *localisation of motor function in the cortex and in the internal capsule.* In addition, observations were made on similar localisation in the cortex of an orang outang; and the results obtained are about to be published by the Royal Society, and embrace many new points.

Mr. F. B. Jessett has forwarded a description of the methods adopted and results obtained from *an experimental investigation into a novel mode of performing operations in the intestines.*[1] The operations performed were gastro-enterostomy, jejuno-ileostomy, circular enterorrhaphy, and ileo-colostomy. The investigation was carried out at the Brown Institution, in conjunction with Mr. Victor Horsley, and assisted by Dr. Dove. The methods adopted in the investigation were those suggested by Professor Senn, of Milwaukee, and were performed shortly as follows: Gastro-enterostomy and jejuno-ileostomy were performed with decalcified bone plates, each of which has an oval opening in its centre, and four perforations for sutures at the margin of the opening, one situated at each end, and one on each side; sutures are passed through these perforations, and fastened at the back. The operation is performed by making a longitudinal incision in the middle line of the abdomen, between the ensiform cartilage and umbilicus, and thus opening the cavity of the abdomen; a portion of the stomach and a loop of the jejunum, as near to its origin as possible, are now drawn out of the wound, and packed round with either sponges or cotton wool, soaked in solution of carbolic acid (1 to 60). A piece of india-rubber tubing is next passed round the intestine above and below the point at which it is to be opened, and lightly tied. An opening is next made in the long axis of the gut and in the stomach, large enough to admit the bone plates, which are now slipped, one into the stomach, and the other into the intestine; the lateral sutures, which are armed with needles, are now carried through all the coats of the stomach on the one hand, and the jejunum on the other, the end threads being left at the angle of the wounds of

[1] JOURNAL, July 27th.

each viscus. The corresponding threads of the two plates are then tied firmly, the knots being embedded between the peritoneal surfaces of the intestine and stomach. The parts are then dropped back into the abdomen, and the parietal wound closed in the usual manner. Jejuno-ileostomy and ileo-ileostomy are performed in identically the same manner, substituting two portions of the intestine. The operation can be easily performed in from fifteen to twenty minutes. Circular enterorrhaphy, as in cases of intestinal wounds, malignant disease, typhoid ulcer, or in any case in which it is deemed advisable to remove a portion of the intestine, is performed as follows:—The abdominal cavity being opened and the portion of intestine removed, a narrow band of india-rubber is cut the exact length of the circumference of the upper portion of divided gut. This is formed into a ring by two catgut sutures. The ring is next pushed into the gut, and fastened round its free edge by a continuous catgut suture. Two threads, armed at each end with a common sewing needle, are prepared. One thread is passed through the upper end of the india-rubber ring, now fixed in the intestine and all the coats of the bowel, the needles being passed one on either side of the mesentery. The needles of the other thread are passed equi-distant through the rubber ring and the coats of intestine on the convex surface. The needles are next passed through the serous and muscular coats of the lower portion of bowel, about an eighth of an inch from its cut edge, at corresponding points. These threads are drawn tightly, and the upper portion of the intestine invaginated into the lower, so that the two peritoneal surfaces are in close contact, and the threads are then tied sufficiently firmly to prevent disinvagination. The bowel is then dropped into the abdomen, and the parietal wound closed in the usual manner. Ileo-colostomy, an operation especially applicable in cases of tumour or cancer of the colon, or intussusception of the ileum into the cæcum and colon, is performed by lining the upper end of the intestine with india-rubber, in the same manner as described for circular enterorrhaphy. An incision is then made in the convex surface of the colon, and the threads passed through its muscular and serous coats on each side of the extremities of the incision. These threads are then drawn tightly, and the small intestine slipped into the slit in the colon, and the threads tied sufficiently firmly to secure the parts in apposition. The distal portion of the divided intestine is invaginated into itself, and fixed by a continuous suture passing through the serous and muscular coats only. These several operations have been performed by Mr. Jessett, assisted by Mr. Victor Horsley and Dr. Dove, with the following results, namely:—Two cases of gastro-enterostomy with approximation discs. Both recovered without bad symptoms. Five cases of jejuno-ileostomy with approximation discs. All recovered without bad symptoms. One case of jejuno-ileostomy by implantation died of secondary hæmorrhage. Seven cases of enterorrhaphy by invagination. Four recovered; the two first died directly from the operation, and one died from obstruction caused by an enterolith. Three cases of ileo-colostomy by implantation. All recovered without bad symptoms. A series of the pathological specimens, the results of the above operations, has been accepted by the pathologist of the College of Surgeons Museum. The entire cost of the investigation has been £20 11s. 5d., of which he has received £12 from your Committee, and he has applied for a further grant of £8.

Dr. Lewis Jones and Dr. T. W. Shore have been engaged in an investigation into the *structure of the vertebrate liver*, and they have examined sections of the liver in all the classes of the vertebrata, and have found that in them all the type of the organ is that of a network of tubules; in none have they found any vertebrata liver which is not a network. They put forward the suggestion that the liver is formed not by the outgrowth of rods of cells which coalesce and form a network, as described by Balfour, but that the network is produced by the breaking up of an originally solid mass of cells through the penetration into it of blood-vessels, and that the meshwork thus formed is more or less finely subdivided according to the extent of the penetration. In the amphioxus the organ remains in its primitive condition, and in the lamprey the penetration of blood-vessels is very imperfect; but in other fishes, in amphibia, in reptiles, and in birds, the liver is plainly seen to consist of a network of tubules. In mammals the tubular arrangement is still present, but it has become obscured by the more abundant anastomoses of tubules which result from (1) the more complete penetration of blood-vessels, (2) the condensation of the tissue, and (3) the development of the lobule, a structural peculiarity confined to mammals, and existing in them in very varying degrees of perfection, which owes its existence to the formation of foci of drainage (intra-lobular veins), and a rearrangement of the tissue around these foci.

The grant to Mr. C. B. Lockwood, was originally made with the view of *investigating the pathology of syphilis;* but as great difficulty has been met with in obtaining suitable material, other subjects have also been investigated. With regard to *syphilis* some material has been obtained and is in course of examination. In making cultures from the blood upon serum an important preliminary difficulty has been met with. The serum tubes, which were obtained from Germany, although apparently pure, were found to contain a motile bacillus, which stained the same as, and had the same morphological characters as, the syphilis bacillus, which some observers say they have cultivated in serum. This point is still in course of investigation. A number of inoculations have been made from the blood of cases of *hectic fever, chronic pyæmia, and gonorrhœal rheumatism, and also from the joint fluid in the latter disease.* The results of these experiments have been decidedly encouraging, and positive results have occasionally been met with, and will in due course be communicated to the JOURNAL. A great many cultures have been made from operation wounds, and although the subject is one which has been much worked at, the results may some day prove worthy of being published. Mr. Lockwood regrets the slowness of the work, but the subject is one in which haste is impossible and quite incompatible with any pretence to accuracy.

Dr. A. P. Luff has been engaged *in a research to ascertain the connection of ptomaines or animal alkaloids with the infectious fevers*, and has worked on the urines of patients suffering from two of the infectious fevers—typhoid fever and scarlet fever—with the view of determining whether any animal alkaloid was present in the urine during the height of the fever which was not present in normal urine. Dr. Luff has extracted from the urine of typhoid fever patients small quantities of two ptomaines, which he has obtained in a crystalline condition, and which apparently have not been discovered before, since they present marked difference from the "typhotoxin" obtained by Brieger, and from the ptomaines extracted last year by Dixon Mann from the abdominal and thoracic viscera of a fatal typhoid fever case. From four gallons of urine collected from scarlet fever patients during the height of the fever, Dr. Luff obtained a small quantity of a semi-crystalline ptomaine in a pure state, and has determined its chemical tests, which he believes are characteristic, and, so far as he has been able to ascertain up to the present, it agrees with no known ptomaine or chemical substance. It is, he believes, a new and definite ptomaine. In the extraction of these ptomaines from the urine Dr. Luff has during the past three months employed a new process, the elaboration of which took him nearly two months. As this process is a somewhat lengthy and tedious one, Dr. Luff proposes to defer its description to the full report which he will send later. Dr. Luff has been extremely careful that the urines upon which he has worked have only been collected from patients who at the time were taking neither alkaloidal nor antipyretic medicines. Dr. Luff has not yet obtained any ptomaine in sufficient quantity to determine its chemical composition by ultimate analysis; this, however, he hopes to do, now that he has discovered a process which extracts the ptomaines in appreciable quantities. It is proposed to go on with the investigations.

Dr. E. W. Reid has been endeavouring *to determine to what extent the vital condition of the various epithelia lining the cavities of the body influence the absorption of different substances.* The object of the research has been to add some data to the facts already known concerning the influence exerted on the process of osmosis through animal membranes by the vital condition of such membranes. In order to exclude the effects of variations in the blood stream the portions of membrane employed have been removed from the body, and the well known long persistence of the vitality of the protoplasm of cold-blooded animals taken advantage of. In order to prolong the vitality of the exsected tissue, as long as possible after removal from the body, a fluid was chosen which would have the smallest depressing action on the vitality of protoplasm consistent with sufficient density to give a fairly rapid indication of the process of osmosis. In obtaining such a fluid the duration of the movement of the cilia of ciliated epithelium, when immersed in the fluid, was taken as an indicator. The majority of the experiments have so far been conducted with the skin of the frog; a few have been made with the gastric mucous membrane of the same animal. The author, however, is desirous of extending the latter series before publication. The

Dutrochet osmometer has been employed in some cases, but the author bases most of his results upon experiments made with a form of osmometer which he has termed the discharging osmometer. In this instrument the pressure is kept constant in order to avoid any error from filtration. In all experiments the instruments have been worked in pairs, exactly equal areas of membrane being exposed in both instruments—one osmometer is thus used to control the results observed with the other. For recording purposes Dr. Reid has taken advantage of the photographic method in order to avoid friction. Two instruments have been devised; in one, the differential recording osmometer, a pair of the discharging osmometers record continuously the difference between the volume of fluid passing through a normal piece of membrane and an equal area of the same membrane subjected to the conditions of the experiment. Units of length in the record have a definite relation to units of volume of fluid passing through the membrane. The second instrument records the rise of fluid in the observation tubes of a pair of osmometers, in which the pressure at the commencement of the experiment is zero, though as osmosis proceeds it gradually increases. Dr. Reid claims to have gained evidence of the following facts in the case of the skin of the frog:—1. A definite absorptive force, apart from the force of osmosis, is exerted by the skin of the frog, comparable to the secretive force of the cells of glands. 2. This force is dependent upon the vital condition of the skin. 3. After removal of the skin from the circulation the absorptive force gradually diminishes; but may persist for three days when the skin is kept in normal saline solution. 4. Reagents tending to depress the vitality of protoplasm, such as chloroform, digitaline, and distilled water, diminish the strength of the absorptive force, while it can be increased by such a stimulant as alcohol in dilute solution. 5. In consequence of this force acting in a direction from without inwards any alteration of the relation of the external surface of the skin to the denser of the two fluids employed in an ordinary osmosis experiment makes a difference in the rapidity of osmotic transference of fluid through the skin, according as the absorptive force is opposed to or in the same direction as the osmotic stream.

The object of Dr. Robert Robertson's inquiry has been to endeavour to ascertain the causes which lead to diminution of *respiratory capacity in pulmonary consumption*, and to estimate how far that diminution is of a permanent character, and how far it depends upon causes which are or may be transient. The investigation as yet has been directed to obtaining some basis for separating the influence of interference with the access of air to the blood from the effects of changes in the blood itself as a respiratory medium, but the observations thus far, though considerable in number, are insufficient for the formulation of any general law upon the subject. Taking the results as provisional, it may be said: (*a*) That sphygmographic records warrant the opinion that the pulmonary blocking of the capillary vessels by the morbid process registers itself in the radial pulse-tracing, just as the blocking of air-cells by the same changes is indicated by spirometric measurements, although, of course, the modifications in the tracings do not permit of the same estimation of the magnitude of the capillary obstruction as do "vital capacities" of alveolar changes. (*b*) That deterioration in the quality of the blood does advance with advancing disease, but that neither the corpuscle-value nor the pigment-value of the blood coincides in rate of deterioration with that of spirometric capacity, nor do the deteriorations in blood-values coincide in rate or degree with each other. It is intended to continue this investigation until reliable conclusions are reached, and to extend it in other directions as may seem desirable.

Dr. W. G. Spencer has been engaged in a research on *the effect of drugs on the course of tuberculosis*. The object of the research has been to see what effect, if any, the administration of drugs to animals inoculated with tubercle would have on the course of the disease. Guinea-pigs have been used, as being most susceptible, inoculated with bovine or human lung tubercle. Thus the tuberculosis ran a rapid course in all the animals inoculated. The drugs were administered by subcutaneous injection, except in the case of bicarbonate of soda, which was given with the food. The doses were carefully regulated so as not to hurt in any way the animal. In no case of those given below in the table did the animal show any sign of suffering from the drug. Control animals were in all cases kept for comparison. The results as yet have been entirely negative.

Dr. H. Tomkins has been engaged in an inquiry into the *etiology of summer diarrhœa*. This investigation was undertaken with a view of throwing some light upon the causes at work in producing summer diarrhœa in England, with its attendant excessive infantile mortality, more particularly as it affects Leicester, which suffers more than any other English town. Dr. Tomkins has been engaged upon this work during the summers of 1886, 1887, and 1888. The general results arrived at so far are as follows:—1. The disease is almost certainly of a specific character. 2. That it has increased considerably during the last quarter of a century. 3. That it affects not merely infants or young children, but, in an equal degree, persons aged 10 years and upwards, but the mortality is confined to infants. 4. That in those districts where the disease most prevails, there the air is most loaded with micro-organisms. 5. That the disease does not begin to prevail to any marked degree until the temperature of the earth has reached about 60° Fahr. at a depth of one foot. 6. That in those districts of the town where diarrhœa is most prevalent, a long continued pollution of the soil has been going on, and that the soil here shows an excess of bacteria compared with the soil of other parts of the borough. 7. That artificially cultivated microbes obtained from the air and soil of the "diarrhœa districts" are capable of producing diarrhœa on the human subject. 8. That *post-mortem* examination, in fatal cases, shows the chief pathological lesions to be in the mucous membrane of the intestines; in a few cases, doubtful changes in the kidneys were observed. That the conclusions arrived at from the above are:—That the prevalence of diarrhœa in Leicester is due to the heat of the summer sun acting upon a polluted soil, whereby large numbers of microbes are produced; these become disseminated in the air, and that these or some of these, either as the direct result of their growth and multiplication, or of some product arising therefrom within the body, as well, probably, as articles of food, set up the diarrhœa, and that the special prevalence in Leicester is due to its topographical position and the character of its geological formation.

The Committee have to report that of the amount granted last year—namely, £419, the sum of £201 19s. 11d. has been returned as unused, and has been paid over to the Treasurer of the Association.

The Committee recommend a grant of £500 for the purposes of assisting researches in 1889-90, of which they recommend the application of £410. The remaining sum to be applicable to further researches of which the details are under consideration.

JOSEPH LISTER, *Chairman*.

REPORT OF THE COLLECTIVE INVESTIGATION COMMITTEE.

THE Collective Investigation Committee beg to present the following report to the Council, to be laid before the annual meeting in Leeds.

The report of the Committee during the past year has been limited to the completion of the inquiries which were in progress at the time of the last report.

The report of the Committee upon the Geographical Distribution of Rickets, Acute Rheumatism, Chorea, Cancer, and Urinary Calculus in the British Islands was presented to the Council at its meeting on January 16th in the form of a series of eighteen detailed maps, besides others of smaller size, and an explanatory commentary. The maps have been deposited in the Library of the Association for the use of members. The commentary was published in the JOURNAL of January 19th.

The Secretary of the Committee has attended on its behalf, or has arranged to attend before the close of the year, the meetings of such Branches as have requested it, to exhibit the maps in question and explain the results of the inquiry. Arrangements will also be made to place the maps on view at the annual meeting.

A report, prepared by Dr. Edward Casey, of Windsor, on the Causes of Death among Gouty People, supplementary to that on Habits of Intemperance, was also published in the JOURNAL of January 19th.

It having been brought to the notice of the Secretary to the Committee in February last that incorrect statements with regard to the results of the "Intemperance" inquiry had been widely circulated in a manner to mislead the public on an important sanitary question, a circular letter was drawn up by him in concert with the Committee on Inebriety, and forwarded to the principal London and provincial journals to caution the public against the statements in question.

Since the completion of the Geographical Report the Committee has directed its efforts to the completion of the inquiries into Epidemics of Diphtheria and the Etiology of Phthisis. A report upon the returns received will be prepared by the Secretary, and presented before the end of September; but the Committee regret to say that the returns upon these subjects have been so few that they do not feel justified in recommending the Association either to continue these inquiries further, or to enter, at the present time, upon fresh ones. They would regard it as the better course to abandon the work of Collective Investigation for the time being, and to allow the Committee to lapse at the end of its current year of office—namely, on October 1st next.

At the same time, they wish again to express their opinion that, considering all the difficulties of the undertaking, the results which have been obtained are quite sufficient to justify the action of the Association in entering on the work, and their hope that a resumption of collective inquiry may be counted among the possibilities of the future.

They also wish to express their deep sense of the liberality and public spirit which have throughout marked the action of the Council and the Association in dealing with the subject.

G. M. HUMPHRY, *Chairman.*

REPORT OF THE THERAPEUTIC COMMITTEE.

DURING the past year the Committee have instituted pharmacological investigations under the direction of Dr. Lauder Brunton, and of Professors Leech, of Manchester, and Cash, of Aberdeen,

A. The researches undertaken under the direction of Dr. Brunton were—

1. A Contribution to our Knowledge of the Physiological Action of Antipyrin, by Rayner D. Batten, M.D., B.S., and T. J. Bokenham, L.R.C.P., L.S.A. The full paper appeared in the JOURNAL of June 1st, 1889. A Research on Antifebrin is also in progress.

2. A Research on the Value of certain Reputed Antiseptics (Sodium, Silicoflouride, and Helenine) as Protectives from Anthrax and Tuberculosis, by T. J. Bokenham, L.R.C.P. An abstract of the work as yet done is appended, but the research is not completed.

3. On the Action and Use of Tertiary Amyl Nitrite (Bertoni's Ether), by T. J. Bokenham, L.R.C.P., L.S.A., and E. Lloyd Jones, M.B., B.C. A paper is in preparation, and will include (1) an abstract of Bertoni's paper, (2) Action of Drug on Animals (3) Action on Patients.

4. On the Action of Iso-Amyl Nitrite Compared to that of Amyl Nitris *B. P.* and Butyl Nitrite, by T. Lauder Brunton, M.D., F.R.S., and T. J. Bokenham, L.R.C.P., L.S.A.

B. Under the direction of Professor Leech, of Manchester:

5. A Contribution to the Pharmacology of Phenacetin, by R. B. Wild, M.D.

6. The Action of Sulphates, by Professor Leech and Dr. R. B. Wild.

C. Under the direction of Professor Cash, of Aberdeen:

7. Observations on the Pharmacology of Urethan, by John Gordon, M.D., Assistant to the Professor of Materia Medica in the University of Aberdeen. Influence on (1) nitrogenous excretion in the urine; (2) blood-pressure, pulse, and respiration; (3) reflex functions of the cord; (4) nerve and muscle. Paper to be read at the meeting at Leeds.

8. On the Action of Certain Inorganic Salts on the Vitality of Muscle, by A. R. Cushing, M.A., M.B. Various salts of potassium, sodium, and calcium have been tested by the method of immersion. Attention directed to (1) spontaneous movement of muscle; (2) retention or increase of its minimal irritability; (3) protraction of rigor.

During the ensuing year the Therapeutic Committee would propose to extend their work in two directions—

1. The pharmacological researches to be continued on the same lines as during the past year. The investigation would be initiated by individual members of the Committee, who would personally supervise the researches. Notice of the work being done or proposed to be done would be sent to the Secretary, who would inform members of the Committee of the researches undertaken.

2. The Committee desire to extend their work to purely therapeutical, as distinguished from pharmacological, questions—the utility of drugs in the treatment of disease. The action of the researches could be determined by the Committee and in lines directed by them. The Committee would, in fact, take charge of the investigations. The Committee would select a certain number of workers, but all members of the Association would be invited to co-operate.

3. The expenses both of clinical and pharmacological work would be defrayed out of the funds allowed the Committee. Such expenses would be for (1) drugs; (2) chemical reagents; (3) glass apparatus; (4) instruments; (5) material; (6) time expended by students and residents in hospitals, or others, on the investigation; (7) clerical work.

4. The results would be published in the JOURNAL after being submitted to the Committee.

5. For the expenses the Committee request a grant of £200.

T. LAUDER BRUNTON, *Chairman.*

BRITISH MEDICAL ASSOCIATION.

FIFTY-SEVENTH ANNUAL MEETING.

THE fifty-seventh Annual Meeting of the British Medical Association will be held at Leeds, on Tuesday, Wednesday, Thursday, and Friday, August 13th, 14th, 15th, and 16th, 1889.

President: Professor W. T. Gairdner, M.D., LL.D., Professor of Medicine in the University of Glasgow.

President-elect: C. G. Wheelhouse, F.R.C.S., J.P., Consulting Surgeon, Leeds General Infirmary, Hillary Place, Leeds.

President of the Council: Thomas Bridgwater, M.B., LL.D., Harrow-on-the-Hill.

Treasurer: Constantine Holman, M.D., Reigate.

An Address in Medicine will be delivered by J. Hughlings Jackson, M.D., LL.D., F.R.S., Physician to the London Hospital, and to the National Hospital for Paralysed and Epileptic, Queen Square, W.C.

An Address in Surgery will be delivered by T. Pridgin Teale, M.B., F.R.C.S., F.R.S., Consulting Surgeon to the Leeds General Infirmary, Leeds.

An Address in Psychology will be delivered by Sir J. Crichton Browne, M.D., LL.D., F.R.S., Lord Chancellor's Visitor in Lunacy London.

PROGRAMME OF PROCEEDINGS.

TUESDAY, AUGUST 13TH, 1889.

9.30 A.M.—Meeting of 1888-89 Council. Council Room, Mechanics' Institute.
11.30 A.M.—First General Meeting. Report of Council. Reports of Committees; and other business. Coliseum.
4 P.M.—Service in Parish Church. Sermon by the Right Rev. the Lord Bishop of Ripon.
8.30 P.M.—Adjourned General Meeting from 11.30 A.M. President's Address. Coliseum.

WEDNESDAY, AUGUST 14TH, 1889.

9.30 A.M.—Meeting of 1889-90 Council. Council Room, Mechanics Institute.
10 A.M. to 2 P.M.—Sectional Meetings. Mechanics' Institute. Public Medicine. Philosophical Hall.
3 P.M.—Second General Meeting. Address in Medicine by J. Hughlings Jackson, M.D., LL.D., F.R.S. Presentation of Stewart Prize to Dr. Klein, F.R.S. Coliseum.
4 to 6.30 P.M.—Reception given by Colonel Wilson and the officers 3rd Volunteer Battalion West Yorkshire Regiment to members in the Services at the Carlton Barracks.
4.30 to 6.30 P.M.—Afternoon Reception at the Yorkshire College by the President, Council, and Senate of the College.
8.30 P.M.—*Conversazione* by the President of the Association and Local Executive Committee in the Art Gallery and Municipal Buildings.

THURSDAY, AUGUST 15TH, 1889.

9.30 A.M.—Meeting of the Council. Council Room, Mechanics' Institute.
10 A.M. to 2 P.M.—Sectional Meetings. Mechanics' Institute. Public Medicine. Philosophical Hall.
3 P.M.—Third General Meeting. Address in Surgery by T. Pridgin Teale, M.A., F.R.S., F.R.C.S. Coliseum.
to 6.30 P.M.—Garden Party at Gledhow Hall given by Sir James Kitson, Bart.
7.30 P.M.—Public Dinner of the Association in the Town Hall.

FRIDAY, AUGUST 16TH, 1889.

10.30 A.M. to 1.30 P.M.—Sectional Meetings. Mechanics' Institute. Public Medicine. Philosophical Hall.
3 P.M.—Concluding General Meeting. Address in Psychology by Sir James Crichton Browne, M.D., F.R.S. Coliseum.

4 to 6.30 P.M.—Garden Party at Roundhay Mount given by T. R. Jessop, F.R.C.S.
4.30 to 6.30 P.M.—Garden Party at the W.R. Asylum, Wakefield.
8 P.M.—Reception and Ball by the Mayor of Leeds in the Town Hall.

SATURDAY, AUGUST 17TH, 1889.
4 P.M.—Garden Party at the Palace, Ripon, given by the Bishop of Ripon and Mrs. Boyd-Carpenter.
Excursions.

RECEPTION ROOM.

The Reading Room of the Mechanics' Institute will be fitted up as a reception room, and will be opened at 12 o'clock on Monday, and on Tuesday and the following days at 9 A.M. for the issue of tickets to members, and for supplying all necessary information.

*** *It is particularly requested that members on their arrival will at once proceed to the reception room, at which each member should enter his name and address, receive his member's card and daily journal, inquire for telegrams and letters, and consult the list of lodgings and hotels, etc.*

Head Mistress's Room, Mechanics' Institute.

A. MEDICINE.—*President*, John Edwin Eddison, M.D. *Vice-Presidents*, Charles Parsons, M.D.; Robert Saundby, M.D. *Honorary Secretaries*, Alfred George Barrs, M.D., 22, Park Place, Leeds; Theodore Dyke Acland, M.D., 7, Brook Street, Grosvenor Square, W.

The proceedings of this Section will be opened by the President on Wednesday, August 14th, at 10 A.M., after which Dr. R. Douglas Powell will read a paper on The Clinical Aspects of Chronic Tubercular Diseases of the Serous Membranes and their Treatment. Sir Andrew Clark, Drs. Vincent Harris, Roberts, Samuel West, Churton, Cheadle, Handford, More Madden, and Burney Yeo have promised, if possible, to take part in the discussion.

On Thursday, August 15th, a paper will be read by Dr. Pavy on the Prognosis of Cases of Albuminuria, with Special Reference to Life Insurance. Sir W. Roberts, Drs. Goodhart, Maguire, Pye-Smith, Ralfe, Rabagliati, C. R. Drysdale, Robert Barnes, De Havilland Hall, N. Tirard, Joseph Ewart, T. Cranstoun Charles, and Saundby hope to take part in the discussion.

The following papers are promised:

BATEMAN, F., M.D. (Norwich). On the Jurisprudence of Aphasia.
BROWN-SÉQUARD, C. E. The Toxicity of Expired Air and its Connection with Pulmonary Tuberculosis.
CHURTON, T., M.D.
CUTTER, Ephraim, M.D. (New York). Thirty Years' Work in the United States in the Treatment of Tuberculosis Pulmonalis, with Statistics of 100 Cases Illustrated by Lantern Slides of Microphotographs of Healthy and Tuberculous Lungs.
DRYSDALE, C. R., M.D. The Alleged Rarity of Phthisis among the Jews in London.
ECCLES, A. Symons, M.B. The Influence of Massage on the Rate of Absorption from the Intestines.
FINUCANE, T. D., M.D. (Blackrock). On Asiatic Cholera.
FLOOD, A. W. On Ringworm and its Treatment.
GREENE, G. E. J. (Ferns, Co. Wexford). Notes on Rötheln.
HAIG, A., M.D. On the Connecting Link between the High Tension Pulse and Albuminuria.
HANDFORD, H., M.D. On the Relations of Arterial Hypoplasia to Cardiac Disease.
HARLEY, Vaughan, M.B. Abscess of the Liver: Treatment.
JOHNSTONE, Thos., M.D. 1. Case of Massage. 2. Ilkley as a Resort for the Asthmatic.
LITTLE, J. Fletcher, M.B. The Modern Treatment of Palsies.
MCNAUGHT, Dr. A Case of Dilatation of the Stomach accompanied by the Eructation of Inflammable Gas.
MADDEN, T. More, M.K.Q.C.P.I. Clinical Experiences of the Chronic Tubercular Diseases of Childhood.
MAGUIRE, R., M.D. Presystolic Murmur without Organic Mitral Disease.
PEARSE, T. F., Esq. The Use and Abuse of Soap.
THOMAS, W. R., M.D. On Phthisis, with Remarks on the Varieties of Climatic Treatment.
THUDICHUM, J. L. W., M.D. On the Demodex Folliculorum, the Parasite of the Acne Punctata of Man and the Mange of the Dog.
TIRARD, N., M.D. Peptonuria and the Fehling Test.

Lecture Theatre No. 13, School of Science.

B. SURGERY.—*President*, Thomas Richard Jessop, F.R.C.S. *Vice-Presidents*, Edward Atkinson, M.R.C.S.; Arthur F. McGill, F.R.C.S.; Henry Morris, F.R.C.S.; *Honorary Secretaries*, Arthur W. Mayo Robson, F.R.C.S., Hillary Place, Woodhouse Lane, Leeds; Edward Ward, M.B., 22, Park Place, Leeds.

Arrangements have been made in this Section for the consideration of four special subjects, and the gentlemen whose names are appended have promised, if possible, to take part in the discussions.

The President of the Surgical Section will give an Opening Address on the Treatment of Cancer of the Rectum. The following gentlemen will take part in the discussion:—Mr. Mitchell Banks (Liverpool), Mr. Bond (Leicester), Mr. Bryant (London), Mr. Harrison Cripps (London), Mr. Christopher Heath (London), Mr. Whitehead (Manchester), Dr. Alexander (Liverpool), Mr. H. Allingham (London), Mr. Alfred Cooper (London), Dr. Ward Cousins (Southsea), Mr. Vincent Jackson (Wolverhampton), Mr. Jordan Lloyd (Birmingham), Mr. F. Marsh (Birmingham), Dr. James Murphy (Sunderland), Mr. Bennett May (Birmingham), and Mr. F. B. Jessett (London).

Mr. Henry Morris will open a discussion on the Surgery of the Kidney. Professor Annandale (Edinburgh), Mr. Rickman Godlee (London), Mr. Bennett May (Birmingham), Dr. Newman (Glasgow), Mr. Lawson Tait (Birmingham), Mr. Bruce Clarke (London), Mr. Kendal Franks (Dublin), and Mr. R. Lawford Knaggs (Huddersfield) will take part in the discussion.

Mr. Frederick Treves will open a discussion on The Surgical Treatment of Typhlitis after the discussion on Renal Surgery.

Mr. A. F. McGill will open a discussion on the Treatment of Retention of Urine from Prostatic Enlargement. Mr. Edward Atkinson (Leeds), Mr. A. E. Durham (London), Mr. Reginald Harrison (Liverpool), Mr. Berkeley Hill (London), Mr. Bruce Clarke (London), Dr. Ward Cousins (Southsea), Mr. Vincent Jackson (Wolverhampton), Mr. Jordan Lloyd (Birmingham), Mr. Bennett May (Birmingham), and Mr. W. Whitehead (Manchester) will take part in the discussion.

On Wednesday, August 14th, from 4 to 5.30 P.M., exhibition of surgical cases in the Central Hall, Infirmary.

The following further papers are announced:

ADAMS, W., Esq. (London). On the Successful Treatment of Cases of Congenital Displacement of the Hip-joint by Complete Recumbency with Extension for two years.
ALEXANDER, W., M.D. (Liverpool). The Surgical Treatment of Epilepsy.
ALLINGHAM, H. W., F.R.C.S. The Ligamenta Alaria as a Cause of Internal Derangements of the Knee-joint.
BISHOP, E. Stanmore (Manchester). 1, Some Points in the Technique of Morton's Operation for Spina Bifida. 2. Will show a Splint Cradle for Excision of the Hip-Joint and Osteotomy.
COUSINS, Ward, M.D. (Portsmouth), will exhibit a new Surgical Saw.
CRIPPS, Harrison, Esq. (London). A Series of Cases of Cancer of the Rectum treated by Excision or Colotomy.
FRANKS, Kendal, F.R.C.S. Subcuticular Suture.
HERN, John, M.D. (Darlington). The Advisability of Aspiration of the Protruded Gut in Recently Strangulated Hernia, with Notes of Cases.
HUME, G. H., M.D. (Newcastle). On Combined External and Internal Urethrotomy in the Treatment of certain cases of Stricture.
JONES, Robert, Esq. (Liverpool). 1. The Treatment of Joint Disease by Prolonged fixation. 2. The Treatment of Certain Cases of Peri-rectal Abscess by Partial Removal of the Sacrum.
KEETLER, C. B., Esq. (London). Compression of the Abdominal Aorta by an Instrument passed through a Small Opening in the Anterior Wall of the Abdomen.
KELLER, Otto E., M.D. (London). Trephining in a Case of Actinomycosis of Brain.
LLOYD, Jordan, Esq. (Birmingham). Abdominal Section for Acute Intestinal Obstruction.
MARSH, F., F.R.C.S., will Exhibit a Patient after Madelung's Operation, with subsequent Excision of Rectum.
OTIS, F. N., M.D. (New York). A *Resumé* of the Experience of Seventeen Years in the Operation of Dilating Urethrotomy.
PARKER, Rushton, Esq Cerebral Tumour removed Successfully.
PARSONS, J. Inglis, M.D. (London). On the Arrest of Growth in Cancer by a powerful interrupted Voltaic Current.
PEARSE, T. Frederick, Esq. (London). The Treatment of Empyema.
ROBSON, A. W. Mayo (Leeds). 1. Two Hundred Consecutive Cases of Abdominal Section, with remarks. 2. Successful Case of Cholecystenterostomy for Biliary Fistula. Patient shown.
SILK, J. F. W., M.D. (London). Ether as an Adjunct to Nitrous Oxide Anæsthesia in Minor Surgery; with some general remarks upon Ether Narcosis and the teaching of Anæsthetics.
SPICER, Scanes, M.D. Note on a Case of Progressive Induration of Cervical Glands Simulating Malignant Disease, but readily yielding to the Treatment of Chronic Post-Nasal Catarrh.
STOKES, Sir Wm. Thyrotomy in the Treatment of Laryngeal Cancer.
WHITE, J. William, M.D. (Philadelphia). The Relations of Subdiaphragmatic Abscess to the Thoracic Viscera, with Three Illustrative Cases.

Engineering Class Room, Mechanics' Institute.

C. OBSTETRIC MEDICINE AND GYNÆCOLOGY.—*President*, Charles J. Cullingworth, M.D. *Vice-Presidents*, James Braithwaite, M.D.; J. W. Byers, M.D. *Honorary Secretaries*, F. Hall, M.D., St. Mark's House, Leeds; Peter Horrocks, M.D., 9, St. Thomas's Street, S.E.

Dr. Braxton Hicks, F.R.S., will open a discussion on the treatment of Placenta Prævia. Drs. Robert Barnes, Murdoch Cameron,

Gervis, W. Goodell (Philadelphia, U.S.), Robert Harvey (Bengal), Aust Lawrence, Malins, Murphy, Playfair, Priestley, Macnaughton Jones, Robert Bell, William Walter, Wallace, and Messrs. Hall and Wright are expected to take part in the discussion.

Dr. Herman will open a discussion on Corporeal Endometritis, its Frequency, Diagnosis, and Treatment. Drs. Braithwaite, Byers, Murdoch Cameron, Halliday Croom, Duke, Elder, Gervis, Goodell (Philadelphia, U.S.), A. W. Johnstone (Danville, U.S.), Handfield Jones, Aust Lawrence, Playfair, Robert Bell, William Walter, Priestley, Wallace, Macnaughton Jones, Aveling, Graily Hewitt, and Messrs. Pridgin Teale and More Madden are expected to take part in the discussion.

The President of the Section will give a short introductory address on Some Minor Points in Antiseptic Midwifery.

The following further papers are announced:

ARMSTRONG, J., M.B. The Use of Antiseptics in Midwifery.
BELL, R., M.D. On the Relation of Endometritis to Ovarian Disease, and will also show some instruments.
CAMERON, Murdoch, M.D. Cæsarean Section, with Notes of a Second Successful Case.
CROOM, J. Halliday, M.D. 1. On the Shedding of the Decidual Membrane late in the Puerperium. 2. On Encysted Tubercular Peritonitis Simulating Ovarian Tumour.
CUTTER, Ephraim, M.D. (New York). Eighteen Years of Work in the United States in the Treatment of Uterine Fibroids by Galvanism with Demonstration of Methods of Operating and some Statistics of Treatment of Uterine Fibroids by Food for the same length of time.
DUKE, Alexander, F.K.Q.C.P.I. 1. Additional Traction in Forceps Cases as an Alternative to Craniotomy. 2. New Plan of Plugging the Cervix Uteri in Metrorrhagia.
HANDFIELD-JONES, M., M.D. On Cardiac Insufficiency in its Relation to Abortion.
HART, D. Berry, M.D. (Edinburgh). On the Definition of the Terms used in relation to the Hæmorrhage at the end of Pregnancy. He will also show specimens of Placenta Prævia and Extrauterine Fœtation.
JOHNSTONE, A. W., M.D. (Danville, U.S.A.) The Mechanics of Puberty.
LAWRENCE, A. E. Aust, M.D. (Bristol). Notes on Cases of Concealed Post-partum Hæmorrhage.
MADDEN, T. More, M.K.Q.C.P.I. On Some Points in the Treatment of Uterine Cancer.
NAIRNE, J. Stuart, Esq. Some Practical Points in the Surgical Treatment of Cancer of the Uterus.
PLAYFAIR, W. S., M.D. An Estimate of the Value of Electricity in Gynæcology.
ROBERTS, Arthur, M.D. (Keighley). Concealed or Ante-partum Hæmorrhage.
SINCLAIR, W. J., M.D. (Manchester). 1. Vaginal Hysterectomy for Cancer with Notes of Ten Cases. 2. Oöphorectomy in the Treatment of Certain Neuroses; with Cases.
WALTER, Wm., M.D. A Case of Total Extirpation of Uterus for Cancer.

Philosophical Hall.

D. PUBLIC MEDICINE.—*President*, Edward Ballard, M.D., F.R.C.P., F.R.S. *Vice-Presidents*, George Goldie, L.R.C.P.Edin.; Shirley F. Murphy, M.R.C.S. *Honorary Secretaries*, George Eastes, M.B., F.R.C.S., 35, Gloucester Place, Hyde Park, W.; Arthur Stopford Underhill, M.D., D.P.H., Great Bridge, Tipton, Staffs.

The following special subjects will be considered in this Section:

1. Medical Officers of Health: their Training, and the Conditions on which they should hold Office. The President of the Section will introduce this subject. Dr. John Brown (Bacup), Mr. D. E. Flinn (Kingstown), Mr. G. E. J. Greene (Ferns), Mr. J. Brindley James (London), and others have promised to read papers or take part in the discussion.

2. Disinfection and Isolation: with special reference to the Control of Epidemics. Dr. C. H. Allfrey (St. Mary Cray) will read a paper on The Management of Infectious Diseases in Hotels, as illustrated by an outbreak of Scarlatina at the Grand Hotel, Grasse. Dr. W. Squire will contribute a paper on Disinfection and Isolation as necessary to the Control of Epidemics. Dr. C. R. Drysdale (London), Dr. E. W. Hope, Dr. Joseph Loane (London), and Dr. P. Caldwell Smith (Motherwell), will take part in this discussion.

3. Town Refuse: its Treatment and Disposal. Excremental Matter: its Treatment and Disposal by other Methods than that of Sewers. Dr. E. Slade-King (Ilfracombe) will read a paper on Town Refuse: its Collection and Disposal in the Smaller Towns. Dr. M. Greenwood, jun., will read a paper on Dusting in our Large Towns, and will take part in the discussion on Town Refuse: its Treatment and Disposal. Dr. C. F. Moore (Dublin) will contribute Notes on the Disposal of Town Refuse and Excremental Matter, etc. Dr. D. E. Flinn (Kingstown), Dr. G. E. J. Greene (Ferns), Dr. P. Caldwell Smith (Motherwell), and others, will also read papers or take part in this discussion.

4. Diseases and Injuries caused by Special Occupations: with reference to their Prevention. Dr. T. Churton (Leeds), Dr. J. T. Arlidge, Dr. G. E. J. Greene (Ferns), and others will read papers or take part in the discussion.

5. Contamination of Drinking-water by Lead: its Causes and Prevention. Dr. Sinclair White (Sheffield) and Dr. T. B. Fairclough (Mirfield) will read papers on this subject. Dr. John Brown (Bacup) and Dr. T. Churton (Leeds) will take aprt in this discussion.

The following further papers are announced:

ARLIDGE, J. T., M.D. (Newcastle-under-Lyme). 1. On the Sources of Lead-poisoning in the Arts and Manufactures. 2. On the Observation and recording of Diseases incidental to Occupation.
CHURTON, T., M.D. (Leeds). Results of Twelve Months' Systematic Inquiry into the Sanitary State of the Homes of Hospital In-patients.
FLINN, D. E., F.R.C.S.I. (Kingstown). On the Public Cleansing of Towns viewed in Relation to Public Health.
JAMES, J. Brindley, M.R.C.S. (London). (1) Town Refuse: its Treatment and Disposal. (2) A Cabinet Minister of Public Health.
KING, E. Slade, M.O.H. (Great Torrington.) Town Refuse; its Collection and Disposal in the Smaller Towns.

Class Room 3, School of Science.

E. PSYCHOLOGY.—*President*, D. Hack Tuke, F.R.C.P., LL.D. *Vice-Presidents*, W. Bevan Lewis, L.R.C.P.; Ringrose Atkins, M.D. *Honorary Secretaries*, John Greig McDowall, M.D., Menston Asylum near Leeds; Robert Percy Smith, M.D., Bethlem Royal Hospital, S.E.

Presidential address, Dr. Hack Tuke, on The Past and Present Provision for Pauper Lunatics in Yorkshire, introducing for discussion the question, Ought the Future Provision for this Class to be on the Same Lines? Drs. Bevan Lewis and Yellowlees will take part in the discussion.

Dr. W. W. Ireland will open a discussion on the Double Brain, and the Discordant Action of the Two Hemispheres in Insanity. Drs. Bevan Lewis, Hughlings Jackson, Fletcher Beach, and T. Outterson Wood will take part in the discussion.

Dr. F. Warner, as Secretary of the Committee (appointed at the Glasgow meeting in 1888), will read their report, and introduce a discussion on the Draft Report of the Committee appointed to conduct an Investigation as to the Average Development and Condition of Brain Function among the Children in Primary Schools. Drs. Fletcher Beach, Savage, Ireland, H. Ashby, and Shuttleworth will join in the discussion on Dr. Warner's report.

The following papers are promised:

BEACH, Fletcher, M.B. Some further facts respecting the Causation of Idiocy and Imbecility.
BATEMAN, F., M.D. On Hypnotism, with special reference to Certain Experiments at La Salpêtrière.
BULLEN, F. St. John, M.R.C.S. An Analysis of 1,565 *Post-Mortem* Examinations of the Brain performed at the Wakefield Asylum during a period of eleven years.
ROBERTSON, George, M.D. Melancholia from an Evolutionary and Physiological Point of View.
SAVAGE, G. H., M.D. Massage Treatment of Some Forms of Melancholia.
SHUTTLEWORTH, G. E., M.D. (1) A Contribution to the Etiology of Idiocy. (2) Remarks on a Series of Idiot Brains.
VOISIN, Professeur Aug. (of the Salpêtrière). On the Use of Hypnotic Suggestion as a means of Treatment in the Insane, and the Results he has obtained by this Method.
WIGLESWORTH, J., M.D. Note on Optic Nerve Atrophy Preceding the Mental Symptoms of General Paralysis.

Physics Lecture Room No. 11, School of Science.

F. PATHOLOGY AND PHYSIOLOGY.—*President*, Joseph Coats, M.D. *Vice-Presidents*, Thomas Churton, M.D.; De Burgh Birch, M.D. *Honorary Secretaries*, Ernest Henry Jacob, M.D., 12, Park Street, Leeds; T. Wardrop Griffith, M.D., 23, Park Square, Leeds.

A discussion on the subject of Fever will be opened by Dr. T. J. Maclagan. Dr. Gairdner, Dr. Dreschfeld, Dr. Handford, Dr. Broadbent, and Dr. Sims Woodhead will take part in the discussion.

The following further papers are announced:

BIRCH, De B., M.D. On the Nature of some Pressure Phosphenes.
COPEMAN, S. A. M., M.A. The Detection of Human Blood.
CROOKE, G. F., M.D. The Histology of Bright's Disease.
DRUMMOND, D., M.D. The Pathology of Acute Lead Poisoning.
HANDFORD, H., M.D. Visceral Changes in Enteric Fever.
HAYCRAFT, J. B., M.D. (Title not received.)
MOTT, F. W., M.D. The Pathology of Cardiac Failure.
POPE, F.M., M.D. Case of Thrombosis of Vertebral Artery: Pressure on Glosso-pharyngeal Nerve: Unilateral Loss of Taste.
WILLIAMS, Roger, Esq. The Neoplastic Process from an Evolutional Standpoint.
WOODHEAD, G. Sims, M.D.

The Pathological Museum will be held in the Chemical Laboratory of the Leeds School of Science (Mechanics' Institute). Dr. Beaven Rake will show a series of preparations illustrative of the various lesions of Leprosy.

Class Room 5, School of Science.

G. OPHTHALMOLOGY.—*President*, George Anderson Critchett, F.R.C.S.Edin. *Vice-Presidents*, John Albert Nunneley, M.B.; George

A. Berry, M.B. *Honorary Secretaries*, Gustavus Hartridge, F.R.C.S., 65, Green Street, Grosvenor Square, W.; R. N. Hartley, M.B., 29, Blenheim Terrace, Leeds.

Mr. Jonathan Hutchinson will open a discussion on the Treatment of Glaucoma. Messrs. Couper, Frost, Evan Jones, Green, Griffith, Hutchinson, Little, Mackinlay, Macnaughton Jones, Prichard, Scougal, Sympson, Tweedy, Cant, Nunneley, Williams, and Lloyd Owen have promised to take part in the discussion.

The following further papers are announced:

BENSON, A. H., M.B. Pulsating Tumour of Orbit cured by Digital Pressure.
BERRY, G. A., M.B. Some Points in Connection with Cataract Extraction.
BICKERTON, T. H., M.R.C.S. Criticism of the various Tests for Colour-Blindness, with special reference to the Board of Trade Tests, and further examples of Defective Eyesight occurring in Sailors.
BRONNER, Adolf, M.D., will show a Hook for Removing Remains of Lens Capsule,
CANT, W. J., M.R.C.S. A Case of Paralysis of the Right External Rectus Muscle after Injury to the Left Temple (*contre coup?*).
COLLINS, W. J., M.D. The Composition of the Human Lens in Health and in Cataract, and its Bearing upon Operations for the latter.
CROSS, F. Richardson, M.R.C.S. Muscular Advancement.
EMRYS-JONES, A., M.D. The Value of Galvano-Cautery in the Treatment of Conical Cornea (6 cases).
FORD, Vernon, M.R.C.S. The Value of Peritomy in Ulcers of the Cornea, etc.
FROST, W. Adams, F.R.C.S., will show a series of Ophthalmoscopic Drawings thrown on to a Screen.
GROSSMANN, K., M.D. 1. Note on Test for Colour Blindness. 2. Blenorrhœa Neonatorum.
HARTLEY, R. N., M.B., will show 1. Modification of Sichel's Knife for Cataract Operations. 2. Cases of Soft Cataract treated by Suction. 3. Cases of Hard Cataract extracted without Iridectomy.
HARTRIDGE, G., F.R.C.S. Case of Pulsating Exophthalmos Cured Spontaneously by Suppuration of Contents of Orbit.
HERN, John, M.D. Sclerotitis from Dental Irritation.
HEWETSON, H. B., M.R.C.S. 1. Series of Cataract Operations without Iridectomy. 2. Series of cases of Interstitial Keratitis treated by Syndectomy.
JOHNSON, G. L., F.R.C.S. Observations on the Therapeutical Action of the Violet and Ultra-violet Rays of Light on Vision.
MONEY, Angel, M.D. Sudden Transient Ocular Phenomena in Children.
MULES, P. H., M.D. Peripheral Neuritis of the Ophthalmic Division of the Fifth Nerve, and its Clinical Bearings.
SISSON, W. G. Tumours of Optic Nerve.
SNELL, Simeon, M.R.C.S. Extraction of Cataract without Iridectomy.
TEALE, T. Pridgin, M.B., F.R.S. Description of the Operation he employs for Extraction of Cataract without Iridectomy.
THOMPSON, J. T., M.B. 1. A Note on a case of Superficial Keratitis induced by Aniline Violet. 2. Necrosis of Cornea from Contact with Crude Creasote.

Class Room 1, School of Science.

H. DISEASES OF CHILDREN.—*President*, Thomas Scattergood, M.R.C.S. *Vice-Presidents*, Richard Favell, M.R.C.S.; A. H. Carter, M.D. *Honorary Secretaries*, Walter Henry Brown, F.R.C.S.I., 19, Queen Street, Leeds; Angel Money, M.D., F.R.C.P., 24, Harley Street, Cavendish Square, W.

A discussion on the following subject will take place: The paralyses of the first two years of life. What is the relative frequency of paralysis from brain, cord, and nerve disease? What is the nature of the changes in the centres and nerves? This will probably be opened by Dr. Henry Ashby. Papers will be read on the various forms of infantile paralysis: spastic paraplegia, congenital chorea, infantile palsy, and diphtheritic paralysis.

Surgical Portion.—Subject for discussion: The Surgical Treatment of the Various Congenital Malformations. Mr. Walsham and Mr. Morgan will take part in the discussion.

The following further papers are announced:

ASHBY, Henry, M.D. A case of Softening of an Infant's Brain due to Vascular Obstruction. Also a case of Acute Polio-myelitis; death six weeks after the Acute Attack. The specimens will be shown.
BALLANTYNE, J. W., M.B., F.R.C.S.Ed. Sclerema and Œdema of the Newborn Infant.
BARRS, A. G., M.D., will show some Cases illustrative of Palsy in Infants.
BROWN, John, M.B. (Bacup). Unsuspected Lead-poisoning in Children.
BURY, Judson S., M.D. On a Case of Microcephalus with Spastic Paralysis, and will show a Specimen.
CHURCHILL, F. M.D. Hare-lip Operations.
CHURTON, T., M.D. Meningitis following Slight Injuries to the Head.
MORGAN, J. H., F.R.C.S. Congenital Malformations.
SQUIRE, W., M.D. Cases of Infantile Palsy, Spastic Paraplegia, and Diphtheritic Paralysis in Children.
SYMPSON, Mansel, M.B. (1) A Case of Cerebral Birth Palsy with Epileptoid Convulsions. (2) A Case of Infantile Cerebral Palsy, with comments.
WALSHAM, W. J., F.R.C.S. Ectopia Vesicæ.
WARNER, F., M.D. Coincidental Defects in Children in Association with Mental Dulness, Nerve Defects, and Low Nutrition.

Class Room 2, School of Science.

I. LARYNGOLOGY.—*President*, Henry T. Butlin, F.R.C.S. *Vice-Presidents*, Francis de Havilland Hall, M.D.; Richard A. Hayes, M.D. *Honorary Secretaries*, Greville Macdonald, M.D., 47, Queen Anne Street, Cavendish Square, W.; Barclay J. Baron, M.D., 16, Whiteladies Road, Bristol.

The following subjects are proposed for special discussion:

1. Tonsillitis: its Varieties and Association with Rheumatism.
2. Perichondritis of the Larynx: its Etiology, Pathology, Symptoms, and Treatment.

Dr. R. Hingston Fox and Dr. Barclay J. Baron will take part in the discussions.

The following gentlemen have promised papers on these subjects: Dr. C. W. Haig-Brown, Dr P. McBride, Dr. G. Macdonald, Dr. David Newman, Dr. Scanes Spicer, and Mr. Lennox Browne; and the following will take part in the discussions: Dr. Dundas Grant, Dr. Hodgkinson, Mr. T. Mark Hovell, Dr. C. J. Lewis, Dr. S. Moritz, Dr. G. Hunter Mackenzie, Dr. Scanes Spicer, Mr. G. Eland Stewart, Dr. Archibald Garrod, Dr. Warden, Dr. A. Mantle, and Dr. de Havilland Hall.

The following further papers are announced:

BARON, Barclay J., M.B. A Case of Bilateral Paralysis of Abductors of the Vocal Cords.
HAILES, W. J., M.D. (Albany, N. Y.). Intubation of the Larynx: 60 Cases; 20 Recoveries, with Instruments.
LAWRENCE, L. H., F.R.C.S. Granular Pharyngitis.
MACDONALD, Greville, M.D. Empyema of the Maxillary Sinus, with an analysis of twelve cases.
MACKENZIE, G. Hunter, M.D. Cases of Infraglottic Laryngeal Disease: (1) a Web removed by Laryngotomy; (2) a Growth a Sequel of Acute Laryngitis; (3) Intubation of the Larynx.
MORITZ, S., M.D. A Case of Acute Rheumatic Bilateral Paralysis of the Abductors of the Vocal Cords.
MURPHY, James, M.D. A Retractor for Use in Tracheotomy.
NEWMAN, David, M.D. A Case of Laryngeal Carcinoma complicated by Chronic Pulmonary Tuberculosis, with remarks respecting the rare coincidence of these diseases.
ROBERTSON, W., M.D. Two Cases of Rhinoscleroma. (With Exhibition of Patients.)
SPICER, R. H. Scanes, M.D. Throat and Nose Affections in Children as Causes of Functional Nervous Disorders.
STEWART, G. Eland, M.R.C.S. Tonsillitis as a Cause of Abscess in the Neck.
STOKER, George, M.K.Q.C.P.I. Laryngitis and Rhinitis in Diabetes.
ZWAARDEMAKER, H. M.D. (Utrecht). New Olfactometers for estimating Degree of Loss of Smell (shown and described for the author by Dr. Scanes Spicer).

Elementary Division, Mechanics' Institute.

J. OTOLOGY.—*President*, George P. Field, M.R.C.S. *Vice-Presidents*, Frederick Morrish Pierce, M.D.; Henry Bendelack Hewetson, M.R.C.S. *Honorary Secretaries*, Adolf Bronner, M.D., 33, Manor Row, Bradford; G. William Hill, M.B., 24, Wimpole St., W.

The following subjects are proposed for formal discussion:

1. The Causes, Varieties, and Treatment of Osseous Growths of the Ear.
2. The Influence of Diseases of the Nose and Pharynx on Affections of the Middle Ear.
3. The Diagnosis, with special reference to Localisation, of Intracranial Lesions the result of Aural Disease.

The first of these discussions will be opened by the President, Mr. G. P. Field, the second by the Vice-Presidents, Dr. F. M. Pierce and Mr. H. B. Hewetson, and the third by Mr. Cumberbatch and Dr. William Macewen, of Glasgow; Dr. Hughlings Jackson, Dr. Broadbent, Professor Ferrier, and Professor Horsley will probably speak on the latter subject.

The following otologists have also intimated their intention of joining in one or more of the discussions: Clarence J. Blake, M.D. (Boston, U.S.A.), Professor Urban Pritchard, M.D. (London), H. Macnaughton Jones, M.D. (London), J. Dundas Grant, M.D. (London), W. R. H. Stewart, F.R.C.S.Ed. (London), Donald Stewart, M.D. (Nottingham), Dr. Charles Warden (Birmingham), Mr. Lennox Browne, G. J. Mackesy, M.B., W. L. Mackesy, M.B., J. Erskine, M.B. (Glasgow), and Mr. Richard Williams.

Dr. Ward Cousins will give a demonstration on the Value of Antiseptic Artificial Drumheads in Chronic Middle-Ear Disease and Perforation, on Thursday, August 15th, at 2.30 P.M.

The following further papers are announced:

BARR, Thomas, M.D. (Glasgow). On Non-operative Treatment of Aural Exostoses; and will show Sections of Temporal Bones from Cases of Intracranial Disease illustrative of the various directions by which Disease of the Middle Ear may extend to the Interior of the Cranium.
BRONNER, Adolf, M.D. (Bradford). Notes on the Use of Menthol in the Local Treatment of Diseases of the Middle Ear; and will show (1) a Catheter for the Injection of Fluids, and (2) a Capsule for the Introduction of Vapours into the Middle Ear.
COUSINS, J. Ward, M.D. (Portsmouth). On a New Antiseptic Ear Drum. (Specimen shown.
DALBY, Sir Wm, M.B. (London) and SHEILD, Marmaduke, M.B. (London). On Treatment of Aural Exostoses.
DAVIS, Henry, M.R.C.S. (London). On the question of Anæsthetics in Operations for Adenoid Growths of the Naso-Pharynx.

ELLIS, Richard, F.R.C.S.Ed. (Newcastle). On an Osseous Growth of the Auditory Meatus simulating a Foreign Body and Causing Deafness. (Removal with restoration of hearing. Specimen.)
GUYE, Professor (Amsterdam). On Aprosexia, being the inability to fix the attention, and other allied troubles in the cerebral functions caused by nasal disorders.
HARTLEY, R. N., M.B. (Leeds). Abscess of Right Temporo-Sphenoidal Lobe following Old Middle Ear Disease. (Trephined and drained: Recovery: Patient shown.)
HILL, William, M.B. (London). On some Causes of Backwardness and Stupidity in Children; and will show Intranasal Guards for the safer application of Chromic Acid to the Nasal Cavities.
LEE, Charles G., M.R.C.S. (Liverpool). A case of Cerebral Tumour complicated with Symptoms of Acute Otitis.
LEES, David B., M.D. (London). On the Connection between Aural Disease and Meningitis in Children.
MATHESON, Farquhar, M.B. (London). On Some Subject connected with Deaf-Mutism.
NUNNELEY, John A., M.B. (Leeds).
POLITZER, Professor, M.D (Vienna) (per Mr. G. Stone, Liverpool). On Osseous Growths of the Ear. (With specimens.)
STONE, George, L.R.C.P. & S.Ed. (Liverpool). A Case of Severe Unilateral Tinnitus due to Stricture of the Eustachian Tube cured by Persistent Bougieing.

Class Room 10, School of Science.

K. PHARMACOLOGY AND THERAPEUTICS.—*President*, Sir William Roberts, M.D., F.R.S. *Vice Presidents*, T. Cranstoun Charles, M.D.; I. Burney Yeo, M.D. *Honorary Secretaries*, John B. Hellier, M.D., 1, De Grey Terrace, Leeds; Dawson Williams, M.D., 25, Old Burlington Street, W.

The proceedings of the Section will be opened at 10 A.M. on Wednesday, August 14th, by an address by the President on Certain Practical Points in the Use of Antacid Remedies in Dyspepsia and Gravel.

At 10.30 A.M. a discussion on Hypnotics and Analgesics, with special reference to remedies recently introduced, namely, Paraldehyde, Hypnone, Amylene Hydrate, Methylal, Sulphonal, will be opened by Dr. D. J. Leech, Professor of Therapeutics in the Victoria University, Manchester. Dr. Charteris, Professor of Therapeutics in the University of Glasgow, Sir J. Crichton Browne, Dr. W. H. Broadbent, Dr. Frederick Needham (Gloucester), Dr. Macnaughton Jones, Dr. T. Cranstoun Charles, and Dr. John Gordon (Aberdeen) have signified their intention of taking part in the discussion.

At 10 A.M. on Thursday, August 15th, a discussion on Foods for Invalids and Infants will be introduced by Dr. Burney Yeo; and Dr. Sidney Martin, Dr. E. D. Mapother, Dr. T. Cranstoun Charles, Mr. R. W. Parker, and Dr. S. McBean (Newcastle) will take part in the discussion.

The following papers have been promised:

CHARLES, T. Cranstoun, M.D. (London). 1. The Hot-air Treatment of Pulmonary Consumption. 2. Some Cases of Diabetes. 3. Notes on the Use of Paraguay Tea. 4. On Ichthyol.
CHARTERIS, Professor M., and MACLENNAN, W., M.B. Experimental Research on the General Comparative Action of the Natural and Artificial Salicylic Acids and their Salts of Sodium.
CHURTON, T., M.D. The Treatment of Pemphigus.
CROCKER, H. Radcliffe, M.D. On Anthrarobin in the Treatment of Skin Diseases.
GORDON, John, M.D. (Aberdeen). On the Pharmacology of Urethane.
GREENE, G. E. J. (Wexford). Lychnis Floscuculli in Renal and Vesical Affections.
HAIG, A., M.A., M.D. The Influence of Opium and Morphine on Uric Acid considered with reference to the Action in Health and Disease.
ILLINGWORTH, C. R., M.D. (Accrington). The Therapeutics of the Biniodide of Mercury.
MILLER, A. C., M.D. (Fort William). The Mountain Cure of Phthisis, with special reference to its adoption on Ben Nevis.
MURRAY, W., M.D. (Newcastle-on-Tyne). On the Removal of Renal Calculi by Toxic Doses of Belladonna.
PEARSE, T. F., M.R.C.P., M.R.C.S. On the Use and Abuse of Soap.
SOLLY, Samuel E., M.R.C.S., L.S.A. (Colorado Springs). On the Climate of Colorado.
WOODS, Hugh, M.D. (Highgate). The Oxyiodides of Calcium and Bismuth.

Honorary Local Secretaries, Charles J. Wright, M.R.C.S., Lynton Villa, Virginia Road, Leeds; Charles M. Chadwick, M.D., 3, Park Square, Leeds; G. Herbert Rowe, M.R.C.S., Hillary Place, Leeds.
Honorary Local Treasurer, William Hall, M.R.C.S., Moorham, Headingley.

ANNUAL MUSEUM.

IN connection with the fifty-seventh annual meeting of the British Medical Association, the Museum and Exhibition will be held in the Mechanics' Institute, in which the Sectional meetings are held, and grounds of the Leeds School of Science. The Museum will be arranged in the following Sections:

SECTION A.—Foods and Drugs, including Antiseptic Dressings and other Chemical and Pharmaceutical Preparations. (Honorary Secretaries, Dr. J. Hellier, 1, De Grey Terrace, Leeds; Mr. C. V. Newstead, 40, Headingley Lane, Leeds.) In the Albert Hall.

SECTION B.—Pathology, comprising Casts, Models, Diagrams, Apparatus, Microscopical and Spirit Preparations, etc. (Honorary Secretaries, Dr. J. Dobson, 27, Burley Lawn, Leeds; Dr. E. H. Jacob, 12, Park Street, Leeds.) In the Chemical Laboratory.

SECTION C.—Anatomy and Physiology, comprising Special Dissections, Methods of Preparation, Drawings, Models, Microscopes, Microtomes, and Microscopic Preparations. (Honorary Secretaries—Physiology, Dr De Burgh Birch, 16, De Grey Terrace, Leeds; Anatomy, Dr. T. Wardrop Griffith, 23, Park Square, Leeds.) In the Chemical Laboratory.

SECTION D.—Instruments and Books, including Appliances, Medical, Surgical, and Electrical. (Honorary Secretaries—Instruments, Mr. W. H. Brown, 19, Queen Street, Leeds; Books, Mr. F. H. Mayo, 49, Otley Road, Leeds.) In the Albert Hall.

SECTION E.—Sanitary and Ambulance Appliances. (Honorary Secretaries—Sanitary, Mr. J. S. Loe, Grafton Street, Leeds; Ambulance, Mr. R. N. Hartley, Blenheim Terrace, Leeds.) In the basement of the Boys' School.

In consequence of the great and increasing cost of these exhibitions, charges will be made to exhibitors (other than members of the medical profession), according to the space occupied.

Regulations Regarding Exhibits.

1. Intending exhibitors must communicate with the Secretaries of each Section in which they propose to exhibit, and a brief description of each exhibit, for insertion in the Museum Catalogue, must be in the hands of the respective Secretaries before July 8th.

2. All exhibits should be addressed to the "Secretary of the Museum, British Medical Association, Mechanics' Institute, Cookridge Street, Leeds," with the name of the Section for which they are intended.

3. Communications on general matters connected with the Museum to be addressed to the Museum Secretary, Dr. Jacob, 12, Park Street, Leeds.

All communications respecting advertisements in the Catalogue must be made to Messrs. Goodall and Suddick, Cookridge Street, Leeds.

PROPOSED EXCURSIONS.

1. *The Scarborough Excursion.*—Trains will leave the North Eastern Railway Station (New) at 9.5 A.M on Saturday morning, August 17th, arriving at Scarborough at 11.15. At 12.45 P.M. a luncheon will be given by the profession of Scarborough to 100 members of the Association (by invitation). In the afternoon excursions by sea and land will be arranged, steam yachts will be placed at the disposal of the visitors, and short excursions will be organised by carriage. A garden party will be given by Mr. J. W. Woodall, in honour of the visit of the Association, at St. Nicholas Cliff. In the evening the grounds of the Cliff Bridge Company will be thrown open to the members, and especially illuminated; here a reception will be held in the Grand Hall by his worship the Mayor, official chairman of the Company, and the Committee. On Sunday a special service will be held in the parish church (St. Mary's). preacher the Venerable Archdeacon Blunt, D.D., Chaplain to the Queen. In the afternoon a concert of sacred music will be given in the Spa Grounds (3 to 4.30), and, later, Mr. Alderson Smith will be "at home" at Wheatcroft Cliff, to receive members of the Association and their wives; by his kindness, also, it is hoped that a deep sea trawling expedition will be arranged for Monday morning. A fee of one guinea will be charged, which will include all the expenses of the excursion. Gentlemen may be accompanied by ladies on the same terms, namely: saloon fare from Leeds to Scarborough, hotel accommodation at two of the best hotels from mid-day on Saturday, August 17th, till mid-day on Monday, August 19th (with the exception of wine). The Cliff Bridge Company will admit members free to their grounds on the three days, August 17th, 18th, and 19th. All excursions and other entertainments are open to all members and ladies accompanying them on production of their tickets. The luncheon to be given on Saturday will be by invitation only, as it is not possible to secure a room for an unlimited number. Any further particulars with regard to the Scarborough Excursion can be obtained on application to Charles F. Hutchinson, M.D., Honorary Secretary, May Lodge, Scarborough.

2. *The Ilkley and Bolton Abbey Excursion, given by the Profession in Bradford and Ilkley.*—The route of this excursion runs from Leeds in a north-westerly direction, leaving the Midland Station at 9.35 A.M.; it passes by way of Armley,

Kirkstall (with a view of the old abbey of that name), and continues along the Airedale Valley to Apperley Bridge.

After passing Kirkstall forge, the vale opens out, showing Calverley to the south and on the north, giving a fine view of the slope of the hill from Rawdon, on which, as prominent objects, stand the Rawdon Convalescent Home (founded, for poor patients, by the late Sir H. W. Ripley, Bart.) and the Rawdon Baptist College. These and the numerous villa residences of Leeds and Bradford merchants, embowered in trees, form a pleasant and striking landscape. Passing Apperley Bridge, the line curves temporarily towards the north, up a steep incline, affording a glimpse of the upper portion of the Airedale Valley, with Shipley and Bradford in the distance; it then enters a wooded and tunnelled portion, curving back to the west and reaching Guiseley; here, and at Ilkley, the members of the excursion will be joined by their entertainers, and the train will proceed along the south side of the Wharfedale Valley, towards Ilkley.

Just before the valley opens there lies, on the south side of the line, the New Menston Lunatic Asylum, to which the Psychological Section intends to pay a visit. Beyond this the line divides, one branch turning to the east to Otley, the other pursuing its course to Ilkley and Bolton. In the angle made by this division lies the burial place of the late Right Hon. W. E. Forster. The spot affords a view of the extent of Wharfedale, which, following the course of the river Wharfe from Bolton on the west, runs to where the North Eastern line, on its way to Harrogate, crosses the valley at Arthington, on the east. The dale is one of the most beautiful in Yorkshire, offering at certain points almost unique views, as that at Otley Chevin, Ormscliffe Cragg and the Cow and Calf. The town of Otley lies at the east end, on the north side of the valley, opposite the Chevin; the village of Burley lies embedded in foliage in the middle of the dale, while Ben Rhydding and Ilkley lie on the cliff or south side of the dale, at the edge of Rumbold's Moor.

The train, proceeding, passes the Burley Station, and at this point on the rising ground of the north of the dale may be see Denton Hall and Park, formerly the residence of the famous Fairfax, now the seat of Mr. Wyville, J.P.; and, further west, Myddleton Lodge, the home of the Middletons, one of the oldest Yorkshire county families. The ground now rises precipitously to the south, and the first object which strikes the eye is the splendidly situated hydropathic establishment of Ben Rhydding. Further to the west of it are seen the massive rocks called the Cow and Calf, and the Ilkley district opens out, extending almost from the edge of the moor for a mile or more down a gentle slope to the river Wharfe. As the train moves past Ilkley, a good general view will be obtained of its spa establishments and villa residences. The train goes on past the village of Addingham (with Beamsley Beacon behind) till it reaches Bolton Bridge at 10.49; at this station waggonettes will be in readiness to take the party to the Priory and Bolton Woods. Most people have seen the beautiful print of "Bolton Abbey in the Olden Time." The remains of the Priory are charmingly situated, and form a grand adjunct to the restored church. To strangers the history of the structure will be freely afforded by some of the gentlemen accompanying the party. From the Priory the party will be conveyed to Bolton Woods and the Strid in the waggonettes.

The woods and stream will afford their own beautiful commentary; and the romantic story of the "boy of Egremond" checked in his spring across the "Strid" by the leashed hound, and drowned in the torrent; the despair of the mother, "Alice de Romille," and her subsequent founding of the Priory, can all be told on the spot. Time will not afford more than a distant view of "Barden Tower," the home of the Cliffords, and walk through the woods, nor can a visit to the Valley of Desolation, with its waterfall, be risked; but these will scarcely be missed amid the surrounding beauties. The waggonettes will return from the Strid about 12 45 to the Devonshire Hotel, where, if the day be propitious, lunch will be served on the lawn at 1.30 P.M.

The train will leave Bolton Abbey Station at 2.47 P.M. on its return to Ilkley; and here the rest of the day, till dinner-time, will be spent visiting the points of interest in its immediate precincts. Ilkley and its neighbouring "Rombald's Moor" have their aboriginal and Roman history, with their "Cairns," "Barrows," Roman stations and roads. Monumental relics have been found abundantly, and one is to be seen at the back of the Rose and Crown Inn, and three ancient crosses in Ilkley Churchyard. The old Parish Church will repay a visit. All that the antiquarian will require to indicate the ancient history of Ilkley may be obtained from "Lund's 6d. Guide." Modern Ilkley, as a spa and health resort, as well as Ben Rhydding (which was the first of the large hydropathic establishments in the neighbourhood), owes its celebrity not to any medicinal virtue in its water but to the wonderful purity and abundant supply of that water, and to the charming situation of the place. There is a valuable chalybeate spring at the side of the moor at Heber's Gill, past the Semon Convalescent Home, but this is quite apart from the main "Ilkley Water." This Ilkley water seems specially adapted for drinking and for all such purposes as are comprised under the head of "Hydropathy;" hence the abundance of these establishments. All, or a choice number, of these may be visited; from the original "Old White Wells," which everyone will observe high up on the hill side, through the grand structure of Ben Rhydding (Medical Officer, Dr. Johnstone); the palatial Ilkley Wells (Medical Officer, Dr. Scott); the well-known "Craiglands" (Medical Officer, Dr. H. Dobson); the Elizabethan structure, "Troutbeck;" the "Spa" establishment in the Grove, to Rockwood House, Marlborough House, and Stoney Lea. Besides these there is above the Grove, on the slope of the hill, the Ilkley Hospital (Medical Officer, Dr. Johnstone), established in 1829 as the Ilkley Bath Charitable Institution. This institution has from 700 to 800 patients passing through it in a year; these are recommended by subscribers; and it can be said with truth that the simple treatment and capital Ilkley air materially reinvigorates many of them. Another admirable institution, founded by the late Mr. Charles Semon, of Bradford, and bequeathed by him to the town of Bradford, is the Semon Convalescent Home, situated quite on the edge of the moor, south-west above Ilkley, and intended for the convalescent and weakly of the working class, clerks, and warehousemen; the whole charge for board and lodging is 12s. 6d. a week, the extra cost being furnished by the fund left by Mr. C. Semon. The people can wander on the moor at will, and convalescents are carried up from the railway by omnibus. The Home is open to others beside the inhabitants of Bradford. There are a number of hotels at Ilkley, the principal of which are the Middleton, the Crescent, etc.; but the hydropathic establishments also accommodate visitors even for a few days. Between the return arrival of the train at Ilkley and the hour at which the party will dine (5.30 P.M.), beside the places enumerated and the general exploration of Ilkley, if the day is fine, a walk to the "Cow and Calf" (on the way to Ben Rhydding) will yield a magnificient view from those rocks. Also $1\frac{1}{2}$ mile from the station south-south-west, another splendid view is obtained from the "Panorama Rocks." Again, the walk to Myddleton Moor, $1\frac{1}{2}$ mile north over the Ilkley bridge, will afford many interesting views. To any of the party who may prolong their stay over the excursion, the points of interest in the locality are many and varied, as Skipton town and castle, Keighley and Howarth (home of Charlotte Brontë, 14 miles), Denton Park, Otley and the Chevin, Farnley Hall ($2\frac{1}{2}$ miles from Otley, full of interesting historical records), Burley, Harewood House, Harrogate, Ripon, and Fountains Abbey, etc. After dinner, time sufficient will be afforded for a leisurely stroll to the Ilkley station, from which the train will start on its return journey promptly at 8.35 P.M. for Leeds and Bradford.

3. *York, Helmsley, Rievaulx Abbey.*—The party will leave the North Eastern Railway Station (New) at 9.5 A.M., reaching York at 9 45, where they will be met by the representatives of the profession of York, who have hospitably undertaken to entertain the party, and to show them the various objects of interest. The party will first visit the gardens of the Yorkshire Philosophical Society, kindly thrown open to them by the courtesy of the Honorary Secretary, Mr. Noble, and the Council of the Society. The visit will be supervised by Canon Raine. Amongst the objects of interest are the ruins of St. Mary's Abbey, a portion of the old Roman walls, and a large collection of Roman and other antiquities in the museum and hospitium of the abbey. Afterwards the party will proceed to the Palace of the Stuart Kings, in which is located the Wilberforce School for the Blind. Mr. Buckle, the superintendent of the school, has courteously undertaken to point out the features of interest connected with this historical building. Leaving the Stuart Palace, our visitors will proceed, by way of Boolham Bar, to the Minster, where Canon Raine, in the unavoidable and regretted absence of the Dean of York, will again kindly undertake the duties of cicerone. After viewing the Minster, it is proposed to pay a visit to the Mansion House and Guildhall, where the members and their friends will be received by the Lord Mayor. The ancient plate preserved in the Mansion House and the Guildhall, which is one of the finest Gothic halls in

existence, will, it is believed, be inspected with much interest. Luncheon, by invitation of the profession in York, will be served at the Station Hotel, at 1 o'clock, after which the party will be conveyed by special train to Helmsley. Here carriages will convey them to Rievaulx Terrace, whence, having seen the beautiful view, they will proceed to the Abbey, driving through Duncombe Park to the Home Terrace, and thence by the ruins of Helmsley Castle to the Black Swan for dinner. The train will leave Helmsley for York in time to catch the night mail from York, and the 9.35 for Leeds.

4. *The Harrogate Excursion.*—The party will proceed by special train from the North Eastern Railway Station (New) about 9 A.M. to Pannal, where they will be met by four-horse drags. The beautiful grounds and rocks of Plumpton, will then be visited, where light refreshment will be provided; afterwards the party will drive to Knaresborough Castle, the Dripping Well, and the caves memorable as connected with Eugene Aram. Thence by Scriven and Ripley Castle to Harrogate. Here the members of the profession in Harrogate will entertain the party at lunch in the New Bath Hospital about 3 P.M., afterwards carriages will be provided, so that places of interest may be visited. Various other entertainments will be organised, and in the evening the houses of the various medical men will be thrown open to visitors, and members can return to Leeds either by the special train, or by one of the numerous trains leaving Harrogate for Leeds in time to catch the night mails. It is hoped that many will arrange to stay in Harrogate over the Sunday.

5. *The Brimham Rocks, Fountain Abbey, Studley Royal, and Ripon Excursion.*—Special train will leave the North Eastern Station (New) about 9 A.M. for Pateley Bridge, where carriages will meet the party to convey it by Raven's Gill and Guy's Cliff to Castlestead, where the party will be entertained at luncheon by Mr. George Metcalfe. After luncheon the party will proceed by the fantastic rocks of Brimham over the moors to Fountains Abbey and Studley Royal, the grounds being specially laid open and tea provided by the Marquis of Ripon. Having viewed this, the finest of the Cistercian abbeys, the party will proceed to Ripon, where, having seen the cathedral, they will be received and entertained at the Palace by the Bishop of Ripon and Mrs. Boyd-Carpenter. The train will leave Ripon for Leeds at 8.15 P.M., reaching Leeds about 9.30 P.M.

6. *The Washburn Valley and Farnley Excursion.*—The object of this excursion is to show the waterworks in connection with Leeds, the beautiful scenery of the Mid-Warfe and Washburn Valleys, and the unique collection of Turner paintings at Farnley Hall. The whole journey will be by carriage. The party will first be conducted to Adel Church, when the Rector will show this most perfect specimen of Norman architecture; thence past Creskeld by Arthington and Pool Bridge, through the picturesque village of Leathley, with its old church and village stocks, through Lindley Wood to the Reservoir, where Messrs. Greenwood and Batley will show some interesting torpedo experiments. The party will then proceed over Norwood Edge, whence a splendid view of the whole valley can be obtained by Swinsty Reservoir to Fewston (the Sinking Village). Here lunch will be provided by the Chairman of the Leeds Waterworks Committee, Mr. Alderman Woodhouse. The party will then drive by Snowdon Moors to Farnley Hall, the seat of Mr. Ayscough Fawkes, who has kindly consented to exhibit his unrivalled collection of paintings by J. M. W. Turner, as well as his Cromwellian relics. Thence to Otley, where dinner will be served at the White Horse Hotel, the party reaching Leeds in time for the night mails.

7. *Malham Cove, Gordale Scar, and Settle.*—The object of this excursion is to show the remarkable scenery produced by the Great Craven Fault in the Mountain Limestone, one of the grandest examples in England. A special train will leave the Midland station about 9 A.M., reaching Bell Busk about 10.20 A.M. Here carriages will be waiting to convey the party by Calton Hall, the birthplace of General Lambert, and Kirkby Malham, with its interesting church and registers, to Gordale Scar, described by Wordsworth as "one of the grandest objects in Nature." The party, having been refreshed at a farmhouse, will divide into two, the more adventurous going over the cliffs to Malham Cove, where they will meet the party who have driven round. Having viewed this magnificent amphitheatre of rocks, the party will return to Kirkby Malham, and will here again divide. The lighter carriages, with those who prefer a walk with an ascent of 700 feet, will go over Highside, where a magnificent view of both Airedale and Ribblesdale can be obtained; thence by Scaleber Force to the Ashfield Hotel at Settle, where, being joined by the other party, who have driven round by Otterburn and Long Preston, dinner will be served. After dinner they will drive up Ribblesdale to Great Stainforth Force, returning by Giggleswick, where may be seen the ebbing and flowing well, and the Royal Victoria Cave Remains in the museum at the school. They will then return by Settle to Leeds, which will be reached about 9 P.M.

Railway Tickets.

Members of the Association, on application at the booking office at Leeds, and on production of their cards of membership, can have issued to them return tickets at single fares, available *from Leeds to any station* within a radius of fifty miles. The same facilities will be afforded to ladies accompanying members if they require to do so. Periodical tickets (first class) to Harrogate or Ilkley, available for seven days, will be issued to members of the Association at a charge of 10s. each on production of the voucher above named. These facilities will apply strictly to Leeds, and there will be no reduction in the fares charged to the members of the Association on their journey to Leeds for the meeting.

It has now been decided that Hull may be included in the range of places to which special return tickets may be issued from Leeds at a single fare for the double journey during the time that the Association is staying at Leeds.

The fee for each of the above excursions will be 10s. 6d., except in the case of the Scarborough excursion, for which one guinea will be charged. All applications for tickets, with remittance, to be made to

CHARLES M. CHADWICK, Honorary Secretary,
Excursions Subcommittee.

Cards of Membership.

The cards of membership can be obtained on personal application at the Reception Room of the Mechanics' Institute, Leeds, on Monday, when it will be opened from 12 noon till 8 o'clock, and the other days of the meeting from 9 o'clock till 6 o'clock.

Notices of Motion.

Mr. RIVINGTON gives notice that he will move, on the reading of the report of the Council:

That it is the opinion of this meeting that the Members of the Royal College of Surgeons of England should have a voice in the management of that College and in the election of its Council, and that it be an instruction to the Council of this Association to further this object through the action of the Parliamentary Bills Committee or of a special committee to be appointed for the purpose at this annual meeting.

Dr. EDWIN RICKARDS hereby gives notice that, at the Annual Meeting to be held at Leeds in August next, he will move:

That it be a recommendation to the Council of the British Medical Association that a decennial index of the contents of the BRITISH MEDICAL JOURNAL from its commencement up to the present time be made, and that in future, in addition to the annual index, a quinquennial one be issued.

Mr. J. BRINDLEY JAMES will move:

That the British Medical Association shall give active support and assistance to any scheme that has in view the establishment of hospital co-operation with a view to the better conducting of the out-patient department of our general hospitals, raising thereby the standard of hospital practice and extinguishing the *raison d'être* of so-called provident dispensaries and open surgeries, thus enabling general practitioners to gain an honourable livelihood.

Dr. OGILVIE GRANT gives notice that at the first evening general meeting at Leeds he will move:

That the travelling expenses of representatives of Branches incurred in attending meetings of the Council in London be defrayed out of the funds of the Association.

DR RENTOUL gives notice that he will move:

That, recognising the fact that there is an abuse of the out-patient department of our medical charities, this meeting of the British Medical Association resolves:

1. That medical practitioners and the managers of our medical charities in the various towns and cities meet together and decide who are eligible for out-patient medical aid. This meeting suggests that the following "wage limit" be adopted:—When a man and wife make 25s. per week and over, or a single person 20s. per week and over, that these shall be ineligible for out-patient treatment at the medical charities—except in cases of accident—and that those earning a similar rate of wage be ineligible for "home visits;" that is, visits paid by the staff of the medical charities to sick persons at the patient's home. Further, that either the Manchester system of checking abuse, or that used at the London, and St. Bartholomew's Hospitals be put into force, but that preference be given to the plan used in Manchester.

2. In order that those who shall be excluded from the out-patient department of our medical charities (by the working of the previous resolution) may have the means of obtaining immediate and efficient medical, surgical, and dental

treatment, and medicines, this meeting resolves, that a Public Medical Service—such as that suggested in the JOURNAL of June 22nd, 1889—be formed, and that this service embrace those wage-earners who are making under 45s. per week per family, and single persons under 30s. per week. And that the medical practitioners, dental surgeons, chemists, and hospital managers are requested to bring about this hospital reform, and establish a Public Medical Service with as little delay as possible.

3. That having secured hospital co-operation, and having established a Public Medical Service, the members of this Association appoint a Committee, composed of two representatives elected by each Branch, and that this Committee draw up a series of rules for the formation and working of a provident system, whereby wage-earners receiving up to 45s. per week per family, and single persons 30s. per week, may, by making periodic payments during health and sickness, provide themselves, their wives, and children with efficient medical and surgical treatment, and medicines.

4. That the principle of a "wage limit" be adopted, and worked by friendly societies, tontines, and sick insurance companies; or that a "sliding scale" of payments be made to their medical practitioners, so that the present abuses may be rectified. This scale of payments to be drawn up by the Committee constituted as by Resolution 3. This meeting suggests that the minimum medical fee paid by such sick clubs shall be 6s. per annum, per member; that the person proposed for membership pay a fee of 3s 6d. for the medical examination (whether admitted to membership or not) to the practitioner who so examines; that the sum of 1s. be paid for each certificate to the practitioner by the person who obtains it; and that the sum of 8d. be paid for each prescription dispensed. This meeting earnestly requests the various authorities of friendly societies, tontines, and sick insurance companies, to make provision for surgical and dental treatment, and to draw up a scale of fees for the same, so that they may not be depending on the medical charities for relief.

5. That this meeting, recognising the fact that there are a great number of beds in the Poor-law infirmaries (there being no less than 12,000 in 25 metropolitan Poor-law infirmaries), and many in the various fever hospitals at present unused for the clinical teaching of students, and giving due weight to the statement made in the Metropolitan Asylums Board Report of 1889, page 18, that: "Your Committee cannot fail to observe the large proportion of mistakes which are made in the diagnoses of cases of small-pox and fever," desire to express their regret that the Poor-law infirmaries and fever hospitals are not open for the clinical instruction of medical students, and hope that the various authorities will direct their attention to the removal of the present restrictions, so that the educational standard may be improved, it being essential to the health of cities and towns that medical practitioners may be able to recognise fever cases at the earliest possible period.

6. That the Council and JOURNAL of the Association help in every legitimate way to bring the above resolutions to a successful issue.

FRANCIS FOWKE,
Thursday, July 11th. General Secretary.

CORRESPONDENCE.

POST-GRADUATE COURSES IN LONDON.

SIR,—Why is it that London has not its post-graduate college? New York has, and, I take it, a very successful one. Vienna and Berlin have their post-graduate clinics, attended by medical men from all parts of the world. Edinburgh for several years has had a post-graduate course, which has been very successful, being attended by medical men from all parts. Charing Cross Hospital gives a post-graduate course, but the syllabus shows that it is not at all exhaustive, and extends over too long a period for those not resident in London or neighbourhood. Your very interesting and instructive articles on "Medical Paris of To-day" show that post-graduates have splendid facilities for studying any special subject. What is wanted in London is a school or college where pathology—a subject not taught to the older generation of practitioners—gynæcology, operative surgery and surgical anatomy, medical diagnosis and medical anatomy, dermatology, neurology, ophthalmology, would be taught as they are on the Continent, each subject being thoroughly gone into.

With the vast resources in clinical material at the London Hospital, I believe a trial made by the eminent staff attached, with some other gentlemen of high standing, would bring forward a large body of men who, like myself, feel the need of a "brushing up," and others who wish to qualify as gynæcologists, dermatologists, etc. With short sessions of, say, four or five weeks, with daily lectures and demonstrations, I think success would be assured, as gentlemen of mature years and long standing attend such courses elsewhere.

All should be, but many are not, French and German scholars, and, therefore, cannot avail themselves of the Continental clinics, who would attend, however, such clinics in London if presided over by men of acknowledged eminence in their respective branches.

I trust this subject may be freely ventilated in your columns, and result in the formation of a London post-graduate college.—I am, etc., SCIENTIA.

July 24th.

MEDICAL DEFENCE.

SIR,—The statement of the honorary secretaries of the Medical Defence Union is lacking only in one point, but that is rather an essential one. They state the funds they have received and how much they have in hand, but they do not state what financial assistance they have given in any of the numerous cases of actions, criminal and civil, in which practitioners have been mulcted, to which they refer. It would be satisfactory to know to what extent they have given such financial assistance, and in what cases they have paid for the defence of any one practitioner, or have either contributed anything towards any of the subscription funds, or to any loss incurred by practitioners in consequence of such actions. If not, whom have they defended, and at what cost out of the funds in hand?—I am, etc., CIVIS.

ROYAL MEDICAL BENEVOLENT COLLEGE.

SIR,—It is only right to assume that the Royal Medical Benevolent College was founded from purely philanthropic motives, to alleviate the distress of the aged by granting pensions and to assist the widows of medical practitioners in the education of their sons. Several complaints have, however, been made to the committee of this association by the candidates for the benefits of the college of the hardships which they have had to endure and the expenses which they have been compelled to incur, owing to the present system of election by votes which is countenanced by the council and governors of the college.

Instituted, as no doubt they were, from the highest and purest motives, there is not the slightest doubt that the sixty-three voting charities of the metropolis, of which the Medical Benevolent College is one, do a far greater aggregate of harm than good. From a medical and surgical point of view the hardships imposed upon the needy, at the very time when charity ought to alleviate their distress, are indefensible and unkind. The subscribers to the college, when thinking only of the benefit to the few successful candidates, must be sadly forgetful of the injury done to the many who fail.

As a matter of minor importance, I venture to suggest that the relations of subscribers should have some very substantial advantage over other candidates accorded to them, so long as the medical profession—for it rests in their own hands—allow the present system of election to last. That profession is largely represented amongst the subscribers, not only of the Medical Benevolent College, but of all the voting charities of the metropolis, and this committee feels assured that if each of your readers would seriously reflect on the hardships of canvassing, with its accompanying expenses, disappointments, and personal injury to health, and would communicate his objections to the committees of the charities to which he subscribes, then the voting and canvassing system would soon be a thing of the past.

The medical profession is in itself powerful enough to bring about a change, and if they would seriously set to work to accomplish the task they would earn the lasting gratitude of the poor and of all who have the welfare of the poor at heart. The charities are obdurate. Persuasion on our part has been abandoned as useless, and we now appeal to the public, as an extreme measure, to insist upon an alteration in the method of election, or, failing that, to withdraw their support.—I am, etc.,

30, Charing Cross, S.W., J. A. Dow, Secretary,
July 27th. Charity Voting Reform Association.

PILOCARPINE IN DEAFNESS.

IN the JOURNAL of July 20th, Mr. Woodhouse speaks of a recent "suggestion of Mr. Field's, that the hypodermic injection of pilocarpine was worth a trial in bad cases of deafness, especially where labyrinthine deafness was suspected."

I desire to say, that in my *Practitioner's Handbook on Diseases of the Ear*, is the following. "It is a question if we avail ourselves of the action of pilocarpine as frequently as we should. It is probably the most certain and powerful of all our drugs in cases suitable for its administration, where the reduction of vascular tension is our object, and in which we desire to check effusion, and control the tendency to extravasation. These are exactly the conditions in the earlier stages of Ménière's disease and other forms of vertigo in which labyrinthine effusions are threatened." I then proceed to give in detail the results of Professor Politzer's experience,[1] from the time he first suggested pilocarpine in 1880

[1] *Wiener mediz. Blätter*, Nos. 4, 5, and 6, 1885.

at the Milan Congress, especially in syphilitic affections of the labyrinth, up to 1886. I may add that I first used pilocarpine subcutaneously in labyrinthine vertigo in 1879. I have since (as in a remarkably successful case of typical Ménière's disease, referred to in my *Handbook* in 1885), repeatedly advised and resorted to the use of pilocarpine in cases of labyrinthine vertigo. My success has been marked in some instances, and failure as complete in others has followed its employment. I may say in conclusion, that notwithstanding my unfavourable relations with this drug in one memorable case, I consider as a reducer of vascular tension, especially in ocular hypertension and effusion, when given subcutaneously in appropriate cases, it stands unequalled, and that prudently administered, it is as safe a remedy as any other powerful therapeutic agent we are daily using for other therapeutic indications.

141, Harley Street, W. H. MACNAUGHTON JONES.

SIR,—Since the question of the efficacy of Professor Politzer's treatment of certain cases of deafness by the hypodermic injection of pilocarpine has come before your readers, I should like to state that, following Mr. G. P. Field's recommendation, I have used it in four cases. These occurred in the persons of three gentlemen, whose ages varied from 45 to 23, and one lady, aged 21. In each case the treatment was continued for six weeks, and in each of the male cases material improvement was effected. In the lady's case, I could not find any worth mentioning. It was not merely that I detected improvement in the three male patients by the usual methods of testing, but they expressed themselves as hearing with much greater facility.

If I remember rightly, four of Dr. Woodhouse's cases were over 60 years of age. It is, therefore, at least possible that ordinary senile degeneration had something to do with their failure to improve. My experience with the small number of cases I mention led me to believe that the full benefit of the treatment could not be gained in a less time than six weeks; and it is probable that in many cases an even longer period would be better.

I may remark in passing that, though rather full doses were employed in all four cases over a considerable time, no toxic or ill effects of any kind were produced by the pilocarpine.—I am, etc., HOWARD BARRETT.

3, Tavistock Square, W.C., July 24th.

VOTING PAPERS AT THE COLLEGE ELECTION.

SIR,—Mr. Lawson Tait's suggestion appears to me to be an excellent one, the only stipulation which is necessary being that every Fellow who votes in person shall bring his proxy paper with him.—I am, etc., CHARLES STEELE.

Richmond Hill, Clifton, July 30th.

A NEW METHOD OF EXCISING THE WRIST-JOINT.

SIR,—In the JOURNAL of July 20th there is a short article by Mr. Edward Thompson, of Tyrone, on the above subject. I understand by his paper that he considers excision of the wrist by a single dorsal vertical incision to be a new operation. On reference to the *Provincial Medical Journal* for September 1st, 1885, there can be found a description of the same operation illustrated by diagrams.

At the time of writing that paper I thought that the operation had not previously been done, and, although the exact incision adopted had not been described, the principle of the single dorsal vertical incision without division of tendons had been followed out several times in France and Germany.

I have since excised the wrist in the same manner on numerous occasions, and have every reason to be well satisfied with the results, some of which I hope to show to the members of the British Medical Association at the Leeds meeting in August. This method presents very manifest advantages in ease of performance, in thorough exposure of the joint without division of tendons, and in freedom from the danger of wounding any vessels or nerves of importance.—I am, etc., A. W. MAYO ROBSON.

Hillary Place, Leeds.

A LAW was recently passed by the Legislature of New York State forbidding the sale of cigarettes to children under sixteen years of age. The *New York Medical Record* reports that a conviction was recently obtained, the offender being fined fifty dollars.

HOSPITAL AND DISPENSARY MANAGEMENT.

ALLEGED ABUSE OF OUT-PATIENT DEPARTMENTS.

SIR,—Perhaps as the mover of the resolution passed by the joint meeting of the Worcestershire and Herefordshire and Gloucestershire Branches, after the reading of Mr. Moore's valuable paper, and which resolution, discussed at many meetings of the Branches, has given rise to so much interesting correspondence in your pages, I may be allowed a few lines just before the annual meeting in order to clear the ground for discussion, and also to set our members thinking how the gigantic work cut out for them is to be done.

Every one of the abuses enumerated in Dr. Rentoul's resolutions can be proved from the actual experience of scores of county hospital physicians like myself, as well as from that of a still larger number of hospital surgeons. It is of no use taking the opinions of the physicians and surgeons of our metropolitan hospitals, or of the lecturers at the medical schools. They look upon the dense mass of hospital out-patients only with an eye to clinical research, or to the glorification of their own specialities.

As regards the abuse of clubs, we also know from our own experience that it is a more flagrant and crying evil than even the out-patients of hospitals. When we find that the most thrifty and well-to-do of our trading classes get up their medical aid societies, and paying in their boldest manner their fee to a consultant when they find their "young doctor" somewhat at sea in their cases, or when we find this same class of persons palming themselves off upon the provident dispensary, that palladium of the really poor; or when we see a nobleman going to a hospital to get his bruised hand dressed, and leaving without handing an honorarium to the surgeon who attends to him—whilst such things are, I say it is of little avail to haggle about which is the greater abuse of the two. No, Sir, the grounds of complaint are clear enough; it is the remedy which has to be sought for. And that remedy must be taken up and sought for by the British Medical Association. There is no other body to which we can look for aid. It is of no use going to the Royal Colleges; they never did anything for us, and never will. Our Association, if it puts forth its strength, is all-powerful with the profession, and may be made so with the public. But discussion at our annual meeting will not do the work. It should be taken up by the Council, which, as a thoroughly representative body, is in touch with three-fourths of the members of our profession.

I should recommend Dr. Rentoul to condense or shorten his resolutions, so that they may enter clearly into the mind of the meeting, and then an overwhelming majority will demand that this matter be taken up by the governing body of the Association to be thoroughly thrashed out and brought, in a practical shape, before the next meeting in London.—I am, etc.,

WILLIAM STRANGE, M.D., Vice-President.

Worcester, July 30th.

SIR,—In 1873, and five or six following years, I did all Dr. Rentoul is now doing to expose the rotten system of free medical aid, but, unlike him, did not succeed in rousing the general practitioner to a consciousness of his degraded position! I regret to find that still there is no disposition on the part of hospital men to give a help. Indeed, with but one or two exceptions, they hinder rather than promote one's efforts; and Sir Andrew Clark, in his remarks, indicates precisely the position almost every hospital physician and surgeon would take up if challenged. This conduct deserves the censure of the whole profession. He knew how much value would be attached to his utterances, and what right had he to give expression to his own opinion without making himself acquainted with statistics, which, thanks to Dr. Rentoul, are easily obtainable by anyone, giving overwhelming evidence of the incorrectness of his figures?

I had the honour to be secretary to the committee appointed by your Association "to investigate the working of the provident dispensary system in Manchester." We had no help whatever from the hospitals, and the "managers" of the provident dispensaries absolutely refused investigation of their books. About that time I published a sliding wage scale.

The first thing we must do is to demonstrate to the public the need of reform—not in the out-patient department only, but the in- also, the management of which is a scandal! Take one ex-

ample—the cost of a nurse to any private family. The hospital pays her perhaps £20 to £25 a year; the authorities demand 30s. a week at least for her services. This is what a charitable public get in return for often strained efforts to give a donation to a fashionable hospital. The widow may give her mite, and popular princesses receive purses; but the hard-headed business man has found out how his money is misappropriated, and will help us to secure to ourselves fair play, if we determine to obtain our rights.

But yet the chiefest cause of all the mischief is the tenure of office on the staffs of hospitals. Shorten the periods, and we should find out the men of worth, and have fewer manufactured great men, who, with no real merit, are made popular. It is simply being attached to a large institution. Five years is ample for any man to hold a surgeoncy. The cant about teaching is intolerable. On a lecture morning what is the proportion of patients "carefully examined" to those sent away with a bottle? Is Sir Andrew Clark's greatness due to his having carefully investigated the multitudes in his out-patient room?

Finally, I trust we shall have a great meeting at Leeds, and that Dr. Rentoul will enrol a whole army of helpers. For my part, I shall throw all my energy in with him and help to accomplish a work much needed; but I cannot close without a word for the much-abused "dispensary doctor," or "sixpenny doctor." I look upon him as a man, compared with a hospital physician or surgeon; at least, he is honest as to what he pretends.—I am, etc.,

JAMES BRASSEY BRIERLEY.

Old Trafford, Manchester, July 30th.

SIR,—Perhaps the best answer to be made to your correspondent "Critic" is to narrate as briefly as possible what occurred—I think it was two years ago—when Sir Andrew Clark presided at a meeting of the Provident Medical Association, in the rooms of the Society of Arts, Adelphi. Mr. Lushington, Mr. Bousfield, and some others well known for their interest in hospital matters were present, and spoke on the occasion.

Mr. Bousfield ventured to make some reflections on the manner in which out-patients are treated at the large hospitals; how long they are obliged to wait, and how difficult, if not impossible it must be to give proper attention to such a number; and, more than that, he went so far as to suggest that unqualified students were not infrequently engaged in prescribing for such patients.

This suggestion called forth from Sir Andrew Clark an indignant protest against any reflections of such a nature being made, at least upon the hospital where he had himself spent his time in the out-patient department. There was a gentlemen present who got up and confirmed what Mr. Bousfield had suggested, and, what was more, he said it was true of the London Hospital. Sir A. Clark distinctly denied it; but when the gentleman went on to say that he himself had been a student at the London, and had prescribed for patients often, and that it was a common thing for students to do this, the impression produced upon the audience was a little painful. Sir A. Clark said that so far as he was concerned, he had no knowledge of this. The gentlemen quietly remarked that he accepted the statement with that reservation.

Not long ago I had the pleasure of discussing hospital matters with a well-known London hospital governor.

"I met a friend," he said, "recently, who was looking ill, and I asked him some questions, which led to his telling me that he was going to Carlsbad for his health. He was pretty well off, that is, he had an independence of about £700 a year. A few days after he wrote to me to ask for a letter for the——hospital, as he would like to consult one of the physicians. He could quite well have afforded two guineas. I am ashamed to say I sent him a letter."
—I am, etc.,

ANTI-CRITIC.

SIR—Sir Andrew Clark has written to me saying that he is obliged to me for having drawn his attention to the error in his speech at the Mansion House, and that he will have the statement omitted in the reprint of his speech.

I think there is rather too much being made out of Sir Andrew Clark's statements. He admits the abuse. This is an advance on the statements of those who say "there is no abuse whatever."

I quite agree with "Critic" when he states that, unless we secure the help of those medical practitioners who hold hospital appointments, we shall have great difficulty in succeeding. I can hardly go with him in his definition of "general practitioners" when he separates them from "hospital physicians and surgeons." My experience is—and I think it is the experience of most of us—that a large majority of "general practitioners" act as the physicians or surgeons to medical charities. I have the pleasure of knowing many surgeons to hospitals who can and do treat a case of pneumonia or liver disease as well as any hospital physician. The medical practitioner who holds a hospital appointment is as anxious for reform as anyone, only he is afraid of offending his committee, and so dreads future non-advancement. In the various trades unions there is generally a "victims' fund," that is, a fund to support those who have been dismissed for their defending the rights of the union. Human nature is generally alike, and so men do not care to come forward for fear of social boycotting.

I trust that shortly we members of the Association shall have the privilege and right of a proxy vote for our annual meetings, as recommended by Dr. Hugh Woods. It is perfectly absurd to expect medical practitioners to attend our annual meetings. We have about 13,000 members. About 1,000 will come to Leeds. Perhaps 50 to 80 will discuss the question of hospital reform. Only those who are financially well off are likely to appear. For my part, I cannot see why the great mass of our profession can be expected to leave their work, to lose part of their fees, to pay a *locum*, and defray travelling and other expenses. I suppose if the average holiday were taken for doctors, it would be about seven to ten days. Even the Branch meetings are not well attended. For all these reasons I hope thus that a proxy vote will be allowed when questions affecting the general interest of the profession are to be voted on.

It is pleasant to note the many Branches approving of the Gloucester resolutions, demanding an inquiry into the abuse of hospitals. It is to be hoped that this movement will grow, and that, at the Leeds meeting, we shall not be content with passing some shadowy and indefinite resolution—thus putting back reform for some years. Dr. George Stoker says that the provident dispensary scheme was proposed in 1854; Dr. Smith, of Southam, and Mr. Jones, of Derby—according to the statement of Dr. Ogle—founded it. What advance have we made in these thirty-five years? I fear, if anything, we have stood still. The apathy of medical practitioners and their want of care in studying social questions is much noticed by the public, and, if for this reason alone, I think we should try to advance.

"Anti-Critic" has called attention to the by-law of the College of Physicians, that no Fellow or Member shall, under colour of a benevolent purpose (abuse recognised even here), prescribe for any patient whom he knows to be under the care of another doctor. Is this now a dead letter? For is it not well known to us all that a very large number of persons go to the medical charity once, and to secure an opinion, and so compare notes regarding the treatment pursued? Why can we not be honest with each other? "Make a penny honestly" used to be the mark for acting up to. Now it is "make a penny"—"honestly" left out. "Do you me, or I'll do you," is the motto of a Stock Exchange. Have we "members of the Christ-like profession," not our "brethren," who try to "corner" not only all the patients, but appointments also?

On December 7th, 1886—Sir Andrew Clark in the chair—it was unanimously resolved: "That the attention of governing bodies of hospitals and other public authorities be called to the necessity for some check on the indiscriminate provision of medical treatment at hospitals and dispensaries." Proposed by Mr. W. Bousfield, and seconded by Mr. Nelson Hardy, F.R.C.S.Edin.—I am, etc.,

Liverpool. ROBERT R. RENTOUL, M.D.

SIR,—"Critic's" letter of July 6th seemed to me little more than a quotation from Sir Andrew Clark, and to this replies were directed. "Critic" now calls attention to the fact that Sir Andrew Clark and his colleagues have neither repudiated, modified, or explained the opinions which Sir Andrew Clark therein expressed. Sir Andrew Clark said, speaking of Manchester: "They investigated the matter carefully, I am told, and what do you think was the conclusion they came to? It was that about 8 per cent. of the people who attended at the infirmary might have contributed a little to some provident dispensary where they could have got relief. Eight per cent., etc." Now I beg respectfully to challenge Sir Andrew Clark either to substantiate or to withdraw his statement that 8 per cent. was the abuse rate found.

"Critic" points out, secondly, that without agreement with the President of the College of Physicians, and the hospital physicians whom he represents, we are predestined to meet most serious dif-

ficulties. We are well aware of it, and would, with all due humility, seek their co-operation, if we saw any chance of obtaining it. But while they openly style us "crotchetmongers," and the like, we will not go on our knees to them, and we will do our best to overcome the difficulties they throw in our way. Supporting right against might, we trust to carry reform in their teeth if necessary.

It is quite true that the three parties mentioned by "Critic," namely: (1) the hospital subscribers, governors, and managers, (2) the hospital physicians and surgeons, (3) the general practitioners, ought to act together in bringing about the much needed reforms; but, unfortunately, a large number of Class 2 are opposed to reform.

The subscribers to hospitals, and the public generally, must be taught the plain truth of the matter, and "Critic" is undoubtedly right in thinking that we have a difficult task before us, especially while leaders of our profession systematically throw dust in the eyes of the public.

"Critic" holds out hope to us in case hospital physicians and surgeons were agreed, (1) "That there is an abuse of hospitals large enough to call for their interference." If the abuse (about 50 per cent.) is not large enough now, we give up. Besides, judging from Sir Andrew Clark's 8 per cent., things must appear to them five times smaller than they do to us. (2) "That they are called on to interfere." When gross abuse is proved, as it has been, every honest man is called on to interfere. (3) "In what way they should act." The method is a subject for discussion. It is a matter of duty to remove the abuses.

As to what "Critic" says about the President of the College of Physicians denying Dr. Rentoul's data and conclusions, let him disprove them if he can. Is he or Dr. Rentoul right about the abuse rate at Manchester?

We are perfectly ready to meet the arguments of hospital physicians and surgeons, but we will not submit to their dogmatic decision. Many of them will help us, I am sure, and we will pay respect to such as being "*primi inter pares*;" but we recognise no right on their part to claim submission from us, except of our own free will.

"Critic" seems to think that we shall not be able to convince the public of the need of reform. I believe that the public will be able to understand that by degrading the medical profession they are injuring themselves. "Critic" thinks that we must wait for the unanimous action of hospital doctors. Why not tell us to wait for the millennium? If "Critic" thinks we shall content ourselves with "mere empty protests and beating of the air," he may possibly be mistaken.

Dr. Henry's suggestions are very useful as pointing out the necessity of attempting reforms beyond that of the hospitals. I certainly think that much good would be done by making the examinations at the commencement of medical education much more difficult than they are at present. In this way overcrowding of the medical profession might be stopped at the right point by excluding the inferior men.

In conclusion, let me thank those who are coming forward to help in this hard contest, and let me ask others to give us their aid in fighting for the public good and the welfare of the medical profession.—I am, etc.,

HUGH WOODS.

Highgate, N.

SIR,—It is most urgent that the subject of hospital use and abuse should not be allowed to drop until some more satisfactory system of administering medical relief to the sick poor is arrived at; and that the fact that there is abuse of medical charities is beginning to be felt by hospital governors is evidenced by the report read at the annual meeting of the trustees of the Manchester Royal Infirmary on July 25th. It says:—"But the Board do not regard with satisfaction the circumstance that so considerable a portion of the working class of Manchester and the neighbourhood are in the receipt of charitable medical relief."

The lukewarmness of hospital physicians and surgeons on this matter is lamentable. In all the correspondence which has taken place, as "Critic" observes, there is no opinion coming from them. There can be no efficient reform until all the members of the medical staff of a hospital are paid for their services according to their work and status. "But," says someone, "this would be hindering the flow of charity." Not at all. If a physician at one of the large hospitals were in receipt of, say, £500 per annum, and felt that he would rather do the work for charity, he need only hand back his salary, and, as an annual subscriber of that amount, he would have a voice on the Board of Management, which would be listened to with far more respect than as an honorary medical officer, and so would be avoided those unseemly differences which crop up at times between the Committee of Management and the Medical Board of nearly every large hospital. In this country it is wisely provided that every person, however poor, shall have the means of education for his children, and yet the teachers are not unpaid, and so we should provide that every citizen, however poor, may have the means of obtaining medical relief when sick—but why should the doctor go unpaid? If an army of B.A.'s and M.A.'s and LL.D.'s were to offer their services in teaching poor children gratis, the School Board would look upon them with great suspicion. At our hospitals for persons of unsound mind the medical attendants are paid, and the Commissioners in Lunacy are paid; why should not the same rule hold at our general hospitals?

This system of having honorary physicians and surgeons is a malignant growth in the profession for which there is no remedy but total extirpation, and the sooner it is done the better.

Another reform most urgently needed is the opening of State hospitals as schools of medicine.—I am, etc.,

Stretford, Manchester, July 29th. JOHN T. FAULKNER.

THE HOSPITALS OF THE MANCHESTER SHIP CANAL.

OUR Liverpool correspondent, who, through the kindness of Mr. Robert Jones, consulting surgeon to the works of the Manchester Ship Canal, recently had an opportunity of visiting the part of the canal near Warrington, and of inspecting the hospital at Latchford, writes: The canal, which will reach from Eastham, a village on the Cheshire bank of the Mersey, to Manchester, will be about thirty-two miles in length. The works are divided for medical purposes into eight sections of about four miles each. A medical man, resident in the neighbourhood, is appointed to each section, his function being to visit at their own homes such of the workmen or their families as are sick, and to see them at stated hours at the surgeries which are placed at intervals along the line. There are three hospitals in connection with the canal, namely, at Ellesmere Port, Latchford, and Barton, intended for the treatment of severe accidents and acute diseases. Each hospital is a substantially built wooden structure. It contains three well-lighted and well-ventilated wards; a general ward, over sixty feet long, a women and children's ward, and an emergency ward; an operating room, dispensary, and splint room; apartments for the resident staff, laundry, and offices, and can accommodate twenty patients at a push. It is in charge of a resident house-surgeon, a sister, and a trained nurse. A great number of accidents requiring major operations have occurred since the works began, but there has been a remarkable freedom from infectious outbreaks. The whole medical service of the canal is under the direct supervision of the consulting surgeon, who resides in Liverpool. He performs all major operations, and has the care of the cases in the hospitals. The contractor, Mr. Walker, takes a kindly and lively interest in the health and well-being of his men, and the completeness of the arrangements he has made for their relief when the victims of accident or disease testifies to his care and skill in organisation. The works give employment to 14,000 men, all of whom pay a weekly sum which partly defrays the expenses of the medical service.

MANCHESTER ROYAL INFIRMARY.

THE annual report of the Manchester Royal Infirmary states that 43,985 persons received medical and surgical treatment at the infirmary and its allied institutions at Cheadle and Monsall. Of this number 4,504 were in-patients, 1,960 were fever patients at Monsall, 1,378 convalescents at Cheadle, and 36,143 were treated as out and home patients. The Board of Management point out that a large percentage of the in-patients came from neighbouring towns, and they state that the amount of subscriptions received from their whole area is extremely small. There has been a serious decrease in the amount received from the Hospital Sunday and Saturday Funds, a decrease of nearly one thousand pounds. There has been a reduction of the cost of maintenance per bed.

HOSPITAL SUNDAY FUND.

THE Lord Mayor presided at a meeting of the Council of the Hospital Sunday Fund, held at the Mansion House, on Monday afternoon, for the purpose of distributing the awards of this year's funds. The Committee of Distribution recommended the payment

of awards to 161 institutions, being three more than last year, and an increase of 56 since the first awards were made in 1873. The total amount available for distribution, after allowing sufficient for liabilities and the usual current expenses, is £40,746; of this, £38,481 5s. was now recommended to 111 hospitals and 50 dispensaries. Five per cent. of the total collected is set apart to purchase surgical appliances. The amount raised this year already exceeds a little that of last year, and is expected to exceed it by about £700 or £800—an amount which, we fear, falls far short of the expectations of the promoters of this important fund.

NAVAL AND MILITARY MEDICAL SERVICES.

FOURTH DIVISION VOLUNTEER MEDICAL STAFF CORPS.

THE third annual inspection of this corps was held at Old Trafford, the inspecting officer being Brigade-Surgeon Close, Principal Medical Officer of the North-Western District. The division was commanded by Surgeon Crockwell, the other officers present being Surgeons Coates, Darwin, and Boyd. There were eighty-six rank and file on parade wearing the new Slade Wallace equipment. The inspecting officer expressed his approval of the way in which the several cases of supposed injuries (such as broken limbs, wounds, etc.) had been treated, also of the excellence of the drill, and the extremely good equipment and clothing of the men.

HINTS TO ARMY MEDICAL CANDIDATES.

COTOPAXI writes: Just a few words to intending candidates, so that they may enter the service with their eyes open, instead of learning in the school of bitter experience.

1. Home pay and allowances are good, but bring with them little amenity, either of a social or military kind. The regiment whose sick you attend will usually carefully ignore you.

2. Your sojourns at home will be short. India will be your goal, with the magnificent pay of 317½ rupees a month all told, from which you must find everything—home, servants, tents, and meet a host of unavoidable incidental expenses. The exchange rupee is only worth about 1s. 4d., and its purchasing power in India lessens every year.

3. Whether at home or abroad, you must not look for any real military status. You will have less *bonâ fide* military rank than a warrant officer. The Adjutant-General says you are a mere hindrance to the military machine with your "silly" talk about health and sanitation. He knows much more on every subject than you. You are unfit for any military substantive rank, and in the very nature of things inferior to the "fighting caste."

4. You will not complain of stagnation. Your portmanteau must be always packed, for you will be sent flying from place to place on the shortest notice.

These are some of the worries and troubles in store for you if you determine to enter the Army Medical Service as at present constituted.

THE MEDICAL STAFF.

SURGEON-MAJOR WILLIAM VENOUR has been granted retired pay. His commissions are dated:—Assistant-Surgeon, September 22nd, 1858; Surgeon, March 1, 1873; and Surgeon-Major, January 30th, 1875. He served (says *Hart's Army List*) throughout the second phase of the Ashanti campaign from December 13th, 1873 (medal); with the 15th Hussars in the Afghan war of 1878-80 with the Candahar column, including the advance to Khelat-i-Ghilzie, and was present at the affair of Takht-i-Pul in medical charge of a squadron of the 15th Hussars and a half battery of Royal Horse Artillery (medal); in the Soudan Expedition under Sir Gerald Graham in 1884 in charge of a hospital ship at the base (mentioned in despatches, medal, and Khedive's Star); and with the Burmese Expedition in 1886-87 in medical charge of No. 16, British Field Hospital, and as Principal Medical Officer, 5 Brigade, Shwebo, under Brigadier-General Stewart (mentioned in despatches, medal with clasp).

Surgeon R. E. FOOTT, M.D., who entered the service July 28th, 1886, has now resigned his commission.

Deputy Surgeon-General JOHN EWING died at Alderney Street, London, on July 27th, at the age of 73. Entering as Assistant Surgeon May 21st, 1841, he became Surgeon March 2th, 1852; Surgeon-Major, May 21st, 1861; and Deputy Surgeon-General December 7th, 1867. He retired on half-pay April 28th, 1876. From *Hart's Army List*, we learn, that he served in the Eastern campaign from November, 1854, including the siege and fall of Sebastopol (medal with clasp, and Turkish medal). He was with the 95th Regiment in the Indian Mutiny campaign in 1858, and was at the siege and capture of Kotah, the battle of Kotah-ke-Serai, and the general action resulting in the capture of Gwalior (medal).

INDIAN MEDICAL SERVICE.

SURGEON-MAJOR GEORGE HENDERSON, M.D., of the Bengal Establishment, has leave of absence on private affairs for 1 year and 150 days, embarking on or after July 16.

Surgeon THOMAS ALEXANDER WISE, M.D, late of the Bengal Establishment, and whose commission dated as far back as February 2nd, 1844, died at Upper Norwood on July 23rd, at the advanced age of 87.

MILITIA AND VOLUNTEERS.

MR. JOHN BRUNT, late Surgeon in the Royal Navy, is appointed Captain in the 3rd and 4th Battalions of the Manchester Regiment (late the 6th Lancashire Militia). Captain Brunt was Surgeon of the *Agincourt* during the Egyptian war of 1882, and has the Medical and Khedive's Bronze Star for the campaign.

Surgeon R. CLARK, 5th Lancashire Artillery has resigned his commission, dating from February 1st, 1889.

Surgeon R. PATRICK, M.D., 9th Lancashire Artillery, is promoted to be Surgeon-Major (ranking as Major).

Acting Surgeons O. GRANT, M.B., and J. M. CHAPMAN, M.B., 1st Inverness Artillery, are promoted to be Surgeons.

Surgeon W. ROBINSON, M.B., 2nd West Riding of Yorkshire (Leeds) Engineers, has resigned his appointment, which was dated August 17, 1881.

Surgeon-Major (ranking as Lieutenant-Colonel) A. G. MILLER, Queen's Rifle Volunteer Brigade, the Royal Scots (late the 1st Edinburgh), has resigned his commission, which bore date February 1st, 1889, that of Surgeon being May 10th, 1864; he is permitted to retain his rank and uniform.

Surgeon J. S. HOLDEN, M.D., 2nd Volunteer Battalion, Suffolk Regiment (late the 6th Suffolk), is promoted to be Surgeon-Major (ranking as Major).

Acting Surgeon R. CRAN, M.B., 5th Volunteer Battalion, Gordon Highlanders (late the 1st Kincardine and Aberdeen), has resigned his appointment, which was dated February 2nd, 1889.

MEDICO-LEGAL AND MEDICO-ETHICAL.

BABY FARMING.

DR. MACDONALD, coroner for the north-east division of Middlesex, held an inquiry in the Board room of the Hackney Union Workhouse on July 25th, into the circumstances attending the death of Maurice Frank Marriner, aged five months, the illegitimate son of Minnie Marriner. Mr. Evans, the surgeon called in by the relieving officer of the district, reported: "I have to-day visited No. 3, Lea Terrace, Glyn Road, and found the front parlour used as a bedroom for eight people. The room was in a most filthy condition. There are three children, aged six years, four years, and four months, whose mother is seldom at home, and the children are supposed to be under the care of Martha Forward, an unfortunate girl, not 20 years of age, who rents the room, and has a child of her own. George Marriner, aged six years, in filthy condition, and head swarming with vermin; Minnie, aged four years, in a worse state still. They are both insufficiently clothed. The baby, Maurice Frank, aged five months, only weighs 7 pounds. He presented a most emaciated appearance, evidently improperly and insufficiently fed, and had every appearance of being neglected, eczema pervading the buttocks and thighs, probably caused by neglect." The jury returned the following verdict:—"That the deceased died from exhaustion, consequent on insufficient food and insanitary surroundings, and that the mother was guilty of manslaughter; and further, that Martha Forward was deserving of severe censure for her conduct with regard to the deceased."

THE INSURANCE OF CHILDREN.

To the already long list of crimes committed for the sake of the insurance money one more murder must, it is to be feared, be added. At the Derby Assizes a few days ago George Horton was convicted of the wilful murder of his little daughter, 8 years old. That the child died from strychnine poisoning was incontestably proved. Putting aside the fact that the child had stated that her father had given her some blue stuff in a cup out of a bottle, the case for the prosecution rested mainly on two points. One was that the prisoner, who had gone out to his work before any marked symptoms of illness in his child declared themselves, had returned about an hour after her death without having been to his work and without giving any reason for his return. The other was that, when informed of his child's death, he betrayed no surprise, and did not inquire into the cause of it or the manner in which it had occurred. The only motive that could be assigned for the murder was that she had been insured in April, 1888, and that, on her death a year after that date, the sum of £7 would become payable.

CORONERS AND MEDICAL WITNESSES.

MR. SETTLE held an inquest on July 11th at West Hartlepool on the body of Elizabeth Burn, aged 21, a single woman, who died the same day at 36, York Street, the residence of her parents. The evidence showed that the deceased was confined of a female child on Sunday week, but was not seen by a doctor, having been attended by a Mrs. Holborn. She progressed fairly well until Monday, when a change for the worse took place. Dr. Gourley's assistant was called in, but the unfortunate young woman succumbed shortly after.—The foreman of the jury (Mr. W. Reed) asked if the doctor was present to give evidence. He should like to know why a certificate was refused.—The Coroner: The doctor need not give any reason.—The Foreman: But he was with her three-quarters of an hour before she died, and we want to have his evidence. We want to know why he did not give a certificate.—The Coroner replied that the doctor's evidence was not necessary.—The Foreman: But we want to know his motive. It is through his action these poor people have been brought here. —The Coroner: You have no right, sir, to inquire into his motive, and he won't tell you if you do.—The Foreman: But how can we decide the cause of death unless we hear what the doctor has to say?—A juryman: Can't you give a certificate, Mr. Coroner?—The Coroner: I cannot do so without your sanction. You may surmise, but you have no right to say why a certificate was refused. The poor woman was probably quite as well attended as she would have been by a doctor, and at much less expense.—The Foreman: No doubt. We are quite satisfied that she was well cared for, and that no blame rests upon anyone, but

we desire to express our regret that these poor people should have been put to the pain and exposure of a public inquiry.—A verdict of death from natural causes was then returned.

MESSAGES BY PATIENTS' FRIENDS.

DR. D.—If the facts of the case be as represented, we need scarcely remark that the alleged conduct of Dr. W. would be indefensible, and subject him to adverse criticism. At the same time we deem it well to note that, from past experience in like cases, we think that if the message in question had been conveyed (as it should have been with the view to avoid error in delivery) through the medium of a written communication instead of verbally, it would have borne a different, or at least a less obnoxious, construction than that assumed by Dr. D., who, in our opinion, would have acted wisely before calling upon Dr. W. for an apology if he had in the first instance simply communicated to him the actual message received from the patient, and courteously solicited an explanation. In such case we should have been in a position to express a definite opinion thereon, and, moreover, been better able to advise him in reference to his future relations with the practitioner alluded to. As it is, we lack the necessary reliable information on which to base an opinion.

LUNATICS IN SINGLE CHARGE.

"MEMBER" asks: I am afraid I have not, perhaps, made my case sufficiently clear in the query asked and replied to in the JOURNAL of July 20th under the head of "Lunatics in Single Charge." The case is simply this. A gentleman long resident in India, a great linguist, and well read generally, develops delusions. He is put under restraint in a private asylum for a time, and is then allowed to go out, and recently consulted a high authority in mental diseases, who said he saw no reason why the delusions might not disappear with change, etc. Under these circumstances I am asked by his wife to take him and several members of his family under my roof, and, of course, to receive remuneration for their keep, etc. Is that individual still to be looked upon as a lunatic, and am I still liable to a penalty, though taken under my roof in sheer ignorance, for receiving him without acquainting the Commissioners in Lunacy?

*** In reference to the foregoing letter, the reply in JOURNAL of July 20th, page 156, to the first letter holds good. Our correspondent ought to have sent the "statement" as to the person of unsound mind to the Commissioners in the form prescribed by law, between two and seven days after receiving such person; should have had him visited not less than once in two weeks by another independent and separate qualified and registered medical man, who should at each visit have made entries in a book in the form prescribed by statute. In the former reply only the important earliest proceedings were mentioned; it was not thought necessary to lay down a whole code of instructions.

MEDICAL WRITINGS IN THE LAY PRESS.

KUCHENBACKER asks: Would you consider it improper for a duly qualified medical man to write health articles in a weekly local newspaper on the peculiarly beneficial qualities of a small neighbouring spa for the treatment of certain definite diseases, giving a list of the same, and the name of the attendant doctor who may be known to him?

*** Whatever may have been the course pursued by others in relation to the subject matter of our correspondent's communication, we would simply note for his guidance the following extract, among others, bearing on the subject from the *Ethical Code*:—

"It is alike derogatory to the Faculty to publish cases or operations, or write medical articles with the name and professional suffix of the writer appended, in the lay or daily press, or knowingly to suffer such publications to be made or otherwise issued to the public."

UNIVERSITY INTELLIGENCE.

CAMBRIDGE.

THE Clothworkers' Company has offered a scholarship of £30 a year tenable at Cavendish College, Cambridge, and the Fishmongers' Company has made a grant of £50 to the same College.

VICTORIA.

EXAMINATIONS FOR THE M.B. AND CH.B. DEGREES.—During the past fortnight the examinations for the degrees of M.B. and Ch.B. of Victoria University, and also for the newly-instituted diploma of Public Health, have taken place. For the Final Examination for the medical degrees the number of candidates exceeded twenty, this being by far the largest number of candidates ever entered for this examination. There was also a large number of candidates for the diploma of Public Health.

OWENS COLLEGE.—The Medical Class in Owens College was brought to a close this week. The number of medical students attending the Medical School of Owens College has, during the last year, much exceeded that in any previous year in the history of this flourishing medical school. The number, we believe, exceeded 380. The growth of this school has been so steady and continuous that it is proposed to greatly enlarge the present buildings of the medical department. The medical department was enlarged only a few years ago, but already some of the class-rooms and laboratories have proved too small. It is expected that during the course of next winter a large addition, in the way of new lecture-rooms and departments, will be made. The Dumville Surgical Prize, of the value of £20, has been awarded to Mr. T. N. Kelynack, who also recently won the Turner Medical Scholarship.

GLASGOW.

THE summer medical session of Glasgow University was closed on July 25th. At the graduation ceremony the honorary degree of LL.D. was conferred upon Herr Joseph Joachim "in recognition of the aid he has during more than forty years given to the cultivation in Britain of the highest branch of musical talent and art." The degree of M.D. was conferred upon 10 graduates, and that of M.B. and C.M. upon 91 out of 153 candidates. The graduates were, at the close of the ceremony, addressed by Professor George Buchanan, M.D. Referring to the cry of overcrowding in the profession, Professor Buchanan contrasted the situation in 1850—when the population of Glasgow was 255,000, and the number of medical practitioners 231—with that of to-day, when the population is 750,000, and the number of practitioners 375. Considering the progress of the Glasgow University Medical School since 1859, he pointed out that in that year the number of students of medicine was 317; ten years later it was 310; in 1879 the number rose to 483, and in 1889 to 747; in 1850 the graduates numbered 28; in 1860, 33; in 1869, 48; in 1879, 57; in 1888, 114. Viewing all this increase, Dr. Buchanan concludes that, if no great fortunes have been made in medicine, "the percentage of those who reach moderate competence is equal to that in any other walk in life, while the failures as to worldly means are fewer than in most."

The vacant chair of English Literature in the University has been filled up by the appointment by the Crown of Mr. A. C. Bradley, M.A., Professor of Modern Literature and English Language in University College, Liverpool; and the University Court has appointed, as Professor Jebb's successor in the Greek chair, Mr. G. G. A. Murray, Lecturer and Fellow of New College, Oxford.

MEDICO-PARLIAMENTARY.

HOUSE OF LORDS.—Thursday, July 25th.

Smoke Abatement.—Lord STRATHEDEN and CAMPBELL said the Bill which had been introduced dealing with this subject had the essence taken out of it by the Standing Committee. Inasmuch as the principle of that Bill had been frequently affirmed by that House, he thought the action of the Standing Committee was *ultra vires*. He had determined to withdraw that Bill, and was endeavouring, in conjunction with the Smoke Abatement Institute, of which the Duke of Westminster was chairman, to frame a new Bill, which he expected he would be able to lay on the table during the present session.

Local Government (Scotland) Bill.—This Bill was brought in, and, after some remarks from Lord DENMAN, it was read a first time.

Monday, July 29th.

The Hospitals of London.—Lord SANDHURST rose to present a petition signed by various members of the medical profession and by others, also on behalf of various medical charitable institutions, praying for inquiry in regard to the financial and general management and the common organisation of medical institutions, endowed and voluntary, and in regard to the administration of poor law institutions for the aid of the sick in the metropolis, and to move that the prayer of such petition should be agreed to. His lordship said he had assumed this task with feelings of great diffidence, and wished that the task had been undertaken by some one on either side who was a more practised speaker, and also by one whose individual opinion in endorsing the petition would carry more weight, for the subject was difficult and of great complexity. It concerned the welfare of the general public in receipt of medical relief, and it also concerned those of the public who generally contributed to maintain the charities. Moreover, the subject was bound up with the interest of the most honourable and honoured of professions, therefore he asked the indulgence of their lordships while he endeavoured to state some reasons why some of them, at any rate, considered an inquiry to be necessary. In his remarks he would not impugn the policy of any individual hospital nor arraign any board, neither would he pose as an economist nor a philanthropist; he would merely lay before them facts backed by a few figures. This was not the first time that the subject had been considered. Various medical committees had considered the whole or portions of the subject. No action, however, had been taken by the hospitals. Failing these the information had been amassed by the Charity Organisation Society, a society known to their lordships, whose business was organising and not dispensing charity, and, seeing this was their business, it was a fit and proper body to undertake it. The medical relief in the metropolis might be classed under two heads—charity and Poor-law charities. There were 11 general hospitals with schools and 8 general hospitals without schools, 67 special hospitals, 26 free dispensaries, 35 provident dispensaries, 13 part pay dispensaries, and 5 surgical appliance societies. The number of in-patients was 76,898, and out-patients 1,470,398. The total income was £696,258, and the total expenditure was £723,021. The beds unoccupied were about 2,000 in number. To these must be added 27 Poor-law infirmaries, with 11,900 beds, and £336,200 expenditure; 44 Poor-law dispensaries, with 114,980 out-patients, and £19,980 expenditure; 8 infectious hospitals, with 2,760 beds, and £129,313 ex-

penditure. The total was as follows:—239 institutions, in-patients 122,047; out-patients, 1,585,353; total expenditure, £1,208,523; total income, £1,197,477 in the year 1887. Perhaps all the definitions were not clear. The term general hospitals with schools would not seem to require explanation. Patients were admitted nominally by letter, but practically free. Taking, first and foremost, these three great endowed hospitals—St. Bartholomew's, St. Thomas's, and Guy's. Two of these were of very ancient origin. They were endowed, not by the State or the municipality, but by private individuals, and did not now, or did not formerly, apply to the public. Even of these one (Guy's) was so precarious, that it had to ask the public for £100,000; at another many beds were closed, and doubts existed as to their ever being opened again, and certainly they would not be opened entirely for gratuitous patients. There were 8 other general hospitals with schools. These were the most useful and important schools, all-important for the study of almost all diseases. Their size ensured, if well managed, treatment at less expense than in smaller hospitals. They had, for the most part, special departments for special cases, and had the advantage of the very best advice. Some had been able to be structurally altered in accordance with the advance in medical science. In the last twenty years the greatest advances and improvements had been effected in nursing and nurses. Of the special hospitals, some were special in treatment but nearly all for special diseases. He was anxious to be moderate, but he must and would say what he thought, and what those who were with him thought. The origin and management of some of the special hospitals had been such as to cause suspicion, where suspicion existed, as to the conduct of hospitals as a whole. They were not infrequently started for private advantage by those who wished to make themselves consulting physicians to them, some for speculative purposes, and in neither case considering the public welfare nor the advance of science. They were generally started, as to funds, more or less by some philanthropist, and on that support failing they were thrown on the public. There were no schools, no advance of science, and the management left much to be desired. Owing to the small number of beds the administration must be costly. They were sometimes found in insanitary premises, and were built without regard to local needs, or in proximity to existing hospitals, and the advice was not of first-rate description. By the names which they assumed they deprived the larger hospitals of cases which, in the latter, would be better attended, and from which instruction would be gained. They attracted money which otherwise would probably find its way to the larger hospitals. He should like to read to their lordships the opinions of two individuals. The distinguished physician, Sir Andrew Clark, had vividly described one of the greatest evils in connection with our hospital system in the following words:—"Then there is another reason, and that is the foundation and maintenance of improper hospitals, which divert funds in a direction in which they ought not to be employed, and rob the great hospitals of the support which they ought to receive. A doctor who cannot get on in the ordinary way takes to studying the great toe, and he discovers something about it that has never been discovered before. In the course of his studies he ascertains that the diseases of the organ are not only supremely important in themselves, but that they have the most intimate relation to all the other serious diseases of the body. He also invents a wonderful instrument whereby he can look into the great toe and see what is threatening, and prevent all those terrible things which happen in the organ and affect the whole system. He goes to his friends, shows them his instrument, and tells them of his discoveries. They then club together and establish a Hospital for the Treatment of the Diseases of the Great Toe. This hospital is manned by his friends, who, having joined in the venture, must make it a success. They soon get patients who are convinced of the vast importance of the great toe. Marvellous cures are effected, and all sorts of frightful diseases are prevented. They then have an annual meeting; they have a chairman, who sets forth bashfully, in the presence of the great physician, the diseases of the great toe, the wonderful things that have been done, the great service which has been rendered by the hospital, the terrible prejudice it has had to encounter, the determination that this great institution shall be liberally supported, notwithstanding the prejudices of the medical profession and of those who herd along with them." Mr. Michelli, the Secretary to the Seamen's Hospital Society, and late Secretary to St. Mary's Hospital, recently read a paper at the Hospitals Association on "Hospital Extravagance and Expenditure." He drew attention to the excessive amount spent by hospitals in advertising and collection, printing, stationery, and postage, to the small net percentage of profit that goes to hospitals out of the receipts from bazaars, fancy fairs, and other such means, and to the excessive cost of special hospitals:—"But what is grievous to see is a small special hospital established within a few hundred yards of a large general hospital, in the former of which there are fewer beds altogether than there are beds allotted to the particular speciality in the general hospital close by. The maintenance of a bed in the small hospitals is often 53 to 75 per cent. greater than in a large one, and I maintain that every penny so spent is wicked extravagance and waste." He then states that he has gone carefully through some 200 reports of hospitals, and finds that he can get no information from them. The noble lord said the cost per head for salaries and wages in the first of the large general hospitals, with school and 205 beds, was £19 1s. 2d.; in the second, with school and 310 beds, it was £25 0s. 6d.; in one special hospital, with 80 beds, £39 7s. 2d., and in another special hospital, with 64 beds, £35 0s. 9d. In a third, with 16 beds, it was £33 4s. 2d.; and in a fourth special hospital, with 14 beds, it was £42 10s. 3d. The average cost per head for nine general hospitals with schools, with average number of beds 295, was £24 5s. 10d. for salaries and wages; whereas for the nine special hospitals, average of 27 beds each, it was £30 12s. 2d. These institutions obviously called for inquiry, if for no other reason yet on account of the figures which he had given. At the same time, the fact must not be ignored that there were some exceptions in the case of two or three institutions of world-wide and well-merited reputation. But the very excellence of these made the case for an inquiry all the stronger. The institutions to which he referred were in existence before the general hospital system was as complete as the special department now was. There were 26 free dispensaries, most of which had started before the out-patient system had been developed, combining free treatment both at the dispensary and at home. In these there were 162,219 patients, and a deficit of £2,003 in an expenditure of £21,257. Then there were the part-pay dispensaries, in which the out-patients numbered 102,302, and the deficit was £714 on an expenditure of £9,710. The provident dispensaries, on the benefit society system, to which subscribers paid both in health and sickness, and which afforded relief to the whole family, throve best away from the hospitals. In these there were 125,674 out-patients, and income and expenditure nearly balanced each other. In 1887 the hospital deficit amounted to £32,000, and now the total was about £100,000. He would give an instance of his own experience in hospital finance. A few years ago, as regularly as the quarter came round the chairman of a hospital committee with which he was connected was making the usual motion for the withdrawal of £3,000 or £4,000 of capital for the payment of bills. He remonstrated, but was immediately answered that he knew nothing of finance. The only way in which these general hospitals had been able to get on was by the legacies which from time to time they received and by persistent begging. There was no systematic statement of accounts which could satisfy the staff or the subscribers. Then there were the outdoor departments of the hospitals, of which the dispensaries were really the extension and development. In 1887 the outdoor patients were one million and a half, and the number kept on increasing. These patients often had an almost interminable time to wait, and he had no doubt that many of them were able to pay for attendance and medicine. This was very hard on the small local practitioner, who worked hard for small fees, and tended, he feared, to the pauperisation of many members of the community. There were 44 Poor-law dispensaries and 8 hospitals for infectious diseases in the metropolis. There were 27 Poor-law infirmaries, which before 1867 were of a very inferior character, in which the diet and nursing were bad and the nurses were themselves paupers. But now they were magnificent State hospitals, built away from the workhouses, in which every modern improvement was to be found. In Marylebone alone, with a population of 155,000, there were: one Poor-law infirmary with 700 beds, one general hospital, ten special hospitals, four free dispensaries, one provident dispensary, two Poor-law dispensaries, and one or two charities for gentlewomen. If there was an inquiry by a Select Committee of their lordships' House they would have the advantage of the evidence of experts, and would be likely to come to a more rapid conclusion than if assisted by experts in a Royal Commission. He asked the noble marquis and the noble viscount to consider the matter, and, if they agreed that there should be some inquiry, he thought it would be most satisfactory. He had been told that such an inquiry was premature, and one of the principal reasons was that there were in the air several schemes for the improvement of the system, one of which was linking the provident dispensaries to the general hospitals; another, payment of fees according to means; another, suggested by the Lord Mayor, that of collecting 1d. a week from the wages of people in workshops. These various schemes would, he thought, furnish excellent food for reflection if the inquiry he asked for were granted. His opinion was that, if they were to wait until such schemes could be put in practice, they might have to wait until a very indefinite period. In his opinion, and in the opinion of those for whom he spoke, this inquiry ought not to be delayed. It would be a great pity and a great slur upon this metropolis if they had to confess that these hospitals were failures because they could not provide means to support them. It was difficult to know how matters were to go on as they were at present. He had framed his motion with reference only to the hospitals of the metropolis, although in the provincial towns there was a very general opinion in favour of a similar inquiry with respect to their hospitals. He had not put forward any remedy—it would be better that they should come from the Committee when they should have thoroughly threshed out the subject; but he had endeavoured to bring such light as he could to bear on the circumstances, in the hope that in the end some system might be evolved from the existing chaos. He begged to make the motion which stood in his name.—Viscount CRANBROOK said he was sure their lordships had listened with great interest to the speech of the noble lord on a subject which was attracting very much attention at present, and had attracted it in times past. Nobody would be found to differ from the opinion of his noble friend—that if they could provide some central organisation for the hospitals of this metropolis or of the kingdom it would do a great deal of good. The danger was lest, if they were to impose an inquiry, the flow of means to the institutions might not be in some cases checked. Hospitals generally, he had no doubt, offered a proper subject of inquiry; but it was a very different thing when they came to deal with charities which were receiving aid from day to day. There had been, no doubt, an unnecessary multiplication of special hospitals; but they had been set up and were conducted by those who were breaking no law and infringing no rule of society, and who themselves found the means by which they were carried on. His noble friend referred to what had occurred with regard to the Poor-law hospitals in 1867. Previous to that time there were insufficient attendance, insufficient nursing, and no sanitation. But, with the agreement of all parties, a Bill for their improvement was passed, which was, he believed, now in operation with respect to those Poor-law hospitals. With regard to the motion, he could say, on the part of the Cabinet, that the case for inquiry should be considered, and that next session he might be able to announce to his noble friend what course the Government proposed to take. He could assure his noble friend that the matter would receive the attention of the Government.—The Earl of KIMBERLEY said the Committee on which he sat last session expressed a desire that the Government should consider the whole matter and see whether it would be possible to institute an inquiry. An attempt had been made at amalgamation, but had failed owing to the jealousies and difficulties in the way. Another matter which had not been referred to by his noble friend was the present condition of the great infirmaries connected with the various boards of guardians in the metropolis. These Poor-law infirmaries had become so important as to occupy a very great place in the treatment of the sick. The whole subject was a very large and complicated one, and at the present time he could only say that he was glad to hear that the Government were directing their attention to it. An inquiry into the whole subject could not fail to result in considerable advantage to the metropolis at large.—The petition was then presented.

HOUSE OF COMMONS.—Thursday, July 25th.

Poor-law Bill.—This Bill passed through Committee, Mr. RITCHIE giving a pledge that in another place an amendment would be introduced extending the Bill to Ireland.

The Muzzling Order.—The HOME SECRETARY, in reply to Mr. H. W. LAWSON, said he understood the London County Council had not yet taken any action on the Order in Council for muzzing dogs, but, as the order was not yet in operation, the local authority was not yet in default.

Notification of Infectious Diseases.—Mr. JOHN ELLIS asked the President of the Local Government Board whether, inasmuch as the subject of notification of infectious diseases was embraced in the inquiry referred to the Commission on Vaccination, he proposed to press forward the Bill for the Notification of Infectious Diseases now before the House.—Mr. RITCHIE said he could not concur in the suggestion that the fact that one of the questions referred to the Royal Commission of Vaccination, "What means other than vaccination can be used for diminishing the prevalence of small-pox?" had any practical bearing on the question of the notification of infectious diseases, and it was his intention to press forward the Bill on that subject now before the House.

Monday, July 29th.

Poor Law Bill.—This Bill was recommitted and amended, and was then read a third time.

Lunacy Returns.—Mr. MATTHEWS, in answer to Mr. W. CORBET, said he had been informed by the Commissioners in Lunacy that, in their opinion, the annual increase in the number of registered lunatics, idiots, and persons of unsound mind, as shown in the returns, appeared to be mainly due to the accumulation of chronic pauper cases. It had not been established that there was any material annual increase of fresh cases of insanity out of proportion to the increase of population. With regard to cases of illegal detention, it was the practice of the Commissioners to investigate all cases, and to take proceedings against persons found to be infringing the law. Prosecutions had usually been followed by the discovery of fresh cases previously unreported.

Tuesday, July 30th.

Lunacy Acts Amendment Bill.—On consideration of this Bill as amended: Mr. JOHN ELLIS moved a new clause to provide that there should be exhibited in every asylum a printed notice setting forth the right of every private patient to have any letter written by him forwarded to its address, or within twenty-four hours submitted to a visiting Commissioner or visitor, or else forwarded to the Commissioners or the Masters in Lunacy; also the right to request a private interview with a visiting Commissioner or visitor on the occasion of any visit made to the asylum.—Dr. FARQUHARSON said the Grand Committee had rejected the clause after full discussion. According to the best medical testimony such notices would imperil the recovery of patients by unsettling their minds.—Sir WALTER FOSTER, Sir J. DORINGTON, and others also opposed the clause, while Mr. BRADLAUGH, Mr. FOWLER, and others supported it.—The second reading of the clause was carried, on a division, by 180 to 46, and an amendment moved by Mr. A. O'CONNOR, giving the Commissioners a discretion as to posting the notices, having been agreed to, the clause so amended was added to the Bill.—Mr. MATTHEWS moved in Clause 5 the insertion of words enabling the Commissioners to give information on the dismissal of a petition or the release of an alleged lunatic to any proper person to receive such information.—The amendment was agreed to.—On the motion of Mr. MATTHEWS, Clause 20 was omitted.—Mr. MATTHEWS moved to add to Clause 21 a subsection making it sufficient if a certificate of lunacy in a workhouse under the section is signed within three months of the passing of the Act, and enabling one certificate to cover more than one patient.—The amendment was agreed to.—On the motion of Mr. MATTHEWS, at the end of clause 34 a subsection was added enabling persons in charge of a single patient to add others in the same house in special circumstances.—On the motion of Mr. MATTHEWS and Sir J. DORINGTON, amendments in clause 40 were agreed to providing for reports of the condition of pauper lunatics taken charge of by relatives, and the remuneration of medical officers making such reports.—Mr. ATHERLEY JONES moved the omission of subsection 6 of Clause 55, which prohibits, "save as in this section provided," new licences or the increase in the number of lunatics authorised in existing licences. There had been a general opinion expressed in favour of the abolition of private asylums, but practical difficulties stood in the way. There were some 3,000 or 4,000 lunatics in private asylums. The result of passing this section would be to create a great number of evils, and create a monopoly. It should be remembered that a proprietor of a private lunatic asylum required no qualification; and considerable sums had been speculatively invested in these asylums in view of the passing of this clause. Owing to the existence of the clause, men of ability were not able to become proprietors of private asylums; while up to the present time any person who wished it had been granted a licence. It would not conduce to a safer and more effective management of such institution, but quite the reverse.—Mr. MATTHEWS pointed out that to strike out the subsection would be equivalent to striking out the entire clause. No doubt the clause was open to the objection that it did to some extent create a monopoly; but people who invested money in these private asylums should understand that the licences had to be renewed every twelve months, and that the slightest mismanagement would expose a private asylum to the non-renewal of the licence.—Dr. R. FARQUHARSON did not think that any good case had been made out for sweeping away private asylums altogether.—The amendment was by leave withdrawn.—After some further amendments, the report was agreed to, and, on the motion of Mr. MATTHEWS, the Bill was read a third time.

Vaccination in Wales.—Mr. RITCHIE, in reply to Mr. ALFRED THOMAS, said that there was in Wales no vaccination station at which certificates of qualification in vaccination could be obtained, and the Local Government Board were not aware that any serious inconvenience had been occasioned thereby. It was not usual to appoint examiners to grant these certificates in towns in which there was no school of medicine. If a medical school should be established in Wales, he should be prepared to consider the question of appointing a person who could give these certificates in Wales.

Passenger Ships and Hospital Accommodation.—Sir M. HICKS BEACH, replying to Mr. O'KEEFFE, said the ships of the Royal Mail Steam Packet Company sailing to the West Indies and South America, as also the same Company's ships carrying passengers and emigrants to Brazil and the River Plate, were not passenger ships under the Passenger Acts, and not required by law to provide hospital accommodation. The ships of the Royal Mail Steam Packet Company were provided with space which could be turned into hospitals in the event of epidemic. The cabin where an infectious patient was lying was always surrounded by blankets steeped in a solution of carbolic acid or other powerful disinfectant. Patients on board the *Neva* (where two men died of yellow fever) were removed to cabins surrounded in that manner. The Board of Trade had no power to enforce regulations for securing health on board passenger steamers unless they were also passenger ships under the Passenger Acts.

Universities (Scotland) Bill.—The consideration of this Bill as amended was resumed. Mr. HUNTER, for Mr. FIRTH, moved an amendment to leave out the word "conjoint" in Clause 16. By the clause the University Commissioners were empowered to form a "conjoint" school of medicine for the University of St. Andrews and the University College of Dundee.—Sir L. PLAYFAIR thought that when an old University was united to a new college the susceptibilities of the old University should be considered. In some branches of teaching, and particularly in regard to natural history, no University in the United Kingdom was more active than St. Andrews.—The LORD ADVOCATE explained that the word "conjoint" was introduced in the clause for the express purpose of pointing out that the University of St. Andrews was to form part of the new school of medicine.—The amendment was by leave withdrawn. The third reading was fixed for Wednesday.

Wednesday, July 31st.

Infectious Diseases (Notification) Bill.—Mr. RITCHIE, in moving the second reading of this Bill, explained that it was intended to extend to the whole of the country the provisions which were already in force in fifty-two large towns, comprising a population of three-and-a-half millions. If towns desired to adopt these provisions, each town so desiring had to get a separate Bill, which was a matter of time and money. The extension of these powers to the whole country had been recommended by the Select Committee on Sanitary Regulations, by the Royal Commission of 1882, by many local authorities throughout the country, and a large number of medical officers of health. In 1887 the Local Government Board addressed communications to the authorities of all the towns where notification was carried out, and received absolutely unanimous testimony in reply in favour of the system, which was represented to work smoothly and efficiently. The procedure would be that notification would set the medical officer of health and the inspector of nuisances in motion to see that all proper sanitary requirements were carried out, and, when necessary, to recommend the removal of the patient to a hospital. There was, however, no power to compel such removal. In the inquiries made where notification was in existence, it was found to be extremely useful in enabling the local authorities to trace the source of disease, and to attack it without delay. For instance, there was one borough in which there were no less than thirty cases of typhoid fever notified to the local authority, and the medical officer of health not only took precautions with reference to the cases, but set to work at once to find out how it was that the disease had attacked so many persons. The whole of the cases were traced to one particular source, and the authorities were able to prevent the outbreak assuming greater dimensions. In another case, where scarlatina was notified, all the cases were traced to a particular school, where a child suffering from scarlatina in the peeling state was mixing with the scholars. But for this notification the outbreak would, in all probability, have assumed very large and startling dimensions. The Government proposed that the notification should be compulsory in London, but that outside London it should be optional for the local authorities to adopt the Act by resolution. To make the Act compulsory at once on urban and rural authorities all over the kingdom might create some amount of friction; but if it were found that local authorities were slow to adopt the Act, it might be necessary for Parliament to consider whether it should not be made compulsory. With reference to London, it was perfectly obvious that the same course could not be adopted, because London consisted of a very large number of local authorities, and it could not be contemplated with satisfaction that a local authority in one part of London might adopt the Act, while a local authority in another part of London should not adopt it. The diseases which it was proposed to include in the Bill were small-pox, cholera, diphtheria, erysipelas, scarlatina, typhoid, and relapsing fever; but the Bill also contained a provision that a local authority might, in an emergency, by resolution approved by the Local Government Board, include some diseases other than the diseases mentioned. He quite understood that there might be objections to one or other details of the Bill, but he could not believe that objections from any quarter would come to the principle of the Bill.—Sir WALTER FOSTER admitted the importance of the subject, but felt that, sooner or later, the proposal would lead to the removal of all persons suffering from infectious diseases into infectious diseases hospitals. There was certainly no provision of that kind in the Bill, but that was likely to be the result of such legislation. It was, of course, necessary that all citizens should endeavour, as far as possible, to stamp out the prevalence of disease, and he thought this might be done to a considerable extent by the notification clauses which the Bill contained; but he had not complete sympathy with the method proposed. The Bill called upon medical men to perform something more than the ordinary duties of citizenship by requiring them to become informers of the occurrence of diseases. The relation of a medical man to his patient ought to be one of complete confidence, and anything that came to the knowledge of a medical man in the practice of his profession was practically an inviolable secret, and he himself did not like any Bill which interfered with that relationship. He had known cases where small shopkeepers had virtually been ruined through the exposure which had followed the notification of an outbreak of infectious disease in their houses, and he feared the result of the present proposal might be to induce people to treat such cases at home without the intervention of a medical man. He thought all cases of the kind should be notified, but it would be sufficient, perhaps, if the notification were made by the householder or guardian, and not by medical men. He quite conceived it possible that if an outbreak of infectious disease occurred in a populous part of London, the people might, in order to prevent exposure, refuse to allow a medical man to come in, and in such a case they would have tenfold more difficulty than at present. Therefore, while he was anxious to promote the notification of disease, he did not want the Government to adopt any rough and ready method which would be likely to promote rebellion on the part of the public.—Mr. LLEWELLYN regretted that the Bill had not been made compulsory throughout the country. He was also sorry that the right hon. gentleman did not include measles in the Bill. He was aware, however, that medical men were opposed to it. Some years ago, as a local sanitary authority, he caused a circular to be sent to the medical officers, asking them to give information privately, but every doctor in the place refused to do so. In numberless cases if the local authorities had known of the outbreak at first, they would have been able to take steps for preventing the spread of the disease. He thought the provisions of the measure ought to be made obligatory in all rural districts as well as in towns. It was in his judgment one of the most valuable Bills which had been brought forward for many years.—Mr. W. P. SINCLAIR considered the duty of informing should first rest upon the householder.—Mr. WINTERBOTHAM expressed his approval of the Bill, but hoped the objections of private medical practitioners throughout the country would be taken into consideration by the Government.—Mr. RITCHIE pointed out that the opponents of vaccination were the strongest supporters of the present Bill.—Mr. HUNTER'S motion for an adjournment of the debate was defeated.—Mr. LONG said it was very gratifying to find that there was a general feeling in favour of the Bill, and that there was no serious objection to its principle. What objections had been taken were, he thought, rather matters of detail; and as such were more fit, if he might say so, for consideration in Committee. The hon. member for the Ilkeston Division of Derbyshire had urged that the Bill was calculated to interfere with the domestic freedom of the industrial classes. Even if the Bill did in some degree hurt their feelings, the good they would derive from protection against the spread of infectious diseases would amply compensate them. Then the hon. gentleman referred to the fact that the medical man's position would be a very difficult one, and he con-

tended that nothing should be done by Parliament to interfere with the confidential relations between the medical man and his patient. It was said that if that duty were thrown on the medical profession it would be very unfair towards them, and the result would be that medical men would not be called in when disease broke out in a household. That argument was refuted by the experience they had of the fifty-two towns where similar precautions to those contained in that Bill had hitherto been in force, and where householders had not only not been deterred from calling in medical assistance, but the origin of disease had been traced and its spread arrested. It had also been said that a medical man ought not to be called upon to proclaim to the world that a small tradesman had disease in his house, because when the fact became known the tradesman might suffer loss in his business. But the fear of such a loss would surely operate on the mind of the small tradesman himself if it were thrown upon him alone to notify the outbreak of disease in his house, and he might be induced to hide the fact. Therefore his right hon. friend could not hold out any hope that it would be possible to relinquish that part of the Bill which imposed the double duty on the householder and also on the medical man, because if the householder alone had to make the notification, and there was default on his part, the provisions of the Bill would be weakened and its successful working seriously imperilled. It had been suggested that the measure should be extended to other diseases, and that German measles in particular should be included within its scope. The Government could not consider any proposal not to make the Bill compulsory for London. They would be much more inclined to adopt the suggestion for making it compulsory over the whole country. Petitions in favour of some such measure as that had been presented on the part of more than half the vestries and district boards of London; and he hoped that the Bill would be passed in the interest of the health of the whole country.—Mr. STOREY referred to the experience of Sunderland as showing that objections which were urged against the Bill were not well founded.—Mr. BUCHANAN said in Edinburgh this provision had been accepted without any opposition on the part of the people or the medical profession, and it had greatly assisted in stamping out two epidemics of small-pox.—Mr. H. FOWLER, as one of the members of the Committee which inquired into this subject seven or eight years ago, was glad to find that the recommendation of that Committee was about to form the basis of legislation. In various large towns, such as Manchester, Bradford, and Huddersfield, a similar provision to this had been loyally accepted and carried out by the people and the medical profession to the great advantage of these towns; and he did not see why what was good for these towns should not be good for the country generally. In Nottingham, is was true, there had been some opposition to casting upon the medical men this duty of making notification to the public authority, and he could appreciate the feeling that actuated this opposition, and which objected to the disclosure of confidential information; but, having regard to the preponderance of public advantage in favour of this provision, and the fact that experience showed that it was really not open to the alleged objections, he hoped the Bill, with this provision unaltered, would be passed. At any rate, they were all in favour of the Bill generally, and this point could be more fully discussed in Committee.—Mr. JOHN ELLIS and Colonel GUNTER supported the Bill.—After a few remarks from Mr. ESSLEMONT, the Bill was read a second time without a division.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

MEETING OF MEDICAL OFFICERS OF HEALTH AT DONCASTER.

Tuberculosis.—Notification of Infectious Diseases.

ON Friday, July 26th, a combined meeting of the members of the North Western and Yorkshire branches of the Society of Medical Officers of Health was held at the Guildhall, Doncaster. Dr. J. Mitchell Wilson, of Doncaster, presided. Dr. Vacher proposed the following resolution: "That the North Western and Yorkshire branches of the Society of Medical Officers of Health have read with satisfaction the judgment of Sheriff Principal Berry in the tuberculosis award cases recently heard in Glasgow, in which the urban sanitary authority asked for an order to destroy two carcasses affected with tuberculosis in a comparatively slight degree. The branches are of opinion that, given local signs of tuberculosis in an animal, the flesh itself not being visibly affected, it is desirable to hold the whole carcass as unfit for food."—Dr. Herbert (Whitby) seconded, and, after some objection by Dr. North as to the wording of the proposition, the resolution was carried unanimously.

The meeting next proceeded to discuss the Notification of Diseases Bill. Dr. North (York) proposed that the meeting approve of "dual notification."— Dr. MacLintock seconded.—Dr. Welch (Blackpool) moved as an amendment: "That the medical attendant shall notify to the householder and that the latter shall notify to the proper authority the presence of infectious diseases."—Drs. North, Wade, and Arbinkle testified to the fact that in their districts medical practitioners regularly notified existence of infectious cases, and the resolution was agreed to.—On the motion of Dr. North, seconded by Dr. Roberts (Keighley), it was resolved that the fee for the notification to medical men should be uniform.—A resolution was carried approving of Clause 5, which provides that the Act may be adopted at a meeting of the local authority by resolution, and afterwards another resolution was carried approving generally of the Act, with the exception of Clause 4, and suggesting that a uniform fee of 2s. 6d. be paid for notification.—Dr. Vacher then read a paper on "The Sanitary Requirements of the Modern Dwelling-house."—A discussion followed.

POOR-LAW MEDICAL OFFICERS' ASSOCIATION.

AT a meeting of the Council, held at their Rooms, 3, Bolt Court, Fleet Street, on July 30th, 1889, two cases of poor-law medical officers, now engaged in conflict with boards of guardians, were brought under notice and fully discussed. Both of these were privately advised as to the course the Council thought best for them to adopt.

Mr. Read, of Stradbrooke, who has held office for forty years, has been refused superannuation allowance by the guardians, who have resolved to grant him a donation of £145 on retirement. This has, of course, to be sanctioned by the Local Government Board.

DIPHTHERIA IN THE HOSPITALS OF THE METROPOLITAN ASYLUMS BOARD.

THE Local Government Board has addressed to the Metropolitan Asylums Board a letter sanctioning the expenditure caused by the admittance into the hospitals without decided legislative permission of diphtheria, and also the expenditure in cases of fever and small-pox admitted without relieving officers' orders. A Bill has been introduced into the House of Commons conferring additional powers in these respects upon the managers.

ENGLISH URBAN MORTALITY IN THE SECOND QUARTER OF 1889.

THE vital and mortal statistics of the twenty-eight great English towns dealt with by the Registrar-General in his weekly returns are summarised in the accompanying table. During the three months ending June last 74,889 births were registered in these twenty-eight large towns, equal to an annual rate of 31.5 per 1,000 of their aggregate population, estimated at upwards of nine and a half millions of persons. In the corresponding periods of the three preceding years the birth-rate in these towns was 33.1, 32.4, and 31.4 per 1,000 respectively. In London the birth-rate last quarter was equal to 30.4 per 1,000, while it averaged 32.3 in the twenty-seven provincial towns, and ranged from 23.0 in Huddersfield, 24.5 in Brighton, and 27.4 in Bradford to 37.5 in Newcastle-on-Tyne, 37.8 in Sunderland, 38.3 in Cardiff, and 39.4 in Preston.

The 43,298 deaths registered in the twenty-eight towns during the second quarter of this year were equal to an annual rate of 18.2 per 1,000, against 18.6, 19.8, and 18.1 in the corresponding periods of the three preceding years, 1886-7-8. With the single exception of 1888, the death-rate in these large towns was lower during the quarter under notice than in any June quarter on record. In London the rate of mortality was only 16.0 per 1,000, while it averaged 20.0 in the twenty-seven provincial towns. The lowest rates in these provincial towns were 14.7 in Brighton, 14.9 in Leicester, 16.1 in Derby, and 16.3 in Birkenhead; the highest were 23.8 in Plymouth, 23.9 in Blackburn, 28.0 in Manchester, and 32.6 in Preston.

During the quarter under notice 5,579 deaths were referred to the principal zymotic diseases in the twenty-eight towns, equal to an annual rate of 2.34 per 1,000. In the second quarter of the eight preceding years, 1881-88, the zymotic death-rate in these towns averaged 2.61 per 1,000. The lowest zymotic death-rates in the twenty-eight towns last quarter were 0.85 in Norwich, 0.86 in Derby, and 1.05 in Brighton; while they ranged upwards in the other towns to 4.46 in Plymouth, 4.47 in Manchester, 5.15 in Bolton, and 10.09 in Preston. The 5,579 deaths referred to the principal zymotic diseases included 1,959 which resulted from measles, 1,444 from whooping-cough, 788 from diarrhœa, 554 from scarlet fever, 488 from diphtheria, 345 from "fever" (principally enteric), and 1 from small-pox. The 1,959 fatal cases of measles recorded in the twenty-eight towns during the second quarter of this year were equal to an annual rate of 0.82 per 1,000, which showed a considerable decline from the high rate in the preceding quarter, but slightly exceeded the mean rate in the corresponding periods of the eight previous years, 1881-88. In London the measles death-rate did not exceed 0.62 per 1,000, while in the twenty-seven provincial towns it averaged 1.00, and was highest

Public Health Statistics relating to Twenty-eight Large English Towns, for the Second Quarter of 1889.

Towns.	Estimated Population middle of 1889.	Births.	Deaths.	Annual Rate per 1,000 Living.			Deaths from Principal Zymotic Diseases.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Fever.	Diarrhœa.	Rate per cent. of Uncertified Deaths.	Deaths of Children under one year of age to 1,000 Births.
				Births.	Deaths.	Principal Zymotic Diseases.										
28 Towns	9,555,406	74,889	43,298	31.5	18.2	2.3	5,579	1	1,959	554	488	1,444	345	788	2.1	133
27 Provincial Towns	5,203,668	41,940	25,954	32.3	20.0	2.7	3,533	1	1,292	405	170	903	242	519	2.7	152
London	4,351,738	32,949	17,344	30.4	16.0	1.9	2,047	—	667	149	318	541	103	269	1.0	120
Brighton	121,807	744	445	24.5	14.7	1.1	32	—	13	3	3	8	1	4	3.1	110
Portsmouth	141,253	1,270	576	36.1	16.4	1.7	61	—	2	1	9	30	8	11	0.9	110
Norwich	94,510	831	405	35.3	17.2	0.9	20	—	8	2	1	4	3	2	1.0	129
Plymouth	78,225	626	464	32.1	23.8	4.4	86	—	4	43	6	26	2	5	0.2	152
Bristol	229,361	1,682	925	29.4	16.2	1.7	97	—	47	8	3	12	11	16	2.4	120
Wolverhampton	82,544	662	393	32.2	19.1	1.8	37	—	11	—	2	14	2	8	1.8	166
Birmingham	454,835	3,665	1,986	32.3	17.5	1.9	211	—	39	25	19	81	9	38	2.1	143
Leicester	150,520	1,255	559	33.5	14.9	1.3	48	—	7	—	3	9	7	22	3.4	164
Nottingham	237,812	1,759	991	29.7	16.7	1.9	111	—	14	7	1	59	12	18	1.8	164
Derby	98,529	710	395	28.9	16.1	0.9	21	—	—	5	1	2	5	8	1.8	125
Birkenhead	102,541	790	416	30.9	16.3	2.5	64	—	13	5	1	39	5	1	1.2	137
Liverpool	606,562	4,416	2,908	29.2	19.2	2.6	387	—	87	61	10	113	54	62	5.4	150
Bolton	114,670	976	647	34.2	22.6	5.1	147	—	82	10	10	18	6	21	2.6	171
Manchester	378,800	3,440	2,647	36.4	28.0	4.5	422	1	256	22	23	45	13	62	2.2	174
Salford	234,283	1,823	1,157	31.2	19.8	3.2	183	—	35	49	30	12	23	34	3.2	150
Oldham	142,405	1,067	775	30.1	21.8	3.4	119	—	31	11	1	56	8	12	3.6	185
Blackburn	121,275	1,091	721	36.1	23.9	3.5	106	—	32	28	—	22	6	18	2.1	179
Preston	104,194	1,022	847	39.4	32.6	10.1	262	—	139	5	7	84	13	14	3.3	248
Huddersfield	92,825	534	445	23.1	19.2	2.0	47	—	28	6	2	2	4	5	4.0	163
Halifax	81,080	587	471	29.1	23.3	2.5	50	—	39	—	3	—	4	4	5.3	162
Bradford	235,056	1,605	1,058	27.4	18.1	2.3	134	—	13	12	3	70	5	31	1.7	171
Leeds	357,449	3,052	1,967	34.3	22.1	2.8	251	—	143	15	6	27	8	52	1.4	150
Sheffield	327,227	2,724	1,581	33.4	19.4	2.9	236	—	71	70	8	47	14	26	4.2	140
Hull	208,017	1,764	1,056	34.0	20.4	3.9	202	—	142	2	5	30	4	19	3.8	145
Sunderland	134,193	1,265	655	37.8	19.6	1.3	42	—	2	8	3	14	5	10	0.6	139
Newcastle-on-Tyne	160,983	1,504	952	37.5	23.7	2.7	107	—	30	4	8	45	5	15	2.8	151
Cardiff	112,712	1,076	512	38.3	18.2	1.7	49	—	4	3	2	34	5	1	1.0	117

in Leeds, Halifax, Manchester, Hull, Bolton, and Preston. The 1,444 deaths referred to whooping-cough were equal to an annual rate of 0.61 per 1,000, which was 0.12 below the mean rate in the corresponding periods of the eight preceding years; the rate of mortality from this disease in London was only 0.50 per 1,000, while it averaged 0.70 in the twenty-seven provincial towns, among which whooping-cough showed the highest proportional fatality in Bradford, Cardiff, Plymouth, Birkenhead, Oldham, and Preston. The 788 fatal cases of diarrhœa were equal to an annual rate of 0.33 per 1,000, which exceeded that recorded in the corresponding period of any year since 1882, and was 0.5 per 1,000 above the average rate in the June quarters of the eight preceding years, 1881-88. In London the diarrhœa death-rate was 0.24 per 1,000, while it averaged 0.40 in the provincial towns, and was highest in Salford, Manchester, and Bolton. The 554 deaths referred to scarlet fever were equal to an annual rate of 0.23 per 1,000, which was 0.08 below the average rate in the corresponding periods of the eight preceding years; the rate of mortality from this disease in London was only 0.14 per 1,000, while it averaged 0.31 in the twenty-seven provincial towns, among which scarlet fever was proportionally most fatal in Salford, Sheffield, Blackburn, and Plymouth. The number of scarlet fever patients in the Metropolitan Asylums Hospitals, which had been 738 at the beginning of the year, steadily declined to 527 at the end of April, and was 547 at the end of June; the admissions, which had been 1,095, 921, and 614 in the three preceding quarters, rose to 625 during the three months ending June last. The 488 fatal cases of diphtheria were equal to an annual rate of 0.21 per 1,000, which, although it showed a further decline from the high rates in the two preceding quarters, exceeded the rate in the corresponding period of any year on record. The diphtheria death-rate in London was last quarter equal to 0.29 per 1,000, while it averaged only 0.13 in the twenty-seven provincial towns, among which this disease was proportionally most prevalent in Plymouth, Bolton, and Salford. The 345 deaths referred to different forms of "fever" (including typhus, enteric, and simple and ill-defined forms of continued fever), were equal to an annual rate of 0.14 per 1,000, which, with the exception of the second quarter of 1886, when the rate was also 0.14, was below that in the corresponding period of any year on record. The death-rate from "fever" in London during last quarter was only 0.10 per 1,000, while it averaged 0.19 in the twenty-seven provincial towns, among which it was highest in Liverpool, Salford, and Preston. The death from small-pox occurred in Manchester, and was the only fatal case of this disease registered during the quarter under notice in the twenty-eight towns, against numbers steadily declining from 393 to 3 in the five preceding quarters. Only two small-pox patients were under treatment in the Metropolitan Asylums Hospitals at the beginning of April, and no new cases were admitted during the three months ending June last.

The rate of infant mortality in the twenty-eight towns, measured by the proportion of deaths of children under one year of age to registered births, was equal to 138 per 1,000 during last quarter, which corresponded with the average rate in the June quarters of the eight preceding years, 1881-88. In London the rate of infant mortality did not exceed 120 per 1,000, while it averaged 152 in the twenty-seven provincial towns, among which it ranged from 110 in Portsmouth and in Brighton, 117 in Cardiff, and 120 in Bristol to 174 in Manchester, 179 in Blackburn, 185 in Oldham, and 248 in Preston.

The causes of 895, or 2.1 per cent., of the 43,298 deaths registered in the twenty-eight towns during the second quarter of this year were not certified, either by registered medical practitioners or by coroners. The proportion of uncertified deaths in London did not exceed 1.0 per cent., while it averaged 2.7 in the twenty-seven provincial towns, among which it ranged from 0.2 in Plymouth and 0.6 in Sunderland to 4.0 in Huddersfield, 4.2 in Sheffield, 5.3 in Halifax, and 5.4 in Liverpool.

OFFENSIVE FUEL IN BRICKYARDS.

THE process of "ballast burning," so-called, by which crude plastic clay is converted into a dry friable red cinder, adapted for roads and pathways, though attended by the evolution of disagreeable vapours, has not been proved to be, or even reasonably suspected of being, injurious to health. But this cannot be said of brick-making, that is of brick-making as carried on in the outskirts of London and other rapidly growing towns. In the great brickfields of Staffordshire, for example, the fuel required for burning the clay and sand is furnished, in the form of coal dust, by the neighbouring collieries, but in London and towns remote from the coal fields, the contents of the dust-bins and every kind of organic refuse are substituted. The vapours exhaled under these circumstances are most offensive, and worse still is the sickening stench given off from the accumulation of such refuse, especially in warm weather after rain. It would be unreasonable to require the London builder to obtain his bricks from a distance when he has all the materials on the spot, but it not infrequently

happens that a brick-maker, having a contract for the removal of "dust" with a vestry or local board, continues his operations long after the district has been built over. An instance of this nuisance is the brickfields and potteries on the east side of the Green Lanes, within a few yards of Finsbury Park, and a quarter of a mile of some of the best residential property in the north of London. Its operations are now less active than they were, when fifteen or twenty years ago it was, so to say, in the heart of the country, but we can testify to the nuisance caused by mountains of foul and fœtid refuse gathered from the adjacent parishes.

The disposal of town refuse is a problem of yearly increasing difficulty, of which suitably located destructors and carbonisers seem to offer the only practicable solution, but meanwhile sanitary authorities should be empowered to compel the discontinuance of such operations and collections of offensive matters in the event of the site becoming surrounded by houses, even when, as in this particular instance, they may be situated outside the boundaries of the districts which chiefly suffer.

THE TRUE DEATH-RATE OF LONDON DISTRICTS.

MR. EDRIC BAYLEY, Clerk to the Board of Works for St. Olave District, writes: In your issue of May 11th you publish a table purporting to give the "True Death-Rates of London Districts during the first quarter of 1889." In this table the death-rate of the St. Olave district is stated to be equal to 43.7 per 1,000 living, which is far higher than that of any other district; and the high rate of mortality is attributed to the excessive prevalence of measles and whooping-cough. The latter statement is correct, the epidemic of those diseases having reached the district after visiting many other parts of London. The true rate of mortality is, however, very different to that expressed in your table. The population of the district at the census of 1881 was 11,956. Since then 247 houses have been pulled down for street improvements; these, at the average of 7.845 per house, would reduce the population by 1,937. Twenty-one new houses, several blocks of artisans' dwellings, containing 888 sets of rooms, and a large common lodging-house have been built and occupied; these, partly from an actual census, and partly by calculation, are estimated to give an additional population of 4,685. This would make the present population 14.704, or an increase since the census of 2,748, instead of a decrease of 2,120, as given by you.

I am informed by the Superintendent of Visitors of the London School Board for the Division of Southwark that the number of children between the ages of 3 and 13 in the district is 2,635. The rule of the Education Department is to regard the number of children between these ages as one-sixth of the whole population, which on this basis would be 15,810. It is a little less in London, but not much, one-fifth would be 13,175. The Superintendent adds that it is quite certain that the whole population cannot be less than the mean, namely, 14,492.

Your statement gives the number of births for the quarter as 129, which on your estimate of the population is equal to an annual birth-rate of 52.6 per 1,000, the birth-rate for London for the same period being 32.4. The population on a birth-rate of 32.4 would be 15,925.

If, therefore, we assume the present population to be 14,500, we shall probably be under rather than over the true figure. If your calculations were made upon an estimated population of 14,500, the rates per 1,000 would be: births, 35.58; deaths, 29.51; principal zymotic diseases, 9.1—all in excess of the average.

The total number of deaths during the four quarters ending March 31st, 1889, was 273, which, on an estimated population of 14,500, is equal to 18.82 per 1,000. Notwithstanding the excessive mortality from measles and whooping-cough during the past quarter (and there have been but six since), the mortality during the year will bear favourable comparison with the rest of the metropolis.

I give you this information, as your readers may have assumed this district to be unhealthy, which is not the case.

*** We have adopted Mr. Bayley's estimate.

CANVASSING FOR POOR-LAW MEDICAL APPOINTMENTS.

DURHAM asks: Is it fit and proper, and consistent with medical etiquette, for a candidate for the post of district medical officer, to call upon each guardian for the purpose of obtaining his votes and interest at the ensuing election?"

*** This is very frequently done; we know of no rule against it, and see no special objection to it, provided the appointment has been declared vacant by advertisement or otherwise.

HEALTH OF ENGLISH TOWNS.

DURING the week ending Saturday, July 20th, 5,895 births and 3,844 deaths were registered in the twenty-eight large English towns, including London, which have an estimated population of 9,555,406 persons. The annual rate of mortality in these towns, which had increased from 16.6 to 21.5 per 1,000 in the five preceding weeks, declined again to 21.0 during the week under notice. The rates in the several towns ranged from 12.0 in Brighton, 14.7 in Oldham, 15.4 in Derby, and 15.5 in Bristol to 28.5 in Leeds, 29.2 in Liverpool, 29.9 in Manchester, and 38.1 in Preston. In the twenty-seven provincial towns the mean death-rate was 22.9 per 1,000, and exceeded by 4.2 the rate recorded in London, which was only 18.7 per 1,000. The 3,844 deaths registered in the twenty-eight towns during the week under notice included 708 which were referred to diarrhœa, 102 to measles, 86 to whooping-cough, 58 to scarlet fever, 36 to diphtheria, 28 to "fever" (principally enteric), and not one to small-pox: in all, 1,018 deaths resulted from these principal zymotic diseases, against 476, 700, and 944 in the three preceding weeks. These 1,018 deaths were equal to an annual rate of 5.6 per 1,000; in London the zymotic death-rate was 4.5, while it averaged 6.5 per 1,000 in the twenty-seven provincial towns, and ranged from 0.6 in Wolverhampton, 1.3 in Brighton, and 1.6 in Bristol to 9.7 in Leicester, 9.9 in Leeds, 10.7 in Salford, and 17.0 in Preston. Measles caused the highest proportional fatality in Leeds, Halifax, and Preston; scarlet fever in Salford, Sunderland, and Plymouth; whooping-cough in Bradford, Preston, and Birkenhead; and diarrhœa in Manchester, Sunderland, Birmingham, Liverpool, Birkenhead, Leeds, Salford, Preston, and Leicester. Of the 36 deaths from diphtheria recorded during the week under notice in the twenty-eight towns, 23 occurred in London, 3 in Salford, 2 in Manchester, and 2 in Plymouth. No fatal case of small-pox was registered either in London or in any of the twenty-seven provincial towns, and no small-pox patients were under treatment in any of the Metropolitan Asylums Hospitals on Saturday, July 20th. These hospitals contained, however, 591 scarlet fever patients on the same date, against numbers increasing from 538 to 572 at the end of the four preceding weeks; 85 cases were admitted during the week, against numbers rising from 41 to 81 in the four previous weeks. The death-rate from diseases of the respiratory organs in London was equal to 1.7 per 1,000, and was considerably below the average.

HEALTH OF SCOTCH TOWNS.

IN the eight principal Scotch towns, 808 births and 500 deaths were registered during the week ending Saturday, July 20th. The annual rate of mortality, which had been 21.3 and 18.6 per 1,000 in the two preceding weeks, rose again to 19.6 during the week under notice, but was 1.4 per 1,000 below the mean rate during the same period in the twenty-eight large English towns. Among the Scotch towns the lowest rates were recorded in Aberdeen and Edinburgh, and the highest in Paisley and Glasgow. The 500 deaths registered in these towns during the week under notice included 94 which were referred to the principal zymotic diseases, equal to an annual rate of 3.7 per 1,000, which was 1.9 below the mean zymotic death-rate during the same period in the large English towns. Among these Scotch towns the lowest zymotic rates were recorded in Edinburgh and Dundee, and the highest in Paisley and Leith. The 222 deaths registered in Glasgow during the week under notice included 18 from diarrhœa, 11 from whooping-cough, 8 from measles, and 7 from "fever." Five fatal cases of measles occurred in Edinburgh, and 3 in Leith; and 2 deaths resulted from diphtheria in Greenock. The death-rate from diseases of the respiratory organs in these towns was equal to 2.7 per 1,000, against 1.7 in London.

HEALTH OF IRISH TOWNS.

DURING the week ending Saturday, July 20th, the deaths registered in the eight principal town districts of Ireland were equal to an annual rate of 21.9 per1,000. The lowest rates were recorded in Dundalk and Kilkenny, and the highest in Drogheda and Waterford. The 154 deaths registered in Dublin during the week under notice were equal to an annual rate of 22.8 per 1,000 (against 22 8 and 16.3 in the two preceding weeks), the rate for the same period being 18.7 in London and 15.8 in Edinburgh. These 154 deaths included 25 which resulted from the principal zymotic diseases (equal to an annual rate of 3.7 per 1,000), of which 13 were referred to diarrhœa, 7 to measles, and 4 to whooping-cough.

MEDICAL NEWS.

THE Mayor of Leeds has received a letter from Dr. Goldie resigning his position as medical officer for that borough. The *Yorkshire Post* says: "It was exactly sixteen years yesterday since Dr. Goldie succeeded to the position of medical officer of health for Leeds, and in leaving it he has the sympathy of a considerable proportion of his fellow-townsmen, who consider he has been hardly treated, and has, in fact, been made the scapegoat of a bad system and an inefficient committee."

THE fourth session of the French Surgical Congress will be held in Paris on October 14th, and six following days, under the presidency of Baron Larrey. The principal subjects of discussion will be: 1. The Results, Immediate and Remote, of Operations for Local Tuberculosis; 2. Surgical Treatment of Peritonitis; 3. The Treatment of Aneurysm of the Extremities. Communications should be addressed to M. le Docteur S. Pozzi, Secrétaire Général, 10, Place Vendôme, Paris.

DR. ROSS, from his experience during an epidemic of cholera in the Rawal Pindi gaol, recommends, in the *Indian Medical Gazette* for June, 1889, the early resort to hypodermic injections of morphine $\frac{1}{4}$ gr., and atropine $\frac{1}{150}$ gr.; the injection must be repeated every twenty minutes until the patient is disposed to fall asleep. At the same time an astringent acid mixture, containing gallic and sulphuric acid, carbolic acid (gr. j) and the tinctures of catechu and cardamoms, was given. In all he treated 100 cases, with 19 deaths. Atropine was used owing to the analogy of the symptoms produced by cholera and muscarin, atropine being a physiological antidote of the latter.

THE BRITISH DENTAL ASSOCIATION.—The annual general meet- of the British Dental Association will be held in Brighton on August 22nd and two following days, under the presidency of Mr. S. Lee Rymer. On the first day, a discussion on Anæsthetics will be opened by papers by Dr. F. R. Cruise on Ether; by Mr. Bowman Macleod on Chloroform; by Dr. Dudley W. Buxton on Recent Researches upon Nitrous Oxide Narcosis; and by Dr. Frederick Hewitt on Certain Anæsthetic Mixtures. It is believed that this discussion will have much interest for medical practitioners, and Mr. Morton Smale, Honorary Secretary of the Association, will send an invitation to any medical man who will address him at 40, Leicester Square. The annual dinner will take place at the

Pavilion on August 23rd, and on August 24th a large number of demonstrations will be given.

ROYAL COLLEGE OF PHYSICIANS.—The following are the officers and examiners elected at the last annual meeting:—*Censors:* John Syer Bristowe, M.D.; John Hughlings Jackson, M.D.; William Henry Broadbent, M.D.; Sir William Roberts, M.D. *Treasurer:* Sir Dyce Duckworth, M.D. *Emeritus Registrar:* Sir Henry Pitman, M.D. *Registrar:* Edward Liveing, M.D. *Harveian Librarian:* William Munk, M.D. *Elected Members of the Library Committee:* Joseph Frank Payne, M.D.; Isaac Burney Yeo, M.D.; Robert Farquharson, M.D.; Norman Moore, M.D.; *Curators of the Museum:* William Wegg, M.D.; William Howship Dickinson, M.D.; William Cayley, M.D.; Norman Moore, M.D. *Finance Committee:* Sir Edward Sieveking, M.D.; George Tupman Fincham, M.D.; Robert Martin, M.D.—EXAMINERS: *Chemistry and Chemical Physics:* Charles Henry Ralfe, M.D.; John M. Thomson, F.C.S.; August Dupré, Ph.D.; William Ramsay, Ph.D., F.R.S. *Materia Medica, Medical Botany, and Pharmacy:* Herbert Isambard Owen, M.D.; Nestor Isidore Charles Tirard, M.D.; John Mitchell Bruce, M.D.; William Hale White, M.D.; Cecil Yates Biss, M.D. *Elementary Physiology:* Henry Lewis Jones, M.D.; Frederick Walker Mott, M.D. *Physiology:* William Henry Allchin, M.B.; Arthur Gamgee, M.D.; Charles Scott Sherrington, M.B. *Osteology and Anatomy:* Wilmot Parker Herringham, M.B.; Seymour Taylor, M.D. *Medical Anatomy and Principles and Practice of Medicine:* William Henry Stone, M.B.; Sir Dyce Duckworth, M.D.; Alfred Baynard Duffin, M.D.; Joseph Frank Payne, M.D.; Thomas Henry Green, M.D.; John Cavafy, M.D.; Frederick Thomas Roberts, M.D.; Arthur Ernest Sansom, M.D.; Sidney Coupland, M.D.; James Frederick Goodhart, M.D. *Midwifery and Diseases peculiar to Women:* John Braxton Hicks, M.D.; Alfred Lewis Galabin, M.D.; Francis Henry Champneys, M.B.; Charles James Cullingworth, M.D. *Surgical Anatomy and Principles and Practice of Surgery:* Sir William Mac Cormac, F.R.C.S.; Professor Humphry, F.R.C.S.

THE MEDICO-PSYCHOLOGICAL ASSOCIATION.—The annual meeting of the Medico-Psychological Association, under the presidency of Dr. Hayes Newington, was held on Thursday, July 25th, at the rooms of the Medical Society of London, Chandos Street, W. The affairs of the Association are in a very flourishing condition, both numerically and financially, and an increasing number of candidates for the diploma of the Association are coming forward. The diploma can be obtained only after a stringent examination, theoretical and practical, and is a guarantee that the holder has a thorough knowledge of insanity and its treatment. The Association is doing good service in thus encouraging a more extended knowledge of this important branch of the profession. The attendance of members was fully up to the average of former years, and the able address of the President, which dealt chiefly with the question of instituting lunatic asylum hospitals for teaching purposes, was heartily applauded and followed by an animated discussion. In the evening the members dined together at "The Ship" at Greenwich. The following are the office-bearers for the year:—*President:* H. F. Hayes Newington, M.R.C.P.Edin. *President-Elect:* D. Yellowlees, LL.D., M.D., L.R.C.S., F.F.P.S. *Treasurer:* John H. Paul, M.D. *Editors of Journal:* D. Hack Tuke, M.D.; George H. Savage, M.D. *Auditors:* T. Outterson Wood, M.D.; Ernest White, M.B. *Hon. Secretaries (for Ireland):* Conolly Norman, F.R.C.S. (I.); (*for Scotland*) A. R. Urquhart, M.D.; (*General*) Fletcher Beach, M.D. *Members of Council:* F. H. Craddock, M.D.; F. Schofield, M.D.; S. W. D. Williams, M.D.; A. Patton, M.B.; W. W. Ireland, M.D.; T. S. Clouston, M.D.; S. A. K. Strahan, M.D.; E. B. Whitcombe, M.R.C.S.; E. M. Cook, M.B.; E. M. Courtenay, A.B., M.B.; T. D. Greenlees, M.D.; M. D. MacLeod, M.B.; J. Wiglesworth, M.D.; S. H. Agar, L.K.Q.C.P.; R. Baker, M.D.; J. B. Spence, M.D.; W. R. Nicholson, M.R.C.S.; D. Nicolson, M.B. and C.M.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—The following gentlemen, having passed the required examination, were admitted Members on July 25th:

J. W. Carr, M.D.Lond.; A. E. Cordes, M.D.Paris; W. Hunter, M.D.Edin.; D. R. Paterson, M.D.Edin.; F. H. Taylor, M.D.Lond.; D. Turner, L.R.C.P.; W. A. Turner, M.B.Edin.; W. J. Tyson, M.D.Durh.; S. W. Wheaton, M.D.Lond.; J. L. Whitehead, M.D.St.And.

ROYAL COLLEGE OF SURGEONS OF EDINBURGH.—The following gentlemen have been admitted Fellows of the College during the half-year to June 30th, 1889:

After Examination.—A. O. C. Watson, Army Medical Staff; J. C. Graham, Deli, Sumatra; A. W. Flood, Buncloran, Co. Donegal; A. Hewett, Army Medical Staff; D. Harrisson, Liverpool; W. D. Stewart, Surgeon-Major in Indian Medical Service; C. H. Clanburn, Army Medical Staff; A. Y. Reilly, Army Medical Staff; G. T. H. Thomas, Army Medical Staff; J. S. Nairne, Glasgow; J. R. Murray, Army Medical Staff. By election: T. E. Williams, Talgarth, Breconshire, and R. Somerville, Galashiels.

During the July sittings of the examiners the following gentlemen passed the first professional examination for the Licence in Dental Surgery:

J. M'L. Mason, Edinburgh, and A. S. Anderson, Edinburgh.

The following gentlemen passed the final examination, and were admitted L.D.S.Edinburgh:

C. W. S. Wilde, Liverpool; T. Gregory, Edinburgh; W. G. Campbell, Dundee; C. H. J. Acret, Canada; J. H. Cormack, Edinburgh; J. S. Allen, Ripley; W. G. Routledge, Exeter; A. E. Smith, Norwich; L. S. Shennan, Houghton-le-Spring; and F. L. F. Masters, Huddersfield.

The following having passed the required examinations were admitted L.R.C.S.E.:

Julia Cock, Shrewsbury; Jane Harriett Walker, Dewsbury, Yorks; W. A. Mackay, Caithness; H. E. B. Dickson, Sussex; F. Haley, Melbourne; J. D. Windle, Oldham; and W. C. Little, Ontario.

MEDICO-PSYCHOLOGICAL ASSOCIATION.—The following gentlemen have passed the examination for the certificate in Psychological Medicine granted by this Association, held in the Aberdeen Royal Asylum:

W. Bullock, W. Davidson, J. Rannie, J. Wilson.

The following gentlemen passed the examination for the certificate in Psychological Medicine granted by this Association, held in the Edinburgh Royal Asylum:

J. B. Bird, A. W. Carter, R. J. Drummond, M.B., C.M., H. M. Eames, R. A. Fraser, M.B., C.M., G. Fitzgerald, G. Hennan, M. L. Hewat, J. Monteith, M.B., C.M., R. Renton, T. M. Ritchie, B.Sc., J. D. Stanley, M.B., C.M., W. D. Stewart, M.D., R. R. H. Whitwell, M.B., B.Sc.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—Dental Examination. The following gentlemen have been admitted Licentiates in Dental Surgery of the College:

F. E. Garner, Bradford, Yorkshire; T. M. Howkins, Guernsey; E. Mawer, High Wycombe, Buckinghamshire; W. D. Quinn, Dublin; F. Sheppard, Hastings; and C. H. J. Williams, Croydon.

MEDICAL VACANCIES.

The following Vacancies are announced:

BIRMINGHAM WORKHOUSE INFIRMARY. — Senior Resident Medical Officer. Salary, £150 per annum, with board and lodging, etc. Applications by August 3rd to Mr. W. Bowen, Clerk to the Guardians, Birmingham.

BIRMINGHAM WORKHOUSE INFIRMARY.—Assistant Resident Medical Officer. Salary, £100 per annum with board and lodging, etc. Applications by August 3rd to Mr. W. Bowen, Clerk to the Guardians, Birmingham.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—Assistant Physician. Applications by August 6th to the Secretary, 24, Finsbury Circus, E.C.

COVENTRY AND WARWICKSHIRE HOSPITAL.—House-Surgeon. Salary, £100 per annum, with board, lodging, and attendance. Applications by August 16th, marked "Application for House-Surgeon," to be sent to the Secretary.

HOSPITAL FOR WOMEN, Soho Square, W.—House-Physician. Salary, £75 per annum, with board, etc. Applications by August 3rd to the Secretary.

LONDON TEMPERANCE HOSPITAL, Hampstead Road, N.W.—Registrar and Chloroformist. Salary, 50 guineas. Applications by August 10th to the Secretary.

NORFOLK AND NORWICH HOSPITAL. - Honorary Dental Surgeon. Applications by August 14th, endorsed "Dental Surgeon," to the Secretary.

NORTH CAMBRIDGESHIRE HOSPITAL, Wisbech.—House Surgeon. Salary, £130 per annum, with house, etc. Application by August 10th to the Honorary Secretary.

NORTH STAFFORDSHIRE INFIRMARY.—Physician or Medical Officer. Applications by August 29th to the Secretary.

NORTHUMBERLAND COUNTY ASYLUM.—Clinical Assistant. Board and residence. Applications to Dr. McDowall, Northumberland County Asylum, Morpeth.

RIPON DISPENSARY AND COTTAGE HOSPITAL.—House-Surgeon and Dispenser. Salary, £70 per annum, with board and lodging. Applications to the Honorary Secretary, F. D. Wise, Esq., Ripon.

TOWN OF HOVE.—Medical Officer of Health. Salary, £100 per annum. Application by August 1st, endorsed "Medical Officer of Health" to the Town Clerk, Town Hall, Hove.

WOLVERHAMPTON EYE INFIRMARY.—Resident Assistant. Board and washing. Applications by August 12th to the Chairman.

MEDICAL APPOINTMENTS.

ALLAN, Francis J., M.D., D.P.H.Camb., appointed Deputy Public Vaccinator, Whitechapel Union.

BETTS, F. B., M.R.C.S.Eng., L.R.C.P.Lond., appointed Resident Obstetric Assistant to the Westminster Hospital.

KINGSTON, P. J., L.R.C.P., M.R.C.S., appointed House-Surgeon to the St. Mark's Hospital for Fistula, City Road, *vice* W. J. Midelton, M.R.C.S., resigned.

KIRKPATRICK, W., M.D., appointed Resident Assistant House-Surgeon to the Derbyshire General Infirmary, *vice* R. M. Wilson, M.D., B.Ch., resigned.

LEIGH, Randle, B.Sc.Lond., M.R.C.S., etc., appointed Demonstrator of Physiology in University College, Liverpool, *vice* F. C. Larkin, ppointed Assistant Lecturer.

MARTYN, R. J., L.R.C.S.I., L.M., L.K.Q.C.P.I., appointed Medical Officer to No. 2 Dispensary, Sligo; also Surgeon to the Royal Irish Constabulary and military stationed at Sligo, *vice* Dr. Palmer, deceased.

POGSON, J. W. B., M.B., B.S., M.R.C.S., appointed House-Surgeon to the Durham County Hospital.

WALSH, E. H., L.R.C.S.E., L.R.C.P.E., L.M., and L.A.H.I., appointed Medical Officer of Mitchelstown Workhouse, and Physician to the Fever Hospital, *vice* Dr. William O'Neil, resigned.

WILLIAMS, R. E., M.R.C.S., L.R.C.P., appointed House-Surgeon to the Clayton House and General Dispensary, *vice* R. B. Eskrigge, L.R.C.P., M.R.C.S.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the announcement. The first post on Thursday mornings is the latest by which advertisements can be received.

BIRTHS.

ASHWORTH.—On July 27th, at Halstead, Essex, the wife of J. Henry Ashworth, M.R.C.P.Ed., of a daughter.

GREATHEAD.—On July 6th, at Graham's Town, South Africa, the wife of J. B. Greathead, M.B.Edin., M.R.C.S., London, of a son.

HOOKER.—On July 27th, at Cirencester, the wife of Charles Hooker, L.R.C.P.and S.Edin., of a daughter.

KENYON.—On July 25th, at Hooton Pagnell, near Doncaster, the wife of G. Herbert Kenyon, M.D., of a son.

WILLIAMSON.—At 22, Eldon Square, Newcastle-on-Tyne, July 26th, the wife of G. E. Williamson, M.A., F.R.C.S., of a son.

MARRIAGE.

LEWIS—STARK.—At Thornville, Falkirk, on July 31st, by the Rev. George Lewis, Liverpool (father of the bridegroom), assisted by the Rev. J. B. Johnston, B.D., Falkirk, Charles James Lewis, M.D., C.M.Edin., M.R.C.S.Eng., Stirling, to May Harvey, only daughter of Henry Stark.

DEATH.

BEVISS.—On June 30th, at Pinetown, Natal, Charles Beviss, M.D., M.R.C.S., aged 49.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 1.30; Skin, M. 1.30; Dental, M. W. F., 9.

CHELSEA HOSPITAL FOR WOMEN.—M. Tu. W. and F., 1.30.

GREAT NORTHERN CENTRAL.—Medical and Surgical, M. Tu. Th. F., 2.30; Obstetric, W., 2.30; Eye, Tu. F., 10; Ear, M. F., 2.30; Diseases of he Skin, W., 2.30; Diseases of the Throat, Th., 2.30; Dental Cases, W., 2.

GUY'S.—Medical and Surgical, dai ly, 1.30; Obstetric, M. Tu. F. 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu. 1; Skin, Tu., 1; Dental, Tu. Th. F., 1.30.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th. S., 1.30; o.p., W. F., 1.30; Eye, M. Th., 1.30; Ophthalmic Department, W., 2; Ear, Th., 2; Skin, F., 1.30; Throat, F., 1.30; Dental, M. Th., 9.30.

LONDON.—Medical, daily, exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p. W. S., 1.30; Eye, Tu. S., 9; Ear, S., 9.30; Skin, Th., 9; Dental, Tu., 9.

MIDDLESEX.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 9.30; o.p., W. 1.30; Eye, W. S., 9; Ear and Throat, Tu., 9; Skin, Tu., 4, Th. 9.30; Dental, M. W. F., 9.30.

NATIONAL ORTHOPÆDIC.—M. Tu. Th. F., 2.

NORTH-WEST LONDON.—Medical and Surgical, daily, 2; Obstetric, W., 2; Eye, W., 9; Skin, Tu., 2; Dental, F. 9.

ROYAL ORTHOPÆDIC.—Daily, 1.

ROYAL FREE.—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Dental, Th. 9.

ST. BARTHOLOMEW'S.—Medical and Surgical daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, W. Th. S., 2.30; Ear, Tu. F., 2; Skin, F., 1.30; Larynx, F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9.

ST. GEORGE'S.—Medical and Surgical, M. T. F. S., 12; Obstetric, Th. 2; o.p., Eye, W. S. 2; Ear, Tu., 2; Skin, W., 2; Throat, Th., 2; Orthopædic, W., 2; Dental, Tu., S., 9.

ST. MARK'S HOSPITAL.—Fistula and Diseases of Rectum, males, W., 8.45; females, Th., 8.45.

ST. MARY'S.—Medical and Surgical, daily, 1.45, o.p., 1.30; Obstetric, Tu. F., 1.45; Eye, Tu. F. S., 9; Ear, M. Th., 3; Orthopædic, W., 10; Throat, Tu. F., 1.30; Skin, M. Th., 9.30; Electro-therapeutics, Tu. F., 2; Dental, W. S., 9.30; Consultations, M., 2.30; Operations, Tu., 1.30; Ophthalmic Operations, F., 9.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, Tu. F., 2; o.p., W., 1.30; Eye, M. Tu. W. Th., F. 1.30; o.p., daily, except Sat., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Tu. F., 1.30; Children, S., 1.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1.30; Obstetrics, M. Th., 1.30; Tu., W. F., 2; Eye, Tu. F., 2; Ear, M. F., 9; Skin, W., 1.45, S., 9.15; Throat, Th., 1.30; Dental, W., 9.30.

WESTMINSTER.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1; Eye, M. Th., 2.30; Ear, M., 9; Skin, W., 1; Dental, W. S., 9.15.

OPERATION DAYS AT THE LONDON HOSPITALS.

MONDAY.....10 A.M.: Royal London Ophthalmic.—10.30 A.M.: Royal Free (Ophthalmic Department).—1.30 P.M.: Guy's (Ophthalmic Department); Royal Westminster Ophthalmic.—2 P.M.: Central London Ophthalmic; Hospital for Women; Royal Orthopædic; St. Mark's; London.—2.30 P.M.: Chelsea Hospital for Women.

TUESDAY.....10 A.M.: Royal London Ophthalmic.—1.30 P.M.: Guy's; Royal Westminster Ophthalmic; St. Bartholomew's (Ophthalmic Department); St. Mary's.—2 P.M.: Cancer Hospital, Brompton; Central London Ophthalmic; London; Westminster.—2.30 P.M.: St. Mark's; West London.—4 P.M.: St. Thomas's (Ophthalmic Department).

WEDNESDAY....10 A.M.: National Orthopædic; Royal London Ophthalmic.—11 A.M.: St. Mary's (Orthopædic).—1 P.M.: Middlesex.—1.30 P.M.: Royal Westminster Ophthalmic; St. Bartholomew's; St. Thomas's.—2 P.M.: Central London Ophthalmic; Great Northern Central; London; Royal Free; University College; Westminster.—2.30 P.M.: St. Peter's; Samaritan Free Hospital for Women and Children.—3 to 4 P.M.: King's College.

THURSDAY.....10 A.M.: Royal London Ophthalmic.—1 P.M.: St. George's.—1.30 P.M.: St. Bartholomew's (Ophthalmic Department); Guy's (Ophthalmic Department); Royal Westminster Ophthalmic.—2 P.M.: Central London Ophthalmic; Charing Cross; Hospital for Diseases of the Throat; Hospital for Women; London; University.—2.30 P.M.: Chelsea Hospital for Women; North-West London.

FRIDAY .....9 A.M.: Metropolitan; St. Mary's (Ophthalmic Department).—10 A.M.: Royal London Ophthalmic.—10.30 A.M.: Royal Free (Ophthalmic Department).—1.15 P.M.: St. George's (Ophthalmic Department).—1.30 P.M.: Guy's; Royal Westminster Ophthalmic.—2 P.M.: Central London Ophthalmic; East London Hospital for Children; King's College; London; St. Thomas's (Ophthalmic Department).—2.30 P.M.: West London.

SATURDAY.....9 A.M.: Royal Free (Department for Diseases of Women).—10 A.M.: Royal London Ophthalmic.—1 P.M.: King's College.—1.30 P.M.: Royal Westminster Ophthalmic; St. Bartholomew's; St. Thomas's.—2 P.M.: Cancer Hospital, Brompton; Central London Ophthalmic; Charing Cross; London; Middlesex; Royal Free; University.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the office of the JOURNAL, and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

QUERIES.

G. A. H. asks for advice how to remove the yellowish brown stains (or, rather, pigmentation marks) which are so common on the face of some women during and after confinement.

THE EFFECT OF CASTRATION ON THE VOICE.

M.D. writes: A patient of mine, aged 50, in robust health otherwise, has suffered very much from venous congestion of the epididymes of both testes (was operated on for varicocele with success some fourteen years ago). I have advised removal of one, or if necessary of both, testes. Can you or any of your readers say what effect, if any, such an operation will be likely to have on his voice? Strange to say some medical men (he has seen a great many) say it will alter his voice; others, equally eminent, that it will have no effect at all.

NOTES, LETTERS, ETC.

OUT of the economies of her private purse, the Empress of Japan has just bestowed the amount of her year's savings on the Tokio Female Hospital; the sum amounts to £1,500.

"The British Pharmacopœia."

Mr. Henry Kimpton (London) writes: In your account of the meeting of the General Council of Medical Education and Registration, Mr. Macnamara, speaking of the proposed publication of Dr. Maybury's book by me, is reported to have said that it was intended to be issued at a lower price than the *British Pharmacopœia*. That is an error; the price advertised being 6s. 6d., that is, 6d. more than the *British Pharmacopœia*. It is also not the fact that the two books are printed in the same type, as stated by the same gentleman.

Prize for an Essay on Fish Poisoning.

The Russian Academy of Sciences offers a prize of 5,000 roubles (£500) for the best inquiry into the nature and effects of the poison which develops in cured fish. The objects of the competitors must be: "(1) To determine, by means of exact experiments, the physical and chemical nature of the poison which develops in fish; (2) to study, by experiments on animals, its action upon the heart, the circulation of the blood, the organs of digestion, and the nervous system; (3) to determine the rapidity of its absorption by the digestive organs; and (4) to study and describe the characteristics which may serve to distinguish contaminated fish from such as are not contaminated." The fifth and sixth questions, with which it may be impossible for any one to deal satisfactorily, relate to the means of preserving fish from the development of the poison, and to the question of counter-poisons and the medical treatment of poisoned persons. The competition is open to all. The memoirs must be sent in, either in manuscript or printed, before January 1st, 1893, and may be written in any one of the following languages: Russian, Latin, French, English, German. If none of the papers is deemed worthy of the full prize, the accumulated interest upon the above-named sum may be handed over to the author who presents the best solution to some part of the problem.

"Peromelus Apus."

Mr. Mark Style (Bromyard) writes: Dr. Nisbet's case, reported in the Journal, July 6th, reminds me of a case I inspected a few years ago in a travelling show. The man was some 25 years of age, and gained his living by acting as boot maker to the troupe, as well as by showing himself to the public. There was absolutely no sign of a lower extremity on either side, and I could make out no acetabula; there was some puckering of the skin over the pelvic bones. The humeri were abnormally long, both forearms terminating above the wrist joint; otherwise he was a well developed, strongly built man.

Municipal Appreciation of Medical Services.

"It is unfortunately not often," says the *New York Medical Journal*, "that a municipality sets a just estimate upon medical services for which it is called upon to pay. A commendable example in this respect has been set by the Municipal Assembly of St. Louis in voting an appropriation of 500 dollars to Dr. A. C. Bernays for attendance on a member of the police force who had been injured in the discharge of his duty. The case was one of gunshot wound of the abdomen involving the stomach, the duodenum, and the jejunum, and immediate laparotomy was performed with perfect success."

Maggots in the Ear.

J. Holmes, M.D., M.R.C.S.Eng., L.S.A.Lond. (Southam) writes: A man, 66, with a history of middle ear disease from infancy, and who had been totally deaf in left ear since that time, came to the surgery on July 24th complaining of "maggots in the ear." He said that whilst haymaking about 2 P.M. on July 23rd, a small blow fly settled in his ear and remained there for about ten minutes in spite of his repeated endeavours to dislodge it. About 2 A.M. on July 24th he felt a stabbing pain in his ear, and there was a slight discharge of blood. He inserted some fresh cotton-wool in his ear, and on subsequently removing this found one or two small maggots. He came to the surgery at midday on the same day, and on removing the wool from the ear there was a small maggot on it, and two observed crawling on his neck. His ear was syringed, and one or two came away. He was told to drop some sweet oil into his ear. He returned on the morning of July 25th, and his ear was syringed with a weak antiseptic solution, and one larger one came away. He then stated that about forty had come away altogether. He returned in the evening feeling much more comfortable, and believes there are no more there. They had the appearance of ordinary maggots, such as one sees in fly-blown meat, and were from about a quarter to half-an-inch in length.

Post-Diphtheritic Paralysis.

E. Mansel Sympson, M.B. (Lincoln) writes: A girl, aged 9, who has been a patient of mine lately, possesses a history of, I think, some interest. Two months ago she had a bad sore throat; "it looked whitish," the mother said. After a week, when she had got rid of a lot of whitish phlegm, her speech was thick, and fluids returned through her nose; also her accommodation was impaired. Later, she seemed to have no command over her legs, and when I saw her there was no knee-jerk to be obtained. Her breathing apparently was never affected, nor did her voice become "croupy." Here, then, was a case of diphtheria with typical paralysis following, and the mother had not thought it necessary to send for a doctor! Again, there were three other children living in the house; one had a slight sore throat, so that the susceptibility to contagion varied greatly in that one house.

Deaths from Phthisis.

Dr. Alexander James writes to say that with reference to a passage in the review of his work on *Pulmonary Phthisis* which appeared in the Journal of April 6th last, in which it was stated that the results given in the first Brompton Hospital Report as regards age in phthisis were "founded on much larger data" than his own, that he has ascertained that the number of cases in the Report referred to was 4,358, whilst the number of cases from which his conclusions were drawn was 81,626, namely, the total deaths from phthisis in Scotland for ten years.

COMMUNICATIONS, LETTERS, etc., have been received from:

Dr. P. M. Deas, Exeter; Mr. O. Hehner, London; Mr. R. M. P. Low, London; Mr. F. W. J llye, Warminster; Dr. T. O'Reilly, St. Louis; Dr. J. H. Stallard, San Francisco; The Secretary of the Sanitary Institute, London; Mr. T. J. Bokenham, Cheshunt; Mr. T. M. Evans, Hull; Mr. A. Clark, Southampton; Mr. J. Hogg, London; Mr. G. F. E. Morgan, Hartlepool; Dr. B. Walker, Kirkby Stephen; Dr. Halliday, Glasgow; The Registrar of the Royal College of Surgeons in Ireland, Dublin; Dr. A. H. Griffiths, Manchester; Dr. C. M. Chadwick, Leeds; Mr. H. T. Rake, Fordingbridge; Mr. A. B. MacDowall, London; Mr. W. Faulkner, London; Dr. H. Woods, London; Director-General Dick, London; Mr. Mayo Robson, Leeds; Dr. Mickle, London; Dr. J. Matthews, London; Dr. W. Pearce, London; Mr. W. Rivington, London; Dr. C. Puzey, Liverpool; Mr. J. H. Flather, Cambridge; Dr. H. M. Jones, London; Dr. C. T. Williams, London; Mr. H. N. Lawrence, London; Messrs. Burroughs, Wellcome, and Co., London; Dr. Holman, Reigate; Mr. H. Whorlow, London; Our Manchester Correspondent; Mr. J. Gawith, London; Dr. G. H. Kenyon, Doncaster; Mr. R. Leigh, Liverpool; Mr. W. H. A. Jacobson, London; Mr. P. P. Whitcombe, London; Mr. C. P. Hooker, Cirencester; Mr. J. Ewens, Clifton; Dr. J. T. Faulkner, Stretford; Mr. D. J. Wylie, Streatham; Mr. T. R. Jessop, Leeds; Dr. G. Herschell, London; Our Liverpool Correspondent; The Mayor of Leeds, Leeds; Mr. R. R. Leeper, Dublin; Dr. J. W. Byers, Belfast; Mr. F. Taylor, London; Mr. F. Hall, Leeds; Messrs. John Weiss and Son, London; Dr. Symes Thompson, London; Dr. E. L. Dixon, Preston; Mr. E. G. Newell, Moville; Dr. W. C. Steele, London; Surgeon I.M.S.; Dr. F. Hueppe, Wiesbaden; Dr. F. Payne, London; Dr. J. Oliver, London; X.; Mr. G. A. Harris, Simla; Dr. J. H. Warren, Boston, Mass.; Dr. A. Napier, London; Dr. R. Rentoul, Liverpool; A Member of the Medical Profession; Mr. C. H. Bishop, London; Dr. T. J. Browne, Dalysfort; Dr. Yarrow, London; Nom de Plume; Dr. T. W. Hime, Paris; Dr. W. H. Wathen, Louisville; Mr. J. A. Dow, London; The Editor of the *Nursing Record*, London; Dr. H. C. Chapman, Liverpool; Mr. G. E. Williamson, Newcastle-on-Tyne; The Secretary of the Royal College of Surgeons of Edinburgh; Dr. C. E. Glascott, Manchester; J. W. B. Pogson, M.B., Birmingham; Dr. Halliburton, London; Anti-Critic; Mr. R. Jones, Liverpool; Semper; Mr. C. Buckley, Mitchelstown; Mr. J. H. Harris, London; Mr. J. D. Staple, Bristol: Mr. J. P. R. Jamison, Broughshane; Mr. T. N. Kelynach, Manchester; Mr. R. J. Martyn, Sligo; Mr. F. F. Jones, Llanfyllin; Dr. Wm. Strange, Worcester; Mr. G. H. King, London; Rev. F. Lawrence, York; Mr. E. M. Sympson, Lincoln; Dr. Cookson, Stafford; Dr. Abercrombie, London; Dr. C. J. Mouncey, Earlestown; etc.

BOOKS, etc., RECEIVED.

Illustrated Catalogue and Price List of Surgical Instruments, Apparatus, and Appliances. Sold by John Weiss and Son, London.

Diseases and Injuries of the Ear. By Chas. Henry Burnett, A.M., M.D. Edinburgh and London: Young J. Pentland. 1889.

A System of Obstetrics. Edited by Barton Cooke Hirst, M.D. Volume II. Edinburgh: Young J. Pentland. 1889.

Clinical Lectures on Diseases of the Nervous System. By Professor J. M. Charcot. Volume III. Translated by T. Savill, M.D.Lond., M.R.C.P.L. London: The New Sydenham Society.

On the Respiratory Functions of the Nose, and their relation to certain Pathological Conditions. By Greville Macdonald, M.D.Lond. London: A. P. Watt. 1889.

Health Troubles of City Life. By George Herschell, M.D.Lond. Bristol: J. Wright and Co. London: Hamilton Adams and Co. 1889.

Manual of Musical Drill. By George Cruden, A.M. London: Simpkin, Marshall, and Co. 1889.

Lectures on General Pathology. By Julius Cohnheim. Translated from the second German edition, by Alex. B. McKee, M.B.Dub. Section I: The Pathology of the Circulation. London: The New Sydenham Society.

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CLINICAL LECTURE
ON
UTERINE MYOMA.

By LAWSON TAIT, F.R.C.S.,
Professor of Gynæcology, Queen's College, Birmingham.

WITHIN the last few weeks a remarkable group of cases of this disease has been brought under your notice in which many of its strange phases have been peculiarly emphasised, and you have seen me carry out a variety of proceedings for its treatment. The interest of these cases has been greatly enhanced by a paper which you may have read, which you all ought to read, in the columns of the JOURNAL. It is from the pen of no mean authority, Dr. Thomas Keith, a man who has exercised great influence in the progress of abdominal surgery, and in whose steps, until lately, I was proud to tread. Some strange change seems of late to have come over him, and now all is disagreement where formerly all was concord.[1]

The chief cause of difference between Dr. Keith and others, including myself, has arisen on the disease we are now discussing. I have already told you how its treatment by removal of the uterine appendages arose, how completely successful it has been, and in a few days a volume will appear in which my cases are recorded in detail, showing for this operation the insignificant mortality of 1.23 per cent. in 262 consecutive cases. The permanent and complete efficacy of this method of treatment has been established by evidence beyond all cavil; in fact, it stands unrivalled in the history of modern surgery. There are, however, some cases, how large the proportion we do not yet exactly know, for which it is unsuited for various reasons, and these cases fall under the category requiring hysterectomy.

The details of this latter operation I shall lay before you by-and-by; sufficient for my present purpose to say that in the perfection of its detail Dr. Keith acquired and deserved, with one unfortunate qualification, much credit. But it is more than clear that Dr. Keith did not succeed satisfactorily with the less formidable operation, removal of the uterine appendages. He has confessed as much, and he certainly has never ventured on any detailed publication of his experiences. But Dr. Keith brought down the mortality of hysterectomy, as I shall tell you, to within justifiable limits, that is, about 10 per cent., and at that we have nearly all arrived, perhaps some of us have improved upon it, but you will at once see that as this is a *remanet* mortality, it is really not so bad as it looks; it is the mortality of the residuum of the cases, those which cannot be dealt with by removal of the appendages, which must always be a more satisfactory operation. I for one do not despair of seeing hysterectomy with a mortality as low as ovariotomy, though there are certain essential details—mainly the difficulty of dealing with the pedicle by the intra-peritoneal method—which stand sadly in the way. We had all settled down to a consensus of opinion upon the main lines of treatment when there arose in Paris a strong advocacy for the treatment of this disease by a plan known as electrolysis, and it is this which has set us all by the ears. Keith gives a ghastly account of the electrolytic treatment of uterine tumours by Simpson,[2] and he has the hardihood to say: "It is to a practice such as this many allude when they speak of Dr. Apostoli's method as nothing better than the revival of an old process."

Anyone may satisfy himself by turning up the correspondence that we mean nothing of the kind, and Dr. Althaus's evidence upon this subject is final and satisfactory. Besides, I have all the apparatus yet in my possession, and I have exhibited in it proof of what I say.

Let us now revert to the cases I have shown you, and preach to you from a text taken from Dr. Keith's paper: "What we had most to trust to, however, was the change of life. It was the one great hope that patients had to look forward to; the difficulty was to get them over the last few years, for the three or four years before menstruation ceases are the most trying time for a patient with a bleeding fibroid, and the periods have a tendency in the worst cases to linger on year after year, till it is often long after 50 that, in the majority of cases, the troubles caused by a uterine tumour come to an end."

This is precisely the principle upon which our surgical proceedings are based. Myoma is a disease of menstruation, and upon the arrest of menstruation only does its cure seem to depend, whether by Nature's own efforts or by an imitation of them. The very few exceptions of soft œdematous myoma only serve to prove the rule. Removal of the appendages is a scientific proceeding for the imitation of Nature's own method. Hysterectomy is a coarser and much more dangerous method of accomplishing the same ideal. You have seen four such operations, in every case of which I performed the operation against my will—that is, I would rather have done anything else if I could, for I detest the operation of hysterectomy. It is generally difficult to perform, it has a strain upon me which no other operation has, the convalescence is tedious, complicated, and risky, and has to be watched with an assiduity quite unequalled by any other operation within my province.

The first to be mentioned is that of a young Frenchwoman sent to me from Constantinople, said to be suffering from an ovarian tumour, a diagnosis in which I quite concurred. You saw that it was not until the tumour had been injected and dissected by Mr. Teichelmann that we discovered that it was a large œdematous myoma of the uterus which had been removed. The second was one where the violence of the bladder symptoms demanded immediate interference, and where the alternative diagnosis was that of a suppurating lithopædion or a sloughing myoma. The tumour turned out to be the latter, and the chief trouble was the inflammatory association between the tumour and the bladder. Here electrolysis was entirely out of the question, if for no other reason than that we never could reach the cervix. The third case was that of an enormous œdematous myoma growing from the fundus uteri of a woman in her 65th year. It had grown in two years, and had been diagnosed by several practitioners as an ovarian cyst, and it was not till I had punctured it that its exact nature was ascertained. Its removal was then, and in any case, a matter of absolute necessity. As the woman had not menstruated for fourteen years, removal of the appendages was not indicated, and I think any proposal to insert electrolytic needles into such a mass as that now before you, lying loosely in a capsule and ready to slough at the slightest injury, would have been a proposal not short of absolute insanity. If it had sloughed, certain death would have been the patient's fate, whereas she is now quite well, and, as there was no hæmorrhage, intra-uterine electrolysis would have been futile. The fourth case was one in which electrolysis had had a fair trial in the hands of a most competent worker, with the result that the tumour grew more rapidly and the symptoms increased in severity. In two of the cases mistakes in diagnosis occurred; but, even if such mistakes had not been possible, hysterectomy in both instances would have been inevitable; and then Dr. Keith is just as apt to make mistakes in diagnosis as anyone else, a fact I have had occasion to draw attention to. We must conclude, therefore, that it is impossible to avoid hysterectomy altogether, even if we wished to do so, and a certain proportion of cases must permeate our practice.

Exact diagnosis in the abdomen is an impossibility, and only the rash and inexperienced assert the contrary. As for example, this polypus, which some of you saw me remove. The patient had been in the hands of a very prominent gynæcological electrician, who made elaborate and extensive trials of this method, with the result that the patient nearly died of her hæmorrhages on three or four occasions. When she arrived in Birmingham the true nature of the case was discovered, and a polypus removed.

[1] An indication of the change is given in Dr. Keith's first paragraph, where clearly a fault of memory exists. He says that it so happened that he was the last of the Edinburgh medical apprentices who had a regular indenture. Dr. Keith's indentures must have been executed somewhere about the year 1844, before I was born, and I am sure that indentures were not unknown when I was a student from 1860 to 1865. According to general belief among the students, based on the statements of the alleged apprentices, at least two of the University professors took indentured pupils with fees of three hundred guineas. I know of one executed in 1862.

[2] Here again Dr. Keith's memory seems to be at fault. He says: "It so happened that I was last of the Edinburgh medical apprentices who had a regular legal indenture, and amongst the odds and ends of work that fell to me was the keeping of some of these patients under chloroform when the electric current was supposed to be sent through their tumours." But Dr. Keith's indentures must have been dated, as I have said, before I was born, and the anæsthetic properties of chloroform were not discovered till I was nearly three years old. From other sources I have satisfied myself that the incidents of Dr. Keith's recollections of 1844-8 did not occur until much later.

She went home and for a time was better. Then another polypus appeared and more hæmorrhage. By this time the patient was so exsanguine as to be absolutely colourless, and she succumbed to the simple division of the neck of this small polypus. I have removed scores of uterine polypi, and I have never had a death from this operation before; I never even heard of such a thing. Can we then fairly attribute the death of this case to such a trifling operation? Most certainly not. The death is due to the previous mischievous efforts of the electrician, efforts which left the patient unable to resist anything. It was the months and months of delay, and the continual loss of blood during that time, and the absurd—unpardonable—mistake in diagnosis, which killed the patient. Certainly it was not the removal of a polypus as large as a mandarin orange.

The next group of cases brought under your notice were five in number, where I removed the appendages for myoma. Some of you will remember in Room 7 a woman whose face was like yellow wax, and who was brought to me from Michigan by Dr. Kellogg. She had been subjected to the electrolytic treatment for two years with the result that her tumour grew rapidly, and her symptoms steadily grew worse.[3] I removed the appendages in fear and trembling. I thought she was too much exhausted to stand anything in the way of an operation, that she would surely die of shock or heart clot. If she had died, ought it to have been reckoned as a death from the operation of removal of the uterine appendages? Certainly not. In fairness the fatal result ought, in that case, to have been set down against the electrolysis; but she did not die, and now she has passed over two periods without the loss of a drop of blood, and she will go home in a few weeks a perfectly and a permanently cured woman.

In Dr. Keith's paper are many statements but few facts. What we want are the absolute and authenticated facts. What is the death-rate of the electrolytic treatment? For that must be shown to be less than 1.23 per cent. before any argument can be sustained. Not only this, but is it cheaper and easier, and is it as permanent as the surgical method? Dr. Keith says: "It is a slow treatment, requiring great patience, great tenderness of manipulation, and much thinking. A knowledge of electricity is also essential, and the more knowledge on this subject the better, for without it no progress or improvement can be reasonably expected. Two or three months, if the intervals between the periods be short, may pass away quickly without much sign of amendment, and the patients and friends are apt to be discouraged, or the patient, from the tonic effects which electricity has upon some, feels better, becomes inclined to do too much, overtaxes her strength, gets a chill, with perhaps pain in the tumour, and a temporary disturbance of temperature, but with patience the result is certain, and more or less of improvement takes place."

All this we know to be true, but we suspect that this treatment does not get thinking enough when we know that a pregnant young woman has had electrolytic needles thrust into her uterus, and has been imperilled by a premature confinement within 24 hours. Dr. Keith says: "All this can be done without danger to life, and if there be pain during the time the current passes the fault is in the operator. What more does a reasonable woman who has suffered much desire or need?" and he immediately quotes a case to prove the contrary. The employers of electrolysis have been challenged by name and instance to contradict or account for the rumours of its fatalities, and they maintain a most indiscreet silence. Dr. Keith says: "If there be any pain during the time the current passes, the fault is in the operator." But I have already drawn your attention to a case where the applications were made in Paris thirty-three times, and in thirty-one the patient was under an anæsthesic. The process lasted three months, and cost some hundreds of pounds. *Apropos* of such practice Dr. Keith says: "Electricity in any form, when applied to the cure of disease, is set down as pure quackery by many medical men," and this is about the only statement he makes with which I thoroughly agree. Stay, there is one other. Speaking of hysterectomy, he says: "Whoever induces any woman to have such an operation, and tells her that it is nearly as safe as having a baby, should stand in the dock." I agree with him entirely in this, only I am quite sure that no surgeon ever was such an ass as to say anything of the sort. Yet if it were not for the delayed cases in which hysterectomy becomes inevitable, if we could treat all the cases by removal of the appendages, is 1.23 per cent. a mortality very much above that of labour, taking all cases?

Gentlemen, you have heard me inveigh throughout this course of lectures against delay in the performance of operations of all the varieties with which we have to deal. It is not the performance of unnecessary operations that we have to dread, it is the criminal delay of such as are imperatively demanded that still constitutes the opprobrium of surgery.

In the paper I have already quoted Dr. Keith tells the following story, against which I have something to say concerning improper delay in the performance of operations and upon the unfair selection of cases.

"Some years ago an American lady—a fine specimen of womanhood—came to me from San Francisco to have a moderate-sized uterine fibroid removed. It gave her no trouble whatever, and had been discovered by accident only a short time before, though it must have been growing for many years. She made the journey easily across America without stopping, and came to me without having rested anywhere. She was in perfect health. I advised her to have nothing done, to have no operation of any kind, and I assured her that in a few years, when menstruation ceased, the tumour would cease to grow, and would probably more or less disappear. She argued the matter for a long forenoon, saying that she would take all responsibility upon herself if I would only remove the tumour, and it could easily have been removed. She went away unwillingly, returned home, and from time to time wrote pleasant letters. She continued in good health, and had apparently got over her fever for an operation. I heard no more of her till the summer before last, when Dr. Cushing told me of her fate. She had started off again to see me, having heard that I was performing hysterectomy oftener than before. She stopped in a provincial town on her way, had an operation at once, and died in twelve hours."

When I first read this story I suspected that it referred to an operation performed by myself; but I now know that it does so as a fact. Except that the patient came from San Francisco and was a fine specimen of womanhood, there is not one point of the narrative upon which Dr. Keith's memory has not played him false. I have a regular habit of recording every fact of the slightest importance about my patients and of preserving every letter and document of the slightest interest. I, therefore, do not have to depend upon a treacherous memory for the following statements, but upon a "casebook" now before me.

The patient came over twice to Dr. Keith from San Francisco, and for that alone and no other purpose; and for Dr. Keith to tell us that a woman would do so, and insist upon having an operation done involving grave risk to life, merely for the fun of the thing and for no serious reason of suffering, is asking us to believe too much. Failing to induce Dr. Keith to undertake the operation, she came to me, and my notebook says that she menstruated too often and very profusely, and that she was profoundly anæmic. The tumour had been growing for three years, and two years (at her first visit to Dr. Keith) before I saw her Dr. Keith ordered her a very active course of treatment by ergot. This was persevered in for eight months, and then in June, 1883, a very irksome and ineffectual treatment by the hypodermic injection of ergotine was persevered with till she started on her second visit to England. If the patient was in perfect health, as Dr. Keith says, why did he order her the ergot? When I saw her in November it was for "a cystic tumour, with uterus behind and to left of it;" it was not a fibroid tumour at all. When Dr. Keith says it could easily have been removed he is talking about what he knows nothing. The broad ligament was split up, the vaginal flexure quite obliterated, and the tumour completely embedded, and I have never in my life undertaken anything more difficult. In those days we did not know how to enucleate, as we do now, swiftly and boldly; but, even if I had that case over again to-morrow, I would class it among the "terrible cases." Emptied of its fluid, the cystic tumour weighed 20 ounces. Before the operation it reached above the umbilicus and blocked up the pelvis completely, rendering the patient's life a perfect burden to her. Now that I know more of such cases, I

[3] Such failures as this may be attributed to faulty employment of the electrolytic method. Dr. Keith hints as much when he says: "From not a few cases that have lately come to me, when the patients have got scared by the pain produced after two or three applications, I am inclined to think it is being tried by some who do not yet understand the current, who manage it badly, or who try it in unsuitable cases. Though the method may be sometimes abused, or the current managed unskilfully or painfully, the operator, not the electricity, must be blamed for these things." But we have not one word to make us understand how Dr. Keith alone of all electricians can do such feats. Every other English observer who has used it has already confessed that it is risky, painful, costly, troublesome, and disappointing.

know exactly what it was—a thick embedded cyst of the broad ligament. As Dr. Keith was wrong in his diagnosis and is wrong in his recollections, we can place no reliance whatever on his conclusions.

My own conclusion about this case is that the death was really due to delay in performing. Dr. Keith ought to have performed it two years before it was done. He knew at that time how to deal with these troublesome broad ligaments, and for years he had promised to comply with my constantly-repeated request to see him do a hysterectomy. But he as persistently broke his promise, and finally, when pressed into a corner on the subject, refused to fulfil it. Had I been in possession of what Dr. Keith kept secret, I could have operated upon this poor woman successfully, and upon many others. Had Dr. Keith done the operation himself it would probably have been successful. The death should therefore be recorded against Dr. Keith and it is very hard that I have to bear the odium of the failure.

That the case was one of uterine myoma never entered my mind; but I knew it was a bad case before the operation, because the whole thing was so fixed; and I began then to suspect what I now know to be the fact, that Dr. Keith habitually made a selection of cases for operation. Of course such a practice will yield results that cannot be compared in any fairness with the results of men who, despising such methods, operate upon all cases which demand it without reference to selection for results.

Dr. Keith says: "From the fact that in my cases of hysterectomy the removal of the uterus and ovaries was sooner or later followed by insanity in 10 per cent. of the whole number is enough for me to condemn any operation that removes these organs." This is a prodigious statement, quite out of harmony with my own experience. In not one of my hysterectomies has insanity followed the operation.

I have seen insanity follow removal of the appendages for myoma in two cases, but in one the patient was insane from the moment she came out of the chloroform, and she was "queer" before she went under it. I have seen insanity follow simple unilateral ovariotomy, and also simple exploratory incisions. It is well known to occur after all surgical operations and even after the administration of anæsthetics; but we know nothing yet to make us believe that the proportion of cases of insanity amongst persons who have been thus operated upon is higher than it is amongst the general population who have never had any surgical treatment. And, even if it were higher, the question is after all a relative one: do 97 women out of 100 recovering from an operation which will cure 92 or 93 of them suffer more because a few of them will go insane than if the whole 100 are left to suffer and bleed and die? It is not, as Dr. Keith rightly says, a question of surgery, but a question of humanity; and, if he can cure his cases by electricity, so much the better for humanity. But he gives no proof, and he gives no details of his marvellous methods, methods which must be vastly different from and very superior to those of Apostoli; and until he does so the assertions about electricity are no more than words.

CLINICAL NOTES ON LEPROSY.

By JAMES J. L. DONNET, M.D.,
Inspector-General of Hospitals and Fleets; Honorary Surgeon to the Queen.

The following summary of cases of leprosy—anæsthetic and tuberculous—may prove interesting at this time, when the public mind—earnest in its anxiety—is using its every endeavour towards alleviating, if not stamping out, this loathsome disease.

These cases were observed in Lisbon at the Hospital of San Lazaro in the years 1866-67, during my administration as medical officer in charge of Her Majesty's Royal Naval Hospital established in that city.

This Lazar hospital is dependent upon the large hospital of San José, and is set aside for the reception, treatment, and segregation of leprosy. The two types which are seen in this hospital are those of lepra anæsthetica and lepra tuberculosa. The first is known to the Portuguese by the name of gafeira, the last by that of morphœa.

The cases are as follows:—

Case I. September, 1866. *Lepra Anæsthetica.*—M. J. G., aged 38. Born in the province of Minho in 1828. Has lived for the last twenty years on the seaboard of Lisbon as a vintner. His diet has been of a varied nature, using flesh meat frequently. Both parents are living. Neither they nor any of his brothers or sisters are affected with leprosy. Remarked a scaly eruption of his skin shortly after his arrival in Lisbon. In the year 1857 he experienced for the first time a difficulty in the use of his hands; the left little finger became stiff, and stiffness of the other fingers of the left hand followed. The right hand shortly after became affected in the same way. The muscles of both hands, especially of thumbs, have shrunk in size, the fingers are flexed, and cannot be extended under the use of a moderate force; the integuments are thickened at the joints of the fingers; the fingers are dwindled in size, and their distal extremities are being absorbed; the nails have somewhat shrunk, are adunque, and of a dark hue. The sensibility of both hands, of wrists, and of part of forearm is lost; the elbow is still sensible when touched. Ankle joints are stiff; the integuments of the arch of the feet are thickened. Hair of head plentiful, that of eyebrows and eyelids fast disappearing; the lower eyelids are drawn downwards, and are with difficulty closed; they seem glued to bone. Fauces red; respiration and deglutition easy. Was never vaccinated; has had small-pox twice—when an infant and again at the age of 5. Never had syphilis, but has suffered from gonorrhœa. Has been six years in San Lazaro.

Case II. September, 1866. *Lepra Tuberculosa.*—F. T., aged 32, native of Estremadura. Has been living in Belem, near Lisbon, for the last six years, five years and a half of which he has been in San Lazaro. Was educated for the Church, delivering lectures at different colleges whilst thus preparing. Father and mother living, both in good health. Family consisted of eight; the two youngest are the only ones affected with leprosy, he being the elder of the two. Has the disease in the tubercular form, whilst his younger brother has it in the anæsthetic. None of the collateral branches of the family are in any way affected. Is temperate and regular in his habits; never had any more serious illness than measles when young. It was in the year 1856, being then 22 years of age, that he fell subject to a severe cold, which affected and obstructed his nasal respiration, and deadened in some measure his olfactory sense. About this time there appeared a small tubercle on the free edge of the upper eyelid, for which he consulted a surgeon, who excised it. It, however, returned, and others of a similar tubercular nature followed on legs, eyebrows, and hands. These swellings made their appearance all about the same time, gradually enlarging until they attained the size now observed. The sensibility of the skin is only diminished on the tubercle and where the skin is thickened; the tubercles being insensible to the prick of a pin. The sense of touch is not affected, for with his hands he can accurately ascertain the form, the degree of heat, of hardness and softness of any and every article he examines. The hands and fingers have the appearance of being affected with chilblains; when allowed to hang they give to the patient a sense of leaden heaviness. They are sensitive to both heat and cold. Eyesight entirely gone; there is a deposit of plastic lymph between the layers of the cornea; sense of smell is sometimes entirely absent, but when a free discharge takes place from the nasal cavity sense of smell becomes perfect, and respiration is rendered easier. The patient explains this by saying that tubercles form within the nasal cavity, grow, break, and scab over, the sense of smell is then lost by the pressure made by the scabs on the extreme filaments of the olfactory nerve; but when the scabs are thrown off and a free discharge follows, the nerves, being free, reacquire their power. The salivary glands are swollen, the saliva is secreted abundantly during the day, whilst at night, from the respiration being effected exclusively by mouth, it is dried up, giving a sense of parchness and dryness very distressing. Tongue large and chapped. Pulse slow, 65 per minute. Where the skin is thickened it is of a dusky hue. Hair of head thin; none on eyebrows or eyelids; it is fast disappearing from face and shins, but is natural in both axillæ and pubes. He is puzzled how to account for the causes which originated the disease in him; if not to the cold he contracted at the age of 22, he

knows of no other reason; for, with the exception of the Fridays and Saturdays and fast days throughout the year, he has used flesh meat as his ordinary diet, has lived generously, temperately, and used life, never abusing it.

CASE III. 1866. *Lepra Tuberculosa.*—D. F., aged 22, born in Certao Beira Baixo. Has been seven years in Lisbon, six years in San Lazaro; father and mother are living and healthy; employed as an agricultural labourer; of eight children (four boys and four girls), four have become victims of leprosy; two alone are now living; he is one of the affected now surviving; a female cousin of his father's, who died at the age of 60, became affected with the disease in the latter years of her life. At the age of 15 he came to Lisbon to learn the trade of a shoemaker, but, becoming soon after affected, he was unable to follow it out. He tended sheep up to that age, and lived chiefly upon bacalhao, sardines, or salted tunny fish. It was only after coming to Lisbon that he was able to indulge in flesh meat. Never was affected with any disease except scabies, which sulphur soon cured. He had only been a year in Lisbon when his attention was drawn to a tubercular growth which made its appearance on the ankle of the left foot, which would have had but little significance had not others soon followed on different parts of his body. The skin of forehead and face now thickened, and a year after the integuments of hands enlarged. The face is interspersed with knobs of a dusky hue, the cheeks are swollen, the furrows from alæ nasi to corners of mouth are deepened, the nose flattened, the nostrils broad, upon their edges are several tubercles, some ulcerated and discharging, others scabbed over and dry; lips thick, projecting; the lower lip hangs; ears thickened, the lobes more especially, the conchæ are contracted. Sight of one eye endangered by a deposit on cornea; the upper eyelid of this eye is thickened and hangs, giving the appearance of one affected with ptosis. Hands thickened as if by chilblains. No sense of itching of tubercles. Respiration difficult and labouring, as if endeavouring to overcome some obstruction in the air-passages. Mouth dry at night. Salivary glands not affected.

CASE IV. *Lepra Anæsthetica.*—M. M. R., aged 68, native of Cinco Villas, near Coimbra, a shoemaker by trade; has been fifty-four years in Lisbon, sixteen of which have been passed in San Lazaro. When 21 years of age he was affected with a scaly form of disease, which, however, gradually disappeared, leaving no sign of its existence behind. It was when the skin became free that he experienced a sense of numbness of the left hand, followed by a gradual diminution of its size. A year elapsed when the left foot fell under similar conditions of loss of sensibility and of size. Again, after a year—that is, two years after the numbness of the left hand, the right hand became similarly affected. Both hands are now contracted; their phalanges have been partly absorbed, and have much decreased in length; the joints of fingers are stiff, the original nails have fallen, and others distorted in shape and size have taken their place; muscles of the hands atrophied. No tubercles are to be found on any part of the body. Hair of head and other parts natural, excepting the shins and the backs of both hands, which are denuded of hair. The lower eyelid of right eye is drawn downwards and does not meet upper, leaving a portion of the globe of the eye exposed; lachrymation of this eye is constant, whilst that of the left is natural. Respiration free; general health good. His feet are partially atrophied, the toes flexed and diminished in size; they bear some resemblance to the forcibly contracted foot of a Chinese lady. This case is likewise mentioned by Dr. da Silva Beirao, in his *Memoria acerca da Elephantiase dos Gregos*, 1854.

CASE V. *Lepra Tuberculosa.*—A. G., aged 39, born in the island of Pico (Azores) in 1827; five years in San Lazaro. From the year 1843 to 1845 he worked as a jeweller in the city of Rio de Janeiro (Brazil). Left the city to hawk jewellery in the town of Campos, 150 miles inland. Father, mother, brother, and sister now living, and are free of the disease. Never had constitutional syphilis, though he had been the subject of gonorrhœa more than once before 1851. He suffered much from general itching of the body during this year; it was followed by a scaly eruption of the skin, tubercles then made their appearance on arms, chest, thighs, and finally on face. The disease progressed in spite of all treatment; the tubercles on face have the appearance of huge folds of corrugated skin, which to the touch seem as if they contained fatty matter; he feels them sensible when thus touched by hand, but experiences no pain when pricked by pin. The epidermis of hands is furfuraceous, and the scales frequently peel off. No hair on head, eyebrows, eyelids, nor face, nor is there any on axillæ or pubes. Cornea nebulous, vision lost. The tubercles on nose are ulcerated and discharge. Respiration difficult, irregular, and at times much oppressed; nasal apertures contracted by tubercular deposit. The skin of forehead, of lips, and chin is furrowed by the deposition of leprous matter. Hands are large, skin on their back thick and in folds; in the palms it is scaly; the nails have a scabby appearance, and peel; sensibility of both hands almost entirely gone; sufficient remains to enable him to distinguish by touch the form of objects and the degree of their heat. He speaks of his general sensibility as being asleep. There are several tubercles on tongue, and likewise on the mucous membrane of the buccal cavity; mastication is by them rendered difficult. He is a married man; his wife and his two children are free of the disease which afflicts him. The colour of the tubercles is like that of the surrounding skin. He attributes the disease to a cold contracted by a checked perspiration. He has always lived well and generously, living on a flesh diet.

CASE VI. September, 1866. *Lepra Anæsthetica.*—M. J. C., aged 52, born near Alhandra, at Villa na Ruda, in 1814; has been two years in San Lazaro. Is a servant and general labourer. Has been married three times; his first marriage was celebrated thirty years ago. Both his father and mother died of yellow fever during the fatal epidemic of 1857. An elder brother of his, who died four years ago, was affected with the same form of leprosy under which he himself labours, and had lost all the fingers of his hands and the toes of his feet. The chief article of diet of both, when young, was fish; was never vaccinated; has had small-pox; never suffered from any form of syphilitic disease. After exposure to cold, sixteen years ago, when perspiration was checked, he experienced an itching of both legs, which, troublesome, was followed by small ulcers appearing on legs, of such a nature and extent as to incapacitate him from work. His hands shortly after became contracted, and their muscles underwent atrophy. The cartilage of the nose is now partly gone, the opening into nasal cavity contracted, rendering nasal respiration difficult. Respiration effected chiefly by mouth, which, from this circumstance, is as a rule dry. The alveolar processes of front part of upper maxilla are partially absorbed, and the incisors have fallen out; the upper lip unsupported falls. No hair on eyebrows nor on eyelids, whilst the hair of the head, beard, axillæ, and pubes is natural. At the commencement of the disease several tubercles appeared; there are none now.

CASE VII. September, 1866. *Lepra Tuberculosa.*—A. Z., aged 36, born in Santa Iria, three leagues from Lisbon. Has been an inmate of San Lazaro for the last seven years. His occupation had been that of hawking fish; purchasing it in Lisbon, and selling it at Santa Iria. His diet consisted chiefly of fish. His mother and three married brothers and their children are all healthy; his father alone, now dead, was subject to the same form of tuberculous leprosy under which he is suffering. In a population of 700, he and another are the only ones affected with leprosy, with this distinction, that whilst he has it in the tubercular form, the other has it in the anæsthetic. He is intelligent and observant. He remarked, some sixteen years ago, the appearance of several tubercular swellings on forearm and leg; and after the lapse of a year, others which affected the face and other parts of the body. Two years after the declaration of the first symptoms, the hair of eyebrows, eyelids, of forearms, and legs commenced to fall off, whilst that of other parts of body remained intact; the eyebrows are now entirely denuded of hair, whilst eyelashes are gradually disappearing. The skin is thickened, in patches, of a liver colour, and is insensible when pricked with a pin; the tubercles are flattened, not knobby. Both sight and hearing good, nose flattened, nasal apertures contracted; lobes of ears thickened. Tongue red, chapped, slightly ulcerated at tip; part of soft palate ulcerated away; deglutition painful. Expectoration, mucous and abundant, sometimes streaked with blood. Respiration short, and at times hurried; he has a large throat cough. Breath tainted; lungs sound; never had syphilis. Hands contracted, their muscles atrophied, the skin covering them insensible when pricked; but where ulcerations obtain the application of lunar caustic occasions much pain. Nails displaced by the swelling of the fingers. Has several open ulcers on both feet; toes entire, sensibility less in hands than in toes. Though vaccinated, has had small-pox.

CASE VIII. *Lepra Anæsthetica.*—F. M, aged 64. Born in Casal Gudia, Malta. Has been thirty-four years in Portugal; his occupation has always been that of a labourer in the fields. Sixteen years ago, after having suffered from general debility for seven

previous years, he remarked that small tubercles made their appearance on the eyebrows; at the same time he experienced a loss of sensibility of the hands, together with a loss of power over their movements; he likewise felt they were stiff. Shortly after the fingers contracted and the muscles of the hands gradually atrophied; he has now lost the use of his hands. It was about two years ago that his vision commenced to fail him. At present all sight is gone; the eyeballs look like two masses of movable granulation; these masses are seemingly insensible, as he is unconscious of the many flies that settle upon them. Skin of face is smooth and, excepting eyebrows, is free of tuberculous growth or thickening; no hair on eyebrows nor eyelids. Both hands and feet are contracted, though no portion of them is lost. Respiration at times difficult. His diet has consisted chiefly of fish.

Case ix. September, 1866. *Lepra Anæsthetica.*—E. M., aged 28. Born in Lameirao, seven leagues from Coimbra. Never vaccinated. Had small-pox when 8 years old; never had syphilis. Has been an inmate of San Lazaro for the last three years. Has lived chiefly on a fish diet, sometimes, but rarely, indulging in a meat diet. Lameirao, his native place, has a population of 150; for the last ten years there have been in it but two cases, a woman and himself. None of his family nor any member of its collateral branches had been the subject of leprosy. Ten years ago, when returning from his work in a state of perspiration, he drank cold water at a fountain by the roadside, was chilled, and was laid up with some affection of the chest, and so weakened was he by it that he never recovered the strength he had before. About six years ago he experienced numbness of the small finger of his left hand, which was soon followed by similar numbness of the other fingers of this same hand, and by a contracted state of these fingers; numbness of the fingers of the right hand was now felt; contraction followed, and both hands became useless. His intellect is bright and his perception quick. Left eye is inflamed, its vision dim. Hair on eyebrows and eyelids is fast disappearing; skin of eyebrows and cheeks furfuraceous, and, where so, colour is of a dusky hue. Cartilage of nose depressed, nasal orifices contracted. Respiration laboured. Prefers cold to warm weather. Legs are swollen, but do not pit on pressure. Skin of legs of a dark hue, scaly in parts; several cicatrices of old ulcers are met with on them. Never had any tubercles on any part of the body. He labours under a sense of great lassitude, which disables him from all manual work.

Case x. September, 1866. *Lepra Anæsthetica.*—A. L., aged 52. Born in Adanay, near Alhandra; five years in San Lazaro, a labourer. Several of the members of his mother's family have suffered from both forms of leprosy (morphœa and gafeira); none of his father's family. Never vaccinated. Had small-pox at the age of 14. Has had scabies, measles, scarlatina, and ague, but no syphilis. He was freely bled when suffering from scarlatina. He attributes his present state to the loss of blood he then sustained, for it was very shortly after this loss that numbness of the hands appeared. The phalanges of both hands have been absorbed; the truncated palms alone remain. He states that he frequently wounded his fingers with tools he was in the habit of using without being conscious of what he had done; the wounds enlarged, fingers then contracted, and finally disappeared. Vision of right eye weak; deaf of left ear; hair of head, of eyebrows, and eyelids natural; sensibility of hands, of forearms, of legs, and feet almost *nil.* Several of the toes are absent. Skin over body furfuraceous. Never had any tubercle. Is intelligent, perspires much, and is very weak; he nevertheless attempts and does some little work.

Case xi. January, 1867. *Lepra Anæsthetica.*—J. J. F., aged 30, housemaid. Born in Alcavadre, in Conceiho de Leiria, four leagues from Thomar. She has lived nine years in Lisbon, five of them in San Lazaro. Her father and her brother were affected with morphœa, whilst she and her sister (Case xii) suffered from gafeira. She was 14 years old when her father commenced to show symptoms of disease in himself; so that if we admit her leprosy to have been due to hereditary transmission, the germ communicated must have had existence in the father's system at the time of conception, and, consequently, must have lain dormant for fourteen years at least in himself, as the leprous symptoms in him only manifested themselves after that lapse of time. In her the disease first appeared when in her 24th year; the hands became numbed, stiff, contracted, and partly shrunk; though thus mutilated by the disease, she is able to thread a needle and sew. Her diet, when at home, consisted chiefly of fish, and that bacalhao or sardines.

Case xii. January, 1867. *Lepra Anæsthetica.*—F. F., aged 24, housemaid; sister of the above. When 18 years of age she remarked her legs to swell, the skin of them scaly, and ulcers to break out. Hands have lost much of their sensibility; hair of eyebrows and eyelids gone. Diet chiefly fish, like that of her sister's. She was bled freely when symptoms first made their appearance; to this loss of blood she considers the disease attributable. The mother of these sisters never suffered from any skin disease.

Case xiii. April, 1867. *Lepra Anæsthetica.*—J. D., aged 30, labourer. Born in Alcoentre. Admitted into San Lazaro February, 1867. Father died twelve years ago, at the age of 70; mother, aged 60, is alive; neither suffered from any leprous complaint. He is the first and the only one of his family affected with the disease. Diet chiefly fish; seldom has tasted flesh meat. Has had small-pox, measles, and scabies. When 12 years old he suffered from a severe cold, from whence, whilst recovering, he observed stiffness in both hands, which shortly afterwards became contracted. Eyebrows and eyelids denuded of hair. Sight of both eyes lost; on each cornea a tubercle protrudes; both eyes inflamed, the right suppurating. Hands and feet contracted, their muscles atrophied. In both hands the anæsthesia obtains to one inch above wrists; forearms and arms are sensible to touch. Respiration sometimes short; hearing good.

Case xiv. April, 1867. *Lepra Tuberculosa.*—B. V., aged 24, servant. Born at Orense, in Galicia. No member of his family has ever been affected with either morphœa or gafeira. Came to Lisbon in 1840, and was employed as servant, water-carrier, and cook. In 1850 contracted syphilis, and, whilst under treatment, caught cold; to this affection he attributes his present disease. In 1852 he married, but never had children. In 1854 he went to Brazil. About this time he remarked that the hair of eyebrows and eyelids was gradually disappearing; tubercles then made their appearance on eyebrows and cheeks; as they enlarged, they became of a dusky hue. The hands, œdematous, are useless for any practical purpose; skin dark, fingers ulcerated; voice hoarse, deglutition painful; soft palate thickened and ulcerated. Believes that were he supplied with more food he might be cured, for he remarks that, with insufficiency of food, the malady makes more rapid progress. He is anxious to use an external embrocation made by heating a quart of olive-oil in which a toad recently taken is immersed, and reducing it to the quantity of a pint, when it is fit for use. He spoke of one who had been cured by it, whose address he gave me, and whom I visited, but could not, after examination, confirm his glowing statements as to the beneficial effects of this application.

Case xv. April, 1867. *Lepra Tuberculosa.*—A. F., aged 40, agricultural labourer, unmarried; born in the environs of Coimbra, five leagues from the Atlantic. None of his family are affected with the disease; never knew of anyone in his own village having the disease; remembers only to have seen it in a district some distance from his village. Diet has chiefly consisted of bacalhao, sardines, and vegetables. Has been twenty-four years in Lisbon working as labourer. Has suffered from the disease for the last seven years. Cannot assign any cause for its appearance. His face, ears, nape of neck, and upper part of throat are covered with tubercular masses; these tubercles are large, prominent, and pedunculated; they are unlike the tubercles generally observed, which lie upon the skin in little mounds, their base being broadest. Ears large, conchæ contracted, almost closed by the pachydermatous thickening of the tissues; the helices and lobes are monstrous; some of the tubercles on the nape of the neck resemble a flattened bunch of grapes—as if in basso-relievo. Throat painful, voice hoarse, coughs when speaking. Breath much tainted; eyesight weak, tubercles from eyelids hang, obstructing what sight he has. Is subject to headaches. Face covered with tubercles; eyebrows, eyelids, and lower lip thickened by them. Skin of abdomen thickened and in folds—all these masses are of a dark, dusky colour. Soft palate ulcerated. Eyebrows and eyelids bereft of hair.

Case xvi. April, 1867. *Lepra Tuberculosa.*—A. G. P., aged 47, servant, born in San Guillon de Freixa, in the Minho. Has been thirteen years in Lisbon. Has had constitutional syphilis. None of his family have ever been affected with leprosy. His diet has consisted of fish and vegetables, seldom touching flesh meat. Suffered from ague for five months when 28 years of age; never afterwards regained his former strength; he then became subject to flushings of the head and face, which for one year distressed him greatly; tubercles then appeared on eyebrows and

other parts of body, increasing by time in size and number. Face is now studded with tubercles; the skin is puckered in folds, which gives a bloated appearance to the features; when these folds and tubercles are handled they feel like masses of adipose substance. Ears are not affected. Conjunctivæ of both eyes congested and thickened; eyesight weak. Though the soft palate is ulcerated, voice is clear, and talking does not distress him. Anæsthesia of skin of hands and part of forearms and of lower limbs as high as knees. No hair on eyebrows or eyelids.

CAUSES.—Several have been the factors assigned as causes in the generation of this disease; among them a special and exclusive diet, heredity, contagion, and endemicity have held the first place. The majority of the subjects whose cases are related above had lived on the seaboard of Portugal, or at no great distance from it, using fish as their chief diet, seldom indulging in the use of flesh meat. To this exclusive article of diet the majority attributed the disease, and many a thinking mind, both lay and medical, strengthened by the evidence which came before them, inclined towards believing that in fish —and in salt fish especially—there lurked some element which, under certain predisposing conditions, effected an inroad into the system, and elicited the symptoms such as are witnessed in leprosy. They observed that in those districts where flesh meat was readily and cheaply obtained, there the disease had little hold. In Alemtejo, for example, where pork is in general use, neither morphœa nor gafeira is known.

A very large quantity of salt cod-fish (bacalhao) is yearly imported from Newfoundlamd, which, from its cheapness and quantity is used largely by the people of Portugal. Besides this, salt cod, sardines, salted tunny, and other salted fish are used likewise. All classes—rich and poor—among the Portuguese eat fish on Fridays and Saturdays throughout the year.

The question of heredity is adopted by some, denied by many; for so strange and eccentric are the modes and manner of transmission that hesitation takes its stand at the threshold, and fails to accept it as the "*vera causa*" of the disease.

The experience which has afforded so many and such startling instances in what has been witnessed in the island of Molokai (Sandwich group) goes much towards establishing a belief in contagion by microbian transmission. If we admit the existence of a microbe as cause and not effect of the disease, we may find a *raison d'être* for the manifestations observed in the discovery of the "bacillus lepræ" made Dr. Armauer Hansen.

Endemicity is only found in localities where leprosy is already in existence, as in villages in the colonies set aside for the reception of lepers. When therefore communicated it is due not to any endemic peculiarity attached to the soil, but to the presence of a leprous person, and therefore takes rank with contagion.

Of the above sixteen cases, nine presented symptoms which characterise the anæsthetic type, whilst seven offered those of the tubercular. These two types are unlike; the symptoms they present differ materially one from the other. For in one (lepra anæsthetica) we observe a greater loss of æsthesia; a contraction and loss of fingers and toes, and an atrophy of the muscles of both hands and feet. The nasal cavity, the openings of the pharynx and larynx are contracted and in such guise as to implicate respiration, and thus threaten life. Whilst the anæsthetic is thus characterised, the lepra tuberculosa on its part is marked by a generation of successive tubercular growths over part or whole of body; by a corrugated and thickened state of the skin, by a loss of the hair of the head and of other parts of body. Both are termed leprosy, but symptoms obtain in one which differentiate it from the other. These marked differences are met with in individuals composing one and the same family; for while one member is affected with the symptoms of the anæsthetic form, another evinces those of the tubercular.

On investigating and probing the different circumstances which influence the protean forms that occur in one and the same family, we are at a loss to account for the difference. Both are the issue of the same parents, both have lived under the same hygienic conditions, and on an exclusively fish diet, both have been subjected to factors of similar nature and powers, yet, when affected, each expresses the disease in his person differently.

It naturally occurs to the mind that where two diseases obtain, with characteristics individualising each, there must be at work separate and distinct factors to create the differences which offer in each. We have observed a body of men encamped in malarious districts, subjected to similar conditions of exposure, of food, of position, and of work, falling victims at the same time to distinct and separate affections, as dysentery and remittent fever, and we could not but bring ourselves to believe that two distinct causes were in operation at the same time; one attacking the liver and intestinal canal causing dysentery, the other using its full force upon the corpuscles of the blood and making rude advances upon the parenchyma of the spleen, declaring itself remittent fever; both in action at the same time, both however inducing different results.

In so speculative a science as that of medicine, dogmatic assertions can find no place, for when ventured upon, scepticism steps in, leavens the mass, and shrouds with doubt every postulate assumed. Nevertheless, bacteridian histology has of late years made such gigantic strides, and with steps so firm, that there now obtains a tendency towards accepting its conclusions as a reason for the existence of the many specific diseases which fall under observation, and of giving importance to the existence and presence of microbes as the *fons et origo* of these specific diseases. Yet in so pronouncing and accepting this theory, we cannot help indulging the hope that—when histological research is pushed to a final and logical conclusion—the causes in operation which result in the dissimilar and different manifestations we now witness in the anæsthetic and tubercular forms of leprosy may be found to be different in nature, as different and as marked as those which distinguish typhus from typhoid fever.

There is some reason to believe that the anæsthesia which distinguishes these two forms of leprosy is due to the choice of place of the deposited lymphoid matter; in the anæsthetic the interstices between the nerve fibre in the site pressing, by its presence, upon the nerve, and impairing its function; in the tubercular it elects the swellings themselves.

Some have believed to have found a resemblance with scurvy in the plastic deposit, the fœtid breath and livid colour of the skin, for in both scurvy and leprosy these symptoms obtain, but this seeming analogy is set at rest when the history, the cause, and the progress of each disease are studied and observed.

Treatment.—In the treatment of this disease the hygienic, the dietetic, and the palliative had more influence than the therapeutic. Where the cleansing of the skin by baths could be effected; where soothing or stimulating applications were made to ulcerated surfaces and to skin, to allay the distressing symptom of prurigo; where good and abundant food was given, fresh air obtained, and exercise without fatigue taken, with attention to full ventilation of inhabited rooms, where measures were adopted to afford recreation and gentle excitement, and thus divert the mind from the disease itself, a marked difference and a decided improvement were the consequence. Under these influences the disease made little advance. But it is one that follows a determined course, rapid in some, more dilatory and seemingly stationary in others, but never retrogressing, always advancing.

Where drugs were administered internally, I remarked that only those possessed of dietetic properties—as for example, cod-liver oil—were of any value. Mercury, arsenic, iodide of potassium, assacú (obtained by incisions into the bark of the *hura brasiliensis*), ammonia, and other preparations, each acted on the system, *modo suo*, but not in the measure or way hoped for.

It was observed that man and wife, having no apparent disease upon them at the time of conception, having begotten a healthy family, have, nevertheless, towards the decline of life, fallen victims themselves to the disease, their children never manifesting any symptom at any time of their life. Married couples, free of leprous disease, have given birth to children who afterwards became lepers. Parents, perfectly free of all leprous taint throughout, have given birth to children in whom, at a later period of their lives, leprosy has declared itself. Instances of the disease have occurred in one family where it assumed different forms, one taking the form of morphœa, another that of gafeira. The disease has declared itself in a member of a family perfectly free, together with its collateral branches, of all leprous affections.

Though in former days Egypt was accredited with having originated the disease, as Lucretius in the sixth book of his *De Rerum Naturâ* says:

> Est elephas morbus qui propter flumina Nili
> Gignitur Ægypto in mediâ neque preterea usquam.[1]

we find it in existence over the world, and, unfortunately, in great numbers in the lands which acknowledge British rule; in the West Indies, in Mauritius, and Seychelles the disease is found. In 1866 in India, with a population of 210,767,504 there were 124,924 affected with leprosy.

[1] Lib. VI, v, 1113-4.

The causes of the origin, the progress and the mode of propagation being in great measure known to us, we possess a remedy at hand, which, if carried to its legitimate ends, will result in immense good. I do not mean by this that a law similar to the ancient law of Epirus should be called in requisition to restrict or suppress it; but, by a system of precaution, of segregation, and by regulations influenced and dictated by a spirit of Christian charity—a duty imperative upon England—a certainty may be arrived at, and a means found by which this loathsome disease, if not wholly stamped out, will meet with so effective a check, and be so controlled, as to soften down the ravages it now makes, and curb the facility of its propagation.

SUMMARY OF THREE LECTURES
ON
TRANSFUSION:
ITS
PHYSIOLOGY, PATHOLOGY, AND PRACTICE.

Delivered at the Royal College of Surgeons.

By WILLIAM HUNTER, M.D., M.R.C.P., M.R.C.S., F.R.S.E.,
John Lucas Walker Student in Pathology, Cambridge; Arris and Gale Lecturer, Royal College of Surgeons.

Lecture III.

The respiratory as well as the hæmogenic value of transfused blood is subject to the same conditions, and depends on the same two factors—(1) the quantity of blood transfused, (2) the nature of the blood destruction in progress at the time of the transfusion.

The greater the quantity of blood transfused, the longer are red corpuscles likely to remain within the circulation, and the more likely is their hæmoglobin and the iron it contains to remain within the system. Over this factor, however, we can exercise but little control. The quantity of blood transfusible in man can rarely be more than about 5 per cent. of the quantity of blood already in the body. And the life-duration of the red corpuscles under such circumstances is probably to be reckoned by a period of hours.

Of far more importance as a factor is the nature of the blood destruction at the time of the transfusion and subsequent to it. The more the blood destruction is "active," the shorter is the life-duration of the red corpuscles; and how active this may at times be is evidenced by cases in which the transfusion is followed almost immediately by rigors, fever, and the appearance of free hæmoglobin in the urine. There are certain forms of anæmia in which excessive blood destruction is the essential feature, and these from their very nature are certainly unsuitable for transfusion. We shall presently see that it is possible for us to recognise by certain clinical features the nature of the anæmia we have to deal with, and in this way to avoid the operation of transfusion under circumstances that would probably render it of little, if any, service. In addition to these pathological variations, the activity of blood destruction is, as we have seen, subject to certain physiological variations chiefly having relation to the ingestion of food; and this factor it is in our power to some extent to control by having regard both to the quantity and quality of food subsequent to the transfusion. Our object would be best attained by withholding food altogether, in this way rendering blood destruction, as far as possible, "passive." In any case the food should be as little nitrogenous as possible, since a nitrogenous diet undoubtedly increases blood destruction more than a simple carbohydrate one.

Physiological Action of Sodium Phosphate.

It is by interfering with this—what may be regarded as the primary—indication in transfusion, namely, to reduce blood destruction to a minimum, that the use of sodium phosphate for purposes of transfusion to prevent coagulation of the blood is attended with certain disadvantages that require here to be noted. First recommended now some years since by Dr. Braxton Hicks and Dr. Barnes, the use of this salt has recently been revived, apparently with much success, in the hands of Mr. Cotterill, Dr. John Duncan, and others.

This practice of mixing the blood with saline solutions before injection, and in this way getting rid of certain of the dangers incidental to the operation, is based on an assumption that is as erroneous as it is widespread, namely, that the behaviour of salts, poisons, etc., on the red corpuscles outside the body affords any clue to their probable behaviour on the blood after their injection. The conditions of an experiment outside the body and those existing within the body are entirely different. Outside, the conditions are physical; we mix the blood with the solution whose action is being studied, and allow the red corpuscles to remain at rest, and in contact more or less prolonged with the substance whose action is being studied under conditions that are entirely without parallel within the body. Within the body the conditions are physiological: the blood is constantly in rapid circulation; all the processes, including the process of blood destruction, are the result of the activity of cells, and may be modified in many ways by the action of the drug introduced.

The facility with which blood can be withdrawn from the body, and the action of drugs on its corpuscles studied, has led to many erroneous conclusions regarding the behaviour of various drugs on the blood. The following observations may serve to emphasise the above conclusions:—I have found a $\frac{3}{4}$ per cent. solution of sodium chloride to cause red corpuscles to break up and disappear in the course of twenty-four hours, while the same solution, after the addition of toluylendiamine in the proportion of $\frac{1}{2}$ per cent. to 1 per cent., preserved them intact for several days. The two observations were made at the same time, and the conditions were precisely the same in both.

Nevertheless, the injection of the simple saline solution into the circulation, even in the largest quantities, is harmless, while the injection of a few cubic centimètres of a 1 per cent. solution of toluylendiamine causes a most marked destruction of the red corpuscles, accompanied, it may be, by jaundice, hæmoglobinuria, or even death.

The bearing which these observations have on the value of the practice of injecting sodium phosphate with the blood transfused will be evident. Its behaviour towards the corpuscles outside the body affords no criterion of its probable behaviour after injection. In all cases bodies so introduced are in the position of foreign bodies. Their action will be harmless only on one condition—namely, that they affect in no way the activity of the cells of the blood on the one hand, or of the blood organs on the other. My observations show that in the case of sodium phosphate this condition is not fulfilled.

In every instance in which the salt was injected along with the blood, the subsequent blood destruction was of a more active character than that observed after transfusion of pure defibrinated blood alone, although the conditions of the experiments were precisely the same in all cases. (Fig. 14.) The evidence of this more active destruction was, in addition to the shorter life duration of the corpuscles as determined by enumeration (Fig. 14), of a twofold nature: 1. The presence of iron in the liver in larger amount than was ever observed in any experiment in which blood alone was transfused, the pigment in which this iron was contained being found in the situation most characteristic of excessive blood destruction—namely, within the liver cells; and (2) an increase in the colouring matters of the fæces pointing to an increased formation of bile pigments.

Clinical evidence of a similar change in the character and amount of the bile excreted after transfusion is, I believe, afforded by an interesting case recorded by Dr. Halliday Croom.[1] On the day following transfusion of a mixture containing $5\frac{1}{2}$ ounces of blood and $2\frac{1}{2}$ ounces of a 5 per cent. solution of sodium phosphate, there was a well-marked attack of jaundice. It is possible that the occurrence of the jaundice subsequent to the transfusion may have been a mere coincidence, but recent observations tend more and more to establish the importance and frequency of that form of jaundice depending on increased destruction of blood, sometimes termed "hæmohepatogenous," but whose essential feature, I believe, may be best described by terming it "hæmolytic." By far the best example of this form of jaundice is that so frequently met with in pernicious anæmia. The sudden onset of the jaundice in the above case after the transfusion, as well as its brief duration (it began to fade at once, and had disappeared at the end of a week), points in all probability to a causal connection of this kind between it and the injection.

The use of salts for purposes of transfusion is, to a great extent, based on the assumption that the composition of the plasma, as regards its richness in inorganic solids, is constantly varying, and that the injection of a little more or less is immaterial. So far

[1] *Edin. Obstetric. Soc.*, June, 1887.

is this from being the case that there is every reason to believe that its composition in inorganic solids remains, consistently with its discharge of great carrying functions, as constant as that of any tissue of the body.

This constancy in composition is most noticeable in the case of chlorides, which form more than one-half of the total percentage of salts in the ashes of the plasma, but it doubtless also applies to the other inorganic constituents. When a rich supply of chlorides is given in the food, the excess is at once excreted by the kidneys.

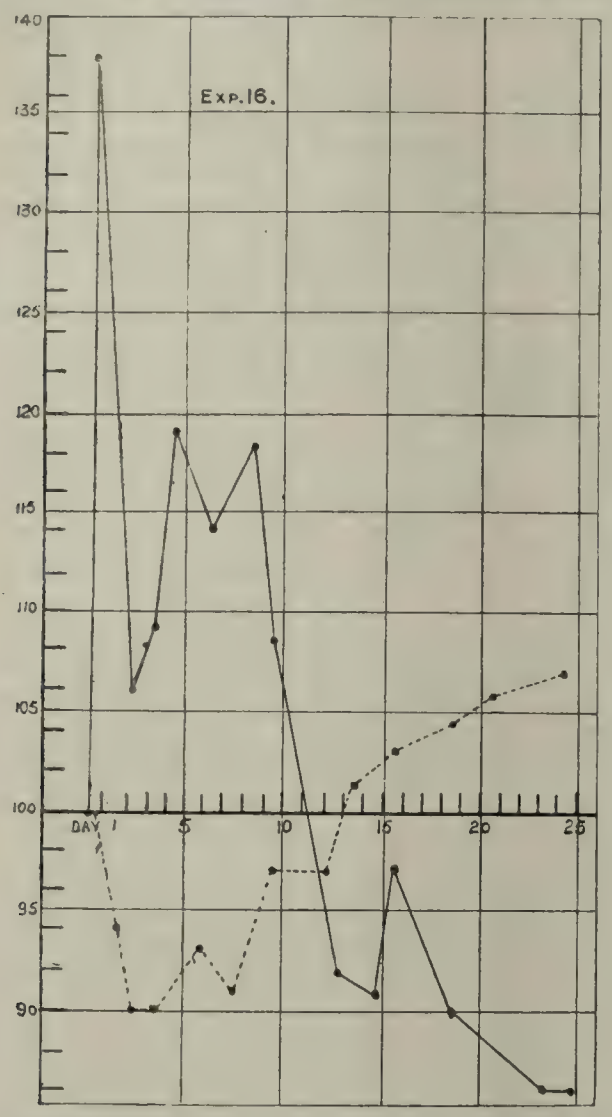


Fig. 14.—Injection of 100 cubic centimètres of blood and 30 cubic centimètres of a 5 per cent. solution of sodium phosphate into the peritoneal cavity of a rabbit, under the same conditions and with the same precautions as in the preceding series with pure and defibrinated blood. Greater quantity of blood transfused. Life-duration of red corpuscles shorter.

When withheld altogether, the percentage in the blood at first falls very considerably, but ultimately rises again to the normal, while the excretion of chlorides by the kidneys falls to a minimum. The difficulty experienced in removing the chlorides from the serum by osmosis, even with the aid of large quantities of distilled water (Hoppe-Seyler), may be regarded as likewise pointing to the same conclusion—namely, that the inorganic solids of the plasma, as of the red corpuscles, are present, not in free form as such, but in combination with the other constituents. They must be regarded, therefore, as constituting portions of an organised structure built up by the agency of cells, and their amount is, therefore, solely regulated by the activity of these cells. This is specially true of the phosphoric acid of the blood, a considerable part of which is derived from the phosphorus contained in lecithin, one of the most complex, as it is one of the most widely spread, organic compounds in the body. It is also true of the sulphates, some of which are derived from the sulphur of proteids. Hoppe-Seyler has, within the last few weeks, shown that even the hæmoglobin of the corpuscles is not present in the corpuscles as such, but is in intimate combination with other organic and inorganic solids.[2]

[2] For independent evidence pointing strongly to the same conclusion, see *Lancet*, ii, 1888, p. 656, where I have described a special variety of hæmoglobinuria characterised by the excretion of hæmoglobin not in free form, but in combination with albuminous constituents of the blood.

The importance of these various facts and observations lies in this, that they point clearly to the conclusion that all salts injected directly into the blood form no part of the blood while present, but are in the position of foreign bodies. They are removed from the blood and excreted from the body with the same rapidity as sugar, peptones, hæmoglobin, and large quantities of neutral saline solutions when similarly injected.[3]

Pathology of Transfusion.

Thrombosis.—Transfusion of blood is an operation at all times attended with certain dangers that fully entitle it to the respect with which it is generally regarded, notwithstanding that the operation is one attended with no great technical difficulties.

Up till 1821, the operation of transfusion consisted in the injection of pure blood. In that year attention was drawn for the first time by two French observers (Dumas and Prévost) to the fact that transfusion of defibrinated blood was equally efficacious in rescuing animals from impending death from hæmorrhage. Their observations were confirmed a few years later by Dieffenbach (1828); but the use of defibrinated blood gained ground so slowly that up till 1860 only 13 cases had been recorded.

The great impetus to its use was given by the researches of Panum (1863). Undeterred by Magendie's experiencies as to the dangers accompanying the transfusion of such blood, Panum advocated transfusion of defibrinated blood to the entire exclusion of pure blood, urging as one of its advantages that large tanks of it could be kept ready for use on the field of battle. These were, in truth, the palmy days of transfusion.

The disturbances noted by Magendie following the transfusion of defibrinated blood were chiefly the appearance of blood-stained froth at the nose and mouth, œdema and congestion of the lungs, subpleural hæmorrhage, swelling and congestion of the mucous membrane of stomach and intestine, with occasionally the presence of blood in the fæces, and were ascribed by him to an alteration in the viscosity of the blood from the removal of the fibrin. Panum met with similar changes in a number of his experiments; but he attached no importance to them, considering them merely as the result of the rupture of certain of the capillaries from increased action of the heart after the transfusion. Ponfick and Landois, who also met with them, explained their occurrence in different ways; the former regarding them as the result of irregularities in the mode of injection, the latter as the result of blocking up of certain capillary districts with "fibrin-stroma"—the stromata of the injected corpuscles—and the subsequent rupture of adjacent capillaries. None of these explanations serve in any way to account for these various pathological changes.

With regard to the last one more particularly it may be noted that it is possible, as I have found, by means of destructive agents injected into the blood, to reduce the greater number of the red corpuscles to the form of stromata, and to have them circulating in the blood for days without producing any of the disturbances which may sometimes be caused by the injection of a few drops of blood.

The observations that threw most light on the true nature of these disturbances were those of Armin Köhler (1877). The various pathological changes, with their accompanying symptoms, are the results of a widespread capillary thrombosis in various parts of the body, occurring more especially, however, in the capillaries of the lungs and gastro-intestinal mucous membrane, occasionally also in the mesenteric veins and mesenteric glands, sometimes throughout the entire blood vascular system.

The conditions favouring the occurrence of this thrombosis are still in great part unknown. Defibrinated blood obtained by allowing the blood to coagulate spontaneously, and then pressing out the clot, was found by Köhler to be much more active in inducing thrombosis than that obtained in an ordinary way by a process of whipping. The great feature of defibrinated blood in all cases, however obtained, is the uncertainty of its action. It is sometimes quite harmless, at other times highly dangerous, this result being entirely independent of the quantity injected or the care taken in injecting it. The same uncertainty in action applies, although perhaps in less degree, to all blood after its withdrawal from the vessels.

Pathological Action of Sodium Phosphate.

Nor is this peculiarity in the behaviour and uncertainty in action

[3] St. Klikowicz. "Die Regelung der Salzmengen des Blutes." *Archiv f. Physiologie.* 1886. P. 818.

of blood affected in any degree by the use of such salts as sodium phosphate.

The two following experiments may serve to illustrate both the harmlessness of such transfusions and also the dangers they may occasionally be attended with. They will at the same time serve to show how entirely independent the disturbances are of any factors such as overfilling of the system of the blood or too rapid injection, the factors so frequently credited with their production.

EXPERIMENT 13.—*Auto-transfusion.* Rabbit anæsthetised with ether. Twenty cubic centimètres of blood withdrawn from one of the carotid arteries into a vessel containing 15 cubic centimètres of a 5 per cent. solution of sodium phosphate maintained at the temperature of the body; immediately allowed to flow back into the jugular vein. The injection completed without the slightest disturbance of any sort arising.

EXPERIMENT 14.—*Auto-transfusion.* Rabbit anæsthetised with ether. Twenty cubic centimètres withdrawn from carotid artery into 20 cubic centimètres of a 5 per cent. solution of the same salt kept at the body temperature. Blood was immediately reinjected into the jugular vein, with the fullest precautions; my object in doing the experiment being to reinject the whole of the blood back into the circulation. Immediately the blood began to flow the animal became restless and uneasy, its breathing more rapid, and it began to struggle. The injection was stopped, and then resumed after a short pause, the symptoms having apparently passed off. Violent convulsions then immediately set in, the breathing became extraordinarily rapid, a large quantity of frothy blood-stained mucus poured from nose and mouth, and death occurred five minutes after the injection had been commenced and after the injection of 7 cubic centimètres of blood (2 drachms).

An examination made at once revealed the following *post-mortem* changes. Both ventricles of heart distended and motionless, the auricles only moderately distended and still beating. A small quantity of serum within the pericardium. The ventricles on being opened began again to beat, and were both found filled with a firm compact thrombus, red in the left, of darker colour in the right ventricle. In both cases the thrombus extended back into the auricles, and could be traced from the left auricle into the smaller branches of the pulmonary veins. The thrombi were not however continuous, but were in isolated portions of more or less cylindrical shape, tapering off at each end. From the ventricles the thrombi also extended foward into the aorta and into the pulmonary artery, and in the former they could be traced as low down as the descending thoracic aorta, where they gradually tapered off.

The lungs were extremely œdematous, especially at their bases, the bronchi and trachea contained much frothy blood-stained mucus. Over the surface of the lungs were numerous bright red subpleural hæmorrhages.

The ventricles began to beat as soon as they were cut open, and the heart only ceased to beat when cut out of the body some ten minutes after death had occurred.

There could be no doubt in this instance as to the significance of the symptoms which preceded death, and the pathological changes which underlay them. The peculiarity of the thrombosis was that it was complete, extensive, and widespread. The shape of the thrombi in the lung showed that thrombosis had occurred independently at different parts, and had not extended out from one centre. The individual thrombi were remarkable for their extreme toughness. Microscopic examination showed that they were specially numerous in the smaller arterioles and capillaries of the lung. The distribution of the thrombosis in the portal system was, unfortunately, not noted.

In the light of these observations the various disturbances so frequently met with during the performance of transfusion acquire a new significance and importance. The sudden gasping for breath, or the quick and laboured breathing, the feeling of tightness and oppression over the chest, or of precordial anxiety, the forcible cardiac action, or the threatened failure of heart and great weakness of pulse, the restlessness and distress from pains in loins and abdomen, with urgent calls to stool, and the vomiting, these and other symptoms are undoubtedly the manifestation of changes in all respects similar to those found in animals under similar circumstances. Köhler, indeed, found that in animals killed while showing similar symptoms of distress, small thrombi could be discovered in the capillaries of the lungs and gastro-intestinal mucous membrane, sometimes in the mesenteric veins.

I have frequently found changes of less degree (numerous subpleural hæmorrhages) after the transfusion of 10 or 20 cubic centimètres of an animal's (rabbit's) blood into its own peritoneal cavity—under circumstances, therefore, that entirely precluded the operation of any factors such as the introduction of air, too hasty injection, or overfilling of the system.

The following cases of Quincke may serve to illustrate the nature of the dangers attending transfusion of blood.

Cases of Pernicious Anæmia.—Arterial transfusion of 85 cubic centimètres of defibrinated blood. Towards end of the transfusion face became flushed and covered with perspiration, followed suddenly by pallor and complete collapse. Heart sounds inaudible; pulse not to be felt. Under influence of irritants and stimulants, recovery, but great complaint of cold during the next three hours, with violent abdominal pains and diarrhœa. Urine passed the same day albuminous, and contained a considerable quantity of free hæmoglobin, with casts. The temperature, which before the operation was 98° F., rose in the course of four or five hours to 102°, falling again in the evening to 98.5°.

In another case (Case XII), in which 50 cubic centimètres of defibrinated blood were injected, the transfusion had to be stopped on account of the feeling of great anxiety on the part of the patient with sickness. Half an hour later there was a rigor, which lasted three to four hours, violent pains in the abdomen, and repeated urgent calls to stool lasting several hours. The temperature, which before was 99° F., rose in the course of two hours to 102.4°, and seven hours later still remained at over 100°.

In a third (Case XV), in which 105 cubic centimètres of defibrinated blood were transfused, there was diarrhœa, and icteric tinge of conjunctivæ became more marked.

In another (Case XVI) transfusion of 100 cubic centimètres of defibrinated blood was followed by giddiness and rigors, pulse rose from 84 to 160, temperature to 102°, and in the course of two hours there were no fewer than six loose motions into the bed, urine became albuminous, and contained free hæmoglobin with numerous hyaline and granular casts.

The use of sodium phosphate along with the blood is not unattended with dangers of similar nature; "unpleasant though evanescent symptoms," great distress from pain in loins, and forcible cardiac action, were observed by Dr. Duncan in a case of pernicious anæmia after the injection of 4 ounces of a mixture of blood and sodium phosphate, and were ascribed by him to the too rapid injection of so much blood at a time "when the quantity of blood was daily increasing." As has been seen, the same train of symptoms may follow the injection of a few cubic centimètres of the animal's own blood, and may be absent after the injection of fluid to the amount of 100 per cent. or 130 per cent. of the quantity of blood in the body (Lesser).

There can, I think, be little doubt that their cause is to be sought in changes in all respects similar to those found in animals—in the occurrence, namely, of capillary thromboses, the pains felt being probably due to spasm. It will be noted how constantly the abdominal pains are met with, usually attended by diarrhœa more or less severe. In this connection it will be remembered that the radicles of the portal system within the gastro-intestinal wall have been seen to be the favourite seat for the occurrence of such thromboses, and the subsequent swelling and congestion of the mucous membrane, so well described by Magendie in the first instance, are doubtless responsible for the violence of the symptoms observed, pains, diarrhœa, appearance of blood in stools, etc. Sometimes, though rarely, the effect of transfusion in causing intra-vascular clotting may be observed in a still more striking way, as in the case recorded by Hayem,[4] in which, immediately after a transfusion, phlegmasia alba dolens appeared, first in one leg, then in the other. The condition of the vessels and their blood was probably such that it never required the extra stimulus afforded by the transfused blood to bring about instantaneous clotting.

The cause of thrombosis in all such cases is by no means clear. It is probably connected with the disintegration of the white corpuscles of the injected blood as well as of the plasma, and is favoured doubtless by certain conditions of the blood of the recipient at the time of the transfusion. The frequency with which the characteristic symptoms are met with in cases of pernicious anæmia is doubtless connected with the excessive blood destruction, with consequent instability of the blood, which characterises that disease. With regard to the action of sodium phosphate, one of the favouring conditions we may judge to be the quantity of the solution injected. In the experiment already recorded the

[4] JOURNAL, vol. i, 1884, p. 387.

blood and salt solution were mixed in equal proportions, instead of in the usual proportion of 3 to 1. It is possible that the influence of this factor is also to be observed in one of Dr. Duncan's cases, in which the patient suddenly became nearly collapsed; the salt solution had, by an oversight, been made of the strength of 10 per cent. instead of 5 per cent.

Fever and hæmoglobinuria not infrequently follow transfusion of blood. They are of constant occurrence when the blood of one animal is transfused into another of different species. In all cases the occurrence of hæmoglobinuria is of the greatest significance as marking—(1) the sudden and rapid liberation of the hæmoglobin from the injected corpuscles, but still more as pointing (2)[5] to the seat of this liberation, namely, the general circulation. In health no such liberation ever occurs in the general circulation. Active destruction, as I have shown, is limited to the portal circulation—chiefly to the spleen: the hæmoglobin set free being disposed of by the liver before it reaches the general circulation.

The largest quantities of blood may under ordinary circumstances be transfused from one animal into another of the same species without the occurrence of any hæmoglobinuria. The explanation of this is, as we have seen, that the seats of destruction are the same as in health.

The appearance of hæmoglobin in the urine is an indication therefore that the conditions of the blood within the general circulation are entirely inimical to the preservation of the red corpuscles, even for a few hours.

The rigors and fever which mark this occurrence are connected with the liberation of the hæmoglobin. The same phenomena attend the liberation of hæmoglobin in paroxysmal hæmoglobinuria.

Any value which blood transfusion possesses over the infusion of saline solutions, we have seen, depends upon the presence of the red corpuscles and their hæmoglobin in the general circulation. We now find that the chief dangers of transfusion are connected with the presence of the white corpuscles of the injected blood and from changes in the white corpuscles and plasma of the recipient's blood.

Any advantages that transfusion of red corpuscles may have over simple saline injections are counterbalanced by the dangers attending the simultaneous injection of the white. In the case of defibrinated blood the latter so preponderate that transfusion of defibrinated blood is an operation not only dangerous in itself, but one whose practical value by no means serves to compensate the additional risks run in carrying it out.

Practice of Transfusion.

We have up to this point considered transfusion as partly a physiological, partly a pathological, problem. It is not in health, however, in which condition we have been hitherto studying it, but in disease, that transfusion finds its practical application.

We have seen that transfused blood (1) possesses no nutritive value. Transfusion of blood is, therefore, useless in all forms of "atrophic" anæmia, by which term rather than by the unfortunate term "symptomatic," hitherto given, I would distinguish all forms of anæmia in which the changes in the blood simply correspond in degree to the wasting changes occurring in other tissues. The anæmia of all forms of wasting disease is, therefore, of this character. It is important to note that the degree of anæmia cannot be judged of by the amount of pallor. Examination of the blood alone enables us to determine whether the anæmia is "atrophic" in its nature or not.

(2) If the condition to be met is a want of red corpuscles, or an incapacity on the part of those already present to carry on their respiratory functions, then transfusion of blood may possibly be of value. The red corpuscles transfused remain for a certain time within the circulation of their host. Transfusion of blood may conceivably be of value in carbonic oxide poisoning, where the red corpuscles are incapacitated for their work by a close union of the gas with the hæmoglobin of the corpuscles. Successful cases have been recorded without, however, any clear demonstration, that the most dangerous stage of the poisoning had not been passed before the operation was performed. In most of the cases recorded, chiefly by German observers, the transfusion was not made for many hours after the symptoms of poisoning were fully developed. In any case the transfusion must in this instance always be preceded by a venesection. Even when this is done, the operation is of doubtful value.

As regards the other indication for the transfusion of red corpuscles—the existing want of them—it may be stated that there is scarcely a single condition of the blood in which the want of red corpuscles is a source of urgent danger. After the greatest losses of blood in animals, a sufficient number of red corpuscles always remain in the circulation to carry on respiration, provided that the circulation is maintained. In animals, after loss of half to two-thirds of the total quantity of blood in the body, the number of corpuscles per cubic millimètre may be found as high as 3,000,000 or 4,000,000. The absolute loss is, of course, great, but the relative loss is slight, and is of little importance. The animal's health is in no way affected injuriously by the loss. In some of my experiments the animals have gained in weight from the day of the abstraction of blood, no indication being afforded of any disturbance at all, except on examination of the blood, which showed the reduction in the number of corpuscles. In man the loss of blood can never be so great as in animals. Syncope occurs earlier. Transfusion of blood is, therefore, never required for the purpose of supplying red corpuscles to carry on respiration after sudden loss of blood in a patient previously healthy. The immediate source of danger in such cases is not the want of red corpuscles, but the disturbance of the relation between the vascular system and its contents.

Nor is transfusion of blood indicated on account of its respiratory value in anæmia of idiopathic or traumatic origin. By idiopathic anæmia I mean those conditions in which the changes in the blood are in excess of the changes in the other tissues, and constitute a characteristic feature of the disease. The best examples of this form of anæmia are pernicious anæmia, chlorosis, and leucocythæmia. It is remarkable how slight the disturbance in respiration may be in cases, for example, of pernicious anæmia in which the red corpuscles may be reduced to 10 per cent., or even less, of their original number. I have observed cases in which the number of corpuscles was as low as 500,000 or 600,000 per cubic millimètre, instead of 5,000,000 as in health, the respirations never rising above 20 per minute; the breathing perfectly tranquil throughout. The great breathlessness on exertion always observed depends on other factors, and in any case never constitutes an indication for the performance of transfusion.

(3) If the condition to be met is a failure in blood formation due, perhaps, to the want of iron in the system, transfusion of blood may be of some value, in so far as we in this way supply the organism with iron in the form in which it can most conveniently be stored up in the body. The two conditions in which this disturbance is most marked are chlorosis, and traumatic anæmia resulting from long-continued and repeated hæmorrhages. There is, I conceive, no disease in which transfusion of blood corpuscles is theoretically more indicated than in chlorosis. The anæmia here is in a special degree the result of an insufficiency of iron in the system, so much so that a chlorosis of old age where, as we have seen, the tendency is for pigment to accumulate in great abundance within the spleen, bone marrow, and other organs, is almost a contradiction in terms. The anæmia of chlorosis we can, however, readily combat without having resort to transfusion.

The question as to the advisability of transfusion in traumatic anæmia is not so easily answered. Our object here is not so much to relieve any passing danger arising from insufficient bulk of fluid, or want of red corpuscles, as to stimulate blood formation. That transfusion appears to be of value in some cases there is no reason to doubt, but how far the result is *propter hoc* as well as *post hoc* it is impossible in any case to determine. If it really is of any value it must be solely by assisting blood formation. I am inclined, however, to regard it of doubtful value even from this point of view, and that for the following reason: that in animals the subsequent recovery after loss of blood is certainly not accelerated by transfusion of blood, but in most cases is actually retarded (Hayem, von Ott). If this be the case where the blood-forming organs are active as in health, it is difficult to understand how the result will be different in disease. The recovery is effected with greater rapidity when simple saline solution (3 per cent. solution of common salt) is injected than when blood is transfused. My own experiments show that the recovery after infusion of saline solution is remarkably rapid. The time required for the return of the red corpuscles to their original number after loss of blood, without subsequent infusion or transfusion, varies from two to three weeks. With subsequent infusion of simple saline solution it is the same; whereas with subsequent transfusion of blood complete recovery is delayed a week longer or more. Further, what is perhaps more striking and certainly is of more importance, is the fact that during the subsequent recovery the

[5] Hunter, *Lancet*, vol. ii, 1888.

animal generally appears to be in better health after infusion of salines than after transfusion of blood.

Even in traumatic anæmia resulting from long-continued losses of blood, transfusion of blood has in all probability no value not possessed by simple saline solution. The former may actually retard blood formation; the latter is at least always harmless, and might be beneficial if it were required.

In the other forms of idiopathic anæmia, pernicious anæmia, and leucocythæmia, transfusion of blood can, in my opinion, never be indicated. In both, the condition of the blood is the result of changes in the blood-forming or blood-destroying processes, or in both.

In leucocythæmia the disturbance is one of blood formation in the first instance, evidenced by the increase in the leucocytes of the blood, while the diminution in the number of the red I find to be due in great part to excessive blood destruction, probably induced by the activity of the leucocytes. In pernicious anæmia, the condition of the blood is mainly the result of excessive destruction. Transfusion of blood under such circumstances is not unattended by dangers as we have seen, but is followed in most cases by rapid destruction of the injected red corpuscles as evidenced by fever, sometimes by hæmoglobinuria, occasionally also by increase in the slight icterus which so frequently marks the progress of the disease.

It is important therefore to be able to distinguish between profound anæmia of traumatic origin and pernicious anæmia; and this I find it is possible most easily to do, by having regard to the character of the urine in the two cases. I find that the urine of pernicious anæmia contains large quantities of pathological urobilin, recognisable both chemically and on spectroscopic examination, and that its colour is correspondingly high. In marked cases, or during periodic exacerbation of the destructive process within the blood, this character of the urine is a very striking one; more especially as it is unaccompanied by any diminution in the quantity, is frequently quite independent of the occurrence of fever, and the specific gravity is usually very low (1010 to 1015).

The urine of traumatic anæmia, on the contrary, is exceedingly pale in colour, and is free from pathological urobilin. If in addition we note the condition of the blood in the two forms of anæmia, with special reference to the relation between the richness in hæmoglobin and the corpuscular richness—in traumatic anæmia the percentage diminution in hæmoglobin being usually considerably in excess of the diminution in the number of corpuscles; whereas in pernicious anæmia the hæmoglobin percentage is always relatively high, I believe we shall be able in future to draw a sharper line of distinction between these two forms of anæmia than has hitherto been possible.

(4) Lastly, if the condition to be met in transfusing blood is a threatened failure of circulation as the result of sudden loss of blood, then it is unnecessary to have recourse to blood transfusion, as infusion of any neutral saline meets equally well, if not better, all the indications. The value possessed by transfused blood in such cases is almost solely in virtue of its physical properties. The chief physical property of blood for purposes of transfusion is undoubtedly its volume. The immediate source of danger from sudden loss of blood is the fall in the blood pressure to a point where the circulation is unable to be maintained. The obvious indication, therefore, is to raise the pressure within the vessels. In health the blood pressure is dependent mainly upon peripheral resistance. The effect of a loss of blood on the blood pressure is, up to a certain point, completely neutralised by an increase in the peripheral resistance due to stimulation of the vasomotor centre. It is only after very severe hæmorrhage that this relation between the vessels and the amount of fluid they contain necessary for the carrying on of the circulation is disturbed. The pressure falls rapidly and suddenly, and death will ensue unless means be taken to meet the threatened failure of the circulation. The readiest way in which this can be done is to replace the lost blood with a certain bulk of fluid. To meet the danger thus arising, the quantity of blood is of more importance than its quality. In an emergency the infusion of ordinary water (Coates) has been followed by results as successful as any ever obtained after transfusion of blood. Bulk for bulk, pure or defibrinated blood, however, must possess certain advantages over neutral saline solutions free from organic constituents. They doubtless possess a certain physiological value as well as a physical value, inasmuch as blood must have a greater and more immediate effect in restoring the tone of the vasomotor centres than saline solutions. These advantages, however, are more than neutralised by the other and still greater disadvantages—namely, (1) the difficulty of obtaining blood in sufficient quantity or with sufficient rapidity as compared with the ease with which simple saline solution can be prepared; (2) the dangers attending the transfusion of blood, compared with the absolute freedom from danger possessed by solution; and (3) the doubtful value of the transfusion, whether hæmogenic or physical, when compared with saline solution.

Transfusion of blood will long continue to be practised, and its action studied on account of the many interesting problems connected with the physiology and pathology of the blood on which it is well fitted to throw light. For practical purposes, however, all the advantages to be gained by transfusion may, I believe, be equally well and more readily obtained by infusion of a neutral saline, such as ¾ per cent. solution of common salt (about one drachm to the pint). The only pressing indication for the performance of transfusion is the collapse from sudden and severe loss of blood.

With regard to its performance, two points may be noted: (1) that the simpler the instruments used—a simple glass cannula, with a piece of india-rubber attached, and a clean syringe—the more easily will this infusion be effected, and the less likelihood will there be of the injection of air—a source of danger to which far too much importance has long been attached, as it is also one which can readily, with a little care, be altogether avoided; (2) that the temperature of the solution should never rise above that of the body.

Under no circumstances is transfusion of milk or of other mixtures possessing what are supposed to be nutritive properties, ever indicated. They possess no value not possessed by an equal bulk of saline solution.

CASE OF PROGRESSIVE PARALYSIS OF MUSCULO-SPIRAL NERVE CONSEQUENT UPON INJURY; OPERATION; SUCCESSFUL RESULT.

By CHAUNCY PUZEY,
Surgeon to the Liverpool Northern Hospital.

In the JOURNAL of May 16th, 1885, I recorded very fully a case of paralysis of the ulnar nerve, due to a fracture of the ulna, in which I operated with a completely successful result; and I concluded by saying that, with the knowledge thus gained, I should feel justified in operating earlier in a similar case.

On March 21st of last year, a Custom-house officer, aged 50, was admitted into the Northern Hospital, under my care, suffering from complete loss of power of extension of the right hand and fingers, the wrist being dropped; and the sensation throughout the parts supplied by the cutaneous branches of the radial nerve being defective. The muscles of the dorsum of the forearm were flabby and wasted, and supination of the forearm was effected with difficulty.

The history given was, that three months before he had fallen down and fractured the humerus rather below its middle. Nothing special was observed about the fracture, which was treated in the ordinary way. On removal of the splints, there was found to be great impairment of motor-power in the forearm; wrist-drop and loss of power in the extensors of the fingers. The flexors acted well.

He was treated by galvanism and massage for some weeks, but instead of improving, his condition became worse, the muscles wasting rapidly. Then it was observed that the signs of "reaction of degeneration" were appearing in those parts supplied by the branches of the musculo-spiral nerve.

The site of fracture presented no noteworthy features, except that there was rather an excessive amount of "callus." Pressure over the course of the nerve elicited the ordinary sensations, until that part over the callus was reached, when they ceased. It was therefore thought that probably the nerve was involved in the callus; at all events, that it must be pressed upon in some way.

He was recommended to come into hospital for operation. To this he agreed; and on March 22nd I operated, making an incision 3 or 4 inches long over the course of the musculo-spiral groove, between the outer and inner heads of the triceps. The nerve was

soon found, and exposed throughout its extent, where it lay on the callus. It was thick, pink, and fleshy-looking higher up than the commencement of the callus, but over the thickened bone it was smaller, paler, and hard. On making a small longitudinal incision through the neurilemma, which appeared thickened, the nerve substance bulged out excessively, showing that it was much compressed. The nerve was, therefore, dissected out from the groove for 3 or 4 inches (the wound being lengthened for the purpose) until it could be felt free above and below the extent of the callus. A large arterial branch (no doubt the superior profunda artery) and its accompanying veins were tied. The wound was then closed, free drainage being provided for. The usual Listerian precautions were adopted.

The first result of the operation was eminently unsatisfactory; but this was due to a circumstance which I mention as a warning as well as an explanation. I had given directions that an Esmarch's tube was to be applied to the upper part of the arm for the purpose of rendering the operation bloodless. I afterwards found that a solid cord of india-rubber had been used. The effect of this must have been so to compress and bruise all the nerve trunks that for some days there was partial paralysis of all the muscles of the hand and forearm.

Happily these effects passed off before long; but it was not until nearly a week had elapsed that the first sign of something like a change in the musculo-spiral supply began to appear. This sign was a slight "tingling" along the parts supplied by the terminal branches of the radial nerve. Then very slowly, almost imperceptibly, there came slight power of extension of the fingers; then very slight extension movements of the wrist.

All this time the continuous current was being used daily; the circulation was also stimulated by hot mustard-and-water arm baths, and by massage, in which treatment every assistance was rendered by the patient himself.

This treatment was persevered with for weeks, the patient attending daily for the purpose, and making steady but slow progress. About the end of June I went away for two or three weeks, and the man ceased attending; and it was not until the first week of this year that I saw him again, when I was delighted to find that his damaged limb has completely recovered.

He is a very intelligent man; and he says that, feeling satisfied that his arm was steadily improving, and finding it inconvenient and he thought unnecessary to continue the galvanism, he carried out the rest of the treatment as well as he could himself and with a satisfactory result. There is now nothing to be seen amiss with the limb, except that it is nowhere quite as plump and firm as the other arm; but he has full and perfect use of every muscle and of every finger, and writes a beautiful "hand."

It may possibly be objected that the operation had less to do with the result than had the long-continued galvanism, douching, and massing. In reply, I would point out that up to the time of operation, the course was rapidly down-hill. From about a week after operation, progress in the right dirction was continuous, though slow.

In concluding, I think I may venture to repeat a warning as to the possible dangers of the elastic tourniquet. About ten years ago, I had a case in which the use of an Esmarch's tube, in the operation of excision of the elbow-joint, in the case of a very emaciated man, led to partial paralysis of all the muscles and of the sensibility of the hand and forearm—a condition which, however, completely and satisfactorily passed away in a few days. Since that occurrence, I have always, in the case of children or thin people, used a stout india-rubber bandage instead of a tube. By winding this round and round the limb, coil over coil, any amount of cumulative pressure may be obtained; but it is diffused over a surface represented by, or corresponding with, the width of the bandage.

EPSOM COLLEGE.—Mr. France has presented another female scholarship at St. Anne's School to the Council of Epsom College. This is the sixth scholarship he has purchased. Mr. France is doing good work with both hands. With the one he gives a large sum of money to a most deserving institution; with the other he enables the members of Council of the College to give in perpetuity a first-rate education free of all charge to six girls, the orphan daughters of medical men. Lucas, Mair, Norman, Barron. Griffiths, and Hardcastle, pupils of Epsom College, have all passed in the first division of the matriculation examination of the University of London.

REMOVAL OF ACCESSORY LIMB AND MENINGOCELE FROM THE BACK OF A CHILD, AND ITS ANATOMY.

BY ROBERT JONES,
Honorary Surgeon, Liverpool Stanley Hospital,
AND
F. CHARLES LARKIN,
Assistant Lecturer in Physiology, University College, Liverpool; and Anæsthetist to the Liverpool Royal Infirmary.

THE patient, an infant of four months, was sent by Mr. H. O. Thomas. It was born with a tumour at the back of its neck, which had attained to the size of a small cocoa-nut. This was attached by a broad base to the back in a line with the upper surface of both shoulder-blades. At its upper part was a dimple of retracted skin, and lower down an extension which felt like a forearm, and terminated in three fingers, which were perfectly formed, even to the nails; the third being less firmly attached by a narrow fleshy neck. On feeling the mass, bones could be diagnosed, which seemed to correspond to an elbow, humerus and possibly scapula. It could be freely manipulated without giving the child any discomfort. The family history was very interesting. The aunt had a supernumerary digit on the left forefinger, and an uncle died in infancy after an operation upon a lumbar spina bifida.

Mr. Jones exhibited the patient at the Medical Institution before operating, and the opinion of all those who took part in the discussion was, that it had no connection with the vertebral canal, and that operative measures would be safe. It was believed to be connected with the shoulder girdle. On careful and repeated examination no deficiency could be detected in the vertebral column; and apart from its position, there was nothing to suggest a spina bifida. The base of the tumour was too solid to admit of accurate manipulative measures beneath it. The parents were strong advocates of operation, and after its dangers were forcibly put before them, they elected that the risk should be run.



Fig. 1.

Mr. Jones operated next day. He made an oval incision round the base of the tumour, leaving just sufficient skin to form flaps. The growth was found to be connected with the spinal cord, and the sac of the spina bifida was opened. A free discharge of spinal fluid escaped, and it was with difficulty that the flow was checked

by ligature. A thick nervous cord which almost looked as if it arose from a bifurcation of the cord was divided. It was now discovered that the laminæ and spinous processes of the lower two cervical and upper two dorsal vertebræ were absent, and a narrow chink existed in the column. There was very little bleeding.

For the first twenty-four hours the little patient did well, afterwards became restless, and, after a series of convulsions, died in about fifty-six hours after operation. The tumour was handed to Mr. Larkin for dissection.

Dissection.—The general appearance of the "tumour," as seen from the dorsum, is shown in Fig. 2. It consisted of two parts, an



Fig. 2.

upper, oval portion—the meningocele portion—10.3 by 7 centimètres; and a lower, smaller, limb-like portion, attached to the left side of the upper segment, and free to the extent of 4 centimètres.

Upper Portion.—The dorsal surface was covered by normal fine skin. Just below the centre of its convexity was a small pedunculated mass, 1.8 centimètre long by 1 centimètre thick, and attached to the rest by a narrow neck. The ventral surface, by which the mass had been attached to the child's body, showed a cut surface of fat over the greater portion of its extent, but a little above its centre was a small aperture, 0.5 centimètres in diameter, bounded by dense fibrous tissue. Into this aperture a probe could be passed for about 4 centimètres into a cavity. Dissection showed this to be the cavity of a meningocele (3.5 by 3 centimètres). The walls of the cavity were tough and strong—2 millimètres thick—and lined by serous membrane. The rest of this portion of the "tumour," including the pedunculated portion, consisted simply of adipose tissue, a few vessels and nerves, and part of the skeleton to be shortly described.

Lower Portion.—This was continuous above with the left border of the upper segment, while below it presented a free hand-like part, having well-marked palmar and dorsal surfaces covered by skin, such as is natural to these parts. The posterior (post-axial) border was exactly like the ulnar border of a natural hand. The anterior (pre-axial) border was rounded and smooth. Peripherally the hand divided into three digits. Of these, the most posterior (post-axial) was largest and best formed; the next was smaller, but otherwise well formed; while the anterior (pre-axial) was rudimentary, consisting of one segment only, and was an example of dactylolysis.

Figure 3 is a diagram of the position of the meningeal sac, the nerves, and the skeleton to each other and to the rest of the mass.

The skeleton consisted of the following parts, and is shown as it appeared after removal in Fig. 4. (The dotted parts are cartilaginous, the rest bone.)

1. Scapula and coracoid (?) occupying the angle of junction of the upper and lower portions of the "tumour." The scapula convex dorsally, concave ventrally, had a rudimentary spine on its dorsum, was attached post-axially to the coracoid, and peripherally articulated with the humerus. In both these joints the union was by means of fibrous tissue. The coracoid (?) thin and bent, concave dorsally, and articulating post-axially with scapula.

2. The humerus somewhat obliquely situated, and slightly bent. Shaft osseous, ends cartilaginous. It articulated above with scapula, below with "carpal" cartilage; both joints ligamentous.

3. The carpal (?) cartilage, a quadrilateral piece of cartilage, flattened dorso-ventrally, and wider distally where it articulated with the two metacarpals by two separate synovial joints. Its narrower proximal end articulated with the humerus, as above mentioned.

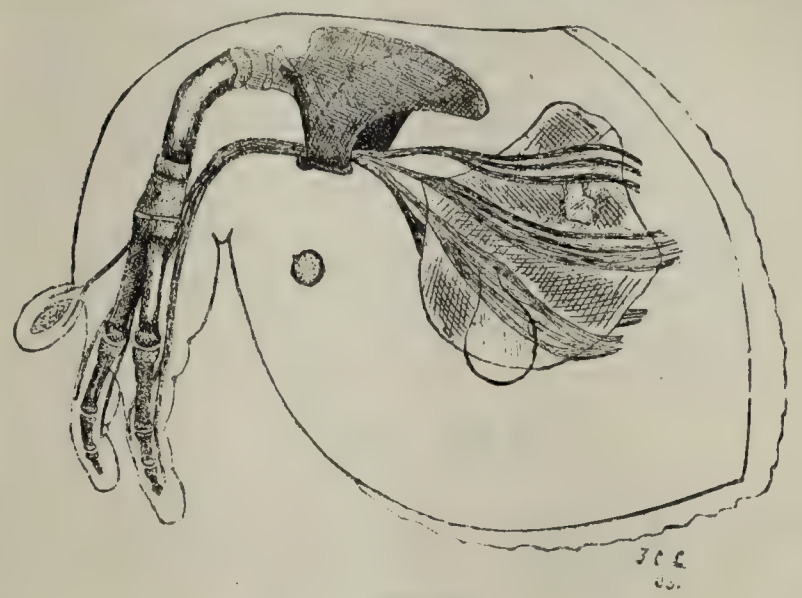


Fig. 3.

4. The two post-axial fingers had each a well-formed metacarpal and three normal phalanges, articulating by synovial joints. The pre-axial imperfect digit contained only a small oval piece of cartilage, which had no articulation with other bones. Vertically below, and at some distance from the scapulo-coracoid joint, was a small round nodule of cartilage (see Fig. 3). The unopposed sur-

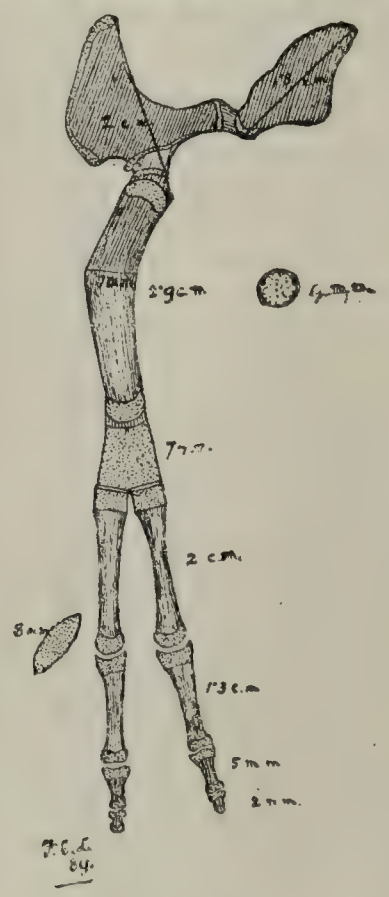


Fig. 4.

faces of the coracoid and scapula had on them a few scattered muscular fibres. These were the only muscular fibres the "tumour" contained. The blood vessels seemed to have no regular arrangement.

In the wall of the meningocele were numerous flattened nerve bundles, which collected peripherally into four trunks (Fig. 2). These four soon united together to form one large trunk, which passed between the scapula and coracoid close to their point of articulation. Opposite to the "carpal" cartilage this trunk divided into digital nerves for the supply of the fingers. All the rest of the "tumour" consisted of adipose tissue.

THERAPEUTIC MEMORANDA.

"STATUS EPILEPTICUS" TREATED BY AMYL NITRITE.

A YOUNG man was seized with an epileptic fit, which recurred several times at intervals of about fifteen minutes. During the intervals he was profoundly insensible and breathing stertorously, with occasional vomiting. As there seemed no sign of improvement after a considerable time, I administered, by inhalation, two capsules containing four grains each of amyl nitrite. There was a slight but distinct appearance of improvement at once, and the fits did not afterwards recur. After a time he recovered consciousness.

I certainly think that the amyl nitrite acted beneficially. A case of "status epilepticus" which I attended some time ago, without adopting any such measures, terminated fatally. It was, however, rather a worse case than the present one.

Highgate, N. HUGH WOODS, M.D.

REPORTS

ON

MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

MURDAN HOSPITAL, PUNJAB.

TRAUMATIC SUBCLAVIAN ANEURYSM; LIGATURE OF INNOMINATE AND CAROTID ARTERIES; RECOVERY.

(Under the care of J. LEWTAS, M.D.Lond., Indian Medical Service.

A YOUNG man, 20 years of age, was brought to the Murdan Hospital on May 13th, 1889, with the following history: His gun had burst about a month before, and a piece of the breech had, he thought, lodged in his neck, just above the right clavicle. For the last three days blood had been slowly escaping from the wound thus caused, and could not be arrested.

State on Admission.—He lay on his back, with his head and right shoulder drawn somewhat together. He complained of acute pain in the right side of his neck. The outline of the right clavicle was obliterated by a swelling about as large as the top of a fœtal head at term, which occupied the posterior triangle of the neck; this swelling was hard to the touch, and did not pulsate. Unfortunately, I did not examine for a *bruit*, as I had no suspicion that the tumour was caused by blood extravasated from a wounded artery. There was a partly healed wound, an inch in length, immediately above the clavicle, in front of the attachment of the sterno-mastoid muscle; from this wound blood of a brownish colour was slowly oozing.

As the man and his friends were anxious that I should search for and remove the foreign body which they were convinced had lodged in his neck, and as I was then of opinion that I had to do with an abscess beneath the deep cervical fascia, I introduced a probe into the original wound, but failed to detect any foreign substance. I then enlarged the external wound sufficiently to admit my index finger, and on passing this deeply into the root of the neck I felt a hard substance, which on removal with a pair of dressing forceps proved to be an irregular fragment of steel weighing three drachms (twelve grammes). There was an alarming rush of blood from the wound as soon as I withdrew my finger from it, and the cavity of the wound refilled with blood in an instant after it was sponged out with absorbent wool. I made repeated attempts to discover the bleeding point, but the blood-flow was so profuse as to render this impossible. Fortunately, on passing a finger into the wound I was able to find an opening in the subclavian artery behind the scalenus anticus muscle, and to stop the bleeding by making pressure upon this opening. The man's condition was now desperate, he being pale and unconscious from loss of blood; and any further attempt to tie the artery at the seat of injury was clearly inadmissible, attended as this must have been by still further loss of blood. An attempt to seize the artery with Spencer Wells's forceps guided by touch only failed, as other structures besides the artery became engaged within the forceps. There was not time for much deliberation, and I decided to tie the common carotid and innominate arteries. Confiding, therefore, the control of the artery to an assistant, I made an incision along the inner border of the lower end of the right sterno-mastoid muscle, notched the outer borders of the sterno-hyoid and sterno-thyroid muscles, and passed a catgut ligature round the common carotid, leaving the ends of the ligature long, that by drawing upon them I might be guided to the position of the innominate. Using a couple of blunt hooks I was able to free the innominate from its surroundings, and to pass a catgut ligature round it just before its bifurcation. But as the patient seemed to be *in articulo mortis*, in order to avoid the odium which inevitably attaches to a death on the operation table, I had him hurriedly transferred to his bed and removed from the room without waiting to dress the wound. I then proceeded to explain to his friends the hopeless character of the case, feeling convinced that as I spoke he was either dead or dying. But he did not die, although for several hours he remained unconscious, owing perhaps as much to ligature of the carotid as to the amount of blood which he had lost. I then proceeded to complete the dressing, closing the incision which I had made, and covering it with a pad of sal alembroth tissue, but inserting a drainage tube into the extensive cavity of the original wound after removing some of the coagula which filled it.

Subsequent History.—This can be given in a very few words. There was no return of hæmorrhage, both wounds healed perfectly, but the patient was so weak and anæmic that he was not discharged from hospital until forty-three days after the operation. When discharged he still carried his right hand in a sling; no pulsation could be felt in the radial artery, but in the brachial a feeble pulse could with care be felt.

REMARKS.—This operation was done under critical circumstances, which allowed no opportunity of first referring to authorities; else, had I then known how very unfavourable its results would have been, I would probably have contented myself with plugging the wound, and leaving the man to a fate not more certainly fatal than that attending ligature of the innominate artery. Mr. Erichsen[1] tabulates seventeen instances of this operation, only one of which recovered.

The patient has promised to show himself again about a month hence.

ADDENBROOKE'S HOSPITAL, CAMBRIDGE.

PNEUMONIA AND PREGNANCY.

(Under the care of Dr. BRADBURY.)

[Reported by Mr. FREDERICK W. BURTON, House-Physician.]

MRS. M., aged 33, the mother of three children, was admitted on January 21st. She thought herself eight months' pregnant, and till five days before admission had enjoyed good health; but on that day, without any known cause, she suffered from stabbing pain in the left axilla on breathing or coughing; during the next few days she became feverish and short of breath, and on the morning of her admission she shivered for a few minutes.

The patient had marked orthopnœa; the whole face was red and suffused, while the lips were a little blue. The pulse was 116, of good size, but very compressible, while the temperature was only 98.4°. She had a good deal of cough, with rusty expectoration. The respirations were 40 to 48, and, on examining the chest, there was found to be dulness, with tubular breath-sounds over the upper and middle lobes of the right lung and over the lower lobe of the left lung. The uterus was enlarged to the size of the organ at full term; the fœtal heart-sounds were plainly heard and were 120 per minute, but the child's movements became less active as the mother grew worse. The patient was well propped up in bed, while mustard poultices were applied to the chest and stimulants administered; but the next day the dyspnœa was more distressing, while the pulse became gradually weaker; there was, however, no delirium, and the highest temperature recorded was 100.4°. The urine was non-albuminous, nor was there any marked diminution in the amount of chlorides present.

On the morning of January 23rd, labour came on, and in three hours the patient was very easily delivered of a healthy, non-febrile, apparently full-term child. The amount of blood lost was certainly below the average; and though for about an hour afterwards she was much depressed (pulse was weak and only 80 per minute), she then rallied, and the comparative ease with which she now breathed was most striking. From this point she rapidly improved, and in four days the temperature was normal and the pulmonary physical signs had almost disappeared.

REMARKS BY MR. BURTON.—Especially striking in the above

[1] *Science and Art of Surgery*, vol. ii, pp. 195-6, 9th ed.

case were the slightness of the fever and the relief to the breathing which soon followed delivery. This relief was so obvious that I cannot help questioning the absolute correctness of Lusk's statement, who, speaking, in his work on *Midwifery*, of pneumonia and pregnancy, says: "Parturition itself, whether naturally or artificially produced, greatly imperils the woman's life."

REPORTS OF SOCIETIES.

NORTH OF IRELAND BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

THURSDAY, JULY 18TH, 1889.

Professor DILL, M.D., President, in the Chair.

Double Osteotomy.—Dr. HENRY O'NEILL, Belfast, exhibited a boy, aged 14, on whom he operated for double knock-knee by Macewen's method on March 21st. He is now able to walk quite well, and has increased two inches in height. He suffered from rickets from 2 years of age, and received a severe fall at 4 years of age, which bruised the inner surface of each knee. Since then he suffered from knock-knee, and was quite crippled.

Enterectomy.—Professor SINCLAIR exhibited a patient, aged 20, upon whom he successfully performed enterectomy, five weeks previously, for the cure of an artificial anus of fifteen months' standing. Lembert's silk sutures in a single row were employed after the removal of seven inches of the ileum. The parietal wound in the groin had healed completely, and the motions now pass *per anum* in a natural manner. The operation was undertaken only after failure of the pad and bandage, plaster, stitching, india-rubber tube, and truss methods had failed. This is the second successful enterectomy reported by Professor Sinclair.

Ovariotomies.—Dr. THOMPSON, of Omagh, read notes of two successful ovariotomies. In one of the cases there was considerable oozing of blood from the peritoneal aspect of a long, broad adhesion, which required the thermo-cautery to control it successfully. In the other case, there was great œdema of the abdominal walls, necessitating an incision nearly four inches in depth before the peritoneum was reached. Both patients made satisfactory and very quick recoveries.

Bowel Obstruction.—Dr. THOMPSON also read notes of a case of bowel obstruction, from fæcal accumulation in the ascending colon, of ten days' duration. The abdomen was opened, and an attempt made to reach and remove the obstruction. The necessary manipulations, however, ruptured the intestine. The abdominal wound was at once enlarged, the ascending colon drawn well forward, and thoroughly examined. It was found very much distended, and filled with a fæcal accumulation as large as a man's head. There were several gangrenous ulcers on its surface, one of which had given way and caused the extravasation. The impacted fæcal mass was broken up and removed, the parts thoroughly cleansed, about nine inches of the sloughy portion of gut excised, the peritoneal cavity washed out with a 15 per cent. solution of boracic acid, and the abdominal wound closed. The patient survived the operation ten hours, and affords another and a well-marked instance of the great danger of delay in performing abdominal section in cases of bowel obstruction which have resisted the usual methods of treatment.

Uterine Polypi.—Dr. DEMPSEY showed two sub-mucous fibroid pedunculated uterine tumours, each about the size of a goose egg, which he removed with the *écraseur* at one sitting from a patient in the Mater Infirmorum Hospital, who suffered for more than a year from profuse metrorrhagia. The patient has another tumour of equal size remaining, a subperitoneal fibroid, attached to the fundus by a pedicle of similar thickness to those of the tumour removed. The points noted were the presence of three tumours of equal size, which were undergoing extension from the uterine walls, producing an equal degree of pedunculation, and which made it probable they had originated from some local excitement or irritation in operation at a particular time. The two internal tumours had been freed through the os, dilating it to an extent capable of permitting the passage of a fœtal head, without the slightest pain or pressure symptoms being complained of.

THE Bristol General Hospital has, says the *Bristol Mercury*, been specially fortunate this year in handsome bequests. Bequests of £1,500 from Dr. Fairbrother and of £1,000 from Mr. Henry Matthew Clarke have recently been received.

REVIEWS AND NOTICES.

A PRACTICAL GUIDE TO THE CLIMATES AND WEATHERS OF INDIA, CEYLON, AND BURMAH, AND THE STORMS OF THE INDIAN SEAS. By HENRY F. BLANFORD, F.R.S. 8vo. Pp. 364. London: Macmillan and Co. 1889.

MR. BLANFORD writes with a lifelong familiarity with his subject, and has produced a manual which will be invaluable to all who are connected with India. The indigo, the tea, the coffee planter, all who are interested in the products of the country, the navigator of Indian seas, and, not least, the medical man, can derive much instruction from it. The practical value of a general survey of the climates of India is greater than that of a similar survey for these islands, owing to the climate of India having a regularity and uniformity on which it is possible to count to a certain extent, a thing scarcely true of unstable and changeable weather at home. Even in the matter of storms, our knowledge of cyclones, initiated by the ingenious Mr. Piddington, has been greatly extended, and the last results are given here for the guidance of navigators in Indian seas. The first part of Mr. Blanford's work is a short but clear account of the elements of climate and weather. This is followed by a detailed account of the particular climates of Indian stations in relation to health and industry. An important section considers rainfall in relation to water supply and drainage, evaporation and wind pressure. The accounts of the particular climates are supported by the climatic statistics of ninety-two stations. Such is the general nature of the contents.

The medical man may learn much from the careful study of the accounts here furnished him of climates of districts and of particular localities. In particular, for instance, on looking at the hill stations, he can at once seize on the marked characteristics of the climate of each; and, in passing, we may observe that the oldest of all these stations, Ootacamund, in the Nilgherries, justly appears to be Mr. Blanford's favourite. The medical man, after he has had some experience of India, will soon observe that climate has much to do with the production and spread of disease. Its influence as an important factor is, owing to the comparative uniformity of seasons, much more marked in India than in the more uncertain climate of England.

AMERICAN RESORTS, WITH NOTES UPON THEIR CLIMATE. By BUSHROD W. JAMES, A.M., M.D. Large 8vo, pp. 270. Philadelphia and London: F. A. Davis. 1889.

MOST of us have of late years become aware that America possesses valuable health-resorts in the Rocky Mountains, in California, and elsewhere, but few of us have been prepared for the astonishing list of health-resorts which Dr. JAMES lays before us. Their circumstances are so various that we agree with him that Americans may very well find suitable health-resorts at home, without crossing the Atlantic or undertaking a journey to Europe, which, by the way, Americans are always ready to venture on. In a survey of so many places, the author cannot be expected to give a detailed account of all—still he constantly gives useful hints and information, and his remarks appear to be generally judicious. America has an ample supply of sea-side places, of varied mountain climates, of abundant mineral waters, and of opportunities for travel, whether in the interior, or to places along her coasts, or to more distant islands—such as the West Indies and the Sandwich Islands.

This handsome volume contains an ample map of States in America. It would require local knowledge to examine Dr. James's statements in detail, but they have a general character of fairness which invites confidence. Besides incidental notes of particular climates, our author has enriched his work with an elaborate treatise on climates in the Atlantic and on the American Continent, down to the extreme South, translated from the work of the Russian Woeikof. We have heard so much of late of violent storms in America that we extract some of his remarks on cyclones:—"More especially do great and rapid changes, both of atmospheric pressure and of temperature and cloudiness, take place in conjunction with the cyclones so frequently traversing the northern part of the United States, from the Upper Missouri to the St. Lawrence, moving thence in the direction of Nova Scotia. Nowhere on earth are cyclones of more frequent occurrence than right here. The velocity of these cyclones is, even in

the mean, twice as great as in Europe, and the attendant changes of weather are consequently singularly abrupt. In summer, the cyclones are less frequent than in winter, the latter part of autumn, and in the early part of spring, although the track along which they principally travel remains the same." Dr. James's work ought to extend and popularise our knowledge of American climates.

THE CUP OF YOUTH, AND OTHER POEMS. By S. WEIR MITCHELL, M.D., LL.D. Boston and New York.

The name of WEIR MITCHELL is so well known, both on this and the other side of the Atlantic, as that of a thoughtful, original, and philosophic-minded physician, that we welcome a volume of poems from his pen. Severe as are the demands of the medical profession on the mind and time of its servants, it is gratifying to note how many medical men who excel in their profession excel also in the fine arts. In proof of this we need only mention the etchings of Seymour Haden and Propert, the paintings of Sir Henry Thompson and Prescott Hewitt, and the essays of Oliver Wendell Holmes; and we have a fresh example in the book of poems before us. The volume is small, and contains a dramatic poem called "The Cup of Youth" and a number of lyrics and shorter poems. In "The Cup of Youth," in which Galileo is introduced, and an ancient sage discloses his earnest desire to discover the elixir of life, there are many fine thoughts gracefully expressed. The longing of all is here expressed:

> Alas, were I but sure that after death
> I still should carry all life's nobler seed
> To ripen largely under other skies,
> I should not mourn at death.

And, failing this assurance, the sage asks for renewed youth, to which vain hope Galileo replies:

> Fill full, God helping, all the years He leaves
> Set 'gainst the darkness of death's nearing hour
> In wholesome light all human action shines.
> This dream is childlike; you will wake to tears.
> Ask of your life if you have life deserved.
> What did you with the gift? You had of it
> All that another hath, or long or short.
> Not time, but action, is the clock of man.

There are sprinkled among these pages terse sentences which remain with us. We give a few examples:

> Who trusts a multitude of counsellors
> Wins sad unrest.
>
> And he alone has lost the art to live
> Who cannot win new friends.
>
> A goodly half of this world's misery
> Is born of woman's patience.

The following from *Minerva Medica*, verses read at the dinner commemorative of the fiftieth year of the doctorate of Dr. Hayes Agnew, in 1888, will appeal to many:

> But I will take you where the great have gone,
> And I will set your feet in honour's ways;
> Friends I will give, and length of crowded years,
> And crown your manhood with a nation's praise.
> These I will give, and more; the poor man's home,
> The anguished sufferer in the clutch of pain,
> The camp, the field, the long, sad, waiting ward,
> Watch for your kindly face, nor watch in vain;
> For, as the sculptor years shall chisel deep
> The lines of pity 'neath the brow of thought,
> Below your whitening hair the hurt shall read
> How well you learned what I my best have taught.

The poet who can gather up and transmute into verse the passionate longings, the thought, the science, and the aspirations of the nineteenth century is yet to come; meanwhile we welcome among our own ranks a simple singer who, though saturated with science, reverently listens for whispers which may explain the meaning of the wonder and beauty and misery of life.

THE GHOST OF DUNBOY CASTLE. By HUBERTO. London: Simpkin, Marshall, and Co. 1889.

THIS novel, though published under a *nom de plume*, is the work of a medical man. Of this there are internal evidences on every page. The author does well to hide his real name, for ridicule is of all things the hardest to bear and to live down. The story is laid in Ireland at the time of the siege of Limerick and the Cromwellian wars, that is, in the middle of the seventeeth century; but our author has not the power of projecting his mind into the past, and his characters speak the language, think the thoughts, and live the lives of men and women of the present day; anything more absurd than the anachronisms committed cannot be imagined. Thus of his heroes, one goes to Oxford, comes out first in the classical tripos, another passes the medical examinations of the various colleges, and adds the letters L.R.C.I., M.K.Q.C.P.I., M.R.H., and L.S.A. after his name; he discourses eloquently of bacteriology and microbes, is an accomplished operator, and understands the use of the obstetric forceps, tourniquets, etc.; his heroines dress in silk and plush and wear sailors' straw hats, and live either in castles, or in "elegant villas with hot and cold water laid on;" they play the piano and bézique, read "a profusion of books, periodicals, and illustrated papers," and they carry on flirtations at the *tables d'hôte* of hotels. All this in Ireland in 1650; they moreover enjoy driving along the Boulevards and Rue de la Paix, and going to theatres and concerts at Paris. One young man's "long dark hair fell in loose curls under his Spanish helmet, with its waving plumes;" while another "always wore a tall silk hat, and never was seen without an umbrella."

Incidents, many and various, enliven the pages, and hairbreadth escapes, suicides, rapes, a murder, an elopement, mortal illnesses medically described, and treated on the most modern scientific principles, a trance and premature interment, and love scenes, are interlarded with banal discussions on morality and science. Thus the affections are described: "Oh, propinquity, propinquity, propinquity, how potent are thy spells to thaw the frozen iceberg of indifference, to fan the tiniest spark of congenial sentiment into tenderest interest, or to envenom the molecule of inherent dislike till it culminates in positive aversion."

One more quotation from this remarkable novel: "The deliberate flirt may so far evade her intuitive knowledge as to place her in a dilemma of uncertain whether his love will terminate in a proposal, or, according to the ordinary thermal law of endosmosis and exosmosis, cool down to the temperature and consistence of its surroundings." We advise Huberto to do the same, and to cool down to sober medicine, and not to try to rise to the fever heights of romance.

NOTES ON BOOKS.

Johns Hopkins Hospital. Addresses at the Opening of the Hospital, May 7th, 1889. Baltimore: 1889.—The addresses delivered by Mr. Francis T. King, Dr. J. S. Billings, and Mr. Daniel C. Gilman, at the opening of the Johns Hopkins Hospital, Baltimore, are here printed in a volume which will form an interesting reminiscence of the ceremony. The occasion was in many respects remarkable. The hospital, which has been erected at very great cost, with the one desire that it should be in every respect as good as could be built, embodies every modern improvement, and probably represents, by reason of the excellence of its design and the perfection of its workmanship, at the present moment, the last word of hospital architects. The cost has been entirely defrayed out of the trust created by Johns Hopkins, a fund which has already sufficed for the foundation of the university which bears his name. The opening of the hospital marks the second step towards the fulfilment of his plans; hospital and university were linked together in his liberal foundation. "Bear constantly in mind," he wrote, "that it is my wish and purpose that the hospital shall ultimately form a part of the medical school of that University for which I have made ample provision in my will." The volume before us is illustrated by drawings of the hospital showing the general arrangement and elevation of the noble pile of buildings which has been erected on a commanding site; it also contains a perspective view of one of the pavilion-wards, and a ground plan of the site.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS,
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

ANTISEPTIC LOZENGES.

THE Sanitas Company, Limited, have added to their numerous preparations an antiseptic lozenge, which as its essential constituent contains the Sanitas fluid. It possesses strongly the odour and taste of Sanitas. It is stated to be quite harmless.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1889.

SUBSCRIPTIONS to the Association for 1889 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, AUGUST 10TH, 1889.

LORD CAMPERDOWN'S COMMITTEE ON RANK, ETC., OF ARMY MEDICAL OFFICERS.

IN reply to a question in the House of Commons, the Secretary of State for War stated that the Report of Lord Camperdown's Committee on Pay, Status, and Rank of Army Medical Officers has been signed and placed in his hands. We understand that the conclusions arrived at are to the following effect: (1) that it is expedient that the Army Medical Service should be created by Royal Warrant a Royal Medical Staff Corps ; (2) that in respect to the vexed question of titles, as to which so much has been written by army medical officers in these columns, and concerning which so strong a feeling undoubtedly exists throughout the department, a compound title should be conferred, distinctly indicating the military alongside of the medical rank, such as Surgeon-General, Surgeon-Colonel, and so on.

Other important points raised are decided favourably to the demands of the army medical officers, as formulated in our columns and in the Reports of the Parliamentary Bills Committee, and put forward in the evidence of the army medical officers before the Committee. These, we believe, will be found to include the following points, namely : —(*a*) The application of the Royal Warrant of 1879 to India, which will settle in a favourable sense the existing grievance as to the pay of brigade-surgeons and other like points ; (*b*) that the period of foreign service shall be five years, as heretofore, instead of six ; (*c*) that there shall be only one subsequent examination after entry, which will be held on attaining the rank of surgeon-major.

The corresponding military rank of army medical officers will be rigidly observed in all Royal Warrants, and it is recommended that no alteration should be made in any of the above points without previous reference and assent of the heads of the respective departments.

It will, we believe, be generally felt that great thanks are due to Lord Camperdown's Committee for the conclusions at which they have arrived ; they constitute a considerable advance over the status which previously existed, and remove the chief heads of grievance, which have given rise to so much dissatisfaction.

DEGREES FOR LONDON MEDICAL STUDENTS: PRESENT POSITION OF THE QUESTION.

THE view consistently advocated in these columns, and originally adopted in the report of the Metropolitan Counties Branch, that "the best and most legitimate remedy for existing defects in medical education in the metropolis lies in the University of London" (to quote the words of the report) having now been adopted by the Royal Commission on University Education in London, and extended by it to embrace education in arts and science also, has been, we have reason to believe, fully accepted in principle by the Senate of the University of London. That body occupies at the present moment an independent and extremely advantageous position, and appears disposed to make use of its opportunity to further the best interests of higher education in London and not least those of medical education. It is understood that it will proceed upon the lines proposed by the Royal Commission, and that the meetings of the influential Committee appointed to report on the question to the Senate have disclosed a remarkable unanimity. There is a strong desire to satisfy the equitable demand that a degree should be put within the reach of London medical students upon reasonable terms, and if this can be done by the existing University, acting in association with the Royal Colleges of Physicians and Surgeons, the wishes, as originally formulated, of all the parties interested would appear to be fulfilled. It would be universally desired that the degree or degrees to be granted should not be in any way inferior to those granted by other universities in the United Kingdom, and the Senate of the University will doubtless be prepared to insist that the regulations to be made in conjunction with the Royal Colleges shall be framed so as to attain the object. Upon this point it is not probable that any serious difficulty would arise, but before this point is reached several important steps will have to be gained.

The attitude of the Royal Colleges is at present an element of uncertainty ; the President of the Royal College of Physicians, at the last meeting of the College, pointed out that they had now to look at the question from an entirely new standpoint ; his observations and the appointment of a strong special Committee indicated that the importance of the present crisis was recognised. The Council of the Royal College of Surgeons postponed till after their annual election the appointment of a Committee to meet that of the College of Physicians, and have now nominated seven of their body for this purpose. The joint action of these important bodies, and especially their response to the overtures of the Senate of the University of London, will be awaited with interest.

The dissatisfaction of the Councils of University and King's College with the recommendations of the report is not difficult to understand ; as expressed, however, in the memorial presented to Lord Cranbrook, their objections appear wanting in solidity, as they do not in reality go beyond the opinion expressed in the note appended to the report of the Royal Commission by Sir William Thomson, Sir G. G. Stokes, and Mr.

Welldon, in which a doubt was expressed as to the possibility "of effectually combining the functions of an examining, and of a teaching as well as examining," university in the University of London.

That such difficulties exist is very apparent, and will not be denied by those most in favour of the Commission's scheme for reforming the University; whether they are insuperable remains to be seen. The answer will depend upon the result of the efforts now being made by the Senate of the University. The main difficulties, aside from sentimental considerations, in so far as concerns medical institutions, are those connected with the tests of preliminary education in arts, and more especially in science. As to the latter, the only solution appears to be a lengthening of the medical curriculum, and, if this should act as a deterrent to a certain proportion of would-be medical students, this need not perhaps be regarded as an unmixed evil. As to the former, it cannot be denied that the inspections and inquiries made from time to time by the General Medical Council have shown that the preliminary education of medical students in arts is liable to be very defective, and the test by examination inefficient. This, to quote the words of the President of the Medical Council at the opening of the last session, "is most deplorable in the members of a profession whose position is so high, from whom society and Government may justly claim, and will more and more certainly exact, evidences of a good education, and who are yearly becoming more and more engaged in the performance of public duties, bringing them into relation with fully-trained and critically-disposed members of society."

The University of London may reasonably be very desirous that such a reproach should never be addressed to its graduates, yet one of the chief obstacles to the success of the University has been the curious severity of its matriculation examination. The recommendations of the Royal Commission become unfortunately nebulous when this point is reached: "A matriculation is necessary and intermediate examinations may be desirable for students who have not gone through the curriculum of arts and science in any constituent or associated College or institution of sufficient rank," but in the case of students whose proficiency in the general subjects of the matriculation examination has been tested by examination, after curriculum within the College, "it would seem reasonable that there should be power to matriculate without any examination by the University." This proposal is not one which commends itself; it appears to be wholly inapplicable to medical students.

The proposal originally made in 1885 in the report of the Metropolitan Counties Branch is of greater practical value, though it retains the examination by the University; it was, that "the matriculation examination might be modified so as to cover such a range of knowledge as might reasonably be expected from boys on leaving public schools." Mr. Marshall, in the recent address, from which we have already quoted, suggested that for the defects discoverable in preliminary education, "a leaving school examination, such as has been recently established in Scotland with so much success, will yet prove to be the efficient remedy."

MR. BRAXTON HICKS ON CERTIFICATES OF DEATH.

EVERYONE must regret the occasions, unfortunately not seldom arising, when a conflict takes place in court between a coroner and a medical man, and one object of Mr. Braxton Hicks's little pamphlet[1] is to obviate the necessity for such friction. No doubt instances do occur of personal disagreement in the court, and we are quite willing to admit that, in the great majority of such instances, the medical man is the offender; but it does sometimes happen that the coroner is distinctly in the wrong. The object of the coroner's inquiry, we are told on the first page, is to inquire into the cause of death and the circumstances in connection therewith; and on the next page this is given more in detail, for it is laid down that the coroner's province is to inquire *how*, *when*, and *by what means* a person came to his death (the italics are not ours). When a medical man is prepared to certify that death was due to phthisis, as was actually the case in a very recent instance, he may be excused if he shows some signs of irritation when the coroner proceeds to hold an inquest and declines to call him as a witness.

But the great source of complaint which medical men have against coroners is that, in many instances, the inquest entirely fails of its purpose, and the cause of death, though duly recorded as due to "natural causes," remains absolutely unknown at the termination of the inquiry. It is not long, for instance, since we drew attention to an inquest on the body of an infant who was found dead in bed by its mother's side; the only evidence tendered was that of the policeman, who testified that he had seen the body of the infant, and that from the appearance of the face he inferred that it had died in convulsions, and the jury promptly recorded a verdict of death from natural causes. This is not by any means an isolated instance; inquests as useless are being held all over the country every day.

As regards the cases of which the cause is unknown, or of which the cause may not be a natural one, we admit that in all such it is the duty of the registrar to inform the coroner, who will then exercise his discretion as to whether an inquest is needed. The only point on which we should feel any doubt is as to whether, in a case where the death has occurred under suspicious circumstances, the friends ought to be referred to the coroner's officer as Mr. Hicks recommends, or whether it would not be better that the doctor should himself communicate directly with the coroner; there are many instances in which the latter would be, we think, the more desirable course, particularly in cases where a suspicion of poisoning has arisen.

Another point dealt with by Mr. Hicks, and in which we must admit the truth of his complaint, is that certificates are so often loosely filled up: a medical man can rarely—if ever—be justified in omitting to state the primary cause of death if he knows it, and it is most desirable that both primary and secondary causes should be stated. In most instances the omission to do this is from mere carelessness, and under the belief that, as the certificates have no real value

[1] *Hints to Medical Men Concerning the Granting of Certificates of Death.* By A. Braxton Hicks, Barrister-at-Law, and Coroner for London and Surrey. London: William Clowes and Sons. 1889.

for statistical purposes, owing to the large number of deaths in which the cause is not conclusively ascertained, it is needless to state more than the actual cause of death. Under such a belief a medical man will, for example, certify death to have been due to peritonitis, which is clearly insufficient, as, without some knowledge of the cause of the peritonitis, the registrar cannot tell whether it is a death that he is allowed to register without any reference to the coroner or not.

Where death may be natural or due to neglect, great care, says Mr. Hicks, should be exercised in giving a certificate, and he complains, not without some cause, that medical men at hospitals, dispensaries, and even in private practice, are in the habit of giving certificates in the case of children whom they have only seen once or twice during life, and he objects to "marasmus," "wasting," and "exhaustion" as much too indefinite to be used in a death certificate; but, after all, these terms are not so indefinite as the usual verdict of a coroner's jury, which would have us believe that it is the natural thing for an infant to die; and, as regards the infant having only been seen once or twice by a doctor, it is perfectly well known to all medical men that a few hours or days of vomiting and diarrhœa are quite sufficient to carry off an infant even under the most favourable surroundings of good nursing and hygienic conditions. No doubt where a medical man had any good reason to believe there had been neglect he would be justified in refusing a certificate; but as a rule he will get no mercy from the coroner's jury unless his allegations against the parents of neglect are amply substantiated. This matter of refusing a certificate is not so very simple as it might seem, and we would draw attention to the case reported in the JOURNAL for August 3rd, p. 289, where a medical man had refused a certificate and the coroner declined to call him or ask his reasons. The case was that of a young woman who died about a week after confinement; the doctor had only been called in shortly before her death. There was no *post-mortem* examination, and it is needless to say that the cause of her death was not ascertained at the inquiry, and the reward the doctor got for fulfilling a public duty in refusing a certificate was that the coroner said that the poor woman was probably quite as well attended as she would have been by a doctor, and at much less expense; and the jury, through the foreman, expressed their regret "that these poor people should have been put to the pain and exposure of a public inquiry." We wonder what Mr. Hicks would say about this inquest.

PATHOLOGY IN ART.

MM. CHARCOT and RICHER have continued their researches into the pathological indications given by the art and artists of the Middle Ages, and their monograph on *Demoniacs in Art* has been quickly followed by another on the *Deformities and Diseases depicted in Art*.[1] The subject is not a pleasant one, and the collection of horrors contained within the cover of the book before us, and illustrated with painful realism, throw side lights on phases of life which are generally hidden, and which it requires the skill of a Charcot and Richer to describe without exciting a feeling of loathing. The book treats in different chapters of the grotesque, dwarfs and idiots, the lame and paralytic, the blind, the lousy, the syphilitic, the leprous, those smitten with the black plague, the sick and the dead. This dolorous list furnishes, however, many interesting subjects for discussion. The actual nervous disease causing lateral protrusion of the tongue and closure of one eye—glosso-labial hemispasm—which must have affected the model which suggested to the sculptor the grotesque mask in the church of Santa Maria Formosa, at Venice; the rachitism of the Egyptian god Bes, and the Pott's disease of Æsop, are described and illustrated.

The evidences furnished by the mosaic of the Cathedral of Lescar, and by an ancient pottery excavated in the gardens of the Cluny at Paris, that wooden legs were long ago used, even by warriors, to supply the loss of part of the limb by gangrene or accident, are interesting, as well as the reproduction of the fresco by Taddeo di Bartholo representing the care of the sick by monks in the Hospital of Siena in the fourteenth century. Graphic accounts are given of the scourges which afflicted humanity in the Middle Ages—namely, syphilis, leprosy, and the black plague. The first of these diseases sprang up in Europe in the fifteenth century, and spread, in the form of a violent epidemic, simultaneously in Italy, Spain, France, Germany, and England. How deeply this terrible scourge affected the imagination, and how severe was the form of the disease, is shown by a picture of the fifteenth century, and attributed to Mathias Grünewald. A nude figure, half covered by a monk's hood and cloak, is seen writhing in agony; the body is covered by tubercular syphilides, the nose and ear are eroded, and the left arm is reduced to a stump; but though the artist has thus faithfully reproduced the pathological symptoms of a victim of the epidemic, he also seems to suggest by the substitution of human feet by webbed bird's claws, and by the attitude of agony and despair, the representation of a demon or one of the damned.

Two illustrations of leprosy are given, one by Holbein, and the other by Albert Durer; in these pictures, however, the Masters have made human pity take the largest share in the spectator's mind, which the loathsome disease only serves to set off. In the leper of Durer, our authors recognise the atrophic form of the disease, and that peculiar progressive muscular atrophy which 300 years later was accurately described by Duchenne.

The black plague has happily become so entirely a thing of the past, that its pathology has been forgotten; but the classic description by Boccaccio of the scourge in Florence in 1348 will live as long as literature is preserved. The violence of the attack of the disease, the abscesses that formed in the inguinal region and the axilla, the anthracic patches on the body, the agonies, the thirst, the pestilential odour, and the rapid mortality, as well as the loss of natural affection, and the efforts of the doomed to snatch a false joy from life while it lasted, are all described with an unsparing pen and pencil. No Pasteur had then arisen to track the fatal microbe to its hiding place, and to find a mithradatic antidote; the plague pursued its course unchecked, slayed its hundreds of thousands in every city, and left no trace after its hecatombs of dead had been gathered to the earth, but the wail of the poets and

[1] *Les Difformes et les Malades dans l'Art.* Par MM. Charcot et Paul Richer Lecrosnier et Babé. Paris: 1889.

the vivid depictions of tragic scenes by the artists of the day. The ravages made by the black plague are illustrated from pictures by Raphael, Nicholas Poussin, Pierre Mignard, and de Troy.

The doleful record closes with a chapter on the dead, and the various ways in which the closing scene of life has been depicted, from the noble art of the Greeks as represented in the Dying Gladiator to the repulsive realism of the Middle Ages, as shown in many memorial statues on tombs, are described at much length. It is not without a sense of relief that the end of the book is reached, and we trust some service will be rendered to art, humanity, and science by its compilation.

THE Library of the Obstetrical Society of London will be closed from August 19th to September 19th.

Dr. FARQUHARSON has given notice that he will ask the Vice-President of the Committee on Education whether he will authorise the publication as a parliamentary paper, of the full text of the investigations on which Dr. Warner's report, published in the BRITISH MEDICAL JOURNAL of July 27th, is founded.

THE late Dr. Joseph Rogers, the former President of the Poor Law Medical Officers' Association, whose name will long be remembered for his eminent services in connection with sanitary and poor law reform, bequeaths by his will £500, free of legacy duty, to trustees for the foundation of a "Rogers Prize," the dividends accruing every ten years to be awarded to the writer of the best essay on the treatment of the sick poor, and the preservation of the health of the poor, or on either of such subjects. The adjudicators to be the President of the College of Physicians and the Master of the Apothecaries Society for the time being; or in the event of both failing to act, the Vice-Chancellor for the time being of the University of London. If at the end of any such period of ten years no such essay shall have been written, or deemed of sufficient merit, the dividends and accumulations of each period are to be applied for the benefit of the Medical Benevolent College.

THE PASTEUR INSTITUTE.

THE Lord Mayor sent last week three more patients for treatment at the Pasteur Institute in Paris, at the expense, in whole or in part, of the Mansion House Fund. Of these one was a laundryman in Shepherd's Bush, another an army pensioner, living at Portland Island, and a third, a labouring man, from Wellington College, Berkshire, all of whom had been bitten by rabid dogs. The Duke of Portland has given £25, Mr. Albert Brassey £20, Sir Henry Thompson £10 10s., and Mr. Mence Smith £10, to the Fund.

THE CHILDREN OF NOMADS,

MR. GEORGE SMITH, of Coalville, whose efforts have been successfully directed to the amelioration of the sanitary and other conditions of the children born and reared on the canal boats of the country, is exerting himself to bring under the same wholesome influences the present-day gipsy and van children. Mr. Smith has made the nomad population his especial study, and his thorough acquaintance with their habits and their mode of life should secure for his scheme, at any rate, careful and serious consideration. He says: "If Parliament will only pass the Bill I have been praying them to do for eleven years, similar blessings and advantages all round will be seen among those living in vans and tents as has been the case with those living in canal boats. The Bill will bring to the front the finer feelings of those on the road' who are now outside the pale of civilisation."

THE CASE OF THE REV. WM. JOHN BOWDEN.

As considerable prominence was given to this case in the daily press last week, it may be well to mention the chief points which arose during the inquiry, which lasted two days, and which attracted some attention. The inquiry was before Sir Alexander Edward Miller, Q.C., one of the Masters in Lunacy, and a jury of seventeen, and was opened on August 2nd at the Hall of the Incorporated Law Society. The half-brother of the patient and his three sisters were the petitioners, and they were represented by Mr. Murphy, Q.C., and Mr. Deane; while the counsel for the alleged lunatic were Mr. Bucknill and Mr. Cave, instructed by Messrs. Slack and Metcalf, of Lincoln's Inn. Mr. Murphy, in opening the case for the petitioners, gave an outline of the history of the rev. gentleman, from which it would appear he had been under restraint as far back as 1879. He, however, recovered, and since then until November last he had been living at the Oratory at Brompton. He then showed symptoms of excitement and suspicion of conspiracy, and became an inmate of Ticehurst and Burgess Hill Asylums, and was finally transferred to Virginia Water, where he was detained as a lunatic at the time of the inquiry. The evidence called in support of the petition went to prove that he had been subject to attacks of excitement; that he had laboured under delusions of illustrious descent; that he had discovered a cryptogram, which was to the effect that by means of a chessboard with perforated squares, placed over a page of Shakespeare, the knight's moves on the board gave a sequence of words under the squares which had a distinct meaning which could not otherwise be obtained; that his food was poisoned, that he had been magnetised, and that the Freemasons were conspiring against him. The medical evidence confirmatory of this was given by Drs. Hayes Newington, Blandford, Read, Little, and Smythe; and evidence as to his general condition last November was given by the Rev. Father Gordon, the Superior of the Oratory, the Rev. Canon Searle, and others. Mr. Bucknill, for the patient, relied upon the evidence of those who had had business relations with him; and further, upon the fact that he had all along been a good man of business, and had practically managed his own affairs, even while under detention as a lunatic. He called Dr. Ernest White, Medical Superintendent of the City of London Lunatic Asylum, who had visited the patient as a friend at Virginia Water, and Dr. T. Outterson Wood who had recently examined him as an expert, and their evidence was to the effect that the patient was quite capable of managing his affairs, and his present mental condition did not warrant detention in an asylum. Several old brother officers who had served with the patient in the 97th Regiment, also spoke of his freedom from signs of insanity. Mr. Bucknill in his address for the patient, laid especial stress upon the point, that even admitting everything alleged against this sanity months ago, was that his condition now? He also produced a cryptogram of a similar nature to that spoken of by the patient, which was published in the *Field* newspaper. The learned Master in summing up pointed out to the jury they should not lose sight of the probable recovery of the patient, and quoted another instance of a cryptogram depending upon the knight's moves on the chessboard. The jury by twelve votes to five found the patient now to be of sound mind, and able to manage himself and his affairs.

INSURANCE OF CHILDREN.

THE Select Committee of the House of Commons on Friendly Societies, at their final meeting on Tuesday, is understood to have resolved to recommend legislation forbidding the insurance of the lives of children in more than one office, and limiting the maximum amount of insurance to £4 in regard to children of five years of age, £6 in the case of children of ten years, and £8 in the case of children under sixteen.

HOSPITAL SATURDAY FUND.

THE total net proceeds of the sixteenth annual street collection in the metropolis and its suburbs made under the auspices of this fund amount to £5,080, or £130 more than last year, and the largest result yet attained. Owing to the Lord Mayor's public appeal, 1,000 additional firms have consented to adopt a penny-a-week collection. This makes a total of 4,000 subscribing firms. The expectations formed will, it is feared, fall far short of realisation; the first quarter's collection under the new system has only realised £1,400; it is thought that nearly all the subscribing firms are deferring their payments until next month, as usual. In September, and subsequently last year, the proceeds of the workshop collection reached £6,980. It would be premature to predict how far the attempt to raise 500,000 pence per week, or £100,000 per annum—the sum needed to free London hospitals, etc., from debt—is likely to succeed. The fact that a penny-a-week collection among the industrial classes of large provincial cities and towns has proved successful encourages the hope that in due time it may work well and prosperously in London. This failing, the Lord Mayor has pointed out that London hospitals will not improbably have to be rate-supported and officially controlled—a contingency which would, in his view, be a distinct loss to humanity, "because then we should have fewer benevolent people to watch over and care for those who are admitted into hospitals as patients."

SANITARY CONDITION OF MANCHESTER.

OUR Manchester correspondent writes:—We have become so familiar with the heading "The Excessive Mortality in Manchester," that it is a welcome announcement that a serious effort is about to be made to reduce the excessive death-rate. The Unhealthy Dwellings Committee of the corporation was appointed in 1885 to "inquire and report upon the dilapidated or insanitary dwelling-houses within the city, especially such as are situated in courts approached by narrow or covered passages, also those in *cul-de-sac* streets, with a view to their improvement or removal, and also to recommend the purchase on economical terms of such as would provide sites for open spaces and playgrounds in densely populated neighbourhoods." There is a very large number of such courts approached by narrow or covered passages in the older parts of the city. Of courts of this description 183 have been dealt with by the committee; the total number of houses dealt with has been 775, and the number of owners 185. Of the 775, 97 have for the most part been demolished, 280 have been closed as unfit for human habitation; about 200 dwellings have been abolished as separate dwellings, and their rooms have been added to the houses behind them, thus transforming the back-to-back houses into one "separate" house. This change has not proved very satisfactory. In a few cases only have a nest of insanitary dwellings been completely removed, and the space they occupied well flagged and converted into comparatively open free spaces. All this has meant a dislodgement of about 3,000 persons, and of course if these are not provided for at once, the remedy may prove worse than the disease. This is well understood by the committee, who have already sought powers to build, and these the Council have granted. It is imperative—if satisfactory conditions for the maintenance of health are to obtain—that the provision of improved houses should go hand in hand with more thorough measures for amending or altogether clearing away nests of insanitary dwelling. This is the only way in which a permanent lessening of the excessive death-rate can be accomplished. In the annual report of the Committee of the Manchester and Salford Sanitary Association just issued, we have a record of the work which is being done to improve the environment of many of the denizens of some parts of our over-crowded city. One special feature in the report of the Ladies' Branch of the Association is the importance which is attributed to the facilities afforded for the consumption of alcoholic liquors in many of the poorer quarters of the city.

LONDON CEMETERIES.

THE Home Secretary has, at the instance of Mr. Byron Reed, M.P., acting on behalf of the Church of England Burial Reform Association, published returns of the number of bodies at present interred in the principal metropolitan burial places:—Abney Park, Stoke Newington, 82,570; Brompton Cemetery, 155,064; St. Mary's, Battersea, 24,648; Camberwell Cemetery, 87,790; St. Paul's, Deptford, 50,459; St. James's, Highgate, 76,220; All Souls' Kensal Green, 80,265; St. Mary's Kensal Green, 56,246; Lambeth Cemetery, 109,010; South Metropolitan Cemetery, 73,750; All Saints', Nunhead, 65,550; Paddington Cemetery, 82,536; City of London and Tower Hamlets Cemetery, Mile End, 247,000; and Woolwich Cemetery, 27,687. The total number of bodies registered as buried in metropolitan cemeteries is 1,276,875. The Association proposes to approach the Government with a view to obtaining fresh legislation preventing burial in improper soil, overcrowding, etc.

REPORT OF THE COMMISSIONERS IN LUNACY, JULY, 1889.

FROM this report it appears that the total number of lunatics, idiots, and persons of unsound mind in England and Wales, registered as such on the books of the Commissioners on January 1st last, was 84,340, being an increase of 1,697 during the year 1888, as compared with an increase of 1,752 during the preceding year, and as compared also with 1,410, the average annual increase per year of the ten years next preceding January 1st, 1888. The increase of private patients during last year was 175, of pauper patients 1,461, and of criminal lunatics 61. Of the increase of 175 in private patients, the increase was 66 in county and borough asylums, 83 in registered lunatic hospitals, only 14 in licensed houses (private asylums), and 12 under single care or in other institutions. The increase among the private patients may, to some extent, be accounted for by the additional number of patients admitted into and remaining under care in idiot asylums, and, as the Commissioners say, "these represent, probably, cases never previously brought under such supervision." They also state that, owing to fear of litigation, during the last few years many medical men have refused to certify to the insanity of persons requiring care and treatment, and that this has tended to prevent many insane persons being legally dealt with and treated, thereby lessening the number of persons who would otherwise have been registered as private patients; also that a number not sane have gone to hospitals as boarders, and that it is to be feared that there are many insane persons in illegal charge, who, if certified and brought to official cognisance, would have swelled the number of private patients. The increase, namely, 61 in criminal lunatics during the year, alarming as it appears, is apparent only, and does not represent a real increase of that element in the community; it is entirely on paper, and due to the removal of insane convicts from the hospital wards of Woking Prison (where they were not visited nor registered by the Commissioners) to Broadwood Criminal Lunatic Asylum, where they came under official cognisance and enumeration.

ERGOT IN CHILDBED.

DR. PINZONI, of Bologna, has made some interesting clinical experiments in order to determine, with something like precision, the value of ergot in childbed. He administered ergot systematically to ninety-one lying-in patients, generally in the form of about 2 grammes of the powder daily. Seventy-nine similar cases were treated without ergot. After comparing the series, he came to the following conclusions:—Ergot has little or no influence on the temperature, at the most a slight rise is occasionally observed.

It hastens the pulse a little, yet has no marked influence on the physiological slackening of the pulse observed during the first days after delivery. The physiological increase in the secretion of urine during the first days is favoured by ergot. The involution of the uterus, according to Dr. Pinzoni's researches, is either totally uninfluenced by ergot, or slightly retarded. The escape of the lochia remains normal when that drug is given; but clots, as universal experience has proved, are more readily expelled. The lochia seldom smell fœtid when the ergot is taken. Ergot delays the after-pains in primiparæ, and lessens them when they have already commenced. The secretion of milk is retarded and lessened by ergot, and sometimes completely suppressed. Ergot seems, in the belief of Dr. Pinzoni, to be a prophylactic against puerperal fever, an indirect antiseptic agent. When infection has already taken place, ergot appears, on the other hand, to hasten the entrance of the virus into the circulation. Dr. Pinzoni's researches appeared in the *Bollettino delle Scienze med. Bologna*, series vi, vol. xx.

HÆMORRHAGE FROM THE UMBILICAL CORD.

Dr. Auvard has recently described an instructive case of this accident, which occurred six hours after birth in a private case. The cord was carefully tied one inch and a half from the umbilicus; it was thick and contained much Whartonian jelly. Four hours later, Dr. Auvard visited the mother, who was thirty-five years old and had borne two other children. Looking at the infant he noticed that it was rather pale but sleeping comfortably. He was sent for an hour and a half later, as the nurse had found the child's binder soaked with blood, and its extremities were cold. The cord was immediately tied again and the child kept warm. On Dr. Auvard's arrival he found that drops of blood kept issuing from the stump of the cord, notwithstanding the new ligature. He tied the three umbilical vessels separately; the hæmorrhage then ceased, and the infant, a well-nourished female, recovered perfectly.

SCOTLAND.

THE ACTION AGAINST THE EDINBURGH SCHOOL OF MEDICINE FOR WOMEN.

Evidence has been led at some length in the action brought by two lady medical students against the executive of the Edinburgh School of Medicine for Women, to which reference has already been made in the Journal. Considerable difference in statement was expressed by the witnesses of the respective parties, but largely in connection with points which seem hardly of sufficient importance to lead to so serious a state of matters as an action at law suggest. After hearing evidence, the Lord Ordinary adjourned the case, expressing the hope that, before it came before him again next session, the parties might have settled the matter.

DISEASED OFFAL.

Dr. Murray, Medical Officer of Health, Forfar, in a letter to the Local Authority he serves, pertinently asks, What is to be done with the offal of diseased animals? Offal, as he points out, is not the excreta of animals, but the entrails and other parts cast away as unfit for human food, and, unless carefully dealt with, may be the means of spreading infectious diseases. What is at present done with such offal? Whether derived from a sound carcass or a diseased one, it is put into the middens at the shambles, from whence it is removed to be mixed with other town manure and sold to farmers. As such removal commonly takes place every twenty-four hours, and there is no reason to doubt that the offal of diseased animals may retain the germs of infection for a long time, the risk of thus conveying infection to healthy animals is manifest. In course of time, no doubt, the changes induced by putrefaction may be trusted to destroy the germs, but meanwhile the danger is imminent. We have a suspicion that Forfar is no exception to the rule in respect to this little matter of negligence, and that there are other urban authorities who spread infected offal over neighbouring farm lands, without a thought of the injury that may result. Dr. Murray is to be thanked for having sounded a much-needed note of warning. The only wise and safe course is to effectually destroy by burning the whole offal of every infected animal, and medical officers of health would do well to advise their authorities that this should be done.

IRELAND.

Dr. E. McDowel Cosgrave has been appointed Physician to Mercer's Hospital, Dublin, in room of Dr. Knight.

Dr. Daniel Crowly, of Loughrea, has been elected Coroner for the Southern Division of County Galway.

INSPECTORSHIP IN LUNACY.

Dr. Hatchell, one of the Inspectors of Lunatic Asylums in Ireland, has resigned his office owing to ill-health. We have already alluded to the supposed intention of the Government to amalgamate this department with the Poor-law, and to the appointment of a commission to report upon the subject. We do not know whether the commission has made any declaration of its views; but it is certain that no change can be made this session. The appointment is worth £900 a year, rising to £1,200, with travelling allowances. Two gentlemen prominent in the service are mentioned as the strongest candidates for the vacant office.

BELFAST SEWAGE AND BELFAST LOUGH.

The condition of the Holywood foreshore in Belfast Lough has long been a great grievance. The slob lands in the neighbourhood, which are exposed at low tide, have gradually become covered to a depth of several feet with sewage matter from Belfast, with the result that in warm weather the exhalations are of the most powerful and dangerous character. The three worst places are between Sydenham and Tillysburn, between Tillysburn and Holywood, and off the town of Holywood itself. Considerable difficulty has arisen owing to the doubt as to the authority with whom jurisdiction lay, and a pretext for delay was found in the fact that when the extensive scheme of main drainage now in progress in Belfast is completed the nuisance will no doubt be much abated. Its continuance, however, in its present state has at length become intolerable, and the Belfast Board of Guardians, who are the sanitary authority, have taken action in the matter. Their consulting sanitary officer, Dr. Seaton Reid, made an inspection on August 3rd, and it is hoped that prompt measures will be taken.

CARBOLIC ACID NOT A POISON.

A letter has been received by the President and Fellows of the King and Queen's College of Physicians in Ireland from the Under Secretary to the Lord Lieutenant, informing the College that the Privy Council for Ireland consider that it is desirable that uniformity of practice in the matter of the sale of poisons should exist throughout the United Kingdom; and that, having ascertained that the authorities in England have been advised that it is not expedient to include carbolic acid in part ii of Schedule A of the Pharmacy Act, 1868, the Privy Council feel unable at present to adopt the recommendation of the College to include carbolic acid in part ii of Schedule A of the Sale of Poisons (Ireland) Act, 1870.

QUEEN'S COLLEGE, GALWAY.

THE President, in his report for the past session, refers to the disadvantages under which the institution labours, and also to the successful results which have been obtained by students of the College, At the recent examinations of the Royal University, the Travelling Medical Scholarship, which was founded last year by the Senate, was for the first time awarded, Mr. J. Stewart, a student of the college, being the successful candidate. The museums, libraries, and laboratories appear to be thoroughly efficient; and the President contrasts the teaching of physiology as formerly carried out with the method adopted at the present time. "Not many years ago," he says, "instruction in physiology consisted in formal lectures, illustrated by experiments performed by the lecturers, and by histological specimens shown to the students." Now, in addition to attendance on lectures, a student must, with his own hands, make the analyses, preparations, and experiments that were previously only shown to him. Practical histology has been taught in a separate class for some years in the college; but last year a course of experimental and chemical physiology was carried on, which was attended by eleven students. The collection of instruments and apparatus in the physiological laboratory is believed to be not inferior in fitness for its purposes to any similar collection in Ireland; and the chemical laboratory affords ample accommodation.

NEW PARK FOR BELFAST.

MR. R. G. DUNVILLE, D.L., has presented to the Corporation of Belfast a valuable piece of land, extending over five or six acres, lying between the Falls Road and Grosvenor Street, to be converted into a public park. The neighbouring districts are very densely populated, and the proposed park will be a great boon. Belfast is to be congratulated upon the growing number of its breathing spaces, and upon the good use that has been made of them. The new park will be the fourth added to the resources of the city within the last few years. The declining death-rate is the best commentary upon the wisdom of the Corporation and the liberality of the leading citizens.

FATAL SEWER ACCIDENT IN BELFAST.

PROFESSOR LETTS has presented to the Belfast Corporation his report regarding the recent sewer accident, by which two men lost their lives. His conclusions are that the accident was due to the sudden outburst of foul gas through a disused privy pipe opening into the top of the sewer; that the noxious constituent of this gas was probably carbonic acid, which prostrated the men in the sewage water; that the death of the men was largely due to their having swallowed quantities of the sewage water; and that it is probable no fatality would have resulted if it had not been for irregularities in the floor of the sewer and the consequent accumulation there. Amongst other precautions, he recommends that the sewers should not be cleansed during the continuance of such exceptionally dry weather as prevailed during the month of June; and that, before cleaning any sewer, two men should walk the whole distance, each provided with a lamp, and then return and make their report.

DEATH FROM HYDROPHOBIA IN BELFAST.

PATRICK HUGHES, who was admitted into the Royal Hospital on July 29th, suffering from hydrophobia, died on August 2nd. The deceased was bitten by a dog on March 14th. The wound healed in about ten days, and there were no symptoms until July 28th. On admission to hospital he complained of loss of power in the right arm, pain in the left, and difficulty in swallowing. On the third day he became delirious and violent, so that restraint had to be employed. Congestion of the lungs set in before death. The dog was destroyed by the police shortly after the occurrence.

TOPICS OF THE DAY.

(AN OCCASIONAL COLUMN.)

BY THE EDITOR.

THE most interesting topic of the day at this moment is naturally the forthcoming annual meeting, and the business which awaits its consideration. The reports of Council and of standing committees are this year unusually full and important, and the special resolutions are exceptionally numerous and suggestive of discussion. It is to be hoped that the attendance at the general meetings will be full, and that the "garden parties," this year unusually abundant, and set down at the same hours as some of the business meetings, will not unduly deplete those meetings.

THE annual report of Council, taken together with the minutes of the last meeting of Council, show an increasing liberality of endowment of science, and a large generosity in promoting the higher interests of education and the progress of research. The funds available for these purposes are the outcome of the extension of membership, and of the ever-growing prosperity of the JOURNAL, and the result of good financial management. The expenditure for the general purposes of the Association, for the accommodation of committees, for the convenience of members, on grants for the research Committees and for the newly-formed library, reach an amount which has no parallel in the annual history of the Association. This expenditure is wholly met out of revenue, and leaves untouched the invested capital necessary to give stability to so great an institution.

ON the recommendation of the Scientific Grants Committee, the Council have this year placed £500 at their disposal, to meet applications for researches on subjects conducive to the growth of new knowledge. They have given, as is now usual, two research scholarships of £150 each to distinguished workers who will throughout the year carry on their investigations on subjects directly connected with or collateral to medicine, in London and Edinburgh. They have further voted £200 for a series of researches in therapeutics to the newly-formed Committee on that progressive department of study; these investigations being conducted under the direction of well-known professors, who have sanctioned the applications and will supervise the grants. The Scientific Grants Committee will meet in October to consider further applications for the balance of the sum allotted to, but not yet allocated by them; and a further application may be expected from the Committee for investigating the state of children unfit from mental and nervous conditions for ordinary school teaching, who received last year a grant of £50. A grant of £100 has been made to the Lord Mayor's Fund for the Pasteur Institute.

FOR the library, reading and writing rooms for the use of members the Council have made grants amounting to £400 for fittings, etc., and a further sum of £300 for books of reference. By the happy combination of individual liberality with corporate initiative, which has always been a feature in our institutions, the generosity of private donors has provided already about 1,500 volumes, including a considerable number of recent interest. Thus this as yet infant department of the Association work starts with favourable promise of usefulness, and under circumstances which justify the hope that it may attain great usefulness and considerable proportions. The experience of sister libraries here and in the United States is that such a library attracts to itself valuable gifts by donation and legacy, while the machinery for "exchanges" in serial literature which the JOURNAL possesses may possibly render that important feature in a reading room and reference library unusually complete without any large expenditure.

THE expenditure this year on an addition to the existing premises for the purposes of committee rooms, etc., has been upwards of £3,000.

THUS the grants for purely scientific work this year amount to £1,100, for the library £800. It will be noted that the scientific men who apply during the year for research grants are not always able to utilise the whole of the sums thus granted. This part of the Society's work is carried on with the aid of a highly competent Committee, and under conditions corresponding to those of the Royal Society (which dispenses a parliamentary grant for the

purpose), and the sums voted are exclusively for the cost of the research. Most, but not all, of the results attained are either noticed or reported in the pages of the JOURNAL; but as the object has always been to encourage research from the broadest and most liberal point of view, it has not been made a *sine quâ non* that the resulting reports and observations should be confined to these pages; on the contrary, they have enriched the *Proceedings* of learned societies and of special scientific journals and reviews, where this was the preferable course.

THE total sums that have been granted for scientific research have been as follows:

	£	s.	d.
Scientific Grants	3,836	17	2
Research Scholarships	1,548	1	6
Collective Investigations	3,447	9	11
Therapeutics Committee (1889)	200	0	0
	£9,032	8	7

IN respect to the points raised as to the JOURNAL by the circular from leading metropolitan members discussed in the report of Council, it may be noted first as to the question of the proposed signature of all articles that it was stated in the memorandum of the Journal and Finance Committee: "As regards the suggestion in the circular that all articles contributed to the JOURNAL should be signed, the Journal Committee are of opinion that this cannot be done. There are upwards of 140 members of the editorial staff of the JOURNAL, and in each issue the editorial writers number between 30 and 40. Many of these contributors are of great standing in the profession; others hold high official positions in the various universities, corporations, and colleges, and in the hospitals and schools throughout Great Britain, in the several Government offices, and in the public services. Their contributions to the JOURNAL, published under the protection of the editorial responsibility, are frequently of vital importance, especially to the members of the military, naval, public health, poor-law, and other official medical services, as well as to the profession at large. To compel signatures to be appended would be to cut off a large proportion of these communications and contributions, so important to the interests of the Association and the profession; it would emasculate the JOURNAL, and would seriously injure the Association."

As to the second question raised, that of the advertisements, which appear to be objected to as commercial, it may be noted that at no period during the last forty years have the managers found it possible or thought it desirable to dispense with that source of income and of information, which is and has always been common to all medical journals, whether controlled by individuals, committees of professional men, or medical societies, as will be seen on the most cursory examination of all the medical journals and magazines of this country, published in London, Edinburgh, Dublin, Birmingham, Liverpool, Glasgow, Bristol, and elsewhere. It is stated that so careful has been the supervision of those columns that series of advertisements have been refused of the value of some hundreds of pounds, which have been admitted to the advertisement sheet of other medical journals of the highest repute. The value of the advertisements has increased *pari passu* with the increase of circulation. In 1866 the present Editor came into office, and in 1872 the present General Secretary and Manager. In 1865 the receipts from advertisements were £655 9s. 3d., including sale of JOURNALS; in 1888 it was £12,150 for advertisements and £1,338 for sale of JOURNALS, and it is still growing. But for this legitimate and customary source of revenue the JOURNAL could not have been enlarged to its present size and completeness without raising the annual subscription. In 1865 it consisted of about 29 octavo pages, each containing 1,260 words; it has now an average of 56 quarto pages, each containing 1,700 words.

THE subscription remains the same, £1 1s. a year to the Association and JOURNAL. The number of pages in the front part of the JOURNAL, devoted to scientific and clinical matter, was in 1865, on an average, less than 8 small pages, which were much encroached upon by other matter; it is now an average of 24 large pages; the scientific leaders and notes of the week have been increased in proportion; there were then reported only 14 learned societies; at present there are issued reports of 37; the number of Branches and District Branches reported was then 23, it is now 53. The following departments have been added: Army and Navy Medical Department, Poor-law Department, Public Health, Hospital and Asylum Management, a Medico-Legal and a Medico-Ethical Department, all of which are specially contributed by carefully selected experts of high standing.

THE book review department has been greatly developed; a staff of upwards of forty of the most eminent persons in their several departments in the three kingdoms are engaged in this work. The special correspondence from great cities at home and abroad has been greatly multiplied, and its scientific side specially developed.

THE net result of this steady development of the usefulness and completeness of the JOURNAL to all branches of the profession at home and abroad it is not meet here to estimate. In 1873 Dr. Quain, the President of the Metropolitan Counties Branch, said:—"The founder of our Association long enjoyed the happiness of witnessing the realisation of his hopes and anticipations, whether looking to the number who joined the Association as members, or to its achievements. At the close of the first year of its existence (1833), the number of members was 310. In the year 1842, at the end of the first decade, the number was 1,300; eight years ago (1865) after thirty-two years, it was a few over 2,000; whilst the number at the present moment falls but little short of 5,500. The average annual increase of members during each of the last six years has thus been at the rate of 600 (instead of the previous annual rate of 40). And here it is but just to observe that this increase is coincident with the vast improvement which has taken place in the management of our JOURNAL in the hands of the present editor." In 1867 Dr. Stokes said: "Your Society is one altogether peculiar in its organisation, and in which we recognise the union of the profession in the three kingdoms for objects that are good, and consequently great. And so we are proud of our institution, proud of it as followers, and, therefore, as teachers of science; for every man who practises medicine or surgery in a true spirit is himself at once a learner and a teacher. Yet it is not on this ground alone that the British Medical Association is to be considered; for, from its very beginning, more than a quarter of a century ago, it has kept other and, in a sense, higher objects in view. It has in good earnest sought to raise the social status of medicine, by the labours of science on the one hand, and the labours of love on the other."....."in founding the Association, Sir Charles Hastings and the far seeing men who worked with him kept in view its operation, not only as a scientific body, but as a means of promoting friendly feelings by the personal interchange of kindly offices, a means of getting rid of prejudices and of neutralising those corporate jealousies so long the bane of our profession."

SINCE the above dates, it is equally true that whereas, prior to the development of the JOURNAL, dating from 1865, the yearly rate of growth of numbers did not exceed forty; it began from that date, and has since steadily continued to attain an average of 500, a rate which at the present moment is exceeded. That at least 50 per cent. of new members are obtained annually by special issues of specimen numbers of the JOURNAL, and are forwarded to the office direct after each such issue. That not more than 10 per cent. of members are able to attend annually the general meetings; that whereas before as many as 500 local members would sometimes join the Association to attend a general meeting in one of the great cities, of whom hardly fifty could be retained as permanent members of the Association, the increment goes on now throughout the year, and constitutes a permanent addition to numbers amounting in 1887 to 1,649 (including a considerable accession of Colonial members), and in 1888 to 954, the present number of members being 12,897.

THE LIVERPOOL POISONING CASE.

AFTER an unusually protracted trial the jury have found Mrs. Maybrick guilty of the wilful murder of her husband, and none who have followed the evidence closely can doubt that they have arrived at the truth. The prosecution had to demonstrate not only that Mr. Maybrick died of arsenical poisoning, but that the arsenic was administered by his wife, both of which points were stoutly contested.

The evidence of the poisoning was supplied by the analysis of the viscera. From 8 ounces of the intestines Dr. Stevenson extracted 0.015 grains of white arsenic; from the liver 4 ounces yielded

0.027 grains. The kidneys showed a trace of arsenic, but none was detected in the contents of the stomach or in the coats of that organ. Dr. Stevenson stated that at the time of death the body probably contained approximately a fatal dose of arsenic; and added that, in cases of undoubted arsenical poisoning, he had found both more and less arsenic than in this case. The defence in regard to this part of the case was that the quantity of arsenic found was not nearly sufficient to account for death, and that it might have been due to the fact that the deceased had been in the habit of taking medicines—and especially arsenic—as a "pick-me-up." The evidence as to this latter fact was, however, by no means conclusive, and only referred to some months, if not years, before his fatal illness. A great deal of stress was laid by the defence on the alleged fact that the condition of the stomach was not characteristic of arsenical poisoning, as it did not present any petechiæ. And here the prosecution cannot be said to have pressed the case unduly against the prisoner, for they neglected to call attention to the fact that the severe gastric condition referred to was not so likely to be found when the poison had been taken in solution—as it had been in this case—a circumstance which also fully accounted for the absence of the poison from the contents or walls of the stomach.

The deceased was under medical observation during the whole of his last illness, and a great deal was made by the defence of the fact that arsenical poisoning was not suspected by any of the doctors until it was suggested to them. There is nothing unusual in this; it is almost the rule on occasions of this kind that it is not the illness but some attendant circumstance that first gives rise to suspicion of poisoning, and when the poisoner is in actual attendance on the patient and in sole charge, it is very easy to understand that the symptoms would not be so presented to the doctors as to suggest poisoning.

Read by the light of the *post-mortem* examination and subsequent analysis, it is not very difficult to see in the account of the illness a clear case of arsenical poisoning, and it was noteworthy that on at least three occasions the deceased referred his symptoms to something he had taken; the first time it was a cup of tea, at another it was the medicine which had disagreed with him, and on a third occasion it was some Revalenta Arabica that he accused of making him feel ill, and it was shown that in one bottle of medicine there was arsenic present when none had been ordered, and the jug in which he had taken his luncheon to the office on the last day he went there was proved to contain arsenic. The symptoms commenced with sickness one morning, and stiffness in the legs, which he attributed to the cup of tea he had taken; he went, however, to some races that day, when it was contended by the defence he got wet, and thus brought about the gastro-enteritis from which he died. We are not, however, aware that gastro-enteritis can be thus produced, and, as we said a few weeks ago in speaking of chronic poisoning by arsenic, the simultaneous occurrence of vomiting and diarrhœa in an adult should always raise a suspicion of poisoning.

The main symptoms during the early part of his illness referred to the stomach, mouth, and throat; there was much straining and hawking but not much vomiting, probably because he was allowed to take so very little by the mouth. There was but little complaint of pain or tenderness in the stomach, a point to which the defence attached much importance, but which will be easily explained by the fact that the poison was administered in solution; towards the end diarrhœa and tenesmus set in, but, although trained nurses were in attendance, we are not informed of the extent of the diarrhœa; the mildness of the diarrhœa and the tenesmus would also probably be due to the poison having been administered in solution.

It was not a difficult task to connect the prisoner with the crime when it had been shown that death was due to arsenical poisoning. Two days before the first onset of symptoms she purchased some arsenical fly papers, and soaked them in water, and a further purchase of papers at another shop was also proved; but the most damning thing against her was the fact that she had put arsenic into some Valentine's meat juice, which, owing to the watchfulness of his nurse, was never given to the deceased. As regards the remarkable statement which she was allowed to make, we need only say—namely, in that she asserted she had put a powder into the meat juice, whereas it was proved that the arsenic used was in solution—that in one most important respect it was obviously untrue.

A CORRESPONDENT writes: During the recent trial of Mrs. Maybrick, the value of expert evidence has been brought prominently before the public. Mr. Justice Stephen, in the course of summing up the case, passed some rather severe strictures on testimony of this nature. He said: "The great controversy in this case was in the medical evidence. The jury had noticed the different peculiarities of manner and expression on the part of the doctors called, and had no doubt formed their own opinion as to their impartiality or their partisanship, and their understanding and judgment generally. He did not suggest any imputation upon their good faith, but they certainly did differ very widely in their conclusions. There was such a thing in forensic medicine as a kind of subtle partisanship which very much diminished the value of the evidence given. Any person who had been in the habit of attending committees of the Houses of Parliament, and hearing evidence there given by engineers and persons connected with the mechanical arts, must have learned that the mere fact that a man went into the box and said this, that, or the other, did not by any means qualify them to receive unhesitating belief. One had to take a great deal of the scum from the testimony of skilled witnesses on the ground of their becoming, probably insensibly to themselves, advocates rather than witnesses. He would not do anything so invidious or so unjust as to impute in this awful inquiry such advocacy to gentlemen who had given the court the benefit of their experience."[1]

The remarks of the learned judge are obviously intended to be quite general in their application, and are not directed specifically against medical evidence. But this consideration increases rather than diminishes the gravity of his lordship's charge, that "one has to take a good deal of the scum from the testimony of skilled witnesses, on the ground of their becoming insensibly to themselves rather advocates than witnesses."

It is, indeed, difficult to see how an expert witness can help being, to a certain degree, an advocate of his opinions.

He is called to show that such and such things are the results of certain pre-existing circumstances. He must have reasons for his belief; on his reasons he is examined and cross-examined, and he probably knows that there is an expert on the other side, who, in equal good faith, has come to a diametrically opposite conclusion.

The result is, that credit will be given to the witness who adduces the stronger arguments in favour of his views. And to adduce arguments clearly and tersely is nothing more nor less than advocacy. In other words, advocacy must form part of an expert's evidence.

But if our inquiry is pursued further we shall find that "advocacy" is by no means peculiar to experts. One has only to go into court when, for example, an action for libel or breach of promise is being heard, and to listen to the plaintiff or defendant giving evidence as to damages, and the hearer will have no doubt as to the real existence of "witness advocacy," to coin a phrase.

Yet we never hear that "the value of the evidence given is thereby much diminished," while there generally is very good ground for casting imputations on the good faith of the witnesses. In referring to the medical evidence in the Maybrick trial his lordship expressly guards himself from making this imputation, and he would probably do the same in the case of all honourable expert witnesses.

The true conclusion would appear to be that "that the subtle partisanship existing in forensic medicine is, in reality, an attempt to give without bias, but cogently, the reasons on which certain opinions have been founded, and that it contrasts favourably with the undoubted bias and 'witness advocacy' of the ordinary common law litigant."

I would point out to members of the legal profession that even the astutest lawyers differ in their opinions. Every point of law which is argued is but the opinion of one expert pitted against that of another with all the power that advocacy can command. It is perfectly true that there is a judge to decide: but how often is not the court of first instance overruled by the divisional court, which, in its turn, is overruled by the court of appeal, whose judgment is reversed by the House of Lords? Here, indeed, is an example of variance of opinion amongst undoubted experts of the highest acumen, which the wretched litigant too often meets with, at the cost of his time, his pocket, and his health. It is perfectly true that the final judgment of the House of Lords is binding, and can only be overturned by statute; but we may well rejoice that there is no salaried tribunal whose judgment is binding in matters of doubt in surgery and medicine; for, if there were, farewell to all further progress and research in those sciences.

[1] *Evening Standard*, Tuesday, August 6th, special edition.

PARLIAMENTARY BILLS COMMITTEE.

A MEETING of the Parliamentary Bills Committee of the British Medical Association was held at the offices of the Association on Thursday, August 1st. There were present Drs. T. Bridgwater (President of Council), J. W. Browne (London), G. W. Crowe (Worcester), W. Dickson (London), George Eastes (London), R. Farquharson, M.P. (London), E. H. Galton (London), G. B. Mead (Newmarket), Mickle (London), Nicolson (Wokingham), H. H. Phillips (Reading), W. D. Spanton (Hanley), F. Wallace (London), Mr. Ernest Hart in the chair. The minutes of the previous meeting were read and confirmed. Letters expressing inability to attend were received from Mr. Balding (Royston), Dr. H. Barnes (Carlisle), Dr. Alfred Carpenter (Croydon), Dr. Wm. Carter (Liverpool), Surgeon-General W. R. Cornish (London), Dr. C. E. Glascott (Manchester), Dr. Bruce Goff (Bothwell, Lanarkshire), Mr. J. H. Hemming (Kimbolton), Mr. Hugh R. Ker (Halesowen), Dr. Wm. Ord (London), Dr. G. H. Philipson (Newcastle-on-Tyne), Mr. J. Prankerd (Bath), Mr. S. W. Sibley (London).

CERTIFYING FACTORY SURGEONS.

The CHAIRMAN said he had to report to the Committee in the first instance that the memorial in respect to the employment of medical men as certifying surgeons was forwarded to the Home Secretary and duly acknowledged. Copies of leaders on the subject which had appeared in the JOURNAL had, at his request, been forwarded to him, and the whole matter was now under his consideration. As already reported, the Association of Certifying Surgeons had applied for 5,000 copies of the leader, which, in accordance with the instructions of the Editorial Reference Committee, were reprinted, and had been extensively circulated not only amongst members of Parliament, but amongst the proprietors of mills, for he believed it was felt that it was necessary in the interests of certifying surgeons that the proprietors of factories and mills should be put in possession of the information which those leaders gave in support of the memorial. In reference to that subject, he should like to say how much they were indebted to Dr. Arlidge, of Newcastle-under-Lyme, for the assistance which he gave to the Committee and to the JOURNAL in furthering the objects of the Association of Certifying Factory Surgeons, to whom some acknowledgment should be made for the services which he had rendered.

Dr. BRIDGWATER proposed and Dr. NICOLSON seconded: "That the best thanks of this Committee be given to Dr. Arlidge for the valuable assistance which he has rendered to it in support of the case of the certifying surgeons, and by setting forth in the JOURNAL the reasons in support of their representations to the Government."

This resolution was unanimously carried.

THE LOCAL GOVERNMENT (SCOTLAND) BILL.

The CHAIRMAN said, in connection with this subject, he should ask Dr. Farquharson, M.P. for North Aberdeenshire, to whom the Committee was so greatly indebted for assistance in this and other Bills before Parliament, to give some detailed information, but he (the Chairman) might in the first instance remind them that he had the honour of presenting at the last meeting a series of amendments of which they approved, which were to be presented to Parliament for the improvement of that Bill in the interests primarily of the medical profession, but equally in the interests of public health, and in the interests of the public at large, which were most deeply concerned in rendering any such measure an efficient and perfectly workable and well protected measure. Since he (the Chairman) had had the honour of meeting their Committee, he had had the advantage of meeting a deputation from the West of Scotland Branch of the British Medical Association, an exceedingly important Branch in any sense, and especially so in reference to that particular Bill, because it represented 2,500 practitioners in Scotland, and because those were the practitioners who were especially affected by the operations of that Bill. That deputation represented not only that Branch, but in the person of Dr. Christie it represented also the Sanitary Association of Scotland. Now he was sure it would be satisfactory to their Committee, as he might be permitted to say it was a source of extreme satisfaction and some little pride to himself, that that Committee was deputed to express to him personally as their Chairman in the first instance the great pleasure with which the large number of practitioners, and the important associations whom they represented, regarded the report which he had presented to, and which had been accepted by, the Committee in reference to that Bill. Dr. Watson, who was one of the best authorities he believed in Scotland on the subject, went so far as to say that he and Dr. Russell and other leading authorities on that subject in Scotland regarded it, as he was good enough to say, as one of the ablest and most complete and laborious documents which they had ever had the opportunity of seeing on the subject, and that they entirely approved of every word of it. The importance of that was hardly to be exaggerated, because the measure was one which not only affected the whole of Scotland, and was likely to affect it for many years to come, but affected in a very important degree the interests of all the medical men who were to be concerned in Scotland in carrying out the Public Health Act; and in another respect it was at least as important, in that it set certain precedents which had a bearing on the Public Health Acts of England and Ireland. It was a measure of unusual public spirit, of which he was sure their Committee should make some acknowledgment. The West of Scotland Branch had adopted a course which they could wish that all the Branches of the British Medical Association would adopt, and that was of giving a special, practical, and particular attention to the clauses of that Bill, which affected the interests of their locality and their members. They had gone beyond what was usual, for they had established a most valuable precedent in directing a deputation from themselves to come up to London from so great a distance at their cost in order to support and to strengthen and on their own behalf to urge the recommendations which the Parliamentary Bills Committee had adopted. He was sure that Dr. Farquharson would tell them that he agreed with the impression which he (the Chairman) received at the meeting which they had with the Lord Advocate of Scotland on that occasion, that the presence of those gentlemen, representing so great a body of medical men in one of the greatest Branches of their Association, and one of the largest body of medical men connected with the Association on the subject of that Bill, had had great influence with the Government, and materially assisted the ultimate progress of the amendments of that Bill, which their Committee had adopted on his report, and did much to secure that most triumphant, victorious, and fruitful result, which, as Dr. Farquharson would tell them, was attained in the House of Commons, but which, as he probably would not tell them—but which it was his (the Chairman's) duty to tell them—was largely attained by his own instrumentality. He would ask Dr. Farquharson briefly to state to them what were the most important results attained in Committee on the Local Government (Scotland) Bill in the House of Commons; and after he had made that statement, he would ask them to pass such a vote of thanks as they might think proper to the West of Scotland Branch of the British Medical Association for their public spirited and valuable action on that occasion.

Dr. FARQUHARSON said the last time they met they were considering the various amendments which they were desirous of bringing before the House of Commons, and the various members who should be asked to take charge of them. The members who were asked to do so had, to use a homely phrase, "shied off," and it was left to Sir Walter Foster and himself on the night before the Committee stage to distribute them among themselves, and to take upon themselves to move those amendments. As their Chairman had told them, a very important factor came into play before the Committee stage, and a deputation from the West of Scotland Branch, consisting of Dr. McVail, Dr. Christie, Dr. Watson, and himself, together with their Chairman (which gave additional weight to their proceedings), was received by the Lord Advocate. He was bound to say the Lord Advocate was extremely impressed by the weight of the testimony brought to bear by those gentlemen as to the necessity of the changes which they advocate, and he was bound to say it was very largely due to the attendance of those gentlemen that they got those changes introduced into the Bill which were now exciting the envy of Englishmen. English medical men were, he thought, very naturally envious at their success. The Lord Advocate, in private correspondence, expressed to him (Dr. Farquharson), that he never saw a series of amendments or a statement drawn up in better form, or more convincing than the form which had been sent to him by their Committee, to which and to the deputation were due, he thought, the concessions they got. Mr. Hart had asked him to point out what they had attained. The first point was that of compulsion, that every County Council must appoint a medical officer for each district; it should no longer be a matter for their own opinion; secondly, they had obtained what was practically security of tenure for the

health officer, so that they should not have the terror hanging over them of capricious dismissal by their own County Council, but that they should have a power of appeal, not only to their district County Council, but to the Board of Supervision (corresponding to the Local Government Board in England), and the highest authority to whom they could go.

Dr. BRIDGWATER having suggested that it would have been better if the County Councils had had the power of combining for appointing one medical officer, the CHAIRMAN pointed out that the Bill gave this power.

Dr. FARQUHARSON, continuing, said he thought the action of the Parliamentary Bills Committee had been extremely useful and beneficent, and it was entirely due to their influence and their energy that the medical profession of Scotland were indebted for those two very useful concessions.

The CHAIRMAN thought they would all feel that, if the British Medical Association had during the whole year done nothing but that, and if the Parliamentary Bills Committee in its whole history had never achieved any other result than that, it had, for the first time in the history of sanitary legislation in this country, introduced into an Act of Parliament, for the most Radical and Liberal part of Great Britain, two provisions, one of which makes it compulsory on every County Council to appoint a medical officer of health—a principle which does not exist in any other part of Great Britain; and, if to that be added, that we have attained for Scotland that which England has vainly been desiring to obtain, so far as its medical profession is concerned, namely, security of tenure for health officers corresponding to the security of tenure of Poor-law medical officers—a tenure no longer dependent upon the caprice of small local boards, on whom the medical officer may be bound to press sanitary reforms, but a tenure independent of those local boards, and capable of maintenance, and depending only on the Central Board, which was removed from the personally vested interests which at present operated in so hostile a manner against the efficiency of the local medical officers in England. If their Association and this Committee had not during the year been able to effect anything else than the inscribing of these two great principes on the statute-book, and in getting them accepted by the Government—in these respects, at least, it had attained a result worthy of their great efforts, and not unworthy of the great objects of their Association. While congratulating themselves, therefore, he thought it would be proper that they should offer their warmest thanks to the West of Scotland Branch for the assistance which they had rendered in the matter, and he might venture to add also to Dr. Farquharson and Sir Walter Foster for the invaluable assistance they rendered in communication with the Lord Advocate and in Parliament in effecting that most desirable object.

VOTE OF THANKS TO THE WEST OF SCOTLAND BRANCH.

It was moved by Mr. SPANTON, seconded by Dr. PHILLIPS, and carried: "That the warmest thanks of this Committee are due to the West of Scotland Branch for their public spirited action in sending a deputation to London in support of the amendments put on the paper of the House of Commons by Dr. Farquharson and Sir Walter Foster on behalf of this Committee, and to those members of Parliament herein mentioned, for their active assistance in carrying into legislative effect the recommendations of this Committee, especially those providing the compulsory appointment of a medical officer of health for every County Council under the Local Government (Scotland) Act; and for ensuring security of tenure to the medical officer so appointed."

It was proposed by Dr. CROWE, and seconded by Dr. MEAD: "That the thanks of this Committee are due and are hereby tendered to the Lord Advocate of Scotland for the sympathetic reception which he gave to the deputation from the West of Scotland Branch and from this Committee on the subject of the draft amendments, and for the practical effect which he gave to their recommendations in the House of Commons."

This was unanimously carried.

LUNACY ACTS AMENDMENT BILL.

The CHAIRMAN said they now came to a matter in which they had the most valuable assistance from metropolitan members, and that was the Lunacy Acts Amendment Bill, and Dr. Mickle, who was a tower of strength to them in that matter, and who did not shrink from any labour of detail, would perhaps favour them with a report as to the further progress of the amendments. He (the Chairman) was very glad to be able to state that the action which the Committee had authorised Dr. Mickle to take in this matter, and which Dr. Farquharson and Sir Walter Foster had taken on their behalf, had been most successful in advancing the interests of the public, which they were bound to consider in all that they did, but the interests of the whole profession, and especially of individual medical men, who were threatened in a very serious manner, both as regards the slur that some of the provisions of the Bill cast upon their moral strength of character, but also in regard to their material interests, by the provisions of the Bill; and Dr. Mickle, he was sure, would tell them that they had met with an unexpected and quite unusual measure of success in the steps which had been taken in this most important matter.

Dr. MICKLE said since the last meeting of the Committee the Bill had become practically law. It had been read a third time. So far as he could gather from the short report which he had seen, an amendment was passed which expunged from the Bill the clause and subsections which provided that a medical man who had signed a certificate in a case of urgency, admitted under an urgency order, should not be allowed to be one of those who subsequently signed one of the two medical certificates under which the patient subsequently continued to be detained under care and treatment. That was a provision of the Bill which seemed to be extremely unfair and unnecessary, casting a slur upon the first medical man engaged. Then a very important point came before the House which concerned medical men who received single cases. In accordance with the recommendations of their Parliamentary Bills Committee, the clauses of the Bill had been removed which affected medical men who received "single patients" of unsound mind. The clauses discriminated adversely against medical men with regard to the reception of such single patients, as compared with persons other than medical men who received such patients; and limited medical men to three specified classes of cases, who might be received as single patients under conditions. With regard to single patients and their reception by medical men, it had been proposed and carried that medical men should be allowed to receive what practically amounted to an unlimited number of patients. But it seemed that that raised an entirely different question, and, if a house was to receive several patients, surely it ought to be licensed and submitted to the same control by the licensing authority, as was the case with similar houses receiving a smaller number of patients; otherwise, of two medical men, receiving the same number of patients, one would have the house licensed and be subject to a very much larger amount of visitation and control by the licensing authority than his medical neighbour who had the same number of patients in an unlicensed house; and it would be insufficient that only the slight amount of visitation and supervision should be exercised over houses containing several patients as was now required by unlicensed houses receiving only one patient. It would seem right that the visitation should be the same in all houses where more than one patient was received. A very important point that was urged by this Committee, and was accepted by the Standing Committee on Law of the House of Commons, and which was finally rejected in Committee of the whole House, was the omission of the very irritating and absurd clause relating to the posting, in conspicuous places in asylums, of printed notices of the right of patients to write letters to a number of authorities, and to have them forwarded unopened; and of the right to have all other letters written by them forwarded, unless submitted to Commissioners or visitors within twenty-four hours. This clause, which had been rejected, as above stated, was reintroduced on the motion of Mr. John Ellis, and the reintroduction of the clause was supported by arguments which read very absurdly to those who knew anything about it, consisting very largely of grievous misstatements of fact. It was, for example, stated that the Commissioners were totally opposed to the Bill, whereas some of the clauses were put in at the Commissioners' request. It was said that it was the first time that attention had been called to this, whereas, on the contrary, it had been repeatedly urged by this Committee before; and there were a number of other statements as to the sources of litigation, the majority of cases being those of persons who had been in public asylums.

The CHAIRMAN called attention to the fact that the clause was only reinstated subject to the condition suggested by Mr. Arthur O'Connor and accepted by Mr. Matthews, that the posting of these notices should only take place subject to the approval of the Commissioners of Lunacy, which he took it to be a very important condition, inasmuch as they would have the power in any and

every place of refusing the posting of such notices when it was suggested it would lead to injurious results.

Dr. MICKLE said this would depend upon the wording of the clause; and it was decided that attention should be directed to this point. Dr. Mickle said another point was the assurance given by the Home Secretary that the special reports required periodically should not be of a character to take the medical superintendent from his more important duties. They were very much indebted to Dr. Farquharson and the other gentlemen who supported him in securing the introduction into the Bill of some of the amendments of this Committee, by which they had been able to alter the character of the Bill far more than they at one time thought was possible.

The CHAIRMAN said he thought they ought to remember that a great many of the most important objects which this Committee had in view were carried out by amendments carried in, what was called, Grand Committee, which were not reported; and that they were therefore exceedingly indebted, to an extent which did not appear in any published report, to Dr. Farquharson and Sir Walter Foster for the very valuable assistance which they rendered to this Committee, and he though it would be extremely interesting to them if Dr. Farquharson would give them a little account of what took place.

Dr. FARQUHARSON said he did not want to take any credit to himself. He did his best to carry out the objects of this Committee. A great many of the amendments which now occurred publicly under the name of Mr. Matthews, were the amendments of the Parliamentary Bills Committee, placed by him (Dr. Farquharson) before the Government Committee, and accepted there and then by Mr. Matthews. With respect to what Dr. Mickle had said as to the reception of single cases, it would be desirable in future to extend and encourage the domestic treatment of insanity by giving medical men the power to take two or three cases into their houses, and giving lunatics the chance of associating with the same people, and of getting the advantages of domestic country life, which was felt to be of great importance.

Mr. EASTES moved, and Mr. BROWN seconded, "That the best thanks of the Committee be given to Dr. Farquharson and Dr. Mickle for the information they have given the Committee, and the valuable assistance they have rendered it in obtaining those concessions in the medical interests and in the interests of the insane, in the Lunacy Acts Amendment Bill."

INFECTIOUS DISEASES (NOTIFICATION) BILL.

The CHAIRMAN said they had a very important matter to consider in the Notification of Infectious Diseases Bill of Mr. Ritchie. They would remember that they had had this subject many times before them in respect to private Bills. He thought something like fifty-two private Acts were now in operation on this subject, and this Committee, with the approval of the Association, had many times represented to the Government that the subject was one which should be dealt with by a general Act as far as possible. At present, as they knew, all those private Bills which subsequently became private Acts came before a Special Committee of the House of Commons called the Sanitary and Police Committee. On more than one occasion the Association as a whole had expressed the opinion that while the compulsory notification of infectious disease was a very desirable measure, the method of notification should be by the householder, and not fall upon the medical man who took part in it. Nevertheless, the Sanitary and Police Committee of the House of Commons, and the House of Commons as a whole, had on several occasions taken the precisely opposite view; and he (the Chairman), on behalf of the Parliamentary Bills Committee, had more than once made representations to that Committee in accordance with the view thus far expressed by the Association that the notification of infectious disease should be the duty of the householder exclusively, and not by the medical man; and in one or two cases, notably in the case of the Brighton Bill, he had been successful in obtaining the expungal of that part of the clause; but that had been only the exception, and the general rule had been altogether the other way. The conclusions of the Sanitary and Police Committee had been as a rule, with very few exceptions, in favour of what was called dual notification, the exceptions being Bradford, Norwich, and Nottingham in England, and Greenock, etc., in Scotland. The Parliamentary Bills Committee had previously dealt with this question by referring it to a subcommittee consisting of Dr. Bridgwater, Dr. Alfred Carpenter, Dr. Langdon Down, and Dr. Grigg. When Mr. Ritchie's Bill was brought in it was referred to this subcommittee, of which Dr. Alfred Carpenter was the Chairman. They had before them copies of the memorandum of the subcommittee.

The following is a copy of the memorandum:

MEMORANDUM FOR CONSIDERATION OF SUBCOMMITTEE.
By Dr. ALFRED CARPENTER.

THE subcommittee appointed by the Parliamentary Bills Committee in April of last year for the consideration of the Infectious Diseases Notification Bill, which Mr. G. Hastings proposed to introduce, had no opportunity of considering the subject, as Mr. Hastings was informed that the Government would themselves deal with the question. It was not again brought forward until June 27th, when Mr. Ritchie obtained leave to bring in a Bill for the purpose.

The subcommittee have fully considered the details of the proposed measure. They are not in accord with the expressed wish of the Association, inasmuch as the Bill adopts the principle which has had the name of the "dual system of notification" attached to it.

The Association was one of the first, if not the first, public body to insist upon the necessity for notification, and to press upon the attention of Parliament the duty of making it compulsory upon some one to notify the presence of infectious disease to the local authority. This necessity has at last been recognised by the Government of the country. The whole of the medical officials connected with the sanitary departments of the State believe that it will be best to have a "dual system of notification." Members of Parliament and other laymen of position, who do at all consider the question, incline to the view held by the official mind, whilst a considerable minority within the ranks of unofficial medical men see no objection to the enactment.

Under these circumstances, and considering that the Bill is a distinct advance in the direction of disease repression, the subcommittee consider that it would be unwise to arrest the progress of the Bill through the House, and risk its defeat by direct opposition. They think that it would have been better to have left the medical man a free agent, but as public opinion seems to be against the view, and the medical profession as a whole is greatly indifferent, it will be best to accept the proposal in the expectation that the principle may be made to apply distinctly to the householder or his representative, so that the public mind may be educated in the direction of disease repression on the lines adopted at Leicester. When cases of small-pox arise in that borough, the people take care immediately to inform the local authority, with the fortunate result that in spite of the absence of efficient protection by means of vaccination, epidemics of small-pox are for the present prevented from extending in that borough.

The Association believe that the question of notification is one for the people more than for the medical profession, but as the Bill recognises their right to payment for the service rendered, the subcommittee recommended that objection be not made to Clauses 3 and 4 of the Bill until it is in Committee.

Clause 5 is defective, inasmuch as notification ought to be compulsory in every district which has provided hospital accommodation, and only applicable under those circumstances. It is suggested that the clause should stand "shall" instead of "may," provided that the district has hospital accommodation at command, and that it be altered as suggested below.

5.—(1.) *The local authority of any urban, rural, or port sanitary district shall adopt this Act as soon as they have made provision for the care and maintenance of infectious cases of disease during their illness and convalescence.*

The definition of infectious diseases, modified as it is by the power to extend the list of diseases, may be taken as sufficient for present purposes.

Clause 13, as it stands, should be strenuously resisted. If notification is to be effectual there must be no loophole, and those inhabiting Government houses, and even Royal palaces, should obey the law as well as other people. If the exception is allowable, it vitiates the whole principle of the Bill. We advise that it be petitioned against as a serious blot in the details of the measure, and that means be taken to get its exclusion in Committee on the Bill.

13. Nothing in this Act shall extend to any building, ship, vessel, boat, tent, van, shed, or similar structure belonging to Her Majesty the Queen, or to any inmate thereof.

The CHAIRMAN said he had received a letter from Dr. Carpenter, in which, after expressing his inability to be present, he said: "I shall be obliged to leave the subcommittee to be dealt with as the Committee think fit. Dr. Gairdner wishes to support it, but he thinks that the people should be the first informers, and that it should not be left by them as a question between the doctor and the officials. Dr. Langdon Down objects to give up the primary opposition to the dual clause." They would see that Dr. Carpenter's subcommittee appeared to recommend the Association, or its Parliamentary Bills Committee rather, to abandon their opposition to the dual notification, on the ground that the importance of notification was so great as a general principle, and the House of Commons so set upon it as the result of its experience in respect to the fifty-two private Acts, and as the result of the opinion which the Government had formed, that Dr. Carpenter thought, and the subcommittee in whose name he wrote appeared to have thought, that opposition to dual notification would be hopeless, and could only tend to arrest the progress of the Bill, the principle of which was one of which the Association entirely approved. He (the Chairman) might be permitted to say for himself—and those were the only words he should say on the subject—that he did not regard the reasons given as adequate grounds for abandoning their position. If they were in principle opposed to that form of notification, he thought it was their duty to fly their flag to the last; and, although they might not succeed in carrying their particular point, he thought it was right that their protest should be placed on record on behalf of those whom they represented. He did not say this for himself, but as Chairman of

a representative Committee. What his opinions were on that question he wholly withheld from consideration, but as Chairman of that Committee he ought to say that so long as that principle was one which those who sent them there held, and so long as the Committee themselves entertained a belief, if they did entertain a belief, in the well-grounded character of that opposition, it was desirable they should maintain it to the last. On that ground he thought they ought to express their indebtedness to Sir Walter Foster for having so ably expressed in the House of Commons, though hopelessly and ineffectually, the opposition which was felt in the minds of a large number of the medical profession to that form of notification. With these observations he commended the report to their consideration; and perhaps they would like to hear any observations which Dr. Biddle, of Kingston, wished to make on the subject, who, though not a member of the Committee, had taken a great interest in the subject under discussion.

Dr. BIDDLE said his objection to the Bill was in the first place, one of principle. The dual system required the medical man's performance of a so-called duty which did not properly devolve upon him. He contended that the system did no good; statistics were dead against it. As he suggested to Mr. Ritchie in a letter, which was published in the JOURNAL, he was quite convinced he (Mr. Ritchie) would carry the great body of the medical profession with him if he would simply substitute for what were called the model clauses those which were in operation in Bradford, Norwich, and Nottingham, that is, that the medical man when he became aware that any infectious disease was present in a house, should hand a certificate to the householder and instruct him to forward it to the proper authorities in the same way as was now done with vaccination and death certificates, and that there the medical man's duty should terminate. This he regarded to be the commonsense view of the matter. They hoped to have some opportunity of modifying matters when the Bill went into Committee. They were perfectly ready to further Mr. Ritchie's views in every way with the single exception that they strongly objected to being made informers upon patients who had called them in at their discretion and expense. In the case of pauper patients the case was different. Mr. Ritchie's statements were incorrect in many particulars. In his statistics he (Dr. Biddle) took the twenty-eight large towns as being representative, and there were eleven of those under no system, constituting a population of about 6,000,000; and there were fourteen towns under the dual system. In 1887, on an average, 206 per million more persons were lost from notifiable diseases in the towns under the dual system than died from the same diseases in towns under no system. In 1887, the zymotic death-rate was high throughout the country, and then was the time for showing what the dual system could do; but it utterly failed. In 1888, when the death-rate was extremely low, the dual system stood very much on the same footing as the no system and single system, when the death-rate scarcely varied in any of the three groups of towns.

Dr. MEAD asked whether it was not one of the objections brought against notification by the medical man that it induced people to hide up infectious disease and scarlatina particularly.

Dr. BIDDLE said that was a strong objection. In the case of small-pox very drastic measures were used, and cases were well looked after.

Dr. FARQUHARSON, speaking as a member of the Police and Sanitary Committee, and referring to the Kingston Bill and Dr. Biddle's evidence before the Committee, said if there had been any widespread feeling in Kingston itself against the Bill, or any substantial arguments brought forward, they would very likely have given greater weight than they did to Dr. Biddle's statement at the time. He was bound to say that it would have taken a great deal to make him go against a widespread sentiment in the profession. He entered into the question with an open mind. They had taken evidence from a large number of towns, and those which came before them for the establishment of the notification clauses for the first time were able to tell them that there was no practical opposition among the medical profession to their adoption; and, secondly, where they had inquired of the towns where the dual notification clauses were in action, many had been able to tell them that there was opposition from the medical men at the time, but that the opposition had entirely died out, and the evils predicted had proved entirely fallacious; that the dual system was working well in the public interest and with the full confidence of the medical profession. He was not at all prepared to accept Dr. Biddle's statistics while they had the statistics of Dr. Seaton and others. Dr. Littlejohn had told them most emphatically, from his own experience, that the dual clause worked well. The person whom they wanted to protect the public against was the householder, and if they made the householder the person on whom the primary, secondary, and tertiary obligations depended, then that protection would be removed, because they knew, in a great number of cases, the natural predilections and the self-interest of the householder would be entirely in favour of concealing the disease. Of course, it would be a bad thing for the householder, the shopkeeper, and the hotelkeeper if it were publicly known that they had in their houses cases of infectious disease: but in the public interest he thought it most desirable that there should be some check by a high sanitary authority, whose duty it should be to notify at the same time. He did not hold that this could be any breaking or sapping of the confidential relations between the medical man and his patient, that was done over and over again, and it was admitted that in the public interest the public safety must override all such considerations. If a strong case could be made out in the public interest, he thought that should override sentiment, which he honoured, but which he thought should give way to the interests of the general public. Of the forty-seven towns in which the dual system was working Dr. Biddle had only heard that there was opposition in four or five of them. The fact of calling in a doctor did not lessen the responsibility of the householder, which was the same whether he called in a doctor or not, the legal obligation rested upon him to notify. When the doctor was present the law had a double protection.

Dr. DICKSON asked if there was any provision to protect the medical man from prosecution and an action for damages, in case of an error of diagnosis?

Dr. BIDDLE said that very objection had been brought forward by him before the Police and Sanitary Committee last year, and made a very strong point of. There was no doubt that they were liable to an action, though, in all probability, no judge would mulct them in any fine; still he thought they would have to pay the costs of the action.

Dr. FARQUHARSON asked if there had been any case of the prosecution of a medical man for a mistaken diagnosis in any of the forty-six towns? It would strengthen their case very much if such evidence were forthcoming.

Dr. BIDDLE said there had been two or three cases, but he was not then prepared to give the facts. Another point was that the dual system gave the householder no right to call in a second opinion. If the medical man in attendance said "This is an infectious case, I must notify," the householder, under the dual system, had no right of saying "Before that document is forwarded to the authorities, I would wish to call in a second opinion."

Dr. FARQUHARSON: That is a matter of detail. I should be inclined to agree with that.

Mr. SPANTON spoke of the very strong feeling that existed among the profession in his district against the dual clause. He concurred with the Chairman that, holding those views, and having consistently held them, the Committee should hold them to the last. The strongly expressed opinion from a committee such as theirs, consistently maintained, must, he thought, have good effect in modifying some of the objectionable points such as they were going to put before the Committee in the House of Commons. With regard to the memorandum he took it that it was merely for their consideration, and that they were not going to adopt it. Referring to the words in clause 3 (*b*) of the Bill—"Every medical practitioner attending on, or called in to visit, the patient shall forthwith, on becoming aware that the patient is suffering from an infectious disease," etc., Dr. Spanton asked whether the obligation of certifying would rest upon a medical man who, on entering the house and being informed that the case was one of an infectious nature, refused to attend?

Dr. BRIDGWATER: You cannot certify from hearsay.

Dr. FARQUHARSON: Is it not covered by the following words, "on becoming aware"?

After some amount of discussion it was thought that the words "or called in to visit" should be expunged, and Dr. Farquharson was asked to assist in obtaining this modification.

Mr. SPANTON asked who was to decide in a case of difficulty of diagnosis? Was the medical officer to be the authority to decide? He asked this question because a difficulty had arisen in a district near his own. He was of opinion that measles should be added to the list of diseases. They had experienced a very severe and fatal epidemic of measles in his district.

Dr. FARQUHARSON observed that it was not included in the nomenclature under the Public Health Act.

Mr. SPANTON thought one great reason why the objection to the dual clause had not been supported by a larger number of the less affluent of the medical practitioners of the country was the source of revenue from the 2s. 6d. notification fee, which to many was a matter of considerable moment.

Dr. BRIDGWATER thought it was essential that measles should be included.

Mr. SPANTON thought the word "forthwith," in Clause 3, page 2, line 2, was an offensive word, and should be modified. Did it mean that the certificate was to be filled up on getting to the house, and finding it was a case of infectious disease, or when?

Dr. BIDDLE referred to a case in which a medical man who, not being quite certain that the case he was attending was one of scarlet fever, was fined, he believed, 10s. for not notifying.

Dr. PHILLIPS asked in how many towns the householder was looked to as the source of information. He complained that the medical man was singled out for prosecution if he failed to notify, but the householder invariably escaped free.

Dr. BIDDLE said he had made that a special subject of inquiry last year, and found that, while there were about a score of prosecutions of medical men for not notifying, the prosecutions of the householder amounted only, he believed, to three.

Dr. GALTON asked whether a medical man who, attending a case at night and being unable to determine with certainty whether the case was one of an infectious disease or not, adopted means of isolation would be considered as having assumed that it was a case of contagious disease, and so render himself liable to an action.

Dr. BRIDGWATER thought that such precautions were taken over and over again. The suggestion was made that instead of the word "forthwith" in clause 3, page 2, line 2, should be inserted the words "shall as soon as he has ascertained."

The following resolution was proposed by Dr. DICKSON, seconded by Mr. SPANTON, and adopted:—"That the objection of this Committee to the dual form of notification be maintained in Committee of the House of Commons on the Notification of Infectious Diseases Bill, and that Sir Walter Foster be requested to move an amendment on the pertinent clauses. That a clause be framed and submitted to the House of Commons (in case the existing clause be maintained) for the protection of the medical man who may be called upon to certify the existence of such diseases, and who may do so *bonâ fide* in the exercise of his judgment but in error."

RESOLUTIONS TO BE REPORTED TO GENERAL MEETING.

Dr. DICKSON proposed "That our best thanks are due to the Chairman, Mr. Ernest Hart, for the great skill with which he has managed to meet the difficulties to carry into effect the legislative amendments which have been brought before us to-day; to the members of Parliament, Dr. Farquharson and Sir Walter Foster, and others who have assisted; also to Dr. Mickle, Dr. Biddle, and the members of the committee, who have so liberally given their time and attention to the many questions involved."

Mr. SPANTON, in seconding the motion, said that he most cordially endorsed every word that had been said. Speaking on behalf of provincial members, a section of which he represented, he said they felt that the work done by the Parliamentary Bills Committee and especially the continuous labours of the Chairman (Mr. Ernest Hart) were of the utmost value to them as members of the Association; it was a work which was more highly appreciated by them than any other, and it could not be better done.

The resolution was unanimously adopted; and it was resolved, "That the above resolution be communicated to the Council, who be requested to report it to the general meeting at Leeds."

DR. HYSLOP, Assistant Medical Officer at Bethlem Hospital, has, as a result of the honours examination in Psychological Medicine, gained the Gaskell prize, given annually by the Medico-Psychological Association.

PRESENTATION.—The presentation of a silver salver was made to Mr. William Van Praagh, at a recent annual meeting of the Central London Throat and Ear Hospital, in recognition of the great amount of time and patience he has for many years bestowed on sufferers for defects of such in connection with that hospital.

MALCOLM MORRIS INDEMNITY FUND.

	£	s.	d.
Amount previously acknowledged	428	7	0
Sir William Gull	5	0	0
D. J. Woodman, Esq. ...	5	5	0
Dr. Corfield	2	2	0
Dr. M. Baines	1	1	0
Dr. T. Morton	1	1	0
Dr. Allchin	1	1	0
W. J. Walsham, Esq... ...	1	1	0
Dr. Macnaughton Jones ...	1	1	0
E. Nettleship, Esq.	1	1	0
Herbert W. Allingham, Esq.	1	1	0
Dr. Henry C. Martin ...	1	1	0
Dr. H. Cooper Rose	1	1	0
Dr. Riding	1	1	0
Dr. T. Britton (Harrogate)...	1	1	0
W. Bruce Clarke, Esq. ...	0	10	6

The costs amount to £480. Subscriptions may be sent to Mr. G. P. Field, 34, Wimpole Street, or Dr. Sidney Phillips, 21, Upper Berkeley Street, who will be glad to receive subscriptions which have been promised but not yet sent.

INDIA AND THE COLONIES.

INDIA.

THE Viceroy and Lady Lansdowne have subscribed 500 rupees to the Countess of Dufferin Fund.

THE deaths by snake bites in the North-West Provinces last year were 6,000. In Madras, the loss of human life by snakes and wild animals was 1,642.

AN OPHTHALMIC HOSPITAL FOR CALCUTTA.—It is reported that a native gentleman, Baboo Churn Laha, has offered a sum of 60,000 rupees to found an ophthalmic hospital in Calcutta, and it is proposed to erect a suitable building on a site near that of the Lady Dufferin Hospital now in process of construction. The *Indian Medical Gazette*, in commenting on this generous gift, writes:—"There is much room in Calcutta for a special ophthalmic hospital, and we are sure Baboo Churn Laha will be conferring an inestimable blessing on those of his poorer fellow-citizens who may have to seek the benefits of the hospital, and for which in days hereafter many will hold his name in reverence."

THE LEPER QUESTION IN INDIA.—The Governor-General of India in Council has introduced a Bill to make provision for the isolation of lepers, and for the amelioration of their condition. This Bill, which may be called the Lepers Act, 1889, shall extend over the whole of British India, and shall come into force at once. It enables local authorities to expend funds on, and appropriate property to, retreats for lepers. Lepers may be detained in these retreats at their own request, but power is given to magistrates to order the arrest of any persons whom they believe to be suffering from leprosy and who are found asking for alms and wandering about without any employment or visible means of subsistence on proof that such persons are lepers. Such lepers shall be committed to a retreat with the concurrence of the person in charge thereof and shall be detained subject to the provisions of the Act. The local Governor or district magistrates may order the discharge of lepers from such retreats. A leper detained for life or a term of years, if he leaves the retreat without being discharged, may be arrested and brought back by any police officer, or by the person in charge of the retreat, or any person acting under his direction. Power is given to the local Government to make rules for the management of such retreats. A special clause in the Act provides that the sexes shall be kept separate. Protection will be afforded to the religious beliefs of all lepers confined in these asylums.

CEYLON.

ST. JOHN AMBULANCE ASSOCIATION.

F.R.C.S. writes: I think it will be gratifying to all your readers who take an interest in the affairs of the St. John Ambulance Association to learn that in the colony of Ceylon great progress has of late been made in establishing various classes, under the direction and supervision of Surgeon Lees Hall, A.M.D., late Adjutant of the London Volunteer Medical Staff Corps. Not only has that energetic officer started and matured classes for ladies and gentlemen in Colombo, but he has also succeeded in obtaining the support of the authorities for providing lectures for the police and railway *employés* in various localities of the island. A first meeting of the Police Ambulance Class was held on July 2nd, at Colombo, the Inspector-General of the Police presiding, and was heartily responded to by a majority of the force. Dr. Keegel will conduct this class. It is satisfactory to learn that under the disinterested and efficient action of Dr. Lees Hall the benefits of the Ambulance Association will be extended to our distant colonists in Ceylon, and that we may entertain the best hopes for the future prosperity and success of this most useful undertaking.

THE Sheffield Infirmary, Public Hospital, Jessop Hospital for Women, and Children's Hospital will, it is stated, each benefit to the extent of about £200 under the will of the late Mr. J. H. Hunter.

ASSOCIATION INTELLIGENCE.

COUNCIL.

NOTICE OF MEETINGS.

A MEETING of the Council 1888-89 will be held in the Council Room, Mechanics' Institute, Leeds, on Tuesday, the 13th instant, at half-past nine o'clock in the forenoon.

Meetings of the Council 1889-90 will be held in the Council Room, Mechanics' Institute, Leeds, on Wednesday, the 14th instant, at half-past nine o'clock in the forenoon, and on Thursday, the 15th instant, at half-past nine o'clock in the forenoon.

FRANCIS FOWKE, *General Secretary.*

August, 1889.

NOTICE OF QUARTERLY MEETINGS FOR 1889. ELECTION OF MEMBERS.

A MEETING of the Council will be held on October 16th, 1889. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting, namely, September 26th, 1889.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member *by the Council* or by any recognised *Branch Council.*

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No member can be elected by a Branch Council unless his name has been inserted in the circular summoning the meeting at which he seeks election.

FRANCIS FOWKE, *General Secretary.*

COLLECTIVE INVESTIGATION OF DISEASE.

THE series of Maps forming the Report of the Collective Investigation Committee on the GEOGRAPHICAL DISTRIBUTION OF RICKETS, ACUTE RHEUMATISM, CHOREA, CANCER, AND URINARY CALCULUS are deposited in the Library of the Association, and are open to the inspection of members. A descriptive commentary appeared in the JOURNAL of January 19th, 1889.

An inquiry into the ORIGIN AND MODE OF PROPAGATION OF EPIDEMICS OF DIPHTHERIA is in progress.

Memoranda and forms for communicating observations may be had on application to the Secretary of the Collective Investigation Committee, 429, Strand, W.C.

OXFORD AND DISTRICT BRANCH.

The annual meeting was held on July 26th in the Council Chamber, Abingdon. Previous to the general meeting a meeting of the Branch Council was held, at which the President, Mr. SLADE BAKER, entertained the members of the Branch at lunch. Seventy-seven members partook of his hospitality.

Retiring President.—The minutes of the last meeting having been read and confirmed, the retiring President, Mr. A. WINKFIELD, installed Mr. Slade Baker, as President, and in vacating the chair expressed the pleasure that it had given him to occupy it during his year of office.—A vote of thanks to the retiring President was carried unanimously.

Abuse of Out-patient Departments.—It was resolved to postpone the discussion on Dr. Rentoul's scheme until the October meeting.

Council's Report.—The report of the Council was received and adopted. The Council reported that the present number of members of the Branch was 92. They regretted to have to record the death of an esteemed member of the Branch, Dr. Leonard Williams, of Wheatley. The members of Council who retired by rotation were Dr. Tuckwill, Messrs. Parry and Wilson. The balance in favour of the Branch was £18 16s. 4d.

Election of Members.—Dr. Emerson, Wantage, was elected member of the Association and Branch, and Messrs. Pratt and Whitelock, of Oxford, were elected members of the Branch.

Election of Representatives.—Mr. A. Winkfield was re-elected Treasurer and Representative of the Branch on the General Council, also representative on the Parliamentary Bills Committee. Mr. Lewis Morgan, was re-elected Secretary of the Branch.

Election of Officers.—It was carried unanimously that Mr. H. P. Mallam, of Oxford, be President-elect, and that Oxford be the place for the next annual meeting. Dr. Collier and Dr. Gray, of Oxford; Dr. Parker Douglas, of Newbury, and Mr. Bloxsome, of Fairford, were elected members of the Branch Council.

New Members Proposed.—Mr. Williams, of King's Sutton, proposed by Dr. Griffin, and seconded by Mr. Wise; Dr. Douty, of the Moulsford Asylum, proposed by Dr. Morgan, and seconded by Mr. Sankey, of Littlemore.

After the meeting, the PRESIDENT showed the members some of the interesting old buildings for which Abingdon is famous.

NORTH OF ENGLAND BRANCH.

Visit to the Northumberland County Asylum.—On Tuesday, July 30th, by the kind invitation of Dr. McDowall, the Medical Superintendent, the members of the North of England Branch visited the Northumberland County Asylum at Morpeth. About sixty members were present. After the asylum and the grounds had been seen, Dr. McDowall entertained his visitors at lunch with generous hospitality in the beautiful large hall of the asylum. A special resolution of Council, thanking Dr. McDowall was sent to him by the Council of the Branch.

BORDER COUNTIES BRANCH.

THE twenty-second annual meeting was held at Dumfries on July 12th, 1889; Dr. ROBERTSON, Penrith, President, in the chair. Eighteen members and two visitors were present.

Election of Members.—The following new members were elected to the Branch: James Thomas, Selkirk; F. H. Clarke, Dumfries; W. D. Grieve, Dumfries; Victor Black, Dumfries; and James Menzies, Galashiels.

Report of Council.—The report of the Council was read and adopted. The report stated that the condition of the Branch was very satisfactory. During the past year 19 new members had been added to the list, making a total of 143—the largest number the Branch had ever numbered. During the last year one member, Mr. Arras, of Wetheral, had been removed by death, one member had resigned, and four others had left the district. The number of members on the list was 137. The income of the Branch had been £24 17s. 3d., namely, by balance from 1888, £7 13s.; and by subscriptions, £17 4s. 3d. The expenditure was £7 7s. 2d. The balance at the bank on January 29th, 1889, was £17 10s. 1d. Ordinary meetings were held during the year at Penrith, Whitehaven, Carlisle, and Galashiels. At the annual meeting at Penrith 21 members and two visitors were present, at Whitehaven 17 members and 1 visitor, at Carlisle 24 members and 2 visitors, at Galashiels 14 members and 3 visitors. At the Carlisle meeting held in December Professor Chiene, of Edinburgh, by the invitation of the Council, introduced a discussion on Suppuration, its Causes and Treatment. The number of papers read during the year, including Dr. Robertson's presidential address, was 12. The report referred with regret to the death of Mr. Arras, who formerly practised for forty years at Wetheral, near Carlisle, and whose health had compelled him to retire to Portobello, where he died this spring. As an original member of the Branch, as a frequent attendant at the meetings, and as a much trusted practitioner his loss was felt keenly throughout a wide district. The Council had received from Dr. Lediard an intimation that it was his intention to retire from the office of Secretary. The Council had heard this intimation with deep regret. They desired to record their sense of the great obligations they were under to Dr. Lediard and to tender him their best thanks for the efficient manner in which he had discharged the duties of the office he had held for some years. By his zeal and energy, by his efforts to promote the success of the meetings and to increase the number of members, and by his uniform courtesy he had materially increased the usefulness of the Branch.

Surplus Funds.—It was agreed, after some discussion, to give a prize of £10 for an essay to be competed for by the younger members of the Branch, and a committee was appointed to arrange the details. It was agreed to subscribe the sum of two guineas to the Mead Testimonial Fund.

Election of Officers.—Dr. Lediard was appointed President-elect. The following members were appointed Councillors:—Dr. Haddon, Dr. Kerr, Dr. Hamilton, Dr. Grange, Dr. Campbell, Mr. Crerar, Dr. Robertson, Dr. Green, Dr. I'Anson. Dr. Altham, Penrith, was appointed Secretary and Treasurer. Dr. Barnes was appointed to represent the Branch on the Council of the Association and on the Parliamentary Bills Committee. Drs. Sanderson and Thomson were appointed Auditors.

Future Meetings.—It was agreed to hold the autumn meeting at Windermere, in the last week of September; to hold the winter meeting in Carlisle, at the end of December; and the spring meeting at Lockerbie.

Local Government (Scotland) Bill.—The question of the Local Government (Scotland) Bill having been introduced by Dr. HAMILSTON, some resolutions in the form of a petition to the Lord Advocate were briefly discussed and adopted. These resolutions were similar to those passed in several other districts.

Retiring President.—Dr. ROBERTSON, the retiring President, made some valedictory remarks, and vacated the chair, which was taken by Dr. Thomson, Dumfries. On the motion of Dr. HADDON, a cordial vote of thanks was given to Dr. Robertson, and he was appointed Vice-President for life.

Presidential Address.—Dr. THOMSON delivered his presidential address "On the Progress of Abdominal Surgery."—Dr. ROBERTSON proposed a vote of thanks, which was unanimously agreed to. Dr. Thomson was requested to print and circulate his address.

Cases.—Dr. BLACK, Dumfries, exhibited cases of General Paralysis of the Insane, from the Crichton Institution. The patients shown were affected with the disease in different stages, and an admirable demonstration of the leading features of each stage and case was given.—Dr. CLARKE, Dumfries, exhibited two children showing Abnormalities of the Organs of Generation (male and female).—The other papers on the list were postponed.

Dinner.—The members afterwards dined together at the King's Arms Hotel.

NORTH OF IRELAND BRANCH.

THE eleventh annual meeting was held in the Board Room of the Belfast Royal Hospital on Thursday, July 18th. Professor DILL, President, occupied the chair, and there was a large attendance of members.

Report of Council.—In presenting the eleventh annual report the Council stated that there were 153 county and 74 town members, making a total of 227. During the past year there were four meetings, which had been more largely attended than at any previous period since the formation of the Branch. Communications were brought before the members at their meetings by Dr. Mansergh Palmer (Armagh), Dr. O'Neill, Dr. Maconchy (Downpatrick), Dr. Burden, Mr. Fagan, Dr. J. Campbell Hall (Monaghan), Dr. St. George (Lisburn), Dr. J. A. Lindsay, Dr. Dempsey, Dr. W. A. McKeown, Professor Sinclair, Professor Cuming, Dr. E. C. Thompson (Omagh), Dr. Walton Browne, and Dr. John W. Byers. At the last general meeting, held on April 25th, a deputation consisting of Dr. Byrne and Dr. Donaldson (Derry) presented a memorial, signed by members of the North-West Subsection of the Branch, asking that they might be formed into a distinct and separate Branch, whereupon it was decided unanimously to approve of the memorial, and to transmit it to the General Secretary of the Association in London. While the Council regret that the members in the vicinity of Derry are, owing to the long distance, unable to attend the meetings of the North of Ireland Branch in Belfast, they are glad to aid in any way the formation of a new Branch of the British Medical Association in Ireland. The financial statement showed that there was a balance in the hands of the treasurer of £59 8s. 11½d. Both the Council's report and the Treasurer's statement were adopted.

Election of Officers.—Dr. George Gray, J.P. (Castlewellan), was unanimously elected President for the coming year, and was requested to continue to act as Treasurer; Dr. Byers was re-elected Secretary; Dr. Dunlop (Holywood) and Dr. Whitla were chosen Vice-Presidents; and the following were elected on the Council:—*Town:* Professor Cuming, Mr. Fagan, Dr. Walton Browne, Professor Sinclair, Dr. Dempsey, Dr. J. W. T. Smith, Dr. J. A. Lindsay, Dr. McKeown; *Country:* Dr. E. C. Thompson (Omagh), Dr. Mansergh Palmer (Armagh), Dr. Maconchy (Downpatrick), Dr. Kidd (Ballymena), Dr. Stuart (Ballymena), Dr. St. George (Lisburn), Dr. Frazer (Armagh), Dr. Macalister (Carrickfergus); Dr. Byers and Dr. Dempsey were appointed Representatives of the Branch on the Council of the Association; and Dr. Stuart (Ballymena), and Dr. Esler (London) were selected to act on the Parliamentary Bills Committee.

President's Address.—Professor DILL delivered the presidential address. After thanking the members for the high honour they had conferred in unanimously electing him President of the North of Ireland Branch of the British Medical Association, Professor Dill said he had selected the subject of "Forensic Medicine and Medical Evidence." It was, he said, of the greatest importance, for at any moment a medical man might be called to give evidence in a medico-legal inquiry. In the case of a person found dead with wounds, he might be asked to decide whether these injuries were done before or after death; or in the case of an individual found in the water, the question would have to be settled, was he, or she, as the case might be, alive or dead when immersed. Again, a medical man might at any moment be called to a person said to be poisoned. He must determine whether the symptoms are those of poisoning or of disease, and if due to the former, what poison is it? Professor Dill gave a short summary of the symptoms of the more important poisons, with the treatment to be adopted in each case. Having referred to the proper method of conducting *post-mortem* examinations in medico-legal cases, Dr. Dill made some admirable suggestions for the guidance of medical men in the witness-box. The medical man when giving evidence should be cool, collected, self-possessed, and should have a thorough knowledge of his case; he should avoid technical terms, and use simple words which any juryman could comprehend. In this way he would be able to withstand the cross-examination of any counsel who had acquired a mere mechanical knowledge of the case, either from the reading of books on medical jurisprudence or from having been coached by a rival practitioner. After relating several humorous and interesting medico-legal anecdotes of the encounters in the witness-box between medical witnesses and counsel (as Curran, Dowse, and Day), Professor Dill said, in conclusion—From the report as now read by the able and worthy secretary, Dr. Byers, I think that this Branch is to be congratulated on the amount of work that its members have accomplished in the year 1888-89. It shows that they have not been idle, and do not form an unimportant Branch of the British Medical Association. It is now a little more than half a century since it was first called into existence by the late Sir Charles Hastings, of Worcester, at which time it consisted of but a few local men of that town and neighbourhood. Now it numbers 13,000 members, showing that it had not only taken deep root and gone far down into the soil, but that its Branches have spread far and wide, until now; when they girdle the globe, and "the leaves of the tree are for the healing of the nations." The work of such a number of scientific men, and as it is always in the interests of mankind, "*salus populi suprema lex*," must have been vast indeed. That work done in a proper spirit and tone may make it that we should consider ourselves associated with a Christ-like profession; often making the rough ways of life smooth; often removing mountains of difficulties; calming the agitated and the troubled sea of life; making literally the blind to see, the deaf to hear, the lame to walk, and the sick to be made whole. On the motion of Dr. E. C. THOMPSON (Omagh), seconded by Mr. FAGAN, a hearty vote of thanks was passed to Dr. Dill, for his presidential address.

Annual Dinner.—In the evening the annual dinner was held in the Grand Restaurant and Café, Belfast, when thirty-three members were present. Professor DILL presided, and Dr. George Gray occupied the vice-chair. Various toasts were proposed, and through the kindness of Dr. Mackenzie, Dr. J. A. Lindsay, Dr. Leslie, and Dr. Mackisack an admirable programme of music was provided.

[A report of the papers read on this occasion is published at page 313.]

BRITISH MEDICAL ASSOCIATION.

FIFTY-SEVENTH ANNUAL MEETING.

THE fifty-seventh Annual Meeting of the British Medical Association will be held at Leeds, on Tuesday, Wednesday, Thursday, and Friday, August 13th, 14th, 15th, and 16th, 1889.

President: Professor W. T. Gairdner, M.D., LL.D., Professor of Medicine in the University of Glasgow.

President-elect: C. G. Wheelhouse, F.R.C.S., J.P., Consulting Surgeon, Leeds General Infirmary, Hillary Place, Leeds.

President of the Council: Thomas Bridgwater, M.B., LL.D., Harrow-on-the-Hill.

Treasurer: Constantine Holman, M.D., Reigate.

An Address in Medicine will be delivered by J. Hughlings Jackson, M.D., LL.D, F.R.S., Physician to the London Hospital, and to the National Hospital for Paralysed and Epileptic, Queen Square, W.C.

An Address in Surgery will be delivered by T. Pridgin Teale, M.B., F.R.C.S., F.R.S., Consulting Surgeon to the Leeds General Infirmary, Leeds.

An Address in Psychology will be delivered by Sir J. Crichton Browne, M.D., LL.D., F.R.S., Lord Chancellor's Visitor in Lunacy London.

Programme of Proceedings.

Tuesday, August 13th, 1889.

9.30 A.M.—Meeting of 1888-89 Council. Council Room, Mechanics' Institute.
11.30 A.M.—First General Meeting. Report of Council. Reports of Committees; and other business. Coliseum.
4 P.M.—Service in Parish Church. Sermon by the Right Rev. the Lord Bishop of Ripon.
8.30 P.M.—Adjourned General Meeting from 11.30 A.M. President's Address. Coliseum.

Wednesday, August 14th, 1889.

9.30 A.M.—Meeting of 1889-90 Council. Council Room, Mechanics Institute.
10 A.M. to 2 P.M.—Sectional Meetings. Mechanics' Institute. Public Medicine. Philosophical Hall.
3 P.M.—Second General Meeting. Address in Medicine by J. Hughlings Jackson, M.D., LL.D., F.R.S. Presentation of Stewart Prize to Dr. Klein, F.R.S. Coliseum.
4 to 6.30 P.M.—Reception given by Colonel Wilson and the officers 3rd Volunteer Battalion West Yorkshire Regiment to members in the Services at the Carlton Barracks.
4.30 to 6.30 P.M.—Afternoon Reception at the Yorkshire College by the President, Council, and Senate of the College.
8.30 P.M.—*Conversazione* by the President of the Association and Local Executive Committee in the Art Gallery and Municipal Buildings.

Thursday, August 15th, 1889.

9.30 A.M.—Meeting of the Council. Council Room, Mechanics' Institute.
10 A.M. to 2 P.M.—Sectional Meetings. Mechanics' Institute. Public Medicine. Philosophical Hall.
3 P.M.—Third General Meeting. Address in Surgery by T. Pridgin Teale, M.A., F.R.S., F.R.C.S. Coliseum.
to 6.30 P.M.—Garden Party at Gledhow Hall given by Sir James Kitson, Bart.
7.30 P.M.—Public Dinner of the Association in the Town Hall.

Friday, August 16th, 1889.

10.30 A.M. to 1.30 P.M.—Sectional Meetings. Mechanics' Institute. Public Medicine. Philosophical Hall.
3 P.M.—Concluding General Meeting. Address in Psychology by Sir James Crichton Browne, M.D., F.R.S. Coliseum.
4 to 6.30 P.M.—Garden Party at Roundhay Mount given by T. R. Jessop, F.R.C.S.
4.30 to 6.30 P.M.—Garden Party at the W.R. Asylum, Wakefield.
8 P.M.—Reception and Ball by the Mayor and Mayoress of Leeds in the Town Hall.

Saturday, August 17th, 1889.

4 P.M.—Garden Party at the Palace, Ripon, given by the Bishop of Ripon and Mrs. Boyd-Carpenter.
Excursions.

Reception Room.

The Reading Room of the Mechanics' Institute will be fitted up as a reception room, and will be opened at 12 o'clock on Monday, and on Tuesday and the following days at 9 A.M. for the issue of tickets to members, and for supplying all necessary information.

*** *It is particularly requested that members on their arrival will at once proceed to the reception room, at which each member should enter his name and address, receive his member's card and daily journal, inquire for telegrams and letters, and consult the list of lodgings and hotels, etc.*

Exhibition of Surgical Cases.

On Wednesday, August 14th, from 4 to 5.30 P.M., exhibition of surgical cases in the Central Hall, Infirmary.

Head Mistress's Room, Mechanics' Institute.

A. Medicine.—*President*, John Edwin Eddison, M.D. *Vice-Presidents*, Charles Parsons, M.D.; Robert Saundby, M.D. *Honorary Secretaries*, Alfred George Barrs, M.D., 22, Park Place, Leeds; Theodore Dyke Acland, M.D., 7, Brook Street, Grosvenor Square, W.

The proceedings of this Section will be opened by the President on Wednesday, August 14th, at 10 A.M., after which Dr. R. Douglas Powell will read a paper on The Clinical Aspects of Chronic Tubercular Diseases of the Serous Membranes and their Treatment. Sir Andrew Clark, Drs. Vincent Harris, Roberts, Samuel West, Churton, Cheadle, Handford, More Madden, and Burney Yeo have promised, if possible, to take part in the discussion.

The following papers will subsequently be read:

Cutter, Ephraim, M.D. (New York). Thirty Years' Work in the United States in the Treatment of Tuberculosis Pulmonalis, with Statistics of 100 Cases Illustrated by Lantern Slides of Microphotographs of Healthy and Tuberculous Lungs.
Madden, T. More, M.K.Q.C.P.I. Clinical Experiences of the Chronic Tubercular Diseases of Childhood.
Drysdale, C. R., M.D. The Alleged Rarity of Phthisis among the Jews in London.
Brown-Séquard, C. E. The Toxicity of Expired Air and its Connection with Pulmonary Tuberculosis.
Thomas, W. R., M.D. On Phthisis, with Remarks on the Varieties of Climatic Treatment.

On Thursday, August 15th, a paper will be read by Dr. Pavy on the Prognosis of Cases of Albuminuria, with Special Reference to Life Insurance. Sir W. Roberts, Drs. Goodhart, Maguire, Pye-Smith, Ralfe, Rabagliati, C. R. Drysdale, Robert Barnes, De Havilland Hall, N. Tirard, Joseph Ewart, T. Cranstoun Charles, W. J. Tyson, and R. Saundby hope to take part in the discussion.

Haig, A., M.D. On the Connecting Link between the High Tension Pulse and Albuminuria.
Tirard, N., M.D. Peptonuria and the Fehling Test.
Handford, H., M.D. On the Relations of Arterial Hypoplasia to Cardiac Disease.
Maguire, R., M.D. Presystolic Murmur without Organic Mitral Disease.

On Friday, August 16th, the following papers will be read:

Ruffer, W. Armand, M.B. (of the Pasteur Institute, Paris). On the Prevention of Hydrophobia by Pasteur's Method; and a discussion will take place.
Bateman, F., M.D. (Norwich). On the Jurisprudence of Aphasia.
Churton, T., M.D. On the Recent Prevalence of Pneumonia in Leeds. (Cases will be shown at the Infirmary daily at 9.30 A.M.)
Little, J. Fletcher, M.B. The Modern Treatment of Palsies.
Eccles, A. Symons, M.B. The Influence of Massage on the Rate of Absorption from the Intestines.
Johnstone, Thos., M.D. 1. Case of Massage. 2. Ilkley as a Resort for the Asthmatic.
McNaught, Dr. A Case of Dilatation of the Stomach accompanied by the Eructation of Inflammable Gas.
Harley, Vaughan, M.B. Abscess of the Liver: Treatment.
Thudichum, J. L. W., M.D. On the Demodex Folliculorum, the Parasite of the Acne Punctata of Man and the Mange of the Dog.
Flood, A. W. On Ringworm and its Treatment.
Finucane, T. D., M.D. (Blackrock). On Asiatic Cholera.
Greene, G. E. J. (Ferns, Co. Wexford). Notes on Rötheln.
Ringwood, J. Further History of an Outbreak of Relapsing Fever.

Lecture Theatre No. 13, School of Science.

B. Surgery.—*President*, Thomas Richard Jessop, F.R.C.S. *Vice-Presidents*, Edward Atkinson, M.R.C.S.; Arthur F. McGill, F.R.C.S.; Henry Morris, F.R.C.S.; *Honorary Secretaries*, Arthur W. Mayo Robson, F.R.C.S., Hillary Place, Woodhouse Lane, Leeds; Edward Ward, M.B., 22, Park Place, Leeds.

Arrangements have been made in this Section for the consideration of four special subjects, and the gentlemen whose names are appended have promised, if possible, to take part in the discussions.

The President of the Surgical Section will give an Opening Address on the Treatment of Cancer of the Rectum. The following gentlemen will take part in the discussion:—Mr. Mitchell Banks (Liverpool), Mr. Bond (Leicester), Mr. Bryant (London), Mr. Harrison Cripps (London), Mr. Christopher Heath (London), Mr. Whitehead (Manchester), Dr. Alexander (Liverpool), Mr. H. Allingham (London), Mr. Alfred Cooper (London), Dr. Ward Cousins (Southsea), Mr. Vincent Jackson (Wolverhampton), Mr. Jordan Lloyd (Birmingham), Mr. F. Marsh (Birmingham), Dr. James Murphy (Sunderland), Mr. Bennett May (Birmingham), and Mr. F. B. Jessett (London).

Mr. Henry Morris will open a discussion on the Surgery of the Kidney. Professor Annandale (Edinburgh), Mr. Rickman Godlee (London), Mr. Bennett May (Birmingham), Dr. Newman (Glasgow), Mr. Lawson Tait (Birmingham), Mr. Bruce Clarke (London), Mr. Kendal Franks (Dublin), and Mr. R. Lawford Knaggs (Huddersfield) will take part in the discussion.

Mr. Frederick Treves will open a discussion on The Surgical Treatment of Typhlitis after the discussion on Renal Surgery.

Mr. A. F. McGill will open a discussion on the Treatment of Retention of Urine from Prostatic Enlargement. Mr. Edward Atkinson (Leeds), Mr. A. E. Durham (London), Mr. Reginald Harrison (Liverpool), Mr. Berkeley Hill (London), Mr. Bruce Clarke (London), Dr. Ward Cousins (Southsea), Mr. Vincent Jackson (Wolverhampton), Mr. Jordan Lloyd (Birmingham), Mr. Bennett

May (Birmingham), and Mr. W. Whitehead (Manchester) will take part in the discussion.

The following further papers are announced:

ADAMS, W., Esq. (London). On the Successful Treatment of Cases of Congenital Displacement of the Hip-joint by Complete Recumbency with Extension for two years.

ALEXANDER, W., M.D. (Liverpool). The Surgical Treatment of Epilepsy.

ALLINGHAM, H. W., F.R.C.S. The Ligamenta Alaria as a Cause of Internal Derangements of the Knee-joint.

BAMPTON, A. H., M.D. Notes on a case of Lodgment of False Teeth and Dental Plate in Stomach for Two Months: Recovery.

BISHOP, E. Stanmore (Manchester). 1, Some Points in the Technique of Morton's Operation for Spina Bifida. 2. Will show a Splint Cradle for Excision of the Hip-Joint and Osteotomy.

COUSINS, Ward, M.D. (Portsmouth), will exhibit a new Surgical Saw.

CRIPPS, Harrison, Esq. (London). A Series of Cases of Cancer of the Rectum treated by Excision or Colotomy.

FRANKS, Kendal, F.R.C.S. Subcuticular Suture.

FRASER, Professor A. (Dublin). A Method by which the Human Body with all its details of structure, has been made Practically Transparent for Operative Surgical Purposes.

HERN, John, M.D. (Darlington). The Advisability of Aspiration of the Protruded Gut in Recently Strangulated Hernia, with Notes of Cases.

HUME, G. H., M.D. (Newcastle). On Combined External and Internal Urethrotomy in the Treatment of certain cases of Stricture.

JONES, Robert, Esq. (Liverpool). 1. The Treatment of Joint Disease by Prolonged fixation. 2. The Treatment of Certain Cases of Peri-rectal Abscess by Partial Removal of the Sacrum.

KEETLEY, C. B., Esq. (London). Compression of the Abdominal Aorta by an Instrument passed through a Small Opening in the Anterior Wall of the Abdomen.

KELLER, Otto E., M.D. (London). Trephining in a Case of Actinomycosis of Brain.

LLOYD, Jordan, Esq. (Birmingham). Abdominal Section for Acute Intestinal Obstruction.

MARSH, F., F.R.C.S., will Exhibit a Patient after Madelung's Operation, with subsequent Excision of Rectum.

OTIS, F. N., M.D. (New York). A *Resume* of the Experience of Seventeen Years in the Operation of Dilating Urethrotomy.

PARKER, Rushton, Esq. Cerebral Tumour removed Successfully.

PARSONS, J. Inglis, M.D. (London). On the Arrest of Growth in Cancer by a powerful interrupted Voltaic Current.

PEARSE, T. Frederick, Esq. (London). The Treatment of Empyema.

ROBSON, A. W. Mayo (Leeds). 1. Two Hundred Consecutive Cases of Abdominal Section, with remarks. 2. Successful Case of Cholecystenterostomy for Biliary Fistula. Patient shown.

SILK, J. F. W., M.D. (London). Ether as an Adjunct to Nitrous Oxide Anæsthesia in Minor Surgery; with some general remarks upon Ether Narcosis and the teaching of Anæsthetics.

SPICER, Scanes, M.D. Note on a Case of Progressive Induration of Cervical Glands Simulating Malignant Disease, but readily yielding to the Treatment of Chronic Post-Nasal Catarrh.

STOKES, Sir Wm. Thyrotomy in the Treatment of Laryngeal Cancer.

THOMAS, Wm. (Birmingham). The Value of Tarsectomy in the Treatment of Talipes Equino-varus, with Suggestions as to the Best Method of Performing the Operation.

WARREN, J. H., M.D. An Improved Method for the Radical Cure of Inguinal, Femoral, and Umbilical Hernia by the Formation of a Reinforced Cicatrix at the Site of Rupture.

WHITE, J. William, M.D. (Philadelphia). The Relations of Subdiaphragmatic Abscess to the Thoracic Viscera, with Three Illustrative Cases.

Engineering Class Room, Mechanics' Institute.

C. OBSTETRIC MEDICINE AND GYNÆCOLOGY.—*President*, Charles J. Cullingworth, M.D. *Vice-Presidents*, James Braithwaite, M.D.; J. W. Byers, M.D. *Honorary Secretaries*, F. Hall, M.D., St. Mark's House, Leeds; Peter Horrocks, M.D., 9, St. Thomas's Street, S.E.

Dr. Braxton Hicks, F.R.S., will open a discussion on the treatment of Placenta Prævia. Drs. Robert Barnes, Murdoch Cameron, Gervis, W. Goodell (Philadelphia, U.S.), Robert Harvey (Bengal), Aust Lawrence, Malins, Murphy, Playfair, Priestley, Macnaughton Jones, Robert Bell, William Walter, Wallace, and Messrs. Hall and Wright are expected to take part in the discussion.

Dr. Herman will open a discussion on Corporeal Endometritis, its Frequency, Diagnosis, and Treatment. Drs. Braithwaite, Byers, Murdoch Cameron, Halliday Croom, Duke, Elder, Gervis, Goodell (Philadelphia, U.S.), A. W. Johnstone (Danville, U.S.), Handfield Jones, Aust Lawrence, Playfair, Robert Bell, William Walter, Priestley, Wallace, Macnaughton Jones, Aveling, Graily Hewitt, and Messrs. Pridgin Teale and More Madden are expected to take part in the discussion.

The President of the Section will give a short introductory address on Some further Applications of Antiseptic Principles in Midwifery Practice.

The following further papers are announced:

ARMSTRONG, J., M.B. The Use of Antiseptics in Midwifery.

BELL, R., M.D. On the Relation of Endometritis to Ovarian Disease, and will also show some instruments.

CAMERON, Murdoch, M.D. Cæsarean Section, with Notes of a Second Successful Case.

CROOM, J. Halliday, M.D. 1. On the Shedding of the Decidual Membrane late in the Puerperium. 2. On Encysted Tubercular Peritonitis Simulating Ovarian Tumour.

CUTTER, Ephraim, M.D. (New York). Eighteen Years of Work in the United States in the Treatment of Uterine Fibroids by Galvanism with Demonstration of Methods of Operating and some Statistics of Treatment of Uterine Fibroids by Food for the same length of time.

DUKE, Alexander, F.K.Q.C.P.I. 1. Additional Traction in Forceps Cases as an Alternative to Craniotomy. 2. New Plan of Plugging the Cervix Uteri in Metrorrhagia.

HANDFIELD-JONES, M., M.D. On Cardiac Insufficiency in its Relation to Abortion.

HART, D. Berry, M.D. (Edinburgh). On the Definition of the Terms used in relation to the Hæmorrhage at the end of Pregnancy. He will also show specimens of Placenta Prævia and Extrauterine Fœtation.

JOHNSTONE, A. W., M.D. (Danville, U.S.A.) The Mechanics of Puberty.

LAWRENCE, A. E. Aust, M.D. (Bristol). Notes on Cases of Concealed Post-partum Hæmorrhage.

MADDEN, T. More, M.K.Q.C.P.I. On Some Points in the Treatment of Uterine Cancer.

NAIRNE, J. Stuart, Esq. Some Practical Points in the Surgical Treatment of Cancer of the Uterus.

PLAYFAIR, W. S., M.D. An Estimate of the Value of Electricity in Gynæcology.

ROBERTS, Arthur, M.D. (Keighley). Concealed or Ante-partum Hæmorrhage.

SINCLAIR, W. J., M.D. (Manchester). 1. Vaginal Hysterectomy for Cancer with Notes of Ten Cases. 2. Oöphorectomy in the Treatment of Certain Neuroses; with Cases.

TAIT, Lawson, Esq. The Statistics and Results of the Treatment of Uterine Myoma by Removal of the Uterine Appendages.

WALTER, Wm., M.D. A Case of Total Extirpation of Uterus for Cancer.

Philosophical Hall.

D. PUBLIC MEDICINE.—*President*, Edward Ballard, M.D., F.R.C.P., F.R.S. *Vice-Presidents*, George Goldie, L.R.C.P.Edin.; Benjamin A. Whitelegge, M.D. *Honorary Secretaries*, George Eastes, M.B., F.R.C.S., 35, Gloucester Place, Hyde Park, W.; Arthur Stopford Underhill, M.D., D.P.H., Great Bridge, Tipton, Staffs.

The following special subjects will be considered:

1. Medical Officers of Health: their Training, and the Conditions on which they should hold Office. The President of the Section will introduce this subject. Dr. John Brown (Bacup), Mr. D. E. Flinn (Kingstown), Mr. G. E. J. Greene (Ferns), Mr. J. Brindley James (London), and others have promised to read papers or take part in the discussion.

2. Disinfection and Isolation: with special reference to the Control of Epidemics. Dr. H. F. Parsons will open the discussion by a paper on the subject. Dr. C. H. Allfrey (St. Mary Cray) will read a paper on The Management of Infectious Diseases in Hotels, as illustrated by an outbreak of Scarlatina at the Grand Hotel, Grasse. Dr. W. Squire will contribute a paper on Disinfection and Isolation as necessary to the Control of Epidemics. Dr. C. R. Drysdale (London), Dr. E. W. Hope, and Dr. P. Caldwell Smith (Motherwell), will take part in this discussion.

3. Town Refuse: its Treatment and Disposal. Excremental Matter: its Treatment and Disposal by other Methods than that of Sewers. Dr. E. Slade-King (Ilfracombe) will read a paper on Town Refuse: its Collection and Disposal in the Smaller Towns. Dr. M. Greenwood, jun., will read a paper on Dusting in our Large Towns, and will take part in the discussion on Town Refuse: its Treatment and Disposal. Dr. C. F. Moore (Dublin) will contribute Notes on the Disposal of Town Refuse and Excremental Matter, etc. Dr. D. E. Flinn (Kingstown), Dr. G. E. J. Greene (Ferns), Dr. P. Caldwell Smith (Motherwell), and others, will also read papers or take part in this discussion.

4. Diseases and Injuries caused by Special Occupations: with reference to their Prevention. Dr. J. T. Arlidge, Dr. G. E. J. Greene (Ferns), and others will read papers or take part in the discussion.

5. Contamination of Drinking-water by Lead: its Causes and Prevention. Dr. Sinclair White (Sheffield) and Dr. T. B. Fairclough (Mirfield) will read papers on this subject. Dr. John Brown (Bacup) and Dr. T. Churton (Leeds) will take part in this discussion.

The following further papers are announced:

ABRAHAM, P. S., M.D. (London). On the Question of Segregation for Leprosy.

ANDERSON, A M., M.D. (Dundee). Notes of a Peculiar Teat-Eruption in a Milch Cow coincident with an Outbreak of Typhoid Fever amongst the Consumers of the Milk.

ARLIDGE, J. T., M.D. (Newcastle-under-Lyme). 1. The Sources of Lead-poisoning in the Arts and Manufactories. 2. On the Observation and recording of Diseases and Impurities incidental to Particular Trades.

CHURTON, T., M.D. (Leeds). Results of Twelve Months' Systematic Inquiry into the Sanitary State of the Homes of Hospital In-patients.

FLINN, D. E., F.R.C.S.I. (Kingstown). On the Public Cleansing of Towns viewed in Relation to Public Health.

JAMES, J. Brindley, M.R.C.S. (London). (1) Town Refuse: its Treatment and Disposal. (2) A Cabinet Minister of Public Health.

KING, E. Slade, M.O.H. (Great Torrington.) Town Refuse; its Collection and Disposal in the Smaller Towns.

Class Room 3, School of Science.

E. PSYCHOLOGY.—*President*, D. Hack Tuke, F.R.C.P., LL.D *Vice-Presidents*, W. Bevan Lewis, L.R.C.P.; Ringrose Atkins, M.D

Honorary Secretaries, John Greig McDowall, M.D., Menston Asylum, near Leeds; Robert Percy Smith, M.D., Bethlem Royal Hospital, S.E.

Presidential address, Dr. Hack Tuke, on The Past and Present Provision for Pauper Lunatics in Yorkshire, introducing for discussion the question, Ought the Future Provision for this Class to be on the Same Lines? Drs. Bevan Lewis and Yellowlees will take part in the discussion.

Dr. W. W. Ireland will open a discussion on the Double Brain, and the Discordant Action of the Two Hemispheres in Insanity. Drs. Bevan Lewis, Hughlings Jackson, Fletcher Beach, and T. Outterson Wood will take part in the discussion.

Dr. F. Warner, as Secretary of the Committee (appointed at the Glasgow meeting in 1888), will read their report, and introduce a discussion on the Draft Report of the Committee appointed to conduct an Investigation as to the Average Development and Condition of Brain Function among the Children in Primary Schools. Drs. Fletcher Beach, Savage, Ireland, H. Ashby, and Shuttleworth will join in the discussion on Dr. Warner's report.

The following papers are promised:

BEACH, Fletcher, M.B. Some further facts respecting the Causation of Idiocy and Imbecility.
BATEMAN, F., M.D. On Hypnotism, with special reference to Certain Experiments at La Salpêtrière.
BULLEN, F. St. John, M.R.C.S. An Analysis of 1,565 *Post-Mortem* Examinations of the Brain performed at the Wakefield Asylum during a period of eleven years.
ROBERTSON, George, M.D. Melancholia from an Evolutionary and Physiological Point of View.
SAVAGE, G. H., M.D. Massage Treatment of Some Forms of Melancholia.
SHUTTLEWORTH, G. E., M.D. (1) A Contribution to the Etiology of Idiocy. (2) Remarks on a Series of Idiot Brains.
VOISIN, Professeur Aug. (of the Salpêtrière). On the Use of Hypnotic Suggestion as a means of Treatment in the Insane, and the Results he has obtained by this Method.
WIGLESWORTH, J., M.D. 1. Note on Optic Nerve Atrophy Preceding the Mental Symptoms of General Paralysis. 2. On Fibrinous Membranes within the Spinal Canal occurring in the Insane.

Physics Lecture Room No. 11, School of Science.

F. PATHOLOGY AND PHYSIOLOGY.—*President*, Joseph Coats, M.D. *Vice-Presidents*, Thomas Churton, M.D.; De Burgh Birch, M.D. *Honorary Secretaries*, Ernest Henry Jacob, M.D., 12, Park Street, Leeds; T. Wardrop Griffith, M.D., 23, Park Square, Leeds.

A discussion on the subject of Fever will be opened by Dr. T. J. Maclagan. Dr. Gairdner, Dr. Dreschfeld, Dr. Handford, Dr. Broadbent, and Dr. Sims Woodhead will take part in the discussion.

The following further papers are announced:

BIRCH, De B., M.D. On the Nature of some Pressure Phosphenes.
CHURTON, T., M.D. Note on the Diagnostic Value of Indicanuria.
CROOKE, G. F., M.D. The Histology of Bright's Disease.
DRUMMOND, D., M.D. The Pathology of Acute Lead Poisoning.
HANDFORD, H., M.D. Visceral Changes in Enteric Fever.
HAYCRAFT, J. B., M.D. (Title not received.)
MOTT, F. W., M.D. The Pathology of Cardiac Failure.
POPE, F.M., M.D. Case of Thrombosis of Vertebral Artery: Pressure on Glossopharyngeal Nerve: Unilateral Loss of Taste.
SINCLAIR, A. W., Esq. The Occurrence of Distoma Crassum in the Human Subject.
WILLIAMS, Roger, Esq. The Neoplastic Process from an Evolutional Standpoint.
WOODHEAD, G. Sims, M.D.

The Pathological Museum will be held in the Chemical Laboratory of the Leeds School of Science (Mechanics' Institute). The following subjects will be specially illustrated in the Museum: 1. The Lesions of Leprosy; 2, Diseases of the Knee-joint leading to the Formation of Foreign Bodies; 3, Hypertrophy of the Prostate and its Treatment; 4, Diseases of the Larynx and Trachea.

Class Room 5, School of Science.

G. OPHTHALMOLOGY.—*President*, George Anderson Critchett, F.R.C.S.Edin. *Vice-Presidents*, John Albert Nunneley, M.B.; George A. Berry, M.B. *Honorary Secretaries*, Gustavus Hartridge, F.R.C.S., 65, Green Street, Grosvenor Square, W.; R. N. Hartley, M.B., 29, Blenheim Terrace, Leeds.

At 10 A.M. on Wednesday, August 14th, the President will give an address on the Treatment of Immature Cataract, and the following papers will be read:

TEALE, T. Pridgin, M.B., F.R.S. Description of the Operation he employs for Extraction of Cataract without Iridectomy.
BICKERTON, T. H., M.R.C.S. Criticism of the various Tests for Colour-Blindness, with special reference to the Board of Trade Tests, and further examples of Defective Eyesight occurring in Sailors.
COLLINS, W. J., M.D. The Composition of the Human Lens in Health and in Cataract, and its Bearing upon Operations for the latter.
GROSSMANN, K., M.D. 1. Note on Test for Colour Blindness. 2. Blenorrhœa Neonatorum.
HARTLEY, R. N., M.B., will show 1. Modification of Sichel's Knife for Cataract Operations. 2. Cases of Soft Cataract treated by Suction. 3. Cases of Hard Cataract extracted without Iridectomy.
HEWETSON, H. B., M.R.C.S. 1. Series of Cataract Operations without Iridectomy. 2. Series of cases of Interstitial Keratitis treated by Syndectomy.
SNELL, Simeon, M.R.C.S. Extraction of Cataract without Iridectomy.
THOMPSON, J. T., M.B. 1. A Note on a case of Superficial Keratitis induced by Aniline Violet. 2. Necrosis of Cornea from Contact with Crude Creasote.
FROST, W. Adams, F.R.C.S., will demonstrate some Ophthalmoscopic Drawings thrown on to a Screen.

At 10 A.M. on Thursday, August 15th, Mr. Jonathan Hutchinson will open a discussion on the Treatment of Glaucoma. Numerous surgeons have promised to take part in the discussion. After this the following papers will be taken:

BENSON, A. H., M.B. Pulsating Tumour of Orbit cured by Digital Pressure.
BERRY, G. A., M.B. Some Points in Connection with Cataract Extraction.
CROSS, F. Richardson, F.R.C.S. Muscular Advancement.
MULES, P. H., M.D. Peripheral Neuritis of the Ophthalmic Division of the Fifth Nerve, and its Clinical Bearings.
MONEY, Angel, M.D. Sudden Transient Ocular Phenomena in Children.

On Friday, August 16th, the session will commence at 10 A.M., and the following papers will be read:

CANT, W. J., M.R.C.S. A Case of Paralysis of the Right External Rectus Muscle after Injury to the Left Temple (*contre coup?*).
EMRYS-JONES, A., M.D. The Value of Galvano-Cautery in the Treatment of Conical Cornea (6 cases).
FORD, Vernon, M.R.C.S. The Value of Peritomy in Ulcers of the Cornea, etc.
GRIFFITH, A. Hill, M.D. Diagnosis of Intraocular Growths, with Specimens.
HARTRIDGE, G., F.R.C.S. Case of Pulsating Exophthalmos Cured Spontaneously by Suppuration of Contents of Orbit.
HERN, John, M.D. Sclerotitis from Dental Irritation.
JOHNSON, G. L., F.R.C.S. Observations on the Therapeutical Action of the Violet and Ultra-violet Rays of Light on Vision.
SYM, W. G. Tumours of Optic Nerve.
BRONNER, Adolf, M.D., will show a Hook for Removing Remains of Lens Capsule,

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Class Room 1, School of Science.

H. DISEASES OF CHILDREN.—*President*, Thomas Scattergood, M.R.C.S. *Vice-Presidents*, Richard Favell, M.R.C.S.; A. H. Carter, M.D. *Honorary Secretaries*, Walter Henry Brown, F.R.C.S.I., 19, Queen Street, Leeds; Angel Money, M.D., F.R.C.P., 24, Harley Street, Cavendish Square, W.

A discussion on the following subject will take place: The paralyses of the first two years of life. What is the relative frequency of paralysis from brain, cord, and nerve disease? What is the nature of the changes in the centres and nerves? This will probably be opened by Dr. Henry Ashby. Papers will be read on the various forms of infantile paralysis: spastic paraplegia, congenital chorea, infantile palsy, and diphtheritic paralysis.

Surgical Portion.—Subject for discussion: The Surgical Treatment of the Various Congenital Malformations. Mr. Walsham and Mr. Morgan will take part in the discussion.

The following further papers are announced:

ASHBY, Henry, M.D. A case of Softening of an Infant's Brain due to Vascular Obstruction. Also a case of Acute Polio-myelitis; death six weeks after the Acute Attack. The specimens will be shown.
BALLANTYNE, J. W., M.B., F.R.C.S.Ed. Sclerema and Œdema of the Newborn Infant.
BARRS, A. G., M.D., will show some Cases illustrative of Palsy in Infants.
BROWN, John, M.B. (Bacup). Unsuspected Lead-poisoning in Children.
BURY, Judson S., M.D. On a Case of Microcephalus with Spastic Paralysis, and will show a Specimen.
CHURCHILL, F. M.D. Hare-lip Operations.
CHURTON, T., M.D. Meningitis following Slight Blows on the Head.
HELLIER, J. B., M.D. Notes on Slojd.
MANTLE, Alfred, M.D. A Peculiar Form of Laryngisms in Young Infants.
MORGAN, J. H., F.R.C.S. Congenital Malformations.
OLIVER, Thomas (Newcastle-on-Tyne). Hemiplegia with Asphasia in Children.
SQUIRE, W., M.D. Cases of Infantile Palsy, Spastic Paraplegia, and Diphtheritic Paralysis in Children.
SYMPSON, Mansel, M.B. (1) A Case of Cerebral Birth Palsy with Epileptoid Convulsions. (2) A Case of Infantile Cerebral Palsy, with comments.
WALSHAM, W. J., F.R.C.S. Ectopia Vesicæ.
WARNER, F., M.D. Coincidental Defects in Children in Association with Mental Dulness, Nerve Defects, and Low Nutrition.

Class Room 2, School of Science.

I. LARYNGOLOGY.—*President*, Henry T. Butlin, F.R.C.S. *Vice-Presidents*, Francis de Havilland Hall, M.D.; Richard A. Hayes, M.D. *Honorary Secretaries*, Greville Macdonald, M.D., 47, Queen Anne Street, Cavendish Square, W.; Barclay J. Baron, M.D., 16, Whiteladies Road, Bristol.

The following subjects are proposed for special discussion:

1. Tonsillitis: its Varieties and Association with Rheumatism.

2. Perichondritis of the Larynx: its Etiology, Pathology, Symptoms, and Treatment.

Dr. R. Hingston Fox and Dr. Barclay J. Baron will take part in the discussions.

The following gentlemen have promised papers on these sub-

jects: Dr. C. W. Haig-Brown, Dr P. McBride, Dr. G. Macdonald, Dr. David Newman, Dr. Scanes Spicer, and Mr. Lennox Browne; and the following will take part in the discussions: Dr. Dundas Grant, Dr. Hodgkinson, Mr. T. Mark Hovell, Dr. C. J. Lewis, Dr. S. Moritz, Dr. G. Hunter Mackenzie, Dr. Scanes Spicer, Mr. G. Eland Stewart, Dr. Archibald Garrod, Dr. Warden, Dr. A. Mantle, and Dr. de Havilland Hall.

The following further papers are announced:

BARON, Barclay J., M.B. A Case of Bilateral Paralysis of Abductors of the Vocal Cords.
GARROD, A. E., M.D. On Perichondrites.
HAILES, W. J., M.D. (Albany, N. Y.). Intubation of the Larynx: 60 Cases; 20 Recoveries, with Instruments.
HALL, De H., M.D. On Perichondrites.
LAWRENCE, L. H., F.R.C.S. Granular Pharyngitis.
MACDONALD, Greville, M.D. Empyema of the Maxillary Sinus, with an analysis of fifteen cases.
MACKENZIE, G. Hunter, M.D. Cases of Infraglottic Laryngeal Disease: (1) a Web removed by Laryngotomy; (2) a Growth a Sequel of Acute Laryngitis.
MACKENZIE, G. Hunter. Intubation of the Larynx.
MORITZ, S., M.D. A Case of Acute Rheumatic Bilateral Paralysis of the Abductors of the Vocal Cords.
MURPHY, James, M.D. A Retractor for Use in Tracheotomy.
NEWMAN, David, M.D. A Case of Laryngeal Carcinoma complicated by Chronic Pulmonary Tuberculosis, with remarks respecting the rare coincidence of these diseases.
ROBERTSON, W., M.D. Two Cases of Rhinoscleroma. (With Exhibition of Patients.)
SPICER, R. H. Scanes, M.D. Throat and Nose Affections in Children as Causes of Functional Nervous Disorders.
STEWART, G. Eland, M.R.C.S. Tonsillitis as a Cause of Abscess in the Neck.
STOKER, George, M.K.Q.C.P.I. Laryngitis and Rhinitis in Diabetes.
ZWAARDEMAKER, H., M.D. (Utrecht). New Olfactometers for estimating Degree of Loss of Smell (shown and described for the author by Dr. Scanes Spicer).

Elementary Division, Mechanics' Institute.

J. OTOLOGY.—*President*, George P. Field, M.R.C.S. *Vice-Presidents*, Frederick Morrish Pierce, M.D.; Henry Bendelack Hewetson, M.R.C.S. *Honorary Secretaries*, Adolf Bronner, M.D., 33, Manor Row, Bradford; G. William Hill, M.B., 24, Wimpole St., W.

The following subjects are proposed for formal discussion:

1. The Causes, Varieties, and Treatment of Osseous Growths of the Ear.

2. The Influence of Diseases of the Nose and Pharynx on Affections of the Middle Ear.

3. The Diagnosis, with special reference to Localisation, of Intracranial Lesions the result of Aural Disease.

The first of these discussions will be opened by the President, Mr. G. P. Field, the second by the Vice-Presidents, Dr. F. M. Pierce and Mr. H. B. Hewetson, and the third by Mr. Cumberbatch and Dr. William Macewen, of Glasgow; Dr. Hughlings Jackson, Dr. Broadbent, Professor Ferrier, and Professor Horsley will probably speak on the latter subject.

The following otologists have also intimated their intention of joining in one or more of the discussions: Clarence J. Blake, M.D. (Boston, U.S.A.), Professor Urban Pritchard, M.D. (London), H. Macnaughton Jones, M.D. (London), J. Dundas Grant, M.D. (London), W. R. H. Stewart, F.R.C.S.Ed. (London), Donald Stewart, M.D. (Nottingham), Dr. Charles Warden (Birmingham), Mr. Lennox Browne, G. J. Mackesy, M.B., W. L. Mackesy, M.B., J. Erskine, M.B. (Glasgow), Dr. Sexton (New York), and Mr. Richard Williams.

Dr. Ward Cousins will give a demonstration on the Value of Antiseptic Artificial Drumheads in Chronic Middle-Ear Disease and Perforation, on Thursday, August 15th, at 2.30 P.M.

Dr. J. Ward Cousins will also show a new Eustachean Catheter, with Inflator attached, for alternate Injection and Evacuation of the Tympanum.

The following further papers are announced:

BARR, Thomas, M.D. (Glasgow). On Non-operative Treatment of Aural Exostoses; and will show Sections of Temporal Bones from Cases of Intracranial Disease illustrative of the various directions by which Disease of the Middle Ear may extend to the Interior of the Cranium.
BRONNER, Adolf, M.D. (Bradford). Notes on the Use of Menthol in the Local Treatment of Diseases of the Middle Ear; and will show (1) a Catheter for the Injection of Fluids, and (2) a Capsule for the Introduction of Vapours into the Middle Ear.
COUSINS, J. Ward, M.D. (Portsmouth). On a New Antiseptic Ear Drum. (Specimen shown.
DALBY, Sir Wm, M.B. (London) and SHEILD, Marmaduke, M.B. (London). On Treatment of Aural Exostoses.
DAVIS, Henry, M.R.C.S. (London). On the question of Anæsthetics in Operations for Adenoid Growths of the Naso-Pharynx.
ELLIS, Richard, F.R.C.S.Ed. (Newcastle). On an Osseous Growth of the Auditory Meatus simulating a Foreign Body and Causing Deafness. (Removal with restoration of hearing. Specimen.)
GUYE, Professor (Amsterdam). On Aprosexia, being the inability to fix the attention, and other allied troubles in the cerebral functions caused by nasal disorders.
HARTLEY, R. N., M.B. (Leeds). Abscess of Right Temporo-Sphenoidal Lobe following Old Middle Ear Disease. (Trephined and drained: Recovery: Patient shown.)
HILL, William, M.B. (London). On some Causes of Backwardness and Stupidity in Children; and will show Intranasal Guards for the safer application of Chromic Acid to the Nasal Cavities.
LEE, Charles G., M.R.C.S. (Liverpool). A case of Cerebral Tumour complicated with Symptoms of Acute Otitis.
LEES, David B., M.D. (London). On the Connection between Aural Disease and Meningitis in Children.
MATHESON, Farquhar, M.B. (London). On Some Subject connected with Deaf-Mutism.
NUNNELEY, John A., M.B. (Leeds).
POLITZER, Professor, M.D. (Vienna) (per Mr. G. Stone, Liverpool). On Osseous Growths of the Ear. (With specimens.)
STONE, George, L.R.C.P. & S.Ed. (Liverpool). A Case of Severe Unilateral Tinnitus due to Stricture of the Eustachian Tube cured by Persistent Bougieing.

Class Room 10, School of Science.

K. PHARMACOLOGY AND THERAPEUTICS.—*President*, Sir William Roberts, M.D., F.R.S. *Vice-Presidents*, T. Cranstoun Charles, M.D.; I. Burney Yeo, M.D. *Honorary Secretaries*, John B. Hellier, M.D., 1, De Grey Terrace, Leeds; Dawson Williams, M.D., 25, Old Burlington Street, W.

The proceedings of the Section will be opened at 10A.M. on Wednesday, August 14th, by an address by the President on Certain Practical Points in the Use of Antacid Remedies in Dyspepsia and Gravel.

At 10.30 A.M. a discussion on Hypnotics and Analgesics, with special reference to remedies recently introduced, namely, Paraldehyde, Hypnone, Amylene Hydrate, Methylal, Sulphonal, will be opened by Dr. D. J. Leech, Professor of Therapeutics in the Victoria University, Manchester. Dr. Charteris, Professor of Therapeutics in the University of Glasgow, Sir J. Crichton Browne, Dr. W. H. Broadbent, Dr. Frederick Needham (Gloucester), Dr. Macnaughton Jones, Dr. T. Cranstoun Charles, and Dr. John Gordon (Aberdeen) have signified their intention of taking part in the discussion.

At 10 A.M. on Thursday, August 15th, a discussion on Foods for Invalids and Infants will be introduced by Dr. Burney Yeo; and Dr. Sidney Martin, Dr. E. D. Mapother, Dr. T. Cranstoun Charles, Mr. R. W. Parker, and Dr. S. McBean (Newcastle) will take part in the discussion.

The following papers have been promised:

CHARLES, T. Cranstoun, M.D. (London). 1. The Hot-air Treatment of Pulmonary Consumption. 2. Some Cases of Diabetes. 3. Notes on the Use of Paraguay Tea. 4. On Ichthyol.
CHARTERIS, Professor M., and MACLENNAN, W., M.B. Experimental Research on the General Comparative Action of the Natural and Artificial Salicylic Acids and their Salts of Sodium.
CHURTON. T., M.D. The Treatment of Pemphigus.
CROCKER, H. Radcliffe, M.D. On Anthrarobin in the Treatment of Skin Diseases.
GORDON, John, M.D. (Aberdeen). On the Pharmacology of Urethane.
GREENE, G. E. J. (Wexford). Lychnis Floscuculli in Renal and Vesical Affections.
HAIG, A., M.A., M.D. The Influence of Opium and Morphine on Uric Acid considered with reference to the Action in Health and Disease.
ILLINGWORTH, C. R., M.D. (Accrington). The Therapeutics of the Biniodide of Mercury.
LITTLEWOOD, H., F.R.C.S., and TREVELYAN, F., M.D. Demonstration of the Use of Suspension in the Treatment of Locomotor Ataxy.
MILLER, A. C., M.D. (Fort William). The Mountain Cure of Phthisis, with special reference to its adoption on Ben Nevis.
MURRAY, W., M.D. (Newcastle-on-Tyne). On the Removal of Renal Calculi by Toxic Doses of Belladonna.
PEARSE, T. F., M.R.C.P., M.R.C.S. On the Use and Abuse of Soap.
SOLLY, Samuel E., M.R.C.S., L.S.A. (Colorado Springs). On the Climate of Colorado.
TAYLOR, J. Cleasby, M.D. Grand Canary: Its Climate and Waters.
WOODS, Hugh, M.D. (Highgate). The Oxyiodides of Calcium and Bismuth.

Honorary Local Secretaries, Charles J. Wright, M.R.C.S., Lynton Villa, Virginia Road, Leeds; Charles M. Chadwick, M.D., 3, Park Square, Leeds; G. Herbert Rowe, M.R.C.S., Hillary Place, Leeds.

Honorary Local Treasurer, William Hall, M.R.C.S., Moorham, Headingley.

ANNUAL MUSEUM.

IN connection with the fifty-seventh annual meeting of the British Medical Association, the Museum and Exhibition will be held in the Mechanics' Institute, in which the Sectional meetings are held, and grounds of the Leeds School of Science. The Museum will be arranged in the following Sections:

SECTION A.—Foods and Drugs, including Antiseptic Dressings and other Chemical and Pharmaceutical Preparations. (Honorary Secretaries, Dr. J. Hellier, 1, De Grey Terrace, Leeds; Mr. C. V. Newstead, 40, Headingley Lane, Leeds.) In the Albert Hall.

SECTION B.—Pathology, comprising Casts, Models, Diagrams, Apparatus, Microscopical and Spirit Preparations, etc. (Honorary

Secretaries, Dr. J. Dobson, 27, Burley Lawn, Leeds; Dr. E. H. Jacob, 12, Park Street, Leeds.) In the Chemical Laboratory.

SECTION C.—Anatomy and Physiology, comprising Special Dissections, Methods of Preparation, Drawings, Models, Microscopes, Microtomes, and Microscopic Preparations. (Honorary Secretaries —Physiology, Dr. De Burgh Birch, 16, De Grey Terrace, Leeds; Anatomy, Dr. T. Wardrop Griffith, 23, Park Square, Leeds.) In the Chemical Laboratory.

SECTION D.—Instruments and Books, including Appliances, Medical, Surgical, and Electrical. (Honorary Secretaries—Instruments, Mr. W. H. Brown, 19, Queen Street, Leeds; Books, Mr. F. H. Mayo, 49, Otley Road, Leeds.) In the Albert Hall.

SECTION E.—Sanitary and Ambulance Appliances. (Honorary Secretaries—Sanitary, Mr. J. S. Loe, Grafton Street, Leeds; Ambulance, Mr. R. N. Hartley, Blenheim Terrace, Leeds.) In the basement of the Boys' School.

In consequence of the great and increasing cost of these exhibitions, charges will be made to exhibitors (other than members of the medical profession), according to the space occupied.

Regulations Regarding Exhibits.

1. Intending exhibitors must communicate with the Secretaries of each Section in which they propose to exhibit.

2. All exhibits should be addressed to the "Secretary of the Museum, British Medical Association, Mechanics' Institute, Cookridge Street, Leeds," with the name of the Section for which they are intended.

3. Communications on general matters connected with the Museum to be addressed to the Museum Secretary, Dr. Jacob, 12, Park Street, Leeds.

All communications respecting advertisements in the Catalogue must be made to Messrs. Goodall and Suddick, Cookridge Street, Leeds.

PROPOSED EXCURSIONS.

1. *The Scarborough Excursion* (limited to 200).—A special train will leave the North Eastern Railway Station (New) at 9.10 A.M. on Saturday morning, August 17th, arriving at Scarborough at 11.30. At 12.45 P.M. a luncheon will be given by the profession of Scarborough to 100 members of the Association (by invitation). In the afternoon excursions by sea and land will be arranged, steam yachts will be placed at the disposal of the visitors, and short excursions will be organised by carriage. Dr. Calantarients invites all the visitors to inspect his Glaciarium, an artificial ice invented by himself. A garden party will be given by Mr. J. W. Woodall, in honour of the visit of the Association, at St. Nicholas Cliff. In the evening the grounds of the Cliff Bridge Company will be thrown open to the members, and especially illuminated; here a reception will be held in the Grand Hall by his worship the Mayor, official chairman of the Company, and the Committee. On Sunday a special service will be held in the parish church (St. Mary's), preacher the Venerable Archdeacon Blunt, D.D., Chaplain to the Queen. In the afternoon a concert of sacred music will be given in the Spa Grounds (3 to 4.30), and, later, Mr. Alderson Smith will be "at home" at Wheatcroft Cliff, to receive members of the Association and their wives; by his kindness, also, it is hoped that a deep sea trawling expedition will be arranged for Monday morning. A fee of one guinea will be charged, which will include all the expenses of the excursion. Gentlemen may be accompanied by ladies on the same terms, namely: saloon fare from Leeds to Scarborough, hotel accommodation at two of the best hotels from mid-day on Saturday, August 17th, till mid-day on Monday, August 19th (with the exception of wine). The Cliff Bridge Company will admit members free to their grounds on the three days, August 17th, 18th, and 19th. All excursions and other entertainments are open to all members and ladies accompanying them on production of their tickets. The luncheon to be given on Saturday will be by invitation only, as it is not possible to secure a room for an unlimited number. Medical men will be admitted free into the Aquarium on Saturday. On Sunday evening a sacred concert will be arranged by the kind invitation of Mr. Morgan. Any further particulars with regard to the Scarborough Excursion can be obtained on application to Charles F. Hutchinson, M.D., Honorary Secretary, May Lodge, Scarborough.

2. *The Ilkley and Bolton Abbey Excursion, given by the Profession in Bradford and Ilkley* (limited to 100).—The route of this excursion runs from Leeds in a north-westerly direction, leaving the Midland Station at 9.35 A.M.; it passes by way of Armley, Kirkstall (with a view of the old abbey of that name), and continues along the Airedale Valley to Apperley Bridge. After passing Kirkstall forge, the vale opens out, showing Calverley to the south and on the north, giving a fine view of the slope of the hill from Rawdon, on which, as prominent objects, stand the Rawdon Convalescent Home (founded, for poor patients, by the late Sir H. W. Ripley, Bart.) and the Rawdon Baptist College. These and the numerous villa residences of Leeds and Bradford merchants, embowered in trees, form a pleasant and striking landscape. Passing Apperley Bridge, the line curves temporarily towards the north, up a steep incline, affording a glimpse of the upper portion of the Airedale Valley, with Shipley and Bradford in the distance; it then enters a wooded and tunnelled portion, curving back to the west and reaching Guiseley; here, and at Ilkley, the members of the excursion will be joined by their entertainers, and the train will proceed along the south side of the Wharfedale Valley, towards Ilkley.

Just before the valley opens there lies, on the south side of the line, the New Menston Lunatic Asylum, to which the Psychological Section intends to pay a visit. Beyond this the line divides, one branch turning to the east to Otley, the other pursuing its course to Ilkley and Bolton. In the angle made by this division lies the burial place of the late Right Hon. W. E. Forster. The spot affords a view of the extent of Wharfedale, which, following the course of the river Wharfe from Bolton on the west, runs to where the North Eastern line, on its way to Harrogate, crosses the valley at Arthington, on the east. The dale is one of the most beautiful in Yorkshire, offering at certain points almost unique views, as that at Otley Chevin, Ormscliffe Cragg and the Cow and Calf. The town of Otley lies at the east end, on the north side of the valley, opposite the Chevin; the village of Burley lies embedded in foliage in the middle of the dale, while Ben Rhydding and Ilkley lie on the cliff or south side of the dale, at the edge of Rumbold's Moor.

The train, proceeding, passes the Burley Station, and at this point on the rising ground of the north of the dale may be seen Denton Hall and Park, formerly the residence of the famous Fairfax, now the seat of Mr. Wyville, J.P.; and, further west, Myddleton Lodge, the home of the Middletons, one of the oldest Yorkshire county families. The ground now rises precipitously to the south, and the first object which strikes the eye is the splendidly situated hydropathic establishment of Ben Rhydding. Further to the west of it are seen the massive rocks called the Cow and Calf, and the Ilkley district opens out, extending almost from the edge of the moor for a mile or more down a gentle slope to the river Wharfe. As the train moves past Ilkley, a good general view will be obtained of its spa establishments and villa residences. The train goes on past the village of Addingham (with Beamsley Beacon behind) till it reaches Bolton Bridge at 10.49; at this station waggonettes will be in readiness to take the party to the Priory and Bolton Woods. Most people have seen the beautiful print of "Bolton Abbey in the Olden Time." The remains of the Priory are charmingly situated, and form a grand adjunct to the restored church. To strangers the history of the structure will be freely afforded by some of the gentlemen accompanying the party. From the Priory the party will be conveyed to Bolton Woods and the Strid in the waggonettes.

The woods and stream will afford their own beautiful commentary; and the romantic story of the "boy of Egremond" checked in his spring across the "Strid" by the leashed hound, and drowned in the torrent; the despair of the mother, "Alice de Romille," and her subsequent founding of the Priory, can all be told on the spot. Time will not afford more than a distant view of "Barden Tower," the home of the Cliffords, and walk through the woods, nor can a visit to the Valley of Desolation, with its waterfall, be risked; but these will scarcely be missed amid the surrounding beauties. The waggonettes will return from the Strid about 12.45 to the Devonshire Hotel, where, if the day be propitious, lunch will be served on the lawn at 1.30 P.M.

The train will leave Bolton Abbey Station at 2.47 P.M. on its return to Ilkley; and here the rest of the day, till dinner-time, will be spent visiting the points of interest in its immediate precincts. Ilkley and its neighbouring "Rombald's Moor" have their aboriginal and Roman history, with their "Cairns," "Barrows," Roman stations and roads. Monumental relics have been found abundantly, and one is to be seen at the back of the Rose and Crown Inn, and three ancient crosses in Ilkley Churchyard. The old Parish Church will repay a visit. All that the antiquarian will require to indicate the ancient history of Ilkley may be obtained from "Lund's 6d. Guide." Modern Ilkley, as a spa and health resort, as well as Ben Rhydding (which was the first of the

large hydropathic establishments in the neighbourhood), owes its celebrity not to any medicinal virtue in its water but to the wonderful purity and abundant supply of that water, and to the charming situation of the place. There is a valuable chalybeate spring at the side of the moor at Heber's Gill, past the Semon Convalescent Home, but this is quite apart from the main "Ilkley Water." This Ilkley water seems specially adapted for drinking and for all such purposes as are comprised under the head of "Hydropathy;" hence the abundance of these establishments. All, or a choice number, of these may be visited; from the original "Old White Wells," which everyone will observe high up on the hill side, through the grand structure of Ben Rhydding (Medical Officer, Dr. Johnstone); the palatial Ilkley Wells (Medical Officer, Dr. Scott); the well-known "Craiglands" (Medical Officer, Dr. H. Dobson); the Elizabethan structure, "Troutbeck;" the "Spa" establishment in the Grove, to Rockwood House, Marlborough House, and Stoney Lea. Besides these there is above the Grove, on the slope of the hill, the Ilkley Hospital (Medical Officer, Dr. Johnstone), established in 1829 as the Ilkley Bath Charitable Institution. This institution has from 700 to 800 patients passing through it in a year; these are recommended by subscribers; and it can be said with truth that the simple treatment and capital Ilkley air materially reinvigorates many of them. Another admirable institution, founded by the late Mr. Charles Semon, of Bradford, and bequeathed by him to the town of Bradford, is the Semon Convalescent Home, situated quite on the edge of the moor, south-west above Ilkley, and intended for the convalescent and weakly of the working class, clerks, and warehousemen; the whole charge for board and lodging is 12s. 6d. a week, the extra cost being furnished by the fund left by Mr. C. Semon. The people can wander on the moor at will, and convalescents are carried up from the railway by omnibus. The Home is open to others beside the inhabitants of Bradford. There are a number of hotels at Ilkley, the principal of which are the Middleton, the Crescent, etc.; but the hydropathic establishments also accommodate visitors even for a few days. Between the return arrival of the train at Ilkley and the hour at which the party will dine (5.30 P.M.), beside the places enumerated and the general exploration of Ilkley, if the day is fine, a walk to the "Cow and Calf" (on the way to Ben Rhydding) will yield a magnificient view from those rocks. Also 1½ mile from the station south-south-west, another splendid view is obtained from the "Panorama Rocks." Again, the walk to Myddleton Moor, 1½ mile north over the Ilkley bridge, will afford many interesting views. To any of the party who may prolong their stay over the excursion, the points of interest in the locality are many and varied, as Skipton town and castle, Keighley and Howarth (home of Charlotte Brontë, 14 miles), Denton Park, Otley and the Chevin, Farnley Hall (2½ miles from Otley, full of interesting historical records), Burley, Harewood House, Harrogate, Ripon, and Fountains Abbey, etc. After dinner, time sufficient will be afforded for a leisurely stroll to the Ilkley station, from which the train will start on its return journey promptly at 8.35 P.M. for Leeds and Bradford.

3. *York, Helmsley, Rievaulx Abbey* (limited to 100).—The party will leave the North Eastern Railway Station (New) by special train at 9.10 A.M., reaching York at 9.50, where they will be met by the representatives of the profession of York, who have hospitably undertaken to entertain the party, and to show them the various objects of interest. The party will first visit the gardens of the Yorkshire Philosophical Society, kindly thrown open to them by the courtesy of the Honorary Secretary, Mr. Noble, and the Council of the Society. The visit will be supervised by Canon Raine. Amongst the objects of interest are the ruins of St. Mary's Abbey, a portion of the old Roman walls, and a large collection of Roman and other antiquities in the museum and hospitium of the abbey. Afterwards the party will proceed to the Palace of the Stuart Kings, in which is located the Wilberforce School for the Blind. Mr. Buckle, the superintendent of the school, has courteously undertaken to point out the features of interest connected with this historical building. Leaving the Stuart Palace, our visitors will proceed, by way of Boolham Bar, to the Minster, where Canon Raine, in the unavoidable and regretted absence of the Dean of York, will again kindly undertake the duties of cicerone. After viewing the Minster, it is proposed to pay a visit to the Mansion House and Guildhall, where the members and their friends will be received by the Lord Mayor. The ancient plate preserved in the Mansion House and the Guildhall, which is one of the finest Gothic halls in existence, will, it is believed, be inspected with much interest. Luncheon, by invitation of the profession in York, will be served at the Station Hotel, at 1 o'clock, after which the party will be conveyed by special train to Helmsley, where tea will be provided. Here carriages will convey them to Rievaulx Terrace, whence, having seen the beautiful view, they will proceed to the Abbey, driving through Duncombe Park to the Home Terrace, and thence by the ruins of Helmsley Castle to the Black Swan for dinner. The train will leave Helmsley for York in time to catch the night mail from York, and the 9.35 for Leeds.

4. *The Harrogate Excursion* (limited to 120).—The party will proceed by special train from the North Eastern Railway Station (New) at 9 A.M. to Pannal, where they will be met by four-horse drags. The beautiful grounds and rocks of Plumpton will then be visited, where light refreshment will be provided; afterwards the party will drive to Knaresborough Castle, the Dripping Well, and the caves memorable as connected with Eugene Aram. Thence by Scriven and Ripley Castle to Harrogate. Here the members of the profession in Harrogate will entertain the party at lunch in the New Bath Hospital about 3 P.M., afterwards carriages will be provided, so that places of interest may be visited. Various other entertainments will be organised, and in the evening the houses of the various medical men will be thrown open to visitors, and members can return to Leeds either by the special train, or by one of the numerous trains leaving Harrogate for Leeds in time to catch the night mails. It is hoped that many will arrange to stay in Harrogate over the Sunday.

5. *The Brimham Rocks, Fountain Abbey, Studley Royal, and Ripon Excursion* (limited to 100).—Special train will leave the North Eastern Station (New) about 9 A.M. for Pateley Bridge, where carriages will meet the party to convey it by Raven's Gill and Guy's Cliff to Castlestead, where the party will be entertained at luncheon by Mr. George Metcalfe. After luncheon the party will proceed by the fantastic rocks of Brimham over the moors to Fountains Abbey and Studley Royal, the grounds being specially laid open and tea provided by the Marquis of Ripon. Having viewed this, the finest of the Cistercian abbeys, the party will proceed to Ripon, where, having seen the cathedral, they will be received and entertained at the Palace by the Bishop of Ripon and Mrs. Boyd-Carpenter. The train will leave Ripon for Leeds at 8.15 P.M., reaching Leeds about 9.30 P.M.

6. *The Washburn Valley and Farnley Excursion* (limited to 50).—The object of this excursion is to show the waterworks in connection with Leeds, the beautiful scenery of the Mid-Warfe and Washburn Valleys, and the unique collection of Turner paintings at Farnley Hall. The whole journey will be by carriage. The party will start from the Mechanics' Institute at 9 A.M., and first be conducted to Adel Church, when the Rector will show this most perfect specimen of Norman architecture; thence past Creskeld by Arthington and Pool Bridge, through the picturesque village of Leathley, with its old church and village stocks, through Lindley Wood to the Reservoir, where Messrs. Greenwood and Batley will show some interesting torpedo experiments. The party will then proceed over Norwood Edge, whence a splendid view of the whole valley can be obtained by Swinsty Reservoir to Fewston (the Sinking Village). Here lunch will be provided by the Chairman of the Leeds Waterworks Committee, Mr. Alderman Woodhouse. The party will then drive by Snowdon Moors to Farnley Hall, the seat of Mr. Ayscough Fawkes, who has kindly consented to exhibit his unrivalled collection of paintings by J. M. W. Turner, as well as his Cromwellian relics. Thence to Otley, where dinner will be served at the White Horse Hotel, the party reaching Leeds in time for the night mails.

7. *Malham Cove, Gordale Scar, and Settle* (limited to 50).—The object of this excursion is to show the remarkable scenery produced by the Great Craven Fault in the Mountain Limestone, one of the grandest examples in England. A special train will leave the Midland station about 9 A.M., reaching Bell Busk about 10.20 A.M. Here carriages will be waiting to convey the party by Calton Hall, the birthplace of General Lambert, and Kirkby Malham, with its interesting church and registers, to Gordale Scar, described by Wordsworth as "one of the grandest objects in Nature." The party, having been refreshed at a farmhouse, will divide into two, the more adventurous going over the cliffs to Malham Cove, where they will meet the party who have driven round. Having viewed this magnificent amphitheatre of rocks, the party will return to Kirkby Malham, and will here again divide. The lighter carriages, with those who prefer a walk with an ascent of 700 feet, will go

over Highside, where a magnificent view of both Airedale and Ribblesdale can be obtained; thence by Scaleber Force to the Ashfield Hotel at Settle, where, being joined by the other party, who have driven round by Otterburn and Long Preston, dinner will be served. After dinner they will drive up Ribblesdale to Great Stainforth Force, returning by Giggleswick, where may be seen the ebbing and flowing well, and the Royal Victoria Cave Remains in the museum at the school. They will then return by Settle to Leeds, which will be reached about 9 P.M.

The fee for each of the above excursions will be 10s. 6d., except in the case of the Scarborough excursion, for which one guinea will be charged. All applications for tickets, with remittance, to be made to

CHARLES M. CHADWICK, Honorary Secretary,
Excursions Subcommittee.

RAILWAY TICKETS.

Members of the Association, on application at the booking office at Leeds, and on production of their cards of membership, can have issued to them return tickets at single fares (Lancashire and Yorkshire Railway at a single fare and a fourth) available *from Leeds to any station* within a radius of fifty miles. The same facilities will be afforded to ladies accompanying members. Periodical tickets (first class) to Harrogate or Ilkley, available for seven days, will be issued to members of the Association at a charge of 10s. each on production of the voucher above named. These facilities will apply strictly to Leeds, and there will be no reduction in the fares charged to the members of the Association on their journey to Leeds for the meeting.

It has now been decided that Hull may be included in the range of places to which special return tickets may be issued from Leeds at a single fare for the double journey during the time that the Association is staying at Leeds.

CARDS OF MEMBERSHIP.

The cards of membership can be obtained on personal application at the Reception Room of the Mechanics' Institute, Leeds, on Monday, when it will be opened from 12 noon till 8 o'clock, and the other days of the meeting from 9 o'clock till 6 o'clock.

NOTICES OF MOTION.

Mr. RIVINGTON gives notice that he will move, on the reading of the report of the Council:

That it is the opinion of this meeting that the Members of the Royal College of Surgeons of England should have a voice in the management of that College and in the election of its Council, and that it be an instruction to the Council of this Association to further this object through the action of the Parliamentary Bills Committee or of a special committee to be appointed for the purpose at this annual meeting.

Dr. EDWIN RICKARDS hereby gives notice that, at the Annual Meeting to be held at Leeds in August next, he will move:

That it be a recommendation to the Council of the British Medical Association that a decennial index of the contents of the BRITISH MEDICAL JOURNAL from its commencement up to the present time be made, and that in future, in addition to the annual index, a quinquennial one be issued.

Mr. J. BRINDLEY JAMES will move:

That the British Medical Association shall give active support and assistance to any scheme that has in view the establishment of hospital co-operation with a view to the better conducting of the out-patient department of our general hospitals, raising thereby the standard of hospital practice and extinguishing the *raison d'être* of so-called provident dispensaries and open surgeries, thus enabling general practitioners to gain an honourable livelihood.

Dr. OGILVIE GRANT gives notice that at the first evening general meeting at Leeds he will move:

That the travelling expenses of representatives of Branches incurred in attending meetings of the Council in London be defrayed out of the funds of the Association.

DR RENTOUL gives notice that he will move:

That, recognising the fact that there is an abuse of the out-patient department of our medical charities, this meeting of the British Medical Association resolves:

1. That medical practitioners and the managers of our medical charities in the various towns and cities meet together and decide who are eligible for out-patient medical aid. This meeting suggests that the following "wage limit" be adopted:—When a man and wife make 25s. per week and over, or a single person 20s. per week and over, that these shall be ineligible for out-patient treatment at the medical charities—except in cases of accident—and that those earning a similar rate of wage be ineligible for "home visits;" that is, visits paid by the staff of the medical charities to sick persons at the patient's home. Further, that either the Manchester system of checking abuse, or that used at the London and St. Bartholomew's Hospitals be put into force, but that preference be given to the plan used in Manchester.

2. In order that those who shall be excluded from the out-patient department of our medical charities (by the working of the previous resolution) may have the means of obtaining immediate and efficient medical, surgical, and dental treatment, and medicines, this meeting resolves, that a Public Medical Service—such as that suggested in the JOURNAL of June 22nd, 1889—be formed, and that this service embrace those wage-earners who are making under 45s. per week per family, and single persons under 30s. per week. And that the medical practitioners, dental surgeons, chemists, and hospital managers are requested to bring about this hospital reform, and establish a Public Medical Service with as little delay as possible.

3. That having secured hospital co-operation, and having established a Public Medical Service, the members of this Association appoint a Committee, composed of two representatives elected by each Branch, and that this Committee draw up a series of rules for the formation and working of a provident system, whereby wage-earners receiving up to 45s. per week per family, and single persons 30s. per week, may, by making periodic payments during health and sickness, provide themselves, their wives, and children with efficient medical and surgical treatment, and medicines.

4. That the principle of a "wage limit" be adopted, and worked by friendly societies, tontines, and sick insurance companies; or that a "sliding scale" of payments be made to their medical practitioners, so that the present abuses may be rectified. This scale of payments to be drawn up by the Committee constituted as by Resolution 3. This meeting suggests that the minimum medical fee paid by such sick clubs shall be 6s. per annum, per member; that the person proposed for membership pay a fee of 3s 6d. for the medical examination (whether admitted to membership or not) to the practitioner who so examines; that the sum of 1s. be paid for each certificate to the practitioner by the person who obtains it; and that the sum of 8d. be paid for each prescription dispensed. This meeting earnestly requests the various authorities of friendly societies, tontines, and sick insurance companies, to make provision for surgical and dental treatment, and to draw up a scale of fees for the same, so that they may not be depending on the medical charities for relief.

5. That this meeting, recognising the fact that there are a great number of beds in the Poor-law infirmaries (there being no less than 12,000 in 25 metropolitan Poor-law infirmaries), and many in the various fever hospitals at present unused for the clinical teaching of students, and giving due weight to the statement made in the Metropolitan Asylums Board Report of 1889, page 18, that: "Your Committee cannot fail to observe the large proportion of mistakes which are made in the diagnoses of cases of small-pox and fever," desire to express their regret that the Poor-law infirmaries and fever hospitals are not open for the clinical instruction of medical students, and hope that the various authorities will direct their attention to the removal of the present restrictions, so that the educational standard may be improved, it being essential to the health of cities and towns that medical practitioners may be able to recognise fever cases at the earliest possible period.

6. That the Council and JOURNAL of the Association help in every legitimate way to bring the above resolutions to a successful issue.

FRANCIS FOWKE,
Thursday, July 11th. General Secretary.

CORRESPONDENCE.

MEDICAL DEFENCE.

SIR,—In answer to your correspondent "Civis," we shall be obliged if you will allow us to give a brief *résumé* of some of the work done recently by the Medical Defence Union, and at the same time to state that if an action is brought against a member, such action being one which, to fair-thinking men, merits defending, the Medical Defence Union undertakes the whole responsibility and entire cost of the defence. Not only so, but in suitable cases we are prepared to support our members in the *rôle* of plaintiffs, and in such cases all penalties recovered belong unconditionally to the member for whom the Union acts.

On the other hand, we very properly have no power under our constitution to subscribe a penny-piece to an appeal on behalf of a man who is not a member. This is the reason we did not "state what financial assistance we have given to any of the numerous cases of action, criminal or civil, in which practitioners have been mulcted." Nor have we, since we are true to our fiduciary position, "contributed anything towards any of the subscription funds, or to any loss incurred by practitioners in consequence of such actions," such practitioners not being members of the Union.

Short notes of some cases undertaken by the Medical Defence Union:

Dr. J. B.—Threatened action by patient for malpraxis by Dr. B.'s qualified *locum tenens*. Quashed by prompt steps taken by the Medical Defence Union.

Dr. D. W. Davies.—Action brought for him by the Medical Defence Union for improper dismissal by the Great Western Railway Provident Society. Verdict for £40 and costs. Defendants appeal, and Medical Defence Union supports Dr. Davies's case in the pending appeal.

Dr. Tompkins.—Supported by the Union in his refusal to resign at the request of the Leamington guardians.

Dr. Lloyd Jones and Others.—Grievance against County Court judge. Matter investigated at length by the Union with view to petition Lord Chancellor, but relinquished for want of shorthand evidence.

F. C. Groom was, owing to the representations of the Union, struck off the College of Surgeons and the *Register* for conduct infamous in a professional respect.

Another Member of the College was struck off in consequence of the action of the Union in bringing his case before the authorities.

In many cases advice has been given by the secretaries to members in reference to the course to be adopted in threatened proceedings. Considerable correspondence has been entered into with the General Medical Council and various licensing bodies in reference to matters benefiting the profession at large, and the executive are keenly alive to the fact that their duties are daily increasing. It is not by always appearing in court that a Union like ours is of advantage to its members; better work can often be done by stopping a case at its outset. Taking into consideration the fact that the Society has not been under its present management very long, that the number of members is increasing, that a large branch is established by well-known men in East Anglia, and another about to be formed in London and home counties, and that the executive work without expense to the Union, surely it ought to be a matter of congratulation on the part of the profession that such a society should exist. If "Civis" be a member, let him write for information direct to us; and if he be not, we fail to understand his *raison d'être*. We regret, Sir, in conclusion, that anyone who apparently wilfully has misread our last letter to you should be permitted in the JOURNAL to use its columns in order, under the protection of anonymity, to question the truthfulness of those who at any rate are doing their best gratuitously to raise up a Union which shall aid the profession against the multitude of false charges which are made against it, and who, in the midst of busy professional work, give up a great deal of their spare valuable time to work for the benefit of their fellow practitioners.—We are, etc.,

LESLIE PHILLIPS, M.D.,
A. G. BATEMAN, M.B.,
Honorary Secretaries, Medical Defence Union.

Birmingham, August 3rd.

SIR,—I am glad to have the opportunity of answering "Civis," in relation to the Medical Defence Union.

Three years ago a double qualified medical friend was staying with me on a visit. I being much pressed with work, he undertook a parturition (primipara) in my absence. The case was a bad one, and forceps were necessary. A ruptured perineum followed, but not into the rectum. The rent was sutured, but later on all broke down and the patient was told an operation should be done when in a fit state; two months after inquiries were made, but she had left the town. Recently I received a communication demanding damages for unskilful treatment, etc.

I referred the case to the Medical Defence Union and have not heard any further from the claimant. I have had no expenses to pay, no loss of any kind incurred, and the utmost courtesy from Secretary and President of the Union, the latter offering personally to give evidence after examination should the case go into court.

I think the profession should be grateful that such a Union is existent, and give it all support possible. Personally, I cannot speak too highly of its advantages.—I am, etc.,

Rotherham, August 3rd. F. B. JUDGE BALDWIN.

SIR,—At page 285 of the current number of the JOURNAL I notice the note signed "Civis," anent the Medical Defence Union. I think it my duty to state the following facts. At the beginning of this year I was very badly treated by a County Court judge. I applied to the officers of the Medical Defence Union for advice and assistance. They took solicitor's opinion on my case, and went to much trouble and, I have no doubt, considerable expense in the matter. All this cost me nothing. I was thoroughly satisfied with the action of the Defence Union.—I am., etc.,

A. T. LLOYD JONES.

The Laurels, Oakengates, Salop, August 5th.

SIR,—My attention has been called to-day to a letter upon this question, signed "Civis," which appeared in the JOURNAL of August 3rd. I am in a position to answer some of the writer's inquiries, having had occasion only recently, as one of the medical staff of the Great Western Railway Provident Society, to bring an action against the Society for wrongful dismissal and damages. The case, which was tried before his honour Judge Gwilym Williams, in the Pontypridd County Court, and in which judgment was given in my favour, was reported in some of the medical papers at the time, though not so fully reported as I think, from its importance to medical men, it should have been. All the costs in the case were paid by the Medical Defence Union.

Since then, an appeal has been lodged against the decision of the judge, upon the ground of excessive damages; and this appeal will be fought by the Medical Defence Union entirely at their own expense.—I am, etc., D. W. DAVIES, M.D.

The Firs, Llantrissant, Glamorganshire, August 7th.

THE ROYAL COLLEGE OF SURGEONS AND ITS BY-LAWS.

SIR,—"A resolution was carried *nem. con.* (August 1st, 1889) that a copy of the by-laws be given to each candidate before his admission to the membership, at such time as may be judged convenient."

The record of this resolution is a practical confession by the Council that their action in the past has been improper, and probably illegal, and that there has been up to the present time most certainly no moral obligation on the part of the Members to respect the objectionable By-law XVII. Those of us who, as it is alleged, have contravened it, were not put in possession of the fact of its existence at the time of the contract. I, for one, certainly never knew of its existence, and therefore do not hold myself in the least bound by it. To make the contract binding, the step which the Council have now adopted ought to have been taken from the first, for the terms must always be read over, or otherwise made known, to the contracting parties.

Several members of the Council have privately remonstrated with some of the plaintiffs in the pending action, that, having entered into a contract with our eyes open, we have no right now to object to the conditions. By the "*nem. con.*" of the resolution these members of the Council now confess themselves mistaken, and they ought to alter the attitude which hitherto they have maintained *in re* Steele *v.* Savory.

Above and beyond all this, even if we had known and had knowingly accepted the conditions, no law exists, nor would be permitted, to prevent or hinder constitutional efforts to get a bad law altered or repealed.—I am, etc., LAWSON TAIT.

7, The Crescent, Birmingham, August 6th.

ROYAL MEDICAL BENEVOLENT COLLEGE.

SIR,—In reply to Mr. Dow's letter in the JOURNAL of August 3rd, the Council of Epsom College has to say that they are fully alive to the expense and anxieties entailed upon those who have relatives seeking to gain a pension or a foundation scholarship at Epsom.

The Council are powerless, the act of incorporation declares that every governor shall have a vote or votes, and shall have a proportionate voice in the election of those to be benefited.

The Council may desire to prohibit canvassing, but they cannot secure obedience upon the part of the candidates or their friends. To attempt to palliate the difficulty, some years since, after a full discussion at a general meeting of governors it was agreed to appoint a committee from the Council yearly, to consider carefully the list of applications and to *recommend* to the governors the cases they thought the most deserving. This has been done most carefully, most honestly, and at a considerable expenditure of time. The names of the recommended cases have been placed in the balloting paper issued prior to each annual meeting.

The immediate result of this step was a falling off of the number of subscribers; the more recent effect has been that in many years there has been a very large increase of recommended cases found amongst the unsuccessful candidates. I have not any means at hand to determine the exact relation between the unsuccessful and the successful candidates; the relative proportion of the former to the latter annually must be large. But the number of those who actually fail altogether to gain admission is, I think, very small.—I am, etc. C. HOLMAN,

Reigate, August 7th. Treasurer of Epsom College.

THE TUBERCULOSIS QUESTION.

SIR,—In your issue of July 27th, I notice an editorial on the above subject, in which, in referring to several resolutions passed recently at a meeting of the Scottish Met. V. M. Association, you say "That such a resolution should have been passed by the veterinary associations some time ago; and though we are glad to welcome its appearance, even at this late hour, we cannot but think that the necessary stimulation to action was forthcoming in Sheriff Berry's recent decision in the now famous Glasgow diseased

meat case." Really, Mr. Editor, I think this is rather a sweeping assertion, in face of all that has been done in this matter by the members of the veterinary profession during the last few years.

I had the privilege, in February of last year, of reading a paper before the Medico-Chirurgical Society, of Edinburgh, on this subject, and I there directed attention to the following facts as to the action taken by members of the veterinary profession and by Veterinary Associations in connection with this question—(1) In 1872, I read a paper in Glasgow before the West of Scotland V. M. Association, in which I directed attention to the gravity of the question, from a sanitary point of view. (2) In 1879, I published a work—*The Four Bovine Scourges*—in which I said, "Under any circumstances, the internal organs should be destroyed, and it is a matter for grave consideration whether the flesh of an animal suffering from even a slight degree of tuberculosis should not be condemned." "As to the use of milk from animals in which tubercle is suspected to exist, no two opinions can be held." "It would be far better to give compensation and have even a suspected animal destroyed, than to allow her to remain in a herd or byre with the probability of spreading the disease to her neighbours, and of poisoning the consumers' milk." (3) In 1883, the following resolution was unanimously passed by the members of the National V. Association—namely, "That in the opinion of this meeting the Privy Council should include tuberculosis in the Contagious Diseases (Animals) Act." (4) In 1884, at a meeting of the National Association, held in Manchester, I had the privilege of proposing the following recommendation, "That the flesh of animals which have suffered from tuberculosis, or any other disease likely to prove dangerous to the human subject, should be condemned." (5) Including my paper read before the Medico-Chirurgical Society, and already referred to, I urged upon the members the necessity of taking into consideration (*a*) the transmission of tuberculosis to man by the ingestion of the flesh, the milk, or the viscera of tuberculous animals; (*b*) the advisability otherwise of providing for a more thorough and scientific system of inspection at our slaughter-houses; (*c*) to the advisability of memorialising the Privy Council to include tuberculosis amongst the contagious diseases of animals; thus giving veterinary inspectors the power of seizing all tuberculous cows, or even suspected animals, that they may find in byres, markets, or fairs; (*d*) to the advisability or otherwise of condemning the flesh of animals affected with tuberculosis, even though it may be of a limited extent, and localized in the serosæ."

The result of the discussion which followed the reading of this paper was that a committee was appointed to take the whole matter into consideration, and, as an outcome of this, Dr. Littlejohn presented a report to the Board of Supervision, in which, I take it, the views of this committee were embodied.

In your editorial you express the opinion "that the veterinary surgeon is not, as a rule, the man best qualified to judge as to the fitness of carcasses for human food," and acknowledgedly this opinion is based on evidence given at the recent trial at Glasgow. I confess, Sir, that some of it was remarkable; but was the peculiarity confined to the veterinary profession only? I am speaking within bounds when I say that there are very few members of the medical profession who know anything about the diseases of animals; and, if this is so, how are they to know what flesh is fit for human food, and what unfit? It was in full view of this fact that at a meeting of the Royal Scottish Veterinary Association held in this city in March of last year, under my presidency, I proposed a resolution to the effect "that an international conference of pathologists, medical men, and veterinary surgeons should be held for the purpose of discussing the whole matter of meat inspection;" and, going on with the process of evolution, I further thought it my duty to ask (through the Secretary) the President of the National Veterinary Association to put the following resolution to the meeting held in London on the 24th and 25th of last month: "That this meeting reaffirms the principles of the resolutions already passed at previous meetings of the Association, and, in view of the revelations recently made in Glasgow, memorialises the Government to appoint a Royal Commission to inquire into the whole question of meat inspection." This resolution was not put because I had not complied with certain formalities, but, at my suggestion, it was put at a meeting of the Border Counties Veterinary Medical Association held at Carlisle on July 26th, and carried with acclamation; and I hope that not only the veterinary but the medical profession also will agitate in the matter until something definite is done by those who are responsible for the protection of the public in the matter of meat supply. Lastly, Sir, is it not a significant fact that in the programme of the forthcoming meeting of the British Medical Association there is no allusion made to this very grave and important subject, in which the medical profession ought to take a deep and an abiding interest?

In conclusion, allow me, from an extended experience, to endorse the remarks made in your last issue in reference to the prevention and suppression of rabies. I cannot conceive why there should be so much opposition to such measures, in view of the frightful nature of the disease; and personally I am of opinion that, if proper suppressive measures were enforced uniformly over the country, there would be nothing heard of rabies in six months.—I am, etc.,

THOMAS WALLEY.

Royal Veterinary College, Edinburgh, August 6th.

A NEW METHOD OF EXCISING THE WRIST JOINT.

SIR,—The operation for excision of the wrist as described by Mr. E. Thompson in the JOURNAL of July 20th is by no means new.

It originated with Langenbeck, and is usually performed by making a free incision over the dorsum of the hand along the centre of the metacarpal bone of the index finger; on dividing the interosseous ligaments the bones can be easily turned out with an elevator and forceps.

In a case of my own I was struck with the facility with which it could be performed, and it is one I shall certainly adopt in future cases.—I am, etc.

Derby. T. HENDERSON POUNDS, F.R.C.S.

SCOTCH LOCAL GOVERNMENT BILL.

SIR,—At a special meeting of this Branch, held on July 30th, it was unanimously resolved that the thanks of the Branch should be sent to you (as well as to Dr. Farquharson and Sir Walter Foster, members of Parliament) for your great kindness, and for the valuable assistance you rendered, in facilitating the work of the deputation sent up by this Branch in connection with the Local Government (Scotland) Bill. I have the greatest pleasure in making this communication.—I am, etc.,

ALEX. NAPIER, Honorary Secretary, Glasgow and
Crosshill, Glasgow, August 3rd. West of Scotland Branch.

TYPHOID FEVER IN DOMESTIC ANIMALS.

SIR,—Your article on the above subject reminds me of the prevalence of typhoid amongst oxen and dogs in Natal in 1880. Dr. Saunders, A.M.D., and myself found the typical lesions of typhoid in several cases we examined of these animals that had died with all the symptoms of the disease. Moreover, he has pointed out that, in fresh encampments there during 1879 and 1880, the cattle were first attacked with diarrhœa, hæmorrhage, "redwater," "lung sickness," and that after a few weeks the men were down with genuine typhoid, suggesting a progressive development of the virus. The credit of the observation is due perhaps to Homer in the description of the plague at the beginning of the *Iliad:*

> First fell his wrath on the mules and the swift-footed
> hounds of the huntsman.....
> .....and the night and the day were black with
> the smoke of the corpse-fires.
>
> (Calverley's Translation.)

—I am, etc.,

WILLIAM G. THISTLE.

Taunton, August 5th.

TEIGNMOUTH (Population, 8,548).—*High Death-rate from Cancer.*—The most important facts in regard to the mortality statistics for 1888, to which Dr. F. C. Piggott draws attention, are the low total number of deaths, the small number of deaths from the principal zymotic diseases, and the marked diminution in the number of deaths of children under one year of age. The absence of diarrhœa from the list of fatal diseases is also worthy of notice, this being the first year in which Dr. Piggott finds that no death was registered from this cause. He also comments on the number of deaths from cancer; the nine deaths registered as due to this disease give 1,053 as the proportionate number of deaths from cancer for each million of living persons, whereas the number for England and Wales was, in 1887, 606 per million. A high death-rate from this cause is always observable in Devonshire, especially in certain localities, of which Teignmouth is one, and recent researches seem to show that the increase is mainly dependent on geographical conditions.

MEDICO-LEGAL AND MEDICO-ETHICAL.

REMEDIES AGAINST DEFAULTING WATER COMPANIES.

WATER Companies, which have parliamentary powers for supplying a district with water, usually are subject to section 43 of the Waterworks Clauses Act, 1847, which renders them liable to a penalty of £10 and 40s. a day for every day during which they neglect or refuse to furnish a supply of water to any owner or occupier of premises entitled to receive a supply who has paid or tendered the proper water rate. This section is of course intended to make the companies do their duty, and the penalties which may be imposed under it are no doubt such as to prevent wilful neglect or refusal being profitable. The liability to these penalties may, however, act as a protection to a peccant company, as well as provide a stimulus to the proper performance of their duty. It is a well known legal maxim that where Parliament provides that a particular remedy shall be given under certain circumstances it impliedly takes away others. The existence of this section, providing the penalty for failure to provide a proper water supply, has been held to take away any right of action which an aggrieved owner or occupier might otherwise have had against the company. This was determined first by the Court of Appeal in the year 1876. The premises of a person named Atkinson were burned down, owing to the failure of the Newcastle Water Company to provide a proper supply of water to extinguish the flames. He brought an action and recovered heavy damages; but the Court of Appeal held that his action was not maintainable. The same point has been again decided recently in the same way by Mr. Justice Stirling and the Court of Appeal, in the case of McColk *v.* the Clacton-on-Sea Water Company. The plaintiff there brought an action claiming damages against the company for their improper refusal to supply his house with water, and a declaration that he was entitled to a supply. The Courts, however, both held his action to be misconceived, and that his proper remedy would have been to proceed summarily for the penalties imposed by section 43 of the Waterworks Clauses Act.

It will be advisable that aggrieved consumers of water should be aware of this section and the decision on it. They must, however, always be careful to ascertain whether the section is incorporated in the special Act of the company in question. In many districts water is now supplied by the local sanitary authority, under the power of a local Act or of the Public Health Act. The latter Act does not incorporate section 43, and contains no summary provision for compelling local authorities to furnish a proper supply of water. The question what remedy an aggrieved ratepayer may have against a negligent sanitary authority has not yet been decided, the cases above cited do not seem to bear upon it, and it may be that an action can be successfully maintained. Lawyers will look with interest on any case in which the experiment is tried; and the public will at some time or other obtain a knowledge of what the law is.

REGULATIONS AS TO IMBECILES IN PRIVATE HOUSES.

RESIDENT would be glad to know if it is legal to have one or two uncertified persons in his house as patients without a licence from the Lunacy Commissioners? He has been informed that inasmuch as they are of weak intellect, although not insane, it is strictly illegal. He would also like to know what bearing the new Lunacy Bill will have in such cases?

*** It is illegal to have one person of unsound mind in a house without the statutory "order," "statement," and "two medical certificates," in the form prescribed by law; also visitation and entries in books in the form prescribed by law.

It is illegal to have two such persons in the house (even if the above is complied with) without having previously obtained a licence for the reception of such persons.

The general conditions will be much the same under the new Lunacy Act as regards one patient.

DONATION.—The North Staffordshire Infirmary has received a donation of £200 under the will of the late Mr. Thomas Hackwood, of Little Haywood, near Colwick.

PRESENTATION.—Mr. P. G. Philps, M.R.C.S., L.S.A., has been presented by his patients and friends, on the occasion of his leaving Queen's Road, Peckham, with a handsome clock and other *souvenirs*.

NAVAL AND MILITARY MEDICAL SERVICES.

ARMY MEDICAL SCHOOL, NETLEY.

THE summer session of the Army Medical School was brought to a close on August 2nd, when the ceremony of distributing the prizes gained during the session took place. Ten candidates have been studying for H.M.'s Indian Medical Service. There has been also a large class of surgeons of about seven or eight years' service in the medical staff going through a post-graduate course. The prizes were distributed by Sir Dyce Duckworth. He was accompanied by Director-General W. A. Mackinnon, C.B., Sir Joseph Fayrer, K.C.S.I., Surgeon-Generals Sir Thomas Longmore, C.B., W. C. Maclean, C.B., W. Sim Murray, M.D., R. Dane, C.B., Prof. Sir William Aitken, F.R.S., Deputy Surgeon-General Henry Cayley, F.R.C.S., T. Blatherwick, Colonel W. Hanning Lee, Brigade Surgeons C. H. Y. Godwin, F. Beattie, W. T. Martin, Surgeons-Major J. D. Edge, J. Findlay, Surgeons A. M. Davies and D. Bruce. The following surgeons on probation in Her Majesty's Indian Medical Service were successful at both the London and Netley examinations:—The prizes are awarded for marks gained in the special subjects taught at the Army Medical School. The final position of these gentlemen is determined by the marks gained in London added to those gained at Netley, and the combined numbers are accordingly shown:—

	Marks.		Marks.
[1]F. R. Ozzard	6265	Edgar Jennings	5620
[2]A. R. S. Anderson	6020	T. M. Stiles	5473
[3]J. T. Calvert	5705	A. G. Hendley	5445
W. S. P. Ricketts	5680	G. W. Jenney	5441
C. M. Moore	5655	C. T. Hudson	5285

[1] Gained the Herbert Prize of £20, with the Martin Memorial Gold Medal, and the Parkes Memorial Bronze Medal, and also the Prize in Pathology, presented by Sir William Aitken, M.D., F.R.S.

[2] Gained the Montefiore Medal and prize of 20 guineas.

[3] Gained the Montefiore Second Prize, and the Prize in Clinical Medicine presented by Surgeon-General W. C. Maclean, C.B.

Sir DYCE DUCKWORTH, in addressing the students, referred to the value of Netley as a medical, surgical, and hygienic centre. He could only account for the desire to curtail the advantages of that school as an outcome of the spirit which was too prevalent in the present day, a spirit which was not satisfied with anything as it was, which sought to uproot and disturb everything for the mere sake of change. He added a sympathetic reference to the great losses sustained by the school by the deaths of Professors de Chaumont and Boyd-Smith, whose lives afforded examples worthy of imitation. Sir Dyce Duckworth expressed the opinion that it would be well if one or two surgeons were definitely attached for a term of years to each regiment. The advantages of this plan were obvious, and he imagined it could be carried out without great violation of existing arrangements. It was impossible to work both in quarters and on the field on a procrustean system. He concluded by a well-deserved compliment to the teachers, with whom he associated the names of Maclean, Longmore, and Aitken.

The DIRECTOR-GENERAL, Sir JOSEPH FAYRER, and Sir THOMAS LONGMORE having spoken, the proceedings terminated.

GYMNASTIC APPARATUS IN MILITARY HOSPITALS.

I.V.R.C. writes: May I invite attention to the advantages of supplying gymnastic apparatus, like quoits, dumb-bells, clubs, single stick, etc., to military hospitals?

These institutions are not only curative institutions for active disease, but convalescent homes for the full recovery of invalids to convalescence. Whatever would tend, therefore, to fit a soldier for his duty would be of value in such hospitals; and it seems unfair to send a man to his "duty" without some such preparation for it.

I suggest, therefore, that in military hospitals quoits, dumbbells, clubs, single sticks, foils, boxing gloves, and parallel bars and kindred apparatus would be very useful.

It might be advisible later on to make the use of these articles compulsory in certain cases.

THE MEDICAL STAFF.

THE following Surgeons, upon completion of a course of instruction at the Army Medical School, Netley, have been ordered to the stations named:—P. M. CARLTON, M.D., G. W. BRAZIER-CREAGH, H. O. TREVOR, C. E. NICHOL, M.B., A. A. PECHELL, M.B.Irel., H. A. H. CHARLTON, E. L. MAUNSELL, R. F. ADAMS, M.B., S. H. CREAGH, A. F. RUSSELL, M.B., L. H. TRUEFITT, M.B. (Aldershot); A. G. KAY, M.B. (South-Eastern District); F. H. M. BURTON, M.B. (North-Western District); E. J. E. RISK and H. J. BARRETT (Thames District).

Surgeon-Major W. D. WILSON, M.B., has been ordered to join the Woolwich District for duty.

The leave to England on urgent private affairs, granted to Surgeon F. J. GREIG (who is serving on the Bengal Establishment), March 15th, 1889, is extended to September 20th.

A telegram from Cairo, published in the *Times* of August 1st, announces the death at that place of "Surgeon-General Galbraith;" but as there is no medical officer of that name on the active list of the army, it is impossible to identify the person intended.

INDIAN MEDICAL SERVICE.

SURGEON S. HASSAN, Bengal Establishment, has passed the examination in Arabic, held in Calcutta, by the higher standard.

Surgeon J. F. EVANS, M.B., Bengal Establishment, is appointed to the officiating medical charge of the 19th Punjab Infantry, *vice* Surgeon Morwood, transferred to temporary civil employment.

The appointment of Surgeon B. K. BASU, M.D., of the Bengal Establishment, to the medical charge of the 18th Native infantry, is cancelled.

Surgeon-Major A. B. SEAMAN, Bengal Establishment, is among the officers mentioned for meritorious service in the despatch of Colonel Tregear, commanding the Looshai Expeditionary Force, reporting the operations of the troops under his command.

Deputy Surgeon-General W. R. RICE, Bengal Establishment, has leave of absence for three months.

Surgeon-General GEORGE BIDIE, M.B., C.I.E., of the Madras Establishment, Surgeon-General with the Government of Madras and Honorary Surgeon to the Governor-General, has been awarded a good service pension, *vice* Brigadier-General J. C. Hodding, succeeded to colonel's allowance.

MILITIA AND VOLUNTEERS.

THE names of the officers of the "Royal Malta Regiment of Militia" appear for the first time in the July *Army List*. The Surgeon to the corps is A. MIFSUD, the date of his commission being May 1st, 1889.

Acting-Surgeons C. ARROD and R. J. BRYDEN, 3rd Volunteer Brigade Cinque Ports Division Royal Artillery (late the 1st Kent Artillery), are promoted to be Surgeons.

Surgeon P. A. YOUNG, M.D., 1st Midlothian Artillery, is promoted to be Surgeon-Major (ranking as Major).

Acting-Surgeon D. T. PLAYFAIR, M.B., 2nd Volunteer Battalion Queen's Own Royal West Kent Regiment (late the 3rd Kent), is promoted to be Surgeon.

Surgeon W. G. LOWE, M.D., 2nd Volunteer Battalion Prince of Wales's North Staffordshire Regiment (late the 5th Staffordshire), is promoted to be Surgeon-Major.

ARMY MEDICAL STAFF: EXCHANGE.

The charge for inserting notices respecting Exchanges in the Army Medical Department is 3s. 6d., which should be forwarded in stamps or post office orders with the notice. The first post on Thursday mornings is the latest by which advertisements can be received.

A SURGEON-MAJOR and a Surgeon serving in a Mediterranean station, whose tours will expire in 1891, desire to effect exchanges with officers in some other station.—Apply, with full particulars, to Zero, BRITISH MEDICAL JOURNAL Office, 429, Strand, W.C.

MEDICO-PARLIAMENTARY.

HOUSE OF LORDS.—Thursday, August 1st.

Local Government (Scotland) Bill.—The MARQUIS OF LOTHIAN, in moving the second reading of this Bill, explained its provisions, and after some discussion the Bill was read a second time.

Tuesday, August 6th.

Local Government (Scotland) Bill.—The House went into Committee on this Bill. A large number of amendments were moved, but most of them were withdrawn after much discussion, which, however, raised no principle of medical interest.

Universities (Scotland) Bill.—This Bill was read *pro formâ* a second time, the MARQUIS OF LOTHIAN remarking that he would make his statement on the House going into Committee.

Lunacy Acts Amendment Bill.—The Commons' amendments to this Bill were considered and agreed to.

HOUSE OF COMMONS.—Friday, August 2nd.

Colour Blindness.—Sir M. HICKS BEACH, in answer to a question from Dr. FARQUHARSON, said the Board of Trade had referred the subject of colour blindness among seamen to a Departmental Committee, which would have scientific assistance in its inquiries in the matter. It would not be possible for the report of the Committee to be laid on the table of the House before the end of the session.

HOSPITAL AND DISPENSARY MANAGEMENT.

THE PROPOSED PUBLIC MEDICAL SERVICE.

SIR,—In the JOURNAL of July 27th, I stated the last census returns show that there were 8,649,259 of industrial classes in England, and that out of our population of 36,000,000 over 30,000,000 were in receipt of incomes of £150 per annum or under. Yet there are still a few doctors who say that there is no need to establish any scheme for supplying the wage-earning classes with good medical aid.

Another statement has been made to me, and it is this, That we have no statistics showing what wages are paid. May I contradict this, and at the same time refer readers to the lately-issued Blue Book, C. 5,505? I give some extracts. Will those who read kindly note that the average wage is stated? The average wage is very much less than the daily wage, for the average is struck after deducting loss from sickness, strikes, unemployed, and accidents.

Name of Trades Union.	No. of Members.	Annual Income.	Average Weekly Wage.
		£	
Society of Engineers	51,869	188,805	26s. to 38s.
Society of Carpenters and Joiners	25,497	67,819	20s. to 42s. 4½d.
Steam Engine Makers' Society	5,080	14,838	26s. to 38s.
Society of Ironfounders	11,718	46,259	24s.
Boilermakers and Iron Shipbuilders ...	25,100	70,552	34s.
National Union Boot and Shoe Rivetters ...	9,494	4,821	Piecework.
Society of Coach Makers	4,688	9,548	24s. to 40s.
Pattern Makers' Association	1,334	3,370	31s. 7½d.
Bricklayers' Society	6,693	10,737	S. 24s. to 42s. W. 18s.-38s. 3d.
Ironmoulders of Scotland	5,455	17,223	31s. 6d.
Society of Compositors	7,025	12,384	36s.
Journeymen Bookbinders	923	3,037	32s.
Blacksmiths' Society	1,628	4,039	28s.
Operative Cotton Spinners	15,416	48,190	—
Society of Railway Servants	10,830	10,722	—
Stonemasons' Society	2,376	13,499	20s. to 35s. 3½d.
Society of Painters and Decorators	1,583	1,583	38s. 6d.
Carpenters and Joiners	3,877	5,941	—
Glass Bottle Makers	1,482	5,430	30s.
Northumberland Miners	12,748	18,719	32s. to 40s.
Kent and Sussex Labourers	9,040	12,180	12s. 6d.
Warehousemen's Philanthropic Society ...	131	192	24s. to 28s.
Association of Pressmen	261	321	36s.
Operative Bakers	47	133	26s. to 30s.
London Operative Zincworkers	85	135	36s. to 39s.
Bristol Institute of Engineers and Operatives' Trade Society	1,967	2,037	Varies greatly.
Leith and District Coopers' Friendly Society	180	225	27s.
Bricklayers', Trade and Accident	1,275	1,384	27s. to 36s.
Society of Carpenters and Joiners	77	66	39s.
Overlookers' Provident Society	250	306	Varies.
Operative Plasterers	1,532	1,936	26s. to 39s.
Smiths' Society	450	1,469	30s.
Plumbers' Association	3,003	4,750	33s. 4d.
Saddle and Harness Makers	475	399	28s. to 31s.
Printers and Transferers	360	177	28s.
Amalgamated Society of Upholsterers ...	227	325	43s. 4d.
Edinburgh Typographical Society	651	950	25s. to 30s.
West Yorkshire Colliery Enginemen ...	98	142	35s.
Wooldesford Miners' Association	16	30	—
Cigar Makers' Association	895	2,132	20s. to 40s.
National Association of Coach Ironworkers ...	46	63	30s.
Shipwrights' Society	3,578	3,033	30s.
Carriage Straighteners' Society	57	53	12s. 6d.
North of England Sailors and Firemen ...	99	84	28s.
Tailors' Mutual Association...	200	252	—
Operative Ship Painters	323	230	31s. 6d.
United Society of Holders Up	304	326	22s. to 28s.
Wood and Tin Packing Case Makers ...	334	520	36s. to 38s.
Amalgamated Society of Lithographic Printers	1,854	2,672	27s. to 42s.
Power Loom Tenters' Union	101	253	Varies.
Dublin Bakers	540	3,754	36s. to 39s.
Stone Carvers	55	66	47s.
Silk Dressers	449	715	32s.
Society of Tool Makers and Machinists ...	340	398	26s.
Enginemen's Protection Association ...	359	357	30s. 6d.
Trimming Weavers...	200	195	17s. to 22s.
Wheelwrights and Blacksmiths	822	745	30s.
Society of Locomotive Engineers	2,067	3,964	—
Scottish Tailors	2,853	3,421	28s. 6d.
Society of Journeymen Felt Hatters ...	1,253	1,297	26s. to 35s.
County Colliery Enginemen's	1,151	1,387	26s.
Amalgamated Society of Tailors	14,305	18,604	—
Barge Builders	174	238	40s.
French Polishers	112	107	32s. 8d.
Signalmen's United	27	13	24s.
Durham Miners	30,000	43,578	—
Operative Ship Painters	46	34	30s.
United Brush Makers	1,486	5,293	Piecework.
Woolstaplers	64	208	—

I may further add that Mr. C. Booth, in his lately issued book *Life and Labour in the East End of London*, says that out of its population of 908,958, fully 577,000, or 65 per cent., "are classes in comfort and rising to affluence." The East of London is generally referred to as one of the poorest localities, yet 65 per cent. are classes in comfort.

The average loss of wages in this country each year has been put down at £20,000,000 for sickness alone. "National health is national wealth," B. W. Richardson says. Would a properly organised and worked Medical Service not lessen this waste? Each person in this kingdom spends, on an average, £3 6s. 8d. per annum, or 1s. 4d. per week, on alcohol. I think the great majority are able to pay their doctors, as well as their clothes, water, grocery, or bread bill.—I am, etc.,

Liverpool. ROBERT R. RENTOUL, M.D.

THE PROPOSED RESOLUTIONS *RE* THE REFORM OF THE *OUT*-PATIENT DEPARTMENTS OF HOSPITALS.

SIR,—The undersigned generally approve of the resolutions. If there is one thing more than another which gladdens one's heart, it is the fact that so many practitioners holding hospital appointments are fully determined to bring about hospital reform. It is to be hoped that the great body of our 13,000 members will also show their deep interest in this vital question, and will come to Leeds and take part in the discussion which is set down for Tuesday, August 13th, at 11.30 A.M.—I am, etc., R. RENTOUL.

Liverpool.

Bampton, A. H., Leeds
Stewart, Donald. Nottingham
Britton. Thos., Harrogate
Haley, Wm., Wakefield
Rice, Richardson, Stoke, Coventry
Farrar, J., Gainsboro'
Smith. John, Kirkcaldy
Hillier, J. B., Leeds
Sieveking, Sir E. H., London
Davy, John, Halifax
Erskine, James, Glasgow
Bridgwater, Thos., Harrow
Richardson, B. W., London
Lawton, H., Poole
Dorset and Hants Branch, British Medical Association.
Jeaffreson, C. B., London
Braithwaite, James, Leeds
Scott, Chas., Twickenham
Llewellyn, E., Ramsey, Hunts
Byrne, J., Preston
Jones, Orlando, Harrogate
Woods, Hugh, London
Masson Herbert, Coventry
Illingworth, C. R., Clayton-le-Moors
Shann. H. C., York
Shadwell, St. Clair, Walthamstow
Harris, James, Liverpool
Barnes, Robert, London
Moore, W., Brighton
Miall, Philip, Bradford
Shanks, Alex., Airdrie
Greenwood, Wm., London
Alderson, F., London
Lee, Robt., London
Underhill, F. T., Tipton
Kelly, Wm., Taunton
Gordon, John, Aberdeen
Ackland, Sir Wm., Oxford
Lush, Vaudrey, Weymouth
Allfrey, C. H., Southsea
Bratton, Allen, Shrewsbury
Faulkner, John, Stretford
Daly, Shelton, Manchester
Holdsworth. Saml., Wakefield
Robson, A. W., Leeds
Greene, G., Ferns
Farmer, Cottenham, London
Strange, Wm., Worcester
Beech, D., Manchester
Hall, Fredk., Leeds
Alderson, J. H., London
Harrison, Reginald, Liverpool
Henty. George, London
Page. H. W., London
Wood, W. H., Boston, Lincolnshire
Gay, J., Putney
Tait, Lawson, Birmingham
Eastes, G., London
Townsend, F., London
Yates, M., Godalming
Davies, Maurice, London
Westland, Albert, London
Galton, John, Norwood
Duncan, Matthews, London
Wills, W. Bootle
Wynne, Chas., London
Moore, H., Stourport
Simons, Fredk., London
Tytler, Peter, Cheetham
Sibley, W., London
Irving, John, London
Falby, Chas., Lowestoft
Erwin, S., Manchester
Webster, T., Bristol
Rigby, John, Preston
Greenwood, Major, London
Duke, Alex., Dublin
Belcher, J., Gloucester
Davis, P. M., Exeter
Dill, H., Belfast
Crosby, Thomas, London
Dolan. Th., Lytham
Wheelhouse, C. G., Leeds
May, E. Hooper, Tottenham
Webb, W., Wirksworth
Squire, W., London
Loame, S., London
Mouncey, Chas., Earlstown
Ballard, E., London
Crowe, G. W., Worcester
Barr, J., Liverpool
Marshall, J., London
Waters, Ed., Chester
Watt, — York
Farrar, C., London
Carter, T. E., Stamford
Gould, A., London
Davy, W. R., London
Quain, R., London
Henry, J. P., St. Mary Cray
Hogg. Jabez, London
Pidcock, —, London
Saunders, F. A., Denburn
Jones, A., Denburn
Strawbenzee, —, Denburn
Grant, F., London
Hewitt, Graily, London
Collins, G. W., London
Gairdner, W., Glasgow
Cowell, S., London
Philpott, —, London

Dr. Hugh Woods sends us the following:

"We, the undersigned, medical men engaged in general practice, emphatically protest against the system of hospital management at present in vogue, and believe that the whole question is one which calls for a full and impartial inquiry.

"We maintain that the existing system acts injuriously to the best interests of the medical profession:—

"1. By encouraging the abuse of charity, especially in the out-patient departments. Such abuse we believe to be so great as almost to amount to a national calamity, inasmuch as habits of unthrift are encouraged, and a direct incentive is held out to improvidence and fraud.

"2. By encouraging the formation of low-class dispensaries.

"3. By discouraging local practitioners, inasmuch as the latter, by being brought into unfair competition with the charities, are practically denied the professional benefits which might jointly accrue were they permitted to become members of the staff of the various local hospitals.

"We also maintain that, however philanthropic may have been the motives which led to the foundation of pay hospitals and pay wards, the result of their formation has been that many patients have been taken out of our hands without any necessity, and without any corresponding advantage accruing to the patients themselves.

"In the event of a Commission being appointed to inquire into the subject, as we hope will be the case, we demand:—

"1. That the *bonâ fide* general practitioner should be fully represented on such Commission. We deny that any consultant, or any hospital physician or surgeon, however eminent, could so represent us. 2. That the Commission, if appointed, should inquire thoroughly into these and kindred grievances, by such means as they may think fit; among others, by the examination of *bonâ fide* general practitioners.

"We accept in principle Dr. Rentoul's scheme of Medical Aid, as published in the BRITISH MEDICAL JOURNAL of June 22nd, 1889, subject, of course, to such alterations in details as a fuller discussion of the subject may show to be advisable.

R. R. Rentoul, M.D., M.R.C.S., Liverpool
Edwin Chill, M.D., C.M., 95, Tollington Park, N.
Llewellyn Thelwall, L.R.C.P.E., 145, Seven Sisters Road, N.
Alexr. Skipton, L.R.C.S.I., and L.R.C.P.E., London, N.
James P. Fennell, L.K.Q.C.P.I., L.R.C.S.I., 18, Hungerford Road, London, N.
Frank Quick, M.R.C.S.Eng., 34, Westbourne Road, N.
F. R. Hannah, L.R C.P.E., 66, Jackson Road, Holloway, N.
J. Fredk. Silk, W., M.D., 9, Pemberton Road, Upper Holloway N.
J. Wycherley Donovan, L.K.Q.C.P., 135, Hornsey Road. N.
C. Jeffrey Morgan, M.R.C.S., L.R.C.P., 546, Caledonian Road, N.
W. A. Malcolm, M.B., C.M., 421, Holloway Road, N.
Wm. Edw. Cree, M.R.C.S., L.R.C.P., 1, Pemberton Villas
Wm. Jno. Qualtrough, L.R.C.P., 2, St. John's Road, Upper Holloway
Edwd. G. Wake, M.D., M.R.C.S., Dartmouth Park Hill, N.W.
H. Dane, M.R.C S., L.R.C.P.Lond., 86, Finchley Road, N.W.
Hugh Woods, M.D., B.S., 11, Archway Road, Highgate
Edward Calthrop, M.R.C.S., L.R.C.P., The Cheal, Hornsey Rise
Edwd. Reynolds, R. B., M.R.C.S., Highcroft, Shepherd's Hill, Highgate
Chas. P. Langford, M.R.C.S., Sunnyside, Hornsey Lane, N.
F. Orton, M.D., Crouch End
Alexr. Cowley, M.B., 62, Cromwell Avenue
S. T. Salter, M.B.Cantab., 20, Crouch Hill Road, Crouch End, N.
J. W. Murray, 67, Ferme Park Road
Thomas Wingrave, M.R.C.S.Eng., 15, Ridge Road, Stroud Green, N.
R. G. Bailey. L.R.C.P.Lond., 117, Mount View Road, N.
Hugh Webb, L.K.Q.C.P., 24, Mount View Road, N.
Robt. Jas. Hutton, L.R.C.P., "Carshalton," Stapleton Hall Road, N.
Frederick Reynolds, 76, Stapleton Hall Road, N.
James MacMunn, L.R.C.P.L., 56, Cecile Park, Crouch End, N.
Aug. C. Dove, M.D., B.S.. Parkside, Crescent Road, Crouch End
George Willis, L.S.A., Lake House, Hornsey Rise
Francis Hyde Forshall, M.R.C.P. Edin., M.R.C.S., Southwood Lane, Highgate
George Herbert Rutter, L.R.C.P., L.R.C.S., L.S A., 15, Hazelville Road, Hornsey Lane
Francis Ewens, M.D., Tyndale House, The Bank, Highgate.
Arthur Greenwood, L.R.C.P.Lond., 3, Hornsey Rise Gardens, N.
Benjamin, Hosford, M.A., M.D., 89, St. John's Road, N.
J. F. Harris, M.D., 89, St. John's Road, N.
R. Robinson, M.R.C.S., L.S.A., 159, Stroud Green Road, N.
T. A. Cambridge, M.R.C.S.E., 124, Stroud Green Road, N.
M. Ryder Draper, L.R.C.S., L.R.C.P.E., 124, Stroud Green Road. N.
Ernest Noad, L.R.C.P.Edin., M.R.C.S. Eng., 47, Stroud Green Road, N.
Thos. Buchanan Dunn, M.B., M.C., 54, Stroud Green Road, N.
H. A. Wickers, L.R.C.P.Lond., etc., 59, Upper Tollington Park, N.
J. Brighouse, 93, Tollington Park, N.
J. Pratt Brooks, M.R.C.S., 82, Tollington Park, N.
R. P. Fouracre, M.R.C.S., L.S.A., 20, Tollington Park, N.
Richard F. Owen, M.K.Q.C.P.I., Fairbridge House, Upper Holloway, N.
Thos. Marsden Edwards, M.D.Lond., Fairmead House, Upper Holloway, N.
John Mulvany, 381, Holloway Road, N.
William Case (per partner, F. Quick), M.R.C.S., L.S.A., 34, Westbourne Road, N.
Frank Godfrey, L.R.C.P., Glendower House, Compton Terrace, N,
George Wight, M.B.Edin., 428, Liverpool Road, N.

SIR,—The annual meeting of the British Medical Association is at hand, and matters of the highest importance are to be discussed. When men like Dr. Rentoul, and other champions of a noble cause, sacrifice so much as they do in the interests of the public and the medical profession, is it too much to ask their fellow members to go up to Leeds and vote?

In order that our efforts may be successful in effecting lasting good, and removing long-established evils, we must sink our minor differences. More than 90 per cent. of general practitioners (I speak from my own experience in North London), agree with us cordially in all essential particulars. The remaining 10 per cent. are not hostile, and would join us if we gain a little success. Each of us will no doubt have views of his own as to the right course to be pursued, but, while we are going in the right direction, we must not dispute over the particular path to be taken. Some will think that Dr. Rentoul's resolutions go too far; some will think that they do not go far enough. Most of us will think them right in the main; so by all means let us support them.

Histories of past failures ought to make us more sure of success

now; because we can guard against the dangers which these failures have revealed. Far the greatest danger arises from the apathy of friends. It is not enough to wish us success, though they do so from their hearts; they must lend a hand to gain it. Again, one victory, however splendid, will be of no avail without the prolonged drudgery of discussing and arranging difficult details.

One reform, wisely and energetically carried out, will open the way for many more; but if the first attempt at reform is blasted at its commencement by apathy and half-heartedness, or ruined in its later stages by selfish disputes and incapacity, then a heavy blow will have been dealt to the cause of reform.

Dr. Rentoul's exertions and those of many other workers in the same field have made it impossible for anyone to deny the abuses complained of. To those who laugh at our "resolutions" and "protests,' let me say that these are merely the preliminaries in the contest. This is not a mere question of conflicting interests between different branches of the profession; it is a question whether the medical profession is to continue a downward course. Even though we should at last fail to prevent this threatened degradation, let us at least know that we have tried to prevent it. Degradation of the medical profession endangers seriously the health and the lives of the public. It is not our interests we are seeking in this contest; we are working for the public good.—I am, etc.,

HUGH WOODS.

Highgate, N.

SIR,—Among the many welcome letters on hospital abuse appearing in your recent issues I fail to find one from this side of the channel. Dublin is notoriously "over-hospitalled," and such abuse is rampant.

In addition, the hospital physician and the collegiate dignitary compete with the general practitioner in every path of practice.

I trust the present agitation will bear good fruit.—I am, etc.,

A DUBLIN M.D.

SALFORD INFECTIOUS HOSPITAL.

THE Corporation of Salford have been officially informed that the Local Government Board have given their sanction to the borrowing of £13,100 for the purchase of land at Ladywell, for the erection thereon of an infectious diseases hospital.

UNIVERSITY INTELLIGENCE.

CAMBRIDGE.

CAVENDISH COLLEGE.—Open Scholarships and Exhibitions: W. Abbit, Beaumaris Grammar School, has been recommended for Clothworkers' Company's Scholarship; E Bland, Devon County School, and J. C. Bourne, Merchant Taylors' School, have been elected to scholarships. Exhibitions have been awarded to P. Umney, Merchant Taylors' School, and A. Barraclough, North Eastern County School.

VICTORIA.

FACULTY OF MEDICINE.—The following are the results of recent examinations:

Preliminary Examination in Science—First Division: H. Ainsworth, Owens College; W. M. Brown, University College; E. Harrison, Owens College; A. W. Lilley, Owens College; A. M'Dougall, Owens College; E. E. D. Minshall, University College; H. T. Nixon, University College; D. Seaton, Yorkshire College; P. Thompson, Owens College. Second Division: R. E. Bickerton, University College; J. C. Buckley, Owens College; W. J. S. Bythell, Owens College; D. H. Cheetham, Owens College; E. L. Compston, Owens College; E. A. Goulden, Owens College; W. D. Hayward, University College; H. C. Heathcote, Owens College; S. H. House, University College; J. Howe, Owens College; M. B. James, Owens College; A. Leigh, Owens College; E. H. L. Lindon, University College; F. S. Mathwin, Owens College; T. U. Mercer, University College; A. H. Quinby, University College; M. R. Rhodes, Owens College; H. A. Robinson, University College; L. E. Scanlon, Owens College; B. Stahlknecht, University College; F. A. Storr, Yorkshire College; C. F. Thompson, Yorkshire College; J. D. Whitaker, Owens College.

Intermediate M.B. and B.Ch. Examination—First Division: J. W. Crawshaw, Owens College; J. H. Taylor, Owens College. Second Division: W. E. Barker, Owens College; J. C. Bawden, University College; A. Bicknell, University College; S. R. Knight, University College; C. H. G. Ramsbottom, Owens College; H. K. Ramsden, Owens College; G. Stowell, Owens College; W. H. Waddington, Owens College.

Distinguished in Anatomy:—J. W. Crawshaw, Owens College.

Final M.B. and B.Ch. Examination (Part I.):—A. E. Brindley, Owens College; T. F. Daniels, Owens College; J. Gould, University College; W. Griffith, Owens College; J. M. H. Martin, University College; A. H. Poole, Owens College; F. Robinson, Owens College; J. Teare, University College; L. Youatt, Owens College.

Final M.B. and B.Ch. Examination (Part II.)—First Division: A. E. Brindley, Owens College; T. N. Kelynack, Owens College; R. E. Lord, Owens College; J. S. M'Gowan, Owens College. Second Division: R. Alcock, Owens College; A. Ashton, Owens College; J. Dunlop, Owens College; C. F. Marshall, Owens College; E. Molyneux, University College; T. Porter, Owens College; J. Simcock, Owens College; F. W. Stansfield, Owens College; J. W. Unsworth, Owens College; A. B. Watson, Owens College.

Distinguished in Medicine, Surgery, Forensic Medicine and Toxicology, and Morbid Anatomy:—T. N. Kelynack, Owens College.

Distinguished in Obstetrics:—A. E. Brindley, Owens College.

Diplomas in Sanitary Science:—W. B. Barclay, J. Brown, A. Chadwick, W. Dearden, W. Dick, F. W. Jordan, and W. Sellars, jun.

EDINBURGH.

MEDICAL GRADUATION.—The annual graduation ceremonial, in connection more especially with the department of medicine, took place at Edinburgh on August 1st. These meetings are still held in the United Presbyterian Synod Hall, but it is anticipated that these "loan" exhibitions will shortly be replaced with something more academic, when the M'Ewan Hall, now rapidly progressing, is completed. In the absence of the Chancellor of the University, Principal Sir William Muir, Vice-Chancellor, presided at the function. The degree of Doctor of Medicine was conferred on fifty-nine Bachelors of Medicine. This number shows an increase of eleven over last year's graduation. The following received the degree with highest academic honours, obtaining a gold medal for the thesis: Dr. Herbert H. Ashdown (A Study of the Functions of the Kidney: an Experimental Research), Dr. J. W. Ballantyne (Normal and Pathological Anatomy of the Newborn Infant, Studied in Frozen Sections and Applied to Midwifery), Dr. A. T. M. Bentley (Beri-beri: its Etiology, Symptoms, Pathology, and Treatment), Dr. K. M. Douglas (On Hernia), Dr. T. A. Helme, (Anatomy and Physiology of the Uterus, and Physiological Action of Drugs upon it), Dr. H. A. Thomson (Tuberculosis of Bones and Joints), Dr. T. Tillie (Contributions to the Pharmacology of Curare, Curarin, and Methyl Strychnium), and Dr. H. F. Waterhouse (An Experimental Inquiry into the Influence of Certain Factors in the Causation of Peritonitis). The degrees of M.B. and C.M. were conferred on 164 gentlemen. This is a less number by twenty-eight than for the corresponding graduation last year. Of these ten graduated with First Class Honours, and nine with Second Class Honours. The following Prizes and Scholarships were awarded: the Ettles Scholarship to E. G. Pilgrim, M.B., C.M.; the Beaney Prize to F. G. Pilgrim, M.B., C.M.; the Syme Surgical Fellowship to A. G. Edington, M.B., C.M.; the Goodsir Memorial Prize to H. F. Waterhouse, M.D.; the Murchison Scholarship in Clinical Medicine to A. T. Whiting. M.B., C.M.; the Buchanan Scholarship in Gynæcology to G. Williamson, M.B., C.M.; the James Scott Scholarship in Midwifery to T. Lachie, M.B., C.M.; the Gunning Victoria Jubilee Edward Forbes Prize in Zoology to P. T. White, M.B., C.M.; the Gunning Christison Prize in Materia Medica to J. Tillie, M.D.; the Gunning John Thompson Prize to R. Muir, M.B.; the Gunning Allison Prize in Public Health and Medical Jurisprudence to J. A. Blair, M.B., C.M.; the Gunning Simpson Prize to J. W. Ballantyne M.D.; the Dobbie-Smith Gold Medal in Botany to G. Mann; and the Cameron Prize in Therapeutics to M. Pasteur, LL.D. (Edinburgh), Paris, in recognition of the high importance and great value to practical therapeutics of the treatment of hydrophobia discovered by him. Professor Crum Brown was "promoter" for the year, and addressed the graduates shortly on their prospective duties and responsibilities.

ABERDEEN.

GRADUATION IN MEDICINE, 1889.—The following candidates received degrees in Medicine and Surgery:

The Degree of M.D.:—J. W. Beattie, M.B., C.M., Sunderland; J. Bryce, M.B., C.M., Herts; J. C. G. Carmichael, M.B., C.M., Surgeon-Major, Bengal; F. L. Collie, M.B., C.M., Aberdeen; H. C Gordon, M.B., C.M., Army Medical Service; J. M. Lamb, M.A., M.B., C.M., North Borneo; J. Masson, M.B., C.M., Lancashire; J. G. Middleton, M.B., C.M., Nice; E. Poonen, M.B., C.M., B.A.(Madras), India; C. L. Swaine, M.B., C.M., Army Medical Service; R. G. Wills, M.B., C.M., Bath.

The Degree of M.B. and C.M.:—C. Aymer, Laurencekirk; G. Black, Auchmill; R. S. Black, M.A., Inverness; F. W. Counter, Australia; E. T. Cox, Alton, Hampshire; F. B. Croucher, London; A. R. Cushny, M.A., Speymouth; W. C. Dale, M.A., Aberdeen; G. Dean, M.A., Aberdeen; C. F. Fearnside, M.A., Aberdeen; H. E. Fernandez, Herts; F. C. F. Forbes, India; J. Fraser, Beauly; A. P. F. Gammack, Aberdeen; D. W. Geddie, M.A., Banff; J. A. R. Glennie, Aberdeen; W. Goodwin, St. Albans; J. Grant, Tomintoul; J. E. D. Jones, Cawnpore; F. Kelly, Aberdeen; J. C. M. Kinnear, Montrose; G. A. Lang, Inverness; A. Little, Kinneff; F. W. Ludlow, Germany; A. M'Gillivray, Inverness;

W. S. M'Gowan, M.A., Aberlour; T. M'Hardie, Morayshire; J. M'Rae, M.A., Mintlaw; D. J. Macdonald, Lewis; A. W. Mackay, M.A., Aberdeen; N. Mackinnon, Skye; A. R. Mackinnon, Aberdeen; N. M. MacFarlane, Stanley; D. MacRitchie, Inverness; C. F. G. Mann, Grantown; W. E. Munro, Dornoch; F. Noble, Aberdeen; A. A. Philip, Aberdeen; J. P. Philip, New Deer; J. Reid, Rothiemay; D. Reid, M.A., Aberdeen; W. R. Reith, M.A., Aberdeen; D. Rennet, Aberdeen; A. Rose, Nairn; H. Ross, Ross-shire; A. M. de Saram, Ceylon; L. M. Scott, M.A., Aberdeen; H. C. Seneviratne, L.M.S.Madras University, Ceylon; W. C. Sheard, Yorkshire; G. J. Silver, Crieff; D. M. Smith, M.A., Aberdeen; J. F. Souter, Orange, N.S.W.; E. Stevenson, Birkenhead; W. G. Sutherland, Newcastle-on-Tyne; W. C. Taylor, Aberdeen; W. Thomson, Montrose; R. Thomson, Nairn; J. M. Trail, Aberdeen; J. Troup, Aberdeen; J. Valentine, Montrose; J. L. Watt, M.A., Stonehaven.

A. G. Johnston, Aberdeen, has passed the examinations for the degree of M.B. and C.M., but will not graduate until he has attained the necessary age.

Graduation Honours.—The following gentlemen graduated with honours:

Highest Academical Honours:—A. R. Cushny, M.A.; A. Rose.

Honourable Distinction:—G. Dean, M.A.; D. W. Geddie, M.A.; A. M'Gillivray.

The John Murray Medal and Scholarship (awarded to the most distinguished graduate of the year):—A. R. Cushny, M.A.; A. Rose, *proxime accessit*.

The George Thompson Fellowship:—A. R. Cushny, M.A.; W. L. Mackenzie, M.A., *proxime accessit*.

The Diploma in Public Health:—R. S. Black, M.A., M.B., C.M.; A. L. Duke, M.B., C.M.; J. W. Mason, M.B., C.M.; D. J. M'Donald, M.B., C.M.; R. B. T. Stephenson, M.B., C.M.; E. W. Webb, M.D., Surgeon-Major.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns, including London, which have an estimated population of 9,555,406 persons, 5,471 births and 3,850 deaths were registered during the week ending Saturday, July 27th. The annual rate of mortality in these towns, which had been 21.5 and 21.0 per 1,000 in the two preceding weeks, was again 21.0 during the week under notice. The rates in the several towns ranged from 10.7 in Huddersfield, 12.2 in Derby, 14.6 in Brighton, and 16.4 in Bristol, to 26.3 in Liverpool, 27.2 in Sunderland, 28.0 in Plymouth, and 48.6 in Preston. In the twenty-seven provincial towns the mean death-rate was 23.0 per 1,000, and exceeded by 4.4 the rate recorded in London, which was only 18.6 per 1,000. The 3,850 deaths registered during the week under notice in the twenty-eight towns included 682 which were referred to diarrhœa, 91 to measles, 91 to whooping-cough, 67 to diphtheria, 57 to scarlet fever, 31 to "fever" (principally enteric), and not one to small-pox; in all, 999 deaths resulted from these principal zymotic diseases, against numbers increasing from 399 to 1,018 in the five preceding weeks. These 999 deaths were equal to an annual rate of 5.5 per 1,000; in London the zymotic death-rate was 4.4, while it averaged 6.3 per 1,000 in the twenty-seven provincial towns, and ranged from 1.3 in Wolverhampton, 1.7 in Huddersfield, 2.1 in Brighton, and 2.6 in Halifax, to 8.9 in Leeds, 9.4 in Salford, 10.0 in Plymouth, and 22.0 in Preston. Measles caused the largest proportional fatality in Halifax, Hull, Leeds, and Preston; scarlet fever in Liverpool, Oldham, Huddersfield, Blackburn, and Plymouth; whooping-cough in Bradford and Birkenhead; "fever" in Preston; and diarrhœa in Birmingham, Sunderland, Derby, Leeds, Leicester, and Preston. Of the 67 deaths from diphtheria recorded during the week under notice in the twenty-eight towns, 44 occurred in London, 7 in Bradford, 5 in Salford, 3 in Plymouth, and 2 in Liverpool. No fatal case of small-pox was registered during the week, either in London or in any of the twenty-seven provincial towns; and no small-pox patients were under treatment in any of the Metropolitan Asylums Hospitals on Saturday, July 27th. These hospitals contained, however, 629 scarlet fever patients on the same date, against numbers increasing from 538 to 591 in the four preceding weeks; 108 cases were admitted during the week, against numbers rising from 30 to 85 in the six previous weeks. The death-rate from diseases of the respiratory organs in London during the week under notice was equal to 1.9 per 1,000, and was below the average.

In twenty-eight of the largest English towns, including London, which have an estimated population of 9,555,406 persons, 5,770 births and 3,763 deaths were registered during the week ending Saturday, August 3rd. The annual rate of mortality in these towns, which had been 21.0 per 1,000 in each of the two preceding weeks, declined to 20.5 during the week under notice. The rates in the several towns ranged from 14.1 in Brighton, 14.8 in Birkenhead, and 15.7 in Bristol and in Huddersfield to 25.9 in Newcastle-upon-Tyne, 27.0 in Manchester, 28.8 in Sunderland, and 42.6 in Preston. In the twenty-seven provincial towns the mean death-rate was 22.4 per 1,000, and exceeded by 4.0 the rate recorded in London, which was 18.4 per 1,000. The 3,763 deaths registered in the twenty-eight towns during the week under notice included 578 which were referred to diarrhœa, 79 to measles, 69 to whooping-cough, 65 to diphtheria, 59 to scarlet fever, 41 to "fever" (principally enteric), and not one to small-pox; in all, 891 deaths resulted from these principal zymotic diseases, against 1,018 and 998 in the two preceding weeks. These 891 deaths were equal to an annual rate of 4.9 per 1,000; in London the zymotic death-rate was 3.7, while it averaged 5.8 per 1,000 in the twenty-seven provincial towns, and ranged from 1.9 in Wolverhampton, 2.6 in Derby, and 2.8 in Huddersfield to 7.6 in Salford, 8.9 in Sunderland, 10.0 Plymouth, and 19.5 in Preston. Measles caused the highest proportional fatality in Plymouth, Newcastle-upon-Tyne, Leeds, Halifax, and Preston; scarlet fever in Huddersfield, Bolton, and Plymouth; whooping-cough in Portsmouth and Sunderland; "fever" in Preston; and diarrhœa in Salford, Sunderland, Birmingham, Leicester, and Preston. Of the 69 deaths from diphtheria recorded during the week under notice in the twenty-eight towns, 45 occurred in London, 5 in Manchester, 3 in Salford, and 3 in Sunderland. No fatal case of small-pox was registered either in London or in any of the twenty-seven provincial towns, and no small-pox patients were under treatment in any of the Metropolitan Asylums Hospitals on Saturday, August 3rd. These hospitals contained, however, 695 scarlet fever patients on the same date, against numbers increasing from 538 to 629 during the five preceding weeks; 120 cases were admitted during the week, against numbers rising from 30 to 108 in the seven previous weeks. The death-rate from diseases of the respiratory organs in London was equal to 2.2 per 1,000, and was slightly below the average.

HEALTH OF SCOTCH TOWNS.

During the week ending Saturday, July 27th, 763 births and 459 deaths were registered in the eight principal Scotch towns. The annual rate of mortality, which had been 18.6 and 19.6 per 1,000 in the two preceding weeks, declined again to 17.9 during the week under notice, and was 3.1 per 1,000 below the mean rate during the same period in the twenty-eight large English towns. Among these Scotch towns the lowest rates were recorded in Dundee and Edinburgh, and the highest in Glasgow and Paisley. The 459 deaths in these towns during the week under notice included 95 which were referred to the principal zymotic diseases, equal to an annual rate of 3.7 per 1,000, which was 1.8 below the mean zymotic death-rate during the same period in the large English towns. The highest zymotic death-rates were recorded in Leith and Paisley. The 205 deaths in Glasgow during the week included 17 from diarrhœa, 13 from whooping-cough, 4 from measles, 4 from diphtheria, 3 from "fever," and 1 from scarlet fever. Seven fatal cases of measles occurred in Leith, and 6 in Aberdeen. The death-rate from diseases of the respiratory organs in these towns was equal to 2.2 per 1,000, against 1.9 in London.

HEALTH OF IRISH TOWNS.

In the sixteen principal town districts of Ireland the deaths registered during the week ending Saturday, July 27th, were equal to an annual rate of 22.3 per 1,000. The lowest rates were recorded in Sligo and Londonderry, and the highest in Lurgan and Wexford. The death-rate from the principal zymotic diseases averaged 3.6 per 1,000. The 168 deaths registered during the week in Dublin were equal to an annual rate of 24.8 per 1,000 (against 16.3 and 22.8 in the two preceding weeks), the rate for the same period being only 18.6 in London and 15.0 in Edinburgh. These 168 deaths included 23 which resulted from the principal zymotic diseases (equal to an annual rate of 3.4 per 1,000), of which 12 were referred to diarrhœa, 4 to "fever," 4 to measles, and 3 to whooping-cough.

OBITUARY.

Surgeon GEORGE SCOTT TATE, M.D., A.M.S.

We regret to announce the death of Surgeon George Scott Tate, M.D., A.M.S., of Ballynote House, Downpatrick, Ireland, on July 8th, from enteric fever. Dr. Tate, after passing through the usual course at the Netley Medical School, received his commission as surgeon in January, 1886; the following year he arrived in India, and was stationed almost throughout his whole service in the Sirhind District, and latterly at Umballa, the headquarters. Here he had been selected to officiate as staff-surgeon, and his duties through the hot season were of an arduous and responsible character, involving much exposure to climate. On June 17th, he left Umballa on eight days' leave to visit a friend at Kausauli, the convalescent hill depôt of the district. On the day after his arrival, there was evidence that he was suffering from enteric fever, and of so severe a type that it was deemed advisable to remove him to Lady Roberts's Hospital for Officers, where he had the advantage of trained and experienced nursing, and was placed under the most favourable circumstances. He appeared to be doing fairly well until June 30th, but he died on July 8th. His death was announced to the Sirhind Command by the General Officer commanding the Sirhind District in a special district order, which, after an expression of deep regret at Surgeon Tate's early death, concluded with the following words: "The deceased was a zealous officer, and by his unwearied care of, and attention to, the sick had made himself deservedly popular with all ranks. By his death, Her Majesty's service has suffered the loss of a most devoted and promising medical officer." Expressions of regret have been received from the Surgeon-General Her Majesty's Forces in India, and from numerous other officers.

The funeral took place on July 9th, and was attended by all the officers of the garrison as well as by many of the soldiers and officers of the Army Medical Staff from the hill stations of Subathu, Dughoai, and Solon. As a mark of respect to his memory, all officers of the Army Medical Staff in the Sirhind District were requested to wear mourning for one month. Referring to the sad fate which has befallen this young officer at the beginning of a bright and promising career, the correspondent, to whom we are indebted for the particulars already given, speaks of his upright and honourable character, his sterling worth, and kindly disposition, which caused him to be beloved by both officers and soldiers, and by all who knew him; and adds; "He was a good type of what a medical officer should be. By his death the Army Medical Staff has suffered a great loss."

MEDICAL NEWS.

HOSPITAL SATURDAY IN BELFAST.—Saturday, August 3rd, was the day appointed for the annual street collection in Belfast on behalf of the Royal Hospital. The amount realised was £300, which includes the proceeds of an amateur performance at the Theatre Royal in aid of the fund. While this sum is hardly commensurate with the size and wealth of such a city as Belfast, it is satisfactory to note that it is a considerable increase upon the amounts realised in the two previous years.

DIET IN CASES OF FOREIGN BODY IN THE ALIMENTARY CANAL.—At a recent meeting of the Société Vaudoise de Médecine, Dr. Roux, of Lausanne, communicated the case of a woman who, having undergone Schoenborn's plastic operation on the soft palate (destroyed by syphilis), swallowed a curved needle fixed in the retropharyngeal flap. She was treated by feeding with potatoes alone, in large quantities, with the result that the foreign body was discharged with the fæces on the third day, without having caused any unpleasant symptoms from the first to last.

FATAL CASE OF FLOATING KIDNEY.—Under this heading appeared a hospital report in the *New Orleans Medical and Surgical Journal*, for July. As the treatment of floating kidney, and the alleged dangers of that abnormal condition are the subjects of much controversy, this case deserves both notice and comment. Dr. J. T. B. Berry had under his care a woman, aged 42, of "splendid physique." Her health had failed since her last confinement, two years before she came under his observation. She suffered from pain and attacks of indigestion. On careful examination, repeated a second time, Dr. Berry diagnosed a floating kidney. He did not advocate any operation. Six weeks after he saw the patient she had a sudden and violent attack of peritonitis; the abdomen became very tympanitic, and she died in thirty-six hours. Dr. Berry observes, "Doubtless the peritonitis was caused by the escape of some fluid into the peritoneal cavity, perhaps of pus from an abscess about the kidney, or, possibly, of urine through a perforation of the ureter. From the extreme mobility of the tumour, the ureter must often have been greatly twisted and distended, enough so, perhaps, not to render a rupture or perforation altogether improbable." Dr. Berry did well to publish this undoubtedly interesting case, but it is most unfortunate that no necropsy was recorded in his report.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having passed the necessary examinations, were, at the ordinary meeting of Council on August 1st, admitted Members of the College, namely:

*Aaron, David Jacob, L.R.C.P.Lond., King's College.
Aylward, Walter Charles, L.R.C.P.Lond., 76, Fore Street, Ipswich.
Barber, Sidney Frederick, L.R.C.P.Lond., 5, Hounsfield Road, Sheffield.
Barkworth, Henry Smith, L.R.C.P.Lond., Ryde Vale Road, Balham.
*Basu, Dáman Dás, L.S.A., 32, Trinity Square, S.E.
Beauchamp, Sydney, L.R.C.P.Lond., Caius House, Battersea.
Bennett, Christopher Henry Wentworth, L.R.C.P.Lond., Shrewbridge Hall, Nantwich.
Bennett, Colin Edward Wilmot, L.R.C.P.Lond., 10, Seaton Avenue, Plymouth.
Berryman, Henry Arthur, L.R.C.P.Lond., 29, Fairholme Road, West Kensington.
*Best, William Jenner, L.S.A., 10, Upgate, Louth, Lincolnshire.
Bishop, Reginald Wm. Snowden, L.R.C.P.Lond., 11, Porchester Gardens, W.
Bokenham, Thomas Jessopp, L.R.C.P.Lond., Albury Lodge, Cheshunt.
*Bowlby, George Herbert, L.R.C.P.Lond., 51, Torrington Square, W.C.
Bowman, Henry Moore, L.R.C.P.Lond., Vicarage, New Southgate, N.
Brown, David, L.R.C.P.Lond., 11, Queen Elizabeth's Walk, Stoke Newington.
Carpenter, Edgar Godfrey, L.R.C.P.Lond., 5, The Avenue, Bedford Park, Chiswick.
Challis, Henry Thornton, L.R.C.P.Lond., 65, Amhurst Road, Hackney.
Charles, William Henry, L.R.C.P.Lond., Glebeland, Merthyr Tydvil.
*Clarke, John Kempe, L.R.C.P.Lond., Whitchurch Vicarage, Cardiff.
Clarke, John Tertius, L.R.C.P.Lond., 47, Richmond Ter., Fentiman Rd., S.W.
*Clarke, Thomas Henry, L.S.A., 12, Montague Place, Poplar, E.
Clemson, Thomas Fletcher, L.R.C.P.Lond., Lever House, Bolton-le-Moors, Lancashire.
Colyer, James Frank, L.R.C.P.Lond., Hazeldene, Thurlow Park Road, Dulwich.
*Cooper-Pattin, William Harry, L.R.C.P.Lond., Jesus College, Cambridge.
*Coryn, Herbert Alfred William, L.S.A., 153, Acre Lane, Brixton, S.W.
Creswell, John Edwards, L.R.C.P.Lond., 6, Douro Place, Victoria Road W.
*Crompton, Ernest, L.R.C.P.Lond., St. Leonards, Exeter.
Crook, Arthur, L.R.C.P.Lond., 4, Arbour Square, E.
Crosse, Reginald Edward, L.R.C.P.Lond., St. Giles, Norwich.
Crump, Thomas Greenwood, L.R.C.P.Lond., Winterdyne Villa, Kidderminster.
Curwen, Eliot, L.R.C.P.Lond., Westbridge, Prince Arthur Rd., Hampstead
Dallas, Stuart Alexander Charles, L.R.C.P.Lond., 34, St. James Street, Bedford Row, W.C.
Daniel, Herbert, L.R.C.P.Lond., Wymondham, Norfolk.
*Dawson, Ernest, L.R.C.P.Lond., The Mount, Hampstead, N.W.
De Jersey, Walter Brock, L.R.C.P.Lond., 63, Lambeth Palace Road, S.E.
*Dennison, Tom Stephenson, L.R.C.P.Lond., Melrose Vil., Spring Bank, Hull.
Dodwell, Philip Rashleigh, L.R.C.P.Lond., 136, Stanhope Street, N.W.
Eaves, Wilberforce Vaughan, L.R.C.P.Lond., Shepherd's Hill, Hornsey.
Farington, John, L.R.C.P.Lond., Overton Villa, Manley Road, Alexandra Park, Manchester.
*Farquharson, George Sinclair, L.S.A., 31, Marquess Road, Canonbury, N.
Fazan, Charles Herbert, L.R.C.P.Lond., 60, St. Helen's Gardens, North Kensington, W.
Fitz-Gerald, Edward Desmond, L.R.C.P.Lond., 10, West Ter., Folkestone.
Folker, Herbert Henry, L.R.C.P.Lond., Bedford House, Hanley, Staffs.
Forward, Francis Edward, L.R.C.P.Lond., Forton House, Chard, Somerset.
Foster, Alfred, L.R.C.P.Lond., 13, Delamere Street, W.
Frossard, Emilien Edward, L.R.C.P.Lond., 5, Albyn Road, St. John's, S.E.
*Gilchrist, Alexander William, Middlesex Hospital, W.
Graveley, Ronald Thomas, L.R.C.P.Lond., Cowford, near Horsham, Sussex.
Griffith, John, L.R.C.P.Lond., 5, Leamington Villas, Acton, W.
Habbijam, Ernest Thomas, L.R.C.P.Lond., 259, Uxbridge Road, W.
*Hale, Edward, L.R.C.P.Lond., 11, Greenheys, Liverpool.
Hall, Walter, L.R.C.P.Lond., Gordon Mount, Bevois Hill, Southampton.
Hamilton, Henry, L.R.C.P.Lond., Falkland House, Church End, Finchley.
*Harrison, James Herbert Hugh, L.R.C.P.Lond., University College, W.C.
Haslett, William John, L.R.C.P.Lond., Flower Hill, Donegal, Ireland.
*Heberden, William Stanley, L.R.C.P.Lond., Camden House, Weybridge.
Henniker, John Granville, L.R.C.P.Lond., Albert Gate Mansion, Knightsbridge, S.W.
Hicks, Edward James, L.R.C.P.Lond., 149, Amhurst Road, Hackney Downs, N.E.
Hill, Leonard Erskine, L.R.C.P.Lond., 1, Nassington Road, Hampstead.
Hinds, Thomas Walter, L.R.C.P.Lond., Beechhurst, Goudhurst.
Hitchon, Henry Hardacre Irving, L.R.C.P.Lond., Rochdale Road, Heywood, Lancashire.
*Holman, Henry James, L.R.C.P.Lond., 6, Commerce Place, North Dulwich, S.E.
*Holmes, James Willie, L.R.C.P.Lond., 74, Upperthorpe, Sheffield.
Horden, Herbert Henry, L.R.C.P.Lond., University College, W.C.
Hore, Ernest Wickham, L.R.C.P.Lond., University College, W.C.
*Howse, Arthur Edward, L.S.A., 11, Kingswood Road, Clapham Park.
*Hunt, Arthur Henry William, L.R.C.P.Lond., Westminster Hospital.
Hutchinson, Roger Jackson, L.R.C.P.Lond., 15, Cavendish Square, W.
Jackson, Basil Frederic Forrester, L.R.C.P.Lond., 74. Cornwall Rd., Brixton.
Jacobsen, George Oscar, L.R.C.P.Lond., 18, Gordon Street, W.C.
*Jessop, John William, L.R.C.P.Lond., Crediton, Devonshire.
Johnson, Henry Percival, L.R.C.P.Lond., 154, Sloane Street, S.W.
Johnstone, John Lloyd, L.R.C.P.Lond., Fisher House, Orreh, Wigan.
Jones, Arthur Wentworth, L.R.C.P.Lond., Godington Rectory, Bicester.
Jordan, Henry Martyn, L.R.C.P.Lond., 50A, Trinity Square, S.E.
Kent, Charles Arthur, L.R.C.P.Lond., 42, Craven Hill Grdns., Lancaster Gate.
*Kent, Robert Thomas, L.R.C.P.Lond., 4, Mornington Crescent, N.W.
Kerr, George Douglas, L.R.C.P.Lond., 4, Weeck Road, West Hampstead.
Lambert, Thomas Wilson, L.R.C.P.Lond., 62, Lambeth Palace Road.
Lange, André Philip, L.R.C.P.Lond., 11, Claverton Street, S.W.
Lea, Arnold William Warrington, L.R.C.P.Lond., Bridge House, Sandbach, Cheshire.
Lemon, Edward Henry, L.R.C.P.Lond., 18, Derwent Road, Anerley, S.E.
*Light, Edwin Mellor, L.R.C.P.Lond., 79, Lambeth Palace Road, S.E.
Lloyd, John Wesley, L.R.C.P.Lond., 34, Mount Pleasant, Liverpool.
Lodwidge, William Charrott, L.R.C.P.Lond., Ashley Lodge, Basingstoke.
Long, Edward Charles, L.R.C.P.Lond., Dewetsdorp, Orange Free State.
Mack, Cyril Gordon, L.R.C.P.Lond., 28, St. Paul's Road, Canonbury, N.
*Masser, Edward Charles, L.S.A., St. George's, Oakengates, Salop.
Morgan, Samuel Wolfastan, L.R.C.P.Lond., 13, Cotfield Road, Clifton, Bristol.
Munday, Richard Cleveland, L.R.C.P.Lond., Royal Naval Hospital, Plymouth.
*Murray, George, L.R.C.P.Lond., 65, Green Street, Park Lane.
Oakeshott, Walter Field, L.R.C.P.Lond., Wasdale, Cromwell Avenue, Highgate, N.
Offord, James Albert, L.R.C.P.Lond., St. Giles, Norwich.
Oldham, George Frederick, L.R.C.P.Lond., 104, Norfolk Rd., Dalston, N.E.
*Osborne, Frank, L.S.A., 1, Monmouth Place, Bath.
Osburn, Harold Burgess, L.R.C.P.Lond., 21, Cedars Road, Clapham, S.W.
Parham, Hetman Charles Harris, L.R.C.P.Lond., Maisonette, Mount Ephraim Road, Streatham.
Paton, Edward Percy, L.R.C.P.Lond., 103, Highbury Quadrant, N.
Pearce, Frederick William, L.R.C.P.Lond., 7, Marquess Road, Canonbury.
*Plummer, Richard Henry, M.D, California, 28, Gower Street, W.C.
*Ramsden, Herbert, L.R.C.P.Lond., Dobeross, Saddleworth.
Robinson, Edward Herbert, L.R.C.P.Lond., 223, Cross Lane, Salford, Manchester.
*Russell, William Alfred, L.R.C.P.Lond., 184, Aldersgate Street, E.C.
Saul, Victor Salmon, L.R.C.P.Lond., 1, Maryon Terrace, Hampstead, N.W.
*Scott, Sack Noy, L.R.C.P.Lond., St. Austell, Cornwall.
*Seccombe, Samuel Hubert, L.S.A., 152, Whitechapel Road, E.
Sellers, Arthur Edward, L.R.C.P.Lond., Grove Place, Dalton, Huddersfield.
*Shadwell, Henry Eugene, L.R.C.P.Ed., Lamorna, Oxford Road, Putney.
Sharpin, Archdale Lloyd, L.R.C.P.Lond., St. Paul's Square, Bedford.
Smith, Richard Arthur, L.R.C.P.Lond., 11, Belsize Square, Sth. Hampstead.
Spratly, Ernest Richard Woody, L.R.C.P.Lond., Ticehurst, Egerton Park, Rock Ferry, Cheshire.
Stocken, Leslie Maury, L.R.C.P.Lond., 5, Madeley Road, Ealing.
Stocker, Walter Woodley, L.R.C.P.Lond., 39, St. James's Sq., Notting Hill.
Swallow, Allan James, L.R.C.P.Lond., 313, Clapham Road, S.W.
Swift, Sidney Sampson, L.R.C.P.Lond., 36, Linnet Lane, Liverpool.
Sykes, John Herbert, L.R.C.P.Lond., 5, Walmer Road, Birkdale, Southport.
*Talent, John William, M.B.Edin., District Infirmary, Ashton-under-Lyne.
*Tibbles, William, L.R.C.P.Edin., 245, Radford Road, Nottingham.
*Verano, Louis Lawrence, L.S.A., 56, Torrington Square, W.C.
Vise, Arthur Blithe, L.R.C.P.Lond., Holbeach, Lincolnshire.
*Wakeham, Charles Henry, L.R.C.P.Lond., 186, Amhurst Road, Hackney.

Walker, George, L.R C.P.Lond., 35, Woodvale, Lordship Lane, S.E.
Wallace, Richard Teale, L.R.C.P.Lond., Cravenhurst, Stamford Hill.
*Ware, Ernest Edwin, L.R.C.P.Lond., 83, Lambeth Palace Road, S.E.
Wickham, Gilbert Henry, L.R.C.P.Lond., 59, Lambeth Palace Road, S.E.
Wilkinson, James Howard, L.R.C.P.Lond., Bank House, Dudley, Worcs.
*Winn, Thomas Cromwell, L.S.A., 161, Well Street, South Hackney.
Worboys, Thomas Saunders, L.R.C.P.Lond., 3, Hayter Road, Brixton.
*Yeld, Walter Harry, L.R.C.P.Lond., Churchgate House, Stockport.

* Candidates who have not presented themselves under the regulations of the Examining Board in England.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS, EDINBURGH, AND FACULTY OF PHYSICIANS AND SURGEONS, GLASGOW.—The following are the results of the quarterly examinations for the Triple Qualification, held in Glasgow in July:

First Examination.—Of 62 candidates, the following 38 passed: S. E. Jones, Flintshire; R. Owen, Carnarvonshire; R. Foster, Hartlepool; H. J. Cosgrove, Dumfries; G Crawford, Co. Antrim; A. W. Forrester, Co. Antrim; Mary C. Murdoch, Elgin; Kate E. Pepper London; Susanna R. Beck, Dorking, Surrey; R. T. Davies, Cerrig-y-Druidion; A. R. Huxley, Groombridge, Kent; Rosa E. Bale, Westacott, Barnstaple; J. M. Macmillan, Glenbarr, Argyllshire; Janet M. C. Gray, Bathgate; C. A. Foyl, Liverpool; B. Wiggins, Glengarnock, Ayrshire; J. Devon, Glasgow; J. P. T. Burke, Co. Tipperary; Lucille D. Leslie, Margate; Edith L. Nicholas, Dalston; Emily G. Kent, Rochdale; W. P. Willis, St. Louis, U.S.A.; I. Baldwin, Yorkshire; Janette F. A. Wallace, Inverness-shire; W. Dill, Cork; A. Cumming, Hull; E. Walsh, Limerick; E. R. Pollard, Burnley; R. A. Potterton, Co. Meath; R. Murdoch, Old Cumnock; E. W. F. Kirkman, Dublin; S. J. C. Solomon, Calcutta; W. Bratton, Omagh; D. Riordan, Co. Cork; J. T. Jameson, Ponteland; W. R. Abernethy, Londonderry; D. Donnelly, Kerry; A. P. Stinson, Armagh.

Second Examination.—Of 68 candidates, the following 32 passed: T. B. Kelly, Galway; D. Doherty, Donegal; P. W. M'Gregor, Glasgow; J. Hamilton, Lanark; D. M'Crorie, Kilwinning; Charlotte M. Wheeler, Coppenhall, Crewe; Elizabeth M. Harris, Calne; J. W. Wilkinson, Queen's County; F. Hall, Bury, Lancashire; A. C. Burrows, Waterford; J. C. Sturdy, Ruswarp; T. E. Hughes, Rhyl; H. M. Bayer, Kilmallek, Co. Limerick; Anne E. Wilson, Baltimore, U.S.A.; Harriet M. M. Hughes, London; T. L. Lynch, Co. Kerry; J. Craig, Glasgow; P. T. James, Glamorgan; S. Martyn, Bombay; C. F. Britto, Goa; R. M. Stokes, South Africa; F. Nuttall, Bury, Lancashire; A. J. Clark, Forfarshire; G. Macdonald, Kirkintilloch; A. F. Walker, Liverpool; J. Lane, Co. Cork; T. Davies, B.A., Victoria; J. Hodgson, Calne; R. Smith, South Australia; E. Hartley, Blackpool; A. G. Merson, Banffshire; H. C. Darby, Cradley, Staffordshire.

Final Examination.—Of 49 candidates, the following 24 passed, and were admitted L.R.C.P.E., L.R.C.S.E., and L.F.P. and S.G.: J. Round, Dudley; J. A. Hamilton, Brighton; Edith E. Ward, London; J. P. Granger, Glasgow; A. M. Ford, Glasgow; R. A. Robinson, Co. Derry; R. T. Williams, Glamorganshire; F. G. Phillippo, Jamaica; E. R. P. Watkins, Abergavenny; D. H. Stephens, North Shields; R. Steel, Kilbride, Ayrshire; W. C. Lancaster, Dublin; W. P. Lonergan, Glasgow; F. Castle, London; H. F. W. de Montmorency, Co. Carlow; H. W. Fisher, Liverpool; T. Meiring, Worcester, Cape of Good Hope; P. Campbell, Perthshire; D. Thomson, Newcastle-on-Tyne; F. J. Woods, Banbridge; A. Ross, Edinburgh; J. R. Jones, Festiniog, North Wales; M. R. Callender, South Shields; W. A. P. Ternan, Dundee.

FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.—At the recent sitting of the Board of Examiners for the Fellowship, the following gentleman passed the necessary examination, and he was admitted at the August meeting of Faculty:

D. C. G. Bourns, L.R.C.P.Ed., L.R.C.S.I., Surgeon-Major Army Medical Staff.

At the July sittings of the examiners for the Licence, the following were admitted Licentiates:

L. P. Banks, L.K.Q.C.P.I., Sharnbrook, Bedford; G. J. M'Coull, L.R.C.P. Edin., Ovington-on-Tyne.

At the July sittings of the Board of Examiners in Public Health, the following were admitted Diplomates in Public Health:

W. T. Hodge, M.K.C.S., Esh, Durham; J. S. Rosser, M.B., Morriston, Glamorgan.

At the July sittings of the Dental Board, the following were admitted Licentiates in Dental Surgery:

W. J. Royal, Weymouth; F. P. Nattruss, Nottingham; W. Wallace, M.A., M.B., C.M., Glasgow; A. Berkley, Brighton; J. G. Biggs, Glasgow; W. Geekie, Oxford.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—Fellowship Examination. The following gentlemen, having passed the necessary examination, have been admitted Fellows of the College, namely:

F. Johnson, Surgeon-Major Medical Staff; W. B. Stokes, Surgeon Medical Staff; I. O'Farrell, Surgeon-Major Medical Staff; W. G. H. Henderson, Surgeon-Major Bombay Army; C. B. Gaffney, L.R.C.S.I., L.K.Q.C.P.I.

The following gentleman, having passed the necessary examinations, received the Diploma in Public Health:

J. H. Griffin, M.D., F.R.C.S., L.R.C.P.Lond., etc.

KING AND QUEEN'S COLLEGE OF PHYSICIANS AND ROYAL COLLEGE OF SURGEONS IN IRELAND.—Conjoint Examinations held in July, 1889. The following candidates have passed their respective examinations under the conjoint scheme between the above Royal Colleges:

First Professional Examination:—T. E. Cotter, E. D. Cameron, W. F. Pigott, T. N. Redington, D. B. Taylor, G. W. T. Clarke, J. H. O'Neill, S. P. Callaghan, A. Aiken, E. M. F. Alleyne, W. H. Anderson, Miss M. S. Bell, W. H. G. H. Best, W. Black, W. S. Burke, J. W. Burne, A. C. Callaghan, E. L. Cambie, J. P. Cassidy, J. M. A. Clifford, A. J. S. Cooper, R. A. Cogan, E. F. Le Cowell, T. P. Coyne, M. J. Cuffe, E. T. Cullimore, T. C. Cummins, A. Daly, O. W. Elsner, J. Fagan, H. G. Falkner, R. C. Fisher, A. A. Gibbs, F. M. Golding, E. T. Goode, T. W. Green, R. F. Harding, H Hartigan, T. Hartigan, T. A. Hartigan, R. H. H. Hayden, H. V. Jacob, M. C. D. E. Jordan, W. P. Lappin, N. G. P Le Fanu, F. B Linde, G. F. J. Luther, M. M. Maughan, H. S. Misstear, R. W. Moeran, P. Monaghan, A. J. Moran, W. F. A. M'Cann, R. M. M'Combe, A. C. M'Cutcheon, J. S. M'Givney, J. G. M'Lannahan, M. J. M'Mahon, W. O'Donnell, R. H. Oliver, J. C. Perry, W. G. T. Posnett, J. M. Redington, F. J. Rogers, T. N. Smith, J. E. Tierney, J. Trumbull, F. Warren, R. Waterfield, R. J. C. Whitley, W. A. E. Wills, J. C. Woodside, P. J. Heneghan, M. Brick, J. Maunsell.

Second Professional Examination:—D. A. M'Curdy, H. Tweedy, A. P. Swanson, J. O'Dwyer, T. F. Brophy, W. I. Keane, F. A. Madden, J. P. Sexton, D. H. Foley, W. C. Hamilton, R. R. More Madden, R. W. E. Rose, W. Zimmer, J. M. Mangan, E. W. Lynch, T. E. B. Meyler, S. W. Wilson, T. F. Wyse, P. J. Liston, M. S. Byen, R. P. Connell, E. F. Frozie, F. O. Stoker, P. J. Quintan, J. O'Donoghue, J. J. Cullen, F. P. Smith, J. H. Elmes, W. Hall, F. F. Dillon, H. K. Bentley, W. Russell, P. J. Garland, H. P. Jones, F. W. Condon, J. S. Proctor, A. R. Moore, W. H. Langley, A. W. Tabuteau, M. Ferguson, Temple Smyth, A. K. Dillon Carberry, Miss E. W. Dickson, J. H. Farmer, V. R. de L. Cooke, H. J. M'Cormack, J. Dowling, R. Moynahan, P. Barragry.

Third Professional Examination:—N. G. Cookman, E. Cosgrove, H. M. Cullinan, R. D'Alton, G. W. Dawson, H. W. Devlin, T. G. Dillon, B. G. Elliott, E G. Fenton, P. Flanagan, Miss M. J. Hannan, A. R. R. Hudson, A. H. Jacob, jun., G. W. Joyce, A. E. C. Keeble, S. Keogh, A. J. M'Munn, J. Mackenzie, W. A. Murphy, A. W. S. M'Comiskey, L. T. Whelan, G. F. Woodroffe, R. B. Wright, R. S. Young.

Fourth or Final Qualifying Examination in Medicine, Surgery, and Midwifery:—A. J. Carey, Terenure, Co. Dublin; T. J. Connolly, Drogheda; S. A. D'Arcy, Malahide, Co. Dublin; W. S. Dodd, New Market, Co. Cork; R. H. Dreaper, Castlecomer, Co. Kilkenny; B. F. Falkner, Sandycove, Kingstown; A. A. Ferguson, Clones, Co. Monaghan; S. J. M'W. Gilmore, Castleblayney; E. S. Hawthorne, Dromore, Co. Down; C. O'C. Hodgens, Haddington Road, Dublin; E. Kennedy, Cloughjordan, Co. Tipperary; J. Kearney, Bagnalstown, Co. Carlow; G. M. Laing, Ballina, Co. Mayo; J. R. Meeke, Navan, Co. Meath; S. Moore, Lower Mount Street, Dublin; W. S. M'Bride, Sandymount, Co. Dublin; A. W. S. M'Comiskey, Killough, Co. Down; E. M. H. O'Connor, Thurles, Co. Tipperary; P. J. J. O'Connor; E. P. Pentony, Navan, Co. Meath; D. Power, Rutland Street, Dublin; M. B. Savage, Newry; D. D. Shanahan, Listowel; F. Smith, Royal Infirmary, Phœnix Park; G. J. Smith; R. M. Smyth, Moyne Road, Rathmines; A. E. Sproulle, Londonderry; F. W. S. Stone, Rathmines; R. Stoney, Cloughjordan, Co. Tipperary; G. L. Tuthill, Bruree, Co. Limerick; D. Turner, Monkstown, Co. Dublin.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.—The undermentioned Licentiate in Medicine of the College, having complied with the by-laws relating to Membership, pursuant to the provisions of the Supplemental Charter of Victoria, dated December 12th, 1878, has been duly admitted a Member of the College:

Bartholomew Madigan, Lic. Med., 1878, Kilrush.

MEDICAL VACANCIES.

The following Vacancies are announced:

CANCER HOSPITAL, Fulham Road, S.W.—Two Resident House-Surgeons. Appointment for six months. Honorarium at the rate of £50 per annum, with board and residence. Applications by August 31st to the Secretary.

CHELMSFORD AND MALDON RURAL SANITARY AUTHORITY.—Medical Officer of Health. Salary, £600 per annum. Applications by August 17th to Mr. Duffield, 96, High Street, Chelmsford.

COVENTRY AND WARWICKSHIRE HOSPITAL.—House-Surgeon. Salary, £100 per annum, with board, lodging, and attendance. Applications by August 16th, marked "Application for House-Surgeon," to be sent to the Secretary.

KENDAL DISTRICT.—Medical Officer of Health. Salary, £375 per annum. Applications by August 22nd to Alexander Milne.

LONDON TEMPERANCE HOSPITAL, Hampstead Road, N.W.—Registrar and Chloroformist. Salary, 50 guineas. Applications by August 10th to the Secretary.

NORFOLK AND NORWICH HOSPITAL.—Honorary Dental Surgeon. Applications by August 14th, endorsed "Dental Surgeon," to the Secretary.

NORTH CAMBRIDGESHIRE HOSPITAL, Wisbech.—House Surgeon. Salary, £130 per annum, with house, etc. Application by August 10th to the Honorary Secretary.

NORTH STAFFORDSHIRE INFIRMARY.—Physician or Medical Officer. Applications by August 29th to the Secretary.

QUEEN'S HOSPITAL, Birmingham.—Physician. Annual bonus, £50. Applications by August 20th to the Secretary.

ROYAL MASONIC INSTITUTION FOR BOYS, Wood Green, London, N.—Medical Officer. Salary, £80 per annum. Application by August 17th to the Secretary.

SALISBURY INFIRMARY.—House-Surgeon. Salary, £100 per annum, with board, lodging, and washing. Applications by August 23rd to the Secretary.

VICTORIA INFIRMARY OF GLASGOW.—Superintendent and Resident Medical Officer. Salary, £125 per annum, with board and apartments. Applications by August 31st to Mr. F. Bissett, Secretary, 20, Bridge Street, Glasgow.

WOLVERHAMPTON EYE INFIRMARY.—Resident Assistant. Board and washing. Applications by August 12th to the Chairman.

MEDICAL APPOINTMENTS.

ANDERSON, A. R., F.R.C.S.Eng., appointed Honorary Surgeon to the Nott ngham General Hospital, *vice* James Beddard, F.R.C.S., deceased.

GREENWOOD, E. Climson, L.R.C.P.Lond., M.R.C.S.Eng., appointed Public Vaccinator to St. Marylebone Parish, *vice* W. A. Sumner, deceased.

KINGSFORD, A. B., M.R.C.S., L.R.C.P., appointed Junior Assistant House-Surgeon to the Hull Royal Infirmary, *vice* S. P. Hosegood, L.R.C.P.Lond., M.R.C.S.Eng., resigned.

LITTLE, John Fletcher, M.B.Cantab, M.R.C.P.Lond., appointed Honorary Physician to the St. Marylebone General Dispensary.

MCDOUGALL, W. S., M.B., C.M.Edin., appointed Assistant House-Surgeon to the Cumberland Infirmary, Carlisle, *vice* T. C. Mickle, M.B., C.M.Edin.

MAXWELL, M., M.B., C.M.Edin., appoint Resident Junior House-Surgeon to the Deaconesses' Institute, Tottenham, *vice* R. P. Brooks, M.R.C.S., resigned.

PIETERSEN, James F. G., M.R.C.S., L.R.C.P.L., appointed Divisional Surgeon to the S Division of the Metropolitan Police, *vice* Dr. Hunter Barron, deceased.

PROSSER, A. B., appointed Assistant House-Surgeon to the General Hospital, Birmingham, *vice* Mr. Garrould, resigned.

SMITHSON, S. M., appointed Assistant House-Surgeon to the Royal Berks Hospital, *vice* A. E. Smithson, resigned.

STEVENSON, L. E., B.A., M.B., B.Ch.Camb., appointed House-Surgeon to the Cumberland Infirmary, Carlisle, *vice* J. F. Haswell, M.B., C.M., resigned.

TURNER, C. W., M.R.C.S., appointed Clinical Assistant to the Northumberland County Asylum.

UNDERWOOD, A. S., M.R.C.S.Eng., L.D.S., appointed Professor of Dental Surgery and Dental Surgeon to King's College Hospital, *vice* A. Gibbings, M.R.C.S.Eng., L.D.S., resigned.

WARDILL, G. J., L.D.S., appointed Surgeon Dentist to the Luton Friendly Societies Medical Institute.

DIARY FOR NEXT WEEK.

THURSDAY.

ANATOMICAL SOCIETY OF GREAT BRITAIN AND IRELAND, Theatre of the Medical School, Leeds, 4.30 P.M.—Summer Meeting. Dr. Ambrose Birmingham: Notes on the Arrangement of the Lumbar and Sacral Nerves in a Subject with six Lumbar Vertebræ. Dr. Alex. Fraser: 1. Photography as an Aid in Anatomical, Histological, and Embryological Work. 2. On Nerve Terminations in the Thyroid Gland. 3. On the Pyramidal Tracts of Certain Rodents. Dr. T. Wardrop Griffith and Dr. M. J. Oliver: On the Cutaneous Nerves of the Trunk, with special reference to Herpes Zoster. Specimens:—Mr. R. W. Reid: 1. Specimen from a Female Subject showing Cervical Ribs. 2. Fifth Lumbar Vertebra showing persistence on both sides of a suture in the Neural Arch between Upper and Lower Articular Processes. 3. Calvaria of a Tumbler from Sir Astley Cooper's collection in St. Thomas's Hospital Museum. Mr. C. B. Lockwood and Mr. F. E. Withers: Right Aortic Arch. Mr. J. J. Clarke: Abnormal Aortic and Pulmonary Valves. Mr. Mayo Collier: Specimens showing the Hyo-epiglottic Membrane. Dr. T. Wardrop Griffith and Dr. M. J. Oliver: Frozen Vertical Section of Male Pelvis. Knee-joint showing Abnormal Arrangement of Cartilages, and other specimens from the Museum.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the announcement. The first post on Thursday mornings is the latest by which advertisements can be received.

MARRIAGES.

BOYD—TOMS.—July 25th, at Acton, Stanley Boyd, M.B., F.R.C.S.Eng., Assistant-Surgeon to the Charing Cross Hospital, etc., to Florence Nightingale Toms, M.D.

LUNAN—SHAW.—At Corston, Coupar Angus, on the 1st inst., by the Rev. R. C. Smith, Knox Free Church, Glasgow, Charles Smith Lunan, M.B., C.M., L.R.C.S.Edin., Blairgowrie, to Margaret Eliza Mary, eldest daughter of the late William Shaw, Esq., Finegand, Glenshee. No cards.

ROBERTS—KETT.—On August 1st, at St. Paul's, Cambridge, by the Rev. R. J. Roberts, father of the bridegroom, assisted by the Rev. H. B. Beedham, the Rev. F. J. Dickson, and the Rev. E. F. Plume, Reginald John Roberts, B.A., M.B., B.C.Cantab, of Haseling, Lowestoft, to Catharine Sarah, daughter of George Kett, Esq., of Wymondham House, Cambridge.

SAUNDERS—JEW.—On the 27th ult., at All Saints' Church, Forest Gate, by the Rev.—Dunscombe, William Saunders, M.R.C.S.Eng., etc., of Dudley, second son of the late James Warnes Saunders, M.R.C.S.Eng., etc., of Aylsham, Norfolk, to Sarah Matilda Jew, eldest daughter of Edward Jew, late of Upton-on-Severn.

THOMSON—KARRAN.—At St John's, Egremont, Cheshire, on the 6th inst., by the Rev. W. E. B. Gunn, D. G. Pearse Thomson, M.B., C.M.Edin., Penrith, to Clara, daughter of the late John Karran, Esq., Seamount, Castletown, Isle of Man. No cards.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the office of the JOURNAL, and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

QUERIES.

SACCHARIN.

H.C.R. asks if any, and if so what, bad effects have been noticed after prolonged use of saccharin.

WEIR-MITCHELL TREATMENT IN HOSPITAL.

JOURNAL asks for information as to hospitals, etc., where a surgeon suffering from neurasthenia could be received for treatment by the Weir-Mitchell plan, and the fees he would have to pay for a month's treatment. He is not able to afford much.

ANSWERS.

THE EXAMINATION FOR D.P.H. CAMBRIDGE.

A COUNTRY MEDICAL OFFICER OF HEALTH asks whether a fortnight's course of practical work in a London laboratory in hygiene, in testing, qualitative, and quantitative analyses, etc., would be a sufficient preparation for the oral and practical portion of the examination in sanitary science at the University of Cambridge?

*** A fortnight's work would hardly be sufficient. Although the analytical knowledge required at the examination is very elementary, and a practical acquaintance with quantitative analysis is not expected, not less than a month should, as a rule, be devoted to practical preparation. Candidates are expected to show sufficient theoretical knowledge of quantitative work to enable them to interpret the reports of professional analysts; they must be able to make rough qualitative examinations of samples of water and air; and they require some experience in hygienic microscopy.

THE TREATMENT OF SWEATING FEET.

P. writes: This subject keeps cropping up every few months in the JOURNAL. I have the same affliction when I am careless, and here is how I cure myself: I find that when I drink a lot of liquids of any sort my feet sweat, and I spend half my time changing my socks and washing my feet. But when I cut down my "drinkables" to one-half, in two days my feet are dry, and remain so as long as I exercise this self-restraint. I have used zinc oxide and various other applications without permanent advantage.

NOTES, LETTERS, ETC.

DR. BROWN-SÉQUARD'S EXPERIMENTS.

A MEMBER OF THE MEDICAL PROFESSION writes: You have not done me justice by your note on my circular relative to Dr. Brown-Séquard's experiments. Much as I disapprove of the animal torture in question, I should not have felt it my duty to print and post some 6,000 copies of my protest had that been all. I consider the idea of injecting the seminal fluid of dogs and rabbits into human beings a disgusting one, and when the treatment also involves the practice of masturbation, I think it is time for the medical profession in England to repudiate it. One may be a vivisector without also encouraging a loathsome vice, but as far as I could discover no word of protest was uttered by the leaders of medical opinion, and I determined to take the thing into my own hands, with the effect, as I have good reason to believe, of making it very improbable that this method of pretended rejuvenescence will be introduced into England. I have a great number of encouraging letters from eminent Englishmen, who will take good care of this, at least. Vivisection may be an open question, but self-abuse is not.

OIL OF WINTERGREEN IN RHEUMATISM.

MR. JAMES D. STAPLE, M.R.C.S., L.S.A., writes: During my two years' period of house-surgeonship at the Stockport Infirmary, I used a liniment composed of equal parts of olive oil and oil of wintergreen locally in nearly forty cases of rheumatism. In the acute cases it was painted over the joints, and in the chronic ones well rubbed into the affected parts. After the application of the oil, the joint was wrapped in cotton-wool and lightly bandaged. This liniment eased the patients very considerably, and several of them went to sleep soon after its use. In the majority of cases pain ceased for some five or six hours after it was applied. The internal treatment adopted for these cases was salicylate of soda. In the acute cases large and in the chronic small doses of this drug were used. I would recommend oil of wintergreen very strongly as a local application in all forms of rheumatism.

The Jones Indemnity Fund.

The following additional amounts have been received in answer to an appeal published in the Journal of July 20th, on behalf of Dr. Jones, of Edmonton:

	£	s.	d.
Lennox Browne, Esq.	1	1	0
G. Borlase Hicks, Esq.	1	1	0
E. Hooper May, M.D.	0	10	6
H. G. Sworn, Esq.	0	5	0

Further contrtbutions may be sent to Dr. J. W. Hunt, 101, Queen's Road, Dalston, N.E. Dr. Jones's expenses were over £60.

Post-Graduate Course in London.

Dr. Vincent D. Harris (Physician to the City of London Hospital for Diseases of the Chest, Victoria Park), writes: With reference to the letter of "Scientia," in the Journal of August 3rd, on the subject of post-graduate courses in London, may I be permitted to draw attention to the fact that the practice of the City of London Hospital for Diseases of the Chest, Victoria Park, is about to be opened to practitioners, as well as to students, for systematic instruction in the diagnosis and treatment of chest diseases, on the payment of a small fee?

The hospital, as is well known, has a very large practice, both in-patient and out-patient. With it have been associated in the past the honoured names of Peacock, Risdon Bennett, Andrew, Erichsen, and others, and our present highly respected senior physician, Dr. Thorowgood, has long been connected with it.

It must be confessed, however, that hitherto the traditions of the hospital have not been to encourage systematic clinical teaching. The Committee of Management have this year, at the request of the Medical Committee (strongly urged thereto by Dr. Heron), consented that the unsurpassed clinical material shall in the future be made available for teaching purposes.

It will thus be seen that another of the largest special hospitals is opened to gentlemen who, like "Scientia," "feel the need of a brushing up" in certain of the subjects connected with clinical medicine.

Arsenical Poisoning and Common Sense.

Surgeon-Major N. Alcock, M.S. (Military Prison, Dublin) writes: Having regard to the cases of poisoning by arsenic which have occurred during recent years by accident or design, it would seem a common-sense precaution that all tasteless poisons should be mixed with some innocuous substance of a distinct taste. This might be made congenial to the palate of the rat, and such as would not interfere with the condition-powders of the horse-coper. It would go far towards preventing those of weak moral nature being led into temptation.

Policlinic.

Mr. Rushton Parker (Liverpool) writes: Your employment and correct spelling of the word "policliniques," in the Occasional Column of the Journal of August 3rd, 1889, p. 262, gives opportunity to furnish an additional paragraph of literary interest in attempting to settle the spelling of the second syllable, which on English and American pages appears to be more often wrong than right. Even in Dr. Byrom Bramwell's excellent *Studies in Clinical Medicine*, No. 1, p. 1, "polyclinic" appears. The term first came to my notice in German periodicals, and, owing to inattention to the spelling, was erroneously supposed by me to mean "composite," or "promiscuous" clinic (as if from πολυς, many), until a German friend reminded me that it means "town" clinic (πολις), that is, out-patient department. Whether the word "policlinic" should be used at all or not I do not pretend to advise, but a little advertising may at least serve to extinguish its illiterate substitute "polyclinic."

Imperial Postage and the British Medical Association.

The *Imperial Federation* commenting on the action of the British Medical Association in forwarding copies of the Journal to the Colonies at the inland rate of postage of one penny, observes:—"While offering our hearty congratulations to the Council, we would only suggest that they should send the Postmaster-General a resolution to go and do likewise. As long as we place Kirkwall and St. Heliers on the same footing as the suburbs of London, but sextuple the charge to Melbourne, it is useless to make abstract proclamation of the fact that our Colonial brethren are as dear to us as if they dwelt in Surrey or Hampshire."

COMMUNICATIONS, LETTERS, etc., have been received from:

The Registrar of the Royal College of Physicians of Edinburgh; Mr. A. Freer, Stourbridge; Dr. R. J. Roberts, Lowestoft; Dr. T. Patterson, Oldham; Lord Sandhurst, London; Mr. F. Wood, Brighton; Mr. T. S. Short, Birmingham; Dr. J. B. Brierley, Old Trafford; Dr. E. Sansom, London; Mr. E. C. Roberts, Southgate; Dr. Thin, London; Professor Corfield, London; Mr. C. Steele, Clifton; Dr. Balding, Royston; Mr. G. P. Field, London; The Secretary of the Victoria University, Manchester; Dr. Rentoul, Liverpool; Dr. Cullingworth, London; M. O.; Dr. S. G. Campbell, Glenboig; Dr. A. Carpenter, Croydon; Mr. G. J. Waraill, Luton; Dr. T. M. Watt, Hovingham; Mr. W. J. Harris, London; Mr. T. W. Clark, Luton; Messrs. May, Davis and Co., London; Dr. H. R. Ker, Halesowen; Dr. J. W. Moore, Dublin; Mr. R. W. Helen, Carlisle; Dr. J. W. Hunt, London; The Editor of the *Metropolitan*, London; The Dean of the University of Aberdeen; The Registrar of the Royal College of Surgeons in Ireland, Dublin; Justitia; Mr. W. C. Crofts, London; Mr. W. Porter, Guelph; Mr. C. G. Ethelston, London; Sir J. C. Browne, London; The Jeyes Sanitary Compound Co., London; Dr. Mickle, London; Mr. J. H. Flather, Cambridge; Messrs. Street and Co., London; Mr. A. W. Mayo Robson, Leeds; Surgeon-Major R. Anderson, Dundalk; Dr. Lewers, London; Dr. Woodhead, Edinburgh; Dr. O. Sturges, London; Mr. W. C. Thompson, West Drayton; Dr. Willoughby, London; Mr. J. F. G. Pieterson, London; Mr. F. Vacher, Birkenhead; Mr. W. Duncan, Bristol; Mr. J. A. Manton, Birmingham; Mr. M. E. Ling, Saxmundham; Dr. H. Bennett, London; Dr. de H. Hall, London; Dr. M London; Dr. Ball, London; Mr. T. R. Jessop, Leeds; Mr. W. W. Wagstaffe, Sevenoaks; Mr. W. W. T. Steed, Yealmpton; Mr. B. Rake, Trinidad; Messrs. J. McKeevor and Son, Carlisle; Mr. E. H. Bailey, Leamington; The Editor of the *Illustrated Medical News*, London; Dr. R. M. Wyckoff, Brooklyn; Mr. A. W. Bush, London; Mr. G. Lushington, London; Mr. G. E. Williamson, Newcastle-on-Tyne; Dr. Savage, London; Dr. J. H. Jackson, London; Mr. G. N. Wynne, Dublin; Surgeon-Major Climo, Simla; Mr. J. Martin, Huddersfield; Dr. F. Beach, Dartford; Mr. F. F. Welsh, Stoke Bishop; Mr. Y. J. A. MacAlister, London; J.V.R.C.; Dr. S. C. Smith, Halifax; Mr. C. Begg, Hankow, China; The Secretary of the Oxford and District Branch of the British Medical Association, Oxford; Mr. G. N. Stewart, Edinburgh; Efficiency and Economy; Dr. F. W. Edridge-Green, London; Dr. H. Woods, London; Mr. R. Parker, Liverpool; Dr. A. Napier, Crosshill; Mr. G. Lushington, London; The Vestry of the Parish of St. James Westminster; Mr. J. H. White, Chicago; D. H. Hamilton, M.B., Northampton; Rev. F. Lawrence, York; Mr. F. Hall, Leeds; Surgeon-Major N. Alcock, Dublin; Mr. Cassal, London; Dr. J. A. de Gama, Bombay; Dr. T. E. Satterthwaite, Interlaken; Mr. M. R. J. Behrendt, Burringham; Mr. R. T. Hewlett, Bromley; Mr. L. W. Pead, London; Mr. H. C. Rogers, Newport Pagnell; The Secretary of the Central London Throat and Ear Hospital, London; A. Stewart, M.B., Glasgow; Dr. Mercier, London; Mr. J. B. Bailey, London; Brigade-Surgeon R. Waters, Punjab; Mr. J. W. Black, Edinburgh; Mr. A. T. Lloyd-Jones, Salop; Dr. V. D. Harris, London; Mr. E. D. Farmer Bringhurt, Waterford; Surgeon-Major H. Charlesworth, Sheffield; Mr. L. J. Pisani, Cohat; Mr. G. J. Flamank, London; Mr. A. W. Shepherd, Moriani; Mr. Towers Smith, London; Surgeon-Major T. Murtagh, Sutton; Mr. S. Osborn, London; Mr. F. C. Coley, Newcastle-on-Tyne; Mr. F. B. J. Baldwin, Rotherham; Mr. T. Walley, Edinburgh; Dr. G. Herschell, London; Dr. Hugh Woods, London; F. W. S. Hodder, M.B., Granville, Jersey; Dr. J. W. Hunt, London; Mr. J. Farmer, Brockley; Dr. J. Wigmore, Tiverton-on-Avon; Mr. J. Ewens, Clifton; Mr. T. H. Pounds, Derby; Mr. D. H. Hamilton, Berry Wood; Dr. Sergeant, London; Dr. W. Sykes, Mexborough; Our Manchester Correspondent; Dr. D. Crowly, Loughrea; Messrs. Romeike and Curtice, London; Mrs. N. J. Hunt, Exeter; Mr. W. G. Thistle, Taunton; Mr. E. Bayley, London; Dr. R. Wade Savage, London; Dr. F. Payne, London; Mr. F. Neal, Longhope; The Secretary of the Faculty of Physicians and Surgeons, Glasgow; Mr. F. F. Moore, Southport; Mr. T. W. Jordan, Stockport; Mr. A. R. Anderson, Nottingham; Mr. Lawson Tait, Birmingham; Mr. J. V. Laverick, Hinderwell; Dr. Leslie Phillips, London; Mr. E. Boyd, Bournemouth; Dr. Tyley, Wedmore; Dr. H. D. Ward, Blyth; Mr. J. L. Holbertson, Brierley Hill; Dr. M. Colman Collins, Nottingham; Mr. B. D. Smithers, Norwood; Mr. G. P. Field, London; Mr. Adams Frost, London; Messrs. Manville and Madgen, London; Dr. Lewers, London; Dr. Mickle, London; Mr. E. A. Onyon, Eye; Dr. W. White, Hadfield; Dr. Moriarty, Cork; Mr. R. J. Collyns, Dulverton; Mr. T. H. Hardman, Leeds; Dr. Lane, Milford Haven; Mr. E. C. Greenwood, London; Mr. Morris, Swansea; Mr. W. S. Kay, Sheffield; Dr. Holman, Reigate; Mr. W. F. Husband, Leeds; Dr. D. W. Davies, Llantrissant; Mr. J. E. Bennett, Liverpool; Mr. R. S. Jaynes, Spennymoore; Mr. R. W. Turner, London; Mr. Johnston, Acton; Mr. H. J. Laslett, Bermuda; The Mayor of Leeds, Leeds; Dr. J. Fletcher Little, London; etc.

BOOKS, etc., RECEIVED.

An Atlas of Illustrations of Pathology. London: The New Sydenham Society.

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Notice.—Advertisers are requested to observe that it is contrary to the Postal Regulations to receive at Post-Offices letter addressed to initials only.

PRESIDENT'S ADDRESS,

DELIVERED AT THE

FIFTY-SEVENTH ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION,

BY

CLAUDIUS G. WHEELHOUSE, F.R.C.S.,

Consulting Surgeon to the Leeds General Infirmary.

A CURSORY REVIEW OF THE PROGRESS OF MEDICINE AND OF MEDICAL EDUCATION.

LIFE, as measured by the standard of the space of time allotted to each unit of the human family, is but a little span. Man has not reached his present condition of intellectual, of moral, or even of physical greatness in one generation; the white cliffs of Albion, in their formation, mark not only generations but æons in the progress of creation. Rome was not built in a day! So medicine, as she stands to-day, strong by the acquirements of her children of many generations, did not arise upon the world in the full glory of a heaven-born science; but, sifting grain by grain of her faith from the speculations laid at her feet by her followers through countless ages, has, little by little, built up the temple of her fame until it has assumed the proportions in which we now behold it, and of which we are the accredited custodians.

THE MEDICINE OF THE EARLY AGES.

Sometimes in the current of events her progress has been laboured and slow; with halting and uncertain steps, with Arabian mythologists, astrologers, and such like visionaries as her companions, she has picked her way through gloomy times of mystery, uncertainty, and doubt. At times the light of truth has shone upon her path more brightly and has cheered her on her way; and with the Harveys, the Sydenhams, the Jenners, and the Hunters, the Dupuytrens, Laennecs, and Pasteurs of the world for her companions she has walked with firmer steps until at last she has become an acknowledged power, and stands forth as the companion of even the exact sciences. Each generation of her votaries as it passes across the stage of the world's history is henceforward bound to leave a mark behind it as its contribution to the sum of existence, and that mark must, in the aggregate, be the result of individual efforts.

To some it is given to do great things, and to stand revealed by the unmistakeable stamp of genius. To some, by more prolonged and patient effort, to leave an impress which, if it be not so brilliant, is yet equally fruitful and enduring. And to everyone of us, however humble may be the current of his life, it is permitted to make his mark, to add his little contribution to the total sum of a ceaseless progress, and to advance it or to hinder its advance.

I can look upon the broad roll of this great Association and can see there names that will never die—the names of men whose achievements will never perish, who when they sink as their predecessors have done to their rest will leave, as Harvey and Jenner left in former times, a priceless inheritance to mankind at large, whose labours will not have been in vain, and of whom the world will acknowledge that the talent entrusted to them has been productive of abundant fruit, that of a truth they have left the world better and richer than they found it.

I can see hundreds of others who are aiming at this high standard, who by their individual labours are raising the great tower of knowledge, and whose lives, though not illumined by the torch of genius, will yet leave behind them the undying results of patient labour in well-doing; and I see, in all, the roll of a great brotherhood, strong in their efforts to advance the common weal, and doubly strong in the strength of union.

To us, as medical men, all science is of transcendent interest; but, not unnaturally, the sciences which bear on life and death stand, for us, in the forefront; and to each generation as we pass across the stage of existence, it becomes imperative to seek to add something to the store of that knowledge by which life is rendered more endurable, is robbed of some of its attendant evils, some of its sorrows and some of its sufferings.

Our fathers, under disadvantages we are scarcely able to appreciate, did great things. Are we better than our fathers were?

Will you quarrel with me if, in welcoming you to this our great annual festival, I ask you, for a few brief moments, to ponder over this important question with me?

Life, and with life the progress of science, has ever been chequered with sunshine and shadow. Evil and bright days must follow each other; good times and bad must balance one another, and if, in the great battle for existence, we incline sometimes to lay down our arms and to capitulate, we have the authority of one of the sweetest of sweet singers to revive our fainting courage:

> Be still, sad heart, and cease repining,
> Behind the clouds is the Sun still shining;
> Thy fate is the common fate of all,
> Into each life some rain must fall;
> Some days must be dark and dreary;

and the lives into which, on the other hand, some bursts of sunshine of even more than usual brilliancy do not occasionally force their way are, I would fain hope, very few.

You, by your unfailing kindness, have on many occasions so brightened my life that I should be ungrateful indeed if, on an occasion such as this, I failed to offer you my warmest and most grateful acknowledgments and thanks.

On one occasion you placed me at the Council table of the Royal College of Surgeons; on another you sent me as your "direct representative" to the General Medical Council; for three years you placed the highest interests of this great Association in my hands as your President of Council; and now, on the occasion of your third visit to our town, you have done me the supreme honour of asking me to fill your Presidential Chair, and to undertake the conduct of what I sincerely trust will be a great and a successful gathering.

On behalf of the profession of Leeds and the district I bid you most heartily welcome. I join my fellow-townsmen and our neighbours in adjoining towns who desired to share with us the pleasure of receiving you, in the hope that the week you are about to spend with us may be a happy one, may be productive of scientific benefit, and may prove of social value; that the arrangements we have made for your comfort may work well, and may conduce to your enjoyment. To us your acceptance of our invitation, and your presence among us, are matters for great rejoicing, and we sincerely hope that, when our meeting is over, you will still hold Leeds in the esteem we prize so highly.

The bill of fare we have provided for your enjoyment will meet, we hope, with your appreciation and approval; and if we have ventured upon the introduction of some few novelties and variations in the usual plan of the annual programme, we have done it in the sincerest hope that we may thereby advance and increase the interest of your sojourn among us.

My duty is an easy and a pleasant one. I am precluded from speaking to you on any of the directly special subjects with which we are called upon, whether as physicians or as surgeons, to deal.

Medicine will be discussed, and all that can be said of it will be brought before you by one of the leading physicians of the day; and in Dr. J. Hughlings Jackson will find an exponent to whom you will join me in listening with hearty interest and attention.

Surgery, and the progress it has made and is making, will be dealt with by my friend and colleague Mr. T. Pridgin Teale, and for, I believe, the first time in the history of the Association, an address in Psychological Science will be offered you, and this we have placed in the very able hands of our former tried and ever welcome friend Sir James Crichton-Browne.

Our Sections will be presided over by men who, each in his own department, will tell us all that it is necessary for us to know to keep us abreast with its latest and highest developments, and, as individuals, you will have an opportunity, in the discussions which have been arranged for you, to bring forward any special matters with which you wish to deal, on which you may personally wish to be heard, or to impart to us any information which you have acquired or have worked out. To do this has ever been, and is still, the great object of our Association; and who can calculate the advantage that has accrued to us, as a profession, from the accumulated labour of the fifty-seven years during which it has existed?

Union is strength, and that which men by individual labour never could have accomplished the principle of association has enabled us to do; and by yearly repeated meetings such as this upon which we are entering—with the aid of a JOURNAL by which the labours of each one may be made the common property

of all—a fund of wealth which must otherwise have died with individuals has been preserved to us for ever.

Of what comparative general value were the labours of individuals in the early days of the present century in comparison with what they are now?

However brilliant the work that was done, or however intrinsically valuable, what opportunities were there of its being made known beyond the limited area of the worker himself; and how much excellent work must have been lost to the world in consequence?

The Comparative Isolation of Practitioners in Former Times.

We, in comparison with preceding generations, have been possessed of advantages of incomparable magnitude. Not only in our own, but in every other science also, knowledge and the facilities for the spread of knowledge have so increased that comparison is almost impossible. Think for a moment of the changes that one generation only has seen! The facilities for personal communication that have come with the advent of railways, of steam, and, above all, of the developments of electrical science, by which not individual portions of our own kingdom only, but all the nations of the earth have been brought into intercommunication.[1] What great discovery can now be made that does not instantly become the property of even the remotest nations of the world, and is not, by an omnipresent press, brought to the personal knowledge of every votary of science?

Does America give birth to anæsthesia? and in what part of the world does the blessing of painless surgery remain unknown? Does Sir Joseph Lister satisfy his own mind of the infinite powers of antiseptic surgery? and in how short a period of time is his brilliant discovery the common property of every surgeon in the world?

What did the surgeon of fifty years ago know of the powers of "germs," of "bacteria," of "bacilli," and of their capability to destroy his most elaborate and perfect work? and where is the student of surgery of the present day to whom they are unknown, or who is unprepared to do battle with them, one and all, and to baffle or to modify their evil influences? What the medicine and surgery of the 18th and preceding centuries were, we are only able to conjecture. Its medicine we believe to have been little more than an empiricism founded on close observation, and led by a few master minds, and its surgery we know was crude, and, as compared with that of to-day, was even barbarous and cruel, and few of us I imagine would care to witness a major operation, as then performed, by even the most renowned and skilful surgeon.

But the light, even then, was breaking, and not many years of the present century were to run ere truer principles of both medicine and surgery were to be made known to the world, and each was, as a science, to be established on a surer foundation than any on which it had hitherto rested.

The General Practitioner of the Early Part of the Present Century.

Let me endeavour to draw a sketch of the average practitioner of the commencement of the present century, and there may be some, at any rate, in this room who can follow me and judge whether I paint him correctly, or whether, trusting too much to tradition and report, I do him injustice.

He was usually a hard-working industrious man, who thought little of bodily exertion, and who spent the greater part of his time in his saddle, which was his only way of getting about the country; a hard-thinking man, but one whose mental training had not been great, nor his education elaborate; whose opportunities for the acquisition of professional knowledge had been few and short; of whom it might be said that that which he knew was, in the main, either the fruit of his own observation, or of his own observation added to the traditions of the place or practice in which he had been brought up.

Knowledge and practice alike were purely empirical with him, and though he could treat disease with skill, and could, in most cases, give a good account of his warfare, it was purely by empirical means that he did it. His great panacea for all ailments was blood-letting, and his pocket was never unarmed with the all-potent lancet.

As a Physician.—No matter what the case might be, so long as it was "acute," venesection must precede everything else; then followed a superabundance of mixtures, powders, draughts, pills, lotions, and so forth, with which he hoped to effect a double purpose, first, to cure his patient, and, secondly, to remunerate himself for his attendance; for, so trifling were the charges he was able to make for his personal labour, and at so low a rate was that estimated by his patients, in comparison with the amount of medicine he gave them, that, except for the additional charges made for it, his remuneration would have been infinitesimal. He had a good sound knowledge of drugs in general, and of what they could do; he was sadly too ready to rely on them, and his patients were compelled not only to swallow most nauseous compounds, but to swallow them also in inordinate quantities. Of the morbid anatomy of disease he knew something, but not much; of pathology, in its true sense, he knew nothing, for physiology, whether healthy or morbid, was not one of the sciences of his day. When he "walked the hospitals" for the few months required of him, he saw a few *post-mortem* examinations, and had the opportunity to mark the ravages and the appearances left by various so-called diseases, and these he was apt to regard as the diseases themselves. His treatment was chiefly based on nomenclature; he could tell you what was good for "fever," what for "tic," for "rheumatism," for "indigestion," for "scurvy," and for innumerable other complaints; and he who was believed to possess the greatest number of formulæ for the greatest number of complaints was regarded as the cleverest and most desirable doctor.

As a Surgeon.—As a surgeon he was, as a rule, further behind the practitioner of to-day than he was as a physician. His education, such as it was, had taught him to rely, in this branch, more on the skill of others than on his own. There were certain men, well known in their several districts, as the men to whom to appeal in cases of surgical emergency, and they were the men who made world-wide reputations.

Leeds, possessed one such surgeon, whose name was known, not only in every hamlet in Yorkshire, but, even in that day, all England over, William Hey; and we are proud, even to-day, of that reputation, and that we possess a statue of him which, while it points the moral of the fame to be attained by industry, ability, and rectitude, is an ornament also to the noble hospital which enriches our town, and of which he was one of the founders.

What William Hey was to Leeds, Sir Astley Cooper and many others were to their London *confrères;* and so, scattered all the country over, were there others to whom, in times of surgical emergency, or for great surgical skill, the country practitioner was wont to look, and as a natural consequence surgery remained an art but little cultivated by the general practitioner. Nor, for this, was the practitioner alone to blame.

Surgical Operations in Former Times.

A surgical operation in those days was an ordeal of fearfully different magnitude to anything known to us to-day, and, naturally enough, the patient had a large say in the matter. Confidence in operations themselves and confidence in the skill of the operator were not then what they are now, and it must be remembered that when, as the only means of escape with life, an operation had to be performed, it had also to be endured in all its unalleviated agony. Courage and endurance, unfortunately, are not given alike to all, and many a life which would be saved to-day was at that time voluntarily laid down, not simply for want of faith in the capability of the surgeon, but from sheer inability to face the terrible ordeal of bodily suffering involved.

Apprenticeship.

The practitioner was not called upon, on entering the profession, to prove himself in any way specially adapted for it. It mattered not what his education or want of it had been, no test was required of him. In the majority of cases he was, as it were, in a manner born to the position, as well as to the particular practice in which he was destined to take part; and, under any circumstances, he was called upon to serve an apprenticeship so prolonged as to be almost the same thing.

For the first five years of his professional life he was compelled to devote himself to what seemed, perhaps, at the time, the simplest and most abject drudgery; but at the same time he

[1] In his Presidential Address on the occasion of the first meeting of the Association in Leeds in August, 1843, the then President, Mr. Wm. Hey (Hey secundus) took the opportunity to congratulate the members attending, on the fact that they could then, for the first time, approach Leeds by railway, and he contrasts this with an advertisement to the following effect:—"Safe and expeditious travelling in machines on steel springs in four days to London, from the Old King's Arms, in Leeds, every Monday and Wednesday."

picked up, all unconsciously it may have been, but none the less certainly, knowledge destined to be of infinite value to him in after life—the knowledge of common diseases; and when, after his few short months of hospital experience, he entered on practice, he did so with a fair all-round idea of its ordinary requirements and he trusted to extraneous help in emergencies and unusual difficulties.

So, taking him for all in all, our forefather in the early part of the century was pretty much what the times were calculated to make him—a shrewd, keenly observant, self-contained, and self-reliant practitioner, whose education, whether general or professional, had been but scanty, whose means of intercommunication with his fellows were few, and whose professional position and value were very much what he himself chose to make them. That he did excellent work in the world no one will be willing to deny; and we, who are endeavouring to carry on and improve upon his efforts, should be the last to deny him the meed of praise he so abundantly earned.

The Medical Science of the Present Day.

That the medical science of our time is in advance of that of the time of which I have been speaking is beyond question, and that the effects produced by increased knowledge and research have given advantages to the world of indescribable value no one will deny. Look where you will, whether over the domain of medicine or of surgery, and the facts are indisputable. The field is enlarged, the culture of the field is improved and the harvest is, beyond all question, infinitely greater, and it is surely worth our while on an occasion such as this to ascertain, if we can, wherein lies the secret of our advance.

In a large measure it is due to our possession of vastly improved instruments of precision.

To our ancestors the revelations the microscope has made to us were but a dream. They could theorise and argue and believe, but the things upon which they could only theorise and argue and believe are living verities to us. To them the existence of a *materies morbi* was only an argument, whereas now, we know not only that the causes of many diseases are indeed material, and even tangible, but that we are able to demonstrate and see them, to recognise their individuality, their specific forms, and the phenomena of their growth, propagation, and development.

I call to mind a story of two great Scotch professors—the one a theorist, the other a materialist. The materialist would argue that certain forms of disease must be due to the presence of germs, and were the direct results of their development, propagation, and multiplication; and the theorist would cry "here is your microscope, show me but one of these germs and I will believe; but, until you do, I cannot;" and, being unable to do this, his friend could only fold his hands and wait patiently, hugging his belief, meanwhile, but with the conviction of certainty none the less.[2]

Gentlemen, picture these two professors now, if they could meet, and know only as much as we know of bacteria and bacteriology, and of the field of germ pathology. And meanwhile, yet another Scotch pathologist as fully convinced as though he could see or had seen the whole range of modern pathological development, so ponders the theory, and acts upon what he believes its possibilities to be, that, at last, he lays at the feet of his profession the whole science of antiseptic surgery. So, in like manner, and little by little, the microscope has revealed to us many of those hidden mysteries which constitute the whole science of physiology, has shown to us the beauties of capillary and lymphatic circulation, has enabled us to understand and comprehend the processes of absorption, of disintegration, and of recuperation, and has placed at our disposal the key to mysteries of which our predecessors could have but faint imaginings, but which we know, and know with a certainty, which constitutes our knowledge science indeed.

Thus medicine and surgery have alike been founded on a rock of knowledge, from which they can never henceforward be dislodged, and from which in their future progress light may be made to shine, which will illumine their path along whatever roads they may advance, and will dispel many a doubt and darkness which, in former times, would have been insuperable barriers to their progress. And so, by other instruments of precision, barrier after barrier has been removed from our path, doubt after doubt has been cleared away, and we now see clearly where heretofore we had only seen as "in a glass darkly" and unassailable stores of knowledge have thus been placed at our disposal. What shall I say, for instance, of our advance along the pathway opened up to us by electrical science? Is not this alone one which, uncomprehended in former times, has enabled us to build up knowledge of phenomena, without which the infinite intricacies of the action of the nervous system must have remained shrouded in profound darkness, and out of the chaos of former mysteries to see, clearly defined, order and law where ignorance, hypothesis, and mystification formerly had reigned supreme. And while physiology has thus grown into a true science, pathology has also advanced with equally rapid and giant strides. We see, indeed, as our ancestors did, the ravages made and left behind in the track of disease, but we see them only as the evidences of deeper physiological mysteries; we study them as the effects of processes which have constituted the true phenomena of disease, and we seek to unravel them one by one until we see clearly how they have arisen, and what they denote. And so, with ceaseless patience we endeavour to track down mischief to its origin and birth. Year after year our patience is rewarded by fresh discoveries, fact is added to fact, uncertainty after uncertainty is dispelled, and thus, each year, the tree of knowledge puts forth fresh shoots and brings us a more and more abundant yield of goodly fruit.

Advances, however, of such kinds as these, and in such directions, do not, in my opinion, constitute the chief or highest glory of modern medicine.

Public Medicine.

A common reproach is often brought against both medicine and its practitioners that it is a sceptical profession; that its practitioners are essentially materialists in their views; that medicine, as a science, leads to free thinking, and seeks, in a rational explanation of every fact with which it is brought into contact, to undermine our belief in things spiritual, and to lessen our faith in all that we cannot see, and handle, and account for; that constant contact with pain and suffering tends to numb our sympathy and to diminish our pity for the sufferings of mankind.

On this point I would venture fearlessly to challenge any other calling or profession to produce a parallel to the modern development of "Public Medicine," a science which seeks ever, even at the risk of its own extinction, to exterminate the causes of disease and death, and to eradicate from the world the very springs and sources from which they arise.

"It is a commonwealth sustained and governed by the desire existing in the minds of each of its members to do as much good as possible to every other member." It looks upon prevention as better than cure, and asserts, as is now clear to all, "that a large part of human suffering is preventable by improved social arrangements," and sets itself to the task of sweeping away all such preventable causes.

"Its compassion is all the deeper, its relief more prompt and zealous, because it does not generally, as former generations did, recognise such calamities to be part of man's inevitable destiny; and it hurries with the more painful eagerness to remedy evils which it feels ought never to have befallen."

"When the sick man has been visited, and everything done which skill and assiduity can do to cure him, modern charity goes on to consider the causes of his malady; what noxious influences besetting his life, what contempt of the laws of health, in his diet or habits, may have caused his sickness, and then to inquire whether others incur the same dangers, and may be warned in time."

"Our Great Example commanded His first followers to heal the sick and give alms, but He commands us and all His followers in this age to investigate the causes of all evils, to master the science of health, to consider the question of education with a view to health, and while all these investigations are made with free expenditure of energy and time and means, to work out the rearrangement of human life in accordance with the results they give; and if, instead of undoing a little harm, and comforting a few unfortunates, we have the means of averting countless misfortunes, and raising, by the right employment of our knowledge and power of contrivance, the general standard of happiness, we lessen the necessary evils of life, lengthen the term of human existence, wipe out the causes of innumerable griefs and sufferings, make life more endurable and happy, can it be said that we are failing to obey the commands or to undermine the teaching of our great Master?"[3]

Can it be denied that these are among the chief aims and ob-

[2] Professors J. Y. Simpson and Hughes Bennett at the last meeting in Leeds.

[3] See *Ecce Homo*, chap. 17, "The Law of Philanthropy."

jects of our profession in this our day? Is not every community provided with its officer of health? Is not disease of every kind assiduously and ceaselessly tracked to its hidden birthplace? Can an epidemic now run riot as it did in former times? or devastate a whole country, as it formerly was wont to do? Look at the great scourges of the earth as described in history—at malarial fevers, at small-pox, at typhus, at cholera, at the whole host of epidemic diseases which, born of and fostered by insanitary conditions, revelled in the unprotected homes of this and other countries, and sapped the health and strength of nations.

Are we not adding year by year to the vast stores of our knowledge? Are we not, by our ceaseless search after the seeds of disease, the bacilli, the micrococci, and the germs of which it comes, and by our cultivation of sanitary science, doing a mighty work in the renovation of the world and the diminution of suffering and pain? Can any work be nobler? any search after truth be more innately religious?

Thus at least I argue when I hear our profession charged with irreligion, and thank God for that spirit of ceaseless inquiry which impels us to seek truth and truth only, and, when we have found it, to hold it with a grasp whose tenacity cannot be broken.

So then in our daily life as the servants of our suffering fellow creatures, in our eager race after improvements, in our efforts to spread abroad over the earth the results of the knowledge we attain, I hold that the practitioners of medicine of the now closing nineteenth century have not been left behind in the race of life; that we have won our laurels, and have been faithful to our trust. And as we exult in the progress we have made, and are humbly thankful, so let us hope will those who follow after us outshine our accomplishments, and leave us in turn very far behind them in knowledge and in power for good.

Medical Education in the Past.

But, on an occasion such as this, and with such an assembly for my audience, I cannot refrain from discussing, or attempting to discuss, a question which, while of deep interest to us, is of vital importance to those who will succeed us, namely, the medical education of the day.

Are we doing the best that can be done for the practitioners of the future in our method of training them? The answer to this question involves an inquiry which must at any time be a formidable one, and one which to many people seems almost, if not quite, unattainable.

"Quot homines tot sententiæ;" in every large gathering of medical men opinions will be found at variance on the subject, and yet, until something like general accord can be attained, it is hardly to be expected that the difficulty will be overcome, or a safe solution be arrived at.

During the last fifty years the knowledge to be acquired by medical men has increased a hundredfold, and the educational status of our students has, of necessity, been correspondingly advanced.

In the early days of which I have been speaking no educational test was applied to those who desired to enter the profession; candidates might be almost devoid of education, and many were of so rough and uncultivated a class as to bring on the medical student a very unenviable notoriety. Happily this difficulty has been amended, and the students of to-day are represented by a body of youths of whom the country may be reasonably proud. The medical student of to-day is usually an industrious and steady man who not only seeks sound information from recognised sources, but who is given to investigation on his own account. His time is, on the whole, devoted to its proper objects; he takes work seriously, and small blame to him if, now and then, he takes his pleasure hilariously, so long as he ever remembers that he is a gentleman, and is qualifying himself to carry the colours of a gentlemanly calling.

"All work and no play makes Jack a dull boy" in medicine as in everything else, and medicine does not want dull boys among her followers, and the student of the present day usually turns out a thoughtful, studious, and observant man, well trained for the work of his profession. But he needs certain practical and mental qualifications, qualifications possessed by his predecessor, but still to be picked up, so far as he is concerned, during the early years of active practice, and which are not to be attained in any other school than that of serious and anxious responsibility.

Fifty years ago our plan of educating such a man was this. For five years after leaving school he was compelled, as an apprentice, to begin at the beginning, to learn, while his mind was teachable, the very A B C of his profession, to watch and observe the practice of his master, and to pick up, in a general way, "the reason why" of all that he saw done. When old enough and qualified to do so, he was often permitted and encouraged to try his "'prentice hand" himself, and to help in many ways under the guidance of his superior. Then he was sent for three years to a recognised hospital and medical school, and there, by the study of elementary chemistry, of materia medica and therapeutics, of medicine, of practical anatomy and surgery, by lectures and clinical instruction at the hands of able teachers, both medical and surgical, he was shown the best of all work done in the best possible way, and he thus obtained a groundwork of knowledge and information sufficient to make him a safe practitioner for the time, and capable of any amount of expansion and extension in the future.

Examinations in the Past.

Then came the all-important matter of his examinations. Once and for all he had to bring all his information to the tables of the Royal College of Surgeons and of the Apothecaries' Society (the College of Physicians took no notice of him), and there to show not that he knew everything known to his examiners, not that he was as well qualified as they to cope with all the subtleties of elaborate practice, but that he knew the anatomical construction of the body, the main laws of physiological action, the chief principles of medicine, surgery, and midwifery, and that he was qualified to cope, when called upon, with diseases and accidents in general, and to take intelligent charge of the health of the public. Once "passed" he was troubled no more.

With the commoner forms of disease of everyday life he had become familiar in his early days, and for the elaboration of his knowledge he was trusted to work out the results of his experience in actual practice, and to perfect himself year by year in those higher branches of information which the study and observation born of increasing experience and responsibility were alone calculated to bring. And by this plan, in the large majority of cases a general practitioner was produced in whom the public were enabled to place a well-founded confidence.

Now let me contrast this with the methods of the present day and see how we conduct the medical education of to-day.

Medical Education in the Present.

Year by year and little by little we have been accumulating a burden which, if not absolutely more than the shoulders of the student can bear, is yet heavier than he can possibly carry with credit; and, instead of increasing his opportunities to acquire the strength necessary to bear it, we have curtailed his time, have deprived him of material advantages, and, in accordance with the hurry of the age, have demanded results well-nigh impossible of attainment.

The five years of apprenticeship have been swept away, and with them the opportunity to master the groundwork of medical education and to acquire a sound knowledge of the more common forms of ordinary illness has gone also; and in four years, instead of eight, we permit the whole work to be completed.

We have determined to ignore the utility of that homely but infinitely useful form of preparation for the higher parts of medical education which apprenticeship or pupilage was pre-eminently calculated to afford; we have determined that from the day on which a boy has been able to pass a very ordinary and limited educational examination he shall be permitted to take his place in a medical school, and we have arranged a curriculum which, if by dint of slavish toil he can master, shall enable him, at the early age of 21 to enter upon the full responsibilities and duties of practice.

The Great Burden of Modern Examinations.

We demand of him that he shall pass *at least* four examinations. One in general education; then a preliminary one in his professional subjects, at the end of his first year of professional study; a "primary" and a "pass" examination; and to make this the more easy to him we permit him, if he wishes to do so, to split up these four examinations into eight or even ten, and, by clearing them off in fragments, we give him the opportunity to dismiss study after study from his mind with a rapidity which leaves scarcely a trace of them behind, and enables him to forget them, one after another, with a facility which, if the mere capability to pass examinations were the only end and object aimed at, would be commendable enough; until at last there only re-

mains the one final test, at which, by a supreme effort, he may show that he has attained a sufficient amount of theoretical knowledge to satisfy his examiners and that he has acquired a fair comprehension of the principles which underlie his future work.

That even this is impossible, or nearly so, is abundantly proved by the fact that in a large majority of cases men voluntarily, and in many more under the compulsion of failure in the earlier examinations, devote five years instead of four to their education, and find that even then the task has been almost more than their powers could endure. To make up for deficiencies which even to themselves are then only too apparent and too keenly felt, hospital appointments, whether paid or unpaid, are eagerly sought for and accepted; or, failing to obtain these, men seek for themselves assistantships in which they may obtain that practical knowledge which only work under the guidance of experience can give them, and for lack of which they feel and know that they are unfit to cope alone with the responsibilities of practice.

In one thing the new system is unquestionably superior to the old. It takes its stand upon a higher grade of education, both general and professional; and of two men educated one on the old and the other on the new plan, when they have been equally for a few years in practice, the latter will probably be the better practitioner of the two. He will then have picked up what the other had already acquired to begin with, and will henceforward easily distance his competitor in the race. But I do not envy him the experience of those first five years.

The General Medical Council, with a laudable desire to diminish the evils of unqualified practice, has determined as far as it is possible to put down the employment of unqualified assistants, and it thereby unquestionably aids the young and recently qualified practitioner in his attempt to complete an education which ought to be complete already. But there are two sides of this question, and it has to be regarded from the point of view of the employer also. He, when engaging an assistant, is presumably seeking the service of one who will be a help to him, and not of one who, though nominally an assistant, is in reality a pupil, and who, though he be very learned in all the highest wisdom of the schools, is startled by the appearance of so extraordinary a rash as that presented by "sudamina," for instance, and who, though he can tell an examiner glibly enough the number of days necessary for the incubation of varicella, rubeola, variola, or scarlatina, and all the theoretical details concerning the history, course, complications, development, and sequelæ of these various diseases, is "not quite sure," when he *sees* them, which is which, and would, therefore, like his principal to see them before he ventures upon their treatment.[4]

Gentlemen, this is not an overdrawn or fanciful picture. It is sketched from life; and although, happily, it may not be an invariable one, nevertheless it is one we elders in the profession not infrequently see, and which makes us just a little sceptical as to the superiority of modern over former methods of education. It happened to one of my colleagues not very long ago, when called into the country to perform the operation of lumbar colotomy, to be provided with the assistance of a gentleman of this order, who, when requested to administer an anæsthetic, was compelled to admit that he had never done such a thing in his life, that he knew nothing about it, and, what is more, was further ready to confess that not only had he never administered an anæsthetic, but that he had never passed a catheter and had never drawn a tooth, and yet he had passed all the examinations necessary to enable him to register as a fully qualified practitioner.

I know there are many men who feel strongly that this is the time when pupilage would be most advantageous, and in the discussions of the Education Committee of the General Medical Council, as well as elsewhere, I have heard it strenuously argued, but the view is one which does not commend itself to my judgment, and which a long course of observation has not tended to confirm.

The most Advantageous Time for Pupilage.

I hold that the time to acquire simple information is when the mind is eager, inquiring, impressionable, and plastic; when mistakes and failures are of comparatively little moment; when a little wholesome ridicule may be borne with equanimity, and when lessons which are the outcome of inexperience leave well defined impressions on the mind which serve as warnings and landmarks at a future and more important age without any bitterness or sting in their remembrance. In later life, especially at that particular time of life when a young man is, perhaps pardonably and not unreasonably, a little elated and puffed up by having passed all his examinations, such failures, and the rebuffs they bring in their train, are neither so well borne nor so productive of advantage, and they constitute an evil which may be avoided. In our large county hospitals, workhouse infirmaries, and public dispensaries which, up to the present time, have been but very slightly utilised, we have a splendid field in which a vast fund of information of this kind which now runs to waste might be gleaned, and of these I would make much greater use than has hitherto been the practice.

In pupilage, in one or other of these, in my humble judgment, a year, or even two, at the commencement of professional study would prove the very best beginning; and in following the practice to be there seen under the direct guidance and supervision of those who administer them, a youth would see work which in after life would be of incalculable value to him, and would obtain opportunities for a groundwork which, under the present method of education, are wholly thrown away.[5]

The Subject of Modern Examinations.

I would earnestly plead also for a radical change in our modern system of examinations. That they are capable, as at present conducted, of great improvement will, I think, be very generally admitted.

Their Inadequacy.—That they fail in their essential object—the discovery of those who are fit and of those who are unfit to enter upon the responsibilities of practice—is undeniable; and, while I admit that the effort to do this is always conscientiously and most praiseworthily pursued, I am satisfied that they often—far too often—wholly fail in the attainment of their intention. During a long career as a teacher, systematic and practical alike, I have watched with the keenest interest the success or failure of those whom I have trained, and many and many a time my heart has failed me when I have seen those whom I have known to be conscientious, painstaking, and thoroughly well-informed men sent down, while others, of whose records I should have been sorry to speak, have passed with flying colours.

Their Great and Unnecessary Multiplication.—I have already spoken of the number of examinations—"an appalling number," as they have been publicly called by my friend, Mr. Teale—demanded of the modern medical student before he can claim to be placed upon the *Medical Register*, and I pray you to consider with me for a few moments what they involve.

Their Costliness.—For each one his presence in London or at

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[4] *Letter Received by the General Medical Council.*

Sir,—You have been rightly informed that I am employing an unqualified assistant to *help* me. I visit the town in which I have placed him every day, often twice a day, and sometimes three times. It is not a separate practice, but is intimately mixed up with the portion of my practice which I work myself, and my assistant has not sole charge of the other portion. The two are so intimately mixed up with one another that it is impossible to separate them one from the other. Just the same with regard to club patients belonging to clubs in the two districts. I may say that I have (since I kept an assistant, and that is only during the last four or five years) employed three qualified gentlemen, none of whom would stay at the place at all, and the last qualified gentleman said that he would not stay in such a place if I would give him five hundred a year; so, under the circumstances, I was compelled to fall back on the unqualified assistant, and I can assure you that the change is most satisfactory. The unqualified man works well, is very kind and attentive, and practically well up to his work; not so the qualified; he is often above his work, very conceited in his manner, not pleasant with patients, and grossly ignorant of the practical part of his profession. I may safely say that after twenty-seven years of experience of qualified and unqualified assistants the former are, for this class of practice, a very great mistake, not only useless, but, in the vast majority of instances, positively injurious to the interest of the principal.

The majority of the qualified men I have employed would have done well if they could have stepped into my position and left me to do the working part of the practice. Among the few good qualified men, I have always found they did not stay long enough to be of service, but were always naturally looking out for something for themselves. I may say that my father, after more than thirty years' experience, said that a qualified man in this practice was a very great mistake. I have recently had two qualified men, and both of them have nearly lost me the whole of my assistant's portion of my practice; the last man sent me three miles to see a very curious eruption, which, upon my arrival, I found nothing more than sudamina, and he confessed to me that he had never made a pill in his life. I should like to know what this gentleman could know about drugs? I should be sorry to do anything unprofessional, but I have tried your qualified man well, and find him, as far as the working of my practice goes, worse than a failure; he is always vaunting his opinion against his principal's interest, and very seldom seems interested in the work he is doing for his employers. I give a good salary, and should willingly employ a qualified man if I could get a very good one, but I cannot see myself ruined by these unpractical qualified men. I trust this is satisfactory.

[5] In the Leeds Public Dispensary alone last year 36,046 patients were examined and prescribed for in the dispensary, and 19,118 visits were paid by the members of the staff to patients in their own homes.

one of the capitals or Universities of the kingdom is necessary; and, divided as they are into "written" and "oral" and "clinical," think of the terrible waste of time and of money that is expended upon each. Take the simple instance of one, the "primary" at the united Colleges. The candidate must go to London and submit himself first to the ordeal of a written examination. This he has to do against time and under most unfavourable conditions. A certain number of questions are given to him on a printed form, and he is told that within a certain definite time he must have answered so many—not necessarily all, but a given proportion—and that, unless he can succeed in doing that, he need trouble himself no further.

The Hurry and Worry under which they are Conducted.—Thus he is compelled to think against time and to write against time. He has no opportunity deliberately to marshal either his knowledge or his facts, or to consider how he can show them to the greatest advantage. He scrambles all he knows of any given subject, or can hastily call to mind, into his paper, and, whether it be ill-written or well, he must abide the consequence! And to how many does it not happen the moment the ordeal is over, the paper irrevocably handed in, the overstrain relaxed, that there rush in upon the memory many points overlooked or forgotten that would be joyfully added if it were possible. But that cannot be; he must be content to be adjudged ignorant of those things which he has not actually written, and must abide the decision of the examiner with such patience as he is able to command.

The Ordeal to the Examiner.—Then comes the equally terrible ordeal of the examiner, whose duty it is within a certain given number of hours or days, as the case may be, not only to read over the papers handed in to him, but to adjudicate upon the value of each answer. In a public discussion of the subject of "Examinations" generally, recently held in Leeds, Mr. Teale told his audience this startling fact—namely, that a young examiner had confided to a near relative of his the information that he had to look through fifteen hundred sets of answers in a fortnight, and that they would have to be done at the rate of five minutes for each paper!

Meanwhile, the candidate, though his effort may have fallen far short of the standard required, is not—probably cannot be—informed of his failure; he is still required to present himself for the *vivâ voce* portion of the examination, and for this purpose either a journey home and a second to the seat of examination is necessary, or he must stay where he is until his fate has been decided.

Now, can this, I would ask, be necessary? Is it a fair way to ascertain what a man truly knows? Can it be just either to candidate or examiner? To each one of these queries I give an emphatic No; and you may very reasonably ask me how I would propose to remedy the evil.

An Alternative Scheme.

Years ago I suggested to the Council of the College of Surgeons that much, at any rate, of this difficulty might be overcome by conducting the written portion of the several examinations at the seats of teaching, as is done with the University local examinations. The question papers could be forwarded under the seal of the examining body to the official in charge of the local examination room. The seal could be there broken in the presence of the candidates, and the examination could be so safeguarded as to render collusion as impossible as in London or elsewhere. To the candidate such time as he felt that he honestly needed could be given, and the element of hurry, at any rate so far as he is concerned, could be eliminated. The answers, when handed in, could be sent, again under seal, to the examiners with absolute safety, and all this at an almost nominal cost. The examiners, in their turn, could take reasonable time in which to form an accurate judgment of each set of papers; and last, and most important of all, those of the candidates who so entirely failed as to make all hope of their passing an impossibility, might be informed that that was so, and that their presence for further examination was not, on that occasion, necessary.

By this plan time, labour, money, and heartburning would be saved, and a feeling of justice and fairness, unquestionably lacking under the present system, would be engendered; and, as with this, so the same proceeding could be carried out with all the other examinations.

And yet, as examinations are at present conducted, one great thing would be lacking; they would lack any guarantee of the possession by the candidate of that *practical* knowledge which we some of us feel to be the great want in modern medical education. This I, if I could have my way, would thus supply. I would make the first step in the purely medical part of the curriculum a year, at any rate, of practical pupilage. So soon as the "preliminary" or educational examination had been passed, I would insist that the next step should be residence for one year either with a general practitioner, or as a pupil at a county hospital, or in connection with a recognised public dispensary where, under the observation and guidance of the acting officers, the pupil might see, day by day, the general run of everyday practice, and would become familiarised with the common ailments of daily life as seen in the homes of the people, where he would become acquainted, and that practically, with all that he would be called upon to undertake, or would meet with in the early years of actual practice; where all the simple and minor operations of surgery would be seen and learned in the best, because most practical, manner. Then I would send him for at least four full years to a medical school and hospital to learn the why and the wherefore of all that he had already picked up, and to learn all that is so admirably taught in those most admirable schools.

I would not permit him to fritter away his examinations in scraps, but, at the end of the second year, I would institute one full one, to embrace all the preliminary studies which had occupied him so far, and, by delaying all else to the end of the curriculum, I would compel him to keep all his knowledge well in hand, and would then institute such a full and complete examination, both theoretical and practical, as should be an indisputable guarantee of his possession of the requisite knowledge to make him a safe and reliable practitioner.

This is done now in Germany[6] and the example is one we should do well to follow. At that examination I would also have placed in the hands of the examiners a minute and careful analysis, drawn up by the teachers, of the character of every candidate; this should be accompanied by a certificate of his pupilage, and should declare, on the responsibility of those under whom it was served, that he had been made conversant with daily outdoor practice, and had himself performed the common operations of minor surgery. At any rate, whatsoever may be the course that future examinations may take, I sincerely hope their number will be diminished, that they will become more and more practical in their character, and that they will be made to include a knowledge of everyday occurrences, rather than of such as are likely to come but rarely under observation. Further, I confess to being sufficiently old-fashioned to desire to return, in a greatly modified form, to some system of pupilage, by which a true foundation may be laid, by an early acquirement of the knowledge of common things, for that vast superstructure which the medical practitioner of the future will be called upon to raise and carry.

I have now endeavoured to recall to your memory the character, the achievements, and the capability of the practitioner of former times. I have shown you how infinitely greater is the knowledge and the utility of the practitioner of the present day. We know how he has brought every region of the body, even those which were formerly deemed wholly beyond the sphere of his influence, such as the contents of the cranium, the vital organs of

[6] In view of the great freedom in regard to attendance on lectures and on practical work, it is important to see how the studies and attention to clinical work are influenced by the examinations to be passed. There is the "Medical Vorprüfung" at the end of the second year, already alluded to, embracing the earlier subjects of professional study. After four years and a half there is the Staats Examen, a protracted examination in the whole field of medical study, conducted at each university by a Board, nominated yearly by the Minister of Education, and composed of the professors of the university, together with a few outside examiners. The examination is in five "stations." 1. Anatomy and physiology, oral and practical, including dissection, occupying five to six days, conducted by four examiners. If he fails at this part of the examination, the candidate cannot proceed to other stages. 2. Medicine, oral and practical, including clinical work in the wards, conducted by two examiners. 3. Surgery, the same including operations. Ophthalmology is included in this station. 4. Obstetrics, including diseases of women and children, the same, and including a delivery. 5. A general review examination, conducted by eight examiners, two in practical medicine, two in practical surgery, two in the theoretical parts of medicine and surgery, in forensic medicine, mental diseases, materia medica, etc., and the remaining two in anatomy, physiology, and natural philosophy. This lasts only one evening, and terminates the "Staats Examen;" only those are admitted who have passed through all the former stations. It is at this stage that a large number of the candidates fail. The whole "Staats Examen" occupies usually about four months, provided that the candidate be not rejected in any station. It may occupy six or even more months.

When the Staats Examen has been passed, the examination for the doctor's degree of the university is not reckoned very serious. The thesis is not now required to be written in Latin. [Extract from information laid officially before the Education Committee of the General Medical Council.]

the chest, of the abdomen, and of the pelvis, under the dominion of our science; that, by the institution of preventive medicine, he has swept away many of the opprobria, and of the direst scourges of former times; and it only remains to indicate in very few words the still vast field of further utility that lies open for cultivation by the practitioners of the future. There is one plague spot, I fear, which even he will fail to conquer; which will remain to fester, to kill its thousands, to maim, disfigure, and to sap the health of millions, of deserving and of undeserving alike, and, as the great curse of humanity, to baffle all our efforts to arrest the progress of disease, and to render them futile and abortive. You know the curse to which I allude; the curse that steadily and vindictively pursues the track of licentiousness, of ungoverned passion, of hateful sensuality; and you will admit with me that so long as human nature remains what it is, and is left in unbridled possession of the means of gratification, no ray of either light or hope will fall on that dark track.

Some day men may have become sufficiently enlightened to submit to necessary legislation and restrictions on this and cognate subjects; but, until they do, the foul stream of syphilis will continue to meander hither and thither, and whithersoever it will through the world of life; will poison its springs, will wither even its fairest blooms, and destroy its richest fruits without selection and without mercy.

By the cultivation of bacteriology and cognate sciences, by a deeper and more profound acquaintance with natural phenomena and laws, I can foreshadow in my mind the time when the whole range of zymotic and exanthematous diseases will have been subdued and conquered; when the seeds of each will have been isolated, and so studied that their individuality will be recognisable; the soils in which they will grow and those in which they will lie sterile will be known and appreciated, and be brought under cultivation by the hands of the medical men of the day; when the methods of dealing with them will be such that they may be reduced to harmless quantities; and when, by the spread of sanitary science, the whole human race may be protected from their evil influences.

It will not be in our day that these mighty triumphs will be won, but our successors will undoubtedly achieve them; and the time will certainly come when the kingdom of disease will be so closely narrowed down that only the necessary accompaniments of the changes and vicissitudes of natural laws, the evils attendant upon the wilful disobedience of those laws, the innumerable accidents to which life and limb must be for ever liable, and the inherent defects and deficiencies in the harmonious working of the parts of a machine so exquisitely and delicately constructed as is the frail body which, for a time, we inhabit will be the only kingdom in which the professors of medicine and surgery will be called upon to exercise their sway. Then will the victory of our science be complete, and the day will have come when the world will be called upon to acknowledge that the labours of the physician and the surgeon, patient, enduring, untiring, as they have been through all time, have not been in vain, and have reached their final consummation.

CHELTENHAM (Population, 46,950).—*Prevalence of Typhoid: traced to Use of Water from Shallow Wells.*—Notwithstanding the prevalence of typhoid fever during 1888, Surgeon-General Roch is able to report that the death-rate, 16.8 per 1,000, was lower than any recorded during the past fifteen years with one exception, that of 1881, when it was 15.8 per 1,000. He considers this due to a remarkable immunity from measles, the severe epidemic of 1887 having exhausted all the susceptible material. Of scarlet fever, only 3 genuine cases came under notice, and small-pox was entirely absent. One fatal case of diphtheria occurred, for which Mr. Roch could ascertain no other origin than the sleeping in a damp room on the ground floor, the paper on the walls being much mildewed. The total number of cases of typhoid fever were 107, of which the majority were traced to polluted water drawn from shallow wells in the low-lying parts of the town. Thirty-one deaths resulted, while diarrhœa caused 15, chiefly among infants. The zymotic death-rate for the year was 1.28 per 1,000. Mr. Roch again strongly condemns the use of water derived from shallow wells in the district. They are liable to gross pollution, and when it is remembered that there is an excellent public service available, the continued use of such wells is inexcusable. So long as they are continued in use the town will, in Mr. Roch's opinion, be subject, under certain conditions of rainfall, to a reappearance of fever.

ADDRESS IN MEDICINE,

BY

J. HUGHLINGS JACKSON, M.D.,
F.R.C.P., LL.D., F.R.S.,
Physician to the London Hospital, and to the National Hospital for the Paralysed and Epileptic.

ON THE COMPARATIVE STUDY OF DISEASES OF THE NERVOUS SYSTEM.

FIRST of all, I beg the President and Council of this great Medical Association to accept my heartiest thanks for the very high honour they have conferred on me in asking me to give this address. I have had much difficulty in choosing a subject, the difficulty being mainly in finding one on which I thought I had something to say, and on which I had not already said the little I was capable of. Finally, I concluded to consider once more, with all the care I could and with as little recapitulation as possible, the most important of general doctrines bearing on the science of medicine.

We have multitudes of facts, but we require, as they accumulate, organisations of them into higher knowledge; we require generalisations and working hypotheses. We have, so to speak, ready made for us, the hypothesis of evolution, one verified in numerous different cases. Huxley[1] writes: "The peculiar merit of our epoch is that it has shown how these hypotheses [one of which is the doctrine of evolution] connect a vast number of seemingly independent partial generalisations; that it has given them that precision of expression which is necessary for their exact verification; and that it has practically proved their value as guides to the discovery of new truth." I do not advocate the application of the doctrine of evolution to the classification of diseases for practical purposes, but believe, nevertheless, that its indirect value to clinical medicine is very great indeed, and that before long it will be directly helpful. Thinking that for clinical purposes we must continue to have arrangements of cases "by type,"[2] I once more urge that we should also attempt a parallel study of diseases as they are dissolutions—that is, reversals of evolution. By the latter means I hope that we shall be able to make broad and yet precise generalisations of great value. The man who puts two old facts in new and more realistic order deserves praise as certainly as does the man who discovers a new one. There is an originality of method. Gaskell has found out much that is new in his recent well-known researches on the nervous system; but I imagine that the greatest merit of his work is that he has made fruitful generalisations, and has set many things long ill assorted in realistic order. By doing this he will have put a stop to certain loose explanations in which the sympathetic figures. I do not pretend to be able to define generalisation as that term is used in science. May I say that it is the classification of things which are for the most part very different by some fundamental peculiarity each of them has? It is easy to see how one may be misunderstood when making generalisations after this fashion; one may be supposed to overlook important differences—not to be putting things in order but to be trying to organise confusion. I will give a series of illustrations of the method spoken of, because it is one I follow largely in this address.

1.[3] A patient of mine had lost one hand, but, as is most often the case, he had representing it, a phantom hand; this was always in a position as if encircling a vessel; the member had been blown off when he was holding a cylinder to be charged with an explosive. 2. An aphasic patient of mine frequently uttered, on being questioned,

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[1] *Reign of Queen Victoria*, vol. ii. p. 340.

[2] JOURNAL, July 14th, 1888.

[3] In his magnificent work, *Diseases and Injuries of Nerves*, 1872, p. 355, Weir Mitchell writes as follows: "E. C., aged 32, lost his left arm, five inches below the shoulder, nine years ago. When shot, the thumb turned into the palm, and continued in this state of spasm, so that when, six hours later, the limb was removed, the nail of the thumb had cut into the palm. He several times lifted the thumb, but it always returned to the same spot. For nine years the absent thumb still remains cutting into the palm." After speaking of various positions of phantom parts of limbs, Weir Mitchell writes (*op. cit.*, p. 354): "Another class has the hand constantly in some painful position which it occupied before the operation, so that the last real sensation is so stamped upon the sensorium as to forbid its erasure by any future impression."

but with no relevance to anything going on, "Come on," or "Come on to me;" he was a signalman, and had been taken aphasic and hemiplegic on the railway in front of his box; the presumption is that he was saying, or was about to say, those words when taken ill. 3. An epileptic patient told me that his first fit occurred when he was a soldier, and at the very time he was "numbering off;" after every subsequent fit, and before regaining consciousness, he used to count; this we observed when he was in hospital. 4. A woman I was asked to see in a surgical ward in the London Hospital, who had fractured her skull by a fall when laying down oilcloth on a staircase, kept, during partial unconsciousness a few hours before death, manipulating the counterpane of her bed. We supposed this to be a sort of continuance of the action of laying down the oilcloth; the patient desisted, for a time at least, when the nurse assured her that "it was properly laid."

These illustrations will appear incoherently grouped to those who do not happen to see that the intention in stating them is not to deal with stumps, aphasia, epilepsy, and injury to the head, but to make a basis for the discovery of the reason why there is a fixation of states, which are normally temporary, upon the sudden occurrence of lesions of the nervous system;[4] very different cases are chosen in order to make the basis a broad one. This is by way of illustration, but I hope that such facts are of some value towards the methodical study of persisting delusions. I suggest, quite hypothetically, that some very grotesque delusions may be a fixation of absurd beliefs in dreams, in cases where a sudden morbid change, or sudden increase of it, has occurred in the brain during sleep—such delusions as one mentioned to me by Dr. Savage; a patient of his believed himself to be a jar of Indian pickles.

Before going further, I must mention that most valuable work has been done by Anstie, Ross, Ribot, Mortimer Granville, Mercier, and Bland Sutton in the application of the principles of evolution to normal and abormal conditions of man's body. We ought not to forget that nearly half a century ago Laycock extended the doctrine of reflex action to the brain, and that so long ago as 1829 Von Baer announced "his great discovery, that the progressive change from homogeneity to heterogeneity is the change in which organic evolution essentially consists."[5] I need scarcely mention the name of Herbert Spencer, except to express my vast indebtedness to him; the first edition of his *Principles of Psychology* appeared so long ago as 1855, five years before the publication of the *Origin of Species*.

In the doctrine of evolution we have principles which no doubt apply to the whole organism and to every one of its diseases; it is at once a means of scientific classification and a guide to the discovery of new facts. Limiting myself in this address to the nervous system, I submit that ultimately those principles will help us to a more realistic explanation of symptomatologies so different as those in a case of paralysis of an external rectus and those in cases of insanity. The comparative study of nervous diseases—the study of them as dissolutions—is a process of generalisation. To attempt this generalisation without prior careful analysis of the things concerned, needing minute clinical study of individual cases, is not likely to lead to anything of permanent value. To compare and contrast the mere local lesions and the symptoms directly dependent on them only in the two cases instanced is not good method. The symptomatology of each must be regarded as the result of a flaw in an evolutionary whole. It is one merit of the method I am urging that it deals not only with the local lesion—with that, I mean, which disease (in the strict sense of pathological change) causes—which alone is dissolution, but also with the healthy rest; that is, it takes into account the evolution going on in the undamaged remainder of the nervous system. The full symptomatology of a case of ocular paralysis is not to be intelligently stated even unless activities of healthy centres, including the highest (all centres above the peripheral lesion) are considered; and a case of insanity is not properly analysed unless undiseased parts of the highest centres and all lower centres are considered (*vide infra*). In the two cases a great part of the symptomatology is owing to over-activity of perfectly healthy nervous arrangements; the erroneous projection and diplopia in the first, and the illusions, delusions, and all other positive mental symptoms in the second. To insist on the principle implied, I say in recapitulation that every case of nervous disease is a problem, not only in dissolution but in evolution; in example, he who is studying the physical process during an illusion in an insane patient is as certainly dealing with evolution as he is who is studying that process during the perception of a healthy person.

Before I give particular illustrations of dissolution, I will make brief statements concerning some different aspects of the one process evolution, of which dissolution is the reversal: (1) evolution is a passage from the most to the least organised. I must stay to remark on the term organised. "Highly organised" is frequently used synonymously with "very complex;" but by degrees of organisation I mean degrees of perfection of union and certainty of action of nervous elements with one another. Using the term organised in this sense, I say that the highest cerebral centres are the least organised (the "most helpless centres"), although they are the most complex, whereas the lowest centres are the most organised, although the least complex. In other words, we may say (2) that the evolutionary ascent is from the least to the most modifiable. If the highest centres were not modifiable, we should be very simple machines; we should make no new acquirements. If the lowest ("vital") centres were to become as modifiable as the highest are, life would cease. It is only another aspect of this statement—that the progress in evolution is from the most to the least organised—to say (3) that the passage is from the most automatic to the most voluntary (properly, "to the least automatic"); equivalently it is (4) from structures inherited most nearly perfected (acquirements of the race and of præhuman beings), such as the cardiac centres in the medulla oblongata (some centres of the lowest level of evolution)—from those comparatively perfectly evolved at birth—to those of the highest nervous arrangements of the highest centres, which are only incipient nervous structures, and which are evolving during the latest new mental states; (5) the process of evolution is from the simple to the complex; (6) from the general to the special. Reversals of evolution are effected by pathological processes, and are called dissolutions; they are reductions from the least organised, etc., towards the most organised, etc.

I can give no good illustrations of dissolution from lesions at the periphery. Nor can much that is definite be said in this regard of lesions of the spinal system (lowest level of evolution of the central nervous system). Yet we may say that in most cases of the ordinary form of progressive muscular atrophy the muscles first morbidly affected are the small muscles of the hand, and that in most cases of Duchenne's bulbar paralysis the tongue is first invaded. In these two cases the most special parts, in manipulation and in articulation respectively, fail first. Going higher up in the nervous system we find definite and certain illustrations. It is plain that hemiplegia from disease in the mid-cerebral region is a failure in the order from "most voluntary" towards most automatic; whether chorea and paralysis agitans are due to morbid changes in the region mentioned or not they certainly illustrate dissolution in the very same way as hemiplegia does. The numerous different phenomena of cases of aphasia are the best illustrations of the process of dissolution, but I have stated them several times.[6]

Dr. Donald MacAlister has pointed out in his admirable Croonian Lectures[7] that the febrile process exemplifies dissolution. "The thermal nervous system," to use his words, "has three parts; let us call them briefly the thermotaxic or adjusting, the thermogenic or producing, and the thermolytic or discharging mechanism."....."In the ascending scale of evolution," he continues, "we seem to rise from the thermolytic to the thermogenic, and thence to the thermotaxic nervous system." He considers fever as a process of dissolution, and, next, recovery from fever as a process of re-evolution. Some, presumably all, cases of insanity illustrate dissolution. I will content myself with quoting very briefly from that part of Dr. Savage's important work, *Insanity*, where he deals with general paralysis. In these cases, he writes, that the disease "affects first the highest intellectual and motor acquirements is undoubted." He says, too, "Both Dr. Maudsley and I have independently taught that in this progressive degeneration the last and highest acquirements fail first."..... We have very good illustrations of dissolution in the symptomatology of drunkenness. Long ago Charles Bell wrote:[8] "It is a fact familiar to pathologists that, where debility arises from affection of the brain, the influ-

[4] In the case of No. 1 the hand was blown off at a time when particular nervous arrangements of the nervous centres, from highest to lowest, were being discharged. The persisting memory, so to call it, of the last position of the lost hand implies a persisting state in the highest centres. Why that state remained permanently, it is for me impossible to say.

[5] Fiske, *Cosmic Philosophy*, vol. i, p. 342.

[6] JOURNAL, March 29th, 1884.
On the Nature of Fever, *Lancet*, March 26th, 1887.

[8] *Nervous System*, 3rd ed., p. 165.

ence is greatest on those muscles which are, in their natural condition, most under the command of the will. We may perceive this in the progressive stages of debility of the drunkard, when successively the muscles of the tongue, the eyes, the face, the limbs, become unmanageable; and under the same circumstances, the muscles which have a double office, as those of the chest, lose their voluntary motions and retain their involuntary motions; the force of the arms is gone long before the action of breathing is affected."[9] Lauder Brunton, in his *Pharmacology*, 3rd edition. p. 146, writes: "In the action of such poisons as alcohol, the nervous system appears to be paralysed in inverse order of its development; the highest centres going first, next the middle, and then the lowest. After this comes paralysis of the motor nerves, and, lastly, of the muscles themselves."

I now give a curious illustration. We see, not dissolution, but, this time, evolution illustrated by certain surgical cases—by the order of persistence of spectral representatives of parts of limbs lost by amputation. Weir Mitchell writes:[10] "The limb is rarely felt as a whole; nearly always the foot or the hand is the part more distinctly recognised, and, on careful questioning, we learn that the fingers and toes are readily perceived; next to these the thumb; then more rarely the ankle or wrist; and, still less frequently, the elbow and knee. Very often some fingers are best felt, especially the forefinger." This, the order in which the lost parts remain most vividly represented in consciousness, is almost exactly the order in which the parts physical do fail in dissolution of the nervous system.

Speaking most generally, and ignoring some very obvious qualifications, we may say that the hemiplegic man is reduced to a more automatic condition of movement, the aphasic to a more automatic condition of language, and the insane man to a more automatic condition of mind. There is a reduction to a lower level of evolution in each series.[11] Dissolution is exemplified in each of the following exceedingly different symptoms: 1. Most epileptiform seizures begin in the thumb or index finger, or in both; these digits are the most special parts of the body. 2. The words most often left to an aphasic who is, for the rest, entirely speechless, are "yes," or "no," or both; these "words," as I called them, are the most general of all propositions. 3. The aphasic may be unable to put out his tongue when told, although he moves it well in other ways; loss of the "most voluntary" movement, with persistence of the more automatic movements of that organ. 4. In what is called word-blindness, there is inability to recognise the latest learned, and very arbitrary, "objects," letters, and words, whilst the recognition of objects, properly so-called, is unimpaired, or comparatively so. 5. In early stages of atrophy of the brain, say, in that occurring so often after hemiplegia in men past middle age, there is defect of memory for recent events with seemingly good remembrance for long past circumstances, and there is at the same time loss or defect of the "finest," latest acquired emotions, with obtrusion of the coarser and earlier acquired. Different as these five examples are, they are alike in that dissolution is definitely illustrated by each of them.

I here stay to remark on what I think is the evolutionist's measure of mind. Opinions will differ vastly as to who are the men of greatest mental elevation. Some would put Napoleons highest, others Shakespeares and Goethes. But evolution, I think, supplies us with a scientific measure, which ignores superior and inferior, as these terms are ordinarily used with regard to men's minds. This measure is according to the intellectual and emotional differences between lower and higher races of mankind, and to those between children and adults. Higher races of men and adults have the latest acquired faculties, and these, according to Spencer, are, intellectually, the power of abstract reasoning, and, emotionally, the sentiment of justice. So that, instead of saying that a person is superior or inferior to most other men, we may say that he has more or less of the latest faculties of the race than most other men have. I by no means think that to have the latest intellectual faculties most highly developed is the same thing as being most endowed intellectually. I submit that the poet inherits in some ways more of the earlier acquired faculties of the race, and has less of the latest than the scientific man has; yet no one would say that poets are mentally inferior to scientific men. In the cases of atrophy of the brain recently instanced, there first occurs defect of the two "latest" faculties I mentioned; the patient easily becomes confused by consideration of things of a little complexity, and of which the elements are not before him, and is often peevish and selfish.

I admit that I have selected cases which will suit my purpose best. Some cases seemingly exceptional are not so. It is not meant that in every case of nervous disease the most voluntary of all parts of the body suffer first and most. Were that so all nervous diseases would affect first and most the thumb and index-finger. The word voluntary, a psychological term, is not the right word to use when speaking of physical processes. The progress of dissolution, properly stated on this aspect, is from the least automatic towards the most automatic. And in disease of any centre it is only supposed that the "most voluntary" (least automatic) parts represented by that centre suffer first and most. In an epileptiform seizure, beginning in the leg, the great toe is nearly always the part first in spasm; the "most voluntary" part of the leg suffers first and most from the cortical discharge.

To take a more extreme illustration. It may be said that the symptoms from morbid changes in the cerebellum do not accord with statements made as to the process of dissolution. I believe that all the skeletal muscles are represented in the cerebrum in one set of movements, and that all of them are represented in the cerebellum in another set of movements. In rough and only partial statement the order of representation in the cerebrum is of movements of the arm, leg, and spine. This agrees with a popular doctrine, for the order is that of the degree in which the three parts of the body are "under command of the will." The order of representation in the cerebellum is of movements of the spine, leg, and arm. This accords with the current doctrine that the cerebellum co-ordinates (*vide infra*) movements of locomotion. (I presume that a man's spine must be braced up before his legs can come into play in walking.) So that, ignoring the term voluntary on account of its psychological implications, and using the term special, we say that the arm is the most special part in the cerebral series, and fails first in disease of the brain proper; and that the back is the most special part in the cerebellar series, and fails first in disease of the cerebellum.

I now try to consider evolution and dissolution more methodically. I submit the following statements:—By aid of the doctrine of evolution we shall discover a harmony or rational parallelism between (1) psychology, (2) the anatomy and physiology of the nervous system, and (3) that important part of clinical medicine which deals with diseases of this system. It will help us towards a comparative study of all diseases of the nervous system, and in particular, to the realistic comparison and contrast of cases of insanity—diseases of the highest cerebral centres—with diseases of lower centres.

The doctrine of evolution implies that the whole nervous system has a sensori-motor constitution. It has long seemed to me that only on this basis can we show how it is that such very different sets of symptoms as convulsion and insanity (and, as I think, paralysis) are owing to disease of the cerebrum proper. The assignment of such a constitution to the whole of the nervous system shows that, when I speak of diseases of that system, reference, explicit or implicit, is always to parts of the body. (By "parts of the body," I mean non-nervous parts.) It is a merit of the method that parts of the body are necessarily taken into account in all nervous lesions. The nervous system by itself is a functional nothing; it is only something as representing parts of the body.

I carry the doctrine of sensori-motor constitution of the nervous system further than anyone else, so far as I know, since I urge that the highest cerebral centres (the "organ of mind" or anatomical substrata of consciousness) represent parts of the body as certainly as that of the lumbar enlargement does; they are evolved out of lower centres, which, as everybody admits, do represent parts of the body. No one denies that the highest centres contain sensory elements; no one denies that very many, if not all, parts of the body are represented sensorily in the "organ of mind." But to their representation motorily in that organ there seems to be great objection. It is not many years since the ascription of motor representation to any part of the cerebrum proper was denied. It is agreed upon now that some convolutions (Rolandic region) contain motor elements—and, according to some, nothing else. The præ-frontal lobes (convolutions in front of the Rolandic region) are said to be, or to be part of, the "mental

[9] My friend and colleague, Dr. Gowers, drew my attention to this passage; I gave the quotation, *Lancet*, February 15th, 1873. (On the Anatomical and Physiological Localisation of Movements in the Brain.)

[10] *Op. cit.*, p. 350.

[11] Dr. Mortimer Granville, who has for some years applied the doctrine of Dissolution, uses the term "denudation," and takes note of the "exposure" of the lower layers, which I call the lower levels of evolution, remaining.

centres." I admit that they are a great division of these "mental centres," but say that they are motor too—that they are the highest motor centres. And Ferrier, who agrees with me in thinking that these lobes are motor, finds that, after their ablation in monkeys, there is degeneration of fibres "descending" as low as the medulla oblongata, but no lower; this is proof positive that the præ-frontal lobes are, at least to some extent, motor. I will here state in outline what I believe to be the hierarchy of the motor centres, only alluding to that of the sensory series and ignoring the cerebellum.

1. The anterior spinal horns and their homologues higher up (nuclei of motor cranial nerves) are the lowest motor centres (both of the cerebral and cerebellar systems). These lowest motor centres, with the corresponding sensory centres, make up the lowest level of evolution of the central nervous system.

2. The convolutions of the Rolandic region are the middle motor centres of the cerebral system. With the corresponding sensory centres, they make up the second or middle level of the central nervous system.

3. The præ-frontal lobes are the highest motor centres of the cerebral system. With the corresponding sensory centres, they make up the third or highest level of the central nervous system, that is, the "the organ of mind."

Here I may best remark on the differences between muscles and movements, a matter of vast importance. To speak figuratively, the central nervous system knows nothing of muscles, it only knows movements. I have already stated the speculation that all muscles of the skeleton are represented in the cerebrum in one set of movements, and all in the cerebellum in another set. I here give another illustration simplifying it in several ways. There are, we shall say, thirty muscles of the hand; these are represented in the nervous centres in thousands of different combinations—that is, as very many movements; it is just as many chords, musical expressions, and tunes can be made out of a few notes. I now speak of the representation of the muscles of the hand in the three orders of motor centres just spoken of. 1. In some lowest motor centres (anterior horns) which are evolved out of the muscles of the hand, these muscles are represented in numerous different combinations, as simple and very general movements. 2. In the middle motor centres (Rolandic region) which are evolved out of the lowest motor centres, the same muscles are represented (re-represented) in still more numerous different combinations, as complex and special movements. 3. In the highest motor centres (præ-frontal lobes), which are evolved out of the middle motor centres, the same muscles are represented (re-re-represented) in innumerable different combinations, as most complex and most special movements. Anticipating in part what is to come, the last representation is of "finest" movements of the hands in the anatomical substrata of tactual ideas and of other mental states.

I fear the doctrine of sensori-motor constitution of the "mental centres" will be a hard one to many of my medical brethren. My contention, nevertheless, is that the highest centres ("organ of mind") have no other function than that of representing or co-ordinating parts of the body; bearing in mind the subordinate centres, we may say that they represent parts of the body triply indirectly. Function is a physiological term, and it is, I submit, improper to speak of states of consciousness as being "functions of the brain;" we can only say that states of consciousness attend functioning of the brain, of those parts of it, at least, which are the highest cerebral centres. We can only affirm concomitance, and why immaterial processes always go along with the material processes of our brains is, as yet at any rate, inexplicable. The late Professor Clifford wrote:[12] "I may very well say that among the physical facts which go along at the same time with mental facts, there are forces at work. That is perfectly true, but the two things are on utterly different platforms, the physical facts go along by themselves, and the mental facts go along by themselves. There is a parallelism between them, but no interference of one with the other."

It is neither more nor less easy to understand the nature of the relation of the two utterly different and yet concomitant things if the physical thing, the "organ of mind," has a sensori-motor constitution, than it is on any other hypothesis as to the constitution of that organ. Here is an express repudiation of any intention on my part to attempt to explain psychical states by anatomico-physiological states. It is not the mind, but the physical basis of mind, which is a product of evolution; it is the organ of mind, not the mind, which, being an evolution out of the rest of the body, is representative of it. When tracing an evolutionary ascent from the muscles of the hand to the highest cerebral centres nothing was said even remotely implying that the most complex, etc., representation of these muscles became, or became part of, tactual ideas; it was only said that this most complex, etc., representation was part of the physical basis of those ideas. I know of no evolutionist of repute who has attempted the marvellous feat of "getting the mind out of the body." For my part, I am content with "getting" the organ of mind out of the rest of the body.

I contend that the highest centres represent all parts of the body, literally all parts supplied by nerves—not only sensory regions and muscles of such parts as eyes and hands ("organs of special sense"), but of legs and arms, of internal viscera, of external viscera (as sweat glands), and all the rest. Under the head of movements, one takes in effects produced in glands by what the physiologist calls their motor nerves, and also negative movements, so to call them, that is, effects on musculatures produced through the intermediation of inhibitory nerves. The highest centres are centres of universal representation or co-ordination. When dealing with the physical condition in coma, Dr. Mercier writes: "Thus we arrive at this most important conclusion: that the highest nervous processes, which form the substrata of the most elaborate mental operations, represent at the same time not only the most elaborate forms of conduct and muscular movements, but also *every part of the organism* (italics in original) in some degree."[13] Ribot, in his remarkable and most valuable work on *Personality*, writes: "Nous pourrons dire que la couche corticale représente toutes les formes de l'activité nerveuse; viscérale, musculaire, tactile, visuelle, significatrice."

No one doubts that the lowest level of evolution (roughly, pons, medulla, and cord) represents all parts of the body; it is certain that motor effects in nearly all parts of the body are produced by discharges of the so-called "motor region" (motor division of the middle level). I am only going a step further when I suggest that the highest level (although "for mind" in the sense of being the physical basis of mind) is also universally representing. A higher level of evolution is, so to put it, the lower "raised to a higher power." Each of the levels being universally representing their evolutionary differences are in the degree of complexity, etc., in which each represents all parts of the body.

The phenomena of an ordinary epileptic fit, epilepsy proper (I am not speaking of epileptiform seizures, which are owing to sudden discharges beginning in parts of the mid-cortical convolutions, or, as I call them, middle motor centres) seem to me to accord with the hypothesis of sensori-motor constitution of the highest centres and of their universality of representation.[14] Cessation of consciousness being the first, or a very early, psychical event in the paroxysm, I presume that the first correlative physical event must be a discharge (here a sudden and excessive one), beginning in some part of the physical basis of consciousness (highest centres). Now, it is certain that in a severe epileptic fit there are effects produced in nearly all, presumably in all, parts of the body, and obviously the effects we see are motor or their equivalents. In a slight fit of epilepsy (*le petit mal*), the effects are widely distributed; they are so various as pallor of face, increase of saliva, arrest of respiration, and emission of urine. The effects are crude, but this does not invalidate them as witnesses to the representation of parts of the body in the highest cerebral centres; the process by which they are produced is a crude one; the "epileptic discharge" differs from normal discharges in being sudden, excessive, and rapid; and also, I submit, in starting in some small part of the highest centres (a "discharging lesion" or "physiological fulminate").

That artificially induced discharges of parts of the Rolandic region (middle motor centres of the cerebral system) produce effects in nearly all parts of the body, visceral included, is demonstrable. No one doubts that in this region all the skeletal muscles are represented in movements; but the organic parts also, presumably all of them, are represented in it. If curara be given to a dog, its skeletal muscles are, by paralysis of their motor nerve-endings, put out of reach of the effects of central discharges; upon Faradic excitation of the curarised animal's sigmoid gyrus (artificial respiration being kept up) the fit is

[12] *Fortnightly Review*, December, 1874, p. 728.

[13] *Brain*, January, 1887.

[14] I have considered in detail the phenomena of epileptiform paroxysms with reference to the hypothesis of universal representations by the highest cerebral centres in the Bowman Lecture, *Trans. Oph. Soc.*, vol. vi.

limited to the organic parts; we witness effects on viscera or their apparatus which we can never observe in man; the dog's abdomen having been opened, there are seen, among other effects, increased flow of bile, a little paling of the kidneys, and contraction of the spleen. In this case the artificial discharge is started in part of the middle motor centres; but, at any rate, that universal effects are so produced gives some countenance to the supposition that the convolutions in front of these centres, highest motor centres, are also universally representing.

Another way of stating the function of the highest cerebral centres is to say that whilst a man is having states of consciousness (in artificial analysis, Willing, Remembering, Reasoning, and Feeling) there are occurring correlatively with those purely psychical states the physical things, slight discharges of nervous arrangements of his highest centres representing the whole of his body. In differing states of consciousness different nervous arrangements of these centres representing or co-ordinating different particular parts of his body more than all the rest will be engaged.

It is just here that the harmony of psychology with the anatomy and physiology of the nervous system is, I think, to be best seen; it is here too that the basis for the comparative study of cases of insanity (diseases of the highest centres) with diseases of lower centres is established. I have elsewhere[15] analysed very briefly, and, I admit, very imperfectly, the highest cerebral centres considered as they form the physical basis of consciousness.[16] The conclusion from that analysis was that the highest cerebral centres are sensori-motor arrangements representing all parts of the organism in most complex, etc., ways—a conclusion agreeing with the hypothesis of evolution, and strictly according with the phenomena of epileptic paroxysms. If that analysis be valid, there is no difficulty in seeing how it is that epilepsy proper is a disease of the "organ of mind." The epileptic convulsion is a brutal development of the most complex, etc., movements represented in the anatomical substrata of the four "faculties" mentioned, along with a development of the less complex, etc., movements represented by the middle and lowest motor centres.

I will here analyse the physical basis of but one mental state, artificialising largely. There is no such thing as a separate centre for tactual ideas, but for simplicity of exposition, we may imagine some part of the highest centres to be such a centre; popularly, it is a centre for objects explored by the hands. When we actually explore an object the skin of our fingers and the muscles of our hands are engaged; and at the same time all sensory centres from lowest to highest, and all motor centres from highest to lowest. The tactual centre represents the skin and muscles of the part of the periphery mentioned—is sensori-motor in that way. The sensory element in the tactual centre corresponds to the surface of objects (the homologue of colour in visual perceptions and ideas), the motor element to their extension (shape and size). I have already mentioned the motor element when speaking of the hierarchy of motor centres. I illustrated by the representation of the muscles of the hand; their final representation (re-re-representation) in the highest centres is the motor element in the tactual centre.

During the actual exploration of an object there is a vivid mental state; we may call it a tactual perception. Now suppose we think of the object when it is absent, popularly, "have an idea of it;" there is then a faint mental state, a tactual idea. In both cases the centre for tactual ideas is engaged; a tactual idea is a faint tactual perception, and a tactual perception is a vivid tactual idea; the centre for tactual ideation and for tactual perception is one; it is made up of the same sensori-motor arrangements of the highest centres.

But it may be said that whilst thinking of the object there is no movement, and it may be averred that the correlative physical process is sensory only; but the sensory element corresponds only to surface; the extension requires accounting for; the object thought of has shape and size. I submit that there is corresponding to extension slight discharge of the motor nervous arrangements of the tactual centre, which, when strongly discharged in the actual exploration, did move the hand; there is "nascent movement." The physical difference more fully is that (1) during exploration of the object, having a tactual perception, the tactual centre is strongly discharged from the sensory periphery, and reacts upon the muscular periphery; there is strong and complete sensori-motor action, all orders of centres being engaged; whilst (2) during thinking of the object, having a tactual idea, the tactual centre is slightly discharged, and the discharge is limited to the centre; there is weak and incomplete sensori-motor action; the highest centres alone are engaged. In both cases there is sensori-motor action, in both the same nervous arrangements of the highest centres—those representing the skin of the fingers and the hand muscles—are discharged. So far for two degrees of normal discharges of the tactual centre. Now let us suppose that a sudden, excessive, and rapid discharge (such a discharge as that which produces an ordinary epileptic fit) begins in some part of the tactual centre, and soon involves the whole of it. We should then have a miniature epileptic fit. During the onset there would be tingling referred to the fingers; there would be (middle and lowest centres being subordinately engaged) also convulsion of the hand. No tactual ideas would arise during such a discharge.

Asking you to accept provisionally the conclusion that the anatomical substrata of will, memory, reason, and emotion (together states of consciousness), represent parts of the body (together, all parts of it, sensorily and motorily), in most complex, etc., ways, I go on to speak of the relevance of that hypothesis to the study of some important diseases. There is no difficulty in understanding that insanity arises from disease of the organ of mind. But we have to face this question. How is it that the superficially seeming quite different phenomena, 1, convulsion with cessation of consciousness (an epileptic fit); and, 2, insanity result from morbid affection of the "organ of mind" (highest centres)? This problem is forced on us. We cannot consider one of the two by itself, and ought not to try to explain each quite separately. For often enough there is the sequence, an epileptic convulsion with loss of consciousness, and then temporary insanity, for example, epileptic (post-epileptic, I think) mania. Moreover, I believe that paralysis also results from negative states of the highest centres; I submit that it exists in temporary post-epileptic insanities, indeed in every case of insanity.

After epileptic fits there is often insanity. There are two degrees of it; there is according to the severity of the paroxysm, mania, or coma, physically two depths of dissolution effected by the prior epileptic discharge. I first take coma,[17] which is acute temporary dementia rapidly produced. Here I remark again on the need of distinguishing psychical states from nervous states. If anyone compares and contrasts post-epileptic coma as a negative psychical state with a case of paralysis, say hemiplegia, which is a negative physical state, he is attempting a pseudo-comparative study. I submit that the negative affection of consciousness in the comatose patient implies a correlative negative state of more or less of his highest centres which causes paralysis. It is not the negative affection of consciousness, but the paralysis from the negative state of elements of the highest centres which that negative affection of consciousness implies, which we can reasonably compare and contrast with the hemiplegia. It is true that in post-epileptic coma there is not limited, regional paralysis, such as hemiplegia or monoplegia; there is supposed to be some universal, I do not mean total, paralysis. I am not speaking of paralysis of the muscles. There is loss of some movements of all parts of the body. That there is some universal paralysis after a severe epileptic fit accords with the hypothesis of universal representation by the highest centres, and is in harmony with the universality of the convulsion in the prior paroxysm. If a man cannot move an arm after a convulsion limited to that limb, no one hesitates to call that condition a paralytic one. Why then should not the name be given to universal motionlessness after a universal convulsion? To say that the patient who is unconscious does not move because he is unconscious is to give an explanation which explains nothing. Beevor has noted lateral deviation of the eyes after epileptic fits; surely this is indirect evidence of some paralysis. Moreover, Westphal, Gowers, and Beevor have observed alterations of "deep reflexes" after such seizures, and this too accords with the view that the man comatose after such seizures is paralysed. Here let me say,

[15] Croonian Lectures, JOURNAL, April 12th, 1884.

[16] I then spoke of centres for Will, Memory, Reason, and Emotion, the artificially distinguished elements of consciousness. It was a mere artifice to imagine such centres. The evolutionist does not try to localise volition or any other mental faculty in the brain; he is content with attempting to localise parts of the body in the highest cerebral centres. For my part, I think there are not in the cortex-cerebri any abruptly demarcated centres for any kind of representation. The recent researches of Beevor and Horsley on the mid-cortex seem to me to show that the current hypothesis as to localisation is untenable.

[17] I would refer all interested in the application of the doctrine of evolution to the investigation of diseases of the nervous system to Dr. Mercier's masterly article "Coma" (*Brain*, January, 1887), a most important contribution to the methodical study of insanity.

once for all, that no doubt in post-epileptic coma, besides paralysis from loss of most complex movements represented in the highest centres, there will be after a severe fit some paralysis from loss of less complex movements represented in the middle motor centres, and some from loss of simplest movements represented in the lowest motor centres. For in the prior severe epileptic fit all centres are engaged; there is an excessive process from highest centres to muscles. Indeed (Westphal, Gowers, and Beevor), after some epileptic fits there is temporary loss of the knee-jerks, showing exhaustion of the lumbar centres, which are some of the lowest centres.

The conclusion about post-epileptic coma is very important, for from it we make the hypothesis that there is paralysis in all cases of insanity, a widespread or universal paralysis—that is, paralysis of a kind corresponding to the universality of representation of the body by the highest centres, which are certainly diseased in cases of insanity. I must now briefly analyse these cases of disease of the highest centres.

In cases of insanity the mental condition is, as Dr. Monro long ago insisted, duplex; it is of two opposite elements, one negative and one positive; cases of perfect dementia, if there be such a thing, where the mental condition is entirely negative, are excepted. Ignoring perfect dementia, there is always some negative affection of consciousness (negative mental symptoms) in cases of insanity; there are degrees from slightest defect of it, such as that existing in trifling confusion of thought, to nearly complete loss of it, as in dementia, or in coma which is acute dementia. We must not speak as if there were no degrees between perfect consciousness and unconsciousness. There are also positive, often superpositive, mental symptoms coexisting with the negative. The defect of consciousness and the consciousness remaining (that is what I just called the positive mental symptoms) in cases of insanity vary inversely. When the positive mental symptoms are many and elaborate, and the defect of consciousness therefore little, the former may attract exclusive attention. Slight degrees of defect of consciousness are often disregarded. A patient may be said to be "perfectly conscious," and be said to have illusions, delusions, etc., as if these positive mental symptoms were his sole symptoms; but surely these positive symptoms of themselves imply the coexisting negative states of some non-recognition and some non-reasoning, that is, they really imply some coexisting defect of consciousness. A patient may be said to be "perfectly conscious," although, when his symptoms are given, he is described as apathetic, as forgetful, as confused, and as having lost regard for others; these popular statements are nearly, if not quite, equivalent to the technical statements that the patient is defective in will, memory, reason, and motion—in other words, that he *is* defectively conscious.

The correlative physical condition of the highest centres in cases of insanity is correspondingly duplex. The negative affection of consciousness implies a negative state of, or of elements of, some nervous arrangements (temporary loss of their function or actual loss of them) of the highest centres. It is this negative state alone which implies paralysis; this alone is dissolution, this alone is the result of disease in the sense of pathological change.

Now for the physical condition corresponding to the positive mental symptoms. As before said, when speaking of the case of paralysis of an external rectus and of cases of insanity, every nervous disease is to be considered as a flaw in an evolutionary whole; and the assertion was then made that great parts of symptomatologies are owing to activities of healthy nervous arrangements. I submit that all the positive mental symptoms in the symptomatology of insanities occur during activities of healthy nervous arrangements remaining in the maimed highest centres; they are, or are parts of, the insane man's mentation; they are, or are signs of, his lowered consciousness; his illusions, as we call them, are his perceptions, and his mental symptoms altogether are lower homologues of his normal mentation, and are his will, memory, reason, and emotion. Putting the matter still otherwise, the positive mental symptoms do not signify dissolution; they signify evolution going on in what disease has spared; they are signs of survival of the fittest states on the lower, but now the highest, level of evolution remaining. The sensori-motor arrangements of this lowered level (sublevel of the highest level) may be over-active from loss of control, but this is a physiological abnormality; when I say that they are healthy, I mean that they are untouched by any pathological process; they are in the same case as the heart is when it is beating more frequently after section of the vagus. When a general paralytic believes himself to be Emperor of Europe, I submit that this delusion does not arise during activities of any nervous elements touched by any sort of pathological process; but, on the contrary, that it is framed during activities in what remains of his highest centres, that is to say, in what disease has spared—presumably the posterior lobes and what is left intact of the anterior. This delusion (his belief) signifies evolution going on in the remains of a mutilated nervous system, as certainly as his beliefs when sane signified evolution going on in an entire nervous system.

I can now consider the other degree of post-epileptic insanity, mania. Manifestly, the mental condition is duplex; the patient is "unconscious" (significant of dissolution) as well as furiously acting (evolution going on). By artifice, speaking of layers (sub-levels) of the highest centres, I will suppose that his "unconsciousness" signifies loss of function of the highest two layers of his highest centres. This produces some universal or widespread paralysis, but less than that in post-epileptic coma, in which, a deeper dissolution, we shall imagine that the highest four layers are functionless But the positive symptoms of the post-epileptic (unconscious and) maniacal patient are owing to over-activity of sensori-motor arrangements of the healthy third layer and of still lower layers of his highest centres; these layers, now his highest, are in great hyper-physiological activity, being uncontrolled by the normal highest two layers which have been suddenly rendered functionless. To say that there is some universal paralysis and yet universal activity is not contradictory. It would be a flat contradiction if it were said that all the patient's muscles were perfectly paralysed and at the same time in great activity. There is supposed to be loss of some movements of all muscles, with over-development of other movements of those same muscles. Let me consider the matter analogically. Often do we encounter cases of imperfect hemiplegia; here, although clinically we may say that the muscles of the limbs are weak, there is really loss of some movements of all the muscles of the limbs, with persistence of others of those same muscles. I can now consider the sensori-motor constitution of the nervous system more widely.

In order to make a proper comparative study of nervous diseases on a large scale we must reduce different symptoms to a common denomination. The widest assertion in accord with the hypothesis of sensori-motor constitution of the whole nervous system is, that negative lesions of every part of it produce paralysis, sensory or motor, or both, and nothing whatever else.

I will illustrate this dictum further, speaking, however, of motor paralysis only, by which I always mean loss of movements. The assertion made is not a mere truism. For instance, it may be said that negative lesions of the highest cerebral centres cause loss of consciousness. I have been urging that they produce paralysis. I admit that consciousness ceases or diminishes correlatively with loss of function in these centres: but this is not contradictory of the statement that the loss of function causes paralysis. So anxious am I to make out a good case for the sensori-motor constitution of the highest centres that I will state a comparatively simple example of artificially produced insanity, dementia, in a lower animal. When a rabbit's cerebrum is cut out the animal is demented. But movements of every part of its body can be evoked by appropriate incitations. Nevertheless, I declare that the animal is paralysed. It retains all simple movements represented on the lowest level of evolution, which is pretty much all that is left of its cerebral series. But I submit that it has lost all the more complex movements; all those it no longer makes—all those movements which, in the human subject, we should distinguish as the physical aspect of Conduct—and is, therefore, universally paralysed. Further illustrations must be given in outline and briefly. We ought to analyse symptomatologies very carefully; the positive or superpositive symptoms in any case of negative lesion of any nervous centre cannot possibly result directly from that lesion. For example, the destruction effected by a tumour of the middle lobe of the cerebellum cannot produce the disorder of co-ordination which nevertheless is present in such a case. My submission is that this lesion produces paralysis only; this is first, I think, loss of some movements of the spinal muscles. The positive symptoms, the erratic movements of the legs by which the patient in an early stage of his ailment does somehow get along, are the outcome of over-activity of perfectly healthy nervous arrangements; these are doing more than their normal share of work. So that, comparing and contrasting such a case with one of hemiplegia, the things comparable and contrastable are not the "disorder of

co-ordination of locomotor movements" with the hemiplegia; the comparison and contrast are of two cases of paralysis, of loss of movements of the spinal muscles with loss of movements of the limbs. I submit that the formula describing all inco-ordinations with negative lesions of nervous centres is that there is, negatively, loss of some movements, paralysis (this alone being the result of pathological change), with, positively, forcing of some other movements of the same muscles. In saying this, the assertion I made early in this address, and repeated when stating the duplex condition in cases of insanity—that much of the symptomatologies of nervous diseases is owing to activities or over-activities of healthy nervous elements—is implicitly reiterated. Now for other examples of paralysis from negative lesions of centres.

I believe that in what is commonly called tremor in a case of disseminated sclerosis, say of an arm, there is paralysis in the sense of loss of some movements of the limb; the tremor itself is owing to the fact that the excursions of the limb have to be effected by fewer, and presumably less fit, movements than normal. Observe there is loss of some and retention of other movements of the same muscles. The movements by which the limb does carry, although erratically, a cup to the mouth are not blameworthy; they are the best in the evil circumstances, the next best to the normal; they are produced, I suggest, by discharges of healthy nervous arrangements. Let me illustrate the principle involved by a very simple case, and this time by one in which the muscles are paralysed. When a man has paralysis of the extensors of the forearm, his grasp is weak and the hand moves clumsily in all its uses. But no one thinks of blaming the flexors for the weak grasp and for the clumsy operations of the limb; the flexors are acting faithfully; what they do is badly done because the extensors will not co-operate. So I suggest that, in the kind of tremor spoken of, the fault is that certain movements being lost they no longer co-operate with others which, being unaided, move the limb erratically; the real fault, what the pathological change causes, is paralysis. That a patch of sclerosis, if it be an absence of proper nervous elements, can cause any movements, good or bad, is an impossible thing; the tremor has, however, been ascribed to imperfect function of intact axis cylinders in the parts sclerosed. Now for another example. I have long held that the lesion in cases of aphasia produces paralysis in the sense of loss of complex, etc., movements of the articulatory muscles. It may, however, be urged that the articulatory muscles move well; so they do in simple operations, but they never move so as to make articulations (syllables). I have so recently dealt with this matter[18] that I will say no more of it. I will, however, allude to what I said of Semon and Horsley's experiments on the representation of the vocal cords in the cortex. These experiments demonstrate that in one case at least there may be loss of some movements of a muscular region, with persistence of so many other movements of that region that no disability in the working of the muscles is discoverable. (These experiments are a strong confirmation of Broadbent's well-known hypothesis, for one case at least.) There are other cases in which paralysis exists in which it is not expressly thought of. In cases of pernicious diabetes the lesion is supposed to be of a certain part of the great vasomotor centre; if so, then what the disease (pathological process) produces is nothing but paralysis of the hepatic arterioles. Speaking figuratively, the medulla oblongata knows nothing of glycogen or sugar; it only knows the hepatic arterioles. Thus, in a scientific classification, pernicious diabetes is a paralysis from lesion of a part of the spinal system (lowest level of evolution of the central nervous system) as certainly as that ordinary progressive muscular atrophy, or anterior-polio-myelitis, is. I suggest that the xerostomia ("dry mouth"), first described by Hutchinson, and soon afterwards by Hadden, is also a paralysis—that it is owing to a negative lesion of the centres for the motor nerves of the salivary and other oral glands.

I submit that the essential thing, that which disease, in the strict sense of pathological change, produces, in cases of insanity, "disorders of co-ordination" with negative lesions, tremor, aphasia, pernicious diabetes and xerostomia is paralysis. This way of looking at cases is most important when we are engaged in the comparative study of nervous diseases, and especially of insanities (diseases of the highest level) with diseases of the lowest level.

I will now give a series of fragmentary illustrations, largely hypothetical, of losses of some and persistence of other movements of the same muscles, the movements lost and those persisting varying according to the level of evolution damaged. I submit the hypothesis that (1) progressive muscular atrophy, (2) paralysis agitans, and (3) general paralysis are homologous diseases. The comparison and contrast is not of wasting of muscles, tremor, and a negative psychical defect. Analysis shows, I think, that, artificially limiting illustration to the hand, there is loss respectively of (1) simplest, (2) more complex, and (3) most complex movements of the hands. The comparison is of three cases of paralysis. The lesion is supposed to be wasting of cells, in the order from smallest towards largest, of lowest, middle, and highest motor centres respectively. The cases differ according to the level of evolution morbidly affected. Referring back to what was said on the hierarchy of motor centres, I now go into more detail.

1. In progressive muscular atrophy there is loss of simplest movements of the hands (cerebral and cerebellar), of those represented in some of the lowest motor centres (anterior horns). In this case the muscles are cut off from the influence of the whole central nervous system and waste. It is important to note that there is retention of more complex (middle centres) and most complex (highest centres) movements of the hands, certainly of motor nervous arrangements for them. Did not motor nervous arrangements still representing the hand remain in the highest centres, the patient could neither think nor dream of moving the part, and would have no physical basis for tactual ideas.

2. In paralysis agitans there is (this is, of course, hypothetical) loss of more complex movements of the hand, those represented in the middle motor centres. There is retention of the most complex movements represented in the highest motor centres, and also of the simplest represented in some lowest. With this loss of more complex movements (we might say "middle movements") there is, in the tremor, development of simplest movements of the same muscles, the latest stage being rigidity. I submit that these movements are the result of mere physiological over-activity of the healthy lowest motor centres. To repeat, there is a duplex condition of the hand; negatively loss of complex (middle) movements of its muscles, and, at the same time, super-positively, over-development of simplest (lowest) movements of the same muscles. This case (2) differs doubly from (1), for in (1) the movements lost are (*a*) simplest, and (*b*) both the cerebrum and cerebellum are cut off from the muscles, whilst in (2) the movements lost are (*a*) more complex, and (*b*) the cerebellum remains united through the lowest motor centres with the muscles. (I have suggested that the cerebellum co-operates with the anterior horns in producing the tremor.)

3. In general paralysis there is loss of some of the most complex ("finest") movements of the hands, those represented in the highest motor centres, of those entering into the physical bases of tactual ideas and of other mental states. Here there is retention of less complex (middle) and of simplest (lowest) movements.[19]

Of course the negative psychical defect in general paralysis is wider than that answering to loss of motor elements in the highest centres representing the hand. I have been artificially limiting the illustration. Yet if Spencer be right in saying that all other ideas have to be translated into tactual ideas, to lose tactual ideas is to become imbecile. I will here make further remarks on the negative mental defect in cases of general paralysis. I ask you to bear in mind the suggestion that the positive mental symptoms in this insanity, as in all other insanities, correspond to activities of healthy nervous arrangements; if so, we have nothing to do with them at the time when we are dealing with the effects of pathological processes.

Most mentation is carried on in visual and tactual ideas, and by aid of words. To have negative affection of consciousness is therefore to have especially loss of these three—I shall limit consideration to them—and thus it implies that there is correlatively a negative state of their sensori-motor bases. In general paralysis the lesion, if of the highest motor centres, is of the motor elements in those sensori-motor nervous arrangements—is loss of more or fewer of the most complex ocular, manual, and articulatory movements; the lesion therefore produces paralysis in the sense of loss of "finest" movements of the three parts. I submit that, taking an early stage of general paralysis, the tremor of the hands is indirect evidence of loss of most complex movements of these parts, and further evidence is the lack of dexterity in manipula-

[18] JOURNAL, July 14th and 21st, 1888.

[19] Of course I do not mean that the lesions in general paralysis are limited to the highest motor centres. I am dealing with what I suppose to be the effects of lesions of those centres in this disease, and am taking but one fragment of these effects in illustration. Moreover, general paralysis is not a well-defined clinical entity.

tion. Similarly for the defective articulation. Now for paralysis corresponding to loss of visual ideas; in these ideas most of all mentation is carried on. Here I admit a discrepancy. It is said that there are no abnormalities in ocular movements in general paralysis; but I think that there is, in some cases, a want of even gliding of the eyes in their different excursions. I say this diffidently, and, instead of founding anything on it, will admit that I can show no evidence of paralysis answering to loss of motor elements of the physical bases of visual ideas in cases of general paralysis. (The pupillary inabilities in this disease are presumably owing to lesions of lowest motor centres.)

ADDRESS IN SURGERY,

BY

T. PRIDGIN TEALE, M.A., F.R.C.S., F.R.S.

DETAIL IN SURGERY.

In deciding what line of thought to select for this address, I had to consider whether, following the example of many of my predecessors and of the earlier retrospective addresses, to give an account of recent advances and changes in surgery, or to select some definite subject perhaps not entirely in accordance with precedent.

Happily my immediate predecessor devoted his address to a review of the surgery of the last half-century, absolving me from the obligation to adopt a similar course, and setting me free to choose a subject more congenial to my habit and work.

"Detail in Surgery" is the title selected for this address, in which I hope to show how much some of the triumphs and shortcomings of modern surgery are made or marred by the carrying out of detail, detail which is essentially embodiment of principle, not the mere multiplication of points of practice such as may not materially further the end in view.

In working out this line of thought, I hope to be able profitably to employ the time at my disposal, and to give prominence to conclusions which have been formed during a surgical life of over thirty years, made up not of my own work alone, but very largely of the freest interchange of thought and experience with most friendly and active-minded colleagues, medical and surgical, with whom it has been my great happiness to be associated. In so doing, it has been my endeavour to be as little egotistical as is compatible with the attainment of the end in view.

Ligature of Arteries.

It happened not long ago that I had to deal with a wound of the brachial at the bend of the elbow. Esmarch's tourniquet enabled me to expose beautifully to the eye a longitudinal slit in the artery. Of course I was obliged to apply a ligature on both sides of the puncture. There were then clearly exposed to view the two ligatures and about half an inch of the artery containing the slit. It occurred to me to divide the artery between the ligatures, and so to relieve obvious tension. I then appreciated what I had never before fully realised in connection with ligature of an artery, the immense elasticity of the arterial coats. The separated ends receded fully half an inch from one another. The question at once occurred to me, Can it be right ever to tie an artery by a single ligature, and to leave this powerful force of elasticity to work for ulceration of the coats and gaping of the ulcer, with the risk of final disturbance by retraction of the divided ends when ulceration has completed its work? May we not here find an explanation of the numerous failures of ligature of the great arteries of twenty and thirty years ago, and of the fatal secondary hæmorrhages, chiefly from the distal end? Some may say that antiseptics and the cutting short of the ligature have changed all that, have reduced the risk of ulceration of the coats of the artery and of secondary hæmorrhage. Well, antiseptics fail now and then; and if they should fail we may be thankful for the additional protection of a doubly-tied divided artery. Secondary hæmorrhage and fatal result will be thereby rendered extremely improbable. Recently I assisted my friend, Mr. R. N. Hartley, in a case in which he first ligatured the femoral and, a week later, the external iliac on the same side in the same patient. On both occasions he doubly tied and divided the artery with admirable result. This principle, proposed by Abernethy and afterwards forgotten, has recently been restored to practice at St. Bartholomew's Hospital by Mr. Walsham, and is, I believe, practised elsewhere. May we not call this "a detail" in the operation of tying an artery? Does it not embody a principle —the principle of physiological rest? Are we to recognise and act upon the fact of the elasticity of an artery or are we to ignore it, and to place our patient at the mercy of elastic drag, tension, ulceration, retraction when liberated, and secondary hæmorrhage? Does it not also involve the larger principle of *rest* as an important factor in the healing of any tissue?

Stricture.

There is a form of instrument for the treatment of stricture which has been but little written about and, although at last slowly making its way into use, has not met with the attention which I feel sure it deserves. It is known to me by the name of "Lister's sound," and was invented by Sir Joseph Lister.

From the very commencement of my professional life I have been familiar with and have been taught to use in the treatment of stricture "bulbed" steel sounds, which seem to have existed as traditional instruments in the Leeds Infirmary, were constantly used by my father and the older surgeons, and were, I believe, brought to Leeds by the late Mr. Samuel Smith, who had learnt their use from his master, Sir Charles Bell, in Edinburgh. The virtue of the bulb is this: that, the stem of the instrument being necessarily smaller than the bulb, as soon as the bulb has passed through the stricture the instrument is free, and the touch of the surgeon is at liberty to perceive the character of the succeeding part of the urethra. Compared with the bulbed sound, the ordinary catheter which, as a student, I frequently witnessed in use in the treatment of stricture was clumsy and eminently unsatisfactory. The defect of the bulbed sound in common with most other methods of treating stricture, was that as soon as one size had been passed through a stricture, the same process of difficulty had to be encountered in passing the size larger. Some twelve years ago, whilst I was considering how to overcome this difficulty, our house-surgeon, Mr. Rowell, on his return from a visit to Edinburgh, said to me: "Here is the instrument you want, a Lister's sound." I ordered a set, and I have used them ever since, exclusively, and have never flinched one moment from my allegiance to them. The principle of the instrument is this. It is bulbed at the point, like our old bulbed sounds. Then after the narrow neck the stem gradually increases until it attains, at a point about four inches from the bulb, a calibre two sizes larger than the bulb. Thus: No. 1 at the bulb swells to No. 3 or 4; No. 9 to 12; No. 11 to 14. It is clear then that if you can once pass No. 1 safely into the bladder, you have prepared the way by the thickness of the stem for the more easy introduction of a sound with a bulb of the size of No. 2, and so on, each number passed rendering the way more easy for its successor. As a matter of fact, the larger sizes are passed with constantly increasing facility.

Have we not here a "detail" in the form of an instrument which solves many difficulties, combining the advantages of the bulbed sound with those of the conical sounds and bougies, and avoiding the disadvantages of both? It destroys the need of catheters with the hollow eye capable of carrying concealed poison, of gum-elastic catheters, and catgut bougies with the possibility of septic material lurking in interstices and cracks, and reduces very greatly the need of perineal section or internal urethrotomy.

Let me sum up my own experiences of the use of Lister's sound, which for the last 12 years has been, both in hospital and private practice, most satisfactory. Since their adoption, as far as I can recollect, I have only once had to perform perineal section from inability to get through, or to satisfactorily dilate a stricture. I have never performed internal urethrotomy, nor felt the need of it. Rigors are extremely rare after the use of Lister's sounds. This rarity of rigor I am inclined to attribute to the fact that in nearly every instance dilatation has been carried at the first sitting, up to 10, 11, or 12. It is my belief that full dilatation at the first sitting is safer than the older method of partial and gradual dilatation, and for this reason. Even in partial dilatation there is frequently some laceration or bruising of the surface at the strictured point. If the stricture be only partially dilated, there remains a narrowing at this sore point sufficient to materially arrest the flow of urine, and therefore there is urinary

pressure on the raw surface; whereas in full dilatation the urine flows along the urethra equably and without undue pressure at any point; and puts no stress upon the tender and perhaps lacerated surface of the stricture.

In a small number of cases I have failed to introduce Lister's, No. 1, but these have been got over by the aid of Teevan's filiform guide, which in every case was successfully passed. The guide having been introduced through the stricture, its outer end is then screwed into the tip of a conical sound, like Lister's with the bulb cut off. The filiform bougie guides the solid instrument through the stricture, and thus dilatation up to 4 or 5 Lister is secured, with the usual easy sequence, up to 12 or 14.

Effective Drainage.

"Effective drainage" may be defined as "such a provision for the escape of fluid from any cavity as shall secure that the discharges, which when secreted are sweet, shall escape from the cavity before they have time to putrefy, and shall be received into one of the aseptic absorbent materials with which surgery is now so abundantly provided." Formerly the idea of drainage was almost limited to "free incision and a dependent opening." This idea was true to a certain extent and in some cases, of which the following is a brilliant example. A man was received into the Leeds Infirmary suffering from pneumothorax on the left side, from broken rib. The air was rapidly absorbed, but shortly the pleural cavity became full of fluid. This was drawn off twice, and on the second occasion was purulent. For some reason or other, the patient being extremely ill, an opening was made into the chest in front. He continued to lose strength and flesh, became extremely emaciated and albuminuric. As a forlorn hope, an incision was made into the pleural cavity posteriorly, whereby a free, dependent, self-draining opening was secured. In three months the wounds had healed, the patient had gained three stones in weight, had lost his albuminuria, and was well.

But a dependent opening is not always the most efficient or the best. I was requested by my colleague, Mr. Mayo Robson, to see with him a lady with pelvic suppuration discharging through the rectum, that is, by a dependent opening. It was the source of much pain and of occasional febrile attacks and ill-health. A tumour about the size of an orange, and supposed to be the source of the pus, was felt by rectum and vagina. Mr. Robson carried out the following treatment agreed upon at our consultation: Having exposed the tumour by direct abdominal incision, he stitched the peritoneum of the edge of the incision to the upper surface of the tumour, leaving a small area of the tumour exposed, and rendered thereby extra-peritoneal. He then cut into the tumour until he reached a collection of offensive pus, and washed out and drained the cavity. Immediately pus ceased to appear by rectum, that is, by the downward drainage, and in four weeks the whole was healed and the patient was well.

Until recently surgery has been too much a slave to the principle of a dependent opening. A dependent opening may be for the moment efficient whilst the cavity is distended, and yet, after it is emptied and collapsed, may become valvular and inefficient. Moreover, when a large cavity has been emptied the walls may by their collapse shut off portions of the surface from satisfactory drainage. Drainage, therefore, is a "detail" which needs to be studied in reference to each individual case. The leading idea should be so to provide, whether by position of openings, by shape of opening, or by use of drainage-tube, that secretions shall escape from every part before they have time to become septic, remembering that if a way of escape for fluid without risk of imprisonment be provided, we generally have to aid us the elasticity, or contractility, or displacing compression of surrounding tissues, and that we may be, to a great extent, independent of mere gravitation.

Such ideas, clearly held, will set us free, and encourage us to continue, as we now do, to drain abdominal cavities, abscesses, irremovable cysts, distended gall bladders, pelvic abscesses, and, perhaps, even abscesses connected with diseased hip-joint, by a mode of drainage which is anything but a dependent opening, but which we have learnt how to render efficient.

This idea of drainage, combined with the principle of rendering a cavity extra-peritoneal, is the key to some of the recent masterly developments of abdominal surgery, whereby deeply seated cavities containing offensive and septic materials can be treated with comparative safety.

Peritoneal Stitching.

Another "detail" in surgery which I have only recently learned to appreciate is that of the independent stitching of the peritoneum. The looseness of the attachment of the peritoneum to the abdominal wall allows it to be dealt with with great freedom, as has already been referred to in the paragraph on "Drainage." A few months ago, when I was about to stitch up the abdominal wall after ovariotomy, Mr. Hartley, who was assisting me, asked, Why not stitch up the peritoneum alone, and then unite the rest of the abdominal wall by a separate set of stitches? I at once acted on the suggestion, knowing that it had been practised by others. The effect was to make the closing of the abdominal wall much simpler, and not more tedious. The advantages appeared to be (*a*) absence of tension on the peritoneal union, (*b*) very little bleeding from the peritoneal stitches, and (*c*) greater facility in uniting the abdominal wall, from not having to provide for the accurate adaptation of the peritoneal edges. After the operation the patient seemed to be more free than usual from discomfort in the wound. It is possible that further advantages may accrue, such as diminished proneness to hernia of the scar, and less liability to suppuration in the track of the sutures. So much for the value of this detail in ovariotomy and abdominal section. But the lesson thus learnt went further. Not long ago, I was called in the middle of the night to a patient suffering from strangulated umbilical hernia, who had been admitted into the Leeds Infirmary in order that she might undergo an operation for radical cure, strangulation having suddenly set in whilst she was waiting for the operation. After reducing the bowel and removing a large mass of omentum, I was prepared to close the abdominal ring, which had a diameter of an inch. To close this in the ordinary way by sutures, so as to secure union of the peritoneal edge, which is adherent to the margin of the ring, is no easy nor certain proceeding. I therefore, with the scalpel, incised round the margin of the ring, and thereby got a starting point whence I could strip the peritoneum from the under surface of the abdominal wall over a radius of about an inch. The edges of the opening in the peritoneum were then easily brought together, and closed by a row of five or six stitches. The peritoneal cavity having been thereby closed and cut off from the wound, two wire sutures were inserted into the aponeurotic ring of the linea alba, so as to bring the opposite sides together, and were cut off, to be left as a permanent barrier. It seems likely that such a proceeding may increase the safety of operations for umbilical hernia, whether undertaken to relieve strangulation, or for radical cure.

The Sphincter Ani in the Surgery of the Rectum.

There is a detail in operations on the rectum or anus which, rightly carried out, contributes very greatly to ease in operating, to the comfort of the patient after the operation, and to the permanency and perfection of the result. As a preliminary step, in every operation on the rectum or anus, there should be dilatation of the sphincter ani by the fingers. To some this may seem a truism, a self-evident proposition, which it were waste of time and breath to assert. The fact, however, is that it is far from self-evident to many surgical minds, and has not been acted upon as a general rule, and, until very recently, has been absolutely ignored by many rectal specialists, and by writers on general surgery.

First and most conspicuous in this relation are bleeding internal piles. Some twenty-five years ago I was asked to operate for bleeding piles on a gentleman about 30 years of age. On mentioning the case to my father, he said, "Dilate the sphincter, and most likely you will never have to operate on the piles; they will be cured." His anticipation proved to be correct. The advice was acted upon, and the gentleman has remained well to the present time. So late as in 1887 did M. Verneuil bring this subject as a novelty before a meeting of surgeons in Paris, nearly all of whom were entirely ignorant of the question. This experience was amply confirmed by subsequent cases, and I now rarely operate on internal hæmorrhoids without having previously tested the effect of simple stretching of the sphincter. In more severe cases, requiring the removal of hæmorrhoids, the stretching, as a preliminary to operation, at once displays the piles to view, and places them in a ready position for being seen, seized, and dealt with. Another advantage is that, after the operation, the parts remain at rest, and the wounded tissues are not liable to protrude and to be strangled by a resentful sphincter. Also, if there be bleeding, there is great facility for the escape and discovery of the blood, and therefore less danger of concealed hæmorrhage, which may fill the rectum with a large clot, perhaps only to be suspected from the pallor and feeble pulse of the patient. A

further advantage is that wounded and granulating surfaces within the rectum are not interfered with, or kept in a painful or irritable state, after the fashion of fissure, by an over-active excitable sphincter. Two cases have recently been under my care in which long-continued suffering after removal of piles, without stretching of sphincter, was at once cured by simple dilatation.

Contrast with this the clumsy and unscientific plan until recently recommended in the textbooks of requesting the patient to "bring down" the piles by sitting over hot water before operation, so as to afford the surgeon an opportunity of playing hide and seek with the elusive hæmorrhoids, aided by their confederate sphincter.

In operations for fistula in ano, dilatation of the sphincter is an essential preliminary. If the internal orifice be close to the anus it is at once displayed or brought within easy reach. If it be at some distance, and beyond the sphincter, this proceeding renders it possible to cure the fistula without extending the incision up to the internal orifice, and so risking loss of control over the action of the bowel by too free division of the sphincter ani. Such deeply burrowing fistulas I have cured on several occasions in the following manner. The sphincter having been freely dilated, the external orifice of the fistula was enlarged laterally in such a way that the opening in the skin was the base of a triangle with its apex at the other end of the fistula, where it communicated with the bowel. The track of the fistula was freely scraped, and a drainage-tube was inserted, so as to reach within half an inch of the opening into the bowel. Undoubtedly the key to a successful result in such a case is the "detail" of dilatation of the sphincter, which by its relaxation allows the contents of the bowel to pass away easily, and without forcing secretions backwards into the fistula, until time has been given for the freshly scraped surface to unite and seal the offending track. Time will not allow me to say much more on this far-reaching topic, but there is one point I must not omit. Of late years, the question of dilatation of the os and cervix uteri, and of treatment of the cavity of the uterus for endometritis and other metritic troubles, has come very much to the front. Indeed, it is a selected subject of discussion at the present meeting in the Obstetric Section. In some of the discussions by gynæcologists I notice that much is said of constipation as a factor in these cases, and as one that ought to be treated and remedied, of course by medicines, as a preliminary to any special interference with the uterus. In some cases I know, and in many others I suspect, that the cause of the constipation is a tight, or spasmodic, or irritable sphincter. In such a case stretch the sphincter, and you may "throw physic to the dogs." And let me note in passing that there are instances in which the sphincter may cause constipation and its train of symptoms, without any evidence of fissure, or anal pain, or bleeding, or there may be, what I have often observed but have never seen described, a peculiar rigidity, a sort of inelastic ring, like a fibrous degeneration of the muscle, which does not resist the introduction of one finger, but bars the rectum as with a ring of iron to the introduction of two. In such cases only artificially softened evacuations can escape. May we not consider dilatation of the sphincter to be a "detail" in surgery worth study no less by the physician than by the surgeon?

Ether versus Chloroform.

This is a subject on which I wish to speak with a sense of grave responsibility—the more so that I have to express views which are strongly opposed to those uttered at Glasgow last year by my predecessor in this chair.

If anyone asks why I venture to differ so widely and strongly from one whose surgical experience is probably not less than my own, and may be greater, my plea is as follows:—

For the first fifteen years of my surgical life, which includes ten years as surgeon to the Leeds Infirmary, I knew little of any anæsthetic but chloroform. So far, probably, our experience runs parallel. During the last fifteen years ether has almost superseded chloroform in my practice. Here the parallel ceases. Sir George Macleod's second fifteen years are still devoted to chloroform. He cannot speak from fifteen years' experience of ether. As a result of the comparison of these two periods I unhestatingly assert that ether is, for safety to the patient and for comfort and convenience to the operator, immeasurably the better anæsthetic of the two. Ether can be given "*tute, cito, et jucunde!*" I say can be; would that I could say *is* always so given.

My earliest experience of ether was in the method introduced by Dr. Joy Jeffreys, when, at the International Ophthalmic Congress in 1872, he preached his crusade against the almost universal use of chloroform prevalent in the United Kingdom, and compelled British surgeons to take up the question of ether. He appealed to our sense of duty in reference to the fearfully increasing fatality of chloroform, and we responded to his call, in spite of the grave disadvantages, of the clumsy, wasteful, nay harmful, method of giving ether by lavishly pouring into a cone formed of a towel, to which he introduced us. The disadvantages of ether so given were great and obvious. The struggling of the patient, the icy coldness of the inhaled air, the saturation of the air of the room by 12, 15, or 20 ounces of ether spent upon a single case, and the not infrequent, and occasionally fatal, bronchitis which followed, were such obvious drawbacks that the wonder is that ether survived as an anæsthetic in England, until it had time, by improved methods and increased experience, to win its way to the pre-eminent confidence which it now commands. The towel was, after a time, superseded by the wicker grid—brought over from America by a late chaplain to the Leeds Infirmary, the Rev. E. Spencer Gough—an improvement on the towel, but sharing with it the chilling of every inhalation by the evaporating ether as well as a high percentage of waste of the anæsthetic. The method of administering nitrous oxide gas before giving ether was, in his later years, largely given up by Clover. Next came the great step, which was the saving of ether as a British anæsthetic. Ormsby, of Dublin, invented the inhaler in which the exhaled warm air, charged as it is with ether, was received into an india-rubber bag and breathed over and over again, thus economising the heat of about 90 per cent. of the exhalations and reducing the waste of ether. This idea was taken up by Clover and developed into the present form of inhaler, which, as far as I know, is unapproached by any method of giving ether that has come into use. But, "*Non cuivis homini contingit adire Corinthum.*" It is not everyone who knows, and there are some who are incapable of learning, how to administer ether, even with Clover's inhaler.

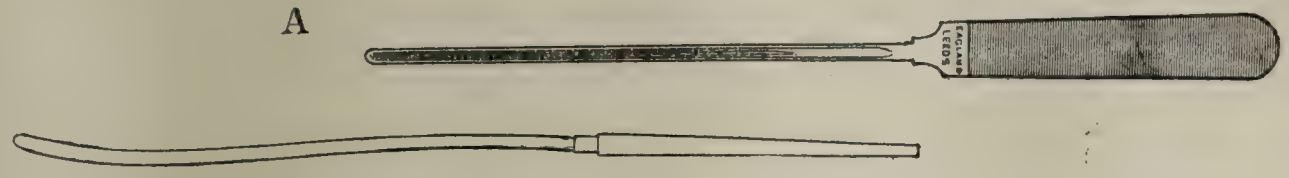
There are many hospitals in England, and still more, I believe, in Scotland, where the use of ether is practically unknown, or where, if ether is given, the obsolete towel or the grid, or the very inferior inhaler of Ormsby is used; or even should the hospital possess a Clover, it may not possess an etherist who knows how to use it to the best advantage. To administer ether badly is to bring it down nearly to a level with chloroform as to safety, and to render it inferior to chloroform as to comfort to the patient. A bad etherist will cause fear, coughing, distressing sense of suffocation, excitement, struggling, blueness of lips, mucous rattling in the trachea and bronchi. He will take many minutes, five to ten, in getting his patient under the anæsthetic, will use twice or thrice as much ether as is needful, will keep his patient when unconscious overcharged with ether in a state of profound stertor, and will now and then set up a dangerous bronchitis. A good etherist will win the confidence of his patient, even of the most timid, by judicious encouragement, and by first applying the mouthpiece alone. As confidence becomes established he adds the reservoir and then the india-rubber bag, slowly turning on the ether as tolerance of the vapour becomes established, and unconsciousness begins to steal on. Then he more rapidly increases the proportion of ether, and the patient quickly falls into complete anæsthesia. Such an administrator will, in nine cases out ten, have his patient ready for operation in two or three minutes, and not infrequently in about a minute and a half, without a struggle, without coughing, often without even a transient sense of suffocation, and with the expenditure of about half an ounce of ether, and will but need about one ounce of ether for each quarter of an hour that the anæsthesia is kept up. In such a case we need fear nor danger at the time, nor subsequent bronchitis. So much for the patient.

But there is another side of the ether question which I have never seen adequately stated. The advantages to the operator of using ether instead of chloroform are very great. In the first place his anxiety is less, his fear of a fatal issue is less, and when obliged to trust to an inexperienced administrator, as he must do at times in sudden emergencies, he can more efficiently keep an eye on the patient's condition, and superintend the administrator, than when chloroform is used.

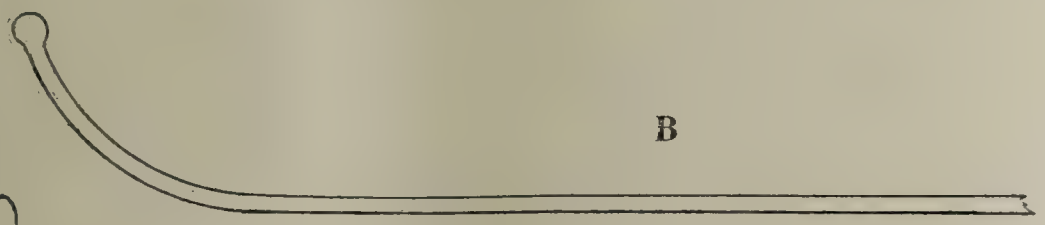
In the second place there is a saving of time, a patient being brought under the influence of ether in two or three minutes, whereas chloroform, in my experience, needs eight or ten. Such a saving is of no slight moment in modern hospital practice now that the sphere of surgery has become so enormously extended.

In the third place, under ether return of consciousness to pain generally lags behind the return of mental perception, and thus

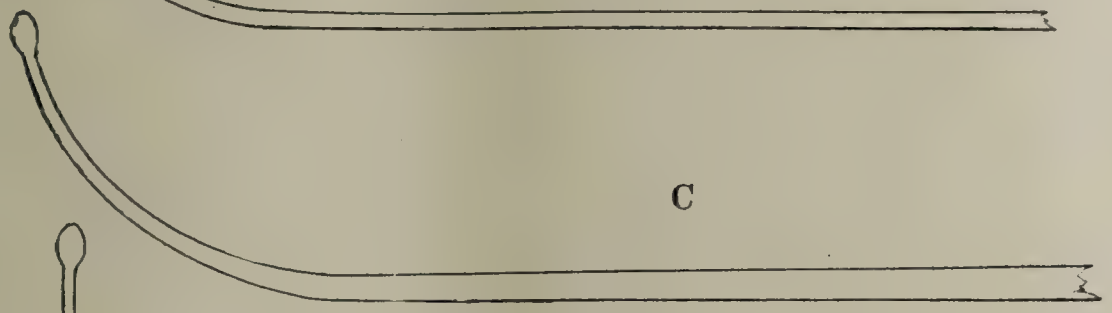
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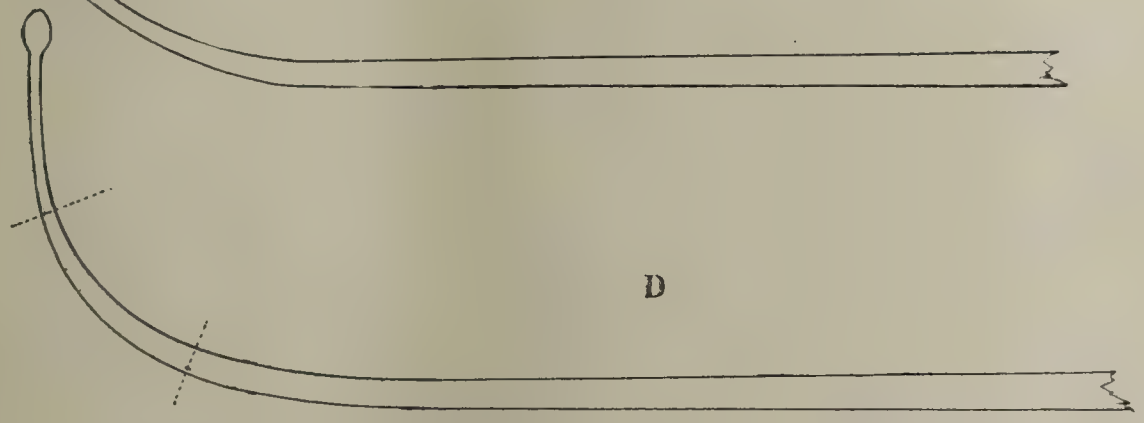
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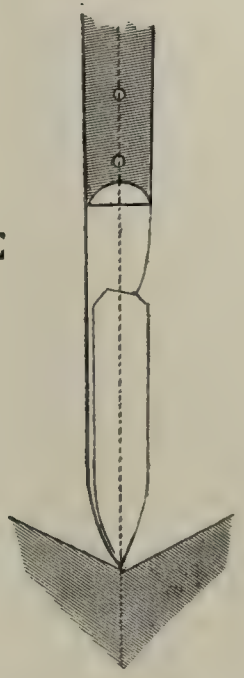
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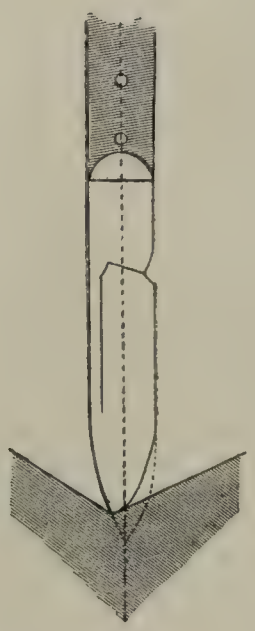
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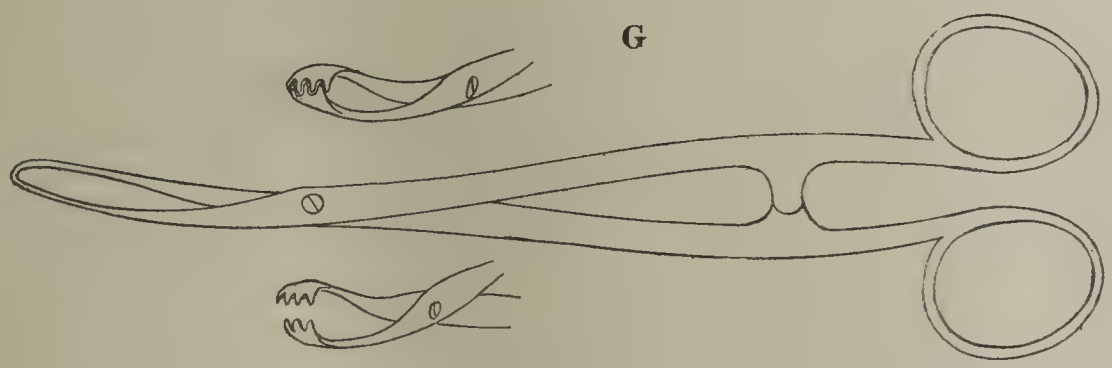
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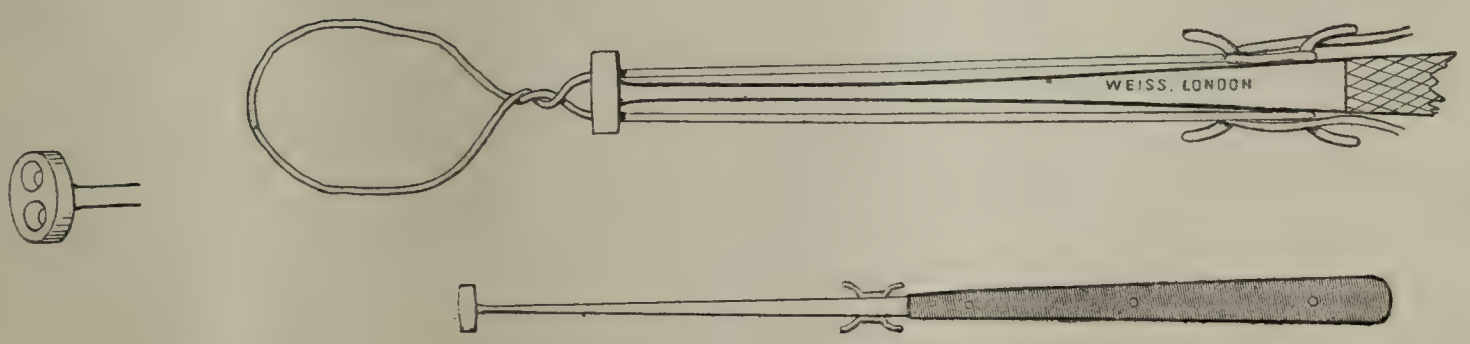
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anæsthesia can easily be re-established without interrupting the operation. So marked is this fact towards the end of a prolonged operation, that sometimes the surgeon may continue to operate for ten minutes or a quarter of an hour without re-application of the inhaler, and even converse with his patient whilst stitching up a wound. This is hardly, or rarely, the case with chloroform. Let anyone who is not yet a convert to ether, or who, having used ether, is wavering in his allegiance to it, ask himself these questions. Have I myself studied the details of successful etherisation? Am I using the best form of inhaler? Have I taken pains to have those who act for me properly taught and trained? If not, let him ask himself one more question—have I done my duty?

INSTRUMENTS. THE SCALPEL. E, F.

An essay on "Detail in Surgery" would hardly be complete without some words about "instruments." Instruments bearing the same name are apt to vary in shape. Some forms are certainly better than "other some." Certain good forms and types are apt to go out of fashion, to "get out of print," and to be superseded by inferior types. It is often difficult to get the best type of instrument, or to renew a lost form, so great is the tendency to degeneration and departure from the original type. Take as an illustration one of the simplest and most frequently used, a "scalpel." How rare it is to meet with a scalpel of good form; and yet we have the pattern admirably drawn in the work on *Surgery*, by that master hand in the selection, designing, and handling of instruments, Sir William Fergusson.

The scalpel should be to the surgeon what the pencil is to the artist. The surgeon should be conscious, even with his eyes shut, where the point of his scalpel is, his eye should be upon the tissues he is about to cut, not in continual search for the point of his instrument. And how can he feel where the point of his instrument lies unless the point be central; and how can the point be central except the scalpel be truly lancet shaped? How few of our instrument makers, turn out truly balanced central pointed scalpels. Fewer still can keep our scalpels in order without grinding the point away until it reaches the level of the back of the knife, giving us, instead of the beautiful, sawing, lancet-shaped curve of edge, an edge belly shaped, flat towards the point, ready to be blunted by the first plunge into the skin.

THE DIRECTOR. A.

Another simple, universally used instrument, is the "director," which is rarely met with of good form, as generally offered for sale. It is straight, instead of having an elegant double curve, slight indeed, but such as would enable the surgeon to insinuate the instrument along curving passages, or more conveniently to bring the point to tell from beneath against the skin. It is often too deep or too narrow in the groove, and the groove, instead of shelving off to a vanishing point and allowing the bistoury to continue its course, ends in a full stop, and spoils both the course and the point of the knife. Another faulty point is the handle. A director should be capable of being held firmly, the handle being substantial, not thin, long enough and not stumpy, and horizontally roughened and not slippery. You may perhaps think this a long tale about a small matter.

CATHETERS AND SOUNDS. B. C. D.

The metallic catheter or sound is, or was, an instrument used by nearly every medical man. As with the scalpel so with the catheter, the surgeon should be able to feel, that is to be conscious, where the point of the catheter or sound is, and without seeing it, as he cannot have his eye upon the point when in use. In order that we may feel where the point of the catheter is, the straight stem should be continued into a true curve, that is, a segment of a single circle, probably exactly a quadrant. And yet what do we generally find? A curve, which at one part is the curve of a one-sized circle, at another part is a curve of a circle of a different size, or the catheter may terminate with about one inch of its length which is a segment of no circle whatever. The same applies to sounds, and even to some sets of Lister's sounds. My own had to be remodelled and brought to a correct curve.

VOLSELLUM FORCEPS. G.

Perhaps no single instrument has been made in greater variety of form and shape than the "volsellum forceps," of which I possess a considerable variety. The principle on which the majority are formed is that of one, two, or more pairs of teeth or claws, or fangs, which sometimes fit accurately when closed, so as to present no projecting points, sometimes expose unguarded points which interfere with easy manipulation, and may prick the surgeon's finger when guiding them to their destination Probably the best of this class is the hawk's-claw forceps, designed by Mr. R. B. Hewetson, of Leeds, copied from a bird's claw. It consists of five prongs, which fit so accurately at the points as to present when closed a smooth rounded surface. Forceps of this class are essentially grouped hooks, and like hooks are apt to tear through tissues when any forcible drag is put upon them. The needs of abdominal and uterine surgery have, however, created a demand for a form of forceps which shall be capable of maintaining a firm grip without tearing of tissue, even under the stress of considerable drag. This need forced itself upon my attention when working out a satisfactory method of rapid dilatation of the os and cervix uteri. Marion Sims taught us the value of drawing down the os uteri by a hook. But the hook will not provide for a prolonged and powerful drag, such as is needed to fix the uterus in dilating the os internum. The other forms of hook were tried, and the claw-like volsellum forceps, and all at times disappointed me, until, taking a hint from a small pair of forceps which were found in the collection at the Leeds Infirmary, I had made by Messrs. Weiss a pair of forceps which has proved most satisfactory. The teeth, seven in number (three and four), are short, and so fit into one another when closed, that they not only act as seven hooks, but also close upon and nip firmly the tissues that lie between them. They are also provided with a catch, so that they will hang, or can be held by a single finger passed through one ring. The key to satisfactory uterine dilatation is the power of holding the os uteri down towards the vulva, and no form of forceps that I have met with is equal in efficiency to the one now described. Had I possessed them years ago, they would have saved me hours of work, and perhaps sometimes failure, in operations for vesico-vaginal fistula.

THE TWITCH TOURNIQUET AND TORSION CLAMP. H.

Some years ago Messrs. Weiss made for me an instrument named the "twitch tourniquet," which has not yet been described in print. It has proved useful to me on many occasions, as an easy means of controlling the cord in extirpation of the testis, as a more handy and manageable clamp in amputation of the penis than the ingenious vulcanite plate of Clover, and as an aid in removal of intra-uterine fibroma. The idea was suggested by the "twitch' used by veterinary surgeons for controlling horses by a hold on the upper lip. The idea stood me in such good stead when in a great fix not long ago that I have developed out of it the "uterine torsion clamp," designed to do the work of Kœberlé's and Lawson Tait's clamp in hysterectomy. The emergency was as follows: A few months ago, when operating on a supposed simple ovarian tumour at the Leeds Infirmary, I unexpectedly found that it was so completely united with the back of the uterus that I must include the uterus in the pedicle. Kœberlé's clamp was produced, but the screws would not bite, and we had no other clamp at hand. We were suddenly face to face with an extreme difficulty. Mr. Littlewood, who was assisting me, suggested the wire *écraseur* as a way out of the difficulty, and the thought struck me at once that, having surrounded the pedicle with the wire, I might tighten by torsion instead of by the mechanism of the *écraseur*. The result was so satisfactory that I determined to modify the "twitch tourniquet" so that it might admit of the use of suitable flexible wire, which, having been tightened by torsion to any desired extent, could be released and left on the pedicle as a clamp.

CONCLUSION.

Those of my hearers, and readers, for an address to the British Medical Association is practically delivered *urbi et orbi*—those, I say, who have expected to hear a triumphant record of the astonishing progress of surgery, or a pæan on our local surgical achievements, may be disappointed at the humble theme which I have attempted to work out, and may think that I have failed to do justice to colleagues who have done much to leave a mark upon the progress of surgery. My aim has been not to sound the praise of individuals, much as they deserve it, but rather to leave an impression on the practice of surgery.

If any of you shall have been induced to study afresh, and from the point of view put forward in this address, the question of division of an artery between two ligatures, the bearing of the sphincter ani upon the surgery of the rectum, and disturbed functions of the colon; the substitution of Lister's sounds for older methods in the treatment of stricture; the emancipation of "drainage" from red-tape rules; and, lastly, the proper method of administration of ether so as to raise it as an anæsthetic to a position of incontestible superiority to chloroform; if such should be the outcome of this address, your time in listening will, I trust, not have been wasted, and my labour in composing it may not have been in vain.

AN ADDRESS

DELIVERED AT THE OPENING OF

THE SECTION OF PSYCHOLOGY.

At the Annual Meeting of the British Medical Association, held in Leeds, August, 1889.

By D. HACK TUKE, M.D., LL.D.,

THE PAST AND PRESENT PROVISION FOR THE INSANE POOR IN YORKSHIRE.

Gentlemen,—In taking the honourable post assigned me in this Section to-day, I must express the obligation under which I lie to those who have thus given me an opportunity and a powerful motive for dwelling on a subject congenial to my tastes and associations on the one hand, and germane in a high degree, as I venture to think, to the object of our meeting and to the particular county in which we assemble.

The subject I have chosen—the Past and Present Provision for the Insane Poor in Yorkshire—forcibly recalls to my mind the strong objection I felt to the name given to this Section when it was instituted. Surely it ought to have been Medical Psychology or Psychological Medicine, rather than "Psychology," pure and simple, a name which has the effect of making it seem out of place to mention bricks and mortar, and justifies the disgust which an eminent French alienist experienced when at our Glasgow meeting he had to listen to a debate on the best kind of cement for use in lunatic asylums.

Had I realised when I selected this subject for my Address the amount of time and labour it would involve, I should hardly have had the courage to attempt it. The mass of material it is necessary to study, the imperfection of many of the early returns of lunacy, the defective statistical tables in the Blue Books until a recent period, the errors which in the course of years have crept into the Asylum Reports, are enough to dishearten any historiographer of the insane poor who desires to compare their numbers and location at different periods. Why, only to mention one fatal omission in the Blue Books, there is no return of the admissions of the insane into workhouses, without which information we are totally unable to gauge the amount of occurring lunacy in regard to a large area of the pauper population.

I will, however, endeavour to make the best of the materials I have been able to bring together. In a subsequent paper I shall place before you a number of statistical tables, some of the results of which I will mention in this address. I would express to the medical superintendents of the Yorkshire asylums my heartiest thanks for the loan of their Reports, and their kindness in supplying me with any information within their power which I required.

My review of the provision made for the insane poor in Yorkshire must commence with a reference to the Lunatic Hospital at York, generally known as the Old York Asylum. From its foundation as a charity in 1777 it has been a mixed institution, and received, in accordance with its rules, the indigent poor whether paupers or not. It has also admitted persons of limited means, and a certain proportion of opulent patients for the purpose of assisting the funds. The Lunacy Commissioners have repeatedly counselled the restriction to private cases, and the establishment of a Borough Asylum in York for pauper lunatics. We have no means of knowing what the number of this class may have been when the asylum was opened 112 years ago, but we may be very sure that as there were only 15 patients altogether in this asylum the year afterwards, the relief afforded must have been entirely disproportionate to the need. The numbers very gradually crept up till there were about 50 at the close of the first decade; and passing over twenty years more, we find that there were 150 in 1809, but how many of these were of the indigent class it is impossible to say. Now in this year a pamphlet, entitled "Observations on the Present State of the York Asylum," was published, which reveals the prevalent ignorance as to the actual amount of pauper lunacy in this county, for there were those who at the time "actually supposed that this institution was capable of receiving all the needy and indigent applicants from the various parts of the British dominions." This extraordinary belief it is the purpose of the pamphlet to combat, and the writer observes: "The futility of this will appear from the returns made to the House of Commons preparatory to the Act of Mr. Wynn in 1807. From this it may rather be inferred that with respect to the lunatic parish-paupers alone, the asylum, even on its present enlarged scale, would scarcely be found adequate to their reception."

As the population of Yorkshire at that period (1809) was about 950,000, the number of insane poor must have been very considerable. Where, one asks, were they located? Some were detained in poorhouses, such as they were, but a large proportion of dements and idiots were with their friends, probably in some outhouse, attic, or cellar, or were wandering about, the butt of village ruffians, and were sometimes dangerous epileptics. Lastly, not a few lunatics were persons whose malady was unrecognised, and who were in gaols. Undoubtedly some were executed as criminals.

From the date of the opening of the York Asylum to 1814, the year when it was reformed and entirely reorganised, 2,635 patients were admitted, 2,133 were discharged, and 399 died, leaving 103 under care. How many of the admissions were of the pauper class cannot be discovered. In fact, Dr. Thurnam found it impossible to make any use of the statistics of this asylum during this period, in consequence of the imperfect state of the registers.

The average number resident appears to have been a little under 100. Since 1814 the institution has been a credit instead of a disgrace to those concerned in its management. It is a striking fact that the rate of mortality, which up to that year was at least 11 per cent. (calculated on the average number resident), was only about 7 per cent. during the succeeding quarter of a century.[1]

I am able to state that in the following year there were 47 pauper patients from Yorkshire, 31 of whom were West Riding cases, 5 from the North, 7 from the East, and 4 from the City of York. I mention these small items, because they are very important as showing the number of insane paupers provided for at this asylum in a year—1815—to which I must especially draw your attention, because it was signalised by the projection of the West Riding Asylum at Wakefield. Let me, however, conclude my notice of the York Asylum by the remark that its subsequent history has been one of great usefulness in accordance with its charitable design, that the old cells have long disappeared, and that it is now an attractive institution, containing 135 patients on January 1st last, 46 of whom were paupers. For many years it had, as you are aware, the advantage of having Dr. Needham as its medical superintendent.

To justify the erection of a county asylum, an attempt was made to ascertain the number of insane poor in the West Riding. There was reason to believe that there were at least 600 of this class, and it was supposed by Dr. (afterwards Sir William) Ellis, the first superintendent at Wakefield, that there were 750 in Yorkshire altogether, without proper accommodation for more than 200. This accommodation was found, according to Dr. Ellis, in "a great many private houses," as well as the York Asylum, but I believe that even he quite overestimated the amount of this accommodation. Thus he speaks of the York Asylum accommodating 100, but there were in it at that time only 47 pauper patients. To us it sounds as incredible that there were only 750 pauper lunatics in Yorkshire in 1815, as it then seemed incredible to Yorkshiremen that there could be so many. Taking his estimate, the proportion to the population of the county would be 1 in 1,300, whereas now it is 1 in 560. It seems strange to us nowadays to find Dr. Ellis laying down the rule that from 100 to 120 patients are as many as ought to be in any one house. Where they are beyond that number, he adds, the individual cases cease to excite the interest they ought. He further says: "It is absolutely necessary that to manage such a house and such inhabitants the heads of it ought to possess the most sovereign authority over all the rest, and, consequently, to be accountable for everything. The effects arising from the want of such an arrangement in the Asylum at York, and from the introduction of it into the Retreat, have surely been sufficiently exemplified" (page 17). What would Ellis have thought had a prophet told him that the asylum he superintended would, in 1889, contain nearly 1,400 patients, for the care and treatment of which one unhappy superintendent is responsible?

The provision for the insane poor made at Wakefield was a portion of the harvest gathered in this field from the seed sown at York in 1792, when the Retreat was projected. It was its legitimate child. That event had its constructive and destructive aspects. On the destructive side was the revolt against the bar-

[1] *Statistics of Insanity.* By John Thurnam, M.D. 1845. App., p. 7.

barous treatment of the patients in the York Asylum, ending in its being purged of its abuses in 1814. On the constructive side was a reformed hospital, and then the desire to supply the needs of the insane poor on a much larger scale. Whatever share my own ancestors may have had in this movement, they would have desired that honour should be done to that bold and upright West Riding magistrate, Godfrey Higgins, who not only aided them in exposing the cruel neglect of the patients in the York Asylum, but for years took an active part on the Committee of the Wakefield Asylum. Having from boyhood heard him spoken of in terms of the greatest respect and admiration, I rejoice to have this opportunity of reviving his memory in the Riding in which he dwelt and in the hearing of men who are so well aware of the contrast between the treatment of the indigent insane in 1815 and 1889. I hold in my hand an original letter written by Mr. Higgins to my father in April, 1815, which is very brief, but announces a fact of greatest importance. It reads thus: "I write in great haste to inform you that it was the unanimous wish of the magistrates (at the quarter sessions) to accede to the proposal to build a place for our pauper lunatics, and we have proceeded as far as it was in our power according to law; indeed, I believe a little further. There was but one opinion." The Wakefield Asylum was constructed to accommodate 150 patients on what is called the H plan, and was opened in November, 1818, seventy-one years ago. I could not take a better illustration of the advance which has been made in asylum construction during this period than the architecture of this institution as originally constructed and that of recently built county asylums, such as that erected at Menston. It was, I make bold to say, from no want of thought or any lack of desire to do the very best thing for the care and comfort of the insane poor that allowed of such grave defects in the building, but those who planned it lived during the earliest stage of development in asylum architecture. It was necessary, I suppose, to follow the tedious but wholesome law of evolution rather than reach at one bound the highest form of art, and so it comes to pass that a building which in 1818 was justly regarded as a great step in advance would now be considered to be altogether below the standard of excellence. The comparison is not affected by the opinion held by not a few, that some of these modern asylums for paupers do not appear to be exactly suited for the particular class for which they are built.

The Wakefield Asylum, as is stated in an early annual Report, was judiciously built within one mile of the central town of the West Riding, in a cheerful and healthy situation combining the convenience of contiguity to a market town with the salubrity and quietude of the rural districts.

A very brief period elapsed before it was only too evident that the accommodation provided by the new asylum was altogether inadequate to the wants of the West Riding. It would be wearisome to enumerate the successive enlargements of the original building which were found to be necessary. Suffice it to say that its subsequent history is that which has become so familiar to us all, the record, namely, of the erection of building after building, here a little and there a little, to supply the unexpected demand made for admission of patients. In one of the Reports (1844) the superintendent, Dr. Corsellis comments, like his predecessor, on the importance of not making asylums so large as to prevent minute observation in each case. He would have limited the number to 300, which he points out had already been much exceeded by the Wakefield Asylum, the average number of patients in that year having been about 400. In his Report two years later he refers to the apparent increase of insanity, but he does not hesitate to attribute it to "the beneficial operation of new laws by which attention was drawn to what was formerly regarded with culpable indifference, and a suitable provision for the insane poor enforced on parish officers." In that year (1846) the population of the asylum reached about 450. Ten years witnessed an alarming increase, the number of patients advancing to close upon 800, while in 1871, just before the opening of the second West Riding Asylum at Wadsley, the highest number in the history of the institution was reached, namely, 1,494. The number resident on January 1st of this year was 1,354. Mr. Cleaton's appointment to the post of medical superintendent in 1858 was the means of vastly improving the condition of the asylum, while his successors, Dr. (now Sir James Crichton) Browne, Dr. Herbert Major, and Dr. Bevan Lewis, have worthily sustained the reputation of this great institution. It would be interesting to dwell upon the good work that has been done at this asylum, administrative, clinical, and pathological; but I must rigidly limit myself to a somewhat dry record of events bearing on the real object of my address. I reluctantly, therefore, pass on to chronicle the erection of the South Yorkshire Asylum at Wadsley, near Sheffield, approvingly described by the Lunacy Commissioners as "a substantial structure of brick and stone; the architecture and elevation are of a plain but varied and pleasing character, without unnecessary ornamentation." It was built to accommodate from 750 to 800 patients, and opened in the month of August 1872. It admitted from that time to the close of the year, 321 patients, and by 1874 there were 605 inmates. Ten years after its opening—namely, in 1882—there were about 1,300 patients in the establishment, and on January 1st, 1889, there were 1,616. Thus, again, has asylum history repeated itself, and the necessity of the provision made at Wadsley for the southern division of the West Riding has been more than justified by the event. Of the first superintendent I will only say that as the West Riding Asylum at Wakefield was fortunate in having Dr. Ellis, so that at Wadsley was fortunate in securing the services of Dr. Mitchell.

As I am speaking of the asylums of the West Riding, I will complete what I have to say about them and defer my notice of the North and East Ridings Asylums, which, in point of chronological order, possess a prior claim. The population of the West Riding has enormously increased, in proof of which it is only necessary to state that while at the census of 1801 it stood at about half a million (576,336), it is estimated at the present time to be two and a half millions (2,515,886). The consequent demand for additional accommodation for pauper lunatics led to the erection of the third West Riding Asylum at Menston, opened in October, 1888. The buildings now erected will accommodate 840 patients, those for chronic cases, designed, but not erected, another 250 or 300 of each sex, making a total of some 1,440 patients. The health and success of the first medical superintendent, Dr. McDowall, in his arduous and responsible position, we all, I am sure, most heartily desire.

In the construction of this asylum, we have undoubtedly gratifying evidence of the praiseworthy desire of the magistrates to make provision for the pauper lunatics of the district. It will be admitted that they have steered clear of that false economy which, in erecting a second-rate structure, involves in the course of a few years such frequent and expensive repairs as necessitate in the end a still greater outlay. I gladly recognise and pay my humble tribute to the feeling which has thus actuated the county justices in their plans of this great asylum. I hesitate to say a word, more especially at the present crisis in the history of our county asylums, which can be construed to imply anything like blame; I hope, however, I shall be forgiven if I venture to say, bearing in mind the wisdom of avoiding even the appearance of evil, that it would have been wise to avoid anything in the way of costly embellishment calculated to prejudice the mind of the ratepayer on entering the building. Although he may not always discriminate fairly between lavish expenditure and good durable workmanship, I should find it difficult to deny that, without the expenditure of so large a sum of money, the structure might have been as substantial, along with that just regard for cheerful appearance and even a certain amount of decoration which I am sure none of us wish to ignore in institutions for a class of persons for whom it is most desirable to avoid cheerless and depressing surroundings. When visiting this fine asylum I could not help thinking that it may very possibly be utilised some day, to a certain extent at least, as an asylum for the middle and even the upper classes, some of whom at the present time occupy much humbler quarters in private asylums and registered hospitals. It is not everywhere that

> "Each hospitable chimney smiles
> A welcome from its painted tiles;
> The parlour walls, the chamber floors,
> The stairways and the corridors,
> The borders of the walls and walks
> Are beautiful with fadeless flowers
> Which never droop in winds or showers,
> And never wither on the stalks."

To some of the poor labourers and peasants of our county it is probable that a more homely—I had almost said a more homeish—dwelling would have been quite as acceptable and no less adapted to the great object in view, the comfort or the cure of its inmates.

Those who planned the Menston Asylum wisely adopted the block or pavilion system, admitting as it does of complete classification and the separation of patients labouring under different states of insanity, as also the free circulation of air between the

various buildings. There must, however, be the means of passing readily between the central residence of the chief medical officer and the wards of the sick and the acute cases; and this involves, if, as at Menston, the blocks are at a considerable distance one from the other, an extent of outside covered passages which seem a too prominent, and can hardly be regarded as an agreeable, feature of the building. The extent to which complete separation from the administrative offices should be carried if the block system be adopted is not a point on which anyone would like to speak dogmatically who knows what can be plausibly urged in favour of annectant gyri between all the psychic centres of the great brain of a county asylum; but I venture to hope that before the remaining blocks at Menston are built, full consideration will be given to the advantages of doing without passages altogether, seeing that the patients residing in such blocks will be of the chronic and more or less incurable class. If at Kankakee, Illinois, which I visited with great pleasure a few years ago, this plan is carried out to an extreme, I think that we may learn a lesson from the experiment in avoiding the evils of our present system, and allowing of more structural distinction and a little more autonomy between the various buildings of our monster establishments. I trust also that when Menston is completed, there will be a sensible difference in internal construction—and, therefore, the cost—between the blocks designed for the incurable or rather the demented class and those provided for the acute cases and the sick which might be more on the hospital lines. Diversity in unity, differentiation in the form of the buildings and the proportion of single rooms, seem to me the great points to be borne in mind in the completion of this still unfinished asylum, it being also remembered that there is a limit to the expenditure on architectural designs, provided always that nothing be done in a penny-wise and pound-foolish spirit, or that will needlessly offend the eye.

This very imperfect sketch of the good work which has been done by the West Riding in providing three large county asylums must suffice, and I proceed to describe in a very few words what has been effected by the other Ridings of Yorkshire.

The asylum for the North and East Ridings, situated at Clifton, near York, was opened in April, 1847, and was constructed to accommodate about 150 patients. In its architecture it presented a marked contrast to the Wakefield Asylum, built about thirty years before.

The decision to provide this institution was arrived at by the magistrates of the North and East Ridings three years before it was completed. Some of the pauper patients in the York Asylum were removed to the new asylum, and the committee of the former expressed a hope in their annual report that their institution "might ere long be relieved from the care of the greater part, if not the whole, of these—30 in number—who still remain in it."

The number admitted into the North and East Riding Asylum during the first year was 140. In the course of a decennium the numbers, as a matter of course, ran up, and amounted to 445, about 300 in excess of the original calculation. Another decennium passes and we find close upon 500 under care, and, four years later, namely, in 1871, the number had reached 560. Then it was that the crowded condition of the building found relief by the opening of the separate asylum for the East Riding at Beverley. The consequence was that ten years after this event the number of inmates in the North Riding Asylum was less instead of more, namely 540; while on January 1st of the present year it was 622.

I should like to point out, to the credit of our county, that the decision of the magistrates to provide this asylum anticipated the compulsory enactments contained in Lord Ashley's Act, requiring every county in England to build (if it had not already done so) an asylum for the insane poor. The first superintendent, Mr. Samuel Hill, in his report of 1848, illustrated the wisdom and benevolence of the Ridings by the cases admitted when it was opened, which urgently required attention and treatment. One was that of a female removed from a private asylum, who, when under detention there, was described by the Lunacy Commissioners as "perfectly tranquil; her hands, however, were fastened by wrist-locks to a belt round her waist, to which a chain about 9 feet in length was attached, and the end of the chain was padlocked to the floor near the wall." On the very day of her admission to the new county asylum, needlework was put into her hands, and she was from that time, with few exceptions, regularly employed. The only restraint resorted to was to have her hands tied behind her for an hour or so when disposed to commit violence. Although described by the proprietors of the asylum from which she was removed, as "perfectly murderous," she became "as much under moral control as any other patient."

In this sketch of the North Riding Asylum at Clifton, the materials for which have been kindly placed at my disposal by Mr. Tregelles Hingston, I have incidentally mentioned that at Beverley. I must now add that the magistrates arrived at the conclusion to provide this institution for the East Riding in 1865. Six years elapsed, however, before it was completed, it being opened on October 25th, 1871. I have Dr. Macleod's authority for stating that it has proved a good workable building. A hundred patients were at once admitted, and before the end of the year nearly all the patients in the North Riding Asylum who belonged to the Unions of the East Riding were transferred to Beverley, the total number admitted between October and December 31st being 197. In the course of ten years the number under care reached 277, and on January 1st of the present year there were in the house 291 patients.

The Hull Borough Asylum was originally a licensed house belonging to Dr. James Alderson and Mr. Richard Casson, surgeon. The date of opening is not certain, but there is a record of admissions which shows that patients were admitted as early as 1818, and it is probable that there were none previously.

Of its history for the next 20 years I have nothing to record. At the end of 1839, during which year 62 patients were admitted, there were 90 inmates. In the year 1842 the name of the institution appears as the Hull and East Riding Refuge, Mr. Richard Casson being the proprietor.

In July, 1849, the Refuge became the Hull Borough Asylum, having been purchased from the proprietor by the Hull Borough magistrates. At that date there were 74 residents in the asylum. Ten years afterwards, namely, at the end of 1859, the number of patients was 85. Dr. Merson, to whom I am indebted for these particulars, and to whom the satisfactory state of the existing asylum is really due, accounts for the smaller number of cases in the institution after it became the Borough Asylum by the existence of an auxiliary institution for about 25 private and pauper patients called Field House, at Andaby, near Hull, which was under Mr. Casson's charge. It was closed in the year 1856.

The average number of patients in the Hull Borough Asylum from 1849 to 1868 was 103, 10 years afterwards (1878) the number was 155.

The present asylum was opened with nearly 200 patients in December, 1883. It is situated six miles from Hull, at Cottingham. The accommodation provides for 350, and the number at present in residence is 300.

In this survey of the asylums provided for the insane poor, it must not be forgotten that Yorkshire has every reason to be proud of the share it has taken in the provision for the education and training of idiots and imbeciles, although it does not possess an establishment for this purpose in the county itself. The Royal Albert Asylum at Lancaster may be regarded as largely Yorkshire in relation to its origin and the support which it has received, as in the instances of Sir Titus Salt, who gave 5,000 guineas, and the Rev. R. and Mrs. Brooke, of Selby, whose munificent donation amounted to £30,000.

During last year the contributions to the Maintenance Fund from Yorkshire amounted to £1,606, in the form of annual subscriptions and donations, being only about £300 less than the contributions received for the same account from Lancashire. It is to be hoped that a still larger amount will in future be raised in response to the appeal made in the last annual report. It should be remembered that, of 553 patients in that asylum, about 180 belong to Yorkshire. About one-fourth of the 120 pauper patients in the establishment are paid for by their unions in Yorkshire. Forty-two inmates were from Leeds. It is, however, thought by the authorities, including Dr. Shuttleworth, that Yorkshire, like Lancashire, ought to have its own pauper idiot institution, as there are in the union houses of the county, numbers of young imbeciles who are wasting their lives for lack of training. In the last Report of the asylum, signed by Lord Winmarleigh, the opinion is expressed, "the time has arrived when separate provision for the care and training of pauper imbeciles should be made by the county councils or some other local authorities, in the same way as obtains in the Metropolitan District under the Metropolitan Poor Act, 1867."

It may be stated that, according to the census of 1881, there were in Yorkshire 2,903 idiots and imbeciles, whether paupers or

not, being at the rate of 1 in 997 of the population. The proportion in England and Wales was higher, namely, 1 in 794.

It should here be noted that a considerable number of pauper patients in Yorkshire were admitted into private asylums in addition to those under care in public institutions. Unfortunately there is nothing to boast of in regard to the way in which these patients were treated in these private houses. The numbers rapidly diminished after the opening of the North and East Riding Asylum. In 1847 there were 232 insane paupers in the Yorkshire private asylums. Five years afterwards there were only 69, while ten years later there was only 1; since 1878 there have been none.

Of the provision for the insane poor made at different periods in this county in workhouses, I must now say a few words. I shall not weary you as I have wearied myself in endeavouring to obtain definite information on this subject. I could hardly devise a more cruel punishment for my worst enemy than to have to wade through the Blue Books of the Poor-law and Local Government Boards. The imperfect and often contradictory statistics are bewildering. The Reports do, however, serve to show in what a lamentable condition the insane and idiots were when the Commission was appointed in 1832 to inquire into the administration and operation of the Poor-laws, while the subsequent Reports of the Poor-law Board show the increased care taken of pauper lunatics in workhouses. A debt of gratitude is due to a gentleman who from the earliest period laboriously worked at this subject, and still lives at the age of 90 to witness the complete change in the condition of English workhouses. I refer of course to Mr. (now Sir Edwin) Chadwick, who first served as one of the Commission, and afterwards became Secretary to the Board. I am sorry that I cannot claim him as a Yorkshireman, but he was very nearly being one, as he sprang from the adjoining county of Lancashire.

In 1836 Parliament ordered a return of the number of pauper lunatics and idiots in each county (the first of the kind). Now, the return for Yorkshire amounted to 1,046 lunatics and idiots, of whom 364 were in the County Asylum at Wakefield and the York Lunatic Asylum,[2] while there were 88 in private asylums. The remainder, 594, were detained in workhouses or resided with their friends. Taking the population of the county at that period and the total number of pauper lunatics given in this important Parliamentary return, there was a ratio of at least 1 to 1,417.

These figures, we may well suppose, err on the side of omission, and therefore there must have been a large amount of lunacy outside asylums requiring better care and treatment than it received in workhouses. There have been some very bad ones in this county, on which the Lunacy Commissioners have reported most unfavourably, but I have no reason to believe they are other than in a satisfactory condition at the present time. Of the bad ones, in the past, that at Huddersfield may be taken as an illustration even as lately as 1857. The Commissioners reported that it was "shamefully defective." One-third of the inmates were lunatic or idiotic, many of them were dirty in their habits and slept together, and "sometimes even in a perfect state of nudity. Those patients who were not disabled bodily were crowded together, and associated with most abandoned characters, secluded in the deadhouse, and were so circumstanced in other respects as to end in the most deplorable state of degradation." It is needless to say that all this has been changed, but it is very necessary that we should remember what was the condition of lunatics in workhouses, in many instances, until comparatively recent times.

As an illustration of a workhouse which has, on the contrary, presented a good record, I may take that at York. I do not refer to it as being a model house, or absolutely the best in the county, but because it is known to me as an excellently conducted place, and I have at hand particulars kindly supplied to me by Mr. S. W. North, for many years the medical officer in attendance. There are about 120 patients, and during the last fifteen years the annual admissions have averaged 26. Some were admitted more than thirty years ago. The form of mental disease is one for which a workhouse is obviously well suited. Fifty-five of the above number were imbeciles, 41 dements, 19 chronic maniacs, 3 idiots, and one only a melancholiac. I will not add more to these figures than the statement that, of 250 discharges during the same period of fifteen years, 82 were sent to their friends, 37 to an asylum, and 131 died. I do not think that any of you would maintain that this class of patients ought to have been cared for in an expensively built asylum. I have inquired particularly into the cost. It seems to be impossible to obtain accurate information, the reason being that the insane inmates are part of the general family; no person is exclusively devoted to them; their diet is drawn from the common stock and is cooked with the rest; this diet, at the same time, is not all the same—it can only be estimated in the lump, not individually. A comparison with the cost of maintenance in an asylum is, therefore, most difficult. The master of the workhouse says, that a charge of 5s. per head weekly on the whole number of lunatics would cover everything, except building, with a margin to spare. Mr. North, in a valuable paper which appeared in the *Journal of Mental Science* in July, 1882, estimates that, while the charge for buildings would in asylums be from £10 to £15 per head annually, it would not be more than from £3 to £4 in workhouses. Mr. North calculates that the saving to the ratepayers of the York Union by properly utilising the workhouse for insane paupers is not less than £1,000 a year. He states that "it is the custom in this union, and the desire of the guardians, to send to the asylum every case which, in the opinion of their medical officer, needs the special care of an asylum; and, so far as I know, no single case has ever been kept in the workhouse to the prejudice of the patient." What Mr. North very properly contends for is, "that there should be some careful and skilled discretion exercised, in the first instance, as to who should and who should not be sent to an asylum."

But the time at my disposal will not allow me to do more than add to what I have said of the provision for the insane outside asylums, that the number at the present time (January 1st, 1889) in detention in Yorkshire workhouses is 1,316, or 22.26 per cent. of the 5,879[3] pauper lunatics in Yorkshire; while the number resident with their friends or elsewhere is 330, or 5.58 per cent. The majority (4,265) are cared for in asylums, amounting to 72.16 per cent.; while in England and Wales the percentage is lower, namely, 69.01 per cent. The statistical tables I have prepared show that the recovery rate in the Yorkshire asylums has been very respectable, namely, 39.69 per cent. of the admissions (including transfers)—while the corresponding percentage in the county and borough asylums of England and Wales during the decade ending 1888 was 35.60. Excluding transfers (for as long a period as they are specified), the recovery rate in Yorkshire asylums has been 41.90, while in England and Wales it has been lower, namely, 40.16. Then as to the mortality rate, this in the county and borough asylums of Yorkshire has been 12.09, from their opening to the present time, calculated on the average number resident. In the similar asylums in England and Wales it has been (during the last decade) 10 per cent. (9.99). But it must be borne in mind that the period during which the death-rate in Yorkshire extends dates from 1818, and that if we had the corresponding period for England and Wales instead of during the last ten years, it would in all probability be as high as in this county. You may remember that the eminent statistician of whom Yorkshire can boast as a native, the late Dr. Thurnam, of the Retreat, York, gives a table showing that the annual mortality of patients in English pauper asylums from 1812 to 1844 was 13.88, and observes that, "considering the frequently distressed and too often depraved condition of the pauper population of the manufacturing districts of Yorkshire and Lancashire, we need not perhaps be surprised that the mortality of the asylums of Lancaster and of the West Riding of York has materially exceeded that which has been estimated as the maximum mortality."[4]

And now, looking back over the period our survey has embraced to the date when the philanthropic and rational movement commenced which led, among other things, to the erection of asylums for the lunatic poor in this county, we naturally ask, Has the object for which they were established been fulfilled? I have no hesitation in answering the question in the affirmative. This unhappy class of persons have been rescued from neglect and inhuman treatment, and are now well housed and fed, kindly treated, and placed under medical care in admirably managed institutions. In fact, when criticism is made, it is to the effect that philanthropy has gone to an extreme, and has involved an unfair and disproportionate outlay upon the insane, as compared with the sane, sick pauper.

But while rejoicing in this great and beneficent result, I cannot conceal from myself the fact that the pioneers in this work enter-

[2] The return gives 364 as the number in asylums in Yorkshire "built under the Act of Parliament," but as there were only 309 at that time in the only asylum (Wakefield) so built, I infer that the York Asylum is included.

[3] The total number belonging to Yorkshire is 5,911, but all are not resident in the county.
Statistics of Insanity, p. 138.

tained hopes which, if they could be with us to-day, they would sorrowfully admit had never been realised. I am sure they would say that they fully expected a large proportion of the insane under the reformed treatment to be permanently cured of their malady, and never for an instant supposed that of those who should recover, a frightful proportion would relapse, and that, seventy years after the opening of the first pauper asylum in Yorkshire, there would be five large county and one borough asylum in addition to that at York. I venture to say that had it been possible for them to have foreseen this, their astonishment and dismay would have been great indeed; and, were they present at this moment, it would seriously temper the satisfaction they might justly experience in witnessing the success of their humane labours. They would find us engaged in endeavouring to explain the apparent increase instead of decrease of insanity, as shown in the tables I have prepared; and, although there are explanations which suffice to show that such an inference is hasty and superficial, our ghostly visitants would find, if they interviewed the Superintendent of the Wakefield Asylum, that his knowledge of the masses from which his patients are derived leads him to form a very unfavourable opinion of the mental status of many who are outside our asylums—that, in fact, there is a large borderland class who are practically insane, although able to adapt themselves fairly well to their environment, usually relatives of patients already inmates of the asylum, and often far more insane at times than the latter. Surely, to the prevention no less than the cure of insanity must our endeavours be bent in the future.

In concluding this Address, which in accordance with the custom of the Association is supposed to be undebateable, I would observe that it would be deprived of much of any value it may possess if it did not lead up to a practical consideration of the lessons which the history of the past should teach us in regard to the future provision for the insane poor in this, or, indeed, in any other county in England. This question I reserve for the paper I am about to read, which, I trust, will elicit the opinion of those whom I address, and to whom I shall appeal for suggestions.

It now only remains to thank you for the patience with which you have listened to my history of a movement which deserves an abler though not a more appreciative historian than myself, and to express my ardent hope that the work of this Section will be second to none of the others in its interest and utility.

AN ADDRESS

DELIVERED AT THE OPENING OF

THE SECTION OF OBSTETRIC MEDICINE.

At the Annual Meeting of the British Medical Association, held in Leeds, August, 1889.

By CHARLES J. CULLINGWORTH, M.D., F.R.C.P.,
Obstetric Physician to St. Thomas's Hospital.

SOME FURTHER APPLICATIONS OF ANTISEPTIC PRINCIPLES TO MIDWIFERY PRACTICE.

In an address, delivered at the opening of St. Thomas's Hospital Medical School in October last, I took the opportunity, as some of you may remember, of calling attention to the marvellous triumphs of antiseptic midwifery. I propose to occupy the short time at my disposal to-day with a few remarks by way of supplement to what I said on that occasion. I wish to show that more is included in the words "antiseptic cleanliness" than the mere use of a chemical disinfectant, absolutely essential though I consider that to be.

Every medical practitioner is familiar with the saucerfuls of Condy's fluid that well-intentioned persons used to place here and there in the sick-room of a fever patient, under the delusion that they were carrying out the principles of disinfection. It is difficult to say how this disinfectant was supposed to act: whether, for example, the infecting micro-organisms were expected to be attracted like flies to a fly-paper, and to rush madly to their own destruction; or whether some wonder-working vapour was supposed to be given off from the surface of the fluid. I am inclined to think that in most cases the subject was never reasoned out at all, and that those little dishes of pink fluid, to all intents and purposes, took the place of a charm. If it was thus easy to invest Condy's fluid with mysterious virtues, how much easier was it to attribute such virtues to substances which appealed strongly to the sense of smell! People are ever ready to believe in the mystery-man, and antiseptics are still used by many as though they were part of his stock-in-trade. The belief in their miracle-working power finds expression every day. A few drops of an antiseptic solution are poured, without even a pretence of measurement, into a large basinful of water, and lo! the whole is at once transformed into a disinfectant of such unquestioned efficacy, that, if but the tip of one's finger be dipped into it, straightway the whole hand is rendered aseptic, and may be plunged into the most susceptible wound with impunity. No one who has done me the honour to read what I have written on this subject, and especially the address to which I have alluded, will accuse me of want of faith in antiseptics, provided that, like Opie's colours, they are mixed with brains. But the very fact that the use of these substances is an essential part of the antiseptic method carries with it the danger of regarding the part they play in the treatment too exclusively, and of neglecting other means of ensuring antiseptic cleanliness, which, though perhaps subsidiary, are nevertheless of the greatest importance. I desire to call attention to some of these means in connection with antiseptic midwifery. I do not include purely hygienic precautions, thorough ventilation, abundant cubic space, good drainage, pure water supply, &c. All these are beyond the scope of these remarks. The matters to which I am about to refer relate, for the most part, to details connected with the personal care of the mother and child.

First, I should like to speak of the undesirability of frequent vaginal examinations during labour, and especially during the first stage. When the presentation has been diagnosed, and labour found to be progressing favourably, repeated examinations are unnecessary. And seeing that every vaginal examination, whether necessary or unnecessary, and whether antiseptics are used or not, must be regarded as a possible means of infection, it follows that the fewer we make the better. In this connection, I may remind you of the remarkable immunity from puerperal fever of those patients who, at a period when the mortality from puerperal fever in the great lying-in hospital at Vienna was at its height, were admitted into that hospital after delivery, and in whom, therefore, no internal examination was made. It was the observation of this, amongst other facts, that ultimately led Semmelweis to his great discovery. Recent statistics of the Dresden lying-in hospital show that what was true five-and-forty years ago is true to-day. Leopold tells us, in his report for 1886, that there were admitted in that year 78 patients, in whom, from the unusual rapidity of labour or other causes, no internal examination was required. Under such circumstances, all douching, both before, during, and after delivery, was omitted. Yet, out of these 78 cases 77 made an absolutely normal recovery, and left the hospital on the eleventh day, while the remaining one was detained until the third week, solely on account of a labial hæmatoma which developed during labour. In 1887 the number of cases admitted, in whom, for one reason or another, no internal examination was made, was 170, of whom 165 had a normal convalescence and were able to be discharged on the eleventh day. Of the remaining five, two had been delivered of a putrid fœtus; one had fever lasting two days and was able to leave the hospital on the thirteenth day; while the other two had foul lochia, with fever of so insignificant a character that they were able to be discharged on the seventeenth day. Neither in 1886 nor 1887 was there amongst these patients a single case of parametritis. The bearing of these facts on the proposition just laid down is too obvious to need pointing out.

A matter of still greater importance is the thorough emptying of the uterus after labour and after abortion. Although I am one of those who hold that retained matters only become septic when pathogenic micro-organisms have obtained access to them from without, I am, nevertheless, fully aware how excellent a soil they furnish for the development of these microbes when once they have effected an entrance. I therefore regard the retention of portions of membrane or placenta, whether after labour or abortion, with as much dread as those who believe in the possibility of self-infection, and I maintain that it is impossible to be too careful to prevent it. If, on examining the placenta and membranes, any portion, however small, be found wanting, the uterus ought, in my opinion, to be at once explored for the missing frag-

ment. I have seen so much evil result from leaving the expulsion to chance that I cannot but regard it as exposing a patient to a very serious and quite unnecessary risk; it is a question between prevention and cure, and there surely cannot be a doubt as to which is preferable.

The third point on which I have a remark or two to make is the custom of strictly insisting on the maintenance of the horizontal posture for several days after a normal delivery. For a long time I have been disposed to agree with Goodell in doubting the wisdom of this. The question is not by any means a new one. More than a hundred years ago, Charles White, of Manchester, a Fellow of the Royal Society, and one of the most distinguished surgeons ever connected with the Manchester Infirmary, published a remarkable book, with which no doubt many of you are familiar, on the management of pregnant and lying-in women. In the chapter on the prevention of puerperal fever, there occur one or two passages on this subject of posture, which are so striking that I will, with your permission, read them to you: "In a few hours after delivery, as soon as the patient has had a little rest, she should sit up in bed with a bedgown thrown over her shoulders. If she propose to suckle the child, it should now be laid to her breast, whether there be signs of milk or no." And, again: "The patient should lie very high with her head and shoulders, and should sit up in bed many times in a day, especially when she takes her food and as often as she suckles her child, and should kneel whenever she has occasion to make water, which should be often done. This frequent upright position is of the utmost consequence, and cannot be too much enforced. It prevents the lochia from stagnating, the stools and urine from being too long retained, and promotes the contraction of the uterus, together with that of the abdominal muscles." How contrary is all this to what is now usually taught! Yet the plan here advocated is merely an application to midwifery practice of the great antiseptic principle of drainage.

Of course, no one would dream of permitting so early an assumption of the sitting posture in the case of patients exhausted either by profuse hæmorrhage or by a greatly protracted or difficult labour, but White is speaking of cases of natural labour only. The singular immunity from puerperal fever that he experienced in his own practice he attributed chiefly to having carried this suggestion into effect in the case of his own patients. After a very extensive midwifery practice of more than forty years, he was able to say that he never lost a patient (whom he had himself attended and whose labour had been normal) "either during her month, or at any time, where there was the least reason to imagine her death was the consequence of her lying-in." I am quite aware that statements of this kind ought, as a rule, to be accepted cautiously; but I feel sure that anyone who will take the pains to read the passage for himself will, in this particular instance, have no misgivings. The statement is made with such evident reluctance and such an entire absence of boastfulness that it cannot, I think, fail to carry conviction. It is to his mind the strongest argument he can use; he therefore feels compelled to refer to it, although, otherwise, it "could scarcely be mentioned without a show of ostentation, which," says he, "I despise."

I have not, in my own practice and teaching, dared to go quite the length that Charles White recommends, but I do allow patients who have had a natural labour to sit up in bed occasionally for a few minutes at a time, on the second or third day, and my teaching on this point is in accordance with my practice. I must now pass to the one or two remaining points of which I desire to speak, and I will allude to them very briefly.

In the matter of perineal lacerations, I believe that, where the tear is at all considerable in extent, it is an important antiseptic precaution to stitch it up at once. If properly done, in a good light, and with the patient on the back, so that the surfaces may be accurately adjusted, immediate suture of the perineum seldom fails. No selfish considerations ought to stand in the way of the performance of this little operation, either at the time, or, at any rate, within a few hours after delivery. An open wound at one of the orifices of the body, and especially in this situation, offers peculiar facilities for septic absorption, especially if the nurse does not happen to be an antiseptic enthusiast, and pay as scrupulous attention to the disinfection of sponges, bed-pan, and macintosh, as to that of her own hands.

And this leads me to my last point, namely, the importance of discarding more generally than has yet been done the traditional linen diaper, and substituting for it some absorbent and antiseptic material that can be burnt immediately after use. The lochia undergo decomposition very speedily after leaving the body, and to receive them on to an ordinary napkin is to expose the patient both to unnecessary risk and unnecessary discomfort. In the General Lying-in Hospital at Lambeth many different materials have been tried, and none is found to surpass in cleanliness and comfort gauze bags of sublimate wood wool.

Our zeal for the safety and well-being of the recently-delivered mother must not make us wholly unmindful of the newly-born child. Can we usefully apply antiseptic principles to the management of the infant? The answer is that we can, at least in two ways. First, in reference to the prevention of ophthalmia neonatorum, which, it must be remembered, is a question for the obstetrician and not for the ophthalmic surgeon, who only deals with the disease when it has manifested itself, and who has no opportunity of preventing it. Everyone is now alive to the importance of wiping the child's eyelids with a clean dry napkin as soon as the head is born, and, if possible, before the eyes are opened; but it is possible to add a further and still more reliable preventive. The application of a weak solution of corrosive sublimate to the eyes, immediately after the child has been washed and bathed, will almost certainly destroy any virus that may have lodged there. For this purpose a small quantity of the 1 in 1,000 solution of corrosive sublimate should be diluted with twice the quantity of warm water, so as to reduce the strength to 1 in 3,000. The nurse should soak a small piece of clean rag or cotton-wool in this solution, and, holding the eyelids apart with the thumb and finger of one hand, should with the other squeeze the rag or wool first over one eye and then over the other in such a way that the solution may run freely over the eyeball. The application causes little or no smarting, and seldom produces any irritation. Now that solution of corrosive sublimate is in very general use in the lying-in room, it would involve very little trouble to adopt this thorough disinfection of the child's eyes as a routine practice. Should the mother be known to have been suffering from a purulent vaginal discharge before labour, a stronger and more penetrating preventive should be used. The medical attendant should himself, under these circumstances, put into each eye, within a few hours of the child's birth, one drop of a 2 per cent. solution of silver nitrate, as recommended by Credé. The application causes some irritation; it does not, however, need to be repeated.

There seems no reason to doubt that by these methods ophthalmia neonatorum might be stamped out. Let us try to realise for a moment what that means. In the year 1884, it was ascertained by a Committee of the Ophthalmological Society of Great Britain that in the institutions for the blind in London, York, Belfast, and Hull, 30 to 40 per cent. of the inmates owed their blindness to purulent ophthalmia in infancy. Hence, if we can prevent ophthalmia in the newly-born, it seems not unreasonable to infer from these figures that we shall thereby diminish the amount of blindness at present existing in this country by one-third.

The second point relates to the mode of dressing the remains of the umbilical cord. The division and ligature of the funis in the living child are normally followed by the drying up and shrivelling of the ligatured portion, or, in other words, of the portion of what is now dead tissue still left attached to the living body of the child. This desiccation is a purely physical phenomenon, and depends for its occurrence on a certain temperature being kept up in the neighbouring parts. The living body meanwhile promptly prepares to rid itself of its dead appendage, and, at the end of a varying number of days, the cord falls off, leaving a wounded surface on the umbilicus at the site of separation. This small open wound is to the infant what the placental site on the inner surface of the uterus is to the mother, and should be as rigorously protected from the risk of septic infection. Antiseptic cleanliness of hands and dressings is, therefore, just as necessary in dealing with the newly-born child as with the mother. If it be said all this is mere theory until it is shown that infants are liable to septicæmia during the first few days after birth, I reply that there is abundant evidence to prove that they are liable. I need only refer to the observations of Lorain at the Paris Maternité in 1853. During that year, in which 2,567 deliveries took place and 145 of the mothers died from puerperal fever, no fewer than fifty newly-born children died from diseases, chiefly septic peritonitis, of precisely the same character as those which proved fatal to the mothers, and which are all now included under the general head of septicæmia. In thirty of these cases Lorain gives the details of the *post-mortem* appearances at full length. In ten of them both mother and child succumbed to the same disease, while five

other women, whose infants died from septic peritonitis, were themselves ill, but eventually recovered.[1]

The newly-born child having been thus shown to be susceptible to septic influences, it becomes important to ascertain what mode of dressing best secures the normal desiccation of the cord before separation and an aseptic condition of the wound left after the separation. There can be no doubt that the old-fashioned plan of charring the square of linen used to enfold the cord is really an antiseptic precaution, akin to the practice of charring timber in the construction of railways and bridges. It is, however, inefficient. The mode adopted at the General Lying-in Hospital is as follows: After being carefully dried, the navel-string is passed through an aperture in the centre of a six-inch square of antiseptic gauze. It is then dusted very freely with finely-powdered starch, and wrapped in the gauze, the whole being kept in place, as usual, by the flannel roller. The dressing is left undisturbed until the cord separates, care being taken in the meantime to keep it dry. The results of this method have been highly satisfactory. The raw surface left, after the cord has become detached, should be freely dusted with finely-powdered boric acid and covered with a piece of absorbent wool.

Before sitting down I must offer a word of congratulation to this Section on the programme our Secretaries have provided for us. The Sectional Committee took great pains in the selection of subjects for discussion. As usual, one of the two is obstetrical, the other gynæcological. In regard to obstetrics, it was felt that nothing could more usefully engage the attention of the Section than the treatment of placenta prævia. It was believed, too, that the profession would welcome something in the nature of a definite and authoritative statement on this most important practical question. In matters of this kind, where the practitioner is called upon to act promptly, and where he must often accept the sole responsibility, it is well that the profession should arrive at some agreement as to the main lines of treatment. Every obstetrician would then have in his mind the ideal method of dealing with these cases, there being still abundant opportunity for the exercise of individual judgment in deciding what modifications are rendered necessary by the special circumstances of each case. There is no one in the United Kingdom, and probably no one in the world, upon whom the duty of opening this debate could more fitly have devolved than Dr. Braxton Hicks. The suggestions he made many years ago are at length receiving the attention they deserve, with the result that already a diminution has taken place in the mortality from placenta prævia, such as cannot fail to be a source of the highest gratification to him.

The gynæcological topic chosen for debate is corporeal endometritis. So widely divergent are the opinions of leading gynæcologists as to the frequency, pathology, symptomatology, and treatment of this affection, that it seemed desirable to have placed before us what is actually and definitely known about it. The Committee felt that in obtaining Dr. Herman's consent to open the debate, they were securing the services of a painstaking investigator, who, while possessing the necessary amount of scientific scepticism for the conduct of such an inquiry, would, nevertheless, approach it without prejudice, and would be sure to present to us, in a succinct form, the basis of fact on which the various current theories on the subject have been built up.

I trust that each of these discussions will prove a valuable contribution to the advance of our knowledge, and be the means of increasing our usefulness to the community.

Of the various papers that have been promised, it would be invidious to select any for special mention. Some of them touch on questions that are still far from being settled. One of our weekly journals playfully alluded the other day to the startling differences of opinion that exist amongst gynæcologists, and to the strong phraseology in which those differences are apt occasionally to find expression. I am afraid it must be confessed that we are somewhat combative, and sometimes perhaps even a little wanting in forbearance towards those who differ from us. The reason of this is, partly, that the light of scientific inquiry has only recently been brought to bear upon the study of gynæcology, and that we are still almost completely in the dark as to the pathology of some of the most common affections to which women are liable. When our knowledge has a firmer basis, we shall differ less. There will be less room for the exercise of the imagination, more points on which we can all agree. Exactly in the same way is to be explained the bitterness of those who hold one set of religious beliefs towards those who hold another. It is imperfection of knowledge that lies at the root of it all. Let me in concluding these remarks, quote a passage from a book,[2] that for many years has been a great favourite of mine, in which this point is put very strikingly, and from which, though the author was referring solely to differences of religious opinion, we, too, may derive some consolation as to the future. "Set a company of beginners in archery shooting at a mark, their arrows will all fly wide of it, some on one side, some on the opposite, and while they are all thus far off, many a dispute will arise as to which of them has come the nearest. But in proportion as they improve in skill, their arrows will fall nearer to the mark and to each other; and when they are fixed in the target, there is much less controversy about them. Now, suppose them to attain to such a pitch of mastery, that every arrow shall go straight to the bull's-eye, they will all coincide. This may help us to understand how the differences of the wise and good, which are often so perplexing and distracting now, will be reconciled hereafter; when.....their faculties are strengthened to see truth, and to strive after it and to reach it." "Only," adds a friendly commentator, "if we would hit the truth, we must indeed aim at it."

[1] Lorain (P.), *La Fièvre Puerpérale, chez la Femme, le Fœtus, et le Nouveau-ne.* Paris. 1855.

AN ADDRESS

DELIVERED AT THE OPENING OF

THE SECTION OF PHARMACOLOGY AND THERAPEUTICS.

At the Annual Meeting of the British Medical Association, held in Leeds, August, 1889.

By Sir WILLIAM ROBERTS, M.D., F.R.S.

ON SOME PRACTICAL POINTS IN THE USE OF ANTACID REMEDIES IN DYSPEPSIA AND GRAVEL.

Gentlemen,—It is not my intention to intervene at any length between you and the important discussion on hypnotics and analgesics which is to be initiated by my friend Dr. Leech. The late period of the year at which the section was organised has made it impossible for me to prepare a statement of the recent advances in our knowledge of the action of remedies and their application to the treatment of disease. Nothing can be more striking than the contrast between the activity of the present day in regard to these matters and the apathy and stagnation of forty years ago, when I first began the study of medicine. At that time the leading minds of the profession seem to have regarded with a sort of despair any hope of seriously influencing the issues of disease by the use of drugs. Some of them even gloried in a course of *laissez aller, laissez faire*, and turned their attention entirely to a study of the natural history of disease and the minutiæ of morbid anatomy. Now all this is changed. A more exact investigation of the fundamental action of drugs on the tissues and organs, and the discovery of the remarkable correspondence which has been found to exist between the chemical composition of substances and their physiological effects, have given a new and extraordinary impetus to therapeutical studies. We are evidently entering on a period of important advances in the healing art, and the time seems not very far distant when therapeutics may at last fairly claim a position as one of the exact sciences.

The application of chemical knowledge to the treatment of disease is both new and old. In the course of the discussion which is to be presently opened we shall perhaps hear something of the new and more recondite applications of chemistry to therapeutics. What I am going to say, on the contrary, will only deal with old chemistry and old applications; but I hope, nevertheless, to gather on these ancient paths some useful gleanings of a practical character.

There are, perhaps, in the whole range of therapeutics no simpler problems presented to us than those which have reference to the palliative treatment of acid dyspepsia, and the chemical prophylaxis of uric acid gravel. An excess of acid in the stomach is almost as easily neutralised as if it were contained in a bottle

[2] *Guesses at Truth.*

in the laboratory. And hyperacidity of the urine is scarcely less under our control, provided we employ a larger dose of the neutralising agent. But although the objects in view are so simple, and the means of attaining them so well known, there are a number of practical points in carrying out the indicated lines of treatment which are neither simple nor well known; and it is to some of these points that I propose to call your attention. For our present purpose alkalising or antacid agents may be classed into those which are designed to take effect in the stomach, or gastric antacids—and those which are designed to take effect in the kidneys, or renal antacids. The gastric antacids in common use consist of the alkaline and earthy carbonates and lime water. Renal antacids include, in addition to these, the acetates and citrates of potash and soda, which are changed in the primæ viæ into carbonates of these bases.

Gastric Antacids.

Gastric antacids are employed in two distinct classes of cases—namely, in acid dyspepsia, and, secondly, in a variety of conditions characterised by great irritation of the stomach, often with vomiting, which we seek to allay by the administration of milk mixed with lime-water.

Antacids for Acid Dyspepsia.—You are all aware that sufferers from acid dyspepsia are in the habit of relieving their pains by the use of antacids. I have elsewhere pointed out that the most advantageous mode of administering antacids in these cases is in the guise of the lozenge. A lozenge, properly used, should be deliberately sucked, and not roughly chewed and swallowed. The process of sucking induces a plentiful flow of alkaline saliva, and the presence in the stomach of this bland demulcent secretion is soothing to the angry mucous membrane. The compilers of the *British Pharmacopœia* have provided us with two, and only two, antacid lozenges—namely, the *troch. sod. bicarb.* and the *troch. bismuthi.* The former contains 5 grains of bicarbonate of soda in each lozenge. It is an effective antacid, but it is not a favourable example of pharmaceutical art. It has a peculiarly nasty, soapy taste, which makes the sucking of it a penance; and this, I presume, is the reason why it has not become popular with dyspeptics. The bismuth lozenge is in every way a better article. It owes its antacid properties to $3\frac{1}{2}$ grains of chalk and $2\frac{1}{2}$ grains of carbonate of magnesia. These quantities are, in saturating power, equal to 10 grains of bicarbonate of soda. This is a full antacid dose, and the chalk and magnesia are practically tasteless, and this is a distinct advantage in regard to the active ingredients of a lozenge. The subnitrate of bismuth, to which this lozenge owes its name, has no antacid properties, and is probably inert. It imparts, however, a slight metallic taste, and communicates to the breath a somewhat disagreeable taint; so that its presence in the lozenge may, I think, be regarded rather as a tribute to the decaying art of polypharmacy than as a really useful addition. The bismuth lozenge has won its way into favour with dyspeptics by sheer merit, and inquiries which I have caused to be made among druggists and lozenge-makers show that the sale of this lozenge is steadily and largely increasing all over the country. A bismuth lozenge without the bismuth would be a nearly perfect antacid lozenge, and I would venture to suggest that some such lozenge should be introduced at the next revision of the *British Pharmacopœia.*[1]

Besides these officinal articles, there are largely sold in the shops a variety of lozenges and tablets for the use of dyspeptics. None that I have examined fulfil the conditions of a perfect antacid lozenge. The compressed tablets of carbonate of soda and the soda-mint tablets, although effective as antacids, are so unpalatable that they cannot be properly sucked without disgust, and, indeed, those who use them generally swallow them whole in haste—and thus miss the concurrent flow of saliva, which is distinctly helpful to dyspeptics. Some of the antacid lozenges sold in the shops are flavoured with pungent spices to conceal the taste of the soda. All such adjuncts are obviously a mistake. Pungent spices have a strong tendency to provoke acidity in the stomach; and, moreover, any pronounced flavour is objectionable in an article which is used frequently. The alkaline salts of the Vichy springs have been made into very agreeable lozenges—which are sold in this country in sealed boxes. They owe their antacid properties chiefly to carbonate of soda, but partly also to carbonate of potash and to the carbonates of lime and magnesia. They contain besides a small quantity of sodium chloride, which pleasantly sharpens their flavour. These lozenges have a comparatively feeble saturating power, but owing to their full sapid qualities, they provoke an abundant flow of alkaline saliva, and this renders them effective for the relief of gastric acidity. Were it not for their costliness, I believe these Vichy lozenges would soon get into favour with dyspeptics.

As to the comparative merits of the several antacids employed in acid dyspepsia, there is, perhaps, on the whole not much to choose. Certain differences may, however, be noted. The alkaline bicarbonates have a nauseous taste, and if taken in excess they leave an alkaline residuum in the stomach. This is at least abnormal, and perhaps embarrassing, in an organ which requires the presence of an acid to perform its functions. The earthy carbonates, on the other hand, are tasteless, and, owing to their insolubility, they cannot, when taken in excess, cause the neutral line to be over-passed. Perhaps the most advantageous course would be to vary and change the antacid from time to time.

The question may now be put—Is there any harm in the practice of habitually using antacids for the relief of acid dyspepsia? Do dyspeptics purchase present ease at the cost of some future detriment? My attention has been directed to this point for some years. I have, naturally, regarded a practice so artificial with considerable misgivings. But the more extended my experience has become the more I have been satisfied that, with due precautions, the practice is harmless—and I know of no valid evidence from any other quarter to justify a contrary conclusion. My own experience has been mostly gained from the use of the bismuth lozenges, which I have largely prescribed for a considerable length of time. I have, however, invariably enjoined the following strict rules in regard to their use:—They were not to be used at or near meal times—not sooner than three-quarters of an hour or an hour after breakfast, nor sooner than an hour or an hour and a half after dinner; they were not to be used regularly and systematically, but only as the occasion arose, that is to say, when gastric pain was distinctly present, and was producing more discomfort than a man could be reasonably expected to bear who had the easy means of relief ready to his hands; lastly, the use of the lozenges was to be discontinued if their employment did not cut short the pain. This last injunction leads up to the remark that an antacid dose is sometimes a useful means of diagnosis in cases of gastralgia. It is often impossible to decide from a patient's statements what may be the real nature of the pains complained of. In such a case, if an effective antacid dose fail to give relief it is sure evidence that the pains are not due to gastric acidity.

Lime Water with Milk.—Lime water is used as an antacid in a very important and serious class of cases. It is a very general practice, as you know, when the stomach is intolerant of food, to administer milk with lime water—and often with the happiest results. But in many instances the symptoms are not allayed and the milk is vomited up in hard, sour curds. Failure in these cases is often solely due to the feeble antacid property of the lime water. The saturating power of lime water is really very low. Quicklime dissolves in water only to the extent of about half a grain to the fluid ounce—and this is only equivalent in saturating power to one grain of chalk and to a grain and a half of bicarbonate of soda. To reach an effective antacid dose lime water requires to be given in very large quantities—quantities which are altogether impracticable. Six ounces of lime water are only equal to a single ordinary antacid dose of chalk or bicarbonate of soda. I have repeatedly observed in cases of feeding with milk and lime water that failure was simply due to the feebleness of the antacid charge—and that when a solution of 5 to 10 grains per ounce of bicarbonate of soda was substituted for lime water as an admixture with milk a favourable result was at once obtained, and the vomiting of hard curds arrested.

A useful notion of the relative antacid potency of the several articles in common use as gastric antacids (as sold in the shops) may be obtained from an inspection of the following table. Ten grains of bicarbonate of soda are taken as a standard antacid dose; and the quantities given of the other articles correspond in saturating value to this standard dose. The results were obtained by direct alkalimetrical determinations, and are here shown in round numbers:

[1] Messrs. Squire have at my suggestion carried out this proposal, and have prepared a simple antacid lozenge which contains the same antacid charge as the bismuth lozenge, but excludes the bismuth. It contains also 1 grain of sodium chloride, which sharpens its flavour, and thus promotes the flow of saliva.

Table of Antacid Equivalents.

10 grains	sod. bicarb.	= 12 grains	pot. bicarb.
„	„	= 6 „	creta precipit.
„	„	= 6 „	carb. magnesia.
„	„	= 3 „	calcined magnesia.
„	„	= 6 fluid ounces	lime water.
„	„	= 2 fluid drachms	liq. potassæ.
„	„	= 1	bismuth lozenge *B.P.*
„	„	= 2½	Wyeth's soda-mint tablets.
„	„	= 5	Vichy lozenges.

Renal Antacids.

The use of alkalising agents for the prevention of uric acid gravel stands on quite as rational a basis as the use of antacids for the relief of acid dyspepsia. It is chemically impossible for uric acid to be deposited in the free state from an alkaline urine; and as we have the means of harmlessly alkalising the urine at will, we have in our hands, theoretically at least, the absolute power of preventing uric acid gravel. There are, however, a good many practical difficulties in the way. The disposition to uric acid gravel has a certain persistence. It may last intermittently for weeks, months, and even years, and it would obviously be too great a strain on a treatment which is purely preventive to require that a patient should take antacid remedies in sufficient doses and at sufficiently frequent intervals to maintain the urine continuously alkaline for so long a period of time; nor is this necessary. A study of the normal oscillations of the urine at different periods of the day and night leads to the inference that the liability to uric acid gravel only assumes a morbid intensity during a limited portion of the twenty-four hours. The precipitation of uric acid in the kidneys can only take place when there is a concurrence of several favouring conditions. The flow of urine must be very slow, the secretion must be poor in saline constituents, it must be acid or even hyperacid in reaction, and it must be fairly rich in uric acid. Now these several conditions only coincide at one period of the twenty-four hours, namely, during the hours of sleep. The time of sleep is a time of fasting, and therefore a time of hyperacidity of the urine; a time of bodily immobility and recumbency, and therefore a time when the renal stream approaches nearest to absolute stagnation. On the other hand, during the day and the waking hours the recurrence of the meals keeps the urine rich in saline ingredients, and at a low degree of acidity, or even renders it for awhile actually alkaline; the renal stream is comparatively full and rapid, and its descent from the kidneys is favoured by the force of gravity. During these hours, therefore, the risk of uric acic acid precipitation is reduced to a minimum, even in persons who show a distinct tendency that way; for, as I have repeatedly had occasion to observe, the urine of calculous subjects exhibits exactly the same cyclical diurnal variations as that of healthy persons, though not always to so pronounced a degree.

It follows from these considerations that if we safeguard the night the day may be generally left to take care of itself. This theoretical deduction is fully in accordance with experience in the treatment of uric acid gravel. In the milder cases a single full dose of the alkalising agent taken at bedtime suffices to prevent the recurrence of the colicky pains and the discharge of uric acid concretions. For this purpose the citrates and acetates seem to be preferable to the bicarbonates. Their effect, I have reason to believe, is more protracted and covers a longer period of time than that of the bicarbonates. The citrate of potash is, on the whole, the best preparation to employ; it has very little taste, and it sits comfortably on the stomach. The dose for an adult should not be less than 40 to 60 grains dissolved in three or four ounces of water. In severer cases a single dose is insufficient, and the early morning urine will still exhibit a morbid disposition to precipitate uric acid. In such cases a second dose should be taken about the middle period of the hours of sleep. This is less difficult to manage with the subjects of gravel than in healthy persons. There is commonly in calculous subjects a certain restlessness, and a certain irritability of the urinary organs, which leads to an increased frequency of micturition, and such persons rarely pass the night without a call to empty the bladder. Advantage should therefore be taken of this break in the continuity of sleep to take the second antacid dose. In this way the entire night and early morning may be effectually guarded.

Cases of uric acid gravel, however, are not always to be got rid of on these easy terms. Now and then instances are met with in which the perversion is so great that the urine is disposed to deposit almost all the twenty-four hours round, and in which the normal alkaline tide, after meals, seems to be altogether abrogated. Under these circumstances additional doses of the antacid are required to afford the requisite protection. But, so far as I have seen, these extreme conditions only last a short time—a few days at most—and there is then a return to a less urgent state of things. It is, indeed, a marked character of uric acid gravel that it oscillates in intensity—it comes and goes in paroxysms—reminding one of the waviness of gouty phenomena. For this reason it is desirable to frequently note the state of the urine, and to ascertain its greater or less proneness to deposit uric acid, so that the administration of the antacid may be adjusted to the actual needs of the patient. There is no great difficulty about this. If a freshly voided specimen of the urine of fasting—say the urine of the early morning or the urine secreted just before dinner be set aside in a bottle, in a warm place so as to prevent the separation of the amorphous urates, the imminence of precipitation can be easily observed. If precipitation be morbidly imminent crystals of uric acid will appear—perhaps at once, perhaps in an hour or in a couple of hours. If precipitation be not morbidly imminent crystals will not appear for several hours—perhaps not for two or three days. It is possible in this way to gauge pretty accurately the intensity of the morbid tendency, and to regulate thereby the amount and frequency of the antacid dose—or to decide on its discontinuance.

The essential thing in the prophylactic treatment of uric acid gravel is to guard the urine from precipitating within the precincts of the kidney. And we shall practically have attained our object if we succeed, not in altogether preventing precipitation, but in postponing it until the urine have quitted the kidneys. A postponement for a short time—even half an hour—may make all the difference between a precipitation which is fraught with pain and peril and a precipitation which is practically harmless. Now, the protective effect of the antacid extends in this respect a good deal beyond the point at which the urine is rendered actually alkaline. For although all acid urines of medium density precipitate uric acid sooner or later, the time of the occurrence of that precipitation is immensely influenced by the degree of acidity of the urine. Other things being equal, the more acid the urine the earlier is the precipitation, and the less acid the urine the longer is the precipitation postponed. An antacid effect, therefore, which is too feeble to render the urine actually alkaline may be quite sufficient to depress its acidity to such a degree as shall postpone the time of precipitation until the urine has escaped from the kidneys, and even from the bladder.

There are several important matters in connection with the preventive treatment of uric acid gravel which I am unable to touch upon, such as the regulation of the time and quality of the meals and the general mode of life, the use of other salines besides those which tend to diminish the acidity of the urine, the relations of uric acid to oxalate of lime, and so forth. To expand the subject in these directions would lead me too far. I could not pursue it without entering on some very intricate questions of urinary chemistry—the elucidation of which would require more time than I have now at my disposal—and some of which, moreover, are not yet ripe for profitable discussion. The conditions which determine the occurrence of urinary gravel are still imperfectly understood, and several of the problems connected therewith still await scientific study. The subject is one of great interest, both in regard to its therapeutical issues and its physiological bearings, and I know of none more likely to yield valuable results to a skilled and patient inquirer.

M. Tillaux has operated for vaginal cystocele during hypnotic sleep.

The Tynemouth Public Infirmary, which has been erected at a cost of £3,264, was opened on August 3rd by Earl Percy.

In consideration of the continuance of scarlet fever in Birmingham, another ward, with accommodation for thirty beds, has been added to the Infectious Hospital. The additional ward, it is hoped, will not be needed, but has been erected in case of emergency.

On the recommendation of the Government of India, Her Majesty's Government has been pleased to confer a good-service pension on Surgeon-General George Bidie, M.B., C.I.E., Surgeon-General with the Government of Madras, with effect from February 10th last, *vice* Colonel (Brigadier-General) G. C. Hodding, C.B., succeeded to Colonel's allowance.

FIFTY-SEVENTH ANNUAL MEETING
OF THE
BRITISH MEDICAL ASSOCIATION.

Held in LEEDS, August 13th, 14th, 15th, and 16th, 1889.

FIRST GENERAL MEETING OF MEMBERS: TUESDAY, AUGUST 13TH, 1889.

Professor GAIRDNER in the Chair.

THE minutes of the previous meeting were taken as read, and confirmed.

Retirement of President.—Professor GAIRDNER said the signing of the minutes was the last official act that he could perform as their president. It now remained to him to perform what was to him the very pleasant duty, under the circumstances, of dying officially as gracefully and as briefly as he could. It was not desirable that a dying actor should remain too long upon the stage. In some of the schoolbooks to which he was accustomed in boyhood, there was a very beautiful design bearing a Greek motto, one of the most beautiful passages from the writings of antiquity. A hand was seen coming out of a cloud and bearing a torch. Another hand from the opposite side was seen coming out of the dark and taking the torch, the motto being that those who had torches should hand them on to others. That was his present position. He might be said to be in the moribund condition as president, and handing on his torch, such as it was, in the way of illumination to his successor. Considering this as an act of official death, he must say with the great Roman, that he was, and felt himself to be "*felix opportunitate mortis.*" In dying he brought upon the stage a new president who certainly did not come out of the dark. He had been long before them, not only as one of the most active members of the profession it had, but also as their representative on the General Medical Council, and it was within his knowledge, from friends who had long been members of the Council, that no man in it had made so much way as Mr. Wheelhouse in the opinions of that body. He was universally recognised as a great guiding head, with much tact, good business talents, and every quality of a good medical councillor. He need not say that such a man, when he added to those distinctions high professional distinction in his own particular line, was eminently qualified to be the head of the British Medical Association. In retiring, he (Dr. Gairdner) did so with a warm feeling of gratitude towards the Association and its members and officials for the way in which his hands had been strengthened during the period of his presidency.

Mr. C. G. WHEELHOUSE, President for 1889-1890, then took the chair amid continuous acclamations.

The PRESIDENT said he was very grateful to the members for the way in which he had been received, and to Dr. Gairdner for the terms in which he had spoken. If in receiving the torch from his hand he could carry the light high and steadily before them, and if with that high and steady light he could guide them aright, he should have the greatest possible pleasure in so doing. At the same time he could not but feel that the task was a very difficult one. For example, members who came to their annual meeting, saw the spirit and enthusiasm that was always present, and the happy, social side of the thing, might know nothing of those hours that were spent in Council trying to guide the Association in the proper lines, and to do that which was right by every member of the Association, numbering, as it did, 13,000 members. He had received the honour conferred upon him with very great reluctance, but at the same time would do the best he could for them in all ways.

Report of Council.—The report was taken as read, having been already published in the JOURNAL.

Dr. BRIDGWATER, the President of the Council, moved: "That the report of Council, together with the financial statement for the year ending December 31st, 1888, be received and adopted." He said the report was, on the whole, a record of continued success and progress. It began by stating that this was the third time they had had the privilege of meeting in Leeds, and also that those who could remember their last reception had it indelibly impressed upon their memories. In looking forward to the present meeting under the presidency of Mr. Wheelhouse they knew that, if possible, even that would be surpassed. Taking a retrospect of the history of the Association extending over so many years, they would see that in 1843 they numbered only 1,600, and their income was something like £2,000. Twenty years later there were 4,000 members, with an income of £5,000, without any balance. The Association now numbered nearly 13,000 members, the income this year was £31,685, and the balance of assets over liabilities over £35,000. That was a subject of great congratulation and satisfaction not only to those who were conducting the affairs of the Association and the JOURNAL at the present time, but as a record of progressive and good work done by their predecessors. Their present financial position was a matter for undoubted congratulation. During the last year they received £31,685 and expended £27,680, leaving a balance of £4,000 to the good. This condition enabled the Council to do a great deal more than it was accustomed to do in the early condition of the Association. Amongst other things it had endeavoured to equalise the demand upon every member with regard to the reception of the JOURNAL. The Colonies and India had been accustomed hitherto to pay the postal expenses of the paper, and had thereby been heavily handicapped as regards the members at home. It had been thought, inasmuch as they could afford to do it, that they might free the Colonies and India from that impost, and themselves pay the postage. This involved an outlay of something like £400 a year, but they could see in it simply the carrying out of what might be called the principle of justice to all. Then out of their surplus they had been able to purchase the lease of two houses adjoining their building in the Strand. When they first contemplated going there it was their ambition to have bought the whole block, but with that care which had ever characterised the proceedings of the Council, they thought they were not justified in expending more than they did, and they purchased a certain portion. They had hardly been in their new premises when the policy of the movement was exemplified in the fact that they began to feel pinched for room, and were glad on the earliest opportunity to make a good bargain in purchasing the lease of two adjoining houses; and now, taking it as a whole, they might be congratulated on having a building equal to their requirements. Then, again, they had instituted a library. This was no new idea, for it would be remembered that the JOURNAL some years ago published a short synopsis of their history, showing that the formation of a library was a thing very much in the minds of their predecessors many years ago, but that they had no funds to carry it out. In their present building they had a very large room; the Council had granted a sum of money, and shelves had been provided for the goodly number of volumes already in their possession. He need hardly say their honorary librarian, Mr. Ernest Hart, with his usual energy and public spirit, was endeavouring to add in every possible way literature which should be of advantage to anybody who went there, and the Council had granted £300 for the purchase of books of reference. The members of the Association last year numbered 12,265. During the year 954 had joined them, 110 had died, and 212 resigned, leaving at present as the accurate number of the Association 12,897. A great deal of this resulted from the work of the secretaries of Branches, and the opportunity must be taken to record publicly how much the Association was indebted to them. On the present occasion some five or six men who had been prominently distinguished for their services in this work were about to retire. They could not always claim their services, but most of them had worked on till at last the very pressure of outside work compelled them to resign. They carried with them their regret, and also thanks for the work done; but there was this consolation always to the Association, that no sooner was one down than another was up, and their places had been filled by men equally anxious to do good work, and upon whose work they could look with as much confidence in anticipation as they had in the past. The time had again come round for the administration of the Middlemore and Stewart Prize Funds. For the Middlemore Prize only one essay was sent in, and the adjudicators hardly felt that it was equal to the necessary standard required. The Stewart Prize had been awarded to Dr. Klein for very good work done. Cordial thanks were due to Dr. Littlejohn, Dr. Grimshaw, and Dr. Corfield, who had acted as adjudicators in the Stewart Prize, and to Dr. Swanzy, Dr. Reed, and Mr. Priestley Smith, who had acted in like manner for the Middlemore Prize. The Reports of the various Committees would be brought before the Association, so that they might realise for themselves the amount of work done by those who undertook those duties simply for the honour and glory of serving the Association. He now had to tread on rather tender ground. They knew what had happened with regard to the publication of the

the script. It went without saying, for there was not a single man in the Association who did not feel equally upon the point. Every man in the profession must have felt strongly, and though perhaps this was an opportunity given to some to express their feelings, yet they must remember that in the management of a great concern they did not always act upon individual impulse, but must safeguard the body for which they were acting, and at the same time do what the world at large, and the Association at large, must consider the right thing in the end. They were not able to rush at first start, and to express their sentiments as a Council on this matter. In all conditions of importance they must be well aware that it required very careful forethought, and on this occasion they were justified in the deliberation of their action by the mere fact that their legal adviser cautioned them to be exceedingly careful, explaining to them risks and possibilities which ordinary people would not have realised. In the long run, they had recorded as the act of the Council that they regretted the printing of the script, and that the communication of the regret should be conveyed to the person chiefly interested. Later on, they found that the various Branches had been written to, suggesting that the policy of the JOURNAL was not right—that they should have all articles signed, and should lay aside everything that gave a commercial colouring to the JOURNAL, such as their advertisements. Anybody who had ever had anything to do with journalism would know that both these propositions, if carried out, would be absolutely fatal to the well-being of the Association. It was impossible, without diving into the secrets of the editorial bag, to explain why it was undesirable to have signatures; but it ought to suggest itself to everyone's mind that there must be very many highly-placed, able, and influential men, who were capable of giving the best information, who would never write if they had to sign their names. Then, as to advertisements, it was well known that however perfect their editorial work might be, if they were merely trusting to subscriptions and the casual sources of income that the paper would bring in, they would be simply hurried rapidly into the bankruptcy court. The publishing of advertisements, judiciously managed, as they always had been—there might be now and then a slight error, but that did not condemn the whole—under the general management of Mr. Fowke, constituted, after all, an important element in the financial basis upon which they were able to do the work. This was a fitting opportunity for the Association to record, as they were invited to do in the Report, its full confidence in their Editor. They felt that in him they had a man of beyond ordinary ability and devotion and public spirit in the power of managing the work he had to do. If proof of this were needed it would be found in the widely-extended popularity of the JOURNAL and the vast growth of its circulation. With regard to their Manager, the state of the finances spoke for him and drew forth their gratitude. One could have little conception of the enormous strain it must be on the mind of the Editor of a paper with a circulation so large as theirs to be prepared at any moment and every moment to do that which was most judicious under the conflicting considerations of sudden emergencies. This had suggested to the Editor the necessity of coming before the Council and asking for the formation of a Reference Committee. This was no new idea. But when a Reference Committee had been suggested the Association had on previous occasions, by a large majority, expressed full confidence in the sole judgment of the Editor. On the present occasion they were in a different position, because the proposition came from Mr. Hart himself, and, coming from him as a spontaneous and urgent request, they were very glad to fall in with his views. The Council had accordingly appointed a Reference Committee to assist him in his arduous duties which he had successfully carried on for so many years, and the committee was so constructed that it had upon it the President of the Council and the Treasurer as *ex-officio* members, and as other members, who received remuneration, Dr. Farquharson, F.R.C.P., M.P., as representing London, and Professor Donald MacAlister, of Cambridge, as representing the provinces. He believed that this would in the long run prove a great benefit to the Association. Mr. Hart himself had on many occasions stated that this arrangement was the greatest possible boon and relief to him, and was working as well as it possibly could. He (Dr. Bridgwater) was bound to state that there was a certain rumour that there was a powerful body in the metropolis who did not look upon this arrangement as likely to do the good that was expected; they had gone so far as to write and express themselves as though they were the protectors of the honour and well-being of the Association, and that the Council, the Journal Committee and the Reference Committee were negligent of the honour of the Association. It was very easy to make charges, but what he would say was this—the committee was always open to criticism; it did them good, and he might say journalism lived by it. Suggestions would always be most carefully scrutinised and looked into, but as to judgment they must pause. They could not come before the Association in the spirit of Naaman and ask that if they bowed down to this house of Rimmon they might be pardoned; on the contrary, they felt that the Association would realise how highly they appreciated the trust committed to them and the importance of handing down to those who followed them untarnished the glorious traditions of the past, whilst they also felt that in affectionate loyalty and jealous regard to the honour of the Association they could bow and yield to none. In doing this work they could accept the dictates of no second Cæsar: they had but one court of appeal, and that was the members of the Association. The last part of the Report was a record that came year by year, and in speaking of it it naturally drew their minds away from anything that might be vexatious. As they looked over the list of 120 who had gone to "the long bourne" since their last meeting, the thought came not what they were doing but rather what should the end be. Let them in all faith believe that each of those had gone to his rest after a life of earnest and honest work. And yet even here it was possible to select some two or three names who would deserve perhaps more than a passing mention: Mr. Mason, of Bath, who worked on the Council for some years; Dr. O'Connor, of Cork, who was President when they met in that city some years ago; and last, one who, though it might be said he was not particular in the way in which he called a spade a spade, yet was a man whose friendship they might value, and whose work for certain portions of the Association would have an undying memory as a record, he referred to Dr. Joseph Rogers. From a list of that kind they might derive a constant lesson of work—"Whatever your hand finds to do do it with all your might;" and along with that the not less impressive lesson—"Work while it is day, for the night cometh when no man can work."

Dr. HOLMAN, the Treasurer of the Association, in bringing forward the financial statement, said: In proffering the balance sheet of 1888 for your acceptance, the items are so fully set out that I need only detain you with a very few observations. Our increased receipts for the past twelve months over that of 1887 is £3,105; the increased expenditure amounts to £1,169. We have printed 416 more pages of matter, and 38,075 more copies of the JOURNAL have been issued. The number of reams of paper used in 1887 is largely increased, but, thanks to the unflagging watchfulness of our General Manager in securing an advantageous contract, the extra cost for paper only amounts to £87. Fresh economy has recently been secured by a new contract for machining the JOURNAL. The profit for the year is £4,093, the largest ever made. This might have been increased, but hitherto a rule-of-thumb sum has been written off each year for discounts. The exact amount has now been ascertained, and to enable the calculation to start fair in future, we have charged the revenue of 1888 with five quarters' discounts, and the advantage of this procedure we may expect to find in the balance sheet of 1889. As regards the disposition of profits for last year the item of Nottingham Corporation Stock in the balance sheet appears now amongst the investments. In 1888 we have paid for Nos. 2 and 3, Agar Street, £3,200, and the remainder has been placed on deposit account. On referring to our balance sheets for 1886, 1887, and 1888, I find we have expended between £13,000 and £14,000 in acquiring an invaluable property in the Strand, and furnishing it, and adapting it to our purposes, and we have spent between £3,000 and £4,000 for advancing the scientific work of our profession, and in watching over and advancing its material interests. By our Research Scholarships and pecuniary grants we enable young men to pursue scientific investigations which, without such aid, they could not undertake; the results of their work being from time to time published in the JOURNAL for the benefit of all our members. The sums so expended are apportioned under the direction of men of the highest standing in the scientific world. These moneys could not have been expended in a manner so beneficial to all if there had not been exercised a most careful supervision over the business portion of our work. In your annual subscription you have all enjoyed the privileges of membership of the most numerous and powerful medical association the world has ever seen; weekly you have received the lowest priced and one of the best journals

ever issued by the medical profession, for practically it represents a charge only to each member of 4½d. a number. We seek to make it good in all its parts—and that we fairly succeed may be inferred by the rapid increase of the weekly issue, which now amounts to 15,500 copies delivered free of all postal charges to members of the Association throughout the British dominions and the Continent.

Mr. WRIGHT, of Leeds, seconded the motion for the adoption of the report. He said he had the honour of taking a subordinate part when the Association visited Leeds in 1869 under the direction of their President, and in occupying his present position he (Mr. Wright) felt that Mr. Wheelhouse was a very difficult man to follow, inasmuch as he carried out the duties of the meeting in such an efficient and energetic way. He might take this opportunity of saying that the accommodation of the meeting had been a most anxious matter to them all. In 1869 there were 486 members present, but at the Glasgow meeting last year there were 1,300 present so that the matter of accommodation was a very serious one. He asked members to look charitably upon what had been done, and to believe that the Committee had done their utmost to make the meeting a success.

The resolution was agreed to.

Thanks to the Ex-President.—Mr. SIBLEY moved: "That the best thanks of the Association be given to Professor W. T. Gairdner for the able and courteous way in which he has presided during the past year, and that he be elected a vice-president for life." The acclamation with which the resolution had been received rendered it entirely superfluous on his part, even if he were able to do so, to endeavour by any words of his to commend the resolution. Professor Gairdner had filled the most distinguished office of President with an unusual amount of distinction. There had been many eminent men in the chair before, but few could compare with the high qualities of their ex-President. He need not recall his high scientific attainments or his distinguished social position; these had enabled him to fill this office with grace and dignity. They were under deep obligations to him for the courteous manner in which he had discharged his office. They had had the opportunity of listening to the results of some of his scientific researches in the interesting address which he delivered. These matters were so fully before them that they need not be now dwelt upon. Professor Gairdner spoke of being "moribund"—moribund in the sense of President, but full of life they hoped as Vice-President for life. He had been of the greatest use in guiding the Association through many difficulties during the past year, and they looked to him for still further guidance in passing through the troublesome waters with which they were, perhaps, still surrounded.

Dr. SAUNDBY seconded the resolution. He said it had been to the Association a great honour to have such a distinguished President as Dr. Gairdner. He was not only the very ideal of a scientific physician, but he had also been a most distinguished President and a wise counsellor to the Association in the somewhat unprecedented difficulties through which they had passed.

The resolution was carried by acclamation.

Professor GAIRDNER, in responding, expressed his joy that the Glasgow meeting should have been thought worthy of the remarks that had been made. The work of the meeting was done by others, and the President got perhaps more credit than he ought to have. Still he was not unwilling to accept that which was offered so freely and with such good will. He hoped and believed that the Association, notwithstanding the little difficulties that had been alluded to, would be safely and securely guided through them by his distinguished successor.

Parliamentary Bills Committee.—Mr. FOWKE read the resolution passed at the meeting of the Committee on August 1st: "That our best thanks are due to the Chairman, Mr. Ernest Hart, for the great skill with which he has managed to meet the difficulties to carry into effect the legislative amendments which have been brought before us to-day; to the members of Parliament, Dr. Farquharson and Sir Walter Foster, and others who have assisted; also to Dr. Mickle, Dr. Biddle, and the members of the Committee who have so liberally given their time and attention to the many questions involved."

Mr. ERNEST HART, who on coming forward was received with great applause, in moving the adoption of the report of this Committee, said it was stated at the close that a supplementary report would be presented at the present meeting, and he asked permission to make it verbally. Happily it was one of the most satisfactory reports presented to the Association. Three Bills of great importance had been brought before Parliament. The first was the Lunacy Acts Amendment Bill, which was intended primarily to give protection to the lunatic, an object in which every member of the profession heartily concurred, and in which the Association was only too glad to give its intelligence and its disinterested aid; but there were certain particulars in it (the results of the cogitations of successive Lord Chancellors) which pressed unduly upon members of the medical profession. There were provisions which put the medical man who intended to take, under due precautions, an insane inmate into his house, under great disadvantages in comparison with any other member of the community. The Committee had been unable to induce successive Lord Chancellors to remove those provisions, and it therefore became necessary to appeal to the House of Commons, and the result had been that all the objectionable restrictions had been removed. A number of amendments had been introduced—every one of which had been submitted to the approval of the Association in the JOURNAL—removing certain difficulties which would have been experienced in asylums, in the management of patients, and all those points, almost without exception, had been erased from the Bill, which as it now stood was, if not a perfect measure, a measure which would give greater protection to the lunatic such as the public demanded, and also greater protection to the medical man. He should be ungrateful if, on behalf of the Association, he did not express once more their special thanks to Dr. Mickle and Dr. Langdon Down for the assistance they had rendered in dealing with the technical parts of the Bill. With regard to the Scotch Local Government Bill, its importance to the medical profession was that it dealt largely with sanitary reorganisation in Scotland. It created County Councils, and gave them sanitary duties, as in the case of the Local Government Bill of England. When the latter was brought in he, on behalf of the Committee, and with the assistance of the medical officers of health of England, made urgent representations to Government to give the County Councils a sanitary officer through whom to exercise the powers conferred upon them. A compulsory clause was framed, but it was unacceptable to certain parties in the House, and all that could be done was to get a permissive clause inserted in the Bill. The power thus conferred had been availed of by the County Council of London and one of the Ridings of Yorkshire, but not to any great extent throughout the country; and the officers appointed were appointed annually, having no security of tenure. The Scotch Act had been improved in both those respects. With the assistance of Dr. Russell, of Glasgow, Dr. Littlejohn, of Edinburgh, Dr. Christie, and other distinguished medical officers in Scotland, he drew up a memorandum of considerable elaboration, pointing out the desirable amendments and the reason for them; and he was glad to say that they had been most completely successful, and had done for Scotch members what they had been unable to do for English members. With the aid of Dr. Farquharson and Sir Walter Foster, clauses were brought forward which the Lord Advocate was only too willing to accept. They had also the great advantage of the active assistance of the West of Scotland Branch. He hoped the Branches and their officers would not think it implied any reproach upon them when he said that the Committee did not always receive the active and general support from them which would be of the greatest assistance in its work. The West of Scotland Branch sent up a deputation which represented 2,500 practitioners, and they also sent the President of the sanitary officers of Scotland. Those gentlemen, with Dr. Farquharson and himself, went to the Lord Advocate, and it was largely owing to that interview that the happy result had been obtained that every County Council in Scotland must appoint a medical officer of health. That of course meant that a certain number of what had been called "lucrative posts" had been created, and it had been suggested that that was the main reason of their action. He did not mean to say that they felt bound to put out of consideration the existence of suitable appointments for men of capacity in the medical profession, of which there were too few, and which abounded more in other professions; but that was not their main object; it was to make the Bill thoroughly efficient by compelling every County Council to appoint a medical officer, and to obtain his security of tenure, so that he could only be dismissed on appeal to the central authority. With regard to Mr. Ritchie's Notification of Infectious Diseases Bill, the Committee had decided to maintain the principle which the Association had always adopted, that the notification should be the duty of the householder, and not of the medical man. The matter was

still under debate, and Sir W. Foster was doing his best to impress that view upon the House of Commons. There was another matter of unmixed satisfaction. It would be remembered that at the Dublin meeting he stated that the Act abolishing relative rank had caused the greatest inconveniences, and was a serious grievance to medical officers; and further, that by the non-application of the Warrant of 1879 to India the brigade-surgeons of India were subject to serious disadvantages with respect to rank and pay. The Director-General of the Army Medical Department attended at the Dublin meeting, and directly challenged the statements that were made, and said that the Committee had been misinformed; and he (Mr. Hart) had been regarded as a ringleader in an agitation for the redressing of grievances which were mainly of his own creation. Accordingly, the statements in the reports were referred to a special Committee, and steps were taken to obtain accurate information. The medical officers of Dublin desired to assemble and to give information to the Council as to what their sentiments really were; but they were told that that would be considered as an act of insubordination. Mr. Stanhope was then asked in the House of Commons whether he would allow the army medical officers to make a collective representation of their grievances, and he replied that it would be contrary to the rules of the service. A letter was then sent to each medical officer asking him to make a confidential statement to the Committee for or against the proposed reforms. The replies were analysed, and the result was sent to the Secretary of State for War, who virtually replied, and not very courteously, that they had better mind their own business. Thus they were perpetually checked at all points. However they persevered, and succeeded in getting a Departmental Committee appointed (for which they owed many thanks to Mr. Stanhope), presided over by Lord Camperdown, and having two medical representatives, Mr. Macnamara and Dr. Balfour. Evidence was taken by the Committee, and the result had been that every point that had been urged had been conceded, and every conclusion arrived at by the Parliamentary Bills Committee had been confirmed. The report had not yet been published, but it would be issued before the close of the session. It granted to the army medical officers what had been so long claimed for them, a title which should on the face of it indicate their army rank as well as their medical position, surgeon-general, surgeon-colonel, surgeon-major, surgeon-captain, and surgeon-lieutenant; and they would be constituted a Royal Army Staff Corps, to which they attached great importance. The Warrant of 1879 would be applied to India, so that the Indian grievance would be remedied. The last measure, by which army foreign service was to be extended to six years, would be rescinded, and the period would be the usual one of five years. The general result was that all that they had been asked for had been recommended, he believed unanimously, by Lord Camperdown's Committee. That was the account which he had to give of the stewardship of the Parliamentary Bills Committee; and he hoped the members would think that it was a year's hard work well done, and a work that would redound to the credit of the Association, and to the benefit of the profession.

Dr. ROBERT BARNES, in seconding the motion, said that the work of the Committee and its Chairman entitled them to the gratitude of the Association, and was a proof of the usefulness of the JOURNAL and the ability with which it was conducted. Without the aid of the JOURNAL, and unless the Editor of the JOURNAL had been its chairman and had given his devoted aid and great powers of mind in both capacities, they all felt that such marvellously good work could not have been accomplished.

Brigade-Surgeon HARVEY desired to express what he believed was the universal opinion of medical officers of Her Majesty's service as to the deep debt of gratitude they owed to the Association, to the JOURNAL, to the Parliamentary Bills Committee, and, above all, to Mr. Ernest Hart for their successful and their most invaluable efforts. At present, however, they had only the recommendations of Lord Camperdown's Committee. He sincerely trusted that they would be embodied in a warrant; if so, the chronic discontent which had been long affecting the service would soon become a thing of the past, and the old cordial relations between the medical officers and their fighting brethren would be re-established. The whole service would be deeply grateful to the Association and Mr. Ernest Hart for the great battle fought and won, which would be gratefully esteemed, long remembered, and warmly acknowledged.

The motion was carried by acclamation.

Inebriates Legislation Committee.—Dr. NORMAN KERR moved that the report of the Inebriates Legislation Committee be received and adopted. He congratulated the Association upon the fact that at length a permanent measure had been enacted for the benefit of diseased inebriates. A certain portion of the profession, and a still larger proportion of the intelligent and educated public, were awakening to the fact that persons who gave way to drunkenness were not always the most culpable, but were often the victims of disease as distinct as gout or insanity. He thanked the members of the present Government for the way in which they had met the Committee. He hoped that the good work had only been begun, and that by-and-by there would arise an intelligent public opinion which should compel whatever Government was in power to provide ample accommodation for all diseased inebriates whose wills were so far paralysed that they were unable to assent to any steps for their own cure.

Dr. HARE, in seconding the motion, congratulated Dr. Norman Kerr on the success of his efforts, and expressed a hope that the goodly work begun would be carried out to the end.

Surgeon-Major INCE briefly supported the resolution, which was unanimously adopted.

Scientific Grants Committee.—Professor GAIRDNER, in moving the adoption of the report of this Committee, said that the principle upon which he advocated the granting of money to the Committee was a simple one. Most of them were busily engaged in the remunerative practice of their profession, and they ought to feel a certain responsibility towards those who were engaged in unremunerative work such as that which was encouraged by the Committee. Of course it was desirable that the expenditure should be jealously watched; but they had in the convener of the Committee, Sir Joseph Lister, one who not only represented in the highest degree the scientific spirit, but was thoroughly competent to appreciate the value of scientific labours.

Mr. LAWSON TAIT, in seconding the motion, said that, although some things might be improved, he was sufficiently loyal to the constitution of the Association to refrain from any criticism upon the action of the Committee, and accept it as the best that could be done by a collective body of competent gentlemen. He thought that from those remarks the Chairman of that Committee might take a useful lesson concerning another document at the head of which his name appeared.

The motion was agreed to.

Collective Investigation Committee.—Dr. FELCE moved the adoption of the report of this Committee.

Brigade-Surgeon O'DWYER, seconded the motion, which was agreed to.

Therapeutic Committee.—Dr. JESSOP, in moving the reception and adoption of the report of this Committee, said there was not much work said to have been done; but they all remembered an excellent paper on antipyrin, published a few months ago in the JOURNAL, and that was a substantial work accomplished. Moreover, the Committee was in the hands of very able men. He need only mention the names of Dr. Brunton, Dr. Leech, and Dr. Cash. Three more able men could not have been selected.

Dr. DANFORD THOMAS seconded the motion, which was adopted.

The Royal College of Surgeons.—Mr. RIVINGTON moved:

That it is the opinion of this meeting that the Members of the Royal College of Surgeons of England should have a voice in the management of that College and in the election of its Council, and that it be an instruction to the Council of this Association to further this object through the action of the Parliamentary Bills Committee or of a special committee to be appointed for the purpose at this annual meeting.

He said he believed every one present would be in favour of the motion. The constitution of the Royal College of Surgeons of England was very close and oligarchical. There were two orders of practitioners connected with that College, the Members and the Fellows, who were generally Members who had passed a higher anatomical, physiological, and surgical examination. The Members of the College, according to the Calendar, numbered some 17,027, and the Fellows 1,122. These numbers undoubtedly were excessive because the Calendar had not been corrected up to date. There were probably about 12,000 Members, and the Fellows were somewhat less than 1,000. The Members, therefore, were in the proportion of 12 to 1, and they were increasing out of proportion to the Fellows. He estimated that there were about 30 Fellows added every year, whilst there were some 400 to 600 Members. Looking at the Calendar, he found there were 275 Fellows distributed over the last 10 years, giving an average of 27 per annum, or 20 to 1 as compared with the Members. The government of the College was in the hands of a Council of 24 elected by the Fellows, and only three retired annually, giving an average of office of 8 years to each member of the Council. The Council was

elected entirely by the Fellows, but that was the only privilege the Fellows possessed. They had no right of meeting in the College any more than the Members; they were only called to meetings when it was the gracious pleasure of the Council to call them, and that was exactly the case with the Members. They were called, indeed, to an annual meeting, but that was only held on sufferance, and an official of the College, one who was Vice-President last year, had stated in his place in the Council at several meetings that he was in favour of the abolition of this annual meeting. The constitution of the College of Surgeons was illiberal as compared with that of other Colleges, where the Fellows were called regularly to quarterly meetings, and sometimes to extraordinary meetings, and generally elected the whole or the greater part of the Council annually. At the Faculty of Physicians and Surgeons of Glasgow the Council only held office for four years; that was a very good period, neither too long nor too short, and the Licentiates were represented by two Fellows, who held office for four years. The body of Fellows in whose hands the power at the College of Surgeons nominally rested, but not really, was created by charter of 1843, which was a very great improvement upon the former condition of matters, because before that time the power was entirely in the hands of the Court of Assistants, a self-elected body, ruled by the examiners, who held office for life. That charter was a great improvement; but it did not provide for the representation of the Members, and it was thought that, to a certain extent, it prevented the Members from obtaining the rights which they formerly possessed in the old Company of Surgeons, namely, of meeting and electing the officers. It never, therefore, gave satisfaction, and ever since there had been an undercurrent of dissatisfaction with the constitution of the College. In 1883 the Council found it necessary to apply for a new charter. First of all they wished to abolish the midwifery licence, to keep the ladies from having a back door of entrance into the profession; secondly, they had granted the Fellows the right of voting by voting-papers, and had to get a new charter for the purpose; thirdly, they were holding property in excess of the quantity allowed by the charter. They therefore had to get a new charter, and consequently the whole subject of the alterations that were desirable came up for consideration. The Council thought it only right to submit their programme to the general body of Members and Fellows. Their recommendations were at once passed by the Fellows, and certain resolutions of a progressive character moved by Mr. Swayne, a prominent member of the Association, were carried unanimously. The Council did not accept those resolutions, and the result was the formation of two bodies, the Association of Members and the Association of Fellows, in order to obtain reform in the constitution of the College. The Association of Fellows drew up seventeen points, and nine of those, which were of the least importance, were accepted by the Council; but the recommendations of the Association of Members were not accepted by the Council. At that time the members of the Association of Fellows had not agreed to the principle of the representation of Members, but it was soon found necessary to agree to that principle, and that led to a certain split in the Association of Fellows, and there was a certain amount of secession; but it led to one great advantage—that a common platform was adopted, namely, that the Members ought to have a larger share in the government of the College, ought to have the right of meeting of the College, and ought to be consulted upon any change in the constitution. That had been repeatedly endorsed at meetings at the College; and the resolution which he had the honour of submitting merely asked the members of the Association to adopt that principle. The latter part of the resolution referred the matter to a committee. There was a Bill before Parliament called the Draft Bill of the Association of Members, to carry out the principle. He was not in favour of all the points mentioned in the Bill, but he was in favour of the general principle embodied in the resolution.

Dr. DANFORD THOMAS, in seconding the resolution, said that the struggle between the Members and the Fellows of the College had been going on ever since the charter was granted by which the Council elected themselves. In 1797, a Bill was brought in which excluded Members from taking part in the elections. The Bill was thrown out, but Lord Thurlow said that no Bill ought to pass which did not give the Members a just and equitable share in the management of their own affairs. A charter was then granted, which remained in force till 1843, when a sort of compromise was adopted, and a large number of Fellows were made without examination. Since then examinations had taken place giving the higher qualifications; but the Members saw no reason why such higher qualifications, though they conferred certain distinctions, should entirely exclude the Members from their share in the management of the College. The College property belonged to the Members; if there were a dissolution, each Member could claim his share; and if that were so, they had a right to some part in the government of the College. and a certain portion of the Council should consist of Members. He did not want to oust the Fellows from all the rights and privileges which they had enjoyed for so many years, but he believed that a large number of them were ready to concede to the Members a just and reasonable share in the College government. The Bill in the hands of Lord Randolph Churchill, which would be introduced into Parliament next year, was exceedingly moderate, and he believed it would meet with the general approval of the Members. The journals had been true to their traditions in dealing with the question, and he had no doubt they would continue to be so. Over 5,000 Members had petitioned the Council on the subject, and the number was still increasing.

Mr. GEORGE BROWN supported the resolution. He said there was no question which could be more properly referred to the Parliamentary Bills Committee. He did not approve of every clause of the Bill that had been introduced, but he thought that its principle would commend itself to all the members of the Association.

Dr. WARD COUSINS, in supporting the resolution, said he believed that the members of the Association deeply sympathised with the present position of the Members of the College of Surgeons. It had been said that the Members had no rights and privileges but those connected with their licence. That was the argument put forward with reference to a body of practitioners second to none in the world. The Council of the College was the closest corporation in the kingdom, and he regarded them as usurping a power to which they were not entitled. It might be right enough in the Middle Ages, but in the nineteenth century to exclude 12,000 Members from any particle of power in their own College was monstrous.

Surgeon-Major INCE also supported the resolution.

It was then put and agreed to without a dissentient.

The meeting then adjourned.

ADJOURNED GENERAL MEETING.

TUESDAY EVENING, AUGUST 13TH.

Mr. WHEELHOUSE in the Chair.

President's Address.—The PRESIDENT delivered the annual address, which is published at page 349.

Professor GAIRDNER moved: "That the best thanks of the Association be given to the President, Mr. C. G. Wheelhouse, for his admirable address." The President, he said, had enlarged very much on the advances that had been made in medical education and examination. The question had occurred to him while listening to the address, *Cui bono:* Had the medical man himself correspondingly advanced in the judgment of the public? He could not say; but he had been staggered by reading in a newspaper since he came to Leeds, a statement by a person of, as it would appear, no inconsiderable authority, that in all matters of sanitation any man out of the street was just as good as a medical man. If that represented the feeling of the public in Leeds after two or three generations of Teales, four generations of Heys, and a vast number of distinguished medical men, it was in vain for the President to plead for any addition to medical education or examination. They might just as well shut up shop and yield to the man in the street, or to any number of advertising quacks who chose to obtrude themselves upon the public attention. He was not a pessimist, however; he believed they were advancing in reality, and in the estimation of the public. As to the old practitioner referred to by the President, he appeared to have been a man who learned a good many things in a very inaccurate manner. He saw a great number of common diseases, and learned to put up a lot of prescriptions, but he never learned anything well. The present mode of education proceeded, perhaps, too much on the opposite principle; it aimed at teaching a man a more limited number of things—at least, a less widespread view of common diseases—but it taught him a method of observation. It did not aim at letting the student see every possible common disease. There were many common diseases, like measles, that a student could never see in his curriculum, but he would see

them when he went into practice. A man must see his first case of everything at some time or other. They could not all drop into a museum for him to see, but he must pick them up gradually. The modern student was thoroughly taught in regard to morbid phenomena, and it was better for him to learn the proper method of observation than to know a large number of individual diseases. No doubt when Mr. Wheelhouse brought the facts he had mentioned to bear on the Medical Council in regard to the practical question of medical education, a great deal would be done to improve it.

Professor CUMING (Belfast) in seconding the motion, said that the address had reminded him, in its ripeness of thought and clearness of expression, of the brilliant address of Dr. Gairdner, in Glasgow. It was, however, with a qualm of regret that he had heard the suggestion from a member of the Medical Council that a couple of years should be added to the already sorely weighted medical student. Nothing was ever taken off from the student; every change added something. But he was sure that nothing would be done rashly or prematurely, and that in the hands of men of experience like Mr. Wheelhouse the interests of the medical student would be safe. The position now occupied by Mr. Wheelhouse, as President of the Association, was a reward for the eminent service he had rendered to it, and he hoped that the meeting over which he presided would prove to be one of the most successful that the Association had ever held.

The PRESIDENT, in acknowledging the vote of thanks, said if the Medical Council could only get an expression from the profession at large as to its wishes in the matter of education, its course would be a smooth one. He had done his best to give his own ideas of what that education should be.

The Conduct of the "Journal."—Dr. BRIDGWATER laid before the meeting a letter from Sir Joseph Lister on this subject, his reply thereto, and a copy of a resolution passed by the Council on the subject, as follows:

To the Council of the British Medical Association.

London, August 1st, 1889.

GENTLEMEN,—Many members of the Association have been much disappointed to find that the hopes which they had been led to entertain of an improvement in the conduct of the JOURNAL have not been fulfilled. So strong is this feeling that a large number of men in influential positions in the profession, warmly attached to the Association, but jealous of its honour and despairing of seeing the improvement they desire, have expressed their determination to resign their membership.

But before carrying into effect a resolution so serious, it has been thought right to approach you, as the governing body, with the request that you will give this matter your earnest consideration, and take such steps as shall make the JOURNAL in all respects worthy of the Association which it represents.—We have the honour to be, gentlemen, your obedient servants,

(Signed) JOSEPH LISTER, Chairman.
W. H. ALLCHIN,
W. A. MEREDITH, } Secretaries.
JOHN WILLIAMS,

Reply of President of Council.

DEAR SIR,—I beg to acknowledge the receipt of your letter dated August 1st. I will lay it before the Council when they meet in Leeds next week. I must be permitted, meanwhile, to assure you that you may safely leave the honour of the Association where it has been safely preserved for so many years.

Yours faithfully,

(Signed) T. BRIDGWATER.

Resolved—"That the Council do not admit that the signatories of this letter are better judges than themselves, or more solicitous than they are for the honour of the Association and of the profession, but if there are any points which the signatories desire to particularise, in which they consider that the JOURNAL admits of or calls for improvement, they will, as they ever have been, on receiving them through the Representatives of their Branches in the Council, be ready to give such suggestions their most careful consideration."

Mr. LAWSON TAIT (Birmingham) said he thought the writers of the letter which had been sent to the Council could hardly have recognised the impertinent nature of the language in which it was couched; and he hoped that on reflection they would regret that a more civil tone had not been used towards so important a body as the Council of the British Medical Association. The JOURNAL of the Association was not the only important medical journal in the kingdom, and there were names in the list of signatories to the letter, and to that which was published in March, which clearly indicated one source of the malcontent which had been manifested. One discussion which had taken place in the morning, on which a gratifying decision had been arrived at, had no small bearing upon the nature of the communication which had been read. The financial statement of the Association, the report of Council, and the reports of the Standing Committees, which had been submitted and unanimously adopted by that meeting, were of themselves a powerful argument to induce the members of the Association to pass the resolution which he begged to propose, namely: "That this meeting desires to express its satisfaction with the result of the present representative system of government of the British Medical Association, and their approval of the steps taken by the Council for the management of its JOURNAL." If the signatories of the letter approved of the representative principles of government, they had a very easy remedy for any evil which they thought existed; they could make a representation through the Council of the Metropolitan Branch, and their representatives on the Council. Such representations had been made by provincial Branches, and any expression of opinion of that kind would be sure to meet with every consideration on the part of the Council.

Dr. ROBERT BARNES (London) seconded the motion. He believed that the Council fairly represented the Association, and there had been no distinct impeachment of its conduct. Backstairs influence had been used and hole-and-corner meetings held in getting up these memorials and documents. The letters forwarded were really an impertinence to the Council and the Association. It was absurd to suggest that there should be no advertisements in the JOURNAL, and that all articles should be signed. The plan had been tried and had failed. If signatures were required to all articles there would be no reform of abuses, and the JOURNAL would be maimed and mutilated. He might mention an incident that had occurred in his own experience. Some years ago there was fever in the Pacific Squadron of the English fleet. He had been informed that the cause of it was a want of water, the crew being reduced to a miserable pittance. There was a desire to economise, and, in order to save a few tons of coal, the fleet was attacked with fever. He wrote an article on the subject, adding the words, "Is this true?" Mr. Childers was furious, and asked who wrote the article. He (Dr. Barnes) said he would not give the name of his informant and expose him to the vindictiveness of the Admiralty. He might now state, however, that it was the surgeon on board the Admiral's ship, who would have been liable to ruin if his name had been given up. He contended that they ought to maintain their own JOURNAL as it was. It was the efficient organ of a thoroughly representative body. It was the backbone of the Association; it had their confidence and deserved it. It was recognised everywhere as one of the ablest journals in the world, and one of the most useful to the profession.

Surgeon-Major INCE questioned the wisdom of passing the resolution; he thought such a secession would be a calamity to the Association.

The resolution was then put and carried, there being only one dissentient.

The Out-patient Departments of General Hospitals.—Mr. J. BRINDLEY JAMES said he had given notice of a motion on this subject which he was willing to withdraw. Dr. Rentoul had a motion on the same subject which he would also withdraw, and would bring forward a second motion which would embrace both.

Dr. RENTOUL then moved: "That the resolutions be referred to the Council of the Association; that the Council invite the Branches and individual practitioners to forward suggestions to them; and that the Council furnish their report to the JOURNAL within six months of the present date. and refer their conclusions to a general meeting."

Mr. LAWSON TAIT seconded the motion. He said the whole subject was far too complicated and too large for a general meeting to discuss it till it had been through the mill of the Council.

The resolution was agreed to.

Travelling Expenses of Representatives of Branches.—Dr. OGILVIE GRANT moved "that the travelling expenses of representatives of Branches incurred in attending meetings of the Council in London be defrayed out of the funds of the Association. He said he brought this motion forward with a feeling of great responsibility, having been requested to do so by his Branch. The Northern Counties of Scotland Branch, which he had the honour to represent, although year after year it had elected representatives, had never been able to be represented at the Council until four years ago, when he was asked to endeavour to remedy this great wrong. He had tried to do so for four years, and the fact that he came before them again was an admission of failure. At the Brighton meeting the subject was referred to the Council, and it was agreed that the opinion of the Branches should be taken. That was done, and the result was so decided that the Council were compelled to propose some remedy. A very moderate scheme was proposed and brought before the meeting at Dublin, but through the opposition of the Council was again rejected. What the Branches required was not the payment of their representa-

tives, but equality. Living in the north of Scotland it took him a day and a night to travel to London, and, therefore, he could not under any circumstances be in the same position as his happy professional brother in Harley Street, who rolled in his carriage to the meeting. He (Dr. Grant) had to come in a third-class carriage, which was no great pleasure; but he had done it for four years for what he considered the good of the Association. It meant this: were the members of all the Branches to be present at the Council meeting? If four years' experience was of any use, he thought it was of the utmost importance that every member elected by every Branch should attend. He therefore asked the Association to treat this matter in a liberal spirit. It was said at Dublin that the result of carrying the motion would be that an inferior set of men would represent the Branches at the Council Board. He did not believe that would be the result. What was wanted was that everyone, whether poor or rich, might, if he desired it and had the ability, be able to represent the members at the Council, and that it might be in the power of the Branches to select, not from one or two men, but from every man in their Branch. It had been said that it was undignified for medical men to accept their railway fares; but could it be said that it was undignified for their President to accept payment for attending at the Medical Council? He thought not. Another objection was that, as the Association was a wide one and had Branches in all parts of the world, the next thing would be that members of Colonial Branches would want their expenses paid also. Members of the Colonial Branches were on a better footing. They had the power of electing a man in London to represent them, and if they went on increasing at the present rate, the old provincial Branches would be swamped entirely. It was said that Branches should pay their representatives; but in reply he urged that when he came to London he did not attend to the business of his Branch but to the business of the Association generally. He thought members should be very chary of throwing more burdens on their Branches. He would decline to accept anything from his own Branch. They had saved up a few pounds through long years, which they intended to keep for charitable purposes for any poor brother in the district who might need aid, and the Association did not go in for that. It would be a pity if any little fund the Branches possessed should be used for purposes which were never intended by them. He had no personal motive in bringing forward this motion, for as soon as it was carried he should ask his Branch to elect another representative. All he wanted was to do justice to distant Branches.

Mr. VINCENT JACKSON, in seconding the resolution, asked the Association to look at it from a hard business point of view. He knew that by many of the seniors on the Council it was regarded as a retrograde step. He had no sympathy with such a view. On the Medical Council the members received five guineas for their services as long as the session might last, and he did not notice that the professional and social standing of its members had been in any way lowered thereby. The resolution was in sympathy with the age, and he therefore hoped it would be carried.

Mr. BRINDLEY JAMES supported the resolution. The Association had gained a position of stability and power, and was in a fit condition to pay the expenses of its representatives. If he lived at a long distance, he thought the least thing that the Association could do would be to pay his travelling expenses. It was not derogatory to receive remuneration for services rendered. If the Association was a poor body, it would be a different thing, and, when the question was first brought forward, they were not perhaps in so favourable a condition as they now were.

Dr. EYTON JONES said the ground of opposition on previous occasions had been that the Association was entirely conducted on the voluntary principle. For ten years he had been the representative of a Welsh Branch, and had travelled 1,600 miles a year to attend the Council meetings. Finding it difficult to get any member to go so long a distance, his Branch, small and poor as it was, determined to give assistance out of its own funds, but never to call upon the General Association. It had been the pride hitherto of hospital surgeons that they rendered gratuitous services for the relief of the sick poor. Acting upon this principle, he should consider it his duty to oppose the resolution.

Mr. LAWSON TAIT contended that the Association had never been conducted on the voluntary principle. The Birmingham Branch had the strongest feeling on this subject, and he should, if necessary, bring forward the motion every year until it was carried. It was a democratic question, the question of metropolitan people against the provincial. His own Branch had not funds enough to pay more than one representative, and if an important body like the Birmingham Branch could not pay its representatives their railway fares how could they expect the Scotch and Irish Branches to stand the cost? It was unfair to ask them to do anything of the kind. Dr. Grant's argument was conclusive that it was not Branch work that was done on the Council but Association work, and that ought to be paid for by the Association.

Dr. JACOB (Dublin) also supported the proposition. He said it was a matter of comparatively slight importance whether representatives were paid a small or large sum of money, but it was a matter of extreme importance if that amount had the effect of preventing the attendance. The necessary effect of the difficulty placed in the way of the attendance of representatives of provincial Branches had been to concentrate the administration of the Association in the hands of the metropolitan members almost exclusively, and those within a short distance of the metropolis. This was a very unhealthy condition of things; it was not found to work well, and had revealed jealousies in the Association. One of the most important functions of the representative of a Branch was to bring back to his Branch an account of the work the Association was doing; that could not be done unless he attended, and an arrangement that threw difficulties in the way of attending cut the string which ought to bind every Branch to the central administration. He could assure the Association that, practically, beyond fifty miles from London they had no voice whatever in the administration. He thought that with a balance of £4,000 for the year there should be no difficulty thrown in the way of this slight concession. The very fact of its being opposed by the metropolitan representatives was a reason why the country representatives should maintain their determination.

Dr. DOUGLAS (Leamington) said there was a unanimous feeling in the Birmingham and Midland Branch in favour of paying representatives. Their finances did not permit of their doing so, and it was only in deference to the opinion of one of their representatives that they forebore passing a resolution to go to the Council asking them to pay their representatives. He did not believe that it would lower the dignity of the Council, but, on the contrary, would immensely improve its efficiency, if such a course were adopted, because it would make it more representative and keep it more in touch with the Branches.

Dr. BRIDGWATER said it was not fair in any discussion that things which did not exist should be stated as facts. At their Council meetings they had an average attendance of forty members, and they came from all parts of the kingdom. He was proud to say that Dr. Ogilvie Grant and Dr. Bruce Goff, who came some 400 or 500 miles, were amongst the most regular attendants on the Council.

Mr. BUTLIN said statements had been made with regard to the feeling of the Metropolitan Counties Branch which, so far as he was aware, had no truth whatever. The Metropolitan Counties Branch had never taken any serious interest in the matter, as it did not affect them in any way. He should vote for the resolution, but thought it was very much better to keep to the point of the advisability of paying men who came from a distance than to make attacks on anybody else.

Dr. BRIERLEY (Manchester) supported the resolution.

Dr. HOLMAN said he entertained very strong views upon this question. He had, however, attempted unofficially to bring the matter to a peaceful conclusion. He believed, as a matter of principle, that the Branches, if they could afford to do so, were the proper people to pay their representatives. He admitted that this would be a heavy tax upon small and distant Branches, and therefore suggested that in the case of any such Branch, it should apply to the Council, stating its inability to pay, and such payment should be made by the Association. That would do away with the pseudo-grievance of distant representatives not being able to attend. With regard to the fact of the attendance, the most frequent attendances in 1888 were made by the distant members. With regard to the Birmingham Branch, he saw from their balance sheet for 1888 that there were 28 members in arrear, and that might account for their inability to pay the travelling expenses of more than one representative. They wanted the very best men they could possibly get to represent the Branches, and he feared, old fashioned as it might be considered, they would not have the same class of men returned in the future if it was made an absolute question of payment for everybody.

Dr. GRANT said he could not accept Dr. Holman's suggestion. He asked the Association to vote as a matter of principle.

The motion was then put to the meeting, and carried with but few dissentients.

The meeting then adjourned.

SECOND GENERAL MEETING.

WEDNESDAY, AUGUST 14TH.

MR. WHEELHOUSE, President, in the Chair.

Returns from the Branches.—Mr. FOWKE read a report of the returns of representatives from the Branches.

Meeting of 1890.—Dr. BRIDGWATER said that no definite invitation had been received for the meeting of 1890; and he moved, as usual in such cases, "That the Council be empowered to arrange for a place of meeting for 1890, and further to appoint a President-elect."

Dr. BRISTOWE seconded the motion, which was agreed to.

Address in Medicine.—Dr. HUGHLINGS JACKSON delivered the Address in Medicine, which is published at page 355.

Dr. EDDISON, in proposing a vote of thanks to Dr. Hughlings Jackson for his address, said he agreed with everything in it except the concluding words, for no one was better able than Dr. Jackson to place a complicated question more clearly before an audience. They were all deeply indebted to him, not only for his address, but for all that he had done for them in connection with diseases of the nervous system.

Dr. BRISTOWE, in seconding the motion, said it would be an impertinence on his part to expatiate upon the merits of Dr. Jackson, at whose feet they had all sat, and derived inspiration from his teaching.

The motion was unanimously adopted.

Dr. HUGHLINGS JACKSON briefly acknowledged the vote of thanks.

The Stewart Prize.—The PRESIDENT said the next business was one which was peculiarly gratifying in more ways than one. It had passed into the minds of some of the former men who took interest in the Association to leave a permanent record of that interest, and amongst them they had had no one who had the interest of the Association and the profession more deeply at heart than the late Dr. Alexander Patrick Stewart. Wherever the Association was concerned Dr. Stewart was always at hand to befriend it, and he had left evidence that that feeling towards the Association was not an evanescent one by bequeathing a still persistent record of his desire to recognise the services of those who did good work either for the Association or the profession at large. By his will he left a sum of money the interest of which he desired to be given year by year to the gentleman who, upon careful consideration, was believed to have done the best work of the year in the study of epidemic diseases. This year that prize had been awarded to Dr. Klein "for very valuable and prolonged researches on micro-organisms, and especially for work in connection with the etiology of scarlet fever." It was no small honour to receive even this small acknowledgment of work done. It was no representation either of the labour and time which had been devoted to this work, but it would, he hoped, be accepted as the gift of an old and dear friend who had passed from them but had left it at their service.

Dr. KLEIN said he wished to return his best thanks for this unexpected and highly prized award. He took it to mean not merely an acknowledgment of his own services, but of the services which this branch of work, bacteriology, had rendered and was rendering to medical science in general.

The meeting then adjourned.

A COTTAGE HOSPITAL is to be built at Bromsgrove, near Birmingham, and large sums have been forwarded for the purpose. Dr. Chavasse has offered to build and furnish a male ward for six beds, to be called the Arthur Ryland Ward. Mr. Corbett, M.P., gives £500 and Lord Windsor £100.

JUVENILE INSURANCE.—The report of the Select Committee appointed to inquire into the operations of the thirtieth section of the Friendly Societies Act, 1875, recommends that the age for the insurance of juveniles be extended from 10 to 16 years, but that the total amount of insurance be absolutely limited, and for the security of infantile life suggest that the Registrar-General should add to the form of medical certificate of death a column demanding particulars of insurances on the life of the deceased, to be filled up by the doctor in attendance on the family. In view of the excessive prevalence of infant mortality, these provisions cannot be considered unnecessary or supererogatory.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1889.

SUBSCRIPTIONS to the Association for 1889 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, AUGUST 17TH, 1889.

THE PRESIDENT'S ADDRESS,

THE President of our Association is able, in his opening speech, to take a wider view of medicine, and to examine it from a more philosophical standpoint than is permitted to the deliverers of the Sectional Addresses. While they can only deal each with the limited department allotted to him, and this rather from an internal and practical point of view than from an outside analytical one, the President is expected to deal with some one or other of the aspects of medicine viewed as a whole, either in its relation to the outside world or in its internal policy. And herein consists much of the value of his observations. Unfettered by any official connection with close corporations, and endowed with the authority of the greatest medical representative assembly in the British Empire, he is able to point out the defects and shortcomings of either the external or internal, the written or unwritten laws which govern the medical profession, and to demand, with all the gravity and weight which his position gives him, those reforms which are required by the needs of his brethren or by the necessities of an ever-advancing science.

It is, then, a fortunate choice which has placed Mr. Wheelhouse in the presidential chair at our Leeds meeting, and the subject of his address has been as happily selected.

There can be no question of more vital importance to the future of medicine in Britain than that of the effects upon modern practitioners of the system of education and examination introduced during the last thirty years. And there can be no one more fitted to deal usefully with the subject than one who, as teacher in a great provincial school, has had every opportunity of observing its incidence on both teaching and taught, who, as member of the Council of the College of Surgeons, has had much experience in modern methods of examination, and who, as one of the freely-elected representatives of his fellow practitioners upon the General Medical Council, possesses an exceptional opportunity of shaping the educational policy of the future upon the lines of public opinion and of common sense.

In considering the question, Mr. Wheelhouse is careful to avoid the common mistake of confounding *post* with *propter*. Many men, in examining the effects of modern education, allow their judgment to be obscured by the glamour of recent achievements in the field of science, to mistake that ad-

vance in knowledge, which is universal and independent of all educational systems, for the result of local and partial reforms in methods of preparatory instruction, which are themselves the consequences and not the causes of the increasing thirst for and attainment of knowledge, and of resulting dissatisfaction with old modes of imparting it.

Mr. Wheelhouse acknowledges gladly that the medical practitioners of the present day are far in advance of their predecessors in every branch of the profession. But for this we stand principally indebted to the vast improvement in both our methods and means of research. Instruments and modes of inquiry, of a perfection and nature undreamt of by the most enlightened of our fathers, are now at the disposal of every country surgeon; while our rapidity of locomotion and the quick and universal diffusion of knowledge have played no small part in our modern advance and improvement. Besides making every man's information or discoveries available for his neighbour's use, either by means of the press or through the personal interchange of ideas which takes place at such meetings as those of the British Medical Association, an interchange which was impossible fifty years ago, they have affected medical character and opinion equally profoundly in a more indirect way. The minds of modern practitioners are more open to the reception and assimilation of new ideas and impressions. The old conservative clinging to established theories and opinions, the constant defensive appeal to ancient authority, and the slow and difficult acceptance of new views or discoveries which characterised our ancestors, are now things of the past. Scarcely could we find to-day a surgeon of eminence and position who could give such a cold and grudging reception to a new discovery as Mr. South did to the use of ether as an anæsthetic, in 1846,[1] or who could speak so disparagingly of the practice of a new speciality as Liston did of aural surgery, in 1840.[2] If a new departure in practice is announced nowadays, it is received with enthusiasm, and tried with impartial perseverance by numberless intelligent practitioners; and if it be finally rejected, it is because of its own inherent worthlessness, and not on account of any initial prejudice. While acknowledging modern advances, Mr. Wheelhouse frankly admits the shortcomings of our predecessors of the early part of the present century; and no one who is at all acquainted with such works as Copeland's *Medical Dictionary* (in its early edition, at least), or with Dr. Mason Good's *Study of Medicine*, will be inclined to disagree with him in saying that the system of these worthies "was chiefly based on nomenclature. They could tell you what was good for 'fever,' what for 'tic,' for 'rheumatism,' for 'indigestion,' for 'scurvy,' and for innumerable other complaints, and he who was believed to possess the greatest number of formulæ for the greatest number of complaints was regarded as the cleverest and most desirable doctor." The difference between modern and previous methods of regarding disease is best realised by those who compare some early *Practice of Medicine* with such a modern manual as Dr. Fagge's. In the former, a line or two will sum up all that was known of the pathology of a disease, while whole pages are devoted to the drugs supposed to be useful in its treatment. On the contrary, in the modern work the positions are reversed—the portion devoted to pathology being full, lucid, and detailed; while that dealing with treatment is in an inverse proportion disappointingly scanty.

But if the knowledge of over fifty years ago was small and erroneous when compared to our present attainments, Mr. Wheelhouse holds that the methods of instruction in such knowledge as was possessed, and of finally testing how much of it had been assimilated by the student, were far superior to our present system. Under these abandoned methods, "a general practitioner was produced in whom the public were enabled to place a well-founded confidence." The modern plan, though superior to the old one in demanding a higher education both general and professional, fails to secure or guarantee a practical training. It turns out men as fully qualified to practise their profession upon suffering humanity, who have never either passed a catheter nor drawn a tooth in their lives, who cannot distinguish scarlatina from measles, and to whom a sudaminal rash is an unknown phenomenon. We have heard recently of two fully qualified Bachelors of Medicine and Masters of Surgery of a British University, one of whom could not use the elaborate axis-traction forceps with which he came armed, in even the simplest case of midwifery; the other, who sent for his principal to apply the forceps to an undilated pregnant uterus, which he had mistaken for the child's head.

The cure for this lamentable state of practical ignorance is, in Mr. Wheelhouse's opinion, a preliminary pupilage of at least a year's duration to be undergone subsequent to the examination in general education, but prior to the attendance on lectures at a medical school. It is interesting to compare this opinion of a practical and distinguished English surgeon with that of a foreign critic on our system of medical education. Professor Theodor Puschmann, of Vienna, says in his recently-published *Geschichte des medicinischen Unterrichts*:[3] "The methods of the Middle Ages have held their own longest in the medical teaching of England. Therefore it happens nowadays, even if seldomer than aforetimes, that medical students become apprentices to a practical physician. They remain with him an entire year in order to obtain a superficial acquaintance with those things which life will one day require of them. In this method much depends on the individuality of the pupil, and nearly everything on the personality of the teacher. If the student is industrious and gifted, and if the teacher possesses knowledge and pleasure in the performance of his duties, then this year is to the former of inestimable advantage to his later studies. Under other circumstances it is lost time, and serves at the most to provide him with a mechanical routine, which often borders closely on charlatanism." He speaks in similar terms of initial pupilage to a hospital. "There," he says, "the students believe that they will have the opportunity of observing many sick, and hope to receive from the house-physician teaching on the more important phenomena. If they are not deceived in their expectation they gain a certain dexterity and readiness in their intercourse with the sick which is most useful to them in their later clinical and medical practice." In direct opposition, however,

[1] Chelius's *Surgery*, ii, 1009.
Elements of Surgery, p. 446.

[3] Leipzig, 1889.

to Mr. Wheelhouse's opinion, Professor Puschmann concludes "that in many other directions this mode of entry into the medical profession is objectionable. It misleads the learner into superficiality, because it accustoms him to skim the reality of things, since knowledge and intelligence fail to enable him to reach the bottom. Moreover, the results obtained scarcely repay the sacrifice in time and trouble which they occasion the physician who acts as teacher, and still less justify the inconveniences in the treatment of disease which they bring in their train."

We do not doubt which of these two views would be most widely held by the practitioners of England if the matter were referred to them. The decision of the General Medical Council, however, settled the question long ago, in a sense adverse to preliminary apprenticeship. But the opinion is widely held, whether on adequate grounds or not, that this decision was arrived at accidentally rather than deliberately, and that at all events the time has now arrived for its being once more reviewed. The moderate and straightforward protest uttered by our President will have great effect in forwarding that view.

The inadequacy, the multiplication, the costliness, and the hurry of modern examinations, upon which Mr. Wheelhouse insists, are questions closely related to this one of apprenticeship. It is certain that if the authorities deliberately maintain their decision against a preliminary pupilage as forming a necessary part of medical education, then the examinations must be widely altered in the direction of increased efficiency of test as to practical attainments. The present system, unaccompanied by an adequate guarantee of real ability either educational or examinational, is injurious to the practitioners of the future in this country.

But whether wise counsels prevail in our rulers or no, and even though medicine in England may suffer, yet the general progress of our great profession cannot be retarded; it will advance on the lines indicated by Mr. Wheelhouse in the eloquent peroration of his speech. Like some mighty tide it will sweep inevitably on its way, though its path may be obstructed here and there by an isolated rock or a fragment of fallen cliff. It will advance continuously until it is stopped by that boundary which it can never pass—the necessity of dissolution to organic existence. Let us meet certainty of mortality in ourselves and others, not with disappointment, but with the same gallant spirit with which the first of our Presidents who ever sat in Leeds[4] bade us encounter death. "As no elevation can place us beyond his reach, so no obscurity can conceal us from his observation or render us beneath his regard:—

> Pallida mors æquo pulsat pede pauperum tabernas
> Regumque turres.

The best wish with which I can take my leave of you....is that his visit to each of you may be long delayed, and that when he does knock at your door you may be prepared by a well-spent life—a life spent in the discharge of your duties to your God and your fellow creatures—to admit him, an undreaded if not a welcome guest."

W. Hey, jun., in *Transactions of the Provincial Medical and Surgical Association*, vol. xii, 1846, p. 233.

THE EVOLUTIONARY THEORY IN MODERN MEDICINE.

THE Address in Medicine at the annual meeting of the Association displays in a high degree both the profundity of thought and the intricacy of expression which are characteristic of its author. The peculiarity of Dr. Hughlings Jackson's work has always been its aim and its tendency, not so much to collect and register facts, as to elucidate them by organising them into knowledge. It has been well said by Helmholtz that "isolated facts and experiments have in themselves no value, however great their number may be. They only become valuable in a theoretical or practical point of view when they make us acquainted with the law of a series of uniformly occurring phenomena;" and similarly Tyndall has testified that "facts alone cannot satisfy the human mind; we desire to know the inner and invisible cause of the fact; we search after the principle by the operation of which the phenomena are produced."

The characteristic of Dr. Hughlings Jackson's work is the endeavour to make us acquainted with the laws of the working of the nervous system, with the principle of operation by which the phenomena are produced. In this endeavour to trace the operation of the laws which regulate the working of the nervous system, he proceeds, not so much inductively, by collecting facts and grouping them according to their obvious and superficial relationships, as deductively, by framing, from the observation of certain facts, a provisional hypothesis of the law of their production; reasoning out what the consequences of this hypothesis would be, supposing it to be true, and comparing the conclusions thus reached with the actual facts, and observing if they are borne out by them. Thus it is by his method no less than by his aim that he stands apart from the majority of workers in the field of medicine. The results attained by this method differ from those attained by the inductive method of comparing facts mainly in this, that by the latter, the facts are grouped according to their obvious similarities, which means for the most part by their superficial relationships; while by the former, facts of the most diverse and widely dissimilar character become assimilated by virtue of some deeper, more fundamental, and more widely applicable law of their being. Thus a series of most widely dissimilar facts is given in the Address. A man whose hand had been blown off retained a phantom hand, a feeling as if the hand were still belonging to him; and this phantom hand appeared to be always in the position in which it actually was when it was blown away. An aphasic patient had lost the power of answering appropriately, but would frequently repeat the words "Come on," which were appropriate to the circumstances in which he was at the time his speech was suddenly lost. An epileptic soldier, whose first fit occurred when he was numbering off, would, in each subsequent fit, begin to count. A woman, who had fractured her skull by a fall while laying down oilcloth, kept manipulating the counterpane of her bed in the same fashion as she might have been laying the oilcloth. Here are four facts of superficially the most different orders, all connected together by the circumstance that in each there was, on the occurrence of a sudden injury to the nervous system, persistence or fixation of a state that should have been only temporary. The importance of grouping to-

gether facts apparently so diverse is, that if an explanation of the common feature presents itself in any one case, as sooner or later it is sure to do, then we can test the validity of that explanation by applying it to the others. If it is valid in one case it is valid in all, and we have gained, by grouping them together, the power of explaining the other three cases, which, but for this grouping, would have remained inexplicable. If it is invalid in the other three cases, it is invalid in the first one also, and we must seek another cause for the phenomenon.

The principle by virtue of which Dr. Hughlings Jackson performs his most remarkable feats of grouping superficially-unlike things, and the one which underlies all his explanations, is the principle of evolution. According to the doctrine of evolution, the organisation of the simplest and most fundamental functions of the body is completed first, and is most thorough, substantial, rigid, compact, and stable; while the most elaborate, complex, and special functions are not only the last to be organised, but their organisation never attains the fixity, the stability, the solid unshakeableness of the simpler functions; and in proportion as a function is complex, elaborate, and special, in so far is its organisation feebly compacted, and in so far is it more obnoxious to disturbing influences and more easily deranged. Not only is this principle true of the body as a whole, and of the nervous system as a whole—so that, for instance, those nervous arrangements which effect and govern the movements of the fingers and the movements of articulation are more easily deranged than those which effect the movements of breathing—but it is true also of each part and each minor and subsidiary series within the nervous system; so that the movements of the fingers are more liable to be deranged than those of the arm, which is a simpler and more fundamental part of the apparatus of manipulation; the movements of the tongue and lips than those of the larynx, which is a simpler and more fundamental part of the apparatus of articulation; and the movements of the diaphragm than those of the ribs, which are simpler and more fundamental parts of the apparatus of breathing. Hence it is that in apoplexy, when the fingers, tongue, and lips are paralysed and incapable of purposive movement, the movements of breathing continue. Hence it is that in an epileptic fit the convulsion is greatest in the hands and face and least in the trunk. Hence it is also that in hemiplegia the leg recovers before the arm, and the arm before the hand. Hence it is that in an epileptiform seizure the spasm begins in the thumb and index, or in the eyes, or in the tongue, or in the great toe, and involves the more massive muscles later and less. Hence it is that in coma the movements of breathing fail first and most in the lips, palate, and larynx; last and least in the diaphragm and ribs: and that the movements of breathing as a whole fail before the movements of the heart. For the same reason it is that in dementia the patient loses his higher intellectual qualities and emotions before his lower; ceases to care for his family before he loses interest in his own personal appearance; becomes untidy in dress before he becomes wet and dirty in his habits.

The application of a principle so comprehensive and so completely applicable to facts of all orders—to spasm as well as paralysis, to emotions as well as to tingling in the fingers—could not fail to be productive of great results. With what labour, with what clinical industry, with what profound insight, with what wide and accurate knowledge of the most varied orders of facts, Dr. Hughlings Jackson has worked in applying the principle of evolution to the pathology of the nervous system, is only partially shown even in the results which he has reached—results which have won for him the universal admiration of his contemporaries, and will command the admiration of posterity.

DETAIL IN SURGERY.

THE address of Mr. Pridgin Teale deals with a subject which must interest all surgeons, and deserves careful attention. It is practically the outcome of a large experience, and gives to the profession sound advice upon many matters of every-day work in surgical practice—matters which are of great importance to the success of the surgeon and to the welfare of his patients. Attention to detail is a student's lesson, and to be a master of detail is the keystone to success in surgery, as emphatically as in other sciences where mechanics play a great part. If we are inclined to agree with the definition of genius, which has been given by Carlyle, that it is an unlimited capacity for taking pains, this is, in other words, attention to detail, and no better subject could be chosen for an address in the Surgical Section of the Association.

It is not with the general principle of attention to detail that Mr. Pridgin Teale deals, but his hearers and readers will recognise the much greater practical interest that must attach to the application of these principles than to an address which might be confined to a discussion however logical and philosophical upon the causes or progress or results of abstract principles. He applies them to certain subjects which have interested him, and presents a number of interesting practical remarks and suggestions which indicate the importance of detail in some of the operations and methods of surgery. It is true that these may not be new to all, but they will undoubtedly be of great service and suggestive interest to many, and an address has its real value in what it gets its hearers to think about and extend rather than in detailing facts which have to be accumulated, or even conclusions which have been already digested, and which leave the hearers no further work to do. Many of the remarks in this address will be read with a desire to extend them to other practical subjects besides those which time here permitted.

A detail in the operation of ligature of an artery insisted upon is that of division of the vessel between the two points of ligature, and the physiological rest which results is urged as a necessity to avoid the secondary hæmorrhage which is rendered liable by the drag upon the ligatured part by the elastic and muscular coats. Abernethy practised the plan, but it has not been steadily adhered to. In the treatment of stricture provincial surgeons have certainly had a large experience, and here the author expresses himself strongly in favour of Lister's sounds; and it will be of interest to surgeons to find him an advocate for rapid dilatation, to which he attributes the absence of rigors in his cases.

The next subject discussed is the important one of effective drainage, and there is probably none on which the experience

of a practical and scientific surgeon will be of greater value. So much of the advance of modern surgery depends upon attention to this detail that this address naturally includes a reference to this subject. It is clearly summarised in these words: "The leading idea should be so to provide, whether by position of openings, by shape of opening, or by use of drainage-tube, that secretions shall escape from every part before they have time to become septic, remembering that if a way of escape for fluid without imprisonment be provided we generally have to aid us the elasticity or contractility or displacing compression of surrounding tissues." There is no doubt this is the key to some of the recent developments of abdominal and no less thoracic, cranial, and joint surgery, of which our handicraft may boast. Peritoneal stitching has been practised and recommended by modern surgeons, and Mr. Teale adds this as another important detail. One of the charms of this address is the candour with which the suggestions of juniors are acknowledged and credit given to them without hesitation. In this detail, as well as in others, the source of the idea, as far as the operator was concerned, is given without any attempt to appropriate originality when it does not exist, and there is no doubt the address and its author will be the more esteemed for their honesty as well as modesty. This address may carry with it an influence beyond its apparent object, and be a useful example—a detail, in truth, in professional morals of more than ordinary value.

Dilatation of the sphincter ani in operations on the rectum is another detail impressed upon his hearers, and we have no doubt of its importance; yet, as late as 1887 M. Verneuil brought forward this method as a novelty, which shows that to many in Paris it is not a recognised common means of relieving some of the most troublesome and painful faults of the rectum. But we think it has been for many years recommended and adopted by rectal surgeons in England.

There are few "details" in operative surgery which are more important to the operator than the kind of anæsthetic used and the mode of administering it, and we have in this address a most valuable testimony in favour of them. The experience of the modern surgeon is told in a manner many would re-echo, and the results arrived at tally with what this JOURNAL has expressed on the subject, and are opposed to those enunciated (by Mr. Teale's predecessor) in the surgical address at Glasgow. Improvements in the method of administration encourage the belief that ether is quicker and safer than chloroform. When properly administered—and Clover's apparatus is preferred for economy of the anæsthetic and for its warming the cold gas—and when due precautions are taken, two or three minutes suffice to prepare a patient for operation "without struggle, without coughing, often without a transient sense of suffocation, and with the expenditure of about half an ounce of ether." It will need about one ounce more only for each quarter of an hour that the anæsthetic is kept up. The operator feels less anxiety, there is a saving of time in getting the patient under the influence of the anæsthetic, and, moreover, with ether "the return of consciousness to pain generally lags behind the return of mental perception," and thus anæsthesia can easily be re-established without interrupting the operation. Such being the experience recorded, it is hardly to be wondered at that anyone not already a convert to ether is urged to ask himself: "Have I myself studied the details of successful etherisation? Am I using the best form of inhaler? Have I taken pains to have those who act for me properly taught and trained?" If not, let him ask himself one more question: "Have I done my duty?"

As might be expected, "details in surgery" include the character of the instruments used; and here we have a logical preference shown for a scalpel with central point, a director with "an elegant double curve," a point not too abrupt, and a handle long enough and firm enough to be held in the hand, and a catheter with such a curve as will enable the surgeon to have his mental eyes on the point. A good form of volsellum forceps is recommended, and a twitch tourniquet upon the same principle as the veterinarian's twitch for refractory horses, and this has been successfully used as a "torsion clamp."

This address is essentially a practical one, and the wide field it embraced afforded opportunity for the hearers of it to add their own experiences in the importance of "detail" in various operations. It thus performed an important function in stimulating thought and the expression of ideas on "detail in surgery."

THE ADDRESS IN THE SECTION OF PSYCHOLOGY.

IN venturing to attack so large a subject as the past and present provision for the insane poor of Yorkshire, Dr. Hack Tuke, as President of the Section of Psychology, has courageously and successfully undertaken a task of great difficulty and complexity, dealing with facts and figures extending over a period of upwards of a century, and affecting an area containing, in the first instance, 950,000 inhabitants, and numbering at the present time over 3,250,000.

Up to the year 1818 the only asylum accommodation for the insane poor of this large county was at the old York Asylum. This institution had undergone that process of reformation and reorganisation in 1814 which marked an epoch in the history of the lunatic asylums of this country. It was in this year of 1818 that the West Riding Asylum at Wakefield was opened, with accommodation for 150 patients; and it is interesting to note in connection with the present movement in favour of the erection of small lunatic asylum hospitals for the treatment of acute and curable cases, and for teaching and scientific research, more especially from the standpoint of the neurologist, that so far back as 1815 we find Dr. Ellis "laying down the rule that from 100 to 120 patients are as many as ought to be in any one house," and again in 1844 we have Dr. Corsellis proposing to limit the number to 300.

Passing on to the admirable appointment of Mr. Cleaton, and following him Dr. (now Sir James Crichton) Browne, Dr. Major, and Dr. Bevan Lewis, Dr. Tuke regrets he is compelled to bear too brief testimony to the brilliant administrative, clinical, and pathological work done at this institution under their superintendence. Leaving much unsaid, therefore, with pardonable reluctance, Dr. Tuke takes us to the South Asylum at Wadsley, which was built for 750 patients, and opened in 1872, so that we then had the Wakefield Asylum, containing nearly 1,500, and the

Wadsley Asylum with room for 750 more, making accommodation for 2,250 insane paupers. Even this, however, was insufficient, and the opening of a third West Riding Asylum, at Menston, in October last, will give, when completed, space for 1,310 more, making in all for the South and West Ridings alone accommodation for 3,560 patients.

Leaving the South and West Ridings, we follow Dr. Tuke to the North and East, and he gives us an account of the asylum erected for these divisions of the county ("the old North and East," as it was called) in 1847 for 150 patients, and tells us how in the first ten years the number increased to 400, in 1871 to 560, and now is 620. Here again the old story was repeated. The North and East Asylum was found too small, and the East Riding opened an asylum of its own in 1871. Within twelve months it contained 197 patients, and now has close upon 300.

According to the last report of the Commissioners in Lunacy, the actual numbers resident in the county asylums on January 1st last were in the South and West 3,137, and in the North and East 913, giving the total number resident as 4,050. In addition to the county asylums, the Hull Borough Asylum, opened in 1884, now contains 282 patients, and this number is exclusive of those in idiot asylums and workhouses. With regard to the workhouses, we cannot but sympathise with Dr. Tuke in the difficulties he has had to contend with in his efforts to unravel the chaotic condition in which he found the statistics of these institutions. In fact, up to a very recent date no trustworthy statistical records were available. Fortunately, this has now been remedied, and he is enabled to give us the number as 1,316. These, together with those in the asylums and others (idiots or with friends), give a grand total of 5,911 pauper lunatics now belonging to the county.

As the result of Dr. Tuke's labour, which he tells us has been "congenial to his tastes," we have thus been able to trace step by step the gradual accumulation of the insane poor in the various institutions of the county, and we regret to say it agrees but too closely with the accumulations of the insane we find to exist in other counties throughout the kingdom. We wish we had for every other county a history of its asylums and lunacy statistics as accurate and complete as this work of Dr. Tuke in connection with Yorkshire, for we should then possess a record which would prove to be of the greatest interest and value. We regard with feelings of entire accord his statement that "to the *prevention* no less than *the cure* of insanity must our endeavours be bent in future," and in furtherance of this object we should hail with satisfaction the elaboration of any scheme for the improvement of our knowledge of insanity, its causes and its treatment, by the erection of small asylum hospitals in connection with, but at a distance from, the asylums already existing; by giving to each a largely-increased staff of medical men, highly skilled in neurological science, in proportion to the number of the patients; and by encouraging a more general (and perhaps compulsory) attendance of medical students in the wards of such hospitals, and allowing their attendance to count as hospital practice. Thus, with a wider spread of knowledge, so acquired, than has hitherto been found practicable, we should be enabled to clear away the remnants of mysticism and empiricism which are still to be found hanging about our lunatic asylums and the treatment of their inmates.

It is to Dr. Tuke and his fellow workers, who have laboured so long and so earnestly to ameliorate the condition of the insane in the United Kingdom, that we owe the immense improvement that has taken place of late years in our lunatic asylums, which compare so favourably with the best asylums of other countries. Their administration leaves little to be desired, and we trust that in the near future we may see steps taken which will push forward our knowledge of mental diseases and their treatment into the foremost rank. Neurological science of late years has made rapid strides, and it is but fair to hope that by its aid we may yet solve at any rate some of the problems connected with medico-psychology.

ANNUAL MEETING AT LEEDS.

THE number of members registered up to Thursday afternoon as attending the annual meeting was more than 900.

A SPECIAL service was held at four o'clock on Tuesday afternoon in the beautiful old parish church of Leeds. Dr. Boyd-Carpenter, the Bishop of Ripon, in whose diocese Leeds is situated, preached the sermon, which was a remarkably eloquent and impassioned discourse. Taking his text from the Gospel of St. Mark (viii. 1, 2), "Jesus called his disciples unto him, and saith unto them: I have compassion on the multitude," he drew a striking parallel between the work and aims of divinity and medicine. As in so many other relations of life, it was, he said, the smaller details of thought that divided men, the fundamental aim was the same, and both professions, actuated by a deep sense of compassion for the sufferings of humanity, were ranged under one banner. He claimed for Christianity that it had invigorated the spirit of compassion; science had sometimes been disposed to complain that religion had been "the nurse of hysteria and the mother of hallucinations;" it had been one of the glories of Christianity that it had paid heed to the physical needs of man. He asked that medical men should recognise that as their own profession had passed through various stages of development, from the time when it was mere necromancy, through the period when theory and authority ruled, down to the present time when men strove to see things as they were, so religion had advanced from the stage of fetichism, through the later stage when opinion and authority were the only guides, to the present attitude when divines also strove to see things as they were. Science and religion were not antagonistic but complementary, and the two professions of divinity and medicine stood together, incurring common dangers, under the impulsion of a common motive. The chaplain and the surgeon had fought together at Rorke's Drift, and if divinity could boast a Father Damien, medicine might be not less proud of men who risked their lives in the hope of restoring the power of breathing in a child who had been operated on for diphtheria. He recalled some of the triumphs of medicine, the disappearance of ague from whole nations, the enormous diminution of mortality of armies in the field, and paid a remarkable tribute to the achievements of sanitary workers, which had produced the important fall in the death-rate witnessed during the last decade, "through industries and energies never chronicled." This remarkably eloquent and impressive sermon was listened to by a congregation which crowded every nook and corner of the great church.

THE meeting rooms of all the Sections were under the same roof, except in the case of the Section of Public Medicine. It met in the Philosophical Hall, which, however, was at no great

distance. With this exception, if it be an exception, the arrangements for the sectional meetings left nothing to be desired, and in the Coliseum there was a hall well adapted to the requirements of the general meetings.

A DEMONSTRATION of cases treated by surgeons of the General Infirmary was given on Wednesday afternoon. Some highly interesting cases were presented; among them were the following:—Under the care of Mr. Teale: cholecystotomy. Under the care of Mr. Jessop: pendulous tumour of scalp overlying orbit; excision of upper jaw for sarcoma, operation one year ago; cholecystotomy; two cases of recovery from cancrum oris; pyonephrosis; nephrolithotomy, recovery; enchondroma of ribs, excision; compound comminuted depressed fracture of skull, hemiplegia and hemianæsthesia, trephining, recovery; neuroma of median nerve, excision, nerve-grafting, recovering sensation; suprapubic prostatectomy. Under the care of Mr. McGill: cholectomy; senile gangrene; amputation of thigh, recovery; three cases of suprapubic prostatectomy; suprapubic cystotomy for villous growth of bladder; laparotomy for intestinal obstruction, associated with Meckel's diverticulum; as well as numerous other cases, many of them illustrating the treatment of joint-disease. Cases under the care of Mr. Atkinson: chronic intestinal obstruction; intussusception, enterotomy, recovery; two cases of suprapubic prostatectomy; ichthyosis hystrix linguæ; lithotomy and prostatectomy at one sitting; double bronchial clefts in a young man; thyroidectomy. Cases under the care of Mr. Mayo Robson.—Cases illustrating intracranial surgery: (1) man, aged 44, compound comminuted depressed fracture of skull involving the longitudinal sinus, primary trephining, recovery; (2) man, aged 42, compound depressed fracture of skull, Jacksonian epilepsy, trephining, complete recovery (operation 3 years ago); (3) girl, aged 11, hemiplegia associated with otorrhœa, trephining over motor centres, evacuation of serous fluid from lateral sinus, recovery; (4) boy, aged 17, compound comminuted depressed fracture, protrusion of brain matter, hemiplegia and hemianæsthesia, elevation of fragments, recovery; spina bifida in a girl, aged 19, excision, recovery; spinal caries, angular curvature, paraplegia, trephining with removal of spinous process of three dorsal vertebræ; three cases of thyroidectomy; a case of cholecystenterostomy, resulting in a fistulous opening; cholecystenterostomy (May 6th, 1889), complete recovery; two cases of cholecystotomy; two cases of sigmoidostomy; fæcal fistula after strangulated hernia, gut sutured and returned; tubercular peritonitis in a girl, aged 15, abdominal section, recovery with great gain of weight; three abscesses, aspirated and injected with iodoform and ether, recovery; gastrostomy (operation 10 weeks ago); several cases of strumous disease of wrist treated by longitudinal dorsal incision; fracture of olecranon treated by extra-articular pinning, recovery with perfect movements of joint.

IN according to the Annual Museum a central position in the Albert Hall of the Mechanics' Institute, the Museum Committee have signified their sense of the interest attaching to this auxiliary of the annual gatherings of the Association and their desire to meet the convenience of the members. Such an arrangement has not always been found possible; and, in the present instance, even the resources of the Albert Hall have proved inadequate to hold the whole of the various exhibits. Section A (Food and Drugs) and Section B (Instruments and Books) are well represented; and, although a few well known firms are absent, the exhibits in these sections do not appear to be deficient either in number or value. In another part of the building are arranged the Sanitary and Ambulance exhibits (Section E). These, though fewer in number than in some former years, nevertheless include some ingenious appliances, and a number of domestic and sanitary articles of recognised hygienic value and general utility. The museum has this year been very largely attended, and appears to be an object of considerable interest to a large majority of the members.

THE sections of the museum comprising the physiological and pathological objects were placed in the Chemical Laboratory, a well-lighted apartment in the upper storey of the School of Science. The pathology of leprosy was illustrated by a series of specimens exhibited by Dr. Beaven Rake, of Trinidad, showing lesions of the skin, kidney, larynx, spleen, and testes; Dr. Radcliffe Crocker also showed a number of interesting drawings and photographs illustrating the progressive nature of the characteristic changes. Dr. Ernest Jacob, Curator of the Pathological Museum of the Yorkshire College, had arranged an important collection of specimens from that museum; among these may be especially mentioned a series illustrating diseases of the knee-joint, another illustrating prostatic disease and the results of suprapubic prostatectomy, and a third comprising ophthalmic preparations. The President of the Royal College of Surgeons exhibited, by the permission of its Council, a selection of coloured portraits, chosen from those made during the past year under the direction of the Museum Committee, chiefly executed by Mr. Burgess. Dr. Hellier exhibited a set of models used in teaching the Slojd system of educational carpentry. Professor de Burgh Birch showed some excellent teaching models, and also a few instruments, including a most ingeniously constructed hæmometer. In a separate room, Dr. Crooke, of Birmingham, showed a large number of beautiful microscopic specimens, illustrating the lesions of acute and chronic Bright's disease. Dr. Birch, the officer commanding the Leeds Division Volunteer Medical Staff Corps, exhibited a great part of the field equipment of a bearer company. The collection demonstrated how large a variety of articles can be packed into a small compass and made extremely portable. Besides the regulation wagon, stretchers, mule chairs and litters, there are exhibited medical and surgical field panniers, field fracture boxes, etc. The St. John Ambulance Association also exhibited a number of stretchers and other ambulance apparatus.

COLONEL WILSON and the officers of the 3rd Volunteer Battalion of the West Yorkshire Regiment entertained those members of Association who are, or had been, connected with any of the military services, at the Carlton Barracks, Leeds, on Wednesday afternoon. Notwithstanding the inclement weather which prevailed, there was a large attendance, including the President and several members of the Council. The fine band of the regiment was much appreciated. The Carlton Barracks were in themselves well worth a visit, being one of the finest Volunteer headquarters in the kingdom.

THE President of the Association, Mr. C. G. Wheelhouse, and the members of the Local Executive, gave on Wednesday evening a reception in the Art Gallery, which the Corporation of Leeds had placed at their disposal. Not less than fifteen hundred invitations had been issued, and the ladies and gentlemen of Leeds and the vicinity, whose guests a large proportion of the visitors are for the week, representatives of the Yorkshire College, the Leeds Philosophical Society, and other literary and scientific institutions, the Mayor, and other members of the various administrative bodies, as well as numerous foreign guests, were present. The fine galleries, with a little assistance at the hands of the decorator and florist, readily lent themselves to the purposes of a *conversazione*. The company, who were received by Mr. and Mrs. Wheelhouse, began to arrive at about half-past 8. The rooms speedily filled, and before 10 o'clock some fifteen hundred or more visitors had assembled. Various collections of pictures with which the walls were hung, in addition to those of Colonel North which occupied their customary place, came in for a good

deal of attention and some praise. The excellent music was discoursed by Mr. Amer's band from Newcastle, while in the drawing-room recitals, dramatic and humorous, were given and much appreciated. It was in every way a delightful reunion.

On Wednesday afternoon the members of the Association were received at the Yorkshire College by the President (the Marquis of Ripon, K.G.), the Council, and the Senate. There was a very large attendance; the reception took place in the spacious general chemical laboratory on the first floor of the central block, where refreshments were also served to the visitors, who inspected the different lecture and demonstration rooms, and the laboratories in the College buildings. A short history of the College was placed in the hands of each guest, in which attention was drawn to the growing needs of the medical department, which had compelled the authorities to purchase another estate upon which it is intended to build, so soon as the necessary funds have been collected, a much larger medical school than the present one. The Yorkshire College is in a highly flourishing condition; the number of registered students who attended the ordinary day classes was 466 at the end of last session. In addition, there were 548 classed as "occasional" or "evening students," making a total of 1,014. The Medical Department of the College is in Park Street, near the General Infirmary, the buildings near Hillary Place, where the reception was held, being devoted to science, technology, and arts.

One of the subsidiary meetings, that of the Medical Sickness, Annuity, and Life Assurance Society, was of a satisfactory character. The reports presented disclosed a very prosperous state of affairs, showing reserves of nearly £33,000, and a realised profit surplus of over £8,000; the latter the members prudently decided to hold over for a further period of five years before distribution takes place. Some useful and necessary alterations were made in the rules for the administration of the funds of the Society. The chairman, Mr. Ernest Hart, was re-elected, and a very strong list of vice-chairmen and committees was also adopted.

IRISH MEDICAL SCHOOLS' AND GRADUATES' ASSOCIATION.

The summer general meeting of this Association was held on Wednesday, August 14th, at the Philosophical Hall, Leeds; Dr. Fegan (Blackheath), President, in the chair. Among those present were Drs. Macnaughton Jones, Mapother, Davison, Halton, Professor Cuming, and Dr. Abraham (Honorary Metropolian Secretary). Resolutions in favour of the formation of provincial branches of the Association, and in reference to an official organ of publication, were passed, and a vote of thanks to the Reception Committee of the British Medical Association for the use of the room.

HEALTH OF THE PRINCE OF WALES.

H.R.H. the Prince of Wales has been suffering from a gouty affection of the leg, which has necessitated rest, and which incapacitated him from being present at the review at Aldershot on Wednesday, August 7th. His Royal Highness has much improved, and it is fully expected that the treatment at Homburg, where he now is, will greatly benefit him.

RABIES AND THE MUZZLING ORDER.

Mr. E. D. Vesey, Secretary to the Dog Owners' Protection Association, writes to a contemporary to point out that if the dogs of the metropolitan district are muzzled at this moment it is because their owners either believe that they ought to be so, or erroneously imagine that the "Rabies Order, 1889," is in force throughout the metropolitan area, whereas, in truth, it is not in force anywhere within the jurisdiction of the County Council (London). If the dogs of the great provincial towns are muzzled by order, such order must be made by the local authority, acting pursuant to the provisions of the Dogs Act, 1871, or some local Towns Police Clauses Act. Mr. Vesey adds: "An ill-fitting muzzle (as most muzzles are) is undoubtedly calculated to produce a state of mind and body favourable to the development of rabies." "I cannot," he says, "answer for the R.S.P.C.A; but I will undertake, on behalf of my Association, that dog owners using muzzles, whether voluntarily or pursuant to an order, which do not permit the animal to breathe and drink freely, shall be prosecuted with the utmost rigour of the law, provided efficient information to procure conviction is brought to this office."

THE CONTAGIOUS DISEASES ACT IN INDIA.

The Simla correspondent of the *Times* says, in a telegram dated August 14th, that a debate took place in Council on that day on the Cantonment Bill, in the course of which General Chesney expressed the opinion that contagious disease should be dealt with in the same manner as any other infectious disease. The suspension of the Contagious Diseases Act had, he said, resulted in an alarming increase of disease among soldiers, and it was impossible to overrate the importance of the subject. Sir Frederick Roberts, the Commander-in-Chief, stated that the percentage of soldiers on the sick list had doubled since the suspension of the Act. The Marquis of Lansdowne pointed out that the Indian Government was bound by the House of Commons resolution. His Excellency hoped, however, that, without overstepping the limits of that resolution, the present Bill would check disease, and that public opinion would support the reasonable steps which were being taken by the Indian Government.

EXHIBITIONS OF HYPNOTISM.

At Marseilles, Bordeaux, and Poitiers public exhibitions of hypnotism have been forbidden. Our Paris correspondent writes: The Departmental Council of Public Health advised the rector of the Academy to take this step in the districts under his authority, and he wisely followed the good advice. In Belgium, Geneva, and Mecklemburg-Schwerin, they are likewise forbidden. In Paris, unfortunately, unwise doctors can show off their patients, and quacks follow in their steps with unwholesome imitations.

AN INSANITARY EXHIBITION.

Our Paris correspondent writes that, since the case of poisoning resulting from drinking lemonade prepared in zinc pails, the use of metal vessels has been prohibited in the process of lemonade and bonbon making. The Administration of the Exhibition has issued strict orders that this prohibition shall be enforced. Perhaps this wise measure may suggest the framing of others, and some sort of supervision of the wines, meats, and hams, which are astonishingly abundant, but not always either of enticing appearance or odour. It would also be reassuring to the now cosmopolitan French public to have analysed the vast quantity of milk sold at the Exhibition, which is supplied by a comparatively small number of cows. Good and bad sanitation is involved in the simplest and most menial duties. It is for this reason that it would be wise to have a special staff of cup and glass wipers, so that, to quote from a contemporary, "they be not passed from one customer to another *without being washed or even rinsed.*"

SCOTLAND.

THE PERTH WATER SUPPLY.

It is notoriously difficult to bring the public mind to comprehend the difference between "dangerous" and "injurious" water

supplies. It is, however, clear that a water may be shown by repeated analysis to be fairly or even perfectly wholesome, yet a consideration of the circumstances and conditions of its source may be enough to satisfy one that it may at any moment become dangerously contaminated, and be a vehicle of disease. A recent inspection of the extraordinarily primitive contrivances for the collection and filtration of the water of the Tay, used in the city of Perth, rivals a condition which, in spite of the remonstrances of medical men and others in the "fair town of St. John," has existed for years, and with which the authorities appear perfectly satisfied. The sewers, which are old and badly designed, being for a great part of their course below high water mark, and consequently liable to backwatering and reflux for several hours at a time, discharge their contents along each bank of the river, in which the presence of solid fæcal matters is palpably evident, while the stream itself is dark and turbid. In the middle of the town, just above the bridge, is an island composed of pervious sandy loam which is made to serve as a rough sort of filter. A well is sunk in it to some feet below the bed of the river, and the water which percolates into it is pumped out and conveyed by iron pipes laid in the river bed to another pumping station in the city, where it is raised to a sufficient height, but, instead of being distributed directly, it is carried by underground pipes to a reservoir outside the town, and returned by gravitation through the street mains. This is the general plan of the water-supply as it has hitherto been carried out, but the increasing demands of the population have necessitated a recourse to auxiliary supplies; for during the hours immediately preceding and following low tide the pressure is insufficient to force the water into the well. To meet this, a trench has been dug in the same island within a couple of yards of the river, into which the water enters freely, and, of course, in a less filtered condition, and another is in course of construction on a pebbly bank a short distance higher up, the loose shingle of which will be unable to effect more than the feeblest filtration. The iron pipes jointed with lead are being let down by cranes into the bed of the river, and into a trench on the opposite bank, dug out without puddling, two or three at a time. Under such circumstances it is inevitable that in the process of laying, and subsequently from the shifting of the bed of the river, the jointing will yield and the polluted water of the Tay enter the mains. But this is not all. Not far from the reservoir, and between it and the city, is a huge midden-heap, where the contents of the pails, largely used in the poorer class of houses instead of closets, as well as of the dustbins and other refuse, are deposited. Vast numbers of sea-gulls, rarely seen, or far inland elsewhere, frequent this midden to feed on the fish refuse and other organic matter, and then resort to the reservoir to wash their feet and bills, fouling the water that has been subjected to a process of purification, imperfect though it be. If the midden must be located in such proximity to the reservoir the latter ought certainly to be covered, but the obvious course would be to draw the public water supply from the Tay, above the junction of the Isla. The latter has already received the sewage and factory waste of the town of Blairgowrie; but the Tay above this is free from any appreciable pollution. The Romans were wiser in their generation, and provided a pure supply by means of an open conduit from Glen Almond, which the perversity of their successors has appropriated to the purposes of several factories. The obstinacy with which the Town Council adheres to the existing objectionable arrangement is owing to the fact that the shares are mostly held by its members. It is true that the present death-rate of Perth is not above the average of towns of its size, but there is a considerable amount of infantile and other diarrhœa in the autumn, and enteric fever prevailed in an epidemic form for three years at any rate. The conditions of the water supply certainly call for a governmental inquiry. An unimpeachable water could be obtained from one or more of the Perthshire lochs. The Almond river, almost absolutely uncontaminated, flows into the Tay less than two miles from the heart of the city, and might be entirely impounded; but, if its delivery should be found inadequate to the wants of the population, the Tay itself, as we have said, above its confluence with the Isla, would be infinitely preferable to the present supply, provided the sewage of Dunkeld were diverted and subjected, as it might easily be, to ample filtration through cultivated soil, and the effluent perhaps discharged into the group of lochs around Lows. Another scheme, and probably the best, would be to impound the Almond and the Earn. The latter, fed as it is by the large loch of the same name and entering the Tay a conple of miles below the city, would very likely be of itself sufficient for all possible prospective requirements.

IRELAND.

QUEEN'S COLLEGE, BELFAST: ANNUAL REPORT.

THE President of the Queen's College, Belfast, Dr. Thomas Hamilton, has just issued the annual report of that institution. From this it appears that the number of students who entered the College for the first time this session was 126, being 17 more than in the previous year. The total number of students in attendance in the various grades was as follows: in arts, 174; in medicine, 222; in law, 22; in engineering, 11. Allowing for those who attended in more than one faculty, the total number of students in attendance was 422. Seven of the students were ladies. At the examinations of the Royal University during the last academic year, 290 students of the Queen's College passed in the various grades. Of these, 20 passed the first university examination in medicine, 30 the second, 47 the third, and 30 obtained the medical diploma. Twenty-five of the exhibitions of the Royal University were obtained by the students of the College, and 90 other honours fell to their share. Many high honours have been awarded at Cambridge and Trinity College, Dublin, to former *alumni* of the College. The Queen's College enjoys the unique distinction of having furnished three senior wranglers in a single decade. Dr. John Strahan, a graduate of the College, has been awarded the Jenks prize of 250 dollars for an essay on "The Diagnosis and Treatment of Extra-uterine Fœtation," the examiners appointed by the President of the College of Physicians of Philadelphia complimenting him on "the remarkable excellence" of his work. The late Professor McKane has left the sum of £400 to the College for the establishment of a gold medal to be awarded annually for proficiency in political economy and jurisprudence. Great regret was expressed at the death of the late President, Rev. J. L. Porter, LL.D., which took place on March 16th. Dr. Porter had held the office of President since 1879. Dr. Hamilton, in conclusion, urges the claims of the College to increased grants for the purpose of providing additional laboratory accommodation, rendered necessary by the rapidly-increasing number of students and the growing wants of the city of Belfast.

THE HOSPITAL FOR WOMEN.—The £20,000 required to rebuild the new Hospital for Women has, the Treasurer writes, already been subscribed, and, having been so far successful, the Committee are now anxious to free the hospital from the incubus of a heavy ground-rent by purchasing the freehold of its site. This will cost between £7,000 and £8,000, and if this sum could be raised during the next few months the hospital would start on its new way with only the annual maintenance charges to be met.

THE subjects of the doctoral theses recently argued at the Paris Faculty of Medicine occupy a wide range. The first on a long list is entitled: "Facts concerning the Odorant Products of Roses." M. Dudley Tait has his name to a thesis on Lanolin. Three ladies have argued their theses on purely medical subjects, among them Madame Dejerine-Klumpke, *née* Klumpke.

THE MAYBRICK CASE.

We have asked the professors of medical jurisprudence in the various medical schools in the three kingdoms to be good enough to send us their views on the verdict in the Maybrick case. Several have expressed regret that absence from home or other causes prevent them from complying with our request, and one or two have declined, on the ground that the matter is not suitable for public discussion. The following replies have been received for publication:—

Arthur Edward Sansom, M.D., F.R.C.P.Lond., Lecturer on Medical Jurisprudence, London Hospital Medical College.

It seems to me impossible for an adequately instructed observer, on a review of the facts recorded during the trial, to come to any other conclusion than that James Maybrick came to his death on account of arsenical poisoning.

According to the prisoner's own statement, she mixed "a powder" with the food to be administered to her husband on May 9th. The symptoms which he manifested, both previously and subsequently, were those of irritant poisoning. Very large amounts of arsenic were, by chemical analysis, shown to be present in vessels found in the prisoner's room, in the deceased man's dressing room, in the dry remnants of farinaceous food adhering to a jug, and in handkerchiefs which must have been steeped in strong arsenical solutions.

It is very desirable that the question shall be considered in every possible way. Whether the volition of the man contributed to his own death? Was he one who might be termed an arsenic *habitué?* That he had not by custom arrived at a tolerance of the drug is evident, for he died from its toxic action. Every facility should yet be given for the tendering of further evidence as to the nature of the "powder" to which the deceased was said to be addicted, and as to the source from which he obtained it. It is very desirable that medical practitioners, both in this country and in America, should contribute any evidence in their possession as to the alleged arsenic habit. For my own part, I have never yet met with the slightest evidence that such habit exists in this country. Even supposing that the deceased man was the victim of an arsenic craving, it is difficult to suppose that, in his extremity of disease, he would desire a drug the properties of which he must have had knowledge of. It is difficult indeed, on the extant evidence, to come to any other conclusion than that the case was one of arsenical poisoning, and that the result could be ascribed neither to suicide nor to misadventure.

Arthur Pearson Luff, M.B., B.Sc.Lond., Lecturer in Medical Jurisprudence and Toxicology, St. Mary's Hospital.

A careful analysis of the evidence given in this *cause célèbre* can leave little doubt but that the verdict is a just one. It appears that about the middle of April of this year Mrs. Maybrick purchased some fly-papers, since proved to contain arsenic, and of which it is known she prepared an aqueous extract. On April 27th the deceased was seized with vomiting, which came on after taking tea. On April 28th he still suffered from vomiting, with foulness of the tongue, and also complained of stiffness in the lower limbs. On May 1st deceased partook of some luncheon, consisting of a preparation of revalenta arabica, which preparation had been brought to his office by his brother, who had received it from Mrs. Maybrick, and after partaking of it he complained that he did not feel well. On May 3rd he was sick twice after returning home. On May 4th he complained of a tickling sensation in the throat, accompanied with retching. Between May 4th and 6th he took, by order of his medical attendant, part of a mixture containing a small quantity of Fowler's solution (the whole quantity contained only 1-250th of a grain of arsenic, and a portion of this medicine was thrown away unused by the medical attendant on May 6th). On May 7th deceased was still suffering from vomiting, diarrhœa was just appearing, and the throat was dry and acutely inflamed. On May 8th he was suffering from diarrhœa, with considerable straining. On May 9th distressing tenesmus was present. On May 10th the tenesmus was better, but not absent, and the patient was sinking. On May 11th he died.

The *post-mortem* examination indicated acute gastro-intestinal irritation. The chemical analysis showed the presence of arsenic in the intestines, liver, kidneys, and spleen, but none was found in the stomach and pelvic bone. The symptoms preceding death, the *post-mortem* appearances, and the results of the chemical analysis clearly indicate that death was due to arsenical poisoning. For the defence, stress was laid on the fact that petechiæ were absent from the mucous membrane of the stomach; this absence is explained by the fact that in all probability the arsenic was taken in solution, and also by the fact that all arsenic had passed away from the stomach by absorption, by passage into the intestines, and by vomiting.

Three bottles containing a quantity of arsenic, both in the solid state and in solution, were found in the house, together with a package consisting of arsenic and charcoal. Arsenic was also found in a bottle of medicine in which it was not prescribed, and traces were found in a pocket of Mrs. Maybrick's dressing-gown, and on a handkerchief bearing Mrs. Maybrick's name contained in this pocket. Arsenic was found in solution in a bottle of Valentin's meat-juice, which had been seen in Mrs. Maybrick's possession under somewhat suspicious circumstances.

The prisoner in her statement admitted that she had put arsenic in the form of a powder into this bottle at her husband's request, but the fact of its being found in the bottle in a state of solution points strongly to the inaccuracy of the prisoner's statement. It is strange that the counsel for the defence did not call evidence in support of her statement that she had been accustomed for years to use arsenic as a face wash, since on her own declaration this was known to "many young friends in Germany, and to her mother for many years."

The defence endeavoured to show (*a*) that the arsenic present in the body was the result of a habit of taking arsenic acquired years before by the deceased in America, although no recent evidence as to the purchase or taking of arsenic by the deceased was produced; (*b*) that the cause of death was from gastro-enteritis induced by something other than arsenic. Bad sausages, fish, and cheese were mentioned in evidence as possible inducing agents of such irritation, but no evidence was produced that the deceased had partaken of any of these things; the only positive suggestion that was made was that the gastro-enteritis was produced by catching cold, a most improbable result under the circumstances.

David W. Finlay, M.D., F.R.C.P.Lond., Lecturer on Forensic Medicine, Middlesex Hospital.

The verdict in the Maybrick case followed naturally, in the judgment of the jury, from the general body of evidence adduced at the trial. Much more is it an inevitable conclusion in the minds of those who are capable of appraising at its proper value the strictly medical elements of the case. On the one side were a number of medical men and experts who testified to what they had seen, and who recounted symptoms and *post-mortem* appearances pointing to the influence of an irritant poison, and it followed logically from these, and the proved presence of arsenic in the tissues of the body, and from the fact that the access of no other irritant could be suggested, that the cause of death was arsenical poisoning. On the other side were medical witnesses who had not seen the patient either during life or at the *post-mortem* examination, whose evidence was therefore given merely on general grounds; and in a case of poisoning by arsenic he must be a bold man who will declare that the absence of one usual symptom or another of a particular *post-mortem* appearance is inconsistent with death from such a cause. More than almost any other poison is arsenic characterised by the Protean nature of the symptoms, and the *post-mortem* appearances depend largely on the acuteness or otherwise of the case. The truth of the prisoner's statement also is completely discounted by the fact that no solid particles of arsenic were found in the bottle of Valentin's meat juice into which she alleged she placed a white powder, while as much as half a grain was found in it in a state of solution. Such a liquid, cold, and no particular effort being made to secure solution, would dissolve an infinitesimally small quantity of solid arsenious acid.

It must be remembered also that traces of arsenic were found in a bottle of medicine made up in London for Mr. Maybrick, the prescription for which did not contain arsenic.

The alleged fact that traces of arsenic were found in the glaze of some pans examined by one of the witnesses for the defence is entitled to very little consideration, as none was found in those examined by the analyst on the other side, while arsenic was present in the remains of food adhering to the pan out of which Mr. Maybrick had eaten, and which had been sent to him by the prisoner. Perhaps the discrepancy on this point might have been due to the method employed in searching for arsenic in the glaze.

A. Bostock Hill, M.D., Professor of Chemistry and Practical Chemistry and Professor of Toxicology, Queen's College, Birmingham.

I have no hesitation in saying that I strongly support and endorse the chemico-medical evidence of Dr. Stevenson. I consider that it was conclusively proved that the deceased died from the effects of arsenical poisoning.

Edmund W. Davy, M.D., Professor of Forensic Medicine, Royal College of Surgeons, Ireland.

Having been asked to express my opinion on the Maybrick case, I beg to say that, after a very careful perusal of it, I consider that the medical and scientific evidence brought forward for the prosecution was quite insufficient to justify the verdict of guilty found by the jury. Granting that there were none of the many possible sources of fallacy connected with the discovery of the amounts of arsenic said to have been found in the different organs and tissues submitted to analysis, it is impossible to say positively that the arsenic so found in such minute quantities might not have been the result of Mr. Maybrick's habit of taking that substance, and not from its having been administered to him during his last illness. In support of this contention, I may affirm that we have no positive knowledge as to the length of time required to eliminate from the system a given quantity of that substance when such has been taken during life, as this would be influenced by the age, sex, the constitution, and state of health of the individual, as well as by different other circumstances.

Besides, there can be little doubt that the habit of taking arsenic, like that of many other active poisonous substances, would cause the system to more or less tolerate such matters, and consequently there would not be the same effort, as it were, on its part to throw off or eliminate such so quickly as in those not accustomed to their use.

I am of opinion, therefore, that the evidence, from a toxicological point of view, on which Mrs. Maybrick was convicted was quite insufficient.

Michael McHugh, M.A., M.B.Dub., Examiner in Medical Jurisprudence, Royal University, Ireland.

The cause of Mr. Maybrick's death, in my opinion, was arsenical poisoning, a possible explanation of which is furnished by alleged habit of deceased.

Richard J. Kinkead, M.D, Lecturer on Medical Jurisprudence, Queen's College, Galway.

I do not myself think, that an opinion, formed solely on the reports of the trial published in the daily papers, can be taken as accurate. Those reports are necessarily incomplete; the evidence of the witnesses is condensed; the description of symptoms and of *post-mortem* details is curtailed; and from the testimony of the medical attendants and experts, many most important facts, essential to the forming of a sound judgment, are omitted. As however my opinion has been requested, I give it *quantum valeat*. In my opinion, the symptoms during life and the *post-mortem* appearance were consistent with gastro-enteritis, from either what I may call natural causes, or arsenical poisoning, except that in the latter case, I should have expected symptoms which were proved to have been absent. I agree with Dr. Tidy that "cases, where pain in the abdomen and stomach is absent, in connection with arsenical poisoning, are extremely rare," (*Daily News*), more especially, I would add, where the poison had been given in repeated doses, and its action had been irritant. Where pain in the stomach, cramps in the calves of the legs, purging, etc., are absent, the action of the poison is narcotic, and the fatal termination is usually rapid. In this case the symptoms throughout were those of irritation.

If arsenic had not been found in the viscera, it would have been impossible to place the case as one of arsenic poisoning. The amount found was, however, very small, and it is difficult to reconcile its being the unexcreted residuum of a poisonous dose or doses with the other evidence.

Dr. Carter is reported to have said (*Daily News*), "The fatal dose must have been given on Friday, May 3rd; but a dose may have been given after that. When the deceased was so violently ill on Friday, it would, in his opinion, be from the effects of the fatal dose, but there must have been subsequent doses."

It may be assumed as proved that no poison was administered after the nurses took charge. It was proved that he was doing so well on the 7th and 8th that the doctors thought he would be all right in a few days. On the morning of the 9th he relapsed; the subsequent dose, therefore, must have been given on the 8th, prior to nurses taking charge. Judging from the symptoms the doses must have been more than trivial.

The fæces and urine were tested on the 9th, and no arsenic was found. As diarrhœa set in on the 9th for the first time, it cannot be alleged that it was carried off through the bowels. In Smethurst's case diarrhœa was constant, and was given as the cause of death, yet three days before death arsenic was detected in the urine. If in this case the arsenic found in the viscera was the residuum of a poisonous dose or doses administered as alleged, it is incomprehensible that arsenic was not found in the fæces and urine.

Reinsch's test is very simple, very sure, and very sensitive. Unless the proportion of the poison to the quantity of urine passed was so small as to require concentration of the urine prior to using the test arsenic must have been found. If the proportion had been so small, that, taken with the minute quantity found after death, would be inconsistent with the administration of a fatal dose on May 3rd and another subsequent dose: yet, if the symptoms indicate arsenical poisoning, they point to repeated doses. It was proved that deceased had suffered from ague; that on April 14th and 20th he was treated for indigestion; that on April 27th he went to the Wirral races, rode about, got wet, and dined there. What he ate and drank was not told. Whether he was judicious or injudicious as to selection and amount was not proved. Thus, cold, wet, over-exertion, and error in diet are left open as probably producing causes of gastro-enteritis.

That toleration of otherwise fatal doses of arsenic can be acquired is an established fact; that deceased had at one time acquired the habit was given in evidence, and not contradicted; that he probably kept up the habit was testified to, and tended to corroborate the assertions of the prisoner, proved to have been made prior to his illness, to his brother and others, that he was in the habit of taking a white powder. It is probable that a man of Mr. Maybrick's temperament, having suffered from ague and having been cured by arsenic, would, on feeling chilled or depressed, have recourse to it. It is therefore possible that, either prior to going to the races, or feeling chilled after his return, he may have taken a dose, which under ordinary circumstances would have been harmless to him, but which, combined with wetting, fatigue, cold, or possible errors in diet, aided to set up the gastro-enteritis. It appears also that, up to May 3rd, he could have taken at any time a dose of arsenic. If he was subject to the habit of taking it, it is not improbable that he would do so. Neither of these possibilities has been disposed of. Admitting to the fullest extent that Mrs. Maybrick's conduct, letters, and tampering with the meat juice raise a strong presumption against her, and attach the gravest suspicion, yet the evidence of the arsenic habit of the deceased rendered her statement as to the placing of arsenic in meat juice possibly true.

It also seems so incomprehensible, with enough arsenic lying loose about the house to have poisoned many times over all its inmates, that the prisoner should have bought fly-papers and prepared in the most open way a solution to poison her husband, that considerable probability of truth attaches to her statement that she procured them to make a cosmetic.

If no effort to find arsenic in the excreta had been made, the case against the prisoner, or rather the presumption of poisoning, would have been much stronger, for it would have been a fair presumption that the small amount found in the body was because of elimination. But elimination was disproved.

Thus, though surrounded by suspicion of the gravest kind, it does not seem to me to have been proved beyond a reasonable doubt:

That the illness was caused by or death resulted from arsenic. That a poisonous dose was administered or taken. That arsenic was administered by the prisoner. That, if taken during the illness, it was not taken by the deceased himself. That it may not have been taken prior to the inception of the illness.

MALCOLM MORRIS INDEMNITY FUND.

(Seventh List.)

	£	s.	d.
Amount previously acknowledged	452	15	0
Dr. Bristowe	2	2	0
H. H. Clutton, Esq.	1	1	0
Dr. E. L. Birkett, ...	1	1	0
Dr. Mitchell Bruce	1	1	0

The costs amount to £480. Subscriptions may be sent to Mr. G. P. Field, 34, Wimpole Street, or Dr. Sidney Phillips, 21, Upper Berkeley Street.

ASSOCIATION INTELLIGENCE.

NOTICE OF QUARTERLY MEETINGS FOR 1889. ELECTION OF MEMBERS.

A MEETING of the Council will be held on October 16th, 1889. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting, namely, September 26th, 1889.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member *by the Council* or by any recognised *Branch Council.*

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No member can be elected by a Branch Council unless his name has been inserted in the circular summoning the meeting at which he seeks election.

FRANCIS FOWKE, *General Secretary.*

COLLECTIVE INVESTIGATION OF DISEASE.

THE series of Maps forming the Report of the Collective Investigation Committee on the GEOGRAPHICAL DISTRIBUTION OF RICKETS, ACUTE RHEUMATISM, CHOREA, CANCER, AND URINARY CALCULUS are deposited in the Library of the Association, and are open to the inspection of members. A descriptive commentary appeared in the JOURNAL of January 19th, 1889.

An inquiry into the ORIGIN AND MODE OF PROPAGATION OF EPIDEMICS OF DIPHTHERIA is in progress.

Memoranda and forms for communicating observations may be had on application to the Secretary of the Collective Investigation Committee, 429, Strand, W.C.

MIDDLEMORE PRIZE, 1889.

THE essay in competition for the Middlemore Prize, and bearing the motto of "*Erectus non Elatus*," is waiting to be returned to the author, if he will be good enough to call or send for it.

METROPOLITAN COUNTIES BRANCH.

A SPECIAL general meeting was held at 11, Chandos Street, Cavendish Square, on Tuesday, August 6th, at 5 P.M., to reconsider the resolution passed at the annual meeting of the Branch on July 5th, respecting the annual meeting of the British Medical Association in 1890. In the absence of the President (Dr. ORD), the chair was kindly taken by the Past-President, Dr. BRODIE SEWELL. It was resolved by a large majority that it would be desirable to withhold the proposed invitation to the Association to meet in London in 1890.

SPECIAL CORRESPONDENCE.

LIVERPOOL.

[FROM OUR OWN CORRESPONDENT.]

THE trial of Mrs. Maybrick at the Liverpool Assizes on the charge of poisoning her husband by the administration of arsenic has received a degree of attention that has seldom been surpassed in the annals of criminal jurisprudence. It may be of interest to bring forward the salient features of the medical and scientific evidence on either side, to endeavour to arrive at a true estimation of its value, and to ascertain to what extent it affected the question of the guilt or innocence of the accused.

In order to clear the ground, the last of these problems may be briefly disposed of. The learned judge in summing up told the jury that they must not consider the case as a mere medical one, in which they were to consider whether the man did or did not die of arsenic according to the medical evidence. In other words, it was not necessary for them to include the possibility of death having taken place from natural causes, before they could establish the guilt of the accused. This is not the usual practice in criminal jurisdiction; if it were, a coroner's finding of death from natural causes would be no bar to a subsequent prosecution, and an extreme case could be imagined where the existence of a motive and the previous occurrence of a violent quarrel might be held to establish a charge of murder, even though a medical certificate, supported by a *post-mortem* examination, declared that death was the result of natural causes. This would be manifestly absurd, and the conclusion follows that in order to prove Mrs. Maybrick's guilt, the first step was to show that the death was not the result of natural causes.

The deceased, who was 49 years of age at the time of his death, was known to be hypochondriacal, and was constantly dosing himself with all kinds of medicines, in which he had extraordinary confidence. He would often take a double dose of a medicine, and was proved to have been going to two medical men, one of whom was a homœopath, at the same time. His complaints were not altogether imaginary; his liver was frequently out of order, and from time to time he suffered from some kind of numbness or coldness of the extremities, which suggests the first degree of Raynaud's disease. Some years ago, while living in America, he was addicted to the practice of taking arsenic, apparently in considerable quantity, both as a medicine and mixed with his food; it is highly probable that he continued to take it in the form of a "pick-me-up," until eighteen months before his death, and there is no evidence to show that he ever relinquished the practice, and indeed suspicions point strongly the other way.

There is some difficulty in fixing the precise date of the onset of the fatal illness, but it appears that on April 14th of this year, the deceased was in London and consulted a medical man. He was then suffering from indigestion, complained of pains in the head, and of numbness, and was apprehensive of being paralysed. After this he seems to have improved, though he did not seem to be quite well, and on the 27th of the same month he vomited after breakfast and felt some stiffness in his legs on going down stairs. His indisposition did not prevent his going to his office, and afterwards to the Wirral races, where he was on horseback nearly all day, and is said to have got a severe wetting. Still he did not feel well, and in the evening, when dining with a friend, his hand was so unsteady that he upset his wine, and feared he would be suspected of being intoxicated. The following day, which was a Sunday, he sent for Dr. Humphreys, who found him in bed, complaining of uneasiness in his chest and a sinking feeling at the heart. These symptoms he attributed to a strong cup of tea he had taken, and he said that tea had had the same effect on him before. He also said his tongue had been furred for a long time and he could not get it clean. He again expressed his fear of being paralysed. Some simple treatment was adopted, and in the evening all his complaints of the morning had disappeared.

On the 29th there were no symptoms present except the furred tongue, and Dr. Humphreys made the diagnosis of chronic dyspepsia. He ordered him a restricted diet, and recommended him to have for luncheon some beef-tea thickened with revalenta arabica food, which he could take down to his office when he went to business. Some medicine was also prescribed.

On May 1st the deceased seems to have been very well, but on the 2nd he thought his medicine was disagreeing with him, and he saw Dr. Humphreys again on the 3rd; but the latter found nothing special the matter, only that the tongue was still furred. At the office deceased took his beef-tea as before, and afterwards had a Turkish bath and went home. He then vomited twice, and about midnight was seen by Dr. Humphreys, who found him suffering from severe pain in the region of both sciatic nerves. It is not stated whether there still was vomiting, but it was certainly not very troublesome. For the pain Dr. Humphreys introduced a suppository containing a quarter of a grain of morphine, this mode of administration being chosen apparently because the suppositories were in the house. The next day there was constant vomiting of everything taken, a symptom that was at the time ascribed to the action of the morphine. All food by the mouth was consequently forbidden. On the 5th the vomiting was not so marked, but there was frequent hawking, and a feeling as of a hair in the throat; but on the whole the patient was rather better. On the 6th he could retain food better, and he was ordered minute doses of liq. arsenicalis. This treatment, however, was not carried out for long, and the patient could only have taken $\frac{1}{720}$th of a grain of arsenious acid. In the evening a small blister was applied to the epigastrium, and on the 7th the patient expressed himself as being quite a different man since its application, and he was able to retain half an ounce of fluid every hour. His condition on this day, as described by Dr. Carter, who saw him in consultation, was that of a man suffering from acute dyspepsia; he was weak, vomiting, had a dry throat, and a foul tongue. He was rather better on the 8th; but in the night diarrhœa and tenesmus set in, and on the 9th it was apparent that the inflammation had

spread to the colon. In consequence of suspicion having been aroused, the urine and the fæces were tested for arsenic by Reinsch's test, but in both cases with a negative result. On the 10th the patient was manifestly getting weaker, and the right hand had become cold and white, strongly recalling the condition alluded to in the previous history, which it has already been suggested might be a form of Raynaud's disease, and the pulse was almost uncountable. On the 11th death was manifestly impending; the patient was delirious, the tongue could hardly be protruded, and nutrient suppositories were rejected. He died shortly before midnight.

The appearances found at the *post-mortem* examination were briefly as follows: the thoracic viscera were normal, except for the remains of an old pleurisy and a little atheroma in the aorta. The upper part of the gullet was slightly red, and there were some superficial abrasions of the epiglottis. At the lower end of the œsophagus the mucous membrane was swollen, had the appearance of frog spawn, and presented some black patches, probably due to a deposit of bismuth. The mucous membrane of the stomach was reddened at the cardiac and pyloric ends, where there were two or three submucous hæmorrhages, but apparently no petechiæ. The intermediate portion of the stomach was healthy. The small intestine showed a tract of redness for the extent of about three feet, beginning two or three inches below the pylorus, and there was another red patch about eighteen feet lower down. The rectum was slightly red. The liver and kidneys were natural in appearance, there being no naked-eye evidence of fatty change. The heart muscle was examined microscopically, and showed no fatty change.

The analysis of the viscera showed the presence of one-eighth grain of white arsenic in the liver, 0.015 grain in the portion of intestine examined (about eight ounces) a trace in the kidney, and none in spleen, lungs, heart, or other parts.

Dr. Stevenson found a rather higher proportion in the liver than was found by Mr. Davis. This is probably to be explained by the fact that during the seven or eight weeks that elapsed between the analysis made by Mr. Davis and that made by Dr. Stevenson, a great deal of the fluids had drained away from the organ.

There can be no doubt that if this be, as the jury have decided, a case of death from arsenical poisoning, it presents some very exceptional features. The quantity of arsenic found in the body was hardly such as would be fatal if administered to anyone unaccustomed to the drug, and certainly would not be so to one who used it habitually. Indeed, it was no more than one might expect to find in the latter case. The theory of the prosecution was that arsenic was given in a fatal dose eight days before death, but if this were so, there is the remarkable phenomenon that the first symptoms were comparatively mild, and that they excited very little alarm; and only when the poison was nearly eliminated did it produce its fatal, or even any serious, results. There was entire absence of gastric pain, conjunctival irritation, and cramps in the calves of the legs. Vomiting was by no means a prominent symptom until the system was brought under the influence of morphine; when it occurred, Dr. Humphreys ascribed it to the action of this drug, and it can scarcely be conceived that the vomiting of irritant poisoning could be mistaken for that of morphine. The diarrhœa did not appear for five days after the vomiting was established, and at a time when the analysis of the evacuations and urine pointed to no great quantity of arsenic being eliminated; and the diarrhœa itself was not excessive. The symptoms of the last illness bear a striking analogy to those from which, during many years of his life, the deceased had suffered in a minor degree, and suggested an acute exacerbation of the dyspepsia from which he suffered. Further, special attention may be directed to the remarkable fact that though arsenic was present in the house, no trace of it was found in the stained bedding of the sick man.

All the witnesses agreed that death was the result of gastro-enteritis. The question on which the issue turned was: How did the gastro-enteritis arise? Experts answered the question in contrary ways, of which only one could be the true one. The jury were called upon to choose between them, and the jury have found that the gastro-enteritis arose from arsenic.

It cannot be denied that throughout the progress of the case the medical witnesses on either side manifested an irreconcilable difference of opinion; those for the prosecution holding that the symptoms and *post-mortem* appearances were consistent with, or even characteristic of, arsenical poisoning; those for the defence, men eminent as toxicologists, maintaining that they were not only not characteristic of arsenical poisoning, but that they actually pointed the other way. It is nothing new to say that a court of law does not provide the best means for solving obscure problems of this nature, and it cannot be supposed that those who are accustomed to arrive at a diagnosis from what they find at the bedside and in the *post-mortem* room will form their final opinion on this case solely by the verdict of a jury who are confessedly ignorant of such matters. To suspend judgment, to be always ready to accept new light and, if need be, to review the grounds of opinion, is the only consistent attitude for the scientific mind, and it is a positive duty in this important case to point out those striking anomalies which remove it from the category of cases in which there is no room for doubt.

CORRESPONDENCE.

ROYAL MEDICAL BENEVOLENT COLLEGE.

SIR,—Referring to my letter which you were good enough to publish in the JOURNAL of August 3rd, some objection has been taken to my having found fault with the system of election adopted by the Medical Benevolent College, without at the same time suggesting a remedy. I thought that this was unnecessary, since it is clearly the duty of those who are entrusted with the affairs of a very important charitable institution to themselves elect, without any voting on the part of subscribers, those candidates who are most in need of its benefits. The subscribers, scattered as they are all over England, know little or nothing of the relative merits and wants of the respective applicants; but the committee who investigate the claims are supposed to be in possession of all particulars necessary to enable them to select the fittest cases. It is only necessary to take up a voting list of the College to see at a glance that enormous interest has been at work, and that votes have been given to candidates with money or influential friends, to the detriment and exclusion of the helpless. This ought not to be allowed by a noble profession. If it is argued that canvassing brings money to the institution, by trading on human misery as an advertisement for funds, I earnestly appeal to the subscribers of the College to discountenance such a method, and to follow the example of those other equally important charities which find that they can thrive well without voting, and that the justice and merits of their cause are sufficient to ensure success.—I am, etc.,

J. A. DOW, Secretary,
Charity Voting Reform Association.

30, Charing Cross,
August 9th, 1889.

CHRONIC POISONING BY ARSENIC.

SIR,—I observe in your leading article in the JOURNAL of July 27th that there is no mention of jaundice as one of the symptoms that may arise from arsenical poisoning (chronic or otherwise). Allow me to refer you to a short paper of mine in the JOURNAL, 1885 (I forget the exact date), in which I reported six cases of jaundice in the same house caused by white arsenic in two rooms. The patients were sisters, and they were taken ill in pairs, at about a fortnight's interval. The chief symptoms were feverishness, furred tongue, tenderness at epigastrium, vomiting, jaundice; recovery soon established.—I am, etc.,

ALFRED FREER, M.R.C.S., L.S.A.

Green Close, Stourbridge, August 1st.

HYSTERECTOMY AND INSANITY.

SIR,—In a "Clinical Lecture on Uterine Myoma," in the Journal of August 10th, Mr. Lawson Tait calls attention to a statement recently made by Dr. Keith, as follows: "The fact that in my cases of hysterectomy the removal of the uterus and ovaries was sooner or later followed by insanity in 10 per cent. of the whole number, is enough for me to condemn any operation that removes these organs."

I am unwilling that such a statement should go forth, with all the weight of Dr. Keith's authority, or be regarded as presenting the true state of the case. Mr. Lawson Tait tells us that in not one of his hysterectomies has insanity followed. I have done 101 hysterectomies by abdominal section, the majority being cases of supra-vaginal hysterectomy, and in only one was this condition observed. Notice that I do not use the word "follow," for previous

to the operation the patient was undoubtedly religiously insane. Her condition was certainly aggravated for a time, but not to such an extent as to necessitate any control. She is now, I believe, quite well; at least, when I last saw her she was better than before the operation.

I think, therefore, that I am justified in regarding Dr. Keith's experience as altogether exceptional.—I am, etc.,

Granville Place, W. GEO. GRANVILLE BANTOCK.

MEDICO-LEGAL AND MEDICO-ETHICAL.

LEGAL AGREEMENTS AND MIDWIFERY ENGAGEMENTS.

DR. THOMSON.—A written agreement does not appear to be necessary to support an action on a contract to attend a midwifery case if the agreement were to be performed within the period of one year from its date.

MEDICAL WITNESSES.

MEDICUS writes: A patient, suffering from fracture of thigh, brings an action for damages in the County Court. Can his solicitor compel the surgeon to attend and give evidence for the ordinary fee of one guinea?

*** Yes, he is bound to attend on subpœna.

M.D.BRUSSELS.

PHYSICIAN AND SURGEON.—The degree of M.D.Brussels having been obtained since 1886, the words M.D. simply cannot be used in this country. There would be no objection to the user of "M.D.Brussels" on doorplate or card.

FEES PAID TO ASSISTANTS.

M.B. writes: I carry on a general practice. I keep a qualified assistant, who receives a fixed salary, and whose written agreement is to devote the whole of his time to assisting in said practice. He attends upon a pauper lunatic, certifies for removal to asylum by relieving officer of parish of which I am medical officer, and is paid one guinea by relieving officer for said certificate. He claims that he is entitled to retain this fee. I hold that he is bound to pay it over to me.

*** Under a written agreement to devote the whole of his time to assisting in the practice, the assistant (receiving a fixed salary) is bound to pay over to his principal the fee received for the certificate in question.

UNQUALIFIED ASSISTANTS.

MEMBER B.M.A. writes: A clergyman living in London had a child taken ill, and sent for a neighbouring medical practitioner. A message came back to say he was indisposed and would send his assistant. The assistant came and attended a few days until the child died. The certificate of death was signed by the principal, who had never seen the child, not even after death.

*** There would seem to be no suggestion of malpraxis, but if it is quite clear that the assistant was unqualified, a representation of the facts to the College or body of which the medical man in question is a licentiate, or to the General Medical Council, might have a good result.

VERIFICATION OF A DIAGNOSIS.

FROM the correspondence sent us by the medical officer of health, we infer that in the case mentioned in the JOURNAL on July 20th, page 156, under the above heading, the medical practitioner failed to report the case of scarlatina to the local authority in the proper manner—namely, on the form supplied to all the medical practitioners in the district. The medical practitioner was in error in supposing that information of a case of infectious disease given to the relieving officer would necessarily be imparted to the local sanitary authority. With regard to the examination of the patient by the medical officer of health, we are still of opinion that he committed an error of judgment in not obtaining the medical practitioner's consent to such a procedure, although, no doubt, he was actuated by the best of motives in his desire to serve the community, for whose freedom from infectious disease he is in some way responsible. We think that the medical practitioner's letters to the medical officer of health are not couched in those terms of courtesy and consideration which should characterise the professional communications of neighbouring practitioners; and we fail to see that the report of the medical officer of health to his board was unjustifiable, considering the facts of the case as then known to the medical officer.

MEDICO-PARLIAMENTARY.

HOUSE OF LORDS.—Thursday, August 8th.

Lunacy Acts Amendment Bill.—The Commons' amendments on this Bill were considered and agreed to.

Universities (Scotland) Bill.—Their lordships having gone into Committee on this Bill, on Clause 5 Lord CAMPERDOWN moved as an amendment the omission of certain words with the object of preventing professors from being disfranchised in the election of assessors for the general Council of the University courts. The amendment was rejected by 24 to 8. Some unopposed amendments were inserted on the motion of Lord LOTHIAN, who has charge of the measure, and the Bill passed through Committee.

Local Government (Scotland) Bill.—On the report of amendments in this Bill, their lordships agreed to various measures proposed by Lord LOTHIAN, and the report was then received and agreed to.

Friday, August 9th.

Local Government (Scotland) Bill.—This Bill was read a third time, and some verbal amendments having been agreed to, was passed.

Universities (Scotland) Bill.—The report of amendments on this Bill was agreed to.

HOUSE OF COMMONS.—Thursday, August 8th.

Adulterated Lard.—Sir M. HICKS-BEACH, in answer to Sir R. PAGET, said Her Majesty's Government were not prepared to prohibit all adulterations of lard. The ingredients of these compounds were not so deleterious as supposed, consisting in great measure of cotton-seed oil. The Customs were prepared, on obtaining the sanction of the Treasury, to assign a separate heading for lardine in the import accounts of next year.

The Lunacy Laws.—Mr. SALT asked the First Lord of the Treasury whether a Lunacy Law Consolidation Bill, inasmuch as it would probably contain no contentious matter, could be introduced and passed into law in the ensuing session of Parliament before the Lunacy Bill of the present session came into operation.—Mr. W. H. SMITH replied that in that House the previous week an amendment was inserted on report into the Lunacy Amendment Bill, postponing its operation till next May, with the express view of making it possible to pass a Bill consolidating the Lunacy Acts before that date. This consolidation Bill would be laid on the table of the other House before the adjournment of this session.

Sanitation of Movable Dwellings.—Mr. RITCHIE, in answer to Mr. STEPHENS, said he was unable to give an approximate estimate of the number of persons living permanently in movable dwellings. He might mention, however, that the number of persons enumerated as sleeping in caravans and tents and in the open air on April 1st, 1881, the date of the last census, was as follows: males, 4,668; females, 3,901, making a total of 8,569. In answer to a further question by Mr. Stephens, Mr. Ritchie said the Local Government Board, after the passing of the Housing of the Working Classes Act, 1885, brought specially under the attention of the several urban and rural sanitary authorities the provisions of Section 9 of that Act as regards the regulation of tents, vans, sheds, and similar structures used for human habitation. With regard to Subsection 1 of that section the Board had no information as to the extent to which local authorities had availed themselves of their powers under the subsection. With respect to Subsection 2 no by-laws under that subsection had been confirmed by the Board. In three instances only had by-laws been proposed by urban and rural sanitary authorities, and they were now under consideration.

Fever in the Spanish Pavilion, Gibraltar.—Mr. BRODRICK, in reply to Sir W. BARTTELOT, said there had been 3 cases of fever, of which 2 were enteric, in 4 adjoining rooms on the ground floor of the Spanish Pavilion during the last 11 months. The rooms of the lower floor had been closed, and steps had been taken for dealing at once with the sanitary defects of the Spanish Pavilion, if any remained after the overhaul it recently underwent. There had been no case of fever since June.

Monday, August 12th.

Public Health (Cholera Prevention) Bill.—Mr. RITCHIE moved for leave to bring in this Bill, and it was read a first time.

Lunacy Acts Amendment Bill.—The Lords' amendments to the Commons' amendments to this Bill were considered, and, for the most part, agreed to.

NAVAL AND MILITARY MEDICAL SERVICES.

THE RECOMMENDATIONS OF LORD CAMPERDOWN'S COMMITTEE.

SIR,—Many officers of the Medical Staff must have been pleasantly surprised with the recommendations of the Committee, as given in the JOURNAL of August 10th. It was not that the Committee's competence or impartiality was for a moment in doubt, but it was feared that in the face of conflicting evidence, and even powerful opposition, their conclusions might have been less favourable. It is not my purpose to offer any comment on these fair and reasonable recommendations, but rather to remind the officers of the Department whose vital interests were in review, that, but for the persistent efforts of the Parliamentary Bills Committee of the British Medical Association, and especially your able and independent advocacy in its JOURNAL, their just claims would probably never have been sifted at all. To them and to you the warmest thanks of the officers of the Medical Staff are due; and I trust that in no long time they may be permitted to offer you some expression of their deep gratitude.—I am, etc.,

August 13th. MEDICAL STAFF.

AMBULANCE LECTURES.

J. W. B. asks the name of the publisher of Surgeon-Major Shepherd's *Handbook of Ambulance Lectures*, and the title of any other small manual which would assist in getting up a course of ambulance lectures.

*** 1. St. John Ambulance Association. 2. (*a*) *First Aid to the Injured*, by H.R.H. Princess Christian; (*b*) *Ambulance Work*, by R. Lawton Roberts, M.D.

VOLUNTEER MEDICAL SERVICE.

THE following were the candidates at the examination for certificates of proficiency held at York on July 10th, 1889:

Acting-Surgeon A. O. Wiley, 1st West Yorks Volunteers; Acting-Surgeon H. Bramwell, Tynemouth Artillery Volunteers; Acting-Surgeon E. Vaudrey, 1st Volunteer Battalion Derby Regiment; Acting-Surgeon J. F. Porter, 1st Volunteer Battalion Yorkshire Regiment; Acting-Surgeon A. G. Fairweather, 2nd Volunteer Battalion East Yorkshire Regiment; Acting-Surgeon R. Bradshaw-Smith, 1st Volunteer Battalion Leicester Regiment; Acting-Surgeon J. Martin, 2nd Volunteer Battalion West Riding Regiment; Acting-Surgeon C. H. Willey, 1st West Yorkshire Volunteer Engineers.

PROMOTION BY "FELLOWSHIPS."

JUSTITIA has seen with much pain an evident attempt to disparage the distinguished qualification which "Fellowship" of a college conveys. He thinks this has been the work of but a few in the department, probably having

interested motives. He thinks every consideration was given to this matter by the late Director-General when he gave his approval to the suggestions of the War Office, that a Fellowship should carry equal weight with a service examination.

*** We think our correspondent is labouring under some misapprehension; we have not observed any attempt or desire to disparage the Fellowship examinations in themselves. But the primary object of a service examination for promotion to the rank of Brigade-Surgeon is to test the officer's knowledge of service matters, such as military hygiene, organisation, and administration; and surely these subjects are not tested by a purely civil examination in medicine and surgery. Ridicule has been brought to bear, not, as our correspondent imagines, on the admirable civil Fellowship examinations, but on accepting them in lieu of a service examination in cases where officers had already been passed over for presumed deficiency in technical and purely military knowledge.

MEDICAL REORGANISATION IN INDIA.

EFFICIENCY AND ECONOMY, writing from India, seeks to traverse some points by an "Amateur Economist" in the JOURNAL of June 1st. The central idea of the latter, he says, is that the Medical Staff should take over the military, leaving the civil duties to the Indian Medical Service. He himself would abolish dual arrangement, but by handing over the entire local, military, and civil duties to the Indian service; the initial military training of the Indian service is identical with that of the Medical Staff, and should fit them for charge of British troops; while the short and intermittent residences of members of the Medical Staff in India cannot well familiarise them with native customs, language, etc., so as to fit them for charge of native troops. The Indian service thus seems better fitted for all Indian duties. Of course, considerable expenditure would result from increase of the Indian establishment, but it would be met by reductions in the British, while efficiency would be considerably advanced. He denies that charge of a native regiment is unpopular, although it is indeed unprofitable. Many of the civil appointments are very worrying. He thinks the arrangements suggested by "Amateur Economist" for the hospital treatment of British and native troops are excellent, but considers the management should be in the hands of the local service.

THE NAVY.

SURGEON JOHN S. LAMBERT has been appointed to the *Humber*, and Surgeon ALEXANDER G. P. GIPPS to Haslar Hospital, both to date August 9th.

THE MEDICAL STAFF.

THE leave to England on urgent private affairs, granted February 18th last to Surgeon W. KELLY, M.D., who is serving in the Bengal command, is extended to October 16th next.

Brigade-Surgeon J. WILSON, M.B., has been appointed Senior Medical Officer to the Curragh Brigade.

Surgeon-Major B. B. CONNOLLY having been ordered from Dublin to Woolwich, Surgeon-Major J. J. CREAN has taken over his duties in charge of staff and departments.

Surgeon-Major C. W. M. KEYS, M.D., stationed at Woolwich, has leave to September 7th.

MEDICAL NEWS.

MEDICAL VACANCIES.

The following Vacancies are announced:

BOROUGH OF LEEDS.—Medical Officer of Health. Salary, £700 per annum, with disbursements. Applications by August 24th to Sir G. Morrison, Town Clerk, Leeds.

CANCER HOSPITAL, Fulham Road, S.W.—Two Resident House-Surgeons. Appointment for six months. Honorarium at the rate of £50 per annum, with board and residence. Applications by August 31st to the Secretary.

CHELMSFORD AND MALDON RURAL SANITARY AUTHORITY.—Medical Officer of Health. Salary, £600 per annum. Applications by August 17th to Mr. Duffield, 96, High Street, Chelmsford.

CHILDREN'S HOSPITAL, Birmingham.—Resident Medical Officer. Salary, £80 per annum, with board, washing, and attendance. Applications by September 3rd to the Secretary, Children's Hospital, Steelhouse Lane, Birmingham.

CHILDREN'S HOSPITAL, Birmingham.—Assistant Resident Medical Officer. Salary, £40 per annum, with board, washing, and attendance. Applications by September 3rd to the Secretary, Children's Hospital, Steelhouse Lane, Birmingham.

CITY ASYLUM, Birmingham.—Resident Clinical Assistant. Board, lodging, and washing. Application to E. B. Whitcombe, Esq., Medical Superintendent.

GENERAL HOSPITAL, Birmingham.—Resident Surgical Officer. Salary, £130 per annum, with board and lodging, etc. Applications by September 2nd to Dr. Coghill, House-Governor.

KENDAL DISTRICT,—Medical Officer of Health. Salary, £375 per annum. Applications by August 22nd to Alexander Milne.

NORTH STAFFORDSHIRE INFIRMARY.—Physician or Medical Officer. Applications by August 29th to the Secretary.

NOTTINGHAM GENERAL HOSPITAL.—Resident Medical Assistant. Board, lodging, and washing. Applications to the Secretary.

QUEEN'S HOSPITAL, Birmingham.—Physician. Annual bonus, £50. Applications by August 20th to the Secretary.

ROYAL MASONIC INSTITUTION FOR BOYS, Wood Green, London, N.—Medical Officer. Salary, £80 per annum. Application by August 17th to the Secretary.

SALISBURY INFIRMARY.—House-Surgeon. Salary, £100 per annum, with board, lodging, and washing. Applications by August 23rd to the Secretary.

SWANSEA HOSPITAL.—Resident Medical Officer. Salary, £100 per annum, with board and lodging, etc. Applications by September 7th to the Secretary, 9, Castle Street, Swansea.

VICTORIA INFIRMARY OF GLASGOW.—Superintendent and Resident Medical Officer. Salary, £125 per annum, with board and apartments. Applications by August 31st to Mr. F. Bissett, Secretary, 20, Bridge Street, Glasgow.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL, Wolverhampton.—House-Physician. Salary, £100 per annum, with board, lodging, and washing. Applications by September 5th to the Chairman of the Medical Committee.

WALLASEY DISPENSARY.—House-Surgeon. Salary, £110, with furnished apartments, etc. Applications by September 3rd to the Honorary Secretary, Mr. W. Heap, Elm Mount, Penkett Road, Liscard, Cheshire.

MEDICAL APPOINTMENTS.

BUXTON, H., L.R.C.P.Ed., L.R.C.S.Ed., L.F.P.S.Glas., appointed House-Surgeon to the Ripon Cottage Hospital and Dispensary.

EAMES, H. M., L.R.C.P.E., L.R.C.S.E., appointed Clinical Assistant to the Rubery Hill Asylum, near Bromsgrove.

EGAN, Francis, L.K.Q.C.P.I., L.M., L.R.C.S.I., appointed Medical Officer of Health for the parish of Fulham.

HAWKINS, F. H., M.D.Edin., appointed Registrar and Chloroformist to the London Temperance Hospital, *vice* E. Caudwell, L.R.C.P.Lond., M.R.C.S. Eng., resigned.

MANTON, John Albert, M.R.C.S.Eng., L.R.C.P.Lond., appointed Demonstrator of Anatomy to the Sheffield School of Medicine, and also Medical Officer to the South-East District of the Sheffield Union.

MAY-CHICHESTER, G., M.A., M.B.Cantab., appointed House-Physician to the Hospital for Women, Soho Square, W.

MULLEN, John W., L.K.Q.C.P.I., L.R.C.S.I., etc., appointed Medical Superintendent of the Wilton Fever Hospital in the county borough of Salford, *vice* Dr. John Tatham, appointed Medical Officer of Health to the City of Manchester.

PURSLOW, C. E., M.D.Lond., M.R.C.S.Eng., appointed Honorary Medical Officer to the Birmingham Lying-in Charity, *vice* A. F. Hawkins, F.R.C.S.E., resigned.

READ, Harold William Kingcombe, L.R.C.P., L.R.C.S., L.F.P.and S.G., appointed Medical Officer and Public Vaccinator to the Towcester Union and District, *vice* A. G. Evans, deceased.

ROBERTS, John Lloyd, M.B., B.Sc., B.A.Lond., M.R.C.S., L.R.C.P., appointed Resident Medical Officer to the Eastern Counties Asylum for Idiots, Colchester, Essex, *vice* Herbert Evelyn Crook, M.B., B.S.Lond., F.R.C.S.Eng., L.R.C.P., resigned.

ROBERTS, R., appointed Assistant House-Surgeon to the South Hants Infirmary, Southampton, *vice* S. Herbert, resigned.

WHITAKER, S. M., M.R.C.S., L.R.C.P., appointed Assistant House-Surgeon to the Royal Berks Hospital, Reading.

DIARY FOR NEXT WEEK.

MONDAY.

ROYAL COLLEGE OF PHYSICIANS OF LONDON, 4 P.M.—Dr. Norman Moore: The Bradshaw Lecture on the Distribution and Duration of Visceral New Growths.

THURSDAY.

BRITISH DENTAL ASSOCIATION.—Annual General Meeting at Brighton.

FRIDAY.

BRITISH DENTAL ASSOCIATION.—Annual General Meeting at Brighton.

SATURDAY.

BRITISH DENTAL ASSOCIATION.—Annual General Meeting at Brighton.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the announcement. The first post on Thursday mornings is the latest by which advertisements can be received.

BIRTHS.

COCKEY.—On August 11th, at Little Waltham, near Chelmsford, Essex, the wife of E. Percival Cockey, M.D.Lond., of a daughter.

HILL.—At Terowie, South Australia, on June 19th, the wife of A. W. Hill, M.R.C.S., L.R.C.P.Lond., M.D.Brussels, of a daughter (Kate Elizabeth).

MARRIAGE.

ROGERS-TILLSTONE—WILKINSON.—On August 8th, at St. Patrick's, Brighton, by the Rev. O. C. Legge-Wilkinson, B.A., brother of the bride, assisted by the Rev. W. Buckell, M.A., and the Rev. — Wright, M.A., Hermann Rogers-Tillstone, M.B., etc., of 176, Southgate Road, London, N., to Amy Legge-Wilkinson, youngest daughter of the late Thomas Wilkinson, of Stanford House, West Brighton, Esq.

DEATHS.

CLARKE.—On August 12th, at Horsmans Place, Dartford, Fanny Maria, wife of Thomas Furze Clarke, M.R.C.S.Eng., etc. South African papers please copy.

HUTCHINSON.—On July 19th, at Bridlington, Yorkshire, Christopher Francis Hutchinson, M.D., aged 81 years.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the office of the JOURNAL, and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

QUERIES.

REW asks to be directed to a paper by the late Dr. Eason Wilkinson, of Manchester, on the use of Dantzic beer in Bright's disease.

ANSWERS.

TREATMENT OF EXCESSIVE AND FŒTID PERSPIRATION OF FEET.

DR. B. DUKE (Clapham Common) writes: I have found the following treatment thoroughly successful in the above, as recommended by Gaffard in the *Edin. Med. Jour.*, January, 1860: Red oxide of lead, gr. xv; solution of subacetate of lead, ʒj. In most cases it is sufficient to bathe the feet with this every eight days.

NOTES, LETTERS, ETC.

THE MEAD TESTIMONIAL FUND.

THE Honorary Treasurers (Dr. F. M. Beckitt, Ely, and Dr. E. G. Barnes, Eye) acknowledge with thanks the following additional contributions to the above fund:

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BOOKS, ETC., RECEIVED.

The Diseases and Disorders of the Ox, with Some Account of the Diseases of the Sheep. By George Gresswell, with additions on Pathology by Dr. Albert Gresswell. London: W. H. Allen and Co. 1889.

Bemrose's Guide to Paris and the Exhibition. Illustrated. London: Bemrose and Sons. 1889.

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ADDRESS IN PSYCHOLOGY.

BY

SIR JAMES CRICHTON BROWNE,

M.D., LL.D., F.R.S.,

Lord Chancellor's Visitor in Lunacy.

THE HYGIENIC USES OF IMAGINATION.

THE provision made for a general address in Medical Psychology at this Leeds meeting of the British Medical Association, in addition to the address delivered in the Section devoted to the consideration of that subject, is, I take it, a recognition of the truth that the study of insanities or diseases of the mind has a universal medical interest, and that every physician and surgeon must in greater or less degree be a medical psychologist.

On the first day of the present year there were in lunatic asylums—public, private, naval, military, and criminal—in Great Britain and Ireland, and therefore under the care of medical psychologists or specialists, 84,407 insane persons; but at the same date there were in workhouses, boarded out, or dwelling in their own homes, and therefore under the care of general medical practitioners not specialists, 27,266 insane persons; and hence it is clear that a large amount of labour and solicitude in connection with the supervision and treatment of those thus afflicted falls upon the main body of our profession.

But the 84,407 insane persons who were in asylums of one kind or another on January 1st last, and under the care of specialists, had all been consigned to these establishments on the evidence of medical men who were not specialists. The admissions to asylums during the previous year, 1888, had numbered 20,098; and calculating that of these 2,850 were private cases, in which two certificates are required, and 17,248 pauper cases, in which one suffices, we arrive at the conclusion that 22,948 certificates of insanity—certificates, I need scarcely say, involving nice considerations and grave consequences—were granted during the year by medical men who are not specialists. The Lunacy Acts Amendment Bill, which is awaiting the Royal assent, will, when it becomes law, to some extent relieve medical men from the apprehensions which have hitherto attended the signing of lunacy certificates, for merely vexatious legal proceedings, founded on such certificates, will henceforth be no longer possible; but no Act of Parliament can in any way diminish the sense of responsibility attending a step entailing deprivation of freedom, some opprobrium, and far-reaching disabilities; and the certification of the insane must, therefore, always remain an anxious duty to general medical practitioners, and bring home to them the truth that they have an immediate concern in medical psychology. But this immediate concern is, indeed, brought home to them, as a rule, in each case long before the question of certification arises, for insane persons are only removed to asylums or brought under official cognisance when their mental disorder has reached a certain pitch of intensity or assumed a dangerous type; and a large majority of the 20,098 patients admitted into asylums last year must have been for a considerable period prior to that event under the care and treatment of general medical practitioners. These 20,098 lunatics might, indeed, be regarded as a residuum which had proved intractable under such means of treatment as the general practitioner is able to apply, and behind which there must have been a large, but at present incalculable, quantity of insanity of a mild or transitory nature with which general practitioners had successfully dealt. It is incontestably true that many cases of insanity are arrested in an incipient stage, and that many are conducted through their whole course to a favourable issue by the skilful efforts of general practitioners. I am not, from my own associations, likely to underestimate the value of special experience in the treatment of diseases of the mind; but I am bound to acknowledge that I have known many instances in which medical men without such special experience, but guided by the general principles of pathology and medicine, and by sympathetic insight, have treated such diseases with admirable judgment and success. The disinclination of medical men of late years to sign lunacy certificates, while it has had, perhaps, some deplorable results, has had this advantage, that it has led to an extension of the system of treating the mentally afflicted under private care, and has taught our profession that much may be done outside an asylum to alleviate and dissipate mental derangements. About the supreme importance of the early treatment of insanity there can be no question, but that does not necessarily imply removal to an asylum; and where the means of a patient will permit of all necessary precautions being taken, the asylum should be avoided if possible, for it has its drawbacks as well as its conveniences. And even where the pecuniary position of a patient renders the asylum inevitable in the event of a severe or protracted attack, it should not be resorted to hastily or prematurely, not until it is clear that such measures as the general practitioner can employ are unavailing to stem the gathering torrent of mental perturbation; for it is possible that it sometimes converts slight into severe insanity, stereotypes the infirmity, or creates a tendency to its recurrence. But if the treatment of insanity in its earlier stages—when it is in the green tree, and more amenable to control than in the dry—thus devolves on general medical practitioners, and if the management of a considerable proportion of cases of insanity throughout their entire duration is entrusted to them, with or without specialistic assistance, it follows obviously that the study of medical psychology appertains to our profession as a whole, and cannot be altogether relegated to one small branch of it.

And there are still other grounds for holding that medical psychology belongs to our whole profession, for we must remember that all that is commonly included under the name insanity does not exhaust the mental troubles that abound around us. Besides the badly damaged brains that are sent into asylums for safe keeping or repair, there are in this country in every stratum of society large numbers of blemished brains that perform their functions irregularly, have no delight to pass away the time, and are centres of misery and annoyance to their owners and all connected with them. These blemished brains, in which aberrant mental action may stand alone or be bound up with the phenomena of every variety of nervous disease, perpetually remind the general practitioner by their appeals to him for commiseration and help that he cannot ignore medical psychology.

And yet again, and on still wider grounds, I would maintain that medical psychology is inextricably interwoven with the general science of medicine, for there is no bodily disease without its concomitant mental variations, which may have a diagnostic and prognostic value, and react on the morbid conditions in which they originated. In the cerebral centres are represented impressions and movements of all parts of the body, and in their functional activities are reflected the passing fortunes, for weal or woe, of every viscus and tissue, so that the general practitioner has daily to weigh and measure negative mental symptoms or defects of consciousness, that occur in cases of intracranial tumour, or hæmorrhage, or after sudden and excessive discharges of parts of the cortex; positive mental symptoms, or the varieties of delirium that accompany pneumonia, rheumatic fever, erysipelas, and alcoholic and narcotic poisoning, and those emotional disturbances that arise during diseases of the respiratory, circulatory, digestive, and sexual apparatus. He has to note the euphoria or morbid hopefulness which so frequently irradiates the sad progress of phthisis pulmonalis, the dysphoria, or melancholic depression which darkens diseases of the liver, the fits of temper that aggravate the paroxysms of gout, and from his constant observation of these and kindred states, we may not unreasonably hope for some light on insanity in its pronounced forms, for the psychical symptoms of ordinary diseases are, as it were, insanity in the making, and consist in deviations from mental health in their simplest aspects in which they are most readily analysed. Dr. Mercier has shown us how instructive a study of coma may be made, and I do not doubt that in the genesis of delirium clues will yet be found in some mazy problems in mental pathology.

But the general medical practitioner, in the performance of his daily duty, must have regard not only to the psychical symptoms of corporeal disease, but to the psychical conditions and experiences out of which corporeal diseases grow and by which their course may be beneficially or injuriously affected. He has to determine the part played by mental overstrain and worry in the production of degenerative changes in old and young; he has to watch the destructive ravages of violent passion and emotion; and he has to endeavour to abrogate the causes of mental agitation or failure, and impart a healthy tone to the system by instilling confidence and hope. And he is, perhaps, never more a medical psychologist than when he is practising

what is called moral treatment, and is by his manner, demeanour, and well-chosen words driving out fear, calming turbulent feeling, and encouraging self-control. His success or failure as a practitioner will, indeed, often depend as much on his expertness in this moral treatment—that is to say, on his acumen as a medical psychologist—as on his manual dexterity or skill in simples.

It would seem, then, gentlemen, that medical psychology meets the general practitioner at every turn, and that mind in its relations to nervous activities must necessarily engage his attention to some extent. This being so, it is appropriate that the British Medical Association, which represents our profession in all its breadth and in all its requirements, should occasionally, by a general address, such as I have to-day the honour to deliver to you, mark its appreciation of the wide significance which medical psychology possesses. And such an address may perhaps at this time have some small special usefulness in emphasising the psychical element in the conjunction of mind with matter. The brilliant physiological and pathological discoveries which have been made recently in connection with the motor and sensory cerebral centres have perhaps tended, among the less reflective, to encourage a materialistic philosophy, and to give a kind of sanction to the notion that mind is merely brain function. But these discoveries, when closely looked into, have not, it will be found, brought us one hair's breadth nearer the comprehension of the way in which the physical basis of mind is related to mind itself. "Though accumulated observations and experiments," says Herbert Spencer, "have led us by a very indirect series of inferences to the belief that mind and nervous action are the subjective and objective aspects of the same thing, we remain utterly incapable of seeing or even imagining how the two are related." Mind still remains to us an impenetrable mystery, "having neither beginning of days nor end of life;" and to speak of it as if it were an exhalation of brain matter, and of brain as if it were a solidification of mind, is to fall into error. Materialism is simply a logical blunder, springing out of indiscrimination between the objective and subjective. Matter, which signifies what is the object of our knowledge or that which can be known, can never by gradual transitions become subjective and knowing, stripping itself of its essential attributes, and assuming those of its opposite; and materialism is therefore founded on a confusion of ideas. At first, it is assumed, all was matter or object, and in the fulness of time matter came to know itself, and object by fissiparous division gave origin to subject. But object cannot exist without subject, and matter *minus* spirit is nonentity, and therefore materialism and idealism, in the ordinary acceptation of these terms, are equally self-contradictory. Matter which means the cause of our perceptions can never be justly made to mean that which perceives, and what is conceived must not be confounded with what is conscious. To describe consciousness as a function of the brain is to misapprehend the meaning of the word "function," which, as a physiological term, is applicable only to physical changes. The functions of the brain comprise all the nutritive processes that go on in it, and all the irritative conditions of which it is susceptible; but amongst these are not included volitions, cognitions, or feelings. Truly a sensori-motor machine of the most elaborate construction, representing and co-ordinating the different parts of the organism in their most complex combinations, the brain, it has been said, may be a *sine quâ non* of mind as the eye is of sight or the ear of hearing, but it no more thinks than the eye sees or the ear hears. Behind ear, eye, and brain there is self-consciousness or mind, inscrutably changing all that is supplied by the senses into percepts and concepts, and gathering into its own unity the manifold of matter, and as to the ultimate origin of this self-consciousness or mind science, as such, has no suggestion to offer.

But although the real nature of the relation between mind and brain is unthinkable it is convenient to have a working hypothesis on the subject, and hence several metaphysical versions of it have been advanced and more or less widely accepted. To three of these, which may be called the intersectional, the identical, and the parallel theories, I may briefly allude. It has been suggested that the brain is an internal periphery as it were, upon which psychical forces impinge just as physical forces impinge on the external periphery of the sensory nerves and nerves of special sense. It has been suggested again that the activities of the mind and brain are the obverse and reverse aspects of one and the same thing, so that there is nothing to explain. And it has been suggested also that there is a parallelism between mental and cerebral activities which, although entirely different and never interfering with each other, yet invariably occur in correlation. This last theory, the theory of parallelism or of concomitance as it is also called, which supposes that mental states arise during functional states of the brain, from which, however, they are totally dissimilar, is that which has been adopted by Herbert Spencer, Max Müller, Tyndall, Hughlings Jackson, and others of our foremost thinkers, and the first theory—the theory that the mind acts through the nervous system, has been pronounced the least tenable, because by it an immaterial agency is supposed to produce physical effects. For my own part I do not see greater difficulty in this supposition, with its correlative supposition that physical agencies produce effects on the immaterial mind, than in the supposition that, by virtue of some pre-established harmony, mental and cerebral states invariably correspond and yet never communicate, and through incessant changes preserve a parallelism for which they are equally irresponsible. But the kind of provisional theory embraced as to the connection between mind and brain is not of so much consequence if we firmly grasp the truth that mind is still enthroned apart inaccessible except to itself, to be studied by methods different from those employed by science in investigating the laws of matter, that it has been in no sense evolved from matter, and that it is altogether different from the liberations of energy of the highest sensori-motor centres.

Whatever theory we may approve as to the relation between mind and matter, we must take care not to confine that relationship within too narrow a compass. No doubt it is in the highest and dominating centres of the cortex, in which are finally repeated all lower nervous arrangements, so that they become the unifying centres of the organism, that those functional activities upon which psychical states attend are to be sought, but it must be firmly maintained that it is the whole body that is the organ of mind. A brain that is detached from a body is no longer an anatomical substratum of thought, and there are grounds for believing that what may be described as a radiation of consciousness is perpetually taking place. The difficulties in the way of accepting the current theory of sensation has led one of our most philosophical anatomists, Professor Cleland, of Glasgow, to argue that "consciousness extends from its special seat as far as there is continuity of the impressed condition;" or, in other words, that when an irritation is applied to a nerve extremity, as in the finger or elsewhere, the impressed condition of the nerve travels upwards, as is generally understood, but exists for at least a moment along the whole length of the nerve, and that, as soon as there is continuity of the impressed condition from the extremity to the brain, consciousness is in connection with the nerve, and is directly aware of the irritation of the nerve extremity. Functional continuity between nerve extremity and brain is proved to be necessary to sensation; while, on the other hand, the existence of distinct unbroken routes of communication between them is highly improbable; and seeing that functional continuity is of itself sufficient to explain the phenomena, we are not entitled to assume the existence of distinct routes, as has hitherto been done. Professor Cleland does not assert that consciousness resides in the nerve endings, but only that, when the nerves are in an active or impressed condition in their whole extent up to the brain, consciousness is affected directly by the irritations applied to their extremities. The relation, then, of consciousness to the brain remains totally different from its relation to the nerve. The impressed condition of the cerebral corpuscles produces only excitement of mind. The impressed condition of a peripheral nerve or its extremity, continued up to the brain, brings consciousness into communication with the irritation applied.

But whether or not we accept the view that the mind recognises an irritation at the part of its application according to its character, we shall do well very strenuously to oppose a too rigid circumscription of psychical states in the cerebrum itself. In two diagrams of the brain which have been published lately, I have noticed that psychical states and higher psychical states are localised in the frontal lobes, the rest of the brain being mapped out in a mosaic of sensory and motor centres. We all know that electrical stimulation of the præ-frontal lobes in animals is not followed by muscular movements, and that, as Ferrier has shown, their extirpation in monkeys is followed, not by any sensory or motor disturbance—the senses, emotions, and power of voluntary motion remain intact—but by an alteration in character and behaviour, which betokens a loss of the faculty of attention and intelligent observation. But Hughlings Jackson teaches that the whole of the

frontal lobe is chiefly motor in its functions, and Ferrier and Gerald Yeo have demonstrated that some movements, such as the lateral movements of the head and eyes, are represented in the præ-frontal division; and attention and intelligent observation, if localised here, do not by any means exhaust psychical activities. These are not to be pent up in any corner of the brain; and to call the frontal lobes psychical or ideational is misleading. Perhaps even as regards sensory and motor centres in the brain, we have attempted too sharp a demarcation and too much exclusiveness. Some motor centres apparently to some extent overlap each other; some movements seem to have a widely-diffused representation. Gowers has given reasons for thinking that motor centres also possess some sensory functions, and has been confirmed in this position by the observations of Nothnägel, Exner, and Luciani. Then it is probable that we have not by our experiments demonstrated all the functional activities of any part of the cortex. That large area, the præ-frontal lobe, does not in any way respond to electrical stimuli, and affords only vague and problematical indications when submitted to ablation, but that it possesses important functions is indubitable, and we are not entitled to deny that functions kindred to those of the præ-frontal lobe, beyond the reach of anything but vital stimuli, are possessed by regions of the cortex, electrisation of which evokes cruder and more accessible sensory and motor functions. Much and prolonged observation and experiment are still requisite in order that we may attain to anything like a complete knowledge of cerebral architecture, and meanwhile we cannot be too careful in assigning sites to psychical activities. Trousseau mentions the case of an officer whose frontal lobes were pierced transversely by a bullet, and who displayed scarcely a trace of mental deterioration, and I had under my care in the West Riding Asylum a man in whom some portion of the substance of the right frontal lobe, which had been bruised and lacerated, escaped during the dressing of a compound and comminuted fracture of the frontal bone, and in whom no mental symptoms were apparent until the epileptic seizures which followed the accident ultimately induced epileptic dementia. Not less remarkable is the impunity with which, under antiseptic precautions, the brain substance can be manipulated by the surgeon than the trivial nature of the mental effects which have in some cases followed upon destruction by disease or removal by the knife of considerable portions of it. I conversed some time ago with a man whom Mr. Victor Horsley had brought back from the edge of the grave by digging out of his right hemisphere a tumour weighing 3 ounces, and the size of a goose's egg, and I confess I could not dectect in him any distinct signs of mental impairment.

Even should we establish a sharp delineation of singularly endowed centres in the brain, we should not therefore be committed to any strict localisation of psychical function, for it seems certain that ideation and feeling depend on associated combinations of functional activity in sensory and motor centres, whatever else they may involve. Centres and groups of centres are linked in action in intellectual and volitional manifestations, and possibly cells and groups of cells may confederate together for less voluminous mental purposes. There is practically no limit to the number of combinations that may thus be formed, and so the character of a brain depends not less on the total amount of its individual elements and on their range of action than on the freedom and perfection of communication between them. The higher the brain the more numerous are the interconnections of its centres, the higher the centre the more numerous are the interconnections of its units. In brain and centre there are innumerable routes of intercourse, along lines of least resistance well worn by long use and lines of greater resistance more recently opened up.

Now I wish in the time that remains to me to direct your attention more particularly to a mental faculty that has certainly no narrow local habitation in the brain—to imagination, which has been called the noblest attribute of man, and which arises during re-excitations in ever-varying coalitions of permanent cell modifications in sensory and motor centres. I wish to impress upon you that this psychical power has its hygienic uses which neither the medical psychologist nor the general practitioner can afford to neglect. Now, imagination awakens and calls forth from their organic registers the records of movements and sensory impressions. The impressions of sense are strong, the revivals of memory are faint, and the images of imagination may be said to occupy an intermediate position. Sometimes, indeed, in the coarse frenzy of the madman, and even in the fine frenzy of the poet, the molecular thrill of the ideal revival becomes so intense that it overleaps the boundaries of the cerebral cells, and vibrating to the peripheral expansion of the nerve, reinduces exactly the conditions of the original sensation, when hallucinations arise and a counterfeit is mistaken for reality. But in the less violent workings of imagination, the revivifications which it effects are practically confined to cerebral centres, and although more clear and luminous than the reproductions of memory, are surrounded by a nebulous haze that distinguishes them from the communications of sense.

But the essence of imagination lies not only in the superior brightness and clearness of its representations when compared with those of recollection, but in the novelty and supersensuous suggestiveness of the combinations by which they are made up. Its images, in which are brought together in harmonious blending things new and old, are not reached by elaborate composition, but by a flash of intuitive perception; they are not built up, and do not even grow by slow and silent increments, but spring into being fully formed. Its elements in the brain, it might be said, like stellar masses in illimitable space, rush together under laws which we cannot formulate, and new and penetrative light is evolved. Imagination might be spoken of as a pioneer opening up new pathways in the brain, or as a mode of transit between its territories. The brain that is without imagination is like a country without roads or railways, in which locomotion is laborious and slow; and the brain richly gifted with it is like one in which steam and electricity have established easy and rapid communications. Primitive imagination was simple and direct, but the imagination of highly-civilised races is intricate and circuitous. In looking for the anatomical substratum of this complex and ever-widening faculty, which, as I have said, can have no narrow local habitation in the brain, but must traverse its richest expanses, we should seek it not so much in the cells of the third layer of the cortex, which, with their distinct processes and definite connections, cannot readily undergo structural alterations in adult life, as amongst the embryonic, budding, and still imperfectly linked cells of the first and second layers, which are capable of being forced into new kinds of activity, and which are still undergoing evolutional changes. It is probably upon excitation in groups of these cells propagated along lines of least resistance, and overcoming resistance on lines hitherto blocked, that imagination attends. Could Mr. Muybridge, who has taken muscular movements to pieces and photographed them in little bits, by some new triumph of his ingenuity graphically depict to us the lines of movement of some higher imaginative effort, we should, in all likelihood, have a figure excelling the geometrical spider's web in filamentous complication and beknottedness.

But in attempting in imagination to figure the movements of imagination, and to fix on its anatomical substratum we must not beguile ourselves into believing that we are approaching any explanation of it. It contains elements which must ever defy scientific analysis, and be proof against even its own subtle alchemy. Its semblances are not mere transcripts of external creation but come steeped in a "light that never was on sea or shore;" its offspring are not the results of fortuitous combinations, but of unions that prescience has determined. Out of the mass of mental acquisitions it singles those which were predestined for each other, and which when they meet seem as if they had been never parted, and it is this power of preference and foresight, which without groping or preliminary trial enables it to seize on ideas that are congruous and have an innate fitness for each other, and that in synthesis display an energy more than the sum of their respective forces (the conservation of energy notwithstanding) that is one of the chief characteristics of imagination. Piercing through crusts and disguises into the core of things it classifies them by their true qualities, and instantly consummates some great design. The pilgrim of imagination may stand long knocking at the portal, but if he prevails the gates fly open in a twinkling, and the whole glory of the vision is at once declared.

I do not propose to say anything to-day about the operation and influence of the imagination when resting on intuitive beliefs and historical facts, and stirred by the most earnest cravings of our nature, it mounts into faith and reveals to us "the substance of things hoped for, the evidence of things not seen." Distinguished by religiosity from the beasts that perish, man ceaselessly strives to realise the supernatural, expatiates in regions of mystery and gains momentary glimpses of that invisible and eternal world, over which Carlyle tells us, this world of time flutters as a fantastic shadow. And it would be strange

indeed if his excursions into such awe-inspiring altitudes, which far transcend the heights of science, did not leave their stamp on his being. As a matter of fact, faith has an overpowering influence on individuals and nations, an influence that is essential to their health and well-being, for whatever disasters perversions of faith may have entailed, its normal action is wholesome and hygienic. By affording support under sorrow and misfortune, maintaining mental equilibrium in agitating times, and supplying lofty motives to conduct, and so cleansing and controlling life it makes for sanity.

But it would be neither expedient nor possible for me to trace out here the bearings of faith on corporeal and mental welfare, nor must I even pause to bestow the notice they deserve on those excrescences on faith known as "faith-healing" and "Christian science," which have a certain vogue at present and fall legitimately within the scope of medical inquiry. Regarding these, I will just say that a close scrutiny of their literature cannot fail to create a painful impression. It is not to be gainsaid that faith, even in its aborted or degenerated phases, as monstrous or dilapidated superstition, has a potent effect on the human organism, and is capable of relieving and removing certain functional disorders; and credit may therefore be given to "faith-healing" and "Christian science" for some of the cures which they claim. Their professors, like empirics of all sorts, have wrought modern miracles on hypochondriacal men, who have fallen into drivelling egotism; on hysterical girls, who have entertained demons not unawares; and on a few sincere but highly-sensitive persons who can pass at a touch out of one allotropic state of the nervous system into another. But the small good they have done these has been more than counterbalanced by the mischief they have wrought in encouraging imposture, in postponing medical treatment where it is needed, and in inducing in their adherents, now a large class, an attitude of mind that is debilitating and conducive to the incursion of disease. What has struck me most in scanning, as I have done, a number of their published cases is the credulity of those who can be duped by such records. Before faith-healers and Christian scientists can claim a hearing they must learn how to make an accurate clinical report, apprehend what induction really means, and abandon the baseless assertions in which they at present deal. Only impatience comes to the medical man who peruses their proud archives of cures in cases in which disease was evidently simulated, in which it ran its natural course, in which its existence is asserted, no proof being given, or in which it was of a purely subjective character, and might or might not depart at the word of command—such archives being, in one or two instances, accompanied by minute directions as to how post-office orders are to be forwarded. Let the faith-healers and Christian scientists commence with skin diseases—woo the acarus scabiei from its burrow without aid of brimstone, arrest lupus, and wipe out a nævus—and we shall then be ready to follow them with some hope in their campaign against hidden maladies. Is it not a little anomalous that, while palmistry and astrology—which are, at any rate, ancient and picturesque forms of superstition—are strictly suppressed, the Peculiar People should be allowed to carry on their practices without police interference, unless it can be shown that a life has actually been sacrificed to their blindness? Would it not be well that those benevolent busybodies, who, with a boldness commensurate with their ignorance, assail the unimpeachable scientific conclusions of Pasteur, should transfer their attentions to a class of persons who are really performing painful experiments on living animals—to those faith-healers who, by their well-meant but futile inunctions, protract sufferings which in many instances medical aid would speedily relieve?

But my theme now is not faith-healing or faith—which faith-healing travesties—but the secular imagination and its hygienic uses, my aim being to convince you that it is one of the most effectual of those psychical agencies by which we may modify the conditions of health and disease, and deserves, therefore, the attention of the general medical practitioner in his capacity as a medical psychologist.

Now, the scientific use of the imagination in relation to medicine may be properly included in its hygienic uses, for that faculty is the main instrument of discovery in our investigations, both as regards the specific maladies of our patients and the nature and affinities of disease generally, and so aids us in readjusting the conditions of health when these have been deranged in the individual and in suggesting measures for the protection of the public health. As medical men we have not merely to identify and catalogue the symptoms of disease, but we have to trace them to their antecedents and true causes, and this we can only do by invoking imagination's help, to supply us with speculations and hypotheses, which are not less essential to us in our work than the microscope, test tube, and clinical thermometer. All true science rests on imaginings, and is, strictly speaking, a body of established truth which imagination has built up. Sensible phenomena are not rightly discerned until illuminated with ultra-sensible light, and our knowledge remains a heap of sequences and coexistences until imagination steps in, and by combining, adding, subtracting, and arranging, determines how these were brought about, and how they stand related to each other. The way in which medical knowledge is attained is identical with that by which reasonable knowledge is acquired in common life. Observed phenomena have to be explained in both cases by unfolding their causes; and in medical inquiry, as in common life, a provisional guess is hazarded, which is then put to the test by further observation and experiment. Of course such provisional guesses are often wrong, and have to be dismissed, and a vast and curious place must be the limbo of discarded hypotheses. It is a frequent experience that our diagnoses will not fit, and have to be abandoned; but diagnoses thus cast aside have not been without their utility. They have barred the way to more serious errors, stimulated observation, and been stepping-stones to better-founded views, for one diagnosis is no sooner discredited than another and more probable one takes its place. In the hurry of common life there is often not time for the satisfactory testing of provisional guesses. Immediate action is called for, and is taken on suppositions that prove incorrect; and hence the blunders that, according to our cynical novelist, mar our youth, making our manhood a struggle and our old age a regret. And in medical practice, too, there is often not time or opportunity for the accurate testing of provisional guesses, for disease will not wait for our tardy methods; and hence the mistakes which all of us—all but the few infallible ones—have had to lament. But if practice, like life, is short and fleeting, science, like art, is long and patient, and by her the testing of guesses is calmly and deliberately carried on, provisional guesses being either crystallised into enduring truths or dissipated for ever. But all her most adamantine truths were provisional guesses to begin with—provisional guesses furnished by imagination, and proved by the touchstone of experiment, and so brought to more than mathematical certainty. "Without imagination," says Tyndall, "Newton would never have invented fluxions, or Davy have decomposed the earths and alkalies." Faraday's discoveries must be ascribed to the amazing fertility of his imagination. Through imagination Harvey beheld the circulation of the blood. Darwin has transformed biology by an hypothesis. Pasteur's passage from the facts of fermentation to the prevention of hydrophobia has been a brilliant flight of speculations, and Lister's advance from Pasteur's earlier experiments to the triumphs of antiseptic surgery has been a chain of admirably-conceived hypotheses; and in these, and, indeed, in all instances of scientific progress, the noteworthy point is that it is imagination which has not only anticipated the conclusion, but given the insight. Facts can only be seen by those who are looking for them, and, as it were, know them beforehand. It is a radical difference between the lawyer and the man of science that the latter obtains evidence by those leading questions which it is the object of the former to avoid. Where leading questions are not allowed there is apt to be vagueness and inexhaustiveness. We wring her secrets from Nature by shrewdly guessing at them, and he who would circumvent disease must take the wings of imagination and anticipate her advance.

The cultivation of the imagination, then—and it can be cultivated and disciplined to agility and steadiness of action—is of high importance to us as medical men; for it can be serviceable in collecting materials, in solving difficult problems, and, by the analogies it suggests, in guiding us in our life-long search after truth. The precise character which medicine is happily assuming, as its several departments merge into the exact sciences, and which demands of its cultivators a physico-mathematical and chemical training of ever-increasing stringency, does not in any degree abrogate the necessity for the employment of the imagination. On the physical side of medicine that still holds its own and on its psychical side it is indispensable in dealing with phenomena that are beyond the province of physical and chemical research. Medical men and medical students, then, need not fear that they are altogether wasting their time when they turn aside now and then from their

professional tasks to ramble for a little in the green pastures of literature, or climb the pinnacles of art. True, their imagination may be fully trained for its professional duty, as it is exercised, in conjunction with observation and judgment, in the scientific sphere; but it will be braced, invigorated, and have its resources multiplied, by recreating occasionally in its native air. Even if imaginative pursuits did not strengthen the hands of medical men in grappling with disease, or quicken their scientific vision, these would still be commendable, because of the refreshment they bring to jaded brains. To turn from the fatigue and anxieties of practice into realms where rivalry is no more and night bells never ring is to plunge into one of the most soothing and depurative of "tired Nature's" baths. Members of our profession are, I suspect, generally aware of this, and resort to imaginative literature, music, and art more than any other class of professional men, except, of course, artists and men of letters, and to an extent that is remarkable, considering the engrossing claims made on their time and the scant leisure they enjoy.

The contributions of medical men to the departments of imaginative work have been far from insignificant. At least four eminent members of our profession now living might be named who have found leisure, amidst absorbing occupation, so to use the pencil and brush as to gratify not only their private circles but the public, and a list of medical poets would be a long and goodly one, including such names as Akenside (the gifted singer of the pleasures of that imagination whose usefulness I am attempting to extol), Garth, Blackmore, Goldsmith, Smollett, Armstrong, Erasmus Darwin, Crabbe, Moir (better known as Delta), John Brown, whose *Rab and His Friends* is idyllic, and Oliver Wendell Holmes. Nay, even one or two of the greatest names in poetical literature might not improperly be added to such a list. Keats was apprenticed to a surgeon at Edmonton, and afterwards attended St. Thomas's Hospital. It has been argued, I am afraid not very convincingly, that Shakespeare's extensive medical knowledge proves him to have been engaged in the study of medicine during one or two of those years of his life that are unaccounted for, but it is indisputable that Dante was enrolled amongst the *medici è speziali* (leeches and druggists) of Florence, and that he attended their council meetings for several years. But it is not as producers but as consumers of poetry and imaginative literature that medical men derive from them their restorative influence; and as consumers they are, I feel sure, amongst the booksellers' best friends. Sydenham, when asked by Sir Richard Blackmore what course of study he would recommend for a medical student, replied, "Let him read *Don Quixote*, it is a very good book; I read it still." Conolly, the apostle of that non-restraint system, to which we owe everything that is most excellent in the treatment of the insane in this country, and with which I trust professional opinion and public sentiment will permit no tampering—Conolly told me in his latter years that he took ever renewed delight in *Gulliver's Travels*. I know hard-working doctors in town and country who hold habitual converse with some of our great imaginative writers. Two of the most distinguished and busiest physicians of this day are, to my knowledge, inveterate novel readers. I have heard one of our great surgeons deliver an address betraying a deep study of the poetry of Keats; and another of our great surgeons, present at this meeting, told me recently that on his way to and from every serious operation he dips into Shelley.

But it may be objected that the imagination, if sometimes stimulating and restorative in its influence, is often morbid in its tendencies, and that its indulgence is to be guarded against by those who desire to possess well-regulated minds. "No habit can be more opposed to a healthy condition of the mental powers," says Abercrombie, "than that which permits the mind to wander in a mere vision or waking dream from scene to scene, unrestrained by reason, probability, or truth;" and the answer to Abercrombie is supplied by Tyndall, who says that those who have denounced the imagination because they have seen its disastrous effects on weak vessels "might with equal justice point to exploded boilers as an argument against the use of steam." But the weak vessels wrecked by imagination are really fewer than is commonly supposed. Now and again some erratic genius, of highly strung nervous temperament, gives himself up to the pleasures of imagination till he becomes intoxicated with them, and staggers over the boundary of sanity. Now and again an intensely sensitive child, like Jerome Cardan or Hartley Coleridge, so indulges in day dreams that his fancies grow into phantoms that haunt him; but I do not hesitate to say that for one case of insanity caused by excess of imagination, there are a dozen caused by the want of it. Apathetic dulness and torpor of mind are apt to deepen into dementia; and those entirely given up to "the care of this life and the deceitfulness of riches" are more likely to be choked by them than those who can surmount them, and breathe the free and ample air of æsthetical emotion. A vulgar error as to the nature of insanity has perhaps conduced to exaggeration as to the dangers of imagination. Visitors to asylums invariably arrive expecting to find growths of morbid invention and belief, wild, tangled, and luxuriant as a tropical forest, and leave much disappointed by the barrenness of the land, for the insane are the least imaginative of beings. At rare intervals a madman is encountered—a Blake or a Swedenborg—whom two intrepid doctors have certified, who dazzles all around him by the meteoric brilliancy of his conceptions; but, as a rule, the lunatic is as dull as a stone. He is the victim of a fixed idea, or his delusions pursue a treadmill round, or occur in groups so unvarying that, if you have ascertained one of them, you can predict all the rest. His mind is a blank or a blurred and unreadable page, or his fancies, if they come thick in the tumult of mania, are so disjointed or huddled together as to defy recognition. Idiocy is the absolute negation of imagination, and insanity undermines and destroys or enfeebles it more or less; and, when we try to drive out insanity, the first thing we do is to invoke imagination's aid, for moral treatment consists mainly in appeals to this faculty, and fully acknowledges its hygienic uses. The first recorded cure of melancholia was by the harp of David, and to-day in every lunatic hospital worth the name persistent efforts are being made by music, by pictures, by poetry and the drama to stimulate the imagination, and thus "cleanse the stuffed bosom of that perilous stuff that weighs upon the heart."

Imagination seems to have a trophic influence on the brain. When it is absent, tardy growth goes on; when it is more or less in abeyance, weakness exists; when it is active, there is vigorous development; and the immediate effects of imagination in causing exhilaration and preventing sleep when it is excessively indulged almost suggest that the states of the cortex which accompany it have some control over metabolic changes in the body. We now know that, besides alkaloids exercising a poisonous effect, which owe their formation to microbes, and are called ptomaines, there are others which are produced by the cells of the living organism themselves in breaking down albuminous matter, and which are called leucomaines. Now Bouchard has shown that the alkaloids of the latter kind formed during sleep have a stimulating action, so that, when they accumulate to a certain amount, they excite the nerve centres and cause awakening, while those formed during waking hours have a depressing action and tend to induce sleep. And it is just possible that in the formation of leucomaines of different classes, under varying conditions of the supreme nerve centres, a key may be found to the curious fact that certain emotional moods, after having persisted for a time, tend to induce their opposites—excitement, depression; appetite, disgust—and also to the influence of imagination, when very active, in causing exhilaration and wakefulness. It is just possible that under such circumstances it may arrest the formation of those leucomaines, usually manufactured during waking hours, which are depressing and lead up to sleep, or so modify decomposition that other leucomaines of a stimulating character are produced. There can be no question that, in insanity, certain states of the highest nerve centres are accompanied by rapid disintegration of the tissues and emaciation, while in other states of these centres metabolism is reduced to a minimum, so that prolonged starvation may be sustained with comparatively little wasting.

But it is only an inordinate indulgence of the imagination that produces excitement and interferes with natural slumber; its reasonable and regulated use causing only a certain buoyancy of spirits with which a sense of soothing is associated. Imagination, indeed, legitimately used, combines to some extent the pleasurable effects of both morphine and caffeine, without any disagreeable after-consequences, such as headaches, despondency, or confusion of thought. On the one hand, it may heighten happiness, and on the other afford solace in suffering and sorrow. It may give zest to appetite and allay the pangs of hunger, brace to exertion, or lessen the sense of fatigue. It would not be wrong to speak of it, when rightly used, as a true physiological stimulant and analgesic, capable in some degree of taking the place of those crude agents drawn from herbs and trees, with which in all quarters of the globe mankind has sought to mitigate the dulness or assuage

the pains of life. Moreover, its massive pleasures have a distinctly sedative effect in connection with those petty but exasperating animosities and jealousies that are the thorns of social intercourse, and fret and fray fine-textured brains. Lifting us above the turmoils and worries of the moment and opening up wide and distant prospects, they promote altruistic feeling, lull to rest our wounded sensibilities, and allay feverish excitement.

I have referred to the alleged dangers of imagination as a direct morbific influence, and endeavoured to show that these are illusory; and I must say one word as to the alleged evils attending it, which make it a demoralising agent, and therefore a harbinger of disease, for whatever demoralises tends to upset the equilibrium of the nervous system. Like every good gift, imagination may be prostituted and abused; and, in the history of art, literature, and the drama, abundant proof may be found that it has been made to pander to vice and folly. But, when this has been the case, it is not so much the imagination that has been at fault as a certain pestiferous element that has been infused into it. We do not blame the atmosphere for the impurities with which it is loaded in our large cities, and so we must not charge to the imagination the degrading and licentious suggestions of which it has sometimes been made the vehicle. It would be in vain to attempt to shut out from the masses of the people a knowledge of the tragic events and horrid turpitude of life; but everything depends on the way in which it is treated. Passing through the brain of a Walter Scott or a Dickens such knowledge becomes purified and protective, and has nothing but a wholesome effect when sown broadcast, but, passing through the brain of an Aphra Behn or a Zola, it grows infective and deadly, and disseminates a moral plague around. And thus ideas, like microbes, may by cultivation be attenuated and rendered harmless, or raised to a higher malignancy. The records of crime, when reported with prurient detail, and with a halo of romance thrown round them, have sometimes a pernicious effect and tend to reproduce themselves. After the notorious Algerian case of Henri Cambige, which was treated by a section of the French press with almost doting fondness, there was a series of similar tragedies, and Robert Ferron, the Belgian, who shot himself and his sweatheart at Trent Junction in April last, was shown to have been brooding over highly-spiced accounts of the suicide of the Crown Prince of Austria. Men of taste and delicately reared imagination turn from such garbage with disgust, but there are always sickly and partially-depraved natures ready to be powerfully affected by strong impressions of a criminal complexion.

In prisons and reformatories there are, perhaps, a few waifs landed there by impulses engendered of blood-curdling tales or hair-stirring melodrama. Every asylum medical officer has seen in the wards under his care more or less distorted reflections of incidents that have vividly occupied the public mind, and in the epidemics of the middle ages we have depicted on the large scale the effects of dominant and startling ideas on populations made unstable by poverty and despair, or religious fanaticism. But in all such cases it is a deficiency rather than a superabundance, immaturity rather than ripeness, of imagination that is responsible for the evils observed. It is the ignorant and neglected boy, keen perhaps with that superficial sharpness that is really a kind of imbecility, but with a narrow intellectual horizon, that is lured into wickedness by the penny dreadfuls; and the silly and dissipated youths of better social position who go to ruin can rarely trace their downfall to poetry or fiction. It is the already disease-corrupted nature that mimics the extravagances or eccentricities of iniquity, and it is infant humanity, as represented by primitive or semi-savage man, still ignorant of an orderly and law-abiding universe, that is most prone to give way to panic under fictitious terrors. Sheer weakness and vacuity or instability of temperament are the soils most congenial to vicious and atrocious ideas. A highly and widely cultivated imagination seems to increase physiological resistance to morbid and profligate suggestions, and also to pathogenic germs, for in plague and pestilence those are most likely to escape who have varied mental resources, can distract their minds and look beyond the moment, and those are most likely to succumb who give themselves up to abject fear. Of course, a sufficiently large dose of poison, organic or inorganic, will kill off the imaginative and unimaginative without distinction of persons, but when the dose is just of an amount that may or may not be lethal, those will recover who are able to sustain and cheer themselves by hopeful anticipation, while those will sink and die who are given up to selfish terror. The refinement of the imagination then, it would appear, augments the power of resistance, both to zymotic and to mental poisons. The highly cultivated man is unscathed by virulent ideas that have a dangerous fascination for the ignorant and vulgar, and also preserves his equanimity when pestilence is abroad that terrifies and thus makes susceptible the stupid and illiterate.

That an enormous and progressive improvement has taken place in the purity of our literature and of the drama, no one who contrasts them as they are now with what they were at the period of the Revolution can doubt. Occasional lapses still occur, but these are promptly condemned; and no such outrages on public decency as were at one time fashionable would now be for a moment tolerated. The preservation of our juvenile literature from any taint is of paramount consequence, for impressions made on the imagination while brain-development is actually going on are not only indelible, but highly influential. Burns and Scott both asserted that they had their bias given to them by the legends of an old woman; and the battle of the sects over education clearly shows what importance is attached to the momentum imparted to the brain and mind during their developmental epochs. If I recollect aright, it is Thackeray who tells us of an old gentleman of 70, who came down to breakfast one morning looking very pale and ill, and who, when questioned about his condition, said: "Yes, I am far from well. I have had a terribly bad night. I dreamed that I was flogged by Dr. Keats." Thus had a powerful impression of his boyhood reached even unto his old age. Fletcher, of Saltoun, said that, if he might write the ballads of a nation, he cared not who made its laws; and vast power for good or evil centres to-day in those who are preparing our school books.

The profitable and hygienic uses of imagination are daily more and more widely realised, for in every country in Europe there is an increasing demand for what may be called imaginative aliments and stimulants. Picture galleries and exhibitions are thronged by ever-swelling crowds; concerts and musical performances enjoy an increasing popularity, and imaginative literature advances by leaps and bounds. The spread of education has opened up this latter source of imaginative recreation to the masses, and they are not slow to take advantage of it; but education has also opened up to them other departments of literature, and the fact that they do not avail themselves of these to anything like the same extent shows, I think, how keen the appetite for imaginative literature has become. In the free libraries of Birmingham during last year, 1888, there were issued to readers, 347,334 works of pure fiction, and 20,634 works of poetry and the drama, to say nothing of magazines in which fiction and poetry bulk most largely; while in the same year there were issued just 18,214 works on theology and philosophy, and 86,942 on arts, sciences, and natural history. In sober-minded Scotland the thirst for imaginative literature has become generally prevalent. When the most important circulating library there was established fifty years ago, it was stated in the prospectus that novels were, with rare exceptions, to be excluded; and now novels constitute 63 per cent. of the whole issue of that library.

That the craving for works of fiction is not only great but growing may be deduced from the figures given from time to time in that useful periodical, the *Publishers' Circular*, showing the number of books of different descriptions published annually, and of new editions issued. Now a table which I have had constructed shows that, whereas in the six years from 1877 to 1882 there were 2,632 new novels published, in the six years from 1883 to 1888 there were 3,655; the increase, subject to some fluctuations, having been markedly progressive, from 446 new novels in 1877 to 926 in 1888. As the number of works of any class published is a fair indication of the demand for books of that class, it is clear that the consuption of light literature is largely upon the increase. Of course, in other departments of literature there has also been a large increase in the number of works published, but in none has the increase been equal to that in novels, while in some departments there has been a falling off. Of works on theology, of which 3,839 were published between 1877 and 1882, only 3,508 were published between 1883 and 1888; and of works on medicine, of which 930 were published in the former period, only 912 appeared in the latter. It is impossible to get at facts as to the size of editions and sales of works of different classes, but it may be safely asserted that, as regards both of these, novels, as a rule, far outstrip any other kinds of books. The monthly sales of some of the early numbers of the *Old Curiosity Shop* reached 70,000, and the figures representing the sales of *Pickwick* from

first to last would be startling could they be accurately set down.

The vast extension of the habit of novel reading amongst us is also demonstrated by an observation of journalistic literature. Newspapers that at one time confined themselves to news, political commentaries, and criticism, now form syndicates to supply their readers with a modicum of fiction, and journals entirely devoted to fiction have an enormous circulation. One such journal, a penny one, and by no means one of the best known, had to my knowledge a few years ago a circulation of a quarter of a million a week, and no doubt therefore reached millions of readers, for such journals pass from hand to hand; and journals which combine fiction with fashion, which is imagination applied to personal decoration, are sold, I am informed by a high authority, in hundreds of thousands in this country weekly, and are exported in tens of thousands weekly to our colonies, being purchased both here and at the Antipodes chiefly by servant maids and shop girls. And that the demand for cheap fiction will go on growing can scarcely be doubted, for the monotony of life which the division of labour has so greatly aggravated, the aspirations which even a humble education serves to implant, and the increased mental friction which arises from the aggregation of masses of our people in large towns, all tend to whet the appetite for an imaginative diet. To us as medical men it is interesting to remark that this appetite is most urgent in spring, when nervous erethism exists, and "a young man's fancy lightly turns to thoughts of love," and is least pressing in autumn, when the nervous system is comparatively quiescent. In the Birmingham lending libraries the issue of novels reaches its maximum in March—32,796 were issued in that month last year—and touches its minimum in August—27,140 were issued in that month in 1888—a difference of 5,656 in favour of March.

And now, gentlemen, having trespassed as far as I dare on your patience, I must close without having even mentioned several topics in connection with the hygienic use of the imagination which I had proposed to bring under your notice in some detail. As I voyaged forth on this address I trusted to be able to submit to you some observations on sex and age in relation to imagination, on types of imagination in individuals and races, on the conditions of imaginative production, on the operation of imagination, causative and corrective, in certain special nervous and mental diseases, and on the education of imagination; and now I find myself stranded on the sands of the hour-glass, when I have scarcely got beyond my introduction. Let me console myself by thinking that I shall on some future occasion—not, of course, in my present gratifying position, for that comes but once in a lifetime, but in some other place—disburthen myself of what I have to say on these matters. And let me console myself above all by believing that you will leniently judge my introduction to have been not altogether unworthy of your attention. Matthew Arnold said that two-thirds of life are conduct, and it may be truly alleged that three-fourths of thought are imagination. It is not merely the child who builds castles in the air. Each of us—the most matter of fact as well as the most romantic—has "cloud-capped palaces and gorgeous towers" known to himself alone, to which in hours of solitude and reverie or sadness and chagrin he retires with ever-renewed wonder and refreshment. And the great faculty that out of thin air constructs these cities of refuge for us, and enables us in a sense to shape our own environment, that is the handmaid of science, the giver of insight, the harmoniser of discords, must always receive primary consideration in a study of mental hygiene.

BRADFORD.—*Heavy Mortality from Phthisis; Cases of Lead-poisoning.* The death-rate for the quarter ended March 31st, 1889, was 19 per 1,000 per annum, an increase on that of the quarter immediately preceding, and of the corresponding quarter of last year. The increase was of a general character, and does not call for special comment. From infectious diseases 101 deaths were recorded, made up as follows: small-pox, 1; measles, 14; scarlet fever, 17; diphtheria, 2; whooping-cough, 43; enteric fever, 2; diarrhœa, 20; and two of doubtful character. Phthisis caused 102 deaths, or one more than all the zymotic diseases put together. The question of lead-poisoning by water from the public supply attracted a good deal of attention during the early part of the quarter, and a few cases occurred in the borough, though none terminated fatally.

AN ADDRESS

DELIVERED AT THE OPENING OF

THE SECTION OF SURGERY.

At the Annual Meeting of the British Medical Association, held in Leeds, August, 1889.

BY T. R. JESSOP, F.R.C.S.,
Senior Surgeon to the Leeds General Infirmary.

ON THE TREATMENT OF CANCER OF THE RECTUM.

GENTLEMEN,—You are probably aware that the Council of our Association have issued a request calling upon the chairmen of the various Sections to refrain from inflicting upon their audiences anything in the shape of a presidential address. In the judgment of the Council the Sections will best fulfil their purpose if the time allotted to them—admittedly too short for the adequate discussion of more than a small proportion of the various subjects of interest offered for consideration—is devoted without deduction to the reading and criticising of the papers forming the agenda, which have been prepared by their authors at the cost of so much time and labour.

In this decision, as it affects us in the Surgical Section, I fully concur, knowing well how much more profitably your time will be spent in the thoughtful consideration of the important surgical questions to be raised, than in listening to mere generalities such as constitute the orthodox introductory discourse. With this request before us, my official colleagues were good enough to suggest that I should undertake to open a discussion upon some subject of my own choosing; and on looking at the length of the list of eminent surgeons who have promised to follow me, it is gratifying to me to find that I have succeeded in exciting so wide an interest by selecting as the initial subject of our deliberations the treatment of cancer of the rectum.

You will have observed that, in the exercise of that discretion which is granted to the officers of every Section, we have this year—extending an experiment which has in former years been tried on a smaller scale with, as I think, encouraging success—determined to commence each day's meeting with a discussion upon a set subject, for the more interesting and instructive treatment of which we have invited contributions from selected authorities. It is hardly necessary to say that, when each list of names has been exhausted, it will be our pleasure to listen to any remarks from other gentlemen desirous of speaking upon the questions under consideration; and I hope in this way the number of speakers will be largely augmented. Our aim is not only successfully to compete with those lighter attractions provided outside the sectional work, but is directed to the more worthy object of collating and of placing upon record the deliberate observations of men whose opinions are entitled to the respectful consideration of the profession. At the close of each discussion, such other papers as are on the list will be taken *seriatim*, so long as time shall permit.

I would here crave one moment for a pleasurable and obvious duty, that, namely, of expressing my sense of the high honour conferred upon me in being asked to lead and to regulate the discussions in this Section. The honour I feel is greatly enhanced by the fact that my predecessors have been chosen from amongst the most eminent surgeons of the day, and my responsibility is made heavier by the recollection that, when the Association last met in Leeds—exactly twenty years ago—the chair I now occupy was filled by one of the ablest and most cultured of the surgeons whose names are to be found upon the Leeds Infirmary roll—the late William Hey—at whose feet in 1869 I was proud to sit in the not less useful or less honourable capacity of Secretary to the Section. Fortunately for me, your Council have surrounded me with able colleagues, to whom I shall not look in vain for help, all of whom but one—himself a welcome accession to us, prominent even among London surgeons—have been closely associated with me in the past, and will, I trust, for years to come share with me that personal friendship which proverbially belongs to the surgeons of the General Infirmary at Leeds.

Without further encroachment upon your time, I will pass on to the consideration of the subject we are here to discuss, namely, the treatment of cancer of the rectum. And here let me say that my object shall be, whilst stating my own views when amply matured, to invite the opinions of subsequent speakers upon some of the debatable or imperfectly settled questions which present themselves to the surgeon during the course of cancer as it is met with in the upper, the middle, or the anal portions of the rectum, and again as it involves a portion only or the entire circumference of the bowel.

When making selection of this subject I had in my mind nothing more than the surgical, or, as it may perhaps more appropriately be termed, the operative treatment of the disease; but I may perhaps be permitted to make a very brief allusion to the help we may hope to obtain from medicines alone. Curative drugs are no more and no less applicable to cancer in this situation than to the same disease in other parts; upon them I would that we could profitably linger. My attitude towards the question of a cure for cancer is one of hope and even of faith in the future, but of absolute distrust in the past. That the discovery of an agent capable of selecting and of destroying the cancer microbe—if cancer microbe there be—may reward the lifelong labour of some future Pasteur is reasonably conceivable; that such an agent has been found in Chian turpentine or in any other known germicide rests upon the slenderest foundation; and after repeated, patient, hope-inspired (for who could turn a deaf ear to such statements as were put forth by a justly-respected member of our own profession?), and exhaustive trial, this drug, like all its predecessors, has been relegated to its proper place upon the back shelves of the chemist's shop, to be unearthed at some future time and curiously viewed as embodying, it may be, an honest attempt to accomplish an end which shall then happily have been successfully attained.

After lamenting his powerlessness to grapple with cancer, William Hey the first prayed that the time might come when the means of cure should be vouchsafed to man; and now, nearly a century later, Hey's prayer may still form part of the surgeon's missal; for although every district has for ages possessed aud still supports its cancer curer, it is none the less true that cancer never yet was cured. Much, however, may be done medicinally to alleviate the great suffering and distress attendant more especially upon the later stages of the disease. The washing out two or three times a day with simple warm water, and the introduction into the emptied bowel of a suppository containing cocaine, belladonna, morphine, and iodoform have been attended in my hands with the most comforting results. Laxatives, again, seem called for chiefly in those cases in which the upper portions of the organ are involved, whilst the anal portion is free; and on the other hand, astringent measures and such as tend to solidify the evacuations I have found more suited to the cases in which, the anus being implicated, the sphincters have ceased to act, and the fæces, liquefied by admixture with sanious mucus, are more or less constantly dribbling, to the patient's unspeakable distress.

Upon these points—the value of and the best method of securing cleanliness of the parts, the use of antiseptics and of anodynes, the means whereby we may procure for our patient the nearest approach to a single daily evacuation—I shall hope to elicit valuable information.

We pass on then to the operative treatment of cancer in the rectum, and I propose briefly to consider it under two leading heads: operations, namely, for the ablation of the disease—proctectomy, as they are termed; and secondly, operations for diverting the fæces from their passage through the rectum, and thus far dispensing with the rectum as an active organ, and placing it as it were outside the alimentary canal, no longer required to perform its ordinary functions, and no longer subjected to the irritating presence of effete material. The former operations must almost of necessity be confined to the lower reaches of the bowel, whilst the latter have very generally been employed for relief from the disease wherever situated.

I pass by partial removal, whether by scraping or by scissors and knife, as being but rarely advisable, and barely scientific; and I will do no more than mention proctotomy as a possible occasional resource for the relief of partial obstruction when other measures are deemed inapplicable.

First, then, with regard to proctectomy—an operation which, though sporadically performed in this country for many years, has only of late been forced into prominence by the persistence and the success of our German colleagues—I will make this observation at the outset that, based upon the local origin of cancer, it aims at the complete eradication of the disease, and therefore, if successful as an operation, not attended by an undue mortality on the one hand, or followed by detracting disadvantages on the other, it must take its stand as an established surgical procedure. I am not at all sure, indeed, that it may not be so considered already. The reports published from time to time—some of them by gentlemen to whom we shall hope to have the privilege of listening to-day—encourage us in the belief that, with the perfecting of procedure, it only remains to determine in what cases proctectomy is or is not to be recommended. The mode of operation, its every detail, I take it, is an all-important matter here; and I shall hope to have much light thrown upon various points of difficulty and doubt; such as what is the best method of obtaining free access to the parts to be removed; of avoiding and of arresting hæmorrhage during or after the operation; of dealing with accidentally opened cavities and wounded organs, the peritoneum, the bladder, the prostate, the urethra, the vagina; of adjusting the portions of rectum unremoved; of draining; of securing an aseptic condition; and of promoting the favourable healing of the wound; of retaining an active and efficient sphincter; and, finally, of preventing cicatricial contraction at the outlet. Then, again, what are the conditions favourable for this undertaking? When is it to be recommended, and under what circumstances is the patient to be denied the relief it offers? As yet my experience is small, hardly perhaps worth relating, my cases numbering no more than seven. Of these, one died as the immediate consequence of the operation. The patient was a poor curate, dejected by misfortune and poverty. The disease was extensive, occupying four fifths of the circumference of the gut just within the anus, and reaching so high that the finger could not touch healthy mucous membrane beyond. Although nothing occurred during the operation to intensify shock, he never fairly rallied, but lingering on a few days with the aid of stimulants, he died without actually emerging from the primary collapse. The remaining six obtained a varying amount of relief. In the three most favourable the disease was situated in the posterior or lateral walls of the rectum above the sphincter, and well within reach of the finger; and these, at the time of writing, are all alive: one apparently well at the end of twenty-one months, and showing no signs of return or of much inconvenience; the second with an equally favourable record at the end of seventeen months; whilst the third, operated on nine months ago, has not been able to leave his room owing to a speedy return of the disease, which has now invaded the pelvic tissues to such an extent as to threaten an early fatal termination. A fifth case, equally favourable with the former three, was that of a lady, upon the anterior surface of whose rectum was a deep hard-based carcinomatous ulcer, of the size of a florin. The vaginal mucous membrane could be moved upon the growth, so that I was able to dissect away the infiltrated structures and leave the vaginal canal intact, An untoward circumstance marred and interrupted the course of recovery I naturally looked for. The wound was dressed with undiluted salufer, and to the escharotic action of this powerful and useful antiseptic I attribute the subsequent perforation of the recto-vaginal wall, by the occurrence of which this patient's convalescence and ultimate good recovery was delayed. The present condition of this lady—thirteen months after the operation—is fairly satisfactory; for, whilst there is no return of the disease, the small vaginal opening, now completely cicatrised, in no way interferes with the action of the sphincter, and permits only of an escape of fæces when from any cause the motion is not solid.

The two remaining operations were undertaken for the removal of disease situated at a higher level. In each there was a hard nodular ring completely encircling the bowel, through which the finger-tip could be made to pass, whilst the anal portion of the rectum to the extent of from two to three inches was unaffected. In both, without much difficulty, the whole of the new growth was removed. The first was an elderly male with a capacious pelvis, whose tissues were spare and relaxed. After removal of the ring I succeeded in approximating and suturing the divided edges of the mucous membrane. In the second, a stout middle-aged woman, Douglas's peritoneal pouch was extensively wounded, and through the opening the uterus and the small intestines were readily felt. Here I determined not to attempt any suturing, but to trust to unaided adaptation, free drainage being secured by the introduction of a large celluloid tube. Both cases recovered so as to leave for home, and both remained well when last heard of, five months in the one case and twenty-six weeks in the other having elapsed since the operation.

Of the seven cases, one, I have already said, died within a few days; in another the disease rapidly returned; and in a third, except that a small recto-vaginal opening permits of the occasional involuntary passage of flatus and fæces, a cure, at least of temporary duration, has been brought about; whilst in the remaining four excellent immediate results have been obtained, and the conditions in each as regards defæcation and local suffering are almost all that can be desired, and are incomparably better than the most exceptional colotomy can effect. In addition to these advantages is the hope of a more or less prolonged immunity from the disease. Results even such as these encourage us to hope that, with increased experience and a more accurate appreciation of the causes of danger and of failure, we shall find in proctectomy a valuable means of prolonging life and of mitigating suffering applicable to a considerable number of cases for which other measures offer at the best but imperfect palliation. We shall look to this discussion for the fruits of collective experience, and especially for guidance in the methods of procedure and in the perfecting of the details of the operation. I have not myself attempted hitherto the extirpation of cancer when beyond the reach of the finger as felt in an ordinary examination, and I shall, therefore, feel much interested in the experience of those who have removed neoplasms from the higher portions of the rectum. Neither have I in the male advised removal where the disease has been seated on the anterior wall of the rectum, as I have had reason to believe the operation might involve injury to the urethra, prostate, or bladder. The opening of the peritoneum in proctectomy, though by no means free from risk, is not, as we have seen, of necessity followed by serious consequences. On the other hand, a communication with the urethra or bladder could hardly fail to result in such inconveniences as would more than neutralise any benefit derived from the extirpation of the disease.

Before leaving this part of my subject, let me briefly allude to one or two points of interest and importance in the operation itself. With the patient placed in the lithotomy position, access to the disease may be obtained in one of two ways—either by widely expanding the sphincter by means of a modified Weiss's three-branched dilator, or by cutting from the rectum deeply down to the coccyx. The former plan may suffice in thin, wasted subjects, whilst in stout persons a full view of the interior of the rectum can only be brought about by a deep and extensive incision. With the ulcer or growth exposed to sight, an outline incision with the knife may be made to encircle it well outside its margin, and the removal may be completed with scissors, care being taken to include in the parts removed a considerable margin of healthy tissue. The arrest of hæmorrhage is not usually attended with difficulty; but few vessels call for ligature, and venous bleeding is best put a stop to by the temporary insertion of a well-squeezed sponge. In some I have found it practicable to adjust the cut edges of the mucous membrane, but I have not observed that the care bestowed upon this point has been attended with compensatory advantages. In the greater number the wound has been left unclosed, care being taken to keep it cleansed by the free use of iodoform or other antiseptic, and patent by means of celluloid drainage tubes, so as to avoid accumulated secretions or concealed hæmorrhage. Much of the success of the operation, I am convinced, depends upon the thorough cleansing of the wound not only at the time of operation, but during many subsequent days. I have usually had the rectum washed out with some antiseptic solution every eight hours, and have followed this each time by the insertion of an iodoform suppository. By attention to details such as these, dangers are averted and the healing process is much accelerated; and thus the operation may be expected to take rank with those for the removal of cancer in other situations. And yet it will be generally conceded, I think, that in the existing state of our knowledge and experience, proctectomy is an operation of limited application, unsuited to more than a minority of the cases presented to us. When the disease is well within reach of the fingers, and confined to the posterior or lateral portions of the rectum, or if, situated anteriorly, it has not invaded the tissues outside the muscular wall of the bowel, and when also the external sphincter can be preserved in functional activity, I have no hesitation in recommending its adoption; but in those cases in which the disease has originated beyond the reach of the finger, or, having commenced lower down, has crept up to a higher level, we must still, I think, trust to those other less radical measures which till recently constituted our only resource.

In none of my cases have I seen fit to precede the removal of the disease by an opening in the colon, and yet I cannot but think a complete diversion of the fæces as a preliminary measure would prove an advantage in proctectomy. The passage of fæces over the wound, besides complicating and delaying the healing, materially adds to the dangers and miseries of the patient. It is a question for the future to determine how far by combining the two operations of colotomy and proctectomy we may succeed in still further prolonging the duration of life.

We proceed now to the consideration of the second of the operative measures, namely, colotomy, and as bearing upon this part of my subject it will be interesting and instructive to note a few points in what may be termed the natural history of cancer in the rectum. Before considering how we can best postpone death—for, apart from possible eradication of the disease by proctectomy, we can hope for no more than a prolongation of life—let us inquire in what way death usually comes in these cases. Of 102 patients, seen during a period of ten years in consultation with their medical attendants or at my own rooms, for whose histories I am much indebted to my medical friends, I find that seventeen died of complete obstruction, unrelieved by any operative interference, whilst fifteen others, similarly obstructed, underwent the operation of left lumbar colotomy. From this it would appear that about 31.4 per cent of all cases of cancer of the rectum would die of obstruction if left to Nature. Of the remainder, seventy in number, three died from hæmorrhage, five are said to have died of acute septicæmia, two from implication of other organs—the peritoneum and abdominal lymphatics in one, the vagina, uterus, and bladder in the other. In nine the operation of left lumbar colotomy was performed, in the absence of complete obstruction, for the relief of local distress; whilst, in the remaining fifty-one, exactly one half of the whole number, death is attributed to "exhaustion;" and in several of these such complications are mentioned as "œdema of legs," "ascites," "urinary difficulties," implying doubtless extension of the disease to neighbouring organs and tissues.

At first it seems a little surprising to find that less than one in three, if unrelieved by operation of any kind, will die of obstruction. It must be borne in mind, however, that it is complete obstruction which is here referred to. More or less interference with the passage of the intestinal contents is met with in a much larger proportion of cases, in nearly every case indeed at some period of the disease; but it is an incomplete stoppage which may be got over by ordinary measures, such as injections, the introduction of the finger, or of bougies, the use of laxatives, and the like, and which, though painful and exhausting, is not by any means the sole factor in causing death. It is a pregnant fact, and one worth dwelling upon, that in not one of the thirty-two obstructed cases above referred to, in which colotomy was imperatively called for, was the disease situated within easy reach of the finger; and in the majority it was quite beyond the touch, its position being diagnosed by other agencies, or inferred from the past and present history of the patient. I have for some time held, and have often given expression to the opinion, that in cancer of the lower half of the rectum we have not much fear of the occurrence of complete stoppage. I may now add with equal confidence that where the upper portions of the rectum are involved complete blockage is almost certain sooner or later to appear. This latter assertion would seem warranted by the results of the thirty-two cases I have quoted; and of the truth of the former I have several times met with most striking confirmation. Let me mention two cases. In August, 1883, Mr. Griesbach, of Garforth, sent me an elderly man, who had been suffering since the previous January, and of whom, after examination, I wrote to his doctor;—"An immediate colotomy is desirable to avoid complete obstruction, which seems imminent. The hard ring of growth has almost obliterated the lumen of the rectum." He declined operation, and yet his death did not take place till January, 1885, seventeen months after I saw him, and at no time was he threatened with anything like complete obstruction of the passage. In February, 1884, I saw, with Dr. Hall, of Leeds, a patient whose rectum, at a distance of three inches from the anus, was encircled by a thick nodular ring of carcinoma, through which it would have required force to pass one's little finger. Colotomy was pressed upon him as needed to avert an early death from obstruction. He declined; and yet he lived on till February, 1887, a period of three years, without realising the agonies I had predicted. The reasons for this difference in the effect of cancer as a cause of occlusion are doubtless to be found in the anatomical relations of the upper and lower portions; for whereas the rectum as it approaches the outlet becomes more closely applied to the sacrum and pelvic wall, in its superior por-

tion it is comparatively free, and thus the contractile action of the colon above is exerted with effect in forcing the contents through a contracted ring when that ring is fixed and immovable; whereas when the narrowed portion is free, movable, and not attached as it is when seated in the upper portions of the rectum, the efforts of the bowel above succeed only in invaginating or otherwise displacing the growth, often so as to enable us to make a complete diagnosis by bringing the disease within reach of the finger, and fail altogether in effecting any onward movements of the contents.

If, then, we are satisfied that we have to deal with a case of cancer situated in the upper movable part of the rectum, knowing that complete obstruction may of a certainty be looked for, we shall probably all agree that it is desirable to make an artificial anus in the colon above as soon at least as the first symptoms of impending blockage appear, and in time to anticipate those further changes upon which the mortality of colotomy so much depends. And I will here state my opinion that in these circumstances the ordinary left lumbar colotomy is to be preferred, not only because of the facility with which the distended bowel is reached, but chiefly because the opening is made at a sufficient distance from the disease to ensure its being found in a healthy state, free alike from cancerous infiltration and from those ulcerative changes which are apt to occur on the distal side of a strictured canal. That an early operation is called for is abundantly shown by a reference to the mortality in the cases just mentioned. Of the fifteen operated on for complete obstruction, five died within the first week, two within three months, and the remaining eight lived an average of rather more than twelve months, including one who survived the operation twenty-two months. On the other hand, of the nine operated on when no symptoms of obstruction were present, the earliest death did not take place for upwards of two months, and the average of life throughout was a little over eleven months. And, again, reviewing a larger series, I find that out of fifty-four cases of colotomy taken from both my hospital and private notebook, performed for the relief of distress only, and not for obstruction, three only died during the first month, and in each of these there were some special circumstances, such as advanced age or great emaciation, to account for the early death. It is not in cases of complete obstruction or of threatened obstruction that any difficulty arises in the course to be pursued. When death is imminent and other means have failed to bring about relief, an opening somewhere and of some kind in the bowel for the exit of the pent-up excreta is obviously called for; and, as we have seen, the earlier that opening is made the more certainly will a lasting relief be obtained. And, following out the result of my observations, I would say that, given a diagnosis of cancer high up in the rectum—in the earlier stages, it is true, by no means always an easy matter—the duty of the surgeon would seem clear, namely, to recommend without delay the formation of an artificial anus.

There remain, however, still to be considered those cases of disease affecting the middle and lower portions of the rectum, to which excision is deemed inapplicable, and in which obstruction to any serious extent is not likely to happen. How are these to be dealt with? The propriety of recommending colotomy here must turn upon the answers to two questions—is the life of the patient prolonged by its adoption? are his remaining days made more tolerable? In order to answer these questions I have made inquiry into the life history of eighty-six patients, of whom fifty-two ran their course without operation, and thirty-four submitted at some stage or other of the disease to left lumbar colotomy. In this inquiry I have taken care to exclude all doubtful cases, and I have limited it to such in my private practice as have within recent years come under my own personal observation, in order, as far as is possible in such an inquiry, to exclude elements of uncertainty. The average duration of life in those who were not operated on, reckoned from the date of the earliest symptoms complained of, was a little over seventeen months; whilst that of the thirty-four who underwent colotomy was twenty-two and a half months. This gives an average extension of life in each case operated on of five and a half months. Again, the average duration of life in the thirty-four after the time of operation was fifty-three weeks, whilst in thirty-seven out of the fifty-two cases in which I have put on record in my notes the fact that I have recommended colotomy, and in which my advice was not taken, I find the average of life, reckoned from the time of my seeing them, reached to a little over thirty-four weeks, thus giving an additional nineteen weeks of life to those who submitted to colotomy. It is not unfair, perhaps, to assume that the patients who consented to operation were suffering more severely, as a rule, than those who for some reason declined; and, if so, the duration of life in them had they refused colotomy would probably have shown a shorter average than in those who, suffering less severely, declined the surgeon's aid. Be that as it may, there is ample evidence in the foregoing facts to show that in recommending the formation of an artificial anus in the cases under consideration we are justified by the knowledge that by its means a substantial addition to our patients' lives may be procured.

It is, perhaps, worth remarking that the proportion of patients who have declined operation has increased during the last few years. I believe the cause of this is to be found in the fact that for some indefinable reason my faith in the value of colotomy had gradually waned; and we all know how much patients are influenced by the mental attitude of their advisers. On commencing this review of my own work and experience, I am free to confess it would have given me no surprise had the results turned out upon the whole unfavourable to colotomy. The actual results have had the effect of re-establishing, nay, of materially raising, in my mind the value of colotomy as a means of prolonging life in all sufferers from cancer in the rectum.

In the next place we have to consider how far the patient's physical condition is improved, to what extent his sufferings are alleviated by the operation. Bear in mind I am dealing only with cases in which there is no material obstruction to the passage of fæces, and which, on the other hand, are characterised by the distress and worry of frequent ineffectual evacuations, and by unceasing pain and discomfort, due in great measure to the presence of excreta in the rectum, and of more or less loss of control over its expulsion. The amount of relief to be obtained is to be measured by the extent to which suffering depends upon the presence of fæces and of their passage over the diseased surface. Complete relief is never obtained. A variable amount of pain and distress is inseparable from the condition itself. To this fact must be attributed the not infrequent expressions of disappointment which escape the lips of our colotomised patients. We have not here the comforting assurance of a respite from the inroads of the cancer which comes of excision, or the obvious escape from actually impending death from complete obstruction. The mental relief obtained in the one case, the rescue from death, and the palpable physical improvement in the other, are absent here. However real the actual relief, it is never complete; and there is still the prescience of a lingering death. These militate, except in the most sanguine, against realisation of benefit received. The colotomised patient has not experienced the miseries of him who has declined operation. His own sufferings are not small; to speak to him of an escape from greater seems a mockery. The attendance upon dying patients who have willingly accepted every surgical aid at our command is not calculated to impress the surgeon even with an overwhelming sense of benefits conferred. It is probably from frequently witnessing the last weeks of these patients, who remain under observation more persistently after operation, that I had gradually come to question the advisability of opening the colon where life was not immediately imperilled. A careful and impartial comparison of their sufferings, however, in a series of patients, including some who had declined and some who had undergone operation, has convinced me of the great utility of colotomy, and has completely dispelled my doubt as to its alleviating power. The conclusions I have been able to draw are that, by its means, the continuous pain is lessened in severity; the desire to evacuate, almost constant, and very distressing where no operation is performed, disappears in some and is diminished in others; incontinence of fæces, a frequent source of anguish in rectal cases, though occasionally met with, is usually absent in the colotomised; and, finally, the motions are not only discharged with comparative ease, but, in the majority, are reduced to at the most two or three in the twenty-four hours. These are substantial advantages, generally, I am aware, though perhaps vaguely, claimed as pertaining to colotomy, which it may be well for this meeting to acknowledge, to qualify, or to repudiate.

Finally, there remains for consideration to determine what kind of artificial anus best supplies the needs of the patient, and obtains for him the nearest approach to a state of Nature. Till recently, one operation, that, namely, of left lumbar colotomy, practically held the field. Inguinal colotomy was here and there undertaken, and now and again there appeared a paper founded upon one or two examples, setting forth its advantages over the other proceeding; but it was not until the last two years, since Mr. Allingham,

jun., read his paper on this subject in the Surgical Section at the Dublin Meeting, that hospital surgeons in general have taken up the question in earnest, and have put to the test the advantages claimed for this over the usual operation. I have not myself yet performed the inguinal operation in any case of cancer; but there are doubtless many gentlemen present who will give us their experiences, and so will enable us to form a judgment upon its merits.

I am bound to confess that, having opened the descending colon in the left loin 103 times, I find it in some respects an unsatisfactory operation. Now and again it is not unattended with difficulties; but I have never found these insurmountable. In stout persons it will sometimes be found that the bowel is in front of the anatomical line; in the thin and wasted, the empty gut may have dropped down, as it were, so as to form an attenuated cord by the side of the spine. In these cases the peritoneum may require to be opened; and in others an opening may be unintentionally made. With cleanliness and care in avoiding the introduction of putrescible material, there need be no fear of inserting the finger freely within the cavity of the abdomen in search of the truant bowel, and the accidental wound need not so much as interrupt the even tenour of the operation. It has happened to me more than once to have opened a tightly distended colon and the peritoneal cavity by the same incision, and to have become suddenly conscious of the accident only during a copious flow of liquid fæces over the entire wound; and yet I am not aware that any disastrous effects have ensued. The tightly distended bowels secure an accurate closure of the wound, and I have always taken care to second this by seizing the cut edge of the colon with forceps and dragging it to the surface. It is not on account of the difficulties we sometimes encounter, or of the accidents which cannot always be avoided, that I am dissatisfied with this long established operation; neither is it because of the high mortality which undoubtedly attends it when undertaken for relief of complete obstruction, a mortality which I am prepared to show arises more from the circumstances preceding the operation than from the operation itself; but rather because of its failure in a number of instances to secure that complete diversion of the fæces which it is intended to bring about, and because of a tendency to a gradual stenosis and even closure of the opening, on the one hand, or of unmanageable prolapse of the bowel on the other, which in a not inconsiderable number of cases detracts materially from the comfort to be derived from a perfect operation.

It is claimed for inguinal colotomy that, when rightly performed, there is no possibility of fæces finding their way beyond the opening in the groin, that the removal of a portion of the free border and the kinking of the bowel secure a continued patency of the artificial anus, and that prolapse may be effectually prevented by the use of a properly constructed truss. If these claims should prove to be well founded—and the examples I have seen in London, in Leeds, and in Newcastle would seem to support them—the chief drawbacks of colotomy will have been removed. The lumbar opening will continue to be preferred when the disease is so high up as to render it uncertain if an inguinal opening will enable the bowel to be reached, and probably also in cases of great distension where an immediate opening for relief of obstruction is imperative. Not long ago a man, whose colon I had some months previously opened, returned in a condition but little, if at all, improved by the operation, which had wholly failed to prevent the dribbling of fæces through the rectum, although the artificial opening had remained patent as at first. To his complete relief I performed the operation of colectomy. The colon, having been cleared from its attachment to the lumbar opening, was dragged outside and completely divided. Having then temporarily secured the upper end with an encircling ligature of silk, so as to prevent the escape of fæces, and given it in charge of an assistant, I first dealt with the lower portion, and finding it empty, I was able at once securely to close it by stitching with fine silk its invaginated wall in such manner as to oppose two serous surfaces throughout the entire circumference. Thus safeguarded against any back flow of its contents, the distal end of the bowel was dropped into the abdominal cavity. The upper open end was then stitched all round to the edges of the lumbar wound, and in this way the whole of the contents of the bowel were perforce discharged through the lumbar opening.

How far this operation may be safely undertaken as a primary proceeding we have not sufficient evidence to show. Should it prove on trial to be not more fatal than the ordinary method, it is clear that by its means we shall more completely accomplish the chief end we seek to attain—namely, the diversion of the intestinal contents through the loin, and the detaching of the diseased rectum from the alimentary canal. It has been proposed, indeed, and even, I believe, essayed to accomplish, the removal of the cancerous bowel through the lumbar or inguinal opening, and that such a procedure may, in exceptional instances, be warranted, I can well conceive; but for the present our choice of operation in cancer of the rectum would seem to lie between proctectomy as performed from the anal extremity on the one hand, and some form of artificial anus on the other.

AN ADDRESS

DELIVERED AT THE OPENING OF

THE SECTION OF PATHOLOGY AND PHYSIOLOGY.

At the Annual Meeting of the British Medical Association, held in Leeds, August, 1889.

By JOSEPH COATS, M.D.Glasgow.
Lecturer in Pathology and Pathologist, Glasgow Western Infirmary.

ON THE NATURE OF CONSTITUTIONAL SUSCEPTIBILITY TO DISEASE.

Gentlemen,—In opening the Section of Physiology and Pathology it is fitting that I should recognise the close relationship between these two branches of science. The methods and leading principles of physiology have, with great advantage, been extended to pathology, and through pathology to practical medicine and surgery. We are apt to think that this is a special characteristic of recent times, but we must not forget that in the work of our great master, John Hunter, this combination was exemplified in the highest degree. Not only is his work largely physiological, but in his marvellously full and suggestive lectures on the Principles of Surgery, it is only after a prolonged discussion of the fundamental principles of physiology that he goes on to the principles of disease. It is, I think, matter for congratulation that, following John Hunter's example, modern pathology does not confine itself to pathological anatomy, but recognises that the processes of disease occur in living animals, and are to be investigated from the physiological as well as from the anatomical standpoint.

Misuses of Pathological Terms.

It must be recognised that pathology has made great advances in modern times. It follows from this that the meanings and uses of terms must have undergone considerable changes in the course of years, and that confusion is liable to occur between the older and more recent uses of these terms. This applies especially to terms which imply theories or views, because as the views change the terms either become obsolete or else linger in some indefinite sense, to the confusion of the minds of men. On the other hand, a term which expresses some great fact of fundamental importance must remain, although the attitude towards the fact and the interpretation of it may undergo alteration. I propose to-day to take up in this aspect one of the expressions belonging to the latter class, but before I do so let me give two examples of the former.

The term "lymph" in its pathological use is, I believe, a Hunterian expression. Hunter's "coagulable lymph" was primarily the fibrin which forms when the blood coagulates. He says that the blood separates into the coagulable lymph, the serum, and the corpuscles. It is well known that Hunter ascribed very special powers to the coagulable lymph, regarding it as the vehicle of the living principle of the blood. What we now regard as dead fibrin was to him the most active and vital matter in the body. Hunter regarded the new formation of tissue as brought about by this lymph, so that even the extension of a scirrhous cancer to the axillary glands, for example, was by the passage of the coagulable lymph from the tumour in the mamma. Our views of all this have entirely changed, but the term unfortunately remains, and is used, especially by surgeons, in what I cannot but regard as a loose and misleading way. Thus, not only is the fibrinous exudation of acute inflammation called lymph, but the connective tissue

which, let us say, unites the various abdominal organs together in cases of tubercular peritonitis, is also called lymph. It would be a great advantage, I think, if the word were banished from our nomenclature. It is interesting in the history of pathology, but like some of the creeds of our ancestors, had better be left as a historical monument.

There is again the expression "deposit," which is somewhat frequently in use. We hear about "tubercular deposits," and "cancerous deposits," for example, as if there were some tubercular or cancerous substance brought to the part and laid down there. Now, it ought to be remembered that tuberculosis and cancer imply the new formation of tissue, and not a deposition from the blood. It is true that in the case of tuberculosis and syphilis the specific morbific agent is brought to the part and laid down there; but the actual tubercular or syphilitic lesion arises by growth of tissue, and the specific morbid poison may, having done its work, disappear, leaving the visible lesion as a piece of new formed tissue. In the case of cancer, the whole process is one of a preternaturally active growth of tissue, something very different from a passive deposition. The influence of the Hunterian idea of the coagulable lymph is visible in this expression also, and it is perhaps an evidence of the abiding influence of a great mind, that even his errors possess so much vitality. I think, however, that it is time to cease speaking in this loose sense of deposits, when the real process is an active one of growth.

Nature of Constitution and Constitutional.

Passing however from this, the subject which I have thought might profitably engage us here is one having wide general relations, and therefore suitable to such an address as this. I refer to the subject of Constitutional Susceptibility and Constitutional Disease. These expressions refer to fundamental facts in connection with disease, and are not likely to go out of use. I believe, however, that considerable confusion exists as to the bearing of the facts, and consequently in the use of the words. It will be recognised, for example, that in common language a certain contradiction in meaning is assumed between constitutional and local, as if they were mutually exclusive of each other. This assumption, in my opinion, is a mistaken one, and it arises from want of due care in distinguishing between constitutional susceptibility and constitutional disease. I hope in the sequel to show that constitutional susceptibility is, at least in many cases, strictly local.

The constitution of the body has been defined as "its particular frame or temperament," and as "the inherent structure and powers of the organism." We recognise differences of constitution in different individuals, that is, differences in the inherent structure or frame. For the most part these differences are within the normal anatomical and physiological limits, and these constitute the *differentiæ* by which one individual is distinguished from another. It is very pertinent to our subject to consider what are the characteristics of these normal constitutional differences. If we look closely at them they will be found to consist in varieties in the local construction or action. As the bodily frame is composed of a vast aggregate of minute parts, it is variations in these minutiæ which constitute the differences in the frame as a whole. This is recognised in common language when we say that a particular shape of head, or gait, or cough, is constitutional.

Many of these peculiarities are inherited, and it is, again, a fact which will be recognised as fundamental that the constitutional is very frequently the inherited. In an address published about eighteen months ago[1] I endeavoured to show that inheritance does not determine merely vague general characters and susceptibilities, but definite local peculiarities of structure and function. We may say here that the bodily frame or constitution, while built on a general plan, is subject to variation in a multitude of local details, and that these variations are frequently matters of inheritance. It is these chiefly which constitute the *differentiæ* of constitutions.

It is now my object to inquire how such constitutional differences affect the incidence of disease, and in order to this I must make some reference to the causation of disease.

In the causation of disease we recognise two elements nearly always at work, one internal and the other usually external. The one we name predisposition or susceptibility, and the other we designate the determining cause. For the most part susceptibility is constitutional; it belongs to or is inherent in the bodily frame, and in many cases it is inherited. Differences in susceptibility depend on differences in constitution, and these differences, although frequently congenital, are in some cases acquired, the constitution being altered by the circumstances of life. Constitutional susceptibilities, we may infer, will be correlated to a multitude of local peculiarities in structure or function, and it may itself be due to some definite local speciality.

It will be seen already that the normal constitutional peculiarities are for the most part local, and that constitutional susceptibilities to disease may also be local. When we speak of tendencies or susceptibilities to disease, therefore, local and constitutional are not inconsistent, but are, as I hope to show, for the most part associated. It is otherwise when we come to the actual manifestations of disease. A disease is constitutional when it affects the bodily frame as a whole, and it can only do so when it either contaminates the blood or, by acting on the nervous system, interferes with the functions of the body as a whole. It is, I think, by confusing constitutional susceptibility and constitutional disease that the former is generally regarded as excluding the idea of a local seat.

Constitutional Susceptibility of Organs, as the Liver and Lungs.

I think it will assist us in comprehending the meaning of constitutional susceptibilities if we notice that each of the individual organs of the body has a constitution as well as the body as a whole. The constitution of an organ will be its inherent nature, and will include its structural and physiological peculiarities. Now, the various organs show the most interesting peculiarities in their susceptibility to disease, and these differences in susceptibility are inherent in their constitution.

Let me take first the liver as an illustration of what I mean. The liver is exposed, perhaps more than any other organ, to the attacks of disease. Any solid granular matter which may be present in the blood is liable to be deposited there. It has been shown by experiment, for example, that when vermilion granules are introduced into the blood, they are to be found in large numbers afterwards in the liver. In the condition of melanæmia, also, where there are numerous granules of black pigment in the blood, there is a deposition of this pigment pre-eminently in the liver. This seems due to the fact that the capillary circulation in the liver is unusually slow. The blood before it reaches the liver has already traversed a set of capillaries, and, arriving at the liver by the portal vein, it is at a greatly diminished pressure and rate of speed. It follows from this that in all diseases in which solid granules are present in the blood the liver is likely to be the seat of deposition. There are two kinds of solid matters which, when they are deposited in an organ, may lead to disease, namely, microbes and cells from malignant tumours. In regard to both of these, the liver shows great differences of susceptibility.

Take first the case of tuberculosis. It used to be said that the liver is very rarely the seat of tuberculosis, and this is in a sense true, but it is not because the tubercular bacillus is not frequently carried to the organ and deposited there. I am prepared to say that probably in a large majority of cases of tuberculosis, whatever the locality of the disease, the liver is infected with the virus. In general tuberculosis, where the bacilli are present in large numbers in the blood, the liver is the seat of enormous numbers of miliary tubercles. Again, in phthisis pulmonalis there are nearly always a considerable number of tubercles present. I have frequently examined the liver in such cases, and I can say that in this disease, although frequently the tubercular process is, so far as naked-eye appearances are concerned, confined to the lungs and the related mucous membranes, such as the larynx and intestines, yet that microscopic examination commonly reveals the presence of many minute tubercles in the liver. The bacilli pass in comparatively small numbers into the blood from the primary seat of the disease, and are, as we might expect, deposited in the liver. They obviously find, however, that the liver is inimical to their growth. They produce the typical miliary tubercles, but there is apparently no considerable multiplication of the microbes, and so we have small isolated tubercles, which usually show the various appearances of degeneration. According to Baumgarten, the giant cell and the other constituents of the tubercle proper are the direct result of the action of the bacilli; and, according to the very beautiful observations of Metschnikoff, these cells endeavour to inhibit the further development of the bacillus, and in some cases succeed. They seem to be successful in the liver, so that the tubercles scarcely ever form in this organ considerable masses such as we find in the lungs and in the brain, and are seldom even

[1] *Lancet*, January, 1888.

large enough to be visible to the naked eye. I might venture on the paradoxical statement that the liver is probably more frequently than any other organ the seat of tubercles, but is scarcely ever the seat of tuberculosis. I would say that the liver is constitutionally inimical to the tubercular bacillus, and is constitutionally almost insusceptible of tuberculosis.

Contrast with this the relation of the liver to syphilis. Here also we have a virus in the blood, and I think we may infer that it is a microbe. At any rate, we have sufficient evidence that it is commonly deposited in the liver, and it evidently finds there a congenial seat. I suppose there is no organ in the body which is so frequently the seat of syphilitic gummata as the liver. This organ has apparently a constitutional susceptibility to this disease.

Then in regard to tumours, we know that the liver is very frequently the seat of secondary cancer. It is so not only when the primary tumour is in the intestinal canal, but also when it is in external parts, provided that the tumour elements get into the blood. These are usually carried to the liver by the portal vein, and are not only deposited in the organ, but evidently find it a highly congenial seat, so that they grow, as a general rule, with a riotous luxuriance. Every pathologist must have been struck with the fact that a small primary cancer in the stomach or intestine may give rise to an extraordinary secondary growth in the liver, so that this organ is increased by many pounds in weight, and its tissue almost replaced by cancerous tissue. We may say that the liver has a constitutional susceptibility to cancerous growth when once it is implanted, although in itself indisposed to primary cancerous development. Primary cancer of the liver is almost as unusual as secondary cancer is common.

The lungs present, in regard to the three diseases mentioned, an almost precise converse to the liver. It is obvious that these organs are a very congenial seat for the tubercular bacillus. Not only are these microbes frequently deposited in the lungs, but they grow vigorously there, and usually produce continuously extending effects. I was peculiarly struck with the contrast in a case of general tuberculosis in which both lungs and liver were affected. The bacilli had been implanted in both in great profusion, but in the liver they had apparently, even thus early, to a large extent died out. The bacilli are always difficult of detection in the liver, and they were so in this case; but in the lungs they had grown with extraordinary vigour, and had done so to a large extent in the lung alveoli, so that when the lung was prepared in the ordinary way so as to stain the bacilli red with fuschine, the alveoli looked, with the low power of the microscope, as if filled with red matter. There was an almost pure culture of the bacilli in the alveoli.

In direct contrast with this is the case of syphilis. The extent to which syphilitic lesions occur in the lung is still regarded by some as undetermined, but by all it is admitted that they are exceedingly rare. So far as my experience goes, I have only seen one unequivocal case of syphilis of the lungs and one doubtful one. In the unequivocal case there were gummata similar to those so frequently seen in the liver, and which were present also in that organ.

Cancer in the lung occupies a somewhat similar position to tuberculosis in the liver. The lung is not infrequently the seat of cancerous infection by the elements of cancerous tumours being carried to the organs, but they seldom grow to any considerable extent. I have seen several cases which presented somewhat peculiar features. The cancerous elements had evidently reached the lung by the pulmonary artery, but they had not developed to any considerable extent in the lung tissue. They had rather passed into the lymphatic spaces of the lung, so that outside the branches of the pulmonary artery the perivascular spaces were seen to be occupied by cancerous growths. These were also present in the lymphatics of the general connective tissue. The cancerous growth in the lymphatics beneath the pleura produced an appearance as if these vessels were injected, the lobules being mapped out by the white tissue in the lymphatics of the interlobular septa.

I think we may infer from the facts already adduced that the constitution of the lungs and liver respectively are such as to render them very variously susceptible to certain morbid influences. I want now to make the further observation that there are marked differences in susceptibility in the same organs in different individuals. We have seen that in man the liver is very inimical to the tubercular process, but it does not seem to be so in at least some animals. In bovine tuberculosis, for example, pearl nodules are commonly present in the liver, and they generally grow to the usual dimensions of those in other parts. In many other animals also, tuberculosis manifests itself very markedly in the liver.

But even amongst men the liver presents very marked difference in its susceptibility to disease. The tropical abscess of the liver is no doubt due to the implantation of the microbes of suppuration in the substance of the liver. I do not here go into the question of the connection of this disease with dysentery, but we must infer that these microbes find entrance to the body through some breach of surface, and probably by the intestine. What I want to point out particularly is, that Europeans in India are much more susceptible to the disease than natives. I owe the knowledge of this fact to my friend, Dr. David Wilkie, of Simla. From the statistics of the European and native armies from 1877 to 1886, it appears that while the death-rate from dysentery was nearly the same in both races, namely, 1.33 in Europeans, and 1.25 in natives per 1,000 men, the death-rate from hepatitis, or abscess of the liver, was more than eight times as high amongst Europeans as amongst natives, the figures being 1.45 and 0.17 per 1,000 men respectively. This peculiar and interesting fact implies a constitutional peculiarity, which may be related to racial differences, or be due to modes of living, and particularly to the differences of diet. In any case we have a congenital or acquired difference in the constitution of an organ determining an extreme difference in susceptibility to a particular form of disease.

It may be well at this point to take up, for a moment, the question as to the explanation of such constitutional differences in organs as those which I have been referring to. What is it that makes the liver of man peculiarly inimical to tuberculosis, and peculiarly susceptible to cancer and syphilis, and what is it that makes the livers of some men so much more susceptible to the pyogenic microbes than those of others? I believe that we are to look for an explanation in the action of the living cells of the organ. Tubercles in the liver have their seat in the connective tissue of the organ, and it looks as if the vicinity of the proper hepatic cells prevented the multiplication of the bacilli. In man there is comparatively little connective tissue in the liver, and this may possibly account for the slight growth of the tubercles, the connective tissue being, in some animals at least, more abundant. In all the diseases which I have mentioned the morbid process involves the multiplication of living cells, the cells which constitute the microbes in tuberculosis and syphilis, the cancer cells in cancers. The natural living cells of the part enter into contest with the morbid cells, and in some cases are capable of controlling the latter, whereas in other cases they are not. We may suppose that the issue of the contest depends on the inherent powers of the respective living structures. So far as the organs of the body are concerned these inherent powers are involved in the constitution of the organs.

Senile Changes in Arteries Produce a Constitutional Susceptibility to Atheroma and Aneurysm.

With a view to the further illustration of my subject, I shall now refer to senile changes in relation to constitutional susceptibility. Take first the normal senile changes. We recognise that baldness and greyness of the hair are, in a certain sense, the natural results of accumulating years. They are due to atrophy, the one of the hair follicle, and the other of the pigment. But what variations are shown by different individuals in the age and degree in which they occur! We recognise here constitutional peculiarities, and we are familiar with the fact that these are in a very high degree hereditary.

Turning to susceptibilities to disease, I believe that senile changes constitute a very important element in the commoner diseases of arteries. Atheroma of arteries and aneurysms, arising as these do for the most part from atheroma, are conditions in which we can distinctly trace the two elements in the causation which I alluded to at the outset of this address. These are diseases of middle life and old age, that is to say, senile changes in the arteries constitute the predisposing cause or susceptibility, but the determining cause is the impact of the blood on the wall of the artery. This is evident from the fact that atheroma is commonest where that impact is greatest, namely in the aorta. It is not common in arteries of comparatively small calibre, but there are two situations in which it frequently occurs even in small vessels, and these are situations where the impact of the blood is apt to be greater than in other arteries of a similar size. The

coronary arteries of the heart, coming off directly from the aorta, are exposed to a high blood-pressure, and they are very often atheromatous. The arteries of the brain also, coming off as the anterior and middle cerebral do from a large artery which passes up directly from the aorta, are presumably exposed to unusual blood-pressure, and they are very frequently affected with atheroma. Perhaps also the soft character of the brain substance, causing the arteries to be less supported than most others, may have to do with the frequency of atheroma here. In this disease, then, the changes of constitution in the arteries consequent on many years of activity induce a condition which renders the tissues of these vessels incapable of resisting, as before, the effects of the blood-pressure. This change of constitution we may infer to be a diminished vitality in the living structures forming the walls of the vessels. That it is so is almost demonstrated by the fact that atheroma is often associated with a condition of the middle coat, which implies greatly diminished vitality, namely, calcification of the muscle cells of that coat. Before a living structure allows of the deposition of lime salts in it, it is already so much reduced in vitality as to be almost dead.

Now it is interesting to observe that these senile changes in the constitution of arteries are subject to very great variations in different individuals, and in like manner the occurrence of atheroma varies, both in the age at which it occurs, and in its extent. This is of great importance when we consider what an important part this disease plays in causing death in old people. A large proportion of the deaths in the latter part of middle life and in old age are from hæmorrhage or softening of the brain, presenting itself in the various forms of apoplexy, paralysis, and brain weakness. These conditions of the brain mostly depend on atheroma of the arteries, and so we may say that the tendency to death is greatly influenced by the occurrence or the premature occurrence of the senile changes which render the arteries susceptible to atheroma. The constitutional condition of the arteries as regards vitality of their tissues in advanced life exercises thus a very important influence on the duration of life. I may venture to say that the constitutional powers of the heart and of the arteries are the principal factors in determining longevity. The ability of the heart varies greatly in different individuals, and survival when attacked by an acute disease will largely depend on the power of the heart to resist the debilitating influence of the morbid agent. If a man passes through middle life and has escaped from acute diseases, or has survived them, then the condition of his arteries is probably the most important factor in determining his chances of life. It is thus that the local constitutional peculiarities of the vascular system influence the duration of life. These constitutional conditions, like others, are largely the subject of inheritance, which thus again is seen to determine local peculiarities.

Constitutional Susceptibility to Tuberculosis.

I might further illustrate the principles which I have been endeavouring to enforce by other examples, but I turn now to two diseases concerning which considerable confusion exists, as I think, in regard to their relations to the constitution—I mean tuberculosis and cancer. I have already referred to the difference between constitutional susceptibility and constitutional disease. In what I have already said there has scarcely been any possibility of confusion between the two terms, as the illustrations have been selected in order to exhibit the nature of constitutional susceptibility. We have seen that it is in these cases related to local characteristics. In the case of tuberculosis and cancer we have a more difficult subject, chiefly because in these diseases we have to deal both with constitutional susceptibility and constitutional disease. It is, I think, because of this that many men find it difficult to conceive of a constitutional susceptibility to tuberculosis or cancer being a purely local condition. I want to make it apparent that the constitutional susceptibility is local, and that it is only a constitutional state that may be secondarily induced which is general.

Let us take first the case of tuberculosis. We recognise in this disease in the most prominent way the influence of the two factors in the causation of disease to which I have alluded. There is the definite determining cause, the tubercular bacillus, but there is, in most cases at least, the pre-existing susceptibility. While everyone is exposed to the determining cause, it is only the susceptible who succumb. This susceptibility to tuberculosis is constitutional, and in many cases it is hereditary, although the mode of life may determine an acquired susceptibility.

If we look closely at any tubercular disease we shall find that, in man at least, it is always, to begin with, local. So far as I can see, there is no evidence that the tubercular bacillus multiplies in the circulating blood. What happens is that when the microbes gain entrance to the body they are deposited somewhere. If they get leave to lie, there is the contest between them as living cells and the living cells of the tissues. In the liver the hepatic cells, as we have seen, are able to control the microbes; so also are the living tissues generally in most people. But if the bacilli are implanted in an organ which is constitutionally incapable of dealing with them, then they multiply. The person has a constitutional weakness, as it is said, and the local propagation of the bacilli is allowed. This local implantation may be in various places, the commonest being the lungs, the lymphatic glands, the bones, the brain, the testicles, and the kidneys.

I do not think it is likely that there will be, usually, in the same person, a local susceptibility in more than one situation. It is sometimes said that tuberculosis of the lymphatic glands or scrofula, is seldom associated with phthisis pulmonalis, but I know of no actual observations on this point. I should expect that inherited susceptibility would be entirely local, and that it would determine one or other of the local manifestations.

But tuberculosis, wherever its seat, usually produces constitutional manifestations, fever, emaciation, frequently amyloid disease. It does so, not necessarily or usually by the bacillus passing into the blood, but rather by the evolved products doing so. I think it may be said that whatever their seat, the bacilli do not produce tuberculosis by their mere presence, but rather by the poisonous principles which they evolve. These are probably alkaloids, and are soluble in the juices of the body. They are diluted by the fluids, and in this form may be carried away from the local seat, and pass on into the blood. I believe that it is the presence of these products in the blood which is the main cause of the fever and other constitutional phenomena. We are to remember also that the occurrence of tuberculosis may lay open the way for the absorption of other foreign products, especially in the case of the lung. The cavities formed in phthisis contain variously decomposing matters, and the products of these may be absorbed. Then, also, necrosis of the pleura often leads to an acute pleurisy, which in many cases is, I believe, a septic pleurisy, and this is a cause of fever. It is apparent to my mind that these constitutional symptoms are the result of the local disease.

An important point comes up here. The local tuberculosis is a focus of infection, and although it is only exceptionally that it gives off bacilli in such numbers as to constitute a proper acute general tuberculosis, yet, from the evidence in regard to the liver which I have already adduced, it would appear that in most cases a few bacilli are being occasionally shed. In cases where a local susceptibility exists in other organs besides the primary seat, we should expect to find that a secondary tuberculosis would be established. It is even possible that the constitutional state induced by the tuberculosis might increase the susceptibility of some organs, or even create it. As a matter of fact, we sometimes find such a local tuberculosis in a second organ. I do not refer to the direct extension of a tuberculosis, say from the lungs to the larynx and intestine, which are so common, because in that case the bacilli in the sputum applied to the larynx, and, by swallowing, to the intestine, are so numerous that, without any special susceptibility, these structures become affected. I refer rather to the occasional occurrence of tuberculosis of the kidney, peritoneum, brain, bones, etc. In my *Lectures to Practitioners on the Pathology of Phthisis Pulmonalis*, published last year, I refer to some of these conditions, and make the statement that in a series of cases observed by me, local tuberculosis of the kidney occurred as a complication of phthisis pulmonalis to the extent of about 3 per cent., and that tubercular peritonitis occurred in a somewhat similar percentage. These observations were made almost entirely in adults, but I am inclined to think that the organs of children show a much greater susceptibility to tuberculosis than do those of adults. When tuberculosis exists in children it is not uncommon to find, in addition to the primary disease, let us say in the lungs, a tuberculosis in bones, kidneys, and elsewhere, but seldom or never in the liver. In this way what Weigert has called a chronic general tuberculosis is established, this condition being nothing more than a series of local tuberculoses. This condition, occurring as it does mostly in children, would indicate either that their organs are more susceptible than those of adults, or else that in them the bacilli find their way in larger numbers into the blood. It is possible that in the growing tissues the blood vessels are more easily penetrated by the bacilli than in the mature tissues of adults.

There is still another matter which rather complicates the position in regard to tuberculosis. I believe that tuberculosis in man is always, to begin with, a local disease, and is preceded by a local susceptibility, but in some cases at least a general want of vigour in the body as a whole—a general constitutional weakness—precedes and apparently determines the local weakness. It is natural that any local constitutional weakness should be emphasised by a general deterioration of the health. On the other hand, it must be admitted that there are persons who show such a pronounced proclivity to phthisis pulmonalis that they are attacked in spite of an apparently robust condition of the general health. These are chiefly cases of inherited susceptibility, in whom also the local susceptibility is sometimes shown to be very great by the rapidity with which the disease extends.

Constitutional Nature of Cancer.

When we come to the question of constitutional susceptibility to cancer, we encounter many difficulties, partly because the causation of cancer is exceedingly obscure, and partly because till late years the delimitation of this form of disease was very indefinite; partly also, as we shall see, because in the process itself there are involved somewhat contradictory phenomena. As the constitutional nature of cancer is a matter of great consequence, it may be well, even at the expense of a little extra time, to look some of these difficulties in the face, and endeavour to formulate the position.

Cancer, in modern pathology, means a malignant epithelial tumour. The multiplying epithelial cells take origin from the existing epithelium, but do not respect the normal bounds, growing into and penetrating the underlying and surrounding tissues. The tumour hence takes origin in epithelium or epidermis, and its seats are the skin, mucous membranes or canals, and epithelial glands, to which may be added as rare situations the cavities of the brain, the pleura, and the peritoneum. The cancer always begins in a definite local centre, and spreads from that. It is, I believe, a fact of universal application that, however widespread may be the ultimate extension of the growth, it is all to be traced more or less directly to the primary local nest, the secondary tumours being in all cases grafts from the primary one[2]. This relation to the primary tumour is frequently evidenced by the structure of the secondary ones, as these usually imitate very closely in their details the special characters of the original growth. It will be seen from this that cancer is primarily in all cases a local growth, and in speaking of susceptibility this must be taken into account.

I have mentioned that cancer consists in an excessive growth of epithelium, but it is a curious and apparently contradictory fact that it occurs most frequently when the natural forces of the body may be supposed to be diminishing. It is a disease mainly of the latter half of life, and it occurs with particular frequency in organs which undergo a specially early senile involution—the mamma and the uterus. The disease thus connects itself with senile changes, in this respect presenting some analogies with atheroma. There is, however, this distinction, that cancer is not common in advanced life, being rather a disease of vigorous middle or later life.

In regard to the connection of cancer with senile changes, a very ingenious explanation has been suggested by Thiersch, to the effect that the overgrowth of epithelium may be due to a falling off in the resistance of the neighbouring tissues rather than to an excessive vigour of the epithelium. The epithelial tissues are, as a rule, peculiarly active all through life, multiplying so as to make up for the losses by desquamation or secretion. Under normal conditions the multiplying cells are restrained from penetrating downwards by the active underlying structures, chiefly the connective tissue. If this activity diminishes then the epithelium may take advantage of this circumstance and assume malignant characters in its growth. I do not think this is a sufficient explanation of all the facts, but it seems not improbable that it enters into the somewhat complicated problem. There is no doubt that the seat of a cancerous tumour has a great deal to do with the vigour of its growth. A cancer which grows slowly in the wall of the stomach, for example, sometimes grows with extraordinary vigour when transplanted to the liver. It is very possible therefore that the condition of the tissues underlying the epithelium may have an important bearing on the origin of the tumours.

[2] See an exposition of this view by the author in a discussion on cancer, in the Pathological and Clinical Society of Glasgow, *Glasgow Medical Journal*.

We have, then, two possible forms of constitutional susceptibility to consider, namely, an excessive tendency to growth on the part of the epithelial tissues, and a diminished power of resistance in the underlying structures.

The latter condition, due in many cases to senile changes, will very frequently be local. I have already alluded to the fact that organs, such as the mamma and the uterus, which undergo a senile involution at a specially early period, are prone to cancer. It is as if the constitution of the organs, as altered by the process of involution, rendered them specially susceptible. We have also such facts as the occurrence of epithelioma in cicatrices, indicating that the existence of an imperfect connective tissue instead of that of the true skin renders the part specially susceptible to cancer. Again, the history of many cancers of the stomach, for example, is that of a prolonged dyspepsia. This implies a chronic inflammation of the stomach and a new formation of dense connective tissue in its wall. We may suppose that this change in the constitution of the wall will, as in other cases, render it unduly susceptible. The same applies to cancer of the lip and of the scrotum, induced, as they generally are, by special irritations. In so far, therefore, as senile or inflammatory changes in the underlying connective tissue influence the causation of cancer we may suppose that their action is local.

When we turn to the other factor the relations are scarcely so definite, this factor being a tendency to excessive activity in the epithelial structures. The cancer depends on a local manifestation of this tendency, but the tendency may itself be either general or local. We have seen that senile changes in arteries, although they may be extensively present, lead to the occurrence of atheroma only in certain localities. We may suppose in the case of cancer that there may be either a general or a local tendency to excessive growth of the epidermic or epithelial structures, which comes into effect as the cause of cancer when other causes coincide. There are several facts in connection with the diseases of the skin which indicate that the epidermis as a whole may present special constitutional susceptibilities. One of the most interesting of these is the disease ichthyosis, in which the epidermis presents an excessive or peculiar growth. The constitutional character of this is shown by the very striking manner in which it is transmitted by inheritance. We may suppose then, in some cases, a special tendency in the epidermis as a whole, or in the epithelium of the alimentary canal as a whole, towards cancerous development. We should expect such a tendency to be inherited. Whether it may exist both in the epidermis and in the epithelium, and whether it may extend to the epithelial glands, is much more problematical. The position of inheritance in the causation of cancer might be expected to throw some light on this subject. We should expect, if the tendency is confined to the epidermic structures on the one hand, or to the epithelial structures on the other, that when a cancer is inherited its situation would only vary from one locality of these structures to another, as from one part of the skin to another, or one part of a mucous canal to another. These are points, however, which I do not think are sufficiently elucidated, especially in view of the great divergence of opinion which exists in regard to the influence of inheritance on the causation of cancer.

There is one thing, however, which I may mention in regard to the constitutional tendency of the epithelium to the development of cancer—namely, that amongst the epithelial glands great differences of susceptibility apparently exist. The hepatic cells, for instance, I believe, very seldom, if ever, give rise to cancerous growths, the rare primary cancers of the liver taking origin rather in the ducts than in the parenchymatous cells. In contrast with this is the frequency of cancer in the mamma.

I am conscious that much of what I have been saying in regard to cancer is vague and unsatisfactory, but it is what has occurred to me, on looking closely at the facts, as the only possible modes in which constitutional susceptibility can exist. I have thought it worth while to formulate these considerations, because I am aware of an undercurrent of belief in a vague general constitutional susceptibility which disappears when we look at the facts.

The belief in a general constitutional susceptibility is associated in the minds of some with the frequent recurrence of cancer after removal, as if this were evidence of an ineradicable tendency to cancer. I believe this to be an entirely mistaken view. I am convinced that, except in the very rare case of the coexistence of two primary cancerous tumours in the same person, all cancerous growths are directly connected with the primary local tumour.

When a cancer recurs, it is because some part of the growth has been left in. The recurrence is in the neighbourhood of the original tumour, or in the connected lymphatic glands—this itself indicating a direct connection with the primary tumour. When we consider that a cancer consists of vigorously growing epithelium, which has a special tendency to propagate into the lymphatics, and so to send offshoots or grafts into parts around, we can scarcely be surprised that complete eradication is so difficult. When once the epithelium has broken bounds, and has been transplanted to parts which may be more favourable to its growth than its natural site, then it will frequently be impossible to determine the limits of its extension.

I have said so much as to the constitutional tendency to cancer. The determining cause is frequently stated to be a local injury or irritation. Such injury or irritation may produce changes in the connective tissue such as I have already referred to, and it is possible that the coexistence of the two factors already considered may determine the occurrence of the disease. It is possible also that injury or irritation, while damaging the more inert connective tissue, may stimulate the more active epithelium.

I need hardly add that cancer frequently induces a very serious constitutional state, leading on to a fatal issue. The so-called cachexia is, however, a secondary result of the cancer. This is manifest enough in the case of external cancers. We are familiar with the fact that cancer of the mamma or of the lip or larynx frequently shows itself in persons of robust general health, and that the constitutional decadence is often the result of a long struggle between the vigorous vitality of the individual and the inroads of the disease. The cancer leads to these effects by ulceration, by using up the nutritious material of the body in its growth, and by extending to parts which are important in the economy. There is the important distinction in these secondary effects from those in tuberculosis, that, as cancer is not associated with a specific microbe, there are no poisonous alkaloids evolved, and there is consequently no fever, as a rule. In the case of internal cancers, which are concealed from view, the constitutional effects may be manifest before the local cancer is discovered. It is not infrequently the office of the pathologist to find a large and old ulcerating cancer of the stomach, whose existence had by no means been certainly distinguished during life.

Conclusion.

The subject on which I have entered is an exceedingly wide one, and I am only controlled in my efforts to expound it by considerations of time and space, as well as of your patience. I had intended, for instance, to enter more particularly on the subject of immunity to certain diseases, as determined by constitutional susceptibilities, a subject already hinted at in speaking of the susceptibilities of the liver, and a subject also which has received much elucidation in my mind from the interesting observations, already referred to, of Metschnikoff, and of the no less remarkable investigations of Pasteur into the nature of certain vaccines. I must however conclude my remarks, but before doing so I may, in a sentence or two, sum up the deductions which appear to me to follow from what I have adduced.

The constitution or frame of a man or animal is made up of a multitude of local items, each of which is liable to variation in structure and function within normal limits. These variations form the *differentiæ* of species and of individuals, and they are generally subject to inheritance. Susceptibility to disease varies greatly in different men and animals, and this variation is correlated to the structural and functional peculiarities which determine the differences of constitution. The individual organs of the same animal show very different degrees of susceptibility to certain diseases, as is shown by the relations of the liver and lungs of man to tuberculosis, syphilis, and cancer. In different individuals of the same species of animal, also, the same organs, such as the lungs or liver, vary greatly in susceptibility to disease. Finally, as such diseases as tuberculosis and cancer are, in man, primarily local, susceptibility to them must be related to local constitutional peculiarities in the situations primarily attacked.

The Calcutta Jubilee Fund has made over 20,000 rupees to the local Dufferin Hospital, and a further balance will shortly be devoted to the same object, thus exhausting the fund.

National Pension Fund for Nurses.—Mr. W. Rathbone, M.P., and Mr. Jonathan Hutchinson have become Vice-Presidents of the National Pension Fund for Nurses, and Dr. Broadbent has been elected a member of the Council.

AN ADDRESS

DELIVERED AT THE OPENING OF

THE SECTION OF OPHTHALMOLOGY.

At the Annual Meeting of the British Medical Association, held in Leeds, August, 1889.

By ANDERSON CRITCHETT, F.R.C.S.Ed., M.A.Cantab.,
Senior Ophthalmic Surgeon to St. Mary's Hospital.

On the Treatment of Immature Cataract.

Gentlemen,—When the history of the nineteenth century comes to be written in its entirety, the phenomenal growth of scientific knowledge will, I doubt not, be placed upon permanent and honourable record; and, although it represents only a small unit amidst the multitude of the sciences, I think I may venture to claim for ophthalmology that it has not "lagged reluctant in the race."

It is indeed almost impossible for us at the present time to conceive the difficulties which were encountered and successfully overcome by the pioneers of ophthalmic surgery. When we remember the wonderful results which they achieved although unaided by the ophthalmoscope, by any accurate knowledge of optics, by cocaine, by the galvano-cautery, or by the numerous instruments of precision which we now possess, we must indeed marvel, as did the Israelites of old when the mighty giant was laid low by a sling and a stone.

Time has, alas, robbed us of most of those who commenced their labours in that, which we may perhaps term the pre-ophthalmoscopic, period, and it seems difficult to realise that our honoured friend, Professor Donders, who presided only a year since with so much native dignity and urbanity over the International Ophthalmic Congress at Heidelberg, and whose mental and physical vigour gave promise of days extended beyond the ordinary span, now lives but in the cherished memory of a noble and beneficent career. He has left us the example of a blameless life, devoted not alone to abstract scientific research, but also to the practical development of those great discoveries in optics which have conferred such lasting benefit upon mankind; of him we may indeed say with truth "*Vir nullâ non donandus lauru.*"

And now with reference to the work which lies immediately before us, I feel I may congratulate this Section upon the very interesting list of papers which we are promised, and which will, I doubt not, be the cause of much profitable discussion.

I will not intervene at any length between you and so appetising a mental feast, but I desire briefly to allude to a subject the importance of which is, I think, becoming more and more recognised by ophthalmic surgeons; I mean the best method of dealing with immature cataracts. Each one here present must, I feel sure, have met with numerous cases where not a little hardship has been endured, not only by the individual sufferer, but also by those who are dependent on him where the patient is the bread-winner, when cataract has become so far advanced as to seriously interfere with the pursuit of any occupation, but is not sufficiently mature to render an operation justifiable. A few years since the outlook for such a patient was exceedingly gloomy, for the ophthalmic surgeon, influenced by most worthy and conscientious scruples, could only advise postponement till a more convenient season, which sometimes occupied many years in its advent, until at length hope repeatedly deferred became supplanted by despair, and the unfortunate patient too often drifted into the hands of some unscrupulous charlatan, who robbed him of his already diminished resources under the cover of specious promises which could never be fulfilled. Within the last decade great practical advances have been made in several directions towards a solution of the difficulty, and we may broadly divide the recognised operative methods into two classes—that which deals with the immature cataract by immediate extraction, and that which involves an artificial ripening of the lens before its removal. Amongst those who are adherents to the first-mentioned plan I may mention Mr. Tweedy, Mr. Couper, and Dr. McKeown. More than eight years since, at Moorfields, Mr. Tweedy removed an immature cataract from a respectable artisan, who had to no slight extent forced his hand by declaring that, if no surgical aid could be afforded him, he must enter the workhouse and remain there till the eye was ready for an operation. Referring to

this case in May, 1888, Mr. Tweedy writes: "The extraction was uncomplicated, and the lens left the capsule entire. Recovery was prompt, and a few weeks later, with suitable glasses, the patient could read 'brilliant' type quite fluently. Since that operation I have rarely refused to extract a cataract, no matter how immature, whenever both eyes were so affected that the patient was unable to earn his livelihood.

"The success which so far I have had I ascribe entirely to the kind of operation which I have been in the habit of performing—namely, a corneal section upwards with a Graefe's knife, with an iridectomy, and a peripheral section of the capsule of the lens with the cataract knife, leaving the anterior capsule, as far as practicable, intact. By this means the lens is taken, as it were, out of a pocket."

Mr. Tweedy claims that any lens matter which is left behind remains within the capsule to which the aqueous humour finds ready access, causing disintegration, liquefaction, and absorption, so that in due time, in the large majority of cases, a perfectly transparent capsule remains; while in those rare instances where opaque matter still obstructs the pupillary area a single needle will suffice to tear a capsule, the natural fragility of which has not been impaired by previous instrumentation. In the peripheral section of the capsule Mr. Tweedy was, I believe, anticipated by Dr. Knapp, of New York, who, however, used a cystotome for that purpose, while Mr. Tweedy thinks that a cleaner and better regulated incision can be obtained with a Graefe's knife. Mr. Couper is equally ready to operate on immature cataracts, and claims that he has done so with a large measure of success, but he adopts a plan which is the antipodes both in principle and in practice of that mentioned above, since he introduces a pair of specially constructed forceps into the anterior chamber, and endeavours to remove a considerable portion of the centre of the anterior capsule.

The much canvassed plan of Dr. McKeown, of Belfast, who uses a syringe and warm water to wash the chamber free of soft lens substance, is already well known to you, and, although it has encountered much adverse criticism, I believe that it owns some staunch adherents, who are ready to substantiate their opinions by reliable statistics.

These, gentlemen, are the principal methods of dealing directly with unripe and unripened lenses; but Dr. Förster's introduction of artificial maturation, which consists of iridectomy combined with cortex triturations, is an operative procedure which has already gained the approval and support of not a few ophthalmologists. There is, however, considerable difference of opinion; first, respecting the particular forms of the disease in which this method proves especially effective; and, secondly, as to its exact *modus operandi* upon the lens substance. Thus Förster considers the chief factor to be a mechanical destruction of the layers between the capsule and the nucleus, while Samelsohn thinks that the proceeding produces a change in the lymph stream, resulting in a disturbance of nutrition, and Helfreich seeks an explanation in the mechanical displacement of the individual lens layers.

Time will not permit me to go at length into the minute details of Förster's method, but the subject has been exhaustively dealt with by Dr. Otto Schirmer, who gives the results of numerous experiments. The chief point of difference between Förster and himself is as follows. Förster believes it to be essential to the success of his process that some opacity of the anterior cortex, even though lying very peripherally, must already exist, and in this view he is confirmed by Ottinger, who carried out ten trituration experiments in clear rabbit lenses with and without iridectomy, and in no case did any opacity result, in spite of the application of the most varied degrees of pressure.

Schirmer, on the other hand, after experimenting on fifty-two rabbit lenses, failed to find opacity in only six instances, and, as four of these belonged to his first cases, he believed the cause of failure must be attributed to imperfection of procedure. The other forty-six showed distinct opacity of lens. During the first few hours and sometimes days, this was frequently veiled by deposits of fibrin in the aqueous humour, occasionallly consolidated to membranes over the anterior surface of the lens.

The opacification always made its first appearance at the anterior pole, close under the capsule, and by focal illumination an exceedingly fine striation was seen placed radially around the broad, gaping anterior extremity. In a few hours it progressed towards the equator, and its density became increased. Dr. Hess obtained similar results to those just mentioned, except that in every case but one he produced total cataract, which may be attributed to the fact that he continued trituration for three or four minutes instead of half a minute; and this explanation gains probability from the fact that Voelckers, who only momentarily crushed the lens, never obtained a total cataract. The chief dangers of this proceeding seem to be that, if any excessive pressure be used during the trituration, there may subsequently be loss of vitreous when the lens is extracted, and also that the process sometimes produces troublesome iritis. Dr. Noyes, of New York, has published the results of Förster's operation in eight cases, all the patients being over 50 years of age. In two instances iritis ensued; in one of these both eyes were operated on at different times, and both ultimately gave a good result, but severe iritis occurred after each preliminary operation, and again after each extraction. It is to be noted that in this case the cataracts were devoid of all cortical opacity. In the other case iritis with a few synechiæ occurred, but without any prejudicial result. In all the cases an increase of opacity was observed to ensue immediately, but the rate of increase varied in different individuals. Where cortical opacity was already abundant, the effect was prompt and unaccompanied by unpleasant reaction, and in no case did glaucomatous symptoms arise. I believe I am justified in stating that in Great Britain Förster's method of artificial maturation has as yet met with no very general adoption, though some ophthalmic surgeons, including Mr. McHardy, have given and are still giving to it an impartial trial, and I hope that at no distant date we may be favoured with the result of their experiences.

I have endeavoured, gentlemen, briefly, and I fear very imperfectly, to place before you the different plans which have hitherto been suggested for dealing with immature cataracts. I do not desire to hold a special brief on behalf of any individual proceeding, though I think it is probable that the best solution of the question will ultimately be found in a happy union of Förster's somewhat radical method with the eminently conservative ophthalmic surgery which is advocated by Mr. Tweedy, but I have striven to place the facts judicially before the enlightened and impartial members of this ophthalmic jury, and to leave the issue in your hands. The subject, I am well assured, thoroughly merits our most careful consideration, and, although I fear that the time at our disposal will not allow of its discussion on the present occasion, I venture to hope that at some future meeting we shall be able to exchange for our own benefit, and for that of the suffering public, the outcome of an extended research in this particular region of ophthalmology.

There now only remains to me the pleasant task of bidding you welcome to the Ophthalmic Section of our great Association, coupled with the expression of an earnest desire that the work which lies immediately before us may result in both pleasure and profit to each and all.

AN ADDRESS

DELIVERED AT THE OPENING OF

THE SECTION OF OTOLOGY.

At the Annual Meeting of the British Medical Association, held in Leeds, August, 1889.

By GEORGE P. FIELD, M.R.C.S.,
Aural Surgeon to St. Mary's Hospital.

ON THE TREATMENT OF AURAL EXOSTOSES.

Gentlemen,—It is with mingled feelings of pleasure and responsibility that I find myself once again called upon to occupy the honourable post of President in the Otological Section of the British Medical Association. Naturally I am gratified at this expression of confidence; but if, when chosen to act as your President during the meeting at Liverpool in 1881, I was weighed down with a sense of my insufficiency for the task before me, I am now still more conscious of the inadequateness of my resources, for since that time has not the science of aural surgery reached a far more important position?

Mankind could not fail in olden days to recognise the ear as the organ of sound, but of the minute and complex internal construction of the machine, of its subtle mechanical and physical adaptations to the requirements of the human race, and, last and most important, of the origin and treatment of its ailments, next to nothing, or even worse than naught, was apprehended. Late in the dawn of modern physiological and surgical knowledge

these all remained objects but mistily perceived. Now we behold the whole scene changed; the relations of otology to other departments of medical science have received definition; the connection of apparently isolated phenomena has been manifested; hypotheses have been exchanged for theories, and theories have been substantiated by abundant observation. If simply the steady augmentation of our attendance and of the number of the papers brought before us be considered, we have good reason to congratulate ourselves upon the success of our yearly gatherings; but there is at our meetings one yet more conclusive evidence than the mere length and number of the essays read of the progress that is being made in otology.

"The true test of civilisation," says Emerson, "is not the census, nor the size of cities, nor the crops—no, but the kind of man the country turns out." And we can have no surer criterion of the continually improving status of otological science as represented by this Association than the increasingly suggestive and practical character of the communications submitted for our discussion. Never before have we had so imposing an array of papers, or I think I may safely say, a larger attendance. The actual words that are spoken, and even the very names of the speakers may indeed be forgotten in the lapse of years; but what is here enunciated as the outcome of general experience and careful observation in the exercise of our profession will not be lost, but, corrected or confirmed by the accumulated wisdom of after-ages, will abide for the benefit of mankind at large. The pyramid of truth will still point heavenwards when its patient old-world builders have long been numbered with the dead. The tendency of all modern sciences, and notably, perhaps, of medicine is toward specialism, a division of labour for the general good. In the realm of the healing art, the tyrannic reign of Hippocrates, Galen, Celsus, Pliny, and some few other writers small and great, is now no more. In the democracy that now holds sway in matters medical, it behoves each that has aught of weight to utter in behalf of the common weal to have a voice, whether he be reckoned surgeon, otologist, obstetrician, or general practitioner.

It has been my lot of late, possibly because there is some truth in the saying that each man finds what he looks for, to meet with and to treat a long series of cases of aural exostosis.

The subject of aural exostosis, it is true, is now no longer new to the profession. I believe, however, that, in the circumstances, some short recital of my observations and conclusions with respect to it may prove of interest to you. At the same time, it is with some diffidence that I open this discussion, as I have already written at considerable length on the causes, varieties, and treatment of osseous growths in the ear. I am persuaded that it would be making unnecessary demands on your patience to reiterate much of what I have already laid before the profession in my published papers. My remarks, then, shall be brief and calculated to serve not so much as a digest of the subject in its entirety as to introduce what I am sure will be of considerable profit to myself, the observations and deductions of others in the field of otological science. Moreover, it is well to remember that at such discussions as we are about to enter upon many are usually present who have come, if I may use a familiar expression, to have their say, rather than to sit silently throughout the reading of a long paper. I hope very shortly, therefore, to give them the opportunity of unburdening their souls.

The rarest form of aural exostosis consists simply in a general thickening of the walls of the osseous meatus. In practice the examples of exostosis usually met with are those affecting only a limited area of the meatus. We may take it, I think, as pretty well established that their causation is some local source of irritation of the ear—active in the instance of the rapidly-growing pedunculate forms, and slight but long continued in that of the rarer and slowly-developed ivory-like tumours. There are certainly as yet no conclusive data for the supposition that syphilis, scrofula, gout, or rheumatism influences their production, nor does heredity appear to have any special determining cause.

I was first induced to enunciate the opinion that these growths are most probably, in many instances, due to the irritation of the ear by salt water, introduced repeatedly during a long course of sea baths, by the singularity of the fact that four of my patients, who for protracted periods used to bathe together on the south coast of Ireland, had each to be operated on for double ivory exostosis.

I may add, that I have met with numerous subsequent exemplifications of the correctness of my original view. In common with other aurists, I have found the occurrence of an exostosis among hospital patients to be an almost unique phenomenon, and it is difficult to avoid the surmise that these persons owe their exemption chiefly to the rarity with which they expose their ears to the ingress of water—their ablutions, as a rule, being scanty. In connection with the etiology of aural exostosis, it is noteworthy that among women, whose constitution and mode of life perhaps renders them more obnoxious to active inflammatory disease, soft growths with discharge are much more common than among men; whereas, it is almost invariably one's male patients that are the subjects of ivory exostosis.

Whatever the apparent exciting cause of the growth, the practitioner's first duty is obviously to endeavour to ascertain the same, and to remove it if still existent. He has next, and this is a most important matter, to consider the question of operation—whether it be necessary at all, and, if so, how soon it should be undertaken. Some authors have recommended a "masterly inactivity" until the exostosis has attained its full development. My experience is that it is far better to operate whilst there is room left to guide the drill, should that be required. The danger and difficulty of operating when the ear is completely occluded are very great. Dr. Mackesy, my first patient, was stone deaf from complete closure of each meatus, and the making of a passage was effected only after several hours and many operations, as, being present to-day, he can himself inform you. There are cases in which the only advice that can be given is "Defer no time; delays have dangerous ends." But with one of my patients expostulation was fruitless: "I am too busy," was the reply I got, "to be operated on just now," and in the midst of his business a cerebral abscess, due to his neglected ear, carried him off before I had time to complete a journey from the country to London, when summoned by telegraph to see him.

As regards the operative treatment of exostoses, much that is almost contradictory has been promulgated, and for this reason: the operator has not always taken the precaution, before proclaiming the success of his methods, to ascertain that the growth he has extirpated by a few seconds' application of the *écraseur*, or a slight wrench of the dentist's forceps, with perhaps a dozen or two preliminary revolutions of the drill, is actually the hard and ivory-like body that he has fondly imagined it to be. It may be permitted to me here to remark that the successful stalking of a tame deer, even without weapons of precision, is not usually fraught with superabundant difficulties.

As a matter of fact, the destruction of one of the intensely hard broad-based aural exostoses, or hyperostoses, apart from the exercise of considerable patience and a variety of precautions, and the employment of special measures, is an undertaking at once difficult, tedious, and uncertain.

In the treatment of a now exceedingly numerous series of these growths I have found the employment of the dental engine a uniformly satisfactory measure, on the score not only of ease of application and economy of time (I now rarely take more than twenty minutes for one ear), but also of after-results. In my experience the dental engine is more under control when worked by the foot than by means of electricity.

Much has been written in favour of mallet and chisel rather than the drill for the removal of aural exostoses. With all due admiration for those that can efficiently use them, I cannot but regard these instruments as more likely, even with the adoption of every available precaution, to cause injury to patients than the drill.

I have operated on several patients where the bone has completely blocked up the meatus; in one last month, a gentleman in the Indian Civil Service had been deaf for some years from a growth of bone deeply seated, which entirely blocked up the auditory canal. I used the drill most satisfactorily. In such cases the mallet and chisel would be worse than useless, for I feel certain it would be impossible to operate in such a way; but with the drill, on the contrary, I have found little or no difficulty in making an aperture sufficiently large for the passage of sound, or of pus should an abscess occur in the drum. When the osseous growth is deeply seated great caution, I need hardly say, is absolutely necessary. For the past eight years I have been in the habit of operating for double exostoses at one sitting; formerly I took one ear at a time. Greater experience, together with a more rapid mode of procedure, enables me to say that this is far better, especially for the patient, who naturally dreads a second operation. My cases to the present time without exception have done well, and this I attribute in a great measure to my practice of always insisting on absolute rest for some days, and never permitting a patient to leave the house under a week, and so as far as possible avoiding cold.

One curious point with regard to these operations is that in the majority of patients there is little or no pain felt afterwards; whilst, on the other hand, in some few cases very great pain is experienced subsequently, and it may be present in one or both ears; luckily the latter is rare, and I am unable to account for the suffering of some patients and the complete absence of it in others.

Even the most skilled manipulators of the mallet and chisel must, I think, admit that it is exceedingly difficult to make sure, by their means, of removing the apices of two or more exostoses within one meatus. This, however, must, I find, be accomplished in order to secure the patient immunity from a repetition of his troubles; and it can be readily and effectually accomplished by the use of the drill. In one of my earlier cases of multiple exostosis, the largest exostosis only was removed, and four years later the others had so increased in size as to make a second operation indispensable; so that I have found in multiple exostosis it is necessary to drill the apices of all, and no further trouble will result. The arrest of the growth by drilling is well illustrated by the case of our colleague, Dr. Mackesy, who can personally testify to you that after the lapse of nearly twelve years since he was operated on, he can hear as well as ever. I may here remark that one of my colleagues at St. Mary's, who was present at this operation, suggested that I should cut through the auricle and turn it forwards on to the face, and thus get nearer to, and have a better view of, the exostoses. I did not deem it necessary then, nor have I seen any sufficient reason since, for resorting to so heroic a measure.

Gentlemen, I have to thank you for the attention with which you have favoured me. I might add to my remarks, but feel that having now already entered at considerable length upon the subject of our discussion, I can with as much propriety as confidence commit it to the care of the assemblage of gifted and experienced aurists whom it is my gratification to be associated with to-day.

A DISCUSSION ON THE PROGNOSIS OF CASES OF ALBUMINURIA WITH SPECIAL REFERENCE TO LIFE ASSURANCE.

In the Section of Medicine at the Annual Meeting of the British Medical Association, held in Leeds, August, 1889.

I.—F. W. PAVY, M.D., LL.D., F.R.S.,
Physician, Guy's Hospital.

THE title of this communication is not my own framing. It was handed to me with the request that I would introduce the subject for discussion by the members of the Association at the present meeting. It stands as evidence of a new departure, the traditional notion being that the presence of albumen in the urine should be regarded without further question as excluding the case from fitness for acceptance by life insurance companies.

Reference to works on the principles of guidance for the medical selection of lives for insurance, gives in unequivocal terms albuminous urine as a ground for rejection. In former times, however, the urine was not subjected to analysis as a part of the examination of a candidate for assurance in the frequent manner it is now.

Brinton, writing in 1856, says with respect to the urinary apparatus: "Careful inquiry will often give us so healthy a history of its function as to allow us to dispense with all further examination, not only of the organs themselves but even of their secretion. It is only where gout, scarlatina, dropsy, or some other disease or appearance of a like suspicious character specially directs our research towards these structures that we need alarm or annoy our subject of examination by insisting on any further inquiry."

Later on Sir E. Sieveking, in 1882, contends that as no medical man reports on a case of life assurance without examining the thorax, so no report for life insurance ought to be considered complete without a definite statement as to the condition of the urine after examination by the physician, and it is scarcely necessary, he says, to insist upon the necessity of rejection if albumen is found, and is persistently present. Under the more frequent examination of the urine that has been practised as a matter of routine in connection with life assurance combined with the systematic examination that is frequently adopted as a preliminary to selection for employment in the public services, and the common procedure of now including the examination of the urine in the clinical investigation of a case whether the symptoms suggest the requirement or not, the knowledge has been acquired that albumen is often found where there is nothing in the state of health to lead to a suspicion of its existence. Thus, through the information that has been gained as a result of the increased observation occurring, an advance has been made sufficient to give the question before the meeting the position of being an appropriate one for discussion, and the gathered experience of the profession here represented cannot fail to be of service in helping to a right settlement of the matter.

Put plainly, the points upon which discussion is invited are: Is it to be considered or not that there are cases of albuminuria which admit of being regarded as eligible for life insurance; and, if so, how are these cases to be distinguished with the requisite confidence from those which are to be looked upon as of a serious nature? The question lies between albuminuria as a functional aberration which is now admitted to exist, and albuminuria associated with structural disease.

Albuminuria sometimes occurs as a transient phenomenon. Certain conditions of a passing nature are recognised as sometimes productive of albuminuria which disappears with the removal of the condition. If the condition is a morbid one the albuminuria partakes of the significance of the state that has given rise to it, and the consideration consequently becomes merged into that of the exciting cause upon the degree of importance of which the prospect to be looked for will depend. There are other conditions in themselves not to be spoken of as morbid, but constituting only ordinary conditions of life which, from the evidence of recorded observation, may prove productive of albuminuria. An unusual susceptibility to influence may exist or the condition may be carried beyond the ordinary degree of tolerating power. Forced exercise is mentioned as one condition. In the case of Weston, the great American pedestrian, the production of an albuminous state of the urine upon one occasion occurred under my own observation. It was with his first pedestrian feat in this country, in which he undertook to walk 115 miles in twenty-four consecutive hours. The state of the atmosphere was against him, and he was much distressed by his performance. The urine passed an hour after the finish was albuminous, and contained hyaline and granular casts of tubules unaccompanied with blood corpuscles. Twelve hours later it was found to have resumed its normal condition. Severe mental strain as with candidates at examinations is enumerated as another source of temporary albuminuria; immersion of the body in cold water another. Dr. Barnes says: "When physician to the Dreadnought Hospital, I saw several cases of transient albuminuria from sudden immersion in cold water." Further, under certain circumstances, the ingestion of food may constitute a determining agency. But transient albuminuria need not detain us. It is sufficient to find that the case is only of a transient nature, and, all other circumstances being favourable, it may be disposed of by regarding the prospects as of an ordinary character; at least, such is the view I should myself take.

It is where the albuminuria is not of this transient kind that we encounter a more difficult question to deal with, and my own experience would suggest that it will be convenient to group the cases under three heads. It appears to me that discussion will be facilitated and the matter made clearer by adopting such a course.

The three groups are: (1) cases in which traces only of albumen are observed; (2) cases in which a notable amount of albumen exists, and is always present; (3) cases in which a notable amount of albumen is found at one period of the twenty-four hours, and none at another, or, in other words, cases which possess a cyclic character.

Before speaking of these groups, it must be stated that in every case as a first consideration there must be an absence of all the elements, apart from the presence of albumen, of Bright's disease to justify the question of a favourable view being entertained. The albuminuria must constitute the only factor present to admit of the case being regarded as an open one for consideration. It is

necessarily understood that the mode of testing is such as to afford an infallible indication to start upon.

A careful survey of all the collateral circumstances is therefore called for, and these are the points to which attention requires to be given: whether there is anything in the family or personal history suggestive of the existence of renal disease. It is known that Bright's disease occasionally runs in families. The family of a former peer, bearing a title which has now become extinct, has furnished a striking instance of this. Is there a history of antecedent nephritis, gout, lead poisoning, or conditions that would lead to lardaceous disease? Is the age such as to favour the presumption of organic disease? Whilst simple functional derangements are common in early life, structural alteration becomes more common as a source of deviations from the ordinary state in proportion as age advances. Has there been the slightest evidence of œdema, and is there any unnatural pallor? The question of persistent headache, vertigo, and any kind of fit must be inquired into. Is there impaired or disordered vision? If so, by ophthalmoscopic examination it must be ascertained whether the changes in the retina and optic disc belonging to Bright's disease are discernible.

Does the examination of the cardio-vascular system reveal by such signs as hardness of pulse, thickened artery, undue cardiac impulse, accentuation of the aortic second sound, and reduplication of the first sound at the apex the existence of high arterial tension? Has there been anything of the nature of albuminuria, dyspnœa, or palpitation?

A frequent feature of renal disease is anorexia, amounting, it may be, to an actual aversion to food, especially meat, and there may be with it nausea, vomiting, and a disposition to diarrhœa. Another feature is a disposition to inflammation of the serous membranes; but should these conditions exist, the case is scarcely likely to allow a doubt to prevail as to the manner it should be dealt with in relation to life insurance.

The state of the urine beyond the presence of albumen will require attention. An occasional large quantity with low specific gravity is not a matter of import, the permissible inference being that a nerve, or some other temporary state, has given rise to it. As an habitual occurrence, however, it may possess great significance, and will suffice to excite suspicion of grave disease. An examination microscopically will suggest itself as absolutely indispensable. No opinion, unless other circumstances are sufficient by themselves to lead to an adverse one, should be given without it. Blood corpuscles will prompt delay and further inquiry. Casts of renal tubules may be spoken of as standing prohibitory, but the absence, on the other hand, of casts does not imply the non-existence of renal disease; our task would be much lightened if it did. Experience, indeed, is not very rarely supplying instances where the diagnosis of Bright's disease is permitted, and no casts are at the time to be found in the urine. It must not be omitted to be borne in mind that casts are liable exceptionally to be come across derived from the seminal tubules. They closely resemble renal casts with a very transparent character. They may be found accompanied or unaccompanied by spermatozoa. Recently, in a case where advice was sought upon the ground of spermatic trouble, I observed them in several specimens passed at distant periods. There was nothing besides to lead to the suspicion of renal disease; but, had there been, they might easily have been taken as affording supporting evidence. In another case there actually had been recurring attacks of nephritis associated with tonsillitis, put down to the effects of taking cold. The case was, therefore, a complicated one, but at the time of observation the urine was free from albumen, and the single specimen in which the casts were found also contained spermatozoa.

Such are the points that require to be looked to as a collateral proceeding in framing a conclusion respecting the prospects in a case where albumen has been found in the urine, and attention to them may alone suffice to establish a diagnosis of Bright's disease, where, as may rarely happen, the urine may be observed on testing to give no reaction of albumen.

The first of the enumerated groups is that in which traces only of albumen are present. My own experience leads me to say that it is not to be regarded as a specially remarkable circumstance to find urine containing traces of albumen without the case being such as to justify the conclusion that anything of the nature of renal disease exists. It will be understood that what is comprised under the head of traces of albumen is from the indication afforded by the employment of a delicate mode of testing, but one nevertheless from which the information given is to be regarded as free from fallacy, which some of the tests are open to. With traces of albumen thus found, and with everything else bearing upon the point pronounced to be satisfactory, after a full and careful investigation of the case, I should not consider the prospects invalidated. The granular kidney is the form of renal disease which is especially associated with small amounts of albumen; and what calls, therefore, for most consideration in the investigation of the collateral aspects of the case is attention to the main coincident conditions belonging to this affection, namely, increased quantity of urine, low specific gravity, and morbid changes in the cardio-vascular system.

The second group of cases is that in which a notable amount of albumen exists and is always present. Instances are sometimes come across of the description named where no history of nephritis can be elicited, no casts of tubules discovered, and none of the general symptoms of Bright's disease recognised. I am not prepared to state that a definite opinion can be given about the future in these cases. I have reason to believe there are some which run on without any serious results arising, but I do not consider that medical knowledge is at present in a position to enable us to differentiate these cases from those which may become developed into well-marked Bright's disease. It is not sufficient that there is an absence of casts of tubules and cardio-vascular changes, for frequently in established Bright's disease our examination fails to disclose the presence of casts; and it is not by any means always that we come across evidence of a positive nature from the heart and arteries, notwithstanding there may be sufficient upon other grounds to diagnose the existence of the disease. It would be only in a case that had been under distinct observation for a considerable time, without anything wrong becoming developed, that I would venture to look favourably upon the prospects, and even then I should consider that a decidedly more than ordinary risk existed. Without saying more, I submit these cases for the opinion of others to be expressed upon them.

The third group comprises cases with a notable amount of albumen appearing and disappearing in such a manner as to give the case a cyclic character.

Of these cases I have personally had a somewhat extensive experience, and since grouping and describing them under the head of "cyclic albuminuria," they have been freely and widely discussed in the profession. They are admittedly cases of functional albuminuria, but also something more—namely, functional albuminuria, with a special, sharply defined, and readily noticeable character, which groups them together into an easily recognisable class standing in a distinct position by themselves. Functional albuminuria is the "generic" and cyclic albuminuria a "specific" group contained within it. The distinguishing character belonging to the case is that without evidence from other sources of the existence or pre-existence of renal disease, albumen, under the ordinary course of daily life, is at one period of the day present and at another absent, and that this recurs day after day in exactly the same order. At the period of rising in the morning there is no albumen to be discovered. In an hour or two's time albumen shows itself increasing in quantity for awhile, and then as the day advances declines and becomes usually entirely lost before bedtime is reached. Remaining absent during the night it returns after rising the next day, and subsequently follows the same order that had been previously observed. To call the case "cyclic" is simply to express an outwardly observable feature belonging to it, and the condition may run on with its repeated diurnal variation, not only for weeks or months, but also, it can be said, for years, without anything further becoming noticeable.

I have committed myself to a definite opinion with regard to the prospects in these cases, and the opinion I expressed in 1885 is sustained by the experience derived from the extension of time up to the present date and by the additional cases I have seen. It is now about ten years that my attention has been fixed upon the point and that I have made a close study of the subject. Expressing myself upon this foundation, I feel it warrantable to state that with a sufficiently full and careful inquiry it may be ascertained whether the case falls or not into the cyclic functional group, and that, if it does so, a favourable opinion of the future may be given. Speaking with reference to life insurance, the opinion to be given is founded upon the same basis as that which guides to an ordinary medical prognosis. In the latter case, however, it may be allowable to incline more to optimism than in the former, where there is not the outside pecuniary interest placed

at stake upon our opinion as there is when the question of life insurance is involved. The condition existing is not the ordinary one. It may be taken as standing in the position of a border line with a serious outlook on the one side and a favourable one on the other, and everything depends upon whether, by the light of other considerations, it is viewed rightly or not. Under these circumstances, if insurance companies should decide to admit these cases as eligible for acceptance, it is not unreasonable that an additional premium should be demanded to meet the possible contingencies, whether from diagnosis or otherwise, that may arise.

Chemistry has shown that several modifications of albumen exist, and the number has been an increasing one with the recent advances made by research. The usual form met with in renal disease is serum albumen, which is precipitable by mineral and not by the organic acids. It is certainly the exception and not the rule in cases of structural disease of the kidneys to find that anything in the shape of proteid matter is thrown down by the organic acids. In cyclic albuminuria, on the other hand, my experience leads me to say that it is the rule instead of the exception for the addition of an organic acid to be followed by the production of a precipitate. What is usually observed in this class of case is that two kinds of albuminous matter are present—one which, like alkali-albumen and mucin, is precipitated by an organic acid, and the other which corresponds with serum albumen. I submit the question of the chemical nature of the urinary albumens as far as it bears on diagnosis for further elucidation by those taking part in the meeting.

The remark I have in conclusion to make is that the safety of an opinion will depend upon the completeness and carefulness with which the investigation of a case is made. I designedly use the word "investigation," for something more than the kind of examination ordinarily made for life insurance purposes is needed in the class of case that has been referred to.

II.—GEORGE JOHNSON, M.D, F.R.C.P., F.R.S.,
Consulting Physician, King's College Hospital,

IN a book on *Diseases of the Kidney* which I published in 1852, I gave (page 111) the early history of the case of a man (S. G.), aged 23, who, in October, 1846, was admitted into King's College Hospital with acute renal dropsy. In about a month he left the hospital free from dropsy, but with the urine highly albuminous and depositing oily casts and cells. I saw him occasionally during the two years after he left the hospital, when, although the coagulated albumen occupied half the column of urine, his general health remained so good that "he could scarcely be persuaded that he had any serious disease."

After October, 1848, I lost sight of him until October, 1855, when he again came under my care at the hospital. He then stated that during the previous six years he had been serving as steward on board an Antwerp steamer, and had enjoyed excellent health until January of that year (1855), when he was suddenly seized with left hemiplegia, from which he had but partially recovered, the leg being still very weak and the arm nearly powerless. He thought that the attack might have been induced by his having been in the habit of taken a large quantity of whisky.

The urine was then of a light colour, specific gravity 1010, containing one-half albumen, and deposited oily casts and cells. The subsequent history of this case is recorded in the 42nd volume of the *Medico-Chirurgical Transactions*. He died of uræmia in October, 1856, exactly ten years after his first admission with acute renal disease. The paper contains a chromolithograph of one kidney and woodcut illustrations of the various forms of tube casts which were present during the last year of his life. I may add that these casts, which I preserved in diluted wood naphtha (one part in ten), retain their characteristic appearances to the present day.

In the concluding paragraph of that paper I make the following statement (p. 164): "It is a well-known fact that patients who have constantly a large amount of albumen in the urine may live on for months, and even for years, without any serious impairment of their general health." The paper in question was published thirty years ago, and the case of S. G. had been under my observation for ten years before that. I have referred to the history of this case in order to show that for a great number of years I have known, and I have endeavoured to convince the profession, that albumen to a large amount may be constantly present in the urine of men and women and children who are apparently in good health; and as an obvious inference from this, that the urine of every patient, no matter how apparently trivial his ailment, and the urine of every candidate for life assurance, no matter how robust his appearance, should be carefully tested.

Not long since, a gentleman, whose albuminous urine was rendered nearly solid by nitric acid, spoke to me in substance as follows: "I have come to you at the urgent request of my medical attendant, but I am perfectly well, and I want neither advice nor medicine."

Thirty-two years ago I was appointed medical adviser of the Equitable Life Office, an appointment which I held for a period of eighteen years. Soon after my appointment I wished to arrange for testing the urine of every applicant for insurance; but the directors objected that this would cause annoyance and give offence, and they begged that I would test the urine only when I had reason to suspect that something was wrong. I had to submit to their decision, but I told them that the result would be the acceptance of an uncertain number of lives with latent albuminuria.

At the present time no respectable office would accept a proposal without a report as to the character of the urine, and for some years past I have, from time to time, been consulted by numbers of men who, believing themselves to be in good health, have been found to have albuminuria by the medical examiners of insurance offices.

Since the practice of testing the urine in all cases of illness and in all cases of proposed life insurance has become common, the fact that albuminuria may exist in persons apparently in good health has become more generally known, and has formed the subject of numerous essays and papers.

Statistics have been published showing that of a large percentage of persons apparently healthy a perceptible amount of albumen has been found in the urine, and such cases have been designated examples of "functional" and even "physiological albuminuria."

The only use of statistics of this kind is to show the importance of universal urine-testing; a detailed history of the antecedents of a comparatively small number of cases, with a view to ascertain the probable cause of the albuminuria, is of more value than whole columns of figures.

It is notorious that a man with indubitable physical signs of valvular disease of the heart may live for many years entirely free from functional disorder of the circulation and respiration; but such a condition is not designated physiological or functional.

I once examined for life insurance a man whose aortic valves had been injured by a fall from his horse. There was a very loud diastolic murmur, with the characteristic collapsing pulse of aortic incompetence; but so complete was the compensating hypertrophy of the dilated ventricle that the man believed himself to be quite well, and his medical attendant reported that he had "completely recovered from the accident, the noise alone remaining!"

I commend this narrative to the consideration of those who speak and write of "physiological" or "functional" albuminuria.

As the result of numerous and careful observations I am convinced that no albumen exists in normal urine—in other words, that albuminuria is always pathological. The most delicate and entirely trustworthy test for minute quantities of albumen is a saturated solution of picric acid, with the subsequent application of heat. Any opalescence resulting from the addition of picric acid, which is increased and not dissolved by heat, is certainly albumen, except in the very rare case of an immediate separation of uric acid in sufficient amount to render the mixture cloudy. In such cases the crystals of uric acid may be seen with the microscope. Picric acid causes no opalescence in normal urine. It does not precipitate mucin, as has sometimes been asserted; but when combined with acetic or citric acid, the mucin which is precipitated by either of these acids is rendered more conspicuous by the yellow picric acid.

The test for albumen which in delicacy comes nearest to picric acid is nitric acid at the bottom of a column of cold urine. Those practitioners who boil the urine before adding nitric acid must often fail to detect a trace of albumen which might readily be detected by nitric acid in the cold urine. A slight trace of albumen is apt to be decomposed by the addition of nitric acid to the boiling urine.

A comparison of the nitric and picric acid tests may most satisfactorily be made by gradually diluting a specimen of albuminous urine. At a certain stage of dilution it will be found that while picric acid gives an instantaneous opalescence, the nitric acid test forms an opalescence at the junction of the two liquids only after some minutes. Then, in urine yet further diluted, the picric acid,

with the subsequent application of heat, gives a decided indication of albumen which the most careful testing with nitric acid fails to show.

I have so often compared these two tests that I can now tell at once whether a trace of albumen, which is clearly shown by picric acid, is so small that nitric acid either fails to indicate it or it does so only doubtfully after the mixed liquids have been allowed to stand for some minutes.

Another important use of picric acid is in estimating the amount of albumen by Esbach's simple but accurate quantitative process. Again, picric acid is a more delicate and trustworthy test for peptones than Fehling's solution, the precipitated peptones being redissolved by heat below the boiling point. It is often stated that peptonuria is of common occurrence. As to this I may say that in carefully testing many hundred specimens of urine I have never met with peptones, except in small quantity, associated with an abundance of albumen.

The separation of peptones from albumen is easily effected by passing the boiling mixture of urine and picric acid through a previously warmed filter. The coagulated albumen remains on the filter while the dissolved peptones pass through and are precipitated on cooling.

Once more, the picric acid and potash test for glucose, while it is equal to any other for accuracy of result, surpasses all others by its readiness of application and facility of working. One especial advantage over the copper test is that the presence of albumen in no wise interferes with the action of the picric acid and potash quantitative test for sugar. In several instances I have known the reducing action of uric acid and urates upon Fehling's solution mistaken for an indication of glucose.

It has been publicly suggested that I am disposed to overestimate the evil results of albuminuria; I therefore venture to give an extract from my *Lectures on Bright's Disease* (p. 42), published in 1873, an extract which expresses the views of prognosis which I have held and taught for the last thirty years:

"Acute Bright's disease has a tendency to terminate in complete recovery. It is essentially a curable disease, as much so as acute bronchitis or acute pneumonia. The earlier the patient comes under treatment the better is his prospect of recovery; and, on the other hand, the longer the symptoms have continued without signs of amendment the more grave does the prognosis become. The prognosis is, on the whole, more favourable in the young and middle-aged than in those more advanced in years; but the disease may prove mild and tractable even in very aged persons. For obvious reasons, the prospect of recovery is better in the case of those who can avoid exposure to cold and other injurious influences than when the patient's circumstances are less favourable. In favourable cases a copious secretion of urine, of comparatively low specific gravity and of pale colour, with a diminishing amount of albumen and decrease of dropsy, are amongst the earliest signs of amendment. Albuminuria is usually the last symptom to disappear. The time of its disappearance varies in different cases of recovery from a few days to many months. If the urine continue albuminous for more than six months, it becomes more and more doubtful whether it will ever cease to be so; but I have seen cases of complete recovery after albuminuria had continued for one, two, and even three years."

On looking over my private case books, I find the history of two cases of acute nephritis in which the albuminuria had been more or less constantly, though often intermittingly, present for five years before its final disappearance; and I have published one case in which complete recovery occurred after seven years of persistent albuminuria consequent on scarlatinal nephritis.[1]

It is important to bear in mind that cases of recovery from acute nephritis often pass through a stage of intermittent albuminuria on the way to complete convalescence. In fact, the only exceptions to this rule are cases of quick recovery from an acute attack while the patient is still in bed and restricted to liquid food. If, on the other hand, the albumen persists while the patient is walking about and taking more or less solid food, it will often be found that, for a variable period, the morning urine is free from albumen, while that which is secreted after food and exercise continues to be more or less albuminous.

Here, I may remark, that it has happened to me on several occasions to be consulted by patients who, the morning urine alone having been tested, had been declared free from an acute attack, when the subsequent history has shown that the disease had persisted and ultimately resulted in structural degeneration of the kidneys.

Another point of practical importance is that for an indefinite period after recovery from an acute attack there is a liability to a recurrence of the albuminuria, sometimes without apparent cause, and without obvious derangement of the general health; but in other cases exposure to cold or over-fatigue or mental anxiety would seem to have been the exciting cause. The urine of convalescents should, therefore, be tested occasionally for months and even for years; and for this purpose I teach patients, or, in the case of children, some member of the family, to test the urine from time to time, and to apply to me only in case of a recurrence of the albuminuria.

The result of my experience is that most cases of albuminuria in the apparently healthy, whether intermitting or persistent, may, on careful inquiry, be traced back to some probable exciting cause, and a very large proportion of cases will be found to have had their origin in an attack of acute nephritis.

This has been the result of my experience for many years past. At the present time I have under observation a considerable number of cases of so-called intermittent albuminuria, and taking from my notebooks twenty successive typical cases, I find that in no less than fourteen out of the number there is a distinct history of an antecedent acute nephritis; the cause of the acute renal attack being in five cases scarlet fever, in four exposure to cold and wet, in two repeated cold bathing, in one diphtheria, in one rheumatic fever, and, lastly, in one, sewage poisoning. Of the six cases without a history of a previous acute attack, in two repeated cold bathing, and in four chronic dyspepsia, was the probable exciting cause. The age of these twenty patients ranges from 7 years to 86.

I have seen several cases of temporary albuminuria the result of the fatigue and anxiety of a prolonged examination for the Civil Service. The last case of this kind was that of a youth of 18 years, seen soon after an examination of six hours daily for thirteen days. In that case the albumen disappeared in less than a month after the hard work of the examination was over. In other cases that I have seen the condition of the urine and the physical signs of cardiac hypertrophy, with high arterial tension, indicated the existence of a chronic degeneration of the kidneys, which had been latent until it was brought to light by the Civil Service medical examiner.

Then, as regards the prognosis in this class of cases, the more copious the albumen and the longer it has persisted the less is the probability that it will ultimately be got rid of; on the other hand, the absence of albumen at any period of the twenty-four hours, the urine being of normal colour, quantity, and specific gravity, and quite free from tube-casts, warrants the conclusion that there is no serious structural change in the kidney, and justifies a hopeful prognosis, if the patient can be induced to submit for a sufficient length of time to the prescribed regimen, dietetic, medicinal, and hygienic. On the other hand, a restless and unruly patient who, in spite of advice and warning, commits errors in diet and exposes himself to cold and wet, will certainly aggravate his malady. The comparatively mild condition of intermittent becomes a persistent albuminuria, and ultimately—though it may be after many years—an incurable degeneration of the kidney is the result.

Here I would repeat a warning which I have often given before, namely, that we must not allow ourselves to be misled into giving a too favourable prognosis by the absence of all indications of disorder of the general health. If the absence of indications of disordered health, apart from the condition of the urine, is held to constitute the case one of physiological or functional albuminuria, I can affirm from a not inconsiderable experience that the greatest possible amount of albumen in the urine, persisting for months and even for years, might in some cases be looked upon as physiological. The case whose history I gave at the commencement of this paper is an example of this, and at the present time I have under my observation many similar cases.

It has been proved by abundant experience that the mere fact of albumen, even in large amount, filtering through the walls of the Malpighian capillaries, does not seriously, if at all, interfere with the proper excretory function of the convoluted tubes. But the long-continued percolation of albumen through the walls of the capillaries may be associated with a physical change in the walls of the vessels which renders them permanently incapable of preventing the continued escape of albumen. I believe that in all cases of long-continued albuminuria the Malpighian capillaries

[1] JOURNAL, February 2nd, 1889.

have undergone a demonstrable structural change. After death with albuminuria of quite recent occurrence and of short duration these capillaries are visibly altered. Their walls are more opaque than in the normal state, and their surface appears rough and finely granular, as if from the coagulation upon them of some albumino-fibrinous materials which during life have transuded through their walls. The nuclei in the walls are either increased in number or they are rendered unusually conspicuous. By these physical changes the filtering action of the vessels may be so impaired as to occasion a permanent escape of albumen with the urine; and in consequence of the long-continued infiltration of albumen amongst the gland cells of the convoluted tubes, these structures may by degrees become so disorganised as to be incapable of discharging their excretory function.

The practical question to be determined in cases of persistent albuminuria with urine of normal colour and specific gravity, and free from tube-casts, is not whether the case is one of Bright's disease, the term "Bright's disease" being one respecting the definition of which there is much disagreement; but the vitally important question is what will be the ultimate result of an albuminuria of several years' duration with, as yet, unimpaired general health, and, so far as we can judge, no other structural alteration of the kidney than the physical changes in the walls of the Malpighian capillaries to which I have just now referred? To give a trustworthy answer to this question requires a long and extensive experience. I have referred to one case of recovery after seven years of persistent albuminuria. I have seen a considerable number of cases in which albuminuria has continued from ten to fifteen years, and in one case for twenty years, without other evidence of disease. Some of these cases have passed from under my observation, and I know not what may have been the ultimate result; but I have seen one case fatal after twenty years of persistent albuminuria and one after thirty years; and in neither of these cases was the general health seriously impaired until within two years of the fatal termination of the disease. I have published a brief history of these two cases in the JOURNAL of February 2nd, 1889.

With regard to the question of albuminuria and life assurance, no medical officer, I suppose, would advise that a proposed assurer with a decided trace of albumen in the urine should be accepted at the ordinary rate of premium. Such a condition, even in a careful and prudent man, must involve some extra risk, and no office can ensure care and prudence. Whether an albuminuric should be accepted on any terms can be determined only by a careful inquiry into the particular history of each case.

It goes without saying that such unquestionable signs of advanced organic disease as albuminuric retinitis, and hypertrophy of the left ventricle with high arterial tension, would absolutely exclude the applicant.

Then with regard to the presence or absence of tube-casts, I venture to remark that while small hyaline and epithelial casts are commonly present in the albuminous urine of patients whose speedy recovery may confidently be predicted, on the other hand, in the advanced stages of the contracted granular kidney (the so-called cirrhotic kidney), the colourless urine of low specific gravity often contains but a small amount of albumen, while the characteristic large granular and large hyaline casts may be absent for days, and even for many consecutive weeks.

In searching for tube-casts when the sediment is scanty, it is not enough to put a drop of the sediment between two flat pieces of glass, but about four ounces of the urine having been allowed to stand for some hours in a conical glass, some drops of the sediment taken up by a pipette are placed in a shallow cell over which a thin glass is then placed, and the examination made with a power of about 200 diameters.

The following are the main points which in this and in previous publications on the same subject I have endeavoured to establish:

1. The presence of albumen in the urine, though small in amount and occasionally intermittent, is always pathological.

2. The practice of testing the urine in all cases of ailments, even the most trivial—the importance of which I have for many years past insisted upon—has led to the detection of albuminuria in many youths and adolescents, who are especially liable to be exposed to the commonest of its exciting causes, namely, cold and wet and over-fatigue, and who have not lived long enough for the ultimate evil results of a neglected albuminuria to have become developed.

3. The albuminuria, whether intermittent or persistent, of persons apparently in good health has no such special features as to require it to be designated by such misleading terms as "physiological," "functional," "cyclical," and "the albuminuria of adolescents." The last term is especially inappropriate, since the condition is of more common occurrence in both sexes and at all periods of life, from childhood to extreme old age.

4. In almost every instance these cases of albuminuria may, by a careful inquiry, be traced back to some recognised exciting cause.

5. Nearly all cases of acute nephritis pass through the stage of intermittent albuminuria in their progress towards convalescence, and, on the other hand, the majority of cases of intermittent albuminuria may be traced back to a more or less remote attack of acute nephritis.

6. While, on the other hand, intermittent albuminuria—even though it may have existed for years—may be looked upon as a curable condition if only its exciting causes can be ascertained, avoided, and counteracted by suitable dietetic, medicinal, and hygienic means, on the other hand, the neglect of such means may convert an intermittent into a persistent albuminuria; and a persistent albuminuria, although for many years it may be unattended by symptoms of disordered health, ultimately results in a fatal degeneration of the kidneys.

7. Since it is notorious that albumen, even to a very large amount, may exist in the urine of persons who are apparently in perfect health, it is obvious that the urine of every patient, no matter how apparently trivial his ailment, and the urine of every applicant for life assurance, no matter how robust his appearance, should be tested for albumen.

8. For many years past the fact that albumen may be abundantly present at one period of the twenty-four hours and entirely absent at another has been publicly demonstrated, and ought to be generally known. It is, therefore, necessary to test the urine, not only after rest in bed and before breakfast, but also after food and exercise.

III.—R. MAGUIRE, M.D.,

Physician to Out-patients, St. Mary's Hospital.

DR. MAGUIRE said that he had found disorder of circulation in all cases of functional albuminuria. He referred under this term only to cases where the general health was apparently good with the exception of the albuminuria. Such cases were of two kinds. The first exhibited high arterial tension. These cases occurred in persons beyond middle age as well as in the young. They were frequent in those with a family history of Bright's disease. Yet such cases were undoubtedly functional in nature, for the albumen could very easily be made to disappear by suitable treatment. The second class of cases comprised those with a low arterial tension, yet the condition of the pulse was variable and very easily assumed the characters of capillary resistance or "virtual tension." The subjects of this form of albuminuria were of weakly frame, and especially weak circulation. The albumen was essentially cyclic in occurrence, but this was not a characteristic of functional albuminuria alone. It might occur in cases of Bright's disease. The pathology of these two classes of cases was essentially different. In the first class the blood was overloaded with renal excrement, and the kidneys irritated by an effort to remove it; or, in certain cases, the amount of blood impurity might not be in excess of the normal, but the kidneys were especially vulnerable, often as the result of a family tendency. Although the albumen was easily caused to disappear, yet when present at the time of examination for insurance the life should be rejected. In the second class of cases we had stagnant circulation through the kidneys, yet the kidney was clearly a weak part of the body. Such cases, if accepted at all, should be received only at an increased premium. When globulin alone was present the albuminuria was not so serious as when serum albumen was in excess. Yet this did not serve absolutely to distinguish cases of functional from those of organic origin.

IV.—P. H. PYE-SMITH, M.D., F.R.S.,

Physician, Guy's Hospital.

DR. PYE-SMITH said that he believed there was no "physiological" albumen, and that "functional" albuminuria was really pathological for the time being. Admitting that excessive exertion, temporary asphyxia, or external cold might cause temporary albuminuria in apparently healthy persons, it must be remembered that these same conditions also increased albuminuria in cases of undoubted Bright's disease. Again, casts might be absent in very

many specimens of urine in cases of renal cirrhosis, and they might be present in cases of temporary renal congestion. One form of occasional "functional" albuminuria was that which was really a slight form of paroxysmal hæmoglobinuria. He would, for practical purposes of prognosis, compare albuminuria with hæmoptysis. It was always serious, though it did not always indicate organic disease. Even when there were indications of structural lesion of the kidneys our prognosis might be good, for Bright's disease, like phthisis, was a curable disease. Even when believed to be "functional" it was better to defer the application for assurance than to attempt to determine what was often an insoluble question.

V.—W. T. GAIRDNER, M.D.,

Professor of Physic in the University of Glasgow.

DR. GAIRDNER said that for a good many years he had been accustomed to examine the urine personally in every case of a proposal for life insurance, besides having brought under his notice from day to day the results of very numerous observations made in hospital upon a great number of miscellaneous cases in which the urine was examined as a matter of routine by the assistants. The results of this inquiry he did not propose to submit in detail, nor was he, indeed, able to do so; but the result of it all, taken in connection with all that he had seen, or heard, or read upon the general subject, was that, when the ordinary or old tests of serum albumen were used, the occurrence of albumen in cases otherwise wholly unexceptionable from the view of life insurance was so far from universal as to make the term "physiological albuminuria" one in all probability misleading, and therefore undesirable to use. Dr. Pavy had alluded to the case of Weston, a man presumably healthy and well organised, who, in walking for a wager, had albumen in his urine. The just inference from that case, taken by itself, would not be that the albuminuria was physiological, but that walking for a wager after Weston's method was unphysiological. And so with the cases reported by Sir Andrew Clark, showing that a large proportion of youths cramming for the examinations of the Civil Service were at least temporarily albuminuric. It is not necessary to maintain that the albumen in these persons always indicates serious disease, but it certainly shows that cramming for examination is not physiological. The term "functional albuminuria" is not open to the same objections, regard being had always to the difficulty of distinguishing, either during life or after death, what is functional and what is structural. The result of the whole in Dr. Gairdner's mind is that, while he freely admits a functional albuminuria (subject to the qualification just alluded to), he is altogether sceptical, or more than sceptical, as to physiological albuminuria. Considering this practically in relation to life insurance, Dr. Gairdner said that he could not find a more just or accurate expression for his opinion than to say that serum albumen, when present in the urine even casually, must be regarded as a danger signal. As to the amount of danger implied in the fact in particular cases, he was neither pessimistic nor optimistic. He was able in a general way to accept Dr. Pavy's conclusions both as to the significance of the fact and the other circumstances to be taken into account in forming a prognosis. The only result that inevitably follows, or should follow, from ascertaining casually the fact of albuminuria in a case otherwise acceptable, is that judgment must be postponed for a period varying, according to circumstances, from weeks to months. It may be that the circumstances are such as to show, or to render it highly probable, that the occurrence is a purely casual and almost accidental one. It may be, on the other hand, that a long period of probation may be required, or that the danger is shown after a time to be such as to put an end to the negotiations. Having regard to the comfort as well as the real interest of the proposer, Dr. Gairdner has frequently thought it right to communicate, privately or otherwise, with the ordinary medical attendant (if attainable), indicating to the proposer at the same time that there is a flaw, but it may be quite a slight or temporary one, and that it requires to be investigated in the interest of the office, which is also in the end his own interest, as his medical man will explain to him.

VI.—A. RABAGLIATI, M.D.,

Honorary Surgeon Bradford Infirmary.

DR. RABAGLIATI detailed several cases of albuminuria in which application had been made for life insurance policies. In the close of his remarks, he said he attached importance to the specific gravity of the urine; if above 1020 it suggested commencing lithæmic nephritis; if below 1010 it suggested further advance of the disease. Then he looked for the other marks of gout; if present, he thought the case more grave. On the whole, he could not support the opinion of those who were disposed to take a favourable view of cases in which even a trace of albumen was present. If casts were present (and the search for them was much aided by the use of stains), he thought rejection necessary. Coming to the practical question, what amount of advance in rating was safe to the office and fair to the assured, he referred to a report published by the Scottish Widows' Fund, in which 3,246 deaths were included. Of these, 255, or 7.8 per cent., were due to "urinary diseases." Of these, again, rather more than one-half (4.3 per cent.) were due to "disease of kidneys and nephritis." He had compared this with the deaths among adult males in a mixed population like that of Bradford. There, among 3,317 deaths of males above 15 years of age, only 3.4 per cent. were returned as due to urinary diseases. Without laying too much stress on this, he thought it showed a *primâ facie* case for the view that the well-to-do who applied for life insurance suffered more from urinary diseases than the ordinary population—mainly, he thought, because well-to-do people ate and drank too much. Recently the Scottish Widows' Fund found the average age at death of albuminurics was 57 years. Dr. Rabagliati therefore proposed that, where only a trace of albumen was present, without casts and with no other definite lesion, the life might be received as one having an expectation of about 57 years. This would mean rating up young lives moderately in which albumen was present; rating up lives under 40; leaving and rejecting those absolutely which were over 40 or 45.

VII.—C. R. DRYSDALE, M.D.,

Senior Physician Metropolitan Free Hospital.

IT is only of late years that it has been possible to come to any clear conclusion as to the prognosis of albuminuria. At first, after the masterly papers of Dr. Bright, written in 1827, and for many —very many—years after that date, it was, I think, a matter of professional faith that there was almost as little hope for a patient in whom the presence of albumen in the urine had been recognised as for a consumptive patient. But gradually it was noticed that this prognosis was often quite contrary to what was ascertained by even the most careless observers, until latterly it has been acknowledged that a great number of patients who have had much albuminuria have recovered entirely, and lived quite as long as their neighbours. The present division of the states of the kidney which cause albuminuria is into nephritis, granular degeneration, and lardaceous disease; and it may at once be remarked that when granular degeneration has been ascertained to be present, the prognosis is very gloomy indeed, for although by careful attention to climate, clothing, and diet such a patient may prolong his life, he is likely at any moment to be carried off by some of the numerous complications of this incurable condition of the kidney.

With respect to the disease called lardaceous affection of the kidney, that is not quite of such a gloomy prognosis as granular degeneration, because its causation seems due either to suppuration, which may be removed by surgical treatment; to syphilis, which may be successfully attacked by iodide of potassium, as it is in the later stages of syphilis that this affection of the kidney most frequently appears; or, lastly, to tuberculosis, in which latter case the prognosis is gloomy in the highest degree; for when the disease which causes the lardaceous affection of the kidney has been cured, there is no reason why, in favourable cases, the lardaceous material which has invaded the kidney and given rise to the albuminuria should not be dissolved out, and the organ restored to health. My own observation of albuminuria in constitutional syphilis has shown me that this is by no means rarely the case; and we may therefore say that, if taken in time, syphilitic albuminuria is of favourable prognosis.

Whether ordinary nephritis is likely to afford a favourable prognosis, and to leave the kidney as healthy as before its supervention, depends in a great measure upon the effect the congestion in the acute stage of this malady has upon the connective tissue which surrounds the tubes. In speaking of the prognosis albuminuria, it must be acknowledged that the urine is said to have been rendered temporarily albuminous by the injection of a quantity of the white of eggs when the experimenter was fasting. But it may be said that clinically all the cases of albuminuria seen by the practitioner of medicine are accompanied by

some disease of the kidney, such as congestion, shedding of the epithelium of the tubes, or pouring forth of fibrin by the vessels of the organ.

With regard to the prognosis in cases of simple nephritis, when this resembles bronchial catarrh, and when it arises from scarlatinal poison, or from cold, there is a natural tendency to recovery. But if a case of nephritis continue to run on for four or five months, and exhibits a constantly recurring series of phenomena, such as the presence of albumen and casts in the urine, the prognosis becomes alarming, although by no means desperate. Long-continued hyperæmia, such as that which causes albuminuria in pregnant women, may set up granular degeneration; indeed, this fatal result may be effected in two or three months' time. When acute albuminuria proves fatal after a week or two of illness, or after a month or more, the kidney is of the kind described as the large white kidney. There are, as is now well known since Dr. Grainger Stewart has drawn attention to the fact, a number of conditions which may bring on a slight discharge of albumen in the urine. Such are the albuminuria of fatigue or imperfect nutrition; the prognosis, therefore, of albuminuria in painters is usually gloomy. One point in the prognosis of nephritis concerns the way in which the disease is treated. The *nimia diligentia* is never more to be deprecated than it is in this case. The use of drastic purgatives, repeated hot-air baths, and strong diuretics often converts a simple case into a fatal one. If, on the contrary, the practitioner can only have patience to let the patient lie in a warm bed, and supply him with plenty of skimmed milk and light food, a vast proportion of the cases of nephritis will end in health. The use of cantharides, of blistering in the loins, of blood-letting, and of elaterium and pulvis jalapæ co., should be most restricted, and, in the majority of instances, left out of the treatment entirely. Hot baths and vapour baths should be used cautiously when there are symptoms of uræmia. As a rule, the prognosis is better when as little heroic is attempted as the desire to do something will admit of.

With regard to life assurance, naturally every case coming before the medical officer of a company must be carefully studied, and he must judge whether the patient is suffering from temporary or permanent disease of the kidney. In the latter case the prognosis is bad; in the former delay is advisable before coming to any definite conclusion.

VIII.—R. SAUNDBY, M.D., F.R.C.P.,
Physician Birmingham General Hospital.

Dr. Saundby said he was a firm believer in the innocent character of albuminuria in certain cases, and therefore would gladly see some change in the present practice of the majority of insurance companies, if it could be brought about with due regard to their interests. He thought medical examiners were fully justified in rejecting all cases of albuminuria possessing any of the following features: (1) a history of Bright's disease in a parent or in any two near relatives; (2) a personal history of past acute nephritis; (3) a history of plumbism or gout; (4) cardiac hypertrophy, hard pulse, and frequent nocturnal micturition, or retinal changes; (5) where the age was over 40 years; (6) where the urine deposited casts; (7) where there was chronic dyspepsia. The type of case which he thought might unquestionably be accepted was that in which the albuminuria disappeared when the patient resumed the recumbent position, and in consequence was absent from the urine passed on getting out of bed in the morning. This usually occurred in overgrown, loosely-made people, but they were insurable lives. He thought Dr. Pollock, in his recent work (*Medical Handbook of Life Assurance*) went further than was prudent in accepting (see paragraph 269) lives with albuminuria due to an antecedent nephritis. On the other hand, he did not think Dr. Fraser, in his recent memorandum for the use of the Standard Insurance Company, went far enough. He deprecated very strongly frequent re-examinations at short intervals; they were generally useless, and consequently disappointing to the applicant. It was much kinder to defer the case for six months at once. With respect to tests, he was convinced that nitric acid often failed to disclose the presence of small quantities of albumen, and the superiority of acetic acid (dilute acetic acid in his opinion was the best) for this purpose had been fully admitted by the principal authorities on the subject. He believed that other innocuous forms of albuminuria existed, but they were at present badly defined, and their prognosis at least unascertained. He should be content if the insurability of cases of mechanical albuminuria was admitted, subject to the limitations suggested. At any rate, he felt sure that it was a step that would not have to be retraced.

He had only referred to the eligibility of lives for acceptance at ordinary rates. He had not alluded to insurances for short terms or where the premiums were paid up in a very limited period; such plans were adapted to risky lives, and a clever medical examiner and an actuary together might calculate such risks with success. But it seemed to him essentially speculative business, and a proceeding upon which it was impossible to formulate any general rules.

IX.—W. J. TYSON, M.D.,
Medical Officer Folkestone Hospital.

Dr. Tyson said that his remarks referred to those cases of albuminuria described by Dr. Pavy in his paper under the head of "persistent albuminuria," in which the albumen was demonstrable by heat and nitric acid. The great popular knowledge of the presence of albumen was causing a needless amount of anxiety, and this knowledge seriously affected the minds of many patients. Two cases were quoted, one in which the patient was constantly testing his own urine by nitric acid, and became almost melancholic, and the other in which the man was mentally much disturbed by his albuminuric knowledge. Both the above showed no other symptoms of kidney disease. The first case is now quite well, but the second cannot be so pronounced at present as sufficient time has not elapsed. Another point referred to was the small number of deaths that occurred from Bright's disease when compared with the comparatively large number of cases of albuminuria met with in practice. This appears to support the view, at any rate indirectly, that a large number of cases of the above recover. Again, there is the good health which cases under consideration enjoy whilst the albumen is still present. Lastly, the speaker referred to the suggestions which he had made to the Collective Investigation Committee to take up the subjects of prognosis in cases of valvular disease of the heart, and also to the one of prognosis in albumen. The former had been carried out successfully, and a more correct view was now taken of such cases; the latter remains to be done. This can be best carried out by those who have watched cases carefully for years, and premature recording of albuminuric cases as cured is to be deprecated.

X.—ALEX. HAIG, M.D.,
Physician Royal Hospital for Women and Children, Waterloo Road.

The temporary albuminuria of Mr. Weston was accompanied by pulse tension, which was not high but was relatively higher than during all the rest of his exertions, when albumen was absent, as shown in Dr. Mahomed's paper on the water of Mr. Weston as well as in pulse traces made by Dr. Mahomed at the time, and now in the possession of the speaker.

XI.—W. P. HERRINGHAM, M.D.,
Physician West London Hospital.

Dr. Herringham mentioned that he knew a case of a man, now 40 years of age, who, when a boy, had several attacks of bleeding from the kidney, probably paroxysmal hæmaturia, and for several years thereafter albumen. He was now, and had been for many years, perfectly free from this. He also referred to another case of a young man who three years ago suffered with paroxysmal hæmaturia, and who at the present time had albuminuria on over-exertion. A third case was that of a man of 60, who, after a mountain walk, had an attack of paroxysmal hæmaturia, and who now had no albuminuria, and was in good health. The first case showed the possibility of recovery from albuminuria after paroxysmal hæmaturia; the second presented the same condition before recovery, and the third exemplified the connection between the albuminuria of over-exertion and paroxysmal hæmaturia.

XII.—GEORGE HARLEY, M.D., F.R.S., F.R.C.P.,
Late Physician University College Hospital.

Dr. George Harley said that a quarter of a century's experience in the treatment of the various kinds of albuminuria had taught him that the specific gravity of the urine was a far more reliable guide to prognosis than either the quantity of the albumen or of tube casts. Although the presence of albumen in the urine was always to be regarded as a pathological sign, and one never to be disregarded, it was not the loss of the

albumen which caused the death of the patients in Bright's disease, but the retention in the blood of the excrementitious urinary salts, the urea, uric acid, oxalic acid, etc. This retention of salts only arose when there was an actual disorganisation of the excretory tissues of the kidneys. Consequently, the albumen found in the urine in cases of hepatic, cardiac, cerebral, and pulmonary albuminuria—from being unassociated with renal structural derangements—did not cause the twenty-four hours' urine as a rule to fall below 1015 of specific gravity, and could thus be distinguished—other things being equal—from the incurable albuminurias of Bright's disease, which from their being accompanied with a retention of the urinary salts, invariably had a much lower specific gravity.

XIII.—J. E. EDDISON, M.D., F.R.C.P.,
Senior Physician, Leeds Infirmary.

DR. EDDISON drew attention to the necessity of remembering that albumen in the urine is a danger signal, and that the mere excretion of albumen, although pathological, is not in itself the cause of fatal results, the real danger being the want of due excretion of the waste products—urea and others. He expressed the opinion that every case referred for report as to insurance, that showed albumen in the urine by ordinary tests, should certainly either be refused or postponed for later examination for six months or a year, and then rejected if the presence of albumen persisted, no matter how apparently otherwise healthy the person examined might be. He objected to the use of the word "functional" in such a connection, if used as implying the absence of any pathological change. A person in whose urine albumen appears cannot be assumed to be free from some pathological change, whether we can detect what the change is or not.

XIV.—J. BARR, M.D.,
Physician, Northern Hospital, Liverpool.

DR. BARR said that it frequently appeared to him that too much attention was directed to albumen in the urine, to the neglect of the other constituents. For his own part he attributed as much importance to the excretion of urea. A case of granular kidney, with no albuminuria, was much more serious than a case of functional albuminuria with a fair proportion of albumen and a proper amount of urea. He held that when there was albumen in the urine the patient was not in perfect health, and consequently should not be accepted by a life assurance company until the albumen disappeared and the causes of it were remedied. The question was not merely the presence of albumen, but the cause of its appearance. The albuminuria is due to mechanical causes, arising from excessive pressure in the Malpighian corpuscles. The amount of urine depends on the velocity of the blood or total amount traversing the kidneys in a given time, while the amount of albumen depends more on the amount of pressure or quantity of blood in the kidneys at any one time. In cases of functional albuminuria it was the circulation rather than the kidneys which was at fault. In these cases there was a weak propulsive power of the heart and deficient vascular tone, the velocity of the blood was diminished, and its static condition increased. The less the velocity and the greater the static condition of the blood the greater would be the amount of albumen. The question of functional albuminuria was largely one of physics, and as such should be studied and treated.

XV.—T. CHURTON, M.D., F.R.C.P.,
Physician, Leeds General Infirmary.

DR. CHURTON said that probably the albumen in nephritis and ordinary albuminuria came from the Malpighian capillaries, in consequence of molecular or so-called functional changes in the endothelium covering them; whereas when the tubular epithelium was diseased, casts or globulin or both were found.

DR. PAVY, in replying to the whole discussion, defended the use of the term functional albuminuria, on the ground of its general convenience.

THE Islington Vestry have decided to adopt the Public Baths and Washhouses Act. It is intended to borrow £50,000, in order to erect three separate bathing and washing establishments in this parish, which, with over 300,000 inhabitants, is the most populous in the United Kingdom.

FIFTY-SEVENTH ANNUAL MEETING
OF THE
BRITISH MEDICAL ASSOCIATION.

Held in LEEDS, August 13th, 14th, 15th, and 16th, 1889.

THIRD GENERAL MEETING OF MEMBERS: THURSDAY, AUGUST 15TH, 1889.

Mr. C. G. WHEELHOUSE, President, in the Chair.

THE third general meeting was held in the Coliseum on Thursday, August 15th.

The Parliamentary Bills Committee and Medical Officers of Health.—The PRESIDENT said he had been desired to inform the members of a resolution passed in the Public Medicine Section, and to ask their sanction to the same: "August 14th, 1889. Resolved that the best thanks of this meeting be tendered to the Parliamentary Bills Committee for their action in reference to the appointment of medical officers of health; that the Committee be requested to continue their labours in the matter, and that in the English Local Government Act a clause should be inserted providing that no medical officer of health should be dismissed from office without the consent of the Local Government Board; and also that in regard to the appointment of any such officer the word 'shall' should be substituted for 'may' in the English Local Government Act." He would ask those members who desired to support the Public Health Section in passing that resolution to signify their approval.

The resolution was then put to the meeting, and unanimously adopted.

Address in Surgery.—The Address in Surgery was then delivered by Mr. T. P. TEALE, F.R.S., M.B., F.R.C.S. It was published in the JOURNAL of August 17th, p. 362.

Dr. W. MACEWEN (Glasgow) said he rose with some diffidence to propose the resolution which he held in his hand, fearing that he could not do it justice. He had learned a great deal and heard and seen a great deal of surgery since coming to Leeds. First of all they had an admirable address from Mr. Jessop at the opening of the Surgical Section, and secondly, in the afternoon, they saw a series of surgical cases which any hospital in the world might be proud of; and now they had heard a very brilliant address from Mr. Teale—brilliant in its thought and in the very careful manner in which the various points had been put forward. Mr. Teale's progenitors were known throughout the surgical world as having contributed greatly to science. Mr. Teale's own accomplishments did not rest at surgery, even including the most delicate operations upon the eye, but he had also devoted a considerable amount of time to sanitary matters, and had made himself an authority on the economy of coal. He moved: "That this meeting gives its cordial thanks to Mr. Pridgin Teale for his very able Address in Surgery."

Dr. MITCHELL BANKS seconded the motion. He did not purpose saying anything about the admirable address which Mr. Teale had given them. He expected and knew that they would get an admirable address. With the permission of the meeting, and on their behalf, he wished to express to Mr. Teale, in addition to their thanks for his lecture, the sentiments of respect and admiration with which they regarded him as the type of all that was best in British provincial surgery. It was given to a great many to excel in one department of the profession, but to excel as an operating surgeon, to take rank among the ablest of their oculists, and to be a foremost pioneer in sanitary science in this country was given to very few. He would say further that no one who was a friend of Mr. Teale's could help loving him for that kindliness of heart and that unselfishness of disposition which characterised him. After the unrivalled display of surgical cases demonstrated in the Infirmary on the previous day, he knew that Mr. Teale's one thought was that of unqualified delight and pleasure at the success of his colleagues, and that the great traditions of the Teales and the Heys and the Nunneleys would be grandly maintained by those into whose hands at that day and in that city had fallen the practice and teaching of surgery.

The resolution was carried by acclamation.

Mr. TEALE said he felt very grateful to the members for this hearty vote of thanks, and also to the mover and seconder for the extremely kind way in which they brought it forward.

The Management of Medical Charities.—The PRESIDENT read

the following notice of motion by Dr. Rentoul, to be brought up at the next general meeting:

That this meeting of the British Medical Association views with great pleasure the action of the Charity Organisation Society of London in presenting a petition to the House of Lords praying for an inquiry into the management of the metropolitan medical charities, and earnestly hopes that the scope of the inquiry will be extended so as to include provincial hospitals and dispensaries, with the view of obtaining as complete information as is possible upon this important subject; that a copy of this resolution be forwarded to the Lord President of the Privy Council, and that he be requested to receive a deputation; that the Council be requested to appoint a special committee to deal with the question, and request the Charity Organisation Society of England to form a similar committee to act in conjunction with it.

The meeting then adjourned.

Fourth General Meeting.

Friday, August 16th.

Mr. C. G. Wheelhouse, President, in the Chair.

Address in Psychology.—The Address in Psychology was delivered by Sir James Crichton Browne. It is published in this day's Journal, p. 399.

Dr. Needham, in proposing the thanks of the Association to Sir James Crichton Browne for his very able address, said he should have had considerable misgivings in undertaking the duty if he had not known that from Sir J. Crichton Browne they would have an address the "good wine" of which would "need no bush" of feeble words from him, and the applause during the delivery of the address had justified his conviction. When the unusual course was taken of having an address in psychology, all who were engaged in the treatment of mental disease must have felt that it was a great compliment to their speciality, and for several reasons. In the first place, it brought them into a closer relation to general medicine, which was exceedingly desirable; in the next place, it showed that medical psychology had attained a position which entitled it to be placed very much on the same platform with general medicine, that was to say, that it had attained more or less a scientific character. It was also quite fitting that if an address of that kind was to be given, Sir James Crichton Browne should be selected for the purpose, because they remembered what an enormous work he had done whilst at the West Riding Asylum in Yorkshire for psychological medicine, and how great his influence had been upon the treatment of mental disease, not only in this but in other countries. For these reasons he had a peculiar pleasure in proposing their thanks to Sir J. Crichton Browne. They expected a great treat, and they had had an address which had been of the most brilliant kind, full of thought, highly philosophical, and, above all, most suggestive.

Dr. R. Atkins, in seconding the vote, said fortunately it required but few words to recommend this resolution. He was sure that they all most anxiously desired to afford Sir James Crichton Browne their unqualified admiration for the splendid address to which they had just listened. They who were engaged in the practice of medical psychology were proud of Sir James. He was a man who by his exertions had won for himself a foremost place among great workers and thinkers of the day. The address had been brilliant in every sense; it was hard to say whether they had been more interested by its reasoning or charmed by the brilliancy and power of its words. It was worthy of the author and of the great Association before which it had been delivered.

The resolution was carried by acclamation.

Sir James Crichton Browne said he wished to thank them mostly sincerely for the most patient hearing that had been granted to a rather long address, and for the vote of thanks which had been accorded to him, proposed, as it had been, in such kind and cordial terms.

Management of Medical Charities.—Dr. Rentoul, in bringing forward the motion of which he had given notice, said that he should not say anything in its support, but would simply read the resolution—"That this general meeting of the British Medical Association views with great pleasure the action of the Charity Organisation Society of London, in presenting a petition to the House of Lords praying for an inquiry into the management of the Metropolitan Medical Charities, and earnestly hopes that the scope of the inquiry will be extended so as to include the provincial hospitals and dispensaries, and thereby obtain as complete information as is possible upon this important subject. That a copy of this resolution be forwarded to the Lord President of the Privy Council; that he be requested to receive a deputation thereon; and that the Council be requested to appoint a special Committee to deal with this question, and to request the Charity Organisation Society of England to form a similar Committee to act in conjunction with it."

Mr. Ernest Hart, in seconding the resolution, said he did so on three accounts. First, because he believed it to be in entire accordance with all the traditions of the Association and with the course which had been pursued on similar occasions in dealing with precisely similar questions; secondly, because he believed it would be an efficient course; and, thirdly, because it would be the most expedient course. A precise precedent in point was when the Association had to deal with the great question of sanitary organisation when it had, as in the present case, to elucidate a great body of opinion, and to endeavour to organise conflicting opinions, and out of those opinions and out of the conflict of those opinions to obtain a good working scheme. Precisely as in that case they had here also to deal with a question which concerned not only medical men—and, from one point of view, not even chiefly medical men—but which concerned the whole of the public, and especially hospital managers. Therefore, as in the case of organising a Sanitary Association, it was necessary here also practically to ascertain what were the views of the hospital managers, and especially of that great body of hospital managers whom they knew to be in accordance with themselves in desiring to put an end to these abuses, in obtaining their help, and in ascertaining how far they would go in helping them, and how many of their remedies they would adopt. When they got a consensus of opinion amongst themselves, and could ascertain how far the hospital managers and the more enlightened sections of the public would go, then they would be prepared to recommend, and endeavour to carry out practically, a thorough scheme. In the meantime they must remember that this question had been before the profession for thirty years. Endless committees had been formed, resolutions had been adopted, schemes had been recommended, and nothing had come of it; and unless now they adopted a thoroughly practical course, the result also was not likely to be promising. He believed the course recommended in the resolution was thoroughly practical, but would suggest that the members of the Association and the Branches should consider that it was at least as much their question as it was the question of the Council or any of its committees. The committees could only bring into effect working resolutions which would have the support of the whole profession. It was the Branches themselves and the members of the Branches to whom they would look to thresh out this question. Mere resolutions would be of little use; they must have opinions and facts in favour of those resolutions, the arguments on which they were based, and the means by which it was proposed to meet the difficulties in carrying them out. He wished to add, as editor of the Journal, that it would be exceedingly glad to throw open its columns, as fully as other interests would allow, to the reports of the discussions of these resolutions in the Branches, and if any difficulty was felt in the Branches in obtaining such reports, the Journal itself would be happy to aid in the general interests of the profession and the Association in the special reporting of the meetings at which these resolutions were discussed.

Mr. Arthur Jackson, as Secretary of the Yorkshire Branch, stated that he had sent a circular to the hospitals in Yorkshire asking the managers to consider this question. They had not had a meeting of the Branch since to consider the replies.

Surgeon-Major Ince supported the resolution, which was then put and unanimously agreed to.

Resolutions Passed by the Public Health Section.—Mr. Fowke said he had to report the following resolutions passed by the Public Health Section:—

Resolved—That this meeting of the Public Health Section of the British Medical Association recommends that all keepers of hotels, hydropathic establishments, and boarding houses in a town (or other convenient district), should form themselves into an association for the mutual sanitary protection of themselves and visitors.

That this Association should have for its principal objects—(1) An agreement that insists upon the removal (as soon as practicable and when consistent with safety) of *all* members of an infected family. (2) An agreement to require the signature of every visitor to a declaration that none of his or her party has recently been suffering from any infectious disease, or to his or her knowledge exposed to infection. (3) The establishment of a Register of Hotels certified to be in a perfect sanitary condition.

The Section recommends that such certificates, which must be approved by the local Sanitary Authority, should be renewed annually, after inspection, and that they should be exposed in a prominent position in every hotel, etc.

The Section also recommends such a combination of hotel keepers, etc., that in towns where no sufficient provision for such purposes exists, they should themselves provide, either jointly or separately, a detached building for the isolation of infectious or doubtful cases.

The PRESIDENT said he thought that the best course would be to refer the matter to the Parliamentary Bills Committee.

Dr. LITTLEJOHN moved that it be so referred, and that the Parliamentary Bills Committee have full power to deal with it.

Dr. ALLFREY seconded the motion, which was agreed to.

Resolutions of Thanks.—The PRESIDENT said they had now come to a very pleasant part of their duty, and one which they would not like to omit. They had been entertained in the most handsome manner by everybody in the borough, from the mayor downwards to the humblest citizen: it was therefore their necessary duty to return thanks to those who had been so kind to them. He then proposed the following resolutions, which were carried by acclamation:—

"That the very warm thanks of the Association be given:

"To the Worshipful the Mayor and the Mayoress for their great hospitality in giving a reception and ball in the Town Hall in honour of the Association."

"To the Right Reverend the Lord Bishop of Ripon for his sermon, delivered in the Parish Church to the members of the Association."

"To the President, the Most Honourable the Marquess of Ripon, and the Council of the Yorkshire College, the Right Honourable the Earl of Harewood, and to the 3rd Volunteer Battalion of the West Yorkshire Regiment, for their hospitable receptions."

"To the Lord Bishop of Ripon, Sir James Kitson, and Mr. T. R. Jessop, for very enjoyable garden parties."

"To the Vicar of Adel and Professor Ransome for their kind services to members visiting Adel Church and Kirkstall Abbey, and to those gentlemen who have kindly thrown open their interesting manufactories to members of the Association, who warmly appreciate their attentions. To Messrs. Pawson and Sons, Greenwood and Batley, Eyres and Co., Mr. Sampson Fox, Messrs. Taylors, Dr. Coleman, and Mr. P. A. Steedman, Messrs. Lawson and Co., and Messrs. Manning and Wardle, for their hospitality to members visiting their manufactories."

"To the President and Local Executive Committee and the members of the various Subcommittees for their work in organising the meeting, and for a brilliant *conversazione* in the Municipal Art Gallery."

"To Colonel North for the loan of his splendid collection of pictures at the *conversazione* in the Art Gallery.

"To those ladies who have so kindly and efficiently carried out the arrangements for the comfort of the ladies attending during the meeting."

"To Mr. Charles J. Wright, Dr. C. M. Chadwick, Mr. Herbert Rowe, Hon. Secretaries, and to Mr. William Hull, the Hon. Treasurer, for their arduous labours, which have carried the meeting to so successful a conclusion."

"To the Conservative and Liberal Clubs for throwing open their houses to members, and to the Committees of the Royal Exchange Reading room and the Young Men's Christian Association."

"To the Profession of York, Hull, Bradford, Scarborough, Ilkley, Harrogate, and to the Most Honourable the Marquess of Ripon, Mr. Ayscough Fawkes, Mr. Alderman Woodhouse, Mr. George Metcalf, Mr, Alderson Smith, Mr. Woodall, and to those who have assisted in the excursions to these places."

Dr. WARD COUSINS wished to be allowed to propose the final resolution, which he was sure would be received with acclamation. It was that their thanks be given to the President for so ably presiding over the fifty-seventh annual meeting, and for his continued exertions in the interests of their great Association.

The resolution was carried by acclamation.

The PRESIDENT briefly returned thanks.

THE ANNUAL DINNER.

The annual dinner of the members of the Association took place on Thursday evening, in the Town Hall. The chair was occupied by Mr. C. G. WHEELHOUSE, President.

On the removal of the cloth, the PRESIDENT gave "The Queen," which was drunk with enthusiasm.

The PRESIDENT next proposed "The Prince and Princess of Wales and the rest of the Royal Family." In doing so he said that so greatly was the country indebted to the Prince and Princess of Wales and the rest of the Royal Family for the work that they did on all hands and on all good occasions, that if he were to fail to say something he should clearly be wanting in his duty. Happy was the country which was ruled over by a Queen who lived in their hearts as Her Gracious Majesty did; and, if it were possible, happier still was the country in which the Prince and Princess of Wales, following the example of Her Majesty, were doing all they could to keep up the great traditions that she had instituted, and were apparently determined that those traditions should be carried out. When they remembered how ready the Prince of Wales was on all occasions to help every good cause, and above all every good cause connected with medicine, he maintained they would be ungrateful if they did not drink to his health and to the health of those near and dear to him. (Applause.) That the Prince of Wales had a loving affection for the medical profession he knew, for on one occasion when he did them the great grace and honour of dining with the Council of the Royal College of Surgeons, in a few graceful words he told them with his own lips that there was little he would not do that it was possible for him to do in honour of the medical profession. (Applause.)

Mr. BENSON TOWITT, in proposing "The Clergy," said that the toast needed no commendation from him in such an assembly as that. They had all heard lately, in magnificent language, of the close union which existed to some extent, and should exist to an even greater extent, between the clerical and the medical professions. They had heard how divinity and medicine marched hand-in-hand in indissoluble alliance to perform works of compassion and charity. With those noble words which many of them heard in the Leeds Parish Church a few days before still ringing in their ears, with those lofty sentiments still finding echo in their hearts, he knew that that night they would feel peculiar pleasure in accepting the toast, and would drink it with unwonted cordiality, because he coupled with it the name of an eloquent orator, of a large-hearted, broad-minded prelate, who was always heartily welcomed in any assembly in Leeds—the Bishop of Ripon. (Applause.)

The LORD BISHOP OF RIPON, on rising to respond, was greeted with loud applause. He said it was a very congenial task for him to be allowed to return thanks for the clergy. In one sense they were all, he supposed, in the position of laymen. He felt, in speaking in their midst, that he might claim the privilege at least of being a layman towards the medical profession; and, if he might for a moment claim in another spirit to be a layman, he would venture to open his mind to them, and to make them participators of some of those secret regrets which were so constantly present in the mind of men when they looked at life and became conscious that every occasion and every occupation had its limitations. Sometimes one felt the regret which he supposed ministers of religion must feel when exposed to the sarcasm which he thought was almost going to be suggested in the music connected with that toast—namely, that they were disposed to wander in the sanctuary, and to be dreamily "Onward Roaming." Whatever measure of regret he might have in feeling how deserved at times such a sarcasm might be, he was consoled to think that sarcasm had perhaps other objects of attack, and that even their eminent profession was not altogether free from the shafts of hostility; for, if the clergy might roam or dream, medical men sometimes—only sometimes—were obliged "to put drugs of which they knew little into bodies of which they knew less." (Laughter.) He felt that they had also in the midst of the circumstances surrounding their life, not only in the present day, but in the days that were past, some cause of regret on another score. They, at least, were sometimes twitted with this, that it was very difficult for them to find mutual agreement, and that their standpoints were so various that the public were perplexed; but he consoled himself with the reflection that, after all, the gift of infallibility had sometimes been claimed even by the medical profession, and that, though the clergy might be accused of dogmatism on questions concerning which there might be a legitimate variety of opinion, it was the Royal College of Physicians which expelled Dr. Caius for impugning the infallibility of Galen. Whilst speaking in that way he might be allowed to say also that there were two points, one on which he could give the members of the medical profession his unqualified envy, and the other on which he felt that they and all of the ministers of religion alike could claim a common ground. He gave them his unqualified envy because he thought that the medical profession was capable of infusing that temperament which it was hard probably for other occupations fitly to appropriate to themselves—he referred to the temperament of scientific preoccupation. They at least need not fear the changes and the chances of the various kinds which afflicted the political or the social world; they at least could pursue their profession with the unalloyed satisfaction of knowing that whatever happened their occupation was ready, and

that a steady scientific pre-occupation was one of the chief merits of their calling. They could imitate the splendid example of the abbé, who, in the days when the whole of Europe was convulsed with excitement through the victories or the battles, as they might be regarded, of Ramilies and Blenheim, could say calmly, "Well, whatever may happen in the world, I have got here" (tapping his desk) "3,000 verbs rightly conjugated." He (the Lord Bishop) envied that happy equanimity which he supposed was born of scientific preoccupation. It was a delightful thing to live, as Bacon reminded them, on "those serene heights," and to look down—he would not say with contempt, for the feeling would be far distant from their minds, but, at any rate, with a supreme and superior pity on those who were wandering in the mists below. But on another score he could claim at least that they had a common ground of sympathy. Their profession, if he might speak for one moment to them as medical men, was one which suffered from being what he might describe as one of the comparatively speaking undecorated professions. He thought he was within the mark in saying that not alone was that true, but there had been surreptitious attempts to deprive some of what might be called legitimate rank. In that at least they should have the sympathy of the clergy. He wished to know, however, whether there was not something which came as a compensation when all this was said and done. He was persuaded that those who followed other occupations, with that generosity of spirit which always filled the hearts of Englishmen, would agree with him when he said that there was something loftier to be thought of, something nobler to be contended for in the world than its mere decorations and its glory. A capable and a noble member of their own profession had drawn in inimitable verse a contrast between the two armies that marched side by side along the dark stream of death which flowed steadily through the world. On the one side was the army that marched to the beat of the drum and the blare of the clarion, and bore upon its flag the motto, "Our glory is to slay." On the other side there marched another army, marching to no mere martial music, and sustained by no mere cry of applause. Theirs was a silent march, but it was the march of benevolence, and upon their banner was inscribed, "Our duty is to save." That was the duty to which they were called. He knew of none nobler; and he thought they would forego the possibility of all decorations, the opportunity of any glory, for the possession of that noblest glory, baptised with the highest name spoken under heaven—the glorious duty of the opportunity to save. They might be sure of this, that whereas things were weighed in this world in various balances, the balance of commerce or the balance of political success, the balance which would weigh the work done by such as these was the balance which was found in the very presence of the highest views of life. And so that poet-physician of whom he had been speaking pictured the great roll of humanity trooping up to the gates of heaven. There were the valorous men with many a wound and many a scar, and the marks of glory and honour which they carried up there; there, also, was the great army of those who moved undecorated up the steeps of heaven; but while

> The haughty champions must wait
> While every wound is snown;
> Love walks unchallenged through the gate
> To sit beside the throne.

Wherever that spirit prevailed, wherever men pursued the saving work which healed or elevated humanity, there he was persuaded that whatever want of light, whatever want of recognition or success might be their portion in the short life which was assigned to them, future generations and the throne of heaven itself would recognise that theirs was a work all noble and all glorious, and in the possession of that work they had their own most splendid reward. There was only one triumph which was enduring, namely, the triumph which was won by heroic, single-minded, simple-minded determination lovingly to do that work of health and healing in the world for which God had given them talents, and towards which He gave them opportunity. (Loud applause.)

Sir James Kitson, Bart., then gave "The Army, Navy and Auxiliary Forces." He was, he said, in the position of a young doctor who was partaking of hospitality at his table the other day, who was questioned by a lady as to his position in the profession. She said: "I believe you are a young doctor." He said "Yes." "Well," she said, "you have not had time to do much harm." (Laughter.) They all believed in the valour and daring of the British Army, and they all felt proud that we had now officers who could lead to victory foreign troops in the field. (Applause.) They had also seen the part which the medical officers had fulfilled in that short campaign. Their labours and devotions were bestowed not only upon our troops, but upon the poor people it was our duty to conquer. They had "had compassion on the multitude." (Applause.) They had seen the recent picturesque array of the Navy, and how great were the forces at our command there, but they had yet to learn that the scientific element of the Navy was sufficiently cared for and cultivated. (Hear, hear.) He regretted too that the scientific service those present represented on that occasion in the Army did not receive the recognition to which they were entitled. (Applause.) The engineers of our great ironclads were scientific men, who required and deserved as much training and consideration as the navigator who guided the ship; and the medical men who kept in health the troops in the field were important as the generals who manœuvred the armies in the field. (Applause.) The auxiliary forces were men who only required proper training and the opportunity to take the same position in the country as the British Army itself. It was simply a question how much the nation would yield to give these volunteers the support and encouragement they so well deserved. (Applause.)

Surgeon-General Cornish, C.I.E., in replying, said that it had been his great honour and privilege to belong to a branch of the Indian Army, but circumstances had forced his life a great deal into employment in connection with the civil population. Instead of being engaged in active service, as was the case with most officers of the medical department, his only battles had been in connection with disease, pestilence, famine, and death. It might be interesting to an assembly of medical men to know that a short time since he was attending a public dinner at which the Director-General of the Navy stated publicly that, so far as he knew, the Medical Department of the Navy was one without a failure. (Applause.) With regard to the British army, they knew that numerically, in comparison with the great armies of European countries, it was nowhere; but Her Majesty had a large army in India, and that was likely to be considerably reinforced through the recent circumstance that the native princes were now endeavouring to have their forces trained and modelled on the European system by European officers, and that would probably add enormous strength to their Indian garrisons. With regard to the Medical Department of the Army, he was sorry to say there had been considerable dissatisfaction, and he thought deserved dissatisfaction, on the part of its members. By some blundering, why he did not know, the relative army rank of medical officers in the army had suddenly and without warning been taken from them. They knew on good authority that Lord Camperdown's Committee had recommended the restoration of that rank, and he hoped that that would be carried out, so that the medical department of the army might be reinstated in its proper position. (Applause.)

Colonel Harding, of the 1st West York Artillery, who also responded, said that, while great progress had been made in military science, and while great progress had been made in the art of healing, in no instance had the progress been greater than in that of military hospitals, largely in consequence of the introduction of antiseptics.

The Marquis of Ripon, in proposing the toast of the evening, "The British Medical Association," said that it was exactly twenty years ago since the Association last met in that borough. He need not remind them of the vast progress that had been made during the last twenty years, but the fact that they now numbered between 13,000 and 14,000 members was sufficient to show their importance, and when it was remembered that they were not 13,000 or 14,000 miscellaneous individuals, drawn together by some common taste, but that they were members of a great and illustrious profession, then he thought they would be well aware of the importance of the body whose guest upon that occasion he had the honour to be. He believed he was right in saying that the Association at its commencement was a strictly provincial Association. After many years it had extended its borders, and it now represented the medical profession, not only in the United Kingdom, but throughout the length and breadth of the British Empire (applause); still, he was quite sure that it did not, even in its changed position, forget that it had specially to safeguard the interests of the profession in the provinces, for which they at all events who dwelt in those parts of the country were very grateful, and which they believed to be a very valuable part of the duties of the Association. (Applause.) He had not the happi-

ness of hearing the President's address, but having read it he had acquired a very extended idea of the scope and nature of the work of the Association. As he read that most interesting sketch of the progress of the medical profession and of medical science down to the present day, he felt how wide was the view which the Association took of their work and duty; and, as he read that brilliant description of the future of medical science with which the address concluded, and of those benefits which were promised, not, alas! he feared, to those who were alive to-day, but to their children and grandchildren in some distant future, he could not help thinking how much the work of the Association was tending gradually to bring about that desirable condition of things. He was glad to find that during the present year they had expended, or were about to expend, not less a sum than £1,100 in promoting direct scientific inquiry and investigation. (Applause.) He believed that that sum devoted to so important a public object was derived from the profits of the JOURNAL connected with the Association, which, in some respects, appeared to be conducted upon strictly co-operative principles, for the members, taking all the profits, which were not inconsiderable, put them not into their own pockets, but devoted them to the promotion of medical science. (Applause.) They also owed the Association a debt of gratitude for another of its works, because at their annual meetings they afforded ample opportunity for the discussion of medical and professional subjects, which was a matter of great benefit to the profession at large. Speaking as one interested in the public aspect of these questions, he might be permitted to say with what extreme pleasure he read the very able address delivered in the Public Medicine Section by its President, Dr. Ballard, who seemed to touch upon the great public questions in which their profession was so deeply interested, and in which they were the leaders and the guides of public opinion, with a discretion and a wisdom which left nothing to be desired. (Applause.) He (the speaker) believed nothing would tend more to bring about that blessed condition of affairs which was sketched out in the Presidential Address than the thorough cultivation of sanitary science, and the increasing application of these principles to the management of their public and local affairs. If all who were interested in the question, both laymen and medical men, would only carry in their minds in dealing with these topics the doctrine laid down by Dr. Ballard that they must approach them with the utmost tact, and work through, and by, and with the local authorities with whom they had to deal, remembering that they could only act upon public opinion by dealing patiently with those who differed from them, and by endeavouring to educate that public opinion, then no doubt the progress which had been made with regard to sanitation would be steadily continued until the great aim, which in conjunction with the Association all men who studied the matter had in view, might at length, for the benefit of the public, be attained. He had in the course of his life found himself in positions in which he had looked at the British Medical Association from a somewhat different point of view, because it had been his fate in the past to be connected with three public departments, all of which had more or less to do with medical questions—the War Office, the Admiralty, and the Privy Council. He was bound to say he had occasionally found in those departments men of ultra-official views who were so irreverent as occasionally to speak in terms not altogether of admiration or respect for the British Medical Association. He once, indeed, had to suffer from the action of the Association. When he was Lord President he endeavoured to deal with the subject of the constitution of the General Medical Council, and he introduced a Bill which he thought was a very good one, and most of the provisions of which had since become law. It did not, however, contain one provision greatly desired by the British Medical Association, and they so effectually pleaded for delay at a fatal moment towards the end of the session that they defeated the Bill, and stranded him altogether until he was carried away in the wrong direction by the rising tide of opposition. He was bound to say—and he made the confession very frankly—that he was now convinced that the Association was right and he was wrong. (Laughter and applause.) He was, perhaps, on that occasion—it was a rare occasion in his public life—somewhat too conservative. He thought the time had not arrived for that direct representation which they had since obtained. He would heartily and cordially retract that opinion since he had seen what the use was which they had made of that direct representation, when he saw that they had chosen as one of their first direct representatives upon the General Medical Council the gentleman who now occupied the Presidential chair. (Loud applause.) When he saw that they had returned him by a large and overwhelming majority he was bound to say that they had proved beyond dispute their fitness to exercise the franchise they had claimed. He was not sorry that they had defeated his Bill, because they had now got a better one. (Applause.) Before sitting down he wished to speak on behalf of those who dwelt outside the limits of the borough, and who had come to do the Association just honour, and to say on their behalf how truly they welcomed the Association to Yorkshire. (Applause.) They rejoiced to welcome the Association, because of its valuable labours for the advance of medical science in which all men were so deeply interested; they were glad to welcome it because of its earnest efforts in the cause of sound sanitary legislation, and because it was from its ranks that their medical officers of health were so largely drawn; above all, they welcomed the Association as the representative of a noble profession marked in an especial degree by an earnest devotion to duty, by an unselfish forgetfulness of personal consideration at every call of human need, by a courage which shrank from no danger, and by a sympathy which no familiarity with suffering could exhaust. (Loud applause.)

Dr. BRIDGWATER (Chairman of the Council) responded. He said that anyone who had the honour of rising under the peculiar circumstances to respond for that toast had a task of some difficulty, because whilst wishing to recognise in its entirety the liberal way in which the toast had been proposed, the kind appreciation expressed of their services, and the glorious aspirations for the future which had been uttered, it was only natural that he should ask himself and the Association whether they had really from the first carried out honestly and fully the intentions for which they were first brought together, whether they had always retained before them the high aspirations which it was intended they should ever have as their stimulant to work, and whether they were keeping themselves unstained from the pollutions of the world. Fifty-seven years ago it occurred to an acute mind that it would be beneficial, not only to the profession, but to the nation at large, if from time to time medical men would meet together, partly for social enjoyment and at the same time for the discussion of the records of the past, and for the drawing up of suggestions which should be a guide to the future. The question might arise, had they year after year, as time rolled on, advanced with the times, had they shown themselves equal to the occasion, or had they stood still? In those early days their numbers were scarce 100, and their papers were one or two. Contrast with that their condition to-day, when they had enrolled in their strength an army of 13,000; think of the work that they had done during last week, think of the social advantages that they had enjoyed. He thought the reflection would bring gratification and satisfaction, and also the conviction that they had been doing their duty. (Applause.) But there was always the danger lest, in a too high appreciation of what they were doing, they might forget the noble aspirations of their profession, and perhaps degenerate into what had been called, he was sorry to say, a commercial spirit. Their chief and primary duty was one for which all nations and individuals would give them credit—to make themselves more and more perfect, in order to benefit the community at large. In conclusion, he said it was most agreeable to him to see, and he was sure that it was also a source of great pleasure to all the members of the Association, that, notwithstanding the differences that existed on some points between themselves and eminent gentlemen, the President of the Royal College of Surgeons and the four Censors of the Royal College of Physicians of London were present taking an active part in the proceedings of the Sections. They were happy to welcome Mr. Jonathan Hutchinson at that table, recognising in him one of the warmest friends and former officers of the Association; and they trusted to be able to do so on many future occasions. (Applause.)

Mr. BUTLIN, in proposing "The Mayor and Corporation of Leeds," said he was very glad, on the part of the visitors at that anniversary, to thank the civic authorities for having done all they could to make their visit to Leeds a pleasure and a success. (Applause.) It had passed through his mind that there might be a kind of grudge on the part of the profession in Leeds against the Mayor. ("No, no.") He understood that the Mayor had taken very keen interest in all matters connected with sanitary science, and that he was determined to make Leeds the most healthy city, as well as one of the largest, the most populous, and the most wealthy in that part of the country. (Applause.) And, therefore, he bid fair to take out of the hands of the medical men in Leeds

a large number of "ugly cases" which might otherwise come under their care. He had no doubt, however, that the profession in that town would join with the Association in drinking the toast. (Applause.)

The toast was drunk with musical honours.

The MAYOR OF LEEDS, in responding, said that, on reading the local newspapers, those present would have formed an opinion that sanitary matters in Leeds were not in that satisfactory condition that they ought to be. On Tuesday a letter appeared—a remarkable letter, and one which he regarded as very unfortunate, appearing, as it did, on the first day of the meeting of the Association. As to that letter, he could only say the writer of it did not in any way wish to convey that the opinions expressed in that letter were held by any other members of the Corporation but himself. He (the Mayor) was not at all in sympathy with the views there expressed, and he might say the same for many of his colleagues on the Town Council. (Applause.) Leeds had entered upon its work of sanitation in 1865, the raw material being a police-superintendent and twelve policemen. In 1868 the death-rate was 32.0, and the deaths from zymotic and preventable diseases 7.19 per 1,000. In 1888 the death-rate for Leeds was 19.7 per 1,000, and the deaths from zymotic diseases 1.8 per 1,000. It would, perhaps, be unfair to take two years at the end of these periods, but he had taken from 1869 to 1878 inclusive, and he found the death-rate for that period was 26.6 per 1,000, and for the ten years from 1879 to December 31st, 1888, the death-rate was 22 6, showing a clear gain of 4 per 1,000; and taking the death-rate from zymotic diseases, he found the return was 5.02, against 3.12 for the last series of years. He admitted that the same thing had taken place throughout the country, but he wanted to show that Leeds was not behind the rest of the municipalities in the matter. (Applause.)

Sir J. CRICHTON BROWNE then proposed the health of the President. He said that, whether regarded as a private friend, as a member of the medical profession, or as the President of the Association, Mr. Wheelhouse was well entitled to their esteem and honour. He had had the privilege of his friendship for a quarter of a century, and he expressed the sentiment of everyone who had enjoyed a similar privilege in saying that he was the most considerate, generous, and loyal of friends. He thought he could not be wrong in attributing the magnificent majority by which Mr. Wheelhouse was returned to the General Medical Council not less to his professional services than to his personal popularity. (Applause.) As a member of the medical profession, Mr. Wheelhouse had done much to enhance and maintain its high position, and in no town in the kingdom did the profession possess a higher social position and influence than in Leeds. His services as President were so recent that it was not necessary to recall them. They had been witnesses of the success of the organisation of the meeting, for notwithstanding great drawbacks and difficulties it had been a signal success. (Applause.) And whilst Mr. Wheelhouse would be the last to allow that too much should be attributed to him, and that those associated with him in the organisation of that meeting should be forgotten, he (Sir J. C. Browne) must still assert that much of its success must be due to the action and services of the President. In all these capacities—as private friend, as a member of their profession, as President of the Association, and as chairman of the evening, he submitted the toast of "Mr. Wheelhouse," and was sure that it would be received with enthusiasm. (Loud applause.)

The toast was enthusiastically drunk.

The PRESIDENT, responding, said it was true that he had tried, in the various capacities in which it had been his chance during his life to have acted, to bear in mind that he was acting for his profession, at all events as much as, if not more than, for himself. He had passed through many critical positions, and was bound to say that whenever he had great responsibilities placed upon his shoulders, he had always found kind and ready friends able to lessen the burden for him, and to carry much of it themselves. That had been so in the management of that meeting. He had been surrounded by a band of workers to whom no exertions had been too great, who had worked cheerfully, readily, and very happily, and had so organised the meetings that, so far as they had gone, everything had worked smoothly. (Applause.) For himself he had only to thank them for their very hearty reception, and for the many other kindnesses that they had done him during his life. As he had said before, he did not think that there was any other medical man in the profession who could say that so many signal benefits had been conferred upon him by the members of the profession as had happened to himself. They placed him at the table of the Council of the College of Surgeons, they placed him with a thumping majority at the head of the poll as their direct representative, they placed him at the head of that Association, so far as its ordinary work was concerned, as President of Council for three years, and now they had done him the crowning honour of placing him in that chair. (Applause.) He wished that he had been able to do more for his profession than he had done. However, what he could do he had done, and what he could do so long as life was spared he would do. (Loud applause.)

Mr. ERNEST HART, in proposing the last toast, that of "The Guests," said that, amid the many unmerited disappointments which the Association had received at the hands of its editor and the occasional trials that beset the path of that editor, not the least was that he had to propose this toast, in the absence of Professor Gairdner. The toast was an important one, for it was most desirable that the Association should live in the hearts of the most influential of the public, who judged their work and the whole work of the profession very largely by the doings of these annual meetings. Nothing could be more important than that they should receive, at these meetings, eminent men from every part of the world, who should bring them the strength of their knowledge and the aid of their sympathy. They had present with them as their guests men eminent in the State, men of the highest position, who had already signified by their generous hospitality the regard which they had for the medical profession. He wished to thank them for their hospitality. They wished also to welcome those representative men from Holland, Germany, and every part of the Continent, who brought the valuable contingent of their scientific knowledge. They were especially glad to see representatives of their Colonies, for the Association could claim that it had solved a problem which statesmen had failed to solve, namely, the problem of federation without undue restriction and of autonomy without undue weakness. (Applause.) He gave the toast of "The Guests," coupled with the names of Dr. Trendelenburg, of Bonn, and Dr. Cutter, of New York. (Applause.)

The toast was duly honoured.

Dr. TRENDELENBURG, in responding, said he was not a stranger in this country, as about twenty-six years ago he was here as a pupil of Dr. Allen Thomson, of Glasgow. He had ever since had a strong feeling of sympathy and esteem for this country, and was very glad to have an opportunity of saying it again. He was especially glad, as a surgeon, to meet so many eminent members of his profession in a town which, since the time of the Heys, and the Nunneleys, and the Teales, had always been in the front among medical schools in Great Britain for its surgical skill and experience. (Applause.)

Dr. EPHRAIM CUTTER, of New York, also responded. He said he wished to present his greetings to this the largest Medical Association in the world. He wished it peace and good will, because it had assisted the American Association in more ways than one. Their membership across the Atlantic had increased to about 6,000—(applause)—only there was this fact that they had 60,000 doctors in the United States. The activity in their meetings had also increased, and on one occasion the social delights of an evening reception were given up rather than have the real business of the time unfinished. (Applause.) He desired the co-operation of British practitioners on the food question. Already he knew they had much sympathy with it, or they would not have been guests at that magnificent feast that night. (Laughter.) He could not help saying how delighted he had been with the service on Tuesday at the parish church, especially because of the music. There was a good deal of medicine in music, and he had taken a good deal of it in his early days when, from his wife, who was a good musician, he learned to play the piano. (Laughter.) Nothing could more relieve the weary and jaded soul, especially if it were such music as they could provide in Leeds. (Applause and laughter.)

The company then separated.

AMUSEMENTS.

GARDEN PARTIES.

Mr. T. R. Jessop's garden party, held in the delightful grounds of Roundhay Mount, Leeds, proved a great attraction to the members of the Association, as well as to the ladies and gentlemen of the district, who liberally responded to the invitation. It was calculated that there were at least 1,500 persons present. The

guests were received by Mr. and Mrs. Jessop. The band of the 1st Durham Light Infantry occupied a stand in the corner of the grounds, and during the intervals several vocalists representing the Leeds Albion Quartet and Octet Party sang glees and other concerted pieces.

Sir James Kitson gave a garden party in the fine grounds of Gledhow Hall, which was attended by upwards of 800 members and their friends, and was characterised by such generous hospitality, and diversified by so many agreeable musical entertainments, that the occasion was altogether of quite an unusual character even in the annals of the entertainments offered to this Association by so many wealthy and liberal hosts.

At the invitation of Dr. Bevan Lewis, the medical director of the West Riding Asylum, Wakefield, a large number of practitioners, British and foreign, as well as a number of other guests, attended a garden party in the grounds of Wakefield Asylum. The weather was all that could be desired. The grounds were tastefully decorated, and the asylum was thrown open to inspection. Drs. Birt, Dudley, and Bullen, three of the medical officers of the asylum, conducted the visitors through the male and female departments, the pathological museum, recreation grounds, etc., being inspected. The hospitality of Dr. and Mrs. Lewis was also much appreciated by the guests.

The Mayor's Reception and Ball.

The proceedings of the annual meeting of the Association at Leeds were agreeably brought to a close by the Mayor's reception and ball in the Leeds Town Hall on Friday evening. Invitations had been freely issued, not only to the members present at the meeting but to the host and hostesses of the visitors to the town, to the members of the Town Council, to the magistrates, and a large number of the principal residents in and near Leeds; the result was a brilliant gathering. The corridors of the Town Hall, which had undergone extensive decoration, served as excellent promenades. The floors were covered with crimson cloth, and art fabrics were in profusion; large foliage plants everywhere abounded; cacti and creepers hung from the ceilings, and the mirrors on the walls reflected the light from the incandescent electric lights, giving a charming effect. Refreshments were provided in the Barristers' Robing Room and in the vestibule. From 8 o'clock the visitors began to arrive, and were received by the Mayor and Mayoress in the hall, and from that hour until 10 o'clock pleasing selections were given in the Victoria Hall, from a well-arranged musical programme, by a fine orchestra. The Mayor's Rooms, Law Library, and other departments were thrown open, whilst a smoking concert was held in the Council Chamber, a selection of glees being sung by the Leeds Albion Quartet. After 10 o'clock pianoforte and violin recitals were given in the Mayor's Rooms. The arrangements were carried out in the most satisfactory manner, and everyone concerned must be congratulated on the result.

Worcester (Population 43,000).—*Improvement in Health of City.* Dr. Strange considers his report for 1888 as the most satisfactory he has ever presented. The marked improvement in the general health and also in the death-rate, which set in in 1879 and has continued steadily ever since, in 1888 culminated in a rate of 18.7 per 1,000, the most favourable ever recorded in the annals of the city. Climatic conditions doubtless contributed much to this result, the summer being cool and the autumn and early winter months being characterised by extreme mildness. Zymotic diseases were most troublesome in the commencement of the year, when cases of measles, scarlet fever, and whooping-cough were seattered over the whole area of the city. About midsummer they fell off, and at the close of the year scarcely a case remained. Dr. Strange notes that for a long time past these children's diseases have been of an exceedingly mild type, and those who have had them may be congratulated on a security against future epidemics which may not be of so mild a character. Typhoid fever has also been much simpler and milder than formerly, as proved by only five deaths occurring from it. Not a single death occurred from small-pox; nor was there a single case in the city during the year. He considers that the careful way in which vaccination is carried out for the whole infantile population, and the equally careful watch for any imported case of the disease, must be credited with this immunity from the most disgusting of diseases to which flesh is heir.

PROCEEDINGS OF SECTIONS.

The following pages, which are founded upon the minutes kept by Honorary Secretaries of Sections, will serve to give an idea of the work accomplished by the Sections during the three days of the meeting. The mass of material brought together on these occasions is very large. The papers read and reports of the discussions will be published as early as possible.

Section A.—Medicine.

President, John Edwin Eddison, M.D. *Vice-Presidents*, Charles Parsons, M.D.; Robert Saundby, M.D. *Honorary Secretaries*, Alfred George Barrs, M.D.; Theodore Dyke Acland, M.D.

Wednesday, August 14th.

The proceedings of the Section were opened by the President, who briefly sketched the arrangements which had been made for the work of the Section.

A discussion on the Clinical Aspects of Chronic Tubercular Diseases of the Serous Membranes was introduced by Dr. Douglas Powell, and continued by Drs. Handford, Burney Yeo, Churton, Broadbent, Gage-Brown, Drysdale, Saundby, Imlach, Dreschfeld, and the President. Dr. Ephraim Cutter (New York) made a communication on Tuberculosis Pulmonalis; Dr. W. R. Thomas made some remarks on the Varieties of the Climatic Treatment of Phthisis; and Dr. Drysdale discussed the Alleged Rarity of Phthisis among Jews in London. Drs. Acland and MacLaurin and the President commented on these papers.

Thursday, August 15th.

A discussion on the Prognosis of Cases of Albuminuria, with special reference to Life Insurance, was opened by Dr. Pavy, F.R.S., who was followed by Drs. Maguire, Pye-Smith, F.R.S., Gairdner, Rabagliati, Drysdale, Craustoun Charles, Saundby, Tyson, Haig, Herringham, George Harley, Barr, and Churton. The President also made some remarks, and read a summary of the conclusions of a paper contributed by Dr. George Johnson.

Dr. Alexander Haig read a paper on the Connecting Link between the High Tension Pulse and Albuminuria, upon which Dr. Saundby made some remarks.

A paper on the Treatment of Abscess of the Liver was read by Mr. Vaughan Harley, and was made the subject of comment by Dr. George Harley and the President.

Friday, August 16th.

Dr. Ruffer read a paper on M. Pasteur's Treatment of Hydrophobia, upon which the President, Drs. Alfred T. Brett, Drysdale, Brigade-Surgeon J. F. O'Dwyer, Dr. Saundby, Sir William Moore, Drs. Vaughan Harley, Torrence, and George Harley made remarks.

Dr. Bateman read a paper on the Jurisprudence of Aphasia. A paper on the Modern Treatment of Palsies was read by Dr. Fletcher Little, and Dr. Symons Eccles made a communication on the Influence of Massage on the Rate of Absorption from the Intestines.

This concluded the business of the Section.

Section B.—Surgery.

President, Thomas Richard Jessop, F.R.C.S. *Vice-Presidents*, Edward Atkinson, M.R.C.S.; Arthur F. McGill, F.R.C.S.; Henry Morris, F.R.C.S. *Honorary Secretaries*, Arthur W. Mayo Robson, F.R.C.S.; Edward Ward, M.B.

Wednesday, August 14th.

The President commenced the proceedings of the Section by reading a paper on the Treatment of Cancer of the Rectum, and the subject was discussed by Messrs. F. Marsh, Mitchell Banks, Harrison Cripps, Herbert Allingham, Ward Cousins, Vincent Jackson, Bennett May, Jessett, Inglis Parsons, Professor von Trendelenburg, and Messrs. McGill, Lawford Knaggs, and Sympson.

A case in which a Cerebral Tumour was Successfully Removed was related by Mr. Rushton Parker, and the President and Dr. Wm. Macewen made some remarks upon it.

Mr. Stanmore Bishop described a Splint Cradle for Excision of the Hip and Osteotomy, upon which the President made some remarks.

Mr. Mayo Robson exhibited a patient upon whom he had performed the operation of Cholecystenterostomy, and the President and Dr. Thomas Eastes made some observations thereon.

Thursday, August 15th.

The subject of the Surgical Treatment of Typhlitis was introduced by Mr. FREDERICK TREVES, and discussed by Mr. Bennett May, Dr. Eastes, Mr. Lawford Knaggs, Dr. Beale, and the President.

Mr. MAYO ROBSON presented the Statistics of Two Hundred Consecutive Cases of Abdominal Section, Including Sixty-one Ovariotomies, with Fifty-Six Consecutive Recoveries,

A discussion on the Surgery of the Kidney was opened by Mr. HENRY MORRIS, who showed a number of specimens, and an interesting debate ensued, in which the President, Mr. Bennett May, Dr. Newman, Messrs. Lawson Tait, Bruce Clarke, Kendal Franks, Lawford Knaggs, and Dr. Imlach took part.

Friday, August 16th.

A discussion on the Treatment of Retention of Urine from Prostatic Enlargement was opened by Mr. MCGILL, and continued by the President, Messrs. Edward Atkinson, Reginald Harrison, Bruce Clarke, Dr. Ward Cousins, Messrs. Jordan Lloyd, Bennett May, Professor Trendelenburg, Mr. Balding, Dr. Hern, and Dr. Macewen.

Professor FRASER (Dublin) described a method by which the Human Body can be Rendered Transparent for Operative Surgical Purposes.

A paper on the Treatment of Congenital Displacement of the Hip-Joint was read by Mr. W. ADAMS.

Dr. OTTO KELLER (London) read a paper on Trephining in a case of Actinomycosis of the Brain.

Dr. WARD COUSINS exhibited a New Surgical Saw.

This concluded the business of the Section.

SECTION C.—OBSTETRIC MEDICINE AND GYNÆCOLOGY.

President, Charles J. Cullingworth, M.D. *Vice-Presidents*, James Braithwaite, M.D.; J. W. Byers, M.D. *Honorary Secretaries*, F. Hall, M.D.; Peter Horrocks, M.D.

Wednesday, August 14th.

The proceedings were opened by the PRESIDENT, who read the address published in the JOURNAL of August 17th.

A discussion on the Treatment of Placenta Prævia was introduced by Dr. BRAXTON HICKS, F.R.S., and continued by Drs. Murphy, Robert Barnes, Robert Harvey, More Madden, Murdoch Cameron, and W. Walter. Dr. Berry Hart also spoke and showed some specimens. A letter from Dr. Lomer was read, and Dr. Braxton Hicks replied.

A paper on the Mechanics of Puberty was read by Dr. A. W. JOHNSTONE (Danville, U.S.A.), and discussed by Mr. Lawson Tait and the President.

Four papers on the Surgical Treatment of Cancer of the Uterus were read by Drs. MORE MADDEN, J. STUART NAIRNE, SINCLAIR, and WM. WALTER respectively, and were discussed by the President, Drs. Braithwaite, Horrocks, Robert Barnes, Imlach, Campbell, Bell, and Murdoch Cameron.

Thursday, August 15th.

A paper on the Diagnosis, Frequency, and Treatment of Corporeal Endometritis was read by Dr. HERMAN, and discussed by Drs. Byers, Routh, Graily Hewitt, Mr. Pridgin Teale, Drs. R. Bell, More Madden, Braithwaite, Handfield Jones, Duke, Walker, Murdoch Cameron, Horrocks, and the President. Dr. Herman replied.

Dr. M. HANDFIELD JONES made a communication on the Relation of Cardiac Insufficiency to Abortion.

Dr. MURDOCH CAMERON related and commented on a second Successful Case of Cæsarean Section. Drs. Byers, Imlach, Horrocks, and the President made some remarks on the paper, and Dr. Murdoch Cameron replied.

A paper on Concealed or *Ante-partum* Hæmorrhage was read by Dr. ARTHUR ROBERTS, and discussed by Dr. Herman and the President.

Friday, August 16th.

The proceedings were opened by a paper by Dr. W. S. PLAYFAIR on the Value of Electricity in Gynæcology. Dr. EPHRAIM CUTTER followed with a paper on the same subject, which was further discussed by Mr. Lawson Tait, Drs. Inglis Parsons, R. Bell, Graily Hewitt, Braithwaite, Routh, More Madden, Imlach, Horrocks, Handfield Jones, Byers, Harvey, Ross Jordan, Murdoch Cameron, Robertson, Mr. S. Rumbold, and the President.

This concluded the business of the Section.

SECTION D.—PUBLIC MEDICINE.

President, Edward Ballard, M.D., F.R.C.P., F.R.S. *Vice-Presidents*, George Goldie, L.R.C.P.Edin.; B. Arthur Whitelegge, M.D. *Honorary Secretaries*, George Eastes, M.B., F.R.C.S.; Arthur Stopford Underhill, M.D., D.P.H.

Wednesday, August 14th.

The business of the Section was commenced by the PRESIDENT, who introduced the first subject for discussion—Medical Officers of Health: their Training and the Conditions on which they should hold office.

Dr. BROWN, of Bacup, read a paper on the Training of Medical Officers.

A paper on the subject under discussion, by Mr. G. E. J. Greene, was read by the SECRETARY, as was also a letter from Dr. Grimshaw, Registrar-General for Ireland, in which he stated that a large advance had recently been made in the Public Medical Service of that island, but that improvements still remained to be effected. The discussion was continued by Dr. Colville Smith (Glasgow), Dr. Littlejohn (Edinburgh), Alderman Elmsley (Leeds), Dr. C. H. Allfrey (St. Mary's Cray), Dr. De'Ath (Buckingham), Dr. Whitelegge, Mr. Brindley James (London), Dr. Holden (Hull), Surgeon-Major Poole, Dr. Ogilvie Grant (Aberdeen), Dr. Major Greenwood, jun., and Dr. J. S. Loe. Dr. Ballard replied.

Mr. BRINDLEY JAMES read a paper recommending the appointment of a Cabinet Minister of Public Health.

Dr. A. GARROD asked for assistance for the work of the Committee on British Balneology and Climatology of the Royal Medical and Chirurgical Society. Mr. R. C. APPLETON (Beverley) also spoke.

Dr. ANDERSON read notes on a Peculiar Teat Eruption in Cows associated with Typhoid Fever, on which Dr. CALDWELL SMITH made some remarks.

Dr. CHURTON gave the results of an Inquiry into the Sanitary State of the Homes of Hospital In-patients; the subject was discussed by Drs. Littlejohn, Appleton, and Roberts.

Thursday, August 15th.

A series of papers on Disinfection and Isolation, with special reference to the Control of Epidemics, was read by Dr. H. F. PARSONS, Dr. CALDWELL SMITH, Dr. SQUIRE, Dr. E. W. HOPE, and Dr. ALLFREY.

The subject was further discussed by Drs. C. F. Hutchinson, Aston, Littlejohn, Loe, Ogilvie Grant, Greenwood, jun., Whitelegge, Eastes, Hirst, and MacLaurin.

Friday, August 16th.

A discussion on Town Refuse: its Treatment and Disposal. Excremental Matter: its Treatment and Disposal by other Methods than that of Sewers, was opened by Dr. M. GREENWOOD, jun., who read a paper on Dusting in our Large Towns; Mr. BRINDLEY JAMES contributed a paper; and Dr. E. SLADE-KING (Ilfracombe) read a paper on Town Refuse: its Collection and Disposal in Smaller Towns.

Dr. G. FLINN contributed a brief note on the Public Cleansing of Towns Viewed in relation to the Public Health; Dr. C. F. MOORE also contributed a paper; and the discussion was continued by Drs. Parsons, Jessop, Cameron, Littlejohn, Caldwell Smith, Hirst, and the President.

Dr. ARLIDGE read a paper on the Source of Lead-poisoning in the Arts and Manufactures, which was discussed by Drs. Sinclair White, Whitham, and Holdsworth; the same author also contributed a paper on Diseases and Injuries caused by Special Occupations, on which Drs. Caldwell Smith, Sinclair White, and A. S. Underhill made some remarks.

The Contamination of Drinking Water by Lead was the subject of papers by Drs. SINCLAIR WHITE and FAIRCLOUGH, which was discussed by Drs. Tomkins, Roberts, Underhill, Deville, and Whitelegge.

Dr. C. M. JESSOP read a paper on the Physiological Value of Meat Foods.

[The resolutions passed in this Section will be found set out in the reports of the general meetings.]

SECTION E.—PSYCHOLOGY.

President, D. Hack Tuke, F.R.C.P., LL.D. *Vice-President*, W. Bevan Lewis, L.R.C.P.; Ringrose Atkins, M.D. *Honorary Secretaries*, John Greig McDowall, M.D.; Robert Percy Smith, M.D.

Wednesday, August 14th.

The PRESIDENT opened the proceedings by delivering an address on the Past and Present Provision for Pauper Lunatics in

Yorkshire, introducing for discussion the question, "Ought the Future Provision for this Class to be on the same Lines?" This was continued by Drs. Ringrose Atkins, North, Bevan Lewis, Douglas, Wiglesworth, Yellowlees, Nicholls, Merson, Chapman, Richards, and Shuttleworth.

The next discussion—On the Double Brain and the Discordant Action of the Hemispheres in Insanity—was introduced by Dr. IRELAND, and continued by Sir J. Crichton Browne, Drs. Bateman, Wiglesworth, Bevan Lewis, Fletcher Beach, Ringrose Atkins, Yellowlees, and Hack Tuke.

Thursday, August 15th.

A paper on Optic Nerve Atrophy preceding the Mental Symptoms of General Paralysis was read by Dr. WIGLESWORTH, and discussed by Drs. Percy Smith and Yellowlees.

Dr. WIGLESWORTH also read a paper on Fibrinous Membranes in the Spinal Cord occurring in the Insane, upon which Professor Aug. Voisin and Dr. Percy Smith made some remarks.

Professor AUG. VOISIN made a communication on the Use of Hypnotic Suggestion in the Treatment of Mental Diseases, which was discussed by Drs. Yellowlees, Macleod, Langdon Down, Slowman, Tuckey, Ireland, Robertson, Percy Smith, Goodall, Wallis, the President, and Dr. Turnbull Smith.

Dr. BATEMAN read a paper on Hypnotism, with special reference to certain Experiments at La Salpêtrière.

A note on New Methods of Pathological Inquiry was read by Dr. BULLEN, and elicited some remarks from Drs. Beevor, Wilberforce Smith, and the President.

A paper on Massage in the Treatment of Insanity was contributed by Dr. SAVAGE, and discussed by Drs. Warner, Needham, Wilberforce Smith, Percy Smith, and the President.

Friday, August 16th.

The draft report of the Committee appointed in 1888 to conduct an investigation as to the Average Development and Condition of Brain Function among Children in Primary Schools was considered. After some introductory remarks by the PRESIDENT, Dr. WARNER presented and moved the adoption of the report; the motion was seconded by Dr. SHUTTLEWORTH. Remarks were then made by a number of those present.

Papers on the Etiology and Causation of Idiocy were read by Drs. SHUTTLEWORTH and BEACH. Dr. Langdon Down made a few remarks on the papers.

Dr. SHUTTLEWORTH described a series of Idiot Brains.

Dr. BEEVOR described a Method of Staining the Brain.

This concluded the business of the Section.

SECTION F.—PATHOLOGY AND PHYSIOLOGY.

President, Joseph Coats, M.D. *Vice-Presidents*, Thomas Churton, M.D.; De Burgh Birch, M.D. *Honorary Secretaries*, Ernest Henry Jacob, M.D.; T. Wardrop Griffith, M.D.

Wednesday, August 14th.

The PRESIDENT opened the proceedings by delivering an address on the Nature of Constitutional Susceptibility to Disease.

Dr. T. CHURTON read a paper on Indicanuria, upon which Dr. Jacob and the President made some remarks.

A paper on the Pathology of Cardiac Failure was read by Dr. F. W. MOTT, who exhibited a number of micro-photographs with the limelight. Drs. Pope, Henderson, Crooke, Wardrop Griffith, and the President discussed the paper, and Dr. Mott replied.

Dr. POPE related a case of Thrombosis of the Vertebral Artery, with Pressure on the Glosso-pharyngeal Nerve and Unilateral Loss of Taste, upon which Professor De Burgh Birch made some remarks.

Dr. G. F. CROOKE read a paper on the Histology of Bright's Disease, which was illustrated by lantern-slides, and subsequently gave a microscopical demonstration on the subject.

Thursday, August 15th.

Dr. WARDROP GRIFFITH described a case of Hepatic Cirrhosis, with Enlargement of Vein in Round Ligament, and exhibited the specimen.

A Lantern Demonstration of certain Lesions of Syphilis was given by Dr. JACOB.

A paper on the Neoplastic Process from an Evolutionary Standpoint was read by Mr. ROGER WILLIAMS, and discussed by Drs. Mott and Sims Woodhead and the President.

Dr. SIMS WOODHEAD read a paper dealing with Suppuration occurring in the Tubercular Process, on which Drs. Crooke and Mott made some remarks.

Dr. MACLAGAN contributed a paper on Fever, which was discussed by Drs. Broadbent, Sims Woodhead, Handford, Hunter, Birch, and Crooke.

A paper, illustrated by numerous microscopical drawings, was read by Dr. HANDFORD, on the Visceral Changes in Enteric Fever; and discussed by Drs. Crooke, Mott, Sims Woodhead, Jacob, and the President.

Friday, August 16th.

The discussion on Dr. Crooke's paper on the Histology of Bright's Disease was resumed. The speakers were Drs. Dreschfeld, Russell, Jacob, Churton, Sims Woodhead, and the President; Dr. Crooke replied.

Dr. DRUMMOND read a paper on the Pathology of Acute Lead-poisoning, which was continued by Drs. Mackenzie, Churton, and Crooke.

A paper on Ulceration of the Vermiform Appendix, leading to Suppurative Peritonitis, read by Dr. SIMS WOODHEAD, was discussed by Drs. Russell, Jacob, Wardrop Griffith, and the President.

SECTION G.—OPHTHALMOLOGY.

President, George Anderson Critchett, F.R.C.S.Edin. *Vice-Presidents*, John Albert Nunneley, M.B.; George A. Berry, M.B. *Honorary Secretaries*, Gustavus Hartridge, F.R.C.S.; R. N. Hartley, M.B.

Wednesday, August 14th.

The PRESIDENT opened the proceedings by an address, which is published in this day's JOURNAL, p. 414. It dealt with the subject of the Treatment of Immature Cataract. Mr. T. PRIDGIN TEALE, F.R.S., described the operation which he uses with Iridectomy; Mr. H. B. HEWETSON related cases of operation for Cataract without Iridectomy; and Mr. SIMEON SNELL contributed a paper on the same subject. Mr. S. A. BERRY discussed some points in connection with Cataract Extraction, and the other speakers comprised Messrs. Mackinlay, Adams Frost, Mules, Collins, and Grossmann. Dr. BRONNER showed and described a Hook for removing Remains of the Lens Capsule.

The subject of Colour Blindness was dealt with by Mr. T. H. BICKERTON, who criticised the various methods of testing for the defect, and gave further examples of defective eyesight in sailors, and by Dr. K. GROSSMANN.

Thursday, August 15th.

A discussion on the treatment of Glaucoma was opened by Mr. JONATHAN HUTCHINSON, F.R.S., and continued by the President of the Section, Drs. Mules, Little, Berry, Macnaughton Jones, Mr. R. Cross, Dr. Griffith, Mr. Mackinlay, Dr. Swan Burnett, Mr. Adams Frost, and Mr. Oldham; Mr. Hutchinson replied.

Dr. P. H. MULES read a paper on Peripheral Neuritis of the Ophthalmic Division of the Fifth Nerve, and its Clinical Bearings.

Dr. A. H. BENSON related a case of Pulsating Tumour of the Orbit cured by Digital Pressure, upon which Drs. Berry, Griffith, and Bell made some comments.

The Recurrence of Sclerotitis due to Dental Irritation was the subject of a paper by Dr. JOHN HERN.

Friday, August 16th.

A paper on Blenorrhœa Neonatorum was read by Dr. K. GROSSMANN, and the discussion of the subject was continued by Drs. Illingworth, Swan Burnett, J. L. Johnson, and Mr. Simeon Snell.

A paper on Tumours of the Optic Nerve was read by Mr. W. G. SYM.

Dr. G. L. JOHNSON made some observations on the Therapeutical Action of the Violet and Ultra-violet Rays of Light on Vision.

A paper on Muscular Advancement was read by Mr. F. RICHARDSON CROSS.

SECTION H.—DISEASES OF CHILDREN.

President, Thomas Scattergood, M.R.C.S. *Vice-Presidents*, Richard Favell, M.R.C.S.; A. H. Carter, M.D. *Honorary Secretaries*, Walter Henry Brown, F.R.C.S.I.; Angel Money, M.D., F.R.C.P.

Wednesday, August 14th.

The proceeding were opened by the reading of a paper on the Paralysis of the First Two Years of Life, by Dr. HENRY ASHBY (Manchester). Dr. Oliver made a few observations.

Dr. MANSELL SYMPSON related a case of Cerebral Birth Palsy, and a case of Infantile Cerebral Palsy.

Dr. OLIVER (Newcastle) read a paper on Hemiplegia with

Aphasia in Children, which was discussed by Dr. Mantle, Dr. Sympson, and Dr. Squire.

Dr. MANTLE described a Peculiar Form of Laryngismus, upon which Dr. Ashby made some remarks.

Dr. W. SQUIRE reported cases of Infantile Palsy, Spastic Paraplegia, and Diphtheritic Palsy in children.

Thursday, August 15th.

Dr. CHURTON read a paper on Tubercular Meningitis following Injuries to the Head, drawing attention to the question arising in cases of school children in whom dangerous and even fatal consequences had arisen after seemingly trivial injuries. The President alluded to instances which had come under his own notice. After some further remarks by Drs. Warner, Ashby, and Brown, Dr. Churton replied.

Dr. F. CHURCHILL read a paper on Hare-lip Operation, advocating the use of very delicate pins and fine silk suture. Dr. Hellier urged the importance of adopting the Slojd method in this country, and Drs. Warner, Churchill, and Ashby spoke in favour of the introduction of some modification of the system.

Dr. F. WARNER read a paper on the Frequency of Coincidental Defects in Development as seen in Children.

This concluded the business of the Section.

SECTION I.—LARYNGOLOGY.

President, Henry T. Butlin, F.R.C.S. *Vice-Presidents*, Francis de Havilland Hall, M.D.; Richard A. Hayes, M.D. *Honorary Secretaries*, Greville Macdonald, M.D.; Barclay J. Baron, M.D.

Wednesday, August 14th.

Papers on Tonsillitis and on its Association with Rheumatism were read by Dr. HAIG-BROWN, Dr. ARCHIBALD GARROD, Mr. LENNOX BROWNE, and Dr. HINGSTON FOX. The discussion was continued by Drs. Barclay Baron, Charles Warden, de Havilland Hall, Scanes Spicer, and Greene.

A discussion on the Etiology, Pathology, Symptoms, and Treatment of Perichondritis of the Larynx was opened by papers contributed by Drs. DE HAVILLAND HALL and GREVILLE MACDONALD. Dr. Scanes Spicer, Mr. Lennox Browne, Dr. Hailes, and the President spoke on this subject.

A paper on Intubation of the Larynx, containing particulars of sixty cases, with twenty recoveries, was read by Dr. HAILES (Albany), who also exhibited the instruments. Dr. Ridge and the President made some remarks.

Mr. L. A. LAWRENCE read a paper on Granular Pharyngitis, which was discussed by Drs. Spicer, Baron, and Macdonald.

Friday, August 16th.

A paper on Throat and Nose Affections in Children as Causes of Functional Nervous Disorders was read by Dr. SCANES SPICER, and discussed by Drs. Warden and Macdonald.

Sir WILLIAM STOKES read a paper on Thyrotomy for Removal of Laryngeal Cancer, which was discussed by Dr. Newman, the President, and Mr. Lennox Browne.

A paper on Empyema of the Maxillary Sinus was read by Dr. GREVILLE MACDONALD, and discussed by Drs. Warden, Scanes Spicer, and William Robertson.

Dr. ZWAARDEMAKER'S Olfactometers were exhibited by Dr. SCANES SPICER.

SECTION J.—OTOLOGY.

President, George P. Field, M.R.C.S. *Vice-Presidents*, Frederick Morrish Pierce, M.D.; Henry Bendelack Hewetson, M.R.C.S. *Honorary Secretaries*, Adolf Bronner, M.D.; G. William Hill, M.B.

Wednesday, August 14th.

The proceedings were opened by the address of the PRESIDENT, published in this day's JOURNAL, p. 415. Sir WILLIAM DALBY followed with a paper on the Treatment of Bony Growths of the External Meatus; Dr. BARR (Glasgow) discussed the Non-operative Treatment of Aural Exostoses; and Mr. MARMADUKE SHEILD read a paper on the Removal of Aural Exostoses by a Displacement of the Auricle. Mr. RICHARD ELLIS (Newcastle) described a case in which an Osseous Growth of the Meatus simulated a Foreign Body, and caused deafness, which was cured by its removal. The subject of osseous growths was further treated in a paper contributed by Professor POLITZER. A discussion ensued, in which Sir W. Dalby, Professor Pritchard, Dr. Ellis, Professor Guye (Amsterdam), and Drs. Barr, Lee, Jackson, Hill, Hewetson, Sexton (New York), and the President took part.

A paper on the Condition of the Naso-pharynx was read by Dr. FARQUHAR MATHESON.

Professor GUYE (Amsterdam) contributed a paper on Aprosexia, being the inability to fix the attention, and other allied troubles in the cerebral functions caused by nasal disorders.

Mr. WILLIAM HILL read a paper on Some Causes of Backwardness and Stupidity in Children.

Thursday, August 15th.

Dr. WILLIAM MACEWEN discussed the Diagnosis, with special reference to Localisation of Intracranial Lesions, the Result of Aural Disease.

Dr. BARR showed sections of the Temporal Bones from Cases of Intracranial Disease, illustrative of the various directions by which disease of the middle ear may extend to the interior of the cranium. The relation of intracranial to intra-aural disease was further discussed by the President, Dr. Hughlings Jackson, Dr. Broadbent, Professor Pritchard, Dr. Blake (Boston), Mr. Stewart, Dr. Sexton (New York), Mr. Bendelack Hewetson, Dr. Macnaughton Jones, Professor Guye, Dr. Barr, Mr. William Hill, and Dr. Adolph Bronner. Dr. Macewen replied.

An Operation for the Relief of Deafness and Tinnitus due to Immobilisation of the Ossicles and for Otorrhœa was described by Dr. SEXTON (New York), who also exhibited an Ear Speculum with lens for the examination of the middle ear, and an Electric Forehead Lamp, padded with asbestos, to prevent the transmission of heat.

Dr. BLAKE (Boston) made some remarks on the Mechanical Treatment of the Effects of Chronic Catarrh and Chronic Suppuration of the Middle Ear.

Dr. WARD COUSINS exhibited and demonstrated his new Antiseptic Drum and a Flexible Eustachian Catheter.

Friday, August 16th.

A discussion on the Influence of Diseases of the Nose and Pharynx on Affections of the Middle Ear was introduced by Mr. BENDELACK HEWETSON. Dr. ADOLF BRONNER read notes on the Use of Menthol and Eucalyptus in the Local Treatment of Middle Ear Disease. Dr. HENRY DAVIS discussed the question of Anæsthetics in Operations for Adenoid Growths of the Naso-pharynx. Mr. GEORGE STONE (Liverpool) related a Case of Severe Unilateral Tinnitus due to Stricture of the Eustachian Tube, cured by persistent bougieing. The discussion was continued by Mr. Lennox Browne, the President, Messrs. Bickerton, Matheson, Professor Guye, Messrs. William Hill and Thomas Barr. Dr. Adolf Bronner and Mr. Bendelack Hewetson replied.

This closed the proceedings.

K. PHARMACOLOGY AND THERAPEUTICS.—*President*, Sir William Roberts, M.D., F.R.S. *Vice-Presidents*, T. Cranstoun Charles, M.D.; I. Burney Yeo, M.D. *Honorary Secretaries*, John B. Hellier, M.D.; Dawson Williams, M.D.

Wednesday, August 14th.

The proceedings of the Section were opened by an address by the PRESIDENT on Certain Practical Points in the use of Antacid Remedies in Dyspepsia and Gravel, published in the JOURNAL of August 17th.

This was followed by a discussion on Hypnotics and Analgesics, with special reference to remedies recently introduced—namely, Paraldehyde, Hypnone, Amylene Hydrate, Methylal, Sulphonal, opened by Dr. D. J. LEECH, Professor of Therapeutics in the Victoria University, Manchester.

Dr. JOHN GORDON (Aberdeen) read a paper on the Pharmacology of Urethane, and in the discussion which ensued Drs. Roberts, Cranstoun Charles, Needham (Gloucester), Richards, Woods, and Gordon took part. Professor Leech replied.

Dr. CRANSTOUN CHARLES read a paper on the Hot-Air Treatment of Pulmonary Consumption, upon which Drs. Purdy and Martin made some remarks.

A paper on the Climate and Waters of Grand Canary was read by Dr. TAYLOR, and a paper on the Mountain Cure of Phthisis, with special reference to its adoption on Ben Nevis, was contributed by Dr. ALEX. C. MILLER.

Thursday, August 15th.

A discussion on Foods for Invalids and Infants was opened by papers read by Dr. BURNEY YEO and Dr. SIDNEY MARTIN. The discussion was continued by Drs. E. D. Mapother, Radcliffe Crocker, Hugh Woods, Dawson Williams, D. McNaught, and the President. Dr. Burney Yeo replied.

Dr. W. MACLENNAN stated the results of an Experimental Research on the General Comparative Action of the Natural and Artificial Salicylic Acids and their Salts of Sodium, carried out by himself and Professor Charteris.

A paper on the Climate of Colorado, which was illustrated by numerous photographs, was read by Dr. SAMUEL E. SOLLY, Colorado Springs.

Dr. RADCLIFFE CROCKER read a paper on Anthrarobin.

Dr. C. R. ILLINGWORTH read a note on the Therapeutics of Biniodide of Mercury. Mr. Purdy made some remarks, and Dr. Illingworth replied.

A paper on the Oxyiodides of Bismuth and Calcium was read by Dr. HUGH WOODS.

Dr. CRANSTOUN CHARLES read a paper on Paraguay Tea.

Friday, August 16th.

Dr. TREVELYAN gave a Demonstration of the Method of Applying Suspension in the Treatment of Locomotor Ataxy, in the Operating Theatre of the General Infirmary. Dr. FLETCHER LITTLE demonstrated the special apparatus designed for the purpose by Mr. Hawksley.

MEETING OF THE ANATOMICAL SOCIETY OF GREAT BRITAIN AT LEEDS.

THE Anatomical Society of Great Britain and Ireland held their summer meeting on Thursday, August 15th, in the theatre of the Medical School, Leeds, and during the meeting of the British Medical Association in that city. Mr. F. Treves, a member of the council, took the chair. There was a good attendance of members and visitors, and a number of interesting things were brought before the meeting. Dr. Ambrose Birmingham succeeded, by following the nerve trunks, in ascertaining that an extra lumbar vertebra belonged to the sacrum and not to the dorsal region. Drs. Griffiths and Oliver, having observed that the distribution of herpes zoster seemed irreconcilable with current accounts of the anatomy of the spinal nerves, were led to investigate their anatomy. They showed to the satisfaction of the meeting that the dorsal branches of the spinal nerves were distributed to the skin very much lower than is supposed, and that they ran downwards for some distance in the substance of the muscles. These gentlemen also showed a very interesting series of specimens and frozen sections from the Leeds Museum, including a patent parumbilical vein, an anomalous round ligament of the liver, feet with six toes, frozen sections of the pelvis.

Dr. R. W. Reid also sent some rare specimens of cervical ribs, a fifth lumbar vertebra with a suture in the neural arch between the upper and lower articular facets, and the calvaria of a tumbler from Sir Astley Cooper's collection.

Messrs. Lockwood and Withers showed an unusual right aortic arch, which, while showing the usual condition, had persistence of a part of the second left arch, which gave off the left subclavian artery.

By far the most interesting exhibits were those of Professor Alexander Fraser, who showed a very large series of photographs of anatomy, histology, and embryology. His composite photographs were greatly admired, as were also his photographs of brains. The same anatomist also described some bodies like Pacinian corpuscles, which he had found in the thyroid gland, and in giving the details of his work on the spinal cords of a number of rodents said that he found that the pyramidal tract ran in the posterior columns of the cord, and not as others had described.

Both as regards the attendance of members and visitors and the value of the work placed before it the meeting was most satisfactory.

TEMPERANCE BREAKFAST AT LEEDS.

BY invitation of Sir Edward Baines, Mr. Arthur Peace, and Dr. Hannay, Vice-Presidents of the National Temperance League, some 250 of the members of the Association were entertained at a temperance breakfast in the Town Hall, Leeds, on Friday morning, August 16th. Sir Edward Baines, who is in his 90th year, stated that these breakfasts had been begun twenty years before, the first having been held at Leeds, when he was present. Short addresses were given by Drs. C. J. Hare and Norman Kerr (London), Dr. Cameron (Glasgow), Dr. Ridge (Enfield), and Dr. Lees. Dr. Kerr stated that there were nearly 1,000 medical practitioners in the United Kingdom who were abstainers.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1889.

SUBSCRIPTIONS to the Association for 1889 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, AUGUST 24TH, 1889.

THE ADDRESS IN PSYCHOLOGY.

ELEVATED in tone, broad in its sympathy, and practical in its aim, Sir J. Crichton Browne's Address in Psychology on the Hygienic Uses of the Imagination will be long remembered as one of the great features of the Leeds meeting. We commend it especially to the careful attention of the younger members of our profession, who are perhaps sometimes a little in danger of becoming "materialised" by their course of training. And this we do for two reasons: for the attitude which it gently yet firmly rebukes, and for the demand which it makes for a more liberal medical curriculum in the higher educational sense. The claim urged by Sir J. Crichton Browne is that the physician should not rest content with bringing to his work only the help that science can give, but that he should bring the wider sympathy, the deeper penetration into the soul of Nature, the broader eye-sweep of a philosophy that can only come from communion with the master spirits who have ruled the world of literature and art.

"The class bias," as Herbert Spencer terms it, perhaps affects doctors less than other professional men, but we cannot deny that even the less is too much. Its excuse is found, to some extent, in its necessity, but the true physician must rise superior to it, for exactly in proportion as it obtains so is his usefulness obstructed. The microscope and the scalpel teach the doctor so much that the novice looks to his tools to do more for him than they ever can do. "The tendency of his studies," says Sir J. Crichton Browne, "is among the less reflective to encourage a materialistic philosophy, and to give a kind of sanction to the notion that mind is merely brain function." But mind is "not a mere exhalation of brain matter," nor is brain a sort of "solidification of mind." Materialism is a logical error founded on a fundamental blunder; but natural enough, perhaps, in a young man intoxicated with the wonders revealed to him by his first acquaintance with the working of this intricate machine of the most elaborate construction, which, however, no more thinks than the eye sees or the ear hears. The materialist's objection that mental phenomena are correlated with molecular action is not denied; brain wastes by mental action, but the connection is as far off as ever from being accounted for. No one has yet identified mental phenomena with motion; the doctrine of conservation of energy forbids us to hold that energy can be transformed into thought, otherwise it would be wasted. We

cannot measure thoughts by foot-pounds, but we can account for the food taken into the body by the heat and muscular action produced; and "if this be so," as Professor Newcomb says, "there is nothing left to be transformed into thought." Sir J. Crichton Browne is not afraid that the establishment of a sharp delineation of singularly endowed brain centres would commit us to any strict localisation of psychical function; he thinks it is demonstrable that ideation and feeling chiefly depend on associated combinations of functional activity in sensory and motor centres, whatever else they may involve; and he goes on to insist that "the higher the brain the more numerous are the interconnections of its centres; the higher the centre, the more numerous are the interconnections of its units." This train of reasoning leads the lecturer up to his theme, the imagination and its hygienic uses. No narrow local habitation in the brain has yet been assigned to this noblest attribute of man.

"Imagination is the air of mind," and, as Napoleon said, "it rules the world." This strange yet simple gift was as nearly localised by Shakespeare as it is ever likely to be when he said its forms and shapes "are begot in the ventricle of memory, nourished in the womb of *pia mater*, and delivered upon the mellowing of occasion." We have progressed no further than that, with all our knowledge. Now this faculty which is occupied throughout the brain from cell to cell in ever varying coalitions and modifications in sensory and motor centres has uses which neither the professed psychologist nor the humblest general practitioner can afford to neglect, and the object of Sir J. Crichton Browne's address is to show how for doctor and patient these can best be turned to account. The brain has vast resources which it is the work of the imagination to open up with rapid and easy communications. We know how often—and Sir J. Crichton Browne laid great stress on the fact—poverty in mental resource, like general mal-nutrition, actually invites disease. By the cultivation of the imagination the treasures hidden in the intricacies of the brain are laid under contribution, and "a flash of intuitive perception brings them into harmony and combines them by a synthesis which displays an energy more than the sum of the respective forces of the ideas themselves." With this energy we can combat morbid suggestions, distract our minds, and look beyond the moment. To be possessed of it is to have the noblest form of health, a mental wholeness which is the consequence of singling out of our mental acquisitions predestined elements which in combination make the sound mind. This is a medical use of the imagination, surely, which commends itself for its reasonableness and suggestiveness. Of the hygienic influence of religion, the "faith which is the subtle chain which binds us to the infinite," the lecturer spoke in no uncertain tones; essential alike to nations and individuals, affording support in trouble, maintaining mental equilibrium, and giving lofty motives for conduct, it makes for sanity. How well we doctors know it! "The spiritual blight which comes with no faith," as George Eliot expressed it, cannot be hidden from the observing eye of the thoughtful physician; the life of man under such circumstances can be but "a trouble of ants in the gleam of a million million of suns." We can make no progress in science without imagination. "We wring her secrets from Nature by shrewdly guessing at them." By profession we are truth-seekers, and imagination is our guide. Sir J. Crichton Browne begs us not to think we are wasting time when we turn from our professional tasks to ramble in the green pastures of literature, or climb the pinnacles of art. There are certain exercises recommended because they bring into play most of the muscles of the body; but judicious reading of the imaginative order, especially the higher poetry, must exert an influence on the brain of a "causative and corrective" nature of the highest importance to its well-being. Of the moral causes of insanity during the ten years 1878-87, domestic trouble, adverse circumstances, and mental anxiety are answerable, according to the report of the Lunacy Commissioners, for sending some 27,000 cases into our asylums. It is an inference warranted by observation that a very large proportion of such cases lose their balance for want of the support which the resources of a well-stored mind unfailingly afford.

> It is the mynd that maketh good or ill,
> That maketh wretch or happie, rich or poore,

said Spenser. To minister to the mind diseased demands qualifications on the part of the ministrant for which the ordinary medical curriculum at present very inadequately provides. He must first drink from the fountain indicated by Sir J. Crichton Browne in his address; his eyes will then be opened to the "sweet oblivious antidotes" to the troubles of the brain which imagination has in store, and to which it is well within his power to direct his patients.

THE LEEDS MEETING.

THERE is, we feel assured, but one opinion among those who attended the fifty-seventh annual meeting of the British Medical Association; whether judged by the value of the scientific work done in the Sections, by the importance of the business transacted, or by the enjoyable character of its social events, it equalled, if it did not surpass, any of its predecessors. The annual meeting of the Association has become one of the most considerable events of the *annus medicus*, and the completion of the arrangements necessary for the smooth working of so large a congress, transacting its business under so many subdivisions, and seeking interest and relaxation in so many directions, throws upon the local executive an amount of responsibility and hard work which earns the gratitude, not only of all those present at the meeting, but of every loyal member of the Association. Of the care and pains which had been expended on the planning of the arrangements of the Leeds meeting, it may be said that they completely achieved their end, for the casual visitor might have supposed that no trouble had been necessary, so completely had all wants been foreseen, and so thoroughly well had every detail been organised. It was the triumph of art to conceal art. Such a result might naturally have been expected under the Presidency of Mr. Wheelhouse, whose exceptional powers as an organiser have been often displayed. The greatest credit is due to the Local Organising Committee, and especially to its honorary secretaries, Mr. C. J. Wright, Dr. Chadwick, and Mr. H. Rowe. Those who know what the work of an annual meeting is will understand the time and labour which must have been expended by each of these gentlemen to make all the arrangements so completely successful

Everything was ready and in its place at 9 o'clock in the morning of each day, and there was a total absence of friction. The quick willingness and attention of Mr. Wright, the courteous and effective help of Mr. Rowe, and the remarkable organising ability of Dr. Chadwick cannot be too highly extolled.

Nothing was wanting to give distinction to the meeting. On the opening day, in the fine old parish church of Leeds, it was addressed by the bishop of the diocese, who is also one of the most eloquent and accomplished of English prelates; at the annual banquet the toast of the Association was given before a brilliant company, by a man who has added to the distinction given by hereditary honours the greater distinction of long and faithful service to the State; it was addressed in general meeting by men of such unquestioned eminence, each in his own department, as Hughlings Jackson, Teale, and Crichton Browne; among those who took an active part in the work of the Sections were to be found some of the best known names in the three kingdoms, including that of the President of the Royal College of Surgeons of England; and last, but not least, the congress had in its President an old and tried friend of the Association, who through many years and in many capacities has served it with the same ability as has distinguished his career as surgeon to a great infirmary and an active member of the Executive Council of the profession.

The hospitality publicly extended to the Association was most generous. The Mayor of Leeds (Alderman John Ward) and the municipal officers from an early stage of the preparations showed great interest in the meeting, and heartily co-operated with the President and Honorary Local Secretaries in the general arrangements. They placed at the disposal of the local executive the Art Gallery and municipal buildings in which the highly successful *soirée* of Wednesday evening was given. They permitted the Victoria Hall of the Town Hall to be used for the annual banquet, and on Friday evening the Mayor and Mayoress gave a most successful reception and ball in the Town Hall. Of the private hospitality shown during the meeting, not only by members of the medical profession but by many private persons in Leeds, it is not necessary to say more here than that as it was generously extended, so it was warmly appreciated. "The inhospitable North" was not said of the men of the North.

The importance of the business transacted at the general meetings will not escape attention. The Council of the Association was able to point with just pride to the large amount of work done during the year to forward the social and material interests and to promote the scientific progress of the profession. The two are intimately related, and the records of the meetings will show to those who were not present that, far from desiring to rest upon its laurels, the Association will in the future strive to continue steadfastly in the path which it has marked out for itself. From time to time, as its resources have allowed, the Council has voted funds for the advancement of science; this year it has placed considerable sums at the disposal of the Scientific Grants Committee, of the Library Committee, and has made a vote to the newly constituted Therapeutic Committee. A new departure will now be taken by paying the travelling expenses of representatives of Branches attending the meetings of Council. This proposal was in the past strenuously resisted, and one of the main arguments now in its favour has been the increased and increasing financial prosperity of the Association. The attendance of provincial members has always been good, but if the change should result in a still larger attendance, this will doubtless be to the advantage of the Association. It should not be forgotten that all the very considerable expenditure for this purpose and for subsidising scientific medicine has only been rendered possible by the continuous industry and prudent financial management of the officers of the Association. A policy which has been in the past so rich in good results cannot be lightly abandoned.

The work done in the Sections was of great, and in some instances of unusual, interest.

Section of Surgery.

The innovation of having special subjects for discussion each day opened by a single paper, headings of which had been previously sent to the surgeons invited to take part in the debate, led to some very useful work being done in the Surgical Section. The discussion on Wednesday on the Treatment of Cancer of the Rectum, opened by the President, and taken part in by Mr. Harrison Cripps, Mr. Bennett May, Mr. Mitchell Banks, Mr. H. Allingham, Dr. Ward Cousins, Mr. Vincent Jackson, and Mr. Jessett, occupied the greater part of the morning, and proved of such interest that a very large audience remained throughout. On the second morning Mr. Henry Morris's paper, which opened the discussion on the Surgery of the Kidney, excited considerable attention, and among those taking part in the highly interesting debate were Mr. Lawson Tait, Dr. Newman, Mr. Bennett May, Mr. Bruce Clarke, Mr. Kendal Franks, and Mr. Lawford Knaggs. A very able paper by Mr. Frederick Treves on the Surgical Treatment of Typhlitis was listened to by a large audience and thoroughly appreciated. The third meeting of the Section was opened by a paper on the Treatment of Retention of Urine from Prostatic Enlargement, by Mr. A. F. McGill, the discussion being sustained by Mr. Ed. Atkinson, Mr. Reginald Harrison, Mr. Bruce Clarke, Dr. Ward Cousins, Mr. Jordan Lloyd, Mr. Bennett May, and Professor Trendelenburg, of Bonn. The subject excited a considerable amount of interest, and the debate occupied nearly the whole of the morning, the general feeling of those who took part in the work of the Section being that for those cases of prostatic enlargement causing retention of urine, which were incapable of being relieved by catheterism, the operation introduced by Mr. McGill was eminently serviceable, and would be likely to take a permanent place in surgery. In consequence of the length of these discussions and the interest taken in them by members, there was very little time to devote to the reading of papers promised; hence a number of these had to be taken as read. Professor Frazer, of Dublin, showed an interesting series of photographs illustrating a method by which the human body with all its details has been made practically transparent for operative surgical purposes. Dr. Otto Keller related an instance of trephining in a case of actinomycosis of brain. Mr. Adams contributed a paper on The Successful Treatment of Cases of Congenital

Displacement of the Hip-joint by Complete Recumbency with Extension for Two Years. Mr. Stanmore Bishop exhibited a cradle splint of his own invention, for use in hip-joint disease and in osteotomy, which would seem to be eminently adapted to its purpose. Dr. Ward Cousins showed a new surgical saw capable of being adapted to the many purposes for which a saw may be required. Mr. Mayo Robson showed a successful case of cholecystenterostomy, which had been performed for the cure of a biliary fistula of fifteen months' duration, and briefly referred to a series of about 200 abdominal sections which he had performed. Mr. Rushton Parker gave a most instructive account of the removal of a cerebral tumour, Dr. Macewen and others joining in the discussion. Mr. F. Marsh, of Birmingham, showed a patient on whom he had operated for cancer of the rectum by Madelung's operation, afterwards performing proctectomy; the man, when shown, appeared to be in good health. The exhibition of cases by the surgeons of the Infirmary on Wednesday afternoon was highly appreciated by a large number of members.

Section of Obstetrics and Gynæcology.

The proceedings in the Obstetrical Section were opened on Wednesday, August 14th, by an address from the President, who dealt chiefly with Antiseptics in Obstetrics. A discussion on the Treatment of Placenta Prævia was then introduced by Dr. Braxton Hicks, F.R.S., and continued by Drs. Murphy, Robert Barnes, Robert Harvey, More Madden, Murdoch Cameron, and W. Walter. Dr. Berry Hart spoke on the definition of the terms used in relation to the hæmorrhage at the end of pregnancy, and also showed specimens of placenta prævia and extra-uterine fœtation. Dr. A. W. Johnstone (Danville, U.S.A.) then read a paper on the Mechanics of Puberty. The President made remarks, after which the following four papers were read: On some Points in the Treatment of Uterine Cancer, by Dr. T. More Madden; Some Practical Points in the Surgical Treatment of Cancer of the Uterus; Vaginal Hysterectomy for Cancer, with Notes of Ten Cases, by Dr. W. J. Sinclair; A Case of Total Extirpation of Uterus for Cancer, by Dr. Wm. Walter. These four papers were discussed together, the following members taking part in the debate: the President, Drs. Braithwaite, Horrocks, Robert Barnes, Imlach, Campbell, Bell, and Murdoch Cameron. On Thursday, August 15th, a discussion on Corporeal Endometritis, its Frequency, Diagnosis, and Treatment, was opened by Dr. G. E. Herman, and was continued by Drs. Byers, Routh, Graily Hewitt, Mr. Pridgin Teale, Drs. R. Bell, More Madden, Braithwaite, Handfield Jones, Duke, Walker, Murdoch Cameron, Horrocks, and the President. Dr. Handfield Jones read a paper on Cardiac Insufficiency in its Relation to Abortion. Dr. Arthur Roberts (Keighley) then read a paper on Concealed or *Ante-partum* Hæmorrhage. Remarks were made by Dr. Herman and the President. A paper by Dr. Murdoch Cameron, on Cæsarean Section, with notes of a second successful case, was then read; it was illustrated by capital drawings made from photographs, giving a very vivid idea of the two patients. Remarks were made by Drs. Byers, Imlach, Horrocks, and the President. On Friday, August 16th, in the unavoidable absence of Dr. Playfair, his paper on an Estimate of the Value of Electricity in Gynæcology was read by Mr. C. G. Wheelhouse, President of the Association. This was followed by a paper from Dr. Ephraim Cutter (New York) on Eighteen Years of Work in the United States in the Treatment of Uterine Fibroids by Galvanism, with demonstration of methods of operating, and some statistics of treatment of uterine fibroids by food for the same length of time. These two papers were discussed together, and remarks were made by Mr. Lawson Tait, Drs. Inglis Parsons, R. Bell, Graily Hewitt, Braithwaite, Routh, More Madden, Imlach, Horrocks, Handfield Jones, Byers, Harvey, Ross Jordan, Murdoch Cameron, Robertson, Mr. S. Rumbold, and the President. Owing to want of time, the following two papers by Dr. Alexander Duke were taken as read; 1. Additional Traction in Forceps Cases as an Alternative to Craniotomy; 2. New Plan of Plugging the Cervix Uteri in Metrorrhagia.

The Section of Psychology.

The attendance in this Section was far above the average, comprising many asylum medical superintendents from all parts of the kingdom, as well as others from America and the Continent. Immediately after delivering his presidential address Dr. Hack Tuke read a paper upon the Future Accommodation for the Insane Poor, in which he gave statistics which went to show that, in spite of all that had been done to improve the care and treatment of the patients, the rate of recovery had not been appreciably increased. The question how the ever-increasing accumulations of pauper lunatics were to be provided for was fully discussed. In view of the movement in favour of small institutions, a curious fact was brought to light by Dr. Tuke's voluminous statistics, for Table III showed that the largest asylum had the highest recovery rate. Dr. Ireland's paper on the Double Brain and the Discordant Action of the Hemispheres in Insanity also gave rise to an animated debate, and was followed by Mr. F. St. John Bullen's analysis of 1,565 *post-mortem* examinations of the brain performed at the Wakefield Asylum during eleven years, and a paper by Dr. G. H. Savage on the Massage Treatment of some Forms of Melancholia. An interesting point in the pathology of general paralysis, namely, Atrophy of the Optic Disc preceding the Mental Symptoms as a Basis for Diagnosis, was made the subject of a valuable communication by Dr. Wiglesworth. This was illustrated by two cases. Dr. Percy Smith gave particulars of two additional cases, and Dr. Yellowlees a third, confirmatory of Dr. Wiglesworth's views. A paper by the same author gave details of three cases in which fibrinous membranes were found in the spinal canal. All were general paralytics, and in his opinion these membranes were not the result of inflammatory action (pachymeningitis), but were hæmorrhagic in origin. Dr. Percy Smith mentioned a similar case, and pointed out that the membrane was outside the dura mater.

M. Voisin's paper on the Use of Hypnotic Suggestion as a Means of Treatment in the Insane and the Results he has obtained by this Method contained a startling statement of the different forms of insanity and other disorders he had been able to cure by hypnotism. Among the cases he enumerated were auditory hallucinations, morphinomania, dipsomania,

menstrual mania, epilepsy, amenorrhœa, vicious habits, such as onanism, lying, thieving, and many others. "Surely," exclaimed Dr. Yellowlees, "if these things can be our occupation is gone; I am amazed and dumbfounded." Many of the members present evinced a strong desire that M. Voisin should give a demonstration of his method, and one or two pointed out the danger that this powerful agency might be used for evil purposes. Particulars of 150 cases were given by one of the speakers, in many of which he had been able to cure certain functional neuroses, and the President mentioned Dr. Huggard's case in which melancholia with refusal of food of long standing had been cured by hypnotism and suggestion. M. Voisin, in replying, said that relapses occurred in only one-tenth of his cases. It was often necessary to hypnotise a patient as many as ten or fifteen times before a cure was effected. He concluded by giving a demonstration of the various methods he employed.

The reports of Drs. Warner, Ireland, and Savage upon the investigations they had made with regard to abnormal children found in schools were next read. Dr. Fletcher Beach gave an account of a school he had visited the day after the annual inspection, when he found nervous signs of overpressure in 1 in 17.5 of the children, a proportion which a week later was reduced to 1 in 10. The suggestion providing separate schools for the defective children was condemned as distasteful to the parents and injurious to the children, and the proposal to have separate classes in the same schools met with unanimous approval.

The work of the Section was brought to a conclusion by a paper by Dr. Shuttleworth, entitled "A Contribution to the Etiology of Idiocy," and one by Dr. Fletcher Beach giving some further facts respecting the causation of idiocy and imbecility, and showing that intemperance in parents, combined with other causes, was found to exist in a large proportion of cases.

Section of Pathology and Physiology.

The work of the Section of Pathology and Physiology at the meeting was characterised rather by the exhibition of laborious histological research than the enunciation of any principles of great novelty. With the exception of the President's address, which embraced in a masterly summary the chief points of modern pathological research, the papers mostly dealt with some special point of pathological anatomy. The beautiful preparations shown by Dr. Crooke, Dr. Mott, and the drawings of Dr. Handford illustrating the pathology of Bright's disease, of cardiac degeneration, and the visceral changes of enteric fever, respectively, evidenced a great deal of careful and laborious work; and the discussion on Dr. Crooke's paper had the advantage of being supported by Dr. Dreschfeld, Dr. Russell, and others who have made a special study of the subject. The discussion on Fever fell rather flat, owing principally to the absence of the opener of the discussion, whose paper was read by the Secretary, the subsequent speakers feeling the absence of a living person to attack or agree with. On Friday some specimens of Distoma Crassum were exhibited by Mr. A. W. Sinclair. An important paper by the same gentleman on Beri-beri could not be read, owing to want of time. Physiology was conspicuous by its absence; and the experiment of combining this subject with pathology is hardly justified by the results of this meeting. Both the Sectional proceedings and the Pathological Section gave evidence of the great advances made in the methods of pictorially illustrating pathological conditions. Thanks to the excellent arrangements for optical demonstration in the Physics Lecture Room of the Mechanics' Institute, in which the Section met, there was every facility for the use of the optical lantern in the exhibition of both drawings and photomicrographs in a fully lighted room, the special arrangements of screen and lantern devised by Professor Barr being used, while the powers of the lantern microscope as improved by Mr. Lewis Wright and Messrs. Newton was shown in a demonstration on the visceral lesions of syphilis by Dr. Jacob. The Pathological Museum, as referred to above, showed great richness in the department of pictorial illustration. The valuable collection of drawings sent from the Royal College of Surgeons by the kindness of Mr. Jonathan Hutchinson, and the collection of equal artistic merit by Dr. Drummond, covered a goodly space; while photography and microphotography were well illustrated. A somewhat novel step was made by the arrangement of various series of preparations to illustrate specific pathological lesions, diseases of the knee-joint and of the larynx being arranged under the heading of the disease rather than that of the special exhibitor. The anatomical and physiological collection was mainly occupied by a collection of anatomical preparations exhibited by Dr. Griffith and Dr. Oliver, and some large models for teaching purposes made under the superintendence of Professor Birch, from the Anatomical and Physiological Departments of the Yorkshire College.

Section of Ophthalmology.

The Section of Ophthalmology was largely attended during all the days on which the Sections met, and the interest of its meetings was well sustained throughout. The President's address dealt with the Treatment of Immature Cataract, and following appropriately on this a number of papers were read dealing with various aspects of cataract and its treatment. Mr. Teale described the operation he employs for extraction of cataract without iridectomy, and on the second day of meeting several cases were shown by Mr. Teale, Mr. Snell (Sheffield), Mr. Hewetson, and Mr. Hartley illustrative of this method of operating. The attraction of the second day of meeting was the opening of a discussion by Mr. Jonathan Hutchinson on the Treatment of Glaucoma. This gave rise to a long and interesting debate among the various members present. A large number of other papers were read in this Section, most of them of very distinct interest.

Section of Pharmacology and Therapeutics.

A full audience assembled in the Section of Pharmacology and Therapeutics to hear Sir William Roberts's address on the use of Antacid Remedies in Gout which, as its full title expressed, contained some points of great practical value. Professor Leech's paper on New Hypnotics, which followed immediately, was a most able exposition of the present state of our knowledge of this important class of drugs. Much interest was exhibited in the discussion on Invalids' and Infants' Foods, held on the second day; it was introduced by Dr. Burney Yeo, who delivered a well-reasoned and interesting discourse, and was followed by Dr. Sidney Martin, who dis-

cussed some Recent Accessions to our Knowledge of the Chemistry of Digestion. Sir William Roberts, in bringing the brief but spirited discussion to a conclusion, traversed with much practical sense and shrewd wit the stock arguments of the well-meaning enthusiasts who see in the use of white bread a potent cause of physical and mental degeneration.

Section of Laryngology.

Besides the discussion on Tonsillitis and on its Association with Rheumatism and that on Perichondritis, several papers of considerable interest were read in the Section of Laryngology, The most important of these was that of Dr. Hailes, of Albany, New York, on Intubation of the Larynx, giving a summary of sixty cases. He exhibited the newest forms of O'Dwyer's instruments, the most novel feature being a mechanism attached to the upper surface of the tube, by which it could easily be removed from the larynx with the forefinger alone. Dr. Hailes read an extract from a letter recently received from Dr. Waxham, of Chicago, in which he stated that he had finally abandoned the artificial epiglottis devised by himself. Sir William Stokes contributed an important paper on Thyrotomy for Malignant Disease, which elicited the general opinion of the Section in favour of external operation in such cases. Dr. William Robertson exhibited two cases of rhinoscleroma, which, while generally admitted by the Section to be of rare interest, excited some discussion as to their true nature. Dr. David Newman, Mr. L. A. Lawrence, Dr. G. Macdonald, and Dr. Scanes Spicer contributed papers, the latter also exhibiting Zwaardemaker's olfactometers—instruments that will doubtless prove valuable, and not the less so from their extreme simplicity. The attendance throughout, in spite of many unavoidable absences, showed a considerable improvement on that of any preceding year.

We have received intelligence of the death of Dr. L. T. Cumberbatch, which occurred suddenly on Sunday last while on a yachting cruise with friends in the north of Scotland.

A new wing is about to be added to the Leeds Infirmary. The new erection will be in general keeping with the present building, with which there will be communication by corridors. The estimated cost of the new building is £17,000.

The Vaccination Commission have presented their first report to Parliament, consisting of minutes of evidence, appendices, etc.; but it will, in all probability, be a long time yet before the Commission are in a position to come to any conclusion upon the evidence laid before them.

We regret to have to announce the death of Dr. Thomas King Chambers, honorary physician to the Prince of Wales, and a member of the General Medical Council. Dr. Chambers came of a good family associated both with science and art. He was a ripe classical scholar, an accomplished gentleman, and highly esteemed by all with whom he was brought into contact. Dr. Chambers's work on the General Medical Council was of a valuable character, and it will be difficult to find a worthy successor to supply the loss which the Council have undoubtedly sustained in his death. He had virtually long retired from active practice, and his illness was of long duration. We hope to give a fuller notice of his life and career in our next issue.

The Caledonian Medical Society.

This Society, the membership of which is rapidly increasing, held its ninth annual reunion in the Grand Hotel, Trafalgar Square, on the 16th instant; Mr. Wm. A. Macnaughton, M.A., M.D., President of the Society, in the chair. The Society was established for purposes of mutual support, and for the advancement of medical science, among its members, who must be graduates of a British university, and have some connection with the Highlands of Scotland. The following are the office bearers for the ensuing year:—*President:* A. Macfadyen, M.D., D.Sc.; *Vice-President:* T. Duncan Greenlees, M.B.; *Secretary and Treasurer:* T. F. Tannahill, M.B., Borstal, Rochester; *Editor of Journal:* J. Macpherson, M.B., Larbert, Stirling, N.B.

Sir John Banks, K.C.B.

It is with peculiar satisfaction that we learn that Her Majesty has been pleased to confer upon Dr. John T. Banks, of Dublin, the Knight Commandership of the Bath, Civil Division. The distinction thus conferred has been warmly received by the profession generally, but particularly in Ireland, where Sir John Banks is so deservedly popular; and the only regret is that he has not long since been selected for an honour to which his position and services eminently entitle him. Sir John Banks is an M.B. of Trinity College, Dublin, 1837. In 1843 he was appointed one of the Physicians of the House of Industry (Government) Hospitals, where he is now senior physician. In 1849 he became King's Professor of Medicine in Trinity College, and he held the office for some years. He has been President of the College of Physicians; he is a member of the Senate of the Royal University in Ireland and its representative on the General Medical Council. He was the first President of the Academy of Medicine in Ireland; and on the visit of the British Medical Association to Dublin he was made its President. He is Physician-in-Ordinary to the Queen in Ireland, and Regius Professor of Medicine in the University of Dublin. Five years ago Dr. Banks was offered knighthood, but he declined the honour, not on personal grounds, but as a representative of the profession. His action on that occasion met with general approval, and it increases the pleasure of his many friends to know that a more adequate acknowledgment has at length been made of his very distinguished professional position.

English Doctors in Switzerland.

Mr. T. K. Tapling, M.P., in a letter to the *Times* on this subject, refers to the discussion he raised in the House of Commons last year on the "very substantial grievance of the English medical profession and the English travelling public," and says he has learned with great regret that after much negotiation the Swiss Government has arrived at a final decision hostile to the English doctors, the importance of which he feels is very little realised. There is not only, he points out, "the serious inconvenience to English tourists and invalids, who perhaps can only speak their own language, but there is an absolute injustice to members of the British medical profession, who are perfectly well qualified to attend me here, but who are to be debarred from doing so because I happen to find myself in Switzerland;" and he adds: "I believe it is urged by the Swiss Government that 'reciprocity' in this matter is impossible, that the bread is all buttered on one side as far as the English doctors are concerned. This may be so, but the 'reciprocity' question cuts both ways." Mr. Tapling says he has good reason for knowing that "the whole agitation against British medical men has been got up by an interested clique of Swiss doctors, who use the convenient plea of keeping out German quacks as a means of injuring Englishmen, whose writings have simply been the making of Swiss health resorts. They wish to reap where others have sown. I cannot help thinking that a hint of retaliation in a direction which it would not be difficult to

indicate would bring a little more moderation and common sense into the counsels of the Swiss Government." We are glad to be able to state, on most trustworthy information which has reached us since the publication of Mr. Taplin's letter, that, although the agitation against the English doctors has been renewed, no decision has yet been arrived at.

MEDICAL CIVIL SERVANTS AND THE PENSIONS BILL.

It does not, of course, lie within our province to discuss the general merits of the Civil Service Superannuation Bill, which has been introduced at the fag end of a particularly fatiguing session; but there are certain of its provisions against which we think it our duty at once to raise an emphatic protest. It has hitherto been the rule in counting time for pensions to add seven years to the actual period of service in the case of professional men. The reasonableness of this rule is so obvious that no argument is necessary to enforce it. The gross injustice of placing a medical man, who has had to spend several years and a considerable sum of money in fitting him for the work of his profession, on a level as regards period of service counting towards pension with persons of no special knowledge or training, who have been earning a salary from the very beginning of their career, can scarcely require to be pointed out. We call on all medical and professional men in Parliament to oppose the hurrying through of such a Bill, introduced far too late in the session to be fully discussed. The passage of such a measure could not fail to have a most disastrous effect on the future of the medical department of the Civil Service, which has done such excellent service for the commonweal in the past, besides inflicting a grievous wrong on most deserving and devoted public servants.

THE ALLEGED OUTBREAK OF TYPHOID FEVER AT THE WEST END.

In view of the somewhat alarming statements which have appeared in the press as to an outbreak of typhoid fever in certain quarters of the West End, Mr. Ritchie's statement in the House of Commons will be reassuring to the public mind. Dr. Corfield, as medical officer of the parish in which the cases occurred, is still investigating the matter, and Dr. Barry has been appointed by the Local Government Board to inquire into the cause of the outbreak. The cases were almost entirely confined to the Mayfair Subdistrict of St. George, Hanover Square, and all occurred at the same time, the onset of the disease being in all cases about July 25th. Dr. Corfield, in his report to the vestry dated August 3rd, stated that he knew of fourteen houses in the parish of St. George Hanover Square, and of seven in the adjoining parishes, where there had been cases of typhoid. The outbreak was limited to houses of the better class, including some of the largest houses in the parish; not a single case was reported at the dispensary. From the uniformity in the date of the attacks, and from the fact that the sanitary arrangements of most of the houses where there were cases have been carefully carried out, Dr. Corfield came to the conclusion that the outbreak was not due to any defective sanitary arrangements, but to some temporary cause, which had apparently already ceased to operate at the date of his report. Two cases have since been reported in houses in the Belgrave subdistrict, the dates of the attack being about the same as those of the other cases. The disease was in all the cases of a very mild character. Although it is highly satisfactory to learn that the outbreak was so short lived and so limited in its extent, it is somewhat disappointing that its cause has not yet been discovered. Under circumstances of less careful or less competent medical supervision, such an outbreak might easily have assumed much larger proportions.

SCOTLAND.

REMARKABLE SUBSIDENCE AT BELVEDERE FEVER HOSPITAL, GLASGOW.

On August 12th a curious accident happened at Belvedere Fever Hospital. As one of the nurses was walking along a pathway to the west of the nurses' entrance, the ground gave way under her, and she sank down up to the armpits. After she was extricated it was discovered that immediately under the surface was a shaft 168 feet deep, evidently that of an old coal-pit. The mouth of the pit had been simply covered with wood and a thin layer of soil, and the wood had yielded to rot. When the hospital was in course of erection, twenty years ago, the shaft had been searched for but not discovered.

GLASGOW CHILDREN'S FRESH AIR FORTNIGHT.

This scheme has been so actively carried on this summer, the experience of former years having satisfied the Committee as to the most suitable way of boarding out the children, that no less than 3,195 of the poorest children have already been sent for a fortnight to the coast or country. The Committee has a house at Garelochhead capable of accommodating thirty children, to which such as need special superintendence are sent. It is to be used for this purpose for the next three months.

GLASGOW TOWN COUNCIL AND MEAT INSPECTION.

Since the test case concerning the sale of tuberculous meat, the Health Committee of Glasgow Town Council have been considering the necessity of making new arrangements for meat inspection, which has hitherto been under the Police Board, and has applied only to the carcases of animals slaughtered in the city. It has now been decided to place the meat inspection under the charge of the sanitary department. A committee has also been appointed to make arrangements for the successful carrying out of the work, and to consider what further legislation is necessary to secure that no meat shall be offered for sale in the city until it has been inspected.

ST. MUNGO'S COLLEGE, GLASGOW.

Arrangements are being made by the governors of St. Mungo's College to provide adequate instruction not only in the subjects of the medical curriculum, but in other faculties also. The chief appointments have already been made in the faculties of medicine and law, and those in medicine are as follow:—*Professors:* Henry E. Clark, M.R.C.S., F.F.P.S., Anatomy, junior, Anatomy, senior; John Barlow, M.D., F.R.C.S., Physiology, Practical Physiology; John Dougall, M.D., F.F.P.S., Materia Medica; David N. Knox, M.A., M.B., F.F.P.S., Surgery; Alexander Robertson, M.D., F.F.P.S., Medicine; James Stirton, M.D., F.F.P.S., Midwifery; John Glaister, M.D., F.F.P.S., Medical Jurisprudence; J. R. Wolfe, M.D., F.R.C.S.E., Ophthalmology; William M'Ewen, M.D., F.F.P.S., Clinical Surgery; David C. M'Vail, M.B., F.F.P.S., Clinical Medicine. *Lecturers:* The Pathologist of the Royal Infirmary, Pathology, Practical Pathology; James Whitson, M.D., F.F.P.S., Surgery Practical; James K. Kelly, M.D., Gynæcology; James Provan, M.D., F.F.P.S., Dermatology; Johnston Macfie, M.D., F.F.P.S., Otology; David Newman, M.D., F.F.P.S., Throat and Nose; James W. Allan, M.D., of Belvedere Hospital (subject to approval of Town Council), Fevers; A. Campbell Clark, M., of Glasgow District Asylum, Bothwell, Psychology; Neil Carmichael, M.D., F.F.P.S., Bacteriology; James A. Adams, M.D., F.F.P.S., Surgical Diseases of Children; D. Campbell Black, M.D., F.F.P.S., Medical Diseases of Children. For the professorships of Chemistry and Zoology applications are

being invited. These appointments indicate that, so far as the subjects taught are concerned, the governors are endeavouring to keep well in view the modern requirements of medical training. The announcement of the appointments has, however, given occasion, in Glasgow, to a certain amount of comment. No public intimation was given that appointments were about to be made. The governors have, so far as one can judge, simply met and made a selection to please themselves.

IRELAND.

An epidemic of typhus fever has prevailed for some time past in the Marshallstown division of the Mitchelstown district. A large number of persons were attacked, but happily the deaths were but few, and the outbreak is now subsiding.

ALLEGED INSANITARY CONDITION OF DERRY GAOL.

In consequence of the allegation that this prison was in an insanitary condition the General Prisons Board recently sent their medical officer, Dr. O'Farrell, to examine and report upon the subject. That gentleman reports that there is nothing in the conditions of the prison injurious to the health of the inmates; but that the sewage of the city is thrown into the river, and is brought back with every return of the tide. It is stated on good authority that there has not been a case of fever occurring among the prisoners for the past ten or twelve years.

LUNATIC ASYLUMS, IRELAND: ANNUAL REPORT.

On January 1st last the registered insane of all denominations coming within Government supervision amounted to 15,685, of whom 7,923 were males and 7,762 females, a remarkably close approximation, although the causes of mental disease vary much between the two sexes. Of these 15,685, 10,825 were inmates of district lunatic asylums at the date mentioned, the total under treatment for the past year being 13,320. The "absolute recoveries" numbered 1,207, or 44 per cent. on admissions, which may be regarded as satisfactory; "improved," 356, or 14 per cent.; "no improvement," 144; and 786 deaths took place. The death-rate in Irish asylums year by year is uniformly low in proportion to the number of inmates, last year the mortality being equal to something over 7 per cent. These 786 deaths were attributable, except in four instances (cases of suicide), to natural causes, the more prevalent being pulmonary and cerebral affections, as also physical debility—the result not only of advanced age, but not infrequently of prolonged mental decay or of acute excitement. In the various district asylums (excepting the Richmond and Carlow Asylums) the conjoint number of fever and cases of a dysenteric nature during the year was limited to 97, very few proving fatal. Hence, in the absence of any other epidemic, the sanitary condition of these establishments may be regarded as highly favourable. The great majority of admissions were through magisterial warrants as dangerous lunatics, and, however unsatisfactory the existing system may be, it affords one paramount advantage, namely, the quick transmission of the destitute and too frequently homeless insane from distant localities, who on long journeys would have no means of conveyance or protection to their destination, unless taken charge of by the police, not infrequently for a distance of over fifty miles. The expenditure in district asylums during the year 1888, including all items of outlay—save those of a structural character or for the purchase of land—amounted to £219,585 4s. 11d., or, taking one establishment with another, to a capitation scale of £20 10s.10d. per head, being less by 12s. 3d. than in the previous year.

TOPICS OF THE DAY.

(AN OCCASIONAL COLUMN.)

By the Editor.

The Maybrick trial will, of course, lead to much protracted discussion on the discrepancies and contradictions in the evidence of experts, and the advisability of introducing a system of scientific assessors in lieu of expert witnesses. There is much to be said in favour of a well-devised scheme for obtaining the services of technical assessors. This trial, however, indicates that not under any system which the wit of man can devise is it likely that conflict of evidence and irreconcilable differences of opinion can be avoided in cases where the elements of judgment are uncertain, and capable of different interpretation by the best informed persons. An assessor might in such a case assist the Court to arrive at a definite conclusion; but such a conclusion would hardly be less liable to error than now, and certainly would not be free from question. It is not sufficiently recognised by those who arrive at more sanguine opinions as to the result which would be attained that the scientific witness, under the circumstances, has to deal with many indeterminate data; and the assessor would be in the same dilemma. The conflict of opinion and deduction shown by the evidence of the experts reflects the different aspects under which the doubtful elements of the case present themselves to men of large experience and acute judgment. From them may be struck out the line of ultimately just deduction; but as the suppression of just doubts is not the object of a court of justice, and a firm conviction is not necessarily a just conviction, it is evident that neither the suppression of expert evidence—if that were contemplated by anyone—nor the introduction of a skilled assessor would materially alter the results in such a case as the Maybrick trial.

The fact appears to be that, apart from all other evidence, and considered only as a toxicological problem, the case of Mr. Maybrick presents some novel elements, as to the interpretation of which positive data can hardly be said to exist. The experience of Dr. Meymott Tidy and Dr. Stevenson in cases of death from arsenic is probably greater than that of all other British experts united. Dr. Tidy has, it is stated, had to deal with upwards of 270 cases of poisoning, of which upwards of forty were cases of arsenical poisoning; and Dr. Stevenson has probably a not less wide experience. Nevertheless this case presented difficulties which did not admit of solution by reference to any precisely similar facts on record, and which left the conclusion open to inferential reasoning upon a balance of probabilities as to which they neither were nor are able to agree. It will have been seen also that the many and impartial trained toxicological teachers in the medical schools, who had the advantage of comparing the statements, the reasoning and the deductions set forth on the sworn testimony of these two leading experts, were equally unable to arrive at a unanimous conclusion, but were pretty equally divided in opinion as to the fundamental question whether Mr. Maybrick did or did not die from arsenical poisoning, leaving aside altogether the question by whose hand, how administered, and under what circumstances.

The human body is a re-agent of extreme complexity, and in this case the previous habits of the deceased and his addiction at one time (and to an extent not fully ascertained) to the habit of taking arsenic introduced elements of unusual doubt and difficulty. The scientific aspects of the case will call for further study after its purely judicial side has been disposed of. How far does the discovery of one-tenth of a grain of arsenic in portions of the liver taken here and there justify the conclusion that the whole was proportionately impregnated, and contained four-tenths of a grain altogether,? What is the evidence as to "pocketing" and unequal dissemination of the arsenic? In what parts of the intestine is arsenic most likely to be collected? Are the duodenum and the lower parts of the large intestine specially selective places of deposit? How long will the habit of taking arsenic at a previous date leave an arsenical deposit in the parts of the body of a person not poisoned with arsenic? And what amount of arsenic may be found after death under such circumstances? Will a previous habit of arsenic-taking explain in a person dying from arsenical poisoning the absence of characteristic symptoms such as incessant vomiting, petechial spots, fatty degeneration of visceral organs? These are among the new toxicological

problems suggested by this case, as to which Professors Tidy and Stevenson might reasonably differ, for we are not aware that any data for dogmatic decision exist, although no doubt "the man in the street" is prepared to give an answer right off. Further experiment and research, and the reinvestigation of phenomena and experience will, however, be required to give an answer satisfactory to conscientious inquirers where the conditions are so complex and the issues so momentous. A point of critical importance was the accuracy or inaccuracy of Mrs. Maybrick's statement that she had put a white powder (presumably arsenic) into the bottle of Valentin's meat-juice, and this at Mr. Maybrick's request. The statement on the contrary that no powder but a solution was found in the meat-juice seemed a serious obstacle to the credibility of this important—nay, as some thought, crucial—part of the narrative. But experiments remain to be tried on the solubility of arsenic in the acid juice of meat. These experiments do not appear to have been made before the verdict, but subsequent experiments with half a grain of arsenic and a drachm of water indicate a surprising solubility of the arsenic, such as could not, *a priori*, have been anticipated. It is not here that all the new points which have arisen in this case can even be indicated, far less solved, but enough has been said to show how legitimate are the doubts, and how natural the differences which have occurred in the interpretation of a series of phenomena which, in their precedent and coincident complications, were without precise parallels in any recorded case. Seeing how difficult was the problem, how indeterminate the conditions, and how variable the biological characters which affected them, it may be doubted whether certainty could be arrived at by any known machinery of judgment, and whether any decision could be anything else than a good guess arrived at from what one of the scientific witnesses spoke of as "approximate possibilities." This is parlous ground on which to hang a man or woman.

MEDICAL SICKNESS, ANNUITY, AND LIFE ASSURANCE SOCIETY.

THE sixth general meeting of the members of this Society was held in the Philosophical Hall, Leeds, on Wednesday, August 14th. The chair was taken by Mr. ERNEST HART, who was supported by Dr. F. de Havilland Hall (one of the Vice-Presidents), and the Treasurers, Mr. S. W. Sibley and Mr. Noble Smith. There were also present: Dr. Charles Aldridge (Plympton), Mr. W. Gilchrist Burnie (Bradford), Mr. H. W. Boddy, M.B. (Manchester), Mr. M. Bryson (York), C. H. Braithwaite, Mr. Eustace Carter (Chapel Allerton, Leeds), Mr. J. B. Carter (Chapel Allerton, Leeds), Dr. G. W. Crowe (Worcester), Dr. J. E. Garner (Leeds), Dr. Major Greenwood, jun. (London), Mr. De Vere Hunt (Cardiff), Mr. T. Vincent Jackson (Wolverhampton), Mr. Brindley James (London), Mr. H. A. Lownds (Kirkburton, Huddersfield), Mr. W. Partington, M.B. (Tunstall, Staffs), Mr. F. H. Preston (London), Dr. Harry B. Pope (Kington, Herefordshire), Dr. J. Ridge (Enfield), Mr. G. S. Rhodes (Saltburn-by-the-Sea), F. Sherwood, Walter Smith, Mr. J. Prince Stallard, M.B. (Manchester), Mr. W. D. Stamp (Plympton), James Sedgwick (Boroughbridge), E. F. Taylor (Leeds), William Thomas, Mr. A. H. Thompson (Great Ouseburn, York), Dr. J. B. Walker (Golcar, Huddersfield), Mr. Frederick Wallace (London), Dr. Thomas Whitham (Leeds), and Mr. C. J. Radley, Secretary.

The SECRETARY having read the minutes, which were confirmed,

The CHAIRMAN said according to the order of the proceedings the first business set down was the chairman's address. He thought they would excuse him if, under the very satisfactory circumstances under which they met and in view of the fact that they were met really for business, he omitted that part of the programme and confined himself to a few words recapitulating the substance of the report which they had before them. He was sure it would be satisfactory to all the members of the Society that they were able to meet on the occasion of the first quinquennial valuation of the Society with a report which affirmed on the evidence of the actuary, arrived at after searching investigation, that the operations of the Society had been of the most satisfactory character, and that the financial reports were absolutely reassuring, and in every way supported the favourable reports which they had been able to submit annually. They would see that as regards the operations of the year they had had a net increase of 104 members, and that brought their total membership very nearly up to that charmed number of 1,000 which they ventured to hope for when they first founded the Society, as a high-water mark, but which they certainly hardly expected to reach in so short a space of time. He hoped that when they met again next year he would be able to report that their roll of membership exceeded that number. Again, it was satisfactory to be able once more to report to their members that, although they desired that the Society should extend as largely as possible for the benefit of the profession, and especially for the younger members of it, they needed no accession in order to insure the prosperity and the stability of the Society, which were already secured. The most important department of their fund at the present certainly, and probably would be for some years to come, was the Sickness and Accident Pay Department—that department in which they provided, for the first time in the history of any profession, a means for every medical man actively engaged in professional life to insure himself against absolute default of funds in the case of sudden sickness or accident. They had had, of course, more payments to make during the past year because they had had 100 more lives at risk, and because also all those lives were gradually becoming more liable to sickness as age advanced. Those risks and the increased expenditure had been amply provided for in the tables, and it was satisfactory to know that on that fund, although they had made this year payments to 130 members for 636 weeks six days' illness, as compared with 125 members and 524 weeks' illness last year, they had once more a satisfactory report to make; the claims on the fund had been well within the assets, which were by anticipation prepared to meet those claims. In respect to the general management fund, they were once more able to come before the members with the satisfactory statement that, in proportion as their numbers had increased, the ratio of expenditure on management had decreased; and in that respect they were able to show a record which was unexampled in the history of any insurance company in any way comparable which had been started within the last quarter of a century. There was no society comparable to themselves which had been started in recent times which could say that its management fund, which had been calculated at a 10 per cent. deduction annually from premiums, had really been carried on at a cost of less than 5 per cent. of the premium income. They had set aside £983 as a fair calculation of the expenses of the fund during the year, and of that sum they had expended only £502, and they had an accumulated fund to the credit of that account, which was all so much pure profit, which would remain divisible with the division of profit, a sum of £2,498 which stood to their credit. The report mentioned—and they were aware that that was very largely due to the gratuitous services rendered by the Committee of Management, and the extreme care which had characterised their management—that there had been no expenses for house rent, for advertising, no deductions for commissions or for directors' fees, or any of those expenses which were common to insurance societies. He (the Chairman) was sure they would feel that their thanks were due to the Committee of Management, and were due also to the many gentlemen throughout the country who had assisted by their reports when their fellow brethren had been stricken with sickness, and by so doing had insured the prosperity of the Society, and had also enabled them to effect considerable economies. They now came to the final item of the financial report—the amount of their reserves. They would see that those reserves, which were at first very modest, amounting in 1884 to £1,434, had rapidly risen, and last year they were able to make a reserve of nearly £8,000. This was a most essential thing to do. They had not an excessive reserve, but a reserve called for in view of the constantly increasing liabilities which accrued as years went on in respect to annuities becoming due and other incidental expenses which would fall upon the Society as it attained a greater age. Their reserves now amounted to £32,561. He would not delay by referring to the quinquennial valuation, because it had already been in their hands. They were aware that the valuer had confirmed all that had been said to them from year to year, not only as to the financial soundness, but as to their remarkable financial prosperity and the growing surpluses from each of the funds; and they would see that he had recommended—and as the Committee thought very judiciously—that that surplus at this early history of the Society should remain to their credit, and not be divided until the second valuation. They had thought that essential for the high stability which a society of that sort ought to acquire; at the same time they had desired to deal with the utmost equity and liberality that the state of their funds justified with every member at this date, and, as they would see, it was proposed that

those amounts (which could be easily ascertained) due to each member should be understood to go now to his credit, in the sense that if, when the first distribution of profits would be made, which would properly be at the next valuation, anyone now a member of the Society should have died before that valuation, his representatives would be entitled to a fair share of the profits which might be considered to accrue from this time, and which they conceived to be equitably due to him and which would be paid to him if he lived, and if not to his representatives. That was to some extent a self-denying arrangement on their part, but he thought a wise one, and he hoped they would approve of that resolution. There were certain amendments in the rules which were not, as they would find, of a very important kind, but such as the working of the Society showed to be necessary to its equitable working. They would be explained to the meeting by their vice-president, Dr. de Havilland Hall, to whose unwearied labours from week to week they were all very much indebted for that constant supervision of individual claims and weekly questions arising which was absolutely necessary for the performance of economy and of justice; and Dr. de Havilland Hall would tell them some of the reasons which had induced the Committee to recommend the amendment of the rules. In conclusion, he said it only remained for him to congratulate the members on the great prosperity the Society had met with, a prosperity which, he was happy to say, was in marked contrast with some doleful anticipations which were formed when the Society was first formed, and with the fate which befell its prodecessor which it was attempted to form some years ago. He congratulated them on the usefulness of the Society, and ventured to express the hope that every member would endeavour to increase the sphere of the Society, and add to its beneficent working throughout the profession. He begged to move:

That the report of the Committee and the audited accounts for the year ending June 30th, 1889, be and are hereby received and adopted.

Mr. BRINDLEY JAMES seconded the motion.

Mr. WALTER SMITH said he should like to add his testimony to the very satisfactory report, and very great credit was, he thought, due to the Committee. It had been stated that it was proposed to pay the representatives of any members dying between the present time and the distribution a proportionate portion of the profits. He could not help thinking that it ought to refer to all members withdrawing before the next valuation if they withdrew from no misconduct, because that profit had already been earned by those members, and he thought it was only fair that a withdrawing member should have the same as the representatives of a deceased member; for instance, a member might have to go abroad. He saw that it was proposed to alter the rules so that any member ceasing practice could no longer go on the sick fund. In that case it seemed to him that the member withdrawing would be clearly entitled to a share of those profits already earned. He heartily congratulated the Committee on the very excellent report which they had presented to the members.

The CHAIRMAN said Mr. Smith had raised a point they were about to consider—namely, the case of anyone compulsorily caused to retire. He thought it was quite obvious that there could be no division of profits to anyone voluntarily retiring before the time for the division of profits came. If compulsorily retired he would receive a surrender value and a share of the reserves.

The resolution that the report of the Committee and the audited accounts for the year ending June 30th, 1889, be received and adopted was carried *nem. con.*

Mr. WALLACE said the resolution which he had the pleasure to bring before them was:

That the report of the valuer (Mr. F. G. P. Neison) on the affairs of the Society for the quinquennium ending December 31st, 1888, be and is hereby received and adopted, and that the Secretary be instructed to deposit the same with the Chief Registrar of Friendly Societies as the valuation of the Society.

Those who had had the management of the Society knew that Mr. Neison had subjected the affairs of the Society to a most severe and thorough valuation, and that he took into consideration everything that could possibly be on the black side of the question, if he might put it in that way. When, in the concluding paragraph of the report, Mr. Neison said: "Allow me to congratulate all concerned with the Society upon the prosperous condition of its finances, and the great success which has attended its operations," he felt there was nothing more for him to say except that he had the greatest pleasure in moving the adoption of the valuer's report. He might mention that he had the honour in Liverpool of seconding the resolution for the formation of the Society, and in his wildest dreams he could never have thought that in a period of five years he should be able to propose the adoption of that most satisfactory quinquennial report.

Dr. MAJOR GREENWOOD, jun., in seconding the resolution, approved of the recommendation that there should be no division of profits for another five years.

PROPOSED ALTERATION OF RULES.

The following proposed alteration of rules:

RULE VII.—The following to be added to the rule: "Should any member retire from the practice of his profession from any cause other than illness, he shall be paid the ascertained surrender value of his interest in the Sickness Fund, and shall cease to be a member of such Fund. Such relinquishment of practice shall not in any way interfere with the rights of membership of the Annuity or Assurance Funds."

Insert in the 2nd line of the present Rule, following the word "withdrawing:" "After not less than five years' membership."

The first alteration of Rule VII was withdrawn with the approval of the meeting.

The following met with unanimous approval:

Insert in the second line of the present rule, following the word "withdrawing, "After not less than five years' membership."

Rule VIII was amended so as to read as follows:

DECLARATION ON THE FUND.

VIII.—When any member shall, by sickness or any bodily or mental infirmity, be incapacitated, he shall send, or cause to be sent, to the Secretary, at the registered office, postage or delivery paid, a declaration in the following form, viz.:

"I, (*here insert christian and surname*), a member of the No. , residing at (*here give the full address*), being at the present time afflicted with and thereby incapacitated from all work, and compelled to entirely cease from seeing or advising patients, do hereby declare on the fund of this Society: this day of , 18 ."

Such declaration shall be posted not more than four days from the time of the member being compelled by illness to entirely cease practice. No sickness pay shall be made for illness of less than one week; but, at the close of such week, if the member remain incapacitated by illness, he shall be entitled to claim for the whole seven days, provided the preceding declaration has been punctually sent by him, and provided he forward at once a medical certificate that he has been under treatment at least three days of such week. No sick pay shall be allowed under this rule until a medical certificate has been received, nor unless a printed form (to be periodically forwarded to the sick member from the office) is returned signed by the medical attendant. Should the Executive Committee deem it necessary, they may request a sick member to allow himself to be examined by a special physician or surgeon, and any refusal to do so shall be a sufficient cause for the discontinuance of payment of the allowance. The term "sickness" shall include any incapacity for work caused by accidents. No payment shall be made for any sickness arising from the intemperance, immorality, or misconduct of a member.

It was moved by Dr. HALL, and seconded by Mr. SIBLEY, that Rule VIII be amended as above.

The CHAIRMAN stated he had received a letter from Dr. Mouncey (Earlestown, Lancashire), who thought the words "totally incapacitated" too stringent. They had not, however, found this to be the case.

The following proposed alteration of Rule IX was adopted:

RULE IX.—The following words on lines 2 and 3 to be deleted: "Giving verbal orders or directions alone excepted."

The following to be added to the rule:

Any member who shall, during the period he is claiming sickness pay, neglect to at once apprise the Secretary of any change of residence, or to return any receipt for payment or any report or certificate required as to his condition, within the specified time, shall forfeit his right to claim so long as such neglect shall continue.

The following proposed addition to Rule XI was discussed:

No sickness claim shall be allowed if the member during any part of the period claimed for is absent from the United Kingdom, unless with the special consent of the Executive Committee. Such Committee shall have power to allow sickness pay, under special circumstances, during the absence of a member abroad for not more than four weeks, provided such consent shall have been applied for and obtained after the commencement of an illness and before the member leaves the United Kingdom.

Mr. WALTER SMITH proposed, as an amendment, that the words "for not more than four weeks" be omitted. They had every confidence in their Committee, and thought it might be safely left to them.

The amendment was accepted, and the proposed addition to Rule XI, as amended, was adopted.

The following alteration of Rule XII was approved:

RULE XII.—The words "six calendar months," in line 4, shall be altered to "twelve calendar months."

The following addition to Rule XV was carried:

"Any member who joined previous to August 1st, 1889, may, on giving notice to the Secretary in writing within twelve months from that date, arrange to receive £75 in place of each £10 per year annuity he would become entitled to, such payment to be in lieu of all other payments under the annuity branch, and to be made on the same date as the annuity would commence, namely, on the member becoming 65 years of age. Members joining subsequently to August 1st, 1889, shall be entitled to convert their annuity into a single payment on similar terms, provided notice be given to the Secretary in writing any time within one year from the date of

joining. Any member who has given notice of his intention to accept a single payment in place of his annuity shall not have power to alter or rescind such condition."

Mr. NOBLE SMITH proposed:

That the following officers and members of Committee be and are hereby elected: *Chairman:* Mr. Ernest Hart. *Vice-Chairmen:* Messrs. W. M. Ord (London); Clifford Allbutt (Leeds); J. B. Brierley (Manchester); W. Bruce (Dingwall); T. M. Dolan (Halifax); M. Greenwood, jun. (London); F. de Havilland Hall (London); T. V. Jackson (Wolverhampton); W. Newman (Stamford); R. J. Pye-Smith (Sheffield); J. B. Sincock (Bridgwater); F. Wallace (London); and W. G. Burnie (Bradford). *Six Members of the Executive Committee:* Messrs. E. Bartlett (London); M. R. J. Behrendt (Doncaster); J. B. James (London); J. W. Hunt (London); R. Lord (London); and F. Swinford Edwards (London). *Twelve Members of the General Committee:* R. H. Coombs (Bedford); G. W. Crowe (Worcester); W. A. Elliston (Ipswich); L. M. Griffiths (Bristol); D. De Vere Hunt (Cardiff); F. S. Palmer (East Sheen); T. E. Parsons (Wimbledon); J. Pickett (London); W. J. Stephens (Brighton); G. E. Herman (London); A. S. Gubb (London); and W. Thomas (Birmingham). *Arbitrators:* Messrs. Farquharson, M.P., J. V. Fitzgerald, W. H. Michael, J. W. Stephenson, and Professor W. T. Gairdner.

He said, in proposing these members of Committees, etc., for re-election, it was hardly necessary, after what had taken place, for him to say much with regard to their work. They owed a very great debt of gratitude to their Chairman, Mr. Ernest Hart, and he thought every member of the Society fully recognised that fact. Mr. Hart had on all occasions, sometimes at very great personal inconvenience, attended meeting, and guided to a very great extent the conduct of those meetings. There were other members of the Committee who had not been behind in giving their services. No words could express what Dr. de Havilland Hall had done for the Society since he had joined it; he had given it, he would almost say, an unjustifiable amount of time. He (Mr. Noble Smith) had been unable to attend to the work of the Committee during the last year in a way he would have liked, and, feeling that, he had thought seriously of tendering his resignation as one of the Treasurers of the Society. As there had been some difficulty, however, in appointing a successor, he had decided to defer taking this step for the present. Mr. Sibley had done most of the treasurer's work during the year, and everyone, he thought, had the utmost confidence in his ability and his work.

Dr. MAJOR GREENWOOD proposed a vote of thanks to Mr. Hart for taking the chair.

Dr. DE VERE HUNT said he had great pleasure in seconding the resolution, which was unanimously received.

Mr. SMITH proposed that the best thanks of the meeting be given to the officers of the Committee of the Society for their services during the past year, which was carried *nem. con.*, and the proceedings were brought to a close.

[We are asked to state that some little time must elapse before the alterations of the rules take effect, as they will not be valid until deposited with the Chief Registrar of Friendly Societies and registered by him. Further particulars of the Society, with reports, prospectuses, etc., will be supplied, free of cost, on application to the Secretary, Mr. C. J. Radley, 26, Wynne Road, Brixton, S.W.]

IRISH MEDICAL SCHOOLS' AND GRADUATES' ASSOCIATION.

AT the summer meeting of the Irish Medical Schools' and Graduates' Association, held in Leeds on August 14th, the following resolutions were unanimously passed:—

1. "That the Council be authorised to establish Branches of the Association in the United Kingdom."

In proposing this, Dr. MAPOTHER alluded to the rapid increase in numbers and in influence of the Association within the last few years; and he stated that a strongly-worded desire for the formation of Branches had been expressed by many members living in the provinces, who found it difficult to attend the meetings in London.

This resolution was seconded by Dr. HALTON, of Barnsley.

Dr. MACNAUGHTON JONES then proposed:

2. "That the Branches formed in the United Kingdom be constituted under the conditions prescribed by the Council, and that the by-laws of the Branches be those of the Association." The Council had recommended the following conditions:—1. That a Branch may be constituted on the written requisition of not less than twenty local members. 2. That the election of officers be subject to the ratification of the General Council. 3. That the expenses of the Branch be defrayed by the Branch itself. 4. That the President and Secretary of the Branch be *ex-officio* members of the General Council.

Professor CUMING (Belfast) seconded the proposition in a speech of cordial approval.

The CHAIRMAN OF COUNCIL and Dr. DE VERE HUNT (Cardiff) seconded a vote of thanks to the Reception Committee of the British Medical Association for the use of the Philosophical Hall, in which the meeting was held.

It was decided that the *Medical Press and Circular* should be the recognised official organ of this Association, which would be supplied to members at a reduced subscription.

Among the members present at the meeting were the President, Dr. Fegan (Blackheath), Dr. Macnaughton Jones, Professor Cuming (Belfast), Dr. Mapother (London), Dr. Davison (Bournemouth), Dr. Halton (Barnsley), Dr. Pope (Eardisley), Dr. McGeagh (Liverpool), Dr. De Vere Hunt (Cardiff), Dr. J. B. Brereton, Dr. W. R. Thomas, and Dr. Abraham (Honorary Metropolitan Secretary).

THE NEW SYDENHAM SOCIETY.

THE thirty-first annual meeting of the New Sydenham Society was held at Leeds on Friday, August 16th; Dr. ROBERT BARNES in the chair. The report stated that during the year which has just closed the following works were issued: Second and concluding volume of Spiegelberg's *Midwifery;* the fifteenth fasciculus of the *Lexicon of Medical Terms;* the first volume of Cohnheim's *Lectures on General Pathology;* the first volume of Henoch's *Lectures on Diseases of Children.*

For the year just commenced (1889) there are already in the members' hands: The seventh fasciculus of the *Atlas of Pathology,* comprising Diseases of the Gall-bladder, Calculi, etc., with one plate, illustrating Osteitis Deformans; the third volume of Charcot's *Lectures on Diseases of the Nervous System.* The *Lexicon of Medical Terms* was considerably more than half completed.

The following works will be ready within the next six months; the dates of issue will, however, depend upon the funds at the Council's disposal: The second volume of Henoch's *Lectures on Diseases of Children;* the second volume of Cohnheim's *Lectures on General Pathology;* the sixteenth and seventeenth fasciculi of the *Lexicon of Medical Terms;* Flügge's *Treatise on Microparasites.*

The Council wishes it to be clearly understood by local secretaries and members generally that the question as to the number of works to be issued in the current year rests with themselves.

The Society's accounts for the year 1888 show a balance of £230 5s. 1d. carried over to the current year. The report and balance sheet were read and adopted. The officers for the ensuing year were then elected.

MALCOLM MORRIS INDEMNITY FUND.

(EIGHTH LIST.)

	£	s.	d.		£	s.	d.
Amount previously acknowledged	458	0	0	Dr. A. Garrod Thomas (Newport, Mon.)	1	1	0
Dr. Percy Boulton	2	2	0	Dr. Anthony Corley (Dublin)	1	1	0
Dr. Bowles (Folkestone) ...	1	1	0	Dr. Frazer (Bournemouth)...	0	10	6
F. Swinford Edwards, Esq....	1	1	0	Johnson Herbert, Esq. (Whitby)	0	10	6
A. Napper, Esq. (Cranleigh)	1	1	0				

The costs amount to £480. Subscriptions may be sent to Mr. G. P. Field, 34, Wimpole Street, or Dr. Sidney Phillips, 21, Upper Berkeley Street.

CORRESPONDENCE.

ROYAL MEDICAL BENEVOLENT COLLEGE.

SIR,—I regret Mr. Dow should ignore the real point of my letter of August 7th on the question of voting.

"The Council are powerless. The Act of Incorporation declares that every governor shall have a vote or votes, and shall have a proportionate voice in the election of those to be benefited."

Until a new Act of Parliament is obtained, the Council cannot alter this.—I am, etc.,

C. HOLMAN,
Treasurer, Epsom College.

Reigate.

SIR,—If you can spare me a little space, and you do not think that your readers are thoroughly tired of the subject, which they have every reason to be, will you permit me to make a few remarks on Mr. J. A. Dow's letter in your last issue?

In saying "it is clearly the duty of those who are entrusted with the affairs of a very important charitable institution to themselves elect, *without any voting on the part of subscribers*

(italics are mine), those candidates who are most in need of its benefits," Mr. Dow shows that he does not realise the power of voting which every governor has, and which the large majority of them are determined to jealously guard. Obviously he had not seen Dr. Holman's letter on the subject in the JOURNAL of August 10th when he penned this letter. Yet what Dr. Holman observed as to the powerlessness of the Council to abolish the present voting system should be taken to heart by Mr. Dow, and by those gentlemen who periodically agitate for what they please to term a "reform" in the mode of election. The Royal Medical Benevolent College Act, 18 and 19 Vict., sess. 1854-5, cap. 166, enacts (sec. XIX): "Every governor, whether present at the meeting [1] or not, shall be entitled to vote in the election of pensioners and foundation scholars, in such manner and according to such scale or number of votes as shall from time to time be prescribed by the by-laws of the College." The power in the hands of governors, then, is evident; and as probably 50 per cent., if not more, are life governors, many of recent constitution, there is practically no prospect of a change in the mode of election.

I fear that I have already trespassed too far on your space, yet I should much like to criticise one other passage in Mr. Dow's letter dated August 9th. He says: "The committee who investigate the claims are supposed to be in possession of all particulars necessary to enable them to select the fittest cases." Is this so? Surely not. I venture to say that no committee can get hold of the hundred and one private particulars of candidates, such as whether relatives be rich or poor; if well-to-do, whether they, or other kind friends, give occasional help; whether an uncle has a child for three months in the year and an aunt has the same child for another three months, etc. These are particulars which the committee surely do not expect, and which, were they to, I very much doubt whether they would obtain. Yet many of these particulars might be known to numerous governors and to honorary local secretaries with large numbers of votes, who reside near candidates, and have, it may be, personal acquaintance with them.

To my mind, all that the committee or council can be expected to do is to approve of persons as candidates—that is to say, to shut out the really undeserving cases; and I venture to say that, in recommending certain candidates as most deserving of support, they are attempting what is not really in their power. But, of course, the Council have no choice in the matter, for they have been compelled to do this selecting by a general meeting of the governors of the institution.—I am, etc., A GOVERNOR.

[1] General meeting of the governors of the institution.

A NEW METHOD OF EXCISING THE WRIST-JOINT.

SIR,—If the operation I suggested in the JOURNAL of July 27th for excising the wrist-joint is not new, all I can say is that it is not mentioned in any of our best known and most popular surgical textbooks. It really matters very little who invents a new method of treatment; the only question of any importance is the true value of the proceeding recommended. There can be no doubt of the ease and thoroughness with which the wrist-joint can be removed by the posterior incision, and I strongly urge all surgeons at any rate to give it a fair trial. Notwithstanding what your correspondents have stated, I believe the operation, as suggested by me, is in every one of its details quite new, and has not hitherto been practised.—I am, etc., EDW. THOMPSON.

Omagh, August 13th.

DRESSINGS FOR THE UMBILICAL CORD.

SIR,—In my address, at the opening of the Section of Obstetric edicine at the Leeds meeting, I advised the free use of starch owder as the best dressing for the cord before its separation. It as naturally occurred to some of my readers that finely-powdered oric acid, or some compound into which boric acid entered as an gredient, would be preferable to pure starch. This, however, is ot so. Our experience at the General Lying-in Hospital has own that the property of deliquescence possessed by boric id unfits it for this particular purpose—preventing, instead of ding, the normal desiccation of the cord and delaying its paration. Instead of falling off on the fourth or fifth day, cords essed with boric acid seldom come away before the eighth day. mentioned this when delivering my address, but only in the rm of an "aside," so that, while it reached my hearers, it did t reach the larger body of my readers. I shall, therefore, be greatly obliged if you will kindly allow this to appear in your next issue.—I am, etc.,

CHARLES J. CULLINGWORTH.

Brook Street, W., August 20th.

MEDICO-LEGAL AND MEDICO-ETHICAL.

COLE v. THE ACCIDENT INSURANCE COMPANY.

(Supreme Court of Judicature, Court of Appeal.)

THIS was an appeal from a decision of Mr. Justice Mathew and Mr. Justice Grantham, affirming the judgment of Mr. Baron Huddleston, which was in favour of the defendants. The action was brought by the representatives of a jobmaster in London upon an insurance effected ten years ago by the latter with the company for £1,000.

The policy contained a clause exonerating the company from liability in the event of the death of the assured being caused by suicide or by poison. It appeared that one night in February of last year the assured went into his stable for the purpose of taking some medicine which he kept on a shelf in it. By a gust of wind the candle he was carrying was blown out, and in the dark he took up what he believed to be his bottle of medicine, but what turned out to be a bottle of horse lotion, containing corrosive sublimate. He drank a portion of the mixture, which occasioned his death. The plaintiff, as the personal representative of the deceased, then brought the present action to recover the amount of the policy.

At the trial before Mr. Baron Huddleston, it was contended on behalf of the plaintiff that the death of the assured was the result of an accident, whilst the defendants relied upon the clause in the policy that exonerated them from liability in the event of the death of an assured being caused by poison. Mr. Baron Huddleston directed the jury to find a verdict for the defendants, and his ruling was upheld by the Divisional Court. The plaintiff now appealed.

The Master of the Rolls, in giving judgment against the appellant, expressed an opinion that an ordinary person insuring against accident would suppose that the policy covered pure accidents; but the exceptions inserted so cut down these accidents that it did not include a case of this kind, and persons insuring against accidents should be careful to see what were the terms of the policy they received.

Lords Justices Lindley and Bowen concurred in dismissing the appeal, the latter expressing some dissent from the view of the Master of the Rolls.

The appeal was dismissed with costs.

MEDICO-PARLIAMENTARY.

HOUSE OF LORDS.—Thursday, August 15th.

Lunacy Laws.—A Bill to Consolidate the Lunacy Laws was brought in by the LORD CHANCELLOR, and read a first time.

HOUSE OF COMMONS.—Thursday, August 15th.

Civilian Doctors and Military Service.—Dr. KENNY asked the Secretary of State for War whether Dr. Richard Nicholls, of Navan, who was for over seventeen years civil medical officer to the regular troops stationed in that town, and also for some years medical officer to the Meath militia, had recently been deprived of those appointments without compensation.—Mr. E. STANHOPE: Dr. Nicholls held no appointment. He was employed, as medical men are all over the kingdom, to attend at contract rates detachments of troops when no military medical officer should be present. A military medical officer having been stationed at Navan, the necessity for Dr. Nicholls's service ceased. It has always been a condition of the employment of a civilian medical practitioner that his employment might cease at any time without notice and without the creation of any claim to compensation.

Scotch University Endowments.—The House being in Committee of Supply on the vote to complete the sum of £16,888 for Scotch universities, Mr. HUNTER called attention to the extraordinary expense connected with the education of divinity students. Taking an average of three years, £1,921, at the disposal of the University of Aberdeen, had been spent in the education of about thirty students, so that each student cost no less than £62 a year. The medical endowments were smaller than those for divinity, but the number of students in medicine was more than ten times the number of divinity students, while the cost was only £4 16s. per student. The University of Edinburgh had an income of £1,944 for divinity, with 107 students, while the endowments for medicine amounted to £1,776, with 1,879 medical students, so that the cost per medical student was 19s., and for each divinity student £18 3s. Taking the whole of Scotland, the endowments for medicine amounted to £5,800 for 3,000 students, the cost being less than £2 per head. The endowments for divinity amounted to £7,664, and the students number 278.—The SOLICITOR-GENERAL said he was

not in a position to controvert all the figures given by the hon. member, but if they were all of the same inaccurate character as the figures relating to St. Andrews University he could not receive them with absolute faith.—The vote was agreed to.

Friday, August 16th.

Unhealthy Barracks.—Mr. LAFONE asked the Secretary of State for War whether the Island Bridge Barracks were duly handed over to the 4th Hussars on their arrival from Cork; and that the headquarters, recruits, and married men were settled there; if the Royal Barracks were too unhealthy for the 5th Dragoon Guards, why the 4th Hussars were to be removed there; and if they were removed from Island Bridge, whether the expenses incurred by the married men would be repaid them.—Mr. E. STANHOPE said the details of these removals were all arranged by the commander of the forces in Ireland, and he had not yet received a report on the circumstances, and he would only repeat what he said yesterday, that in the cavalry barracks in question there had been no recent case of fever nor any evidence of unhealthy condition.

Unqualified Medical Practitioners.—Mr. RITCHIE, replying to Mr. Causton, said he had made inquiry of the Registrar-General, and was informed that the death of a child named Smith was registered on the certificate of Mr. Carr, a duly registered medical practitioner, who stated on his certificate that he had attended the child during its last illness, and that the cause of death was, to the best of his knowledge, "dentition convulsions." From information received by the local registrar from other sources, he thought that the case was of a suspicious character, and sent information to the coroner. An inquest was held and a verdict found that the cause of death was narcotic poisoning, but whether caused by an overdose of prescription given by an unqualified practitioner there was not sufficient evidence to show. The coroner requested the registrar to inform the Registrar-General that Mr. Carr had certified that he had attended the child, although he had in fact never seen it, the child having been attended by Mr. Carr's unqualified assistant. The registrar had asked to be furnished with a copy of the depositions. He had not yet received them, and he had therefore at present no evidence on which to take action.

Contagious Diseases Acts.—Mr. CAVENDISH-BENTINCK asked the Secretary of State for War whether the War Office were in possession of any statistics from India relative to the alleged increase of contagious disease in the Indian Army since the repeal of the Contagious Diseases Acts; and whether he could give any information on the subject.—Mr. E. STANHOPE: So far as the British troops are concerned the admissions for venereal disease have risen from a yearly ratio of 323 per 1,000 for the year 1887 to 560 per 1,000 for the first four months of 1889.—Mr. CAVENDISH-BENTINCK asked the Under Secretary of State for India whether the debate on the Cantonment Bill in the Legislative Council of India on the 14th instant was correctly reported in the London newspapers of the 15th instant; whether General Chesney then stated that the suspension of the Contagious Diseases Act had resulted in an alarming increase of disease among soldiers; whether General Sir F. Roberts, the Commander-in-Chief, then stated that the percentage of soldiers upon the sick list had doubled since the suspension of the Act; and whether the Cantonment Bill contained powers and provisions which would mitigate the prevalence of this disease and the sufferings caused by it.—Sir J. GORST said the Secretary of State had seen the reports in the press of the debate in the Legislative Council, and had no reason to doubt the correctness of such reports. The Cantonment Bill contained provisions for mitigating the prevalence of all contagious diseases within cantonments, and regulations for that purpose were now under the consideration of the Government of India.

Saturday, August 17th.

The House being in Committee on the Civil Service Estimates, on the vote to complete the sum of £16,658 for hospitals and infirmaries in Ireland, Mr. SEXTON reminded the Committee that some years ago a Royal Commission made recommendations with regard to capitalising the whole grant for hospitals in Ireland, and the putting control of the sum realised under a central body, who should distribute the income according to the number and value of the various hospitals. A Bill to carry out those recommendations had, he believed, been on the stocks for a long time. He promised the right hon. gentleman that if he would bring in such a Bill on Monday he might count on the co-operation of the Irish members.—Mr. JACKSON said it was true that such a Bill had been drafted, and he believed it was just about ready. He would endeavour, after what the right hon. gentleman had said, to introduce it during the present session.—The vote was agreed to.

Local Government (Scotland) Bill.—The Lords' amendments to this Bill were considered, and, after discussion, agreed to.

Tuesday, August 20th.

Typhoid in the West End of London.—The MARQUIS OF GRANBY asked the President of the Local Government Board whether his attention had been called to the recent severe outbreak of typhoid fever in the West End of London, especially in the parish of St. George, Hanover Square, and whether he would cause inquiry to be made into the matter; whether he was aware that it was stated that the sanitary arrangements of St. George's Vestry were very deficient, especially with regard to the proper and adequate flushing of the sewers and main drains of that parish; and whether it was in the power of the Local Government Board to institute any inquiry on this point.—Mr. RITCHIE replied that his attention had been called to the outbreak, and especially in the parish of St. George, Hanover Square. He had, he said, communicated with the vestry of that parish, and he was assured that they had a constant staff of men flushing the sewers, at a large cost, and that the London County Council also had a staff of flushers for the purpose of flushing their main sewer. He had also received a provisional report from Dr. Corfield, the medical officer of health of the parish, from which it appeared that the outbreak was not due to any defect of sanitary arrangements, but to some temporary cause which has apparently ceased to operate. He had determined to direct an inquiry by one of the inspectors of the Board.

THE NEW ELIXIR OF YOUTH.—Dr. Brown-Séquard's rejuvenating fluid is said to have been tried at Indianapolis on a decrepit old man with marvellous effect. Four hours after the injection the patient walked over a mile in twenty-five minutes. He declared that he felt more vigorous than he had done for twenty-five years. He read a newspaper without glasses, a thing he had not been able to do for thirty years. It should be added that no medical authority is given for this story.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

DURING the week ending Saturday, August 10th, 4,838 births and 3,437 deaths were registered in twenty-eight of the largest English towns, including London, which have an estimated population of 9,555,406 persons. The annual rate of mortality in these towns, which had been 21.0 and 20.5 per 1,000 in the two preceding weeks, further declined to 18.8 during the week under notice. The rates in the several towns ranged from 13.9 in Oldham, 14.3 in Derby, 15.7 in Bristol, and 16.4 in London, to 28.4 in Sunderland, 30.8 in Newcastle-upon-Tyne, 31.4 in Plymouth, and 34.6 in Preston. In the twenty-seven provincial towns the mean death-rate was 20.8 per 1,000, and exceeded by 4.4 the rate recorded in London, which was only 16.4 per 1,000. The 3,437 deaths registered in the twenty-eight towns during the week under notice included 548 which were referred to diarrhœa, 60 to whooping-cough, 58 to measles, 52 to scarlet fever, 38 to diphtheria, 29 to "fever" (principally enteric), and not one to small-pox; in all, 785 deaths resulted from these principal zymotic diseases, against numbers declining from 1,018 to 891 in the three preceding weeks. These 785 deaths were equal to an annual rate of 4.3 per 1,000; in London the zymotic death-rate was 3.1 per 1,000, while it averaged 5.2 in the twenty-seven provincial towns, and ranged from 1.3 in Halifax, 1.9 in Cardiff, 2.3 in Bristol, and 2.8 in Huddersfield, to 6.8 in Hull, 7.4 in Sunderland, 9.3 in Plymouth and in Sheffield, and 16.0 in Preston. Measles showed the highest proportional fatality in Wolverhampton, Halifax, Hull, Newcastle-upon-Tyne, and Preston; scarlet fever in Sheffield, Huddersfield, and Plymouth; whooping-cough in Newcastle-upon-Tyne, and Portsmouth; "fever" in Preston; and diarrhœa in Sunderland, Norwich, Leicester, Sheffield, and Preston. Of the 38 deaths from diphtheria recorded during the week under notice in the twenty-eight towns, 28 occurred in London, 2 in Plymouth, 2 in Birmingham, and 2 in Manchester. No fatal case of small-pox was registered, either in London or in any of the twenty-seven provincial towns; and no small-pox patients were under treatment in any of the Metropolitan Asylums Hospitals on Saturday, August 10th. These hospitals contained, however, 745 scarlet fever patients on the same date, against numbers increasing from 538 to 665 during the six preceding weeks; 95 cases were admitted during the week, against numbers increasing from 30 to 120 in the eight preceding weeks. The death-rate from diseases of the respiratory organs in London was equal to 1.8 per 1,000, and was considerably below the average.

During the week ending Saturday, August 17th, 6,016 births and 3,518 deaths were registered in twenty-eight of the largest English towns, including London, which have an estimated population of 9,555,406 persons. The annual rate of mortality in these towns, which had declined from 21.0 to 18.9 per 1,000 in the three preceding weeks, rose again to 19.2 during the week under notice. The rates in the several towns ranged from 9.0 in Derby, 15.9 in Bristol, 16.2 in Nottingham, and 16.6 in London, to 27.9 in Newcastle-upon-Tyne, 28.1 in Hull, 29.5 in Sunderland, and 42.6 in Preston. In the twenty-seven provincial towns the mean death-rate was 21.4 per 1,000, and exceeded by as much as 3.1 the rate recorded in London, which was only 18.3 per 1,000. The 3,518 deaths registered during the week under notice in the twenty-eight towns included 555 from diarrhœa, 69 from measles, 54 from diphtheria, 53 from scarlet fever, 45 from whooping-cough, 36 from "fever" (principally enteric), and not one from small-pox; in all, 812 deaths resulted from these principal zymotic diseases, against numbers declining from 1,018 to 785 the four preceding weeks. These 812 deaths were equal to an annual rate of 4.4 per 1,000; in London the zymotic death-rate was 3.0, while it averaged 5.6 in the twenty-seven provincial towns, and ranged from 1.5 in Oldham, 2.2 in Huddersfield, and 2.7 in Bristol, to 7.6 in Birmingham and in Leicester, 8.0 in Hull, 10.7 in Plymouth, and 19.0 in Preston. Measles showed the highest proportional fatality in Hull, Halifax, and Preston; scarlet fever in Plymouth; whooping-cough in Birkenhead; "fever" in Preston; and diarrhœa in Hull, Portsmouth, Birmingham, Leicester, and Preston. Of the 54 deaths from diphtheria recorded during the week in the twenty-eight towns, 36 occurred in London, 4 in Birmingham, 3 in Sheffield, and 2 in Liverpool. No fatal case of small-pox was recorded either in London or in any of the provincial towns, and no small-pox patients were under treatment in any of the Metropolitan Asylums Hospitals on Saturday, August 17th. These hospitals contained 780 scarlet fever patients on the same date, against numbers increasing from 538 to 745 in the seven preceding weeks; 81 cases were admitted during the week, against 120 and 95 in the two previous weeks. The death-rate from diseases of the respiratory organs in London was equal to 1.9 per 1,000, and was below the average.

HEALTH OF IRISH TOWNS.

During the week ending Saturday, August 3rd, the deaths registered in the sixteen principal town districts of Ireland were equal to an annual rate of 21.1 per 1,000. The lowest rates were recorded in Sligo and Londonderry, and the highest in Belfast and Drogheda. The death-rate from the principal zymotic diseases in these towns averaged 3.2 per 1,000. The 144 deaths registered in Dublin during the week under notice were equal to an annual rate of 20.7 per 1,000 (against rates increasing from 16.3 to 24.8 in the three preceding weeks). These 140 deaths included 15 which resulted from the principal zymotic diseases (equal to an annual rate of 2.2 per 1,000), of which 8 resulted from diarrhœa, 4 from measles, 2 from "fever," and 1 from whooping-cough.

The deaths registered in the sixteen town districts of Ireland during the week ending Saturday, August 10th, were equal to an annual rate of 22.9 per 1,000. The lowest rates were recorded in Lisburn and Galway, and the highest in Lurgan and Newry. The death-rate from the principal zymotic diseases averaged 4.4 per 1,000. The 168 deaths registered in Dublin during the week under notice were equal to an annual rate of 24.8 per 1,000 (against 24.8 and 20.7 in the two preceding weeks), the rate for the same period being only 16.4 in London and 15.1 in Edinburgh. These 168 deaths included 25 which resulted from the principal zymotic diseases (equal to an annual rate of 3.7 per 1,000), of which 17 were referred to diarrhœa, 4 to whooping-cough, and 3 to measles.

MEDICAL NEWS.

An epidemic of diphtheria and typhus has broken out at Aarhuus, Jutland. The authorities have ordered all schools, both public and private, to be closed.

The Paris Municipal Council has voted a grant of 20,000 francs towards the equipment of a station for ambulance carriages for the transport of persons suffering from contagious diseases.

Vaccination in Ireland.—During the June quarter 29,017 persons were successfully vaccinated, while in 2,844 cases the operation was postponed, and 54 children were reported as insusceptible of vaccination. The deaths of 1,443 unvaccinated children under three months old were registered during the quarter, making a total of 33,358 children with regard to whom particulars as to vaccination were ascertained.

MEDICAL VACANCIES.

The following Vacancies are announced:

BOROUGH HOSPITAL, Birkenhead.—Junior House-Surgeon. Salary, £60 per annum, with board, lodging, and washing. Application by September 2nd to the Chairman of the Weekly Board.

BOROUGH OF LEEDS.—Medical Officer of Health. Salary, £700 per annum, with disbursements. Applications by August 24th to Sir G. Morrison, Town Clerk, Leeds.

CANCER HOSPITAL, Fulham Road, S.W.—Two Resident House-Surgeons. Appointment for six months. Honorarium at the rate of £50 per annum, with board and residence. Applications by August 31st to the Secretary.

CHILDREN'S HOSPITAL, Birmingham.—Resident Medical Officer. Salary, £80 per annum, with board, washing, and attendance. Applications by September 3rd to the Secretary, Children's Hospital, Steelhouse Lane, Birmingham.

CHILDREN'S HOSPITAL, Birmingham.—Assistant Resident Medical Officer. Salary, £40 per annum, with board, washing, and attendance. Applications by September 3rd to the Secretary, Children's Hospital, Steelhouse Lane, Birmingham.

GENERAL HOSPITAL, Birmingham.—Resident Surgical Officer. Salary, £130 per annum, with board and lodging, etc. Applications by September 2nd to Dr. Coghill, House-Governor.

NORTH LONDON CONSUMPTION HOSPITAL, Hampstead. — Resident Medical Officer. Salary, £40 per annum, with board, apartments, etc. Applications by September 10th to the Secretary, 216, Tottenham Court Road, N.W.

NORTH STAFFORDSHIRE INFIRMARY.—Physician or Medical Officer. Applications by August 29th to the Secretary.

ROTHERHAM HOSPITAL—Assistant House-Surgeon. Board and lodging. Applications by September 2nd to the House-Surgeon.

STAMFORD, RUTLAND, AND GENERAL INFIRMARY.—House-Surgeon and Secretary. Salary, £100 per annum, with board, lodging, and washing. Applications by September 9th to the Chairman of the Special Committee.

SWANSEA HOSPITAL.—Resident Medical Officer. Salary, £100 per annum, with board and lodging, etc. Applications by September 7th to the Secretary, 9, Castle Street, Swansea.

VICTORIA INFIRMARY OF GLASGOW.—Superintendent and Resident Medical Officer. Salary, £125 per annum, with board and apartments. Applications by August 31st to Mr. F. Bissett, Secretary, 20, Bridge Street, Glasgow.

WALLASEY DISPENSARY.—House-Surgeon. Salary, £110, with furnished apartments, etc. Applications by September 3rd to the Honorary Secretary, Mr. W. Heap, Elm Mount, Penkett Road, Liscard, Cheshire.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL, Wolverhampton.—House-Physician. Salary, £100 per annum, with board, lodging, and washing. Applications by September 5th to the Chairman of the Medical Committee.

MEDICAL APPOINTMENTS.

Ensor, C. W., L.R.C.P.Lond., M.R.C.S.E., appointed Junior Assistant Medical Officer to the Somerset and Bath Lunatic Asylum, *vice* A. W. James, L.R.C.P.Lond., M.R.C.S., resigned.

Field, Edgar A. H., L.D.S.Eng., appointed House-Surgeon to the National Dental Hospital.

Jones, E. L., B.A., M.B., B.C.Cantab., appointed Demonstrator of Physiology to the Victoria University, Yorkshire College.

Jones, H. L., M.A., M.D.Cantab., M.R.C.P., appointed Assistant Physician to the City of London Hospital for Diseases of the Chest, Victoria Park, *vice* Bedford Fenwick, M.D., resigned.

Kellett, R. G., L.K.Q.C.P.I., L.R.C.S.I., appointed Medical Officer to Halstead Union, Essex.

Kitchin, J. T., M.B., C.M.Edin., appointed House-Surgeon to the Whitehaven and West Cumberland Infirmary, *vice* J. Pirie, M.B., C.M.Edin., resigned.

Read, H. W. K., L.R.C.P., L.R.C.S.Edin., L.F.P.S.Glas., appointed Medical Officer of the Workhouse and the Towcester District, *vice* A. G. Evans, M.R.C.S.Eng., deceased.

Wilkinson, Arthur T., B.A., B.Sc., M.D.Lond., M.R.C.P.Lond., appointed Honorary Physician to the Ancoats Hospital, Manchester.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the announcement. The first post on Thursday mornings is the latest by which advertisements can be received.

BIRTH.

Nicholls.—On July 30th, at Dominica, West Indies, the wife of H. A. Alford Nicholls, M.D., F.L.S., of a daughter.

MARRIAGES.

Barber—Ward.—On August 21st, at the Parish Church, Great Horton, by the Rev. James Gallie, M.A., and the Rev. W. Cunliffe, Frederic S. Barber, L.R.C.P.Lond., M.R.C.S.Eng., of Bradford, to Annie Mary, younger daughter of Henry Ward, Norlands, Great Horton. No cards.

Joseph—Duder.—At St. Luke's Church, Little Bay Mines, Notre Dame Bay, Newfoundland, on August 17th, Louis Joseph, M.B., C.M., to Alice Jane Duder. (By cablegram.)

Mills—Mudge.—On August 15th, at the parish church, St. Elwyn, Hayle, by the Rev. W. Horsburgh, B.A., Vicar, Joseph Mills, of 28, Queen Anne Street, W., younger son of the late Robert Mills, of West Court, Inkpen, Berks, to Mary, youngest daughter of James Mudge, of Bonaér, Hayle, Cornwall.

DEATH.

Jackson.—On Thursday, August 15th, at his residence, Cranbourne Hall, Grouville, Jersey, John James Jackson, M.R.C.S.E., only son of the late John Jackson, Esq., in his 45th year, deeply regretted. Relatives and friends will kindly accept this (the only) intimation.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

Communications for the Current Week's Journal should reach the Office not later than Midday Post on Wednesday. Telegrams can be Received on Thursday Morning.

Communications respecting editorial matters should be addressed to the Editor 429, Strand, W.C., London; those concerning business matters, non-delivery of the Journal, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

In order to avoid delay, it is particularly requested that all letters on the editorial business of the Journal be addressed to the Editor at the office of the Journal, and not to his private house.

Authors desiring reprints of their articles published in the British Medical Journal are requested to communicate beforehand with the Manager, 429, Strand, W.C.

Correspondents who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

Correspondents not answered are requested to look to the Notices to Correspondents of the following week.

Manuscripts forwarded to the Office of this Journal cannot under any circumstances be returned.

Public Health Department.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

QUERIES.

Anæsthetic Leprosy.

Dr. G. Thin will be greatly obliged if the gentleman who sent him notes of a case of anæsthetic leprosy would favour him with his address, the letter and MS. having been unfortunately mislaid.

Wagstaffe's Obstetric Forceps.

Dr. Percy Newell (Ipswich) writes: I should be glad to know if any of your readers use Wagstaffe's obstetric forceps, and their experiences of it.

Specific for Drunkenness.

G. P. asks for information as to the composition and value of Dr. Haines's Golden Specific for Drunkenness.

Lying-in Home for Unmarried Women.

A. C. M. writes: Would any correspondent kindly inform me if there is an establishment in London, or elsewhere in England, for the reception of young women of the middle class expecting their confinement, although unmarried?

Wanted a Diagnosis.

B. M. T. writes: A lady who resided in India for ten years consulted me six months ago for pains in the back and feet. She told me she had been treated for uterine disease and irritability of spine. On inquiry I found that she suffered from swollen feet, but never to such an extent as to prevent her from walking or taking active exercise. Her circulation is good, and she is quite free from headache and bad vision.

On examining the urine I find it is covered on the top with bubbles, has an alkaline reaction and specific gravity of 1022. On the application of heat it becomes whitish, and gives a large deposit on the addition of nitric acid. She suffers from some insomnia, dyspepsia, and lassitude on exertion, but otherwise feels well. The swelling in the feet and the pain in the back has ceased to give trouble. She has been taking quinine, ergot, iron, a generous diet, Turkish and hot baths, but still feels weak and sick.

I shall be thankful for any suggestions as regards further treatment and information of the real nature of the disease and cause of the whitish colour on exposing the urine to heat. This lady has not been taking cod-liver or any other oil.

"HAVE I DONE MY DUTY?"

X. Y. Z. writes: Will anyone kindly give the particulars of how to bring a patient under the influence of ether in from a minute and a half to three minutes with an expenditure of only half an ounce of ether, or name a book in which the information can be found?

THE WEIR-MITCHELL TREATMENT.

AN OLD SUBSCRIBER writes: I shall be glad if you will allow me to ask through the medium of your columns for information as to where I can send a girl, who is suffering from hysterical eclampsia, for the purpose of undergoing the "Weir-Mitchell" treatment, and as to terms. She is the daughter of a tradesman in reduced circumstances, and could not afford to pay very much.

TREATMENT OF WORMS.

A MEMBER writes: I have a troublesome case of seat worms on my list; and after trying infusion of quassia, salt and water, ung. hydrarg., ung. thymol, and weak solutions of ferri perchlor. locally, and santonin by mouth, and failing to eradicate them, I write to see if any member will kindly suggest some more efficient remedy than I can think of.

PAIN OVER TUBER ISCHII IN RIDING.

ANTLER writes: I have been consulted by a young lady, who complains that she suffers pain, which is attended by swelling and tenderness, over the right tuber ischii, after riding on horseback. I presume that this is due to tension in a bursa at this point, and that the most effectual way of treating it will be to prevent pressure on it in future. I shall be grateful to any of your readers who can give a hint as to the best way of relieving the pressure, either by making a small hollow in the saddle to receive the point of bone, or by an arrangement of padding to transfer the weight of the body to the surrounding soft parts.

ANSWERS.

EXAMINATION FOR THE M.R.C.S. DIPLOMA.

"M.D., B.Ch.Univ. Dub." will find full information as to the subjects of examination and the fees payable for the Membership of the Royal College of Surgeons of England in the *Medical Directory* (J. and A. Churchill), p. 334 *et seq.* The dates of examination are published from time to time in the medical journals. For further information application should be made to the Secretary, E. Trimmer, Esq., Royal College of Surgeons, Lincoln's Inn Fields, W.C.

EXAMINATION FOR THE F.R.C.S.I.

A PRACTITIONER.—There are no books which are specially recommended. Such books as would prepare a candidate for any high class examination are sufficient.

THE M.D. BRUSSELS.

"M.B., C.M."—Full information on the conditions and subjects of examination, fees, dates, etc., was given in the JOURNAL of September 15th, 1888, p. 634. Dr. Warwick C. Steele, of 1, Florence Terrace, Ealing, Honorary Secretary of the Association of Brussels Graduates, would no doubt supply any further information that might be required.

"HISTORY OF CHEMISTRY."

F. C.—Without further details than those given it is impossible to answer the question.

TREATMENT OF CHRONIC FEMALE INEBRIATES OF THE POORER CLASSES.

MR. S. G. SLOMAN, JUN.—We are unable to supply the information. The simplest plan to obtain it would be to write to the managers of the various institutions appearing in our advertising columns.

NOTES, LETTERS, ETC.

THE TITLE OF DOCTOR.

NOT AN M.D. writes: It seems a pity that this pot does not boil over and scald the fingers of those who are keeping it in a state of ebullition. Many medical men who, like myself, are buried, so to speak, in outlandish regions, would relish reading something of a more practical nature in the JOURNAL. Some may feel aggrieved at not possessing an M.D., but I can assure them that there is nothing in it. The real fault or mistake lies in this, that the majority of students, when entering the profession, have not the slightest idea as to what degree or diploma they are to receive as a reward for their industry until they have spent, perhaps, one or two years in study; should it then dawn upon them, they find it inconvenient to change to a University.

Now, as regards "Doctor" the word has become a household one, and any qualified man is, I should think, quite as much entitled to be called doctor as he is to be called a medical man. For instance, in a case of sudden illness, the thought is to run for a doctor; you never hear anyone saying, run for a mister, or go for an esquire. No; it is run for the doctor; it matters not whether he be L.S.A., L.R.C.P., M.D., or anything else.

Upon one occasion, when having a brass plate made for my door, bearing the inscription "Physician and Surgeon," a gentleman of high standing in Liverpool, seeing it, observed, "I did not know that you were a physician." Having explained, he replied, "Well, I thought you were only a doctor"—(I presume he meant only an M.D.). I have since learned from several that a physician is considered higher than a doctor, and, in fact, thought more of; consequently, I should think that licentiates would do more to strengthen their position by adopting the title of physician and discarding that of doctor altogether. If our Colleges of Physicians are to be so much despised, why is it that so many M.D.'s do not feel satisfied with their degree, but fly sooner or later for the diplomas of one or more Colleges of Physicians?

In conclusion, let me ask why physicians and surgeons have not their qualification placed upon the wrapper of their JOURNAL instead of Esquire. Does it also consider us something to be despised? This may seen a very trifling point, but I can assure you that it is a very great injustice to us; for instance, in this colony (New South Wales) quacks are rampant, and the town in which I now reside formerly had three unqualified men engaged in practice. My JOURNAL comes by post with the usual Esq., and nothing more; the postmaster observes, "Here is a medical paper coming to the doctor with only Esq.: he must be another of these unqualified men, or else his qualifications would surely appear." I feel sure the matter has only to be pointed out to be rectified, and thank goodness I am not an M.D.

COMMUNICATIONS, LETTERS, etc., have been received from:

H. Stelkart, M.B., Alloa; Dr. Conner, Manningtree; Dr. H. A. Auchinleck, Dublin; Mr. J. Mills, London; Dr. F. Tresilian, Enfield; Messrs. Swan Sonnenschein and Co., London; Dr. H. F. Parsons, London; Mr. A. Cooper, London; Dr. C. M. McQuibban, Aberdeen; Mr. E. Wright, London; Messrs. Funk and Wagnall, London; Messrs. Burroughs, Wellcome and Co., London; Sir D. Maclagan, Edinburgh; Dr. W. Pearce, London; Mr. R. R. Sleman, London; Mr. J. G. Montefiore, London; Dr. Drysdale, Leeds; Dr. Mickle, London; Dr. L. Manché, Malta; Mr. J. J. Briginshaw, London; Mr. J. Freeland, Antigua; Our Liverpool Correspondent; Dr. N. S. Durrant, Carriacou; Dr. A. W. Johnston, Leeds; Mr. H. T. Butlin, London; Dr. W. Gardner, Adelaide; Mr. R. Bodmer, London; Mr. M. V. C. Marquis, Bombay; Mr. E. Stephens, Ilminster; Mr. H. W. Crosse, London; Dr. L. Barnett, London; Messrs. Reynolds and Branson, Leeds; Dr. S. Smyth, Bournemouth; Dr. C. H. Allfrey, Midhurst; Mr. S. B. G. McKinney, London; Dr. J. Haddon, Canonbie; Mr. J. B. Lamb, London; Dr. Norman Kerr, London; Dr. D. M. Smith, Aberdeen; Mr. H. C. Fox, Walton-on-Naze; Dr. H. Woods, London; Mr. H. Oylesby, York; The Wenham Company, London; Mr. Tucker, Caiston; Dr. F. R. Fairbank, Doncaster; Dr. T. Partridge, Stroud; Mr. Lockwood, London; Dr. G. W. Potter, London; Mr. L. M. F. Christian, Stockport; Mr. S. Norman, Havant; Mr. A. H. Dodd, West Brighton; Mr. J. B. Brereton, Gildersome; Mr. F. Yates, Godalming; Mr. A. M. Archer, Chester; Mr. T. D. Greenlees, Dartford; Mr. E. A. H. Field, London; The Editor of *Pump Court*, London; Mr. A. T. Scott, London; Dr. Mickle, London; Professor V. Horsley, London; Dr. Rentoul, Liverpool; Dr. Fairweather, London; Mr. C. J. Lyons, British Honduras; Dr. G. F. Da Costa, Kingston, Jamaica; Dr. W. J. Mackie, Nelson, N.Z.; Dr. A. B. Judson, New York; Mr. H. Wilson, Manchester; Dr. W. R. Cossham, Cirencester; G. A. Pirie, M.B., Manchester; Dr. A. Smart, Edinburgh; Mr. M. G. Dundas, Litcham; Dr. E. M. Sympson, Lincoln; Dr. A. Birmingham, Vienna; Dr. K. Grossmann, Liverpool; Dr. F. Warner, London; Dr. P. Horrocks, London; Mr. S. Snell, Sheffield; Dr. Theodore D. Acland, London; The Secretaries of the Royal University of Ireland, Dublin; Mr. A. G. Osborn, Dover; Mr. Arthur Jackson, Sheffield; Rev. W. T. Cormick, Brighton; Dr. A. T. Wilkinson, Manchester; Mr. E. Turner, Stourbridge; Mr. J. T. Hartill, Willenhall; Mr. G. P. Field, London; Mr. R. H. Belton, Boston; Dr. M. Hay, Aberdeen; Mr. C. Palmer, Burton-on-Trent; Mr. W. O'B. White, Tralee; Mr. W. H. Hally, Wakefield; Dr. S. Martin, London; Mr. P. S. Hutchinson, London; Mr. Towers Smith, London; Surgeon A. de C. Scanlan, Aldershot; Mr. H. C. Phillips, London; W. J. Smyth, M.B., Brentwood; Dr. C. J. Cullingworth, London; Sir Edward Sieveking, Falmouth; Our Manchester Correspondent; Mr. T. H. Mills, Cambridge; The Honorary Secretary of the British Dental Association, London; Dr. M. Banks, Liverpool; Mr. A. S. Cooke, Stroud; Mr. H. Skelding, Salop; Dr. S. Phillips, London; Mr. Thomson, Northampton; Professor A. Fraser, Dublin; The Stretton Hill Mineral Water Company, Salop; Dr. Jacob, Leeds; Mr. A. Douglas, Handsworth; Dr. Chadwick, Leeds; Mr. A. W. Sinclair, South Lancing; Dr. G. Harley, London; Mr. G. H. Bailey, London; Mr. E. R. Lyth, Maidstone; Mr. E. W. Emtage, Bradsworthy; Mr. E. E. Jones, Manchester; Professor Corfield, London; Dr. R. Thorne Thorne, London; Mr. C. G. Campbell, Saddleworth; Dr. Abraham, London; Dr. J. F. W. Silk, London; Messrs. Street and Co., London; Miss M. L. Dow, Llandudno; Dr. C[illegible]stoun Charles, London; Mr. F. Hall, Leeds; etc.

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Post-Office Orders should be made payable to the British Medical Association at the West Central Post-Office, High Holborn. Small amounts may be paid in postage-stamps.

NOTICE.—Advertisers are requested to observe that it is contrary to the Postal Regulations to receive at Post-Offices letter addressed to initials only.

AN ADDRESS

DELIVERED AT THE OPENING OF

THE SECTION OF PUBLIC MEDICINE.

At the Annual Meeting of the British Medical Association, held in Leeds, August, 1889.

By E. BALLARD, M.D., F.R.S.,

Medical Inspector, Local Government Board.

MEDICAL OFFICERS OF HEALTH: THEIR TRAINING AND THE CONDITIONS ON WHICH THEY SHOULD HOLD OFFICE.

SINCE the last occasion on which it was my privilege to attend an annual meeting of this Association a very proper step with respect to the sectional meetings has been taken by the Council. They have relieved the Presidents of Sections from the duty or task of preparing and delivering an introductory address. To me, selected as your President this year, the step is a source of personal rejoicing, and I congratulate you, gentlemen, also, on having been protected from an infliction which would assuredly have put a strain upon your habitual courtesy. But, as things turned out, neither you nor I have come to be let off quite so easily as I anticipated; since, notwithstanding that a formal address has been dispensed with, I have been requested to introduce, by means of a written paper, the first subject on our agenda. The subject relates to "Medical Officers of Health: their Training, and the Conditions on which they should hold Office"—a subject which just now has been brought into prominence by a recent statute, and by the promise of further legislation in the same direction. It is not for me, holding the official position that I do, either to criticise past action of Parliament or to forecast the future, but it is clear that public interest has been aroused. It is equally clear that there is abundant room for the expression of both professional and non-professional opinion as to what should be further done, and what the relation should be between County and District Councils and their respective sanitary officers on the one hand, and between the latter and the central sanitary authority of the kingdom on the other hand. I mention this, not because I shall take any part in the discussion, but because I am sure that these relations have occupied your thoughts, and because it is not to be expected, in a meeting of Englishmen, that what is labouring in their minds will fail to be delivered in words. For myself, I may say that I have never posed as a medical reformer, nor taken any active part in medical politics. In respect of all such subjects I occupy, and intend to occupy, the stool of the learner.

For a good many years of my life, as most of you probably know, I filled the post of medical officer of health in one of the largest of the metropolitan districts, and for a good many years since have been in relation, official or otherwise, with gentlemen holding a similar post in all parts of the country, both in urban districts and in rural districts. In this way I have necessarily made a very considerable number of acquaintances, and formed, I am most happy to add, not a few personal friendships, among the medical officers of health of England; and, somehow, very many of these professional acquaintances and friends have been led, for some reason best known to themselves, to make me the recipient of their confidences, their anxieties, and their professional troubles. So, what with my own experience, and what with hearing the experience of others, I think I know something of what it is to be a medical officer of health. I shall make use of both these kinds of experience in what I am about to say. I will be as brief as possible in saying it, and I shall confine myself to one branch of the subject by endeavouring to reply to the question, What are the requisites for a good and efficient medical officer of health?

First, then, he must possess himself of due learning. What I mean by this, of course, is that his mind must be specially stored with that kind of learning which shall fit him to deal with and to advise about disease, not as it affects the individual but as it affects the community. It goes without saying that, as communities are made up of individuals, a knowledge of disease as it affects individuals is the basis of the knowledge of disease as it affects communities, and this is the reason why an officer of health to be efficient must be a medical man. "Nihil humanum a me alienum puto" is the motto which every practitioner of the art of medicine appropriately adopts; "Nihil mundanum a me alienum puto" should be the motto of every medical officer of health. No knowledge—I was going to say in Heaven above—certainly on the earth beneath, comes amiss to him. He has to deal often with complex problems, to solve which his mind cannot be too well furnished, and furnished with information that the ordinary practitioner of the healing art has little or no call for. Let me instance such branches of knowledge as these: meteorology, geology, sewer and water engineering, the construction of houses, the ventilation of private and public buildings; or, to pass to living things, bacteriology, the subtle and often tortuous path of epidemic contagia, the physical and sometimes moral peculiarities of race; and even the pathology of animals lower than man in the scale of creation, but domesticated for his use. I need not prolong this list. When medical officers of health were first appointed in this country the necessity for special knowledge was scarcely recognised; but a considerable step was made when it was recognised that an officer of health should be medical. As I speak to-day the necessity for special knowledge has obtained recognition by Parliament; this is another great step in advance, and not only so, but in the great schools of medicine in England, Scotland, and Ireland provision has been made for giving requisite special instruction.

Secondly, to make a man an efficient health officer he requires to be trained. The requisite science he may be taught, but the art is only to be acquired by practising it and by watching others practise it. It is the same with preventive as with curative medicine. The physician does not learn his art in the lecture room, but in the hospital; so the health officer learns his either slowly and laboriously, with many mistakes and even some blundering in striving to carry on his duties, or he may take the shorter road of working practically for a season under the direction or supervision of another. It is the same with all professions; a good theologian would make but a sorry parish priest unless he had been well drilled in parish work. What is now needed to supplement the scientific instruction of the future health officer is the same sort of practical training under a medical officer of health that men entering other professions and the curative branch of the medical profession get before they are permitted to exercise them. Judging from some reported proceedings of the Medical Council, and some discussions that occurred during their last session, an opinion of this kind appears to have found expression there. I hope that at their next session some regulation pertaining to this subject will be formulated. It is a subject that requires to be dealt with, and no doubt will be dealt with thoughtfully and with discrimination.

Lastly, I may mention "tact"—an acquisition of rare value, but one the possession or lack of which may make all the difference between the successful and the inefficient medical officer of health. To such an officer, all his learning and all his training will avail him little unless, at the same time, he has learned the inestimable art of dealing patiently but firmly with men—with men who have not always the intellectual culture that he possesses, who see the same things that he sees but with differently coloured spectacles, and from altogether a different view-point. Deficiency in tact is a fault chiefly observable among the junior members of the confraternity. Anxious to serve their district, earnest and enthusiastic, they chafe at obstacles which they find impenetrable, and are ready to give up a strife which, over and over again, terminates in their discomfiture. It is men of this stamp (and they are not always—I say it with bated breath—young men) that I hear perpetually calling out for central interference. They mistake their position and functions, and are wanting in a very cardinal virtue. They forget that they are advisers, not administrators; that good and proper as their advice may be, there may be difficulties not apparent to them in at once pursuing it—trifling difficulties, possibly, in their eyes when they are pointed out, and unworthy of regard in view of the advantages to be gained by their disregard, but, nevertheless, serious difficulties in the eyes of other people. A medical officer of health

is not an autocrat; it was never intended that he should be one. Often and often it has happened that health officers, who have made this mistake, have sought my condolence with them in the tribulation they have thus brought upon themselves. They all get from me pretty much the same advice. It is this: Be patient, bear with the infirmities of your weaker and less instructed brethren. Keep your own conscience clear amidst all discouragement by carrying out your duties to the best of your ability, and leave other people to look after theirs. Recollect that the rope you are tethered with is public opinion—the public opinion locally prevalent; that if you want to be more free, to get more of your own way, you can only do it by educating public opinion; you must turn schoolmaster. You will do no good but much harm by scolding those who appear to be stupid. You must be patient; and in the end, by the tedious process of line upon line and precept upon precept, you will perhaps attain your object. And to assist yourselves to wait patiently for results, to save yourselves from the misery of grizzling over the opposition you encounter, divert your thoughts into scientific channels. Nature is never unkind to such as in the proper way seek to learn her secrets; she never disappoints, never vexes, never discourages. To the medical officer of health working in the baldest rural district, as well as to him who labours in the crowded town, she holds an open gate, and says: "Treasure is hidden here; my servants are contented and happy; come and dig."

Dr. G. E. J. GREENE (medical officer of health, Ferns, Ireland) thought that the chief reason why a medical officer to a dispensary district in Ireland, who was also a medical officer of health, was frequently found to perform his sanitary work in an imperfect manner was because it was often financially to his advantage to be "sanitarily amaurotic," especially when he who permitted a nuisance to exist was a well-to-do patient. Medical officers of health should possess a diploma in sanitary science, obtained by passing a Government examination in analytical chemistry, botany, geology, pathology, and sanitary engineering; should hold jurisdiction over a large area; be appointed by, and draw their pay from, Government, which pay should be sufficient to support them without their engaging in any other occupation; should not engage in private practice; and should have the option of promotion to a better district after some years' service. The Parliamentary Bills Committee of the British Medical Association might have a Bill, containing some of the most practical points in this paper, introduced next Session into Parliament.

Dr. GRIMSHAW (Registrar-General of Ireland) wrote saying that, had he been present, he had intended to advocate a system of organisation of public health officers on the Irish system. He was strongly in favour of combining in one person the offices of poor-law officer, public vaccinator, district medical officer of health, and registrar of births and deaths. Such a civil medical service was the foundation upon which the whole State medical system should rest, only there should be independent offices, say for counties and groups of unions. There should be inspectors, then superintendent officers for counties, and then again the really active officer who combined all the offices together. He thought a local officer should not require so high a qualification as the county officer or the combined union officer.

Dr. JOHN BROWN (Bacup) said the medical officer of health was a specialist of the highest order. His duties were the conservation of the health of the community and the prevention of disease. The medical officer of health for large districts whose time was entirely devoted to his work ought by age, experience, and high attainments in sanitary science to be held in high esteem, and to have the fullest confidence of his medical brethren. No one should be under 25 years of age, and probably 30 would be better for the more important positions for county councils. Cases of difficult diagnosis, where a mistake might involve the town in a serious epidemic, were of frequent occurrence. The medical officer of health should be able to command the confidence of his medical brethren, and be called in to assist in the diagnosis; therefore, it was desirable that he should have had considerable experience in general practice and special facilities by attending fever hospitals to assist in cases of doubtful or difficult diagnosis. He should have practical knowledge of the analysis of water and air, and how to detect the more common adulterations of food, although no one would expect him to be a thorough analytical chemist. He should be able to make a complete qualitative and quantitative analysis of water, so far as it regards the detection of those organic substances and salts which showed that the water had been polluted with sewage or other organic matter. In some epidemics of enteric fever, unless the water was examined just after its pollution, by the time the circumstances were reported to the Health Committee, the water might be perfectly free from organic matter, as the following case proved. Some months since he (the speaker) analysed the water-supply of a hamlet where a serious epidemic of enteric fever had occurred. The circumstances, apart from analysis of the water, clearly proved that the water-supply was the source. The analysis which he made showed organic pollution of the water, the source of which was proven. The circumstances were reported. The Health Committee decided that a sample should be taken and forwarded to the county analyst. His analysis failed to detect organic pollution, and no action could be taken to close the supply. The consumers, however, acted on his advice, and no harm came of it. The further pollution was prevented. In cases like this the medical officer of health ought to be able to perform the analysis, and county councils ought to provide laboratories and all the necessary apparatus for water analysis. To be able to do this considerable experience in practical chemistry was absolutely necessary, and every medical officer of health should have at least a three months' course in a laboratory under a skilled analytical chemist. He should also be, trained in the practical duties of the office, so as to obtain tact-method, etc. There ought to be appointed by the Local Government Board a medical officer of health, holding a public appointment for a county council or large borough, who by his experience and scientific attainments was well qualified to train men in the practical duties of their onerous and responsible work. These officially appointed tutors should have facilities for giving practical instruction on the construction and uses of instruments used in meteorological observations; also for giving practical demonstrations on the various methods of ventilation, lighting, construction of sewers, various methods of treatment of sewage, disposal of towns' refuse, examination of meat, fish, etc. He should also be trained in bacteriology, and should attend a course of practical demonstrations on the use of the microscope in adulterations of food, examination of micro-organisms, parasites in meat, etc. As far as possible set lectures should be avoided, and everything should be taught by practical demonstrations. He should also understand geology, and ought to learn the special features of the geology of the district of which he might happen to be the medical officer of health. The conditions on which medical officers of health now held office were scandalously unsatisfactory. If faithful in the discharge of the duties they might have to resign, submit to reduction of salaries, increase of duties without extra pay, as in some cases in which the medical officer of health had been appointed surgeon to a fever hospital, which if he had not accepted he must have resigned, or been subjected to many petty annoyances because he had the ill-will of one or more of the Committee. The following conditions were necessary in order that the highest interests of the public might be served: 1. Fixity of tenure, so long as the medical officer of health was able to discharge his duties. 2. Salary in county councils and large populations should be such as to secure the very best men: £500 per annum should be the minimum. This could scarcely be considered a high salary when one remembered that the medical officer of health had spent considerable time and money in gaining the special knowledge required, and was debarred from private practice, and moreover had no claim for pension for long service, or any claim for permanent disablement by sickness, etc., acquired or contracted in the discharge of his duties. Besides, he exposed his life and health to special dangers which might prematurely cut short his career. 3. Salaries should be placed by the Local Government Board at a fixed minimum; for large districts (county councils) this might not be necessary in all cases; but in small towns and rural authorities the salary was absurd; only young men, newly qualified, would hold these appointments, and, as a rule, little or nothing was expected to be done. These remarks applied to many parts of England, and to nearly every place in Ireland. Also there should be a fixed minimum of increase for every five or seven years that the appointment had been held. This would be conducive to the best interests of the public. The medical officer of health would be more likely to remain and serve the public to the best of his ability, and the experience gained would not be lost. 4. The Local Government Board should be a court of appeal as to matters of dispute, so that it would be impossible to discharge the medical officer of health without their consent, or to reduce his salary, or impose any duties which were contrary to the principles of justice and honour.—

Dr. CALDWELL SMITH (Glasgow) remarked that, as a teacher of hygiene, he would like to say something regarding the training of medical officers of health. It was now necessary that medical officers of health should possess a qualification in public health, but the General Medical Council had passed a resolution to the effect that such qualification would not be registrable unless after six months' analytical work in a laboratory, as well as six months' work under a medical officer of health for a large area. In regard to the former, he had to demur somewhat; he thought a better system would be for the Council to insist that all examining bodies should require attendance at lectures on hygiene before the entering for the examination. Such course of lectures should necessarily include analysis in all its bearings on public health. He did not think that a medical officer of health should be public analyst—although he ought to be able to perform and interpret analyses—as if he held such office it was apt to produce much friction with some classes of the community. In regard to tenure of office, he was glad to state that in Scotland they were in advance of their English brethren, as in the Local Government Bill for Scotland no medical officer of health under the county council could be dismissed from office without the consent of the central authority for Scotland, namely, the Board of Supervision for Scotland. He thought that this section of the Association should petition Government to pass a supplemental Bill to the English Local Government Bill to obtain such tenure of office. He might state that Dr. Wallace, of Greenock, was the only medical officer of health that he knew who could be deposed from office only with the consent of one of Her Majesty's Secretaries of State.—Dr. LITTLEJOHN (Edinburgh) referred to the admirable address to which they had listened, and he emphasised the importance of tact in the discharge of sanitary duties. He agreed with the last speaker, that the medical officer of health should not also hold the office of public analyst. The chemistry of adulteration was making such rapid advances, and the delicacy of chemical analysis was becoming so great as to render it impossible for an active medical officer to overtake in a satisfactory manner his ordinary official work and at the same time conduct analyses. As to tenure of office, thanks to the action of this powerful Association, coupled with the remonstrances of the profession in Scotland, Government had lately conceded the great act of justice in rendering it impossible for any local authority to dismiss the medical officer without the sanction of our Local Government Board. In large centres of population, this security was not so much required as there; a medical officer should, if at all capable, and gifted with common sense, so commend his work to the community as to render his position absolutely secure. It was in smaller areas with annual appointments that the injustice was chiefly felt. As to Dr. Grimshaw's suggestions, he regarded them as admirable, and he quite approved of the conjunction of various public offices, as this secured a more respectable salary. The rule should be the dissociation of public sanitary duties from private practice, and until this rule were made absolute, it would be impossible to prevent what was so much to be deprecated, namely, friction with our medical brethren, which already had done so much to hamper the efficient discharge of sanitary duties. —Mr. ALDERMAN EMSLEY did not agree with the speakers as to the expediency of a medical officer of health being also appointed registrar of births and deaths, public vaccinator, and medical officer for guardians. In Leeds it would be impossible to follow that suggestion. In the Borough of Leeds there were four Poor-law unions, and if a medical officer of health were appointed for each union, a proper salary would have to be paid: the officer ought not and could not attend to private practice in Leeds. Only last week it was proposed in the Leeds Corporation that a medical officer of health should be appointed for each union at a salary of £250 a year each. This resolution did not pass, as it would be impossible to obtain men at such a salary who could properly perform the duties. He objected to having the medical officer irremovable except with the consent of the Local Government Board. The Corporation were surely better able to decide as to the necessity of discharging the medical officer of health than an official sent down by the Local Government Board. In Leeds they had not found centralisation in many cases work well for the town. Leeds had a high death-rate; this no doubt was caused to a great extent by the congestion of cottage houses in old parts of the town, and also by the pollution of the River Aire, which passed through the town. If the chairman would give them any information regarding their powers for the removal of these nuisances they would not regret the visit of the Medical Association.—Dr. ALLFREY gave the meeting his experience—derived from twenty-five years' experience in general practice, and as Poor-law medical officer and public vaccinator. He advocated the absolute independence of the medical officer of health from private practice, and spoke in favour of combining the offices of medical officer of health, union medical officer, and public vaccinator, in one person. as advocated by Dr. Grimshaw.—Dr. GEORGE DE'ATH (Medical Officer of Health for Buckingham) suggested that, though medical officers of health should of course be independent of private practice, it would be only making enemies of private practitioners to take their Poor-law medical work away and attach it to public health work. Their present experience of a satisfactory salary to a medical officer of health, who was only a medical officer of health, was not encouraging. Much could be done in time, but in the meanwhile the Local Government Board, which inspected the work of vaccination officers, might also periodically inspect the work of health officers and also their districts, using as fully and freely as possible their powers and influence to make both health officers and local authorities do their duty and use their powers.—Dr. B. A. WHITELEGGE said the medical officer of health was simply the adviser of the sanitary authority, and beyond that the responsibility for the actions of the latter did not rest upon him. He should have a competent knowledge of chemistry and of certain branches of law and engineering, but should always have the advantage of the co-operation of professed experts in those matters. The tenure of office should at least be equal in security to that of Poor-law medical officers, but the system of annual or even triennial election was far less secure than simple tenure subject to notice. Registration of births and deaths came legitimately within the sphere of the medical officer of health, and he had already to obtain and classify such returns; but there were other duties now grouped with this work of registration which would scarcely be congenial. He would view with great regret any relaxation of the present supervision of the Local Government Board, which was of the greatest possible service to local medical officers of health. The duties of the medical officers of the county councils were as yet undefined, but on a smaller scale the councils would in some measure supply the place of the Local Government Board, and their officers, being brought into intimate relations with the local medical officer of health, would have a wide field of useful work.—Mr. J. BRINDLEY JAMES said every medical officer of health should be apprenticed to a medical officer of health to gain the experience necessary for that office. He should not practise as a medical practitioner, but give the whole of his time to his office, and be well qualified in every branch of medical science and applied sciences; and receive proper salary to keep him above bribery and corruption.—Mr. W. HOLDER, speaking as a member of the profession and a member of a municipal corporation, said that in the training of medical officers of health the student should have acquired a fair knowledge of chemistry and applied science in his studies for matriculation examination. Then a year passed under a general practitioner, and afterwards a pupilage in the office of a medical officer of health, was essential that he might gain a knowledge of how to acquire and distribute statistical work, learn how to submit his opinions to governing committees, and submit with grace for a proper time to be repressed in his zeal on a question for which public opinion was not yet ripe. He could not but think that the position of medical officer of health was a comparatively new one, and that the growth of public opinion and municipal pay was not altogether unsatisfactory in towns, viewed in the light of its growing importance. In Hull, he would point out, the medical officer was greatly appreciated, had a reasonable salary, and was not subject to instant dismissal, but appointed for so long as he maintained good behaviour. His opinion was one highly valued, and he was treated with the highest respect. He instanced Hull in these matters because the reason why the position in Hull was so reasonably satisfactory was that the emotional feeling of the public had been guided into proper lines by a number of members of the profession, who had accepted their duty as civilians and sought positions on the councils of their corporations, where they had given to the corporation the advice which their technical training fitted them to give to non-professional councillors who, in his experience, were only too glad to do right when they were convinced and knew the importance and truth of the steps they were taking. In Hull, Sir H. Cooper, an old President of this Association, and Dr. Kelburn King had done great things in this corporation work, and their influence was great and

would be abiding, and he urged members of the profession to enter into this useful work as much for the benefit of the people as for that of the profession.—Surgeon-Major POOLE remarked that it seemed to him that the science of public health was becoming too much of a speciality, especially as they heard of one gentleman speaking of the necessity of a medical student intending to follow out the special calling of medical officer of health undergoing an apprenticeship to some such officer. The tendency of the present day was to specialise, and this tendency should be resisted, and appointments made from among the well-qualified general practitioners, provided they had, if possible, the diploma of public health.—Dr. OGILVIE GRANT wished to state that he attached great importance to and urged the necessity of medical officers of health first being for some time general practitioners, and by contact with all classes learning that tact so necessary for the discharge of their duties. Unlike the majority of medical officers of health he had been trained as a civil engineer, but he attached very little importance to this training in comparison with the experience he had acquired as a general practitioner.—Dr. MAJOR GREENWOOD said that the position of medical officers of health would be much improved if more members of the profession took an interest in local matters, and deigned to come forward as candidates for places on the sanitary boards of their districts; that in his own district, an important metropolitan one, with a population of over 150,000, on a board of 120 members, he was the only medical representative, and that far from getting any encouragement from neighbouring practitioners, he was rather rebuked for having anything to do with local matters; that often, when endeavouring to promote sanitary reform in his district, he sadly missed the presence of other medical men on his board, and that he felt sure that a greater leaven of members of the profession on the sanitary authorities throughout the country would make a world of difference in the position of medical officers of health, both as to their influence for the public good and in ensuring them a proper remuneration for their services.—Mr. J. S. LOE considered that all medical officers of health should possess special qualifications for the office; that no medical man should be appointed without this special sanitary knowledge; and, as in obtaining this knowledge many years' work might be required, it was, therefore, only fair that the appointment should be for life, and that he should not be subject to dismissal from any personal feeling that might arise during the discharge of his duties, but that, in the event of just cause of complaint, the matter should be referred to the Local Government Board, which alone should have the power of dismissal.—Dr. BALLARD, replying on the discussion, said it did not follow that because the Irish system was successful in Ireland it would suit England. In his experience he found that local authorities very often did not appreciate a man as a medical adviser, but simply as an inspector of nuisances, which was not the position of a medical officer at all. He was quite sure that that Section would not wish in any way to advise or suggest anything in the present condition of the medical affairs of Leeds. It was only general principles, he thought, on which they could say a word. One point raised by Alderman Emsley was that of cutting up a large town into small districts, and giving to the medical officer for each a small salary. That idea would never do either in Leeds or any other large district; unless a medical officer had time and opportunity to progress he was almost useless. The rivers pollution question, he thought, was dealt with under the new Act.

Resolution as to Tenure of Office of Medical Officers of Health.—Dr. CALDWELL SMITH moved the following resolution:—

That in the English Local Government Bill a clause should be inserted providing that no medical officer of health shall be dismissed without the consent of the Local Government Board, and also that in regard to the appointment of medical officers the word "shall" should be substituted for "may" in the Local Government Bill.

Mr. LOE (Leeds) seconded, and the resolution was adopted. It was also agreed to thank the Parliamentary Committee for their efforts to secure the recognition of the principle embodied in the resolution when the Bill was before Parliament.

TYPHOID FEVER AT BASLE.—An epidemic of typhoid fever has been raging at Basle since the beginning of June. There have so far been 450 cases with 31 deaths. The water-supply has been tested chemically and bacteriologically without anything being found to account for the outbreak. The epidemic is now subsiding.

A DISCUSSION
ON
DISINFECTION AND ISOLATION:
WITH
SPECIAL REFERENCE TO THE CONTROL OF EPIDEMICS.

In the Section of Public Medicine at the Annual Meeting of the British Medical Association, held in Leeds, August, 1889.

I.—H. FRANKLIN PARSONS, M.D.,
Medical Inspector, Local Government Board.

THE invitation of my friend and colleague, the President of the Public Medicine Section, must be my excuse for submitting to the Section, as a text for discussion, the following remarks on disinfection with reference to the control of epidemics.

By disinfection I mean the destruction of infection—the destroying of the activity of that matter which, produced by a sick person and received into the system of a healthy one, has the power of causing in the latter a disease similar to that from which the former was suffering. In popular language the word disinfection is used to include the use of substances ("deodorants") which destroy offensive odours, and "antiseptics" which prevent or retard putrefaction, but I shall employ it in its strict etymological sense.

What, then, is the nature of this infective matter which in the interests of the public health we seek to destroy? It is known that it is organic matter, and particulate—that is, solid, not liquid or gaseous—matter, although the fine colourless particles of which it is composed may be freely suspended in both water and air. There is reason also to believe that it is in all cases living matter, and consists of microscopic vegetable organisms. The analogy between the life history of infectious fevers and that of the yeast plant in a saccharine solution long ago suggested to Liebig this view—a view embodied in the term "zymotic," often applied to such diseases. Modern research has shown that certain diseases in men and animals are undoubtedly caused by the presence in the system of micro-organisms, and are communicable by the inoculation of such organisms. Among these I may mention two acute febrile diseases, namely, anthrax and relapsing fever; acute suppuration and various forms of septicæmia; the chronic diseases, tuberculosis and leprosy; also fowl cholera and infectious pneumo-enteritis of the pig, "swine fever." The last-named disease has an interesting resemblance to the common human infectious disorders, in that the contagium may be transmitted through the air, and attaches itself to places in which the affected animals are kept. In other diseases, as Asiatic cholera, scarlatina, diphtheria, and enteric fever, certain micro-organisms have been found and have been looked upon with more or less probability as the cause of the disease; but the connection is not perhaps as yet completely established, mainly owing to the difficulty of testing it by the results of inoculation on animals. In other infectious diseases, again, as small-pox, measles, and whooping-cough, no such organism has, I believe, as yet been identified; but we may probably for our present purpose, without much risk of error, assume the *materies morbi* in these also to be a living organism. This assumption furnishes us with a practical means of testing the efficacy of the agents we employ to destroy infection. It is in most cases not practicable to test directly the effect of our disinfecting agents upon the contagia of the ordinary infectious diseases of mankind, for the reason that we cannot make the necessary experiments (including control experiments with undisinfected portions of material) upon human beings; and these diseases cannot, or cannot with certainty, be produced by inoculation in the lower animals. If, however, we choose the most refractory organism, pathogenic to animals, that we can find, and ascertain how it may be killed, we shall be tolerably safe in assuming that the same means will kill the contagia of the infectious diseases of mankind, with which as sanitarians we have to do. Now certain of the pathogenic micro-organisms, bacilli, have the property of forming spores, and these spores are found to be more resistent than the fully developed organism, just as a grain of wheat will survive treatment, such as drying and dipping in poisonous solutions, which would kill a growing wheat plant. Of the patho-

genic microbes, the most convenient for the purpose of testing disinfecting agents is the bacillus anthracis; it forms, under certain circumstances, spores which are exceedingly tenacious of life; it can be cultivated, and is easily recognised both by its microscopic characters and its appearance when growing; and, if inoculated into animals, it produces in them with certainty the disease known as anthrax. None of the ordinary infectious diseases of mankind are known to be caused by spore-bearing microbes (though it is possible that small-pox, the contagium of which is very tenacious of life, may turn out to be so); and so far as our present knowledge and experience go, we may assume that means which will destroy the spores of the bacillus anthracis may be relied on as efficacious for our purpose, though it does not follow that agents which do not destroy the bacillus anthracis are, therefore, useless against the less resisting contagia of other diseases.

An extensive and important series of researches upon the efficacy of disinfectants, conducted by Koch and his coadjutors for the German Imperial Board of Health, is in large part the foundation of our modern knowledge on the subject, though his results have been confirmed and extended by other workers, as Dr. Klein in this country, and a committee of the American Medical Association in the United States. Koch employed both spore-bearing and non-spore-bearing organisms of several kinds. Threads steeped in cultures of these were exposed to the action of disinfectants and tested by cultivation or by inoculation on animals. The general result of the experiments with chemical agents was to show the comparative or entire inertness as germicides of many of the substances commonly considered disinfectants. Carbolic acid was found to have a powerful restraining effect upon the growth of bacteria, but was much less efficacious in destroying their vitality. To kill spore-bearing forms it was necessary to steep them for one or two days in a 5 per cent. watery solution; a 2 per cent. solution only killed them at the end of a week; while a 1 per cent. solution did not kill them in fifteen days. Solutions of carbolic acid in alcohol or oil had not the smallest disinfecting effect; 5 per cent. solutions did not kill spore-bearing bacilli however long they were exposed to their action. Vapour of carbolic acid at ordinary temperatures had no destructive effect on spore-bearing bacilli, though some effect was produced at elevated temperatures. In other cases also it was found that the disinfecting effect of substances in the form of vapour was increased by elevation of temperature; thus spores of bacilli in garden earth were killed in two hours by exposure at a temperature of 176° F. to the vapour of bisulphide of carbon, although neither a temperature of 176° in dry air nor the vapour of bisulphide of carbon in equal concentration at ordinary temperatures had any destructive action at all on them.

Sulphurous acid gas was found efficacious for the destruction of non-spore-bearing organisms. Exposure to 1 part in 100 of air killed micrococci, if dry, in twenty minutes; if moist, in one minute. Spore-bearing forms, however, were not killed, even after four days' exposure to a 6 per cent. gaseous mixture of sulphurous acid in air. Chloride of zinc had no disinfecting effect; spores of anthrax bacillus which had remained for a month in a 5 per cent. solution were in no way affected. Absolute alcohol, glycerine, chloroform, sulphates of copper, zinc, alumina, and iron (5 per cent. watery solutions), and boracic acid (5 per cent.) were not found to have any destructive effect on spores of bacillus anthracis. These spores were, however, destroyed by exposure for one day to the action in watery solution of either of the following substances, namely, chlorine, bromine (2 per cent.), iodine, corrosive sublimate (1 per cent.), permanganate of potash (5 per cent.), and osmic acid (1 per cent.). They were also destroyed after longer periods by the following substances, namely, ether, oil of turpentine, hydrochloric acid, chloride of iron (5 per cent.), arsenious acid (1 per cent.), chloride of lime (5 per cent.), and quinine (1 per cent.).

Experimenting with heat in the dry form, Koch found that bacteria free from spores could not withstand an exposure of an hour and a half to a temperature of a little over 212° F. in hot air, but that spores of bacilli were only destroyed by remaining three hours in hot air at 284°. He also found that in hot air the temperature penetrated so slowly that, after three or four hours' heating to 284°, articles such as small bundles of clothes and pillows were not disinfected, and that by heat of this degree and duration most textile materials were more or less injured. The results with steam were strikingly superior. It was found that an exposure of five minutes to steam at 212° was sufficient to kill the spores of the bacillus anthracis, and that the penetration of heat into articles exposed to steam took place far more rapidly than into the same articles exposed to hot air.

A series of experiments made by Dr. Klein and myself on disinfection by heat confirm, on the whole, the results of Koch. The materials experimented with were spore-bearing cultures of anthrax bacillus, anthrax blood free from spores, bacilli of swine fever, and tuberculous pus; and the results were tested by inoculation on animals. Our results were more favourable to the efficacy of dry heat than those of Koch. We found that spores of bacillus anthracis were killed by exposure for four hours to a temperature between 212° and 216° F., or for one hour to 245°. Non-spore-bearing bacilli were rendered inert by one hour's exposure to 212° to 218°. Anthrax spores were killed by boiling for one minute in water, or by exposure for more than five minutes to steam at 212°. We also found steam heat to penetrate far more rapidly than dry heat. Similar results have been obtained by other observers, so that the superiority of steam over hot air as a disinfectant may be looked upon as thoroughly established. With a view to ascertain whether the advantages of steam could be obtained while avoiding certain inconveniences in its use, we made some experiments with hot moist air, but the result was that, while the moistening of the air aided the penetration of heat, it did not up to the point of one-third saturation render it more effectual in killing bacilli than dry air.

Burning, of course, is a very thorough means of disinfection.

It is characteristic of the class of infectious diseases that the morbid poison which produces any such disease multiplies in the body of the patient, and is given off again from it, and that it continues thus to propagate itself for a considerable period—often for several weeks. The poison is believed to be especially given off from the part of the body upon which its local effects are manifested, as from the skin in small-pox; from the skin and throat, and perhaps the kidneys, in scarlet fever; in discharges from the throat and nostrils in diphtheria, and from the bowels in enteric fever and cholera. There is reason to think, also, that the contagia of some at least of these diseases can multiply in suitable media outside the body, as in milk, sewage, soiled linen, or moist sewage-contaminated soil; perhaps, also, even in potable water. On the other hand, some of the pathogenic organisms are found to perish as putrefaction advances, either through the formation by them of chemical compounds antagonistic to their own life, or through the competition of the ordinary putrefactive forms, just as in a neglected garden the exotic flowers are choked or stifled by the ranker growth of the indigenous weeds.

Contagia are not as a rule permanently destroyed by cold, though that of yellow fever is so. They also in general are able to survive drying, though Koch states that drying is fatal to the comma bacillus which he finds in Asiatic cholera.

The matters which may act as carriers of infection, and may thus require disinfection, are: 1. The body of the patient, living or dead. 2. The discharges given off from the body of the patient, and more particularly those from the organs specially affected by the disease, for example, the exfoliating scarf skin in small-pox and scarlet fever; the discharges from the throat and nostrils in scarlet fever and diphtheria, and those from the bowels in enteric fever and cholera. 3. The air tainted by exhalations from the sick; the poison probably existing therein in the form of suspended particles. 4. The clothes, bedding, and other articles used by the sick. 5. Articles of food, as milk and water. 6. Walls, floors, etc., of dwellings occupied by the sick, especially dust and dirt lodging upon the walls, and dirt accumulating in the cracks of the floor. 7. Collections of filth, as sewage, especially in a stagnant state, or deposited in or encrusting the sides of foul drains; foul ground surfaces and subsoil.

The processes of disinfection applicable to the living body, such as baths, inunctions, lotions, and dressings, come within the province of curative medicine and surgery rather than that of public health.

For the prevention of the spread of infection from the corpses of persons who have died of infectious diseases the means usually employed are enclosure in a more or less air-tight coffin with chloride of lime or charcoal, and early burial, and I do not think that anything more is necessary. I have never found any reason to think that a body lying undisturbed surrounded by plenty of earth of a suitable nature is a danger to the public health. The advocates of cremation refer to the observations of Pasteur that cattle grazing in a field in which the bodies of others that have died of anthrax have been buried have contracted the disease; and that the spores of the bacillus anthracis are found in the

superficial mould over the graves, being brought to the surface by earth worms; but, as I have mentioned, the spores of the anthrax bacillus are exceptionally tenacious of life.

It is not of much use attempting to disinfect the infected air of sick rooms by chemical means, for active chemicals, if present in sufficient quantity to be effective as disinfectants, would render the air irrespirable. It is easier to get rid of it, and let its place be taken by fresh air. The contagia of most infectious diseases appear to be destroyed when freely diluted with fresh air. The poison of typhus fever is notably so, but that of small-pox does not appear to be, as Mr. Power has shown that small-pox may be disseminated through the air for considerable distances around a hospital in which many cases of that disease are under treatment. To avoid this it has been proposed that instead of ventilating small-pox wards into the open air, the air from them should be extracted through a flue and burnt in a furnace; or I might suggest that a steam blast might be used to extract the air and disinfect it at the same time. A recent invention for ventilating sewers uses a circle of gas burners for creating an up current of air, and passes the extracted air through the flames with a view to disinfect it. The offensive, and possibly infected, vapours from refuse destructors and the caldrons used in bone boiling and similar trades are best destroyed by passing them through a furnace.

For the disinfection of the discharges of the sick chemical agents must, as a rule, be used, though the discharges from the throat and nostrils in diphtheria and scarlatina are best received upon pieces of rag and burnt. It is of prime importance that infectious discharges should be disinfected immediately on being passed from the body, both because delay will give them more opportunity of causing mischief, and also because if the infected matter be mixed with a large quantity of other organic matters, as in a drain or privy, before the disinfectant is applied, the action of the latter will have to be exerted on a greater mass of material, and its effect will be *pro tanto* weakened; and the chances will also be great that portions of the infective material will escape its action. It is thought by some that germs of enteric fever, for instance, may long lurk unsuspected in defective drains and privies until some accidental circumstance, such as disturbance of the contents, brings them into activity, and that many of the "sporadic" cases of this disease thus arise.

Of chemical disinfectants for the disinfection of excreta, corrosive sublimate is probably the most trustworthy and suitable for ordinary use. In its use, however, three precautions have to be borne in mind—1. It is very poisonous, and hence, in order to avoid accidents (such as frequently occur with carbolic acid), the solution should be coloured, as with permanganate of potash, sulphate of copper, or aniline blue. 2. It corrodes iron and other common metals, and is instantly decomposed by contact with them, hence it must be used in non-metallic vessels. 3. It forms with albumen an inert insoluble compound, but this may be prevented by acidulating the solution. A solution suitable for disinfection of excreta, clothing, etc., is made by dissolving half an ounce of corrosive sublimate with one ounce of hydrochloric acid and five grains of aniline blue in three gallons of water.

Chloride of lime is a useful disinfectant for excreta, but too strong a solution injures clothing. Carbolic acid is especially an antiseptic, retarding putrefaction, for example, in sewage, but a 5 per cent. solution is recommended by Koch by preference for disinfecting excreta and soiled linen of cholera patients. Creolin, a substance allied to carbolic acid, is said by recent experimenters to exceed it in destructive action upon spores of bacilli, at the same time that it is not poisonous to human beings. Permanganate of potash is an excellent deodorant, and has the advantage of not being poisonous. It is also, to some extent, a true disinfectant, but its action upon infective matter is much weakened when this is mixed with a quantity of other organic matter. Green copperas (ferrous sulphate) is a cheap deodorant, but, according to Koch, is not a disinfectant proper. Its habitual use for flushing sewers in time of cholera was strongly recommended by Dr. Budd, and was said at Bristol to have produced excellent results.

With regard to the disinfection of clothing, bedding, etc., used by the sick, it may in the first place be pointed out that for such articles as will stand it boiling in water for, say, five minutes is an effectual means of disinfection. And, since the infectious matters are not actually incorporated with the fibres of the fabric, but merely attached as dirt to their outside, there is reason to think that even a thorough ordinary washing will be a sufficient disinfection, so far as the articles themselves are concerned; but the infectious properties are transferred to the water in which they have been washed. The dangerous properties of such water are shown by the frequency with which cholera is contracted by those who wash the linen of cholera patients, and by cases like that at Moseley, recorded by Dr. Ballard, where an outbreak of enteric fever occurred among the persons drinking the water of a well into which had percolated the soapsuds in which the soiled linen of an enteric fever patient had been washed. To avoid such risks it is necessary that infected articles which are washable should be disinfected before being washed; this should, for obvious reasons, be done immediately on their being left off. Boiling might be used for this purpose; but boiling water in sufficient quantity is not always at hand; and again, if soiled clothes are boiled, the coagulation of albuminous matters fixes stains in them and spoils their colour. Hence it is more convenient to put the clothes to steep in some chemical disinfecting solution, of which a panful should be kept in readiness. A solution of corrosive sublimate is the best for this purpose, as, besides being the most effective, it has the advantage that it does not stain or rot the linen. When the grosser dirt has been removed by rinsing in water, the articles may be boiled.

Articles which cannot be boiled in water without injury, such as cloth clothes, blankets, and beds, are best disinfected by exposure to heat, and the experiments which I have quoted show that for this purpose a steam heat is preferable to a dry heat for several reasons, especially because a lower temperature and a shorter exposure suffice to kill infective organisms, and because a steam heat penetrates much more rapidly than a dry heat into bulky and badly conducting articles. Further advantages are that in a steam apparatus the temperature is approximately equal in all parts, that it can be accurately ascertained, and kept constant at any required degree for any length of time—conditions which are essential to a good apparatus, but which are very difficult to obtain where dry heat is employed. Of dry heat apparatus known to me, Dr. Ransom's self-regulating gas disinfecting stove is the only one in which these conditions are successfully complied with. In several kinds of disinfecting oven frequently used I found a wide difference, sometimes as much as 100° F., between the temperatures in different parts of the heated chamber, and the thermometer used to indicate the temperature did not do so by a wide interval, again sometimes by as much as 100°. Also in ovens heated by coal or coke it is difficult to regulate the temperature so as to keep it near the required point. The result of such defects is apt to be either that clothes are scorched and spoiled, or that, on the other hand, with a view to avoid this, they are so insufficiently heated as not to be thoroughly disinfected.

With care and in a suitable apparatus most articles can be submitted to either dry or steam heat without serious injury, but leather is instantly destroyed by steam. Books, in these days of free libraries, sometimes want to be disinfected; it may be done by exposing them to dry heat, the covers being held back so as to open out the leaves and allow the heat to penetrate. Steam is inadmissible, as it would soften the glue and destroy the leather. Letters may be disinfected by heat, but the effect upon sealing-wax and of steam in loosening the gum of envelopes must be remembered.

A process suitable for the disinfection of rags at paper and shoddy mills is a great desideratum; the requisites being that it shall be cheap, rapid, and effectual, and applicable to rags in the bale without unpacking. An American process attempted to do this by forcing steam into the bale through hollow screws; but it was found that the heat was not uniformly distributed. The infection from which rag-workers incur most danger is that of small-pox, the contagium of which is the most persistent of any of the common infectious diseases, though I could quote cases which show that the contagia of scarlet fever and diphtheria may retain their activity a long time in articles that are kept shut up and not exposed to the air. Outbreaks of small-pox occur from time to time among workers both in linen and cotton and in woollen rags, but are most frequent at paper mills where the best writing paper is made, the reason being that such paper is made from white linen rags, the remains of articles that have come into close contact with human bodies. Unfortunately there are no means of recognising infected rags except by their effects, which are not manifested until too late for preventive measures to be of any use. It is not practicable to insist on the disinfection of all rags, and it is not possible to say which rags ought to be disinfected and which it is not necessary to disinfect. Fortunately, against small-pox—the only disease from which rag-workers incur risk—they have in re-vaccination an effectual protection.

As regards disinfection of food, no one would, I presume, willingly eat or drink articles that he knew to be infected. As, however, one cannot always guarantee the absence of infection in the viands we eat or the water or milk that we drink, it is satisfactory to know that boiling or thorough cooking may be trusted to secure complete disinfection. In the experiments I have quoted it was found that even the very refractory spore-bearing bacilli of anthrax were destroyed by one minute's boiling in water at 212° F., though certain non-pathogenic bacilli found in vegetables and milk require for sterilisation a higher temperature or more prolonged boiling, a fact familiar to the housekeeper who makes jam. It is doubtless owing to the efficiency of cooking as a disinfectant that sanitarians in France and Germany, where milk is, I believe, always boiled before use, are sceptical as to the possibility of the propagation of infectious disease by that medium; whereas with us in England, where milk is drunk raw, epidemics of milk origin are a matter of almost everyday experience. On the other hand, trichinosis, so common among the Germans, who eat their ham raw, that it has to be guarded against by an elaborate system of microscopic examination of all slaughtered swine, is practically unknown as a human disease in England and France, where meat is always cooked.

The case of the Welbeck outbreak in 1880, investigated by the President of our Section, in which a number of persons were seized with an acute specific diarrhœa after eating cooked ham at an auction, may at first sight appear to disprove the efficacy of cooking, as the disease was proved to be caused by a spore-bearing bacillus which was present both in the raw ham and in that which had been cooked. The explanation, however, is probably that the cooking had not been sufficient, of which there was evidence; but that the cooking had not been without effect was shown by the fact that experiments made by feeding animals with portions of raw ham were more uniformly successful than those with the cooked ham. It is to be borne in mind that any bacteria left undestroyed would in time reinfect the whole material, and also that a chemical poison produced by the bacteria would not necessarily be destroyed by a degree of heat sufficient to kill the bacteria themselves. A series of cases of "pork-pie poisoning" at Retford, investigated by Mr Spear in 1887, which presented similar features to the Welbeck outbreak, was found to be caused by a bacillus developing in the pies after cooking. It was found by Dr. Klein that exposure for one minute to a temperature of 153.5° was sufficient to kill the bacillus; but exposure for twenty minutes to a temperature falling from 143.6° to 136.4° did not do so.

For house disinfection, fumigation with sulphurous acid or chlorine gas, the latter preferred, followed by thorough cleansing and scrubbing, removal of wall-paper and lime-washing, are to be recommended; but these processes, to be effectual, need to be carried out with more thoroughness than is frequently done. A difficulty often met with is to know where the inmates are to go while the house is being disinfected; and it would be useful for this and other purposes if sanitary authorities had power to provide refuges for people whom, although not themselves sick, it might be desirable to remove from their homes. Here, however, we come to the question of isolation, which, as I have already occupied your time too long, I will leave to other speakers.

II.—P. CALDWELL SMITH, M.A., M.D., D.P.H.Camb.,

Lecturer on Hygiene, Western Medical School, Glasgow.

Disinfection and isolation, to be of any use at all, must be thorough and complete. It is my experience, and I am certain that it is yours also, that in the great majority of cases of zymotic disease, the former has been carried out very inefficiently, while the latter has very frequently not been carried out at all. Until disinfection and isolation are carried out with the utmost thoroughness, we cannot hope ever to reach that millennium of preventive medicine, when zymotic disease shall have ceased to exist.

This subject naturally falls into two divisions: 1. Disinfection and isolation in hospitals. 2. Disinfection and isolation at home.

In regard to isolation in hospitals, I would lay down the following rules: 1. That in a large town the different zymotic diseases should be treated in separate pavilions; no communication should exist between wards containing cases of different zymotic disease. 2. That in the case of the larger towns the pavilion for small-pox should be situated at a distance from the other pavilions, and, were it not for the difficulties of administration, I would suggest that the pavilion should be situated say two or three miles from the nearest occupied dwelling, and that it should be surrounded by a belt of trees, but not sufficiently near to interfere with the free circulation of air round the hospital. 3. That in the larger towns a separate resident medical officer should be appointed to this hospital, whose duty would consist solely in attending on cases of disease in the hospital. 4. That in the case of the smaller towns and the rural districts, provision should be made by means of cottage hospitals, such hospitals containing wards for scarlet and typhoid fevers and diphtheria only. Arrangements, however, should be made for the immediate erection of a small-pox hut as soon as a case of small-pox appears in the district.

1. With regard to disinfection in hospitals. All hospitals should, as a *sine quâ non*, contain a steam disinfecting apparatus; such apparatus being, in the case of the large towns, fixed, and in the case of the smaller towns and rural districts, it may be movable. Many patterns of the latter are now made, and the majority of them are thoroughly efficient. In the next place a well-appointed laundry should be provided at a distance from the hospital. No communication should necessarily be allowed between those handling the infected and those handling the disinfected articles. I have known several cases of scarlet fever and small-pox arise in washerwomen in this way. All clothing which might be injured by steam should be soaked in a solution of corrosive sublimate before washing. I may say that this has not long since been introduced into the Belvedere Fever Hospital, Glasgow. The clothing which the patient wore on his arrival had better be destroyed *in toto*, and more especially if the patient belong to the poorer classes. It should, however, be done in all cases of small-pox and probably typhus. The wards of the hospital should be vacated *seriatim* once a year for thorough cleansing, whitewashing, and ventilation, and a fortnight or three weeks should elapse before patients are put into the ward again.

2. *Disinfection and Isolation at Home.*—Isolation at home is at all times a difficult matter. Among the poor it is absolutely impossible, and in cases of small-pox and typhus in all cases it should not be attempted. In cases, however, of scarlet fever, measles, diphtheria, and typhoid fever among the well-to-do it may often be carried out in a fairly satisfactory manner. The room should be at the top of the house, of course; no furniture but the bed, and perhaps a mat for the feet, which could afterwards be burned. Plain tables and chairs are all the furniture required, with a table on the landing outside.

There should—and this is more important in scarlet fever than in typhoid—be no communication between the nurse and any occupant of the house. It is, however, only in a few houses that absolute isolation can be got, and my own opinion is that all cases of epidemic disease should at once be removed to a hospital. It always lessens the chance of the case becoming a possible centre of infection.

With regard to home disinfection, we have yet much to teach the public, and I am afraid the profession also. After the elaborate labours of Koch and others, we recognise that the germs of the infective diseases are difficult to destroy, and to deal with the question as has been done in the past is worse than useless.

Aërial disinfection is a sorry stick to lean on, and the sooner it is done away with the better, until at any rate our ideal disinfectant is discovered. As an old practitioner shrewdly said, "the only value he found in disinfection as ordinarily carried out was that it created such a smell that people had to open their windows and so get good ventilation."

Micro-organisms, being presumably palpable entities, have a tendency to fall and lodge on the objects in a room. This being the case, it follows that, comparatively speaking, the number of micro-organisms in the air will be small in comparison with those on the floor, walls, blankets, bed, etc., and consequently our first aim should be thoroughly to disinfect these. After the patient is convalescent, the floor, walls, ceiling, and the other solid articles in the room should be washed thoroughly with a disinfectant solution, the paper, if any, being removed and burned, and the ceiling whitewashed. The bed, blankets, and personal articles of clothing should be disinfected in a steam disinfecting apparatus, and then washed. The room should then be thoroughly ventilated for a week before being occupied; and in my experience, which is now very large, these measures have always been sufficient to prevent the spread of the contagion.

Within the last five years I have attended over 1,500 cases of epidemic disease, and I have never been unsuccessful in preventing the spread of the disease from the patient after my attendance began and as soon as my instructions were thoroughly carried out.

A few words about disinfectants. I do not include under this deodorisers, but only true antiseptic substances or substances destructive to the life of micro-organisms. Many of those which were in common use have, since the publication of Koch's paper, been given up. Carbolic acid has, notwithstanding, held its ground, more especially as an antiseptic in surgery. There are two disinfectants which have lately come into more extended use—namely, corrosive sublimate and creolin, and with both of these I have had very large experience. Corrosive sublimate, as you are aware, has two disadvantages: in the first place, it is very poisonous, and in the second, when added to fluids containing organic matter, an insoluble albuminate is formed, which is inert. The first objection can be got over by using great care and by colouring the solution, but the second is not so easily remedied. Besides acidifying with some acid which is said to prevent this action, Dr. Tracey, of New York, advises the inserting into the fluid of a piece of copper foil, and adding of corrosive sublimate solution till all the albuminate is precipitated; then continue adding till a deposit is formed on the foil, which occurs whenever the solution contains the perchloride in the proportion of 1 to 5,000. Of the second, creolin, much has been said of late, more especially in Germany. It is, in my experience, the ideal deodorant, and as a true disinfectant I can speak of it in very high terms. I have not experimented with it in a laboratory, but from the results obtained in Germany we must accord it a high place among disinfectants. It has this great advantage, that it is not poisonous, and also that, owing to its powerful though not disagreeable odour, it cannot be mistaken for anything else. A third substance, hydronaphthol, lately experimented on by Dr. Edington, of Edinburgh, and spoken of very highly by him, seems also to be a true disinfectant and a non-poisonous one. Of this substance, however, I have had no practical experience.

III.—WILLIAM SQUIRE, M.D., F.R.C.P.

Physician, St. George's Hanover Square Dispensary.

WITHIN the last twenty years only, or since the last meeting of this Association at Leeds, have we had such means of isolating the sick in the more common epidemics as to enable a judgment to be formed of the success obtained, and of the part due to each of various sanitary measures in producing it. The good effects of better drainage and purer water had been established, not only in the prevention of enteric fever, but in the diminution of phthisical disease, and some sanitarians were hopeful that epidemics of the more obviously infective fevers would be abated. This hope soon proved fallacious; even infections such as relapsing fever and typhus, thought to be the associates of filth and famine, reappeared in England very shortly, and in London a hospital for the isolation of relapsing fever was, in 1870, opened at Hampstead; more than 200 cases were received, and the disease rapidly disappeared from amongst us. In this same year, 1870, small-pox, spread by the Franco-German war, raised the fatality of this disease in London to 973, and in 1871 to 7,912, from what was then thought the low figure of 275 in 1869; only once, in 1857, had it been below 200. This sudden increase of small-pox occurred at the end of 1870, and from that time dates the permanent provision made by the Metropolitan Asylums Board for the isolation of infectious fevers; in two months 582 cases of small-pox were received into the Board's hospitals, and during the next twelve months 13,145 were thus isolated; even then not half the fatal cases had been patients in these hospitals, but next year only one in nine of all the deaths from small-pox in London occurred out of the Asylums Board hospitals. At length the means of isolation were adequate to the proportion of the epidemic, and the mortality from small-pox was reduced to 57 and to 46 for the two years 1874-75, or one-fifth of any previous minimum. This was before the ships were utilised as small-pox hospitals, and the reduction was not for one year only as heretofore. Typhus, in the same way, after 1,071 cases had been isolated by these hospitals, was reduced in 1875 to 65 cases, in 1880 to 28 cases, in 1886 to 10 cases, and last year to 1 only, though twice in those ten years a tendency to increase had been observed. In those instances, and in those of enteric and scarlet fevers to be noticed, isolation is not the only factor concerned. Disinfection has a large share in the control over the spread of those epidemics. The disinfection of premises, rooms, and clothes, which follows upon the removal of the sick, often prevents other cases arising from the same source, while the removal of the patient for the whole period of infection is a more efficient safeguard against its spread than any amount of soap and water or external disinfectant could possibly be. It may here be observed that the provision of means of isolation by sanitary authorities and securing facilities for all classes to avail themselves of such means is equal to, and often more than equal to, any scheme for the registration of infectious illness, or for the notifying the outbreak of infectious disease in large communities. Both means should be in force, but it is useless to give notice of the presence of infection unless means of isolation are provided and insisted on; no method of disinfection will succeed unless those who have been exposed to infection are kept from mixing with others, at school or elsewhere, until they are known to have escaped it, and those who have been attacked are kept from mixing with the susceptible until the infectious period is over. The public establishment of good wards, good nursing, and special care attract the notice of those in need; the experience of the last London epidemic of scarlet fever shows how readily the people will notify any illness to the central authority when aid is at hand; the only difficulty, then, is to settle the terms on which admission to the wards is to be granted, and to regulate the mode or degree of payment. Scarlet fever, against which we have no vaccinal defence, is specially in need of extended means of isolation; yet, until five years ago, before Miss Mary Wardell's home, we had no convalescent place for scarlet fever patients, and the fever hospital at Islington could take but few of the numerous acute cases always occurring around us. The Asylums Board hospitals took in a gradually increasing number, but under many restrictions, and it was not until the epidemic of 1887 that more adequate provision was made. In the last quarter of 1887 close upon 3,000 cases of scarlet fever were treated in these hospitals, with a mortality of 267, or more than two-thirds of all the deaths in London from the epidemic in this the highest period of its activity; in this year 5,900 cases were treated in these hospitals, and 4,408 last year, all the convalescents being detained during the infectious period. Diphtheria is now dealt with in the same way. Consequently, in this 1887 epidemic, scarlet fever in London was less fatal than in many non-epidemic years, and so completely was it arrested, that for the first time since registration began no autumnal increase of it occurred with us at the end of last year. As every three or four years brings a new population of children at the most susceptible age around us, our means of isolation should be maintained. Chief among these is a convalescent place such as at Winchmore Hill; here 3,041 scarlet fever convalescents were under care last year (1888), with 22 deaths, most of them from other infections, namely, 4 from measles, 2 from whooping-cough, and 14 from diphtheria; reinfection from scarlet fever only occurred in three cases, and all recovered.

IV.—E. W. HOPE, M.D.,

Assistant Medical Officer of Health, Liverpool City and Port; Lecturer on Public Health, University College, Liverpool.

IN sanitary measures, as in everything else, it is a matter of no small moment to possess definite and conclusive evidence in support of the recommendations we make or of the views we hold; and in order to ensure this it is necessary to record as accurately as possible the results which have followed the measures adopted. In regard to the two points set down for discussion, we frequently find that they are difficult of application from the fact that the channels and conditions of communication of infectious diseases are so numerous and so various as to lead to a perfunctory and slipshod use of available preventive measures; as a result, the value of isolation and disinfection is often underrated by the profession and not appreciated by the public. It cannot be too distinctly understood that unless the disinfection is thorough or the isolation complete no satisfactory results can be looked for, but when carried out with efficiency and common sense they furnish two of the most important factors which can be employed in the control of epidemic disease.

In a statement as brief as the circumstances will allow, I propose to submit a typical series of instances in which the neglect or careless performance of disinfection and isolation has been followed by disastrous results, and, by way of contrast with these, I submit a corresponding series in which the efficient application of these measures has entirely checked the spread of disease. All of these cases, I may add, have come under my own personal notice.

The first series consists of instances of the occurrence of a case of typhus fever in dwellings of the class with which it is usually associated in which the farce of "domestic isolation" was gone through, the nursing being performed by the relatives. Eighty

separate and distinct cases of this nature are on the list before you, and in each case the disease spread through the family, as shown, attacking a total of 386 individuals of these families, of whom 62 died. As a contrast to this, I show you a table of an equal number of instances in which the first case was removed and isolated in hospital before the seventh day of illness, and disinfection and cleansing of the house and its contents performed, and in which no extension whatever of the disease occurred. These are incidents of half-a-dozen years ago, but they are worth remembering, as an argument, were one ever to be necessary, against the folly of attempting domestic isolation of typhus fever.

Turning to small-pox, the evidence in favour of the value of isolation and disinfection is, if possible, even more forcible. First, take the example of domestic isolation, or, rather, failure to isolate:

A girl, aged 19, contracted small-pox at her place of business: she went home to 94, Upper Beau Street, where, after an illness of twelve days, she died. The death was notified by the registrar. Within the next ten or eleven days after her death about forty cases of small-pox were found in the immediate neighbourhood of this house, and were removed to hospital; the stage of the illness of each of these cases proved conclusively that they had been infected during the latter part of the time that the poor girl lay ill at No. 94; their locality served to identify still further the source of their infection; thus, passing down the street, No. 92 (the house next to that in which the death occurred) produced two cases; No. 88, one case; No. 84, one case; No. 82, one case; No. 80, one case; No. 50, one case; the house opposite, namely, No. 115, one case; as did Nos. 73, 67, 57. Passing up the street, the house adjacent to No. 94 produced one, as did No. 100; eleven cases came from the streets on either side and parallel to Upper Beau Street, and five from the two short streets running at right angles through Upper Beau Street. "Domestic isolation," however, provides other channels for the dissemination of small-pox: by the children of the family attending school where there is small-pox in the house; the adults and lodgers going to their office or their tailoring; by the wife dividing her attention between the patient and the shop; by infected linen sent to the laundry; by tradesmen and friends calling; by the patient walking in the streets as soon as this is physically possible. All of these, and others, have been under my notice, and it is upon a volume of such evidence that I submit that domestic isolation of small-pox is not to be lightly undertaken; where it succeeds in one case it fails, and fails disastrously, in ten.

As an example of efficient isolation, I quote the case of our City Hospital, which is some 400 yards from the nearest street, and from which no spread of small-pox has occurred during the four years of its use for that disease. The same hospital also furnishes an example of the value of disinfection in dealing with small-pox—the most virulent of all forms of infection. During the three years 1885-86-87 some 1,000 cases of small-pox were treated in this institution; at the end of that time the disease disappeared from the town, and it was resolved to use the hospital for fever patients. This involved the use of the same wards, the same bedding, the same clothing and utensils and the like recently used for small-pox, and I need hardly assure you that the details of cleaning and disinfecting were scrupulously looked to. The wards were sulphured, painted, or lime-washed, and freely exposed to the air; bedding and such clothing as could not be boiled were exposed to dry heat of 230° for nine hours in the Nottingham gas apparatus; linen, etc., were boiled, and everything freely exposed to air and sunlight. For the next twelve months fever patients were treated in these wards with eminently satisfactory results, and no small-pox whatever made its appearance.

Before sitting down I would direct attention to another readily-communicable disease, in which very disastrous results have followed the too common disregard of appropriate isolation and disinfection; I mean typhoid fever—a disease whose communicability is not as fully recognised as it ought to be, or guarded against as the gravity demands. A few instances make my case clear:—

1. Hugh K., aged 20, had a severe attack of typhoid fever, lasting eight weeks; excessive diarrhœa and much delirium were prominent symptoms about the third and fourth weeks. Hugh had a brother, aged 14, and a sister, aged 10, who were sent from home at the commencement of Hugh's illness, and continued to attend office and school respectively. At the end of the third week, however, they came home regularly to dinner, and about this time Hugh's motions were, the mother states, sickeningly offensive. The mother, besides nursing Hugh, had also to prepare the meals for the other two. These meals were taken in the sick room, as the mother could not leave Hugh, owing to his delirium. Less than two weeks from the commencement of this arrangement both of these younger ones developed typhoid.

2. C., a young man, came home from sea, and was found to be suffering from typhoid. During his illness, which was moderately severe, his three brothers shared his bedroom, on the assurance that the disease was not catching. After the third week they all three developed typhoid.

3. H., Victoria Square (new model dwellings), a boy, aged 14, contracted typhoid, presumably at his place of business, where there was certainly enough to explain it, and lay ill for three weeks at home, nursed by his mother and sister. At the end of that time, both of them simultaneously developed typhoid.

I could easily multiply such cases, or quote the records from some of our hospitals, more especially our fever hospitals, where nurses attending cases of typhoid have themselves contracted the disease, but such instances must be familiar to every one.

V.—C. H. ALLFREY, M.D., F.R.C.S., D.P.H.CAMB.

Medical Officer, Third District, Bromley Union.

THE writer gave an account of an outbreak of scarlatina, which occurred while he was acting as resident physician at the Grand Hotel, Grasse. He thought that useful lessons might be drawn from his experience.

There were in all six mild cases—five decided, one doubtful. The outbreak commenced, as was correctly stated in several English newspapers, in the family of an English nobleman; but there was otherwise nothing to justify the statement made in the same paragraphs to the effect that other members of the family were suffering from "blood-poisoning," attributable to insanitary conditions.

The first case occurred in the person of M., aged 6, who was attacked on January 22nd. He was promptly removed to a neighbouring villa, and placed under the charge of an experienced nurse. All communication was cut off between him and the rest of the family, who consented to a sixteen days' quarantine in the apartments they occupied in the hotel.

The visitors in the hotel were informed of the occurrence of a case of scarlatina, but as they were assured that all precautions were being taken, there was in this instance no panic, and no one left the hotel in consequence. The rooms M. had occupied were disinfected by sulphur fumigation.

On March 3rd, forty days after her son had sickened, M.'s mother was attacked by a rigor and sore throat, and on March 7th she developed a well-marked scarlatina rash. As she had been confined to her room for several weeks in a highly heated and steam-charged atmosphere, suffering from laryngeal symptoms, it was decided, after consultation with Dr. Bright, of Cannes, that it was not practicable to remove her from the hotel in the then inclement weather. Two other cases occurred on March 8th—that of T., one of the visitors, and that of the dessert maid of the house, who also acted as deputy housekeeper. These cases were at once removed to the same portion of the hotel in which M.'s mother was being treated—the ground floor of the west wing. The rooms were boarded off from the rest of the hotel, and a perfect quarantine was established. An efficient staff of English nurses was engaged, and every precaution taken to guard against infection. These measures were apparently successful, as the only case occurring after this was that of Miss V. S., who, although after the unusually long incubation period of fourteen days, must have taken the infection from her sister.

All the cases were subsequently removed from the hotel, but, in the meanwhile, as the result of the exaggerated reports which had been circulated in England and on the Riviera, and no doubt from the knowledge that the cases, however isolated, remained under the same roof, there was an unreasoning panic, and the hotel was emptied.

The writer's conclusions were—that the introduction of the disease was, in the first instance, accidental, there being no history of the occurrence of scarlatina in the hotel at any previous period of its existence, whilst there was evidence of its existence in the town and in the near neighbourhood of the hotel. The sanitary arrangements of the hotel were examined by the writer in January, and again at a later period in company with Messrs. Best and Son (consulting engineers to the town of Oxford and

to the London School Board), who happened to be at Grasse, preparing a scheme of drainage for the town. It was found that not only had the system of drainage been carried out by an English builder, and well constructed on approved principles, but that it was in good working order. The only material defect revealed in the course of the exhaustive examination was the filthy state of the cow stables in the dairy from which the milk supply of the hotel was derived; but as the dairy did not belong to the hotel, and as the features of the outbreak did not point to milk or any other common article of diet as the cause, this is not material. It will, however, be satisfactory to intending visitors to Grasse to know that, profiting by past experience, the proprietors have decided to establish a dairy of their own, so as to place the milk supply above suspicion.

After giving evidence to negative other suggestions, the writer attributed the illness of M.'s mother to infection from her daughter, the doubtful case alluded to, and whom he believes to have had scarlatina in a latent form. She had been ailing more or less for several weeks, but with no symptoms to justify the diagnosis of scarlatina until the discovery on two consecutive days of distinct traces of albuminuria following on slight icteric symptoms. Miss I., who was on intimate terms with M.'s sister, and who had been frequently in her company, and also in the infected wing, probably derived her illness from the same source. The dessert maid's infection was traced to her having handled, owing to an unfortunate miscarriage of the arrangements made for the disposal of infected articles, one of M.'s blankets.

The writer, assuming the sequence of events to be as he explained, laid stress on the importance of extreme caution in giving advice as to infection from mild cases, holding that it is only safe to treat all cases, however mild and whatever their stage, as equally infectious, believing that infection depends more on the susceptibility of the patient and on the degree and circumstances of the exposure than on the severity or stage of the infecting case.

He expressed an opinion that the second outbreak would have been prevented altogether—certainly so far as the hotel was concerned—had the removal from the hotel of the whole of the infected family been insisted upon. He thinks that the importance of adopting such a course upon similar occasions should be impressed upon all hotel keepers. He advocates the formation of an association of hotel keepers to ensure the sanitary well-being of hotels, having for its principal objects (1) an agreement to insist upon the removal from their hotels (as soon as practicable and convenient with the safety of individuals) of all members of an infected family; (2) an agreement, as suggested by Dr. Burney Yeo, to require the signature of all visitors to a declaration that none of the party have been suffering from or, to their knowledge, exposed to infection within a certain period; (3) the establishment of a register, as suggested by the Messrs. Best—of a register of sanitarily certified hotels.

The writer advocated warmly the non-concealment of the occurrence of infectious cases, both as a matter of justice to the visitors and as a matter of policy to the proprietors. He believes that visitors in a hotel where the existence of infectious disease is known, and where they can see what precautions are taken, and gauge the degree of danger, are, in point of fact, safer than in chance hotels, where cases of infectious disease may be concealed.

Dr. HUTCHINSON (Monte Carlo and Scarborough) gave some details of an outbreak of scarlet fever at Monte Carlo, and the difficulty of isolating cases arising in large hotels. He drew attention to the utter uselessness of the present means, such as fumigation, repapering, whitewashing, etc. He suggested, when these infectious cases arise in hotels, an isolation villa (or hospital, call it what you will) as the only means of safety, and he expressed a hope that the meeting would give an opinion upon the subject.—Mr. ASTON said that as he had been for five years medical superintendent of a hydropathic establishment in this country, and, in his experience, had had to deal with the development of epidemic disease in connection with that establishment, he desired to point out the urgent necessity of requiring proprietors of public establishments to show to the sanitary authorities of their districts that they were in a sound sanitary condition, and in a position to cope promptly with the development of infectious disease. The establishment in question, although in a sanitary district, was from end to end, when he went there, a sewage cesspool. Not long ago a case of infectious disease developed in a child who was visiting the establishment, and there were no provisions whatever for dealing with it, although he had urged repeatedly the necessity upon the directors of dealing with such cases. The bed upon which the child lay was, he found, taken from the bedroom and placed in a passage near which children passed on their way to school.—Dr. LITTLEJOHN (Edinburgh) referred to the importance of the subject, and said that he did not think the proposal of an isolating villa would meet the difficulty stated. Several such would require to be provided for the various forms of illness. In Edinburgh they had practically solved the question: they had a system of notification, compulsory removal, and an infectious hospital, which is provided with special accommodation for the rich and well-to-do persons, who had largely availed themselves of the privilege, and thus there had arisen a certain very popular feeling with regard to hospital isolation, which is cheerfully taken advantage of by all classes. Every hotel should have a few rooms shut off from the rest of the building in which suspicious cases of illness should be received until they could be removed to hospital. Every community should be provided with such a building, which, as in Edinburgh, should contain accommodation for the rich and poor.—Mr. J. S. LOE considered that notification of infectious diseases, whether by the householder or the surgeon, was imperative, and that without it they could not stamp out infectious diseases; that it should no longer be a vexed question, but that they should have a decided opinion from the profession at large. He also believed that open drains were a great cause of infectious disease, and that the sewers should be ventilated by special shafts, and not, as at present in Leeds, by open drains in the thoroughfares.—Dr. OGILVIE GRANT considered it of very great importance to have quarantine hospitals as well as epidemic hospitals, so that those exposed to the contagion might be watched for some time. Recently he had to cope with a serious outbreak of typhus fever. What he did was as follows: He removed the patient affected to the fever hospital, and all the other inhabitants of the house to a quarantine hospital, where they were carefully watched. There one of the patients became affected with the fever, showing the necessity of the measures taken. Unfortunately the sanitary inspector also caught the infection in the discharge of his duties; he willingly consented to his removal to the fever house. He was glad to say that he, as well as the other patients, recovered, and the epidemic was stamped out. He was satisfied that no milder measures would have been of use in preventing the spread of this epidemic.—Dr. MAJOR GREENWOOD drew attention to the practice of sprinkling carbolic powder over the openings of the gulleys and ventilation of the drains in the metropolis; he strongly condemned this as being contrary to scientific teaching, not to say common sense, and calculated to mislead the public and instil into them a feeling of false security. He felt quite rejoiced to miss the familiar yellow and white powder from the street gulleys in Leeds, although probably the rain might have washed it all away. Next, he dissented entirely from the opinion expressed by Dr. Squire that the notification of infectious disease was useless without hospitals for removing patients to; he thought half a loaf was better than no bread, and that much more might be done to protect the public, even without removal, if a notification of infectious disease to the health authorities were generally carried out. Lastly, he wished to express a strong opinion that the Asylums Board was not the proper authority, owing to their connection with the Poor-law administration, to be entrusted with the duty of removing patients suffering with infectious disease to the State hospitals; that in the metropolis there was a striking anomaly in this matter, for while infectious disease was notified to the sanitary authority, whose officers saw to disinfection and other means used to protect the public, another authority had to be appealed to to remove the patients when necessary. Further, that the stigma of pauperism that now tended to be thrown on those who availed themselves of the assistance of the Asylums Board was a great discouragement to effectively carrying out that most important principle, the public isolation of infectious disease; that surely it was most unjust, not to say foolish, to throw opprobrium on those members of the community who, for the good of the community, are willing to leave their own homes, and go to a public hospital; the least they can claim is that they shall be put to no exposure, and that what is for the good of all should be paid for by all.—Dr. B. A. WHITELEGGE thought it was important to keep clearly in view the distinction between the possible and the impossible in regard to the suppression of epidemic diseases by isolation and

disinfection. We could scarcely hope at present to stamp out such diseases as scarlet fever, measles, or whooping-cough, the periodic rise and fall of which were clearly dependent upon other conditions, as well as facilities for infection from person to person. What could be done was to reduce the prevalence of those diseases to a minimum at all times, and to delay as well as minimise outbreaks. It was doubtful if measles and whooping-cough could be efficiently isolated, as small-pox and scarlet fever demonstrably could; the former diseases occurred in more or less rhythmic outbreaks, of great intensity and comparatively short duration, so that hospital accommodation upon an immense scale would be required, and would only be in use during epidemics. The notification of such diseases could scarcely be made complete even by legislation, since the majority of non-fatal cases were probably unattended by a medical man, even if recognised at all. Touching upon the question of compulsory notification, Dr. Whitelegge said that amendment to Mr. Ritchie's Bill, advocated by the Council of the British Medical Association, had already been tried in three towns for several years, and, so far, at all events, as Nottingham was concerned, the result was that, by the voluntary action of the medical profession, the procedure had been changed to a direct notification to the sanitary authority—exactly the same routine as under the much-abused dual system. In conjunction with Dr. Ashby, of Reading, he had recently tested experimentally certain of the newer forms of steam disinfection apparatus, and had found that each was capable of doing its work thoroughly, speedily, and safely. Low pressure steam, advocated originally by Koch, had now been utilised for practical disinfection, the experimental results obtained with this apparatus being most satisfactory.—Dr. A. S. UNDERHILL asked Dr. Parsons what disinfectant he would advise the medical officer of health to use in his general work. He thought that the disinfectants noted by Dr. Parsons related more to microbes and their spores, and not to rendering harmless the numberless inorganic or chemical compounds which probably are the sole causes of symptoms of disease, and which are to be found in the vegetable world as a result of proteid disintegration.—Mr. GEORGE EASTES drew attention to the fact that, in Paddington and adjoining parishes, cases of infectious diseases are now much less frequently encountered than they were twenty or twenty-one years ago; and this is the case with regard to both rich and poor. Twenty years ago it was difficult to isolate members of the community who had infectious diseases; people would submit to partial isolation in the upper floor of the house, but more than this could not be effected; now, families gladly send away infected members to any of the hospitals provided for the purpose. Mr. Eastes narrated instances in which single members of four large families, attacked with scarlatina, being at once isolated, no other members of those families contracted the disease. And, to show how rapidly calls for the ambulance are attended to, he stated that he had recently sent a telegram from Paddington to the ambulance station at Chelsea, and in sixty-five minutes the ambulance with a nurse was at the patient's door in Paddington.—Dr. HIRST said he was medical officer of health of Prestwich, and had in his district at present an epidemic of diphtheria, which had been going on for nearly six months, and was only just now ceasing. The patients refused to be removed, and they had no means of isolation. Two deaths occurred in one house where there were only two rooms, one above and one below, and the dead bodies were in the living room. They had no compulsory powers. The parents refused to allow them to remove the patients. There were no means of isolation. What was wanted in such cases were compulsory powers upon which they could act immediately.—Dr. MACLAURIN said that the benefits of compulsory notification and isolation in the case of small-pox had been well shown in New South Wales, where, by a strict carrying out of this system, the colony had been kept practically free from that disease, although the population, he was sorry to say, was practically unvaccinated.—Certain resolutions respecting the course to be adopted by hotel keepers in the event of cases of infectious diseases occurring in their establishments were put to the meeting, and carried unanimously.

A BACTERIOLOGICAL PRIZE.—The Vermont Microscopical Association offers a prize of 250 dollars, on behalf of the Wells and Richardson Company, to the "first discoverer of a new disease germ." The conditions may be learnt by communicating with C. Smith Boynton, M.D., Secretary of the Association, Burlington, Vermont, U.S.A.

A DISCUSSION
ON
THE CONTAMINATION OF DRINKING-WATER BY LEAD.

In the Section of Public Medicine at the Annual Meeting of the British Medical Association, held in Leeds, August, 1889.

I.—SINCLAIR WHITE, M.D.,
Lecturer on Physiology and State Medicine, Sheffield Medical School.

I PROPOSE to discuss the more important theories that have been advanced as to the cause of the action of certain moorland waters on lead, and afterwards to review the remedies that have from time to time been suggested for this evil.

Before entering on my subject, I desire to point out that the behaviour of these waters on lead is liable to vary exceedingly under varying circumstances, and, unless great exactness be observed, the experimenter may find himself bewildered by the apparently contradictory results he obtains. Thus the size, age, and purity of the lead piping employed, the length of time the water remains in contact with the lead, the pressure of the water in the pipe, the temperature of the water, and the admixture or otherwise of air with the water, have each more or less influence in determining the amount of lead which any given water will take up.

It follows from these considerations that inferences drawn from laboratory experiments are to be accepted with great caution, unless the experiments are conducted under conditions similar to what obtain in the actual distribution of water.

1. *Deficiency of salts, especially of phosphates, carbonates, and sulphates.*—Moorland waters are singularly deficient in salts; but that this deficiency is not the cause of their action on lead is easily proved by the fact that a water which acts strongly on lead can be rendered inert in this respect by passing it through an ordinary charcoal filter. Again, it is not uncommon to find two moorland waters having almost the same amount of salts, yet differing widely in their action on lead.

2. *Presence of Sewage Matter, especially of Nitrates and Nitrites.*—These substances when present in any considerable amount have a decided action on lead, and plumbism is one of the evils that may accrue from drinking polluted water drawn through a lead pipe. Moorland waters, however, are very pure in this respect, and the ammonia they yield on distillation is almost entirely of peaty origin.

3. *Scarcity of Silica.*—A few years ago Messrs. Crookes, Odling, and Tidy, after an elaborate inquiry, announced their belief that moorland waters, which act continuously on lead, do so in consequence of the smallness of the amount of silica they contain. Waters that contained upwards of half a grain of silica per gallon were found to be practically inert to lead, while waters that had a continuous solvent action on lead contained less, and often much less, than this amount of silica. These observations were confirmed by laboratory experiments, in which water that acted on lead was made to lose this property by having its dissolved silica increased to at least half a grain per gallon. The water was silicated by being shaken up with finely powdered flint. Their explanation is that the silica unites with lead, and forms an insoluble lining of lead silicate. No other agent than the amount of silica present appeared to have any influence in determining the behaviour of waters to lead.

I regret I cannot assent to these conclusions. That silica has some restraining influence is, I believe, proved, but that it is the chief or only factor in the problem seems to me to be in the highest degree improbable.

The statement that waters which contain upwards of half a grain of silica per gallon do not act on lead is not invariably correct. Thus, water from the Punch Bowl, Hindhead, which contains 0.831 of a grain of silica per gallon, is said to act vigorously on lead. Again, Professor Williams, of Sheffield, has introduced definite quantities of silica, prepared by dialysis, into an acid water without diminishing its solvent action on lead.

The amount of silica which moorland water will take up from flints, even after long contact, is very small, and in practice it would seem to be exceedingly difficult, if not impossible, to silicate by means of ordinary flints some of these waters to the extent of

containing half a grain per gallon. Mr. A. H. Allen has never succeeded in adding more than a quarter of a grain per gallon in this way, and Professor Percy Frankland's experience is of a similar character.

Dr. Tidy himself is a witness against the truth of his own theory. The following table shows the amount of silica he found in the various waters supplied to Sheffield:

Evidence of Dr. Tidy before a Committee of the House of Lords (Sheffield Water Bill, 1887). Samples collected June, 1886. Amount of silica in grains per gallon found in various samples of the Sheffield water-supply.

		Silica Grain per Gallon.
High Level System	Upper collecting reservoir	0.38
	Middle „ „	0.30
	Tower „ „	0.30
	Distributing „	0.30
Low Level System	Collecting reservoir S.	0.30
	„ „ A.	0.16
	Distributing reservoir	0.25

Now it has been established beyond controversy that the "high level" water supply of Sheffield acts vigorously on lead, while the "low level" supply acts very slightly, or not at all. Dr. Tidy's table, however, shows rather more silica in the active than in the inactive supply; although both are far below the amount he deems necessary for safety. But the most convincing proof against the silica theory is afforded by filtering an actively solvent water through an ordinary charcoal filter. After being thus treated, the water is found to be almost inert to lead.

4. *The Presence of a Free Acid.*—It is now well known that some moorland waters have an acid reaction, and I have been led to the conclusion that these waters owe their action on lead largely, if not altogether, to this cause. My opinion is based on the result of an inquiry I conducted in 1885 at the instigation of the Sheffield Corporation, supplemented by numerous observations of myself and others since then. In this inquiry I had the able assistance of Mr. A. H. Allen, of Sheffield, who did all the analytical work.

The water supplied to Sheffield is derived from moorlands which are situated from seven to ten miles distant from the town. The water from one portion of the collecting grounds (Redmires) is distributed separately, and is known as "the high level supply.' The rest of the water (from Strines and Agden) is known as "the low level supply."

The "high level" water acts vigorously on lead, and has caused many cases of plumbism. It is, as distributed, appreciably acid to litmus paper, and concentration of the water increases the degree of acidity. Its acidity and power of dissolving lead increase as we leave the town and approach the collecting grounds, and both qualities attain their maximum degree in the case of water lying stagnant in pools on the surface of the peat. The greatest amount of acidity noted was equal to 0.7 of a grain of sulphuric acid per gallon of the water.

The "low level" water, as distributed, is not appreciably acid to litmus paper, even after being concentrated to one-tenth of its volume. It acts very slightly or not at all on lead. On examining it at its source it is found that a few of the tributaries to its collecting reservoirs are acid, and that the collecting reservoirs themselves are occasionally very faintly so. In its transit to the town this water passes through a tunnel three miles long, one half of which is lined with brick laid in hydraulic cement. With the exception of this cement, neither water supply comes in contact with limestone or lime.

The "low level" collecting grounds have less peat, and are drier than those of the "high level" system. In both there are ochrey springs coming from iron pyrites, which is found in the shale and millstone grit underlying the peat. In no instance were these springs found to be acid. Besides being acid, the "high level" water differs from the "low level" in containing rather more organic matter (peat) and rather less alumina and oxide of iron.

My reasons for believing that the action of moorland waters on lead is due to the presence of a free acid are:—

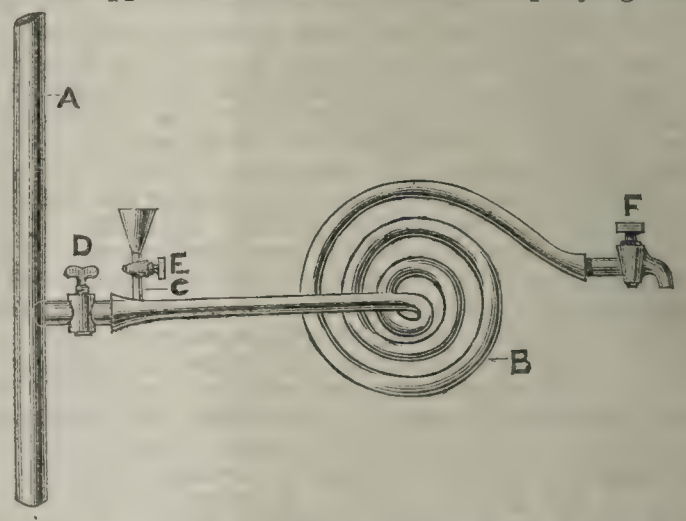
First, That I have invariably found that the lead-dissolving power of these waters is in direct proportion to their acidity;

Secondly, that filtration of an active acid water through a carbon filter removes alike its acidity and its power of dissolving lead;

Thirdly, that neutralisation by limestone, lime, or bicarbonate of soda has a similar effect.

No one has, as far as I can ascertain, determined the nature of the acid, or, indeed, whether it is of organic or inorganic origin. The opinion which has most supporters is, that it is a mineral acid, and originally, at any rate, sulphuric acid, derived from the oxidation of iron pyrites. After a prolonged study of the subject, this view seems to me to be incompatible with the observed facts, and I believe the acid to be an organic one derived from the decaying vegetable peat.

I now turn to the second part of my subject, and the limitation of time compels me to be very brief. In seeking for remedial measures I employed an apparatus which permits of experimenting under conditions similar to what exist in an ordinary house supply. This apparatus is depicted in the accompanying woodcut.



A, iron main; B, lead pipe coiled for convenience; C, side branch to B fitted with funnel; D, screw-down stopcock; E and F, stopcocks; D, when placed horizontally and open, allows of water passing from A to B, but prevents a retrograde current. To charge the pipe allow water to flow through it from the main, shut F and D. The pipe is now full of main water. Fill the funnel with the water to be experimented on, then open the cocks F and E; water will now flow from F. As it flows continue to add to the funnel until the water originally in the pipe is entirely displaced; then close E and F and open D. The charging requires a little care to prevent the entrance of air bubbles from the funnel. Should air have entered its presence is detected by an audible rush of water into the lead pipe when the cock D is opened.

An old and a new lead pipe, each 24 feet in length and $\frac{3}{4}$ of an inch in diameter, were attached to an iron main. By means of a series of taps and a side branch fitted with a funnel the water to be experimented on could be introduced into the lead pipes without admitting air and kept in the pipes for any length of time without mixing with the water in the iron main, being at the same time subjected to any pressure required up to 140 pounds to the square inch.

With this apparatus I tested the solvent power of moorland water under various conditions, and before and after various modes of treatment. The following is a summary of the results I obtained:—

1. Acid moorland water invariably acts on lead, and the intensity of the action is in direct proportion to the degree of acidity.
2. New lead piping is acted on more than old lead piping.
3. The amount of lead which an acid water will dissolve goes on increasing for the first twenty-four hours, when the action usually stops; afterwards some of the dissolved lead is deposited, and at the end of six days there is considerably less lead in the water than at the end of the first day.
4. Other things being equal, the greater the pressure under which the water is stored the greater amount of lead taken up. This influence is considerable, but no amount of pressure will, of itself, render a harmless water active towards lead.
5. Other things being equal, an increase in the temperature of the water increases its lead-dissolving power.
6. The addition of a small quantity of limewater to an actively solvent water will greatly diminish its action; but it is difficult to regulate the amount necessary to procure a maximum effect, and if too much be added it increases the solvent action of the water.
7. Contact for the space of fifteen minutes with Derbyshire limestone broken into small fragments will cause an actively solvent water to become almost inert, but after four weeks' continuous use the protection thus afforded is somewhat lessened.
8. Filtration through almost any kind of charcoal will cause an actively solvent water to become almost inert to lead, and long use does not diminish this effect.

9. Almost all charcoal filters and Bischoff's spongy iron filters remove lead effectually, even when present in large amount.

Remedial measures are of three kinds:

First, those in which lead piping and lead-lined cisterns are replaced by other materials, such as wrought iron, tin, and glass-lined iron. These are most applicable in the case of new houses; and wrought iron piping might be much more utilised than it is for this purpose.

Secondly, removal of lead from the water. Nearly all forms of charcoal filters will do this most effectually.

Thirdly, treating the water before distribution so as to do away with its solvent action. This is the most desirable way of combating the evil, but it is the most difficult to carry out. Hitherto conflicting opinions as to the efficacy of this or that mode of treatment, conjoined with the expense to be entailed, have discouraged many authorities from taking action in the matter.

Liming the water, unless it is done under the constant supervision of a skilled chemist, is a hazardous procedure.

Filtration through charcoal is a very efficient remedy; but there is a growing feeling that the employment of this substance for filter beds is undesirable, and I entirely concur in this view.

Limestone is unobjectionable, and, when fresh, an efficient antidote, but unfortunately after a few weeks' use the fragments become coated with a glitty covering of peat, which diminishes its protective influence. This untoward result can, to a large extent, be obviated by brushing the fragments occasionally.

A better but more costly arrangement would be to make filter beds composed of an upper layer of fine sand, and a lower layer of broken limestone. The fine sand would intercept the peaty matter and greatly improve the appearance and palatability of the water, while the limestone, in consequence, would retain for a long time its protective influence.

This form of filter bed, with the addition of flints, is recommended by the advocates of the silica theory.

Professor Percy Frankland has quite recently conducted some experiments, which show that the addition of bicarbonate of soda to actively solvent water reduces very largely its action on lead.

II.—T. B. FAIRCLOUGH, L.R.C.P. & S.EDIN.,

Medical Officer of Health, Kirkby Stephen District.

HE had seen very great evil result to the health of individuals from drinking water contaminated with lead, and considers the question a most important one, inasmuch as it affects the whole nation. He is of opinion that much of the anæmia and physical degeneration apparent in large towns is largely due to the constant drinking of small quantities of lead, the amount of lead palsy and lead colic being by no means a true indication of the real amount of lead poisoning in any district. Soft waters are those to be avoided, yet corporations trust to surface water to fill their reservoirs, having gone to the moors for catch-ground instead of to the springs. Spring water is more wholesome for drinking purposes; but if some springs act on lead they should be avoided. The temperature of the water, too, is an important matter, as warm water takes up lead more quickly than cold. Soft waters act upon lead, and are, therefore, dangerous. Professor P. F. Frankland (Dundee) condemns all upland surface water, as not containing sufficient permanent hardness to render it inert; while Mr. Allen (Sheffield) attributes its action on lead to the presence in it of a free acid. The author does not think that anything goes on in the reservoir that makes soft water dangerous, though the water taken from the Huddersfield reservoir, which contained a free acid, dissolved lead in the proportion of 1 grain per gallon, whilst water taken from the conduit supplying the reservoir contained no free acid, and did not act on lead more than some other soft waters. [It should be noticed that the reservoir was getting low, and the authorities had just turned in more surface water than usual, and thus made the whole of it more dangerous for the time.] As to whether pipes are lead-producing or not depends, in Mr. Fairclough's opinion, upon the condition of the water. New pipes are always dangerous, but with some waters the danger soon ceases—in two or three weeks or even less—an insoluble crust coating the inside of the pipe. Dr. Russell (M.O.H., Glasgow) remarks that Loch Katrine water, noted for its softness, forms a glutinous film on the lead, which protects it permanently. An intermittent supply of water is bad, as any crusting or coating in the piping becomes dry and rubbed off by the entrance of the water; a fresh surface of lead is thus exposed to the action of the water, and the pipes have to go again through the same protective process as new pipes. The only reliable filter to remove lead from water is one of charcoal; even this soon becomes inert, and requires more cleaning than the ordinary householder can give it. In the case of soft waters the filtering should be done at the reservoir, and their condition made such that they may safely pass through lead pipes without contamination. The only safe water for domestic use is spring water of sufficient hardness that it will not take up lead under any circumstances. Soft water may be better for manufacturing purposes, but that should not be considered if the water is destroying the health of the inhabitants of the district supplied. One danger of drought is that it tempts the authorities to catch the surface-water too soon to turn it into the reservoir. The water should first percolate through the soil, there dissolving ingredients which give it sufficient hardness to resist the taking up of lead in solution. Another danger of drought, namely, that of the intermittent supply, has been already mentioned. Lead poisoning generally occurs more frequently in summer than in winter, and this is supposed to be due to the fact that in summer the water is warmer, and consequently acts more powerfully on lead.

III.—JOHN BROWN, M.B., B.S.VICT., D.SAN.SCI.VICT.,

Medical Officer of Health, Bacup.

WITH regard to causes of contamination, the character of the water was the most important point. In the west of England he had been unable to find any serious epidemic of plumbism such as they were so familiar with in the north of England. Most of the small towns in the west had no public water-supply. He had examined the water obtained from the lead service pipes of five public water-supplies in Lancashire, and all contained lead. The water varied from two and a half to four degrees of hardness. In over 300 cases that he had observed about 80 per cent. were associated with one public water-supply. This water was exceptionally soft, (two and a half degrees of hardness), containing large quantities of oxygen in solution. The water was slightly acid, the free acid being sulphuric acid. The following physical conditions would also assist the solvent action of the water:—(1.) The pressure of the water in the lead service pipes. (2.) Friction and pressure on the inner surface of lead pipes when water was drawn off. (3.) Solids in suspension. (4.) Any condition of the lead pipes which obstructed its flow. From analyses of many samples of the public water-supply of Bacup, he found it contained from one-tenth of a grain to two grains of lead per gallon. It is a remarkable fact that this water-supply had been used for over thirty years, and no serious epidemic had been reported until last year. In the summer of 1887 the reservoir was empty, and the following winter and spring an epidemic of plumbism occurred. The lead service pipes were dry, the incrustations fell off, and the free surface of lead was exposed to the action of the water. Another cause was the length of lead service pipes or lead cisterns; also, whether the lead pipes were made of pure virgin ore or mixed lead. It was probable that the lead existed in two forms in the Bacup water—namely (1) in solution, and (2) in suspension. Water containing one grain and a half of lead per gallon was passed through ordinary filtering paper, and 50 per cent. of the lead was removed. The molecules of lead, it would appear, were arrested in the fine pores of the filtering paper. Water with one grain and a half of lead per gallon was passed through a compressed carbon filter, and all the lead was removed. In only one instance had he detected lead after the water had been filtered through a carbon filter. In this case the filter was faulty in construction. The fact that filtering removed the lead led him to make further observations, from which it was noted that it was exceptional for any severe case of plumbism to occur where filters were used, whilst it was among those who had no filters that nearly every case of lead paralysis, saturnine rheumatism, saturnine gout, convulsions, etc., occurred. By way of prevention, as little lead pipe should be used as possible; the water that had been in contact with the lead pipes for any length of time should be run off; substitutes for lead pipes should be used, such as iron pipes, glazed earthenware pipes, glass-lined pipes. Solid blocked tin was good, but rather costly. Tinned or tin-washed lead pipes were more dangerous than ordinary lead pipe. Lead pipes made from the virgin ore were safer than tinned lead pipe or lead pipes made from mixed lead. Slate or galvanised iron cisterns should be used; no red lead should be used for the joints. Iron cisterns should be coated with resin or tar, dissolved in benzene, which would protect the iron as well as red lead paint, which was ordinarily used. Iron cisterns painted with lead paint

had caused lead poisoning. The water might be acted on so as to prevent its action on lead service pipes (1) by passing it over a large bed of limestone; (2) also, if water contains a free acid like Bacup and Sheffield water, it might be neutralised by adding carbonate of soda; (3) another plan would be to make borings down to the abundant underground reservoirs which existed in Bacup in the millstone grit, and mix this with the water collected from the moors; this would make the water harder. The water-supply of all large towns ought to be under the control and management of the local sanitary authority. The sanitary authority should have control of all matters relating to fittings, cisterns, etc.; also have a register of plumbers. Dr. Brown then gave results of experiments made by himself. 1. Water was taken from the Rossendale Waterworks reservoir and was found free from lead, then placed in a tinned lead pipe for ten days; when tested it gave half a grain of lead per gallon. 2. Same water was kept ten days in lead pipe made from virgin ore, and it only dissolved one-tenth of a grain of lead per gallon. 3. Added a teaspoonful of carbonate of soda to half a gallon of water which was taken from a lead cistern; it contained over a grain of lead per gallon. Result: When tested, all the lead was removed. At the bottom of the vessel was a white deposit, which was lead—probably the carbonate of lead thrown down by the carbonate of soda. 4. Water as No. 3 was placed in a glass vessel in which were placed iron or steel filings; nearly all the lead was removed, but the water dissolved so much iron that it was not fit for dietetic purposes. Recently there had been several outbreaks of plumbism, due to water contamination from lead service-pipes, at Sheffield, Bradford, Rochdale, Huddersfield, Keighley, Darwen, Padiham, Pudsey, Norden, and other places. The extent of the epidemic and the amount of sickness and number of deaths, if investigated by a Commission appointed by the Government, would be simply astounding. Some steps ought to be taken to call the earnest attention of the Government to the advisability of appointing a Commission of inquiry.

Dr. HENRY TOMKINS (Leicester) argued that, although in some special districts water obtained from upland districts acted upon leaden pipes, yet this fact should not condemn the use of comparatively soft water supplies; that the use of hard spring waters is attended with great drawbacks, not only for manufacturing purposes, but also for domestic use. He suggested that in towns or localities where the water is known to have a solvent power upon leaden pipes, some form of pipe (several of which are in the market) should be used which are unacted upon by the water. —Dr. ROBERTS (Keighley) said they had had poisoning from drinking water in Keighley. He examined all the springs and streams passing into the reservoirs, and found most of them dissolved lead. Spring water dissolved lead. Charcoal filters removed lead, and the water which had passed through the filter would not dissolve lead. This was also proved by Dr. Tidy, and Mr. Rimmington, of Bradford. Some people preferred hard water, and when the inmates of the Keighley Workhouse had a new supply, which was softer, they begged to have their tea made of the hard water. Dr. Tidy told him that the health of the young soldiers in Paris who had been brought up from the country, where the water was hard, had materially suffered from the soft water. They had now, by neutralising the acid with lime, prevented lead poisoning in those districts where the water was so treated.—Dr. A. S. UNDERHILL called attention to the case of a clergyman in his district who declined to use the town's supply water, and preferred to use filtered rain-water which had been stored in a large iron tank. The water-supply in his district was conveyed by large iron pipes with leaden domestic supply pipes. The water was rather hard, full of carbonic acid gas, with very slight traces of chlorine, and practically free from organic matter. The iron pipes did not unduly rust, and lead poisoning was unknown.—Dr. WHITELEGGE asked if any of those members who had spoken from practical experience of contamination of water-supplies by lead had tried Barff iron as material for water-pipes. Its peculiar property of withstanding rust seemed to mark it out as specially adapted for such use, and the plan had proved most satisfactory when tried on the small scale.—Dr. SINCLAIR WHITE, in reply, defended moorland water as being best for cooking and domestic purposes, and also best for manufacturing purposes. He thought, however, this should be filtered before distribution. Loch Katrine water, in its passage to Glasgow, passed through a conduit lined with old red sandstone and limestone. To this it owed its immunity to lead.

PHYSIOLOGICAL VALUE OF MEAT FOOD FOR INVALIDS, AND WASTE IN METHODS OF PREPARATION.

Read in the Section of Public Medicine at the Annual Meeting of the British Medical Association, held in Leeds, August, 1889.

BY CHARLES MOORE JESSOP, M.R.C.P.LOND.,

Deputy Surgeon-General, Army (retired).

IN the preparation of beef-tea it appears to me that there is considerable waste of material, which arises from a desire to give food of high nutritive value in small quantities, irrespective of its component parts combined in natural proportion. This idea has been fostered by an eminent chemist, whose preparation has not the object, as he himself states, of feeding the sick, but unfortunately adopted by the public for that purpose. Nature does one thing, man another; which is the preferable teacher I will endeavour to show.

Forty years ago patients were deluged with meat washings, under the belief they were being nourished; as they did not improve, brandy was adopted, so, between brandy and meat washings, their recovery was delayed, under a mistaken idea there was virtue in scent, salts, and brandy. Pounds of meat were, and still are, wasted in the preparation of beef-tea, whilst brandy is rightly enough tabooed. Medical men know perfectly well what good beef-tea should be, but patients complain that the doctors do not give them easy directions for its preparation. There is some truth in the complaint, for we are apt to forget that what we are familiar with, the laity, including nurses, is unlearned in. We accept the off-hand statement, "We know all about it," without inquiry.

One reason for waste in material is, that the fastidious palates of the sick are catered for whilst their bodily health is unintentionally neglected; this results from ignorance. Nurses, cooks, and patients all clamour for clear beef-tea. Clear beef-tea is of no use to anyone as food. It is true it is "just what the patients like," and what they "can be got to take;" but what is proper for sustenance is lost sight of. However well beef-tea may be made, the most important part is left at the bottom of the cup—"the grounds which are no good." The patient does not progress; the attendants "have done all that they can do"—which is just what they have not done by rejecting the "grounds as no good." When patients are sick, mental equilibrium is more or less at fault, and against their will must they be fed. Attendants, therefore, require instruction, and with requisite tact they will apply that knowledge.

I propose to bring together (1) facts relating to the nutritive value of meat and what becomes of it after ingestion; (2) to comment on the literature of the subject as found in various journals; and (3) to consider how waste may be remedied and a saving to public and private institutions effected.

Physiological Value.—Meat consists of 78 parts of water and 22 parts of solids, nearly all albumen or nitrogenous substances, which are easily assimilated, and from which a much more rapid metamorphosis of tissue takes place than from vegetable food. Hence, when meat fibre enters the stomach, the gastric juice converts it into a soluble crystalloid or peptone capable of diffusion through animal membrane. By osmosis it passes through the walls of the capillaries of the stomach, whence it is conveyed to the liver by the portal vein before entering the general circulation.

The duty of this nitrogenous substance is to develop and renovate the tissues, assist in the formation of secretions, and produce force. Every substance in the body in which any form of force is manifested is nitrogenous; and as nitrogen where function is performed is traceable throughout the world, such constancy proves necessity. "Nitrogenous substances composing the textures of the body determine the absorption of oxygen. The absorption of oxygen does not determine the changes in the tissues, but changes in the tissues determine the absorption of oxygen. In other words, without the participation of nitrogenous bodies no oxidation and no manifestation of force is possible."[1] Hence, if nitrogen be cut off from the body, the various functions languish and the body dwindles. "Gelatin is chiefly destroyed in the blood and gland-cells, and its energy therefore has a direction different from that

[1] Parkes.

of albumen." It is the least perfect kind of albuminous matter existing in animal bodies, and its nutritive value is one-quarter that of albumen. Submitted to prolonged ebullition, or 220° F., it evolves ammonia, becomes syrupy, loses the property of coagulation, and speedily putrefies. Hence, its nutritive property is destroyed and it impairs digestion.[2]

From the albuminates fat arises, so that the nitrogenous substance plays two parts; first, of the organic framework, that is, the regulation of oxidation and of the transformation of force; and, secondly, it forms a non-nitrogenous substance, which is oxidised and transformed. Fat stored up in fattened pigs cannot be derived from the fat given in the food, but must have been produced partly from nitrogenous substances, but chiefly from the carbo-hydrates. So also it seems now probable that the fat in milk is not derived at once from blood but from changes of albumen in the lacteal gland cells.[3]

The digestive system of man is so formed that fat either cannot be formed in sufficient quantities from albuminates or the body is poisoned by the excess of nitrogen which is necessarily absorbed to supply it, so that fat must be taken in addition. Excess of albuminates causes a more rapid oxidation of fat, while excess of fat lessens absorption of oxygen and hinders the metamorphosis of both fat and albuminous tissues.[3]

Chossat laid down as a broad principle, derived from experiments on many different creatures, that life ceases when an animal loses two-fifths of its weight, so that an animal weighing 100 pounds would die when its weight was reduced to 60 pounds. The daily loss amounts to one twenty-fourth part of its entire weight—a statement in harmony with the conclusions of Bidder and Schmidt that an animal to maintain its weight ought to take one twenty-third part of its weight daily in the shape of food susceptible of being assimilated, water of course included.[4]

1. An adult European, in moderate work and 150 pounds in weight, requires 22.866 ounces of water-free food, that is, 0.15 ounces for each pound weight, with which is mixed from 50 to 60 per cent. of water, or a total of about 40 ounces of ordinary food—about 305 grains of nitrogen. In addition a total water supply of from 70 to 90 ounces, or an average of 0.5 ounces per pound weight. 2. In rest the amount is about 16 ounces water-free food, equal to 240 grains of nitrogen, and is sufficient. 3. The smallest amount of nitrogen necessary for the inner movements of the body and bare maintenance of life is 138 grains, or 2 ounces.[5] This may be considered to be the sick man's state.

The quantity of urea passed in twenty-four hours is said to be the measure of the ingestion of nitrogen, but this view seems somewhat defective, because in fasting or with non-nitrogenous diet urea is still secreted. The nitrogenous diet, therefore, cannot be its sole source. Hence the determination of the quantity of nitrogen to sustain life, or keep up the inner movements of the body of an adult, does not depend upon the amount passed as urea, since urea does not depend upon nitrogenous food for its sole production. The human body may be likened to a closed vessel full of liquid with escape valves; extra liquid added will escape by the valves and be a measure of the liquid added, but the drops which escape are not the drops that were added, for the overflow depends on the inability of the vessel to hold more than it can contain. So when extra nitrogenous diet is indulged in, this determines the passage out of the body of matters which have performed their functions, at a rate proportionate to the activity induced by fresh material, and is a measure of the mechanical energy throughout the body, but is not an index of what is required to sustain life.

A cubic millimètre of blood contains about five millions of blood corpuscles, each one of which Dr. Hunter considers to have a life-duration of, probably, three weeks. Many millions of corpuscles are doomed at every round of the circulation to destruction and conversion into urea and the like. This destruction, says Dr. Paton, must be considered a powerful stimulant to the secretion of bile, the liver having as one of its functions the elimination of effete hæmoglobulin. By this same process urea also is increased. Hence, urea formed even in starvation continues to be secreted till there are no corpuscles left to secure the office of respiration, and go the round of the circulation. But when fresh albumen enters the portal circulation, the blood pressure is raised and products, ready formed for use in the direction assigned them, are passed on.

For the state of rest in health 240 grains of nitrogen are said to be sufficient; but a bed-stricken patient, whose muscular and mental efforts are reduced to a minimum, whose vital processes are carried on with much less energy than usual, and who loses comparatively little heat, requires a relatively small supply of food; and, as at least 138 grains must be supplied, this supply should be thoroughly wholesome, easily digested, and consist of nutritive material.[6] Animal food especially rich in nitrogenous elements digests in proportion to the minuteness of division and tenderness of fibre sooner than farinaceous, so that it is better adapted for those who are only able to take small quantities at one time.

Meat peptonised by the gastric juice is absorbed by the vessels of the stomach; the blood in those vessels charged with constituents whose period of service in the economy has expired is on its way to the liver to be transformed into bile and urea. Arrived at the interlobular veins, it traverses the acini by fine capillaries which enter the intra-lobular veins for conveyance to the right auricle. This work constantly going is like the daily routine work in a manufactory in which, when new material is brought, there is increased energy in all departments; and the process is comparable with iron ore entered at the mouth of a smelting furnace, passed through several ovens, and which appears at the orifice of exit converted into steel; no one sees the conversion, but the highly finished product is far different from that of the raw material.

Literature of the Subject.—Extractum carnis, Dr. Beneké states,[7] is made by chopping 1 pound of beef finely and mixing it with its weight of cold water slowly heated to boiling, then briskly boiled for a minute or two and strained. Six pounds of meat thus treated yield, after evaporation in a water bath, 3 ounces. Hence 1 ounce of this extract equals 32 ounces of meat.

Dr. Hassall[8] exposes the fallacy of this supposed nutritive value, since fibrin, gelatin, albumen, and fat are absent, and that what remains consists of excrementitious substances and blood-salts.

Baron Liebig himself says that neither tea nor extract of meat is nutriment in the ordinary sense. "It will be well understood, therefore, that by the addition of extract of meat to our food we neither economise carbon for the maintenance of the temperature nor nitrogen for the sustenance of the organs of the body, and that, therefore, it cannot be called food in the ordinary sense." "Dogs fed exclusively on extractum carnis die sooner than those not fed at all, which seems to be due to the deleterious influence of the potash salts contained in the extract, for though these are indispensable in the economy, yet a larger dose of them is injurious in the absence of food whose metabolism it is their office to direct."[10]

A patient may be swallowing several ounces of extract daily, and yet be actually starving; he may feel better for it, but his strength will not return unless he can swallow something else as well. We have eaten half a pot of the stuff, and remained as hungry as ever, the only effect being to produce thirst, to heighten the bodily temperature, and to increase the nitrogenous waste in the urine.[11]

Extracts of flesh, fish, and crab are prepared, and have been used for several centuries, and probably longer, says a writer in the *Medical Times and Gazette* for October, 1870, in different countries. In the Malay Archipelago certain meats, sea fish, and little marine crabs the size of a pea are reduced to extracts, and used extensively as flavours and to strengthen with these extracts celebrated native dishes.

These extracts, then, are good stimulants, and useful to bring up the flavour of poor soup, but have no nutritive value, and require as great, if not greater, caution in administration to the sick than wine or brandy.

Meat extracts are neither direct aliments, for they contain no albuminous matter, nor indirect aliments, for their azotised principles do not arrest disassimilation[12]. In small doses they may be useful from the stimulant action of the potash salts, which aid digestion and circulation. In larger doses they have an injurious

2 Power.
3 Parkes.
4 Guy.
5 Power.
6 Power.
7 *Lancet*, 1851.
8 *Lancet*, 1865.
9 *Lancet*, 1869.
10 *Medical Times and Gazette*.
11 Editor of *Medical Times and Gazette*, 1871.
12 M. Muller in *Medical Times and Gazette*, 1872.

effect. In prolonged illnesses, when the powers of life are enfeebled, the salts of potash may, in place of favouring nutrition, impede it (1) by direct action upon the blood globules, causing a diminished absorption of oxygen; (2) by the predominance of salts in the serum, which exert no special solvent action on carbonic acid, and do not permit the exhalation of the normal quantity of this gas, and consequently the introduction of oxygen. To give these extracts alone is to keep the patient in a state of inanition.[12]

A piece of beef, one or two drams in weight, ground to a very fine pulp, is placed in a cup with two tablespoonfuls of water, with a pinch of salt; this can be warmed by the fire in ten minutes. The whole (grounds and fluid) is to be swallowed every four hours. Given in this way it is regarded as a medicine, and will be taken when, as beef-tea, it would be rejected. This process is only intended for cases of emergency, and when delay would be injurious.[13]

Dr. Leared describes a digester; in this he places 1 pound of beef finely minced, with 4 ounces of water, or preferably 8 ounces, from which he produces 9 or 13 ounces.[14] He does not say how he disposed of the remainder.

In the *Gazette Médicale*, 2 pounds of beef are directed to be taken, chopped up and placed in a litre of water with a small quantity of hydrochloric acid; this is to be boiled for fifteen hours, then strained, the mass crushed, emulsified, and boiled again for fifteen hours. The whole is then neutralised with bicarbonate of soda, and evaporated to the consistence of pap.[15]

Dr. Leared macerated 1 pound of crushed muscle for three-quarters of an hour with a pint of cold water, boiled for two hours, and strained.

In the JOURNAL for 1880 is described a complicated process, the last of the various methods described in the journals. Except the French method, which is peptonised beef-tea, only one aims at presenting to the stomach meat fibre in its natural condition, small in bulk, and of physiological value when swallowed; the rest are highly scented and highly salted specimens of broth of little nutrient value, and extravagant waste in production.

Waste of Meat.—Private individuals and public institutions have various ways of making beef-tea, some boiling for long periods and others adding "stock," and equally varied ways of disposing of the remainder when they have, as they term it, "extracted all the goodness out of the meat," which means they have wasted half or two-thirds of the quantity of meat employed, and double salted what they have retained; the effect of which concoction is to produce thirst, heighten the bodily temperature, and increase nitrogenous waste; these results arise from the salts being out of proportion to the albuminates. The half or two-thirds of discarded fibre, termed refuse, is by some sold with "hogs' wash." In one institution alone I know that over 20 pounds were thus daily thrown away; others charitably (?) give it away. If the goodness has been extracted where is the charity? Surely actions belie words. Each thus satisfies the conscience that subscribers' or ratepayers' money is not wasted. Private individuals throw the remainder into the ash-pit. There are others, however, in both classes who, more thrifty, use the remainder in soup or other ways.

In the Metropolitan area—not counting cottage hospitals, private and public asylums, Poor-law infirmaries, numbering 28, workhouse infirm wards and military hospitals—there are no fewer than 87 establishments, including Bethlem with 11,100 beds, which necessarily use fluid meat food more or less. On the supposition that 2,220, or one-fifth of the whole number, may require fluid food, and allowing 12 ounces of meat to each pint, in the course of one week 5.2 tons of solid meat would be required for this purpose alone. I venture to think that this amount is two-thirds in excess of what is necessary to be used. The cost of this quantity will depend upon the quality of beef used; and for the larger establishments, where 100 or more pints are used daily, this is a subject for inquiry, since not only is there waste of food, yearly loss of revenue, no benefit to the sick, but habits of extravagance fostered amongst a class of persons who, of all people, should practise economy.

Of course, the present system is continued on the plea of succouring the sick person with "the best beef-tea that can be made," whilst his starving brother lies outside vainly wishing for what the pigs are fed upon. But admitting that the present method is continued—as I am sure it is—from honest conviction that it is the best, may it not be worth while to inquire if it cannot be improved by putting on one side preconceived notions, and the dull round of routine, and adopting a method which does not countenance waste, does not injure or defraud the sick, and reduces the butcher's bill?

If albuminates are essential to health, and animal food digests in proportion to the minuteness of its division, how much meat-fibre can be suspended in a given quantity of water to make such a draught of nutriment agreeable in swallowing? After many trials I find that 4 ounces of meat can be suspended in one pint (20 ounces) of water, and be taken without disgust, that is, "grounds" do not collect on the palate nor remain in the gullet to annoy the patient; and that from 2 to 4 ounces of such fluid given every three or four hours is sufficient for any sick man. So that if a patient receives a pint and half of such food in twenty-four hours he gets a very large supply of nitrogenous food, and enough for a healthy man in a state of rest. If the food is made stronger than this proportion a very sick man will refuse it, and this is the very difficulty which will be overcome by a good nurse.

One ounce of the best meat contains 14.22 grains of nitrogen; 6 ounces will contain 85.32 grains; and, as 138 grains of nitrogen are supposed to be required, the remainder has to be made up from eggs, flour, and other matters. But the question has frequently arisen in my mind, whether a sick man does really require so much nitrogen daily. Theoretically he may, but practically he does not, nor does he get it. On many occasions I have witnessed very remarkable results from much smaller quantities of meat food—very far below the physiological quantity—so that I cannot help thinking there is some fallacy in the quantity of nitrogen required to keep up the inner movements of the body, particularly if urea, as hitherto maintained, is not the measure of nitrogen required, but in part the measure of the disintegration of blood corpuscles.

In making fluid meat food there should be neither refuse nor remainder. Say 100 pints is required, 25 pounds of good beef well chopped up or minced is placed in a digester with 100 pints of water and boiled for three hours, being frequently stirred and rubbed about with a wooden masher. At the end of this time the fibre is cooked; it should then be passed through a colander to ensure evenness of size and that no fibres adhere. If the process is properly managed there will be no remainder. If required, it can then be seasoned with a little salt, onions, and so forth. The better the quality of meat the less gelatin and better flavour. Prolonged ebullition has not destroyed whatever nutritious properties the gelatin may possess. The food of nature is thus simply cooked and suspended in a given quantity of water. The addition of stuff called "stock" is not required, for, besides being injurious, owing to prolonged ebullition, it gives a disagreeable flavour. The salts are in proportion to the albumen; the draught is thoroughly wholesome, and if administered not more frequently than every three or four hours the stomach will have suitable intervals of rest.

If rectal alimentation has to be employed only half or one-third of water need be used, or even less, so long as the fluid food can be passed through the tube.

For workhouse infirm wards the cut up "shin of beef" can be placed upon a strainer of nine meshes to the inch within an ordinary meat boiler, and by frequent stirring the disintegrating fibres will drop through. In one institution this process answers its purpose admirably, and gives the cook no trouble.

Last year Dr. Laffan obtained from Sir C. Cameron an analysis of the old and new processes as follows:—

	New process.	Old process.
Water	94.65	98.45
Albuminates, crystalline bodies, kreatin, etc.	4.25	0.90
Fats	0.20	0.07
Salts	0.90	0.55

The fluid from the new process was thick; in the old clear.

I confess I was not prepared to find my notion of an increase of salts in the old process so at fault, but the increase in the new process is more than compensated by the increase in the albuminates, while disproportionate in the old.

For travellers and urgent use at any time water-free beef, pounded and sealed hermetically in small tins, would be very advantageous; but all fluid extracts are disappointing and expensive. Poor folks require food within their means, and for such the above method is advantageous, let alone the saving to public institutions.

[12] M. Müller in *Medical Times and Gazette*, 1872.
[13] *Lancet*, 1869.
[14] *Lancet*, 1874.
[15] *Lancet*, 1873.

NOTES OF A PECULIAR TEAT-ERUPTION IN A MILCH COW,

Coincident with an Outbreak of Typhoid Fever amongst the Consumers of the Milk.

Read in the Section of Public Medicine at the Annual General Meeting at Leeds.

By A. M. ANDERSON, M.D.,
Medical Officer of Health, Dundee.

Since Mr. Power's report to the Local Government Board on the Hendon cow disease and its connection with scarlatina in the human subject, and Dr. Klein's experimental inquiries thereupon, the diseases affecting the udder and teats of milch cows have acquired considerable interest for medical practitioners. For the present the conclusions arrived at must be regarded as provisional, and I submit the following notes as a contribution towards the study of the subject.

With the view of showing wherein this Dundee cow disease differs from previously recorded teat affections in its character, duration, and supposed effects on the human subject, I will briefly state the leading characteristics of the Hendon cow disease, the Wiltshire cow disease, and the Edinburgh cow disease.

1. The Hendon cow disease, or cow scarlatina, whether of spontaneous origin or induced by inoculation of the streptococcus scarlatinæ, is, according to Dr. Klein, characterised by an eruptive and ulcerative affection of the teats and udder, followed by some similar and general affection of the skin, and, in some cases, a pulmonary disorder was discoverable during life. At *post-mortem* examination there was found disease of the lungs, pleura, pericardium, lymph glands, spleen, and kidney. During life the ulcers, which are covered by red-brown crusts, show a marked tendency to healing after from several days to a week or two. The animal becomes emaciated, the skin scurfy, and the hair falls off in patches.

2. The Wiltshire cow disease, which, in Professor Crookshank's opinion, is true Jennerian cow-pox, and which Dr. Klein regards as suppurative mastitis, is characterised by a contagious ulcerative disease of the teats and udder, with an absence of the visceral lesions and constitutional symptoms observed in the Hendon cow disease. The sores are more flat and superficial, the scabs adherent to base during three or four weeks; the sores are readily transmitted to man, which the Hendon sores are not, and the use of the milk did not cause scarlatina in the human subject.

3. The Edinburgh cow disease was characterised by a contagious ulcerative disease of the teats and udder, the sores being small, circumscribed, raised above the surface, their bases considerably infiltrated, and showing a tendency to heal very rapidly. In other respects the animal affected was healthy. There occurred amongst the consumers of the milk an outbreak of febrile disorder, lasting only a few days, and associated with severe sore-throat and inflammation of the cervical glands, but no scarlatinal rash and no diphtheritic membranes were observed.

4. The Dundee cow disease was discovered from the inquiries made by the Sanitary Department into every case of infectious disease notified under the provisions of the Dundee Police Act, 1882, one of the points ascertained and recorded being the source of the milk supply. I observed that in February, March, and April last an outbreak of typhoid fever occurred amongst the customers of one particular dairy in Dundee, and the most searching inquiries failed to find any trace of disease amongst the persons handling the milk or in their households. I am satisfied this milk did not acquire infection from the human subject.

The prevalence of typhoid fever in Dundee during recent months was as follows: 1888. October, 8 cases; November, 8 cases; December, 8 cases. 1889. January, 10 cases; February, 3 cases; March, 5 cases; April, 20 cases; May, 6 cases; June (to 10th inst.), 6 cases. Of these cases, there occurred amongst the customers of the one particular dairy 2 cases in February, 3 cases in March, 10 in the first fifteen days of April, 3 in the last half of April, 5 in the first fifteen days of May, and none since, nor to date August 6th. From February 1st to April 15th the total number of typhoid cases reported for the whole city was 21, of whom 15 used milk from this particular dairy; and from April 15th to June 10th the total number reported was 24, of whom only 8 used the suspected milk. From these facts it is evident that the spread of typhoid fever infection amongst the persons using milk from this dairy was greatly checked after April 15th, and apparently ceased altogether after May 15th; and, having regard to the incubation period of the disease, it may be fairly maintained, although not conclusively proved, that the 8 cases which occurred between April 15th and May 15th were caused by infected milk consumed prior to the former date, and that the milk was wholly non-infectious after April 15th.

Now, was any measure adopted on April 15th in connection with this milk supply to which one may reasonably attribute the subsequent non-infective character of the milk? There were two measures adopted: 1. The drain leading from the cowshed to the main sewer in the street was found to be defective and untrapped, and the work of renewing and trapping it was commenced on May 6th and finished on May 25th. 2. On April 15th, the sanitary inspector and myself examined the teats and udders of all the 23 cows which supplied the suspected milk. On one of the cows we found an eruptive disease on each of the four teats, presenting the appearance of ringworm, level in the centre, the margin raised, thickened, and excoriated, without scab or crust or infiltration of the base; the eruption on the inner side of the left hind teat being nearly circular, and about the size of a shilling; those on the other teats being apparently of longer standing and encircling the whole teat, so as to present, not a circular eruption, but a raised, thickened, freely excoriated edge. There was no eruption on the udder nor on the body. The cow appeared to be in perfect health, with a fine coat. Its history, as to which the dairyman is not quite sure, is that he bought it in the Dundee Cattle Market about the end of December last; it calved in the middle of January; its milk was sold daily with the rest, and he could not say when the teat-eruption appeared. Under the directions of the sanitary inspector and myself, this cow was isolated from the rest on April 15th, since when it has been milked by the cattleman, who does not milk the other cows; its milk has been used for feeding young calves, none of it being sold or distributed to the public. From the time this cow was isolated until now (June 10th), a period of eight weeks, I have frequently examined it. It appears to be in perfect health and is getting fatter every week. The eruption on the left hind teat is getting larger than at April 15th and is still well-marked; those on the other teats appear to be slowly healing, the margins being less raised, not so thick under the finger, with much less excoriation, so that the edges are fainter and not so readily recognisable. There has been no crust or scab on the eruptions, which are still confined to the teats, and no similar eruption has appeared on any of the other cows nor on the cattleman.

I may say that we found one cow with a slight excoriation on one of her teats; she was isolated for a few days, during which the excoriation completely healed. A third cow, recently calved, we found isolated on April 15th. She appeared to suffer from suppurative mastitis, with ulcers on the teats and general emaciation. She is still isolated and appears to be getting better, but, as her milk was not at any time distributed to the public, she cannot be regarded as a factor in causing the infectious disease.

Professor Frankland, of University College, made cultivations from the eruption of the first-mentioned Dundee cow, and I send herewith a water-colour illustration of the eruption, which may be compared with illustrations of the Hendon, Wiltshire, and Edinburgh cow disease, as shown in the Local Government Board's report for 1887.

Dr. Caldwell Smith remarked that he was afraid that Dr. Anderson had not proved his case. He did not seem to have had the opinion of a veterinary surgeon on the question, and it was more than probable that the untrapped drain had more to do with it than the cow. Between typhoid and scarlet fever the poor cow was having a bad time of it, and it behoved them to prove their case before fixing on the cow as the cause of the propagation of zymotic disease. Dr. Smith mentioned the case of an epidemic of scarlet fever when the cows were suspected, and ulcers similar to those in the Edinburgh cow disease were found. The cows were isolated, and a calf fed, but with negative results. On further investigation it was found that the dairymaid had been infected by a girl coming to the farm for milk while desquamating, and there could be no doubt that all the cases arose from this cause, and that the cow was not the *fons et origo mali*.

SECTION OF PUBLIC MEDICINE.

WEDNESDAY, THURSDAY, AND FRIDAY, AUGUST 14TH, 15TH, AND 16TH.

Climatology and Balneology.—Dr. GARROD asked the members to assist the Committee of the Royal Medical and Chirurgical Society formed to consider the subjects of Balneology and Climatology.—Mr. APPLETON (Beverley) strongly insisted the time had arrived when some should make a stand against the practice, patronised by the fashionable doctors of the metropolis, of sending the sick with tubercular disease into foreign lands. It was admitted by all that tubercle was incurable; therefore, they could do only two things as physicians: prolong life, and let the patients down as gently as possible. That could be arrived at as well in this country as elsewhere, which fact was enunciated by history. Sending the sick away meant extra cost, social misery, and the displacement of family love for the hireling's services. As foreign residence had failed for remedial and even alleviating purposes, why should they not begin, if the leaders would not lead, to take advantage of their uplands and fells, there to obtain at its best the best antiseptic known—oxygen?

Results of a Systematic Inquiry into the Sanitary State of the Homes of Hospital In-patients.—By T. CHURTON, M.D., Physician to the Leeds General Infirmary. The inquiry was undertaken in order to ascertain the possible share which insanitary conditions at home, and especially defective drains, might have in the causation of diseases of medical in-patients. The author, in his paper read at Glasgow last year, had estimated that approximately one-fourth to one-third of hospital patients had grossly insanitary homes; and he then remarked upon the unwisdom and costliness of sending patients back to the bad conditions from which they came, and which had helped to make them ill. It was not practicable to investigate the homes of patients who came from the country, but only of those living in the borough of Leeds. At first the cases for investigation were selected, the addresses of those patients only being taken whose diseases or histories seemed to warrant the suspicion that something was wrong at their homes. Of these, 53 houses were examined; 28 were found defective. Cases were next taken from the medical and ophthalmic wards, without any reference to the nature of the ailments—the house of every patient living in Leeds being examined—of these there were 435; 81 houses were found to be defective. It thus appears, with respect to in-patients, that about 1 house in 5 is in a distinctly insanitary state. The defects were mainly want of traps to the sink-pipes and broken drains. Occasionally an exceptionally offensive privy—they are all more or less offensive—was the ground of complaint; sometimes a good condition within the house was counterbalanced by an offensive gully, exhaling gases from the street drains, within 4 feet of the front door. The examinations were made by the sanitary inspectors of the borough. A list of the Leeds patients was sent weekly or fortnightly to the sanitary office, and by the kind co-operation of the Medical Officer of Health (Dr. Goldie) and the Sanitary Superintendent (Mr. Newhouse), the inspections were at once made, and reports furnished. Although the ophthalmic cases—many of them simply accidents, and without disease of any kind—may have increased the number of healthy houses inspected, the comparatively low ratio of defects was a pleasant surprise. Personal investigations made during eight years (ending in 1885) among patients of the Leeds Dispensary had prepared the author for a much worse result; but he had not realised to the full the efficiency of the work of the sanitary authority and the quiet reform which has been gradually taking place, house by house, from one cause or another in the borough. It would perhaps be hardly possible now to find a case such as he once saw, where a man and his wife had been for 20 years unfit for any active work, but even at the end of that time had no signs of organic disease beyond those of premature senility, and who, during all those years, had lived in a basement kitchen, the sink-pipe of which had no trap of any kind. They had admitted, but as a matter of no moment, that the sink was very offensive in rainy weather; that is to say, every other day in the year on an average. But there still remains much to be done when 20 per cent. of all the houses inspected appear to be unsound. It had been shown that the reporting of patients' addresses to the sanitary officers was a very easy matter, and their inspections could not fail to be of service to the patients and eventually to the hospital. It was hoped that the experiment, which would be continued as long as possible at Leeds, would be tried at some other hospitals also. One great advantage resulting from this inquiry has been that 109 houses (containing about 500 persons), which otherwise might have remained defective, have been put into a perfectly sanitary state.—Dr. LITTLEJOHN (Edinburgh) said the paper just read was of importance as showing the kind of assistance which sanitary officials received from such inquiries. Indeed, the public were becoming educated in the importance of sanitation, and were giving valuable help to health officials. Citizens were, in Edinburgh, constituting themselves Vigilance Committees, who took up special districts, made house-to-house visitations, noted deficiencies, and reported them to the local authority. Ladies and gentlemen in easy circumstances were giving valuable help in this direction, and instead of feeling annoyed at this apparent intrusion, it should be welcomed as evidencing the interest that is now taken in the welfare of the poorer classes.—Mr. APPLETON (Beverley) thought that all who could influence authorities should be vigilant in urging them to have good by-laws, so as to prevent owners of small properties and jerry builders from collecting in the smallest spaces the largest numbers of the poor. The freest circulation of air was the best antidote, next to good water, to the mischief in and around the poor man's house.—Dr. ARTHUR ROBERTS said that in Keighley public opinion had been very much improved, and the builders were erecting a better class of houses—generally through house. All houses were trapped and disconnected. They also endeavoured to get them to plant gardens in front of the houses, and the builders were beginning to do so.

A Cabinet Minister of Public Health.—By J. BRINDLEY JAMES, M.R.C.S., late President West Kent Medico-Chirurgical Society. Although numerous improvements have been promoted in the interests of public sanitation in the way of organising hygienic supervision, appointing medical public officials who undergo a special examination in subjects bearing on public hygiene, excellent in themselves, they are not sufficient; previous training, and the conditions of holding public medical offices, demand a stringent supervision. All naval and military surgeons belong exclusively to their respective services, and never seek private practice among civilians, unless in remote colonies where no civil practitioner is at hand. It is no less obvious that for public medical officers to devote themselves with as much exclusive zeal to the duties assigned to them as the medical officers of the army and navy they must be in like manner quite free from the cares and claims of a private *clientèle*. What we need is a civil medical service of the Crown. We have Ministers of Commerce, of Public Works; the Post Office is represented in the Ministry, but no recognition of the sanitary claims of the nation or of the medical profession itself has ever existed officially in England. What is needed to constitute a proper medical administration—not necessarily a complex one—is the creation of two medical peers—one a distinguished consulting surgeon, the other an eminent physician—and a Cabinet Minister of Public Health—with the prospect of a similar distinction on retiring from his office, his appointment thereto being based absolutely on his professional eminence and abilities alone; in no way on his political sympathies. Esculapius cannot tolerate the presence of Discord at the bedside. These may appear startling proposals, but it should be remembered also that while the Bar and the Church offer the prospect of attaining the highest State distinctions, Medicine alone has always been the Cinderella of the three learned sisters—quite as useful and as comely, but unrecognised by "the world." We have before now dwelt on the scandal that England—although pagan Rome supported a State hospital for the sick poor—has never, since the Reformation deprived the sick poor and homeless of the benevolence of the convents, officially recognised any. We have indeed excellent hospitals, but due entirely to the private benevolence of the Sovereign or subjects. Disease and deaths are no respecters of persons, striking alike at Pharaoh on his throne and at the bondsman at his gate; it is clear, therefore, that the sanitary state of the public is as much a State interest as public finance, war, commerce, or agriculture. Moreover, the Bar and the junior branch of legal practitioners (solicitors and attorneys) have each their hierarchy culminating in high officials of the Crown, who efficiently maintain their professional etiquette and dignity, able to promptly expel unworthy members of the profession from its ranks; the purity of the Church is protected in a similar manner, and is likewise represented in the House of Lords; but the medical profession, which expects each of its members to prove himself alike a scientist, a practitioner, a philanthropist, and in every sense a gentleman, has no real executive to maintain its standard and protect its interests. Two

medical lords would ensure it a due amount of Parliamentary supervision, and greatly benefit the whole community, if only by forcibly suppressing quackery. But their existence would avail little without the creation of a Minister of Public Health, absolutely independent of any political consideration whatsoever, as in private life we entrust our relatives' lives to the most able practitioner, whatever his tenets, political or religious. His tenure of office should, therefore, be unaffected by change of Government, and he should be entrusted with full powers of selection, promotion, or removal of all public officers of health, whose professional fitness and personal interest his own Ministerial seat and that of the two medical lords in Parliament would fully guarantee, while a peerage would prove a fitting reward at the close of his career. To his arbitration all points of medical ethics, all questions relating to medical education and examinations should be attributed, and the whole control of the curriculum should be entrusted to him and to the two medical peers concurrently. The abstention of all public medical officers of health of course implies compensatory salaries, but the gain to the people at large in health and longevity would render this expenditure true economy. Finally, it should be an essential condition that all future candidates for vacancies in this "Public Medical Civil Service" should have served a previous apprenticeship under some one of their predecessors, under conditions regulated by the Medical Minister assisted by the two Medical Lords. May we hope these suggestions may be ultimately endorsed by the time-honoured professional injunction "*statim sumenda*"?—No discussion arose on this address.

The Disposal of Town Refuse and Excretal Matter.—By MAJOR GREENWOOD, jun., M.D., D.P.H.Lond. (1) Importance from a public point of view of an inquiry as to whether the methods of dusting now in use in our large towns are the best possible under existing circumstances; whether they can be indefinitely continued in the future, and what system would be the best to adopt (*a*) from a sanitary point, (*b*) from an economic one. (2) Brief review of practices adopted usually by the sanitary authorities. The Public Health Act 1874, and the Metropolis Local Management Acts of 1855; and their bearing on the construction of suitable dustbins; the defects and disadvantages of these, their immobility, their situation, their insanitary condition often when empty, the possible sources of disease from them. (3) Can this method of storage be continued in the future? The evils arising from allowing putrescible waste to be stored in the midst of large towns rapidly increase with the population. The probability of a diminution of the death-rate consequent on a more rapid removal of the house refuse changes in the metropolis in this direction. (4) The pail system and its advantages. That it makes absolutely necessary frequent removal of refuse—complaints often arising from faulty administration and inadequate carrying out of details. Small property owners find this system cheaper for themselves, and are endeavouring to inaugurate it. (5) Necessity of covered vehicles for the removal of refuse. Danger and annoyance to the public of the present uncovered carts. Ease with which this can be avoided. Diagram of cart employed by the Town Council of Edinburgh. (6) Disposal of the refuse: Difficulties of this. Sanitary science *versus* economy. Manural properties of the refuse. Dominant idea of Local Boards to get rid of it at the cheapest rate, regardless of public danger. Dangerous position in which refuse is often shot. Evils arising from building over recent dust shoots. Arguments against adding to the impurity of the subsoil by burying house refuse. (7) Cremation and its advantages: Probably more expensive at present, but not necessarily likely to be so in the future. More adapted for large and united sanitary area. Introduction of destructors into the metropolis. Room for great improvement in the economic working of these. At present all the heat evolved wasted. Advantage of small areas combining to work a destructor in common. (8) Profit derivable from our refuse: This gets less every year. Review of the past in this respect, with special reference to Parish of St. Mary, Islington. Result of a return of 22 metropolitan parishes, only two claiming profit. Important bearing of this in the case of refuse removed by contract, as tending to promote sanitary evil. Dr. Corfield's opinion on this. Curious divergence with regard to the cost of dusting and scavenging in the metropolitan area. Probable reasons of this. Table showing details of cost of scavenging and dusting in 24 metropolitan parishes. (9) Brief sketch of a scheme for the dusting and scavenging of a large town: (*a*) the whole to be carried out by a local authority; (*b*) the pail system, or some modification thereof to be adopted; (*c*) refuse to be removed in covered cart to a depôt, and thence by a tram or railway line to destructors situated outside the town; (*d*) All the putrescible refuse, except that which can be advantageously used at once as a manure, to be here carbonised. Remarks on a scheme lately tried at the sewage works of the Halifax Corporation, to use the carbonised products of destructors in treating their sewage, and the advantages claimed for this process.—Mr. J. BRINDLEY JAMES said the conclusions at which the author arrived were the following: 1. The importance of rendering contamination of the surrounding soil by sewers impossible. 2. A chemical system of treatment and utilisation as manure of all slops, excreta, etc., without exception. 3. The contamination of all rivers, streams, wells, etc., prevented. 4. The total suppression of cesspools, and prohibition by law of their construction. 5. Each householder to be compelled to burn his own vegetable refuse, and provided with dust pails for periodical removal (as enforced in Bermondsey). 6. Last, but not least, the construction of a parish crematorium for the reduction to ashes, utilisable in themselves, of all refuse otherwise perplexing to dispose of. Fire purifies everything, and this system, easily rendered innocuous to those employed in it, would confer an incalculable amount of hygienic benefit on the public at large, whose adoption of the same cannot be too zealously invited.—Dr. E. SLADE KING (medical officer of health for Great Torrington, Ilfracombe, and Dulverton), said that the waste products of man's domestic life part themselves for sanitary purposes into two great divisions: 1, sewage, including all excretal and liquid waste; 2, house-refuse, composed of the more solid matters cast away as useless from human habitations, and of the waste materials resulting from the smaller trades and manufactures. House-refuse demands the consideration of the sanitarian in three stages—namely, in its formation in and around houses; in its collection and removal; in its treatment and ultimate disposal. As to its formation or accumulation, cupboards, ashpits, and dustholes are condemned as unfit; and the use is advocated of galvanised metal vessels, casks, or boxes, coated with some non-absorbent material, light in weight, fitted with covers. The collection and removal should be done early in the forenoon, at intervals never exceeding four days, by the scavenger, who empties the contents of the ash-boxes one after another into his cart. Certain precautions are necessary to ensure that each householder does his duty by putting out the refuse in time for the collection. As to the treatment and disposal of house refuse, fire seems the only effectual agent which can be employed for its purification and practical destruction. For large populations this can be done by the "destructor," but smaller sanitary authorities object to the cost of its erection and management. Can the house refuse of a small town be sufficiently burnt and purified without the use of expensive apparatus? and will the charred remains be free from nuisance and of marketable value? The answer is "Yes;" and, as an example, a town of 8,000 inhabitants is selected, the quantity of house-refuse from which in the year exceeds 2,500 tons. Street sweepings are not included; being rich in manural qualities, they are purchased gladly by farmers and market gardeners for immediate use. The dust-heaps of this town having become a scandal and a nuisance, and requiring to be dealt with in a systematic and effectual manner, a small secluded field was rented at agricultural value, and a trench opened therein, 15 feet deep, 25 feet wide, and 65 feet long, leading at either end by a gentle gradient to the surrounding level. Parallel with one side a shelter was provided, consisting of a galvanised metal roof supported by upright posts; under this shed the carts tipped the town refuse. The dust sorter separated with an iron rake stones, clinkers, and other material fit for road making. He kept, as his own perquisites, bones, rags, etc., which the marine storekeeper purchased; while the "soft core," consisting of vegetable and animal refuse, paper, small coal, and combustible material, he distributed along the sloping side of the trench, and then set fire to, gradually covering it with ashes and the rest of the refuse. Thus drying, and then burning, such a heap burns slowly for a month or six weeks without the necessity of relighting. Eventually nought remains but a mass of black ash, highly carbonaceous and free from smell. The organic matter thus charred is of agricultural value, whilst builders purchase it after screening at the rate of 1s. 3d. per load. The slow combustion constantly proceeds at the centre of the mass, destroys all the fumes, gives rise to scarcely any visible smoke, and permits scarcely any smell to be recognised at a distance of more than a few yards. If all is done regu-

larly by the dust-sorter, the process can be carried out cheaply and effectively. The carrying out of such a plan tends to keep the breathing air of towns pure, and to prevent the tainting of milk and drinking-water with impure gases; it thus tends certainly to raise the condition of health, particularly among young urban populations, and exercises a very special influence on the occurrence of sore-throat and diarrhœa. If, from the character of the soil or want of space, it is difficult to open out such a trench as that above described, a small kiln, on the plan of a lime-kiln, may be substituted. This will cost about £25 or £30 complete, and will deal with 50 or 60 loads a week. This plan of an open trench or small kiln for the burning of town refuse of small populations is all-sufficient. The average cost of collecting, removing, and thus treating by fire the town refuse of an urban population (8,000) for twelve months has been for carts, horses, and general wages (including extra for Sunday work at fish shops), £237 9s.; the average total quantity collected being 2,485 tons. The sale of ashes to builders and farmers has realised £45 10s.—Mr. D. Edgar Flinn, F.R.C.S.I. (Kingstown) said: The immediate removal of all refuse and filth was the most essential element in the public cleansing of towns. Even to deposit refuse temporarily on the ground was dangerous, as the atmosphere of the dwelling-house was very much affected by the state of the atmosphere of the soil near it. The daily door-to-door collection at a stated early hour each morning, by means of portable dustbins supplied by the authorities, and large enough to contain the refuse collected during the twenty-four hours, was a system working well in a large number of towns. The portable pail-collection of house refuse should be enforced by every sanitary authority, for it appeared to be the best and readiest system, each householder above a certain rating being supplied with a pail at a small charge, and the poorer class of houses being supplied with them free of cost. In small courtways one large pail could be placed in a convenient position, and would suffice for three or four cottages. These should be emptied each morning by the corporation at a certain hour. In each sanitary authority there should be a specially appointed cleansing committee, whose duty it would be to see that the daily public cleansing of a town in all its details should be systematically and properly carried out. It is surprising how little had been achieved in our best and wealthiest towns to provide the working classes with suitable dwellings and with sanitary accommodation likely to train them into habits of cleanliness. The three essential accessories—drainage, closet accommodation, and water supply—being frequently defective and inadequate to the requirements, it was well-nigh an impossibility for any corporation or public body to keep the courtways and laneways of a town in a cleanly condition unless such places were well paved, or, better still, concreted. It was probable that in the near future a Ministry of Public Health would be formed, with a responsible Minister who would have a seat in the Cabinet. Sanitary legislation would thus receive an impetus, and a marked improvement in each branch would be the result. The cleansing of towns had a marked determining effect on the death-rate of a population. Since the inauguration of the system of domestic and public cleansing in the city of Dublin, some seven or eight years ago, coupled with a firm administration of the provisions of the Public Health Act, the death-rate had declined, and diseases of an infectious character were not so frequent as formerly. The destruction of the first germ of disease was of the utmost importance, and it was to the houses of those resident in the courts and laneways of our cities and towns that the lesson should be taught that national health lay in the individual cleanliness and surroundings of the house and its inmates.—Dr. C. F. Moore (Dublin) said that the disposal of town refuse and excremental matter has, since the visitations of epidemic cholera in 1854-66, and previously in 1849, occupied a prominent place in public medicine. Dr. Moore drew attention to the endeavours which had been made in this direction, the subject having become one of great importance by reason of the great increase of town populations within the present century. The subject embraced the great main-drainage system, such as that of London, to which, however, more than a passing reference was not made; the removal and utilisation or destruction of town refuse, and the treatment and disposal of excremental matter by other methods than that of sewers. The great object of the latter is the disposal, without creating a nuisance or injury to the public health, of excremental matter in such a way, if possible, as to fertilise the ground. The paper contained a brief notice of certain leading methods for that end, with an appendix giving fuller details of the same. One great difficulty in carrying out the disposal of excremental matter by other means than by a system of sewers in many parts of these countries appears to be the absence of a class of persons who will faithfully discharge the duty in a thorough and effective manner. The Chinese and Japanese afforded examples of this mode of treatment of such matters of great antiquity and effectiveness.—Dr. H. F. Parsons remarked that the objections raised by the speakers to the dustbin system as carried out in London and other water-closet towns applied with tenfold force to the midden-privy system in vogue in northern towns. He pointed out the advantages of small portable receptacles in saving labour and nuisance by the contents being emptied direct into the cart instead of repeatedly depositing it on the ground and shovelling it up again. He also pointed out that it was unnecessary that ashpits should be made large enough for a man to work inside. The refuse should be collected at short intervals from each house in turn, not waiting for complaints to be made.—Dr. Ballard characterised the ashpit privy system as abominable, and said he should be glad if some strong expression of feeling came from the Section on the subject.—Mr. C. M. Jessop (London) said that from his experience in the parish of Paddington, householders would not properly make use of the dust carts as they came round, and that when the cart did not call they did not complain to the surveyor; that there were various kinds of dustbins, some of brick, four feet deep, very difficult to be emptied completely; others of small movable covered dustbins, which, in his opinion, were the best form; and that the County Council should compel each householder to take the proper steps to have the dust removed.—Dr. Spottiswoode Cameron (Huddersfield) could not agree with the last speaker that the sanitary authority should expect the householder to give them notice when it was necessary they should do their own work. It was the duty of the authority so to arrange their work that the dustbin should be emptied long before it was full. There was one way, however, in which the householder might greatly lessen the work of the scavenger, and that was by establishing each one a small destructor in his own house. Dr. Cameron's practice was to insist in his own house that all vegetable and animal refuse should be placed each night behind the kitchen fire, and raked next morning when dry into the fire and there cremated. In this manner, especially with the use of Mr. Teale's economisers, the amount of refuse would be immensely reduced. The theoretically perfect plan was to remove the house refuse every day, as was, he believed, done in Edinburgh still. Everyone would have cause to condemn the midden, and even the tub or pail system was only a sort of improvement upon it. The latter had its advantages in limiting, for instance, the spread of infection from cases of enteric fever which could not be taken to hospital. The providing of a separate tub for such cases and the supply of strong disinfectants for use in them had helped greatly to the limitation of this fever in Huddersfield, and when the water-carriage system came to be adopted in that town he should still recommend the continued use of pails for cases of enteric fever.—Dr. Littlejohn (Edinburgh) agreed with the Chairman that no more important subject could be discussed. He was convinced that the remedy for the nuisances connected with the accumulation of domestic refuse was daily removal, and that to be undertaken by the local authority. In Edinburgh this had been satisfactorily carried out. All refuse had to be brought to the street in suitable receptacles, and these were emptied morning and evening in the poorer districts, and every morning in the New Town. The water-carriage system obtained in Edinburgh, and the effect had been that the commercial value of the refuse had been declining from year to year; and now the farmers were unwilling to purchase it. The solution of the present difficulty was destruction by fire. He regretted to hear members advocating the retention of the dustbin in London. Its existence was a nuisance, and sooner or later the metropolis must face the question of daily removal. The existence of decaying material so close to dwellings must be prejudicial to health, and the principle should be condemned by the department.—Dr. Caldwell Smith agreed with the remarks of the previous speaker (Dr. Littlejohn) in regard to the advisability of daily removal. He also thought that the first thing to do was to get the corporations to take over the whole question of disposal and collection of refuse, and not to let it out to contractors. Only by doing this could the matter be done efficiently and well. In a town in Scotland lately the farmers had absolutely refused to remove the manure from ashpits, as they find it is of little manural value.

Resolution.—Dr. GREENWOOD presented the report of a committee of the Public Medicine Section appointed to report upon the dusting of towns. The Committee recommended the adoption of the following resolutions, and that they should be sent to the general meeting of the Association:

1. That this meeting hereby expresses its disapproval of any system of middens, sewers, cesspits, dustbins, etc., which involves the storage of filth or house refuse in the immediate neighbourhood of dwellings.
2. That it further considers that in towns, villages, and other populous places the sanitary authority should itself undertake the removal of such refuse from each household at frequent, regular, and, in populous places, daily intervals, at the public expense, without waiting for notice to be given by the householder.
3. That it expresses its preference for small, movable, watertight receptacles for the collection of house refuse or other excreta, in order to fulfil the essential conditions of preventing pollution of soil as well as air.

The resolutions, after a brief discussion, were adopted unanimously, and it was agreed to submit them to the general meeting.

On the Sources of Lead Poisoning in the Arts and Manufactures.—Dr. J. T. ARLIDGE, Physician to the North Staffordshire Infirmary, read a paper on this subject. After a brief reference to the wide use of lead in the arts and manufactures, and the practical value of knowing where its effects may be looked for, and under what forms the metal exerts its poisonous influences, he proceeded with the consideration of the last-mentioned problem under three heads, namely,—1, Lead in the solid form, as lead ore, as metallic lead, and as an alloy; 2, in the form of its salts, whether in powder or in solution; and, 3, in a mixed form, with oils and fluxes. In the form of ore it is productive of plumbism among the miners and smelters, being injurious to the former chiefly in the shape of dust, and to the latter in that of vapour. It is, too, as a vapour that it produces its noxious effects among the makers of the oxides of lead in the process of calcination. In the case of metallic lead, plumbism is a result among those who frequently handle it, such as file cutters, the rollers of sheet lead, the makers of leaden pipes and utensils, of shot and lead foil, weavers employed at Jacquard looms furnished with weights, plumbers, casters of leaden toys and of letter type. In the last named it enters as an alloy, and as such at times affects injuriously compositors. In the character of alloy it proves mischievous with pewterers, the makers of soft metallic capsules and of inferior German silver or pinchbeck. Further, metallic lead and lead alloys become indirectly the cause of illness when employed to form utensils for the storage or preparation of articles of food or of luxury, as, for instance, snuff and tobacco, or in the construction of pipes for conducting or drawing off fluids. Even in the shape of a comb metallic lead has been noted to cause its characteristic results. But more potent and wide-reaching effects follow the manufacture and uses of the salts of lead. Foremost among these are white and red lead, and, in a secondary place, the acetate and oxides, such as minium. The making of white or the carbonate of lead is a very large industry, destructive of health in all its details, and this chiefly by the evolution of dust which enters the digestive canal. Numerous inventions have been introduced to lessen the ill-results of the trade, but hitherto with imperfect success, and the old-fashioned method held its ground by reason of producing a material found by painters to have a better "body," and to cover better the surfaces painted. As house painters are the chief users of white lead, they are the commonest sufferers in the community at large of plumbism. But, turning to special occupations, there is found an even larger proportion to the whole number using it in various forms and methods among pottery artisans. Again, its poisonous consequences are encountered among the mixers of paints and colour makers, among those employing it as a flux, or in the preparation of enamels or glazing materials such as are used to embellish walking sticks and umbrellas, to give smoothness and polish to the leather lining of hats, or to the exterior of straw hats, or to playing and visiting cards, and many fancy articles of stationery, to glaze earthenware and china, or iron vessels used for cooking, or iron plates for advertisements, or ornamental card and metal boxes. Litharge is much employed by plumbers and engineers. It occurs in polishing powders for metals, and in this form is seen in cutlery and electro-plate factories, and in polishing brass utensils. It is a component of glass, and the "mixers" now and then suffer from it, but more frequently the glass polishers, who dress the wheels with it. In a state of powder dusted on a surface, either by itself or mixed with other matters to produce colour, the carbonate or the oxides are used in the process of "ground laying" as practised in the potteries, and in the preparing of coloured paper and of coloured type. Mixed with water and other media, the same salts of lead are used in adorning common earthenware, and in the dangerous art of majolica painting. In its commonest combination with oil, as ordinary paint, it has been already referred to as the cause of plumbism among house painters. Another class of workmen its ill-effects are seen among are the makers of floor-cloth and of linoleum. Other miscellaneous trade operations in which lead plays its part as a poison are found in the business of lapidaries and cameo makers; in that of brush makers, who employ it to colour the hair or bristles; in that of picture-frame making, where the raised pattern is formed by a sort of cement or putty, in which lead enters as an ingredient; in the less justifiable operations of whitening Brussels lace, and of colouring and weighting of sewing threads and woven tissues; in the colouring of vulcanised india-rubber, so commonly used for "feeding bottles." But we have, likewise, to deplore the surreptitious use of lead salts, as, for example, of the chromate or oxide to adulterate snuff; or, for the sake of colour, to embellish sweetmeats; or to serve as a component in hairwashes and cosmetics; or to give false weight to cayenne powder. To make the survey of the sources of lead poisoning more complete, the accidental introduction of the metal in articles of food may be mentioned as occurring in drinking water, under conditions so well studied by sanitarians; in porter, beer, cider, and lemonade, or fruit juices, any of which may have stood in contact with lead or its alloys in the form of pipes or capsules; or in bottles carelessly cleaned with shot; in solid, but moist or deliquescent, food preserved in lead-foil, or so-called tin cans with soldered joints; or in food cooked or salted in vessels on the surface of which lead occurs as a glaze, or else which have it enter into their structure. Lastly, whilst reserving the study of the symptomatology and pathology of the poison for another occasion, the writer remarked generally on its slow but ever progressive action on the economy when not taken in actually poisonous doses.—Dr. SINCLAIR WHITE remarked that lead poisoning in file cutters was not so prevalent as formerly. This improvement was due to the stricter observance of cleanliness by the workpeople.—Dr. WHITHAM said it was remarkable that plumbism was not common amongst artists. They frequently ate hurried meals in the studio without taking the slightest precaution. Dr. Allbutt had stated that he had never met with a case.

Diseases and Injuries caused by Special Occupations.—Dr. ARLIDGE read a paper on this subject. He remarked that among the causes of disease the effects of occupation had not been adequately studied. To establish the study of industrial diseases upon a sound footing it was necessary to ascertain the numbers engaged in a manufacture, the diseases occurring among them for a series of years, the character of those diseases, and the conditions of employment and the materials used in performing it. The inquiries to be presented were of a fourfold character: 1, statistical; 2, pathological; 3, technical; 4, sanitary. It was a simple task to tabulate cases met with in private, in dispensary, and in hospital practice in such a manner as to exhibit in a series of columns the name, the sex, the age, the occupation, and the disease, and when a sufficient number were registered it needed only an easy piece of arithmetic to sum them up, and to calculate for each trade the proportion in which any specified disease prevailed among its followers. The second class of inquiries were those directed to pathological details; researches into the mode of production of any special lesion attaching to a business; into its intrinsic character, its course, and progress. Each staple trade of the country had in itself some peculiar health condition residing in the nature of the work it entailed, but still oftener in that of the materials employed; and to illustrate or unfold the pathology of its resultant lesions opened up a field of investigation of wide interest, and hitherto little worked. The third group of inquiries to be instituted he had called technical, inasmuch as their object was to ascertain the nature of the manufacturing processes resorted to, and their relations to health. From such inquiries they sought to learn what were the sources of trade diseases; if heat, or vapour, or noxious and poisonous gases, or poison in a solid, vaporous, or fluid form; if compressed or rarefied air, or exposure to intense light or sound, or over-exercise of particular muscles, or whatever other morbific agency could be detected. The last group, sanitary inquiries, aimed at the collection of facts as to the active or sedentary nature of the work performed and the amount of physical exertion entailed. The labour, if carried on as associated labour in factories, or as domestic in the houses or small shops of artisans; if performed on the surface of the earth, or beneath it; if in the open air with exposure to weather, or in confined places; if not only day but also night work

be a condition of employment. Other matters to be kept in view were the number of working hours, the extent of intermissions of labour; and if they included returns as to accidents in the programme, they must ascertain the liability to their occurrence and the circumstances to which they were attributed.—Dr. P. CALDWELL SMITH thanked Dr. Arlidge for his educative paper, and stated that he had hoped to present for discussion before the Section a paper on the death-rate of miners from diseases of the lungs, from the passing of the Mines Act, when better ventilation was instituted. Such an inquiry was suggested to him by the statement of Dr. Nasmyth, of Cowdenbeath, that the death-rate of miners from such diseases was almost the same as in the rest of the population. Dr. Arlidge, in his admirable lectures, somewhat dissented from this opinion; and, as far as his (the speaker's) inquiry had extended, he could positively affirm that Dr. Nasmyth was taking too roseate a view of the miners' occupation. He hoped to publish a paper giving death-rates from diseases of lungs among 12,000 miners in adjoining districts in Scotland.—Dr. SINCLAIR WHITE hoped Dr. Arlidge's valuable paper would have the effect of stirring up medical officers of health to take a greater interest in trade mortality. He had analysed the deaths occurring in some thirty Sheffield trades for three years, and hoped that medical officers in other towns would follow his example. He was able to demonstrate that the high death-rate which obtained among cutlers and some other workmen thirty or forty years ago has been largely reduced.—Dr. A. S. UNDERHILL referred to the almost total cessation of special disease of the lungs amongst colliers in the South Staffordshire district. Since the passing of the Mines Regulation Act no case, pathological or otherwise, had been shown at the Birmingham Societies. Since that time, and at the hospital with which he was connected, no case had been recorded for fifteen years, although it was situated in the midst of the coal-field of South Staffordshire. He attributed this cessation of special disease to the better ventilation of the mines, and to the fact that in his district the coal measures were exceptionally deep.

EXCURSIONS AT THE ANNUAL MEETING.

Scarborough.—The excursion to Scarborough was, as might have been expected, perhaps the most popular of the series. About 120 members of the profession, accompanied to some extent by their wives and friends, left Leeds by special train at 9.10 A.M. on the morning of Saturday, 17th. The journey was broken at York, Scarborough being reached shortly after noon. The weather was all that could be desired. The visitors received a cordial welcome from their Scarborough brethren, a number of whom were waiting at the station to receive them. A special luncheon was given at the Royal Hotel, to which about 150 sat down, Dr. Dale being in the chair. A few speeches were made. "The Health of the Association" was responded to by Mr. Ernest Hart, while the programme of the proceedings was explained by Dr. Hutchinson. During the afternoon the visitors made special excursions round the town and into the country; and sea trips in yachts placed by local gentlemen at the disposal of the visitors were largely indulged in. Alderman J. W. Woodall gave a garden party at St. Nicholas House during the afternoon. In the evening a reception was given in the Grand Hall at the Spa by the Mayor (Mr. James Hutton), and as a special compliment the grounds were illuminated. On Sunday a special service was held at the parish church (St. Mary's). The Ven. Archdeacon Blunt, D.D., preached before a crowded congregation. "Church Parade" on the Esplanade was subsequently attended, and in the afternoon sacred music was played in the Spa grounds. A great attraction was an "At Home" at Mr. Alderson Smith's. Here the visitors were most hospitably entertained, and the Misses Alderson Smith, with Dr. Bower, played several pieces, which were most highly appreciated. Dr. Calantarients's Glaciarum was open to the visitors and much frequented, great wonder and admiration being expressed. The concert of sacred music in the Aquarium on Sunday evening was well attended, while later in the evening the majority of the visitors met together at the Royal Hotel, where, amidst much enthusiasm, cordial votes of thanks were passed to the various entertainers, and Dr. Purdy, of Oulton, gave a recitation. On Monday morning at 10 A.M., Mr. Alderman Smith accompanied a party on a deep-sea trawling expedition, which was much appreciated. The general opinion prevailed that not only had no more enjoyable excursion ever been arranged, but that it was the first time on record where any endeavour had been made to entertain those visiting the annual meetings of the British Medical Association over the Sunday.

Bolton Abbey and Ilkley.—A large number of members and their friend, numbering upwards of 100, took part in this very enjoyable excursion. Travelling in saloon carriages, and proceeding by the new line of railway which connects Ilkley with Skipton, delightful views were obtained of Ilkley and the adjacent hills. At Bolton Abbey Station, which was reached a little before 11, they were met by the entertainers from Bradford and Ilkley, and a number of waggonettes and open carriages were in waiting to convey the party up the Wharfe Valley to Bolton Woods and the Strid. The weather was bright and sunny, and the charming valley, with its beautiful trees and picturesque views, the Wharfe, swollen and boisterous, rushing along midst rocks and eddies, were sights not soon to be forgotten. Then the party drove to Bolton Abbey, strayed among the grand old ruins, visited the church; a few managed to do Posforth Gill, the Waterfall, and the Valley of Desolation; and all returned to the Devonshire Hotel, where a luncheon was served on the lawn, to which ample justice was done. At Ben-Rhydding and Ilkley the various hydropathic establishments were visited. Some of the party wandered on to the moors, others to the Cow-and-Calf Rocks, others to the old church with its Saxon crosses, and at 5.30 they all met at the Wells House, where dinner was served in the beautiful winter garden. All were charmed with this flourishing hydropathic establishment. Old friends here met again, new friendships were formed, and the excursion was a fitting close to a most successful meeting.

Harrogate.—Many members availed themselves of the opportunity offered of visiting Harrogate, and of participating in the hospitalities of their medical brethren in this popular health-resort. A special train left Leeds about 9 A.M., arriving at Pannal at 9.15. Here the party were met by members of the profession at Harrogate, who conducted the excursion during the remainder of the day. Several four-horse drags were in waiting, and a move was at once made for Plumpton Rocks. The party, which included a number of well-known members of the Association and their friends, was pioneered by Dr. Deville and Dr. James Myrtle, hon. secretary of the Harrogate Medical Society. At Plumpton the famous rocks and lakes were much admired, and some pleasing *souvenirs* in the form of rare botanical specimens were taken away. Dr. Deville made an admirable cicerone; while Dr. J. Myrtle supplemented his efforts, to the increasing enjoyment of the party. A move was subsequently made for the ancient town of Knaresborough, with its historic castle and interesting topographical surroundings. On arrival light refreshments were partaken of, after which the Castle, Dropping Well, Robin Hood's and Eugene Aram's caves were in turn visited. The dropping well was a decided feature of interest, whilst the caves, with all their grim associations, added variety to the natural scenery of the place. Knaresborough was left at 12.30 for Ripley. To this place the drive lay through the delightfully rural scenery of Scriven and Scotton. The weather was fine, and a somewhat brisk breeze was blowing, which kept off the threatening rain. The country presented a charmingly picturesque appearance, and the drive was enjoyable. At Ripley the restored church was an object of interest, as was also the castle, together with the lakes and parks. Much enjoyment was afforded here in the inspection of the interior of the castle, with its masterpieces in painting and sculpture. The drive, after three-quarters of an hour's halt, was continued to Harrogate, which was reached about 2.15 P.M. Luncheon was prepared at the Prospect Hotel, of which the members of the party, at the invitation of the local members of the profession, partook. Dr. Myrtle (Harrogate) presided, and toasts were drunk and duly honoured. Once more entering the vehicles awaiting them they were driven to Bath Hospital and Rawson Convalescent Home. From here a visit was paid to the natural curiosity of Harrogate—the Bogs Field, with its thirty-six springs, no two of which are alike in constituents and potency. The beautiful Bogs Valley Gardens were traversed; emerging from the gardens, the old sulphur well was visited. The Montpellier Baths and Pump-room was the next place of visitation. The Victoria Baths, erected by the Corporation at a cost of £30,000, were inspected, and the excellent bath arrangements were the subject of general comment. The party were subsequently driven to High Harrogate, where the steel spring known as St. John's Well was visited. Afterwards the drive was continued up Harlow Road and across the moor, and subsequently the members dis-

persed to the residences of the local members of the profession. In the evening various entertainments were organised at their residences, and the remainder of the visit rendered enjoyable. The day throughout was fine, and the proceedings were highly appreciated. Some of the members returned to Leeds by special train, others left by later trains, while a number stayed in the town over Sunday.

York, Helmsley, and Rievaulx Abbey.—A large number of the members of the Association, accompanied by a goodly sprinkling of ladies, embarked on this excursion. Many members of the medical profession in York combined to welcome the visitors to their city, and all the arrangements were of a very complete character. On arrival by special train from Leeds, they were first conducted to the museum and grounds of the Yorkshire Philosophical Society. Here the Rev. Canon Raine kindly pointed out and explained the various points of interest. The party afterwards proceeded to the Wilberforce School for the Blind, over which they were shown by Mr. Buckle, the superintendent. A pleasing episode in connection with the visit was the singing of a glee by a party of blind vocalists. The Minster was next visited, the Dean of York acting as cicerone; and subsequently a visit of inspection was paid to the Mansion House and Guildhall. The party were received by the Lord Mayor and City Sheriff, who took them over the buildings and pointed out the various objects of interest. At 1 o'clock luncheon was served at the Station Hotel, Mr. S. W. North (Medical Officer for York) presiding. The Chairman briefly bade the guests welcome, and Dr. Cutter (New York) acknowledged the kindness of the medical profession in the city. The Dean of York and the Lord Mayor of York also spoke, and the toast of "The Health of the Chairman," proposed by Mr. Lawford Knaggs (Huddersfield), was duly honoured. About half-past 2 the excursionists left the city for Helmsley, where at 5 o'clock tea was served. Thence the party drove through Duncombe Park, being received by the Earl of Feversham; thence to Rievaulx Abbey, where the picturesque views and objects of interest were much appreciated. Dinner was served at the Black Swan. Here Dr. Cutter (New York) proposed a vote of thanks to the Excursions Committee, which was suitably responded to by Mr. Nevitt, the conductor of the party. Other gentlemen spoke, expressing their great appreciation of the excursion in which they had participated.

Washburn Valley and Farnley.—About forty ladies and gentlemen took part in this excursion. The first stoppage was made at the filtering beds at Weetwood, the process of filtering being explained by Alderman Woodhouse. Next at Adel Church a halt was made, and the principal feature of this almost unique specimen of Norman architecture was shown and explained by the Vicar. At the Lindley Wood reservoir the excursionists were met by Mr. Wurtzburg, of the firm of Greenwood and Batley, and after partaking of refreshment kindly provided for them they were afforded the opportunity of witnessing some very interesting torpedo experiments. At Swinsty reservoir, to which the party next proceeded, a sumptuous luncheon, given by Alderman Woodhouse, was found awaiting them, and then followed an inspection of the tunnel, through which two large mains conducted the water to Eccup reservoir. This tunnel, having been lighted with candles throughout its whole length, presented a very curious and pretty effect. Resuming their drive through Fewston (the sinking village) a call was made at the Fewston Reservoir Lodge, where some curious specimens collected by the keepers were exhibited. Proceeding then by Snowdon Moors to Farnley Hall, the party were entertained to tea by Mr. and Mrs. Ayscough Fawkes, and by them personally conducted over the house and shown the celebrated and fine collection of paintings by J. W. M. Turner, as well as the Cromwellian and other relics. At half-past six the party sat down to an excellently served dinner at the Royal White Horse Hotel, Otley. The health of Mr. Jessop, who presided; of Alderman Woodhouse, to whose courtesy, kindness, and hospitality the success of the excursion was in great measure due; and that of Dr. F. Hall, who acted as conductor to the party, having been drunk and responded to, the carriages were again ordered round, and Leeds was reached about nine o'clock.

Pateley Bridge, Brimham Rocks, Fountains Abbey, and Ripon.—This party, numbering over 100, and conducted by Messrs. C. Richardson, Mayo Robson, and Collier, left by special train at 9 A.M., accompanied as far as Pannal by the members going to Knaresborough and Harrogate. The visitors were met at Pateley Bridge Station by Mr. John Metcalfe, who conducted them through the grounds of Bowerley Hall and up through the charming ravine of Ravensgill, both of these being kindly thrown open by Mr. Yorke. Those who persevered to the top of the glen were amply rewarded for their exertion by splendid views up and down Nidderdale, and of lovely stretches of heather-clad moors in full bloom. The party then proceeded to Castlestead, where perfect arrangements for their entertainment had been made by Mr. and Mrs. Metcalfe. After partaking of luncheon upon the terrace, soothed by the strains of the local volunteer band, the members wandered about the grounds, which, with its undulations and shady walks, nestling on the banks of the rushing Nidal, here foaming from its tumble over the fall, and surrounded by hills crowned on one side by the rocks of Brimham, on the other by Guyscliff, in other directions presenting far-reaching views of blooming heather-clad moors, made up a picture which the visitors were loth to leave. Some of the more active spirits climbed to Brimham Rocks, others being content to let "distance lend enchantment to the view" of their weird and fantastic outline, and proceeded direct to Fountains Abbey, getting fine views backwards over Nidderdale and in front over the Vale of Mowbray, with the towers of York Cathedral, Rolston Scar, with its "White Horse," and Bolby dimly visible in the distance. At the canal gates the Marquis took leave of the party, which then drove through the park to the Unicorn at Ripon. Pressure of time prevented many seeing the Cathedral, but those who did so were most kindly received and conducted over it by the Dean. The Palace was reached at 6 o'clock, and the party, now increased to 122 by visitors who had come direct from Leeds, were entertained at dinner by the Bishop of Ripon and Mrs. Boyd Carpenter, who charmed everyone by their genial kindness and courtesy. After a stroll through the grounds, the party proceeded to Ripon Station, Leeds being reached at 9.45; and so concluded one of the most enjoyable excursions in the history of these meetings.

Malham Cove, Gordale Scar, and Settle.—This party left Leeds at 8 A.M., and after passing Carlton Hall (the birthplace of General Lambert), proceeded to Kirkby Malham Church, where they were met by the courteous vicar, who acted as guide. They were shown its curious niches, quaint pews and font, and the interesting signature of Oliver Cromwell when attesting the marriage of a dalesman there. On reaching Gordale, the magnificent scenery of which was the subject of much admiration, a picnic luncheon was served at the foot of the waterfall, which was highly appreciated. A magnificent drive over the heather-clad moors brought the party to Scaleber Force, which was very full of water, and the beautiful glen was brilliantly illuminated with sunshine; here the party would willingly have lingered. A start was made for Settle, where an excellent dinner awaited them at the picturesque Ashfield Hotel, for which all were prepared and to which ample justice was done. At 4.30 the carriages were brought round, and the party visited the picturesque Catterick Force, with its many smaller but equally beautiful falls, and after returning to the hotel, the ladies had just time for a hurried cup of tea before returning to the train. On the station a very hilarious departing scene showed that the laborious day had been brought to a very satisfactory termination.

THE Viceroy of India, during his term of office, has placed at the disposal of the Central Committee of the Lady Dufferin Fund five silver and two bronze medals for the annual competition among the female medical students. The former are awarded to Calcutta, Lahore, Agra, Bombay, and Madras, and the latter to medical schools at Hyderabad and Agra.

SEAMEN'S HOSPITAL.—In the last year reported on (1887), there were sixteen seamen treated for delirium tremens in the Seamen's Hospital at Greenwich, and these cases are said to be on the increase. There had also been during the previous three years a decided increase in that hospital of seamen suffering from diseases induced by destitution, insufficient food, and exposure to wet and cold, consequent on difficulty in seamen obtaining ships.

PRESENTATIONS.—Dr. Conner, of Manningham, on the occasion of his giving up practice in the town, has been presented by a number of patients and friends with a handsome dish and a large electro-silver tea tray. Dr. Conner had been only seven years at Manningham.—Mr. T. A. Collinson has been presented with a handsome set of brass table ornaments by the nursing staff of the Durham County Hospital, on the expiry of his term of office as house surgeon,

MEMBERS PRESENT AT THE ANNUAL MEETING.

THE following names of members and visitors attending the annual meeting were entered in the books provided for the purpose:

Abraham, P. S., M.D., London
Acland, T. D., M.D., London
Adams, W., M.R.C.S., London
Alderton, H. C., M.R.C.S., Barnoldswick
Aldridge, C., M.D., Plympton
Allan, J., M.D., Leeds
Allbutt, H. A., M.R.C.P., Leeds
Allfrey, C. H., M.D., St. Mary Cray
Allingham, H. W., F.R.C.S., London
Althorp, C. F. M., L.R.C.P., Bradford
Amyot, T. E., M.R.C.S., Diss, Norfolk
Anderson, A., M.D., Mirfield
Anderson, Mrs. G., M.D., London
Anderson, J., M.D., London
Anderson, T., M.D., York
Anningson, B., M.D., Cambridge
Anningson, J. W., L.R.C.P., Burnley
Appleby, F. H., M.R.C.S., Newark
Appleton, R. C., M.R.C.S., Beverley
Aplin, A., M.D., Sneinton
Arlidge, J. T., M.D., Stoke-upon-Trent
Arthur, David, M.B., New Galloway
Arthur, J., L.R.C.S.Ed , Ferryhill
Ashby, H., M.D., Manchester
Aston, J. P., L.S.A., Bradford
Atkins, R., M.D., Waterford
Atkinson, E., M.R.C.S., Leeds
Atkinson, F. E., M.R.C.S., Settle
Atkinson, G. P., M.R.C.S., Pontefract
Atkinson, R., M.R.C.S., Halifax

Bacon, Alfred T., M.R.C.S.E., Leeds
Bagshawe, F., M.D., St. Leonards-on-Sea
Bailey, T. R., M.D., Bilston
Baker, J. W., M.R.C.S., Derby
Balding, D. B., F.R.C.S., Royston
Balkwill, W. E., M.R.C.S., London
Ball, A., M.R.C.S., York
Ballard, E., M.D., London
Bampton, H., M.D., Ilkley
Banks, W. M., F.R.C.S., Liverpool
Barber, F. S., L.R.C.P., Bradford
Barley, David H., M.D., Leeds
Barley, Henry, M.D., Holbeck
Barlow, J., M.D., Glasgow
Barnes, H., M.D., Carlisle
Barnes, R., M.D., London
Baron, B. J., M.B., Clifton, Bristol
Barr, J., M.D., Liverpool
Barr, T., M.D., Glasgow
Barrs, A. G., M.D., Leeds
Bartrum, J. S., F.R.C.S.Eng., Bath
Barron, G. B., M.D., Southport
Bateman, F., M.B., Whitchurch, Oxon
Bateman, F., M.D., Norwich
Bates, W. R., L.K.Q.C.P.I., Addingham
Beach, F., M.B., Dartford
Beattie, G. W., M.D., Failsworth
Beck, F. E., F.R.C.P., Belfast
Beevor, C. E., M.D., London
Bell, J. H., M.D., Bradford
Bell, R., M.D., Glasgow
Benson, A. H., F.R.C.S., Dublin
Bernard, W., F.K.Q.C.P.I., Londonderry
Berry, G. A., M.B., Edinburgh
Bickerton, T. H., M.R.C.S., Liverpool
Biden, C. W., M.R.C.S.E., Leeds
Birch de Burgh, M.D., Leeds
Birt, A., M.B., Sedgefield, Durham
Birt, C., Surg. A.M.S., Yorks
Bishop, E. S., F.R.C.S.Eng., Manchester
Black, Surg. Maj. W. G., F.R.C.S.E., Edinburgh
Blackman, J. G., M.D., Portsmouth
Blair, R., M.D., Goole
Blake, C. J., M.D., Boston, U.S.A.
Bland, A. W. H., M.D., London
Blandford, J. W., M.R.C.S., Stockton-on-Tees
Blore, I., M.D., Cheetham Hill
Boddy, H. W., M.D., Manchester
Bodken, W., M.D., Chelmsford
Booth, P. L., M.R.C.S., Barrow
Bond, F. F., M.D., Rastrick
Bower, D., M.D., Bedford
Bower, E. D., M.R.C.S., Gloucester
Bowman, R. M., M.R.C.S., Ripon
Braithwaite, J., M.D., Leeds
Brereton, J. B., L.K.Q.C.P.I., Gildersome
Brett, A. T., M.D., Watford
Brierley, J. B., M.D., Manchester
Bridgwater, T., M.B., Harrow
Briggs, G. J., M.R.C.S., Hull
Briscoe, J. E., M.R.C.S., Leeds
Bristowe, J. S., M.D., London
Britton, T., M.D., Harrogate
Broadbent, S. W., M.R.C.S., Sunderland
Broadbent, W. H., M.D., London
Broadbent, G. H., M.R.C.S., Manchester
Bronner, A., M.D., Bradford
Brookhouse, J. O., M.D., Nottingham
Broom, J., M.D., Clifton, Bristol
Broughton, H. T., M.R.C.S., Heckmondwike
Brown, Charles G., M.D., London
Brown, G., L.R.C.P., Batley
Brown, G., M.R.C.S., London
Brown, H., M.D., Calverley
Brown, J., M.B., Bacup
Brown, J. H., M.D., Sheffield
Brown, J. W. H., M.R.C.S., Holbeck
Brown, W. H., F.R.C.S.I., Leeds
Brown, W. P., L.R.C.P., Sowerby Bridge
Browne, Sir J. C., M.D., LL.D., F.R.S., London
Browne, J. W., M.D., Belfast
Browne, L., F.R.C.S.Ed., London
Bryan, E., M.R.C.S., Idle
Bryson, M., L.F.P.S.Glas., York
Buchanan, H. D., M.B., Thirsk
Buck, C. W., M.R.C.S., Settle
Buck, J., L.R.C.P.Ed., Leeds
Buncle, A., M.B., Pontefract
Burke, W. H., M.B., Surgeon I.M.S., c.o. Messrs. Grindlay and Co., London
Burrows, E., M.D., London
Butlin, H. T., F.R.C.S., London
Byers, J. W., M.D., Belfast

Callcott, J. T., M.D., Newcastle-on-Tyne
Cameron, J. S., M.D., Huddersfield
Cameron, M., M.D., Glasgow
Campbell, C. G., M.R.C.S., Saddleworth
Cant, W. J., L.R.C.P., Lincoln
Carline, W. A., M.D., Lincoln
Carr, J. A., L.R.C.P., Kippax
Carson, T. J., L.F.P.S.Glas., Oldham
Carter, D'Arcy B., M.R.C.S., Shipley
Carter, Eustace, L.R.C.P.Ed., Leeds
Carter, F. R., M.R.C.S., Leeds
Carter, G., L.R.C.P., Ilkley
Carter, J. B., L.R.C.P.Ed., Chapel Allerton
Carter, T., L.R.C.S., Richmond
Carter, W. R., M.B., Rastrick
Cartwright, J. P., M.R.C.S., Oswestry
Caverhill, T. F. S., M.B., Edinburgh
Chadwick, C. M., M.D., Leeds
Chaffers, E., F.R.C.S.Lond., Keighley
Chambers, H. W., L.R.C.P., Cottingham
Chapman, S. A., M.D., Hereford
Charles, T. C., M.D., London
Chestnutt, J., L.R.C.S.Ed., Howden
Child, H., M.R.C.S., Lincoln
Churchill, F., M.B., London
Churton, T., M.D., Leeds
Clark, D. M., L.R.C.P.Ed., Rotherham
Clark, M. R., L.R.C.P., Sheffield
Clark, R., L.R.C.P., Lancaster
Clark, W. F., L.R.C.P., Cheshunt
Clarke, J. C., M.B., Bolton
Clarke, J. C., M.R.C.S., Leeds
Clarke, W. B., M.B., London
Clayton, A. J., L.R.C.P., Leeds
Clegg, W. J., M.D., Bacup
Coats, J., M.D., Glasgow
Cocking, W. T., M.D., Sheffield
Coldstream, A. R., M.D., Florence
Coleman, H. W., L.R.C.P., Leeds
Collier, S. R., M.D., Wimbledon
Collier, T., M.R.C.S., Ripon
Collins, W. J., M.D., London
Colman, W. S., M.B., London
Corbin, M. A. B., F.R.C.S., Guernsey
Cornish, W. R., Surg.-Gen., F.R.C.S., C.I.E., London
Cosgrave, A., L.K.Q.C.P.I., Bolton-le-Moors
Court, W., L.F.P.S.Glas., Bolton
Cousins, J. Ward, M.D., Portsmouth
Cox, F. A., M.B., London
Craig, J. W., M.D., Bingley
Crauford, A. W., M.B., Paisley
Crean, R., M.D., Higher Broughton
Crespi, A. J. H., M.R.C.S., Wimborne
Crew, J., L.R.C.P., Higham Ferrers
Cripps, H., F.R.C.S., London
Critchett, G. A., M.A., F.R.C.S.E., London
Crocker, H. R., M.D., London
Crocker, J., M.R.C.S., Bingley
Croft, Edward O., M.R.C.S., Leeds
Crooke, G. F., M.D., Birmingham
Crowe, G. W., M.D., Worcester
Cullingworth, C. J., M.D., London
Cuming, J., M.D., Belfast
Cutter, E., M.D., New York, U.S.A.

Dalby, Sir W., F.R.C.S., London
Dancy, H. M., M.D., Southwell
Dautre, S. H., M.D., Bombay
Davidson, A., M.D., Liverpool
Davidson, W., L.R.C.P., Holme, York
Davis, Arthur, M.B., New Galloway
Davis, F. L., L.R.C.P.Lond., Lyme Regis
Davis, Henry, M.R.C.S., London
Davison, J., M.D., Bournemouth
Davy, J., M.D., Halifax
Dawson, C., L.R.C.P., Rawdon, near Leeds
Day, W. W., M.D., Lower Edmonton
De'Ath, G. H., M.R.C.S., Buckingham
D'Evelyn, A., M.B., Armoy, co. Antrim
De Livera, E., M.B., Ceylon
Dempsey, A., M.B., Belfast
Denby, W., M.B., Baildon
Denton, S., M.D., New York
De Renzy, A. C. C., L.K.Q.C.P.I., Leeds
Deville, T., M.D., Harrogate
Dewar, J., L.R.C.P., London
Dick, F., M.D., Lancaster
Dickey, A., M.D., Colne
Dickinson, J. B., M.D., Stalybridge
Dobie, W., M.D., Keighley
Dobson, J., M.B., Leeds
Dolan, T. M., M.D., Halifax
Douglas, C., F.R.C.S., Leicester
Douglas, W., M.D., Leamington Spa
Douglas, W. T., M.R.C.S., Banbury
Doran, A., F.R.C.S., London
Down, J. Langdon, M.D., London
Dow, David R., M.A., Crail, Fife
Dowse, T. S., M.D., London
Doyne, R. W., M.R.C.S., Oxford
Draper, J. W., L.R.C.P., Huddersfield
Draper, W., L.S.A., York
Drake, F. H., M.R.C.S., Headingley
Dreschfeld, J., M.D., Manchester
Drummond, D., M.D., Newcastle-on-Tyne
Drury, A., M.B., Halifax
Drysdale, C. R., M.D., London
Duke, A., F.K.Q.C.P.I., Dublin
Dukes, Clement, M.D.Lond., Rugby
Dunn, H. P., F.R.C.S., London

Eames, T. B., L.R.C.P.Edin., Stoneclough
Earley, C. R., M.D., Ridgway, Pa.
Easby, W., M.D., Peterborough
Eastes, G., M.B., London
Eastes, T., M.D., Folkestone
Eastwood, J. W., M.D., Darlington
Eccles, A. S., M.B., London
Eddison, J. E., M.D., Leeds
Edge, A. M., M.D., Manchester
Edwards, E. H., M.B., London
Ellerton, J. E., M.R.C.S., Leeds
Ellis, R., F.R.C.S.Edin., Newcastle-on-Tyne
Embledon, D., M.D., Newcastle-on-Tyne
Erskine, J., M.B., Glasgow
Erwin, S. J., L.R.C.P., Manchester
Evans, T. M., M.R.C.S., Hull
Exley, John, M.R.C.S.Eng., Leeds

Fegan, R., M.D., London
Felce, S., M.R.C.P.E., London
Fennings, A., M.D., London
Ferguson, A. H., M.B., Winnipeg., Canada
Field, G. P., M.R.C.S., London
Finucane, T. D., M.D., Blackrock
Fisher, E. D., M.D., New York City
Fleck, E., M.D., Cologne
Fletcher, F. A. C., L.R.C.P., Keighley
Foreman, T. D., L.R.C.P., Denton
Forsyth, R., M.D., Birstall
Foss, R. W., M.D., Stockton-on-Tees
Foster, John, M.D., Bradford
Fox, R. H., M.D., London
Frank, Philip, M.D., Cannes
Franks, K., M.D., Dublin
Fraser, A., M.B., Dublin
Freeman, A. J., M.D., San Remo
Freer, E. L., M.R.C.S., Birmingham
Frobisher, Wm. M., M.R.C.S., Leeds
Frost, W. A., M.R.C.S., London
Fryer, J., M.R.C.S., Dewsbury
Fyfe, G., M.D., Gainsborough

Gairdner, W. T., M.D., Glasgow
Galton, J. H., M.D., London
Garner, J. E., M.D., Preston
Garrod, A. E., M.D., London
Garstang, W., M.D., Blackburn
Garvie, J., M.B., Surg. I.M.S., Perth
Gaussen, D. P., M.D., Dunmurry
Gay, W., M.D., Leeds
Geddie, W., M.D., Accrington
Gibson, J., M.B., Halifax
Gillespie, G. B., M.D., Covington, Tenn., U.S.A.
Gillies, J., L.R.C.P.Edin., Selby
Girvan, R., L.R.C.S.Ed., Maybole, N.B.
Glaister, John, M.D., Glasgow
Glascott, C. E., M.D., Manchester
Goff, Bruce, M.D., Rothwell
Gordon, J., M.D., Aberdeen
Goodfellow, James A., M.B., Shipley
Gooding, J. C., M.D., Cheltenham
Goodwin, A. G., L.F.P.&S.Glas., Liverpool
Gott, Henry, M.R.C.S., Leeds
Gowans, W., M.D., South Shields
Gowing, B. C., M.R.C.S., Penistone
Goyder, David, M.D., Bradford
Gramshaw, F. S., M.D., Easingwold
Grant, J. E. R., M.R.C.S., London
Grant, Ogilvie, M.B., Inverness
Gray, E., M.B., Beckenham
Greenwood, G. S., M.R.C.S., Ossett
Greenwood, J. W., M.R.C.S., Ossett
Greenwood, Maj., jun., M.D., London
Greves, E. H., M.D., Bournemouth
Griffith, A. H., M.D., Manchester
Griffith, T. W., M.D., Leeds
Grime, J., M.D., Blackburn
Grimoldby, G. H., L.R.C.P.Ed., Grimsby
Groom, W., M.R.C.S., Wisbech
Grossman, K., M.D., Liverpool
Gubb, A. S., M.R.C.S., London
Gunn, C., M.D., Dublin
Gwynn, S. T., M.D., Whitchurch
Gwynne, C. N., M.D., Sheffield

Hackney, J., M.D., Hythe
Haig, A., M.D., London
Haig, Francis M., M.D., Coventry
Haigh, T. A., M.R.C.S., Meltham
Hailes, W., jun., M.D., Albany, U.S.A.
Haley, W. H., L.R.C.P.Ed., Wakefield
Hall, Frederick, M.D., Leeds
Hall, F. de H., M.D., London
Hall, J. A., M.R.C.S., Huddersfield
Hall, J. G., M.R.C.S., Swansea
Hall, W., M.R.C.S., Headingley.
Hallilay, John, L.K.Q.C.P.I., Leeds
Hallilay, R. P., M.R.C.S.E., Leeds
Halliwell, R. N., M.R.C.S., Dewsbury
Halton, M. C., L.K.Q.C.P.I., Barnsley
Hamilton, A., M.B., Wortley
Hamilton, J. A., M.D., Dublin
Hamilton, J. R., M.D., Hawick
Hamilton, W. D., M.D., Columbus, Ohio, U.S.A.
Handcock, G., M.R.C.S.E., Leeds
Handcock, George, M.R.C.S., Bradford
Handfield-Jones, M., M.D., London
Handford, H., M.D., Nottingham
Hardy, E. P., L.R.C.P., Hull
Hare, C. J., M.D., London
Hargreaves, E., M.D., Sheffield
Hargreaves, J. B., F.R.C.S., Armley
Harlan, H., M.D., Baltimore, U.S.A.
Harley, G., M.D., London
Harley, Vaughan, M.B., London
Harman, W. M., M.D., Winchester
Harral, C. H., L.R.C.P., Leeds
Harris, A. G. R., L.R.C.P., Halifax
Harris, R., M.B., Southport
Harrison, C., M.D., Lincoln
Harrison, J., L.R.C.P. and S.Ed., Bradford

Harrison, R., F.R.C.S., Liverpool
Harrison, W., M.D., Matlock
Hart, Dann Berry, M.D., Edinburgh
Hart, E., M.R.C.S. (*Editor of the British Medical Journal*), London
Hartley, R. N., M.B., Leeds
Hartridge, G., F.R.C.S., London
Harvey, Brig.-Surg. R., M.D., Calcutta
Hasler, J. C., L.R.C.P., Blackburn
Haward, Edwin, M.D., London
Hawtin, John N., L.R.C.P.Ed., Leeds
Heald, B. Gray, L.R.C.P., Leeds
Hebblethwaite, H., M.R.C.S., Burley-in-Wharfedale
Hellier, John B., M.D., Leeds
Hemming, J. H., M.R.C.S., Kimbolton
Henderson, G. C., M.D., Kingston, Jamaica
Henderson, J., M.B., Hutton Buscel
Henderson, R. W., M.D., Leeds
Hengst, D. A., M.D., Pittsburgh, Penn., U.S.A.
Henry, J., M.D., Rochdale
Henry, R., M.D., Clones
Hern, J., M.D., Darlington
Herringham, W. P., M.D., London
Hewetson, H. B., M.R.C.S., Leeds
Hewitt, G., M.D., London
Hick, J., M.R.C.S.E., Leeds
Hicks, J. B., M.D., London
Hill, W., M.B., London
Hindle, F. T., L.R.C.P., Doncaster
Hirst, A., M.D., Prestwich
Hirst, S. C., M.D., Bradford
Hobson, L. J., M.D., Harrogate
Hogg, T. B., L.S.A., Leeds
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Hollings, Robert, M.D., Wakefield
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Holmes, Frederick, M.R.C.S., Leeds
Holmes, J., L.R.C.P., Leeds
Holmes, James G., L.R.C.P., Leeds
Holt, J., L.R.C P.Ed., Castleford
Holt, R. C., F.R.C.S., Burnley
Holthouse, E. H., F.R.C.S., London
Holwell, E. B., M.R.C.S.Eng., Leeds
Honeyburn, R., M.B., Idle
Hopkins, J. W., jun., M.R.C.S., Leeds
Hood, W., M.R.C.S., York
Horrocks, P., M.D., London
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Horsman, G. C., L.S.A., London
Howard, J. F., M.D., Shaw
Howlett, E. H., F.R.C.S., Hull
Hudson, G., M.D., Scarborough
Hudson, T. Joseph, M.D., Leeds
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Hunt, D. De Vere, L.R.C.P.Ed., Cardiff
Hunt, H. J., M.R.C.S., Harrogate
Hunt, T., M.D., Manchester
Hunter, G., M.D., Ealing
Hunter, W., M.D., Cambridge
Hunter, Wm. B., M.D., Londonderry
Hunter, Wm. L., M.D., Pudsey, near Leeds
Hurtley, W. M., M.R.C.S., Leeds
Husband, W. E., L.R.C.P., Manchester
Hutchinson, C. F., M.D., Scarborough
Hutchinson, J., F.R.S., London

Illingworth, C. R., M.D., Accrington
Imlach, Francis, M.D., Liverpool
Ince, Surg.-Maj. John, M.D., Swanley, Kent
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Iredale, T., L.R.C.P., Leeds
Ireland, W. W., M.D., Prestonpans

Jackson, A., M.R.C.S., Sheffield
Jackson, G., F.R.C.S.Eng., Plymouth
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Jackson, T. V., F.R.C.S.Ed., Wolverhampton
Jacob, A. H., M.D., Dublin
Jacob, Ernest H., M.D., Leeds
James, Francis P. R., L.K.Q.C.P.I., Wakefield
James, J. B., M.R.C.S., London
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Jefferson, R. P., L.R.C.P., Leeds
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Jessett, F. B., F.R.C.S., London
Jessop, Deputy Surg.-Gen. C. M., M.R.C.P., London
Jessop, T. R., F.R.C.S., Leeds
Jewison, Thomas W., M.R.C.S., Oulton, near Leeds
Job, S., M.R.C.S., Newark
Johnson, C. J. B., L.R.C.P.Ed., Wetherley
Johnson, G. L., M.A., London
Johnson, S., M.D., Stoke-on-Trent
Johnston, James, M.B., Bradford
Johnston, J. S., L.K.Q.C.P.I., Sheffield
Johnston, S., M.D., Bradford
Johnston, S., M.B., Glasgow
Johnston, T., M.R.C.S., Belper
Johnstone, A. W., M.D., Danville, Ky., U.S.A.
Johnstone, J. J., M.B., Tadcaster
Johnstone, T., M.D., Ilkley
Joll, B. B., M.B., Liverpool
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Jubb, A., M.R.C.S., Halifax

Kay, W. S., M.D., Wadsley
Keay, J. H., M.A., Colne
Keetley, C. B., F.R.C.S., London
Keetley, T. B., M.R.C.S., Grimsby
Kegley, E. A., M.D., Cedar Rapids, Ia.
Keighley, R. D., L.S.A., Batley
Kellar, O. E., M.D., London
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Kemp, E. W., M.R.C.S., Castleford
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Kershaw, H., M.R.C.S., Pudsey
Kershaw, J. C., L.R.C.P.Ed., New Wortley, Leeds
Keser, J. S., M.D., London
Keyworth, G. H., M.B., Wem
Kinch, G. H., M.R.C.S.Eng., Heckmondwike
King, H. W., M.D., Chester
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Knaggs, S., M.R.C.S., Huddersfield
Knight, H. J., M.R.C.S., Rotherham

Lambert, F. W., L.R.C.P.E., Farsley
Lawrence, J., M.D., Darlington
Lawrence, L., F.R.C.S., London
Lazenby, J. M., M.B., Leeds
Lee, C. G., M.R.C.S., Liverpool
Leak, T. M., M.R.C.S., Hemsworth
Leary, T., M.D., Castlederry
Lee, Surg.-Maj. W. A., Limerick
Leech, D. J., M.D., Manchester
Le Page, J. F., M.D., Salford
Leslie, W. M., M.B., London
Lewis, W. B., M.R.C.S., Wakefield
Liddell, J., M.B., Winchester
Lindsay, J. A., M.D., Belfast
Littlewood, Harry, F.R.C.S., Leeds
Littlejohn, H. D., M.D., Edinburgh
Little, D., M.D., Manchester
Little, J. F., M.B., London
Lloyd, Jordan, M.B., Birmingham
Lockwood, C. B., F.R.C.S., London
Loe, J. Scarborough, M.R.C.S., Leeds
Lofthouse, Surg.-Gen. R. C., M.D., London
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Lowther, R., M.D., Grange-over-Sands
Lucey, W. C., M.D., Enfield
Lund, E., F.R.C.S., Manchester
Lunn, W. J., M.D., Hull
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Lyon, W., M.D., Houghton-le-Spring

McAleer, Jas., M.D., Barnsley
MacArthur, Duncan, L.R.C.P.Ed., Wakefield
McConechy, Jas., M.B., Leeds
MacDonnell, M. A., M.D., London
MacDonald, G., M.D., London
MacDonald, P. W., M.D., Dorchester
McDowall, J. G., M.D., Leeds
McDowall, T. W., M.D., Morpeth
Macewen, W., M.D., Glasgow
McGeagh, W., M.D., Liverpool
McGill, A. F., F.R.C.S., Leeds
MacGregor, A. G., M.D., Wick
MacGregor, P., L.R.C.P., Huddersfield
McKane, G. O., L.R.C.P.Ed., Leeds
MacKenzie, J., M.D., Burnley
MacKenzie, W. G., F.R.C.S.Ed., Belfast
Mackenzie, W. Scobie, L.R.C.P., Normanton
MacKew, S., M.D., Biarritz
MacKinlay, J. G., F.R.C.S., London
MacKinlay, R., M.D., Lichfield
MacLaurin, H. N., M.D., Sydney, N.S.W.
McLean, C. J. R., M.D., Yeadon
MacLennan, W., M.B., Glasgow
MacLennan, Q., M.B., Glasgow
MacLeod, M. D., M.B., Beverley
MacLintock, Jas., M.D., Bradford
MacNamara, P. J., M.D., Bruff
MacNaught, J., M.D., Newchurch, near Manchester
MacNaught, F. J., L.K.Q.C.P.I., Walsham-le-Willows
MacNaughton, W. A., M.D., Walker-on-Tyne
McNicoll, E. W., F.R.C.S.Ed., Southport
MacPherson, J., M.B., Leeds
Macvie, A., M.D., Baildon
Madden, T. More, M.D., Dublin
Madders, G., Dublin
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Marsh, F., F.R.C.S., Birmingham
Marshall, M. A., M.D., London
Martin, J., F.R.C.S.Ed., Huddersfield
Martin, J., L.F.P.S.and L.M.Glas., Bolton
Martin, J. W., M.D., Sheffield
Martin, S., M.D., London
Martin, W. Y., M.D., Walkden, near Bolton
Mason, John W., M.B., Hull
Mason, Wm. Harrap, M.R.C.S., Leeds
Masters, J. A., L.R.C.P., London
Matheson, F., M.B., London
May, B., F.R.C.S.Eng., Birmingham
May, J. H. S., M.R.C.S., Plymouth
Mayo, F. H., M.R.C.S., Headingley
Mead, Geo. B., M.D., Newmarket
Measures, J. W., M.R.C.S., Todmorden
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Mitchell, C. A., L.R.C.P., Dewsbury
Mitchell, J., M.D., Barnard Castle
Moffatt, D., M.B., Glasgow
Moffatt, J. G., M.B., Keighley
Molony, D., F.R.C.S.I., Cashel, Ireland
Molouey, P. J., L.R.C.S.I., Dungarvan
Monks, E. H., L.R.C.P., Southport
Moody, J. M., M.R.C.S., Purley
Moore, S., M.D., Holbeck, Leeds
Moore, Surg.-Gen. Sir Wm., K.C.I.E., London
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Morgan, F., M.R.C.S., Uffculme
Morgan, W. F., L.R.C.S.I., Leeds
Morley, R. B., L.R.C.S., Chapel-Allerton
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Murray, J., M.B., Wakefield
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Myrtle, A. S., M.D., Harrogate
Myrtle, J. A., M.D., Harrogate

Nairne, J. Stuart, F.R.C.S.Ed., Glasgow
Napper, A. A., M.R.C.S., Cranleigh
Naylor, J. H., M.R.C.S., Low Moor, near Bradford
Neech, J. T., L.R.C.P.Ed., Oswestry
Needham, F., M.D., Gloucester
Nelson, J., M.D., Belfast
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Norman, C., F.R.C.S.I., Dublin
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Nuttall, Ratcliffe, M.R.C.S., Bradford

Oakley, J., M.R.C.S., Halifax
O'Callaghan, M. Q., L.R.C.P.& S.Ed., Brailsford
O'Callaghan, R., L.R.C.P.& S.Ed., Carlow
O'Connor, M. R., M.D., Limerick
O'Dwyer, Brig.-Surg. T. F., M.D., Malta
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Oliver, T., M.D., Newcastle-on-Tyne
Oliver, Mathew Jas., M.B., Leeds
Oldham, C., F.R.C.S.Eng., Brighton
O'Neill, H., M.D., Belfast
Openshaw, T. H., M.B., London
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Ozanne, F. N., L.R.C.P., Harrogate
Ozanne, Glenmae, M.B., B. Guiana

Page, W. I., M.R.C.S., Wimbledon
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Pearse, W., M.R.C.S., Bodmin
Pearson, A. E. A., M.R.C.S.E., Leeds
Peck, E. G., M.D., Queenstown
Percival, T., M.R.C.S., Knottingley
Perkins, J. F., M.D., Baltimore, U.S.A.
Penny, Deputy Surg.-Gen. J. C., M.D., London
Philipson, G. H., M.D., Newcastle-on-Tyne
Philpots, H., M.B., Birkenhead
Pickles, John J., L.R.C.P.Ed., Leeds
Pigeon, H. W., F.R.C.S., Hull
Pilcher, W. I., F.R.C.S.Eng., Boston, Lincs
Pirie, G. A., M.B., Dundee
Pogson, William, F.R.C.S.E., Seacroft
Poole, Surg.-Maj., M.D., London
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Pope, F. M., M.B., Leicester
Pope, H. B., M.D., Kington
Porritt, N., L.R.C.P., Huddersfield
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Powell, Evan, M.R.C.S., Nottingham
Powell, R. D., M.D., London
Powell, S., M.D., London
Prankerd, O. R., M.D., Brighton
Preston, F. H., L.R.C.P., London
Prichard, R. A., L.R.C.P.E., Conway
Pritchard, U., M.D., London
Purdy, Jas. Robert, M.B., Leeds
Pye-Smith, P. H., M.D., London

Rabagliati, M., M.D., Bradford
Ramsden, H., L.R.C.P., Saddleworth
Ramskill, J., M.R.C.S., Leeds
Rankin, J., L.F.P.S.G., Kilmarnock
Ransome, A., M.D., Bowdon
Rattray, John Moysey, M.B., Frome
Rawson, E. E., L.R.C.P.E., Thornton, near Bradford
Rayner, Edwin, M.D., Stockport
Rentoul, R. R., M.D., Liverpool
Rhodes, G. S., M.R.C.S., Saltburn-by-the-Sea
Rhodes, G. W., M.R.C.S., Huddersfield
Richardson, Charles, M.R.C.S., Leeds
Richardson, Wm. Jas., M.B., Keighley
Richardson, W., M.D., Isle of Man
Richards, J. E., L.R.C.P.&S., Huddersfield
Richards, J. P., M.R.C.S., Hanwell
Ricketts, Jas., L.R.C.P., Harrogate
Ridge, J. J., M.D., Enfield

Ritchie, T., LR.C.P.Ed., Otley
Rivington, W., F.R.C.S.Eng., London
Roberts, A. M.D., Oaklands, Keighley
Roberts, Edwin, M.R.C.S., Leeds
Roberts, R., M.R.C.S., Portmadoc
Roberts, Sir W., M.D., London
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Robinson, H., M.R.C.S., Barnsley
Robinson, H., L.R.C.P., Chesterfield
Robinson, J., L.R.C.P., Frodsham
Robinson, M., Surg.-Maj. I.M.D., Pontefract
Robson, A. W. Mayo, F.R.C.S.,Eng., Leeds
Robson, Herbt. John, M.R.C.S., Leeds.
Roe, E. A. H., Surg.-Maj., M.D., Ballyconnell
Roper, H. J., M.R.C.S.Eng., Leeds
Roulston, William, M.D., Wakefield
Routh, C. H. F., M.D., London
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Royston, C., M.D., London
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Rumbolt, S., L.R.C.P., Leeds
Russell, William, M.D., Edinburgh
Rygate, D. J., L.R.C.P., Cambridge
Rygate, J. R., L.K.Q.C.P.I., Bridgwater

Sadler, M. T., M.D., Barnsley
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Scattergood, A. K., L.R.C.P.&S.Edin., Leeds
Scattergood, Thomas, M.R.C.S., Leeds
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Scurfield H., M.D., Sunderland
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Sharples, T., L.R.C.S., Dardsley, Lostock Hall
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Sheild, A. M., M.B., London
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Sibthorpe, C., Brig.-Surg. I.M.S., Dublin
Sinclair, D., M.B., Bradford
Sinclair, W. J., M.D., Manchester
Sipton, Samuel Stacey, M.D., Leeds
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Smailes, Robt., L.P.C.P., Leeds
Smailes, Thomas, L.R.C.P., Honley
Smeeton, Chas. W., M.R.C.S., Leeds
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Smith, D. T., M.B., Preston
Smith, E., M.B., Bolton
Smith, Henry A., M.R.C.S., Leeds
Smith, J. D., M.D., Fleet.-Surg. R.N., Hull
Smith, Noble, F.R.C.S., London
Smith, P. C., L.R.C.P.&S.Ed., Ferryhill
Smith, P. C. M.A., Motherwell
Smith, R., M.D., Ferryhill
Smith, Robert, Percy, M.D., London
Smith, S. C., M.D., Halifax
Smith, T., L.R.C.P., Leeds
Smith, T. H., M.D., Leeds
Smith, W., M.D., Eccles
Smith, W., M.D., London
Smith, W., J., L.R.C.P., Rotherham
Smith, W. W., M.D., London
Smyth, J., L.R.C.P., Pudsey, nr. Leeds
Snell, S., L.R.C.P., Sheffield
Snow, W. V., M.D., Bournemouth
Solly, S. E., M.D., Colorado, U.S.A.
Solomon, J. V., F.R.C.S., Birmingham
Somerville, R., M.D., Galashiels, N.B.
Spence, W. J., L.R.C.P., Leicester
Spicer, S., M.D., London
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Stack, E. C., L.R.C.S.I., Stanningley
Stainthorpe, T., M.D., Hexham
Stallard, J. P., M.B., Manchester
Stamp, W. D., M.R.C.S., Plympton
Stanger, G. E., M.R.C.S., London
Stanger, W., F.R.C.S., Wakefield
Statter, W. Aked., L.R.C.P., Wakefield
Steedman, P. A., L.R.C.P., Leeds
Steel, Arthur R., L.R.C.P., Wakefield
Steele, S. T., M.R.C.S., Morley
Stevens, G., F.F.P.&S.Glasg., Bury St. Edmunds
Stevenson, G., M.D., Manchester
Stevenson, R..L.R.C.P.&S.Edin.,Leeds
Stewart, D., M.D., Nottingham
Stockwell, F., M.D., Bruton
Stoker, W., F.R.C.S.I., Dublin
Stokes, Sir W., M.D., Dublin
Stone, G., L.R.C.P.&S.Ed., Liverpool
Storrs, R., M.R.C.S., Doncaster
Storry, Frederic Wm., M.R.C.S., Leeds
Strange, W., M.D., Worcester
Street, C. T., L.R.C.P., Newton-le-Willows
Strong, H. J., M.D., Croydon
Stuart, J., M.D., Ballymena
Summerskill, Wm., L.R.C.P., Leeds
Sutcliffe, J., M.R.C.S., Stalybridge
Sutton, F., M.R.C.S., Gainsborough
Sweeting, R. D. R., M.R.C.S., London
Sykes-Wood, A,. M.D., Nottingham
Sykes, J., M.D., Doncaster
Sykes, W., M.R.C.S., Mexborough
Symes, E. W., M.D., Halifax
Sympson, E. M., M.B., Lincoln
Sympson, T., F.R.C.S.Eng., Lincoln
Sym, William G., M.D., Edinburgh

Tait, Lawson, F.R.C.S., Birmingham
Tate, W. B., M.D., Nottingham
Taylor, Geo.Stamp, L.R.C.P.Ed.,Leeds
Taylor, J., F.R.C.S., Chester
Taylor, J. C., M.B., Las Palmas, Grand Canary
Taylor, J. J., L.R.C.P., Newcastleton, N.B.
Taylor, J. W., M.D., Scarborough
Taylor, W., M.D., Cardiff
Teale, J. W., F.R.C.S., Scarborough
Teale, Thos. Pridgin, M.B., Leeds
Telford, S., M.D., Liverpool
Thatcher, C. H., F.R.C.S.Ed., Edinburgh
Thimbleby, J., F.R.C.S., Manchester
Thomas, G. D., M.D., London
Thomas, W. R.. M.D., Bournemouth
Thomas, W., M.B., Birmingham
Thompson, A. H., L.R.C.P., Great Ouseburn
Thompson, E., Leeds
Thompson, H., L.R.C.P., Hull
Thompson, J.T., M.B., Cardiff
Thompson, S. M., L.R.C.S.I., Dublin
Thompson, Walter. M.R.C.S., Leeds
Thompson, W., M.R.C.S., Leeds
Thomson, W. B., A.M.S., York
Thorp, C. W., L.R.C.S.I., Todmorden
Thresh, J. C., M.B., Manchester
Tomlinson, Ed. Denham, Brig.-Surg. M.D., Upper Dorking
Tompkins, H., M.D., Leicester
Topham, A. S., M.R.C.S., Halifax
Tordoff, Hardy, M.R.C.S., Leeds
Torrance, D. W., M.B., Glasgow
Trend, Theophilus Wm., M.D., Southampton
Trendelenburg, F., M.D., Bonn
Treves, F., F.R.C.S.Eng., London
Trevelyan, Edmond F., M.D., Leeds
Trotter, W. O., M.R.C.S., Pocklington
Tuckey, C. L., M.D., London
Tuke, C. M., M.R.C.S.E., Chiswick
Tuke, D. H., M.D., London
Turner, Alfred, M.B., Leeds
Turner, C. W.. M.R.C.S., Leeds
Tyson, W. J., M.D., Folkestone

Underhill, A. S., M.D., Tipton

Waddington, F.. M.R.C.S., Leeds
Walker, A. W. H., M.D., Harrogate
Walker, B., M.D., Kirby Stephen
Walker, E., M.B., Huddersfield
Walker, Henry S., F.R.C.S.Eng.,Wakefield
Walker, J. B., M.D., Golcar
Walker, J. E., M.R.C.S., Huddersfield
Walker, R. F., M.R.C.S., Leeds
Walker, Thos., M.R.C.S.,Wakefield.
Walker, W., M.D., Redcar
Walker, W., M.D., Glasgow
Walker, W., M.D., Manchester
Wallace, A., M.D , Rochdale
Wallace, F., L.R.C.P., London
Wallace, W., M.B., Shawlands
Wallis, J. A., M.D., Whittingham
Walters, Chas. A., M.R.C.S., Cheltenham
Walter, K. S., M.R.C.S., York
Walter, R. S., M.B., Hebden Bridge
Warden, Chas., M.D., Birmingham
Ward, Edward, M.B., Leeds
Ward, J. Bywater, M.D., Oxford
Ward, Wm. Simpson, M.R.C.S., Leeds
Warner, F., M.D., London
Watkins, J. W., M.D., Newton-le-Willows
Watkins, R. W., F.R.C.S., Towcester
Watson, T., M.D., South Stockton
Webb, W., M.D., Wirksworth
Webster, B., M.D., Alderley Edge
Welch, Henry, M.D., Blackpool
Wells, Geo. Lee, M.B., Leeds
Westcott, W. W., M.B., London.
Whalley, W., M.D., Bradford
Wheelhouse, C. G., F.R C.S., Leeds
Whitehead, W., F.R.C.S., Manchester
Whitelegge, B. A., M.D., Nottingham
White, H. W., L.R.C.P., Bradford
White, J., M.R.C.S., Wigan
White, J., F.R.C.S.Eng., Nottingham
White, J. B., Brig.-Surg., Waltham Abbey
White, S., M.D., Sheffield
White, W., L.R.C.S., Barnsley
White, William, M.D., Manchester
Whitham, John H., M.D., Leeds
Wier, P. A., Surg.-Maj., M.B., Glasgow
Wigg, T. C., M.D., Derby
Wigin, G. W., M.R.C.S., Leeds
Wiglesworth, J., M.D., Rainhill
Wiley, E. O., M.R.C.S., Knaresboro'
Willcox, R. L., M.R.C.S., Warminster
Williams, D., M.D., London
Williams, W. T. M.R.C.S., Banbury
Williamson, G. E., M.A., Newcastle-on-Tyne
Williamson, R. E., M.B., Lymm
Wilson, F., L.R.C.P., Hull
Wilson, S., M.R.C.S., London
Wilson, T., M.R.C.S., Wallsend-on-Tyne
Winkfield, A., F.R.C.S., Oxford
Wise, Robert Stanton, M.D., Banbury
Wisken, H., L.R.C.P.Ed., Heywood
Wood, A., L.S.A., Kirby Moorside
Wood, C. A., M.D., Montreal, Canada
Wood, F. H., L.R.C.P., Wakefield
Wood, J. C., L.R.C.P., Sunderland
Wood, T. O., M.D., London
Woodhead, G. S., M.D., Edinburgh
Woods, Hugh, M.D., Highgate
Wrench, E. M., F.R.C S., Baslow
Wright, Chas. Jas., M.R.C.S., Leeds
Wright, F., L.S.A., Stamford Bridge
Wylie, William, M.D., Skipton

Yates, J., M.D., Oldham
Yelf, R. E. B., M.B., Moreton-in-Marsh
Yellowlees, D., M.D., Glasgow
Yeo, J. B., M.D., London
Young, G. E., M.D., Headingley
Young, G. W., L.S.A.Lond., East Ardsley

THE ANNUAL MUSEUM.

THOUGH lacking somewhat the completeness which has characterised recent exhibitions, the twenty-second annual museum, held this year in the Albert Hall, Leeds, formed a very interesting and instructive addition to the attractions of the annual meeting. Occupying as it did a position in the very centre of much of the activity of the meeting, with many approaches, the visitors who sought to acquaint themselves with all the latest novelties (of a somewhat cosmopolitan character), arranged under the Sections of A (Food and Drugs) and D (Instruments and Books) were numerous even up to the hour of closing. Section E (Sanitation), through want of space, was relegated to another part of the building, and Sections B (Pathology) and C (Anatomy), both of an instructive character, were to be found in the Chemical Laboratory. The following is a list of the Museum Committee, who carried out to a successful issue the very arduous duties of their office:—T. Churton, M.D., *Chairman.* Section A—Foods and Drugs: J. B. Hellier, M.D., C. V. Newstead, *Honorary Secretaries.* Section B—Pathology: J. Dobson, M.B., E. H. Jacob, M.D., *Honorary Secretaries.* Section C—Anatomy and Physiology: De B. Birch, M.D., T. Wardrop Griffith, M.D., *Honorary Secretaries.* Section D—Instruments and Books: W. H. Brown, T. H. Mayo, *Honorary Secretaries.* Section E—Sanitary and Ambulance: J. S. Loe, A. N. Hartley, M.B., *Honorary Secretaries. Honorary General Secretary*, Ernest H. Jacob, M.D., 12, Park Square, Leeds.

SECTION A.—FOODS, DRUGS, MINERAL WATERS, ETC.

Messrs. ALLEN and HANBURYS (London) as usual exhibit a variety of pharmaceutical preparations, and special articles manufactured by them, notably their Infants' Food, Perfected Cod Liver Oil, and Tasteless Castor Oil, Bynin or Fluid Malt, Byno-Pepsin and Byno-Pancreatin, Compressed Tablets (both plain and saccharinated), Cascara Lozenges, and Wine. Their most recent productions are Byno-Phosphate, or Malted Chemical Food, in which the syrup is replaced by fluid malt, which is a great gain in strengthening properties; it is perfectly neutral, and keeps well. Byno-Hypophosphite is also a malted solution of hypophosphites preferable to the corresponding syrup. Transparent Coated Pills are a speciality with this firm, also Medicated Throat Pastilles, Granular Effervescent Preparations, and Standard Hypodermic Solutions.

Mr. B. ALLSOP (Saltaire) showed specimens of his A B C Medical Account Books.

Mr. F. BOEHM (27, Billiter Square Buildings, London, E.C.) showed samples of Sozoiodol (Di-iodoparaphenolsulphonic Acid) [Trommsdorff's], an odourless substitute for iodoform; and its Preparations.

Foremost among the exhibitors of invalid and dietetic prepara-

tions must be placed the exhibit of Messrs. BRAND and Co. (11, Little Stanhope Street, Mayfair, London), who showed samples of their various Meat Essences, Concentrated Preparations, Meat Lozenges, Soups, Sauces, and their recent preparations: Digestive Meat and Savoury Biscuits, the former prepared from whole wheat meal and the extractive and fibrous constituents of meat, containing thus, it is contended, a large proportion of the strongest nutriment in a form easily digestible and palatable; the latter of finest flour delicately flavoured with other ingredients. One of their most recent introductions is their Beef Bouillon.

Messrs. BURROUGHS, WELLCOME, and Co.'s stall occupied a prominent position at the head of the Hall, and was well stored with samples of their newest and best known preparations. Among them was to be seen the new hypnotic, Sulphonal, in crystal and in tabloid form, an oxidation product of the union of ethyl mercastan with acetone, the virtues of which have been much discussed in these columns. Another preparation which undoubtedly calls for notice is Fairchild's Pepsine, which in its improved form is so strong that one grain will digest 1,000 grains of egg-albumen, being, in fact, twenty-four times the strength of the *B.P.* pepsine. The Thermo Safeguard Feeding Bottle contains a thermometer (let into the bottle), which registers the heat of the milk, the utility and advantage of which will be generally acknowledged. A new inhaler, called the Pinol Eucalyptia Dry Inhaler, is shown, which is cheap, cleanly, efficient, and easily used. Pinol and Eucalyptia (the latter a preparation distinct from the oil of eucalyptus) are supplied with it. This firm also exhibits samples of their Vaparoles, each of which is composed of a glass capsule containing some volatile substance, such as nitrite of amyl, benzoin co., etc. The capsule is enclosed in absorbent wool, which is laid round in concentric layers and afterwards covered with fine gauze. They are intended to be broken when the wool gets saturated with the medicament, and may be used alone, or from hot water, or in the Vereker Chloride of Ammonium Inhaler, which was shown in working order for anyone who liked to test the capsules. Mention should be made of the Tabloids, which deservedly occupied a prominent part in their exhibit, particularly the Compound Sulphur Tabloids of Dr. Garrod's formula. It is claimed that these are in all ways preferable to the lozenges. Lanolin and all its preparations are well represented, as also are Ichthyol and Salol. Messrs. Burroughs and Wellcome's Medicine Cases, of which many specimens were shown, appear to be compact, reliable, and useful. A large number of the visitors to this stall availed themselves of the opportunity afforded by this firm of taking away specimens of their preparations. Some capital views of the chief objects of interest in Leeds and its neighbourhood were freely distributed to those frequenting the museum.

The exhibit of CARNICK and Co. comprised Beef Peptonoids, Liquid Peptonoids (said to be a very agreeable solution of the peptonoids in sherry), Soluble Food for Infants, Victoria Ofner Bitter Water, and Tablets of Compressed Drugs, Sulphonal, Phenacetin, Antipyrin, and Saccharin.

Messrs. CARSWELL and Co. (Piccadilly Place, London) exhibited Camisole's Champagne, in syphons made of metal unaffected by the deleterious action of the wine. Compared with bottles, the advantage of syphons for hospital and sick room use is very apparent, inasmuch as just so much wine can be drawn from the syphon as is required, and that which remains will be found in a fresh and sparkling condition for future use, whereas that which remains in a bottle that has been opened becomes flat and useless. With these syphons were also shown convenient Ice Wine Coolers in which to stand the syphons.

Messrs. THOMAS CHRISTY and Co. (25, Lime Street, London, E.C.) showed samples of their Fluid Extracts—Tinctures, Kola Chocolate, Kolatina, Kola Lozenges and Cordial, a huge sample of Whiffen's Caffeine, Vaseline, Petroleum Jelly, and samples of their new Christia Sheeting, a substitute for oil sheeting, at a very much lower price, namely, 1s. 9d. per square yard; Papaine and Cocaine Lozenges for ulcerations and all abnormal conditions of the mouth, tongue, and throat; Albuminate of Iron (de Groot, solutio albuminatis ferr. dialys.).

Messrs. CHRISTY showed also samples of the Papier Balme, a bichloride of mercury disinfectant. This firm are also agents for the Liverpool Lint Co., specimens of whose preparations they showed.

Messrs. CORBYN, STACEY, and Co. (300, High Holborn, London) had, as usual, a large exhibit of their various preparations, prominence being given by them to Gynocardic Acid (Chaulmoogra Oil), obtained from chaulmoogra oil, which, although not of recent introduction, is said to have been employed with most favourable results in leprosy and skin diseases generally. One of the latest combinations of this acid—namely, Gynocardate of Zinc—has, it is stated, been found of great value as a dusting powder in eczema, etc. Nasal Cones for hay fever, etc., each containing a quarter of a grain of cocaine. The chief feature of the cones consists in a hole running through the centre, which affords a free passage for breathing, and thus assists in the retention of the cone in the nostril. The other exhibits included Inhalation Cigarettes, which contain in the centre a capsule containing a medicament, which is broken by pressure before use. Each cigarette forms in itself a perfect inhaler, and is a convenient method for applying remedies by inhalation. Glycerine and Hamamelin Suppositories for Hæmorrhoids. Liq. Cinchonæ Rubr. (Corbyn), which they claim to be the only preparation of cinchona bark free from mineral acids that gives a permanently clear and bright solution when mixed with distilled water. It is said to contain 5 per cent. of total alkaloids, of which not less than 1½ per cent. is quinine; to remain perfectly bright and stable at any temperature between its freezing and boiling points, to be free from the unpleasant and abnormal astringent flavour consequent upon the presence of free mineral acid, and to contain only the natural acidity of the bark itself. It may be dispensed in combination with iodide or bromide of potassium without the slightest fear of the development of free iodine or bromine. Dose, 5 to 20 minims. Elixirs: Extract of Malt and Preparations. Besides which, Messrs. Corbyn, Stacey, and Co. showed an interesting collection of new drugs and chemicals, chief amongst which being Exalgine, a new antipyretic; Anthrarobin, a substitute for Goa powder; Phenylacetic and Phenylpropionic Acids, recently employed in phthisis; Thyol, an artificially prepared representative of natural ichthyol; Allyl Tribromide, said to have been recently employed successfully in whooping-cough, administered internally in five-minim doses; Guaiacol, or Methy-cathecol, has, it is stated, been used with much success by Dr. Horner in phthisis; Camphorated Naphthol, an antiseptic preparation, said to be superior to carbolic acid; Benzanilide, analogous in constitution to antifebrin; Oxynaphthoic Acid, put forward as a powerful antiseptic and antizymotic. Mercury: β Naphthol, which is said to be of value in the treatment of skin diseases and old wounds; Mercuro-thymol Acetate, Mercuro-thymol Sulphate, Mercuro-thymol Nitrate. It was stated that, according to recent experiments, these salts have proved of value in the treatment of syphilis by subcutaneous injection, using as a vehicle liquid paraffin. This firm also exhibited a small collection of South African drugs, such as Melianthus Major, Bubon Galbanum, Agathosma Purgata, and Pelagonium Triste, which are of special interest as new drugs, but as yet require investigation as to their therapeutic valne. This firm also exhibited and distributed samples of their Champagne Coca, for which they claim great stimulating and sustaining properties; and Valentin's Meat Juice.

DAHL'S AGENCY (41, Eastcheap, London, E.C.) were present with samples of Dahl's Dyspepsia Cakes, which we have already noticed in these columns; Lorentzen's Condensed and Malt Extract, a concentrated food in cases where the necessity of fat in an easily digested form is indicated; it is said to be very palatable and more efficient than cod-liver oil; and the disinfectant Thanetene in powder and fluid.

Messrs. FELTOE and SONS (27, Albemarle Street, London, W.) were present with their "Spécialité" Lime Juice.

THE FRAME FOOD COMPANY (Lombard Road, Battersea, London, S.W.) showed specimens of their preparations.

Messrs. GODFREY and COOKE exhibited their New Patent Chloride of Ammonium Inhaler, which is said to be extensively used. For those who are unacquainted with this inhaler it may be stated that the main feature of this instrument is extreme simplicity; all parts of the apparatus and the bottles containing the hydrochloric acid and solution of ammonia are coloured to correspond, thus making mistakes next to impossible whilst charging the inhaler. This inhaler differs from other generators of chloride of ammonium in the fact that it contains no body of water. A moist sponge is used to purify the vapour. All the working parts of the instrument are contained within the bottle itself, and so protected from breakage. These parts consist of three tubes passing through the cork, two being inlet tubes containing porous dippers for acid and ammonia respectively.

These dippers are, it is said, quite indestructible, and this material is the subject of a separate patent. The other opening in the stopper is occupied by the centre bell-shaped tube containing a piece of moist sponge, through which the mixed vapours are drawn. When charged this inhaler gives a great volume of smoke perfectly neutral, and can be used without any effort at suction, which cannot be avoided where water is used as a purifier. Another advantage gained by the absence of water is extreme portability, and it can be held in any position whilst in use. This inhaler is packed in a neat cedar box with necessary solutions, and sold at a very moderate price.

In connection with this Inhaler GODFREY and COOKE exhibited an extra attachment forming an Eye Vapour Bath, which consists of a suitable hollow eye-piece, with bellows for pumping the vapour of chloride of ammonium into the eye, for chronic irritability of the eyes.

CHAS. GREEN and Co. (Tower Chambers, London, E.C.) had an extensive exhibit of their hypodermic Solutions, some forty various medicaments, such as Sparteine, Coniine, Osmic Acid, Podophyllin, Duboisine, besides those in daily use, as Morphine, Ergotin, Pilocarpine, Cocaine, etc., of which mention has been made on two former occasions. They exhibited Hypodermic Cases with special syringes, the mode of filling which was demonstrated. A special feature of their exhibit was their Fluid Extracts—Ergot, Damiana, Verbascum Thapsus, Cascara, Cinchona, Saliv. Nigr., Rhubarb, Nux Vomica, and many others. These, it is said, are prepared without heat by a process of upward percolation under pressure, which was fully explained to the members by Mr. Green, who exhibited a model of the percolator, in working order, used in this firm's laboratories. Specimens of their Sublimate ($Hg\ Cl_2$) Tablets for making antiseptic solutions to wash operators' hands, instruments, and other appliances in obstetrical and surgical practices were also exhibited. These have an acid reaction in solution, which prevents the precipitation of the mercury when applied to the tissues; they can also be used for a vaginal douche. Well-made Medicated Bougies of Perchloride of Mercury and Cocaine, together with their Flexible Gelatine Capsules, containing Antifebrin, Antipyrin, Cascara, Sandal Wood Oil, Salol, Sulphonal, Blaud's Ferruginous Pill Mass, with an assortment of instruments, including a new Cocaine or Ether Spray, Graves's Vaginal Speculum, Insufflators, Surgeons' Pocket Cases, etc., made up a very attractive exhibit, which was much visited during the meeting.

GRIFFIN'S Nutritive Suppositories were shown by Mr. W. E. Sacker, 79, Fenchurch Street, London, E.C.

Messrs. HEARON, SQUIRE and FRANCIS (Coleman Street, E.C.) had an exhibit of their "St. Marco Lithia Water," said to be of efficacy in gouty and rheumatic affections.

Messrs. C. J. HEWLETT and SONS had a representative collection of their specialities, including their Pepsin. c. Bismutho for the relief of gastrodynia, pyrosis, and various gastric disturbances; Sol. Opii Purif., a hypnotic for which it is claimed that it causes no constitutional disturbance, such as headache, furred tongue, etc.; Phosphorised Cod-Liver Oil Emulsion, an elegant tasteless emulsion, containing one-hundredth part of a grain of phosph., and 50 per cent. of the oil in each adult dose; Fluid Extract of Cascara Sagrada (tasteless); Ungt. Hæmatoxyl co., used as a dressing for cancer; Tercheno, chemically pure; Mist. Tuss. Rub. Conc., a well-known compound, containing Hydrobromic Acid, Morphine, Senega, Sulphuric Ether, and Hydrocyanic Acid; Lint Algæ, said to be a favourite remedy as a topical application for the treatment of enlarged indolent glands in the neck of scrofulous children.

Messrs. HOCKIN, WILSON, and Co. showed, in addition to their Podophyllin Solutions and Drugs, a large and varied exhibit of Surgical Instruments, which received much approval from visitors to this stall. Their Prostatic Catheters for self-use, with rigid portion at outlet end, meet a difficulty sometimes experienced in introducing the instrument on account of the flexibility of its anterior portion. These catheters contain about six inches of metallic tube in its external portion, which enables the point effectually to ride over any obstacle which it may encounter. Other specialities of this firm are their Throat Spray, requiring only a very small quantity of cocaine, and capable of being used with one hand, leaving the left hand free to use the tongue depressor; and their Shilling Bronchial Inhaler, which supplies a public want, and should no longer (as it is feared has sometimes been the case) prevent a patient from purchasing an inhaler prescribed by a medical man by reason of its cost being beyond his means. The Hypodermic Cases, with Bottles, Syringes, and Needles, of which specimens were shown, are elegant in appearance, very portable, and moderate in price.

M. HOFF (Hamburg, and 29, New Bridge Street, London, E.C.) was present with samples of his widely known Malt Extract, and also with samples of Malto-selzine, a combination of Hoff's Malt Extract and Aërated Water for people with delicate stomachs, who are unable to take the malt extract in its original form.

The LIEBIG WINE COMPANY (Liverpool, and 12, St. Helen's Place, London, E.C.) exhibited Pearson's Beef Wine, Brand "Vin Regno." It is claimed for this preparation for invalids that it contains the greatest amount of nourishment in the smallest and most agreeable form; the juice of five pounds of beef being, according to Sir Charles Cameron's report, contained in a quart of "Vin Regno." This firm also showed a new preparation "Vivo," said to be a pure beef juice of extreme cheapness.

The MALTINE MANUFACTURING COMPANY, Limited (24 and 25, Hart Street, Bloomsbury, London), showed their well-known Maltine, their Extract of Malted Barley, Wheat, and Oats, and a combination of Maltine and Cod-liver Oil, of convenient consistence and palatable.

Messrs. GEORGE MASON and Co. (417, King's Road, Chelsea, London, S.W.) had numerous specimens of their known dietetic and invalid preparations, many of which we have already mentioned in these columns. Our attention was particularly called to their O. K. Bouillon in sixpenny tins, for which they say they have already an extensive demand.

Messrs. G. MELLIN (Marlboro' Works, Peckham, London) showed and distributed samples of Mellin's Food; also their Emulsion of Cod-Liver Oil and Hypophosphites, containing, it is said, 50 per cent. of the finest Norwegian oil in perfect subdivision, with the addition of hypophosphites of lime and soda. It is said to be taken by the most delicate stomach and retained without producing nausea or any unpleasant after-taste. A further exhibit of this firm was Vin de Coca ("Mellin"), which they claim to be a nerve stimulant and digestive tonic. It is said also to be useful in affections of the throat and voice.

JOHN MILNE (Antiseptic Dressings Factory, Ladywell, London) had a very complete series of his well-known surgical antiseptic dressings, prepared, it is said, under the direction of Professor Lister, impregnated with ammonio-mercuric chloride, or sal alembroth, and stained with aniline blue. These alembroth dressings include Cotton Wool, Gauze, Bandages, Tampons, Pads, Plugs, Complete Dressing, First Dressing, Complete Wound Dressing, Lint, and Tow. There were shown also Thymol, Eucalyptus, and Boracic Acid Dressings; Lister's Ligature Flask, Suture Flask, and Drainage Tube Flask; Lister's Complete Antiseptic Wound Dressing; Surgeon-Major Bourke's First Field Dressing, Antiseptic Dressing Cases; and a selection of antiseptic Sanitas dressings.

Messrs. REYNOLDS and BRANSON'S (Leeds) exhibit included the following: In antiseptic surgical dressings, Salicylic Silk, devised by Professor A. F. McGill; Salicylic China Grass (Mr. H. Bendelack Hewetson); and Salufer Cotton Wool (Mr. A. W. Mayo Robson). Salufer (silico-fluoride of sodium) was shown in powder, and also in portable cubes, one cube sufficing to make a quart of antiseptic solution for dressings, or for disinfecting the hands of surgeons, obstetricians, and nurses. Preparations of Merck's Amorphous Hyoscyamine were appropriately included by this firm, who first introduced this drug; Dr. W. H. Beverley's Asthma Fumigating Powder, said, on medical testimony, to be safer and more efficient than the secret nostrums; Dr. G. C. Kingsbury's Granular Effervescent Antipyrin with Hydrobromate of Caffeine; Cocaine Wedges (Mr. W. Hall's) for obstetric use, having much novelty of form; Cocaine Cones in portable boxwood cases, for the relief of pruritus and irritable skin (Mr. Norman Porritt's); Sulphonal; Compound Sulphur Lozenges (Sir A. B. Garrod); Distilled Extract of Witch Hazel; Semina Santonica Saccharata, a tasty vermifuge for juvenile patients; Granulated Ergot, damp-resisting; Tinct. Opii Purificata, about which it is stated that the removal of narcotine and fœtid resin accounts for its avoidance of such effects as nausea and headache, so often attendant upon the use of the ordinary tincture. A group of Concentrated Infusions was included, to show the results of treating the respective drugs by methods modified according to the chemical nature of their constituents; and a select exhibit of Soluble Tasteless Pearl-coated Pills was also shown. A large diagram, entitled "Three Centuries of Pharmacy," which surmounted the stall, was a synoptic table of the preparations of the *London* and *British Pharmacopœias* from 1618 to 1885. This showed

effectively the revolution in pharmacy which occurred in 1788 by the sweeping away of the traditional rubbish of previous centuries. Another link with the past consisted of blue and white earthenware jars for syrups and ointments—relics from an old Yorkshire surgery. Messrs. Reynolds and Branson showed also samples of Vinolia.

JOHN RICHARDSON and Co. (Leicester). This well-known firm had as usual a large and handsome exhibit comprising their Soluble Pearl-coated Pills and Granules, Cod-liver Oil in various forms, Thymol, and other Antiseptic Soaps, Medicated Pessaries, Suppositories, Bougies, and Cones, Fluid Extracts of the *United States Pharmacopœia* in great variety, Thymol Jelly, an antiseptic lubricant for surgeons' hands, etc.; "Exorrhoid," a hæmorrhoidal jelly contained in collapsible tubes, with specially designed rectal pipes; Hypodermic Gelatine Wafers and Ophthalmic Discs, Compressed Tablets of pure drugs, comprising all those recently introduced; Medicated Lozenges, including cascara in its most inviting form, and Sir A. B. Garrod's formula of Sulphur; Emergency Cases, Medicine Chests, Field Companions, and a host of medical specialities. This firm also exhibited their "Prize Dispensing Cabinet," which attracted considerable attention from the members present. The cabinet is handsome and thoroughly comprehensive, and can, we understand, be supplied in various qualities of workmanship and finish to suit the requirements of purchasers. It contains an admirably selected stock of medicines, which may, however, be varied at discretion, and exceptional terms of purchase are offered to medical men. It is constructed in polished walnut and divided into three compartments. The base is enclosed by folding doors. The middle division, the front of which lets down, forms a convenient dispensing counter. The top portion of the cabinet is fitted with shelves made to carry 12 × 16 oz., 14 × 12 oz., and 30 × 8 oz. bottles. The inside of the folding doors is also divided into compartments. The size of this cabinet is 7 ft. 3 in. high, and 4 ft. 2 in. wide at the base. The front is highly finished, and is divided into 17 moulded panels, and has a $3\frac{1}{2}$ in. moulded and dentilled cornice.

Messrs. J. ROBERTSON and Co. (35, George Street, Edinburgh) exhibited specimens of their Flexible Gelatine Capsules; a large display of Ferruginous Pill Mass (Blaud's), also combined with Extract of Nux Vomica, Aloes, and with Arsenic, Digitalin, and other powerful medicines. These iron capsules consist in suspending the ingredients of Blaud's pill mass (alkali and ferrous iron), so that no reaction takes place until the capsules reach the contents of the stomach. In this way they exhibit Nascent Ferrous Carbonate in definite doses for weak stomachs, it being contended that there is no tendency to nauseate patients, for the consistence of the material of the excipient allows of gradual injection only. They showed also their *B. P.* Pills in capsular form, for which they claim ready and certain solubility. Among the other novelties in capsules were ol. menth. pip. et acid. carbolic.; compound sulphur (Garrod); Sulphonal in 5 grs., $7\frac{1}{2}$ grs., and 10 grs. doses, and in these the sulphonal is rendered soluble, and its therapeutic effect about one-half more, and visible very shortly after administration. Phenacetine, Papain et Iridin, Gregory's Powder, Antipyrin, Ergotin 3 grs., Quinin, Euonymin, Euonymin et Pepsin, Pepsin, Dover's Powder, Hyknon, Bismuth, and Easton's Syrup were exhibited contained in capsules. There was also to be seen a display of what appeared to be well-prepared granular preparations, containing amongst others Phenacetine, Sulphonal, Antipyrin, Antifebrini, Bismuth and Pepsine, and Hydrobromate of Caffeine. They make a speciality of the Compressions of Acidified Perchloride of Mercury; these were shown in pellets of three strengths, No. 1, No. 2, and No. 3, one dissolved in a pint of water forming a solution of 1 in 3,000, 1 in 1,500, and 1 in 1,000 respectively. These pellets are introduced as being convenient in obstetric and surgery practice, and useful to the busy practitioner. Among the other preparations we noted were a concentration prepared from the bark of Quillaya Saponaria, which is called Equaloid Quillaya Saponaria; a combination of the Ferrous Iodide with the Hydriodates of Quinine and Strychnine as a sweetened preparation; "Syrup Hydriodate Co.," said to be useful in strumous and syphilitic cases.

Mr. W. E. SACKER (79, Fenchurch Street, London, E.C.), in addition to an extensive show of Schieffelin and Co.'s Soluble Pills and Granules, exhibited specimens of his Hypodermic Solutions (which we have already mentioned), Sulphonal Pellets made from sulphonal (Bayer), 5 grains each, Antiseptic Pellets for Antiseptic Sprays, Nasal Wash, Mouth Wash, etc. Each pellet will make two quarts of antiseptic solution. These are put forward as being of use in ecchondroses of the septum narium and their removal, and as being an antiseptic which does not corrode or discolour any instrument like the perchloride of mercury. He also showed Saccharine Pellets, Cocaine or Voice Pellets, Compound Cocaine Pellets, Compressed Tablets of Cascara Sagrada. Mr. Sacker is also agent for Gardner's Syrup, Hydriodic Acid, etc. A further exhibit was Sacker's Hypodermic Cases, comprising graduated syringe, two needles, and wires with vulcanite rubber mounts, ranging in price from 3s. 6d. to 15s. The advantage of this syringe is that it is fitted with a cap which effectually prevents the accumulation of dirt or dust; the index piston is arranged with a movable screw for adjusting the dosage. They are neatly got up, and will doubtless command extensive use.

The SANITARY WOOD WOOL COMPANY (11, Hatton Garden, London. Hartmann's Patent Wood Wool Preparations, which have acquired considerable hospital use, were shown by this company in all their different variations. We have repeatedly given them extended notice, and it may not be necessary here to do more than enumerate the hygienic wood wool diapers; the sanitary wood wool sheets, impregnated with corrosive sublimate, a most comfortable article for accouchement use, largely replacing macintosh sheets; and their patent wood wool tissue, a new surgical dressing, ready for use, in any required length. The value of wood wool as an absorbent has suggested its use in other forms.

The SANITAS COMPANY, Limited. Each year suggests additional uses to which Sanitas may be beneficially applied, and the number of preparations correspondingly increase. There were shown at this stall samples of the various Sanitas disinfecting preparations: Kingzett's Bactericides, Fumigating Apparatus, the Sanitas Soaps and Powders, Medicated Toilet Paper, Antiseptic Dressings, and many others.

The SANTHA TEA COMPANY, Limited (Darjeeling Works, Penarth Street, Hatcham) exhibited samples of Santha, which is said to consist of the solid residue obtained by evaporating tea infusion *in vacuo*, mixed with a due proportion of gelatine and a certain amount of sugar for preservative purposes. When hot water is added to it in order to make a beverage, the gelatine, it is explained, combines with the tannin in the tea extract, and forms the soluble subtannate of gelatine. The tannin thus remains in solution, but is effectually rendered innocuous, for subtannate of gelatine is as destitute of the injurious properties of tannin as is sulphate of soda of those of oil of vitriol.

SEABURY and JOHNSON (46, Jewin Street, London, E.C., and New York) had a goodly display of their Pharmacopœial, Medicinal and Surgical Plasters, Absorbents, Dressings, Antiseptics and Surgical Specialities of excellent manufacture. "Hydronaphthol," a new antiseptic, which is said to have been received with favour in the bacteriological laboratories of the University of Edinburgh, was also exhibited, together with the various other preparations presented to the profession in forms suggested in the practice of antiseptic surgery.

Messrs. G. and G. STERN'S exhibit comprised the now well-known fragrant Pumiline Essence, distilled from the leaves and twigs of a special species of pumilio pine which grows on the Alps nearest to the line of perpetual snow, the Pumiline Extract from the same source, and various preparations containing one or other of the preceding. The preparation which attracted great attention was the Pumiline Ointment, which incorporates the pumiline essence with a basis of lanoline, etc. This is a fine homogeneous mass, smooth and bland, and not greasy, and well fitted to serve as a toilet cream, and as an application to the irritated condition of the skin in various eruptive skin diseases, such as eczema, impetigo, etc.; also in acne rosacea and other forms of facial acne. The Pumiline Liniment also attracted considerable attention, being recommended for use in chronic rheumatism, lumbago, etc. Messrs. Stern also exhibited a variety of Inhalers for use with Pumiline Essence in cases of bronchitis and chest and throat affections. The small pocket dry inhaler is said to be a useful article in the antiseptic treatment of sore throats and lung affections.

The Stretton Waters, shown by the STRETTON HILLS MINERAL WATER COMPANY (Church Stretton, Salop), are said, by reason of their freedom from lime and other dissolved mineral matters, to be well adapted for gouty people.

Messrs. HENRY THORNE and Co. (Leeds) exhibited specimens of "Health" Cocoa, Cocoa in various forms, Cocoa Butter, Chocolate Crèmes, etc.

The UNIVERSAL DIGESTIVE TEA COMPANY (64, Corporation

Street, Manchester) displayed samples of their Tea, which has been subjected to the action of a patented process, by which they say the tannin is entirely neutralised or rendered inactive, and consequently does not retard digestion.

The VIKING FOOD AND ESSENCE COMPANY (28, Hearn Street) showed samples of their various Invalid Foods, put up in clear, glass jars with "anti-bacterial lids," as also in tins.

Messrs. W. R. WARNER and COMPANY (Philadelphia and London) were well represented by a fine exhibit of their various preparations. Foremost among these were their perfectly soluble Sugar-coated Pills; their Bromo-Soda with Caffeine, introduced as a useful agent in sleeplessness and over-work; Effervescent Hydrobromate of Caffein, and Bromide of Potassium or Bromo-Potash; Fluid Extract of Cascara Sagrada; Fluid Extract of Coca; Ingluvin, said to be useful for vomiting in pregnancy; Parvules and Compressed Drugs of all kinds; nor must we omit to mention their Dosimetric Granules (gelatine-coated); Pil. Chalybeate —ferri. sulph. Fe SO_4, potass. carb. K_2 CO_3=Ferri. carb. Fe CO_3, Potass. sulph. K_2 SO_4—a formula which Professor Niemeyer says he has used for more than twenty years almost exclusively in chlorosis; and Pil. Antiseptic., containing sulphite soda, salicylic acid, and ext. nux. vomica, indicated in acid stomach and enfeebled digestion following excessive drinking.

Messrs. JAMES WOOLLEY, SONS, and Co.—This firm had an exhibit of most of their specialities, which include the following; Akolethe, a solution of the sedative principles of opium; Iso-Butyl Nitris, for use in angina pectoris by inhalation; the remedy is put up in glass capsules encased with silk, each capsule containing sufficient for one inhalation. Sol. Æthyl Nitritis; this preparation contains 3 per cent. of pure Nitrite of Ethyl in absolute alcohol and glycerine. Liquor Bismuth. Co., a concentrated solution of Bismuth, Nux Vomica, Hydrocyanic Acid, and Morphine; Liq. Cascaræ Suavis, possessing the laxative properties of the bark without the nauseous bitter; Liq. Copaibæ Alkalinus, an alkaline solution of Copaiba Resin, perfectly soluble in water; Liq. Ergotæ Ammon., a preparation of ergot combined with a gentle stimulant; Liq. opii et Ipecac., a substitute for Dover's powder; Liq. Picis Alcoholicus, a solution of Coal Tar in Alcohol; Liq. Saccharini Ruber, a sweetening and colouring medium for mixtures; Liq. Santali Co., a combination (perfectly soluble) of pure Sandalwood Oil (distilled in their own laboratory), with Copaiba, Cubebs, and Buchu; Liquor Stypticus (Whitehead), a balsamic solution of Iodoform, used successfully by Mr. Walter Whitehead, of Manchester, in the treatment by injection of the early stages of carbuncle, tubercular adenitis, boils, and buboes; also used for painting the floor of the mouth after removal of the tongue. Lin. Camphoræ cum Sinape, a mild counter-irritant in the throat and chest affections of children; Mineroleum, yellow and white, a non-oxidisable hydrocarbon ointment basis; Minerol. Resinæ Acid (Burn Ointment)—a similar ointment is used in the Manchester Royal Infirmary for scalds and burns; Mollin, a partially saponified fat, used as an ointment basis; Mollin Hydrargyri, equal in strength to Ung. Hydrarg. *B.P.*; Sol. Sodæ Phenatis, used in dental operations for relieving pain after the extraction of teeth; Gelatum Codeinæ, used in laryngitis and phthisical cough; Glycerine Suppositories, three sizes, containing respectively 10, 20, and 40 minims of pure Glycerine; Granular Effervescent Antipyrin; ditto with Hydrobromate of Caffein; Concentrated Mixtures; Tasteless, Pearl-coated Pills, white, pink, and yellow; Gelatin-coated Pills; Concentrated Infusions; Compressed Pellets; Tannin Discs—these are small styptic discs, as suggested by Mr. Lund, F.R.C.S., in the Hunterian Lectures, 1885; Antiseptic Tubes; Minerol. Hydrarg. Perchlor. (1 in 1,000); Minerol. Acid. Boric. (1 in 7), or Minerol. Eucalypti (1 in 5) for use in midwifery, *post-mortem*, and surgical operations; the Sanitary Rose Powder, for nursery and toilet use, prepared with boric acid in the finest state of division possible, and perfumed, prepared in three colours, white, pink, and cream; Cod Liver Oil, "Extra Pale;" Gluten Bread; Diabetic Cocoa; Fluid Saccharin; Ichthyol Capsules, 3 and 5 minims; Naphthalin Capsules, 2, 4, and 7 grains; Plaster Mulls, Salve Mulls, and Over-fatted Soaps, as used by Dr. P. G. Unna in skin diseases; Celluloid Caustic Cases, Ointment Introducers, Stethoscopes, Speculums, Uterine Tubes, etc.; Laryngoscopes, Ophthalmoscopes, and Lamps; Clinical Thermometers, Medical Batteries, Induced and Constant Currents, Microscopes and accessories; Pocket Dressing Cases, Hypodermic Syringes, and other Surgical Instruments.

Messrs. WYLEYS and COMPANY (Coventry).—This exhibit comprised a number of specialities, among which "Standardised Podophyllin" may be instanced, which differs from some articles commonly sold in colour and solubility, being of a pale straw colour instead of being bright yellow, entirely soluble in rectified spirit, and assayed to contain a constant amount of podophyllotoxin, the most active portion of the resin. Glycerine Suppositories for constipation, and Glycerine and Hamamelis Suppositories for hæmorrhoids were also shown, along with Gelatine-coated Pills, the characteristic feature of these consisting in their oval form. As combinations may be mentioned Pil. Podophylli (stand.) of various strengths, Pil. Donovani, Pil. Euonymin et Iridin, Pil. Pulsatillæ et Caulophyllin. The "Pill-Pellets" exhibited by this firm consist of compressed pellets of single drugs, and intended for the administration of such substances as Potass. Permang., Manganese Dioxid., Sodii Salicylas, Salol, Antipyrin, etc. Ergotin for hypodermic injection was exhibited in small tubes, each containing a weighed amount of Bonjean's Ergotin, and intended for the preparation of freshly-made injection (prepared as required by adding water to the contents of the tubes), every tube of which carries a paper label marked at 5, 10, and 15 minims. A novel application of the pellet principle may be mentioned—"Photopel," a photographic developer, consisting of the various chemicals necessary for the production of the latent image on dry plates, films, or bromide papers, and compressed into a single and portable form; and entirely dispensing with the preparation of various solutions. In use a pellet is simply dissolved in two ounces of water, and rendered active as a developer by a small amount of Liq. Potassæ, added just before pouring on the plate or film. Messrs. Wyleys also had on view a number of ordinary pharmaceutical preparations—Compressed Pellets, Hypodermic Pellets, Permanent Hypodermic Injections in Tube Bottles, and Cases of Pellets and Solutions for the Pocket.

Mr. EDWIN YEWDALL (Wade Lane, Leeds) showed a case containing specimens of Clinical Thermometers, Soluble Bougies, Pessaries, Suppositories, Sacchareus, Medicated Lozenges, etc.

SECTION B.—PATHOLOGY.

Among an interesting collection of pathological specimens the following may be mentioned:

Mr. E. ATKINSON: Ichthyosis Histrix of Tongue. Dr. A. G. BARRS (Park Place, Leeds): (1) Bladder and Kidneys, showing congenital hydronephrosis arising from a twist in the ureters; (2) Cerebellum and Pons, showing multiple aneurysms of the basilar artery (injected); there are hæmorrhages in the cerebellum on each side of the vallecula. Dr. CHARLES W. CATHCART (3, Randolph Crescent, Edinburgh): Series of preparations illustrating the different stages in the manufacture of Imitative Casts in Glycerine Jelly. Dr. T. CHURTON (Park Square, Leeds): Spinal Cord, with bony plates in the arachnoid.

Dr. H. RADCLIFFE CROCKER (121, Harley Street, W.): A series of drawings illustrating various forms and stages of Leprosy. Dr. DAVID DRUMMOND (Newcastle-on-Tyne): An extensive series of water-colour drawings of recent Pathological Preparations.

Mr. T. R. JESSOP (Leeds): Series of Calculi—Renal, Vesical, Preputial, Salivary. Dr. THOMAS H. MORTON (Sheffield): Photographs of Internal Hernia. Mr. T. STUART NAIRNE; Dissection of a Monstrosity. Dr. BEAVEN RAKE (Trinidad): Specimens illustrating the Lesions of Leprosy. Dr. G. R. SHUTTLEWORTH (Royal Albert Asylum, Lancaster): Twelve hardened and varnished Brains, illustrating various types of cerebral abnormality in Idiots. Mr. A. W. SINCLAIR (South Lancing, Sussex): Seven specimens of Distoma Crassum, taken from the duodenum of a Chinese immigrant; the second case on record. WEST, NEWMAN, and Co. (54, Hatton Garden, London): Lithographs of Anatomical and Pathological Subjects. A valuable series from the Museum of the Yorkshire College, medical department, had been arranged by the curator, Dr. ERNEST JACOB, from the Pathological Museum of the College, to illustrate certain special pathological conditions: (1) Hypertrophy of the Prostate and its treatment by Suprapubic Prostatectomy, according to Mr. McGill's method; (2) Diseases of the Knee-Joint, more especially those bearing on the formation of loose bodies in the joint; (3) Diseases of the Larynx; Prostatic Disease, and the results of suprapubic prostatectomy; (4) Ophthalmic Preparations, mounted in glycerine jelly by Mr. Priestly Smith's method, by Dr. Jacob, from specimens received from Mr. Pridgin Teale, Mr. J. A. Nunneley, Mr. H. Bendelack Hewetson, and Mr. R. N. Hartley.

From the Royal College of Surgeons; exhibited by the President, by permission of the Council: A Selection of Coloured Portraits,

from those made during the past year, under the direction of the Museum Committee, chiefly by Mr. BURGESS; a series of drawings and lithographs illustrating Kaposi's Disease (Xeroderma Pigmentosum); a series of portraits illustrating Granuloma Fungoides. Mr. JONATHAN HUTCHINSON, F.R.S., also showed some other drawings from his own collection, including one showing Diffuse Lipomata of the Pubes and Perineum; a portrait showing the development of Pigmented Moles in the cheeks of an elderly lady, in association with a small growth of Rodent Cancer; portrait of a young lad who suffered from a condition allied to Kaposi's Malady (this case will be published in this year's *Transactions of Clinical Society*).

SECTION C.—ANATOMY AND PHYSIOLOGY.

We have space for little more than an enumeration of the chief specimens shown.

Professor GRIFFITH and Dr. OLIVER showed specimens and drawings from the Anatomical Department, most of which have been recently added to the collection. Dr. J. B. HELLIER (Leeds) a series of models as used at Näas in the Slöjd System of Educational Carpentry. NEWTON and Co., opticians, scientific instrument and globe makers (3, Fleet Street, Temple Bar, London): (1) Electric Projecting Microscope, fitted with adjusting 5-inch primary condensers, large alum cell, rotating divided stage, removable diaphragms, coarse and fine focussing adjustments, rotating polarising prism, arranged to throw in and out of gear instantly, and analysing prism in rotating divided mount, double convergent system for exhibiting rings and brushes in wide-angle crystals, etc.; (2) New form of Electric Projector Lamp, mounted on patent traversing table (this is the most perfect projecting microscope and micro-polariscope yet made, and gives most excellent results even with 1-12th and 1-16th immersion objectives; the magnification with low powers is almost unlimited, and a flea can be easily exhibited thirty or forty feet long); (3) Oxyhydrogen Lime-Light Jets, with or without Pringle's cut-off. REYNOLDS and BRANSON (Commercial Street, Leeds): Medical Microscope; Ross's Zentmayer Microscope; Beck's new model Star Microscope; Beck's portable model Star Microscope; Beck's Biological Microscope; Beck's Pathological Microscope; Beck's Microscopes, various; Swift's "Wales" Microscope; Swift's "Paragon" Microscope; Swift's Binocular Dissecting Microscope: Swift's Microscopes, various; Objectives, by Zeiss, Beck, Swift; Microscope Lamps, various; Microscope Accessories; Microtomes. Yorkshire College, exhibits from Physiological Laboratory (Professor Birch): (1) Rough Teaching Models; (2) New form of Separator, for physiological purposes; (3) Non-Polarisable Electrodes (copy of Dr. A. d'Arsonval's) for muscle and nerve experiments; (4) Hæmometer, new form for varying thickness of fluid under examination, and for working with corrosive fluids; (5) Dr. Lyon's Urea Apparatus, a new form of the many clinical decomposition methods.

SECTION D.—INSTRUMENTS AND BOOKS.

Messrs. ARNOLD and SONS (West Smithfield) had a good display of Surgical Instruments and Appliances, many of which we have already noticed. Among their more recent introductions should, however, be mentioned a new patent Horsehair Belt, which has the advantages of being porous, extremely light, and of great durability, and has much to recommend it; a new form of Truss, with glycerine pad, designed by its softness to overcome the difficulties experienced by the ordinary hard pad; Dr. Duke's new Bandage-holder, for holding the bandage when in use, and prevent its unrolling if dropped; Dr. Duke's Clamp Scissors, for the treatment of hæmorrhoids, which both cut and clamp at the same time. The following is a brief enumeration of some of the more noticeable of the exhibits of this firm: A Tenaculum Scissors, by Dr. Duke, for cutting and removing sutures; a new form of Urethral Injector, by Mr. Foulerton, for the treatment of gonorrhœa; a Capillary Trocar, for suprapubic puncture of the bladder, by Mr. Foulerton; a new Ointment, introduced by Mr. C. J. Smith, for the treatment of gonorrhœa; new Colotomy Dilators, by Dr. Ward Cousins; new Colotomy Dilators, by Mr. W. H. Cripps; Rectal Dilators and Bougies, as designed by Mr. W. H. Cripps; new forms of Hypodermic Syringes, with self-lubricating plungers, and fitted into very compact cases containing four, six, and twelve tubes of tabloids, respectively; new forms of Glycerine, Pad and Ring Pessaries; a Portable Stethoscope, by Mr. Coombes, for carrying in the waistcoat pocket; Pad for fractured clavicle, by Mr. Greene; Folding Midwifery Forceps, by Dr. J. N. Bredin; a portable form of Hypodermic Syringe, by Mr. Lawson Tait, to which we have already directed attention; new form of Shoulder-brace, for the treatment of incipient lateral curvature, by Mr. W. J. Walsham; a Clamp for circumcision, by Dr. A. W. Sinclair; new form of Midwifery Satchel for carrying on horseback; a Suspensory Bandage for varicocele, by Mr. C. B. Keetley; a Splint for fracture of jaw, by Dr. W. Cousins; new patent Simplex Enemas, with new joint which can be turned to any angle; Ophthalmoscope, by Mr. W. Lindsay Johnson; new Dermatological Pencils; Vaginal Tampon, introduced by Dr. Murchison; an Aural Reservoir, by Dr. Malony; a new form of Chloroform Bottle; a Pelvic Tourniquet, by Dr. W. Cousins. A general variety of Eye, Lithotomy, Uterine, Tooth, Ear, Nose, Vaginal, Minor Operation, and Midwifery Instruments completed the exhibits of this firm.

Messrs. DOWN BROTHERS (3 and 4, St. Thomas's Street, Borough) had a very fine display of surgical instruments which met with general admiration. Among the newest we would call attention to a complete Set of Instruments for Medication of the Eustachian Tubes, by Dr. Adolf Bronner, of Bradford; a new form of Nasal Snare with concealed wires and a new method of adjusting the noose, used by Mr. Charters Symonds, of Guy's; also a very complete Aurist's Armamentarium; some of the more recent forms of Laryngeal and Aural Curettes; a modification of Junker's Inhaler, by Mr. Tom Bird; a set of instruments for applying Hammond's Wire Splint for Fracture of the Jaw; and also a very complete set of Dental Forceps, suitable for a medical man, by Mr. Newland Pedley, of Guy's. Another speciality is Down's Saw for Ripping up Plaster Jackets and Splints with rapidity and ease, which admits of the same splint being reapplied. There were also shown a very serviceable Complete Test Stand, by Dr. Stoker, of Dublin; a Soft Palate Lever, as used by Dr. Cresswell Baber, of Brighton; also a complete set of Charters Symonds's Tubes for Intubation of the Œsophagus; Iris Scissors by Mr. Simeon Snell; Ophthalmic Syringe, by Dr. Wray, of Croydon; an exceedingly portable Ophthalmoscope, by Oldham, of Brighton; Extension Apparatus for End of Bed, by Mr. Johnson Smith, F.R.C.S., Seamen's Hospital, Greenwich, this obviates many difficulties often found by experience to exist in the ordinary form of extension apparatus, doing away with the weight; the extension is elastic. A Uterine Repositor, an ingenious application of the hydrostatic principle for this purpose, by Mr. Campbell Gowan; Hysterectomy Clamp, with endless wire, by Dr. George Elder, of Nottingham; Forceps for Resection of Intestine, as used at St. Thomas's Hospital, by Mr. G. H. Makins; Female Urethra Speculum, by Walters, of Reading; Mr. Clement Lucas's Instruments for Nephrectomy, etc.; a new Stethoscope, by Dr. Dennison, of Colorado; also a Tarsotomy Splint by Mr. R. C. Holt, of Burnley; and a Nurse's Case for Outdoor Nursing.

Mr. J. GARDNER (32, Forrest Road, Edinburgh) showed a collection of surgical instruments, including Smart's Dermic Punctator; Nasal Respirator, recommended by Dr. Smart; Tongue Depressor; Mouth Gag by Mr. Cotterell; Microtome by Cathcart, for ether and paraffin section; Foulis's Glossotilt, for raising the epiglottis; new Aspirator by Dr. Foulis. The chief feature of this aspirator is that the exhaust syringe and stopper are in one piece, thus doing away with a rubber tube whilst creating the vacuum, as is the case in most forms of aspirators. On the top of the stopper the exhaust pump is placed, and is in communication with the bottle by means of a small metal tube, which runs along the under side of the pump, pierces the stopper, and is provided with a stopcock, by means of which the communication between the pump and the bottle is cut off when the latter has been exhausted. It is provided with an adapter, to which the aspirating and exploring needles are attached. Another adapter is provided which has a filler, and to which a stomach tube or catheter may be attached, and thus a perfect apparatus is formed for washing out the stomach and the bladder. The fluid is not injected into those cavities but is introduced on the syphon principle, and as the filler is made to contain 4 ozs., it may easily be ascertained what amount of fluid is used. As there are no rubber valves in the instrument, it is specially adapted for warm climates.

Messrs. LYNCH and Co. (Aldersgate Street, London) showed a large collection of instruments of English and American manufacture, some of which were of new and improved construction. Amongst them we noticed a set of Nickel-plated Uterine Curettes and Scoops, fitting conveniently into one nickel-plated handle; Fuller's Improved Ether Injection Syringes, consisting of a 60-minim syringe without any cement, perfectly air-tight when not in use (thus it is always ready for emergencies), provided with two

needles for injection in a neat case; Clinical Thermometers, which they guarantee to be within one-eighth of a degree of accuracy, with indices which cannot be shaken into the bulb, in neat metal cases for the pocket, which do not roll off the table when put down; Dr. O'Dwyer's Sets of Instruments for intubation of the larynx; Graves's Vaginal Speculums, by means of which an operating Sims's can be made out of an ordinary bivalve pattern; Enema Syringes, made of English india-rubber, said not to split, and fitted with glass valves instead of metal, complete with vaginal tubes, which it is claimed is not only a cleanly contrivance, as valves are easily removed, but a reliable and economic one; Faradaic Batteries, with five different electrodes, in a handsome walnut case; Midwifery Bags, fitted with four one-ounce stoppered glass bottles; New Revolving Dental Mirror, a useful instrument, for the ready examination of the back of the teeth; Laryngoscopic Lamps, fitted with the Argand burners, glass chimney, and Mackenzie Bull's-eye Condenser, supplied with solid metal stands or on brackets for the wall; Pressure Forceps, after the patterns of Sir Spencer Wells, Mr. Lawson Tait, and M. Péan; Folding Air-tight Binaural Stethoscopes and a large assortment of Pessaries and surgical instruments of various kinds completed an interesting exhibit.

The collection of Messrs. REYNOLDS and BRANSON (Leeds) in this Section had many novelties. The Clinical Thermometer was shown historically by the exhibition of the 10-inch thermometers originally used by Dr. Aitken until 1867. Dr. Clifford Allbutt requested Messrs. Harvey and Reynolds to modify the instrument by a chamber, anterior to the bulb, in lieu of 4 inches of the stem. Chart Forms for Temperature were shown in variety, the latest being a Chart for registration at short intervals, as six hours, suggested by Dr. J. B. Hellier. Much interest was excited by the Universal Bandage Winder, invented by Mr. Fred. Reynolds, suited to making all sizes of bandages. Dr. Riegel's Sponges, for testing the acidity of the gastric juice, also attracted attention. Mr. Teale's special patterns of Sinus Scoops; Dr. E. H. Jacob's Oxyhydrogen Lamp and Bracket for wall, as used at the Leeds Infirmary; Laryngoscopic Lamp; Electric Non-thermal Lamp; Buxton's Chloride of Ammonium Inhaler; Dr. Clifford Allbutt's Portable Stethoscope; Urinometer Beads; Einhorn's Fermentation Saccharimeter; Eye-drop Flasks, and Burckhardt-Marion Ear Trumpets may be mentioned. In this collection Dr. J. Ward Cousins exhibited his Instruments suited to army and navy surgeons or for hospital work, various loose handles of novel form being provided with saws, spoons, chisels, and drills; also his New Evacuator for litholapaxy and other bladder operations, being an alternate injector and evacuator. Mr. H. Bendelack Hewetson showed his Nasal Dilator, the use of which he described in a paper read before the Section of Otology.

The Electrical exhibits of Messrs. Reynolds and Branson comprised a variety of designs in Batteries for lamps and general medical purposes, which have many points of novelty. A Portable Storage or Secondary Battery was shown, without the usual lead plates, hence its greater lightness and portability; the peroxide of lead being in contact with strips of platinum foil; for lamps, as well as for small cautery operations, this combination appears to be very convenient. A Patent Primary Battery, at a moderate cost, also attracted a good deal of attention from the steadiness of the current given, and from the total absence of fumes. Several novel forms of Lamps for use with the above apparatus were shown, to one of which a series of curved polished glass rods was fitted to convey light without heat, in any required direction. A Cautery Battery was also in action, capable of heating 18 inches of platinum wire (No. 24, B. W. G.) to full redness. This apparatus was fitted with an endless gear for regulating the quantity of current, and a switch for changing the electro-motive force. The combination is thus very suitable for lamps or for large or small cautery instruments. The method of construction of this battery also ensures, as far as possible, absence of polarisation. An excellent Galvanometer, reading from $\frac{1}{2}$ to 300 milliampères, and which gives rapid readings, was on view. The apparatus devised by this firm for Dr. Apostoli's Treatment of Fibroids, and for general use, and designated the Hospital Battery, includes apparatus for giving both the continuous and the interrupted currents, and is cheap and efficient, and, owing to the large size of cell used, is well calculated to meet heavy requirements. Various Rheostats were also shown in operation.

K. SCHALL (55, Wigmore Street, W.) exhibited a very complete collection of the various Electric Instruments for Illuminating the Ear, Eye, Nose, Pharynx, Larynx, Œsophagus, Stomach, Rectum, Vagina, Urethra, and Bladder, including the most recent improvements of Mr. Berkeley Hill, Mr. Fenwick, etc. Moreover, improved Leclanché Cells for Galvanisation, Electrolysis, and Electric Light, which offer the great advantage that they can easily be recharged by the owner, and need not be sent back to the manufacturer for this purpose. Different Primary and Secondary Batteries for Cautery and Electric Light, a New Cautery Handle, Induction Coils, etc.

Messrs. J. WEISS and SON (287, Oxford Street) had a large and interesting exhibit of approved surgical instruments, including an Electric Light Laryngoscope, adopted also by means of Brunton's otoscope to the larynx, vagina, and rectum; Dr. Mortimer Granville's Sphygmograph; Baildon's Rectum Speculum; Hodgkinson's Laryngeal Forceps; Simpson's Uterine Volsella; Walters's Perineum Forceps; a Tweedy Tourniquet, in which wire of delta metal is used instead of steel, which, it is claimed, has the advantage of being much more flexible and equally strong; a Portable Stethoscope; a set of Instruments by Walters, of Manchester, for the broad ligament; Instrument for injecting ointment into the urethra and rectum; various Operating Knives in solid metal handles to render them antiseptic; Eye Knives with metal handles, which corrosive sublimate will not affect; Gowan's Rectum Bougies; Whitehead's instrument for removing villous growths from the bladder. Messrs. Weiss showed also some special Catheters; Whitehead's Ointment Catheter; Weiss's Lithotrite for Children; also Toogood's Bronchitis Kettle, some very serviceable Dressing Trays in earthenware, and an Antiseptic Surgical Knife, ingeniously constructed so as to be taken entirely to pieces. Their illustrated catalogue and price list for 1889 is a portly 4to volume of some 400 pages, well illustrated and arranged, and an excellent specimen of typography.

Messrs. JOSEPH WOOD and Co. (York) showed a collection of Porous Splints, an Improved Electric Light, Electric Battery for Surgical Purposes, an assortment of Surgical Instruments, and a Uterine Catheter by Dr. Wright, of Leeds.

The exhibitors of books in this section were Mr. F. A. DAVIS, 139, Oxford Street, who had a good display of the medical works published by him, including the *Annual of the Universal Medical Sciences;* a summary of the progress of medical science during the past year; Ranney's *Nervous Diseases;* Sajous's *Diseases of the Nose and Throat;* Smith's *Physiology of the Domestic Animals,* etc.; and HAZELL, WATSON and VINEY, who displayed some excellent specimens of colour printing; case books; obstetric registers, visiting books and clinical note books; as also some beautiful specimens of the binding art. Mr. YOUNG J. PENTLAND (Edinburgh) is known as the publisher of many medical works of value, and to these should be added the following recent publications: Keating's *Cyclopædia of Diseases of Children,* vol. i; Berry, *On the Eye;* Jamieson, *On the Skin;* Buck's *Reference Handbook to the Medical Sciences;* Byrom Bramwell's *Studies in Clinical Medicine* (published in numbers); *Laboratory Reports of the Royal College of Physicians, Edinburgh,* vol. i; *Cyclopædia of Obstetrics and Gynæcology,* 12 volumes; James's *Pulmonary Phthisis;* Alexander, *On Epilepsy;* Rentoul, *On Abortion;* etc. Dr. CHURTON (Leeds) showed his method of case reporting; and Messrs. WODDERSPOON and Co., 7, Serle Street, London, a frame of temperature charts.

SECTION E.—SANITARY AND AMBULANCE APPLIANCES.

Mr. W. BARLOW (61, Knowsley Street, Bolton) showed samples of his Patent Souple Boots; the advantages claimed for them being that they are particularly pliable, offering no resistance to the action of the foot when wearing. They are provided with a layer of waterproof felt inserted between the soles, which it is stated not only materially lightens the boot, but effectually resists damp and moisture. They are made to the shape of the foot.

Messrs. BILLINGTON BROTHERS (Liverpool) had, as usual, a very extensive collection of bedsteads, seats, and other hospital and institution furniture, which merited all the attention they received. This firm has effected many improvements in their bedsteads, and especially in those adapted for use in asylums. Their newly patented "Epileptic Bed" met with a good deal of approval, and was generally thought to be well adapted for its purpose. This bed is composed of a framework surface of pitch pine, fitted with a closely woven steel wire spring mattress, so attached that the edges of the fabric are turned up at the sides, making a box-shaped bed. The object is to secure the patients

from falling out; and in the event of their falling against the bed, to guard against any possible injury. Another object of note is an Institution Seat. This is cleverly designed, and the woven wire fabric is made to do good duty, forming a very strong, smooth and elastic seating, practically indestructible. A goodly array of Invalid Couches, Bedrests, and a varied assortment of Iron and Wood Bedsteads, combine to make a really interesting and effective exhibition of this particular branch of industry.

Messrs. J. DIXON and SON (Boar Lane, Leeds) had a good display of Morrison and Ingram's Baths, Lavatories, Single and Double; a Sanitary Sink; Maignen's Filters; Dalton's Gas Stoves, etc. Morrison and Ingram's Patent Enclosed Urinal, 2 feet by 14 inches, neatly made in walnut wood with plated fittings and folding doors, ready for connecting, ingeniously arranged so that the action of opening it causes the water to flow and flush the pan, is admirably adapted for surgeries, having when closed the appearance of a small walnut cabinet; another exhibit was that of Morrison, Ingram, and Co.'s Lavatory with Shampooing Cock.

Messrs. GEORGE GALE and SONS (17, Upper Mill Hill, Leeds) showed a collection of the "Dominion" Steel Wire Mattresses and Combination Spring Beds. These are made of steel wire, coppered to prevent rust, fitted with springs at either end, and stretched diagonally in separate V links. They are said to have the advantages of great durability, elasticity, and cleanliness, and do not depress in the centre, the diagonal construction of the fabric giving the greatest resistance in the centre of the mattress. They are made in different sizes, and adapted for hospital and private use. This firm showed also the "Lawson Tait" Hospital Bed, in three parts only, fitted with the "Dominion" mattress.

Messrs. GIBSON and Co. (Park Lane, Leeds) had specimens on view of their Ventilating Gas Stove which has very much the appearance of a coal fire stove, over which it claims to have the following advantages:—1. Greater radiated heat than coal fire. 2. Perfect freedom from all smell, smoke, or dust. 3. Constant current of fresh warm air passed into the apartment. 4. Prevents all draughts from doors and windows. 5. Incandescent front equal in appearance to any coal or coke fire. They claim for this stove that it produces the greatest amount of heat at a minimum cost.

Dr. ERNEST JACOB (12, Park Street, Leeds) showed his Ventilating Coil Case with mixed valve for steam or hot water coils. The air is admitted from the outside, and passes either over the heating coils or unheated according to the position of the upper valve. By adjusting this valve the air can be admitted at any required temperature. The lower valve is shut only when the room is to be heated previous to occupation, and no ventilation is required. The air then circulates from the room through the coil box by the lower opening. This method is used, with some slight modification, in the ventilation of the New Leeds Mechanics' Institute Science Schools, in conjunction with an exhaust shaft, and is found to work satisfactorily. The coil cases were made by Mr. E. Oldroyd, Crown Works, Leeds.

Jeyes' Automatic Disinfectant Distributor (Flanders's patent) was exhibited by JEYES SANITARY COMPOUNDS COMPANY, LIMITED (43, Cannon Street, London). This is an ingenious machine (which can be fixed without mechanism to any tank, cistern, or water waste preventer), the action of which is regulated by the rise and fall of the water which automatically discharges from the distributor the required quantity of the disinfectant put into it. It is made in various sizes to suit all requirements. This firm also showed some of their other preparations, including Lano-Creolin, a non-poisonous ointment containing 50 per cent. of creolin, a substitute for iodoform, corrosive sublimate, and carbolic acid.

THE LEATHER AND RUBBER BOOT COMPANY (20, Albion Street, Leeds), exhibited specimens of Scafe's Patent Leather and Rubber Combination Boots. These boots have much to recommend them from a hygienic point of view; they are perfectly water and damp proof, and have an elasticity not obtainable with leather alone. Their construction is ingenious; the middle sole is of vulcanised rubber covered with rubber discs or studs which pass through holes in the outer sole projecting from it, giving a soft noiseless and elastic tread. They are said to be very durable, comfortable to the feet, and particularly adapted to the use of the medical man, both on account of affording a practically noiseless walk, and proof against snow, rain, and damp. They have, we believe, been used by some of the nurses in the Leeds Infirmary. For hospital and nurses' use they seem to have special advantages.

The LONGFORD WIRE, IRON, AND STEEL COMPANY showed Wood's Patent Galvanised Steel Wire Mattresses, which we have already noticed.

In this Section was also shown a very interesting collection of Ambulance Appliances. The officer commanding the 6th Division of the Volunteer Medical Staff Corps, Leeds (Dr. De Burgh Birch), exhibited a part of the Field Equipment of a Bearer Company, including an ambulance waggon, cacolets, field stretchers, medicine panniers, fracture boxes, surgical haversacks, and field and medical companions. The St. John Ambulance Association (Leeds Centre) contribute an Ashford Litter and Cover, a Stretcher with Telescopic Handle, Police and Military Stretchers, a Low Moor Jacket, a small hamper of First-aid Material, a Triangular Bandage, a Set of Splints, and a Life-saving Ice Ball. The Mission to Deep-Sea Fishermen (181, Queen Victoria Street, London) showed an Ambulance Stretcher, designed by Mr. M. S. Drake.

Messrs. SLATER and SON (Bond Street, Leeds) showed a selection of scientific sanitary contrivances, among which were, a large Canopy Bath, supplying douche, shower, spray and wave; a drain "Intercepting"-Chamber which effectually excludes sewer gas from the pipes between its position in the grounds and the residences, and induces a fresh-air current through the soil and rain-water pipes; a neat little Lavatory for the Surgery, designed to be fixed on to the wall, where it closes up by the working of a crank attached to lid; a Sitz-bath, which is pretty and ingenious; College Lavatories, etc. This exhibit secured a good deal of commendation.

Mr. R. M. SOMERS, 47, Briggate, Leeds, was the exhibitor of the "Lionel Teale Front Hob Fireplace," a fireplace without front bars. It is constructed entirely of firebrick, with the exception of the grate, bottom, and ashpan, the fuel being surrounded on all four sides by firebrick. The front consists of a firebrick slab about 3 inches in thickness, laid with its edge to the fire, forming a raised hearth or hob on which to keep things warm, and which absorbs heat and radiates it into the room at the same time that it prevents the cold blast of air from reaching the front of the fuel, which in the ordinary fireplace either chills down and blackens the exposed surface of coal, or causes it to burn too swiftly, but makes it burn more slowly, and at a red instead of a white and scorching heat. The doors and windows may, it is contended, be kept open without discomfort.

Mr. JOHN WARD (246 and 247, Tottenham Court Road, London), exhibited within a folded screen one of Mrs. Ferguson Davies's Patent Commodes in pine wood, with metal pail below, fitted with hermetically sealed valve lid, which seems to be a considerable improvement on some of the old forms of commode.

Mr. J. T. WILKINSON (Spencer Street, Hull) exhibited the "Sultan" Domestic Turkish Bath, consisting of a rectangular cabinet, neatly got up, about 5 feet long by 2 feet wide, with a door in front and a hinged lid at the top. The inside has a very comfortably-shaped couch made of hardwood laths, with spaces between, so as allow of the free circulation of the hot air; underneath the couch is a hot air chamber, which, in this patent bath, is heated from the outside by means of a curved and movable flue, and under which is placed either a gas, petroleum, or spirit lamp or stove, as may be most convenient. This bath is put forward as an improvement on baths of this type having the lamp or stove inside, with the result of an insufficient regulation of the heat. When the bather has seated himself upon the couch he can then close the door and lower the lid, which is shaped to fit the neck, and has also two circular apertures with sliding doors for regulating the heat, and also for passing the arms through, so as to read or smoke, etc. There is also a conveniently-shaped and adjustable head-rest, which makes it additionally comfortable.

Mr. T. HARDING CHURTON (60, South Parade, Leeds) erected in the building one of his "Simplex" Mechanical Telephones, which have proved of considerable service in hospitals and other institutions. Several medical men have used them as a means of communication between the consulting-room and the stable; between the dwelling and the surgery; and their employment is usefully indicated in many other directions.

IT has been decided to hold the British Pharmaceutical Conference in Newcastle (the city of its birth) this year.

A FIRE of a serious character took place at the ambulance station of the Fever Hospital, The Grove, Homerton, on Wednesday. The fire was extinguished by appliances kept on the premises, but not until much damage had been done.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1889.

SUBSCRIPTIONS to the Association for 1889 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, AUGUST 31ST, 1889.

THE REPORT OF LORD CAMPERDOWN'S COMMITTEE.

IN another part we give a condensed summary of this anxiously looked for Report, in which the chief points of interest are set forth, for the benefit of those of our readers who may not be able to peruse the full text.

It might be rash to assume that the recommendations submitted by the Committee to the Secretary of State for War will be wholly approved or accepted by any large body of the medical officers; yet we think the majority will consider them on the whole quite as favourable as could have been looked for. However fair-minded and impartial the members of the Committee were well known to be, it was nevertheless felt that the majority of them had no particular interest in, much less leaning towards, medical officers. The Parliamentary members, it was expected, would be likely to view the questions submitted mainly as economists, while the naval and military combatant members would hardly suddenly divest themselves of their traditional and customary attitude towards medical officers. It is satisfactory, then, to find the claims and contentions of the medical officers practically admitted in the body of the Report; but that must, at the same time, be read in connection with some serious "dissents" at the end, in which these claims are absolutely traversed in very important particulars.

In a preliminary article it would be impossible exhaustively to analyse the various matters in the Report and recommendations, so we can only now notice a few more salient points.

It is stated in Mr. Stanhope's Instructions to the Committee that the contention of the War Office has always been that it (the abolition of relative rank) made no practical difference to medical officers; from which we infer the late agitation concerning it was held officially to spring from mistaken sentiment. We by no means allow such a contention, though we readily admit that sentiment was a factor. We have said before, and now repeat, that sentiment is the very life breath of an army, and can no more be ignored among medical than any other class of officers. Around it centres *esprit de corps*, sense of discipline, and all the cardinal military virtues. It is around questions of rank and title that sentiment was supposed to revolve; but in addition to these the Committee had also to report upon the sadly prosaic and thoroughly practical matters of pay, retirement, and conditions of service.

At the outset they report that the rates of pay and retirement fixed in 1879 have been found adequate, but not more than necessary; and they see no way whatever of reducing them. We hope this will satisfy the economists pure and simple, and bring home to them the fact that high-classed medical, like other labour, commands its price in the market. They admit with sorrow that the non-effective vote must always be proportionately heavy, but how to keep it down is beset with great difficulty. To extend the period of retirement to twenty-five years would scarcely alter the total of the medical vote, and they are therefore unwilling, without very strong reasons, to recommend any alterations in the conditions of service which were laid down in 1879.

As regards rank and title, they admit that the abolition of relative rank enabled the medical officers to say, with "a certain amount of logical correctness," that they now had no army rank at all. That is an important admission. They think the grievance of medical officers originated in great part from the abolition of the regimental system. Therein they are more or less right, for it was when cast loose from regimental ties that the medical officers felt the want of real independent army status. They consider the majority of medical officers would prefer, and they therefore recommend, a compound title, commencing with Surgeon-Lieutenant and ending with Surgeon-General; the title of Deputy Surgeon-General would be merged in that of Surgeon-Colonel; relative rank to be practically restored, and the whole body to be called "The Royal Medical Staff." We are far from saying these new titles will satisfy the bulk of the younger officers, but we must admit they are a distinct advance on the present unmeaning and misleading titles. As such, we think they should be accepted. Although departmental, they undoubtedly express the holder's equivalent military rank. The Committee recommend that there should be no ambiguity in the Regulations regarding the rank of medical officers, which should be explicitly stated therein, as well as in Commissions.

They condemn the frequent moving about to which medical officers have been subjected, and think such cannot be inherent in the station hospital system, but rather the result of ill-regulated administration.

They explicitly point out that a continuous tour of foreign service should not exceed five years. We sincerely trust this will be acted upon. The heavy mortality in the department can be clearly traced to the never-ending strain of duty, combined with the trying tropical foreign service, which it would be positively cruel to increase.

They condemn the indiscriminate filling up of home appointments by retired-pay officers, as tending to intensify and prolong the already exhausting tours of foreign service for those on the active list.

They recognise the gross absurdity and injustice of not extending the advantages of Home Warrants to India, where such a large proportion of the medical officers are constantly employed. They recommend the abolition of examinations for promotion, except that between Surgeon and Surgeon-Major. We are heartily glad of this; the examination for Brigade-Surgeon had become a byword and an absurdity. They think

it inadvisable to introduce a short-service systen into the medical department, as tending to place the army almost permanently in the hands of medical officers of the least experience. They have no alterations to suggest regarding the Naval Medical Service, which they say is in a satisfactory and contented condition.

Mr. Stanhope would have a comparatively easy task before him if he had had only the body of the Report to consider, which doubtless is the finding of the majority of the Committee ; but at several points powerful dissents come in.

About retirement Mr. Bartley does not think the Report goes far enough ; and even questions the accuracy of the actuarial reports on the effect of the extension of voluntary retirement to twenty-five years. He would abolish the right to retire after twenty years, and even for future appointments would extend the period to thirty years, or 55 years of age. This is, of course, the view of the pure economist, who looks only at the money side of the question, without thought of efficiency, or whether medical men will accept the hard terms he would give them.

But of even more significance is the dissent on rank and title, signed by Sir William Crossman, Admiral Hotham, and Mr. Bartley. This may be considered the combatants' dissent, although Mr. Bartley, as a civilian, attaches his name. They think medical officers have really no just ground of complaint with their army status ; to confer on them pure army titles would be displeasing to a large number of medical officers and to the army generally ; and they see no reason why any alteration should be made in existing medical titles. They adopt a sort of *non possumus* attitude, except that they would make clear any corresponding army rank medical officers possess. They further recommend that young medical officers should, during their first years of service, be attached to regiments, and that all medical officers should wear on their uniform some distinguishing badge, such as the Geneva Cross, so as to prevent their being mistaken for any other class of officers.

The Chairman and Mr. Macnamara enter a dissent in favour of admitting a certain small proportion of medical officers for a short term of service of five or six years.

We will conclude by mentioning one very suggestive recommendation in which all concur : it is to the effect that in preparing Royal Warrants affecting the military status or position of officers, the official representatives of the officers affected should be duly consulted before anything is done. Can it be that the abolition of relative rank was carried out without consulting the heads of departments ?

THE DUBLIN HOSPITALS BOARD BILL.

The Government cannot be congratulated on their action in reference to the Dublin Hospitals Grants. Having spent two years and a half in considering the subject, they were only able to bring in a Bill at the tail of the session. It was read a first time on Thursday, a second time on Saturday, and it was proposed to go into Committee on Monday, when it was most wisely withdrawn. The Bill came upon the public in Dublin as a surprise. The hospitals and the colleges did not know what the full proposals were until Saturday, the day on which the second reading actually took place, and it was only on a loud all-round cry of dissatisfaction that the Treasury determined to postpone the matter.

The proposals are mostly upon the lines which we have already indicated in these columns. The annual sum of £11,500 is to be given, instead of £16,000. This is to be distributed by a central board ; no hospital is to benefit which does not contain at least eighty beds and instruct fifty paying pupils ; purchase is to be gradually abolished ; the Richmond, Whitworth, and Hardwicke Hospitals will be transferred to the Board, and, in the event of their closure, the officers' pensions are to be paid out of the annual grant ; and compensation to the medical staff is also to be paid from the same fund.

The result of these proposals, if carried out, would be the closing of the three hospitals just named ; Cork Street Fever Hospital would be deprived of £2,500 a year, and its support thrown on the rates ; Steevens's Hospital would lose £1,300 a year ; while Jervis Street and Mercer's Hospitals would receive nothing. On the other hand, the Mater and Vincent's Hospitals, which are managed by Roman Catholic communities, would receive some portion of the grant. The Adelaide, a Protestant hospital, would receive nothing.

When we come to inquire into the pensions of the officers of the Richmond, Whitworth, and Hardwicke Hospitals, we learn that they will amount to nearly £1,000 a year, without any reference to the claims of the physicians and surgeons, which are admitted in the Bill. The case, then, stands thus : that the effort to get a few hundreds a year for hospitals already very wealthy will end in the closing of a famous institution, against which no fault is alleged; the throwing of a burden on the rates in the shape of Cork Street Fever Hospital ; the crippling of hospitals that are at present badly in want of funds ; and, finally, the loss to the city of £4,500 a year, which is to be saved by the Treasury. In legislation of this character, one does not see where the advantage comes in, and it appears evident either that the persons who drew up the Bill were quite ignorant of the question in its important bearings, or that legislation was undertaken to satisfy a demand which is mainly of a sentimental character. We suppose the question will not now be allowed to rest. But it will be well if those most interested will look carefully to see where the ultimate advantage will be in the proposed changes. It does not appear at present, and it has never been shown. Perhaps, when all is over, those who think that nothing good can be permanent will find that they have succeeded only in doing harm on all sides.

THE REPORT OF THE ROYAL COMMISSION ON IDIOTS, IMBECILES, AND FEEBLE-MINDED CHILDREN.

The long-expected Report of the Royal Commission on the Blind, Deaf and Dumb, and Imbeciles has lately been presented to Parliament ; and the *Times* of Saturday, July 27th, contains a reference to the last and not least important class. The Royal Commissioners at the outset met with great difficulty in determining the total number of imbeciles. In the census for England and Wales for 1881 the number is given as 32,717, but it is well known that, in the case of those under 20 years of age, this number is far under the real mark, on account of

the disinclination of parents to admit that their children are weak minded. A special Committee of the Charity Organisation Society, which met in 1876 and 1877, estimated the total number as amounting to about 25 per cent. in excess of the census figures, bringing it up to 49,041, and of these 35,963 were considered to be of a class needy enough to require public assistance. When it is considered that the provision at present made for pauper imbeciles does not at the outside exceed 1,000, it will be seen that the accommodation provided is lamentably deficient, and that much remains to be done.

Previously to 1886 imbeciles and idiots were classed as lunatics, to the great detriment of the former class; but in that year the passing of the Idiots Act simplified the admission of improvable cases into suitable institutions. Guardians of the poor are empowered to send cases for treatment and education to asylums for imbeciles, by virtue of the same Act (25 and 26 Vict., c. 43) as that relating to the deaf and the blind; but, until more asylums are provided, this law must remain to a great extent in abeyance. There are at present only five public establishments open for the reception of pauper idiots and imbeciles, namely, at Lancaster, at Starcross, near Exeter, at Colchester, Northampton, and Darenth, near Dartford, Kent. The last named is the only institution in England and Wales supported out of the rates to which pauper imbeciles can by law be sent, and it has been erected to meet the wants of the metropolitan district only.

With reference to the character and origin of imbecility much has been written, but further investigation is still required. Mr. Graham Bell has shown that there is a strong probability of some correlation between the deaf, the blind, and the idiotic, and Menckel has given several instances of imbecility in children of deaf-mute parents. Mental defect is not necessarily a condition which is congenital, but it is always found together with an immature or diseased brain. It does not as a rule represent the loss of something which had existed, but a hindrance to that something coming into existence. As Esquirol has well put it, "The man that is mad is deprived of possessions which he formerly enjoyed; it is a rich man become poor; whereas the idiot has always been in misfortune and misery." According to the extent of the mental defect, the individuals are called idiots or imbeciles. Imbecility is a milder form of idiocy, not necessarily congenital, but supervening in infancy. The causes of idiocy and imbecility are various; intemperance, insanity, imbecility, epilepsy, or phthisis existing in one or both parents, fright or anxiety of the mother during pregnancy and tedious labour are the most common.

Distinctive treatment is clearly necessary, and the Commissioners in Lunacy and the medical profession generally condemn the association of idiots with lunatics as objectionable and mutually injurious. The Royal Commission agree in the necessity of this distinctive treatment. The question next arises, how far are idiots and imbeciles capable of improvement? And from this point of view they may be divided roughly into three classes: first, those capable of learning to read and write; secondly, those capable of benefiting in a minor degree by school instruction and discipline; and thirdly, the ineducable class. To the capabilities of the first class should also be added the ability to learn a trade, work on a farm, or engage in domestic pursuits. Even those who cannot attain educational proficiency manifest great improvement in their habits.

The experience of Drs. Shuttleworth, Fletcher Beach, and others goes to prove that a fair proportion of discharged patients are capable of remunerative work, and are able to earn their own living; and, regarding those whose habits have been improved, those authorities, together with Dr. Duncan and Mr. Millard, know that weak physical powers have been strengthened, uncleanly habits cured, the spiteful and irritable have become calm, the dependent self-depending. As regards the treatment, since idiots and imbeciles are of low vitality and generally defective organisation, good food, healthy surroundings, judicious medical and nursing care, and specially adapted physical exercises are chiefly indicated. Besides educational exercises, such as Kindergarten, industrial training, and the like, a healthy moral atmosphere, musical and dramatic entertainments, and dancing are found to be beneficial as a means of training. The occupations which they are best suited for are handicrafts, such as tailoring, shoemaking, mat and brush making, and various outdoor occupations; and, in the case of the girls, such pursuits as will tend to their employment, when discharged, as domestic servants. In all cases we think it is advisable, when practicable, that the discharged patients should be under the supervision of an employer who will take an interest in them.

There is much difficulty in inducing parents to part with their imbecile children and send them to school. The compulsory provision is in operation only in the case of the metropolis, the imbeciles from which are sent to Darenth. At the other institutions the inmates are admitted either by election or payment, and, as above stated, there is very inadequate provision for the imbecile class.

The Commissioners consider that for every group of counties there should be an institution similar in character to Darenth, divided into two sections, one of which should be confined to educable imbeciles, the other to imbeciles who have finished their training, but are not sufficiently improved to mix with the outside world. To the school should be sent by the guardians or school authority the children of those parents who cannot afford to pay for their maintenance. They also think that this class should be treated by the State in the same way as has been recommended for deaf, and dumb, and blind children, the grants being based not on individual results, but on the general character of the institution as a training and educating body. Inspection should be vested in the Lunacy Commissioners, who under their existing powers already exercise most of the duties, and have a sympathetic interest in the work. There ought to be two classes of institutions, established under public administrations—schools and adult asylums—and we hope that the County Councils will soon undertake the work. The case of the adult imbeciles did not come under the cognisance of the Commissioners; but there is a great want of a home for such idiots and imbeciles as cannot support themselves when they leave institutions, especially the charitable ones. The result at present is that for want of some assistance they are sent to workhouses and lunatic asylums, and lose the benefit of their former training.

As regards Scotland, there are two institutions provided for

imbeciles—at Larbert, near Stirling, and at Baldovan, near Dundee—which together accommodate about 230 inmates. As in England, the existing accommodation is far below the actual requirements, and Sir Arthur Mitchell considers that to provide distinct and separate treatment for the educable imbeciles would entail the cost of an additional institution. The Commissioners recommend that the enactments carried out in Scotland should be, as far as possible, similar to those recommended for England and Wales.

In Ireland there is only one institution—the Stewart Institution, near Dublin—and this is much too small. Numbers of imbeciles quite amenable to ameliorative treatment are scattered through the 161 workhouses of Ireland, and no special provision is made for them. According to the law, the guardians are empowered to send imbeciles to institutions, but for those above 18 the weekly contribution must not exceed 5s. This restriction makes the law practically inoperative as regards the older patients, for their education requires much trouble and attention, and an expensive staff. This pecuniary restriction the Commissioners wish to see removed, and they endorse the recommendations of Major Trench's Commission of 1879, which were to the effect that, as regards imbeciles, there should be auxiliaries to workhouses in certain parts of Ireland for their separate care and treatment. One additional institution for Roman Catholics would probably be requisite for the reception of educable imbeciles. The Commissioners then indicate the means by which the money should be raised for the education and maintenance of imbecile children, and recommend that the guardians should have the power of establishing institutions where necessary.

The Commissioners conclude by making various recommendations respecting the idiots and imbeciles of England and Wales, most of which have been previously referred to. Certain recommendations are also made with reference to feeble-minded children, but these we do not now mention, as the subject has already been touched upon in the JOURNAL.

THE HEREDITARY FACTOR IN ALCOHOLISM.

To the thoughtful medical man, who is at the same time engaged in philanthropic work, it must often be a source of discouragement when he reflects that few, if any, of our schemes for ameliorating the condition of our fellow men do more than touch the surface of the evils attacked, leaving their obscure and deep-seated causes to go on producing a like train of ills entirely uninfluenced by our efforts. Someone asked Dr. Oliver Wendell Holmes if it were not the fact that every disease could be cured if the doctor were called early enough? "Yes," he replied, "but early enough would commonly be two hundred years in advance." That Moorish doctor spoke like a philosopher when he prayed: "Oh God, be kind to the wicked! Thou hast been sufficiently kind to the good in making them good." We must all have sometimes wished that the human race could be propagated with as much care as breeders bestow upon horses and cattle; and no thinking man of our profession can contemplate without pain the marriages of consumptives, syphilitics, neurotics, or drunkards. Especially terrible, appears from recent researches, is the part played by alcoholism in heredity.

The *Progrès Médical* has done the medical profession at large good service by publishing M. Paul Sollier's Aubanel Prize Essay on the "Rôle of Heredity in Alcoholism." A more suggestive study for the physician, and a more saddening one for the philanthropist, it would be difficult to imagine. Here is original sin in terms of modern science, and the punishment threatened in the decalogue to the "third and fourth generation" is exhibited at work in perhaps its most terrible form. By abundant and well-arranged statistics M. Sollier traces the afflictions of the idiot, the epileptic, the imbecile, the hydrocephalic, the choreic, and the mentally debilitated, up to the alcoholic father, mother, or grandparent, in so many and such clearly marked instances that it is quite impossible to deny his conclusions from the data he gives. "Conception in a state of drunkenness of the father or the mother devotes the individual conceived to a condition so profound (idiocy, complicated frequently by epilepsy, hydrocephaly, microcephaly, etc.), so that it is condemned in general to a very short existence." An alcoholic subject runs a terrible risk of conferring upon his descendants either insanity or tendency to vice, or suicide, or hysteria, the milder nervous disorders. The legacy of evil may miss a generation, and then appear in the next like gout. It will generally manifest itself, if it appear in the form of dipsomania, in a taste for the same liquor as that preferred by the ancestor, and in its mildest form it will tend so to predispose the unhappy descendant to the evil of ebriety that he will find the freedom of his will in that direction seriously imperilled. The menopause more even than pregnancy seems with women a determining cause of alcoholism. Or its terrible influence may first be manifested after some nervous shock, in sickness, or with advancing age. Hereditary alcoholism has a certain likeness to dipsomania, and it is a fair ground for question whether such a proved condition does not constitute irresponsibility.

Dr. Bourneville, to whom the work is dedicated, has written a very interesting preface, in which he asks, in view of the sad revelations of the statistics, What is to be done to remedy the evil? He suggests the establishment of special asylums for the treatment of inebriates, much greater supervision of the drink trade, and increased penalties for adulteration; but above all, the making known to the public by every possible means the awful consequences which our drinking customs entail, not only on the drinkers themselves, but upon their descendants. It seems to us that medical men taking up the question on the lines of M. Sollier, and teaching it medically from the same point of view, without complicating the question with the often exaggerated arguments of our teetotal friends, might do much to enlighten public opinion on a matter surely second to none in importance for body or soul. How much the moral character of the drunkard becomes degenerated we are constantly compelled to observe; perhaps the mildest form in which he transmits the consequences of his vice to his offspring is in the form of a dulled moral sentiment, a hazy mental outlook which, while not always developing to actual turpitude, yet makes the higher forms of manly and womanly nobleness difficult, if not impossible of attainment.

MEDICAL MAGISTRATES.—Among the new magistrates for Pembrokeshire we see the names of Dr. Bennett, of Haverfordwest, and Dr. David Havard, Newport.

INCREASE OF SCARLET FEVER IN THE METROPOLIS.

At the meeting of the Metropolitan Asylums Board Managers on Saturday last, the number of scarlet fever patients was reported as 808, being a large increase. Mr. Scovell moved a resolution, which empowered the General Purposes Committee to take the necessary steps to prepare as much accommodation at the Northern Hospital as might be required for the reception of patients. Dr. Massey moved, as an amendment, that the South-Western Hospital be substituted for the Northern. On being put to the vote, the motion was carried.

OUTBREAK OF TYPHOID FEVER AT THE WEST END.

Dr. Corfield, in a further report on the outbreak of enteric fever in his parish, dated August 27th, reports four more cases in four houses in the parish, three in Belgrave sub-district and one in Mayfair, and also one doubtful case in the Belgrave sub-district. Two of the above we were enabled to report last week, and as we go to press the intelligence reaches us of a further case, making two new ones in the Belgrave sub-district. The date of attack of all these cases was between July 25th and 27th. There have been two deaths. Dr. Corfield absolutely denies that there is an "epidemic" of typhoid fever in the parish. He knows of only two cases which have occurred since July 27th, and one of these is, in his opinion, of very doubtful nature. It would, however, tranquillise the apprehensions which have not unnaturally been excited to be assured positively that the outbreak, such as it is, is definitively at an end.

MEDICAL CIVIL SERVANTS AND THE PENSION BILL.

We congratulate our brethren of the Local Government Board and other departments of the public service on the speedy withdrawal of the Civil Service Superannuation Bill. Like Marcellus, it was only shown for a brief moment to an inappreciative world and then promptly consigned to the limbo which holds so many other massacred innocents. There were several objectionable features in the Bill besides the one to which we invited the special attention of medical M.P.'s last week, but *de mortuis nil nisi bonum*. If the measure is revived next session, as it is pretty sure to be in a more or less modified form, we hope that Parliament will insist on more generous treatment of the medical and other experts who give their professional lives to the service of the country, often for a very inadequate wage, in the confidence, which they had been led to believe well founded, of a certain provision for their declining years. It is most important that the fact should be fully realised by those in authority that it is the prospect of a pension that is the great inducement to professional men to enter the public service. Reform is no doubt necessary in certain matters connected with the superannuation of civil servants, but if the question of pensions is to be dealt with on the basis of a pedantic and unfair uniformity, medical men of high attainments will think twice, and three times, before entering the Government service.

"CANAL SORE THROAT."

In view of the early completion of the Manchester Ship Canal—in from fifteen to eighteen months—the directors of the Ship Canal are making vigorous efforts to induce the various local authorities to arrange for the carrying out of sewage schemes whereby the pollution of the Irwell and Mersey and their tributaries will be prevented. The water of the Medlock is occasionally used by the Bridgwater Canal Company, and at a meeting of the Altrincham Union Sanitary Authority it was stated that the condition of the canal gives rise to a peculiar disease called "canal throat."

DEATH OF DR. HABERSHON.

The Association and the profession have sustained another severe loss in the death of Dr. Samuel Osborne Habershon on August 22nd, at his residence in Brook Street, a loss which will also be felt by a large circle of friends, and by the College of Physicians, at whose deliberations his quiet and weighty opinion was always valued. But imperfectly recovering from a severe gastric attack in November last, accompanied by hæmatemesis, he received a serious shock from the death of his wife some months ago, and this was followed by a recurrence of the disease in July. Notwithstanding the skill of his professional friends and careful nursing, symptoms of ulceration of the stomach became more definite, and repeated hæmorrhages gradually exhausted his strength and led to his death at the comparatively early age of 64. Few of us have come in contact with Dr. Habershon without being impressed by his clearness of perception, his practical and extensive knowledge, and his painstaking method. To these qualities were added a rigid adherence to principle and straightforwardness of character which endeared him to many friends and gained him the respect of all. The funeral service, which was at Dr. Habershon's house, at Brook Street, on Tuesday, August 27th, was conducted by the Rev. C. H. Spurgeon. The burial took place at the West Hampstead Cemetery immediately afterwards, where a brief service was held at the grave side. Here a large number of relatives and friends were assembled, amongst whom we noticed many medical men, former colleagues of Dr. Habershon at Guy's Hospital, and others.

PUBLIC MEDICINE AT THE LEEDS MEETING.

We are enabled to publish to-day a complete report of all the work of the Section of Public Medicine at the recent annual meeting. It will be found to be of considerable interest, and was just completed in the time allotted to sectional work. The President of the Section, Dr. E. Ballard, opened the business on Wednesday morning by an address on Medical Officers of Health, their Training, and the Conditions on which they should hold Office. The result of a lengthy discussion was that Dr. Caldwell Smith moved: "That in the English Local Government Bill a clause should be inserted providing that no medical officer of health shall be dismissed without the consent of the Local Government Board, and also that in regard to the appointment of medical officers, that the word 'shall' should be substituted for 'may' in the Local Government Bill." This resolution was seconded by Mr. Loe (Leeds), and carried unanimously. Other papers were also discussed on this day. On Thursday two subjects were considered, of which one was Disinfection and Isolation, with special reference to the Control of Epidemics. This was ably introduced by Dr. H. F. Parsons (H.M. Local Government Board). A resolution respecting the plan of action to be adopted by hotel keepers in cases of infectious diseases occurring amongst visitors to such establishments was unanimously passed. The second subject for consideration on this day was Town Refuse: its Treatment and Disposal, and many papers relating thereto were read. On the last day of the meeting there were also two subjects for consideration, one being Diseases and Injuries caused by Special Occupations, with reference to their Prevention. Dr. J. T. Arlidge introduced the subject by a paper on the sources of lead poisoning, which he showed to be almost legion. The last topic for discussion was the Contamination of Drinking-water by Lead: its Causes and Prevention. Dr. Sinclair White (Sheffield), Dr. T. B. Fairclough (Mirfield), and Mr John Brown (Bacup) contributed papers. After the discussion, votes of thanks to the Secretaries of the Section (Mr. G. Eastes, M.B., and Dr. A. T. Underhill) and to the President closed the proceedings.

INFECTIOUS DISEASES IN HOTELS.

Few experiences in life, at any rate amongst members of the wealthier classes, are more wretched than that of the individual who may unfortunately fall sick of an infectious disease whilst sojourning in an hotel. The noise and bustle of the establishment are the absolute reverse of the quietude and repose which are required for the careful treatment of the case; the difficulty in obtaining proper food, particularly that which, as beef-tea, requires special preparation, is notorious; and lastly, the heavy charges which in most cases are made by hotel proprietors render the whole business very serious for the patient or his friends, from the pecuniary point of view. Not that the landlord reaps any monetary advantage from his sick lodger; for as soon as it becomes known that there is a case of infectious disease in the house, the other visitors are apt quickly to seek other quarters. Should the illness happen in an hotel in a foreign land, the miseries of the invalid are likely to be considerably accentuated; the language of the servants is not his own, and the charges are sometimes exorbitant, especially when the landlord considers himself justified in charging the sick man for the rooms vacated by the other visitors scared away by the fear of infection. With a full knowledge of all these details, the Section of Public Medicine at the recent meeting of the British Medical Association at Leeds passed a series of resolutions bearing on the subject, which deserve to be published far and wide, inasmuch as they provide for emergencies of the kind under consideration, and seem to be fair and practicable. The text of the resolutions was published in the Journal, August 24th, p. 425. It may be reasonably anticipated that these or similar resolutions will shortly be put into practice, both in England and abroad. When that desirable result comes to pass an end will arrive to many of the incidental troubles that beset those who are so unfortunate as to be laid up with an infectious disease in an hotel.

DEATH OF A PLUMBER FROM LEAD POISONING.

An inquest was held on Saturday, August 17th, before Dr. Danford Thomas, on the body of Frederick Foster, aged 46, a plumber, residing at Holloway, who met his death by lead poisoning. From the evidence of the widow, it appears that the deceased, who two years ago was a healthy man, had since that time been restless at night, complaining of his head and of a burning pain in the abdomen. It seemed he had taken certain preventive measures, for she stated that he took sulphate of magnesia and salts, and was careful to wash his hands with a powder after he ceased working, and also to remove particles of lead from beneath his finger-nails, but still he continued susceptible to lead poisoning. The coroner observed that he had never had previously a death from lead poisoning before him where the victim was a plumber. The deceased, he thought, must have been a very susceptible subject. Dr. Parker, who had been called in, said that he had twice or thrice advised the deceased that his only chance of preserving life was to relinquish his trade. When he saw him he was in a moribund condition. He died from uræmia when suffering from disease of the kidneys, produced by chronic lead poisoning, contracted by him when working at his employment as a plumber. The jury returned a verdict accordingly.

THE TOXIC ACTION OF CHROMIC ACID USED AS A CAUSTIC.

Dr. J. W. White, of Philadelphia, has recently reported[1] the case of a young woman who was admitted into the venereal ward of the Philadelphia Hospital with a large mass of papillary growths covering the labia and nymphæ. After a fortnight of preliminary treatment, an application of half an ounce of a solution of chromic acid (100 grains to the ounce) was made. This was followed by restlessness, thirst, nausea, paleness, coldness of the extremities, pain in the left hypochondriac region, and fear of approaching death. The temperature was 99° F., and intelligence was unimpaired. The patient died twenty-seven hours after the application of the acid. The necropsy showed numerous fine ecchymoses in the stomach, the result of vomiting. The liver showed nutmeg change. The kidneys were the seat of passive congestion; their capsules were easily stripped off. The mucous membrane of the vagina was dark red in colour and covered with yellowish discharge; there was no evidence of the acid having come in contact with it. The kidneys and liver contained chromium, probably chromate of sodium, derived, in Dr. White's opinion, from combination of the chromic acid with the sodium carbonate of the blood.

[1] *Journal of Cutaneous and Genito-Urinary Diseases*, August, 1889.

LEPROSY IN THE NEW WORLD.

At the meeting of the New York Academy of Medicine, June 6th, 1889, Dr. Prince A. Morrow gave an account of his personal observations on leprosy in Mexico and the Sandwich Islands. He stated that there was good authority for the assertion that the disease was introduced into Central America by the Portuguese, into Mexico by the Spaniards, and into Canada by the French. In the United States it could be traced to at least three or four distinct sources, according to the locality. In California it was introduced by the Chinese, and in the North-West by the Scandinavians. He stated, as a fact that had not yet been mentioned, that it had been introduced into Salt Lake City by Mormon converts in the Sandwich Islands. He remarked that Dr. Blanc had seen forty-two cases in New Orleans alone, and on his visit to that city he found that cases were scattered here and there throughout it. He saw a number in Mexico and in San Francisco. He found six or eight in the pest-house of the latter city, three being Chinese and one negro. He states that when at Molokai there were nearly 1,100 cases in the settlement. In his remarks on the bacillus Dr. Morrow stated that it was present in abundance in the vaccine pustules of leprous patients. The period of incubation, he stated, varied from three to fifteen years. He had examined a great many of the patients in the Sandwich Islands and found that in almost every instance a history of exposure could be obtained, either in sexual relations or in conditions of prolonged intimate contact. He considered that the spread of the disease might be accounted for by the fact that relatives were permitted to care for the diseased in the leper settlements. In 1880, according to the report of the President of the Board of Health, 23 out of 66 such helpers had contracted the disease and 11 others were suspected. He considered it probable that a number of the cases which had arisen in the Sandwich Islands had been caused by impure vaccine. One patient whom Dr. Morrow saw believed that he had acquired the disease through the bite of a leper, and another through sticking himself with a pin, which he had done in a spirit of bravado, in imitation of a leper who had used the same pin. Children never showed evidences of leprosy before the third or fourth year, usually not before the fourteenth year, whilst the majority of cases occurred between the ages of 30 and 50 years. Only a small proportion of the children of lepers in the Sandwich Islands developed the disease unless exposed for a long time to contact with those affected with the disease. That a certain susceptibility in the affected person must exist seemed to be shown by instances such as that related by Dr. Morrow, in which a man had lived with a leprous wife many years, and had a leprous daughter, aged 25, and yet had himself remained in excellent health. In connection with the case of a woman on the island who had had three husbands, each one of whom had become leprous whilst she had apparently remained free from the disease, Dr. Morrow suggests whether it was not possible that she had had

the disease without external manifestations, and had given it to her three husbands successively. In some instances persons had remained free from the disease during an exposure of twelve or fifteen years, then contracted it, and died. Dr. C. W. Allen, two years ago, had estimated the number of lepers in the United States at 150, but he now believed that there were many more. Dr. G. H. Fox remarked that nearly all the cases were imported ones, and considered that, as there was no law prohibiting their migration or compelling their segregation, the small number of cases showed that there was not much danger. At the same time he advocated strict enforcement of quarantine laws, not because of danger of the spread of the disease, but because, like paupers, they were likely to become a burden to the community. Dr. H. G. Piffard also recommended a quarantine law. Dr. R. W. Taylor, whilst admitting a possible danger of leprosy becoming endemic in the United States, stated that during the past fifteen years he had seen almost constantly one to three lepers sleeping in the crowded wards on Blackwell's Island, and in no instance had the disease been conveyed to others.

HYSTERECTOMY FOR FIBROIDS IN VIENNA.

Professor Albert has published, in the *Wiener Med. Wochenschrift*, ii, 1889, a paper on ten successful cases of abdominal section for myoma of the uterus. In all, the extraperitoneal method of treating the stump was adopted. The elastic ligature was used in order to prevent hæmorrhage during the enucleation of the fibroid and the amputation of the uterus, the stump being fixed with pins. In fact, the operation was performed in the manner practised by Drs. Keith and Bantock in this country. In one case an abscess in Douglas's pouch was laid open during the operation. The abscess was drained through the posterior vaginal fornix, the tube being removed on the fourteenth day. In another, Professor Albert found a pancreatic cyst in close proximity to the uterine myoma, which was very large, and removed both. This remarkable case will, the author informed his readers, be published in full. In one (and apparently in only one) of the ten cases a myoma had to be shelled out of the hyoid ligament. The posterior layer of the ligament was sewn to the abdominal incision, and the cavity left between the layers was stuffed with iodoform gauze. Professor Albert rejected the use of sponges for cleaning the peritoneum, and attributed his success in no small degree to this new departure. Our readers are aware that Dr. Keith, a successful operator, published a paper in the Journal of June 8th, wherein he advocated electricity as a safer and more justifiable proceeding in cases of fibroid than hysterectomy. Opinion is still much divided on this question.

ABSENCE OF THE LEFT KIDNEY.

Dr. P. Bezançon has recently described before the Société Anatomique de Paris a case of this malformation, where there was also great arrest of development in the genital tract. The patient was 38 years old, and had been married eighteen years; the catamenia had never appeared. The father died of phthisis. She was admitted into the hospital in a moribund condition from advanced pulmonary phthisis. The disease had lasted about five months, and during the last years of her life she was addicted to drinking. She died three days after admission. The lungs were found extensively diseased. The right and only kidney was perfectly normal, anatomically and histologically. It weighed 95 grammes. On the left side a flat reniform body was found, connected with the vena cava by a large vein, apparently the renal. This vein received the ovarian vein. On careful dissection, the reniform body proved to be the left suprarenal capsule; the kidney was entirely absent. There was but one ureter, and that lay on the right side; nor was there any trace of a left ureteric orifice in the bladder. Both ovaries and fimbriated ends of the Fallopian tubes were present; the uterus was merely represented by a fibrous band. The right broad ligament contained a myoma the size of a walnut. The vulvar structures were normal, but the vagina was reduced to a shallow fluid pouch, bearing evidence of tubercular ulceration. The absence of any disease of the single kidney in an alcoholic patient is worthy of note.

ASTHMA AND THE UTERINE SYSTEM.

Dr. Peyer has recently written in the *Berliner Klinik*, part 9, 1889, on an affection which he terms sexual asthma. He maintained that asthma was always neurotic, and that in different subjects asthmatic convulsions were brought on by the influence of different physical functions. In two young married women coritus caused violent attacks of asthmatic sneezing. In another case the patient suffered from uterine fibroid, with severe asthma, which disappeared after the removal of the tumour. A patient was subject to violent asthmatic fits; on her becoming pregnant for the first time, the asthma was completely cured. In a similar case, of asthma, the patient suffered from chronic metritis. When the uterine affection was cured, the asthmatic complication disappeared. In all Dr. Peyer's cases the patients were more or less hysterical, and in two there was a distinct family history of neuroses. The physician must be careful now to distinguish between the possible coincidence of true asthma and disease of the sexual functions and the alleged form where the former is an effect of the latter. In the case of coincidence it is perfectly easy to understand that any aggravation of uterine or ovarian disease and any irritation of the sexual functions might aggravate the asthma. The other condition is less easy to understand, and very hard to prove in a scientific manner.

PLACENTAL DEVELOPMENT.

There are few subjects more intensely and essentially scientific than the study of the development of the placenta. As, however, all observers are agreed that the inner wall of the uterus takes a more or less prominent share in the process, the subject is of practical interest to the practitioner and specialist. The placenta is, to those who cannot study pathology or histology, a structure to be carefully removed and destroyed. The condition of the uterine wall after labour, and its involution, on the other hand, concerns all who have the charge of parturient women. Besides, we are not certain as to the precise character and limits of the endometrium; and this uncertainty renders the pathology of endometritis obscure. Dr. Marcy, of Boston, read an instructive monograph on Placental Development before the Ninth International Congress. In summarising current researches, he showed that during pregnancy the uterine mucous membrane, which consists of a simple layer of epithelium closely attached to the subjacent mucous membrane, disappears. It is replaced by a layer of decidual cells, proliferated from the vascular network of the uterine wall. The utricular glands are not destroyed, but increased in size. The constant secretion from the glands forms openings through the decidua vera, which form sieve-like perforations easily traced by the naked eye. By the proliferation of the scrotinal cells at the placental site, these glands are, by the pressure from their own obstructed secretion, dilated and altered. This forms the stratum called by Kölliker the non-cadaceus portion of the placenta. Traces of these glands may be observed, even to the termination of pregnancy, but none whatever are found in the cadaceus stratum of the placenta, as defined by Köllicker, where it would be expected that they would be found if, as claimed by him, the placenta be a transformation of the uterine mucosa. The stratum where the placenta is formed is developed from a mass of cellular or decidual elements, traversed by a vascular network, with endothelial walls only during the first months of pregnancy. Among these elements the fœtal villi are buried. During the first

three months of pregnancy the fœtal villi can be separated from the maternal portion without a laceration of the latter, in the same way as in the non-decidual mammalia. Dr. Charles Sedgwick Minot's valuable paper on the uterus, in the Boston *Journal of Physiology*, also throws light on the relations of the placenta to the endometrium or its representative in pregnancy. In order to instruct and enlighten the profession, histologists should faithfully study the human uterus rather than the same organ in kittens and guinea-pigs.

ACUTE INFECTIOUS PROCESSES IN BONE.

Owing to the progress of the new science of bacteriology, this subject requires thorough investigation. Dr. Roswell Park, of Buffalo, has made some important researches, now published in the July number of the *American Journal of the Medical Sciences*. He came to the natural conclusion that there was no specific microbe for the production of acute infectious processes in bone. Most of the staphylococci could cause them. Exceptionally, the streptococci might exert such an influence, and so might tubercle and typhoid bacilli. In the latter case there was a mixed infection as a rule, the pyogenic cocci being the final and active destructive agents. Of all forms, the staphylococcus aureus was the most pernicious. The parasitic infection might occur through any lesion of the external or internal body surfaces, and from any subcutaneous phlegmon, however small. The infection was not necessarily recent, as staphylococci and the tubercle bacillus could lie latent for a long time. Certain predisposing conditions were usually found to favour the entrance of the infectious germs into the system, and their lodgment in the localities where they manifested the most activity. Of the general causes which favoured their entrance, the diathetic conditions, such as the tubercular and the dyscrasial, like the syphilitic, also the post-febrile, played the most conspicuous part. Childhood was always a predisposing cause. Of the causes which favoured lodgment in particular localities, exposure, exhaustion, strain, and more marked traumatisms were most usually observed. Pathologically, a case of acute infectious osteomyelitis became within a few hours a case of localised pyæmia, with all that the term implied. The pyæmia might become so generalised within a few hours that a patient might die, even within thirty-six hours after observation of the first symptom, of overwhelming septic intoxication. Acute infectious periostitis might run almost as acute a course locally as the corresponding grade of osteomyelitis; but, as the pus found an outlet more readily in peritonitis, it seldom led to as rapid general infection. Early radical and antiseptic surgical measures were the correct treatment of acute infectious processes in bone.

IRELAND.

PRESENTATION TO MR. E. S. O'GRADY.

On Tuesday last, a number of friends of Mr. E. S. O'Grady, Surgeon to Mercer's Hospital, waited upon him and presented him with a handsome brougham and horse, and Mrs. O'Grady with a jewelled bracelet. This mark of confidence and respect was prompted by the late proceedings in connection with the management of Mercer's Hospital. The proceedings were of an interesting character, and the speakers strongly testified to their respect and affection for their teacher.

GALWAY INFIRMARY.

The dispute in connection with this hospital has had a new development. The mandamus of the Queen's Bench, that the governors should proceed to a new election of a surgeon, has not been obeyed; and the judge of assize refused to fiat the presentment of the grand jury for £900. As this necessitated the closing of the hospital, the Galway public being unable to provide the necessary funds, Mr. Henry Persse, a distiller, has declared his desire to keep the hospital open at his own expense.

PROPOSED SMALL-POX HOSPITAL AT DERRY.

At a recent meeting of the Derry board of guardians, attention was called to the fact that the corporation of Derry, who had undertaken to build a small-pox hospital, to be worked by the guardians, had not fulfilled their obligation, and had not applied to the Honourable the Irish Society at their late visit for a site for the proposed hospital. A notice of motion has been given to rescind the resolution passed by the guardians, binding them to supply the said hospital with nurses and medicine and medical appliances.

NEWRY WORKHOUSE.

The Newry guardians recently sent four patients, who had been bitten by dogs supposed to have been mad, to a man named McGovern, who professes to cure hydrophobia. McGovern sent in a bill for about £15 for treating these cases, and as the Local Government Board would not sanction the payment, he obtained a decree for the amount. The guardians expect the bailiffs to make a seizure of the goods of the workhouse, and as they object to pay the sum themselves, they are waiting with anxiety the execution of the decree. As a last resource, they have made an appeal to the Local Government Board to sanction the payment of the amount claimed.

BELFAST HOSPITAL SATURDAY.

The recent Saturday hospital collection in aid of the funds of the Belfast Royal Hospital amounted to £263 16s. 9d., which, with £38 5s., the result of the Queen's College Musical Society *matinée*, brought it to £302 1s. 9d. Printing and other items reduced the amount to £280 19s. 4d. The sum handed to the hospital in 1887 was £235 7s. 5d.; in 1888, £221 8s. 2d., showing a decided improvement in this year's collection.

LUNATICS IN IRISH WORKHOUSES.

The total number maintained during the past year amounted to 4,083, the idiot class being composed of 1,903 individuals, 360 of them being epileptic, and the demented of 2,180, of whom 389 were epileptic. On the whole, they are considerately treated, and regarded as special objects of benevolence, while, as infirm or sick, their dietary, which is discretionary with the physicians, is above that given to the ordinary workhouse inmate. The Inspectors of Lunatic Asylums have recommended the advisability of providing in each district one or more poorhouses, so arranged as to accommodate hopeless, aged, and tranquil cases, thereby disembarrassing asylums to a certain extent, and affording means of admitting into them curable and urgent cases at all times, without incurring the erection of new, or the enlargement of existing, asylums, and avoiding an uncalled for expense in their maintenance. If, at the annual rate of £12 or £14 per head, certain classes of the insane can, without any detriment to them, be supported in one institution, there is no reasonable cause why in another their capitation maintenance should amount to £22.

The Pasteur Institute.—Within the last few weeks thirteen patients from various parts of the country have been sent to Paris, at the expense of the Lord Mayor's Fund, for treatment at the Pasteur Institute. All were suffering from bites of rabid dogs. Towards the Mansion House Fund the Earl of Derby has recently sent £100, and there have been various other donations of smaller amount.

TOPICS OF THE DAY.

(AN OCCASIONAL COLUMN.)

By the Editor.

I understand that Dr. Meymott Tidy will probably publish a toxicological study of the case of Mr. Maybrick. As was pointed out last week in these columns, and as, indeed, was subsequently expressed in the official *communiqué*, the grounds for reprieve lay in the strongly-entertained conclusions of Professors Tidy and Macnamara that the death was not proved to be due to arsenic. The doubt as to the actual cause of death was supported by the conflict of opinion manifested not only between Dr. Tidy and Dr. Stevenson, but also between the several toxicological experts who communicated their judgments to the British Medical Journal after perusal of the evidence and of the conclusions of the sworn experts. They were equally driven to opposite deductions from the puzzling and complicated conditions of the case. After the delivery of these extremely divergent conclusions by perfectly unbiassed experts, who were in no way committed to previously entertained theories or expressed opinions, it was obvious that it was impossible to carry out a sentence of death without inflicting violence on the public conscience, and there remained really for Mr. Matthews only the legal question of the validity of the evidence that, apart from the actual cause of death, arsenic had been administered with intent to kill. On this point Mr. Matthews has satisfied himself that the evidence was adequate; and, as that is a matter of purely legal weighing of evidence, and one which the Home Secretary was in the best position to judge, we have nothing to say on it.

The points which had to be debated by the toxicological experts whom Mr. Matthews consulted after the verdict, although such consultation after the varied opinions published by the toxicologists who contributed to our columns was almost in the nature of a necessary formality, are sufficiently obvious but deeply interesting. It may be well to recapitulate them, for they still remain open for further light; and no doubt Professor Tidy's further utterances will help to put them more forcibly, and others will also be able to throw light upon them. 1. How far does the discovery of a given quantity of arsenic in several portions of the liver taken here and there warrant the allegation that the whole liver contains a proportionate multiple of the amount so found? In other words, is arsenic liable to be unequally disseminated, and, so to speak, found in "pockets," or is it equally distributed through the hepatic substance? 2. Has it places of selective deposit in the intestine, and especially are the duodenum and lower part of the intestine such places? 3. How long after the habitual or occasional taking of arsenic will it be found in the tissues? 4. What amount of arsenic may be found in the body of a person who has died while taking arsenic, but not from its effects? 5. How far are effusions of blood in the mucous membrane of the stomach and fatty degenerations of the viscera, severe vomiting and dysentery essential characteristics of arsenical poisoning, and what deductions may be drawn from their total or partial absence? 6. What is the solubility of arsenic diluted with a small quantity of water in Valentin's meat juice? These are amongst the main questions on which the able experts for the prosecution drew unfavourable inferences, which were strongly contested by Dr. Tidy, and as to which his views have found much support from able toxicologists. No doubt he will now have more to say on the subject, which is interesting and important.

Arsenical poisoning is the most ordinary of all forms of criminal poisoning, and not uncommon as a source of death from various accidental causes and mistakes. Arsenic is one of the most permanent and easily recognisable substances. The tests are delicate, sure, and not difficult. Nevertheless, this case has presented very complex, and probably, at the present moment, practically insoluble problems. It is absurd and wrong, therefore, in such a case to talk of the differences of experts as though they involved discredit to science, or implied want of good faith or unscrupulous advocacy on the part of any of the scientific witnesses. Even lawyers, as we have more than once pointed out, are permitted without reproach to differ upon the interpretation of a series of facts, all of which are admitted and known, and of clauses of Acts of Parliament, where there are no other than verbal doubts. But in cases such as this, as so anywhere where medical experts are called into court, the nature of the problem is complicated by numerous elements of uncertainty, and the ultimate deductions are opinions on the balance of probability, as to which, in the long run, it is exceedingly difficult to get any half-a-dozen acute intellects to be unanimous. The vulgar abuse heaped upon differing experts may be sometimes not altogether undeserved; but it is more often the result of intolerant ignorance. Old Montaigne has a passage which is very pertinent to such reproaches: "Dire mensarge, c'est dire faulse, mais qu'on a prius pour vraye, et la definition du mot de mentor en latin-prius d'on nostre francais est party-porte autant comme aller contre sa conscience; et par consequent, cela ne touche que ceux qui disent contre ce qu'ils scaven."

As to the facility with which in medicine unexpected sources of error may vitiate the most obvious conclusions and lead to totally false opinions, the place where these notes are written—Carlsbad—offers a very striking example or two. The myths of mineral springs are an unwritten chapter in the history of medicine. It would furnish sprightly and instructive material for a philosophic pen. Carlsbad, one of the most popular, useful, and serious of the spas of Germany, could contribute copiously to the calendar of deceptions and delusions which such a chapter would contain. Half the doctors in Europe still warn one against Carlsbad, unless in serious cases of obesity, diabetes, and liver disease. "It is so lowering." Why? "The regimen is so severe and the water so purgative."

Now the regimen is obviously a matter of choice or command, and has no material connection with the chemical character of the Sprüdel. But as to the waters being purgative, this is a pure myth, as all the Carlsbad physicians acknowledge their tendency is in another direction. But what, it may be asked, about "Carlsbad salt." Is it not the evaporated salt of the Sprüdel, and is it not recognised everywhere—even in *Bradshaw*—as "a mild purgative." Yes; and therein lies the grave practical joke which Carlsbad has practised upon the profession throughout the world for a long series of years. Carlsbad salt is aperient, and the Carlsbad Sprüdel, from which it is evaporated, is the reverse. For a generation none asked themselves what this meant; and the jargon which is current about "the laboratory of nature," and the mysterious properties of natural mineral waters "drunk upon the premises" stilled all curiosity, until one day an Austrian chemist examined by analysis, and found that the Carlsbad salt was little else than ordinary sulphate of soda, of which the "natural water" contains only a very small proportion indeed. As to Carlsbad being "lowering," so may any place become when people habitually starve, and walk and wash their insides copiously at 6 o'clock in the morning with repeated draughts of hot saline water. I defy the starving as well as some other traditions of which something more may be said another day, and, contrary to every accepted tradition, I always gain weight there.

To appreciate precisely the part which the waters or the walking, the diet or the drinking, play in the Carlsbad would, no doubt, require a more scientific therapeutic analysis than this holiday column pretends to. The subject lends itself to further handling, but *variam dat otia mentem*; and I break off to say a word of regret at the announcement of the death of a notable therapeutist, a great authority on dietary and on drugs, concerning both of which he wrote with singular vigour, freshness, and independence of thought. Dr. T. K. Chambers was cut short in his professional career by a lamentable accident—an aneurysm which was refractory to ordinary surgical proceedings, and necessitated amputation of the leg. None of his friends and colleagues at St. Mary's Hospital will forget his cheery courage and manly determination to continue his hospital work, of which the clinical side was very dear to him, as long as his strength permitted. He inherited the best professional traditions from his celebrated uncle. His fresh and vigorous teaching, his picturesque power of expression, his high-bred courtesy and manly frankness, made him very popular with the students in the early days of St. Mary's. "King Tom" he was called, in allusion to his stately bearing, as well as to some of his genealogical pretensions. He was a trustworthy and agreeable colleague, and did much to lay the founda-

tion of the remarkable success of that youngest and very flourishing metropolitan school. Of his writings, the clinical lectures, which he somewhat fantastically entitled "The Renewal of Life"—a title which gave umbrage—and his *Manual of Dietary* were the most notable. His later work, done at the General Medical Council, after retirement from practice, was meritorious, laying the foundation of the subsequent steps against repression of practising "under cover," and of the abuse of "unqualified assistants." He belonged to a generation which is fast passing away, but which has left honourable traces in the history of metropolitan medicine.

REPORT OF LORD CAMPERDOWN'S COMMITTEE.

WE give the following summary of the report and recommendations which were published on the 23rd instant. The members were as follows:—The Right Hon. The Earl of Camperdown, *Chairman;* Surgeon-General T. Graham Balfour, C.B.; George C. T. Bartley, Esq., M.P.; Lt.-Col. E. T. D. Cotton, M.P.; Major-General Sir W. Crossman, M.P.; Rear-Admiral C. F. Hotham, C.B., R.N.; N. C. Macnamara, Esq., F.R.C.S.; Sir Herbert E. Maxwell, Bart., M.P.; R. H. Hobart, C.B., *Secretary.*

The instructions for the committee are conveyed in a War Office letter from Sir Ralph Thompson, Permanent Under-Secretary.

He informs the Committee, under directions from the Secretary of State for War, that the subjects for their investigation into the pay, status, and conditions of service of medical officers of the Army and Navy had arisen partly from the report of the Select Committee on the Army Estimates, 1888, and partly from the Royal Warrant of 1887, abolishing relative rank. He expresses what has "always been the contention of the War Office," that the abolition of relative rank, and the substitution of "a classified schedule," wherein medical officers were described as "ranking as," made "no pecuniary" and "no practical difference to medical officers;" but the opinion of the Committee is requested. He further requests the Committee to consider a correspondence which had passed between the War Office and the Admiralty and India Offices; also, with the Society of Apothecaries, as to the admission of their Licentiates to compete for commissions in the Medical Staff.

The report of the Committee is short and to the point: Part I, relating to the Army; and Part II, to the Navy, under a number of heads. A number of letters and tables are given in the appendix, but personal evidence given before the Committee is withheld.

The Committee states its labours were materially shortened by having before it a "large quantity of evidence and other public information already existing," as well as the evidence given before the Parliamentary Select Committees, and above all, the report of Mr. Thompson's Committee of 1878.

PART I.—ARMY.

1. *Full Pay.*—The present rates were established by the Royal Warrant of 1879; are "adequate," and the medical officers "contented" therewith; and "having made such inquiry as has been in our power we find no reason to differ from the conclusions arrived at" by the Committee of 1878. As regards the present rates of pay, "we have made careful inquiry from those persons we thought most likely to be able to suggest reductions, but without any success."

2. *Retirement.*—"The large proportion of retired to active officers has, of course, attracted our attention." In the Estimates 1889-90, excluding quartermasters, there are 493 retired against 915 on the active list. The calculation of the actuaries is "that the retired list will, under the present system, amount to three-fourths of the active list under normal conditions." The large number of retired officers is due to two causes: compulsory age retirement, and to "the right which every medical officer has to retire after twenty years' service." Compulsory retirement at 55 in the executive ranks, being fixed with reference to the "age at which a surgeon is fit to serve in a campaign, we do not see our way to propose any change here." Further, as to administrative officers, "we do not see any reason why surgeons-general should not continue to serve until the age of 62." Surgeons-general and deputy surgeons-general should serve at least for two years, and brigade-surgeons for three years, before being permitted to retire on the rates attaching to these ranks, except in case of permanent ill-health contracted in and by the service. The right to retire after twenty years' service was "one of the inducements given by the War Office in 1867;" it is "much valued by medical officers," and has been used to a considerable extent; but it should be remembered that "many who have thus retired have merely substituted this mode for that of retirement on the certificates of a Medical Board on the ground of ill-health."

The actuaries of the War Office report that, by postponing the right to retire to twenty-five years, financially the total result would be as near as possible the same, inasmuch as the full-pay vote would be raised by a "sum almost identical with the diminution of the retired-pay vote."

"We fear the Accountant-General is correct in assuming that the non-effective medical charge must always be proportionately heavy. We are unwilling, without very strong reasons, to recommend any alteration in the conditions of service which were laid down in 1879; but, without altering the conditions of retirement or the rates of retired pay, more service may fairly be required from medical officers." With this view, establishments of station hospitals should be overhauled at home and abroad, and medical officers in charge required to take a fair share of the executive duty.

"Financial saving must be effected chiefly by limiting as much as possible the establishment of officers, and by requiring a sufficient amount of work from every officer."

Civil practitioners should be employed at small home stations.

3. *Rank; Title.*—Especially the younger medical officers are not content with their present position. Discontent is not of recent origin, but manifested after the appearance of the Royal Warrant of 1887, "which omitted all reference to, and so by implication abolished, relative rank." Medical officers, with "a certain amount of logical correctness," say they now have no army rank. "They admit there never was any real substance attaching to the term 'relative rank;' the restoration of relative rank would not satisfy their grievance."

It is true neither pay nor precedence was affected by the abolition of relative rank. The grievance appears to have originated in great part from the abolition of the regimental system; by this abolition the medical officer has fallen apart from the army in a professional sense. Regarding title, as distinguished from command, it is said a considerable number of medical officers desire military titles and definite military rank. The majority of the medical witnesses who appeared as evidence before the Committee favoured a double title. "We are of opinion that no good reasons have been given for conferring pure military titles on medical officers." Such would be displeasing to a large number of army medical officers, and to the general feeling of those in the navy. "We think, too, that it is essential for the dignity of the army medical service that it should plainly appear that they are members of their eminent profession." Titles and army rank should be made clear in the Regulations and on the Commissions. A compound title, up from Surgeon-Lieutenant to Surgeon-General, is recommended, the titles of Brigade-Surgeon and Deputy Surgeon-General being merged respectively into Surgeon Lieutenant-Colonel and Surgeon-Colonel.

"The first fifty Surgeons Lieutenant-Colonels should have the pay and allowances now attaching to Brigade-Surgeons." "Surgeons Lieutenant-Colonels, not being in the first fifty on the list, should retain their right to retire after twenty years' service."

The ranks of medical officers should have the "relative army rank," as expressed in their titles, from Lieutenant to Major-General. The proposed titles should "correspond with and be equivalent to" the respective army ranks and titles. Surgeons should hold the rank on entering the service of Lieutenant for the first three years of service. In preparing Royal Warrants the official representative of all classes of officers affected should be consulted before anything is done altering in any way military status or position.

4. *Service.*—The frequent changes of station of medical officers have been represented as a grievance. Administration should overcome this difficulty, which cannot be inherent in the station hospital system, as medical officers on sick leave contracted in and by the service should have all the privileges of combatant officers as laid down.

5. *Foreign Service.*—The proportion of foreign service is said to increase. "We are of opinion continuous foreign service should not exceed five years, unless in cases of emergency." A considerable number of retired officers are employed in home appointments; as a temporary measure, on grounds of economy, this may

be desirable; "it seems to us objectionable on all other grounds, and we strongly deprecate the practice." It must increase the foreign service and strain on the health of officers on the active list.

6. *Service in India.*—Medical officers complain that the advantages of pay and allowances conceded by recent warrants at home and in the colonies have not been extended to India. We think it advisable that, as far as practicable, the regulations which obtain as regards pay and allowances at home should be extended to officers serving in India."

7. *Admissions into the Service.*—Medical witnesses without exception almost have stated that it would be of advantage if a certain number of vacancies were filled by nomination by the medical schools under sanction of the Director-General and Secretary of State for War. Such commissions to be "offered to medical men who have filled the position of house-surgeon or physician at hospitals recognised by the General Medical Council without examination." Commissions of army medical officers should date, as in the case of the navy and Indian services, from the entry, and not from leaving Netley. "There is no good reason for requiring candidates to produce at the entry examination a second diploma besides that of the Society of Apothecaries if obtained under the conditions of the Act of 1886."

8. *Examination for Promotion.*—Examination "should be conducted by a mixed board, their examiners in medicine and surgery being chosen from outside the medical service." "We recommend that examination for promotion to the ranks above that of surgeon-major be dispensed with." Promotion to ranks above surgeon-major should be by preference given to those distinguished in the field, or in hospital, or in epidemics, or for original research. Medical officers should have, every seven years, three months' leave in addition to ordinary leave, to enable them to attend lectures and hospitals, and to obtain higher qualifications.

9. *Short Service.*—We cannot concur in a proposal to permit a certain number of medical officers to enter for a short term of service. It would be against efficiency, and objected to with reason by the army as tending to place it in the hands of medical officers of the least experience.

PART II.—ROYAL NAVY.

"We are glad to be able to state that the medical service of the navy is, so far as we can see, in a satisfactory and contented condition." Relative rank in the navy is well understood.

10. *Establishment.*—Considerably reduced in recent years from 460 in 1870 to 372 at present.

11. *Pay.*—No alteration proposed in rates established in the Report of Admiral Hoskins's Committee in 1880.

12. *Service.*—Inspectors of hospitals and fleets should serve until the age of 62.

13. *Dockyards.*—"Reductions cannot be further carried consistently with safety and efficiency."

14. *Yarmouth.*—Yarmouth Hospital should be retained and more fully utilised.

15. *Retirement.*—No alterations as regards voluntary retirement at 20 years recommended. The scheme of retirement with gratuity after 8 and 12 years' service has not yet shown how it will affect the retired list; no alteration recommended.

The foregoing is signed by all the members of the Committee, but there follow "dissents" by no less than six out of the eight.

1*a*. *Retirement.*—I regret, in my opinion, the recommendations in this part of the report do not go far enough. The total cost of the Army Medical Service for 1889-90 was—effective, £297,220; non-effective, £161,639. Parliament will not, nor should, allow this to continue. The actuaries say the Retired List will increase until it numbers 76 for every 100 on the effective list. I recommend that brigade-surgeons should continue to serve until 57 instead of 55, and that in all the grades the higher retiring pension should not be granted unless the officer has served three years in that higher grade. I cannot agree in maintaining the right to retire after 20 years' service, that is, at about 44 years of age. I think the actuaries are not correct; that it will make little or no difference in the cost whether officers retire after 20 or 25 years' service. I think that 44 is much too young to allow a medical officer in health to retire. I would recommend that for future appointments the time be 30 years, or until 55 years of age. (Signed) GEORGE C. T. BARTLEY.

1*b*. *Retirement.*—I dissent from the recommendation that "at small stations," where as a rule not more than two or three hours' ordinary daily work exists for the medical officer in charge of the troops, civil practitioners should, when practicable, be employed. The chief duty of an army medical officer is to keep his men in health and efficiency, and the more he is successful in doing so the less apparent will be the amount of his "ordinary daily work." If the recommendation was carried out to any appreciable extent, it would increase the proportion of foreign to home service, already complained of as too great.

(Signed) T. GRAHAM BALFOUR.

2. *Rank Title.*—We regret we cannot agree with the recommendations as to rank and title, and would substitute the following: (Here follows an amended draft to that in the body of the report; the chief points being): The Royal Warrant of 1887 did not affect or alter in any way the rank or status of medical officers. The grievance of medical officers originated in great part, if not entirely, from the abolition of the regimental system. Very few of the older officers desire a change of title, though the desire is general among the younger officers of the service. Between 1880 and 1887, qualified candidates to the number of 885 presented themselves for 493 appointments; showing the popularity of the service; the discontent of the younger members is less reasonable, as they have recently entered the service fully acquainted with the conditions under which they entered. To confer pure army titles on medical officers would be displeasing to a large number of themselves and to the Army generally. We see no reason why any alterations should be made in the existing medical titles. Change in army titles would entail change in the titles of the Naval Medical Service, which would be most distasteful to all ranks of the naval service. We are doubtful whether it would not be better to revert to the system which relieved medical officers from such duties as command than extend these functions. We think a clear and distinct recognition of the relative rank of medical officers from the War Office as regards its pecuniary and other advantages would do much to allay the discontent that may have grown up from continual changes. The regulations should be explicit on the point of their corresponding army rank, which should be stated on the Commission. We think the recommendations of His Royal Highness the Commander-in-Chief as to placing all young medical officers during their first years of service with regiments should be considered, and if possible carried out. It is essential for the dignity of the Army Medical Service that it should plainly appear they are members of their eminent profession, and they should bear on their uniform some distinguishing badge such as the Geneva Cross; at present their dress so closely resembles that of other branches of the service that mistakes are often made.

(Signed) W. CROSSMAN.
CHAS. F. HOTHAM.
GEORGE C. T. BARTLEY.

3. *Short Service.*—We cannot agree with the paragraph of the report relating to short service. We think a certain number should be entered for that service. Ten years, as has been proved, is too long; but we concur with some of the witnesses that five or six years might answer, if a gratuity was given at the end of the term. Economy would result from such a system, and we recommend a grant not exceeding £500 for officers retiring after six years' service, retaining also the right to retire with £1,000 after ten years' service.

The system we advocate is that now in force in the naval medical service. The short service men would be available for foreign service during the whole of their term in the army. It would not be necessary that a short service officer must leave at the end of his term; he might be detained by the sanction of the authorities if it were desirable he should do so.

(Signed) CAMPERDOWN.
N. C. MACNAMARA.

After the dissents follow a number of letters and returns, the chief of the latter relating as follows:

Rates of pay fixed by Royal Warrants 1848 to 1887.

Rates of mortality per 1,000 among combatant, commissariat, and medical officers.

Mortality of medical officers on retired list, with expectation of life of various officers.

Reports and actuarial calculations showing effect of retirement after twenty years' service.

Practical grievances as to pay of medical officers in India.

Rank and titles of foreign medical officers.

Medical officers of the navy.

ASSOCIATION INTELLIGENCE.

PROCEEDINGS OF COUNCIL.

At a meeting of the Council, held in the Council Room of the Mechanics' Institute, Leeds, on Tuesday, August 13th, 1889:

Present.

Dr. T. Bridgwater, President of the Council, in the chair.
Professor W. T. Gairdner, M.D., Glasgow (President).
Mr. C. G. Wheelhouse, Leeds, President-Elect.
Dr. Holman, Reigate, Treasurer.

Dr. A. H. Bampton, Ilkley, Yorks.
Dr. H. Barnes, Carlisle.
Dr. G. B. Barron, Southport.
Dr. J. S. Bristowe, F.R.S., London.
Surg.-Gen. W. R. Cornish, London.
Dr. J. Ward Cousins, Portsmouth.
Dr. G. W. Crowe, Worcester.
Dr. J. L. H. Down, London.
Dr. D. Drummond, Newcastle-on-Tyne.
Mr. George Eastes, London.
Dr. J. H. Galton, London.
Dr. C. E. Glascott, Manchester.
Dr. Bruce Goff, Bothwell.
Dr. O. Grant, Inverness.
Mr. J. H. Hemming, Kimbolton.
Mr. A. Jackson, Sheffield.
Mr. T. R. Jessop, Leeds.
Mr. Evan Jones, Aberdare.
Dr. W. Withers Moore, Brighton.
Mr. W. Jones Morris, Portmadoc.
Dr. F. Needham, Gloucester.
Dr. C. Parsons, Dover.
Dr. W. Russell, Edinburgh.
Dr. R. Saundby, Birmingham.
Dr. A. Sheen, Cardiff.
Mr. S. W. Sibley, London.
Dr. W. Strange, Worcester.
Mr. J. Taylor, Chester.
Dr. T. W. Trend, Southampton.
Mr. F. Wallace, London.
Dr. W. Webb, Wirksworth.
Dr. G. E. Williamson, Newcastle-on-Tyne.
Mr. A. Winkfield, Oxford.

The minutes of the last meeting, having been printed and circulated to the Members of the Council, were signed as correct.

Read letters of apology for non-attendance from Dr. Grimshaw, Dr. Henry Barnes, Deputy-Surgeon-General James Irwin, Dr. Mackenzie Booth, Dr. McIntyre.

Read letter from Sir Joseph Lister, and reply of President of Council, of which the following are copies:—

To the Council of the British Medical Association.

London, August 1st, 1889.

Gentlemen,—Many members of the Association have been much disappointed to find that the hopes which they had been led to entertain of an improvement in the conduct of the Journal have not been fulfilled. So strong is this feeling that a large number of men in influential positions in the profession, warmly attached to the Association, but jealous of its honour and despairing of seeing the improvement they desire, have expressed their determination to resign their membership.

But before carrying into effect a resolution so serious, it has been thought right to approach you, as the governing body, with the request that you will give this matter your earnest consideration, and take such steps as shall make the Journal in all respects worthy of the Association which it represents.—We have the honour to be, gentlemen, your obedient servants,

(Signed) Joseph Lister, Chairman.
W. H. Allchin,
W. A. Meredith, } Secretaries.
John Williams,

Reply of President of Council.

Dear Sir,—I beg to acknowledge the receipt of your letter dated August 1st. I will lay it before the Council when they meet in Leeds next week. I must be permitted, meanwhile, to assure you that you may safely leave the honour of the Association where it has been safely preserved for so many years.

Yours faithfully,
(Signed) T. Bridgwater.

Resolved: That the Council do not admit that the signatories of this letter are better judges than themselves, or more solicitous than they are for the honour of the Association and of the profession, but if there are any points which the signatories desire to particularise, in which they consider that the Journal admits of or calls for improvement, they will be, as they ever have been, on receiving them through the Representatives of their Branch in the Council, ready to give to such suggestions their most careful consideration.

Resolutions passed at the meeting of the Parliamentary Bills Committee, held on Thursday, August 1st, 1889.

Resolved: That the resolutions be reported to the general meeting of the members of to-day, as requested.

Read resolution of the Yorkshire Branch, a copy of which is as follows:—

(1) That the disproportionate growth of the out-patient department in all hospitals demands a general inquiry, as well as the subject of provident dispensaries, medical aid associations, and sick clubs. (2) That a copy of this resolution be sent to the Council of the Association, requesting them to take the matter into their earnest consideration at their earliest convenience.

Resolved: That the consideration of the same be deferred till after the motions on the subject at the general meeting had been discussed.

Mr. Edmund Owen attended by permission to place a complaint before the Council of the way in which he had been treated by the publication in the Journal of a censorious note on a letter of his without at the same time publishing his letter.

Resolved: That this Council regrets that Mr. Owen's letter was not published at the same time as the paragraph of which he complains, and which paragraph is regarded by this Council as unnecessarily severe. The Council beg Mr. Owen to accept this expression of their regret.

Resolved: That the ninety-six candidates whose names appear on the list convening the meeting, together with the twelve candidates whose names appear on the supplementary list, be and they are hereby elected members of the Association, with the exception of one, whose candidature was referred to the Dorset and West Hants Branch.

Resolved: That medical students be admitted to the addresses and the sectional meetings of the Association at its annual meeting in Leeds, on such regulations as may be adopted by the Reception Committee.

The report of attendances of representatives was laid on the table, particulars of which are as follows:

(The letter R. means Representative of a Branch.)

Name and Address.	Total Council Attendances.	Total Committee Attendances.	Grand Total.
Professor W. T. Gairdner, Glasgow, President ...	3	0	3
Mr. C. G. Wheelhouse, Leeds, Vice-President ...	7	14	21
Dr. T. Bridgwater, Harrow-on-the-Hill, President of Council	8	18	26
Dr. C. Holman, Reigate, Treasurer	8	16	24
Sir H. W. Acland, K.C.B., M.D., Oxford, Vice-President...	0	0	0
Dr. B. Anningson, Cambridge, R.	2	0	2
Mr. A. Baker, Birmingham, R.	0	0	0
Dr. A. H. Bampton, 4, St. Mary's Terrace, Ilkley, R.	5	0	5
Dr. J. T. Banks, 45, Merrion Square, Dublin, President	1	0	1
Dr. H. Barnes, Carlisle, R....	5	0	5
Dr. G. B. Barron, Southport, R.	4	0	4
Mr. B. Barrow, Ryde, Vice-President	0	0	0
Dr. M. M. De Bartolomé, Sheffield, Vice-President ...	1	0	1
Dr. J. M. Booth, Aberdeen, R.	2	0	2
Dr. J. S. Bristowe, F.R.S., London, R.	6	0	6
Mr. H. T. Butlin, London, R.	4	2	6
Dr. J. W. Byers, Belfast, R....	1	0	1
Dr. A. Carpenter, Croydon, Vice-President	7	2	9
Surgeon-General W. R. Cornish, London, R. ...	6	0	6
Dr. J. W. Cousins, Portsmouth, R.	8	6	14
Mr. T. W. Crosse, Norwich, R.	3	0	3
Dr. G. W. Crowe, Worcester, R.	5	0	5
Dr. J. Cuming, Belfast, Vice-President	1	0	1
Dr. A. Davidson, Liverpool, R.	2	3	5
Dr. P. M. Deas, Exeter, R.	3	0	3
Professor R. F. Dill, M.D., Belfast	0	0	0
Mr. J. Dix, Hull, R.	2	0	2
Dr. J. L. H. Down, London, R.	8	2	10
Dr. D. Drummond, Newcastle-on-Tyne, R.	4	0	4
Mr. George Eastes, London, R.	8	2	10
Dr. W. T. Edwards, Cardiff, Vice-President	0	0	0
Dr. W. A. Elliston, Ipswich, R.	1	0	1
Sir B. Walter Foster, M.D., M.P., Birmingham, Vice-President	1	1	2
Dr. J. H. Galton, Upper Norwood, R.	7	0	7
Dr. C. E. Glascott, Manchester, R.	7	1	8
Dr. B. Goff, Bothwell, R.	7	1	8
Dr. Ogilvie Grant, Inverness, R.	4	0	4
Deputy Surgeon-General Graves-Irwin, M.S., Edinburgh	0	0	0
Dr. W. C. Grigg, London, R.	5	6	11
Dr. T. W. Grimshaw, Carrickmines, R.	3	0	3
Dr. James Hardie, Manchester, R.	6	0	6
Mr. John D. Harries, Shrewsbury, R.	2	0	2
Mr. J. H. Hemming, Kimbolton, Hunts, R.... ...	7	0	7
Mr. G. F. Hodgson, Brighton, R.	5	0	5
Professor G. M. Humphry, F.R.S., Cambridge, Vice-President	2	0	2
Mr. W. D. Husband, Clifton, Vice-President ...	5	2	7
Mr. A. Jackson, Sheffield, R.	4	0	4
Mr. T. V. Jackson, Wolverhampton, R.	5	4	9
Mr. T. R. Jessop, Leeds, R.	8	6	14
Mr. Evan Jones, Aberdare, R.	5	0	5
Dr. W. M. Kelly, Taunton, R.	1	0	1
Mr. H. R. Ker, Halesowen, R.	5	6	11
Dr. F. H. Kyngdon, London, R	0	0	0

(The letter R. means Representative of a Branch.)

Name and Address.	Total Council Attendances.	Total Committee Attendances.	Grand Total.
Dr. W. R. Kynsey, 57, West Cromwell Road, S.W., R.	0	0	0
Dr. A. Lochée, Canterbury, Vice-President	0	0	0
Dr. W. G. V. Lush, Weymouth, R.	4	0	4
Dr. J. McIntyre, Odiham, R.	4	0	4
Mr. C. Macnamara, London, Vice-President	5	9	14
Dr. W. Withers Moore, Brighton, Vice-President ...	5	3	8
Dr. W. J. Morris, Portmadoc, R.	5	0	5
Dr. F. Needham, Gloucester, R.	6	3	9
Sir G. E. Paget, F.R.S., Cambridge, Vice-President ...	0	0	0
Dr. C. Parsons, Dover, R.	8	9	17
Dr. W. Russell, Edinburgh, R.	1	0	1
Dr. R. Saundby, Birmingham, R.	6	6	12
Dr. A. Sheen, Cardiff, R.	4	0	4
Mr. S. W. Sibley, London, R.	8	12	20
Dr. E. M. Skerritt, Bristol, R.	4	0	4
Dr. W. Strange, Worcester, Vice-President	4	3	7
Mr. T. Sympson, Lincoln, R.	7	0	7
Mr. J. Taylor, Chester, R.	5	0	5
Dr. T. W. Trend, Southampton, R.	6	0	6
Dr. W. F. Wade, Birmingham, Vice-President ...	2	0	2
Mr. F. Wallace, London, R.	7	2	9
Dr. A. T. H. Waters, Liverpool, Vice-President ...	2	0	2
Dr. E. Waters, Chester, R.	6	5	11
Dr. William Webb, Wirksworth, Derbyshire, R. ...	5	0	5
Dr. G. E. Williamson, Newcastle-on-Tyne, R. ...	3	0	3
Mr. Alfred Winkfield, Oxford, R.	7	0	7

At a meeting of the Council, held in the Council Room of the Mechanics' Institute, Leeds, on Wednesday, August 14th, 1889:

Present:

Dr. T. BRIDGWATER (President of the Council) in the Chair.
Mr. C. G. WHEELHOUSE (President) Leeds
Dr. C. HOLMAN (Treasurer) Reigate
Mr. F. BATEMAN, Whitchurch
Dr. J. S. BRISTOWE, F.R.S., London
Mr. H. T. BUTLIN, London
Dr. J. W. BYERS, Belfast
Dr. J. S. CAMERON, Huddersfield
Surgeon-General W. R. CORNISH, London
Dr. J. WARD COUSINS, Portsmouth
Dr. G. W. CROWE, Worcester
Dr. J. CUMING, Belfast
Dr. A. DAVIDSON, Liverpool
Dr. A. DEMPSEY, Belfast
Dr. J. L. H. DOWN, London
Mr. GEORGE EASTES, London
Professor W. T. GAIRDNER, Glasgow
Dr. J. H. GALTON, Upper Norwood
Dr. C. E. GLASCOTT, Manchester
Dr. BRUCE GOFF, Bothwell
Dr. O. GRANT, Inverness
Mr. J. H. HEMMING, Kimbolton
Mr. T. V. JACKSON, Wolverhampton
Mr. T. R. JESSOP, Leeds
Mr. EVAN JONES, Aberdare
Dr. W. W. MOORE, Brighton
Mr. W. JONES MORRIS, Portmadoc
Dr. F. NEEDHAM, Gloucester
Mr. C. H. W. PARKINSON, Wimborne
Dr. C. PARSONS, Dover
Mr. W. PEARSE, Bodmin
Dr. R. SAUNDBY, Birmingham
Dr. A. SHEEN, Cardiff
Mr. S. W. SIBLEY, London
Mr. NOBLE SMITH, London
Mr. T. SYMPSON, Lincoln
Mr. J. TAYLOR, Chester
Dr. T. W. TREND, Southampton
Mr. F. WALLACE, London
Dr. W. WEBB, Wirksworth
Dr. G. E. WILLIAMSON, Newcastle-on-Tyne
Mr. A. WINKFIELD, Oxford

The minutes of the last meeting were read and found correct.

Read return of the Election of Representatives of the various Branches, particulars of which are as follows:

Aberdeen, Banff, and Kincardine Branch.—J. Mackenzie Booth, M.D., 231, Union Street, Aberdeen. *Adelaide and South Australian Branch.*—(No return). *Barbados Branch.*—(No return.) *Bath and Bristol Branch.*—Mr. R. S. Fowler, 6, Belmont, Bath; E. M. Skerritt, M.D., Thornton House, Richmond Hill, Clifton, Bristol. *Bermuda Branch.*—Dep. Surg.-Genl. C. Graves-Irwin, M.S., P.M.O., Edinburgh. *Birmingham and Midland Counties Branch.*—Hugh R. Ker, Esq., Halesowen; Robert Saundby, M.D., 83A, Edmund Street, Birmingham. *Bombay Branch.*—(No return.) *Border Counties Branch.*—Henry Barnes, M.D., 6, Portland Square. Carlisle. *British Guiana Branch.*—A. Finlayson, M.D., Rothesay. *Cambridge and Huntingdon Branch.*—Bushell Anningson, M.D., Barton Road, Cambridge. *Cape of Good Hope Branch.*—(No return.) *Colombo, Ceylon Branch.*—W. R. Kynsey, M.D., Philbeach Gardens, Earl's Court, S.W. *Dorset and West Hants Branch.*—C. H. W. Parkinson, Esq., Wimborne Minster. *Dublin Branch.*—T. W. Grimshaw, M.D., Priorsland, Carrickmines, Co. Dublin. *East Anglian Branch.*—T. W. Crosse, Esq., F.R.C.S., Norwich; W. A. Elliston, M.D., Ipswich. *East York and North Lincoln Branch.*—J. Dix, Esq., 25, Albion Street, Hull. *Edinburyh Branch.*—William Russell, M.D., 46, Albany Street, Edinburgh. *Glasgow and West of Scotland Branch.*—Bruce Goff, M.D., The Lindens, Bothwell, Lanarkshire. *Gloucestershire Branch.*—F. Needham, M.D., Barnwood House, Gloucester. *Griqualand West Branch.*—(No return.) *Halifax, Nova Scotia Branch.*—(No return.) *Jamaica Branch.*—(No return.) *Lancashire and Cheshire Branch.*—G. B. Barron, M.D., Summerseat, Southport; A. Davidson, M.D., 2, Gambier Terrace, Liverpool; C. E. Glascott, M.D., 23, St. John's Street, Manchester; James Hardie, M.D., 1, St. Ann's Place, Manchester; James Taylor, Esq., Newgate Street, Chester. *Malta and Mediterranean Branch.*—(No return.) *Melbourne and Victoria Branch.*—(No return.) *Metropolitan Counties Branch.*—J. S. Bristowe, M.D., 13, Old Burlington Street, W.; H. T. Butlin, Esq., 82, Harley Street, W.; George Eastes, M.B., 35, Gloucester Place, Hyde Park, W.; W. Chapman Grigg, M.D., 27, Curzon Street, W.; Septimus W. Sibley, Esq., 7, Harley Street, W.; Noble Smith, Esq., 24, Queen Anne Street, W.; Frederick Wallace, Esq., 96, Cazenove Road, Upper Clapton, E. *Midland Branch.*—T. Sympson, Esq., 2, James Street, Lincoln; W. Webb, M.D., Wirksworth, Derbyshire. *Northern Counties of Scotland Branch.*—Ogilvie Grant, M.B., Queen Mary's House, Inverness. *North of England Branch.*—David Drummond, M.D., 7, Saville Place, Newcastle-on-Tyne; G. E. Williamson, M.D., 22, Eldon Square, Newcastle-on-Tyne. *North of Ireland Branch.*—J. W. Byers, M.D., Lower Crescent, Belfast; A. Dempsey, M.D., 22, Clifton Street, Belfast. *North Wales Branch.*—W. Jones-Morris, Esq., Portmadoc. *Oxford and District Branch.*—Alfred Winkfield, Esq., 26, Beaumont Street, Oxford. *Perthshire Branch.*—James Ferguson, M.B., 5, Charlotte Street, Perth. *Punjab Branch.*—(No return.) *Reading and Upper Thames Branch.*—F. Bateman, M.B., Whitchurch, Oxon. *Shropshire and Mid-Wales Branch.*—John Davies Harries, Esq., 5, Belmont, Shrewsbury. *Southern Branch.*—J. Ward Cousins, M.D., Riversdale, Kent Road, Portsmouth; Theophilus W. Trend, M.D., Raeberry Lodge, Southampton. *South-Eastern Branch.*—J. H. Galton, M.D., "Chunam," Sylvan Road, Upper Norwood, S.E.; G. F. Hodgson, Esq., 52, Montpellier Road, Brighton; C. Parsons, M.D., 2, St. James Street, Dover. *South Indian and Madras Branch.*—Surg.-Gen. W. R. Cornish, M.D., 8, Cresswell Gardens, S.W. *South Midland Branch.*—J. H. Hemming, Esq., Kimbolton. *South Wales and Monmouthshire Branch.*—Evan Jones, Esq., Aberdare; A. Sheen, M.D., Halswell House, Cardiff. *South-Western Branch.*—P. M. Deas, M.B., Wonford House, Exeter; W. Pearse, Esq., St. Tudye, Bodmin, Cornwall. *Staffordshire Branch.*—T. Vincent Jackson, Esq., Waterloo Road South, Wolverhampton. *Stirling, Kinross, and Clackmannan Branch.*—J. S. Haldane, M.B., Cloanden, Auchterarder, Perthshire. *Sydney and New South Wales.*—F. H. Kyngdon, M.D., 6, Palace Garden Mansions, Linden Gardens, W. *Tasmania Branch.*—(No return.) *Thames Valley Branch.*—J. Langdon H. Down, M.D., 81, Harley Street, W. *West Somerset Branch.*—W. M. Kelly, M.D., Crescent, Taunton. *Worcestershire and Herefordshire Branch.*—G. W. Crowe, M.D., 43, Foregate Street, Worcester. *Yorkshire Branch.*—Dr. J. S. Cameron, 51, New North Road, Huddersfield; T. R. Jessop, Esq., Park Square, Leeds.

Resolved: That the question with regard to the out-patient departments of hospitals, poor-law administration, and provident dispensaries, be referred to the Parliamentary Bills Committee, and that it be an advice to this Council in electing the Parliamentary Bills Committee that they add the three names, Dr. Rentoul, Dr. Crowe, and Dr. Brindley James.

The President of the Council reported that he had not received any invitation for 1890.

Resolved: That it be recommended to the general meeting of to-day that the Council be empowered to arrange for a place of meeting for 1890, and further to appoint a President-elect.

Read notices of motion from Dr. James Erskine and Mr. Hugh Woods, and correspondence with Mr. Upton with reference to voting by proxy.

Resolved: That the correspondence be entered upon the minutes.

At a meeting of the Council, held in the Council Room, Mechanics Institute, Leeds, on Thursday, August 15th, 1889:

Present:

Dr. T. BRIDGWATER (President of the Council), in the chair.
Mr. C. G. WHEELHOUSE (President), Leeds.
Dr. HOLMAN (Treasurer), Reigate.
Dr. B. ANNINGSON, Cambridge
Dr. F. BATEMAN, Whitchurch
Dr. J. S. BRISTOWE, F.R.S., London
Mr. H. T. BUTLIN, London
Dr. J. W. BYERS, Belfast
Dr. J. S. CAMERON, Huddersfield
Surgeon-General W. R. CORNISH, London
Dr. J. WARD COUSINS, Portsmouth
Dr. G. W. CROWE, Worcester
Dr. J. CUMING, Belfast
Dr. J. LANGDON H. DOWN, London
Mr. GEORGE EASTES, London
Prof. W. T. GAIRDNER, Glasgow
Dr. J. H. GALTON, Upper Norwood
Dr. C. E. GLASCOTT, Manchester
Dr. BRUCE GOFF, Bothwell
Dr. O. GRANT, Inverness
Mr. J. H. HEMMING, Kimbolton
Mr. T. V. JACKSON, Wolverhampton
Mr. T. R. JESSOP, Leeds
Mr. E. JONES, Aberdare
Dr. W. W. MOORE, Brighton
Mr. W. JONES MORRIS, Portmadoc
Dr. F. NEEDHAM, Gloucester
Mr. C. H. PARKINSON, Wimborne
Dr. C. PARSONS, Dover
Mr. W. PEARSE, Bodmin
Dr. W. RUSSELL, Edinburgh
Dr. R. SAUNDBY, Birmingham
Mr. S. W. SIBLEY, London
Mr. NOBLE SMITH, London
Mr. T. SYMPSON, Lincoln
Mr. J. TAYLOR, Chester
Dr. T. W. TREND, Southampton
Mr. F. WALLACE, London
Dr. WM. WEBB, Wirksworth

The minutes of the last meeting were read and found correct.

The PRESIDENT of the COUNCIL reported that the gentlemen on the Journal and Finance Committee, three of whom who had served longest retired and were ineligible for re-election this year (in accordance with By-law 29), were—Dr. Davidson, Mr. T. V. Jackson, Mr. S. W. Sibley, and Dr. E. Waters; there was also a vacancy caused by the death of Mr. F. Mason. A ballot was taken; Dr. Ogilvie Grant and Mr. Jones-Morris were appointed scrutineers, and Dr. Davidson, Mr. T. V. Jackson, and Dr. Edward Waters were declared retired.

Nine members of the Council were nominated. A ballot was thereupon taken; Dr. Saundby and Mr. Jones-Morris were appointed scrutineers, and they reported that Mr. Butlin, Dr. Glascott, Dr. Skerritt, and Dr. Trend had received the greatest number of votes.

Resolved: That in accordance with By-law 29, the following fifteen gentlemen, together with the President, the President-elect, the President of the Council, and the Treasurer *ex officio*, be appointed the Journal and Finance Committee for the ensuing twelve months: Mr. H. T. Butlin; Sir B. W. Foster, M.D., M.P.; C. E. Glascott, M.D.; Mr. W. D. Husband; Mr. T. R. Jessop; Mr. Hugh R. Ker; Mr. C. Macnamara; Withers Moore, M.D.; F. Needham, M.D.; C. Parsons, M.D.; R. Saundby, M.D; Mr. S. W. Sibley; E. M. Skerritt, M.D.; W. Strange, M.D.; T. W. Trend, M.D.

Resolved: That the gentlemen whose names are as follows be appointed the Parliamentary Bills Committee: The President *ex officio;* the President-elect *ex officio;* Dr. T. Bridgwater, President of the Council *ex officio;* C. Holman, M.D., Treasurer *ex officio;* Mr. S. H. Agar; Mr. D. B. Balding; H. Barnes, M.D.; Mr. J. Wickham Barnes; Robert Barnes, M.D.; G. B. Barron, M.D.; J. W. Browne, M.D.; A. Carpenter, M.D.; W. Carter, M.D.; Surgeon-General W. R. Cornish; G. W. Crowe, M.D.; P. M. Deas, M.D.; Walter Dickson, M.D.; J. Langdon H. Down, M.D.; Mr. George Eastes; Alfred Eddowes, M.D.; R. Esler, M.D.; Sir B. W. Foster, M.D., M.P.; Mr. E. H. Galton; C. E. Glascott, M.D.; Bruce Goff, M.D.; Ogilvie Grant, M.D.; W. C. Grigg, M.D.; A. J. Harrison, M.D.; Mr. C. H. Rogers Harrison; Mr. Ernest Hart; Mr. W. R. Heath; Mr. J. H. Hemming; Mr. J. R. Humphreys; Mr. A. Jackson; Mr. G. E. Jeaffreson; A. Emrys Jones, M.D.; R. Jones, M.D.; Mr. Hugh R. Ker; Mr. C. Macnamara; W. J. Mickle, M.D.; F. Needham, M.D.; Mr. R. H. B. Nicholson; D. Nicolson, M.D.; Professor A. Ogston, M.D.; William Ord, M.D.; C. Orton, M.D.; Mr. C. H. W. Parkinson; G. H. Philipson, M.D.; H. H. Phillips, M.D.; Mr. J. Prankerd; James Ritchie, M.D.; Mr. S. W. Sibley; Mr. Noble Smith; Mr. W. D. Spanton; W. Strange, M.D.; James Stuart, M.D.; Mr. F. Wallace; Mr. A. Winkfield; together with the addition of Dr. Rentoul, Dr. Croome, and Mr. Brindley James.

Resolved: That the gentlemen whose names are as follows be appointed the Scientific Grants Committee: The President *ex officio;* the President-elect *ex officio;* Dr. T. Bridgwater, President of the Council *ex officio;* C. Holman, M.D., Treasurer *ex officio;* Mr. H. T. Butlin; J. Ward Cousins, M.D.; A. Davidson, M.D.; G. Ferrier, M.D.; Sir B. W. Foster, M.D., M.P.; A. Gamgee, M.D.; Professor G. M. Humphry; Mr. A. Jackson; E. Klein, M.D.; Sir Joseph Lister, Bart., F.R.S.; Mr. C. Macnamara; C. Parsons, M.D.; Professor Burdon Sanderson; Professor E. N. Schäfer; Mr. S. W. Sibley; S. Wilks, M.D.; together with the addition of Dr. Waller, Professor Michael Foster, Dr. Donald MacAlister, Professor Gairdner, and Dr. Saundby.

Resolved: That the gentlemen whose names are as follows be appointed the Committee on Legislation for Inebriates: The President *ex officio;* the President-elect *ex officio;* Dr. T. Bridgwater, President of the Council *ex officio;* C. Holman, M.D., Treasurer *ex officio;* Mr. D. B. Balding; Mr. H. Branthwaite; C. Cameron, M.D., M.P.; Alfred Carpenter, M.D.; G. B. Clark, M.D., M.P.; C. R. Drysdale, M.D.; Mr. G. Eastes; J. W. Eastwood, M.D.; R. Farquharson, M.D.; Sir B. W. Foster, M.D., M.P.; Mr. W. C. Garman; J. Gibson, M.D.; Alexander Grant, M.D.; Mr. F. J. Gray; C. J. Hare, M.D.; Mr. H. R. Ker; Norman S. Kerr, M.D.; Mr. R. H. B. Nicholson; Surgeon-Major G. K. Poole, M.D.; Mr. J. Prankerd; Surgeon-Major R. Pringle, M.D.; Fleet-Surgeon G. Robertson, R.N.; G. D. P. Thomas, M.D.; E. H. Vinen, M.D.; Wynn Westcott, M.D.; H. W. Wiliams, M.D.; together with the addition of Professor Gairdner.

Resolved: That the gentlemen whose names are as follows be appointed the Committee on Branch Organisation: The President *ex officio;* the President-elect *ex officio;* Dr. Bridgwater, President of the Council *ex officio;* C. Holman, M.D., Treasurer *ex officio;* Surgeon-General W. R. Cornish; J. Ward Cousins, M.D.; J. Cuming, M.D.; J. Langdon H. Down, M.D.; Sir B. W. Foster, M.D., M.P.; Bruce Goff, M.D.; W. C. Grigg, M.D.; Mr. A. Jackson; C. Parsons, M.D.; T. W. Trend, M.D.

Resolved: That the gentlemen whose names are as follows be appointed the Premises and Library Committee: The President *ex officio;* the President-elect *ex officio;* Dr. T. Bridgwater, President of the Council *ex officio;* C. Holman, M.D., Treasurer *ex officio;* Alfred Carpenter, M.D.; J. Ward Cousins, M.D.; Sir B. W. Foster, M.D., M.P.; W. C. Grigg, M.D.; Mr. C. Macnamara; Mr. S. W. Sibley; with the addition of Mr. Butlin.

Resolved: That the gentlemen whose names are as follows be appointed the Trust Funds Committee: The President *ex officio;* the President-elect *ex officio;* Dr. T. Bridgwater, President of the Council *ex officio;* C. Holman, M.D., Treasurer *ex officio;* Sir B.W. Foster, M.D., M.P.; Mr. W. D. Husband; Mr. C. Macnamara; E. Waters, M.D.; with the addition of Dr. Saundby.

Resolved: That the gentlemen whose names are as follows be appointed the Therapeutic Committee: Lauder Brunton, M.D.; Cranstoun Charles, M.D.; M. Charteris, M.D.; Sir Andrew Clark, Bart.; Sir B. W. Foster, M.D., M.P.; Professor W. T. Gairdner; D. J. Leech, M.D.; James Little, M.D.; Sidney Martin, M.D.; M. McHugh, M.D.; W. Murrell, M.D.; C. Y. Pearson, M.D.; Sidney Ringer, M.D.; Sir William Roberts; R. Saundby, M.D.; Mr. C. G. Wheelhouse; W. Whitla, M.D.

Resolved: That the eighteen gentlemen whose names are printed in the *Daily Journal*, p. 34, be elected as members of the British Medical Association, subject to confirmation at the next meeting of the Council in October, with the exception of one, whose candidature was referred to the Branch in whose district he practises.

BRANCH MEETINGS TO BE HELD.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT.—The next meeting of the above district will be held at Margate, on Thursday, September 19th; Mr. Knight Treves, F.R.C.S., in the chair. Members wishing to read papers, etc., should communicate at once with the Honorary Secretary, W. J. TYSON, 10, Langhorne Gardens, Folkestone.

SPECIAL CORRESPONDENCE.

SHEFFIELD.

[FROM OUR OWN CORRESPONDENT.]

Presentation to Mr. Arthur Jackson.—Annual Meeting of Public Hospital and Dispensary.—Death from Hydrophobia.—The Workhouse and Means of Escape in Case of Fire.

MR. ARTHUR JACKSON was entertained at dinner on August 9th by the lecturers of the Sheffield Medical School on his retiring from the position of Secretary, which he had occupied for twenty-one years. The chair was occupied by Dr. De Bartolomé, and the whole of the staff of lecturers had joined in the movement. During the evening an elegant and valuable silver inkstand, bearing a suitable inscription on one side, and an engraving of the new medical school building on the other, was presented to Mr. Jackson, together with a beautifully illuminated address, setting forth the appreciation in which his colleagues held his valuable services to the school as honorary secretary for such a long period. This was signed by all connected with the school, and the chairman, in making the presentation, bore witness to Mr. Jackson's efforts, especially in helping to raise funds for building the excellent school which Sheffield is now so fortunate in possessing. The heartiness and unanimity of the proceedings could not fail to be extremely gratifying to the recipient of the honour, as it must also have been to those concerned in their management.

The annual meeting of the Public Hospital and Dispensary was recently held. The annual report was of a satisfactory nature. The number of in-patients was stated to have been less than in the previous year, owing to the greater severity of the cases treated, and in this way the average stay in hospital had risen from 30 to 37 days.

A death from hydrophobia is announced at Chapeltown, occurring in a man aged 37.

The Doncaster board of guardians have had their attention drawn to the inadequate means of escape in case of fire at the

workhouse by the Local Government Board. They have therefore decided that they could not ignore the reports of two inspectors, and have referred the matter to the Visiting Committee for consideration.

An open-air musical service has been held at Barnsley in aid of the Beckett Hospital and Dispensary. The day was fine, and the festival proved a great success. The chairman, in opening the proceedings, said that during the past year 291 in-patients were treated, as against 65 ten years ago. There had been 87 colliery accidents treated in the hospital during the year at a cost of £350. The Hospital Sunday movement in 1883 realised £282, last year £697. It may be remarked that, considering the size of the town, in this respect Barnsley sets an excellent example to much larger places.

MANCHESTER.

[FROM OUR OWN CORRESPONDENT.]

Report of Ancoats Hospital.—Open Spaces for Recreation.

THE annual meeting of the subscribers to the Ancoats Hospital and Dispensary was recently held in the "Albert Victor" Pavilion. In the sixty-first report of the hospital, it is stated that the new wing, known as the Albert Victor Pavilion, has been completed. The recent additions comprise six new wards capable of accommodating eighty-four patients; four special wards of one bed each, a steam laundry, *post-mortem* room, and mortuary. The number of patients during the year was 10,169, and of these 4,487 were cases of accident. The number of home-patients was 2,459.

The Corporation of Manchester are keenly alive to the necessity for providing open spaces for recreation in the more densely populated portions of the city. On Saturday, August 17th, Dr. H. W. Hofman, the Medical Inspector of the Burial Acts Department of the Home Office, held an inquiry into the proposal to convert St. Michael's disused burial ground into a place of recreation for the children of the neighbourhood. The only objection to the proposal came from the cathedral chapter, who urged that the Corporation had no legal power to act in the manner proposed. The inspector described the scheme as a very good one from a sanitary point of view, and hoped that the legal difficulty would be got over.

CORRESPONDENCE.

MEDICAL CIVIL SERVANTS AND THE PENSION BILL.

SIR,—The annotation on this subject in the JOURNAL of August 24th shows the necessity of such a union among medical men holding Civil appointments as I advocated in your columns a short time back, and as I have since been assured that a well-considered plan for such a union would be likely to find favour among those who are chiefly concerned, I should be glad if you would permit me to lay before your readers the following outline of the proposed objects of such a union, and to state that I shall be glad to receive any suggestions or criticisms from those interested in the matter.—I am, etc., H. NELSON HARDY.

1, Southville Park Villas, Dulwich Grove, S.E.

PROPOSED ASSOCIATION OF MEDICAL CIVIL SERVANTS.

Objects:

1. To unite medical men holding office under the State as medical officers of health, Poor-law medical officers, medical coroners, police-surgeons, post-office surgeons, also medical M.P.'s, in a society for mutual assistance.
2. To obtain the establishment of Poor-law dispensaries in towns wherever practicable, and the improvement of the position of medical civil servants generally.
3. To obtain the opening of Poor-law infirmaries and hospitals for the purpose of medical study.
4. To advocate the appointment of a Minister of Health.
5. To watch all Bills brought before Parliament affecting the status or duties of medical civil servants.

THE BRITISH NURSES' ASSOCIATION.

SIR,—The advocates of the British Nurses' Association can hardly be said to have found convincing proofs that the present system by which nurses are procured for private patients is unsatisfactory, or fraught with risk to the community. A doctor who wishes to obtain the services of a skilled nurse can easily communicate with the head of one of the well-known training institutions, and this person accepts the entire responsibility of sending him a woman whose qualifications for her duties have been thoroughly tested. Such a nurse must, necessarily, be under much better supervision than one who may be leading an independent life after having secured her credentials. It is asserted, however, that the latter will be especially trustworthy, because her name is to be registered as having acquired sufficient knowledge. But how will a doctor or anyone else know that she has not lapsed into objectionable habits or defective skill since she obtained her certificate? Those nurses who become incompetent, or perhaps never were competent in many important points out of the reach of examination tests, will, as a rule, remain on the register, just as many incompetent and untrustworthy doctors do. The medical profession and other people are not likely to put much faith in a list of comparatively unknown names, when they can apply directly to institutions which have a personal reputation to sustain, and whose nurses are always under observation. A register of midwives seems to be altogether on a different footing. A midwife literally takes the place of a doctor. The medical profession has chosen to recognise them as capable obstetricians. In a speech at the Mansion House, Dr. Priestley said: "Now we have a nucleus of midwives who are competent to meet any emergency that may arise in the course of their practice;" and, "at the Royal Maternity Charity, where they only engage duly qualified women, the mortality among poor mothers is only one in four hundred." A register of other kinds of nurses would by comparison be logically indicated, if it was deemed expedient for them to attend cases of illness on their own account, calling in the physician or surgeon when the ailment proved to be beyond their skill. Many may be inclined to think that some such evolution of the status of nurses is within the bounds of possibility; and the following remarkable paragraph, taken from the prospectus of the British Nurses' Association, may seem to point in that direction:

"Profession.—The word is used advisedly. Nursing to-day is as truly a profession as medicine and law are professions—requiring, in its way, as arduous and complete a training, as absolute a devotion to duty as medicine and law demand from their votaries. It is universally recognised as a skilled calling. It is adopted now by hundreds of highly educated gentlewomen. It is in every way a profession; an inseparable part of the noble profession of medicine. But it is not acknowledged as such because the nursing world is now composed of thousands of aimless atoms, who have no recognised status, and no guardians of their interests, and are, with few exceptions, absolutely without *esprit de corps*."

—I am, etc., GERALD HARPER.

5, Hertford Street, W., August 10th.

PULSE TENSION AND ALBUMINURIA.

SIR,—I am sorry to find that my remarks in the JOURNAL of August 24th, page 423, on the pulse tension accompanying Mr. Weston's albuminuria are not strictly in accordance with fact, and I hope I may be allowed a few lines in explanation.

At the time I spoke I thought that Dr. Pavy was referring to Mr. Weston's 500 mile walk, which I now find from his published paper was not the case; and secondly, trusting to memory, I believed that at the time Mr. Weston was temporarily indisposed, and had relative high tension during this walk; he had also some albuminuria; while, as a matter of fact, the albumen was expected, but did not appear.

Again, the traces of Mr. Weston's pulse made by the late Dr. Mahomed, and which, thanks to the kindness of his relatives, are now for a time in my keeping, refer entirely to March, 1876, the date of the 500 mile walk. But though the facts are not quite as stated, the point of interest to a large extent remains. On March 11th, Mr. Weston became very sleepy, suffered from cold hands and general chilliness (these being, as I have shown,[1] the usual signs and accompaniments of high tension), and his pulse tension was "very considerably increased;" and, from his other remarks, Dr. Mahomed obviously expected to find some albumen in the urine at this time; but none was found, probably, I think, because he was promptly put to bed and taken such good care of by Dr. Mahomed that he soon recovered.

[1] JOURNAL, vol. i, p. 291.

Further, one of Mr. Weston's competitors was obliged to stop after walking 122 miles, owing to a more severe attack of the same nature, and of this man Dr. Mahomed says: "Unfortunately he was not under regular observation, and his urine was not examined; it would most probably have been found albuminous."

I think, then, that it is almost certain that in Mr. Weston's previous feat of 115 miles in twenty-four hours, his distress, of which Dr. Pavy speaks in his paper, was really of the same nature as that of March 11th; and that he then had, just as Dr. Mahomed would have expected, a high tension pulse and temporary albuminuria.

I must not hope for further space here, but would refer those who may be interested in these points to Dr. Mahomed's most instructive paper in the JOURNAL of March 18th, 1876, from which I have quoted the above; and also to my paper on the connecting link between the high tension pulse and albuminuria, read in the Section of Medicine at Leeds immediately after the discussion on albuminuria.—I am, etc.,

A. HAIG, M.D.

Welbeck Street, August 24th.

THE ADDRESS IN SURGERY: LIGATURE OF ARTERIES.

SIR,—Mr. Pridgin Teale, in his able Address in Surgery, attributes to Mr. Walsham the restoration of the practice of deligating an artery in two places and dividing it between the ligatures. I think that to Mr. Willett the credit of reviving the operation is due. When I was house-surgeon at St. Bartholomew's in 1866 in Messrs. Wormald's and Willett's wards I saw Mr. Willett adopt this method more than once; and I am not aware of ever having followed any other course; and I have frequently helped my colleague, Dr. Keeling, in the same operation. This mode of dealing with arteries has a curious history. Originally practised by Aëtius and Paul of Ægina, students of the Alexandrian school, in the sixth and seventh centuries, it fell into disuse when the ligature ceased to be used, was not revived by Paré, but was adopted by Abernethy and John Bell, and by Maunoir, of Geneva. Sir Astley Cooper says that he often performed this operation very successfully, but says that it is liable to the objection that the ligature sometimes escapes from the artery soon after its application, an accident which happened to Mr. Cline, senior, and to himself. Syme and Pirrie recommend it when the artery has been too much denuded of its sheath. Gross and Holmes condemn the operation as likely to occasion secondary hæmorrhage. It would be well if cases of this operation were reported, so that we might be able to judge of its results.—I am, etc.,

Sheffield, August 20th. ARTHUR JACKSON.

MEDICAL DEFENCE UNION.

SIR,—I should like to add my testimony to that already given in the JOURNAL of August 17th, to the practical assistance this Society has afforded to its members.

Some two years ago I was threatened with an action for indecent assault, on the accusation of an hysterical patient, and in my distress I turned for advice and help to the President of this Society, who gave it to me most fully and cordially. Acting on his advice, I went directly to the legal advisers of the Society, and placed my case unreservedly in their hands; the result being that the accusation was never publicly brought against me, and all expenses were borne by the Society. What my relief was, independently of the expenses, at this result, and even prior to that at the knowledge that my defence was secured, cannot be overestimated, and I shall never cease to urge on all my colleagues the advisability of joining this Society.—I am, etc.,

A MEMBER FROM THE START.

SIR,—I wish to bear testimony to the manner in which the Medical Defence Union assists its members. A difference of opinion between the Warwick Board of Guardians and myself as to the manner in which I performed the duties of district medical officer culminated yesterday in a Local Government inquiry, the result, of course, being still unknown. Immediately upon my communicating to Dr. Leslie Phillips that such inquiry was ordered, that gentleman summoned a meeting of the council of the Union, and, the charges against me being considered "frivolous," their solicitors were at once requested to undertake my defence at the expense of the Union. Dr. Rogers, LL.D.Cambs. was named to represent me, and to that gentleman I must offer my best thanks for his most able advocacy during an inquiry lasting over six hours.

The promptitude with which this most valuable assistance was accorded me is a marked feature in the management; and so highly impressed is the profession here as to the genuine character of the Union, that its action in my contest has already led to many medical men joining its ranks.—I am, etc.,

Leamington Spa, August 13th. A. W. TOMKINS, M.D.

ETHER *VERSUS* CHLOROFORM.

SIR,—The thanks of the profession will be heartily given to Mr. Pridgin Teale for his admirable Address in Surgery, but perhaps most especially for the section "Ether *versus* Chloroform." I am glad to see he so emphatically gives the verdict for ether. This note, however, is not to open up again the subject for discussion, but simply to correct an error that I think Mr. Teale has fallen into with regard to Clover. He says: "The method of administering nitrous oxide gas before giving ether was, in his later years, largely given up by Clover." Having known Clover more intimately than any other of his medical friends, especially in all that relates to anæsthetics, I can say he never gave up the combination; it was the very essence of his most perfect administration, and to the very last used by him. It is nevertheless true that he found, by rebreathing the warm exhaled air, he could readily produce anæsthesia; and so it came about he invented his small apparatus to be used without gas as a more handy method, and no doubt on country journeys used it himself. This probably gave rise to the idea of his having discarded the older apparatus.

My second reason for this note is that, chatting with an instrument maker this afternoon, he showed me a note from a surgeon asking, "Is it true that Clover's gas and ether apparatus is now practically not used?" I feel sure Mr. Teale did not expect this inference from his words.

I may be allowed to add, from a fairly large experience, that, if we want to administer ether in the most perfect way, we should use Clover's own gas and ether arrangement, with ether of specific gravity 720, which does not require warming—an important fact that many do not recognise.—I am, etc.,

Cavendish Place, August 21st. GEORGE H. BAILEY.

INSANITY FOLLOWING SURGICAL OPERATIONS.

SIR,—This question is so important that I venture again to address you on the subject, chiefly because, after reading Dr. E. Denis's book on the subject, I have gone more fully into the subject, so far as my own experience can throw light upon it. I take as two postulates that insanity is practically a disease of adult life, and it is certain that my own work occurs most exceptionally in cases of childhood or senility. The ascertained proportion of cases of insanity amongst adult women is 1 in 600 of the whole adult female population, and this is probably understated, as there are very many cases of insanity not accessible to any inquiry.

According to my own experience, the "constituent elements" of an operation, as Dr. Denis calls them, which are most important in the production of insanity after operations are, first, the anæsthetic, and secondly, the traumatism. Probably the anæsthetic has more to do with the result than the traumatism, for it is certain that anæsthesia alone without any wound will produce insanity. Traumatism has clearly only a secondary influence, for, whilst I have seen insanity follow a simple exploratory incision, a unilateral ovariotomy, and two perfectly uncomplicated cases of removal of the appendages for myoma, I have only once seen it follow the dreadful operations for adherent pyosalpinx, and have never seen it after hysterectomy. If the traumatism was a direct or potent factor, it is in these latter classes of operation that we should see it most pronounced.

Finally, I have now performed, so far as I can estimate, between 7,000 and 8,000 operations requiring the use of anæsthetics, and I have had anæsthetics administered in my practice for purposes not involving traumatism probably in 3,000 more instances, and I know of seven cases of sequent—not necessarily consequent—insanity. Of course there may have been others not known to me, and I shall say fourteen cases to cover that margin of error.

My own practice, therefore, does not yield a proportion of cases of insanity following operations larger than the general proportion of insanity in the adult female population; and if I include the cases of anæsthesia, it is probably considerably smaller.

Dr. Denis says: "En moyenne, on observe 2.5 cas d'aliénation mentale sur 100 opérations." But if this had been the case all of us engaged in active operating practice would have felt the influence of the fact long ago. Personally, I have been struck by the occurrence of insanity after operations as being like the occurrence of tetanus—something to be met with occasionally, but not a matter to calculate upon. If I saw an insanity rate of 2.5 in my operations, it would be more striking than my death-rate in everything but my hysterectomies, and in that class I have already said I have never seen insanity follow in a single instance; and Dr. Bantock's experience amounts to practically the same result, for his exception cannot really be called one of insanity following an operation. As a *per contra*, I can point to at least thirteen cases where operations have cured insanity.—I am, etc.,

Birmingham. LAWSON TAIT.

FALMOUTH AS A HEALTH-RESORT.

SIR,—It is impossible not to regret, for the sake of our travelling invalids and friends, that there is not some international arrangement with regard to medical matters. The commonest courtesy would seem to justify the attendance of medical men upon their own countrymen wherever they may be, and it is difficult to understand the shortsighted policy of those nations who put an obstacle in the way of English physicians and surgeons at places which almost owe their sanitary and sanatory existence to them. But while I should ardently desire to see the path smoothed for our *confrères* who select a foreign residence, permit me to inquire why so large a proportion of our friends prefer a tedious railway journey through foreign lands, with the attendant discomforts while it lasts, and with the numerous disadvantages at the end of it, while they ignore the exquisite beauties of their own country? No one admits the benefit to be derived from change of scene and occupation after a year's hard work more than I do, but it is to be remembered that railways, that have obliterated distance, have also obliterated many of the peculiar attractions which, in their difference from what we are accustomed to at home, constituted so many subjects of delightful interest and study for the traveller of forty or fifty years ago.

I am specially prompted to make these remarks by my temporary residence at one of the most delightful parts of Great Britain that it has been my good fortune to visit.

Before I came here I inquired of my friends what they knew of Falmouth, and the reply was almost invariably a confession of ignorance. Of course, nobody doubted that it was a most relaxing and depressing locality, and this reputation clings to it, so as to surround Falmouth with a halo of an objectionable character. I have no book but guide books here to consult, but I doubt whether Sir J. Clark even mentions Falmouth in his well-known work on *Climate*. The annual rainfall is considerably greater here than in London, but the healthiness of the locality is best shown by the mortality being 10 per 1,000.

For the healthy there is every possible attraction—geology, botany, mineralogy, marine zoology; the joys of the sea, the exquisite colouring of the rocks and hills and bays give occupation to the philosopher, the artist, the sportsman.

The invalid finds every comfort required for mind and body, and, though I am far from asserting that the place is suited for all constitutions or all disorders of the flesh, I do maintain that it is a place that deserves much more attention from our doctors and our countrymen generally than it has yet received. Even here the climate varies in different localities but slightly removed from one another; some are more exposed to the east, some more to the south, north, or west, and these differences would have to be considered in the selection to be made for different affections. But when I inform you that within two miles of this house is a garden where I have seen palms, dracænas, bougainvillias, and many other varieties of tropical plants flourish all the year round in the open air, the character of this "Ultima Thule" of Great Britain is indicated.

There are no swamps in the neighbourhood, therefore no suspicion of the miasm that haunts a great seaport not far from Cornwall. The people are kindly and sociable, and though postal and railway arrangements might be better, they are not such as to materially affect the comfort of the residents.

I trust the Committee of the Medical and Chirurgical Society appointed to investigate the medical climatology and balneology of Great Britain may regard it as one of its functions to report upon the advantages and drawbacks of Cornwall; but it would doubtless aid the Committee if my medical brethren would themselves visit and communicate their impressions of a spot the loveliness of which has poured balm into the heart of one very dear to me, and strengthened many others.

I cannot sum up what I could dilate upon beyond the limits you would allow me better than in the memorandum which I found in the visitors' book at Hill's Hotel at Lizard yesterday: "August 19th. R. de Brower, Gonda, Holland, who is astonished that so many Englishmen do prefer the Rhine and Switzerland to their own beautiful country."—I am, etc.,

Falmouth, August 28th. EDWARD H. SIEVEKING.

ENGLISH PRACTITIONERS IN SWITZERLAND.

SIR,—If the Swiss authorities were to allow English medical men to practise in Switzerland without a federal diploma, they would soon have to do the same with all foreigners. Reciprocity can hardly be discussed, as the Swiss authorities consider that some English qualifications are not to be compared with the Swiss State examination, and the English Government cannot at present guarantee that the reciprocity would be extended to the colonies, which is an essential point; most Swiss doctors would have a much better chance in the colonies than in England. As far as I can make out, the general opinion amongst Swiss medical men is this:—

1. English doctors who have helped to make Swiss health resorts known, and who have resided there for some years, might obtain, as an exceptional reward, the permission to continue to practise without hindrance; there are two or three of these men in the whole of Switzerland.

2. In future, all foreign medical men ought to pass the Swiss State examination; every facility is granted to them, and if they are successful an additional security will be given to English patients in Switzerland, who will then be certain to be attended by really trustworthy practitioners.

3. Many Swiss doctors take the trouble to come to England and to learn the English language, so that they are perfectly able to converse with English patients, who, as a matter of fact, very often prefer them to their own countrymen.

4. Taunts and threats like those which have been published in some English papers are likely to prevent a satisfactory arrangement, as the Swiss have not yet been trained to coercion.—I am, etc.,

J. KESER, M.D.

Harley Street, W., August 28th.

DYSMENORRHŒAL MEMBRANE.

SIR,—In the JOURNAL of July 27th I observe an annotation under the above heading. The subject is one of deep scientific interest. Some three years ago I presented a paper on this very subject to one of our medical journals; it was, however, laid aside. In it I drew attention to the fact that the phrase "membranous dysmenorrhœa" then in vogue should be discarded as it gave rise to misapprehension, and is actually at variance with truth. I then suggested the adoption of the name "croupous endometritis," and for the following reasons:

1. Almost all the membranes of this character that I have examined have presented microscopically the appearances of an inflammatory exudation. The evolution of the membrane takes place, however, without any evidence of inflammatory disturbance.

2. Although pain is a symptom often complained of during the expulsion of such membranes, it is not an invariable accompaniment. In many of the cases under my own observation, these membranous casts of the uterus, sometimes quite entire, have been expelled without the aid of pain, so to speak, or without inducing pain.

3. Although the membrane is frequently separated from its underlying structure in consequence of, and in association with, the menstrual excretion, it is nevertheless occasionally separated at other times as well. I have known complete casts of the uterus to be expelled without being either preceded or accompanied by hæmorrhagic discharge. In such cases the ordinary every-day secretion taking place from the endometrium was sufficient to separate the adventitious structure. The phenomenon may occasionally represent an early abortion; that it, however, more usually results quite independently of a sexual congress I have no misgivings, as I have witnessed the expulsion of these membranes, not only in single women who were free from suspicion, but also in patients during their residence in hospital.—I am, etc.,

JAMES OLIVER, M.D., F.R.S.Edin.

Gordon Square, W.C.

NAVAL AND MILITARY MEDICAL SERVICES.

CHANGES OF STATION.

THE following changes of station among the officers of the Medical Staff of the Army have been officially notified as having taken place during the past month:—

	From	To
Brigade-Surgeon E. C. Markey	Egypt	Madras.
,, F. Ferguson, M.D.	Madras	Gibraltar.
,, F. B. Scott, M.D., C.M.G.	Gibraltar	Canterbury.
,, J. Wilson, M.B.	Aldershot	Curragh.
Surgeon-Major A. Sanderson	Bengal	Aldershot.
,, G. J. Gibson, M.D.	York	Preston.
,, G. B. Hickson	,,	Strensall.
,, J. F. Williamson, M.B.	Buttevant	Egypt.
Surgeon W. T. Johnston, M.D.	Stratford-on-Avon	,,
,, H. A. H. Charlton	Netley	Aldershot.
,, H. J. Michael	Aldershot	Egypt.
,, E. H. Myles, M.B.	Plymouth	Devonport.
,, R. O. Cusack	Derby	Newcastle-on-Tyne.
,, C. R. Woods, M.D.	Bradford	Ashton-u.-Lyne
,, E. L. Maunsell	Netley	Aldershot.
,, R. F. Adams, M.B.	,,	,,
,, C. G. D. Mosse	Canterbury	Shorncliffe.
,, A. G. Kay, M.B.	Netley	Dover.
,, J. Maconachie	Golden Hill Fort	Bengal.
,, T. A. Dixon	Woolwich	,,
,, E. J. E. Risk	Netley	Chatham.
,, R. Fowler	,,	Bengal.
,, S. H. Creagh	,,	Aldershot.
,, N. M. Reid	Bermuda	Devonport.
,, H. J. Barratt	Netley	Chatham.
,, A. F. Russell, M.B.	,,	Aldershot.
,, L. H. Truefitt, M.B.	,,	,,
,, F. H. M. Burton, M.B.	,,	Chester.
,, C. Birt	Newcastle-on-Tyne.	Derby.
,, C. W. Johnson, M.B.	Warwick	Stratford-on-Avon.
,, W. E. Berryman	Leicester	York.
,, H. T. Baylor	Malta	Egypt.
,, R. N. Buist, M.B.	Egypt	Mauritius.
,, H. T. Knaggs	Malta	Egypt.
,, C. H. Hale	Aberdeen	Ayr.
,, A. Y. Reily, M.B.	Aldershot	Maidstone.
,, J. Ritchie, M.B.	York	Preston.
,, H. St. G. S. Hore	Aldershot	Malta.
,, S. Macdonald, M.B.	Lanarkmuir	,,
,, E. Corcoran	Chatham	,,
,, A. O. C. Watson, M.B.	Sligo	Egypt.
,, E. W. Gray, M.B.	Dublin	,,
,, D. Stiell, M.B.	Lichfield	,,
,, L. E. A. Salmon	Malta	,,
,, J. Minniece, M.D.	Aldershot	,,
,, R. H. Penton	,,	,,
,, H. P. C. Holt	,,	C. of Good Hope
,, G. F. Alexander, M.B.	Fort George	Lanarkmuir.
,, C. W. Reilly	Preston	Warrington.
,, O. E. P. Lloyd	Netley	West Africa.

THE NAVY.

THE following gentlemen who competed at the examination recently held at Burlington House, for appointment as Surgeon in the Royal Navy, have been successful:

Names.	Marks	Names.	Marks.
G. Allan, M.B.	3,100	N. C. Ridley	2,920
W. J. Maillard, M.B.	3,065	A. H. L. Cox	2,885
P. V. Jackson	3,010	E. F. S. McKay	2,880
O. M. Jones	2,920	A. Maclean, M.B.	2,880

Fleet-Surgeon GEORGE KELL has been appointed to the *Wildfire*, for charge of medical duties of Sheerness Yard, Naval Barracks, and ships of Steam Reserve; and Surgeon V. G. THORPE, to the *Belleisle*, both to date August 26th.

Surgeon Archibald MCKINLAY, who entered the service March 31st, 1874, is promoted to be Staff-Surgeon. He was Surgeon of the *Mosquito* during the Egyptian war in 1882, and has the medal and Khedive's bronze star for that campaign.

THE MEDICAL STAFF.

THE following is the list of the successful candidates at the recent competitive examination for commissions in the Medical Staff of Her Majesty's Army:

Names.	Marks.	Names.	Marks.
1. H. J. Waller	3,085	5. C. A. Stone	2,800
2. A. W. Bewley	3,080	6. L. Way	2,730
3. W. T. Mould	3,030	7. S. G. Moores	2,640
4. M. L. Hughes	2 910	8. H. E. Winter	2,630

Surgeon E. D. FARMAR-BRINGHURST, F.R.C.S.Edin., has left Fermoy for Waterford, and assumed the medical charge of the troops there.

Surgeon-Major JAMES ADOLPHUS SMITH died at Bhamo, Upper Burmah, of intermittent fever, on August 3rd, at the age of 41. He entered the service as Surgeon March 31st, 1874, and became Surgeon-Major twelve years thereafter. He served in the campaign on the North-West Frontier of India in 1876, and was slightly wounded in an engagement at Aimul Chabootra; in the Egyptian war of 1882 (medal and Egyptian bronze star); and with the Nile Expedition in 1884-85 (clasp).

Deputy Surgeon-General HENRY BOWLES FRANKLYN, M.D., LL.D., Barrister-at-Law, of the Middle Temple, died at Geneva on the 6th instant, aged 60. His commissions were dated:—Assistant Surgeon, March 26th, 1852; Surgeon, March 11th, 1859; Surgeon-Major, March 10th, 1872; and Honorary Deputy Surgeon-General, on his retirement, March 20th, 1877. He served (says *Hart's Army List*) in the Indian campaign in 1857-58, with the Royal Horse Artillery, including the attack on Secundra, the storm and capture of Meeangunge, the relief of Lucknow, and with the Azimghur Field Force in the affairs of June 9th and 10th (several times mentioned in dispatches, twice for gallantry, and once for general ability and zeal; medal with clasp). During the campaign of 1860, in Italy, he was in charge of the stores and appliances of Lady Shaftesbury Committee, and was specially mentioned for his gratuitous attendance on the wounded "in times of much peril" after the battle of Volturno and subsequent operations, ending in the capitulation of Capua. He was thanked personally by the King of Italy, made Honorary Surgeon to His Majesty, and Chevalier of St. Maurice and St. Lazarus, and had the Victor Emmanuel war medal conferred on him for aid to the wounded in the campaign of 1860-61. He also received the Neapolitan gold medal of the Royal Humane Society of Italy, "for service of peril."

Surgeon-Major NATHANIEL ALCOCK is granted retired pay. He entered the service as Assistant Surgeon October 1st, 1860; became Surgeon March 1st, 1873; and Surgeon-Major September 2nd, 1875. He was engaged in the Kaffir war in 1878, and has the South African medal for that campaign.

Surgeon B. A. MATURIN, who went on half-pay on account of ill-health in January last, is now restored to the establishment, *vice* G. S. Tate, M.D., deceased.

Surgeon GEORGE SCOTT TATE, M.D., while serving in the Bengal command, and who entered the service January 30th, 1886, died in Lady Roberts's Hospital at Kussowlie on July 8th, having just completed his 26th year.

Surgeons C. S. CRONIN and J. MEEK, M.D., serving in the Bengal command, have leave of absence for six months on medical certificate.

Surgeons F. H. S. MURPHY, M.D.; W. T. JOHNSTON, M.D.; A. W. BROWNE; R. D. HODSON; C. K. POWELL, M.D.; H. C. KIRKPATRICK, M.D.; JOHN ARMSTRONG; W. W. KENNY, M.D., F.R.C.S.Ireland; P. M. ELLIS; P. J. O'SULLIVAN, M.D.; J. F. BRODIE, M.D., and P. B. TUTHILL, M.D., F.R.C.S.Ireland, are promoted to be Surgeons-Major, ranking as Majors. Dr. Tuthill entered the service February 4th, 1877; all the others named, August 5th, 1877.

ARMY MEDICAL RESERVE.

SURGEON W. M. HARMER, F.R.C.P.Edin., 2nd Volunteer Battalion East Kent Regiment (late the 5th Kent), is appointed to be Surgeon, ranking as Captain.

Surgeon-Major J. P. PURVIS has resigned his commission, which was dated May 16th, 1888.

Surgeon ROBERT CLARK has resigned his commission, which dated from May 5th, 1888.

Acting-Surgeon E. T. CROUCH, 3rd Volunteer Battalion Hampshire Regiment (late the 3rd Hampshire), is appointed to be Surgeon, ranking as Captain.

INDIAN MEDICAL SERVICE.

SUBJOINED is a list of the candidates for Her Majesty's Indian Medical Service who were successful at the competitive examination held at Burlington House on August 12th and following days. Fifty-six candidates competed for twelve appointments, and fifty-five were reported qualified:

Names.	Marks.	Names.	Marks.
A. L. Duke	3,400	C. L. Williams	3,190
H. B. Melville	3,380	C. H. Bedford	3,145
J. C. S. Vaughan	3,380	W. C. Vickers	3,115
H. F. Cleveland	3,260	J. C. White	3,105
J. B. Smith	3,240	E. L. C. Smith	3,060
T. W. Shaw	3,206	H. W. Elphick	3,050

DEPUTY SURGEON-GENERAL W. R. RICE, M.D., Bengal Establishment, is, it is reported, to succeed Sir Benjamin Simpson, as Sanitary Commissioner and Surgeon-General to the Government of India on the latter's retirement.

Surgeon R. JAMES, M.B., Madras Establishment, medical officer 5th Infantry Hyderabad Contingent, is appointed to the medical charge of the 3rd Cavalry Hyderabad Contingent, *vice* Brigade-Surgeon C. E. McVittie, retransferred to the Madras Presidency.

Surgeon E. H. BROWN, Bengal Establishment, officiating in medical charge of the 2nd Infantry, is appointed to the 5th Infantry Hyderabad Contingent, *vice* Surgeon James, transferred to the 3rd Cavalry.

Surgeon-Major M. ROBINSON, Madras Establishment, 29th Native Infantry, has leave of absence for one year.

Surgeon N. P. SINHA, Bengal Establishment, is appointed to the officiating medical charge of the 6th Bengal Light Infantry, *vice* Surgeon-Major J. Moran, transferred to civil employ.

Surgeon-Major CHARLES G. H. ROSS, late of the Bombay Establishment, died on the 3rd instant, at Brussels, aged 63.

Surgeon G. E. FOOKS, Bombay Establishment, medical officer 5th Light Infantry, is appointed Cantonment Magistrate of Baroda, in addition to his military duties.

The services of Brigade-Surgeon J. G. PILCHER, Bengal Establishment, civil surgeon of Darjeeling, are placed temporarily at the disposal of the Government of India in the Home Department.

Surgeon-Major R. COBB, Bengal Establishment, officiating civil surgeon of Hooghly, is appointed to act as civil surgeon of Darjeeling.

Surgeon-Major W. A. C. ROE, Bengal Establishment, civil surgeon of Mooltan, has privilege leave for three months.

The services of Surgeon F. C. PEREIRA, Madras Establishment, are placed temporarily at the disposal of the Public Department.

Surgeon L. J. PISANI, Bengal Establishment, from the officiating medical charge of the 4th Punjab Infantry, is appointed to the medical charge of the 1st Punjab Infantry, *vice* Brigade-Surgeon J. Duncan, M.D., retired.

Surgeon L. G. FISCHER, Bengal Establishment, is appointed to the officiating medical charge of the 23rd Pioneers, *vice* Surgeon J. H. Sellick, transferred

temporarily to civil employment. This cancels Surgeon Fischer's appointment to the 7th Bengal Cavalry, recently notified.

The promotion of Surgeon C. H. BEATSON, of the Bengal Establishment, to be Surgeon-Major, announced some time ago in the JOURNAL, has received the approval of Her Majesty.

Surgeons P. O. W. HAILEY and H. M. BRABAZON, both of the Bengal Establishment, have leave of absence, each for 182 days.

Surgeon P. de CONCEIÇAO, Bengal Establishment, died in London, June 29th, aged 36. His commission was dated October 2nd, 1880. He served in the Burmese campaign in 1886-87, was mentioned in despatches for his services, and granted the medal with clasp.

Surgeon-General DAVID WYLLIE, M.D., of the Bombay Establishment, who entered the service January 1st, 1844, and retired March 31st, 1880, died at Homburg on August 24th, at the age of 68.

THE MILITIA AND VOLUNTEERS.

ACTING SURGEONS R. B. GRAHAM and S. LINTON, M.B., 1st Fifeshire Artillery, are promoted to be Surgeons.

Surgeon-Major (ranking as Lieutenant-Colonel) T. H. RUTHERFORD, M.D., 1st Caithness Artillery, has resigned his commission, which was dated February 1st, 1889, his rank as Surgeon being from July 31st, 1867; he is permitted to retain his rank and uniform.

Honorary Assistant-Surgeon J. W. HEMBROUGH, 1st Volunteer Battalion Lincolnshire Regiment (late the 1st Lincoln), has also resigned his commission, dated March 18th, 1869, with permission to retain his rank and uniform.

Acting-Surgeon A. F. A. FAIRWEATHER, M.D., 2nd Volunteer Battalion East Yorkshire Regiment (late the 2nd East Riding of Yorkshire), is promoted to be Surgeon.

Acting-Surgeon J. R. WATT, M.B., 2nd Volunteer Battalion Scots Fusiliers (late the 2nd Ayrshire), has resigned his appointment, which bore date June 25th, 1879.

Acting-Surgeon D. M. ARTHUR, 5th Volunteer Battalion Gordon Highlanders (late the 1st Kincardine and Aberdeen), has also resigned his appointment, dated March 8th, 1884.

Mr. T. F. MACDONALD, M.B., is appointed Acting-Surgeon to the 1st Dumbartonshire.

Surgeon R. J. REECE, of the London Division of the Volunteer Medical Staff Corps, has resigned his commission, dated April 28th, 1886, and is appointed Surgeon to the Honourable Artillery Company of London.

Acting-Surgeon S. EVANS, 2nd Volunteer Brigade Eastern Division Royal Artillery (late the 1st Essex Artillery), has resigned his appointment, which dates from November 7th, 1877.

Surgeon and Surgeon-Major (ranking as Lieutenant-Colonel) G. PYCROFT, 1st Volunteer Brigade Western Division Royal Artillery (late the 1st Devon Artillery), has resigned his commission, that of Surgeon being dated December 7th, 1865; that of Surgeon-Major February 1st, 1889. He is permitted to retain his rank and uniform.

Acting-Surgeons W. R. SEWELL, M.D., 1st Renfrew and Dumbarton, and J. F. PORTER, M.D., 2nd Volunteer Battalion Yorkshire Regiment (late the 2nd North Riding of Yorkshire), are promoted to be Surgeons in their respective corps.

Surgeon J. A. MACKENZIE, M.B., 1st Volunteer Battalion Manchester Regiment (late the 4th Lancashire), has resigned his commission, dated February 1st, 1889.

Surgeon and Surgeon-Major H. R. SMITH, 3rd Volunteer Battalion Hampshire Regiment (late 3rd Hampshire), is appointed Brigade-Surgeon to the Portsmouth Brigade Infantry Volunteers, ranking as Lieutenant-Colonel.

Surgeon-Major R. V. KELLY, 9th Battalion Rifle Brigade (late the Westmeath Militia), has resigned his commission, which bore date July 25th, 1873; he is permitted to retain his rank and uniform.

Surgeon and Surgeon-Major W. MILLIGAN, 2nd Volunteer Battalion Derbyshire Regiment (late the 2nd Derbyshire), is appointed Brigade-Surgeon to the North Midland Brigade of Infantry Volunteers, ranking as Lieutenant-Colonel.

Mr. A. D. VARDON is appointed Acting-Surgeon to the 2nd Volunteer Battalion King's Own Scottish Borderers (late the 1st Berwick).

The undermentioned Acting-Surgeons are promoted to be Surgeons in their respective corps: H. BRAMWELL, M.D., the Tynemouth Artillery; C. H. WILLEY, M.D., 1st West Riding of Yorkshire (Sheffield) Engineers; A. CRAIGMILE, M.D., 1st Volunteer Battalion Cheshire Regiment (late the 1st Cheshire); W. GANDY, 2nd Volunter Battalion East Surrey Regiment (late the 3rd Surrey).

EXAMINATION FOR VOLUNTEER SURGEONS.

ARTILLERY.—Information as to the examination for volunteer surgeons is given in the JOURNAL of June 4th, 1887, p. 1244. The following books are recommended: *Army Medical Regulations*, 1889; *Manual of Medical Staff Corps*; and Parkes's *Hygiene*.

ANOTHER SLIGHT TO MEDICAL OFFICERS.

M. D. writes: I have no doubt that you observed in the list of officers of the Royal Navy who were presented to H.I.M. the Germany Emperor on board the flag ship, not one medical officer of the fleet was included, although there were many commanders as well as captains, and there must have been several medical officers in the fleet who ranked with commanders, if not higher. It is perfectly unintelligible to anyone that such marked slights are shown to such a highly honourable service as that of the Naval Medical Service. I believe further that not one medical officer of the Army Medical Service was presented to the Emperor, although several lieutenant-colonels were presented who were junior to certain medical officers who were on duty at Aldershot during the recent review. It is difficult to know how to act in such cases, but questions might be asked in the proper quarter, to ascertain the significance of such a marked slight to these services, and by showing that these matters are acutely observed and noticed, their repetition might be frustrated in future.

ARMY MEDICAL REORGANISATION.

ARMY MEDICAL CORPS says too much has been made of the supposed bad feeling between the medical and other army officers. No doubt such a feeling does exist; but, on the part of regimental officers, it is more to the present system than to medical officers as individuals. It is also fostered by such unworthy remarks on medical officers as are found in the *Pocket-book*. There is unfortunately a want of cordiality between regimental and all departmental officers, and the medical are in this respect no worse off than the other officers concerned. He advocates the establishment of medical messes at all stations, which would enable medical officers to advance *camaraderie* among themselves and to return hospitality. Nothing would more improve their social and garrison position. A return to a modified regimental system would not be popular with the majority of medical officers; they would far rather be the officers of a properly-organised Medical Corps.

LORD CAMPERDOWN'S COMMITTEE.

SURGEON-MAJOR J. P. H. BOILEAU writes: I shall feel greatly obliged if you will allow me, through the JOURNAL, to contradict a rumour, which seems to be very widespread, to the effect that I gave evidence before the above Committee—and evidence of a nature at variance with the general feeling of medical officers of the army. There is not a word of truth in the report. I gave no evidence before the Committee, nor had I the least desire to do so.

OBSERVER urges that every effort should be made to have the evidence published in full. The public would then be able to see who are the opponents of the just rights of medical officers, and to estimate the animus of a certain clique towards them.

MEDICAL STAFF writes that these recommendations will be received with eminent satisfaction, except as regards that advocating a compound title. Such titles may conform to the genius of the German language, but are very un-English. There will be a clear tendency on the part of the public to drop the prefix of "Surgeon," and, it is to be feared, military irritation will thereby be caused; better concede purely military titles at once.

AN OLD VOLUNTEER MEDICAL OFFICER suggests that, as a sequel to Lord Camperdown's Committee, the following should be carried out:

1. The invidious and untruthful distinction between "combatant and non-combatant" officers be finally done away with.
2. The term "Honorary" in connection with rank and status should be abolished.
3. Compound titles should be given to medical officers, such as Lieutenant-Colonel and Surgeon, Captain and Surgeon, etc.

PROFICIENCY EXAMINATION FOR VOLUNTEER SURGEONS.

ACTING SURGEON OF TEN YEARS writes: Some months ago a general order or warrant was sent round to volunteer surgeons, saying that acting surgeons who passed the proficiency examination would be commissioned with the rank of surgeon. Last month several acting surgeons passed the proficiency examination, but up to this there is no notice of their being gazetted surgeons. Shortly after there was a column and a half of surgeons gazetted in the JOURNAL, but none since. Can you account for this? Some say it is necessary for the acting surgeons to apply after passing the examination.

*** Regimental volunteer medical officers who have passed the proficiency examination must apply for promotion through their commanding officers, as required by the volunteer regulations. Several promotions of acting surgeons have recently been gazetted and noticed in the JOURNAL.

MEDICO-LEGAL AND MEDICO-ETHICAL.

LUNACY INQUIRY.

AN inquiry was opened on July 30th, before Mr. J. R. Bulwer and a jury of the county of London, as to the alleged insanity of the Hon. Flora Fox Byng, the petitioner being the only child of Mrs. Byng, who is a widow, and is now resident at a lunatic hospital. Both the petitioner and the alleged lunatic were represented by counsel.

Amongst various other matters brought out in evidence was this, that after some attacks of excitement with crying and walking about all night, Mrs. Byng imagined that she was constantly receiving telephone messages from London to Florence, that electric wires were under the bed, and that the floor had a constant see-sawing motion. She also said that she heard voices; and would exclaim to an imaginary person, "How dare you say such a thing," evidently replying to hallucinatory voices.

After a private examination of Mrs. Byng before Mr. Bulwer and the jury a large number of letters were read in order to prove that she was competent to manage her own affairs. Her solicitor said he had received hundreds of letters from her, and about three a week since she had been in the lunatic hospital, and in none of them had he observed any indication of incapacity to manage her affairs; and her counsel said he was prepared to put in such letters by the score. Counsel for the petitioner thereupon read a letter written by Mrs. Byng a few days previously, in which, amongst other similar statements, she wrote that "I never close my poor eye at night on account of the terrible whisperings and irritation of my brain."

Mr. Bulwer, in summing up, said that the proceedings were instituted for the protection of the alleged lunatic's property, and that the evidence was absolutely overwhelming—and was confirmed by the lady herself—that she was now of unsound mind;

and the jury found unanimously that she was of unsound mind and incapable of managing her own affairs.

One point only we desire to emphasise—of which this case was a crucial example—namely, that an extremely insane person may be, and often is, capable of writing hundreds of perfectly ordinary and coherent letters, or letters the contents of which are not palpably delusional.

OFFICERS OF CORPORATIONS.

THE Public Health Act—very properly, as most people think—imposes a penalty on any officer or servant employed by a local authority who "under colour of his employment, exacts or accepts any fee or reward other than his proper salary, wages, and allowances." Several cases have recently been before the Courts in which the meaning of the provision has had to be considered, and in most of them the liability to the penalty has been enforced. In one case the surveyor employed by the corporation of Margate agreed to receive, from contractors employed by them, a commission on the price of certain works executed by them for the corporation. He was sued for the penalty, and the Divisional Court and Court of Appeal held that he was liable. The corporation then voted him as an additional remuneration beyond his ordinary salary a sum equal to the amount of the commissions which the contractors would have paid. The Court, however, held that such a payment was beyond the power of the corporation to make, and granted a *certiorari* to quash their resolution to pay the money. The town clerk of Bury St. Edmund's has, however, been more lucky; he, as is usual, is paid a salary, which is expressed to include all legal charges except those for contentious business, travelling expenses, and expenses out of pocket. The corporation have been concerned in promoting an irrigation scheme which naturally has imposed extra work on their town clerk, and they have voted him an extra remuneration of 500 guineas. The local ratepayers' association thought this payment improper, and consequently brought an action against the town clerk to recover the penalty from him for accepting this additional payment for his services. Baron Pollock, who tried the action, and more recently the Court of Appeal, have, however, decided that under the above circumstances no penalty had become due. The town council had clearly authority to make extra payments for extra work, and this payment was quite justifiable. The result of these cases seems to be that officers cannot accept gratuities from persons who are employed by the local authorities, but can take extra payments from the authority whose servants they are, if they do extra work for it. Public opinion will probably agree that this result is satisfactory. The evil which Parliament wished to check is that of officials being exposed to offers of payment by people whose interests are very likely antagonistic to those of the ratepayers who employ them; to minimise, in fact, the temptation to take bribes. Where they are found out accepting such payments the Courts hold that they have infringed the law, and rendered themselves liable to the penalty; but receipt of extra payment from the employers, if they think right to offer it, is a different matter, and no one thinks there is anything morally wrong in it. The late decision shows that such a payment is not prohibited, and may safely be accepted.

AN UNSATISFACTORY NEIGHBOUR.

J. J. G. writes: I have been in general practice for thirteen years after holding hospital appointments of the highest order, and during the last twenty years I have never made a single professional enemy amongst my medical neighbours. My initials are well known to most West End people; the patient I will call Y., and the surgeon of whom I complain Z. Y., an engine driver, suffering from double pneumonia, was my patient, and I visited him daily. The patient went on very well under the usual treatment until July 13th, when his wife allowed him to get out of bed and sit in front of an open window, without my knowledge. I saw the patient on Sunday, July 14th, when I found him not so well, and again on Monday, when I found his temperature 105°, and every sign of a return of the inflammation. I called upon him again at 2 o'clock, also about 3. His breathing was very unfavourable. I recommended his wife to see a physician if she was not satisfied with my treatment; she did not give her consent, being sure that I was doing all that could be done. I made another call about 5.30, when, to my astonishment, the wife told me she had had another doctor to see the patient, and that he was going to call again in the evening. Of course, under the circumstances I gave up the case.

In the evening I received the following letter from Z:

"My dear Mr. G.,—I was called in to see a man by name Y. That no misunderstanding should arise I let you know this at once. I find that my interpretation of the laws of etiquette differs from that of some of my neighbours, and I much regret this; till it is a pity that there should be any want of confidence between one man and another. Mrs. Y. did not send for me; a patient of mine, a friend of theirs, summoned me in haste. I have given him digitalis, etc., and promised to see him again, they undertaking in the meantime to see you. Shall I meet you there? Will you arrange this?—Yours, etc.,

Z."

After receiving this letter Z called upon me, and I then informed him that he had acted unprofessionally towards me. Hearing that there were many reports set about which were detrimental to my character, I wrote to Z, informing him that I should ask the opinion of the medical papers on his conduct.

I would now ask if Z. was justified in seeing Y., knowing that I was in attendance; and if Z was only called in by one of his own patients, and not by Mrs. Y., was it not Z.'s duty to acquaint me of it, and make me a present of his visit? Z is a much younger man than myself, and his qualifications are no better than my own. I may state that this case is not the first against Z. Eighteen months ago I was taken ill—simply knocked up—and went for a change to Ventnor. Long after my return Z. met me in the street, and apologised for having circulated that I was no longer allowed to attend confinements, on account of my health.

*** In reference to the above case, we note with something more than regret the apparent indifference with which "Z." obtrudes his peculiar "interpretation of the laws of medical etiquette." Be that, however, as it may, his conduct therein needs no editorial comment, since it stands condemned by admission in his own letter to "J. J. G.;" at the same time, we could wish that the latter, both for his own and his patient's ("Y.") sake, had been less precipitate in declining further attendance, inasmuch as the wife of "Y." was admittedly ignorant of the contemplated visit of another practitioner, and should therefore have been afforded an opportunity for repudiating and rejecting "Z.'s" further attendance, which would not improbably have been the result if she had been made aware of the rules by which honourable practitioners are guided in similar cases, but of which persons in her position in life are not unnaturally ignorant. It is scarcely necessary to remark that, under the circumstances related, the course pursued by "Z." in the case contravened the medico-ethical law, and that a continued repudiation thereof cannot fail to react injuriously on himself.

THE LAW OF ETIQUETTE IN URGENT CASES.

ZOROASTER writes: A. and B., father and son practising in partnership, have a patient S. whose place of business is near to them, and whose residence is two miles away.

In course of time S. changes his medical attendant, and employs a gentleman who lives close to his house. This doctor dies, and his partner C. succeeds him in his attendance on S., and has continued to attend him and his family ever since (seven years). While C. has been the family doctor A. has died, and B. has taken a partner D.

S. fell while at business and broke his arm. He sends for his former medical man B., he being the nearest doctor whom he is acquainted with. D. attends to the accident. D. visits S. again the next day at his place of business, and admits that he knows C. to be his doctor. D. continues the attendance throughout.

C. being S.'s family doctor, and being in attendance on a member of the family, pays an ordinary visit to the house two days after this accident occurred, and at this visit receives the first intimation of it, and not hearing from D. he writes the next day to him, and on the fourth day after the occurrence he receives a reply stating that he had intended to write but he had been busy and had not had time.

1. Did D. show want of courtesy in not communicating with C. until he had been written to, and that four days after the circumstances arose?

2. Did D. do his duty towards his neighbour, with whom he was on friendly terms, in retaining the case?

*** In reference to the above case, we may note that A. and B. having for a period of seven years been superseded by C. as the ordinary attendant of S., D. (the new partner of B.), with his admitted knowledge that he (C.) was the medical adviser of the family in question, should have acted in accordance with the following ethical rule, and, in omitting to do so, undoubtedly failed in his duty to his professional brother:

"When a practitioner is called to an urgent case either of sudden or other illness, accident, or injury in a family usually attended by another, he should (unless his further attendance in consultation be desired) when the emergency is provided for, or on the arrival of the attendant in ordinary, resign the case to the latter; but he is entitled to charge the family for his services."

ATTENDANCE ON THE CHILDREN OF MEDICAL MEN.

M.D. writes: I attend a ladies' boarding school; many of the pupils are daughters of medical men. I charge their parents half fees, and mention the fact in the account. One of them writes: "This is the first time I have ever been charged for medical attendance, and I trust it will be the last." He uses other surly expressions. His account was 7s. 6d. Have I erred in making a charge? It is obvious that I cannot attend a dozen young ladies and furnish them with medicines for nothing.

*** Although the location of so many professional "olive branches," so to speak, in the scholastic establishment in question may be personally and pecuniarily inconvenient to "M.D.," we should advise him not to deviate from the traditional usage of the profession, as laid down in the following rule extracted from the *Code of Medical Ethics*, and which we reprint in its entirety for his guidance and that of others. If, however, the supply of medicines unduly trenches on the time and resources of our corresponpent, he may, we think, if he cares to do so, legitimately obviate the latter by simply writing a prescription, and instructing the lady superintendent to let it be compounded at a chemist's and the cost debited to the father of the patient.

"All legitimate practitioners of medicine, their wives, and children, while under the paternal care, are entitled—not as a matter of right but by pro-

fessional courtesy—to the reasonable and gratuitous services (railway and like expenses excepted) of the faculty resident in their immediate or near neighbourhood whose assistance may be desired. In the case also of near relatives who are more or less dependent upon a professional brother (other than wealthy), it will likewise be well, at his request, to forego or to modify the usual fee. On the other hand, a son or daughter altogether independent of the father, or the widow and children of a practitioner left in affluent or well-to-do circumstances, should be charged as ordinary patients, unless feelings of friendship or other special reasons render the attendant practitioner averse to professional remuneration. In such case the rule need not apply. Moreover, if a wealthy member of the faculty seeks professional advice, and courteously urges the acceptance of a fee, it should not be declined, for no pecuniary obligation ought to be imposed on the debtor which the debtor himself would not wish to incur."

REGULATIONS AS TO PRIVATE PATIENTS OF UNSOUND MIND.

THE answer to "Resident's" first letter, given in the JOURNAL of August 10th, is quite correct. Our correspondent is under misapprehension on some points. No person can legally take one person of unsound mind for profit into his house without the certificates, etc., specified in our previous reply; nor can he legally receive for profit two or more such persons until his house has been licensed for the reception of so many persons of one or other or both sexes. Certificates, etc., are, of course, necessary here also.

It is precisely to check abuses that would arise from uncertified persons of unsound mind being kept under care and control without authority and called sane by those who keep them, and to protect such patients, that a large part of the Lunacy Laws exists. "Sane" and "uncertified" are not synonymous.

The imaginary case of his own child given by our correspondent has no bearing on the point, under ordinary circumstances, inasmuch as such child would not be kept for profit, but out of parental love and duty, and, in the case supposed, the Lunacy Laws would not interfere with the parents.

If our correspondent attempts to exercise any control over any uncertified persons in his house or detain them a moment against their will, it is against him they would have grounds for an action at law.

INQUEST FEES.

QUERENS writes: A. and B. are medical practitioners living in the same village, and attend for each other in each other's absence. A. is sent for to attend a man who has fallen from a load of hay and broken his neck. A. not being at home at the time, B. is requested to attend for him, which he does, both seeing the patient afterwards in consultation. The man dies, and B., having been first in attendance, gives his evidence at the inquest and receives the fee. Will you kindly say to whom the fee belongs?

*** In view of the mutual professional arrangement entered into between A. and B., the latter cannot, in our opinion, in the case above alluded to be regarded otherwise than as the voluntary *locum tenens* of the absent A., to whom, therefore, the fee in question would rightly belong, and *vice versâ*. Nevertheless, under all the circumstances, a division of the fee may not be inexpedient.

LEGAL QUALIFICATION FOR GIVING MEDICAL CERTIFICATES.

A PRACTITIONER writes: My son has passed his examination for the M.B. and C.M., but cannot graduate until November on account of his age. 1. Can he legally sign a certificate of death? 2. Can he give evidence at an inquest?

*** 1. The Births and Deaths Registration Act distinctly provides that no medical practitioner, unless he be registered, can give a legal medical certificate for the purposes of that Act. If an unregistered practitioner should give any written statement concerning any cause of death, registrars of births and deaths are instructed to record such statement as an uncertified cause of death in the death register.

2. With regard to inquests, it rests with coroners to decide who shall be called upon to give evidence; but, in accordance with all recent Acts of Parliament, it is registration by the General Medical Council that confers a legal status upon medical practitioners.

WRONGFUL ASSUMPTION OF TITLES.

SURGEON writes: What treatment should be adopted towards one who prints M.B. after his name, never having taken that degree?

*** Any practitioner who assumes a medical title to which he has no legal claim, though otherwise fully qualified to practise, as in the case in question, is morally guilty of an offence under the Medical Act of 1858, and subjects himself to the penalty attached thereto.

Admitting, however, that the practitioner alluded to does not possess (although qualified for obtaining it) the M.B.—a question of fact of which our correspondent will do well to personally assure himself by due inquiry ere he takes further action in the matter—we think that the justice of the case may be fairly met by the simple disclosure of the real fact through the medium of the traditional "candid friend."

TITLES AND BRASS PLATES.

F.R.C.S. AND MEMBER OF B.M.A. writes: I shall feel much obliged if you will let me know in your correspondence column whether it is usual or in accordance with the etiquette of the profession for a Fellow of a Royal College of Surgeons to put F.R.C.S. after his name on a doorplate.

*** So far as our personal experience extends, we have never known the initial letters F.R.C.S. to be appended as a suffix on a doorplate, and hope never so to do; for, not only would such an innovation contravene the time-honoured usage of the profession, but it would serve no practical purpose other than to puzzle the non-surgical minds of passers-by. If, however, the novelty be had recourse to, the specific Royal College of Surgeons should be clearly indicated—Eng., Edin., or Irel., as the case may be.

FEES TO MEDICAL WITNESSES.

MEDICAL WITNESS.—The fee to a medical witness for attending a police court to give evidence is, according to the scale, 10s. 6d. if resident in the city, borough, parish, town, or place where the examination is taken, or within a distance not exceeding two miles from such place, and a guinea if resident elsewhere. We presume that London is considered to be one town or place, and that the 10s. 6d. fee is applicable all through it.

MEDICAL MEN AND MIDWIVES.

C. C.—1. In the case stated the husband of the deceased woman would have no right of action against the medical man for refusing his services. 2. The law does not prevent unqualified persons from acting as midwives. 3. No.

DENTISTS AND MEDICAL MEN.

MEMBER B.M.A.—That the dentist in question should elect, under the conditions above alluded to, to extract teeth for the paying class of the community for a nominal sum is a matter for his own consideration, subject to the usage of the dental profession; but that a qualified medical practitioner should take a like nominal fee, willingly undertake the risk and responsibility of administering the anæsthetic is, from a professional point of view, a course of action not to be commended.

FEES TO MEDICAL WITNESSES.

M. G. D. writes: Last June I had to give evidence in a police case at the police-court, which is eight miles from my residence. I received notice from the police to attend. Last week the inspector called, and paid me a fee of 14s. 6d. I wrote to the magistrates' clerk for my full fee, £1 1s., and 4s. expenses, which sum I have been paid before for attending at the police-court. In reply, he informs me that, by some oversight, the magistrates at the time only allowed me 14s. 6d. in their certificate, and adds that now there is no means of rectifying the matter, as no larger sum can be obtained from the county treasury.

Will you kindly inform me in the next JOURNAL if there is any way in which I can recover my full fee?

*** No; you cannot recover more than the amount certified by the magistrates.

PROFESSIONAL ADVICE IN THE LAY PRESS.

FIDES.—Of course the whole thing is simply deplorable, whether from a professional or a public point of view. The person referred to is, however, a notorious offender, and is quite outside the pale of medical ethics.

CLUBS AND CHRONIC INVALIDS.

W. E. G.—We think our correspondent is labouring under some misapprehension, or, if not, the rules of his club differ from those of all others with which we are acquainted. That members suffering from chronic diseases, such as phthisis, heart-disease, tabes dorsalis, etc., should be debarred from going on the funds again for the same ailment, if they declare off, on account of temporary improvement, is so extraordinary, that it would be difficult to express an opinion as to what would be done in the case of concurrent illness, which would often be the same disease under another name. Most clubs allow full pay for a certain time, usually six months; a further allowance of half-pay is then made for the same period; after this a fixed time, often twelve months, must elapse before such pay can be claimed again.

If a sick member should have declared off the funds before the expiration of the time during which his full or half-pay would have been due, and again requires to come upon the funds, he receives sick pay just as if he had never declared off till the completion of the allotted term of full and half-pay; but it makes no difference what the ailment is, whether the original or another, provided that he is disabled by it, and that it does not belong to that class of disease which is specially excluded by all sick benefit societies.

UNIVERSITY INTELLIGENCE.

LONDON.

INTERMEDIATE EXAMINATION IN MEDICINE. July, 1889.

Pass-list. Entire Examination.

First Division.—Louisa B. Aldrich Blake, London School of Medicine for Women; H. W. Armstead, St. Bartholomew's Hospital; C. Barker, Sheffield Medical Institution; V. B. Bennett, University College, Liverpool; A. S. Blackwell, St. Bartholomew's Hospital; C. C. Chidell, University College; J. G. Clegg, Owens College; R. Clegg, Owens College and Manchester Royal Infirmary; C. Coles, St. Bartholomew's Hospital; H. O. Davies, St. Bartholomew's Hospital; T. B. P. Davies, Guy's Hospital; C. A. Dixon, The Yorkshire College; C. C. Elliott, Guy's Hospital; J. H. Fisher, St. Thomas's Hospital; H. W. Gibson, Middlesex Hospital; J. Harvey, University College, Liverpool; Jessie Flewitt Hatch, London School of Medicine for Women; P. Lord, Guy's Hospital; W. P. Montgomery, Owens College; E. A. Nathan, St. Mary's Hospital; W. P. Purvis, St. Thomas's Hospital; H. B. Rowbotham, Queen's College, Birmingham; W. E. Sargant, St. Bartholomew's Hospital; A. W. Sheen, Guy's Hospital; G. A. Simmons, St. Mary's Hospital; H. R. Smith, University College; W. R. Smith, King's College; C. Sturge, London School of Medicine for Women; J. O. Symes, St. Mary's Hospital; T. R. Taylor, Guy's Hospital; W. L. Wainwright, St. Thomas's Hospital; C. S. Wallace, St. Thomas's Hospital; G. A. Watson, University College; A. N. Weir, B.Sc., St. Bartholomew's Hospital; C. E. Wheeler, St. Bartholomew's Hospitals; A. Whitfield, King's College; S. Williams, University College; C. J. Woollett, Charing Cross Hospital.

Second Division.—T. W. Beazeley, Queen's College, Birmingham; C. B. Braithwaite, Guy's Hospital; S. M. Brown, Owens College; F. P. S.

Cresswell, B.Sc. Guy's Hospital; H. E. Girdlestone, St. Thomas's Hospital; E. Huntley, Guy's Hospital; T. D. Lister, Guy's Hospital; J. H. Muncaster, Guy's Hospital; A. G. Rider, University College; Mary Louisa Sprigg, London School of Medicine for Women; G. R. F. Stillwell, St. Thomas's Hospital; E. G. Stocker, St. Bartholomew's Hospital; W. Watkins-Pitchford, St. Thomas's Hospital; H. B. Wilkinson, Guy's Hospital; A. F. H. Wray, St. Bartholomew's Hospital; S. F. Wright, St. Thomas's Hospital.

Excluding Physiology.

First Division.—E. B. Allan, University College; W. T. Atwool, St. Mary's Hospital; J. B. Byles, University College; R. N. U. Pickering, St. Bartholomew's Hospital.

Second Division.—H. Finley, University College; F. D. Harris, St. Mary's Hospital; A. H. Minton, King's College; G. D. Parker, St. Bartholomew's Hospital; R. M. Smyth, St. Mary's Hospital; J. H. Sproat, Queen's College, Birmingham; H. E. Tracey, St. Bartholomew's Hospital; A. L. Whitehead, Yorkshire College.

Physiology only.

Second Division.—J. J. Brown, Guy's Hospital; J. R. Buckley, Owens College; R. James, University College; G. C. March, Owens College; Elizabeth Margaret Pace, London School of Medicine for Women; C. B. P. Spencer, Guy's Hospital; Mildred E. K. Staley, London School of Medicine for Women; F. W. Wilson, Guy's Hospital; J. G. Wilson, London Hospital.

N.B.—The names of candidates who have obtained honours do not appear in this list.

Examination for Honours. Anatomy.

First Class.—W. M. Stevens (Exhibition and Gold Medal), University College.

Second Class.—A. T. Rake, Guy's Hospital; C. H. Preston, Owens College and Manchester Royal Infirmary.

Third Class.—W. L. Andriezen, University College; W. B. Warrington, Owens College; E. Chichester, London Hospital; T. Holmes, Guy's Hospital.

Physiology and Histology.

First Class.—W. M. Stevens (Exhibition and Gold Medal), University College; H. M. Richards (Gold Medal), University College.

Second Class.—W. L. Andriezen, University College.

Third Class.—A. T. Rake, Guy's Hospital; J. E. Ramsay, University College; E. T. E. Hamilton, Guy's Hospital; G. L. Rolleston, St. Bartholomew's Hospital and Cambridge University; E. Emily Wood, London School of Medicine for Women.

Organic Chemistry.

First Class.—W. L. Andriezen (Exhibition and Gold Medal), University College; *G. S. Buchanan, B.Sc., St. Bartholomew's Hospital; E. E. Blomfield, London Hospital.

Materia Medica and Pharmaceutical Chemistry.

First Class.—W. M. Stevens (Exhibition and Gold Medal), University College; *T. Holmes, Guy's Hospital; W. L. Andriezen, University College.

Second Class.—J. C. M. Given, Liverpool Royal Infirmary.

Third Class.—A. M. Daldy, Guy's Hospital; J. E. Ramsay, University College; H. M. Richards, University College.

* Obtained the number of marks qualifying for the Exhibition and Gold Medal.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

THE REGISTRAR-GENERAL'S QUARTERLY RETURN.

THE Registrar-General has just issued his quarterly return relating to births and deaths registered in England and Wales during the second or spring quarter of this year, and to the marriages in the three months ending March last. The marriage-rate, although it showed a slight further increase upon that recorded in recent corresponding quarters, was below the mean in the first quarters of the ten years, 1879-88. The birth-rate and the death-rate were also below their respective averages. The mean temperature of the air during the quarter at the Royal Observatory, Greenwich, considerably exceeded the average, and the weather was favourable to the public health.

The births registered in England and Wales during the three months ending June last were 227,581, equal to an annual rate of 31.5 per 1,000 of the population, estimated by the Registrar-General to be rather more than 29,000,000 of persons. This birth-rate was 2.3 per 1,000 below the mean rate in the corresponding periods of the ten years, 1879-88, although it slightly exceeded that in the second quarter of 1888, which was the lowest on record. The birth-rate during the quarter under notice in the several counties ranged from 25.3 in Sussex, 26.4 in Herefordshire, and 26.9 in Surrey, to 35.1 in Staffordshire, 35.7 in Durham, 36.0 in Essex, and 38.9 in Monmouthshire. In the twenty-eight large towns for which the Registrar-General publishes weekly returns, the birth-rate last quarter averaged 31.5 per 1000, and ranged from 23.1 in Huddersfield, and 24.5 in Brighton to 37.8 in Sunderland, 38.3 in Cardiff, and 39.4 in Preston. The births registered in England and Wales during the quarter under notice exceeded the deaths by 103,128; this represents the natural increase of the population during that period. From the Board of Trade ret it appears that 131,590 emigrants sailed from the various ports of the United Kingdom at which emigration officers are stationed; of these 51,343 were English, 9,664 Scotch, and 34,060 Irish. The proportions of British emigrants to a million of the respective populations of the three divisions of the United Kingdom were 1,769 from England, 2,370 from Scotland, and 7,222 from Ireland.

During the second quarter of 1889, the deaths of 124,453 persons were registered in England and Wales, equal to an annual rate of 17.2 per 1,000 of the estimated population. This death-rate was 1.8 below the mean rate in the corresponding periods of the ten years, 1879-88, and was lower than that recorded in the second quarter of any year since the commencement of civil registration in 1837. Among the urban population of the country, estimated at more than eighteen and a half millions, the rate of mortality during the quarter under notice was equal to 17.7 per 1000; in the remaining or chiefly rural population of more than ten and a quarter millions the rate was 16.3 per 1,000. These urban and rural rates were both below their respective averages for the seven preceding corresponding quarters. The rate of mortality among infants under one year of age slightly exceeded the average during the quarter under notice; whereas the rate of mortality among persons aged between one and sixty years, and among elderly persons, was last quarter considerably below the average in the corresponding periods of the ten preceding years.

The 124,453 deaths registered in England and Wales during the three months ending June last included 4,464 which were referred to measles, 3,405 to whooping-cough, 1,970 to diarrhœa, 1,347 to scarlet fever, 1,041 to diphtheria, 999 to fever (including typhus, typhoid, and simple fever), and 10 to small-pox; in all, 13,236 deaths resulted from these principal zymotic diseases, equal to an annual rate of 1.83 per 1,000, the average rate in the ten preceding corresponding quarters having been 1.98 per 1,000. The mortality from measles, diphtheria, and diarrhœa showed an excess, while that of each of the other principal zymotic diseases was below the average. The deaths referred to small-pox, which had declined in the five preceding quarters from 582 to 8, were 10 during the three months ending June last; one occurred in Manchester, but not one in London or in any other of the large English towns. Only 2 small-pox patients were under treatment in the Metropolitan Asylums hospitals during the quarter.

The rate of infant mortality, or the proportion of deaths under one year of age to registered births, was equal to 127 per 1,000, and almost corresponded with the average rate in the same period of the ten preceding years, 1879-88. In London the rate of infant mortality did not exceed 120 per 1,000, while in the twenty-seven provincial towns it averaged 152, and ranged from 110 in Portsmouth and in Brighton, and 117 in Cardiff to 174 in Manchester, 179 in Blackburn, 185 in Oldham, and 248 in Preston.

THE TRUE DEATH-RATES OF LONDON DISTRICTS DURING THE SECOND QUARTER OF 1889.

IN the accompanying table will be found summarised the vital and mortal statistics of the forty-one sanitary districts of the metropolis, based upon the Registrar-General's returns, for the second quarter of the current year. The mortality figures in the table relate to the deaths of persons actually belonging to the respective sanitary districts, and are the result of a complete system of distribution of deaths occurring in the institutions of London among the various sanitary districts in which the patients had previously resided. By this means the precise number of deaths of persons actually belonging to the respective sanitary districts is known, as all deaths occurring in institutions of persons who had previously resided in another district have been excluded from the total number of deaths in the district in which the institution is situated, and credited to the districts from which they came. By this means alone can trustworthy data be secured upon which to calculate reliable rates of mortality.

The births registered in London during the second quarter of the current year were equal to an annual rate of 30.4 per 1,000 of the population of the metropolis, estimated at 4,351,738 persons, which showed a slight further decline from the rates recorded in the corresponding periods of recent years. The birth-rate in the various sanitary districts last quarter showed the usual wide variations, the sex and age distribution of the population differing greatly. In St. James Westminster, St. George Hanover Square, St. Martin-in-the-Fields, and Kensington, the birth-rates were considerably below the average; while in East London, Woolwich,

St. George Southwark, Bermondsey, and Fulham, where the population contains a large proportion of young married persons, the birth-rates showed a marked excess.

The 17,010 deaths of persons belonging to London, registered during the quarter under notice, were equal to an annual rate of 15.7 per 1,000, which was 3.5 below the mean rate in the second quarter of the ten preceding years, 1879-88, and was lower than that in the corresponding period of any year on record. The lowest death-rates among the forty-one sanitary districts during the three months ending June last were 11.8 in Lewisham, 12.1 in Paddington, 12.2 in Kensington and in Hackney, 12.5 in Battersea, and 13.1 in Wandsworth and in Camberwell; in the other districts the rates ranged upwards to 21.1 in Stepney and in Whitechapel, 22.1 in Strand, 22.3 in St.-George-in-the-East, 22.5 in St. Saviour Southwark, 22.9 in St. George Southwark, and 23.6 in Holborn. During the quarter under notice, 2,029 deaths resulted from the principal zymotic diseases in London; of these, 665 were referred to measles, 541 to whooping cough, 309 to diphtheria, 268 to diarrhœa, 148 to scarlet fever, 98 to different forms of fever (including 1 to typhus, 80 to enteric or typhoid fever, and 17 to simple and ill-defined forms of fever), and not one to small-pox. These 2,029 deaths were equal to an annual rate of 1.9 per 1,000, which was as much as 0.9 below the mean rate in the corresponding periods of the ten preceding years, 1879-88. The lowest zymotic death-rate among the various sanitary districts last quarter were recorded in St. Martin-in-the-Fields, Paddington, Hammersmith, Kensington, and Hampstead, in each of which sanitary districts it did not exceed 1.0 per 1,000. The zymotic death-rates ranged upwards in the other districts to 3.1 in St. Giles, 3.3 in Greenwich, 3.4 in St. George Southwark and in Rotherhithe, 3.7 in Newington, 3.9 in Westminster, and 4.0 in St. James Westminster. Compared with the preceding quarter, the fatality of each of the principal zymotic diseases, except whooping-cough and diarrhœa, showed a decline.

No death from small-pox was recorded in London during the second quarter of this year; only 2 small-pox patients were under treatment in the Metropolitan Asylums hospitals at the commencement of the quarter, and no new patients were admitted during the three months ending June last. Measles showed the highest proportional fatality in St. Giles, Plumstead, Newington, Whitechapel, Greenwich, St. George Southwark, Westminster, and St. James Westminster; scarlet fever in Stepney; diphtheria in Hackney, Shoreditch, Lambeth, St. George Southwark, Rotherhithe, and Kensington; and whooping-cough in Chelsea, St. George Hanover Square, Newington, Bermondsey, Rotherhithe, and Fulham. The number of scarlet fever patients in the Metropolitan Asylums hospitals, which had been 738 at the beginning of the year, had declined to 541 at the commencement of the quarter under notice, and were 547 at the end of June last; the admissions into these hospitals of persons suffering from scarlet fever, which had been 614 during the first quarter of this year, were 625 during the three months ending June last.

Infant mortality in London last quarter, measured by the proportion of deaths under one year of age to births registered, was equal to 120 per 1,000, against 128 and 125 in the corresponding periods of the two preceding years, 1887-88. Among the various sanitary districts the rates of infant mortality were lowest in London City, Lewisham, Hackney, Poplar, Wandsworth, St. Giles,

Analysis of the Vital and Mortal Statistics of the Sanitary Districts of the Metropolis, after Complete Distribution of Deaths occurring in Public Institutions, during the Second Quarter of 1889.

Sanitary Areas.	Estimated Population middle of 1889.	Births.	Deaths.	Annual Rate per 1,000 Living.			Deaths from Principal Zymotic Diseases.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric Fever.	Simple and Undefined Fever.	Diarrhœa.	Deaths of Children under one year of age to 1,000 births.
				Births.	Deaths.	Principal Zymotic Diseases.											
LONDON	4,351,738	32,949	17,010	30.4	15.7	1.9	2,029	—	665	148	309	541	1	80	17	268	120
West Districts																	
Paddington	112,590	686	339	24.5	12.1	0.7	19	—	2	3	7	2	—	2	—	3	101
Kensington	196,226	914	596	18.7	12.2	1.0	50	—	2	5	25	6	—	3	1	8	115
Hammersmith	102,453	747	383	29.3	15.0	0.7	19	—	3	1	6	4	—	—	1	4	115
Fulham	66,441	799	346	48.3	20.9	2.7	45	—	11	2	3	21	—	—	—	8	110
Chelsea	104,375	705	425	27.1	16.3	1.8	48	—	11	2	7	21	—	1	1	5	123
St. George, Hanover Square	87,944	387	308	17.7	14.1	1.9	42	—	14	1	4	19	—	1	1	2	152
Westminster	54,875	379	263	27.7	19.2	3.9	53	—	34	2	1	10	—	—	—	6	121
St. James, Westminster ...	27,231	113	138	16.7	20.3	4.0	27	—	18	2	—	5	—	—	—	2	230
North Districts																	
Marylebone	149,639	1,144	600	30.7	16.1	1.5	55	—	16	—	10	19	—	1	—	9	118
Hampstead	57,534	376	206	26.2	14.4	1.0	15	—	2	—	1	10	—	—	—	2	133
St. Pancras	245,291	1,825	1,015	29.9	16.6	1.8	112	—	29	7	12	44	—	9	—	11	123
Islington	337,596	2,391	1,186	28.4	14.1	1.9	158	—	70	8	10	44	—	7	3	16	112
Hackney	244,109	1,717	744	28.2	12.2	1.3	80	—	18	3	23	25	—	5	—	6	94
Central Districts																	
St. Giles	39,344	309	188	31.5	19.2	3.1	30	—	10	3	3	4	—	1	—	9	100
St. Martin-in-the-Fields ...	14,836	67	59	18.1	16.0	0.5	2	—	—	—	—	2	—	—	—	—	194
Strand	28,896	177	159	24.6	22.1	2.5	18	—	6	—	1	3	—	3	—	5	181
Holborn	29,937	216	176	29.0	23.6	2.0	15	—	6	—	5	2	—	—	—	2	144
Clerkenwell	70,860	595	327	33.7	18.5	2.0	35	—	5	3	5	11	—	1	1	9	165
St. Luke's	52,000	466	228	36.0	17.6	1.2	16	—	—	4	3	5	—	—	—	4	118
London City	37,054	195	164	21.1	17.8	1.4	13	—	4	3	2	—	—	2	1	1	92
East Districts																	
Shoreditch	125,340	1,145	566	36.7	18.1	1.3	40	—	6	5	12	3	—	—	1	13	127
Bethnal Green	132,079	1,215	570	36.9	17.3	1.9	63	—	23	3	10	12	—	1	2	12	128
Whitechapel	66,916	711	351	42.6	21.1	2.9	48	—	26	2	7	2	—	—	—	11	121
St. George-in-the-East ...	46,142	487	256	42.4	22.3	1.8	21	—	2	—	7	—	—	1	—	11	154
Stepney	58,888	495	310	33.7	21.1	2.7	39	—	5	8	14	3	—	—	1	8	135
Mile End Old Town	115,889	950	413	32.9	14.3	1.5	44	—	10	6	11	6	—	5	—	6	112
Poplar	190,896	1,470	675	30.9	14.2	1.3	60	—	5	1	14	30	—	2	1	7	95
South Districts																	
St. Saviour, Southwark ...	27,084	223	152	33.0	22.5	1.3	9	—	3	—	1	2	—	—	—	3	148
St. George, Southwark	60,133	563	343	37.6	22.9	3.4	51	—	30	5	8	4	—	—	—	4	147
Newington	123,278	1,021	610	33.2	19.9	3.7	114	—	46	10	14	32	—	3	—	9	167
St. Olave, Southwark	14,500	124	61	34.3	16.9	2.2	8	—	4	—	1	1	—	1	1	—	121
Bermondsey	90,143	832	401	37.0	17.9	2.5	56	—	22	4	3	22	—	2	—	3	118
Rotherhithe	44,316	353	168	32.0	15.2	3.4	37	—	9	2	6	14	—	1	—	5	105
Lambeth	289,474	2,255	1,097	31.3	15.2	1.7	125	—	28	21	30	19	—	10	1	16	112
Battersea	165,927	1,254	517	30.3	12.5	1.6	68	—	16	10	6	25	—	—	—	11	132
Wandsworth	130,489	1,017	426	31.3	13.1	1.3	43	—	9	1	10	18	—	1	—	4	99
Camberwell	264,999	1,836	862	27.8	13.1	1.9	127	—	39	7	11	45	—	12	1	12	114
Greenwich	160,376	1,348	685	33.7	17.1	3.3	132	—	71	4	9	28	1	2	—	17	128
Lewisham (excluding Penge)	67,161	454	198	27.1	11.8	1.7	28	—	10	5	—	10	—	1	—	2	93
Woolwich	37,212	344	174	37.1	18.8	1.5	14	—	9	—	2	1	—	1	—	1	110
Plumstead	81,265	644	325	31.8	16.1	2.5	50	—	31	5	5	7	—	1	—	1	102

and Paddington; while they showed the largest excess in St. George-in-the East, Clerkenwell, Newington, Strand, St. Martin-in-the-Fields, and St. James Westminster.

A MEMBER asks: Is it usual for the medical officer of a workhouse to attend the master and matron and other officers free of charge? Has this custom become so general as to entitle the officials to assume an indirect claim for gratuitous attendance?

*** We believe it is usual for the medical officer of a workhouse to attend the officials without charge, but even if this custom is general he is no doubt quite at liberty to make a charge for medical attendance on any or all of the officials if he thinks fit to do so.

MEDICO-PARLIAMENTARY.

HOUSE OF LORDS.—Thursday, August 22nd.

London Government (Scotland) Bill.—The Commons' amendments to the Lords' amendments were agreed to.

Tuesday, August 27th.

Public Health (Cholera Prevention) Bill.—Lord BALFOUR, in moving the second reading of this Bill, explained that its object was to remove doubts in regard to regulations the Local Government Board were empowered to make under the Public Health Act, which had been in force for sixteen or seventeen years. It was of great importance that these doubts should be removed.—The Bill was read a second time.

Poor Law Bill.—The Commons' amendments to the Lords' amendments were considered and agreed to.

Wednesday, August 28th.

Infectious Disease Notification Bill.—Lord BALFOUR, in moving the second reading of this Bill, said that there were now fifty-two urban and rural authorities in whose districts the system proposed under the Bill was already enforced, and no fewer than three-and-a-half millions of people were controlled by those authorities; therefore the Bill could not be said in any way to introduce a novel principle. A large number of public bodies had petitioned in favour of the provisions of the Bill, and in 1887 a circular was sent to the sanitary authorities and medical officers in all the districts now under the system to which the Bill would give effect. The response to this circular was absolutely unanimous in favour of the Bill. One of the chief advantages of the notification of infectious disease was that it led to a more rapid discovery of the cause. In one town thirty cases of typhoid were notified at the same time, and the cause of the epidemic was at once traced to the milk-supply.—Lord HERSCHELL said that he had read a statement in the papers to the effect that the statistics showed that the mortality from infectious diseases was greater where the notification system was now in operation than in districts where it was not enforced. He should like to ask the noble lord if this statement were the fact.—Lord BALFOUR said that he had not seen the statement in question. Where the provisions of the Bill were now in force, they had been introduced in private Acts of Parliament, which of course could only be obtained at considerable expense by large centres of population. Therefore it might be said that the population of the districts in which the system was enforced was denser than the population of the districts where the system was not in force. There would accordingly be a much greater antecedent probability of a high mortality in those districts.—The Bill was read a second time, and the Committee stage being dispensed with, the Bill was read a third time and passed.

HOUSE OF COMMONS.—Thursday, August 22nd.

The Royal Commission on the Blind.—Mr. W. H. SMITH, in reply to Mr. WOODALL, said that he had not had time to peruse the important report of the Royal Commission on the Blind, the Deaf, and Dumb of the United Kingdom, but he might say generally that the recommendations of the Commissioners would be most carefully considered by the Government during the recess.

Typhoid in the West End of London.—Mr. ISAACSON asked the President of the Local Government Board whether, in view of the supposed outbreak of typhoid fever in the parish of St. George, Hanover Square, he would call on the sanitary inspectors of the parish to report on those houses which still had open cesspools, and advise as to their immediate removal.—Mr. RITCHIE replied that he had no authority to give directions to the sanitary inspectors of the parish in question. They were in no way subject to the jurisdiction of the Local Government Board. He would, however, communicate with the vestry of the parish with reference to the question.

Friday, August 23rd.

Public Health (Cholera Prevention) Bill.—This Bill was read a second time.

Movable Dwellings Bill.—This Bill passed through Committee.

Derry Gaol and its Water Supply.—The SOLICITOR-GENERAL FOR IRELAND, in reply to Mr. O'HANLON, said no complaints had reached the Government in the matter of the Londonderry city water supply. The prison was supplied with the same water as the city. It appeared that every attention was given to prevent in any way contamination of the water, and samples of it were regularly analysed by the city analyst, who reported the results to the corporation quarterly. In his last report of analysis made he stated that the water in the basins showed a very satisfactory degree of purity, and the quality in the various reservoirs compared very favourably with that of the public supply in many of the large towns. The Prisons Board reported that all water used for culinary and drinking purposes in the prison was thoroughly filtered before use.

Saturday, August 24th.

Infectious Diseases Notification Bill.—The House went into Committee on this Bill, Sir J. GORST in the chair.—Mr. H. STEWART called attention to the fact that there were many amendments on the paper, and no medical men present. The Bill had not been expected to come on, and he begged to report progress.—Mr. RITCHIE said the Bill had met with universal approval on the second reading, and it was extremely desirable it should be passed.—Mr. SEXTON asked if Her Majesty's Government would support a Bill for Ireland next session, based on the optional principle.—Mr. A. BALFOUR said it should have his consideration.—The Committee divided, and the motion to report progress was lost. Clause 1 was agreed to.—Mr. M. HEALY moved an amendment to omit Subsection A, on the ground that it drew an invidious distinction between London and the rest of England. In London the Bill was to be compulsory after two months of the passing of the Act, whereas in the rest of the country it was only to come into operation on its adoption by an urban or rural sanitary district.—Mr. RITCHIE said the Government proposed to accept the principle of the amendment later on. There had been a unanimous expression of opinion that the Bill ought not to be permissive in any part of the country. They did not, however, wish to make the Bill compulsory against the wish of the House. The Bill, he explained, proposed to make the Act compulsory in London, and optional throughout the country. The amendment would strike out the compulsion with reference to London.—Mr. SEXTON said the Irish were in favour of an optional Bill.—After some further discussion, Mr. RITCHIE said the Government were so impressed with the importance of this measure becoming law, that if the right hon gentleman (Mr. Sexton) was prepared to say, on behalf of hon. members near him, that they would consent to the passing of the Bill as originally introduced, then the Government were prepared to make terms with them on that basis.—Mr. SEXTON was willing to accept that offer, and on the condition that the initiative remained optional with the local authorities, he was prepared to withdraw all opposition.—Mr. B. ROBERTS did not see how the Government could enter into such an arrangement when they had already told many hon. members that they would agree to the Bill being made compulsory.—The amendment was by leave withdrawn, and Clause 2 agreed to. On Clause 3, two amendments were moved by Mr. H. STEWART, and after discussion withdrawn.—Mr. KELLY moved an amendment providing that notices should be sent to masters and mistresses of elementary schools, so that children from infected homes might be prevented from attending school.—Mr. RITCHIE said these details were provided for otherwise than by the Bill, and the amendment was negatived.—Mr. H. STEWART moved an amendment to omit part of the clause, and to provide that a certificate should be given to the head of the family or other person primarily liable to give notice. He contended that the dual system was not more efficient than a single notice system.—Mr. RITCHIE said that such a conclusion could not be maintained in the absence of knowledge as to comparative conditions.—The amendment was withdrawn, and the clause agreed to.—On Clause 10, Mr. RITCHIE moved to add the words, "The managers shall send weekly to the London County Council such return of the infectious diseases of which they receive certificates in pursuance of this Act, as the London County Council from time to time require." The amendment was agreed to.—On Clause 14, Mr. G. BRUCE moved an amendment extending the meaning of the words "occupier of the building" to include a person having control of it as agent, and any person in charge of a shop.—The amendment was agreed to.—On the motion of Mr. RITCHIE, the following new clauses were agreed to and added to the Bill: "A payment made to any medical practitioner in pursuance of this Act shall not disqualify that practitioner for serving as member of the council of any county or borough, or as member of a sanitary authority, or as guardian of a union, or in any municipal or parochial office. Where a medical practitioner attending on a patient is himself the medical officer of health of the district he shall be entitled to the fee to which he would be entitled if he were not such medical officer." "Where this Act is put in force in any district in which there is a local Act for the like purpose as this Act, the enactments of such local Act, so far as they relate to that purpose, shall cease to be in operation." "In the application of this Act to Scotland, the expression 'Local Government Board' shall mean Board of Supervision; the expression "Summary Jurisdiction Acts' shall mean the Summary Jurisdiction (Scotland) Acts, 1864 and 1881, and any Act amending the same; the expression 'local authority,' shall mean the local authority as defined by the Public Health (Scotland) Act, 1867, and any Act amending the same; the expression 'England,' in Section 5, shall mean Scotland; the powers contained in this Act shall be in addition to, and not in lieu of, any of the said Act; the expression 'clerk of the local authority' includes in the case of an urban sanitary authority, town clerk and secretary. 2. References to a place of abode in England shall be construed to refer to a place of abode in Ireland. 3. Offences under this Act may be prosecuted, and fines under this Act may be recovered, in manner directed by the Summary Jurisdiction Acts, before a court of summary jurisdiction constituted in the manner mentioned in the 249th Section of the Public Health (Ireland) Act, 1878." The Bill as amended passed through Committee, and the House resumed.

The Professors of the Queen's Colleges.—Mr. PINKERTON asked the Secretary to the Treasury whether, in view of the serious financial loss inflicted upon certain professors of the Queen's Colleges by the passing of the Royal University (Ireland) Act, he was prepared to make the same concession to them as was given to medical officers and servants in the Dublin Hospital Board Bill, which he had recently introduced.—Mr. JACKSON replied that he did not recognise any similarity in the circumstances of the two cases referred to.

Monday, August 26th.

The Dublin Hospital Board Bill, and The Movable Dwellings Bill were withdrawn.

OBITUARY.

THOMAS KING CHAMBERS, M.D.Oxon., F.R.C.P.

BY the death of Dr. King Chambers, to which we briefly referred last week, English medicine loses one of its most scholarly and cultured representatives. Life-long illness prevented him from taking the position in the medical world of London to which his scientific attainments and practical ability entitled him, but he was none the less a man universally esteemed by his professional brethren, and he exercised considerable influence within a certain sphere.

Dr. King Chambers, who was related to Dr. Chambers, Physician to William IV and Queen Adelaide, was educated at Rugby under Dr. Arnold, and Shrewsbury, from which he passed to Christ Church, Oxford, where in due course he took his degree with honours. He afterwards studied medicine at St. George's Hospital and in Paris, and received the degree of M.D. from his Alma Mater in 1846.

In 1848 he was elected a Fellow of the College of Physicians, and on the opening of St. Mary's Hospital he was appointed one of its first physicians. He was also Physician to the House of Charity in Soho. In 1859 he travelled with the Prince of Wales in Italy and Spain. Skilful in his profession and accomplished in many directions outside it, a man of well-stored mind, polished manners, and refined tastes, who added to his scientific, literary, and artistic attainments the practical culture that is only gained by having, like the wise Ulysses, seen many men and many cities, Dr. Chambers seemed to have the brightest prospects of professional success before him. Ill-health, however, prevented him from winning his way, as he seemed so eminently qualified to do, to a place among the *summa cacumina* of medicine, and he had to resign himself to a less brilliant, though far from inglorious, career.

Dr. Chambers was the subject of a well-marked tendency to aneurysm. This first showed itself in the left popliteal artery, when it was supposed to be connected with an injury to the knee received at football many years before when he was at Rugby. Amputation was performed, and Dr. Chambers was able to resume professional work till eleven years ago, when a second aneurysm became developed in the right leg. This was cured by pressure, but Dr. Chambers thenceforth retired from practice, and lived quietly in the country at Sunningdale, near Ascot, from which he came up to London from time to time to discharge his duties as Physician to the Hand-in-Hand Insurance Office and as member of the General Medical Council.

Though living outside the turmoil of active professional work, Dr. Chambers continued to take a keen interest in the progress of medical science, and in everything relating to the welfare and advancement of the medical profession. He served several times as examiner, both in his own University of Oxford and at Durham, and he was unfailing in his attendance at the meetings of the General Medical Council, till he became physically incapacitated for the journey. Dr. Chambers was a member of our medical Parliament from 1882 till his death, and his place in that body will be most difficult to fill. He took the greatest interest in its work, and no opinion was ever listened to with more respect, or more highly valued by his colleagues than his.

Dr. Chambers was one of the steadiest supporters of the movement for admitting women to the medical profession from its beginning, and up to the last he took a warm interest in the Henrietta Street School of Medicine for Women.

Nine months ago both carotid arteries became the seat of aneurysms, and the case was complicated by severe cardiac disease. His sufferings were intense and almost incessant, but no word of complaint or impatience passed his lips. To use his own words, he "wrestled with himself and would not give in." He was conscious to the end. He died on Thursday, August 15th, and was buried in Sunningdale Church. During his first illness he was attended with loving care by Sir James Paget and Mr. Cæsar Hawkins; on the second occasion by Mr. T. Smith, with the help of Sir William Gull and Sir Henry Acland. In his last illness Dr. Acland and Dr. Lownds, of Egham, were his medical attendants, and added to their professional ministrations the sympathy and unceasing care of devoted friends.

Dr. Chambers was remarkable as much for the mingled strength and gentleness of his character as for his intellectual gifts. He never allowed his mind to dwell on the pain from which he suffered almost without intermission for the greater part of his life, but busied himself in literary work, and in designing, drawing, and carving, in all of which arts he was no mean proficient. In his last illness he constantly regretted not having finished more, and often said: "I cannot wish to live if I am unable to work."

Dr. Chambers was the author of several medical works, most of which passed through more than one edition. That by which he was most generally known to the public is his *Manual of Diet and Regimen in Health and Disease*, a second edition of which was published in 1876. This valuable and interesting work owes its popularity not less to the soundness of its teaching in all that pertains to the science and art of alimentation than to the exquisite charm of its literary style.

Dr. Chambers leaves a widow and two daughters, one of whom is married to Mr. Ouless, the Royal Academician.

POLICE AMBULANCE CLASSES.—Mr. W. A. Tyssen Amherst, M.P., recently presented certificates on behalf of the St. John Ambulance Association to 146 police officers, in the theatre of the Royal United Institution.

MEDICAL NEWS.

SOCIETY OF APOTHECARIES OF LONDON.—The following gentlemen, having passed the Qualifying Examination in Medicine, Surgery, and Midwifery, have received Certificates entitling them to practise in the same, and have been admitted as Licentiates of the Society in August, 1889:

On August 16th:

Greenwood, Samuel, Queen's College, Birmingham.
Jessop, Arthur Rowland, Guy's Hospital.
Rees, Edward Davies, King's College.

On August 21st:

Bate, John, London Hospital.
Blewitt, Patrick Lyons, Dublin
Buée, Kenneth Frederick Tooke, University College.
Case, William, King's College.

On August 22nd:

Ilott, Arthur Talman, Charing Cross Hospital.
Walton, John Stamford, Newcastle-on-Tyne.

MEDICAL VACANCIES.

The following Vacancies are announced:

BOROUGH HOSPITAL, Birkenhead.—Junior House-Surgeon. Salary, £80 per annum, with board, lodging, and washing. Application by September 2nd to the Chairman of the Weekly Board.

CANCER HOSPITAL, Fulham Road, S.W.—Two Resident House-Surgeons. Appointment for six months. Honorarium at the rate of £50 per annum, with board and residence. Applications by August 31st to the Secretary.

CHILDREN'S HOSPITAL, Birmingham.—Resident Medical Officer. Salary, £80 per annum, with board, washing, and attendance. Applications by September 3rd to the Secretary, Children's Hospital, Steelhouse Lane, Birmingham.

CHILDREN'S HOSPITAL, Birmingham.—Assistant Resident Medical Officer. Salary, £40 per annum, with board, washing, and attendance. Applications by September 3rd to the Secretary, Children's Hospital, Steelhouse Lane, Birmingham.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—House-Physician. Board and residence. Applications by September 20th to the Secretary, 24, Finsbury Circus, E.C.

COUNTY ASYLUM, Shrewsbury.—Junior Assistant Medical Officer. Salary, £100 per annum, wtth board, lodging, etc. Applications by September 11th to the Medical Superintendent.

COUNTY INFIRMARY, Monaghan.—Assistant-Surgeon; also to act as Apothecary and Registrar. Salary, £60 per annum, with apartments, light, coal, and rations. Applications to the Registrar. Election on September 11th.

GENERAL HOSPITAL, Birmingham.—Resident Surgical Officer. Salary, £130 per annum, with board and lodging, etc. Applications by September 2nd to Dr. Coghill, House-Governor.

GLASGOW ROYAL INFIRMARY AND ST. MUNGO'S COLLEGE.—Curator of the Museum and Pathologist. Salary, £50 per annum. Applications by September 20th to Mr. Henry Lamond, 93, West Regent Street, Glasgow.

MACCLESFIELD GENERAL INFIRMARY.—Senior House-Surgeon. Salary, £100. Applications by Septemher 14th to the Chairman House Committee, Macclesfield Infirmary.

MANCHESTER ROYAL INFIRMARY.—Honorary Assistant-Surgeon. Applications by September 21st to the Chairman of the Board.

NORTH LONDON CONSUMPTION HOSPITAL, Hampstead.—Resident Medical Officer. Salary, £40 per annum, with board, apartments, etc. Applications by September 10th to the Secretary, 216, Tottenham Court Road, N.W.

ROTHERHAM HOSPITAL—Assistant House-Surgeon. Board and lodging. Applications by September 2nd to the House-Surgeon.

ROYAL ALBERT HOSPITAL, Devonport.—Resident Medical Officer. Salary, £150 per annum, with board and lodging. Applications by September 12th to the Chairman of the Election Committee.

STAMFORD, RUTLAND, AND GENERAL INFIRMARY.—House-Surgeon and Secretary. Salary, £100 per annum, with board, lodging, and washing. Applications by September 9th to the Chairman of the Special Committee.

SWANSEA HOSPITAL.—Resident Medical Officer. Salary, £100 per annum, with board and lodging, etc Applications by September 7th to the Secretary, 9, Castle Street, Swansea.

WALLASEY DISPENSARY.—House-Surgeon. Salary, £110, with furnished apartments, etc. Applications by September 3rd to the Honorary Secretary, Mr. W. Heap, Elm Mount, Penkett Road, Liscard, Cheshire.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL, Wolverhampton.—House-Physician. Salary, £100 per annum, with board, lodging, and washing. Applications by September 5th to the Chairman of the Medical Committee.

MEDICAL APPOINTMENTS.

ABBOTT, F. C., L.R.C.P., M.R.C.S., appointed Resident House-Physician to St. Thomas's Hospital.

ANDERSON, G. R., L.R.C.P., M.R.C.S., appointed Resident Accoucheur to St. Thomas's Hospital.

ANSON, G. E., M.A., M.B., B.C.Cantab., L.R.C.P., M.R.C.S., appointed Assistant House-Surgeon to St. Thomas's Hospital.

AVERILL, C., M.R.C.S.E., L.S.A., appointed Resident Assistant to the Wolverhampton Eye Infirmary.

BOYCOTT, A. N., L.R.C.P., M.R.C.S., appointed House-Surgeon to St. Thomas's Hospital.

COWEN, T. P., L.R.C.P., M.R.C.S.(Extension), appointed Resident House-Physician to St. Thomas's Hospital.

DE JERSEY, W. B., L.R.C.P., M.R.C.S., appointed Assistant House-Physician to St. Thomas's Hospital.

GERVIS, H., M.A., M.B., B.C.Cantab., L.R.C.P., M.R.C.S., appointed Assistant House-Surgeon to St. Thomas's Hospital.

HULBERT, H. H., L.R.C.P., M.R.C.S., appointed House-Surgeon to St. Thomas's Hospital.

LAKE, R., L.R.C.P., M.R.C.S., L.S.A., appointed Clinical Assistant in the Special Department for Diseases of the Ear at St. Thomas's Hospital.

LAMBERT, T. W., L.R.C.P., M.R.C.S., appointed Clinical Assistant in the Special Department for Diseases of the Skin at St. Thomas's Hospital.

MANNERS, W. F., M.R.C.S., L.S.A.(Extension), appointed Clinical Assistant in the Special Department for Diseases of the Throat at St. Thomas's Hospital.

MILTON, F. R. Y., L.R.C.P., M.R.C.S., appointed House-Surgeon St. Thomas's Hospital.

PEARSON, R., M.R.C.S., L.R.C.P., appointed House-Surgeon to the Coventry and Warwickshire Hospital, *vice* H. Miller, M.D., resigned.

SPENCER, M. H., M.A., M.B., B.C.Cantab., L.R.C.P., M.R.C.S., appointed Non-resident House-Physician to St. Thomas's Hospital.

THOMAS, E. C., M B., M.S., appointed Medical Officer and Public Vaccinator to the Lampeter Union (Llanybyther District), *vice* J. H. Williams, L.S.A., M.R.C.S., resigned.

TURNEY, H. G., M.A., M.B., B.Ch.Oxon., L.R.C.P., M.R.C.S., appointed House-Surgeon to St. Thomas's Hospital.

WEST, C. H., appointed House-Surgeon to the North Cambridgeshire Hospital, *vice* R. F. Castle, M.R.C.S., resigned.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the announcement. The first post on Thursday mornings is the latest by which advertisements can be received.

BIRTHS.

EMTAGE.—On August 17th, at Cleverdon House, Bradworthy, North Devon, the wife of E. W. Emtage, M.R.C.S.E., of a son.

GIMLETTE.—On August 5th, at Ireland Island, Bermuda, the wife of Staff-Surgeon T. D. Gimlette, R.N., of a son.

HOLMES.—On the 28th instant, at Newton Mount, Chapeltown Road, Leeds, the wife of J. Gardner Holmes, L.R.C.P.E., of twin sons (one stillborn).

MACPHERSON.—On August 23rd, at Bushey, Herts, the wife of Surgeon W. G. Macpherson, Army Medical Staff, of a son.

MARRIAGES.

ROBSON—ERWOOD.—On August 7th, at All Saints', Wandsworth, London, S.W., by the Rev. W. Reed, Alfred William Robson, L.R.C.P.E., etc., of Aston, Birmingham, late of British and African Steam Navigation Company's Service, to Laura Mary (Dolly), eldest daughter of the late John Erwood, Esq., of the Stock Exchange, London.

WALKER—ATKEY.—On the 28th August, at Holy Trinity Church, Kilburn, by the Rev. John Walker, M.A., assisted by Rev. Wilfred C. Walker, Basil Woodd Walker, M.D., son of Rev. John Walker, Rector of Bradwell, Suffolk, to Maud Ellen Atkey, daughter of the late John Atkey, of Southsea.

WILSON—MACDOWALL.—On August 22nd, at Edinburgh, by the Rev. W. A. Gray, D.D., William Wilson, M.B., etc., of 184, Goldhawk Road, W., to Grace Mary, only daughter of the late William MacDowall. No cards.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the office of the JOURNAL, and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

QUERIES.

LICENCE TO PRACTISE IN QUEENSLAND.

J. M. wishes to know if there is a medical qualifying body or college in Queensland, and whether they would recognise any portion of the examination passed here; or, if there is no such college in Queensland, if any other Australian college recognises parts of examination passed here.

HOME FOR A CASE OF "FIBROID PHTHISIS."

FIBROID writes: A young gentleman, suffering from fibroid phthisis, is wishful to get into some home, convalescent or other. Unfortunately, the parent, who has since died, left the family not well provided for, so that his means are only very limited; and now his brother, who has just obtained a Government appointment in India, has to sail in six weeks, and he would like him to get into a home if possible. I may state that he is certainly not so strong as he was a short time ago—in fact, he finds he cannot do his work.

INVETERATE PSORIASIS.

ENQUIRER asks for advice in the following case: A bachelor, aged 36, of sanguineous temperament, of regular habits, and almost a total abstainer, has suffered for ten years from psoriasis nummulata, which has continued to recur in patches, varying in number from six to twenty-five, and in size from that of a sixpenny to a half-crown piece, chiefly on the extensor aspects of the knee and elbow joints, as also on scalp, scrotum, and between the hips. A brother is similarly afflicted, but, so far as known, there is no syphilitic taint, either hereditary or acquired.

Although the patient has been under the care of several eminent dermatologists, and, with temporary benefit, strictly followed out their injunctions, the disease has, nevertheless, continued to recur. From time to time there have been exhibited internally in various doses Fowler's solution, Donovan's solution, phosphorus, steel wine, sulphur, lime-juice, carbolic acid, Harrogate water, etc. Locally ointments of tar, mercury, chrysophanic acid, pyrogallic acid, etc., have been applied; the latter acid removed the patches, which, however, quickly reappeared in the neighbourhood.

ANSWERS.

LYING-IN HOME FOR UNMARRIED WOMEN.

J. S. N. writes: In reply to your correspondent, "A. C. M.," in "Queries," August 24th, I beg to say there is a home for the reception of such cases as he mentions at 4, Regent Square, Gray's Inn Road, W.C.; and I have no doubt, by applying to the Secretary, he would gain all the information he requires.

ANOTHER CORRESPONDENT writes: There is a home for such cases, established 1876, at Amyer Terrace, Primrose Hill, by Mrs. Catherine Dalby, now carried on at 21, Norfolk Road, N.W.

MISS HONOR MORTEN writes: "A. C. M." should apply to Clapham Maternity Hospital, 74, Jeffrey's Road, S.W. Unmarried women are sometimes taken there, and can be sure of good treatment during their confinement.

PHYSIOLOGY AT THE "FIRST FELLOWSHIP" EXAMINATION.

C.B.—Kirkes's or Power's manuals will be sufficient for our correspondent's purpose. They include as much comparative anatomy as will be required by the examiners.

NOTES, LETTERS, ETC.

TREATMENT OF WORMS.

DR. W. MACFIE CAMPBELL (Liverpool) writes: In answer to "Member," August 24th, I have found very satisfactory and immediate results from injection of sol. hydrarg. perchlor., 1 to 3,000, warm.

THE APOTHECARIES' SOCIETY AND DIPLOMAS IN SANITARY SCIENCE.

INQUIRER asks when there is a probability of the Amendment Medical Act (Sir Walter Foster's), that is, examination for public health diploma, coming into effect, and examinations held at Apothecaries' Hall.

*** Sir Walter Foster's Bill was withdrawn in consequence of persistent "blocking." The disability of the Apothecaries' Society in respect of diplomas in sanitary science to qualify under the Local Government Act cannot, therefore, be removed for another year at least.

DISSEMINATED RINGWORM.

ALMOST DISHEARTENED writes: I would be very glad to know what is the surest and quickest way of curing extensive disseminated ringworm. No patches of the disease whatever on the head now, but diseased stumps almost uniformly spread all over the head amongst healthy hairs, giving to a superficial observer the appearance of a healthy head of hair. Presumably brought about through keeping the head shaved during the treatment of the original patches. Ages of the children affected, 6½, 4½, and 2½ years respectively. How short should the hair be cut, and how often? How often washed, etc.? How, also, prevent the disease spreading to the non-affected hairs? Information respecting treatment of these extensive cases will be thankfully received.

*** In this form of ringworm the hair should be kept cut short—a quarter to half an inch—and the scalp sponged once daily with saturated boracic lotion. The parts on which the stumps are mostly situated might be rubbed in the elder children twice daily with carbolic glycerine of a strength suitable to the resisting power of the scalp in each case, beginning tentatively with weaker solutions. The younger child might be treated with progressive strengths of sulphur ointment. A tedious but satisfactory treatment is to attack individual stumps with a minute drop of blistering fluid, subsequent dressing for a few days with boracic ointment, and repeating the drop of blistering fluid if necessary. When only a few diseased stumps are left, their destruction by electrolysis may be employed, particularly in older children. By steady persevering treatment, carried out by an intelligent nurse over a period of many months, if necessary, the disease will be eventually got under. Our correspondent has probably consulted the special works on ringworm published within the last few years.

"SUCKING THE THUMB."

D. H. G. writes: A kitten 6 months old is thin and meagre, though living in a family where milk and food are abundant. It has the curious habit of constantly sucking one of its own teats. The condition of the cat will strengthen the popular idea that sucking the thumb tends to interfere with the nutrition of an infant, making it pale and bloodless from the constant excitement of the salivary glands and consequent drain on the system.

QUININE IN PREGNANCY.

MR. CHARLES G. LYONS, District Surgeon (B. Honduras), writes: I read with interest, in the JOURNAL of May 25th, the notes of a case read by Dr. R. Park, at the Glasgow Obstetrical and Gynæcological Society, and subsequent letters on the same subject. For more than one year I have been in the habit of administering quinine, generally in large doses, ten to twenty grains to pregnant women, and have only seen one bad result, if a bad result it be. In that case, which was one of acute dysentery complicated with malarial fever—the woman being eight months pregnant—I gave one dose of ten grains, and labour began in about an hour's time; possibly it may only have been accelerated, as it frequently comes on spontaneously in these cases. I never hesitated to give the drug in those doses when indicated.

THE TREATMENT OF OBESITY.

MR. W. TOWERS-SMITH (Chancery Lane) writes: In the JOURNAL of November 10th, 1888, you were good enough to publish some of my cases. I offered to send diet-tables to any medical practitioner on condition that they would report to me the result of any cases of obesity they treated. Some 2,000 sets of diet-cards were applied for and sent to professional men in Great Britain and the Colonies. I have received many satisfactory letters in reply, for which I am greatly indebted. I venture, through the medium of the JOURNAL, to ask those gentlemen who have treated cases and have not informed me as to the result to do so at their earliest convenience. Reports such as I ask are of great interest and value to me. Such as I have received are most encouraging, and fully confirm my view that any healthy obese man or woman may be safely reduced in a short period, and that the loss gained may be easily maintained by an annual repetition of diet-table No. 2 for three weeks, leaving patients to eat any reasonable food during the interval. The improvement in general health is most marked. A retired medical man, aged 65, who was treated in December, 1888, called on me yesterday, and, notwithstanding the fact that for some months he had reverted to his ordinary diet, and in fact during a trip to the Mediterranean on board a P. and O. ship had taken everything going, including champagne, etc., yet his weight remains stationary from the date of his completing his course of treatment early last January, namely, 14 stone.

SANITARY ARRANGEMENTS ON THE CONTINENT.

DR. F. P. ATKINSON (Surbiton) writes: While on a short tour through France, Switzerland, and Italy, I was pleased to note the great improvements that have taken place as regards sanitary arrangements during the last few years. Yet there are many places where there are serious defects still existing, and, in addition to drinking the various natural mineral waters, I found it useful on many occasions to use Mayer and Meltzer's celluloid inhaler when seeking the usual morning retirement, and I would advise all travellers to carry one with them, together with a small quantity of Sanitas or carbolic acid.

MALCOLM MORRIS INDEMNITY FUND.

ADDITIONAL subscriptions received:	£	s.	d.
Dr. Marcus Allen (Brighton)	1	1	0
Dr. Lovell (Deal)	1	1	0

COMMUNICATIONS, LETTERS, etc., have been received from:

Dr. E. Haughton, London; Dr. W. Pearce, London; Mr. P. Selby, Croydon; Messrs. Burgoyne, Burbidges, and Co., London; Dr. W. Collier, Oxford; Dr. Arlidge, Stoke-on-Trent; Messrs. J. Woolley, Sons, and Co., Manchester; Officer; Surgeon-Major P. J. Freyer, Moradabad, N. W. P.; Mr. H. Silverlock, London; Dr. C. M. Chadwick, Leeds; Sir J. Crichton Browne, Dumfries; The Secretary of the School of Medicine, Edinburgh; Mr. T. Scattergood, Leeds; Dr. Haig, London; Dr. T. D. Acland, London; Mr. J. H. Oates, Dewsbury; Sir Walter Foster, Kingussie; Dr. G. G. Clarke, Bessbrook; Dr. W. J. Jones, Llanfairfechan; Mr. E. Robertson, London; Dr. Molloy, Ware; Dr. Campbell, Liverpool; Dr. Thin, London; Surgeon James Porter, R.N., Falmouth; Dr. R. Kirk, Partick, Glasgow; The Director-General of the Naval Medical Department, London; Dr. Thomas Laffan, Cashel; Mrs. Bousfield, Stroud; Mr. J. P. Paton, London; Mr. C. G. Wheelhouse, Leeds; Dr. C. E. Purslow, Birmingham; Dr. C. H. Stanley Stevens, Mustapha Superieur, Algiers; Dr. Gilbert Richardson, London; Dr. Rentoul, Liverpool; The Honorary Secretary of the New South Wales Branch, Sydney; Surgeon H. E. Cree, M.S., Strensall Camp; Dr. Herbert S. Habershon, London; Dr. Cranstoun Charles, London; Mr. Adams Frost, London; Grateful; Mr. Nelson Hardy, London; The Director-General of the Army Medical Department, London; Dr. McNaught, Newchurch, Manchester; The Secretary of Queen Charlotte's Hospital, London; Dr. de Havilland Hall, London; Mr. Lawson Tait, Birmingham; Mr. E. Edmund Taylor, M.B., Sheffield; Dr. G. Halket, Glasgow; Mr. J. S. Northcott, London; Dr. Styrap, Shrewsbury; Mr. Cassall, London; Mr. F. W. Atkey, London; Mr. W. E. Green, Sandown; Mrs. Alsop, St. Leonards-on-Sea; Dr. Major Greenwood, jun., London; Messrs. Hirschfield Bros., London; Dr. W. R. Thomas, Bournemouth; A Military Member of the British Medical Association; Miss Honnor Morten, London; Mr. A. M. Huth, London; Dr. Balding, Royston; Mr. H. T. Butlin, London; Mr. Osmund Barnard, M.B., Alderney; Our Manchester Correspondent; Dr. Gristock, London; Dr. E. Berdoe, London; Messrs. E. Collier and Co., Manchester; Mr. E. W. Emtage, Bradworthy; Mr. A. Jackson, Sheffield; Mr. A. de St. Dalmas, Leicester; Mr. F. H. Westmacott, Patricroft; Dr. T. B. Hyslop, London; The Military Secretary of the India Office, London; Dr. Boddy, Manchester; A Naval Medical Officer; Surgeon-Major Bradford, Woolwich; Mr. G. F. Blake, Dublin; Dr. A. A. G. Dickey, Colne; Dr. Jenkins, Ruthin; Dr. Greville Macdonald, London; Mr. Henry Johns, Middleton; Dr. Tunstall, Birmingham; Mr. George Eastes, London; Spes Bona; The Euonymised Cocoa Company, Birmingham; Mr. C. Sanders, Bideford; Mr. Gerald Coleman, Pontefract; Dr. W. J. Naismith, Ayr; Dr. William Wilson, London; Mr. George Pollock, London; Messrs. Henry Thorne and Co., Leeds; Mr. B. J. Baron, M.B., Clifton; Dr. Turner, Keith; Mr. G. Stillingfleet Johnson, London; Dr. J. Keser, London; Mr. F. C. Wood, Nottingham; Mr. Percy Selous, Daventry; W. Molesworth, M.B., Bristol; Dr. T. Jackson, Hull; Mr. Otto Hehner, London; Mr. Alfred W. Robson, Birmingham; Mr. C. T. Quiller, London; Bis Dat Qui Cito Dat; Sir Edward Sieveking, Falmouth; Mr. J. King Irwin, Dublin; Allen; Mr. R. P. Leeper, Glasneven; Acting-Surgeon Robert Balfour, F.R.C.S., Leven; Mr. David Walsh, Birmingham; Our Birmingham Correspondent; Dr. J. W. Hunt, London; Mr. George Rendle, London; Dr. R. W. O. Withers, Shrewsbury; Dr. James Macartney, Newbridge; etc.

BOOKS, ETC., RECEIVED.

A Manual of Home Nursing. By Louisa Emily Dobrée. With an Introduction by Mary Scharlieb, M.D. London: Swan Sonnenschein and Co. 1889.

Love of Money, "The Root of All Evil;" a Farmhouse Tragedy of Thirty Years Ago. By Alec Fearon. London: Swan Sonnenschein and Co. 1889.

Captain Lobe: a Story of the Salvation Army. By John Law. London: Hodder and Stoughton. 1889.

The Goulstonian Lectures on Secondary Degenerations of the Spinal Cord, 1889. By Howard H. Tooth, M.D., F.R.C.P. London: J. and A. Churchill. 1889.

Buxton: Its Baths and Climate, etc. By Samuel Hyde, L.R.C.P., M.R.C.S., etc. Manchester and London: John Heywood. 1889.

Gynæcological Electro-Therapeutics. By Horatio R. Bigelow, M.D. With an Introduction by Dr. Georges Apostoli. Illustrated. London: H. K. Lewis. 1889.

On the Physiology of the Vascular System; Three Lectures delivered at the Royal College of Surgeons. By M. P. M. Collier, M.B., M.S.Lond., etc. London: H. K. Lewis. 1889.

A Practical Treatise on Materia Medica and Therapeutics. By Roberts Bartholow, M.A., M.D., LL.D., etc. Seventh Edition. London: H. K. Lewis. 1889.

Gout and Its Relation to Diseases of the Liver and Kidneys. By Robson Roose, M.D., LL.D., F.C.S. Sixth Edition. London: H. K. Lewis. 1889.

Dermoids or Tumour containing Skin, Hair, Teeth, etc. By J. Bland Sutton, F.R.C.S. London: Baillière, Tindall, and Cox. 1889.

Emergency Notes. By Glentworth R. Butler, A.M., M.D. New York: Frank and Wagnalls. 1889.

Anæsthetics Ancient and Modern. By George Foy, F.R.C.S. London: Baillière, Tindall, and Cox.

In Sinful Paths; A Story of Euston Road. By J. Gibb Holmes. London: Swan Sonnenschein and Co. 1889.

Cancer and its Complications. By Charles Egerton Jennings, F.R.C.S.Eng., M.S., M.B. London: Baillière, Tindall, and Cox.

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REGULATIONS
OF THE
GENERAL MEDICAL COUNCIL AND MEDICAL LICENSING BODIES.

SESSION 1889-90.

REGULATIONS OF THE GENERAL MEDICAL COUNCIL REGARDING REGISTRATION OF MEDICAL STUDENTS.

PRELIMINARY EXAMINATION.—1. No person is allowed to be registered as a medical student unless he shall have previously passed a preliminary examination in the subjects of general education as hereinafter provided.—2. The Executive Committee is to prepare and issue from time to time a list of examining bodies whose examinations fulfil the conditions of the Medical Council as regards general education.—3. Testimonials of proficiency granted by educational bodies, according to the subjoined list, are accepted; the Council reserving the right to add to or take from the list.—4. (A Degree in Arts of any University of the United Kingdom, or of the Colonies, or of such other Universities as may be specially recognised from time to time by the Medical Council, is considered a sufficient testimonial of proficiency.)—5. The following is a list of examining bodies whose examinations fulfil the conditions of the Medical Council: I. *Universities in the United Kingdom. Oxford:* Responsions; Moderations. *Cambridge:* Previous Examination; Higher Local Examinations. *Durham:* Examinations for Certificate of Proficiency; Examination for Students at the end of the first year. *Oxford, Cambridge, and Durham:* Examinations for Degrees in Arts. *Oxford and Cambridge:* Senior Local Examinations, Certificates to include Latin and Mathematics; Junior Local Examinations, Certificate to include Latin and Mathematics, and also one of the following optional subjects: Greek, French, German.—*Oxford and Cambridge Schools' Examination Board:* Certificate to include Arithmetic, including Vulgar and Decimal Fractions; Algebra, including Simple Equations; Geometry, including the first two books of Euclid; Latin, including Translation and Grammar; and one of the following optional subjects: Greek, French, German.—*London:* Matriculation Examination; Preliminary Scientific (M.B.) Examination; Examination for a Degree in Arts or Science.—*Victoria:* Preliminary Examination, Latin to be one of the subjects; Entrance Examination in Arts to include all the subjects required.—*Aberdeen, Edinburgh, Glasgow, and St. Andrews:* Examination for a Degree in Arts; Local Examinations (Junior and Senior); Certificate to include English Literature, Arithmetic, Algebra, Geometry, Latin, and also one of the following optional subjects: Greek, French, German; Preliminary Examination for Graduation in Medicine or Surgery.—*Edinburgh:* Preliminary Examination for Graduation in Science or Medicine and Surgery.—*Aberdeen, Glasgow, and St. Andrews:* Preliminary Examination for Graduation in Medicine or Surgery.—*Dublin:* Entrance Examination; General Examination at end of Senior Freshman's Year; Examination for a Degree in Arts.—*Queen's University (Ireland):* Local Examinations, Certificates to include all the subjects required by the General Medical Council; Entrance or Matriculation Examination; Previous Examination for B.A. Degree; Examination for a Degree in Arts.—*Royal University of Ireland:* Matriculation Examination. II. *Other Bodies named in Schedule (A) to the Medical Act.—Society of Apothecaries in London:* Examination in Arts.—*Royal Colleges of Physicians and Surgeons of Edinburgh:* Preliminary (combined) Examination in General Education.—*Faculty of Physicians and Surgeons of Glasgow*: Preliminary Examination in General Education.—*Royal College of Surgeons in Ireland:* Preliminary Examination; Certificate to include Mathematics.—III. *Examining Bodies, in the United Kingdom, not included in Schedule (A) to the Medical Act.—College of Preceptors:* Examination for a First-Class Certificate, or Second-Class Certificate of First or Second Division, Algebra, Geometry, Latin, and either a Modern Language or Greek or Chemistry, Botany or Zoology, having been chosen.—*Intermediate Education Board of Ireland:* Junior, Middle, and Senior Grades; the Certificate to include all the subjects required.—*Queen's Colleges of Belfast, Cork, and Galway:* Matriculation Examinations.—*St. David's College, Lampeter:* Responsions Examinations, to include all the subjects required.—*Educational Institute of Scotland:* Preliminary Medical Examination.—*Pharmaceutical Society of Great Britain:* Preliminary and Minor Examinations *(pro tanto).—Pharmaceutical Society of Ireland:* Preliminary Examination *(pro tanto).—Scotch Education Department:* Leaving Certificates in each Grade and in Honours.—IV. *Indian, Colonial, and Foreign Universities and Colleges.—Universities of Calcutta, Madras, and Bombay:* Entrance Examination; Certificate to include Latin.—*Ceylon Medical College:* Preliminary Examination (Primary Class).—*Universities of McGill College, Montreal; Bishop's College, Montreal; Toronto: Trinity College, Toronto; Queen's College, Kingston; Victoria College, Upper Canada; College of Physicians and Surgeons of Ontario; Western University of Ontario; Fredericton, New Brunswick; Halifax, Nova Scotia; Melbourne; Sydney; Adelaide:* Matriculation Examination.—*University of Manitoba:* Previous Examination.—*University of Mount Allison College, New Brunswick, Canada:* Examination for a Degree in Arts.—*University of King's College, Nova Scotia:* Matriculation Examination; Responsions.—*Provincial Medical Board of Nova Scotia:* Matriculation Examination.—*University of Otago:* Preliminary Examination.—*University of the Cape of Good Hope:* Matriculation Examination; Examination for a Degree in Arts.—*University of New Zealand:* Preliminary Medical Examination.—*Codrington College, Barbadoes:* English Certificate for Students of two years' standing, and Latin Certificate or "Testamur."—*Tasmanian Council of Education:* Examination for the Degree of Associate of Arts, Certificate to include Latin and Mathematics.—*Christ's College, Canterbury, New Zealand:* Voluntary Examinations, Certificates to include all the subjects required.—*Dalhousie College and University, Halifax:* Matriculation and Sessional Examinations.—*University of California:* Examination in Department of Letters.—*Germany and other Continental Countries:* Gymnasial Abiturienten Examen in Germany, and other corresponding entrance examinations to the Universities.—*Gymnasia of the Circuit of Dorpat:* Examinations of Maturity.—6. No person will be allowed to be registered as a medical student unless he shall have previously passed (at one or more examinations) a Preliminary Examination in: 1. English Language, including Grammar and Composition; 2. Latin, including Grammar, Translation from specified authors, and Translation of easy passages not taken from such authors; 3. Elements of Mathematics, comprising (*a*) Arithmetic—including Vulgar and Decimal Fractions; (*b*) Algebra—including Simple Equations; (*c*) Geometry—including the first book of Euclid, with easy questions on the subject matter of the same; 4. Elementary Mechanics of Solids and Fluids, comprising the Elements of Statics, Dynamics, and Hydrostatics; 5. One of the following optional subjects: (*a*) Greek; (*b*) French; (*c*) German; (*d*) Italian; (*e*) any other modern language; (*f*) Logic; (*g*) Botany; (*h*) Zoology; (*i*) Elementary Chemistry.[1]

REGISTRATION OF MEDICAL STUDENTS.—7. Every medical student will be registered in the manner hereinafter prescribed by the General Medical Council.—8. No medical student shall be registered until he has passed a preliminary examination, as required by the General Medical Council,[2] and has produced evidence that he has commenced medical study.—9. The commencement of the course of professional study recognised by any of the qualifying bodies shall not be reckoned as dating earlier than fifteen days before the date of registration.—10. The registration of medical students shall be placed under the charge of the Branch Registrars.—11. Each of the Branch Registrars shall keep a register of medical students, according to a form indicating the name; the preliminary examination, with date thereof; the date of registration; and the place and date of commencement of medical study, as certified by a master, or a teacher, or an official in a medical school or hospital.—12. Every person desirous of being registered as a medical student shall apply to the Branch Registrar of the division of the United Kingdom in which he is residing, according to a form which may be had on application

[1] Examinations in General Education conducted by Universities will be accepted as heretofore; but if, in any of these examinations, the subject of Elementary Mechanics be not included, a knowledge of that subject will be required at a separate Preliminary Examination.

[2] Exception may be made in the case of a student from any Indian, Colonial, or Foreign University or College, who shall have passed the Matriculation or other equivalent Examination of his University or College, provided such examination fairly represents a standard of general education equivalent to that required in this country.

to the several qualifying bodies, medical schools, and hospitals; and shall produce or forward to the Branch Registrar a certificate of his having passed a preliminary examination, as required by the General Medical Council, and evidence that he has commenced medical study.[3]—13. The Branch Registrar shall enter the applicant's name and other particulars in the *Students' Register*, and shall give him a certificate of such registration.—14. Each of the Branch Registrars shall supply to the several qualifying bodies, medical schools, and hospitals, in that part of the United Kingdom of which he is Registrar, a sufficient number of blank forms of application for the registration of medical students.—15. The several Branch Councils—and in England the Executive Committee, if its meeting be more convenient and the case be urgent—shall have power to admit special exceptions to the foregoing regulations as to registration, for reasons which shall appear to them satisfactory.—16. A copy of the *Medical Students' Register*, prepared by each of the Branch Registrars, shall be transmitted, on or before the 31st of December in each year, to the Registrar of the General Council, who shall, as scon as possible thereafter, prepare and print, under the direction of the Executive Committee, an alphabetical list of all students registered in the preceding year, and supply a copy of such authorised list to each of the bodies enumerated in Schedule (A) to the Medical Acts, and through the Branch Registrars to each of the several medical schools and hospitals.—17. The Several Qualifying bodies are recommended not to admit to the final examination for a qualification under the Medical Acts any candidate (not exempted from registration) whose name has not been entered in the *Medical Students' Register* at least forty-five months previously. In the case of candidates from other than schools of the United Kingdom, the Branch Councils shall have power to admit exceptions to this recommendation.

RECOMMENDATIONS OF THE GENERAL MEDICAL COUNCIL ON PROFESSIONAL EDUCATION AND EXAMINATION.

AGE FOR LICENCE TO PRACTISE, ETC.—1. The age of twenty-one should be the earliest age at which a candidate should obtain a licence to practise, and the age should, in all instances, be certified.—2. The course of medical study after registration should occupy at least five years, if the subjects of Elementary Physics, Chemistry, and Biology be included in that period, or at least four years if a satisfactory examination in these subjects have been passed previous to registration.[4]

PROFESSIONAL EDUCATION.—3. At least four winter and three summer sessions should be passed at a school or schools recognised by any of the licensing bodies mentioned in Schedule (A) of the Medical Act.—4. The following are the subjects without a sufficient knowledge of which no candidate should be allowed to obtain a qualification entitling him to be registered: (1) Chemistry, including the principles of the science, and the details which bear on the study of Medicine, and the rudiments of Heat, Light, and Electricity; (2) Anatomy; (3) Physiology; (4) Materia Medica and Pharmacy; (5) Pathology; (6) Medicine, including Medical Anatomy, Clinical Medicine, and Therapeutics; (7) Surgery, including Surgical Anatomy and Clinical Surgery; (8) Midwifery, including Diseases peculiar to Women and to Newly Born Children; (9) Theory and Practice of Vaccination; (10) Forensic Medicine; (11) Hygiene; (12) Mental Disease.[5]

PROFESSIONAL EXAMINATION.—5. The Professional Examinations should be so framed as to secure that the knowledge of every practitioner whose name appears in the *Medical Register* has been tested in all the subjects of professional education which the Council deems essential (see Recommendation No. 4).—6. There should be at least three Professional Examinations.—7. The examinations, and the subjects included in each, should be such, and in such order, as may ensure, as far as possible, a due continuity and sequence of study.—8. The Final Examination should not take place till the termination of the full period of medical study.—9. The Professional Examinations should be conducted both in writing and orally; and they should be practical in all branches in which they admit of being so.—10. Two Examiners at least should take part in every oral and clinical examination.—11. A candidate should not be rejected on any written examination unless his answers have been submitted to at least two Examiners.—12. Excellence in one or more subjects should not be allowed to compensate for failure in other subjects.—13. The Professional Examinations should be held by the several licensing bodies at stated periods, to be publicly notified.—14. In no case should the Examination of a candidate in any subject be conducted exclusively by his teachers in that subject in the school in which he has been educated.—15. Every candidate for the Final Professional Examination should be required to give evidence that he has had sufficient opportunities of practical study, with care of patients, medical, surgical, and obstetrical, in hospital, dispensary, or elsewhere.—16. In addition to the requirements at present in force with respect to hospital attendance and duties, all candidates for the Final Examination should be required to produce evidence that they have, under proper supervision, taken part as pupils for six months in the practice of a recognised public dispensary, including the visitation of patients at their own homes, or in the out-patient practice of a recognised hospital, or should have acted for six months as pupil to a registered practitioner, either holding such a public appointment, or having such opportunities of imparting practical knowledge as shall be satisfactory to the Examining Bodies.—17. Candidates for the Final Examination should be required to produce evidence that they have, so far as local circumstaaces will permit, studied fevers for not less than three months, under recognised Clinical Instructors.—18. Every student should be required to attend for three months the indoor practice of a lying-in hospital, or to have been present at not less than twelve labours, at least three of which he should have conducted personally under the direct supervision of a registered practitioner.—19. Greater attention should be given to instruction in Pathological Anatomy than is required in the curricula of some of the Examining Bodies, and, with this view, a course of not less than three months' lectures on Pathological Anatomy, with practical instruction, should be included in the curricula of all the Examining Bodies.—20. It is desirable that candidates for examination should be required to have availed themselves of the opportunities within their reach of studying insanity.—21. In order to afford due time for clinical work, it is desirable that the number of systematic lectures be restricted.—22. Extreme sub-division of examinations for admission to the *Medical Register*, by allowing candidates to present themselves for the various subjects of examination separately, is prejudicial to sound professional education, and should be discouraged.

ROYAL COLLEGE OF PHYSICIANS OF LONDON AND ROYAL COLLEGE OF SURGEONS OF ENGLAND.

DOUBLE QUALIFICATION.

THE regulations for the Conjoint Examination, entitling the candidate who passes it to obtain both the Licence of the Royal College of Physicians of London and the Diploma of Member of the Royal College of Surgeons of England, are applicable to candidates commencing professional study on or after October 1st, 1884. For a synopsis of the regulations, see pages 512 and 513.

Professional studies commenced before Registration, except in the cases of Chemistry and Chemical Physics, Materia Medica,

[3] *Form of Application for Registration as a Medical Student.*—I hereby apply to be registered a Student in Medicine, in conformity with the Regulations of the General Council of Medical Education and Registration of the United Kingdom, for which purpose I submit the following particulars. [Name of applicant (to be written in words at length); Surname; Christian name; Preliminary examination, with date thereof; Place and date of commencement of medical study; Applicant's signature; Address; and Date of application.]

Certificate of Commencement of Medical Study.—I hereby certify that Mr. —— has commenced the study of medicine in (insert name of School, or Hospital, or place of apprenticeship, as the case may be); Signature of Master, Teacher, or Official in a Medical School or Hospital; Place and date. To the Registrar of the Branch Council for ——.

N.B.—The word "Master" or "Teacher" will be held to include any registered practitioner whose pupil the applicant may be at the time. The certificate of examination must testify that the student has been examined in the subjects required by the General Medical Council.

The above form of application, duly and legibly filled up, and accompanied by a certificate of the applicant's having passed a preliminary examination, as required by the General Medical Council, must be forwarded post paid to the Registrar of one of the Branch Councils.

[4] Exception may be allowed in the case of any graduate in medicine of an Indian, Colonial, or Foreign University, or of any student who, having completed the full time required by the Medical Council, and having given satisfactory evidence of general education, shall have spent the whole or three-fourths of that period at an Indian, Colonial, or Foreign University, the several licensing bodies being requested to communicate to the Council annually, in the month of January, a statement of the action taken by them respectively during the last preceding calendar year, in regard to such exceptional cases.

[5] It is to be understood, as regards the above mentioned subjects, that the Council offers no opinion as to the manner in which the subjects should be combined or distributed for purposes of teaching or of examination.

and Pharmacy, will not be recognised. One winter session and two summer sessions may be passed in one or more of the ways as recognised in the regulations.

The instruction in Practical Pharmacy must be given by a registered medical practitioner, or by a Member of the Pharmaceutical Society of Great Britain, or in a public hospital, infirmary, or dispensary.

The systematic practical instruction in Medicine, Surgery, and Midwifery, includes: 1, the applications of anatomical knowledge to the investigation of disease; 2, the methods of examining various organs and other parts of the body, in order to detect the evidence of disease or the effects of accidents; 3, the employment of instruments and apparatus used in diagnosis or treatment; 4, the examination of diseased structures, whether recent or in a museum; 5, the chemical examination of morbid products; 6, *post-mortem* examinations.

No metropolitan hospital is recognised which contains less than 150, and no provincial or colonial hospital which contains less than 100 patients. A three months' course of Clinical instruction in the wards of a recognised lunatic hospital or asylum may be substituted for the same period of attendance in the medical wards of a general hospital.

The Clinical lectures must be attended after the candidate has passed the second examination.

The duties of Clinical Clerk and Surgical Dresser may be discharged at a general hospital, infirmary, or dispensary, or parochial or union infirmary, recognised for this purpose, or in such other similar manner as shall afford sufficient opportunity for the acquirement of practical knowledge.

Students must attend the examinations held in the several classes.

Exemption from any of the regulations can only be granted by the Committee of Management.

Professional Examination.—The examinations will be partly written, partly oral, and partly practical, and will be held in January, April, July, and October, unless otherwise appointed. Every candidate intending to present himself for examination must give notice in writing to the Secretary of the Examining Board in England, Examination Hall, Victoria Embankment, W.C., fourteen clear days before the day on which the examination commences, transmitting at the same time the required certificates. All fees must be paid three days prior to the day on which the examination commences.

Synopses indicating the range of subjects in the Examinations in Chemistry and Chemical Physics, Materia Medica, Pharmacy, Elementary Anatomy, Elementary Physiology, and Physiology, may be obtained together with the regulations.

A candidate will be admitted to the Examinations on Chemistry and Chemical Physics, Materia Medica, and Pharmacy, on producing evidence of having been registered as a medical student by the General Medical Council, and of having received instruction in each of these subjects, or he may take Materia Medica and Pharmacy as part of the Second Examination: but he will not be admitted to the Examination on Elementary Anatomy and Elementary Physiology earlier than the end of his first winter session or than the completion of his first six months' attendance at a medical school. Each of the three parts of this examination may be taken at different times, or the candidate may present himself for the whole at one time.

A candidate will be admitted to the Second Examination after the lapse of not less than six months from the date of his passing Parts I. and III. of the First Examination, on producing evidence of having completed, subsequently to registration as a medical student, eighteen months of professional study at a recognised medical school or schools.

A candidate will be admitted to the Third or Final Examination after the lapse of not less than two years from the date of his completing the Second Examination on producing evidence; 1, of being twenty-one years of age; 2, of having studied Medicine, Surgery, and Midwifery during not less than forty-five months.

SPECIAL REGULATIONS.

1. Any candidate for the Licence of the Royal College of Physicians and the Membership of the Royal College of Surgeons, who shall have commenced his professional study before October 1st, 1884, shall, on production of the certificates required by both Colleges when he commenced his professional study, and on payment of the required fees, be admissible to either or all of the examinations of the Examining Board. 2. Any candidate who shall have passed before October 1st, 1884, at either of the two Colleges, the First or Second Examination, or the First and Second Examinations, will be exempt from the equivalent examinations of the Examining Board. 3. Any member of an English University, or of a Scotch or Irish University, where it is required that not less than two of the four years' curriculum of professional education shall have been spent in residence at the University, who shall have passed such an examination or examinations at his University as shall comprise the subjects of the First and Second Examinations of the Examining Board in England, and who shall have completed not less than four years of medical study according to the regulations required by his University will be eligible for admission to the Third or Final Examination of the Board, two years after his having passed all the other required examinations; any candidate so admitted to examination will be required to pay a fee of £5 5s.; and any such candidate who shall have passed such Third or Final Examination shall, on the further payment of not less than 30 guineas, and subject to the by-laws of each College, be entitled to receive the Licence of the Royal College of Physicians of London and the Diploma of Member of the Royal College of Surgeons of England.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

MEMBERS.

EVERY candidate for the Membership of the College must furnish proof that he has attained the age of twenty-five years, and must produce a testimonial from a Fellow or Member of the College, satisfactory to the Censors' Board, to the effect that, as regards moral character and conduct, he is a fit and proper person to be admitted a Member of the College.

No candidate shall be admitted to examination who is engaged in trade; or who dispenses medicine, or makes any engagement with a chemist or any other person for the supply of medicines; or who practises Medicine or Surgery in partnership, by deed or otherwise, so long as that partnership continues; or who refuses to make known, when so required by the President and Censors, the nature and composition of any remedy he uses.

A candidate for the Membership is inadmissible to the Professional Examination who is unable to satisfy the Censors' Board of his general culture.

All candidates for the Membership shall exhibit to the Censors' Board such diplomas or other evidence of their general education as they may possess, that it may be recorded by the Registrar for future consideration of their claims to the Fellowship of the College.

All candidates for Membership under the age of forty shall be required to prove a knowledge of Latin, and of either Greek, French, or German, by examination before the Censors' Board, unless they have obtained a Degree in Arts in a British University.

Any candidate who has already obtained the degree of Doctor or Bachelor of Medicine at a University in the United Kingdom, in India, or a British Colony, or who shall have obtained a foreign qualification entitling him to practise Medicine or Surgery in the country where such qualification has been conferred, wherein the courses of study and the examinations to be undergone previously to graduation shall have been adjudged by the Censors' Board to be satisfactory, shall, if the Censors think fit, be admitted to the Pass Examination. The nature and extent of this examination shall, in the case of each candidate, be determined by the Censors' Board.

Pass Examination for Membership.—The Pass Examination shall be conducted as follows:—Thursday, from 2 till 6, by written questions on Medical Anatomy, and on the Principles of Medicine. Friday: from 2 to 6, by written questions on the Practice of Medicine, including the Principles of Public Health, and Psychological Medicine. Saturday or Monday: the candidate's practical knowledge will be tested, either at the College or in the medical wards of a hospital. Tuesday and Wednesday: by examination *vivâ voce*. This examination will commence on the last Thursday but one in January, April, July, and October.

Any candidate who has attained the age of forty years, and who can produce testimonials as to his moral character and conduct, his general and professional acquirements, and that he has improved the art or extended the science of Medicine, or has at least distinguished himself highly as a medical practitioner, shall submit such testimonials to the Censors' Board, who may, if they see fit, submit them to the Fellows at a general meeting, and it shall be deter-

TABULAR VIEW OF THE REGULATIONS OF THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS, AND OF THE SOCIETY OF APOTHECARIES OF LONDON.

	ROYAL COLLEGES OF PHYSICIANS & SURGEONS.	ROYAL COLLEGE OF PHYSICIANS OF LONDON.	ROYAL COLLEGE OF SURGEONS OF ENGLAND.		SOCIETY OF APOTHECARIES OF LONDON.
	Double Qualification.	Licentiates,	Fellows.	Members.	Licentiates.
Age Required	Twenty-one	Twenty-one.	Twenty-five.	Twenty-one.	Twenty-one.
Evidence of General Education before Commencement of Professional Study.	Certificate of registration as a student by the General Medical Council.	Certificate of having passed examination in subjects of General Education recognised by the General Medical Council, and of being registered as a student.	Certificate of registration by the General Medical Council.	Certificate of registration by the General Medical Council.	Certificate of registration as a medical student by the Medical Council.
Duration of Professional Study.	Forty-five months; at least three winters and two summers at a recognised school or schools.	Forty-five months; at least three winter and two summers at a recognised school or schools.	Six years; or Members, two years in addition to the certificate for the diploma of Member.	Four years, or not less than four winter and four summer sessions.	Forty-five months; dating from registration as a medical student, not less than three winter and two summer sessions at a recognised hospital and school of medicine.
Courses of Lectures, Etc, required.					
Anatomy and Dissections ...	Lectures, six months; dissections, twelve months.	A course of Anatomy; Dissections twelve months.	Lectures during two winters; dissections three winters.	Lectures, two winters; dissections, two winters.	Six months; Practical Anatomy and Demonstrations, two winter sessions, or twelve months.
Physiology	Lectures, six months; Practical Physiology, three months.	Physiology and Practical Physiology, each one course.	Lectures one winter; and Practical Physiology, another session.	Lectures, one winter; Practical Physiology another session.	Six months; Histology with Demonstrations, three months.
Chemistry	Instruction.	Instruction; time not specified.	One course.	One course.	Six months.
Practical Chemistry ...			Three months.	Three months.	Three months.
Materia Medica			One course.	One course.	Three months.
Practical Pharmacy ...			Three months.	Three months.	Three months.
Botany	Not required.	Not required.	Not required.	Not required.	No certificate of attendance on lectures on Botany is required.
Morbid Anatomy	Three months; Demonstrations in *post-mortem* room during clinical study.	One course; demonstrations in *post-mortem* room during clinical study.	Lectures, three months; demonstrations, three winter and two summer sessions.	Lectures, three months; demonstrations in *post-mortem* room.	Three months; *post-mortem* examinations during hospital practice.
Medicine	Six months.	One course.	One course.	One course.	Six months.
Clinical Medicine...	Nine months.	Nine months.	One winter and one summer session.	One winter and one summer session.	Nine months.
Surgery	Six months.	One course.	One winter session.	One winter session.	Six months.
Clinical Surgery	Nine months.	Nine months.	Two winter and two summer sessions. Observation and examination of patients for three months.	Two winter and two summer sessions. Observation and examination of patients, three months.	Nine months.
Practical Surgery...	Required.	Required.	Six months.	Six months.	Three months.
Midwifery and Diseases of Women.	Three months; attendance on twenty labours.	One course; not less than twenty labours.	One course; not less than ten labours.	One course; not less than ten labours.	Three months; personally attended twenty cases of labour.
Clinical Study of Diseases of Women.	Three months.	Three months.	Not stated.	Not stated.	Three months; besides this a course of Practical Midwifery.
Forensic Medicine...	Three months.	One course.	One course.	One course,	Three months.
Hospital Practice...	Medical and Surgical Practice; three winter and two summer sessions.	Medical and Surgical Practice, three winter and two summer sessions.	Surgical Practice, four winter and four summer sessions; medical practice, one winter and one summer.	Surgical Practice, three winters and two summers; Medical Practice, one winter and one summer.	Medical and Surgical Practice, three winter and two summer sessions, with *post-mortem* examinations.
Hospital Appointments ...	Medical clinical clerk; six months; surgical dresser, six months.	Clinical clerk, six months; dresser, six months.	House-Surgeon or dresser, six months.	Dresser, or (after a year of study) charge of patients under superintendence of a surgeon, six months.	Surgical dresser, three months; medical clinical clerk, three months.
Other Certificates	Systematic Practical Instruction in Medicine, Surgery, and Midwifery. Of having performed Operations on the Dead Body. Instruction in Vaccination.	Systematic Practical Instruction in Medicine, Surgery, and Obstetric Medicine. Instruction and Proficiency in Vaccination. Moral character.	Instruction and Proficiency in Vaccination. Comparative Anatomy, one course. Operations on Dead Body.	Instruction and Proficiency in Vaccination. Examinations in Elementary Anatomy and Physiology at medical school.	Birth; moral character; course of medical study; proficiency in vaccination, signed by a teacher recognised by the Local Government Board; operations performed on the dead body; attendance at class examinations. Signed by the Dean of the Medical School.
Number of Examinations First Examination; when it may be passed; Subjects.	Three. After registration: (1) in Chemistry and Chemical Physics; (2) Materia Medica and Pharmacy; (3) Elementary Anatomy and Physiology; at end of first six months at a recognised medical school,	Three. After registration as a student; Chemistry and Chemical Physics; Materia Medica and Pharmacy; and Osteology.	Two. After third winter session: (1) in Anatomy and Physiology; (2) after passing first and second examinations of Conjoint Board or equivalent examination at University in Great Britain recognised for this purpose.	Two. After second winter session; Anatomy and Physiology.	Four. After registration as medical student, Chemistry, Physics, Practical Chemistry, Materia Medica, Botany, Pharmacy, Prescriptions,

TABULAR VIEW OF THE REGULATIONS OF THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS AND OF THE SOCIETY OF APOTHECARIES OF LONDON.—*Continued.*

	ROYAL COLLEGES OF PHYSICIANS & SURGEONS.	ROYAL COLLEGE OF PHYSICIANS OF LONDON.	ROYAL COLLEGE OF SURGEONS OF ENGLAND.		SOCIETY OF APOTHECARIES OF LONDON.
	DOUBLE QUALIFICATION.	LICENTIATES.	FELLOWS.	MEMBERS.	LICENTIATES.
SECOND EXAMINATION; AT WHAT PERIOD IT MAY BE PASSED; SUBJECTS.	Six months after first examination. After eighteen months of study at a recognised medical school, subsequent to registration: Anatomy and Physiology, which must be taken up together until the required standard is reached in one or other subject. Materia Medica and Pharmacy may be taken at this examination.	After eighteen months of study subsequent to registration as a medical student; Anatomy and Physiology.	After six years of professional study; in Surgery, including Surgical Anatomy and Pathology, Medicine and Midwifery (Medicine and Midwifery not required if passed for the Membership, nor from candidates holding approved diplomas, degrees, or licences, or from those intending to obtain a qualification in Medicine and Midwifery; the diploma of the College is not issued until proof of having passed the required examination is produced).	After end of fourth year of professional education; in Surgical Anatomy, and Principles and Practice of Surgery, Medicine, and Midwifery.	After twelve months' Practical Anatomy with Demonstrations, Anatomy (dissected subject), Physiology, Histology.
THIRD EXAMINATION; AT WHAT PERIOD IT MAY BE PASSED; SUBJECTS.	Two years after second examination; 45 months after registration. (1) Medicine; (2) Surgery; (3) Midwifery and Diseases of Women. (Forensic Medicine and Public Health are included.) Each part may be taken separately or all at one time.	Forty-five months after registration; two years after second examination. 1. In Medical Anatomy and Pathology; Principles and Practice of Medicine and Therapeutics. 2. Surgical Anatomy and Pathology; Principles and Practice of Surgery. 3. Midwifery and Diseases of Women. (Forensic Medicine and Public Health are included.) Each part may be taken separately.	—	—	Forty-five months after registration. Principles and Practice of Surgery; Surgical Anatomy and Operative Manipulations; Use of Instruments and Appliances; Surgical Pathology.
FOURTH EXAMINATION; AT WHAT PERIOD IT MAY BE PASSED; SUBJECTS.	—	—	—	—	Forty-five months after registration. Principles and Practice of Medicine, Clinical Medicine, Pathology, Morbid Histology, Forensic Medicine, Toxicology, Hygiene, Obstetric Medicine, Gynæcology, Use of Obstetric Instruments. For the four examinations, £10 10s.; re-examination after failure, £3 3s.
FEES PAYABLE	At first or second examination, £10 10s.; re-examination after rejection in either part of examination, £3 3s. At third examination, £15 15s.; re-examination after rejection in Medicine or Surgery, £5 5s.; in Midwifery, £3 3s.	£5 5s. for admission to each examination. Candidates rejected at any examination must pay additional £3 3s. before readmission to examination. Total fee for Licence, £15 15s.	At first examination, Members, £5 5s.; non-members, £10 10s.; £5 5s. returned if rejected. At second examination, Member, £10 10s.; if not a Member, £21. In latter case £10 10s. is returned in case of rejection.	Diploma of College, £21; £5 5s. at first examination; after failure at this examination, candidate must pay an additional £3 3s. before being again admitted. At Pass Examination, £15 15s. paid and £5 5s. retained on each failure.	
REJECTED CANDIDATES ...	After first, second, and third examinations, readmitted after not less than three months. Candidates are re-examined in subjects in which they have been rejected.	After rejection at first or second examination, not again admitted until end of three months; after third examination not till end of six months. Candidates are re-examined in subjects of rejection.	After rejection at first examination, candidates not again admitted for six months; after second examination, not till end of one year, unless Court of Examiners shall otherwise determine.	After rejection at primary examination, three or six months; after rejection at second examination, six months, unless the Court of Examiners shall otherwise determine.	Are readmitted after three or six months, as may be directed; and are re-examined in subjects in which they failed; except Surgery, in which candidates are re-examined entirely.
CANDIDATES (1) EXEMPTED FROM CERTAIN PORTIONS OF THE EXAMINATIONS, OR (2) ADMITTED UNDER SPECIAL REGULATIONS.	(1) At first examination candidates who have passed a University examination for a degree in Medicine in any subject of the first and second parts. (2) Holders of Colonial, Indian, or Foreign Qualifications entitling to practise, admitted to second and third examinations on production of evidence of age and of proficiency in vaccination.	(1) Candidates who have elsewhere passed examinations in the subjects of the first and second examinations; who have obtained a degree in Surgery at a recognised University; who have passed an examination in Surgery at a College of Surgeons; who have obtained foreign qualifications entitling them to practise Medicine or Surgery.	(2) Members are admitted to first examination at any time after receiving diploma; to second examination at any subsequent time, if engaged not less than six years in study (or practice) of profession; in case of Graduates in Arts of a recognised University, five years.	(2) *a.* Candidates who have studied in Scotland or in Ireland, or at recognised Foreign or Colonial Universities; *b.* Members or Licentiates of the other Colleges of Surgeons; and Graduates in Medicine or Surgery of a recognised University, admitted to professional examinations on production of the necessary certificates and diplomas.	At first and second examinations, candidates who have passed equivalent examinations before any examining body recognised by the Medical Council.

mined by the votes of the Fellows present, or of the majority of them, taken by ballot, whether the candidate shall be admitted to examination.

The fee to be paid for examination for Membership shall be £6 6s., and such examination fee shall be reckoned as part of the fee for admission as a Member, in the event of the candidate satisfying the Censors' Board of his competency.

Every candidate (except those holding the qualifications above mentioned, or above forty years of age) shall produce proof of his having passed the examinations required for the Licence of the College.

If the Censors' Board doubt the sufficiency of the certificates and testimonials produced by any candidate, or his fitness for admission to examination, they may submit the case to a general meeting of the Fellows.

Every candidate (except in cases specially exempted as above) shall give proof of his acquirements by written answers to questions, and shall also be examined *vivâ voce*.

Every candidate approved by the Censors' Board shall be proposed, at the next general meeting of Fellows, as qualified to become a Member of the College; and, if the majority of the Fellows present shall consent, he shall, on engaging to obey the by-laws and regulations, be admitted a Member of the College.

The fee to be paid for admission as a Member of the College shall be £31 10s., except when the candidate for Membership is a Licentiate of the College, in which case the fee for admission as a Member will be £15 15s.

Any candidate not approved by the Censors' Board shall not (except by special permission of the College) be readmitted to examination until after the lapse of a year.

Every candidate is required to give fourteen days' notice in writing to the Registrar of the College of his intention to present himself for examination, at the same time transmitting: 1. Such diplomas or other evidence of his general education as he may possess; 2. Such medical and surgical qualifications as he may have obtained, unless such qualifications are registered in the *Medical Register;* 3. Proof that he has attained the age of twenty-five years; and 4. A testimonial from a Fellow or Member of the College.

LICENTIATES.

The Licence of the College is a qualification to practise Medicine, Surgery, and Midwifery. The regulations here given (for synopsis, see pp. 512 and 513) are applicable to candidates who commenced their professional studies after March 25th, 1880.[1]

Of the forty-five months of professional study, one winter and two summer months may be passed in either of the following ways, 1. Attending the practice of a hospital, infirmary, or other institution recognised by the College; 2. Receiving instructions as the pupil of a legally qualified practitioner, having opportunities of imparting a practical knowledge of Medicine, Surgery, or Midwifery; 3. Attending lectures on any of the required subjects of professional study at a recognised place of instruction. Professional studies commenced *before* registration, except in the cases of Chemistry, Materia Medica, and Pharmacy, will not be recognised.

Certificates required: First Examination.—Evidence of having been registered as a medical student by the General Medical Council; and of having received instruction in Chemistry, including Chemical Physics, in Practical Chemistry, in Materia Medica, and in Practical Pharmacy.

Second Examination.—Evidence of having completed, after registration as a student, eighteen months of professional study at a recognised school or schools; and of instructions in Anatomy and Physiology. (See Table.)

Third Examination.—Evidence of being 21 years of age; of moral character; of having passed the Second Examination; of having been engaged in professional study not less than forty-five months (see Table); and of instruction in the remaining subjects of study mentioned in the Table.

The systematic practical instruction in Medicine, Surgery, and Obstetric Medicine comprises the same subjects as in the regulations for the double qualification of the Colleges of Physicians and Surgeons. (See p. 512).

No metropolitan hospital is recognised which contains less than 150, and no provincial or colonial hospital which contains less than 100 patients. A three months' course of clinical instruction in the wards of a recognised lunatic hospital or asylum may be substituted for the same period in the medical wards of a general hospital.

Exemptions.—Any candidate who shall produce satisfactory evidence of having passed an examination in any of the subjects of the First Examination, or an examination in Anatomy and Physiology as required for a degree in Medicine or Surgery, at a University in the United Kingdom, in India, or a British Colony; or an examination in Anatomy and Physiology conducted by either of the Royal Colleges of Surgeons in the United Kingdom, or by the Faculty of Physicians and Surgeons of Glasgow, will be exempt from re-examination in the respective subjects. Any candidate who shall have obtained a degree in Surgery at a University in the United Kingdom, or who shall have passed the Examination in Surgery conducted by a Royal College of Surgeons of the United Kingdom, or the Faculty of Physicians and Surgeons of Glasgow, after a course of study and an examination satisfactory to the College, will be exempt from re-examination on Surgical Anatomy and Pathology, and on the Principles and Practice of Surgery. Any candidate who shall have obtained a foreign qualification which entitles him to practise Medicine or Surgery in the country where such qualification has been conferred, after a course of study and an examination equivalent to those required by the regulations of the College, shall, on production of satisfactory evidence as to age, moral character, and proficiency in vaccination, be admissible to the Pass Examination, and shall be exempt from re-examination on such subjects as shall in each case be considered by the Censors' Board to be unnecessary.

The examinations will commence in January, April, July, and October, unless otherwise appointed.

[1] Candidates who commenced professional study on or after October 1st 1884, are subject to the regulations of the Examining Board in England.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

DIPLOMA OF MEMBER.

THESE regulations apply only to candidates who commenced recognised professional study *before* October 1st, 1884.

For synopsis of regulations, see pages 512 and 513.

I. *Preliminary General Education and Examination.*—Candidates are required, before the commencement of their professional education, to pass a Preliminary Examination recognised by the General Medical Council, and to obtain a certificate of having been registered by the General Medical Council. In the case of any Colonial, Indian, or foreign student not registered by the General Medical Council, the conditions of admission to the professional examination for the diploma will be determined by the Council of the College.

II. *Professional Education.*—The following are recognised modes of commencing professional education. 1. Attendance on the practice of a hospital or other public institution recognised by this College. 2. Instruction as the pupil of a legally-qualified surgeon, holding the appointment of surgeon to a hospital, general dispensary, or union workhouse, or where such opportunities of practical instruction are afforded as shall be satisfactory to the Council. 3. Attendance on lectures on Anatomy, Physiology, or Chemistry, by lecturers recognised by this College.

a. By the Practical Course of General Anatomy and Physiology it is meant that the learners themselves shall, individually, be engaged in the necessary experiments, manipulations, etc.; but it is not intended that the learners shall perform vivisections.

b. The certificates of attendance on lectures must include evidence that the student has attended the practical instructions and examinations of his teacher in each course.

c. The course of Practical Surgery is intended to embrace instruction in which each pupil shall be exercised in practical details, such as in the application of anatomical facts to Surgery, on the living person or on the dead body; the methods of proceeding and the manipulations necessary in order to detect the effects of diseases or accidents on the living person or on the dead body; the performance, where practicable, of the operations of Surgery on the dead body; the use of surgical apparatus; the examination of diseased structures, as illustrated in the contents of a museum of morbid anatomy and otherwise.

d. The course of lectures on Chemistry is not required in the case of a candidate who shall have passed a satisfactory examination in this subject in his Preliminary Examination.

e. The certificate of instruction in Vaccination must be such as will qualify its holder to contract as a public vaccinator under the regulations at the time in force of the Local Government Board.

III. *Certificates, etc.*—Certificates of attendance upon the prac-

tice of a recognised provincial or colonial hospital, unconnected with, or not in immediate proximity to, a recognised medical school, will not be received for more than one winter and one summer session of the hospital attendance required by the regulations of this College; and in such cases Clinical Lectures will not be necessary, but a certificate of having acted as Dresser for at least six months will be required.

IV. *Professional Examinations.*—The First or Primary Examination is partly written and partly demonstrative. The Second or Pass Examination is partly written, partly oral, and partly on the practical use of surgical apparatus and the practical examination of patients. A candidate, having entered his name for either the Primary or the Pass Examination, who shall fail to attend the meeting of the Court for which he shall have received a card, cannot present himself for examination within three months afterwards.

Primary Examination.—Candidates who commenced their professional studies on and after October 1st, 1882. and have pursued those studies in recognised medical schools in England, are required, before presenting themselves for the Primary or Anatomical and Physiological Examination for the diploma of Member, to produce certificates of having passed an examination in Elementary Anatomy and Physiology, conducted by their teachers at the medical schools. 1. The periods at which the examinations are held are determined by the teachers at the medical schools, provided that an interval of not less than six months elapse between the date at which the candidates have passed the examination and the date of their presenting themselves for the Primary Examination of the College. 2. The teachers at the medical schools determine the nature and extent of the Examination in Elementary Anatomy and Physiology.

"*Referred*" *Candidates.*—On and after January 1st, 1887, a candidate referred at the Primary Examination in either or both subjects wil be required, before being admitted to re-examination, to produce a certificate that he has pursued, to the satisfaction of his teacher or teachers, in a recognised place of study, his Anatomical *and* Physiological studies, *or* his Anatomical or Physiological studies, as the case may be, during a period of not less than three months subsequently to the date of his reference.

Pass Examination.—Candidates who commenced their professional education on or after October 1st, 1882, are not admitted to the Second or Pass Examination until after the expiration of two years from the date of passing the Primary Examination, except in the following cases: 1. When a candidate, before presenting himself for the Primary Examination, shall possess a recognised degree or diploma in Medicine or Surgery, or shall have completed the curriculum of professional education for the diploma. 2. In the case of a candidate who, being desirous of obtaining the Fellowship, shall fail to present himself for the Primary Examination for the Membership at the end of his second year of professional study, but who shall pass at the end of his third winter session the Primary Examination for the Fellowship; it being required that in such case not less than one year's attendance on the Surgical practice of a recognised hospital shall intervene between the date of his passing the Primary Examination for the Fellowship and the date of his presenting himself for the Second or Pass Examination for the diploma of Member. 3. In the case of a candidate who, having commenced his professional studies by attendance on the practice of a recognised provincial or colonial hospital, shall have completed a year of such attendance before entering at a recognised medical school, it shall be sufficient that not less than one year shall elapse between the date of his passing the Primary Examination and the date of his presenting himself for the Second or Pass Examination for the diploma of Member, provided that his curriculum of four years' professional education shall then have been completed. 4. When a candidate, owing to illness, duly certified by one or more of the teachers of his medical school, shall be prevented from presenting himself for the Primary Examination on the completion of his second year of professional study. 5. In the case of a candidate who, from some unforeseen circumstances, shall fail to present himself for the Primary Examination on the completion of his second year of professional study, it being left to the Court of Examiners to determine whether, in such case, the candidate shall or shall not be required to comply with the regulation.

Candidates can claim exemption from examination in Medicine and Midwifery under the following conditions; namely:

1. The production by the candidate of a degree, diploma, or licence in Medicine and Midwifery, entitling him to register under the Medical Act of 1858; or a degree, diploma, or licence in Medicine and Midwifery of a Colonial or Foreign University approved by the Council of the College.

2. A declaration by the candidate, prior to his admission to the Final Examination for Membership or Fellowship, that it is his intention to obtain either of the qualifications in Medicine and Midwifery mentioned in the foregoing paragraph, in which case the diploma of the College will not be issued to him until he shall produce either the said medical qualification or proof of having passed the several examinations entitling him to receive the same.

"*Referred*" *Candidates.*—A candidate referred on the Pass Examination is required, unless the Court of Examiners shall otherwise determine, to produce, prior to his admission to re-examination, a certificate of at least six months' further attendance on the Surgical practice of a recognised hospital subsequently to the date of his reference. A candidate, referred on the Pass Examination, who shall have exhibited such extreme ignorance as, in the opinion of the Court of Examiners, to render it desirable that he should be referred for a longer period than six months, is required, before his admission to re-examination, to produce a certificate of having attended the Surgical practice of a recognised hospital for a further period of nine or twelve months, as the Court shall determine.

The candidates under the special regulations referred to in the Table at page 513 are admitted to examination on producing (*a*) the several certificates required for the degrees or diplomas in the respective countries; (*b*) the diploma, licence, or degree of the College or University; together with, in each case, a certificate of instruction and proficiency in vaccination, and satisfactory evidence of having been occupied, after passing the Preliminary Examination, at least four years, or during four winter and four summer sessions, in the acquirement of professional knowlege.

DIPLOMA OF FELLOW.

For synopsis of regulations, see pages 512 and 513.

The paragraphs marked *a*, *b*, *c*, *d*, *e*, in the regulations for the Membership are also applicable to the Fellowship

SOCIETY OF APOTHECARIES OF LONDON.

QUALIFYING EXAMINATION FOR THE DIPLOMA IN MEDICINE, SURGERY, AND MIDWIFERY.

Registrable under the provisions of the Medical Act, 1886.

For synopsis of regulations, see pages 512 and 513.

Every student before commencing the study of Medicine must pass an examination in Arts recognised by the Medical Council. Such Preliminary Examination is held quarterly in the Hall of the Society on the first Friday and following day in March, June, September, and December, and is conducted by means of printed papers. The subjects of examination are English, Latin, Mathematics, Elementary Mechanics, and one of the following subjects at the option of the candidate—Greek, French, German, Logic, Botany, Elementary Chemistry. In accordance with the regulations of the Medical Council the subjects may be passed at one or more examinations, and no subject once passed before any recognised examining body can be taken up again except as a "special subject." Medical study before registration as medical student does not count in the curriculum with the exception of Chemistry, Materia Medica, Pharmacy, and Dispensing. A form of notice accompanying the regulations has to be filled up by the candidate, and sent with the fee (one guinea) fourteen days before the examination. Those who desire can present themselves for examination in special subjects. The fee for each subject is one guinea. A pass list is published and sent to every candidate.

The Professional Examinations are all written, oral, and practical.

1. The Examination in Chemistry, Physics, Practical Chemistry, Materia Medica (including the Botany of the *Pharmacopœia*), Pharmacy and Prescriptions, forms Part I of the Primary Examinations, which may be passed at any period after registration as medical student.

2. The Examination in Anatomy, Physiology, and Histology, including an examination on the dissected subject, forms Part II of the Primary Examinations. This Part cannot be passed until after twelve months have been devoted to Practical Anatomy, with Demonstrations. These two Parts may be taken together (that is, passed the same evening), or separately. Part II may be taken before Part I.

3. The Examination in Surgery forms Part I of the Final. It comprises an examination of Surgical Cases, the Principles and Practice of Surgery, Surgical Pathology, Surgical Anatomy, and Operative Manipulations, and Surgical Instruments and Appliances.

4. The Examination in Medicine forms Part II of the Final, and includes an examination of Medical Cases, the Principles and Practice of Medicine, Therapeutics, Pathology, Morbid Histology, Forensic Medicine, Toxicology, Hygiene, Insanity, Midwifery, Gynæcology, and Obstetric Instruments and Appliances. Part II may be taken before Part I. Neither Part can be taken before the candidate is 21 years old, nor before he has been 45 months on the *Medical Students' Register*.

The Primary Examinations are held quarterly, on the first Wednesday and on the Monday and Thursday of the same week, in the months of January, April, July, and October.

The Final Examinations are held monthly. Part I, Surgery, on the second Wednesday and following days. Part II, Medicine, on the third Wednesday and on the Monday and Thursday of the same week.

A certificate or schedule, to be obtained from the Secretary, of the course of medical study pursued by the candidate, must be presented, signed by the Dean of the medical school or other appointed authority, and for the Final, in addition, a certificate of birth, of moral character, of operations performed on the dead body, and of proficiency in vaccination, signed by a teacher recognised by the Local Government Board. Those candidates possessing qualifications to practise can, in lieu of the schedule, present their diploma or certificate of its registration.

All certificates, with the fee, must be sent to the Secretary fourteen days before the examination, together with a notice form, supplied for the purpose, filled in by the candidate, when an admission card will be forwarded stating the time of attendance.

The fee for the examinations is 10 guineas, which, in the event of failure, is not returned. A fee of 3 guineas is required for every re-examination.

The course of medical study required to qualify for the above examinations is as follows (the period stated for each subject is to be understood as the shortest time required): For the Primary Examinations: Chemistry and Physics, six months; Practical Chemistry, in a laboratory, three months; Materia Medica, three months; Practical Pharmacy and Dispensing, three months. Evidence of having received instruction in the foregoing subjects before registration as medical student will be received. Instruction in Practical Pharmacy and Dispensing must be given by a registered medical practitioner, or in a public hospital, infirmary, or dispensary. Anatomy, six months; Practical Anatomy, with Demonstrations, twelve months; Physiology, six months; Histology, with Demonstrations, three months; Attendance at the Class Examinations on the above subjects. For the Final Examinations: Hospital Practice, Surgical and Medical, with *Post-mortem* Examinations, three winter and two summer sessions; Principles and Practice of Surgery, six months; Practical Surgery, three months; Clinical Surgical Lectures, nine months; performance of Operations on the Dead Body; Dresser, three months; Principles and Practice of Medicine, six months; Pathology, three months; Clinical Medical Lectures, nine months; Clinical Clerk, three months; Forensic Medicine, Toxicology, Hygiene, and Insanity, three months; Obstetric Medicine, including Gynæcology, three months; Clinical Instruction in the same; a course of Practical Midwifery; personally conducted twenty Midwifery Cases; Attendance at the Class Examinations on the above subjects. The offices of Surgical Dresser and Medical Clinical Clerk may be discharged at a hospital, infirmary, or dispensary, where sufficient opportunities are afforded for the acquirement of practical knowledge.

The examination for a Certificate to act as an Assistant in compounding and dispensing medicines is held on the third Thursday of every month, and consists in Translating Prescriptions, in the *British Pharmacopœia*, in Pharmacy, Pharmaceutical Chemistry, Materia Medica, and Medical Botany. The fee is 2 guineas. Seven days' notice must be given.

Prizes.—Registered medical students, prior to the close of their third year, and who have not been candidates before, are permitted to compete for the Society's prizes in Materia Medica and Pharmaceutical Chemistry. The examination, which is written, oral, and practical, is held in the month of August. The prizes consist of a Gold Medal and a Silver Medal. Candidates are expected to reach the required standard.

A Gold and a Silver Medal are also given for proficiency in Botany. The examination will take place in the month of June. Female candidates can compete.

Due notice of these examination will be given in the medical journals.

Tickets of admission to the lectures on Botany given at the Society Garden at Chelsea by J. G. Baker, Esq., F.R.S., F.L.S., of Kew, in the months of May, June, and July, can be had on application.

Attendance is given daily at the Hall of the Society, Blackfriars, E.C., from 10 to 4 o'clock, Saturdays excepted.

UNIVERSITY OF OXFORD.

DEGREES IN MEDICINE AND SURGERY.

THERE are two degrees in Medicine, B.M. and D.M., and two degrees in Surgery, B.Ch. and M.Ch.,[1] which under the most favourable circumstances may be obtained in six or seven years from Matriculation.

B.A. DEGREE.

It is necessary first to obtain the degree of B.A., which is only conferred on candidates who have resided for twelve terms within the University. [The four terms of an academical year being Michaelmas and Hilary, of eight weeks each; Easter and Trinity, of four weeks each.]

The degree of B.A. may be obtained in three ways:

(*a*) By passing Responsions (or one of the Extra-University Examinations, which are held as equivalent to it), Moderations, a Divinity Examination, or, in the event of a candidate objecting, an examination in some specified Greek book; and the Final Pass School in three subjects, two of which may be the same as the Preliminary Examinations in Natural Science.

(*b*) By passing Responsions, Moderations, the Divinity Examination, and taking honours in Literæ Humaniores, Mathematics, Theology, Oriental Languages, Modern History, Jurisprudence, or any one of the subjects of the Natural Science School, namely, Chemistry, Physics, Animal Morphology, Animal Physiology, Botany.

(*c*) By passing Responsions, an additional subject in Responsions, the Divinity Examination, the Preliminary Examinations of either the Jurisprudence or the Natural Science School, and taking Honours in one of the Honour Schools mentioned in the preceding paragraph.

Responsions and the additional subject may be passed before a candidate is a member of the University;[2] Moderations can be passed in the fourth term; the Divinity Examination at any time after Responsions; the Final Pass School may be taken any time after Moderations; a Final Honour School in the twelfth term or end of the third Academical year (but most candidates find four years necessary); the Preliminary Examinations of the Natural Science School may be taken as soon as Responsions have been passed.

B.M. AND B.CH. DEGREES.

The degrees of B.M. and B.Ch. may be obtained by passing the following Examinations.

1. *Preliminary.*

A candidate before being admitted to any Professional Examination, except that in Materia Medica, must have passed the Preliminary Examination of the Natural Science School in (i) Mechanics and Physics, (ii) Chemistry, (iii) Animal Morphology, (iv) Botany. These examinations are held twice a year.

2. *Professional (held annually in Trinity Term).*

A. *First Examination.*—Subjects: Organic Chemistry, unless the candidate has obtained a first or second class in Chemistry in the Natural Science School; Human Physiology, unless he has obtained a first or second class in Animal Physiology in the Natural Science School; Human Anatomy.

B. *Second Examination.*—Subjects: Medicine, Surgery, Midwifery, Pathology, Forensic Medicine with Hygiene, and Materia Medica with Pharmacy.

The First Examination for the degrees of B.M. and B.Ch., may be passed as soon as the Preliminary Examinations mentioned above have been completed. Organic Chemistry may be taken on a separate occasion, but before Human Physiology and Anatomy. The two last-named subjects must be taken together. For exemptions, see *ante*.

[1] Also a diploma in Public Health, see page 564.

[2] Membership is constituted by Matriculation, and by becoming a member of a College or Hall, or a non-collegiate student.

The Second Examination may be taken after completion of the first. But Materia Medica and Pharmacy may be offered on a separate occasion, at any point of a student's course before, but not after, the remaining subjects, or it may be taken together with them. The other subjects must all be taken together.

D.M. DEGREE.

The degree of D.M. is granted to Bachelors of Medicine of the University—

(i) Who took the degree of B.M. previously to the end of Trinity Term, 1886, provided they have spent three years in the practice of Medicine after taking that degree, and have composed a dissertation on some medical subject approved by the Regius Professor of Medicine, before whom it must be read in public.

(ii) Who took the degree of B.M. subsequently to the end of Trinity Term, 1886, provided they have entered their thirty-ninth term, and have composed on some medical subject a dissertation which is approved by the Professors in the Faculty of Medicine and Examiners for the degree of B.M. whose subject is dealt with. A book published within two years of the candidate's application for the degree may be substituted for a dissertation.

The degree may be taken in any term.

M.CH. DEGREE.

The degree of M.Ch. is granted to Bachelors of Surgery of the University who have entered their twenty-seventh term, who are members of the Surgical Staff of a recognised hospital, or have acted as Dresser or House-Surgeon in such a hospital for six months, and who have passed an examination in Surgery, Surgical Anatomy, and Surgical Operations. The examination for the M.Ch. degree is held in Trinity Term at the close of the Second B.M Examination.

TEACHING.

I. SUBJECTS OF THE PRELIMINARY EXAMINATIONS.

Courses of lectures on Elementary Mechanics and Physics treated experimentally are given during three terms by the Professor of Experimental Philosophy at the Clarendon Laboratory, by Dr. Lee's Reader in Physics at Christ Church, by the Duke of Bedford's Lecturer in Physics at Balliol College, and by the Millard Lecturer in Experimental Mechanics at Trinity College.

Courses of lectures are given during three terms on Inorganic Chemistry by the Aldrichian Demonstrator in the Department of Chemistry, University Museum, and Practical Instruction on the same subject in the Laboratory daily.

Courses of lectures in Inorganic Chemistry with Practical Instruction are given during the three terms by Dr. Lee's Reader in Chemistry at the Christ Church Laboratory.

Instruction in Elementary Animal Morphology, by means of courses of lectures and Practical Laboratory work, is given in the Department of the Linacre Professor of Anatomy in Michaelmas and Hilary Terms, and on the Embryology of the Chick in Easter Term. The practical part of the course is conducted in the new working room lately erected for that purpose, on alternate days during Michaelmas and Hilary Terms.

Similar instruction in Elementary Botany is given in the Department of the Sherardian Professor at the Botanic Garden in Michaelmas and Hilary Terms. The practical instruction is given in the New Laboratory in the Botanic Garden on the days not appropriated to the course of Animal Morphology.

II. SUBJECTS OF THE FIRST EXAMINATION FOR THE DEGREE OF M.B. AND B.CH.

1. *Human Anatomy.*—The course of lectures and practical instruction on Human Anatomy is given in the Department of the University Lecturer on Human Anatomy. The Lecture Room and Dissecting Room adjoin the Museum. The course consists of lectures delivered three times a week, and is completed in two years. Those of the first year are devoted to the consideration of the osseous, muscular, and vascular systems. Those of the second year relate to the nervous system, the thoracic and abdominal viscera, and to the development of the human embryo. Written examinations are held twice in each term.

The Dissecting Room is open daily during term from 9 A.M. to 4.30 P.M., between which hours practical instruction is given by the lecturer. Demonstrations on the dissected subject are given three times a week at 9 A.M. On alternate days, at the same hour, special demonstrations are given. Students receiving practical instruction are examined orally from time to time by the Lecturer. The fee for practical instruction is £4 per term.

Facilities are given to graduates who may desire to pursue their anatomical studies during the vacation. The Museum, which contains a rich collection of specimens illustrative of Human Anatomy, is open to students.

2. *Human Physiology.*—A course of lectures on Physiology is given in the new Physiological Laboratory. It extends over six terms.

The course of Lectures on Histology is given in the same place by the Demonstrator of Histology. It consists of about forty lectures and demonstrations, and extends over two terms.

These two courses include the whole subject of Physiology as defined in the Regulations of the Boards of the Faculty of Natural Science (see *Examination Statutes*, 1889, pp. 54, 153) and of Medicine.

A course of practical instruction in Histology is given by the Demonstrator during Michaelmas and Hilary Terms.

Practical instruction in the Physiology of Muscle and Nerve, for beginners, is given in Hilary Term. More advanced students have the opportunity of working at the same subject during Michaelmas and Easter Terms.

A practical course of Elementary Physiological Chemistry is given in Easter Term, and practical instruction in the Laboratory for more advanced students in Hilary Term.

3. *Organic Chemistry.*—A course of lectures with practical instruction in Organic Chemistry in its relation to Physiology and Medicine is given in the Department of the Waynflete Professor of Chemistry in Easter Term.

III. SUBJECTS OF THE SECOND EXAMINATION IN MEDICINE AND SURGERY.

Informal instruction on subjects connected with Medicine and Hygiene is given by the Regius Professor of Medicine.

Courses of tutorial instruction and demonstrations in Physical Diagnosis and Regional Anatomy are given at the Radcliffe Infirmary in each term.

Clinical lectures are delivered at the Infirmary during every term by the Lichfield Lecturers in Clinical Medicine and Surgery.

Arrangements are being made for the teaching of Materia Medica and Pharmacy.

Fees.—University: B.A., £16 or £17. B.M. and B.Ch., £21. D.M., £40. M.Ch., £17. Also an annual fee to the University of £2 for the first four years, reduced to £1 when the B.A. is taken.—College: Fees (varying in amount) on taking degrees and for first four years of membership. Tuition fees, £21 to £30. The cost of living for the four University terms cannot be stated at less than £120.

Scholarships, etc.—The Colleges grant after competitive examination annually, or at longer intervals, Scholarships in Natural Science (Chemistry, Physics, Biology) of the annual value of £80, tenable for four years, and also Exhibitions of a less annual value.[3] In February there is competed for annually, by those who have obtained a first class in any school (Moderations or Final) or a Scholarship or Prize open to general competition in the University, one Radcliffe Travelling Fellowship. It is tenable for three years, and is of the annual value of £200. The examination is partly scientific, partly medical. The holder must travel abroad for the purpose of medical study, and take the degree of B.M.Oxon. A Rolleston Memorial Prize is awarded once in two years to members of the Universities of Oxford or Cambridge of not more than ten years' standing for an original research in some Biological subject, including Physiology or Pathology. Students who have passed the examinations necessary for the degree of B.A. are eligible to compete for a Burdett-Coutts Scholarship of the annual value of £115; it is tenable for two years, and is awarded for proficiency in Geology and allied subjects.

UNIVERSITY OF CAMBRIDGE.

BACHELOR OF MEDICINE.

A STUDENT proceeding to this degree must (1) reside in the University during the required portion of each of nine terms; (2) pass (or obtain exemption from) the Previous Examination; (3) pursue medical study for five years.

There are three examinations for the degree of Bachelor of Medicine. They are partly in writing, partly oral, and partly practical. The examinations take place twice in the year, in the Michaelmas and Easter Terms.

The First Examination is divided into two parts: 1. Chemistry

[3] Dates, etc., published in *University Gazette*.

and other branches of Physics; 2. Elementary Biology. These two parts may be taken together or separately. Before admission to this examination, the candidate must have passed (or obtained exemption from) the Previous Examination. He must also produce certificates of diligent attendance on a course of lectures in Chemistry, and on practical instruction in Chemical Manipulations.

The Second Examination is divided into two parts, which may be taken together or separately: 1. Human Anatomy and Physiology; 2. Pharmaceutical Chemistry. Before admission to this examination, the student must have passed both parts of the First Examination, must have attended hospital practice, and have practised dissection, during six months, and must produce certificates of diligent attendance on a course of lectures on each of the following subjects: 1. Human Anatomy; 2. Physiology.

The Third Examination is divided into two parts, called the first part and the second part respectively. Before presenting himself for either part, the student must have passed both parts of the Second Examination. The first part includes Principles and Practice of Surgery and Midwifery and Diseases peculiar to Women. The second part includes Pathology, Principles and Practice of Physic, Elements of Hygiene, and Medical Jurisprudence. The student, before admission to the first part, must produce certificates of attendance on one course of lectures in each of the following subjects: Pathology, Principles and Practice of Surgery, Midwifery; he must have attended a course of Practical Surgery and acted as dresser or house-surgeon at a recognised hospital for six months; must have attended twenty cases of Midwifery; and must have obtained a certificate of proficiency in vaccination from an authorised vaccinator appointed by the Local Government Board. Before admission to the second part, he must produce evidence that he has completed the course of medical study and certificates of diligent attendance on one course of lectures in each of the following subjects: Principles and Practice of Physic, Physiological Actions and Therapeutic Uses of Remedies, and Medical Jurisprudence; he must also have attended the Medical and Surgical Practice of a recognised hospital (with clinical lectures) during three years at least; must have been Clinical Clerk at a recognised hospital for six months at least, or have, subsequently to the completion of his attendance on Hospital Practice, attended to Practical Medicine or Surgery with special charge of patients in a hospital, dispensary, or parochial union, under superintendence of a qualified practitioner, unless the student himself be duly qualified.

After these examinations have been passed, an Act must be kept in the Schools in the following manner. The Regius Professor of Physic assigns a day and hour for keeping the Act, of which public notice has to be given eight days before. The candidate reads a thesis, composed by himself, on some subject approved by the professor; the professor brings forward arguments or objections for the candidate to answer, and examines him orally, as well as on questions connected with his thesis as on other subjects connected with Medicine of a more general nature.

DOCTOR OF MEDICINE.

This degree may he taken by a Bachelor of Medicine in the ninth term after his inauguration (this occurs on the Commencement Day next following the admission to the degree). He is required to produce certificates of having been engaged five years in medical study, to keep an Act in the same manner as that for M.B., and to write a short extempore essay on some one (at his choice) of four topics relating severally to Physiology, Pathology, Practice of Medicine, and State Medicine.

A Master of Arts may proceed to the degree of M.D. in the twelfth term after his inauguration as M.A., without having taken the degree of M.B. He must pass all the examinations for M.B., and keep the Act and write the extempore essay for the M.D. degree. He must produce certificates of having been engaged five years in medical study, and the same certificates of attendance on lectures and hospital practice as are required of the candidate for the degree of M.B.

BACHELOR OF SURGERY.

As the examination for the degree of M.B. includes Operative and Clinical Surgery, the degree of Bachelor of Surgery is conferred upon those candidates who pass the examination for M.B., without further examination.

MASTER IN SURGERY.

The subjects of examination for this degree are: 1. Pathology; 2. Principles and Practice of Surgery; 3. Surgical Anatomy and Surgical Operations; 4. A Surgical Case and a topic relating to Surgery will be submitted in writing to the candidate, on one or both of which, at his option, he will be required to write a short extempore essay.

The candidate must have completed all that is required for the degree of Bachelor of Surgery two years at least before admission to the examination for the degree of Master in Surgery.

A notice is published early in the Michaelmas and Easter Terms stating when the examinations for Medical and Surgical degrees commence, and the dates when candidates are required to send their names and the necessary certificates to the Secretary of Honours Examinations.

Each candidate pays £3 3s. to the Registrary of the University on giving notice of his intention to offer himself for the First or the Second Examination for M.B. He pays £2 2s. before the examination for B.S.; and £3 3s. before that for M.S.

Schedules defining the range of subjects in the First M.B. Examination, and of the Pharmacy and Pharmaceutical Chemistry in the Second Examination, also schedules for the necessary certificates, and a list of the schools of medicine and hospitals recognised by the University, may be obtained, on application to the Registrary of the University.

UNIVERSITY OF LONDON.

THE following examinations will be held in the University of London in 1889 and 1890.

Matriculation: Monday, January 13th, 1890, and the second Monday in June, 1890.

Preliminary Scientific Examination: Monday, January 20th, 1890 (Pass only); and the third Monday in July, 1890.

Intermediate Examination in Medicine: Monday, January 20th, 1890 (Pass only); and second Monday in July, 1890.

Bachelor of Medicine (M.B.): Monday, October 28th, 1889; and the first Monday in May, 1890 (Pass only).

Bachelor of Surgery (B.S.): Tuesday, December 3rd, 1889.

Master in Surgery (M.S.) and Doctor of Medicine (M.D.): Monday, December 2nd, 1889.

The certificates in each case must be transmitted to the Registrar at least fourteen days before the examination. In the case of the Matriculation and Preliminary Scientific Examinations, application for a form of entry must be made at least five weeks before the commencement of the examination.

The fee for each examination is £5.[1] If a candidate withdraw, or fail to pass either of the examinations, the fee is not returned; but he is admitted to a subsequent Preliminary Scientific, Intermediate M.B., or B.S., M.S., or M.D. Examination, on payment of an additional fee of £2 10s., provided that he give notice to the Registrar at least fourteen days (or in the case of the Preliminary Scientific Examination, one month) before the commencement of the examination.

BACHELOR OF MEDICINE.

Every candidate for the degree of Bachelor of Medicine is required—1. To have passed the Matriculation Examination; 2. To have passed the Preliminary Scientific Examination; 3. To have been engaged in his professional studies during four years subsequently to matriculation or graduation in Arts, in one or more of the medical institutions or schools recognised by this University; one year, at least, of the four to have been spent in one or more of the recognised institutions or schools in the United Kingdom; 4. To pass two examinations in Medicine.

Preliminary Scientific Examination.—Candidates for the degree of M.B. are required to pass the Preliminary Scientific Examination before commencing their regular medical studies. The examination in July is for Pass and Honours: that in January for Pass only. Candidates for the Pass Examination may take all the subjects, namely, (1) Inorganic Chemistry; (2) Experimental Physics; and (3) General Biology, at the same examination, or at two separate examinations; that is, two at the first examination and one at the second; or one subject at the first and two at the second examination. Candidates who enter for the whole examination in July are examined for a Pass or for Honours in Inorganic Chemistry and Experimental Physics, and for a Pass in General Biology. Candidates who have entered for the whole examination may also be examined for Honours in Botany and in Zoology.

[1] For the degree of Doctor of Medicine, the fee will continue to be £10 to all such as, having taken their M.B. degree under the former regulations, shall not have paid the £5 at the Preliminary Scientific Examination.

Every candidate, on sending in his name for the examination, must state whether he intends to compete for Honours in any subject or subjects; and, if he does so intend, must specify the subject or subjects. No candidate will be allowed to take both the Pass and the Honours Papers in the same subject;[2] but every candidate must take the Pass Papers in those subjects in which he does not offer himself for Honours. A candidate who enters for, but fails to obtain, Honours in Inorganic Chemistry or Experimental Physics, may be recommended by the examiners for a Pass in these subjects respectively, if they are satisfied that he has shown such a competent knowledge thereof as is required for the Pass Examination.[3]

Intermediate Examination in Medicine.—This examination will take place twice in each year; once for Pass and Honours, in July; and once for Pass candidates only, in January. The candidate must have passed the Preliminary Scientific Examination at least two years previously, and must produce certificates—1. Of having completed his nineteenth year; 2. Of having been a student during two years at one or more of the medical institutions or schools recognised by this University; and of having attended a course of lectures on each of three of the following subjects: Descriptive and Surgical Anatomy, Physiology, and Histology, Pathological Anatomy, Materia Medica, and Pharmacy, General Pathology, General Therapeutics, Forensic Medicine, Hygiene, Obstetric Medicine and Diseases peculiar to Women and Infants, Surgery, Medicine; 3. Of having dissected during two winter sessions; 4. Of having attended a course of Practical Chemistry;[4] 5. Of having attended to Practical Pharmacy, and having acquired a practical knowledge of the preparation of Medicines. Candidates are examined in Anatomy, Physiology, and Histology,[5] Organic Chemistry, Materia Medica and Pharmaceutical Chemistry. Candidates must show a competent knowledge in all the subjects. The examinations are conducted by printed papers and *vivâ voce* interrogations, by preparations and specimens, and by dissections.

Candidates at the July Examination will be examined for a Pass or for Honours in each of the following subjects:—1. Anatomy; 2. Physiology and Histology;[5] 3. Organic Chemistry. 4. Materia Medica and Pharmaceutical Chemistry. The Pass and Honours questions at the July examination will be given on one and the same paper, and will be divided into (*a*) Pass questions, (*b*) Honours questions. Candidates will be allowed to answer questions out of either or both groups, but no credit will be given for more than half of the total number of questions, of which half, in the case of candidates for honours, one third must be taken from the group (*b*). Immediately after the written examination candidates desiring to proceed in Honours in any subject or subjects must give notice to the Registrar, in order that, when necessary, special provision may be made for the practical examinations. A candidate who enters for, but fails to obtain, Honours in any subject, may be recommended by the examiners for a Pass in that subject, if they are satisfied that he has shown such a competent knowledge thereof as is required by the regulations. The examiners will make no report upon the Examination for Honours of a candidate who has failed in any part of the Pass Examination. On Tuesday, at 2 o'clock, in the week after that in which the examination ends, the examiners shall publish (*a*) a list of the candidates entered for the Pass Examination only who have passed, arranged in two divisions; also, after the July Examination, (*b*) a list of the candidates who have passed an Examination for Honours in any one or more subjects, arranged by the examiners in the several departments under their respective heads in three classes, according to their respective degrees of proficiency, candidates being bracketed together if the examiners are of opinion that there is no clear difference between them. As soon as the reports of the examiners shall have been approved by the Senate, a Pass Certificate signed by the Registrar shall be delivered to each candidate who is in the Pass List; an Honours Certificate shall be delivered to each candidate in the Honours List in respect of each subject in which he shall have obtained honours. If, in the opinion of the examiners, sufficient merit be evinced, the candidate who distinguished himself most in each of the first and second divisions receives an exhibition of £40 per annum, and in each of the others £30 per annum, for the next two years, payable in quarterly instalments; provided that, on receiving each instalment, he declare his intention of presenting himself at the M.B. Examination within three academical years from the time of passing the Intermediate Examination in Medicine. Under the same circumstances, the first and second candidates in divisions 1 and 2, and the first candidate in divisions 3 and 4 receive each a Gold Medal of the value of £5.

M.B. Examination.[6]—No candidate is admitted to this examination within two academical years of the time of his passing the Intermediate Examination, nor without certificates: 1. Of having passed the Intermediate Examination in Medicine; 2. Of having subsequently attended a course of lectures on each of two of the subjects for which he had not presented certificates at the Intermediate Examination; 3. Of having conducted at least twenty labours;[7] 4 and 5. Of having attended the Surgical and the Medical Practice of a recognised hospital or hospitals during two years, with Clinical Instruction and Lectures on Clinical Surgery and Clinical Medicine; 6. Of having, after having attended Surgical and Medical Hospital Practice[8] for at least twelve months subsequently to passing the Intermediate Examination in Medicine, attended to Practical Medicine, Surgery, or Obstetric Medicine, with special charge of patients in a hospital, infirmary, dispensary, or parochial union, during six months—such attendance not to be counted as part of the hospital practice prescribed in 4 and 5; 7. Of having acquired proficiency in Vaccination.[9] The candidate must also produce a certificate of moral character from a teacher in the last school or institution at which he has studied, as far as the teacher's opportunity of knowledge has extended. Candidates are examined in General Pathology, General Therapeutics, and Hygiene, Surgery, Medicine, Obstetric Medicine, and Forensic Medicine. The examinations include questions in Surgical and Medical Anatomy, Pathological Anatomy, and Pathological Chemistry. The examinations are conducted by printed papers and *vivâ voce* interrogations; by practical examinations in obstetric preparations and apparatus; by examination, and report on cases, of medical patients in the wards of a hospital; demonstrations from specimens and preparations. Candidates are expected to write prescriptions in Latin, without abbreviations.

Examination for Honours.—Any candidate who has passed the M.B. examination in October may be examined at the Honours Examination next ensuing for Honours in—1. Medicine; 2. Obstetric Medicine; and 3. Forensic Medicine. In determining the relative position of candidates for Honours in Medicine, the marks awarded to such candidates for the Clinical and Practical portion of the Pass Examination shall be taken into account, and shall be added to the marks assigned to them in respect of their written answers to the Honours papers. If, in the opinion of the examiners, sufficient merit be evinced, the candidate who distinguishes himself the most in Medicine receives £50 per annum for the next two years, with the style of University Scholar in Medicine; and the candidates who distinguish themselves the most in Obstetric Medicine and in Forensic Medicine

[2] This rule does not apply to the Honours Examinations in Botany and Zoology, which do not stand in the same relation to the subjects of the Pass Examination, as is the case in the other Branches. Every candidate must take the Pass Examination in General Biology.

[3] Candidates must bear in mind that the standard of attainment for the Honours Examination is much higher than that for the Pass Examination; and they should therefore exercise due caution in making their choice—to which they will be required to adhere. A candidate who has entered for the Pass Examination will not be allowed to take the Honours Papers; and only under special circumstances will a candidate who has entered for Honours in any subject be transferred to the Pass Examination in that subject.

[4] The subjects numbered 2, 3, and 4, must be attended after passing the Preliminary Scientific Examination.

[5] Any candidate, on giving notice in his Form of Entry, may postpone his examination in Physiology and Histology from the Intermediate Examination in Medicine at which he presents himself for examination in the remaining subjects until the Intermediate Examination in Medicine in any subsequent year; but he cannot compete for honours on either occasion; and he cannot be admitted as a candidate at the M.B. Examination until at least twelve months after he has passed his examination in Physiology and Histology.

[6] Any candidate for the M.B. Examination who has passed the Intermediate Examination in Medicine under the former regulations is required to have also passed the examination in Physiology at some previous Intermediate Examination in Medicine carried on under the present regulations; at which examination he is not allowed to compete for honours.

[7] Certificates will be received from any legally qualified practitioner.

[8] The student's attendance on the Surgical and on the Medical Hospital Practice specified in Regulations 4 and 5, may commence at any date after his passing the Preliminary Scientific Examination, and may be comprised either within the same or within different years; provided that in every case his attendance on Hospital Practice be continued for at least eighteen months subseqnently to his passing the Intermediate Examination in Medicine. Attendance during three months in the wards of a Lunatic Asylum recognised by the University, with clinical instruction, may be substituted for a like period of attendance on medical hospital practice.

[9] Certificates on this subject will be received only from the authorised vaccinators appointed by the Privy Council.

receive each £30 per annum for the next two years, with the style of University Scholar in Obstetric Medicine and in Forensic Medicine respectively. The first and second candidates in each of the preceding subjects each receive a Gold Medal of the value of £5.

BACHELOR OF SURGERY.

The candidate must produce certificates—1. Of having passed the examination for the degree of Bachelor of Medicine of this University; 2. Of having attended a course of instruction in Operative Surgery, and of having operated on the dead subject. The examinations are conducted by printed papers on Surgical Anatomy and Surgical Operations; by examination, and report on cases of surgical patients, by performance of operations upon the dead subject; by application of surgical apparatus; and by *vivâ voce* interrogation.

Examination for Honours.—Any candidate who has passed the B.S. Examination may be examined for Honours in Surgery; marks awarded for the Clinical and Practical parts of the Pass Examinations will be added as in the case of the M.B.'s Honours Examination. If, in the opinion of the examiners, sufficient merit be evinced, the candidate who distinguishes himself the most receives £50 per annum for the next two years, with the title of University Scholar in Surgery; and the first and second candidates each receives a Gold Medal of the value of £5.

MASTER IN SURGERY.

The candidate must produce certificates—1. Of having taken the degree of Bachelor of Surgery[10] in this University; 2. Of having attended subsequently—(*a*) to Clinical or Practical Surgery during two years in a hospital or medical institution recognised by this University; (*b*) or to Clinical or Practical Surgery during one year in a recognised hospital or medical institution, and of having been engaged during three years in the practice of his profession; (*c*) or of having been engaged during five years in the practice of his profession, either before or after taking the degree of Bachelor of Surgery in this University.[11] (3) Of moral character, signed by two persons of respectability. The examination is conducted by means of printed papers and *vivâ voce* interrogation; and the candidates are examined in Mental Physiology, especially in its relations to Mental Disorder, and in Surgery. Any candidate for the Degree of M.S. may transmit to the Registrar, not later than October 1st, a printed Dissertation, Thesis, or Commentary, written in view of candidature, or published within two academical years immediately preceding, treating scientifically some special department of Surgical Science, embodying the result of independent research, or showing evidence of his own work, whether based on the discovery of new facts observed by himself, or of new relations of facts observed by others, or generally tending to the advancement of Surgical Science. If the Dissertation, or Thesis, or Commentary be approved by the Examiners the candidate will be exempted from the Written and Clinical Examination in Surgery, subject to such Examination upon the Thesis as the Examiners at their discretion may think fit. If, in the opinion of the examiners, sufficient merit be evinced, the candidate who distinguishes himself the most in the whole examination receives a Gold Medal of the value of £20.

DOCTOR OF MEDICINE.

The candidate must produce certificates analogous to those required for candidates for the degree of Master in Surgery, but having special relation to medicine The examination is conducted by printed papers and *vivâ voce* interrogations; and candidates are examined in Mental Physiology, especially in its relation to Mental Disorders, and in Medicine, or State Medicine. The same regulations apply *mutatis mutandis* to the submission of a thesis in Medicine or in State Medicine, as in the case of the examination for Master of Surgery (see above). If, in the opinion of the examiners, sufficient merit be evinced, the candidate who distinguishes himself the most in the whole examination receives a Gold Medal of the value of £20.

[10] Candidates who have obtained the degree of Bachelor of Medicine previously to 1866 will be admitted to the examination for the degree of Master in Surgery without having taken the degree of Bachelor of Surgery; and their attendance on surgical practice required by Regulation 2 may commence from the date of the M.B. degree.

[11] One year of attendance on Clinical or Practical Surgery, or two years of practice, will be dispensed with in the case of those candidates who at the B.S. Examination have been placed in the first division.

UNIVERSITY OF DURHAM.

THERE are three licences and four degrees conferred; namely, a licence in Medicine, a licence in Surgery, and a licence in Sanitary Science, and the degrees of Bachelor in Medicine, and Doctor in Medicine, and Bachelor in Surgery (B.S.), and Master in Surgery (M.S.).

The regulations for the licence and degree of Bachelor, so far as regards the course of study, the subjects of each examination, and the certificates required, are similar; but the candidate for a degree must produce evidence of general education in addition to that implied in the certificate of registration as a medical student.

The examinations for the licences and degrees above named are conducted at the College of Medicine, and in the Royal Infirmary, at Newcastle-upon-Tyne. Candidates are examined—(1) by printed papers of questions, (2) practically, (3) *vivâ voce*. Every candidate who intends to present himself for any of the examinations must give at least twenty-eight days' notice to the Registrar of the College, and must at the same time send the fee and the necessary certificates. If, after payment of the fee, a candidate withdraw his name, or fail to present himself at the examination, or fail to pass it, he shall not receive back the fee, but shall be allowed to enter for one subsequent examination of the same kind without the payment of any additional fee.[1]

DEGREE OF BACHELOR IN MEDICINE.

A candidate for the degree of Bachelor in Medicine must produce the following certificates: 1. Of being 21 years of age; 2. Of registration in the books of the General Medical Council as a medical student; 3. Of good moral conduct; 4. Of attendance on lectures and hospital practice. In addition to the certificate of registration, the candidate must produce a certificate—(*a*) Of having passed the Preliminary Examination in Arts for Degrees in Medicine of the University of Durham; or (*b*) of Graduation in Arts at one of the following Universities, namely, Durham, Oxford, Cambridge, London, Dublin, Queen's (Ireland), Edinburgh, Glasgow, St. Andrews, Aberdeen, Calcutta, Madras, Bombay, McGill College (Montreal), Queen's College (Kingston), Victoria (Manchester), and Royal (Ireland); or (*c*) of having passed the Preliminary or Extra-professional Examination (including Greek) for Graduation in Medicine at one of the following Universities—Cambridge, London, Edinburgh, Glasgow, St. Andrews, Aberdeen, Queen's (Ireland), Victoria (Manchester), and Royal (Ireland); or (*d*) of having passed the Preliminary Examination in Arts which, before 1881, qualified for the Fellowship of the Royal College of Surgeons of England, or that qualifying for the Membership of the Royal College of Physicians of London. The Preliminary Examination in Arts in the University of Durham is held twice yearly, in April and September.[2] Application for admission must be made at least one month before the examination. The fee is £1. Candidates who, at the commencement of their professional education, passed the Arts Examination for Registration only, may pass in the extra subjects required, either *before or after* presenting themselves for the First or Second Examinations for the degree, but must do so before presenting themselves for the Third Examination.

For the degree of Bachelor of Medicine there are three Professional Examinations, the first and second being held in September and April, the third in June and December. The first will commence on April 14th and September 8th, 1890; the second on April 21st and September 15th, 1890; and the third on December 2nd, 1889, and June 16th, 1890; and again on September 22nd, 1890; instead of in December, 1890; after which date the Final M.B. Examinations will be held in April and September, instead of June and December.

The subjects of the First Examination are: Elementary Anatomy, Elementary Physiology, Chemistry, Chemical Physics, Botany,

[1] There are special regulations in the case of practitioners of fifteen years' standing.

[2] The next examination will be commenced on September 17th, 1888. The subjects will be as follows—*Necessary Subjects:* Greek: Xenophon's *Anabasis*, Book IV. Euclid, Books III and IV. *Optional Subjects (two to be taken)* Latin: Cicero, *De Senectute*. French: Lemercier's *Frédégonde et Brunehaut*. German: Goethe's *Knabenjahre*. Mechanics, Hydrostatics, and Pneumatics. English History: William I to Henry II. The examinations in 1890, will commence on April 1st, and again on September 30th, and the subjects will be as follows, namely—*Necessary Subjects:* Greek: Xenophon's *Anabasis*, Book IV. Euclid, Books III and IV. *Optional Subjects (two to be taken)*: Latin: Cicero, *De Amicitiâ*. French: Voltaire's *Louis XIV*, Chaps. I-XIII. German: Immermann's *Der Oberhof*. Mechanics, Hydrostatics, and Pneumatics. English History: Richard I to Richard II.

with Medical Botany. The subjects of the Second Examination are: Anatomy, Physiology, and Materia Medica, with Pharmacy. The subjects of the Third Examination are: Medicine, Surgery, Midwifery and Diseases of Women and Children, Pathology, Medical Jurisprudence, Therapeutics, and Public Health.

Candidates will be admitted to each of these examinations after duly certified attendance at a recognised medical school on courses of instruction in the various subjects of the examination, as set forth in the schedules of certificates issued by the University. These may be obtained on application to the Registrar of the University of Durham College of Medicine.

Each examination must be passed before the next can be proceded with, and each must be passed in its entirety, except the First Examination, which may be taken in two parts at different times, one part comprising Elementary Anatomy and Elementary Physiology, and the other part Chemistry with Chemical Physics, and Botany with Medical Botany. Failure in one of the subjects comprised in either part of this examination will retail rejection in that part. Before a candidate can enter for either part, his schedule of certificates must be fully signed for both parts.

A candidate who has passed the First Examination of the Conjoint Board of England of the Royal College of Physicians of London and the Royal College of Surgeons of England will be exempt from the First Examination of the University of Durham except in the subjects of Chemistry with Chemical Physics, and Botany with Medical Botany, on which he will be re-examined.

A candidate who has passed the First and Second Examinations of the University will be exempt from the First and Second Examinations of the Conjoint Board of England, and will be entitled to present himself for the Final Examination of the Board on the completion of the necessary curriculum.

Candidates who hold a qualification from a recognised Licensing Board in the United Kingdom at the date of entry for the First Examination are in every case required to pass in Chemistry with Chemical Physics, but are exempt from examination in Elementary Anatomy and Physiology, and are also exempt from Botany with Medical Botany, provided that they have passed in that subject at one or other of their examinations for qualification. In the event of failure at any examination (except those for the M.D. and M.S. Degrees, or for the L.S.Sc., and except in the case of first-year students who fail at the First Examination within their first year of study) the candidate failing will be required to attend a course ot instruction at a recognised medical school in the subject or subjects in which he has failed.

One of the four years of professional education must be spent in attendance at the College of Medicine, Newcastle-upon-Tyne. During the year so spent the candidate must attend at least two courses of lectures throughout the whole winter session, and two throughout the whole summer session, together with the class and test examinations held in connection with those classes; and must also attend hospital practice and clinical lectures at the Royal Infirmary. Candidates may fulfil this portion of the curriculum at any period before they present themselves for the Final Examination for the degree. They are not required to reside at Durham. The other three years of the curriculum may be spent either at Newcastle-upon-Tyne, or at one or more of the schools recognised by the Licensing Bodies. Students are strongly advised to enter in the summer session, so as to be eligible for the First Degree Examination immediately on the completion of four years of study, and in the June following the completion of the year of attendance.

The successful candidates for the Second and Third Examinations for the Degree of Bachelor in Medicine will be arranged in three classes in the first and second (honours) according to merit, and in the third or pass, in alphabetical order.

Candidates who have completed part of their curriculum elsewhere may pass their First and Second Examinations previously to entering at Newcastle-upon-Tyne.

DEGREE OF DOCTOR IN MEDICINE.

Candidates must not be less than twenty-four years of age, must have obtained the degree of Bachelor in Medicine at least two years previously, and have been subsequently engaged in attendance on the practice of a recognised hospital, in the naval or military services, or in medical or surgical practice. Each candidate must write an essay on some medical subject selected by himself and approved by the Professor of Medicine, and pass an examination thereon; and must be prepared to answer questions on the other subjects of his curriculum, so far as they are related to the subject of the essay. A gold medal will be awarded every year to the candidate who presents the best essay (provided that the essay is judged to be of sufficient merit). The successful candidate will be permitted to publish his essay. The essays will be retained by the Faculty of Medicine.

DEGREE OF BACHELOR IN SURGERY.

For the degree of Bachelor in Surgery (B.S.) every candidate must have passed the examination for the degree of Bachelor in Medicine of the University of Durham, and must have attended one course of lectures on Operative Surgery and one course on Regional Anatomy.

Candidates will be required to perform operations on the dead body, and to give proof of practical knowledge of the use of surgical instruments and appliances.

DEGREE OF MASTER IN SURGERY.

For the degree of Master in Surgery (M.S.) candidates must not be less than twenty-four years of age, must have obtained the degree of Bachelor in Surgery of the University of Durham, and must have been engaged for at least two years subsequently to the date of acquirement of the degree of Bachelor in Surgery in attendance on the practice of a recognised hospital, or in the naval or military services, or in medical or surgical practice. The subjects of examination are: Principles and Practice of Surgery, Surgical Pathology, Surgical Anatomy, Surgical Operation, Clinical Surgery.

Every candidate who intends to present himself for any of the above-named examinations must give at least twenty-eight days' notice to the Registrar of the College, and must, at the same time, send the fee and the necessary certificates. If, after payment of the fee, the candidate withdraw his name or fail to present himself at the examination, or fail to pass it, he shall not receive back the fee, but shall be allowed to enter for one subsequent examination of the same kind without the payment of an additional fee.

All candidates who have not completed four calendar years of professional study, and attended a complete summer and a complete winter session at the University of Durham College of Medicine, will be ineligible for the Final Degree Examination.

THE DEGREE OF DOCTOR OF MEDICINE FOR MEDICAL PRACTITIONERS OF FIFTEEN YEARS' STANDING, WITHOUT RESIDENCE.

Practitioners of fifteen years' standing are admitted to examination for the degree of Doctor of Medicine under the following regulations. 1. The candidate must be registered by the General Council of Medical Education and Registration of the United Kingdom. 2. He must have been in the active practice of his profession for fifteen years as a qualified practitioner. 3. He must not be under 40 years of age. 4. He must produce a certificate of moral character from three registered members of the medical profession. 5. If the candidate shall not have passed, previously to his professional examination (in virtue of which he has been placed on the *Register*), an examination in Arts, he must pass an examination in Classics and Mathematics.[3] 6. If the candidate shall have passed, previously to his professional examination (in virtue of which he has been placed on the *Register*), a preliminary examination, he must translate into English passages in any of the parts specified below of any one of the Latin authors mentioned:—Cæsar, *De Bello Gallico*, first three books; Virgil—first three books of the *Æneid:* Celsus—first three books. The candidate has an opportunity of showing proficiency in Greek, Moral Philosophy, or some modern language. 7. He must pass an examination in the following subjects; i. Principles and Practice of Medicine, including Psychological Medicine and Hygiene; ii. Principles and Practice of Surgery; iii. Midwifery and Diseases peculiar to Women and Children; iv. Pathology, Medical and Surgical; v. Anatomy, Medical and Surgical; vi. Medical Jurisprudence and Toxicology; vii. Therapeutics. The examination is

[3] The subjects for this examination are:—1. An English Essay (a short essay on some subject to be specified at the time of the examination). 2. Arithmetic. 3. Euclid—Books I and II. 4. Latin—Translation from Virgil, *Æneid*, Books I and II, together with Grammatical Questions. 5. One of the following subjects: i. Greek—Translation from Xenophon's *Memorabilia*, Books I and II, with Grammatical Questions; ii. French—Translation from Voltaire's *Charles XII*, with Grammatical Questions; iii. German—Translation from Goethe's *Dichtung und Wahrheit*, Book I, with Grammatical Questions; iv. Elements of Mechanics Pneumatics, and Hydrostatics; v. Some Treatise on Moral, Political, or Metaphysical Philosophy.

conducted by means of printed papers, clinically, in the Royal Infirmary, Newcastle, and *vivâ voce*. 8. The fee is £52 10s. 9. If the candidate shall fail to satisfy the examiners, £21 is retained; but, if he again offer himself for the examination, £42 only is then required.

Examinations, in accordance with the above regulations, will commence on December 3rd, 1888, and June 17th, 1889, in the College of Medicine, Newcastle-upon-Tyne. Gentlemen intending to offer themselves as candidates are required to forward their names to Dr. Frederick Page, Registrar of the University of Durham College of Medicine, Newcastle-upon-Tyne, at least twenty-eight days before the commencement of the examination, together with the fee and the before-mentioned certificates.

Fees.—The fees for the examinations, licences, degrees, and certificates are:—Registration Examination, £1; Extraordinary Registration Examination, £2; Preliminary Arts' Examination for Degrees, £1; First or Second Examinations for Degrees in Medicine, each £5; Third Examination for Degrees in Medicine, £10; Licence in Medicine or in Surgery, £3; Degree of Bachelor in Surgery, Master in Surgery, Bachelor in Medicine, or Doctor in Medicine, each £6; Degree of Doctor in Medicine, for practitioners of fifteen years' standing, £52 10s. The fee of £10 for the Third Examination will be required from candidates who entered at the University of Durham College of Medicine, Newcastle-upon-Tyne, on and after May 1st, 1885, and from candidates from other schools of medicine who commenced their professional studies on or after October 1st, 1883.

THE VICTORIA UNIVERSITY.

THE Colleges of the University are Owens College, Manchester; University College, Liverpool; and Yorkshire College, Leeds.

The degrees in the Faculty of Medicine are Bachelor of Medicine (M.B.), Bachelor of Surgery (Ch.B.), Doctor of Medicine (M.D.), and Master of Surgery (Ch.M.). All candidates for degrees in Medicine and Surgery are required to have passed the Entrance Examination in Arts, or to have passed such other examination as may from time to time be recognised for this purpose by the University. This examination can be passed before matriculation, if desired, in which case the candidate is required to present a certificate from his last instructor to the effect that he is a proper person to be admitted to the examination, and to pay a fee of £1.

Matriculation must *precede* admission to any University Examination other than the Entrance Examination in Arts. Matriculation consists in signing the University Register, and paying a fee of £2. If, however, the candidate has passed the Entrance Examination in Arts before matriculating, a fee of £1 only is charged. Before matriculating, candidates must produce proof that they are at the time registered students of a College of the University, or of some medical school recognised by the University.

Entrance Examination in Arts.—The subjects of the Entrance Examination in Arts are: (1) Latin; (2) Elementary Mathematics; (3) Elementary Mechanics; (4) English; (5 and 6) *Two* of the following: (*a*) French; (*b*) German; (*c*) Greek; (*d*) Mathematics (more advanced); (*e*) English History and Elements of Modern Political Geography.

BACHELOR OF MEDICINE AND OF SURGERY.

Before admission to the degree of Bachelor of Medicine a candidate is required to present certificates that he will have attained the age of twenty-one years on the day of graduation, and that he has pursued the courses of study required by the University regulations during not less than four years subsequently to the date of his registration as a medical student, two of such years having been passed in a College of the University, and one year at least having been passed in a College of the University subsequently to the date of passing the Preliminary Examination in Science. All candidates for these degrees must pass three examinations, namely—the Preliminary Examination in Science, the Intermediate Examination, and the Final Examination.

Preliminary Examination in Science.—The subjects of the examination are:—1. *Chemistry:* (*a*) Laws of Chemical Combination; non-metallic elements and their compounds; metals; introduction to Organic Chemistry; (*b*) Elementary Qualitative Analysis. 2. *Elementary Biology:* (*a*) Animal Morphology; (*b*) Vegetable Morphology, Physiology, and Elements of Classification; (*c*) Laboratory Work. 3. *Physics:* (*a*) General Physics: the chief phenomena of Heat, Electricity, and Magnetism, treated in an elementary manner; Geometrical and Physical Optics; Acoustics; (*b*) Methods employed in the Physical Laboratory.

Candidates for the Preliminary Examination in Science must have attended, during at least one year, courses, both of lectures and of laboratory work, in each of the above-named subjects.

Intermediate Examination.—The subjects of examination are:—1, Anatomy; 2, Physiology (including Physiological Chemistry and Histology); 3, Materia Medica and Pharmacy. Candidates must have passed the Preliminary Examination in Science, and have attended courses of instruction in Anatomy for *one* winter session, in Physiology for *one* winter session (but the course attended must be a *complete* course), in Materia Medica and Pharmacy for *one* summer session. The certificates must show (1) that the candidate has been engaged in dissecting during two winter sessions and one summer session at least; (2) that laboratory instruction has been received in Physiology; (3) that practical instruction has been received in Materia Medica and Pharmacy.

Final Examination.—The examination is divided into two parts, called the First Part and the Second Part respectively, which may be passed separately or on the same occasion; but the First Part cannot be taken before the end of the fourth winter, and the Second Part cannot be taken before the end of the fourth year of medical study. The subjects of examination are as follows:—1. Surgery, Systematic, Clinical, and Practical. 2. Medicine, Systematic and Clinical, including Mental Diseases and Diseases of Children. 3. Forensic Medicine and Toxicology, and Public Health. 4. Pharmacology and Therapeutics. 5. Obstetrics and Diseases of Women. 6. General Pathology and Morbid Anatomy.

Before presenting themselves for the Final Examination, candidates are required to have passed the Intermediate Examination, and to furnish certificates of having attended courses of instruction, approved by the University, in a College of the University, or in a medical school recognised for this purpose by the University, in the subjects in which they offer themselves for Examination.

The following certificates will be required:—1. In Medicine and Surgery, of having attended the medical and surgical practice of a hospital or hospitals, approved by the University, during at least three years, of which years two at least must be subsequent to the date of passing the Intermediate Examination, except when exemption has been granted by the General Board of Studies, after report from the Departmental Board of Medical Studies. 2. In Pathology and Morbid Anatomy, of having attended during at least twelve months demonstrations in the *post-mortem* theatre of a hospital. 3. In Obstetrics, of having attended, under proper supervision, at least twenty cases of labour. 4. In Diseases of Women, of having, during at least three months, received, in either a general or a special hospital, approved by the University, such clinical instruction in the diseases peculiar to women as shall be approved by the University. 5. Of having acquired proficiency in vaccination. 6. Of having acted as a dresser for six months in the surgical wards, and as a clinical clerk for six months in the medical wards of a hospital recognised by the University. 7. Of having attended courses of instruction, approved by the University, in a College of the University, or in a medical school or hospital recognised for this purpose by the University, in the following subjects of Examination:—(1) Systematic Surgery, one winter session; Practical Surgery, one winter session; Clinical Surgery, two years of Clinical Lectures. (2) Systematic Medicine, two winter sessions; Clinical Medicine, two years of Clinical Lectures. (3) Forensic Medicine, one summer session; Hygiene, one summer session. (4) Pharmacology and Therapeutics, one winter or one summer session. (5) Obstetrics and Diseases of Women, two summer sessions or one winter session. (6) General Pathology and Morbid Anatomy, one winter and one summer session.

DOCTOR OF MEDICINE.

Candidates are not eligible for the degree of Doctor of Medicine unless they have previously received the degree of Bachelor of Medicine, and at least one year has elapsed since they passed the examination for that degree. Candidates for the degree of Doctor of Medicine must present a printed dissertation embodying the results of personal observations or original research, either in some department of medicine or of some science directly relative to medicine. No candidate will be admitted to the degree unless his dissertation, after report from the Departmental Board of

Medical Studies, shall have been recommended by the General Board of Studies to the Council for acceptance. Candidates may be examined on any subject connected with their dissertations.

MASTER OF SURGERY.

Candidates are not eligible for the degree of Master of Surgery unless they have previously received the degree of Bachelor of Medicine, and at least one year has elapsed since they passed the examination for that degree. The subjects of examination are—1. Surgical Anatomy; 2. Surgical Pathology; 3. Practical Surgery, including the performance of operations on the dead body; 4. Clinical Surgery; 5. Ophthalmology. Candidates must furnish certificates that they have been engaged, since taking the degree of Bachelor of Medicine, in the study of Practical Surgery; and that they have held, for not less than six months, a surgical appointment in a public hospital or other public institution affording full opportunity for the study of Practical Surgery. They must also furnish certificates—1. Of having attended a special course of instruction in Operative Surgery approved by the University, and of having personally practised the principal surgical operations on the dead body; 2. Of having attended a systematic course of instruction, including practical work, approved by the University, on Surgical Pathology, or a course of the same kind of which Surgical Pathology forms part; 3. Of having attended a course of Ophthalmology, and of having received instruction in Ophthalmic Surgery, approved by the University.

Fees.—No fee entitles to admittance to more than one examination. The fee for matriculation is £2, and includes the fee for the Entrance Examination in Arts. A fee of £1 is payable for any subsequent Entrance Examination. The fee for the Preliminary Examination in Science, *or* for the Intermediate Examination, *or* for the Final Examination, is £5; for any subsequent examination, £2. A fee of £10 is payable on the conferring of the degree of M.D., a fee of £5 on the conferring of the degree of Ch.M. The fee for the Ch.M. Examination is £5.

The Entrance Examination in Arts is held twice in each year, in June and about the end of September. The Preliminary Examination in Science is held in June (Chemistry and Physics) and in July (Biology), also in September. The Intermediate Examination, and the Final Examination are held in March and July. The examination for the degree of Master of Surgery is held in July.

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.

REGULATIONS FOR THE LICENCE.

THE College will grant its single qualification in Medicine to Candidates who already possess a recognised British, Irish, Indian, or Colonial qualification in Surgery.

Candidates will be required to pass a written and oral examination before the Examining Board of the College, in Medicine, Clinical Medicine, Materia Medica, Midwifery, and Medical Jurisprudence.

The examinations are held on the first Wednesday, and succeeding days, of every month, except September and October.

No one is admissible to examination who has within the previous three months been rejected by any Licensing Board, and every candidate must sign and send in along with his certificates a declaration stating that he has not been rejected within that period.

The fee for the Licence is £15 15s. In the event of a candidate being unsuccessful, the sum of £6 6s. will be retained; and this regulation will also apply to cases in which the candidate may have been previously rejected on one or more occasions.

Candidates may be admitted to special examination, on days other than those appointed above, on bringing forward reasons satisfactory to the Council, and on paying an extra fee of £5 5s. Should the candidate be unsuccessful, the sum of £9 9s. will be returned to him.

All candidates for Examination are required to communicate with the Secretary to the College, not less than eight days before the date of examination at which they propose to appear; and the fees must be lodged with the Secretary at least four days before the date of the examination.

FELLOWSHIP AND MEMBERSHIP.

No one can be elected a Fellow of the College until he has been at least one year a Member, and has attained the age of twenty-five years.

Any Licentiate of a College of Physicians, or Graduate of a British or Irish University, with whose knowledge of medical and general science the College may be satisfied, may be admitted a Member of the College, provided he shall have attained the age of twenty-four years.

Every motion for the election of a Fellow or Member shall be made at a quarterly meeting of Fellows by one of the Fellows present, and seconded by another; and this motion shall be determined by ballot at the next quarterly meeting—a majority of three-fourths being necessary to carry it in the affirmative.

Every candidate for the Membership (except such as are admissible under the provisions for candidates above forty years of age) must pass an examination:—(1) On the Principles and Practice of Medicine, including Therapeutics; (2) On one of the following subjects, to be selected by the candidate: (*a*) Pathology, including Morbid Anatomy; (*b*) Medical Jurisprudence and Public Health; (*c*) Midwifery and the Diseases of Women; (*d*) Psychological Medicine.

Application for the Membership must be made through the Secretary, who will transmit to the candidate a copy of the regulations and plan of examination, together with a form of petition. The candidate must return the petition duly filled up to the Secretary, and at the same time transmit testimonials of recent date from well known members of the profession, certifying as to his professional and social standing. These documents shall be submitted to the Council, who shall also employ such other methods of scrutiny as they may deem necessary. If satisfied as to the eligibility of the candidate, the Council authorise his examination by the Board of Examiners. If the report of the examiners be satisfactory, the Council report the same to the College at the next quarterly meeting, when a motion may be made for the election of such candidate to the Membership of the College.

If any candidate who has attained the age of forty years, and has been a registered practitioner for not less than ten years, produce testimonials showing that he has been distingnished for his scientific attainments, or eminence as a medical practitioner, the Council may, if they see fit, exempt him from the whole or any part of the prescribed examination.

Examinations will be held on October 8th and 9th, 1889, January 14th and 15th, April 8th and 9th, and July 8th and 9th, 1890. Application must be made to the Secretary not less than one month previous to the date of the examination.

Fees.—The fee to be paid by a Member is £31 10s. A Licentiate who has obtained the Licence prior to August 1st, 1876, when raised to the rank of Member, pays £21; a Licentiate obtaining the Licence subsequently to that date, when raised to the rank of Member, pays £15 15s. When a Member is raised to the rank of Fellow, he pays £31 10s., exclusive of stamp-duty (£25). All candidates for Fellowship or Membership must lodge their fees and the amount of stamp-duty payable with the Treasurer previously to presenting their petitions.

ROYAL COLLEGE OF SURGEONS OF EDINBURGH.

REGULATIONS FOR CANDIDATES FOR THE LICENCE.

THE Regulations in the tables at pages 524 and 525, and below, are applicable to candidates who already hold diplomas in Medicine of any British, Indian, or Colonial University, or of any British or Colonial College of Physicians, whose preliminary examination and course of professional study is proved to be sufficient to fulfil the requirements contained below, or to those who have passed a full examination in any of the above. Female practitioners are admitted to the Licence of the College but not to the Fellowship, and throughout the following Regulations for the Licence the masculine pronoun is to be read as standing for candidates, irrespective of sex.

Professional Education.—In addition to the subjects enumerated in the table, the candidate must have been instructed in Vaccination. Two courses of Clinical Medicine, or of Clinical Surgery, of three months each, if not simultaneous, will be held equivalent to one course of six months. They must be attended during the attendance at the hospital where they are delivered. The six months' course delivered in Scotland must consist of not fewer than 100 lectures, with the exception of Clinical Medicine and Clinical Surgery. The three months' course must consist of not fewer than fifty lectures.

Professional Examination.—Candidates must apply to the Secretary of the Royal College of Surgeons, 1, George Square, Edinburgh, not later than one week preceding the day of examina-

TABULAR VIEW OF THE REGULATIONS OF THE MEDICAL EXAMINING BODIES IN SCOTLAND.

	ROYAL COLLEGE OF SURGEONS OF EDINBURGH.	COLLEGES OF PHYSICIANS & SURGEONS OF EDINBURGH, & FACULTY OF PHYSICIANS & SURGEONS OF GLASGOW.	FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.		UNIVERSITIES OF SCOTLAND.
	Diploma.	Conjoint Examination.	Licence.	Fellowship.	Bachelor of Medicine and Master in Surgery.
Age Required	Twenty-one.	Twenty-one.	Twenty-one.	Twenty-four.	Twenty-one.
Evidence of General Education before commencement of Professional Study.	Having passed a satisfactory preliminary examination.	Having passed a preliminary examination, and being registered as a student by the Medical Council.	Having passed a preliminary examination, and being registered as a student by the Medical Council.	Registration as a student by the General Medical Council.	Preliminary examinations by University; or Degree in Arts or equivalent examinations.
Duration of Professional Study.	Forty-five months, including four winter sessions or three winter and two summer sessions at a recognised school.	Forty-five months, subsequent to registration, including not less than four winter sessions at a recognised medical school.	Four years; including four winter sessions, or three winter and two summer sessions at a recognised school.	Six years; graduates in Arts or Science, five years.	Four years; one year being in the University, and another in the same or some other University (see page 529).
Courses of Lectures, etc., required.					
Anatomy	Six months.	Six months.	Six months.	Two winter sessions.	One hundred lectures.
Practical Anatomy ...	Twelve months.	Twelve months.	Twelve months.	Eighteen months.	Course of same duration.
Physiology	Six months.	Six months.	Fifty lectures.	One winter.	One hundred lectures.
Practical Physiology...	—	—	—	Three months.	—
Chemistry	Six months.	Six months.	Six months.	One winter.	One hundred lectures.
Practical Chemistry...	Three months.	Three months.	Three months.	Three months.	Three months. (See footnote, page 529).
Materia Medica ...	Three months.	Three months.	Three months.	Three months.	One hundred lectures.
Practical Pharmacy ...	Three months.	Three months.	Three months.	Three months.	See page 529).
Natural History (Zoology)	Recommended.	Strongly recommended.	--	—	Fifty lectures.
Botany...	Recommended.	—	—	—	Fifty lectures.
Pathology	Or attendance in *post-mortem* room, three months.	Three months lectures; or attendance in *post-mortem* room of General Hospital.	Three months; lectures or attendance in *post-mortem* room.	Three months; and Practical Pathology three months.	One hundred lectures; or Pathological Anatomy three months, with supplementary course of Medicine or Clinical Medicine.
Medicine	Six months.	Six months.	Six months.	Six months.	One hundred lectures.
Clinical Medicine ...	Nine months.	Nine months.	Six months.	Twelve months.	Six months (100 lectures, Edin.), or two courses of three months.
Surgery	Six months.	Six months.	Six months.	Six months.	One hundred lectures.
Clinical Surgery... ...	Nine months.	Nine months.	Nine months.	Twelve months.	Six months (100 lectures, Edin.), or two courses of three months.
Practical Surgery ...	—	—		Three months.	—

Midwifery and Diseases of Women and Children.	Three months; and not less than six cases of labour.	Three months; and not less than six cases of labour.	Three months; at least six cases of labour.	Three months; twenty cases of labour.	One hundred lectures; three months' Midwifery Hospital, and six cases of labour [1]
Medical Jurisprudence	Three months.	Three months.	Three months.	Three months.	Fifty lectures.
Hospital Practice and Hospital Appointments.	General Hospital twenty-four months; Public Dispensary six months, or Visiting Assistant six months.	General Hospital twenty-four months; Public Dispensary, six months, or three months Dispensary with three months' hospital clerkship, or six months pupilage with a registered practitioner.	Public Hospital twenty-four months.	Twenty-four months.	General Hospital, two years; Out-practice of hospital, or of dispensary or registered practitioner, six months.
Vaccination	—	Six weeks.	—	—	—
NUMBER OF EXAMINATIONS.	One; final only. Candidate must have qualification in Medicine.	Three.	One; final only. Candidates must have qualification in Medicine.	Two; each examination may be divided.	In Edinburgh and Glasgow, four; in Aberdeen and St. Andrews, three. For the subjects of these examinations, and the periods of study at which they may be passed in the respective Universities, see pages 528 and 529.
FIRST EXAMINATION; WHEN IT MAY BE PASSED; SUBJECTS.	—	End of first complete year: Chemistry, Elementary Anatomy, and Histology.	—	Anatomy and Physiology (including Histology and Embryology); Chemistry (unless already passed) Candidates ten years qualified are exempted from this examination.	—
SECOND EXAMINATION; WHEN IT MAY BE PASSED; SUBJECTS.	—	End of summer session of second complete year; Anatomy, Physiology, Materia Medica, and Pharmacy.	—		
FINAL EXAMINATION; WHEN IT MAY BE PASSED; SUBJECTS.	After last winter session; Surgery (including Operative Surgery and Surgical Pathology), Clinical Surgery, and Surgical Anatomy.	End of full period of study: Medicine (including Therapeutics, Medical Anatomy, and Pathology), Clinical Medicine; Surgery (including Surgical Anatomy and Surgical Pathology); Clinical Surgery; Midwifery and Gynæcology; Medical Jurisprudence and Hygiene	Surgery and Clinical Surgery. Clinical Medicine, Midwifery, and Medical Jurisprudence.	Pathology and Medicine (Systematic and Clinical) or Pathology and Surgery (Systematic, Operative, and Clinical).	—
FEES PAYABLE	£15 15s.; in case of rejection, £4 4s. retained.	First and Second Examinations, each £5 5s.; additional, after rejection in all subjects, £3 3s.; after partial failure, £2 2s. Third Examinatn., £15 15s.; after rejection, additional, £5 5s	£15 15s.; in case of rejection, £4 4s. retained.	First Examination, £8: Second, £12; on admission, £5.	£22 in Edinburgh. £21; £5 5s. each of two examinations, £10 10s. at last examination of three; Glasgow, four fees of £5 5s.
DATES OF EXAMINATION.	October 24th, 1889; January 30th, May 1st, July 24th 1890.	First: in Edinburgh, October 2nd to 5th, 1889; January 8th to 11th, April 2nd to 5th, July 2nd to 5th, 1890 in Glasgow, April 16th to 19th, and July 16th to 19th 1890. Second: Monday Tuesday, and Wednesday following the dates of First Examination. Final days next following Second Examination.	October 23rd, 1888; January 8th, April 9th, and July 9th 1889.	Third weeks in April, July, and October.	Aberdeen and Edinburgh; end of winter and summer sessions. Glasgow, April, July, and October. Clinical Examination; Edinburgh, May; Glasgow, June. Final in Edinburgh, June. St. Andrews, end of April.
REJECTED CANDIDATES.	Not readmitted under three months.	At either examination, not readmitted before three months; not re-examined in subjects in which an absolute pass has been obtained.	Not readmitted under six months.	—	Not readmitted until after another year of medical study, or such portion of a year as may be prescribed by the examiners (unless he have studied during another year two of the subjects—*Edinburgh*).
ADDITIONAL INFORMATION.	See page 523.	See page 527.	—	See page 526.	See page 528.

[1] Or at Edinburgh and Glasgow 12 cases of labour under a registered medical practitioner.

tion;[1] and must produce—1. Satisfactory evidence of having attained the age of twenty-one years; 2. Certificates of having attended the classes enumerated under Professional Education; 3. A tabular statement (for which a printed form will be furnished), exhibiting the whole of his professional education, and distinguishing the classes, hospitals, dispensaries, and schools attended during each session of his studies; and, 4. The diploma in Medicine, certificate of registration as a medical practitioner, or satisfactory evidence of having passed a full examination for the diploma in Medicine. If the candidate has been apprenticed to a Fellow of the College, he must also produce his discharged indenture. The fee of £15 15s. must be lodged with the Treasurer not later than one week preceding the examination. The sum of £11 11s. will be returned to unsuccessful candidates.

Examination.—The examination shall embrace the Principles and Practice of Surgery, including Operative Surgery and Surgical Pathology, Clinical Surgery and Surgical Anatomy, and shall not take place before the full period of study. Candidates whose examinations may be considered by the President's Council to have been insufficient in the other subjects contained in the curriculum of study, before being admitted to the examination on the subjects required for this diploma, may be required to pass an additional examination in any of such subjects.

Candidates desirous of special examinations on other days than those fixed must prepare a case to be submitted to the consideration of the authorities of the College, with evidence to show why it is impossible for them to avail themselves of the ordinary examination. They must, at the same time, fill up and lodge the requisite schedule and produce satisfactory evidence of the whole of the prescribed course of study, and of having passed the preliminary examination, and must state the earliest and the latest days within which they can present themselves. The fees, which must lodged two days before the examination day, are £20 for examination, of which £12 will be returned to candidates remitted on examination.

N.B.—The professional examinations require one day for the written part of the examination. The clinical and oral will follow on a subsequent day.

Recent dissections and anatomical specimens are employed during examination. They are also subjected to a practical clinical examination in the Surgical Hospital, including the application of surgical apparatus, bandages, surface markings, etc. No candidate is admissible to examination who has been rejected in the subjects of the examination by any other Licensing Board within the preceding three months.

LAWS RELATING TO THE FELLOWSHIP.

1. No person is received as a candidate for the Fellowship who has not the diploma of the Royal College of Surgeons of Edinburgh, or of the Royal College of Surgeons of England, or of the Royal College of Surgeons of Ireland, or of the Faculty of Physicians and Surgeons of Glasgow. 2. Every candidate for the Fellowship, with the exception of those admissible under the old constitution, with right to the Widows' Fund, and those hereinafter mentioned, must show that he is twenty-five years of age, and that he has for at least two years subsequently to the date of his having obtained a qualification in Surgery, specially recognised by the College, been engaged in the study or practice of his profession; and, before having his petition laid before the College, must pass an examination as follows: A. Those who are already Licentiates of this College: on Principles and Practice of Surgery, Clinical and Operative Surgery, and one optional subject. B. Those who are not Licentiates of this College: on Principles and Practice of Surgery, Clinical and Operative Surgery, Surgical Anatomy, and one optional subject; and in such supplementary subjects as have not, in an adequate manner, been included in the examination for the registrable surgical qualification possessed by such candidate, and which are required in the examination for Licentiates of this College. The optional subjects embrace—*a.* Surgery in any one of its Ophthalmic, Aural, Laryngeal, or other special branches; *b.* Advanced Anatomy and Physiology; *c.* Surgical Pathology and Morbid Anatomy; *d.* Midwifery and Gynæcological Medicine and Surgery; *e.* Medical Jurisprudence and Hygiene; *f.* Practice of Medicine and Therapeutics. In addition to the Written, Oral, and Clinical Examinations, the Candidate will be examined in the use of Surgical Apparatus, and may be required to perform operations on the dead body. He shall give notice of his intention to present himself at least three weeks before the examination, so that his petition may be laid before the President's Council. In the case of registered practitioners of not less than forty years of age, who have been in practice for not less than ten years, the President's Council may consider their claims; and if these and the registrable surgical qualification they possess, together with the fact that they may have highly distinguished themselves by original investigations, seem of a sufficiently high order, they may recommend such candidates to the College for ballot without examination. 3. Every candidate for the Fellowship (with the exception of those entitled to enter under the old constitution of the College, and having right to its Widows' Fund) must lodge with the Secretary a petition for examination with a view to admission, and must be recommended by two Fellows, of whom one at least shall be resident in Edinburgh. 4. Candidates for the Fellowship (not embraced under the exception to Law 3) shall pay £30 to the College funds, including all fees. The money is payable to the Treasurer immediately upon the presentation of the petition. The fee paid by any candidate not admitted shall be returned to him; but in the case of candidates by examination not being successful, £5 shall be retained as examination expenses. 5. The billets calling the meetings at which the petition is to be laid before the College shall intimate the name and surgical qualification of the candidate, his professional appointments (if any), and the names of his proposer and seconder, and whether such petition is presented after or without examination. 6. The petition will be considered at a subsequent meeting, to be held not earlier than four weeks after the first; and, in the meantime, the petition, with the names of the proposer and seconder, shall have been hung up in the Library; and the billets calling the second meeting shall contain an intimation in the same form as those of the first. 7. At the meeting for finally considering the petition of the candidate, except in the case of those eligible for the Widows' Fund, the result shall be ascertained by ballot. Three-fourths of the votes are required for admission, and the number of those voting shall not be less than twenty. 8. The candidate is informed of the result of the ballot; but, before taking his seat as a Fellow, he shall make a declaration to the following effect, and subscribe the same in the Sederunt-book: "I hereby promise faithfully to maintain and defend all the rights, liberties, and privileges of the Royal College of Surgeons of Edinburgh, and to promote the interests thereof to the utmost of my power. I also promise faithfully to obey all the laws of the said Royal College, made and to be made." 9. Candidates who do not find it convenient to repair to Edinburgh may, by a vote of the College, be enrolled as Fellows in absence, if they transmit letters of obligation to conform to No. 8 before taking their seats. 10. Every Fellow, on admission, shall receive a diploma with the seal of the College appended; and, as regards Fellows admitted after examination, the diploma bears that such has been the case. 11. Every Fellow is entitled to attend the meetings of the College, and to take part in the proceedings, and in the election of office bearers. 12. No Fellow of the College shall keep an open shop for the sale of drugs or other merchandise. 13. No Fellow of the College shall allow his name to be connected with advertisements or publications of an indelicate or immoral nature. 14. No Fellow of the College shall practise, or profess to practise, by the use of or according to any secret remedy or method of treatment; or allow his name to be connected with advertisements for the sale of any secret remedy, or for practise by the use of any secret remedy, or method of treatment: or connect himself in partnership or otherwise, or continue in connection with, any person practising by means of or advertising the sale of any secret remedy. 15. No Fellow shall be guilty of any deception or other immorality in the practice of his profession, or in any other way conduct himself inconsistently with the honour and decorum which become his position as a Fellow of the College.

[1] Candidates at a distance are requested to send their certificates much earlier, so as to give sufficient time for the exchange of one or two explanatory letters, as much disappointment has been occasioned by the discovery of defects in their course of study when it was too late to rectify them by the production of documents. Candidates should attend punctually to the dates fixed by the Regulations for lodging their certificates and for paying their money.

FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.

DIPLOMA OF FELLOW.

Candidates are not admissible to the Fellowship till they have been two years qualified, and have attained the age of 24. Candidates who have been less than six years qualified are subjected to

two Examinations: the first in Anatomy and Physiology, the second in Pathology and Surgery, or Pathology and Medicine. Candidates six years qualified are subjected to one Examination, embracing Surgery and an optional subject, or Medicine and an optional subject. The optional or alternative subjects are: (1) Human Anatomy, (2) Comparative Anatomy, (3) Physiology, (4) Pathology, (5) Midwifery and Diseases of Women, (6) Medical Jurisprudence, (7) Ophthalmic Surgery, (8) Aural Surgery, (9) State Medicine, (10) Psychological Medicine.

Election.—There may be admitted yearly to the Fellowship without examination, should the Faculty see fit, not more than four legally qualified medical practitioners, who have been at least ten years qualified, and who shall have highly distinguished themselves by original medical investigations. Candidates must be proposed in writing by two Fellows of the Faculty, and the proposal must contain a statement of the investigations made by them. The proposal is in the first instance submitted to the President and Council, and only on their reporting favourably is it submitted to the Faculty. For the election two-thirds of those voting must be in favour of admission.

Fees.—The fee payable by a candidate qualified to hold office is £50; by a candidate not qualified to hold office, £25. Fellows residing within five miles of the Faculty Hall must qualify to hold office. Fellows residing beyond that distance may or may not qualify to hold office, according to their option.

There are three periods of examination yearly, in the third weeks of April, July, and October. Fourteen days' notice is required.

DIPLOMA OF LICENTIATE.

The examination for the Licence of the Faculty, as granted separately, is open only to Graduates in Medicine of the Universities of the United Kingdom, India, and the Colonies, and Licentiates in Medicine of the Colleges of Physicians of the United Kingdom. Candidates are examined in Surgery, including Surgical Anatomy and Operative and Clinical Surgery. Examinations are held quarterly: on October 22nd, 1889; January 14th, April 8th, and July 8th, 1890. The fee is £15 15s., of which £11 11s. is returned in the event of failure.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS OF EDINBURGH AND FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW: CONJOINT EXAMINATION.

THE Royal College of Physicians of Edinburgh, the Royal College of Surgeons of Edinburgh, and the Faculty of Physicians and Surgeons of Glasgow have made arrangements by which, after one series of examinations, the student may obtain the diplomas of the three Co-operating Bodies.

Students passing the qualifying examination are enabled to register three diplomas under the Medical Acts—namely, Licentiate of the Royal College of Physicians of Edinburgh, Licentiate of the Royal College of Surgeons of Edinburgh, and Licentiate of the Faculty of Physicians and Surgeons of Glasgow.[1]

Every candidate must have followed his course of study in a University, or in an established school of medicine, or in a provincial school specially recognised by the Colleges of Physicians and Surgeons of that division of the United Kingdom in which it is situate. Under the title established school of medicine are comprehended the medical schools of those cities of Great Britain and Ireland in which diplomas in Medicine or Surgery are granted, and such Colonial and Foreign schools as are similarly circumstanced in the countries in which they exist.

Preliminary Examinations.—All students who intend becoming candidates for the diplomas of the three Bodies must pass the complete examinations in General Education, and have their names registered by the General Medical Council at the commencement of their professional studies. Students should therefore see to this without delay, as the regulations of the General Medical Council provide that any period of study taken more than fifteen days before registration cannot be recognised, and considerable trouble and disappointment have sometimes arisen through ignorance or neglect on the part of the candidate of this requirement. The Preliminary Examination may be passed before any of certain recognised Boards, of which a list may be obtained on application. Preliminary examinations are conducted in Edinburgh by the Educational Institute of Scotland on behalf of the Royal Colleges of Physicians and Surgeons of Edinburgh, and in Glasgow by a Board chosen by the Faculty of Physicians and Surgeons of Glasgow. Copies of the regulations respecting the former examination may be obtained on application to Thomas Morrison, LL.D., Free Church Training College, Glasgow; to the Officer of either of the Royal Colleges in Edinburgh: and to the Secretary of the Faculty of Physicians and Surgeons of Glasgow for the latter.

Professional Education.—For particulars see pages 538 and 539. The two courses of Practical Anatomy must not be attended in the same session. In those schools of England and Ireland in which two separate courses of lectures are delivered at separate hours, one on Anatomy, the other on Anatomy and Physiology, the former of these courses will be received as a course of Anatomy, and the other as a course of Physiology. Two courses of Clinical Medicine, of three months each, if not simultaneous, are held equivalent to one course of six months. They must be attended during the period of attendance at the hospital where they are delivered. The same rules apply to Clinical Surgery. The six months' courses delivered in Scotland, with the exception of Clinical Medicine and Clinical Surgery, must consist of not fewer than 100 lectures. The three months' courses must consist of not fewer than 50 lectures. The teacher signing the certificate of Practical Pharmacy must be a Member of the Pharmaceutical Society of Great Britain, or the superintendent of the laboratory of a public hospital or dispensary, or a registered medical practitioner who dispenses medicine to his patients, or a teacher of a class of Practical Pharmacy. The candidates must have been instructed in Vaccination; the teacher signing the certificate must be a registered practitioner. It is strongly recommended to students to avail themselves of opportunities of attending, in addition to the courses of instruction which are aqsolutely required, practical or tutorial clinical instruction in Medicine, Surgery, and Gynæcology, lectures on Ophthalmic, Aural, and Mental Diseases, also on Natural History and Comparative Anatomy; and of obtaining practical instruction in the use of the Microscope, and its application to Physiology and Medicine. It is also recommended that while the student is engaged in his anatomical and physiological studies he should familiarise himself in the wards of the hospital with the subjects of "Fractures," "Dislocations," and the "Diseases of Bones and Joints;" and that the last year of his curriculum should be devoted as much as possible to Clinical work and study. Candidates for the Final Examination are also advised, so far as local circumstances will permit, to study Fevers for not less than three months under recognised Clinical instructors.

Professional Examinations.—See table, pages 524 and 525. A candidate may present himself either in Edinburgh or in Glasgow, irrespective of the place at which he may have been previously examined. An applicant for admission to any of the examinations is required, on entering, to lodge with the Inspector of Certificates a schedule (forms for which are supplied) showing the courses he has attended qualifying for admission. No candidate can be held to be entered for any examination till he has sent in the proper schedule, proved his course of study, and paid the fee. At all the examinations candidates shall be examined orally, as far as possible, in the order of their entry. The subjects of the Second Professional Examination should, as far as possible, be studied only after the First Examination has been passed; and similarly, the subjects of the Final Examination should, as far as possible, be studied only after the Second Examination has been passed. By adhering to this course the student will have his attention occupied by preparing only for one examination at a a time. Candidates qualified by having attended the necessary courses of study may, however, enter for two or more examinations, to be passed successively at the same period, the condition being that failure to pass in all the subjects of any examination precludes the candidate from admission to the succeeding examination. The necessary schedule and certificates must be lodged, and the fees for these respective examinations paid, at the period of entering for the earliest of them. In the event of failure, the fee

[1] The three Co-operating Bodies grant their single qualifications only to candidates who already possess another and opposite qualification in Medicine and Surgery, as the case may be. Thus the Royal College of Physicians of Edinburgh may, notwithstanding this agreement, grant its Licence on examination to candidates already possessed of a recognised British, Irish, Indian, or Colonial qualification in Surgery; and the Royal College of Surgeons of Edinburgh and the Faculty of Physicians and Surgeons of Glasgow may each grant its Licence on examination to candidates already Licentiates in Medicine of any British, Irish, or Colonial College whose preliminary examination and course of professional study are proved to be sufficient, or Graduates in Medicine of any British, Irish, Indian, or Colonial University. Copies of the Regulations for the single qualification of any of the Bodies may be had on application to the respective Secretaries.—N.B. Under the provisions of the Medical Act, 1886, the single qualifications do not confer the right to registration, but may be registered as additional qualifications by those already on the *Register*.

paid for any examination to which a candidate had not been thereby admissible will be returned to the candidate. No candidate shall be admissible to examination who has been rejected by any other licensing board within the preceding three months.

Any Graduate in Medicine and Surgery of a British or Irish University, and any Graduate or Licentiate in Medicine and Surgery of recognised Universities and Colleges,[2] who shall have passed such an examination or examinations as shall comprise the subjects of the First and Second Examinations of this Board, and be proved to have been co-extensive therewith, and who shall have completed not less than four years' medical study, including all the subjects of the curriculum, shall be admissible to the Final Examination. Any candidate so admitted shall pay a fee of £26 5s., and, in the event of his failing to pass, the sum of £20 will be returned.

Any candidate who shall produce satisfactory evidence of having passed an equivalent examination in any of the subjects of the First Examination, before any of the recognised Boards, will be exempt from examination in such subject or subjects; and any candidate who shall produce such evidence of having passed in any of the subjects of the Second Examination, before any of the recognised Boards, will also be exempt from examination in such subject or subjects; but no examination before such Boards will be recognised as giving exemption, unless it is co-extensive in its scope with the equivalent examination of this Board, and is the only or the Final Examination on the subject or subjects required by the Board at which it was passed. The certificates of examination upon which any candidate may claim exemption from any of the subjects of the First and Second Examinations shall, in every case, *specify* the subjects embraced in such examination.

At the First Examination, the examination in Chemistry embraces Chemical Physics (Heat, Light, and Electricity), the principal Non-metallic and Metallic Elements, and their more common combinations, also the leading Alcohols, Organic Acids, Ethers, Carbo-Hydrates, and Alkaloids. The candidate is also examined practically in testing. Elementary Anatomy shall embrace —Anatomy of the Bones and Joints of the whole body, and of the Muscles, chief Blood-vessels and Nerves of the upper and lower extremities. Histology will be held to include a knowledge and recognition of the morphological elements and structure of Skin, Bone, Cartilage, Fibrous Tissue, Hair, Nails, Teeth, Blood, Muscle, Nervous Tissue, and the appearance and distribution of all the different forms of Epithelium, along with a general knowledge of the properties of cells. The Examination on this subject will be oral and practical. Candidates who desire to pass the First Examination must apply to the Inspector of Certificates on or before the Friday preceding the day of examination,[3] and must produce certificates of attendance on one course of Chemistry, of Practical Chemistry, and of Anatomy, and six months' Practical Anatomy, and shall lodge the requisite schedule of course of study. The fee of £5 5s. must be paid to the Inspector of Certificates not later than 4 P.M. of the Friday preceding, after which no candidate will be entered. In the case of a candidate being unsuccessful at this examination, he will be readmitted to examination after a prescribed interval on payment of £3 3s. if he has failed in all subjects, and £2 2s. if he has passed in one or more subjects. This rule will also apply to any subsequent rejection.

At the Second Examination, the candidate must produce certificates of attendance on the prescribed courses of Anatomy, Practical Anatomy, Physiology and Materia Medica, and Pharmacy. The fee of £5 5s. must be paid to the Inspector of Certificates not later than one week before the day of examination. The rule applicable to rejected candidates of the First applies also to those of the Second Examination.

At the Final Examination, every candidate, when entering for the Edinburgh Examination, must produce to the Inspector, Mr. James Robertson, solicitor, 1, George Square, Edinburgh; or when entering for the Glasgow Examination to Mr. Alexander Duncan, B.A., Faculty Hall, 242, St. Vincent Street, Glasgow: 1st, satisfactory evidence of his having attained the age of twenty-one years; 2nd, a certificate of his registration in the books of the General Medical Council; 3rd, a schedule of his entire course of study, along with the certificates enumerated under Professional Education.

The fee payable for this examination, which in the case of candidates who have passed the First and Second Examinations shall be £15 15s., must be paid to the Inspector at Edinburgh or Glasgow, as the case may be, not later than one week prior to the examination day, after which no candidate will be entered. In case of a candidate being unsuccessful at this examination, £10 10s. shall be returned to him, the remaining £5 5s. being retained. This rule will also apply to any subsequent rejection. Any candidate admitted to the Final Examination, on the footing of having passed in the subjects of the First and Second Examinations at a recognised Board, shall, on entering, pay the full fee of £26 5s.; and, in the event of his being unsuccessful, £15 15s. will be returned to him at his first, and £21 at every subsequent, rejection.

No candidate is exempted from examination in any of the subjects of the Final Examination.

In addition to the written and oral examinations, all candidates will be subjected to practical clinical examinations in medicine and surgery, which shall include the examination of patients, physical diagnosis, the use of the microscope, pathology of the urine, surgical appliances, bandages, surface markings, etc.

Copies of the Regulations containing the requisite Schedules will be supplied on application to either of the Inspectors, or at the Colleges.

UNIVERSITIES OF EDINBURGH, GLASGOW, ABERDEEN, AND ST. ANDREWS.

REGULATIONS RESPECTING DEGREES IN MEDICINE.

[THE regulations of these Universities are nearly similar. We therefore give but one statement, noticing points of difference when necessary.]

Three medical degrees are conferred by each University; namely, Bachelor of Medicine (M.B.), Master in Surgery (C.M.), and Doctor of Medicine (M.D.). The degree of C.M. is conferred only on those who at the same time obtain the degree of Bachelor of Medicine. All candidates are now required to qualify for and obtain the degrees of M.B. and C.M. conjointly.

Preliminary Education.—The preliminary branches of extra-professional education are English, Latin, Arithmetic, the Elements of Mathematics, and the Elements of Mechanics; and candidates must also pass an examination in at least two of the following subjects: Greek, French, German, Higher Mathematics, Natural Philosophy, Logic, Moral Philosophy.[1] The examination in the first class of subjects takes place before the commencement of medical study, and in the second, before admission to the First Professional Examination.[2]

[2] The following is a list of Licensing Boards recognised by the co-operating authorities: 1. The Royal College of Physicians of London; 2. the Royal College of Physicians of Edinburgh; 3. the King and Queen's College of Physicians in Ireland; 4. the Royal College of Surgeons of England; 5. the Royal College of Surgeons of Edinburgh; 6. the Faculty of Physicians and Surgeons of Glasgow; 7. the Royal College of Surgeons in Ireland; 8. the Conjoint Boards of the Royal College of Physicians of London and Royal College of Surgeons of England, of the King and Queen's College of Physicians in Ireland and the Royal College of Surgeons in Ireland, and of the Royal College of Surgeons in Ireland and the Apothecaries' Hall, Dublin; 9. the Universities of the United Kingdom; 10. the Society of Apothecaries of London, *under the new Scheme;* 11. the Universities and Colleges in India and the British Colonies whose Matriculation Examinations have been recognised by the General Medical Council, whose curriculum of professional study extends to not less than four years, and whose diplomas have been granted upon equivalent examinations to those of this Board, and entitle to practise Medicine or Surgery in the Indian or Colonial dependency in which the institution is situated; 12. Such foreign Universities as grant Medical and Surgical Degrees entitling to practise in the country in which they are granted, as shall from time to time be recognised by the co-operating authorities, or as may be recognised by the General Medical Council as entitling to registration under the Medical Act, 1886, after a course of study equivalent both as regards duration and subjects to that required by this Board, and preceded by the passing of an examination in Arts recognised by the General Medical Council, or which may, on special application, be recognised by any of the Branch Medical Councils.

[3] Candidates at a distance are requested to send their certificates much earlier, so as to give sufficient time for the exchange of one or two explanatory letters, as much disappointment has been occasioned by the discovery of defects in their course of study when it was too late to rectify them by the production of documents.

[1] The Universities of Aberdeen and St. Andrews include Natural History. Natural History is included in the First Professional Examination in all the four Universities.

[2] At Edinburgh the following are the subjects for examination:—1. English: Including (*a*) Writing a passage of English from dictation; (*b*) English Composition, with the correction of sentences of bad English; (*c*) Questions in English Grammar, with analysis of sentences and derivation and definition of some common English words; (*d*) Questions in Geography and History, especially in the History of the British Islands and of English Literature. 2. Latin: October, 1889, *Cicero de Senectute;* for March and October, 1890, *Livy*, Book XXII; for March, 1891, Virgil, *Eclogues*. An easy passage from a Latin prose author not prescribed, and a single passage of English (translated from a Latin author) to be re-translated into Latin—the more difficult Latin words being given. 3. Arithmetic, Common Rules, including Vulgar and Decimal Fractions. 4. Elements of Mathematics: Geometry, Euclid, Books I, II, and III, or Wilson's *Elementary Geometry* Books I, II, and III, or Books I, II, and III of the Textbook issued by the Association for the Improvement of Geometrical Teaching (Parts I

A degree in Arts (not honorary) in any one of the Universities of England Scotland, or Ireland, or in any Colonial or Foreign University specially recognised by the University Courts, exempts from preliminary examination. The Universities also recognise examination in Arts by any corporate body whose examination has been recognised by the General Medical Council, and also approved by the University Court, so far as regards all subjects comprised in the examination of the said corporate body.

DEGREE OF BACHELOR IN MEDICINE AND MASTER IN SURGERY.

The principal regulations to be observed by candidates for the degree of Bachelor in Medicine or Master in Surgery are given in the tables at pages 524 and 525. Each *Annus Medicus* is constituted by at least two courses of not less than 100 lectures each, or by one such course and two courses of not less than 50 lectures each; with the exception of the clinical course, in which lectures are to be given at least twice a week.

Two courses of Midwifery, of three months each, are reckoned equivalent to a six months' course, provided different departments of Obstetric Medicine be taught in each of the courses.

Practical Pharmacy may be attended in either of the following ways: A course of not less than fifty hours' instruction in the class of Practical Materia Medica and Pharmacy in the University from which the degree is sought, or a similar class conducted in a University or recognised school of medicine, or a similar class conducted by a teacher recognised by the University Court; *or, for at least three months, compounding and dispensing drugs at the laboratory of a hospital, dispensary, Member of a Surgical College or Faculty, Licentiate of the London or Dublin Society of Apothecaries, or a Member of the Pharmaceutical Society of Great Britain.*[3] Evidence of a practical knowledge of vaccination is required in Aberdeen, Edinburgh, and Glasgow.

One of the four years of medical and surgical study must be in the University granting the degree sought. Another year must be either in the same University, or in some other University entled to give the degree of Doctor of Medicine. [At St. Andrews no one can be received as a candidate for the degree of Bachelor of Medicine or Master in Surgery unless two years at least of his four years of medical and surgical study shall have been in one or more of the following Universities and Colleges, namely: the Universities of St. Andrews, Glasgow, Aberdeen, Edinburgh, Oxford, or Cambridge; Trinity College, Dublin; and Queen's College, Belfast, Cork, or Galway.] Of the other two years, one may be constituted by attendance during at least six winter months on the medical or surgical practice of a general hospital which accommodates at least eighty patients, and, during the same period on a course of Practical Anatomy; and one year's attendance, to the extent of four of the departments of medical study required, on the lecturers or teachers of medicine in the hospital schools of London, or in the school of the College of Surgeons in Dublin, or of such teachers of medicine as shall be recognised by the University Court, may be reckoned as one of the four years.[4] All candidates not

and II); the Elementary Rules of Algebra, including Simple Equations. A knowledge of Geometry alone or of Algebra alone will not be sufficient; candidates who have passed a qualifying examination in Geometry only, or in Algebra only, will be allowed to take separately the subject in which they have not qualified, provided they give their paper to the Examiner at the end of half the prescribed time. 5. Elements of Dynamics (Mechanics); Elementary Kinematics, Statics (including the Simple Machines), Kinetics, and Hydrostatics; Textbook, Blaikie's *Elements of Dynamics* (excluding the appendix). In conformity with Section II of the said Statutes, which enacts that no candidate shall be admitted to a professional examination who has not passed a satisfactory examination on at least two optional subjects (in addition to the subjects mentioned above), examinations will also take place on the following subjects. 1. Greek: for October, 1889, Xenophon, *Anabasis*, Book IV; for March and October, 1890, Xenophon, *Cyropædia*, Book II; for March, 1891, Plato, *Crito*. Some easy sentences of English will be set to be retranslated into Greek. 2. French: for October, 1889, A. de Vigny, *La Canne de Jonc;* for March, 1890, to March, 1891, inclusively, E. de Bonnechose, *Lazare Hoche*. An easy passage in English will be given for translation into French. 3. German: for October, 1889, G. von Moser, *Der Bibliothekar;* for March, 1890, to March, 1891, inclusively, Hachette's Reader, "Lust und Lehr," Part I. An easy passage in English will be given for translation into German. 4. Higher Mathematics: Geometry, Euclid, Books I to IV, Book VI. and the Propositions of Book XI, usually given in the modern editions, or Wilson's *Elementary Geometry*, Books I, II, III, and V, and Wilson's *Solid Geometry and Conic Sections*, Book IV, Section 1; Algebra, Elementary Trigonometry, and Conic Sections. Textbook for Conic Sections, Wilson's *Solid Geometry and Conic Sections*, Book V. The use of the above textbooks is not imperative; they are cited merely to indicate the scope of the examination. 5. Natural Philosophy: Balfour Stewart's *Elementary Physics*. 6. Logic: for October, 1889, to March, 1891, inclusively, either Fowler's *Deductive Logic, Introduction*, Parts I, II (chaps. i to iv, and vii, viii), III (chaps. i, ii, iii, and viii), and *Inductive Logic*, chaps. i, ii (sects. 1 and 2), iii, iv; or Professor Campbell Fraser's *Selections from Berkeley*, Editor's "Introduction" and "Dialogue on Visual Language," along with the Prefatory Note, pp. 147 to 153 (third edition). 7. Moral Philosophy: for October, 1889, to March, 1891, inclusively, (1) Sidgwick's *History of Ethics*, chap iv, sects. 1 to 16, inclusively; (2) Professor Calderwood's *Handbook of Moral Philosophy*, Psychology of Ethics, Parts I and II. In answering the questions in Arithmetic, Mathematics, and Dynamics (Mechanics), the steps of the reasoning, as well as the final result, must be exhibited.

At Glasgow, examinations will take place on October 2nd, 1889, and three following days; and on March 26th, 1890, and three following days. *Registration Subjects:* The candidate must pass in all the subjects of this division before registration by the Branch Registrar of the General Council. 1. English; Writing correctly a passage to dictation; Composition of a short Essay on a given theme; Questions on Grammar, with analysis of sentences and the derivation and meaning of some common English words. 2. Latin: Virgil, *Æneid*, Book III, and Cæsar, *De Bello Gallico*, Book V. Translations from the above. Translation of passages from authors not prescribed, and of English passages into Latin, the principal Latin words being supplied; Questions on Grammar and Construction. 3. Arithmetic: The Common Rules, including Vulgar and Decimal Fractions. 4. Elements of Mathematics: Euclid, Books I, II, and III (Books II and III may be passed at a subsequent examination, before the First Professional); Algebra, including Simple Equations. 5. Elements of Dynamics (Mechanics): Elementary Kinematics, Statics, Kinetics, and Hydrostatics. Textbooks: Bottomley's *Dynamics* (Collins's series); Blaikie's *Elements of Dynamics*. 6. One optional subject, Greek, French, German, or Logic, as prescribed in the second part. *Optional Subjects for M.B. and C.M.:* The candidate must pass in a second optional subject in addition to the one passed for registration, before he can be admitted to the first professional examination. 1. Greek: Xenophon, *Memorabilia*, Book I, and the Gospel according to St. Luke; Translations of passages from works not prescribed, and of English passages into Greek—the principal Greek words supplied; Questions on Grammar. 2. French: Montesquieu, *Considerations sur les Causes de la Grandeur des Romains et de leur Decadence*.—Translations and Exercises as in the Latin and Greek. 3. German: Schiller, *Wilhelm Tell*—Translations and Exercises as in the other languages. 4. Higher Mathematics: Euclid, Books I to VI; Algebra, including Quadratic Equations, and the Rudiments of Trigonometry. 5. Natural Philosophy: Todhunter's *Natural Philosophy for Beginners*, Part II, Sound and Heat, omitting chapters xii and xiii on Sound and in Heat from Sect. 732 to 746. 6. Logic: Jevons's *Elementary Lessons on Logic*. 7. Moral Philosophy: Herbert Spencer's *Data of Ethics*. A certificate of having passed, at the examinations for the degree of M.A. or B.Sc., in English, Latin, Mathematics, Natural Philosophy, Greek, Logic, or Moral Philosophy, will be accepted instead of examination in these subjects.

At Aberdeen, examinations will take place on October 10th and 11th, 1889, and April 17th and 18th, 1890. Part I.—The examination on the following subjects takes place prior to the commencement of the medical curriculum, namely: 1. English: Composition, Grammar, and Writing to Dictation. 2. Latin: the First Book of Cæsar's Commentaries, *De Bello Gallico*, Book I, and Virgil, *Æneid*, Book III, with Grammatical Questions. 3. Arithmetic: the Common Rules, Vulgar and Decimal Fractions, and Proportion. 4. Elements of Mathematics; the First Three Books of Euclid; Algebra: as far as and inclusive of Simple Equations. 5. Elements of Mechanics: Blaikie's *Elements of Dynamics*. Part II. Additional Subjects, on two of which, at the option of candidates, a further examination has to be undergone, before admission to the First Professional Examination for the degrees of M.B. and C.M., namely: 1. Greek: Xenophon, *Anabasis*, Book II, with Grammatical Questions. 2. French: Edmond About, *La Grèce Contemporaine*. 3. German: Berthold Auerbach, *Waldfried*. 4. Higher Mathematics: Euclid, Books I to VI inclusive, Plane Trigonometry, Solution of Triangles, Quadratic Equations, Binomial Theorem, Logarithms. 5. Natural Philosophy: (Balfour Stewart's *Elementary Physics*, recommended). 6. Natural History: General Classification of the Animal Kingdom, Characters and Subdivisions of the Vertebrata (Nicholson's *Textbook of Zoology*, recommended). 7. Logic: (Jevons's *Elementary Lessons in Logic*, recommended). 8. Moral Philosophy: (Reid's *Active Powers*, recommended).

At St. Andrews the examination is held in October and March; the subjects are: 1. English: Including Composition, Grammar, Geography, and History. 2. Latin: Virgil, *Æneid*, Book V, and Cæsar, *De Bello Gallico*, Book II. 3. Arithmetic: Including Vulgar and Decimal Fractions. 4. Elements of Mathematics: Geometry, *Euclid*, Books I, II, III, or their equivalent. 5. Algebra: Including Simple Equations. 6. Elements of Mechanics: Blaikie's *Elements of Dynamics*. 7. One of the following optional subjects: (*a*) Greek: Xenophon, *Anabasis*, Book IV. (*b*) French: Voltaire, *Charles XII*. (*c*) German: Schiller, *Wilhelm Tell*. (*d*) Higher Mathematics: Geometry; *Euclid*, Books I to IV and VI; Algebra, including Quadratic Equations; Elementary Trigonometry to Solution of Triangle. (*e*) Natural Philosophy: Balfour Stewart's *Elementary Physics*. (*f*) Natural History: Nicholson's *Introductory Textbook of Zoology*, or similar work. (*g*) Logic: Jevons's *Elementary Lessons*. (*h*) Moral Philosophy Sidgwick's *History of Ethics* or Herbert Spencer's *Data of Ethics*.

[3] Substitute in the case of Edinburgh University the following for the paragraph in italics: or, that he has been engaged by apprenticeship, for not less than two years, with a registered medical practitioner, or a Member of the Pharmaceutical Society of Great Britain, or a Member of the Pharmaceutical Society of Ireland, or a pharmaceutical chemist, or chemist and druggist, registered under the provisions of the "Act for regulating the qualifications of Pharmaceutical Chemists, 1852," "The Pharmacy Act, 1868," or "The Pharmacy Act (Ireland), 1875," in the *bonâ fide* compounding and dispensing of drugs, and the preparation of their officinal and other preparations under his superintendence.

[4] Students of medicine in the London schools and in the school of the College of Surgeons in Dublin can obtain there two *Anni Medici* out of the four required for the Edinburgh degrees in medicine. Courses of lectures in these schools, and the courses of the Medical lectures and of the Science teachers in King's College and in University College, London, in the subjects of graduation, are regarded as equivalent to lectures on the corresponding subjects in this University, except Materia Medica and Midwifery, which, being only three months' courses in them, are not equivalent. One *Annus Medicus* may be constituted by attendance on Practical Anatomy and hospital practice during the winter session. Another *Annus Medicus* by attending either (*a*) full winter courses on any two of the following subjects: Anatomy, Physiology, Chemistry, Pathology, Surgery, Medicine, Clinical Surgery, Clinical Medicine; or (*b*) on one such course and two three months' courses on any of the following subjects: Botany, Practical Chemistry, Natural History, Medical Jurisprudence. If the student select the arrangement prescribed in (*a*), attendance on a third course will be accepted. The other subjects, and the additional courses, not

students of the University attending the lectures of extra-academical teachers, must at the commencement of each year of attendance enrol their names in a book to be kept by the University for that purpose, paying a fee of the same amount as the matriculation fee.

Every candidate must deliver, at such time of the year as may be fixed by the Senatus Academicus—1. A declaration, in his own handwriting, that he is twenty-one years of age, or that he will be so on or before the day of graduation; and that he will not be, on the day of graduation, under articles of apprenticeship. 2. A statement of his studies, general and professional, accompanied with proper certificates.[5]

The examinations are conducted in writing and *vivâ voce*, and, as far as possible, by demonstrations of objects and other practical tests. They are divided as follows:

EDINBURGH: 1. Chemistry, Botany, and Natural History; 2. Anatomy, Institutes of Medicine, Materia Medica (including Practical Pharmacy), and Pathology; 3. Surgery, Practice of Medicine, Midwifery, and Medical Jurisprudence; 4. Clinical Medicine and Surgery in a hospital. The first division of these subjects may be passed at any examination held after completion of attendance on the prescribed courses, and the subjects may be taken at two different examinations, provided that on the first occasion the student takes (1) Botany and Natural History; or (2) Chemistry; or (3) Botany and Chemistry; or (4) Natural History and Chemistry; Practical Chemistry being in each case included under Chemistry, and on the second division at the end of their third year. The examination on the third and fourth divisions cannot take place until the candidate has completed his fourth *Annus Medicus*. Candidates may be admitted to examination on the first two divisions at the end of their third year, or to the four examinations at the end of the fourth year.

GLASGOW: 1. Chemistry, Botany, and Natural History; 2. Anatomy, and Physiology; 3. Regional Anatomy, Materia Medica and Pharmacy; 4. Surgery, Clinical Surgery, Medicine, Clinical Medicine, Pathology, Midwifery, and Forensic Medicine. Students may be examined in the first division of subjects at the period of examination immediately preceding their second winter session; in the second division, after two winter and three summer sessions, or, for those who commenced in a winter session, two winter and two summer sessions, from the time of the commencement of studies; in the third division, after the conclusion of the third winter session of attendance upon medical classes; in the fourth division, at the first term for the final examination after the conclusion of their curriculum of study.

ABERDEEN: 1. Botany, Natural History, Chemistry, and Anatomy, or in two divisions, (1) Botany and Natural History and (2) Chemistry and Anatomy; 2. Regional Anatomy, Institutes of Medicine, Materia Medica, and Surgery; 3. Practice of Medicine, Clinical Medicine, Clinical Surgery, Midwifery, Pathological Anatomy, and Medical Jurisprudence.

ST. ANDREWS: 1. Chemistry, Botany, Elementary Anatomy, and Materia Medica; 2. Advanced Anatomy, Zoology with Comparative Anatomy, Physiology, and Surgery; 3. Practice of Medicine, Clinical Medicine, Clinical Surgery, Midwifery, General Pathology, and Medical Jurisprudence.

At the Universities of Aberdeen and St. Andrews, the examination in the first division of subjects may be passed at the end of the second year (except that at Aberdeen the examination in Botany and Natural History may be passed at the examination term preceding the second winter session); the examination in the second division at the end of the third year; and that in the third division at the end of the fourth year. Candidates may be admitted to examination on the first two divisions at the end of the third year, or to the three examinations at the end of the fourth year.

DEGREE OF DOCTOR OF MEDICINE.

The degree of Doctor of Medicine may be conferred on any candidate who has obtained the degree of Bachelor of Medicine, and is of the age of twenty-four years, and has been engaged, subsequently to having received the degree of Bachelor of Medicine, for at least two years in attendance on a hospital, or in the military or naval medical service, or in medical or surgical practice. The candidate must be a Graduate in Arts, or must before or at the time of obtaining his degree of Bachelor of Medicine,[6] or thereafter, have passed a satisfactory examination in Greek, and in Logic or Moral Philosophy, and in one at least of the following subjects, namely: French, German, Higher Mathematics, Natural Philosophy, and Natural History. At Aberdeen, Edinburgh, and Glasgow, he must submit to the Medical Faculty a thesis composed by himself, and which shall be approved by the Faculty, on any branch of knowledge comprised in the Professional Examinations for the degrees of Bachelor of Medicine and Master in Surgery, which he may have made a subject of study after having received these degrees.[7]

At Edinburgh, candidates settled for a period of years in foreign parts, who have complied with all the regulations for the degree of M.D. (under the new statutes), but who cannot appear personally to receive the degree, may, on satisfying the Senatus to that effect, by production of sufficient official testimonials, have the degree conferred on them in absence. The degree of M.D. is also conferred *in absentiâ* at Glasgow and at Aberdeen where sufficient reason is shown.

The degree of Doctor of Medicine may be conferred by the University of St. Andrews on any registered medical practitioner above the age of forty years, whose professional position and experiences are such as, in the estimation of the University, to entitle him to that degree, and who shall, on examination, satisfy the Medical Examiners of the sufficiency of his professional knowledge, provided always that such degrees shall not be conferred on more than ten in any one year. The candidate must produce a certificate of age, and three certificates from medical men of acknowledged reputation as to his professional position and experience. The examination is conducted in writing and *vivâ voce* on Materia Medica and General Therapeutics, Medical Jurisprudence, Practice of Medicine and Pathology, Surgery, and Midwifery and Diseases of Women and Children.

The Graduation Fees in the Universities of Edinburgh and Aberdeen are—for the Degree of M.B., three examinations, each £5 5s. = £15 15s.; for the degree of C.M., £5 5s. additional. Total fees for M.B. and C.M. Degrees in Edinburgh, £22. At Glasgow there are four examinations for the conjoined degrees of of M.B. and C.M., the fee being £5 5s. for each; and at St. Andrews for the same degrees three examinations, the fee for each being £7. For the degree of M.D. the fees at each University are £5 5s. additional to that for M.B. and C.M., together with Government stamp-duty (£10).

The fee for graduating under the old regulations in Edinburgh is £25. At St. Andrews, the fee for the degree of M.D. under the section relative to registered medical practitioners is 50 guineas; if the candidate fail to pass, £10 10s. (which is to be paid before the examination) is retained. Stamp-duty is included in both cases.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.

STATED examinations for the Licences of the College in Medicine and Midwifery are held in the week following the first Friday in February, May and November.

THE LICENCE IN MEDICINE.

Registered medical practitioners may be admitted to examination for the Licences of the College to practise Medicine and Midwifery, on producing satisfactory evidence of character from a Fellow of the College, or from two registered medical practitioners. A candidate qualified as above, but who is of less than five years' standing, is required to fill up a schedule containing evidence—(1) Of having attended for twenty-seven months a recognised medico-chirurgical hospital, in which clinical lectures

given in London or Dublin, required for the degrees of the University, will have to be attended at the University. In provincial schools where there are no lecturers recognised by the University Court, a candidate can have only one *Annus Medicus*, and this is constituted by attendance on a qualified hospital along with a course of Practical Anatomy; but in a provincial school, where there are two or more lecturers recognised by this University, a second *Annus Medicus* may be made by attendance on at least two six months', or one six months' and two three months' recognised courses.

[5] The University of St. Andrews requires an Inaugural Dissertation to be presented previous to the Final Examination for M.B. In the other Universities no thesis is required until the candidate seeks the degree of M.D.

[6] Or within three years thereafter.—*St. Andrews.*

[7] No Thesis will be approved by the Medical Faculty which does not contain either the results of original observations in Practical Medicine, Surgery, Midwifery, or some of the sciences embraced in the curriculum for the Bachelor's and Master's degrees; or else a full digest and critical exposition of the opinions and researches of others on the subject selected by the candidate, accompanied by precise reference to the publications quoted, so that due verification may be facilitated.—*Edinburgh.* There is a similar regulation in the Universities of Glasgow and Aberdeen.

and clinical instruction in medicine are given, the attendance not to be for more than nine months in any one year, namely, six winter and three summer months. 2. Of having discharged the duties of medical clinical clerk during six months, or of having taken notes, to the satisfaction of the physician in charge of the case, and certified under his hand, of at least six separate medical cases —including different varieties of acute and chronic diseases—in the wards of a recognised hospital; and of having attended, during the whole period of his attendance on hospital practice, demonstrations in the *post-mortem* room of a recognised hospital.[1] 3. Of having, for not less than three months, studied Fever in a recognised clinical hospital containing fever wards, and recorded, from daily personal observation, at least five cases of fever, to the satisfaction of the attending clinical physician, as attested by his signature. The word "fever" includes the following diseases only —namely, typhus, typhoid or enteric fever, scarlet fever, smallpox, measles. 4. Of having attended Practical Midwifery and Diseases of Women for six months at a lying-in hospital or maternity recognised by the College; or, where such hospital attendance cannot have been attained during any period of the course of study, of having been engaged in Practical Midwifery under the supervision of a registered practitioner holding public appointments; the certificate in either case to state that not less than twenty labour cases have been actually attended. 5. Of having been engaged in the practical study of Vaccination. [This rule applies to candidates who commenced the study of medicine on and after October 1st, 1879.] 6. Of having lodged the admission fee in the Royal Bank of Ireland to the credit of the College.

The subjects of examination for the Licence to practise Medicine are—Practice of Medicine, Clinical Medicine, Pathology, Medical Jurisprudence, Midwifery, Hygiene, and Therapeutics.

A candidate qualified as above, but who is of five years' standing, shall be admitted to examination for the Licence of the College, on producing his certificate of registration, with satisfactory references, and shall have the privilege of being exempted from the examination by printed questions.

THE LICENCE IN MIDWIFERY.

Candidates for the Licence in Midwifery, who are not Licentiates in Medicine, may be admitted to examination on producing evidence that they are Registered Medical practitioners of the United Kingdom; 2. Testimonials as to character; 3. Certificates of having attended (*a*) a course of lectures on Midwifery in a school recognised by the College; (*b*) Practical Midwifery and Diseases of Women, for six months, at a lying-in hospital or maternity recognised by the College; or, where such hospital attendance cannot have been obtained during any period of the candidate's course of study, of having been engaged in Practical Midwifery under the supervision of a registered practitioner, holding a public medical appointment—the certificate, in either case, to state that not less than twenty labour cases have been actually attended.

Candidates who are already Licentiates in Medicine of the College, or who have passed the examination for such licence, may be admitted to examination for the Licence in Midwifery on lodging their fees, and signifying their wish to the Registrar a week at least before such examination.

Any registered medical practitioner of five years' standing, shall be admitted to examination for such Licence in Midwifery on producing his certificate of registration, with satisfactory reference, and he shall have the privilege of being exempted from the examination by printed questions.

FEES FOR THE LICENCES TO PRACTISE MEDICINE AND MIDWIFERY.

Fee for the Licence to practise Medicine, £15 15s., except in the case of Graduates in Arts and Medicine of any University in the United Kingdom, when the fee shall be £5 5s. only. Fee for examination for the Licences in Medicine and Midwifery, if obtained within the interval of a month, £16 16s.—to be lodged in one sum.[2] Fee for special examination for the Licence to practise Medicine, £21. Fee for examination for the Licence to practise Midwifery, £3 3s. Fee for special examination for the Licence to practise Midwifery, £5 5s. The admission fee, less the sum paid to the examiners, will be returned to rejected candidates.

[1] This rule is to be enforced in the case of all candidates who shall have commenced their professional studies after September 30th, 1883.

[2] Any candidate who has been rejected at the examination for the Licence in Medicine loses this privilege, and shall be required to pay the full fee of £3 3s. for the Licence in Midwifery.

MEMBERSHIP.

Every candidate for the Membership of the College (not admitted before December 12th, 1878), is required to produce satisfactory evidence—1. Of having attained the age of twenty-five years. 2. Of being a Licentiate of the College for three years at least, computed from the day on which he shall have subscribed his name on admission as a Licentiate; or a Licentiate of one year's standing, who shall be a Graduate of Arts of a University in the United Kingdom at the time of his obtaining the licence; or a Licentiate of one year's standing who shall be a registersd practitioner of seven years' standing at the time of his obtaining the licence. 3. Of moral character and professional conduct from a Fellow or Member of the College, or from a Fellow of one of the Colleges of Physicians of London or of Edinburgh. 4. That he is not engaged in trade; and that he does not dispense medicine, or make any engagement with a chemist or other person for the supply of medicines; and that he does not practise medicine or surgery in partnership. 5. Of having held during at least six months the office of resident physician or resident medical pupill or of having acted during the same period as medical clinical clerk, in a recognised hospital; or of having been in medical charge for at least twelve months of a public institution for the treatment of the sick.

Every candidate must pass an examination in: 1. Principles of Medicine, including Pathology, Morbid Anatomy, and Medical Chemistry; 2. Practice of Medicine, including Principles of Public Health; 3. Clinical Medicine. The fee for the examination is, £21, which must be lodged in the Royal Bank, Dublin, before the applications and certificates are sent in. The examinations are held in January, April, July, and October.

Candidates who were admitted Licentiates of the College before December 12th, 1878, may be admitted Members of the College, under the following conditions. They shall comply with Clauses 1, 2, 3, and 4, as above stated. They shall satisfy the College that they have, since their admission as Licentiates, obeyed the by-laws of the College. Should the College be satisfied that they have complied with the above regulations, they shall be admitted Members without fee or examination, on taking the declaration required of Members. Should the candidate wish to obtain the parchment diploma of Membership, he shall pay one guinea.

REGULATIONS FOR THE CONJOINT EXAMINATIONS OF THE KING AND QUEEN'S COLLEGE OF PHYSICIANS AND THE ROYAL COLLEGE OF SURGEONS IN IRELAND.

ALL information relative to the examinations under the Conjoint Scheme may be obtained from the Secretary of the Committee of Management, 47, Dawson Street, Dublin, with whom all applications of candidates for permission to be examined, and with whom the bank receipt for fees and all certificates, etc., are to be lodged at least fourteen days prior to the day fixed for the commencement of the examinations for the class to which each candidate belongs.

Each candidate before receiving his diplomas must produce evidence that he has attained the age of twenty-one years.

The term examinations, beginning with that of the Junior Class, commence on the first Monday in April, July, and October of each year. A supplemental Final or qualifying examination is held in January of each year.

First Professional Examination.—Candidates shall be required, before admission to the First Professional Examination, to produce evidence: 1, of having been registered by the General Medical Council as medical students; 2, of having attended a course of lectures on Practical Anatomy, and one on Chemistry; 3, of having attended a course of Demonstrations and Dissections; 4, of having attended a summer course on Practical Chemistry and on Practical Pharmacy; 5, of having studied Practical Pharmacy for three months in the compounding department of a clinical hospital, or in the compounding establishment of a licentiate apothecary or Member of the Pharmaceutical Society, or a course in Pharmacy in a recognised medical school.

Fee.—The fee for this examination is £15 15s.

Second Professional Examination.—Candidates shall be required, before admission to the Second Professional Examination, to produce evidence of having passed the First Professional

Examination; also certificates of having subsequently attended a medico-chirurgical hospital for nine months, together with evidence of having taken notes to the satisfaction of the physicians or surgeons in charge of the cases, and certified under their hands, of at least three Medical cases and three Surgical cases, in the wards of a recognised medico-chirurgical hospital, and the following courses of lectures:—Winter Courses: Practical Anatomy, Demonstrations and Dissections. Summer Course, three months: Histology, Materia Medica. The candidate is examined in Anatomy, Histology, Hospital Practice, Physiology, and Materia Medica.

Fee.—The fee for this examination is £10 10s.

Third Professional Examination.—Candidates shall be required, before admission to the Third Professional Examination, to produce evidence of having passed the Second Professional Examination; also certificates of having in his third, or a later, year attended a medico-chirurgical hospital for nine months, or acted for six months as resident pupil, together with evidence of having taken notes to the satisfaction of the physicians and surgeons in charge of the cases, and certified under their hands, of at least three medical cases and three surgical cases, in the wards of a recognised medico-chirurgical hospital, and of the following courses of lectures:—Winter Courses: Demonstrations and Dissections, Medicine, Surgery, Physiology. Summer Course, three months: Medical Jurisprudence. The candidate is examined in Surgical Anatomy, Surgery, Medicine, and Physiology.

Fee.—The fee for this examination is £9 9s.

Fourth, or Final, Professional Examination.—A candidate is required, before admission to the Final Examination, to produce evidence: 1, of having passed the Third Professional Examination; 2, of having in his fourth, or a later, year attended a medico-chirurgical hospital for nine months as extern pupil, or six months as resident pupil, unless a certificate to that effect has been accepted in the third year, and of having attended a Winter course of lectures on Midwifery. Certificates shall also be required: 1, of having attended a recognised midwifery hospital, or maternity, for six months in the winter or summer of either the third or the fourth year, with evidence of having been present at thirty labours; 2, of having, for not less than three months, studied Fever in a recognised clinical hospital containing fever wards, and recorded, from daily personal observation, at least five cases of fever, to the satisfaction of the attending clinical physician, as attested by his signature.—[*Note.*—Attendance at a fever hospital will not be recognised if concurrent with that on Practical Midwifery.]—3, of having attended a course of Operative Surgery in the summer session of either the third or fourth year; 4, of having attended at a recognised ophthalmic and aural hospital, or at a recognised ophthalmic and aural department of a general hospital, Clinical Lectures in Ophthalmic and Aural Surgery during a period of three months. The candidate is examined in Medicine, Surgery, Therapeutics, Pathology, Midwifery and Gynæcology; Forensic Medicine; Hygiene; Ophthalmic and Aural Surgery.

Fee.—The fee for this examination is £6 6s.

Fellowship.—Under the new regulations which came into force in July, 1889, candidates are divided into two grades: Grade I. Licentiates or Graduates in Surgery of a University or College recognised by the College of less than ten years' standing; the examination may be passed in two parts—Primary and Final. The Primary, which comprises Anatomy, Physiology, Histology, and dissections, may be passed at any period after obtaining a surgical qualification. For the Final a candidate must (1) submit a thesis or clinical reports with observations of six surgical cases, and must (2) produce evidence that he has been engaged in the acquisition of professional knowledge for a period of not less than six years, three at least of which must have been spent in a school or schools of Great Britain recognised by the College; the other three may have been spent in a foreign school of repute; the candidate must be 25 years of age and have had opportunities of practical instruction as House-Surgeon or Dresser in a recognised hospital, or have been engaged in actual practice; (3) must pass an examination in Surgery, Surgical Pathology, and Operative and Clinical Surgery. The candidate at both parts of the examination must make a declaration that he has not been rejected within three months by any licensing body. Grade II. Licentiates of more than ten years' standing: the candidate is examined in Surgical Anatomy, Morbid Anatomy, Surgery, and Clinical and Operative Surgery.

Fees for Grade I.—For Licentiates of the College: for Primary Examination, £15 15s.; for Final Examination, £10 10s. For Licentiates in Surgery of other licensing bodies: for Primary Examination, £26 5s.; for Final Examination, £15 15s.

Fees for Grade II.—Licentiates of the College, 25 guineas; Licentiates in Surgery of other licensing bodies, 40 guineas. In either case £10 10s. shall be retained by the College in case of rejection, and shall not be allowed in the fees of re-examination.

A candidate must make application to the President and Council to be admitted to examination, and, if the Council decides to entertain that application, it lies on the table for at least a fortnight, for consideration, before it is put to the Council for approval. All the required evidences of study or qualification, fees, and testimonials to character must be submitted previous to its being so considered, and the candidate must then, if approved by the Council, be admitted to next Sessional Examination or to Special Examination at such date as the President shall fix.

Sessional Fellowship Examinations take place on the third Monday in January, the first Monday in May, the first Monday in July, and the third Monday in November, or as near thereto as may be.

Special Examinations may be granted at other times by the Council if they see fit. The special extra fee for such Special Examination shall be 10 guineas.

ROYAL COLLEGE OF SURGEONS, IRELAND, AND THE APOTHECARIES' HALL, IRELAND: CONJOINT EXAMINATION.

THE Royal College of Surgeons and the Apothecaries' Hall, Ireland, will continue to examine separately and to grant their diplomas only to candidates who have been registered medical practitioners before July, 1887, but the College will also continue to grant its Fellowship independently. All other candidates for the Letters Testimonial of the Royal College of Surgeons, Ireland, or the Licence of Apothecaries' Hall, Ireland, must fulfil the requirements and pass the examinations instituted under the scheme, as follows:

Preliminary Examinations, etc.—Every candidate must produce evidence of having, before entering on medical studies, passed a preliminary examination in general education recognised by the General Medical Council (*q. v.*), and of having been registered by that Council as a student in medicine.

First Professional Examination.—Certificates must be produced—(1) Of having been registered by the Medical Council at least nine months; (2) of having attended winter courses on Practical Anatomy, demonstrations and dissections, and Chemistry; a summer course in Practical Chemistry; of having been engaged in Practical Pharmacy for three months in the compounding department of a clinical hospital, or a school of pharmacy, or in the compounding establishment of a licentiate apothecary. If the candidate has not been examined in physics at the preliminary examination, he must pass in that subject at this examination. Candidates will be examined by written papers and orally in [Physics] Chemistry and Anatomy (that is, Osteology), and in Practical Chemistry in a laboratory. Fee, twelve guineas.

Second Professional Examination.—Certificates must be produced of having, subsequently to the First Professional Examination, attended—(1) a medico-chirurgical hospital for nine months, and of having held a clinical clerkship, or of having taken notes of of three medical and three surgical cases; (2) A winter course in Demonstrations and Dissections, Physiology, Surgery; and a summer course of Materia Medica and Practical Physiology, including Histology. Candidates will be examined by written papers in Anatomy, Physiology, Materia Medica, and Pharmacy, orally in these subjects and in hospital practice, and will be required to make a dissection, to prepare microscopical preparations, and to answer questions on naked-eye and microscopic preparations. Fee, seven guineas.

Third Professsional Examination.—Certificates must be produced of having, subsequently to the Second Professional Examination, attended—(1) a medico-chirurgical hospital for six months as resident, or nine months as extern pupil, and of having taken notes or acted as clinical clerk; (2) a winter course in Demonstrations and Dissections, Medicine, Midwifery and Gynæcology (may be deferred to fourth year); and a summer course in Medical Jurisprudence, and Hygiene. Candidates will be examined by written papers and orally in Anatomy, Surgery, Medicine, and Pathology (Medical and Surgical); they will also be required to make a dissection of a region, and to answer questions on the anatomy of that or other parts. Fee, seven guineas.

Fourth Professional Examination.—Evidence must be produced of having been registered as a medical student by the General Medical Council at least forty-five months previously, and of having, subsequently to the Third Professional Examination, attended—(1) a medico-chirurgical hospital for nine months as extern pupil, or for six months as resident pupil; (2) a winter course on Midwifery (unless taken in the third year), and the practice of a recognised midwifery hospital or maternity for six months in the third or fourth year, with evidence of having been present at thirty labours; (3) for three months in a clinical hospital containing fever wards; (4) Operative Surgery (in summer session of third or fourth year); (5) Clinical lectures on Ophthalmic and Aural Surgery at a recognised ophthalmic hospital, or the ophthalmic department of a general hospital. Candidates will be examined by written papers and orally in Medicine, Therapeutics, Surgery, Midwifery and Gynæcology, Ophthalmic and Aural Surgery, and Forensic Medicine and Hygiene; they will also be examined clinically in a hospital, and in operative surgery, each candidate being required to perform a major and a minor operation. Fee, seven guineas.

Exemptions.—(1) Fully qualified Licentiates of the College are, at their Final Examination, exempt from examination in Surgery, Forensic Medicine, and Hygiene; Licentiates of the Hall from examination in Medicine; and, in either case, if a registrable diploma in that subject is presented, from examination in Midwifery. (2). Candidates who have passed the First, Second, or Third Professional Examinations respectively, as hitherto conducted by the College, may present themselves for the Second, Third, or Fourth Professional Examination under the conjoint scheme respectively. (3.) Candidates who have passed the first half of the Professional Examination under the old scheme of the College, or the first and second part of the Examination of the Apothecaries' Hall, may present themselves for the Final Examination under the conjoint scheme if they have otherwise complied with its regulations. (4.) Candidates who have passed examinations by the licensing bodies which the Committee of Management may consider equivalent, are exempted from similar examinations under the scheme. (5.) The Committee of Inspection have power to make special exemption in favour of students engaged in study before July 1st, 1887.

Schedules of the subjects of examination, and all further information, may be obtained from the Registrar of the Royal College of Surgeons, or the Registrar of the Apothecaries' Hall, Dublin.

UNIVERSITY OF DUBLIN.

THE degrees in Medicine and Surgery granted by the University of Dublin are: 1. Bachelor of Medicine; 2. Doctor of Medicine; 3. Bachelor in Surgery; 4. Master in Surgery; 5. Bachelor in Obstetric Science; 6. Master in Obstetric Science. It also grants diplomas in Medicine, Surgery, and Obstetric Science, and a qualification in State Medicine.

BACHELOR IN MEDICINE.

A candidate for the degree of Bachelor in Medicine must be a Graduate in Arts, and may obtain the degree of Bachelor in Medicine at the same commencement as that at which he receives his degree of B.A., or at any subsequent commencement, provided the requisite medical education shall have been completed. The medical education is of four years' duration, and comprises attendance on a course of each of the following lectures: *Winter*—Anatomy; Practical Anatomy; Chemistry; Institutes of Medicine (Physiology); Practice of Medicine. *Summer*—Botany; Institutes of Medicine (Practical Histology); Comparative Anatomy; Materia Medica and Pharmacy; Medical Jurisprudence; Practical Chemistry. *Term Courses*—Heat (Michaelmas); Electricity and Magnetism (Hilary). Three courses of nine months' attendance on the clinical lectures of Sir Patrick Dun's or other metropolitan hospital recognised by the Board.[1] A certificate of personal attendance on fever cases, with names and dates of cases. Practical instruction in Vaccination. Any of the winter or summer courses may be attended at any medical school in Dublin recognised by the Provost and Senior Fellows.[2] Students who shall have diligently attended the practice of a recognised London or Edinburgh hospital for one year, or of a recognised county infirmary for two years previous to the commencement of their metropolitan medical studies, may be allowed to count those two years as equivalent to one year spent in a recognised metropolitan hospital.

Candidates for the degree of M.B. must pass the Previous Medical Examination and the Bachelor of Medicine Examination.

The *Previous Medical Examination* comprises Botany and Comparative Anatomy; Physics and Chemistry; Descriptive Anatomy and Institutes of Medicine (Practical Histology and Physiology). The examination in descriptive Anatomy includes examination on the dead subject. It is not necessary that the student should pass in all these subjects at the same examination.

A stated Half M.B. Examination is held at the close of the summer session in each year; in addition to which there is an examination in the last term before the M.B.

Bachelor of Medicine Examination.—The candidate for the M.B. Examination must have previously passed the Previous Medical Examination in all the subjects, and have lodged with the Medical Registrar, on a certain day to be duly advertised, certificates of attendance upon all the courses of study above prescribed.

Candidates must pass a final examination in the following subjects: Physiological Anatomy; Practice of Medicine; Medical Jurisprudence; Institutes of Medicine (Pathology and Hygiene); Clinical Medicine; Therapeutics. The fee for the *Liceat ad Examinandum* is £5; for the degree of M.D, £11.

DOCTOR IN MEDICINE.

A Doctor in Medicine must be a Bachelor in Medicine of three years' standing, or have been qualified to take the degree of Bachelor in Medicine for three years. He must also read a Thesis publicly before the Regius Professor of Physic, or must undergo an examination before the Regius Professor of Physic. The total amount of fees for this degree is £13.

BACHELOR IN SURGERY.

A Bachelor in Surgery must be a Bachelor in Arts, and have spent four years in the study of Surgery and Anatomy. He must have passed the M.B. Examination before presenting himself at the B.Ch. Examination, having previously completed the prescribed curriculum of study. The curriculum of study comprises the following, in addition to the complete course for the degree of Bachelor in Medicine: Theory of Surgery, Operative Surgery, and Ophthalmic Surgery, each one course; Dissections, two courses. Candidates are required to perform surgical operations on the dead subject, and are examined in Bandaging and Minor Surgery, and in Surgical Pathology. Fee for the *Liceat ad Examinandum*, £5; for the degree of Bachelor in Surgery, £5.

MASTER IN SURGERY.

A Master in Surgery must be a Bachelor in Surgery of the University of Dublin of not less than three years' standing, and must produce satisfactory evidence of having been engaged for not less than two years from the date of his registration in the study or study and practice of his profession. He must then pass an examination in the following subjects:—1. Clinical Surgery; 2. Operative Surgery; 3. Surgical Pathology; 4. Surgery; 5. Surgical Anatomy (on the dead subject). And one of the following optional subjects, namely: 1. Surgery, in one of its recognised branches, namely: Ophthalmic and Aural, Gynæcological, Dental; 2. Mental Disease; 3. Medical Jurisprudence and Hygiene; 4. Advanced Anatomy and Physiology; 5. Comparative Anatomy. Graduates in Surgery of the University of Dublin, of not less than ten years' standing, may be recommended for the degree of M.Ch., by the vote of the Court of Examiners, on such examination as they shall determine. Fee for the degree of Master in Surgery, £11.

BACHELOR IN OBSTETRIC SCIENCE.

A Bachelor in Obstetric Science must be a Bachelor in Arts, and have passed the M.B. Examination. The curriculum comprises the following in addition to the M.B. course: A winter course of lectures in Midwifery; six months' practice at a lying-in hospital or maternity. The examination comprises Gynæcology, Midwifery, and Obstetrical Anatomy. Fee, £1.

MASTER IN OBSTETRIC SCIENCE.

A Master in Obstetric Science must have passed the M.B. and B.Ch. Examinations, and produce evidence of having attended a summer course of Obstetric Medicine and Surgery. Existing

[1] The following hospitals are recognised:—Sir Patrick Dun's Hospital, Meath Hospital, Dr. Steevens's Hospital, Jervis Street Infirmary, City of Dublin Hospital, Mercer's Hospital, St. Vincent's Hospital, Adelaide Hospital, House of Industry Hospitals, Mater Misericordiæ Hospital, St. Mark's Ophthalmic Hospital, and the National Eye and Ear Infirmary.

[2] The following schools, in addition to the School of Physic, are recognised:—The School of the Royal College of Surgeons in Ireland, the Carmichael School, the Ledwich School of Medicine and Surgery, the School of the Catholic University.

Graduates in Medicine, of the standing of M.D., are not required to attend this course. Fee for the degree of Master in Obstetric Science, £5.

UNIVERSITY DIPLOMAS.

The medical courses are the same as for the corresponding degrees, except that attendance on Botany and Comparative Anatomy lectures is not required. A diplomate wishing to become a graduate must complete his Arts course, attend Botany and Comparative Anatomy Lectures, and pass the Previous Medical Examination in these subjects, and pay the degree fees.

MEDICAL AND SURGICAL TRAVELLING PRIZES.

A Prize of £100 is awarded by the Board, in alternate years, to the best answerer at a special examination in Medicine and Surgery, provided that the merit be deemed sufficient. The successful candidate is required to spend three months in the study of Medicine or Surgery, as the case may be, in Berlin, Paris, or Vienna. Before he can obtain the first instalment of £50, he must satisfy the Senior Lecturer that he possesses sufficient knowledge of a Continental language to derive full benefit from the prize. The examination is held in June, and is open to students who have graduated in Medicine or in Surgery, as the case may be, within two years of the examination. The subjects of the Medical Travelling Prize Examination are Clinical Medicine, Practice of Medicine, Therapeutics, Pathology, Obstetric Medicine, and Toxicology. The subjects of the Surgical TravellingPrize Examination are Clinical Surgery, Operative Surgery, Pathology, Surgical Anatomy, and Ophthalmic Surgery. A Travelling Prize in Medicine will be competed for in June, 1889.

ROYAL UNIVERSITY OF IRELAND.

ALL degrees, honours, exhibitions, prizes, and scholarships are open to students of either sex. The following degrees. etc., are conferred in the Faculty of Medicine. In *Medicine*, M.B., M.D. In *Surgery*, B.Ch., M.Ch. In *Obstetrics*, B.A.O., M.A.O. In *Sanitary Science*, a special diploma. In *Mental Disease*, a special diploma.

No student is allowed to enter upon professional studies until after the completion of the obligatory non-professional studies; that is, he must have passed the following examinations: the Matriculation Examination at least one academical year before, and must have passed the First University Examination. Certificates of attendances not in accordance with this regulation will not be accepted.

A medical student from one of the Queen's Colleges, the Queen's University, or any other institution approved by the Senate, matriculated therein before October 1st, 1881, who has completed at least one year of the medical curriculum in any of the said institutions, is entitled to credit for a year's course without passing the First Examination in Arts.

The course of medical studies is divided into periods of one year each, during each of which the student is required to follow a prescribed curriculum in an institution recognised by the Senate; certificates of attendance on the courses prescribed for the different years must be furnished by candidates for the examinations, and no such certificate will be received unless it attests a *bonâ fide* attendance on two-thirds of the whole course.[1] The courses in Natural Philosophy, Chemistry, Biology, Anatomy, and Physiology must be attended in institutions having facilities for experimental courses and practical work.

The First Year's Course of medical studies includes (1) Natural Philosophy (six months' course of lectures on three days a week, or a three months' course of lectures on five days a week): (2) Systematic Chemistry (six months) and (at the option of the student) Practical Chemistry (three months); (3) Biology, comprising (*a*) Botany, and (*b*) Zoology, each course to consist of lectures and demonstrations on three days a week for three months (syllabus of these courses are fully given in the Calendar of the University).—*The First Examination* in Medicine includes these subjects, except Practical Chemistry, and in each case consists of (i) a written examination, and (ii) practical work and oral examination; particular importance is attached to the practical parts. Candidates must produce a certificate of registration as medical students. Candidates who, at the First University Examination in Arts, failed to obtain 30 per cent. of the marks assigned to French or German will be required to pass a qualifying examination in those languages. Students who have taken the B.A. in any of the subjects named for the first year's course of medical studies will, upon the production of certificates of attendance in recognised institutions at proper courses of instruction in such subject or snbjects, be exempted from attending lectures on, or passing examinations in, such subject or subjects; and any such students who have passed in the three subjects [1, 2, and 3 (*a* and *b*)] shall be entitled at once to enter upon the second year's course of medical subjects, provided in every case that he shall have obtained at such B.A. examinations such marks in those subjects respectively as would have entitled him to have passed. Students may attend Anatomy in the first year of medical studies, and the certificate of such attendance will be accepted as one of the two certificates required in this subject.

The Second Year's Course of medical studies includes (1) Anatomy, systematic and practical; (2) Systematic Physiology; (3) Practical Chemistry, if not already followed in the first year; (4) Pharmacology (materia medica); (4) attendance during a winter session of six months at a medico-chirurgical hospital recognised by the University, and at the clinical lectures delivered therein. No certificate of attendance at any of the above courses will be accepted where such attendance appears to have been given before the completion of the full course prescribed for the first year.—*The Second Examination* in Medicine shall include the subjects (1), (2), (3), and (4) above mentioned.

The Third Year's Course comprises (1) Advanced Systematic Anatomy and Practical Anatomy; (2) Advanced Systematic Physiology and Practical Physiology and Histology;[2] (3) any *one* or *two* of the following: (*a*) Medicine, including Therapeutics and Pathology, (*b*) Surgery, including Therapeutics and Surgical Pathology, (*c*) Midwifery and Diseases of Women and Children, six months; (5) attendance during a winter session of six months, and a summer session of three months at a general hospital recognised by the University and at the clinical lectures therein. There will be at the end of the third year of medical studies *a Special Examination* in the complete course of Anatomy, Physiology, and Histology as prescribed above. A fee of £1 is payable before entering for this examination.

The Fourth Year's Course comprises the remaining subjects of the medical curriculum, namely:—(1) Midwifery and Diseases of Women and Children; (2) Mental Diseases (three months' course in a recognised institution where Clinical Instruction on Mental Disease is given); (3) Medical Jurisprudence with Hygiene; (4) Ophthalmology and Otology (a three months' course in a hospital having at least ten beds devoted to the Diseases of the Eye and Ear); (5) Operative Surgery; (6) Attendance during a winter session of six months, and a summer session of three months, at a general hospital recognised by the University, and at the Clinical Lectures therein; (7) Practical Midwifery at a midwifery hospital or dispensary.—*The Examination for the Primary Medical Degrees* is held at the conclusion of the fourth year of medical studies. Candidates are required to produce certain certificates of attendance at hospital practice. Certificates of attendance on lectures or hospital practice will only be received from institutions formally recognised by the Senate. (1) Certificate of attendance at a recognised hospital for three winter sessions, and two summer sessions, as more fully set out above. No hospital attendance will be recognised where such attendance has taken place prior to the completion of a first year of medical studies. (2) A certificate of having attended at a recognised midwifery hospital or dispensary where clinical instruction is given in Diseases of Women and Children, for six months; such attendance to take place not earlier than the fourth year of medical studies. The certificate must state that the candidate has attended 20 labours at least, at 10 at least of which he had personal charge. (3) A certificate of having attended, during a period of three consecutive months, a fever hospital of repute, or the fever wards of a general hospital receiving fever patients, and of having had personal charge of at least 10 fever cases. This attendance must not take place during the period of attendance on Practical Midwifery and Gynæcology. (4) A certificate of having compounded medicine under a licensed apothecary or pharmaceutical chemist directing a public establishment for the general compounding and sale of drugs in a town of about 10,000 inhabitants at least, or under the apothecary of a large general hospital recognised by the University. Certificates of instruction in connection with

[1] Certificates of attendance at night lectures will not be accepted save in the case of medical students registered as such prior to October 1st, 1887, and will not be received from such students for lectures attended after July 31st, 1890.

[2] A three months' laboratory course of two hours, three times a week, is prescribed, and one third at least of this time should be devoted to Practical Physiology; but the two subjects may be attended in separate courses, and one or both may be taken in the second year at the option of the student.

dispensaries will not be deemed satisfactory. (5) A certificate of having received practical instruction in vaccination stating that the candidate had attended on at least ten days at a place appointed for public vaccination, and had received practical instruction from a public vaccinator. (6) Certificates of attendance on subjects (2) and (4), enumerated above as part of the fourth year's course. (7) A certificate of attendance on a course of operative surgery by a duly appointed lecturer in a recognised school. (8) A certificate of having acted as dresser or clinical clerk in a recognised general hospital for at least two months; such certificates not to be simultaneous. [At the examinations in 1890 and thenceforth (9) a certificate of having had personal charge of at least six cases of diseases or affections peculiar to women, medical or surgical, in a special hospital or special ward. 10. A certificate of attendance on at least six cases of diseases of childhood.] The examination will consist of three parts, each of which must be taken as a whole, namely:—(*a*) Medicine, including therapeutics and pathology, mental diseases, medical jurisprudence, and hygiene; (*b*) Surgery—theoretical, clinical, operative; surgical anatomy, ophthalmology, otology; (*c*) Midwifery—gynæcology, diseases of children. Upon completing satisfactorily his examination in all these three parts the candidate will be granted the degrees of M.B., B.Ch., and B.A.O., together with a certificate setting out that he has passed a qualifying examination in Medicine, Surgery, and Midwifery. The fee for this certificate is £10; the fee for the examination is £2.

Honours.—An honours examination is held in connection with each of the four medical examinations, and in each case subsequently to the corresponding pass examination. In the case of the examination for the primary medical degree the honours examination will be held in each of the three divisions (*a*), (*b*), and (*c*) enumerated above. No one can be admitted to a degree in Medicine who is not fully twenty-one years of age.

Exhibitions.—The following exhibitions may be awarded annually by the Senate. At the First Examination in Medicine, two First Class at £20, and two Second Class at £10. At the Second Examination in Medicine, two First Class at £25, and two Second Class at £15. At the Third Examination in Medicine, two First Class at £30, and two second class at £20. At the Examination for the Primary Medical Degrees, two First Class of £40 each and two Second Class of £25 each. An exhibition will not be awarded to any candidate at the First Examination in Medicine, if a longer interval than three academical years shall have elapsed from the time of matriculation: nor at the Second Examination in Medicine, if a longer interval than two academical years shall have elapsed from the time of passing the First Examination in Medicine; or at the Third Examination, if a longer interval than three academical years shall have elapsed from the time of passing the First Examination in Medicine; or at the Examination for the Primary Medical degrees, if a longer interval than four academical years shall have elapsed from the time of passing the First Examination in Medicine. So long as each examination is held twice annually, not more than one First Class and one Second Class Exhibition shall be awarded in connection with each examination. —Hutchinson Stewart Scholarships,[3] each tenable for three years; one value £10 per annum, for competition in the subject for the Second Examination in Medicine; the other, annual value £50, to graduates of not more than two years' standing, for proficiency in Mental Diseases.

Travelling Medical Scholarship.—In and after 1888 a Travelling Scholarship, value £100, will be open to competition at the October Examination in the Faculty of Medicine. In one year the examination for this scholarship will be in Anatomy and Histology, in the next year in Physiology and Pathology. Candidates must have passed the Medical Degrees Examination either in the year of the Scholarship Examination or in the year immediately preceding.

DEGREE OF DOCTOR OF MEDICINE.

Candidates may be admitted to this degree after three academical years from the time of obtaining the degree of M.B. All persons who were students in Medicine in the Queen's University at the date of its dissolution are entitled to obtain the degree of M.D. upon passing the examination for the M.B. degree.

Candidates must give notice in writing of their intention to present themselves, and must pay the fee of £5 at least one month before the examination, and must produce a certificate of having been, for at least two years, engaged in hospital or private medical or surgical practice, or in the Military or Naval Medical Service.

Every candidate will be examined at the bedside, and required to diagnose at least three medical cases, and prescribe treatment; to write detailed reports on at least two cases to be selected by the examiners, and to discuss all the questions arising thereon. The examination will comprise Medical Diseases and the Theory and Practice of Medicine, including Pathology; and will include (*a*) a written examination, (*b*) an oral examination, (*c*) a clinical examination.

DEGREE OF MASTER IN SURGERY (M. CH.)

This degree is conferred only on graduates of Medicine of the University, and no candidate can be admitted to exainmation until three years have elapsed from the date of first graduating in Medicine. The fee is £5, and the examination will comprise: (1) Surgical diseases and Surgery, both theoretical and operative; (2) Surgical anatomy; (3) Opthalmology; (4) Otology, and will include written and clinical examinations, an examination on surgical instruments and appliances, and in operative surgery. Every candidate will be examined at the bedside and required to diagnose at least three surgical cases and prescribe treatment; and to write detailed reports on at least two cases, to be selected by the examiners, and to discuss the questions arising thereupon. Persons who passed the examination for M.B. before January 1st, 1888, will be entitled to proceed to the degree of M. Ch. according to the courses and regulations in force in 1887, at any time during the three years then next ensuing.

THE MASTERSHIP IN OBSTETRICS.

The degree of "Master of the Art of Obstetrics" (M.A.O.) is conferred only on graduates in Medicine of the University, and no candidate can be admitted until the lapse of three years from the date of obtaining the Primary Medical Degrees. The fee is £5. Every candidate must produce a certificate showing that he has had personal charge of at least twenty cases of labour, and at the examination of 1890 and thenceforward a certificate of having attended the practice of a clinical hospital for women, or a special ward of a general hospital for three months. The examination will comprise the theory and practice of Midwifery, and of Diseases of Women and Children, and will include a written and, as far as practicable, a clinical examination, an oral examination with practical illustrations, including use of instruments and appliances. Persons who passed the examination for M.B. prior to January 1st, 1888, shall be entitled at any time during the three years then next ensuing to proceed to the degree of M.A.O., according to the courses and regulations in force in October, 1887.

NOTES CONCERNING THE HOSPITALS AND MEDICAL SCHOOLS IN LONDON.

In addition to the Tables of the Classes, hours of attendance, and fees, given at pages 536 to 539, we subjoin the points of most interest in the Programmes issued by the several Medical Schools. At each hospital, clinical instruction in Medicine, Surgery, and Midwifery is given in the wards and in the out-patient departments; and also in various special departments, as stated in the tables at pages 536, 537, and in the subjoined notes. All hospital appointments, except where otherwise specified, are made without extra fee.

St. Bartholomew's Hospital.—*The Hospital* comprises 750 beds; 227 for Medical cases, 353 for Surgical cases, 26 for Diseases of the Eye, 20 for Diseases of Women, and 50 for Syphilitic cases; while 75 are at the Convalescent Hospital at Swanley. Children are admitted into both the medical and the surgical wards.

Museums, etc.—The Anatomical Museum, and the Museums of Materia Medica and of Botany, are open to students daily from 10 A.M. to 4 P.M. The Library is open every day from 9 to 5, except one week of the Christmas vacation and one month in the long vacation.

College.—Students attending the hospital or medical school are admitted to residence on the recommendation of a medical officer of the hospital; and such recommendation may be obtained by commencing students on adducing satisfactory evidence of good moral character. The entrance fee is £2 2s.; and a deposit of £3 3s. is required, which will be returned to the student on leav-

(*Continued on p. 540.*)

[3] These scholarships have been suspended owing to failure of the special fund.

GUIDE TO THE LONDON HOSPITALS AND MEDICAL SCHOOLS: 1889-90.

For further particulars regarding each Hospital and Medical School, see pp. 535, 540, et seq.

	St. Bartholomew's Hospital.	Charing Cross Hospital.	St. George's Hospital.	Guy's Hospital.	King's College and Hospital.
Physicians	Dr. Andrew. dy. ex. Th., 1.30 Dr. Church.....daily, exc. W., 1.30 Dr. Gee...Tu. Th. S., 1.30 Sir D. Duckworth...daily, exc. Tu. 1.30	Dr. Pollock...M. Th., 2 Dr. Green...W. S., 2 Dr. Bruce...Tu. F., 2	Dr. Dickinson...M. T. F., 1 Dr. Whipham...M. W. S., 1 Dr. Cavafy...Tu. Th. S., 1 Dr. Ewart, Tu. Th., S., 1	Dr. Pavy...Tu. F., 1.30 Dr. Pye-Smith...M. Th. S., 1.30 Dr. Taylor...M. Th. F., 1.30 Dr. Goodhart...M. Tu. Th. F., 1.30	Dr. Beale...Tu. F., 2 Dr. Duffin...W. S., 2 Dr. I. B. Yeo...Tu. F., 1.30 Dr. Ferrier...M. Th., 1.30 Dr. Curnow.....M. Th., 1.30
Physicians to Out-patients.		[1.30 Dr. Abercrombie...Tu. F., Dr. Lubbock...W. S., 1.30			
Assistant-Physicians	Dr. Hensley...M. Th., 11 Dr. Brunton...Tu. F., 11 Dr. N. Moore...W. S., 11 Dr. S. West...Tu. W. Th. S., 9	Dr. Willcocks...M. Th., 1.30 Dr. H. M. Murray...W. S., 1.30	Dr. I. Owen...M. F., 12 Dr. Penrose, Tu. S., 12	Dr. White...F., 12.30 Dr. Pitt...M., 12.30 Dr. Perry...Tu., 1 Dr. Shaw...W., 12.30	Dr. Tirard...Tu. F., 1.30 Dr. Dalton ..W. S., 1.30
Obstetric Physicians	Dr. M. Duncan. Tu. Th. S., 2	Dr. J. W. Black...Tu. F., 2	Dr. Champneys...Tu. F., 2	Dr. Galabin...M. F., 1.30	Dr. Playfair...Tu. Th. S., 2
Assist. Obstetric Physicians	Dr. Godson...W. S., 9	Dr. A. Routh...Tu. F., 1.30		Dr. Horrocks...Tu. F., 1.30 (o.-p.), Th. S., 12.30	Dr. Hayes (o.-p.)...M. W. F., 12.30
Diseases of the Skin	Mr. H. Cripps...F., 1.30	Dr. Sangster...M., 2	Dr. Cavafy...W., 2 Dr. Whipham, Th., 2	Dr. Perry...Tu., 1	Dr. Duffin...F.
Diseases of Throat					
Surgeons	Mr. Savory...daily, 1.30 Mr. T. Smith...daily, exc. Tu., 1.30 [1.30 Mr. Willett...daily, exc. F., Mr. Langton...daily, 1.30 Mr. M. Baker...daily, 1.30	Mr. Bellamy...M. Th., 2 Mr. Bloxam...Tu. F., 10 Mr. Morgan...W. S., 2.	Mr. Rouse. M. Th. F. 1; W 1.30 Mr. Pick. M. Th. F. 1; W., 1.30 Mr. Haward...Tu. Th. S., 1; W., 1.30 Mr. Bennett...T. Th. S. T. W., 1.30	Mr. Durham...M. Th. F. 1.30 Mr. Howse...W. S., 1.30 Mr. Davies-Colley. M. Th., 1.30 Mr. Lucas...M. Th., 1.30	Mr. Wood...Tu. Th. S., 1.30 Sir J. Lister...M. W. F., 1.30 Mr. Rose...M. W. F., 1.30 Mr. Cheyne (o.-p.) W. S., 1.30
Assistant-Surgeons	Mr. Marsh...Tu. F., 12 Mr. Butlin...M. Th., 12 Mr. Walsham...W. S., 12 Mr. Cripps, Mr. Clarke, 9	Mr. Boyd...M. T., 1.30 Mr. Sheild...T. F., 1.30 Mr. Wainewright, W. S. 1.30	Mr. Dent...M. F., 12 Mr. Turner, Tu. S., 12	Mr. Golding-Bird. Th., 12 30 Mr. Jacobson...W., 12.30 Mr. Symonds...M., 12.30 Mr. Lane...S. 12.30	Mr. Barrow...M. Th., 1.30 Mr. Careless...Tu. F., 1.30
Ophthalmic Surgeons	Mr. Power (i.-p.) Tu. Th. 1.30 Mr. Vernon (i.-p.) M. Th. S. 2	Royal Westminster Ophthalmic Hospital Staff, 1	Mr. B. Carter M. Th. 2; F. 1.15 Mr. Frost (asst.)...W. S., 2	Mr. Higgens...Tu., 12.30 Mr. Brailey (Asst.)...Tu. F.,	Mr. McHardy...M. W. Th., 1.30
Aural Surgeons	Mr. Cumberbatch. Tu. F., 2	Mr. Sheild...F., 9.30	Sir W. B. Dalby...Tu., 2	Mr. Purves...Tu., 1 [12.30	Dr. U. Pritchard...Th., 2.30
Dental Surgeons	Mr. Ewbank...Tu., 9; Mr. Paterson, F., 9	Mr. Fairbank...M. W. F., 9	Mr. Winterbottom. Tu. S., 9	Mr. Pedley...Tu. Th. F., Mr. Maggs [1.30	Mr. Underwood...M. Th., 10
Clinical Medicine	The Physicians...F., 1	The Physicians and Assistant-Physicians, 2	The Physicians...M., 4	The Physicians (Win.)...S., 1.30; the Assistant-Physicians (Sum.)...W., 1.30	Dr. Beale...alt. Tu., 3 Dr. Duffin...alt. F., (Win.) 3 Dr. B. Yeo...alt. Tu., (Sum.) 3
Clinical Surgery	The Surgeons.....M., 2.45 (Winter); S., 2.30 (Sum.)	The Surgeons and Assistant Surgeons, 2	The Surgeons...Tu., 4	The Surgeons (Win.)...W., 1.30; the Assistant-Surgeons (Sum.)...F., 1.30	Mr. Wood...Tu. Th., 1.30 Sir J. Lister...M. W., 2 [3
Clinical Midwifery and Diseases of Women	Dr. M. Duncan.....Dis. of Women) alt. Th., 1	Dr. J. W. Black...Twice a week	Dr. Champneys...W., 2	Dr. Galabin (Win.) W., 1.30; Dr. Horrocks (Sum) Tu. 1.30	Dr. Playfair...alt. Th. in Win.,
Operations	Mon., Tu., Wed., and Sat., 1.30; on Eye, Tu. Th., 1.30	Thursday and Saturday...2	Thursday, 1; Eye, F., 1.15	Tuesday and Friday, 1.30; Eye, M., 1.30; Th., 2	Mr. Wood...S., 2; Sir J. Lister ...F., 2; Mr. Rose...W., 3; S., 1
WINTER LECTURES.					
Physiology	Dr. Klein...Tu. Th. S., 10	Mr. F. W. Mott...M. Tu. W. Th. F., 3	Dr. Buckmaster, M. W., 2; T. Th. F., 2	Mr. Golding-Bird, M. W., 1.45; S., 9.30	Dr. G. F. Yeo...daily, 12.15
Pathological Histlgy.					
Practical Chemistry					
Anatomy, Descriptive and Surgical	Mr. Walsham & Mr. Bruce Clarke...Tu. W. Th. F., 9	Mr. Sheild...M. W. F., 9	Mr. Bennett...M. W. F., 9.15	Mr. Lucas and Mr. Jacobson...Tu. W. Th. F., 9	Dr. Curnow (sen.)...M. Tu. W. Th., 9; (jun.) W. Th., 11.15; F. S., 9
Anatomical Demonstrations	Mr. Bruce Clarke, Mr. Lockwood, Mr. Jessop, Dr. Herringham & Assistnts, 10 to 4	Mr. S. Boyd, Mr. F. C. Wallis and Mr. C. J. Woollett... daily, 9 to 4 (Sum., 9 to 1)	Mr. Ross and Mr. Allingham [11.30	Mr. Dunn, Dr. Washbourn, and Mr. Targett...daily, 9 to 4	Dr. Curnow and Mr. Kenny
Physics					
Chemistry	Dr. Russell...M. W. F., 10	Mr. Heaton...M. W. F., 4	Dr. Rideal... Tu. Th. S.,	Dr. Debus and Dr. Stevenson...Tu. Th. S., 11	Mr. Thomson..... M. W. Th., 10.30
Medicine	Dr. Andrew and Dr. Gee M. Tu. Th., 3.30	Dr. Pollock...M. W., 4; Th., 3	Dr. Dickinson. Tu. Th. F., 3	Dr. Pye-Smith and Dr. Taylor...M. W. F., 3	Dr. Beale...M. F., 4; W., 4
Pathology					
Surgery	Mr. Willett and Mr. Marsh ...W. Th. F., 2.30	Mr. Bellamy...Tu. Th. F., 4	Mr. Pick...Tu. Th. S., 9.15	Mr. Howse and Mr. Davies Colley....Tu. Th., 3.30; F., 1.30	Mr. H. Rose...Tu. W. 5; Th., 4
SUMMER LECTURES.					
Materia Medica	Dr. Lauder Brunton...Tu. W. Th. S., 10	Dr. Bruce (Therapeutics)... Tu. Th. S., 9	Dr. A. Gamgee, M. W. F.. Demons., Mr. Woodland	Dr. White...M. Tu. Th., 2	Dr. Tirard...Tu. W. Th. F., 8.45
Botany	Rev. G. Henslow...M. F., 10; W., 11.30	Dr. Willcocks (with Materia Medica) M. W. F., 9	[9		Mr. Groves. M. Tu. Th. F., 12.15
Midwifery	Dr. Matthews Duncan ... daily, 9	Dr. J. W. Black...M. Tu. W. F., 3	Dr. Champneys...M. W. F.,	Dr. Galabin. Tu. W. Th. F., 9 [10	Dr. Playfair...Tu. W. Th. F., 9
Forensic Medicine	Dr. Hensley..Tu. Th., 3.30; F., 2.30	Dr. Abercrombie...W. F.. 9; Tox., Mr. Heaton, M., 12	Dr. I. Owen...Tu. Th. S., 9	Dr. Stevenson...Tu. Th. S.,	Dr. Ferrier...M. Tu. W. Th., 4
Practical Chemistry	Dr. Russell...M. Tu. F., 11 [Tu. Th., 11.15	Mr. Heaton...M. Th., 2	Dr. Rideal, M. W. F. 11	Mr. Groves...M. W. F., 10 to 1	Mr. Thomson & Demonstrators...M. W. Th., 10.15
Comparative Anatomy	Dr. T. W. Shore (Summer)	Dr. Garson (Sum.)	Dr. Howes (Sum.)..M. F., 4		Mr. F. J. Bell (Win.), M. Tu. F., 4
Practical Physiology and Histology	Dr. Harris, Dr. Shore, and Dr. Lewis Jones, daily	Dr. Mott...(Sum.). Tu. W. F., 2; (Win.). Tu. Th., 4	Dr. Buckmaster (Histology)...M. Tu. Th. F., 3	Mr. Starling & Mr. Tubby (Win.)...Tu. Th., 1.30	Dr. G. F. Yeo and Demonstrators (Sum.)...Tu. F. S., 10.15 [3
Pathology and Morbid Anatomy	Dr. Norman Moore (lect.) Tu. 3.30 and F., 11	Dr. Murray (Sum.)...Tu. Th. S., 9; Mr. Morgan, Surgical (Win.), F. 3	Dr. Delépine (Winter)... W., 3; (demons.), W., 12	Dr. Goodhart (lect.) (Sum.) S., 9; Dr. Pitt and Dr. Perry (dem.)...daily, 2.30	Dr. Duffin (Sum.)...W. Th. F.,
Psychological Medicine	Dr. Claye Shaw (Sum.)... Th., 12.30			Dr. Savage (Sum.)...Tu., 11; F., 10.30	Dr. Sheppard
Public Health	Dr. Thorne Thorne (Sum.) M., 10	Mr. Heaton		Mr. G. Turner...M. F., 11.30	Dr. Kelly (Sum.)...Th., 12.30
Practical and Operative Surgery	Mr. Bowlby and Mr. D'Arcy Power...M., 4.30; W., 3.45; F., 3.30	Minor, Mr. Bloxam, Tu. Th., 9; Operative, Mr. Boyd (Sum.), 4	Mr. Dent (Pract.) (Sum.) M. W. F., 3; Tu. 3.30; Mr. Turner (Oper.) M. W. F., 9.30	Mr. Symonds & Mr. Lane, 3 months before each Final Exam. of Con. Board; Second Course of Oper. Surg. in summer	Messrs. Cheyne, Barrow, and Carless
Pathological Histlgy.					
Surgical Pathology					
Ophthalmic Medicine and Surgery	Mr. Power...Tu. Th., 9; Mr. Vernon (dem.), (Win.)... M., 2	Daily at 1	Mr. R. B. Carter and Mr. Frost (Win.).....W., 4; (Clin.) W. S., 2	Mr. Higgens. W. 3 (Winter); Mr. Brailey, W., 3 (Summer).	Mr. McHardy.....(clin. lect.) (Win.) alt. M., 3
Dental Surgery	Mr. Paterson & Mr. Mackrell	Mr. Fairbank...Jan. Feb. March	Mr. Winterbottom (Sum.) Tu., 10	Mr. Pedley (Winter), F., 4	Mr. Gibbings (clinical lect.) (Win.) alt. Tu., 10.30
Aural Surgery	Mr. Cumberbatch	Mr. Sheild, F., 9.30	Sir W. B. Dalby (S.)...Tu., 2		Dr. U. Pritchard...W., 9 (Sum.)
Diseases of Skin	Mr. Cripps	Dr. Sangster...M., 2	Dr. Cavafy (Win.), W., 2		Dr. Duffin...F., 3

GUIDE TO THE LONDON HOSPITALS AND MEDICAL SCHOOLS: 1889-90.

For further particulars regarding each Hospital and Medical School see pp. 535, 540, et seq.

LONDON HOSPITAL.	ST. MARY'S HOSPITAL.	MIDDLESEX HOSPITAL.	ST. THOMAS'S HOSPITAL.	UNIVERSITY COLLEGE AND HOSPITAL.	WESTMINSTER HOSPITAL.
Dr. Down...Tu. F., 2	Dr. Broadbent..M.Th.,1.45	Dr. Cayley...M. Th., 1.30	Dr. Bristowe...Tu. F., 2	Dr. Ringer	Dr. Sturges...M. Th., 1.30
Dr. H. Jackson...M. Th., 2	Dr. Cheadle...Tu. F., 1.45	Dr. Coupland...Tu. F.,1.30	Dr. Stone...M. Th., 2	Dr. C. Bastian	Dr. Allchin...Tu. F., 1.30
Dr. Sutton...M. Th., 2	Dr. Lees...W. S., 1.30	Dr. D. Powell...M.Th.,1.30	Dr. Ord...M. Th., 2	Dr. F. T. Roberts	Dr. Donkin...W. S., 1.30
Dr. Fenwick...Tu. F., 2	Dr.S.Phillips...M.Th., 1.30 (out-p.)	Dr. Finlay...Tu. F., 1.30	Dr. J. Harley...Tu. F., 2	Dr. Poore (1 & 2 daily)	
Dr. S. Mackenzie...Tu. F., 2 [1.30	Dr. MaguireTu.F.,1.30 (out-p.)		Dr. Payne...M. F, 2	Dr. T. Barlow (1 & 2 daily)	
Dr.Sansom.W.2(o.-p.)M.Th.	Dr. W. Pearce...W. S., 1.30				
Dr. Turner...W.,9.30;S.,1.30; (o.-p.) Tu. F., 1.30					
Dr. J. Anderson...W. S.,1.30	——	Dr. Fowler...Tu. F., 3.30	Dr. Sharkey...M. Th., 1.30	Dr. Angel Money	Dr. Hall...M. Th., 1.30 [1.30
Dr. G. Smith.Tu.F.,2;(o.-p.) W. S., 1.30		Dr. Biss...M. Th., 1.30	Dr. Gulliver...Tu. F., 1.30	Dr. Bradford	Dr. A. H. Bennett...Tu. F.,
Dr. Warner...M.Th.,2;(o.-p.) Tu. F., 1.30		Dr. Pringle...W. S., 1.30	Dr. Hadden...W. S., 1.30		Dr. Murrell...W. S., 1.30
Dr. Ralfe...W., 2 (o.-p.) M. Th., 1.30		Dr. Pasteur...W. S., 9	Dr. Acland...Tu. Th., 1.30		
Dr. Herman...M. Tu. F., 2	[F., 1.45 Dr. B. Hicks, F.R.S....Tu.	Dr. W. Duncan...M. Th.,	Dr.Cullingworth...Tu.F.,2	Dr. J. Williams	Dr. Potter...Tu. F., 2
Dr. Lewers...M.Th., 2 (o.-p.) W. S., 1.30	Dr. Handfield-Jones...M. Th., 1.30	1.30 (o.-p.) W.1.30	Dr. Cory...W. S., 1.30	Dr. H. R. Spencer	Dr. Grigg...Tu. F., 9
Dr. S. Mackenzie...Th., 9	Mr. M. Morris...M.Th.,9.30	Dr.R.Boxall...(o.-p.)M.F,9			
Mr. Couper...M. Th., 1.30		Dr. J. J. Pringle...Tu., 4	Mr. Anderson...F., 1.30	Dr.Crocker..W,1.30; S.9.15	Dr. T. C. Fox...W., 1.30
Mr. Rivington...Tu. F., 2	Mr. Norton...M. Th., 1.45	Mr. Hulke...M. Th., 1.30	Mr. S. Jones...Tu. F., 2	Mr. Berkeley Hill (1 and 2 daily)	Mr. Cowell...M. Th., 1.30
Mr. Tay...M. Th., 2	Mr. Owen...Tu. F., 1.45	Mr. Lawson...M. Th., 1.30	Mr. Croft...M. Th., 2 [2	Mr. C. Heath (1 and 2 daily)	Mr. Davy...Tu. F., 1.30
Mr. McCarthy...M. Th., 1.30	Mr. Page...W. S., 1.45	Mr. Morris...Tu. F., 1.30	SirW.Mac Cormac...M.Th.	Mr. Marcus Beck (1 and 2 daily)	Mr. Macnamara...W.,1.30;
Mr. Treves...Tu. F., 2	Mr. Pye...M. Th., 1.30 (out-p.)	Mr. A. Clark...M. Th. (o.-p) 1.15	Mr. MacKellar...Tu. F., 2	Mr. A. E. Barker (1 and 2 daily)	S., 9.30
Mr. C. Mansell-Moullin...M. Th., 1.30	Mr. Pepper. Tu.F.,1.30 (out-p.)			Mr. R. J. Godlee (1 and 2 daily)	
Mr. Reeves...Tu. S., 1.30	Mr.Silcock...W.S.,1.30 (out-p.)	Cancer...Th., 1.30			
	——	Mr. Pearce Gould...Tu.F., 1.30	Mr. Clutton...Tu. F., 1.30	Mr. V. Horsley (1 and 2 daily)	Mr. T. Cooke...M.Th., 1.30
			Mr. Anderson...M.Th.,1.30	Mr. B. Pollard (1 and 2 daily)	Mr. Bond...Tu. F., 1.30
		Mr.J.B.Sutton...W.S.,9.30	Mr. Pitts...W. S., 1.30		Mr. Stonham...W. S., 1.30
Mr. H. Fenwick...Tu. F.,1.30			Mr. Makins...M. Tu., 1.30		Mr. Spencer...M. Th., 1.30
Mr. F. S. Eve...M. W., 1.30	Mr.A.Critchett. Tu.F.,9.30	Mr. Lang...Tu. F., (o.-p.) 9 (in.-p.) 10	Mr. Nettleship...Tu.Th.,2; (o.-p.-) Tu. Th. F., 1.30	Mr. Tweedy...M. Th. 2	Mr. Cowell...M. Th., 2.30
Mr.W.Tay&Mr.Eve..Tu.S., 9	Mr. H. Juler...Tu.F.S.,9.30				
Dr.Woakes,Mr.Hovell.S.9.30	Mr. Field...M. Th., 2	Mr. Hensman...Tu., 9	Mr. Ballance...M., 1.30	Mr. Pollard, M. T., 9	Mr. James Black...M., 9
Mr. Barrett...Tu., 9	Mr.H.Hayward..W.S.,9.30	Mr. Bennett...M.,9.30;W.9	Mr. Truman...Tu. F., 10	Mr.S. Hutchinson. W.,9.30	Dr. Walker...W., 9.15; Mr. Smale...S., 9.15
		Mr. Hern...W., 9; F., 9.30			
The Physicians	The Physicians	The Physicians...F., 3	The Physicians...weekly	Dr. Ringer, Dr. Bastian, Dr. Roberts, Dr. Barlow, Dr. Money, Dr.Bradford	Dr.Sturges. Th.(aft.Xms.) Dr. Allchin...F.(bef.Xms.) Dr. Donkin...W. (Sum.)
The Surgeons	The Surgeons	The Surgeons...Tu., 3	The Surgeons..weekly;Mr. Croft,special(Win.)Tu 9; (Sum.) M., 9	Mr.Hill,Mr.Heath (Holme Prof.),Mr. Beck,Mr. Barker, Mr. Godlee	Mr. Cowell. Th.(bef.Xms.) Mr. Davy...F. (Sum.) Mr.MacnamaraW(af.Xms)
Dr, Herman and Dr. Lewers	Dr. Braxton Hicks and Dr. M. Handfield-Jones	Dr. Duncan...M. Th., 1.30	Dr.Cullingworth (Win.)... Tu., 4	Dr.J.Williams.fortnightly	Dr. Potter...F.
Daily, except Saturday, 2 [9; 2nd year...Tu. Th. S.,9	Tuesday ...1.30; Eye, F., 9	Wednesday, 1; Saturday, 2	Wednesday and Saturday, 1.30; Eye, Tu., 4; F., 2	Wednesday & Thursday, 2	Tuesday and Wednesday, 2
Mr.McCarthy,1st year,M.W.	Dr .A. Waller..M.W.Th.,12	Mr. Lowne...M. W. F., 9	Dr. Sherrington..M.W.F., 9.30	Mr. Schäfer & Dr.Halliburton...M. Tu. Th. F., 11	Dr. Abraham...M. W. Th., 1.30
Mr. Eve...T. F., 1	——	——	——	——	——
Mr. Page...M. W., 10.30	——	——	——	——	——
Mr. Treves,1st year...Tu.Th.. 9; 2nd year...M. W. F., 9	Mr.E.Lane..M.Tu.Th.F., 9	Mr. Hensman...M. Tu. Th. F., 4	Mr. Reid & Mr. Anderson... Tu.Th.S.,9.30; M.Tu.Th.11	Mr.Thane...daily,exc.S.,12	Mr. Black..Tu.W.Th.F.S., 9; also Sum. Tu. Th., 9
Dr. Moullin&Demonstrators 10 to 5, excepting Sat. aft.	Mr. E. W. Roughton, Mr. G. W. Hill, and Dr. Cagney...daily, 9 to 5	Mr. Sutton, Mr. Brodie and Mr. Carwardine, daily, 10 to 4	Mr.Reid,Mr.Anderson,Dr. Taylor, Mr. Makins, Mr. Parsons(Win)daily,10.30; (Sum.) M. Tu. W. Th. F.	Dr. Flemming, Mr. Pollard and assistants, 8 to 5; Sat., 8 to 2	Mr. Hebbert, Mr. Bell, Mr. Lewis ... M. 9.30 to 1, other days 10 to 1
Mr. Page, Th. S., 10.30	——	——	——	——	——
Dr. Tidy...M. W. F., 10.30	Dr.Wright...W.S.,9;Th.,10	Mr. Foster...M.W.Th.F., 3	Dr. Bernays...Tu. Th. F., 10.30	Dr. Ramsay...M. W. Th. F. S., 10	Dr. Dupré and Dr. Hake ...M. Th. F., 3
Dr. S. Mackenzie...M.W.F.,4	Dr. Cheadle and Dr. Lees...M. W, F., 5	Dr. Cayley...Tu. Th. S., 9	Dr. Bristowe and Dr. Ord ...M.Th.F., 9; after Jan. 1st, 4 P.M.	Dr. Bastian...Tu.W.Th.F., 9	Dr. Sturges & Dr. Allchin bef. Xms., M.W. Th., 4; after Xms., Tu. W. Th., 9
Dr. Sutton	——	——	——	——	——
Mr. Rivington...Tu. Th., 4: S., 10	Mr. Owen and Mr. Page M. Tu. Th., 4	Mr. Morris...M. W. Th., 3	Mr. Jones & Sir W. Mac Cormac..to Dec. 31st, M.Th. F., 4; after Jan. 1st, 9	Mr. Marcus Beck...M.S.,9; W., 4	Mr. Cowell and Mr. Macnamara bef.Xms. M.W.F 9; aft. Xms. M. W. Th., 4
	Dr. Phillips...M. Tu. W. F. S., 10	Dr. Biss...M. W. F., 4	Dr. Stone...M. F., 12; W., 12.30	Dr. F. T. Roberts...M., 9; Tu. W. Th. F., 10 [a.m.	Dr. Murrell...Tu. Th. S., 9
Dr. F. Warner...M. W. F., 12	Rev. J. M. Crombie...M.W. F., 11	——	Mr. A. W. Bennett..Tu.W. S., 10	Mr. Oliver...daily,exc.S., 9	Mr. Worsley-Benison
Dr. Herman...M. W. F., 9	Dr. B. Hicks and Dr. Handfield-Jones. T.W.Th.F., 9	Dr. Duncan...M. W. F., 9; Th., 3	Dr. Cullingworth...M. Tu. Th. F., 4	Dr. J. Williams. Tu.W.Th. F. S., 9	Dr. Potter...Tu. Th. F. S., 9
Dr. Tidy...W. F., 10.30; Dr. Sansom, M. Th., 3.30	Mr.A.P.Luff..M.Tu.Th.,11	Dr. Finlay...Tu, Th. F., 4	Mr. Clutton, Dr. Bernays, and Dr. Cory..Tu.Th.S.,9	Dr. Poore...Tu.W.Th.F.,10	Dr. Hall and Dr. Dupré... Tu. W. F., 3
Mr. Page...M.W.S.9and10.30 [10	[ganic, W. F., 11 Dr. Wright...Tu.F.S.,9;or- [F., 11	Mr. Foster...M. W. F., 3 [Tu. Th., 4	Dr. Bernays...M. Th. F.,10 [9	Dr. Ramsay...M. W. F., 11	Dr. Hake...M. W. F., Jan. to July, 11
Dr. Mansell-Moullin. Tu.Th.	Dr. Bottomley (Sum.).Tu.	Mr. J. B. Sutton (Sum.)...	Dr. Gulliver (Sum.) M.Th.	Mr. Ray Lankester (Win.	
Mr. McCarthy(Sum.)Tu.Th. 9.15; see also Physiology above	Dr. Waller and Dr. Reid Tu. W. Th., 2	Mr. Lowne (Sum.)...M.W. F., 9	Dr. Charles (Sum.) Tu. W. F., 2; Demonst. Dr. Copeman (Win.)..M. Tu. Th. F., 12	Mr. Schafer and Dr. Halliburton and Demonstrators	Dr. Abraham...(Win.) Th., 1.30; Hist. (Sum.)M. W. Th., 1.30
Dr.Sutton..(Sum.)Th.,12.30; S., 10; ditto (dem.) daily, Drs. Sutton, Turner, Anderson and Mr. Eve, 3.30	Mr.SilcockandDr.Maguire ...Tu. F., 12; daily, 2.30	Dr. Fowler(Sum.)..Tu.Th. S., 9; Mr. Hudson (demons.) weekly	Dr. Payne...W.F.,9; Dem., M.,4; Practical,Dr.Sharkey (Win.)...S.,11.30 [12	Mr. Horsley(Sum.),Tu.Th. F.,4; Prac.(Win.),M.Th., 4; Mr. Barker (Surg.) Tu. F., 9; W. S., 10 to 11	Dr. Allchin...W. Th., 9; Morbid Hist., Dr. Hebb, ...Tu. Th., 10
		Dr. Mickle (Sum.)...Th., 3	Dr. H. Rayner (Sum.)...F., [10.30	Dr. W. J. Mickle...W., 3	Dr. Mercier (June)...Tu. Th. F., 4
With Forensic Medicine	Mr. Shirley Murphy	Dr. Finlay (Sum.)	Dr. E. Seaton (Sum.)...W.,	Dr. Corfield, Dr. L. Parkes ...Tu. Th. F., 4; (Sum.)	With Forensic Medicine
Mr. Reeves and Mr. Rivington (Sum.)	Mr. Pepper and Mr. Pye... Tu. Th., 5	Mr. A. Clark...(Win.) W. F., 9; Oper. Surg., April	Mr.MacKellar,Mr.Clutton and Mr.Pitts(Win.).S.,9; (Sum.) F., 9	Mr. B. Pollard, and Mr. R. Johnson (Oct. Nov. Dec.) ...M. Th., 4; Mr. Godlee (Win. & Sum.); Mr. A. E. Barker..Tu.F.,9; W.S.,10	Mr. Davy; Minor Surg., Mr. Stonham, Tu. Th., 4
Mr. Eve...T. F., 1	——	——	——	——	——
Mr. Tay...W.,, 3	Mr.Critchett and Mr.Juler	Mr. Lang (Clin.)...Tu. F.,9	Mr. Shattock (Win.) W. 12	Mr. Tweedy (Sum.) M. W., 4; (clin.), M, Th., 2	Mr. Spencer Mr. Cowell (Sum.)...M., 3
Mr. Barrett (Sum.)	Mr. H. Hayward	Mr. S. Bennett...W., 9	Mr. Nettleship..(Oct. Nov. Dec.) M. F., 5; Mr. Lawford (Sum.),Tu.F.,5	Mr. Hutchinson...W., 9.30	Dr. J. Walker...(Oct. Nov. Dec.), W., 2.30
Dr. Woakes (Sum.)...Tu., 4	Mr. Field Mr. M. Morris	Mr. Hensman...Tu., 9 Dr. Pringle...Tu., 4; Th. 9.30	—— ——	Mr. Pollard...M. Th., 9 Dr. Crocker.....(clin. lect. alt. weeks)	Mr. Black...(June) Dr.Colcott Fox (Feb.Mar.) Th., 2.30

TABLE OF FEES FOR HOSPITAL ATTENDANCE AND LECTURES.

(The letter "s" denotes single course; "p" perpetual or unlimited attendance.)

	St. Bartholomew's.	Charing Cross.	St. George's.	Guy's.	King's College.	London.	St. Mary's.	Middlesex.
Composition Fee for all Lectures and Hospital Practice required by Examining Boards	£131 5s.; or 1st win. £42 1st sum. £48 6s. 2nd win. £48 6s. University students who have finished anatomical studies £68 5s.	£94 10s., or £105 in five instalments, namely, 1st win. £30 9s. 1st sum. £18 18s. 2nd win. £17 17s. 2nd sum. £18 18s. 3rd win. £18 18s.	1st year £45 2nd year £45 3rd year £20 Each subseqnt. year £20 (See note)	£131 5s.; or 1st win. and 1st sum. each £66; or 1st and 2nd year each £50; 3rd yr. £37 10s.	£126 11s. 6d.; or two years £66 each year; or three years £46 each year	100 guineas by instalments, or 90 guineas in one payment (See note)	£120; or 1st year £45 2nd year £40 3rd year £40 (See note)	£100; or 1st win. £40 2nd win. £45 3rd win. £25
Hospital Practice	*Medical.* 3 mos. £10 10s. 6 mos. £15 15s. 2 yrs. £23 12s. 6d. Unlim. £33 1s. 6d *Surgical.* 3 mos. £13 2s. 6d. 6 mos. £19 19s. 12 mos. £26 5s. Unlim. £33 1s. 6d	*Med. or Surg.* 3 mos. £5 5s. 6 mos. £7 7s. 12 mos. £10 10s. Full period £21 *Med. and Surg.* 3 mos. £8 8s. 6 mos. £10 10s. 12 mos. £15 15s. Full p. £31 10s.	*Med. or Surg.* 1 year £10 10s. 2 years £21 Perp. £31 10s.	*Med. or Surg.* 3 mos. £10 10s. 6 mos. £15 15s. 1 year £24 3s. Perp. £36 15s. *Med. and Surg.* 3 mos. £15 15s. 6 mos. £24 3s. 1 year £31 10s. Perp. £63	*Med. or Surg.* 1 sum. £5 5s. 1 win. £9 9s. 1 year £12 12s. Perp. £31 10s. *Med. and Surg.* 1 sum. £8 8s. 1 win. £14 14s. 1 year £18 18s. Perp. £42	6 mos. £10 10s. 12 mos. £15 15s. Perp. £26 5s. *Surgical.* 6 mos. £10 10s. 12 mos. £15 15s. 18 mos. £21 Perp. £26 5s.	*Med. or Surg.* 3 mos. £4 6 mos. £7 12 mos. £12 Perp. £24 *Med. and Surg.* 3 mos. £7 6 mos. £12 12 mos. £20 Perp. £45	*Med. or Surg.* Perp. £15 15s. 1 year £8 8s. 6 mos. £5 5s. 3 mos. £3 3s. *Med and Surg* Perp. £26 5s. 1 year £12 12s. 6 mos. £7 7s. 3 mos. £5 5s.
Fees for Students of Dental Surgery	£63; or 1st win. & 1st sum each £33 1s. 6d.	£42 2s.; or 1st Oct. £22 2s. 2nd Oct. £20	£55; or 1st year £30 2nd year £25	£42 — —	*Hospital.* 1 year £10 10s. 2 years £15 15s.	£40 Dent. pr. gen. £10	£55; or 1st year £30 2nd year £25	£42; or 1st win. £30 2nd win. £15
Anatomy	*s.* £9 9s. *p.* £13 2s. 6d.	£7 7s. Subs. c. £4 4s.	*s.* £7 7s. *p.* £8 18s. 6d.	*s.* £7 7s. —	*s.* £6 6s. *p.* £9 9s.	*s.* £5 5s. —	£8 —	*s.* £10 10s. Subs. c. £4 4s.
Demonstrations and Dissections	*s.* £7 7s. — —	£7 7s. Subs. c. £4 4s. —	*s.* £3 3s. — —	*s.* £7 7s. — —	*s.* £7 7s. — —	*s.* £5 5s. — —	£6 — —	*s.* £6 6s. Subs. c. £3 3s. —
Physiology	*s.* £9 9s. *p.* £13 2s. 6d.	£7 7s. Subs. c. £4 4s.	*s.* £7 7s. *p.* £8 18s. 6d.	*s.* £7 7s. —	*s.* £8 8s. *p.* £11 11s.	*s.* £4 4s. —	£7 —	*s.* £8 8s. Subs. c. £3 3s.
Practical Physiology and Histology	(P. P.) *s.* £7 7s.; (H.) *s.* £2 12s. 6d.	*s.* £6 6s. —	(H.) *s.* £3 3s. —	*s.* £7 7s. —	*s.* £6 6s. ext. c. £2 2s.	*s.* £3 3s. —	£5 —	*s.* £5 5s. Subs. c. £2 2s.
Comparative Anatomy	*s.* £2 12s. 6d. *p.* £4 4s.	*s.* £3 3s. —	*s.* £4 4s. — —	— — —	*s.* £4 4s. *p.* £6 6s.	*s.* £3 3s. —	£3 —	*s.* £2 2s. Subs. c. £1 1s.
Botany	*s.* £4 4s. *p.* £5 5s.	*s.* £4 4s. (See note)	— — —	— — —	*s.* £4 4s. *p.* £6 6s.	*s.* £3 3s. —	£3 —	*s.* £2 2s. Subs. c. £1 1s.
Chemistry	*s.* £6 16s. 6d. *p.* £9 9s.	*s.* £6 6s. —	*s.* £6 6s. *p.* £7 17s. 6d.	*s.* £7 7s. —	*s.* £8 8s. *p.* £11 11s.	*s.* £7 7s. —	£6 —	*s.* £6 6s. Subs. c. £3 3s.
Practical Chemistry	*s.* £3 3s. —	*s.* £5 5s. —	*s.* £4 4s. —	*s.* £5 5s. —	*s.* £6 6s. ext. c. £2 2s.	*s.* £5 5s. —	£4 —	*s.* £4 4s. —
Materia Medica	*s.* £6 16s. 6d. *v.* £7 17s. 6d.	*s.* £4 4s. (See note)	*s.* £4 14s. 6d. *p.* £5 15s. 6d.	*s.* £5 5s. —	*s.* £5 5s. *p.* £6 6s.	*s.* £3 3s. —	£4 —	*s.* £2 2s. Subs. c. £1
Practical Pharmacy	— —	*s.* £2 2s. —	*s.* £3 3s. —	*s.* £3 3s. —	— —	*s.* £4 4s. —	3 mos. £3; 6 mos. £6	£3 3s. —
Pathology and Morbid Anatomy	*s.* £2 12s. 6d. *p.* £4 4s.	*s.* £4 4s. (See note)	*s.* £3 3s. —	P. £3 3s. M. A. £7 7s.	*s.* £3 3s. *p.* £4 4s.	*s.* £3 3s. —	*s.* £4 —	*s.* £4 4s. Subs. c. £2 2s.
Medicine	*s.* £6 16s. 6d. *p.* £9 9s.	£7 7s. —	*s.* £7 7s. *p.* £8 18s. 6d.	*s.* £7 7s. —	*s.* £8 8s. *p* £9. 9s.	*s.* £5 5s. —	*s.* £8 —	*s.* £8 8s. Subs. c. £3 3s.
Surgery	*s.* £6 16s. 6d. *p.* £9 9s.	*s.* £7 7s. —	*s.* £7 7s. *p.* £8 18s. 6d.	*s.* £7 7s. —	*s.* £8 8s. *p.* £9 9s.	*s.* £5 5s. —	*s.* £8 —	*s.* £8 8s. Subs. c. £3 3s.
Practical Surgery	*s.* £6 16s. 6d. *p.* £9 9s.	*s.* £5 5s. —	*s.* £4 4s. —	*s.* £4 4s. —	*s.* £3 3s. —	£5 5s. —	*s.* £5 —	*s.* £6 6s. Subs. c. £2 2s.
Operative Surgery	*s.* £3 3s.	(See note)	*s.* £2 2s.	*s.* £5 5s.	£2 9s. 6d.	£5 5s.	£5	*s.* £5 5s.
Ophthalmic Surgery	*s.* £2 12s. 6d. *p.* £4 4s.	— —	inc. in Surg. —	*s.* £2 12s. 6d. —	— —	*s.* £2 2s. —	*s.* £3 —	*s.* £2 2s. —
Dental Surgery	*s.* £2 12s. 6d. *p.* £4 4s.	— —	— —	— —	— —	*s.* £2 2s. —	*s.* £3 —	*s.* £2 2s. —
Midwifery	*s.* £6 16s. 6d. *p.* £7 17s. 6d.	*s.* £4 4s. —	*s.* £4 14s. 6d. *p.* £5 15s. 6d.	*s.* £5 5s. —	*s.* £5 5s. *v.* £6 6s.	*s.* £4 4s. —	*s.* £5 —	*s.* £5 5s. Subs. c. £2 2s.
Forensic Medicine	*s.* £4 4s. *p.* £5 5s.	*s.* £4 4s. —	*s.* £4 14s. 6d. *v.* £5 15s. 6d.	*s.* £5 5s. —	*s.* £5 5s. *p.* £6 6s.	*s.* £3 3s. —	*s.* £4 —	*s.* £4 4s. Subs. c. £2 2s.
Psychology	*s.* £2 12s. 6d. *p.* £4 4s.	— —	— —	*s.* £3 3s. —	— —	£3 3s. —	— —	*s.* £2 2s. —
Public Health or Hygiene	£2 12s. 6d.	£2 2s.	—	*s.* £3 3s.	*s.* £1 1s.	—	£3 a month	*s.* £2 2s.
Instruction in Vaccination	—	—	by public Vac.	—	£1 1s.	£1 1s.	£1 1s.	£1 1s.
Library	Free	£1 1s.	Each yr. 10s. 6d. comp. £2	Free	£1 1s.	£1 1s.	£1 1s.	£1 1s.

ADDITIONAL NOTES.

St. Bartholomew's Hospital.—The Composition Fee includes Ophthalmic and Dental Surgery, Mental Diseases, and Public Health. University students who have passed their Anatomical and Physiological Examinations pay £68 5s., or instalments of £31 10s. and £42. Fee to Qualified Practitioner, for all courses of instruction, £15 15s. Extra in-patient dresserships; 3 months, £10 10s.; second period of 3 months, £6 6s. Advanced Physiology, £4 4s.

Charing Cross Hospital.—Anatomical and Operative Surgery parts, each 12s. 6d. Use of microscopes to students not possessing their own, 10s. 6d. Comparative Anatomy, general students, £3 3s. Second course of practical classes, £2 2s. Students rejected in either Anatomy or Physiology at second examination of Conjoint Board, £1 1s.; at final examination, £1 1s. in each subject; the fee for Botany and Materia Medica combined is £4 4s.

St. George's Hospital.—Perpetual students pay £125 at entrance; or 1st and 2nd years, each £45; 3rd year £40. Second year students pay £90, or instalments of £50 and £45. Third year students pay £65, or instalments of £40 and £30. The payments for courses required by the examining boards do not confer the privileges of perpetual students. Extra payment is required for Practical Pharmacy; Practical Chemistry; Subjects for Dissection (£3 3s.); Operative Surgery; Library; and Comparative Anatomy.

Guy's Hospital.—Perpetual fee, 125 guineas; students entering in second year, £99 15s.; in third year, £68 5s.; in fourth year, £52 10s.—Biology, £7 7s.; Experimental Physics and Morbid Histology, each £5 5s.; Practical Medicine, £4 4s.—Extra Fees: Practical Chemistry, £1 1s. The library fee (£1 1s.) is returned when the student leaves the hospital. Medical Graduates of a University, and doubly qualified Practitioners, are admitted to Hospital Practice on following terms: three months, £7 7s.; six months, £10 10s.; unlimited, £15 15s.

King's College.—If a course of Preliminary Science be included, the Composition Fee is one sum, £143 7s. 6d.; or two yearly instalments of £74; or three of £51; or four of £40 each. The Composition Fee includes perpetual attendance on Anatomy, Physiology, Chemistry, Medicine, Clinical Medicine, Surgery, Clinical Surgery (one Professor), Obstetric Medicine, Botany, Forensic Medicine, Materia Medica, Comparative Anatomy, Pathological Anatomy, and Hospital Practice; and one course each of Natural Philosophy, Practical Surgery, Practical Chemistry, Practical Pathology, and Practical Physiology. Extra courses of these subjects are charged £2 2s. each. A reduction of 20 per cent. is made to pupils who have attended at least five terms in King's College School.—Clinical Surgery (win.), one Professor, *s.* £6 6s; *p.* £8 8s.; both Professors, *s.* £8 8s.; *p.* £11 11s.; (sum.) one Professor, *s.* £4 4s.; *p.* £5 5s.; both *s.* £5 5s.; *p.* £6 6s.—Anatomy and Practical Anatomy, together, *s.* £9 9s.; *p.* £12 12s. Students of Practical Physiology pay £1 1s. for use of apparatus, etc. Practical Biology and Experimental Physics, three terms, each subject, £8 8s.; second year, each £3 3s. Practical

TABLE OF FEES FOR HOSPITAL ATTENDANCE AND LECTURES.

(The letter "s" denotes single course: "p" perpetual or unlimited attendance.)

St. Thomas's.	University College.	Westminster.	Queen's Coll., Birmingham.	Bristol Medical School.	Leeds.	Univers. Coll., Liverpool.	Owens Coll., Manchester.	University of Durham Coll. of Med.	Sheffield.
125 guineas; or On entr. £75 2nd win. £63; or 1st year, £65 2nd year, £50 3rd year, £30	£126; or 1st year £57 15s. 2nd yr. £52 10s. 3rd year £21	£105; or 1st win. £55 2nd win. £55 or 5 payments of £24 each	Lect. £63; or 1st year £31 10s. 2nd year £31 10s. *plus* entrance and library fees, £3 3s.	Lect. £52 10s. or including pre- liminary sum. session £63; or 1st sess. £31 10s. or £42 2nd sess. £21	Lect. £63; or 1st year £31 10s. 2nd year £31 10s. *plus* Hospital Practice	Lect. £57 15s. or 1st year £31 10s. 2nd year £26 5s. For Victoria Science Classes £23 14s., Medical Classes £63	Lect. £63 in two instalments 1st year £31 10s. 2nd year £31 10s.	£63; or 2 instal- ments, each £36 15s.; or 3 instal- ments; 1st £31 10s.; 2nd £26 5s.; 3rd £21	—
Med. and Surg. 3 mos. £15 6 mos. £26 9 mos. £35 12 mos. £40 Perp. £55	*Med and Surg.* Perp. £36 15s. 1 year £21	*Med. or Surg.* 3 mos. £4 4s. 6 mos. £7 7s. Each subseqnt. 6 mos. £5 5s. 3 years £24 3s. *Med. and Surg.* 3 mos. £7 7s. 6 mos. £12 12s. Each subseqnt. 6 mos. £7 7s. 3 years £36 15s.	*General and Queen's Hospitls.* 4 years £42, or in two equal sums 1 year £21 6 mos. £14 3 mos. £10	*Royal Infirm. Med or Surg.* 6 mos. £7 7s. 1 year £12 12s. Perp. £21 *Med. and Surg.* 1 year £21 Perp. £36 15s. *Gen. Hosp. Med or Surg.* 6 mos. £6 1 year £10 Perp. £20	*Infirmary. Med. or Surg.* 1 win. £7 7s. 1 sum. £6 6s. 12 mos. £12 12s. 18 mos. £15 15s. 3 years £21 Perp. £26 5s. *Med. and Surg.* Perp. £42; or 1st year £22 2nd year £22	*Royal Infirm.* Perp. £42 or in two equal instalments *Medical* 3 mos. £3 15s. 6 mos. £6 6s. 12 mos. £7 7s. *Surgical.* 3 mos £5 5s. 6 mos. £7 7s. 12 mos. £10	*Royal Infirm.* Full per. £42; or 2 instlmnts. £22 *Medical.* 3 mos. £4 4s. 6 mos. £6 6s. 12 mos. £10 10s. Full per. £18 18s. *Surgical.* 3 mos. £6 6s. 6 mos. £9 9s. 12 mos. £12 12s.	*Infirmary.* 3 mos. £7 7s. 6 mos. £10 10s. 12 mos. £14 14s. Perp. £32 11s.; or 1st year £14 14s.; 2nd year £12 12s.; 3rd year £8 8s.; or 1st year £16 16s.; 2nd year £16 16s. College £42, Infirmary £19 19s.	*Gen. Infirm. or Public Hospitl Med. or Surg.* Win. £6 6s. Sum. £3 3s.
£55; or 1st year £50 2nd year £10	£63 — —	£52 10s.; or 1st year £33 2nd year £22	£63; or 1st year £42 2nd year £21	*Perp., Med. and Surg.*, £36 15s. —	— — —	£75 comp. — —	£10 10s. for full period. —	£42; or 2 instal- ments of £22 10s. or 3 of £16 each	— — —
s. £7 7s. *p.* £10 10s. 3 mos. £4 4s. 6 mos. £6 6s. Perp. £10 10s.	*s.* £10 10s. *p.* £12 12s. 3 mos. £4 4s. 1 year £8 8s. —	1 c. £7 7s. Subsq. c. £3 3s. 3 mos. £5 5s. Subsequent 3 mos. £3 3s.	*s.* £6 6s. — *s.* £5 5s. —	*s.* £5 5s. — £3 3s. —	*s.* jun. or sen. each £5 5s. 3 mos. £2 2s. 6 mos. £3 3s.	2 cs. each £5 5s. 3rd c. £2 12s. 6d. *s.* £3 3s. Sum. £2 2s.	*s.* £5 5s. — 6 mos. £3 3s. 3 mos. £2 2s.	*s.* £5 5s. — *s.* £5 5s. —	1st c. £4 4s. 2nd c. £2 2s. — —
s. £7 7s. *p.* £10 10s. *s.* £6 6s. (extras) —	£7 7s. Elem. £5 5s. £8 8s. —	1 c. £6 6s. Subsq. c. £2 2s. 1 c. £2 2s. H. alone £6 6s.	*s.* £6 6s. — *s.* £4 4s. —	*s.* £5 5s. — *s.* £4 4s. —	*s.* jun. or sen. £5 5s. *s.* £6 6s. —	2 cs. each £5 5s. 3rd c. £2 12s. 6d. —	£5 5s. — *s.* £5 5s. (See note)	*s.* £5 5s. — *s.* £5 5s. —	1st c. £3 3s. 2nd c. £2 2s. *s.* £3 3s. —
s. £4 4s. *p.* £5 5s. *s.* £4 4s. *p.* £5 5s.	*s.* £6 6s. — *s.* £3 13s. 6d. *v.* £5 5s.	1 c. £3 3s. Subsq. c. £2 2s. 1 c. £4 4s. —	— — *s.* £4 4s. —	*s.* £4 4s. — *s.* £3 3s. —	*s.* £4 4s. — *s.* £5 5s. —	(See note) — (See note) —	*s.* £2 12s. 6d. — *s.* £2 12s. 6d. —	*s.* £2 2s. — *s.* £5 5s. —	— — *s.* £3 3s. —
s. £7 7s. *p.* £10 10s. *s.* £6 6s. (extras) —	*s.* £6 6s. Sec. c. £1 1s. *s.* £5 5s. Sec. c. £2 2s.	1 c. £6 6s. Subsq. c. £2 2s. *s.* £4 4s. Subsq. c. £1 1s.	*s.* £5 5s. — *s.* £4 4s. —	*s.* £3 3s. — *s.* £3 3s. —	*s.* £5 5s. — *s.* £4 4s. —	£5 5s. — (See note) —	(See note) — *s.* £4 4s. (See note)	*s.* £5 5s. — *s.* £5 5s. —	— — *s.* £3 3s. —
s. £4 4s. *p.* £5 5s. 3 mos. £3 3s. —	*s.* £6 6s. *p.* £7 7s. 3 mos. £3 3s. —	1 c. £3 3s. 2 cs. £4 4s. 3 mos. £1 1s. 6 mos. £5 5s.	*s.* £4 4s. — — —	*s.* £3 3s. — — —	*s.* £4 4s. — £2 2s. —	1st c. £4 4s.; 2 & 3 each £2 2s. £2 2s. —	*s.* £4 4s. — 3 mos. £3 3s. —	*s.* £5 5s. — £2 2s. —	*s.* £3 3s. — — —
s. £4 4s. *p.* £5 5s. *s.* £7 7s. *p.* £10 10s.	*s.* £6 6s. *p.* £7 7s. *s.* £9 9s. *p.* £11 11s.	1 c. £4 4s. 2 cs. £6 6s. 1 s. £6 6s. 2 s. £8 8s.	— £4 4s. *s.* £6 6s. —	*s.* £3 3s. — *s.* £5 5s. —	*s.* £4 4s. — *s.* £6 6s. —	1st c. £4 4s.; 2 & 3 each £2 2s. 0d. 1st & 2nd cs. £5 5s.; 3rd £2 12s. 6d.	*s.* £4 4s. — *s.* £5 5s. —	*s.* £5 5s. — *s.* £5 5s. —	— — 1st c. £4 4s. 2nd c. £2 2s.
s. £7 7s. *p.* £10 10s. *s.* £6 6s. (extras) —	*s.* £7 7s. *p.* £8 8s. *s.* £6 6s. Sec. c. £4 4s.	1 s. £6 6s. 2 s. £8 8s. 1 c. £3 3s. 2 c. £4 4s.	*s.* £6 6s. — — —	*s.* £5 5s. — £3 3s. —	*s.* £6 6s. — £4 4s. —	1st c. £5 5s.; 2nd & 3rd each £1 1s. 1st c. £4 4s.; 2 & 3 each £2 2s.	*s.* £5 5s. — *s.* £4 4s. —	*s.* £5 5s. — *s.* £4 4s. —	*s.* £4 4s. — *s.* £3 3s. —
s. £5 5s. *s.* £2 2s. —	*s.* £5 5s. *s.* £2 2s. —	£6 6s. *s.* £1 1s. —	— — —	£3 3s. — —	*s.* £3 3s. *s.* £2 12s. 6d. —	*s.* £4 4s. *s.* £1 1s. —	*s.* £4 4s. *s.* £3 3s. —	*s.* £5 5s. — —	— — —
s. £2 2s. *p.* £3 3s. *s.* £5 5s. *p.* £6 6s. *s.* £4 4s. *p.* £5 5s. *s.* £2 2s. *p.* £3 3s. *s.* £2 2s. £1 1s. —	— — *s.* £6 6s. *p.* £7 7s. *s.* £5 5s. *p.* £6 6s. — — *s.* £3 3s. £1 1s. —	*s.* £2 2s. — 1 c. £4 4s. 2 cs. £5 5s. 1 c. £3 3s. 2 cs. £4 4s. — — — £1 1s. £1 1s.	£4 4s. — *s.* £5 5s. — *s.* £4 4s. — — — — — £1 1s.	— — *s.* £4 4s. — *s.* £3 3s. — — — — *s.* £2 2s. — £1 1s.	— — *s.* £4 4s. — *s.* £5 5s. — — — — *s.* £2 12s. 6d. £1 1s. £1 1s.	1st c. £3 3s.; 2nd £2 8s. 1st c. £5 5s.; 2 & 3 each £2 12s. 6d. 1st c. £4 4s.; 2 & 3 each £2 2s. £1 1s. — £2 2s. £1 1s. *s.* 10s. 6d. *p.* £1 1s.	£4 4s. — *s.* £3 3s. — *s.* £1 11s. 6d. — £2 2s. A fee —	*s.* £5 5s. — *s.* £5 5s. — *s.* £5 5s. — *s.* £5 5s. £1 1s. 1 year 10s.; longer 15s.	*s.* £3 3s. — *s.* £3 3s. — *s.* £3 3s. — — — — £1 1s. —

Pathology £5 5s. Natural Philosophy £2 2s. Analytical and Experimental Chemistry (exclusive of material) 1 month £4 4s.; 3 months £10 10s.; 6 months £18 18s. Medical Tutors in every subject free of extra charge. Each second year student contributes £1 1s. towards the "Domus" fund of the College.

London Hospital.—General Fee for Lectures and Hospital Practice 100 guineas by instalments, or 90 guineas in one sum. For students entering at or before beginning of second winter £73 10s.; or two instalments of £47 5s. and £31 10s. Students in Arts of Universities where residence is required, may become Pupils of the Hospital, eligible for all appointments, on payment of £52 10s. Graduates of any Indian, Canadian, or other Colonial or American University or Medical College, may be admitted to three months' Clerkship or Dressership and twelve months' Hospital Practice for £10 10s.—The fees for Hospital Practice include Clerkships and Dresserships for one-half the term, not exceeding 6 months' Clerkship and 9 months' Dressership. Maternity Department, one year £4 4s.; including Midwifery Lectures £6 6s. Diseases of Throat and Aural Surgery, each *s.* £2 2s.; Pathological Histology £3 3s. Experimental Physics £3 3s. Extra for use of Apparatus, etc., in Practical Chemistry £2 2s.; in Practical Physiology £1 1s. Students' Club £1 1s.

St. Mary's Hospital.—*Table of Fees.*—Fee for unlimited attendance on the Hospital Practice and all Lectures and Demonstrations given in the School, £120, paid on entering the School; or £125 in instalments of £45 at the commencement of the first year of study, and £40 each at the commencement of the first and second years. Fee for attendance only on one of each of the Courses of Lectures or Demonstrations required by the regulations of the Conjoint Board of the Royal Colleges of Physicians and Surgeons of England to be attended in a Medical School and on Hospital Practice for the term specified in the same regulations, £100, paid in one sum on entering the School; or £105 paid in instalments of £40 each at the commencement of the first and of the second years of study, and of £25 at the commencement of the third year. *Fees for Separate Classes.*—Separate courses of Lectures may be attended on the following terms: Anatomy, Medicine, Surgery, each £8; Physiology £7; Chemistry £6; Histology, Midwifery, Practical Surgery, each £5; Pathology, Forensic Medicine, Materia Medica, Practical Chemistry, each £4; Botany, Comparative Anatomy, each £3; Hygiene £2

Fees for Attendance on Hospital Practice.

	Medicine.	Surgery.	Medicine and Surgery.
	£ s. d.	£ s. d.	£ s. d.
For 3 Months' Attendance	4 0 0	4 0 0	7 0 0
,, 6 ,, ,, ...	7 0 0	7 0 0	12 0 0
,, 12 ,, ,, ...	12 0 0	12 0 0	20 0 0
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(Continued from page 535.)

ing the College, subject to deduction of whole or part for wilful damage of furniture. Resident students are expected to dine in the hall every day.

Special Departments, etc.—Surgical consultations are held on Thursdays at 1.30. Medical casualty patients are attended by the Junior Assistant Physician, the Casualty Physicians (Dr. Tylden, Dr. Calvert, and Dr. Habershon), and the House-Physicians; the surgical casualty patients, by the two Junior Assistant-Surgeons and the House-Surgeons and Dressers. In addition to the courses mentioned at page 550, Dr. Matthews Duncan teaches Practical Gynæcology in the Wards for Diseases of Women on Tuesdays, Thursdays, and Saturdays, at 2 P.M. The Lecturer on Morbid Anatomy gives a demonstration of morbid specimens (medical) at 11 on Fridays. The Surgical Registrar gives a demonstration of Surgical Morbid Specimens every Tuesday at 11. Inspections are made in the Pathological theatre: medical cases by Dr. Norman Moore or Dr. J. A. Ormerod, at 1 P.M.; surgical cases by Mr. Bowlby, at 1.45. Microscopic specimens are demonstrated every Friday at 4.15 by the Lecturer on Morbid Anatomy and the Surgical Registrar. The Ophthalmic Wards are visited at 1.30 on Tuesdays and Thursdays by Mr. Power, and at 2 on Mondays, Thursdays, and Saturdays by Mr. Vernon; the ophthalmic out-patients are seen at 2 o'clock on Tuesdays and Thursdays by Mr. Power, and at 2.30 on Tuesdays and Saturdays by Mr. Vernon. Mr. Vernon gives Ophthalmoscopic Demonstrations at 2 P.M. on Mondays in the winter session. Mr. Walsham sees orthopædic cases at 2.30 on Mondays, and Mr. Butlin patients with diseases of the larynx at 2.30 on Fridays. Demonstrations of Operative Surgery are given by the Demonstrators of Anatomy and Operative Surgery throughout the year. Mr. Mills gives three months' courses of instruction on the administration of anæsthetics. Dr. Steavenson attends in the Electric Department at 1.30 P.M. on Mondays, Tuesdays, Thursdays, and Fridays, and gives systematic instruction.

Appointments.—Eight House-Physicians and ten House-Surgeons (who must be qualified to practise), and a Senior and a Junior Assistant-Chloroformist, are appointed annually. A Resident Midwifery Assistant and an Ophthalmic House-Surgeon are appointed every six months. Each of these officers receives a salary of £25 a year, except the Senior Assistant-Chloroformist, who receives £50. All, except the eight Junior House-Physicians and House-Surgeons, are provided with rooms. The Clinical Clerks to the medical in-patients and the Clerks to the Physician-Accoucheur are chosen from the most diligent students. Clerks

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For attendance on the Medical, Obstetric, or Surgical Tutor's Class for a period of three months, each £3. Fee for use of Dissecting Room and attendance on Demonstrations, £6 for the session. Fee for Work in Laboratory of Practical Hygiene, £3 per month. For attendance for three months on each of the Special Departments in Hospital of Ophthalmic, Cutaneous, Obstetric, Aural, Dental, or Throat Diseases, £3. Students who have kept a portion of the course of Medical study at Oxford or Cambridge are admitted as pupils on payment of £31 10s. for each year of attendance at the School.

MIDDLESEX HOSPITAL.—The Composition Fee includes all the Lectures required by the London Licensing Boards, one course of Practical Chemistry, and two courses of Dissections, the use of the Library, and the instruction of the Tutor. When payment is made by instalments, additional fees must be paid after the fourth year. Members of English Universities who have completed one year of medical study in the University are admitted to all lectures and hospital practice required (except Practical Chemistry, and including only one course of Dissections), for £60 on entrance, or instalments of £45, £20, and £5 at the beginning of each year; separate fees in the latter case being required after the third year. For students who have paid the fee of £35 on entrance upon the course of instruction in Science for the Preliminary Scientific (M.B.) Examination, the Composition Fee pavable upon their entrance upon the medical curriculum is £80; or by instalments, on entrance and at commencement of second winter session, £35; third winter session, £15; fourth winter session, £5. In the case of students who do not require instruction in Chemistry and Materia Medica, a deduction of £5 is made from the Composition Fee or first instalment. Occasional pupils entering to the Hospital Practice pay a registration fee of £1 6s. Parts for dissection, each session, £2 2s. Practical Medicine, one course, £6 6s.; subsequent course, £2 2s. Practical Midwifery, one course, £3 3s; subsequent course, £1 1s. Instruction in Anæsthetics, £1 1s.

ST. THOMAS'S HOSPITAL.—Perpetual Fee for students entering in second year, £85 in one sum; or, 2nd year £65; 3rd year £25; for students entering in third year, £55 on entrance; or £40, and the next year £20. Qualified medical practitioners are admitted to Hospital Practice and Lectures on payment of £12 10s. for unlimited attendance. Practical Pharmacy is not included in the perpetual fee. Students Dissecting, or attending Operative Surgery, pay for the parts they use. Midwifery Practice, £5 5s.; Obstetric Demonstrations, £3 3s.; Ophthalmic Practice, £2 2s.; Operative Surgery (voluntary class), £5 5s.; Operations on Eye (voluntary class), £2 2s. Pathological Anatomy (including practical course), £6 6s., with 10s. 6d. (extra) for apparatus, etc. Laryngology, £3 3s.; Experimental Physics, *s.* £4 4s.; *p.* £5 5s.

UNIVERSITY COLLEGE.—Composition Fees for the entire Medical Education required by the Examining Board in England and the Society of Apothecaries, £126; or first year, £57 15s.; second year, £52 10s.; third year, £21. For students who do not require to attend Chemistry, Pharmacy, and Materia Medica at a Medical School (under the regulations of the Examining Board in England), £105; or first year, £52 10s.; second year, £36 15s.; third year, £21. The student is strongly advised to attend, in addition, a course of Therapeutics, which is not included in the above composition fee; fee, £5 5s. For the whole course of instruction for the Intermediate Examination in Medicine of the University of London, £52 10s., in one sum. For the course of instruction for the Final M.B. Examination of the University of London, £73 10s. in one sum; or first year, £42; second year, £33 12s. Composition Fee for Dental Students, £63. For the whole course of instruction for the Preliminary Scientific (M.B.) Examination of the University of London £36 15s. The Composition Fee admits to attendance for five years on Hospital Practice and Systematic Lectures, and to three years' Practical Anatomy; and to one term of the tutorial class of Chemistry.

WESTMINSTER HOSPITAL.—Students who have completed a year of study elsewhere pay £74 on entrance, or two instalments of £38 17s. each, or three payments of £27 each. Students who have completed their Anatomical and Physiological Studies can enter for hospital practice and lectures on practical subjects by paying £60 on entrance, or two instalments of £31 10s. each. These payments do not include Lectures on Experimental Physics or Comparative Anatomy, nor the special course of Operative Surgery. Graduates of Medicine of Colonial and Foreign Universities are admitted to Hospital Practice and Lectures on payment of £12 12s. Dental Students pay £52 10s. on entrance, or two instalments of £33 and £22. Elementary Anatomy in summer, £2 2s.; Morbid Histology (in summer) one course, £6 6s.; Minor Surgery and Bandaging, £1 11s. 6d., two courses, £2 2s.; Diseases of Skin, £1 1s. Aural Surgery, £1 1s. Obstetric, Ophthalmic, Aural, Skin, or Dental Clinical Departments, 3 months, £2 2s.; 6 months, £3 3s. General students may attend additional courses of lectures on all subjects except Histology (Normal and Morbid) and Practical Chemistry, for a second course of which a half fee is charged. Special Clinical Departments, and Lectures on Comparative Anatomy, Alienism, Ophthalmic, Aural, and Dental Surgery, Diseases of Skin, and Comparative Anatomy, are free to general students, unless a special certificate be required.

QUEEN'S COLLEGE, BIRMINGHAM.—Students who have paid the Composition Fee, and desire to repeat attendance in any class beyond the ordinary requirements of the examining bodies, can do so on payment of half the stated fee for each class. Dissection after second winter, 3 months, £2 2s.; 6 months £3 3s. (including parts for dissection). A fee of £1 1s. is charged for apparatus in the class of Practical Physiology, and 15s. in the class of Practical Chemistry. Advanced Practical Physiology, £2 2s. Elementary Physiology, £1 1s. Every dissecting student pays a fee of £1 10s. at the beginning of each winter session.

BRISTOL MEDICAL SCHOOL.—Students of Anatomy or Physiology pay a Medical Tutor Fee of £2 2s. per annum; this (for 2 years) is included in the Composition Fee. Students not belonging to the Anatomical Class may dissect on paying £3 3s. each session, besides Tutor's fee. *Royal Infirmary:* Entrance fee £2 2s.; and £1 1s. per annum to Library; Clinical Clerk or Dresser, 6 months, £5 5s.; Obstetric Clerk, 3 months, £3 3s.—*General Hospital:* Extra fee for Clerk or Dresser, £5 5s. for 6 months; for Obstetric Clerk, £3 3s. for 3 months. Library, £1 1s. on entrance.

YORKSHIRE COLLEGE: LEEDS SCHOOL OF MEDICINE.—An Entrance Fee of £1 1s. is paid by students who do not pay a Composition Fee. The Composition Fee admits for six years to the lectures required by the English medical corporations and to one course each of Mental Diseases, Ophthalmology, and Hygiene. Diseases of Women and Children, £2 2s.; with Midwifery, £5 5s. Morbid Histology, £3 3s. Dissecting-room for students not attending the course on Descriptive Anatomy, 3 months, £2 2s.; 6 months, £3 3s.

LIVERPOOL UNIVERSITY COLLEGE (ROYAL INFIRMARY) SCHOOL OF MEDICINE.—The Composition Fee includes Library and Ophthalmology. The aggregate fee of £100 for Lectures and Hospital Practice is exclusive of Vaccination (£1 1s.); Dissecting-room expenses (about £3 3s.); Practical Anatomy in summer (£2 2s.); and Practical Pharmacy (£2 2s.); Six months' Gynæcological Practice and Lectures at the Infirmary, £5 5s.; Practical Midwifery at the Ladies' Charity and Lying-in Hospital, £2 2s. Practical Pathological Histology, each course, £2 2s. Diseases of Children, first course, £2 2s.; second and third, each £1 1s. Practical Toxicology, £3 3s. Composition Fee for the classes in Chemistry, Biology, and Physics required for the Universities, £23 14s. Summer: Anatomy, Pathology, Histology, and Practical Toxicology are now in the £63 complete fee.

OWENS COLLEGE, MEDICAL DEPARTMENT.—The Composition Fee admits to four years of study. *It does not include* Hospital Practice. Practical Anatomy, (after two sessions), 3 months, £2 2s.; 6 months, £3 3s.; Operative Surgery (special course), £4 4s.; Practical Pharmacy, £3 3s.; Practical Zoology and Comparative Anatomy, fees according to length of course and number of days per week; Practical Toxicology, £3 3s. Comparative Embryology, £5 5s.; Comparative Osteology, £2 2s.; Botany (Lectures and Practical Course), £3 13s. 6d.; Demonstration class in Anatomy, £2 2s., to members of Practical Anatomy Class, £1 1s.; Deposit Fee (Dissection), £2 5s.; Practical Chemistry, for chemicals, £1 1s.; Practical Organic Chemistry, £2 2s.; Sanitary Chemistry, £4 4s.; Practical Pathology, £2 2s.; Pathological Laboratory (6 hours weekly), 3 months, £3 3s.; 6 months, £5 5s.—Practical Physiology and Histology, extended course (October to end of July), six days per week, £17 17s.; four days, £13 13s.; three days, £10 10s.; two days, £7 7s.; one day, £4 4s. Students entering at or after Christmas pay two-thirds of the fees, if they enter for not less than two days a week. For shorter periods the fees, entitling the student to work every day in the week, are, six months, £15 15s.; three months, £9 9s.; one month, £4 4s.—Chemistry: Laboratory classes according to length of course and number of days.—Zoological Laboratory special courses, fees as for extended course of Practical Physiology.—Obstetric Practice at St. Mary's Hospital, £2 2s.—Practical Pathology for Medical Men (summer), £2 2s.—Practical Anatomy in summer, £2 2s. An extra charge of 5s. is made for use of microscopes in in several of the practical classes.

UNIVERSITY OF DURHAM COLLEGE OF MEDICINE.—Physics, £2 2s.; Chemical Apparatus, £1 1s. (to be returned at end of session); Use of Bones, 5s.; Use of Books for home reading, 10s. Hospital for Infectious Diseases, £2 2s.

and dressers are also selected to attend in the out-patient rooms and in the special departments and in the *post-mortem* room. Dressers to the surgical in-patients and the surgical casualty department are selected, to the number of forty in each year, from the students (of the first year) who pass the best examination in the subjects of the first year. Other in-patient dresserships may be obtained by payment of the usual fees (see p. 552).

Exhibitions, Scholarships, and Prizes.—Two senior open Scholarships in Science, value of each £65, tenable for one year, to be competed for on September 25th; candidates must be under twenty-five years of age. The subjects are Physics and Chemistry for one, Physiology and Biology for the other. Two Junior open Scholarships, value £130 and £50, will be competed for at the same time in the subjects of the London University Preliminary Scientific Examination. Candidates must be under twenty years of age. The successful candidates must enter at St. Bartholomew's Hospital in the October succeeding the examination. Jeaffreson Exhibition: £20; examination on September 28th; subjects, Latin, Mathematics, and any two of the following languages—Greek, French, German. Candidates for the open Scholarships and the Jeaffreson Exhibition must not have entered to the hospital practice of any metropolitan medical school. *First Year:* Four Junior Scholarships, of the value of £40, £30, £20, and £10, after the general examination in first year's subjects at the end of the winter and summer sessions. Candidates, who must not have previously entered at a metropolitan medical school, must have been students at the Hospital for less than fifteen months. Prize Dresserships are awarded to the succeeding forty candidates, if of sufficient merit, provided that they pass the first professional examinations before the end of the second year. Treasurer's Prize for Practical Anatomy, junior. *Second Year:* Foster Prize for Practical Anatomy, senior. Harvey Prize for Practical Physiology. *Second or Third Year:* Senior Scholarship, value £50, in Anatomy, Physiology, and Chemistry. Shuter Scholarship, value £50; subjects, Anatomy, Physiology, and Materia Medica. Candidates must be Graduates in Arts of the University of Cambridge, who have not graduated in Medicine or Surgery. Wix Prize: subject, The Life and Works of Francis Glisson. Hichens Prize: subject, Bishop Butler's *Analogy*. Skinner Prize, for students of not longer standing than one year from qualification: subjects, Regional and Morbid Anatomy, including reference to Scarlet Fever and Rheumatic Fever. Two Brackenbury Scholarships (interest of £2,000) in Medicine and Surgery. Sir George Burrows Prize, £15 for Pathology. Bentley Prize, for the best report of not less than twelve medical or twelve surgical cases occurring in the Hospital during the previous year. The Kirkes Scholarship of £30, with Gold Medal, for Clinical Medicine, open to students of not less than two or not more than four years' standing. *Third or Fourth Year:* Lawrence Scholarship and Gold Medal, value £42; subjects, Medicine, Surgery, and Midwifery. Candidates for the Lawrence and Brackenbury Scholarships may compete after the end of the third winter session, within a limited period after receiving qualification to practise.

Examinations.—Students preparing for their examinations are arranged in classes, and examined by the lecturers, demonstrators, and tutors. Classes are held to prepare candidates for the examinations of the University of London.

The Abernethian Society, composed of the teachers and students of the Hospital, meets every Thursday at 8 P.M. during the winter. The Abernethian Reading-room is for the exclusive use of members of the Society.

Communications regarding the Hospital and Medical College must be addressed to Dr. Norman Moore, the Warden of the College, St. Bartholomew's Hospital.

CHARING CROSS HOSPITAL.—*The Hospital* contains 180 beds. Students are also admitted to the practice of the Royal Westminster Ophthalmic Hospital, which contains 50 beds.

The Library is open daily from 10 A.M. to 4 P.M., except on Saturdays, when it is closed at 1 P.M. The *Museum* is open from 10 to 4.

Special Courses.—Lectures on Diseases of Children are given by Dr. Murray at 1.30 P.M. on Wednesdays and Saturdays. Dr. Willcocks and Dr. Murray will give a course of Practical Medicine on Mondays and Thursdays at 12.30, and on Tuesdays and Fridays at 9.30 A.M., during the winter; and on Mondays and Thursdays at 12.30 and 4 P.M. during the summer. Mr. Woodhouse Braine and Dr. F. Hewitt give instruction in the administration of Anæsthetics in the operating theatre every Thursday. Instruction in Operative Surgery is given by Mr. Boyd daily in the summer; and in Surgical Pathology by Mr. Morgan. Instruction in the Clinical uses of Electricity is given by Dr. Murray at 9.30 on Thursdays, and by the Electrical Assistant on Tuesdays and Saturdays at 12 noon. An Elementary and an Advanced Course of Physiology will be given.

Appointments—A Medical and a Surgical Registrar, each with a salary of £40 a year, are appointed for twelve months. Two House-Physicians, two House-Surgeons, and a resident Obstetrical Officer are appointed by competitive examination for six months. They are entitled to rooms and commons in the hospital. An Electrical Assistant is appointed every six months, and receives £12 12s. at the end of his term of office. Clinical Clerks and Surgeons' Dressers, Clinical Ward Clerks, and Pathological Assistants are appointed for three months. Each student must hold an In-patient Clerkship and In-patient Dressership, after the second professional examination, in order to obtain certificates of hospital attendance. Students may serve as assistants to the Dental Surgeon for three months.

Scholarships, Medals, and Prizes.—Two Entrance Scholarships, of the value of 100 guineas and 50 guineas respectively, are awarded annually at the commencement of each Winter Session, after a competitive examination in the following groups of subjects:—1, English: including Language, Literature, History and Geography; 2, Latin and Greek; 3, French and German; 4, Mathematics, including arithmetic, algebra and Geometry; and Mechanics, including Statics and Dynamics; 5, Chemistry (Inorganic) and Physics, including Acoustics, Heat and Electricity; and 6, Animal and Vegetable Biology. The value attached to each group of subjects is 1,000 marks. No candidate may offer himself for examination in more than three of the above groups of subjects, the selection of the groups being left entirely to the candidate. Intending candidates must give notice before September 21st. The successful candidates must enter for their complete medical education at the Hospital, either immediately or at the commencement of the next summer session. A Scholarship of the value of 50 guineas is open to students from the University of Oxford who have passed the First M.B. Examination, and to students of the University of Cambridge who have passed the Second M.B. Examination, and who have not entered at any London medical school. Subjects: Anatomy and Physiology, including Histology. The examination for this Scholarship, which will be largely practical, will be held on September 23rd and 24th. Notice to compete must be sent in on or before Saturday, September 21st. The successful candidate will be required to complete his curriculum at Charing Cross Hospital. The Llewellyn Scholarship of £25, open to all general students who have completed their attendance on lectures; examination in Descriptive and Surgical Anatomy, Physiology, Materia Medica, Medicine, Surgery, Therapeutics, and Midwifery. The Golding Scholarship, £15, open to all general students who have just completed their first year; subjects of examination, Descriptive Anatomy, Physiology, and Chemistry (Theoretical and Practical). The Pereira Prize of £5, to general students who have completed the third year, for the best clinical reports of cases in the hospital (surgical in 1890). The Governors' Clinical Gold Medal; examination on subjects of clinical lectures during the session, and on medical and surgical cases in the hospital. Silver and Bronze Medals, or an equivalent in books, and Certificates of Honour in all the classes. Prizes of six guineas and four guineas are given by the Lecturer on Dental Surgery. The Lecturers on Physiology and on Pathology will give prizes for the best notebooks and set of specimens.

Examinations.—Classes are held to prepare students for the Preliminary Scientific Examination of the University of London, the Primary Fellowship Examination of the Royal College of Surgeons of England, and the Pass Examination for the Licence of the Royal College of Physicians, and the Membership of the Royal College of Surgeons.

Residence.—Arrangements have been made with several members of the hospital staff to receive resident pupils.

The Medical School is being considerably enlarged and, in addition to other improvements, new Physiological and Pathological Lavatories will be erected, and an additional reading and writing room provided for the use of the Students.

Information may be had of the Dean, Dr. Mitchell Bruce.

St. George's Hospital.—*The Hospital* contains 351 beds, of which 205 are devoted to Surgical, and 146 to Medical cases. There are special wards for cases of Diseases of the Eye (19 beds) and Diseases of Women. Children are received into the women's wards.

The Library and Reading Room and the Museum are open daily.

Special Subjects.—Surgical consultations are held on Wednesdays at 1.30. Orthopædic out-patients are seen by Mr. Dent every Wednesday at 2.30. Dr. Whipham sees patients with Diseases of the Throat on Thursdays at 2, and gives instruction in the use of the laryngoscope, etc. Dr. Cavafy sees patients with Diseases of the Skin on Wednesdays at 2. Mr. Ross will give demonstrations on the Bones, and Mr. Allingham on the Joints and Muscles. A course of Practical Medicine will be given by Dr. Whipham to students of the second summer session, at 9 A.M. on Tuesdays, Thursdays, and Saturdays. Mr. Dent gives a course of Practical Surgery (including minor surgery, bandaging, case-taking, etc.) for second year's students, at 3 P.M. on Mondays, Wednesdays, and Fridays, and 3.30 P.M. on Tuesdays, in the summer, and Mr. Turner a course of Operative Surgery for third year's students, at 9.30 on Mondays, Wednesdays, and Fridays. Dr. Champneys holds a class of Practical Midwifery in the winter and summer sessions. Dr. Delépine gives a course of Practical Pathology, at 4 on Mondays, and 3.30 on Wednesdays, Thursdays, and Fridays, in the summer; and also gives demonstrations in Morbid Anatomy at 12 noon on Wednesdays. The Hunterian Lecturer on Clinical Surgery (Mr. T. Holmes) will deliver a course of lectures during the ensuing session.

Hospital Appointments.—House-Physicians, House-Surgeons, an Assistant House-Physician, and an Assistant House-Surgeon are appointed, half-yearly, from among the perpetual pupils.[1] The House-Physicians and House-Surgeons are appointed by the Weekly Board, on the nomination of the Medical School Committee; they hold office for twelve months, and reside and board in the hospital free of expense. They must each deposit £50 with the Treasurer, which will be returned on the expiration of their term of office, if they have satisfactorily performed their duties. An Obstetric Assistant is appointed annually; he must be a legally qualified practitioner. He resides and boards in the hospital, and receives a yearly salary of £100. A Curator of the Pathological Museum and a Medical and a Surgical Registrar are appointed annually from among the senior pupils, each with a salary of £50. Two Assistant Medical Registrars are appointed every six months by competition. This office must be held before competing for that of Assistant House-Physician. An Assistant Surgical Registrar is also appointed; this office must be held, alternately with that of Ophthalmic Assistant, before competing for the office of Assistant House-Surgeon. Two Demonstrators of Anatomy and a Demonstrator of Physiology are appointed annually, each with a salary of £50. Each pupil of the Hospital must act as Clinical Clerk and Dresser before a certificate of attendance on hospital practice can be signed.

Exhibitions and Prizes.—The following Entrance Scholarships are offered for competition: 1. A Scholarship, value £125, for the sons of medical men who have entered the school during the current year.[2] 2. Two Scholarships, each of £50, open to all students commencing their studies. The subjects for these three Scholarships will be Latin, French or German, and Elementary Physics, and the examination will be held in October. 3. A Scholarship, value £90, open to all students who have entered the school during the current year, and who have passed the Cambridge First M.B. since the previous October. Subjects: Elementary Biology, Anatomy, and Physiology, and Practical Chemistry. 4. A Scholarship, value £65, for students who have entered during the current year, and have been signed up for, or passed the Oxford First M.B. or the Cambridge Second M.B. Subjects: Anatomy and Physiology. The examination for these Scholarships will be held during October. The William Brown Exhibitions: 1. £100 per annum for two years, open to perpetual pupils of the Hospital under the age of twenty-five, who have become entitled to be registered under the Medical Act within two years previously; examinations in July; subjects, Clinical Examination of three Medical and three Surgical cases (including one case of Obstetric Medicine and one of Ophthalmic Surgery), with written or *vivâ voce* examinations in Medicine and Surgery. 2. £40 per annum for three years, to perpetual pupils of the third and fourth winter sessions Subjects as above; the second candidate will receive the Treasurer's Prize (value £10 10s.), and the third the Thompson Silver Medal. Brackenbury Prizes in Medicine and in Surgery (value of each the interest on £1,076 12s. 3d.), open to all pupils who have been for eighteen months students of the hospital, and who have not completed the fourth year on April 1st; examinations in June. Sir Charles Clarke's Prize (value the interest on £209 14s. 5d.) for good conduct; awarded at end of summer session. Sir Benjamin Brodie's Clinical Prize in Surgery (value £6) (the gift of Dr. G. B. Brodie) for the best report with notes of not more than twelve Surgical cases in the hospital during the preceding twelve months. Sir H. W. Acland's Clinical Prize in Medicine (value £5) for the best record of not more than twelve cases of disease in the hospital during the preceding twelve months. (The Clinical Prizes are open to fourth year's students. Reports must be sent in on or before May 1st.) The Henry Charles Johnson Memorial Prize (value £10 10s.) (the gift of Edmund Johnson, Esq.) for Practical Anatomy. The Pollock Prize in Physiology (value the interest on £372 10s.). These two prizes are for second year's students. General Proficiency Prizes, £10 10s., for students of each year: first year, Elementary Anatomy and Materia Medica, Elementary Physiology and Chemistry; second year, Anatomy, Physiology, including Histology, and Physiological Chemistry; third year, Medicine, Surgery, Pathology, and Midwifery.

The Hunterian Society meets once a week at the Hospital during the winter session.

Residence of Students.—The Dean has a list of medical gentlemen living in the neighbourhood, who receive pupils to reside in their families.

Further information may be obtained from Dr. Whipham, the Dean of the School; from any of the Lecturers; or from Mr. F. J. Marshall, the Resident Medical Officer at the Hospital.

Guy's Hospital.—*The Hospital* contains 695 beds, but 200 beds are at present unoccupied for want of funds. There are 36 beds for Ophthalmic and 24 for Obstetric cases. Children are received into the female wards. Detached wards, containing forty patients, are set apart for the purpose of instruction in Clinical Medicine.

Museums, etc.—The Museums of Human Anatomy, Comparative Anatomy (above 2,000 specimens), Pathological Anatomy (above 6,000 specimens), and Materia Medica, are open to the students. The Library is open to the students daily from 9.30 A.M. to 5.30 P.M., except on Saturdays, when it is closed at 3 P.M.

Special Courses.—The Dissecting-room is open from the beginning of September to the end of July. Students are allowed to visit Bethlem Hospital on fixed days in the summer; and gentlemen can enter as extern students for three months by arrangement with the Medical Superintendent. A course of Lectures on Experimental Physics is given by Mr. Reinold at 12 on Mondays during the winter session. Dr. Pitt and Mr. Lane give a course of practical demonstrations in Morbid Histology two days in the week. Dr. E. W. Goodall gives instruction in Practical Medicine throughout the year. Mr. Symonds and Mr. Lane give a course of demonstrations of Practical Surgery (including Minor Surgery, Surgical Pathology, and Operative Surgery) during the three months previous to each Final Examination of the Conjoint Board. Mr. Symonds also gives a further course of Operative Surgery during the summer session. Ophthalmic out-patients are seen at 1.30 by Mr. Higgens on Tuesdays, and on Fridays by Mr. Brailey at 1.30, and also on Tuesdays after his visit to the wards; in-patients at 1.30 on Fridays by Mr. Higgens, and on Tuesdays by Mr. Brailey at 1.30. Dr. Horrocks gives courses of practical instruction in Obstetrics. Mr. Symonds sees patients in the Throat Department at 2 P.M. on Fridays.

Appointments.—All appointments are given according to the respective merits of the candidates, and without extra payment, There are appointed annually House-Physicians, House-Surgeons. Surgeons' Dressers, and Medical Clinical Clerks, for six months; Dressers in the Eye Wards, for four months; Clinical Assistants,

[1] All perpetual pupils are eligible for the office of House-Physician and House-Surgeon. All pupils of the hospital may become candidates for the offices of Medical and Surgical Registrar, Obstetric Assistant, Curator of the Museum, and Demonstrator of Anatomy. They are also entitled to attendance on the Maternity Department, and the practice of Ophthalmic and Dental Surgery, without additional fee.

[2] Subjects: Latin, Cicero, *De Naturâ Deorum;* Virgil, *Æneid*, Book VI. French, Molière, *Le Malade Imaginaire:* B. Saintine, *Picciola.* German, Schiller, *Wallenstein:* Heine, *Buch der Lieder.* The examination in Elementary Physics will include Mechanics, Hydrostatics, Light, Heat, and Electricity.

Assistant-Physicians' Clerks, Assistant-Surgeons' Dressers, Dressers in the Surgery, Obstetric Ward Clerks, Surgical Clinical Clerks, Assistant-Surgeons' Clerks, for three months; Obstetric Residents, *Post-mortem* Clerks, Dental Surgeon's Dressers, Aural Surgeon's Dressers, for two months; Obstetric Out-Patient Clerks, six weeks; Extern Obstetric Attendants, one month; also Clerks in the Electrical Department. A special honorary certificate is given to every gentleman who has diligently performed the duties of not less than three of the various offices; and special certificates are given to those who have attended one hundred cases of midwifery.

Open Scholarships in Arts and Science.—Four open Scholarships, two in Arts and two in Science, will be offered for competition in September, 1889. Entrance Scholarships in Arts: 1. A Scholarship of 100 guineas, open to candidates under twenty years of age. 2. A Scholarship of 50 guineas, open to candidates under twenty-five years of age. Subjects: Latin: Virgil, *Æneid*, Books I and V. Greek: Xenophon, *Cyropædia*, Book V. The principal passages for translation into English will be selected from the above works. Short passages will be given from other works. Questions on grammar and short passages in English for translation into Latin and Greek respectively will also be set. French; German. Passages in the above languages will be set for translation into English; also passages in English for translation into French and German respectively; and questions in Grammar and Literature. Arithmetic. Euclid, Books I, II, III, IV, VI. Algebra, to the Binomial Theorem and Permutations and Combinations. Candidates may choose between Greek and German, but will not be allowed marks in more than one of these subjects. Entrance Scholarships in Science.—1. A Scholarship of 125 guineas, open to candidates under twenty-five years of age. 2. A Scholarship of 50 guineas, open to candidates under twenty-five years of age. Subjects: Inorganic Chemistry, General Biology (Zoology, Botany), Experimental Physics, including General Properties of Solid, Liquid, and Gaseous Bodies, Acoustics, Heat, Magnetism, Electricity, and Optics. There will be a practical examination in Chemistry, in addition to the paper. Specimens will be given with the papers in Botany and Zoology. The Examinations will be conducted as follows: Wed., September 25th, Morning, 10 to 1: French, Chemistry; Afternoon, 2 to 5: Latin, Botany. Thurs., September 26th, Morning, 10 to 1: Euclid, Physics; Afternoon, 2 to 5: Greek and German, Zoology. Fri., September 27th, Morning, 10 to 1: Arithmetic and Algebra, Practical Chemistry. The successful candidate will be required to enter at the Hospital, as a Perpetual Pupil, in the October immediately succeeding the Examination. Names of intending candidates should be forwarded on or before Monday, September 23rd, to the Dean, Guy's Hospital, London S.E.

Scholarships and Prizes.—Four Entrance Scholarships, to be competed for on September 25th, 26th, and 27th: two in Arts,[1] and two in Science.[2] Candidates must be under twenty-five years of age, and must not compete for both Scholarships. Notice must be given to the Dean before September 23rd. The successful candidates must enter at the Hospital in the October immediately following. *First Year:* At the end of the summer sesssion, two prizes of £50 and £25; subjects, Anatomy of Bones, Ligaments, and Muscles, Physiology, Materia Medica, and Chemistry (including Practical Chemistry). *Second Year:* At end of the summer session, prizes of £25 and £10; subjects, Anatomy and Physiology (including Practical Physiology). At end of the winter session, the Michael Harris Prize of £10 for Human Anatomy (including Minute Anatomy); the Sands Cox Scholarship (every third year, next in 1889), value £15, tenable for three years; subjects, Physiology (including Physiological Physics), Histology, and Physiological Chemistry. *Third Year:* At end of the summer session, two prizes of £25 and £10; subjects, Medical Anatomy and Methods of Diagnosis, Surgical Anatomy and Diagnosis, Operative and Minor Surgery, Midwifery, and Therapeutics. *Fourth Year:* At end of the summer session, two prizes of £25 and £10, in Medicine, Surgery, Disease of Women, and Medical Jurisprudence. In March, examination for Golding Bird Prize; subject, The Methods of Diagnosis in Disease. *Fourth and Fifth Years:* Treasurer's Gold Medals in Clinical Medicine and Clinical Surgery; Gurney Hoare Prize of £25, for best reports of three Medical and three Surgical cases, with commentaries; Beaney Prize of 30 guineas in Pathology. Honorary certificates are given to those candidates who pass creditable examinations.

The Registrars and the Demonstrators of Anatomy and Chemistry assist the pupils in their studies. Classes are held for the preparation of candidates for the Examinations of the University of London.

The Pupils' Physical Society meets on alternate Saturdays at 7.30 P.M. A prize of £5 is given for the best essay on a selected subject (this year, Heredity); £10 is divided between two other prizes for the best papers read. The Treasurer gives a prize of £5 for Clinical Research.

The Residential College is approaching completion. Several of the Lecturers have vacancies for Resident Private Pupils. A list of lodgings within easy access of the hospital is kept at the Medical School office. There is a Students' Club within the hospital, where members are supplied with luncheons, etc., at moderate charges.

Information may be obtained from the Dean, Dr. Perry, at the hospital.

KING'S COLLEGE AND HOSPITAL.—*The Hospital* contains 170 beds in daily use.

The Museums of Anatomy, Materia Medica, Natural History, etc., are open daily from 10 till 4. *The Medical Library* is open daily from 10 till 5.

Special Courses.—Clinical Instruction is given daily by the Physicians and Surgeons; the Special Demonstrations in Operative Surgery, Minor Surgery and Bandaging, and Surgical Pathology, by the Out-patient Surgeons and Assistant-Surgeons. Instruction is given in the Diseases of Women and Children; and in Throat-Diseases (with Laryngoscopic Demonstrations), by Mr. Barrow, every Friday, at 2. Demonstrations and Practical Instruction in Morbid Anatomy are given in the *Post-mortem* Theatre. Special Instruction is given in Medical Chemistry and the Microscope by the Physicians. A course of Osteology is given at 2 P.M. on Mondays and Fridays in the summer. Lectures on Natural Philosophy are given in the summer, at 2 P.M. on Tuesdays.

Appointments.—Resident Medical Officers, Clinical Clerks, and Dressers are chosen by examination from matriculated students, who are pupils at the Hospital.

Scholarships and Prizes.—Two Warneford Scholarships, for the encouragement of previous education,[1] each £25 per annum, for three years; three Additional Scholarships of £25 each per annum for two years will be given in October, 1889; and one Warneford Scholarship of £25 per annum at the close of the winter session, for two years, for third year matriculated students. Medical Scholarships given yearly to matriculated students—one of £40 for two years, open to students of the third and fourth years; one of £30 for one year, to students of the second and third years; three of £20 for one year, to students of the first year. Daniell Scholarship, open to students who have worked in the laboratory six months, £20 per annum, for two years. Two Sambrooke Registrarships, of the annual value of £50 each, open to matriculated students who have filled any of the higher appointments at the Hospital. Two Sambrooke Exhibitions, one £60 and one £40, open to all matriculated students at the commencement of their course of study; subjects of examination, Mathematics, Elementary Physics, Inorganic Chemistry, Botany, and Biology. Rabbeth Scholarship, value £20, in July, for best evidence of early scientific training. Two Science exhibitions, given by the Clothworkers' Company, one of £50 and one of £25 per annum, each tenable two years, for proficiency in any four of the following subjects: Mathematics, Mechanics, Physics, Chemistry, Botany, Geology, Mineralogy, and Zoology; open to all candidates under 19 on October 1st, 1886. Inglis Scholarships; two annually, £50 each,

[1] The subjects are—Latin: Cæsar, *De Bello Gallico*, Book VII. Greek: Xenophon, *Cyropædia*, Book I. French. German. Euclid, the first four Books; Algebra to Quadratic Equations; Arithmetic. Candidates may choose Greek or German, but will not be allowed marks in more than one of these subjects.

[2] The subjects are—Inorganic Chemistry; Zoology; Botany; Physics, including general properties of solid, liquid, and gaseous bodies; Acoustics, Heat, Magnetism, Electricity, and Optics. There will be a practical examination in Chemistry, and specimens will be given with the papers in Botany and Zoology.

[1] The examination will be in the following subjects:—1. Divinity, *Old Testament*, the Two Books of Samuel; *New Testament*, the Gospel according to St. Luke; *The Church Catechism;* Books recommended: Barry's *Notes on the Catechism*, or Maclear's *Class Book of the Catechism of the Church of England*. 2. English, Shakespeare, *King John*. 3. History, *The History of England*, from 1625 to 1665; Textbook, Bright's *History of England*; 4. Latin, Virgil, *Æneid*, Books I and V. 5. Greek, Xenophon, *Cyropædia*, Book V. 6. French, Molière, *L'Avare*. 7. German, Schiller, *Wallenstein's Tod*. 8 Mathematics: Arithmetic. Algebra; as far as and including Quadratic Equations, together with Proportion and Arithmetical and Geometrical Progression. Euclid, Books I-IV, or the subjects thereof.

for proficiency in Modern History and English Literature. Leathes' Prizes: Interest of £300 applied in purchase of a Bible and Prayer-Book, as annual prizes to two matriculated medical students. Warneford Prizes: £40 in medals and books, to two matriculated medical students. Class Prizes: Books of the value of £3, and certificates of honour, are awarded annually for proficiency in the several subjects taught in the classes. Two Surgical Clinical Prizes of £3 each for the winter session. Todd Medical Clinical Prize: Bronze Medal and Books, value £4 4s. Jelf Medal, at the Senior Scholarship Examination who is second in order of merit. Tanner Prize, value £10, for proficiency in Diseases of Women and Children, and in Obstetrics. Carter Prize: Gold Medal and Books, value £15, for proficiency in Botany. The Carter (English Original Verse), Stephen (English Essay), Trench (Greek Testament), and McCaul (Hebrew) Prizes are open to students of the medical department.

Medical Tutors are appointed to assist, by instruction and examination, all students in the subjects of all examinations, without any extra fees.

Associate of King's College.—At the end of each winter session the professors recommend to the Council the names of medical students to be elected associates.

Residence.—Rooms are provided within the College for a limited number of matriculated students under the supervision of the Censor. The cost of the academical year varies from £50 to £60.

The Medical Society meets on Thursday, at 8.30 P.M.

Information.—The Dean of the Medical Department, Professor Curnow, attends daily (Saturdays excepted), at King's College, from 11.30 A.M. to 1 P.M., for the purpose of seeing students and their friends. Any letter addressed to the Dean during the vacation will receive early attention.

LONDON HOSPITAL.—*The Hospital* is the largest general hospital in the kingdom; it contains 786 beds, approximately thus allotted: Accidents and Surgical cases, 343; Medical cases, 290; Diseases of Women, 26; Children under seven years of age, 70; Ophthalmic cases, 12; Erysipelas and Isolation cases, 45.

The College, which has been almost entirely rebuilt, affords ample accommodation for teaching in every branch of medical education.

Special Courses.—Sir Andrew Clark, Bart., F.R.S., as Emeritus Professor of Clinical Medicine, will give in the winter session a course of lectures on Clinical Medicine. Mr. Jonathan Hutchinson, F.R.S., as Emeritus Professor of Clinical Surgery, will give in the summer session a course of lectures on Clinical Surgery. Students desirous of obtaining a practical knowledge of Mental Diseases can attend, without additional fee, the practice at the Bethnal House Asylum every Wednesday from 10 to 12. Special lectures and demonstrations are also delivered by Dr. Herman on Clinical Obstetrics; Mr. Rivington, on Operative Surgery; Mr. F. S. Eve, on Ophthalmic Surgery; Mr. Woakes, on Aural Surgery; Mr Eve, on Pathological Histology; Mr. Mark Hovell, on Diseases of the Throat; Mr. Barrett, on Dental Surgery; Mr. Page, on Experimental Physics; Dr. Hewitt, on Anæsthetics; Mr. Reeves, on Practical Surgery, During the summer session a course of lectures will be delivered by Dr. C. H. Ralfe, on Pathological Chemistry, on Mondays at 4 P.M. To enable students to present themselves for the first examination of the Examining Board at the earliest possible opportunity, it has been arranged to hold the course of demonstrations on Practical Chemistry throughout the winter as well as the summer session. Mr. McCarthy gives instruction to first year's students in Practical Histology, at 9.15 A.M. on Tuesdays and Thursdays in the summer.

Museums, etc.—The Anatomical and Pathological Museum, the Materia Medica Museum, and the Library are open daily. The whole of the specimens have been carefully rearranged, and to a large extent remounted. The preparations are classed for convenience of study, and a new catalogue of the entire collection has recently been printed.

Appointments.—Five House-Physicians, five House-Surgeons, and a Resident Accoucheur, are appointed every six months; a Receiving-room Officer, and a Senior Dresser to Out-Patients every three months. Clinical Clerks, Surgical Dressers, and Clinical Obstetric Clerks are appointed every three months. Every student must act as a Clinical Clerk for three months in the medical out-patient department, after passing the first College of Surgeons examination. Maternity pupils reside in the hospital every week. Each student must attend at least twenty cases of Midwifery; those who have attended one hundred are entitled to a special certificate. Dressers reside and board in the hospital every week. Every student must act as Dresser in the Surgical out-patient department for at least three months after the end of the first winter session. Three Clinical Assistants are appointed every three months for the Medical out-patients, and are eligible for re-election. Each receives a salary at the rate of £80 per annum. Unpaid Clinical Assistants are appointed in the Ophthalmic department. A Medical Registrar and a Surgical Registrar are appointed annually; each receives £100. An Instructor in Anæsthetics is appointed annually, and receives £50. Every student must act as a *Post-mortem* Clerk for three months. A Dental Assistant, Prosectors of Anatomy, and Dressers in the Ophthalmic and Aural departments, are also appointed. The holders of resident appointments are provided with rooms and board.

Scholarships and Prizes.—Twenty scholarships and prizes are offered for competition. 1 and 2. Two Entrance Scholarships, value £60 and £40; examination on September 25th, 26th, and 27th; subjects: Physics, Botany, Zoology, and Inorganic Chemistry. Successful candidates must forthwith become pupils of the hospital and school. 3 and 4. Two Buxton scholarships, value £30 and £20, open to full students of less than six months' standing: examination on October 2nd, 3rd, and 4th.[1] 5. A Scholarship at the end of the summer session, value £20, to a first year's student; subjects: Human Anatomy and Physiology. 6. A Scholarship, value £25, to a first or second year's student, at the end of the winter session; subjects: Anatomy, Physiology, and Chemistry. 7, 8, 9. Hospital Scholarships, value each £20, for proficiency and zeal in Clinical Medicine, Surgery, and Obstetrics. 10. The Letheby Prize, value £30, for Chemistry; open to all full students from the end of the second summer session to the end of the fourth year. 11. The Duckworth Nelson Prize, value £10, awarded biennially, at the end of the winter session; subjects: Practical Medicine and Surgery. For the Hospital Scholarships and the Duckworth Nelson Prize, full students of the Hospital are eligible up to the end of their fourth year, with or without a diploma; qualified officers of the Hospital are not eligible. 12. The Hutchinson Prize, value £35, awarded triennially to the author of the best essay on a subject in Clinical Surgery; open to full students of Hospital who have not been registered as medical students more than ten years. 13—18. Six prizes, of the aggregate value of £60, by competition among the Dressers in the out-patient rooms. 19, 20. Two prizes, value £6 and £4, for Dissections, for full students up to the end of the fourth year. Special certificates to those gentlemen who have faithfully performed their duties in the Hospital, and to those who have distinguished themselves at the examinations.

Special attention is paid to the preparation of students for the examinations of the Colleges of Physicians and Surgeons, the Apothecaries' Hall, and the University of London.

The Medical Society meets for the reading and discussion of papers at 7.30 P.M. on alternate Wednesdays during the winter session.

Residence.—Students wishing to reside with a member of the medical profession, within easy access to the Hospital, can obtain information by application to the Warden. Several members of the Hospital staff receive resident pupils. A list of approved lodgings is kept by the Warden. A Refreshment Room has been provided in the buildings, where luncheons or dinners can be obtained.

Information may be obtained from the Warden, Mr. Munro Scott, at the College.

ST. MARY'S HOSPITAL.—*The Hospital* contains 281 beds; 128 Medical, and 153 Surgical. Two wards are appropriated to Diseases of Children, and one to those of Women; there are also beds for Ophthalmic, Aural, Cutaneous, and Dental cases.

[1] The subjects are:—1. The English Language and Literature, inclusive of writing from dictation, the English Grammar, and the Composition of a short Essay. 2. Arithmetic. No candidate will be passed who does not show a competent knowledge of the first four rules, simple and compound, of Vulgar Fractions, and of Decimals. 3. Algebra to Simple Equations inclusive. 4 The first four books of Euclid. 5. Latin: Cicero's *De Senectute*, and Virgil's *Æneid* Book I. And one of the following subjects at the discretion of the candidate:—1. Greek: Xenophon's *Memorabilia*. 1. French: George Sand's *La Mare au Diable* and F. Ponsard's *Charlotte Corday*. 3. German: Schiller's *Jungfrau von Orleans*. 4. Natural Philosophy, including Mechanics, Hydrostatics and Pneumatics. Besides these translations into English, the candidate will be required to answer questions on the grammar of each subject, whether compulsory or optional. The Buxton Scholarships are open to all full students of less than six months' standing, who have received their cards of admission to the lectures and practice.

The Reading Rooms and Library are open daily. The *Museum* is open daily to students. It contains about 3,000 specimens of healthy and morbid anatomy, and many anatomical dissections. There are also a Materia Medica Department and a collection of specimens illustrative of Comparative Anatomy. The Physiological, Chemical, and Pathological Laboratories are in active working order. There is also a Bacteriological Laboratory and a Laboratory of Hygiene.

Special Courses.—Lectures on special selected subjects are given by the Physicians and Surgeons, at 4 P.M. on Fridays, in the winter and summer sessions. Medical Practitioners are invited to attend these lectures. Clinical Demonstrations on Diseases of the Skin and of the Throat are given. The students are carefully trained to the use of the Microscope. Dr. Alder Wright gives a course of Physics at 10 A.M. on Saturdays. Dr. de Watteville gives Instruction in the Practical Application of Electricity. Operative Surgery is specially taught by Mr. Pepper.

Appointments.—Three House-Physicians and three House-Surgeons are appointed for six months each, and two Obstetric Officers for six months each; all live free of expense in the Hospital. All students must act as Clinical Clerks and Dressers for eight months after passing the Primary Examinations, and after having acted as Dressers two months in the Casualty Department. Demonstrators of Anatomy are appointed at salaries of £70, and a Junior Demonstrator at £50 a year. Two Prosectors are appointed annually; each receives a certificate and £5. A Demonstratorship in Pathological Anatomy, value £15, tenable for six months, is given after competitive examination in Pathology and Morbid Anatomy.

Scholarships and Prizes.—One Scholarship in Natural Science, value £105, and three of the value of £50 each; subjects, Inorganic Chemistry, Experimental Physics, and Elementary Biology. There will be a practical examination in each subject. The examination will take place on September 26th at 10 A.M. and following day. The candidates must not have completed a winter session of study at a medical school in London. The successful candidates must enter as perpetual pupils of the Hospital, and pursue the full course of study there. A scholarship of £105, for students of Epsom College, who are sons of medical men. Two scholarships, each of £52 10s., open to students from a University, who have not entered at any London medical school: subjects, Physiology, and either Anatomy or Chemistry at the option of the competitor. There is also a Mathematical and a Classical Scholarship, each of the value of £50, open to competition each April amongst students who are about to enter in May. Three scholarships for general proficiency, value £20, £25, and £30, one at end of each year, after examination in class subjects. *First Year:* Winter Session: Prizes of £3 3s. each in Anatomy and Histology, and in Chemistry. Summer Session: Prizes, value £2 2s. each, in Comparative Anatomy, Materia Medica, Botany, and Inorganic Practical Chemistry. *Second Year:* Winter: Prizes of £3 3s. each for Anatomy and General Physiology. Summer: Prizes, value £2 2s. each, for Midwifery and Medical Jurisprudence. *Third Year:* Winter: Prizes of £3 3s. each for Medicine, Surgery, Pathology, and Operative Surgery. At end of each year, prizes of £5 5s. each for Clinical Medicine and Clinical Surgery. A prize of £10 10s. in Ophthalmology.

St. Mary's Hospital Medical School.—No changes have taken place in the staff of the Hospital during the past year, but a new Out-patient Department for Children has been instituted, and to this Dr. Phillips and Mr. Owen are Physician and Surgeon respectively. Mr. E. W. Roughton, F.R.C.S., M.D.Lond., has been appointed one of the Senior Demonstrators of Anatomy in place of Mr. J. J. Clarke, who has become Curator of the Museum. Mr. Herbert W. Page is the Dean of the School in place of Mr. Field, resigned. The office of Sub-Dean has been abolished, and a School Secretary has been appointed, to whom all applications should be made for the prospectus or other information. Several alterations and improvements will be made in the school buildings during the vacation.

Tutorial Classes are held by Dr. Pearce, Dr. M. Handfield-Jones, and Mr. Crowle to assist students in preparing for their final examinations.

Special Classes are held for the Preliminary Scientific Intermediate M.B., and Final M.B. Examinations of the University of London, and for the Examinations for the Fellowship of the Royal College of Surgeons.

The Medical Society meets on alternate Wednesday evenings, during the winter session, at 8 P.M.

Residence for Students.—Students may reside in the College, 33 and 35, Westbourne Terrace, under the supervision of the Warden, Dr. Luff. Terms, £94 10s. for the academical year, including the assistance of the demonstrators on three evenings in the week.

A Students' Club has been founded. The rooms (in the basement of the "Mary Stanford" wing) comprise a reading-room, smoking and dining rooms. The annual subscription is 7s. 6d.

Further information may be obtained from the School Secretary, or from Mr. Page, Dean of the School.

MIDDLESEX HOSPITAL.—*The Hospital* contains upwards of 300 beds, of which 185 are devoted to Surgical and 120 to Medical cases. There are 33 beds for cases of Cancer; also wards for cases of Uterine Disease and of Syphilis, and beds for cases of Diseases of the Eye.

The Museum is open to students daily from 9 to 5. It contains above 5,000 specimens. *The Library and Reading Room* are open to all general students from 9 to 5; on Saturdays, from 9 to 2.

Special Subjects.—A course of Practical Medicine is given in the winter by Dr. Coupland on Mondays and Thursdays, at 4 P.M. Dr Douglas Powell gives a short course of lectures on Therapeutics in the summer, at 4 P.M. on Mondays and Thursdays. Mr. Morris sees out-patient Cancer cases at 1.30 on Thursdays. Practical Instruction in Mental Diseases is given at the Grove Hall Asylum, Bow. A class of Practical Surgery is held in the winter session. Mr. Andrew Clark will also commence a class of Practical Instruction in Operative Surgery in April. Each student will personally perform all the operations. Dr. R. Boxall gives a course of Practical Midwifery in the winter and summer. Instruction in the administration of Anæsthetics is given every Wednesday and Saturday by Mr. G. E. Norton and Dr. McCausland. Dr. Wynter gives instruction in the practical application of Electricity. In connection with the class of Pathological Anatomy, a practical class of Pathological Histology is formed in the winter and summer sessions, under the direction of Mr. C. L. Hudson.

Appointments, etc.—Sixteen Resident Appointments are open annually to competition among pupils of the Hospital. The officers reside and and board in the Hospital free of expense. There are two Casualty House-Surgeons appointed annually. Six House-Surgeons are appointed every year after examination; they must have a legal qualification. Six Resident Physicians' Assistants are appointed from time to time for six months. They must have a legal qualification, or hold a Broderip Scholarship. A Resident Obstetric Physician's Assistant (qualified to practise) is appointed for six months. Each of the above-mentioned resident officers pays (except the Casualty House-Surgeon) £10 10s. on appointment. Non-Resident Physicians' Assistants are appointed in the out-patient department. Clinical Clerks and Dressers are appointed for six months. An Obstetric Physician's Clerk is appointed. In the out-patient department the appointments are: Dresser to the Assistant Surgeon and to the Dental Surgeon; Clerk to the Assistant Physician; Dresser to Ophthalmic Surgeon; Clerk to the Physician of the Skin Department, to the Assistant Obstetric Physician, and to the Surgeon to the Throat and Ear Department. There are also Extern and Midwifery Clerks, and *Post-mortem* Clerks. The appointments are so arranged that every student may during his course take both a clerkship and a dressership. Each student must be an out-patient clerk or an out-patient dresser before being eligible to an in-patient clerkship or dressership. No student can be appointed to any office until he has passed the second examination of the Examining Board in England, or its equivalent.

Scholarships and Prizes.—Two Entrance Scholarships, value £50 and £30, tenable for two years,[1] open to all gentlemen commencing their medical studies at the Hospital in October, 1886. The successful candidates must become general pupils of the school. Examination on September 27th and following days. Candidates

[1] The following are the subjects for examination. Latin: Passages for translation into English; short passages for translation from English into Latin; and questions in grammar. 1889. Virgil, *Æneid*, Books I and V.—Greek: Easy passages for translation into English; questions in grammar. 1889. Xenophon, *Cyropædia*, Book V.—French or German: Passages for translation into English; short passages for translation from English into French or German; and questions in grammar.—Mathematics: Arithmetic; Algebra up to and including Quadratic Equations; and Euclid, Books I, II, III.—Mechanics and Experimental Physics.—Chemistry.—Botany.—Zoology.—The general range of subjects in Mechanics and Physics, Chemistry, Botany, and Zoology, will be that for the Preliminary Scientific Examination of the University of London.—Candidates will be examined in any three, and not more of the above subjects which they may select.

must send in their names to the Dean, stating the subjects they select, on or before September 18th. John Murray Scholarship and Gold Medal open to competition, in May 1889, among students in actual attendance who have entered since April 30th, 1885. Subjects: Medicine, Surgery, and Obstetrics. Hetley Clinical Prize, value £25, at the end of summer session, to students who have completed the third and not commenced the fourth winter session: *vivâ voce* examination in Medicine, Surgery, and Obstetric Medicine. Lyell Medal, value £5 5s., at end of third winter, for proficiency in Surgical Anatomy and Practical Surgery. Exhibition, value £10 10s., at end of first winter session. Subjects: Elementary Anatomy and Physiology. Two Broderip Scholarships, value £30 and £20, tenable for two years, to students in their fourth winter sessions for reports and comments on selected medical and surgical cases and *post-mortem* examinations. The Governor's Prize, value £21, to the student who, at the end of the third winter session, shall have been out-patient clerk and dresser, and shall pass the best examination in the subjects of the out-patient department. Prizes and certificates of honour are given in each class.

Tutors.—Mr. Pearce Gould and the demonstrators assist all general students of the Hospital, especially those who are preparing for primary examination before the Licensing Boards.

The Preliminary Scientific M.B. Examination.—Arrangements have been made by which candidates for this examination can attend the Lectures and Practical Instruction in Biology, and a portion of the ordinary courses in Physics and Chemistry, at the Normal School of Science, South Kensington.

The Students' Club (*President:* Mr. Henry Morris; *Treasurer:* Mr. E. A. Furdon; *Secretary:* Mr. Leopold Hudson) has been formed for the purpose of amalgamating the following clubs and societies into one body: the Medical Society, the Common Room Society, the Football Club, the Cricket Club. Subscription, 3 guineas.

The Students' Medical Society meets in the Board Room of the Hospital on alternate Thursdays at 8 P.M. during the winter session. Prizes are given to the reader of the best paper, to the exhibitor of the best histological specimens, and to the exhibitor of the best pathological specimens.

Information may be obtained from Mr. Pearce Gould, the Dean; from Dr. Coupland, Secretary of the School; from any of the Lecturers, or from the Resident Medical Officer at the Hospital.

The Residential College is situated in Cleveland Street, W., and has its frontage in the Hospital garden; it accommodates about 30 students. The Warden is Mr. Leopold Hudson.

ST. THOMAS'S HOSPITAL.—*The Hospital* contains 572 beds, of which about 180 are appropriated to ordinary Medical, and 230 to ordinary Surgical cases. There are also special wards for Diseases of Women, Diseases of the Eye, Venereal Affections, Children under six years of age, and (in a separate block) Infectious Diseases.

Museums, etc.—Students have access to the Library, and to the Museums of Human Anatomy, of Comparative Anatomy, of Materia Medica, of Botany, and of Chemistry and Mineralogy, and to the Laboratories of Practical Physiology and Practical Chemistry.

Special Subjects.—A Course of Lectures on Physics and Natural Philosophy is given by Dr. Stone at 12 noon on Saturdays in the winter. Classes in Advanced Anatomy are held by the lecturers on that subject. Physiology: In the summer session instruction is given to a senior class in Cutting and Mounting Sections and in Volumetric Analysis by Dr. Charles on Mondays at 2 P.M.; and in Advanced Practical Physiology (use of physiological apparatus, etc.) by Dr. Sherrington on Thursdays at 12. Physiological Demonstrations are given at 10.30 on Mondays and Fridays, and at 12 noon on Tuesdays and Thursdays in the winter session; and Demonstrations of Pathological Anatomy at 2 P.M. daily by Dr. Sharkey, Dr. Hadden, and Dr. Gulliver; and Dr. Copeman gives demonstrations in Morbid Histology. Dr. Cory sees cases of Diseases of Women and Children at 1.30 on Wednesdays and Saturdays. Out-patients with Diseases of the Throat are seen by Dr. Semon at 1.30 on Tuesdays and Fridays. Dr. Semon gives a short course of Clinical Lectures on Throat Diseases. Mr. MacKellar, Mr. Clutton, and Mr. Pitts give instruction in Practical and Manipulative Surgery. Elementary Clinical Medicine: An elementary course of practical instruction in the means of Physical Diagnosis is held by Drs. Hadden and Acland for about a month before each quarterly appointment of Out-patient Clinical Clerks, and all intending applicants are required to attend this course, or an equivalent course elsewhere. Practical instruction in the Administration of Anæsthetics is given by Mr. Tyrrell and Mr. White.

Appointments.—A Resident Assistant-Physician and a Resident Assistant-Surgeon, at a salary of £100 per annum each, with board, are appointed, and may hold office for a term not exceeding three years. Two Resident and two Non-resident House-Physicians, four House-Surgeons, two Assistant House-Surgeons, and a Resident Accoucheur are selected from gentlemen who have obtained their professional diplomas; they hold office for three or six months. Two Ophthalmic Clinical Assistants, chosen from qualified students, are appointed for six months, the senior receiving a salary at the rate of £50 per annum, and the junior being provided with commons. The House-Physicians, the House-Surgeons, the Resident Accoucheur, and Dressers are provided with rooms and commons. Clinical Clerks and Dressers are selected each year, to the number of at least one hundred for in-patients, and eighty to one hundred for out-patients. Clinical Assistants in the departments for Diseases of the Skin, Throat, and Ear are appointed every three months. Obstetric Clerks are from time to time appointed; also Assistants in the Physiological Laboratory, Prosectors, and Assistants to the Demonstrator of Pathological Anatomy. All students have the opportunity of being engaged in the performance of the practical duties in connection with the Medical, Surgical, Obstetrical, Ophthalmic, and Pathological departments of the Hospital. Two Hospital Registrars are appointed, at an annual salary of £100.

Scholarships and Prizes.—Two Open Scholarships in Natural Science, value 125 guineas and £60, are open to students who have passed a preliminary examination in Arts; subjects, Physics, Chemistry, and either Botany or Zoology; examinations on September 25th, 26th, and 27th. Notice must be given not later than September 23rd. Successful candidates must become students of the Hospital. The William Tite Scholarship, £27 10s., to the student highest on the first-class list at the examination at the end of the first winter session. The Peacock Scholarship, value £38 10s. per annum for two years, biennially, to the student highest on the first-class list at the end of the second winter session. The Musgrove Scholarship, of the same value as the Peacock Scholarship, and given alternately with it, on the same terms. College Prizes each winter for first and second year's students, of £20 and £10 each winter; and for third year's students, of £20, £15, and £10; and £15 and £10 each of three summers. The Cheselden Medal, annually, to a fourth year's student, for Surgery and Surgical Anatomy. The Mead Medal, annually, to a fourth year's student, after practical examination in Medicine, Pathology, and Hygiene. The Treasurer's Gold Medal, annually, at the end of fourth winter session, for general proficiency and good conduct. The Grainger Testimonial Prize, value £15, is awarded annually to students of from three to six years' standing, for an Anatomical or Physiological Essay explanatory of preparations and dissections; papers to be sent in before October, 1890. The Solly Medal, with a prize in money, every two years, for Reports of Surgical Cases, to a third, fourth, fifth, or sixth year's student; papers to be sent in before April, 1890.

Residence of Students.—A Register of Lodgings suitable for students is kept at the Medical Secretary's office. Information as to terms, accommodation, etc., can be obtained on application. This Register has been especially prepared with a view to the convenience of new students for whose accommodation no definite arrangements have been made. Medical practitioners, clergymen, and private families residing in the neighbourhood receive students for residence and supervision. There is a Club in the Medical School, where students who become members can obtain refreshments at moderate charges.

University of London.—Classes in the subjects required for the Preliminary Scientific Examination are held from October to July, and for the Intermediate M.B. Examinations.

The Medical and Physical Society meets on alternate Thursdays, at 8.30 P.M.

Further information may be obtained from Mr. G. Rendle, the Secretary to the Medical School, at the Hospital.

UNIVERSITY COLLEGE AND HOSPITAL.—*The Hospital* contains 207 beds available for clinical instruction and study. In addition to the Physicians' and Surgeons' wards, there are special wards for Diseases of Women, for Children's Diseases, for Ophthalmic affections, and for Skin disorders. In connection with the Skin department, there is a complete system of medical baths.

Libraries, Museums, etc.—The General and Medical Libraries,

the Museums of Anatomy and Pathology, of Comparative Anatomy, of Materia Medica and Chemistry, of Geology, and of Natural Philosophy, are open daily. There are also a Chemical, a Physiological, a Zootomical, a Botanical, and a Hygienic Laboratory, where instruction is given under the superintendence of the Professors.

Practical Instruction.—Dr. Ringer, Holme Professor of Clinical Medicine, delivers Clinical Lectures every Tuesday and Thursday at 2, and trains the pupils in the practical study of disease. Lectures are also given by Dr. Bastian, Dr. Roberts, and Dr. Poore. Dr. Barlow, Assistant-Professor of Clinical Medicine, instructs in Physical Examination, in the Diagnosis of Diseases of the Heart and Blood-vessels, and of Abdominal Diseases. Dr. A. Money instructs in the Examination of the Lungs and of the Urine. Lectures are given every Monday at 2 by Mr. Christopher Heath, the Holme Professor of Clinical Surgery; once a fortnight, or oftener, by Mr. Beck and Mr. Berkeley Hill. The Holme Professor holds a Clinical Examination every Friday at 3. Mr. Barker and Mr. Godlee, Assistant-Professors of Clinical Surgery hold examinations, and instruct students in the observation and examination of patients. Mr. Bilton Pollard attends on Mondays and Thursdays at 9 A.M. to see patients with throat and ear diseases, and to give instruction in the use of Laryngeal instruments. A class for the study of Practical Gynæcology meets twice a week under the direction of Dr. John Williams and Dr. H. Spencer. A course of Practical Surgery is given during the winter. It consists of three divisions: 1. The use of Surgical Apparatus, etc., by Mr. Bilton Pollard and Mr. Raymond Johnson, on Mondays and Thursdays, at 4, in October, November, and December; 2. Operative Surgery, by Mr. Godlee, during the latter part of the winter session; 3. Demonstrations of Surgical Preparations, by Mr. Barker, on Wednesdays and Saturdays at 10, from October to April, and on Tuesdays and Fridays at 9, from May to July. Mr. Godlee also gives, in the summer, a course of Operative Surgery intended for candidates for the public services, for the surgical degrees of the University of London, and the Fellowship of the Royal College of Surgeons. A practical course of instruction in Pathology is given in January, February, and March. A practical class for the detection of Poisons is held by Dr. Plimpton, at 11 A.M., on Mondays, Wednesdays, and Fridays, in October. Practical instruction in Hygiene and Public Health is given by Dr. Corfield and Dr. Parkes.

Biological Courses.—Elaborate courses of instruction are given in this College in the class of Physiology, by the Jodrell Professor, Mr. Schäfer, and assistants; and in the class of Comparative Anatomy and Zoology, by Mr. Ray Lankester, Jodrell Professor, and assistants; and in the class of Botany, by Mr. F. W. Oliver.

Offices.—Eight House-Physicians, six House-Surgeons, eight Obstetric Assistants, Out-patient Physicians' and Surgeons' Assistants, Clinical Clerks, Surgeons' Dressers, and Ophthalmic Surgeons' Assistants, are selected from among the pupils. The House-Physicians, the House-Surgeons, and the Obstetric Assistants, reside in the Hospital, paying for their board.

Scholarships, etc.—Three Entrance Exhibitions, value £100, £60, and £40 per annum, to gentlemen who are about to commence their first winter's attendance. Subjects: Chemistry, Physics, and Biology. The examination will take place on September 24th and 25th. Notice of intention to compete must be given on or before September 23rd. The Atkinson-Morley Surgical Scholarship, £45, tenable for three years, for proficiency in Surgery. Atchison Scholarship, about £60 per annum, tenable for two years, for general proficiency. The Sharpey Physiological Scholarship, annual value about £105. The Filliter Exhibition of £30, annually in July, for proficiency in Pathological Anatomy. Dr. Fellowes's Clinical Medals, one Gold and two Silver, at the end of each winter and each summer session. The Liston Gold Medal, at the end of the winter session, for reports and observations on Surgical Cases in the Hospital. The Alexander Bruce Gold Medal for proficiency in Pathology and Surgery. The Tuke Silver Medal, awarded annually at the discretion of the Professor of Pathological Anatomy. The Cluff Memorial Prize, value about £15, every second year, to the most proficient in Anatomy, Physiology, and Chemistry: next award in 1891. Erichsen Prize, a Surgeon's Operating Case, value £10 10s., awarded yearly in the class of Practical Surgery. Morris Bursary of £25 a year, tenable for two years. Gold and Silver Medals or other Prizes, as well as Certificates of Honour, after competitive examinations in the classes. Prizes to the value of £10 in the class of Hygiene. A prize of Instruments in the class of Dental Surgery.

Private Instruction.—Gentlemen may obtain assistance in their studies within the College, on application to the respective Professors.

The Medical Society meets fortnightly to discuss subjects connected with medicine, and for the exhibition of microscopical specimens.

Residence of Students.—Several professors and other gentlemen connected with the College receive students to reside with them; and, in the office of the College, there is kept a register of persons unconnected with the College who receive boarders into their families.

Information respecting the College may be obtained from the Dean, Dr. John Williams; the Vice-Dean, Mr. E. A. Schäfer; the Sub-Dean, Mr. Thane; or the Secretary, Mr. J. M. Horsburgh.

The Session will be opened on Monday, October 1st, at 4 P.M., when an Introductory Address will be delivered in the Botanical Theatre by Mr. R. J. Godlee, M.S., B.A., F.R.C.S.

WESTMINSTER HOSPITAL.—*The Hospital* contains upwards of 200 beds. There are separate departments for Diseases of the Eye, Ear, Skin, Teeth, and Throat, for Diseases of Women, and for Orthopædic Practice, and a special ward for children.

Museums, etc.—The Anatomical Museum is constantly open to the students. A cabinet containing a valuable collection of microscopical preparations, chiefly histological, has been presented to the Museum. There are also a Pathological Museum and a Materia Medica Museum. The Library is open daily from 10 to 5.

Special Subjects.—In addition to the practice of the Hospital, general students may attend, without further fee, the practice at the Royal Westminster Ophthalmic Hospital; and the practice of the National Hospital for Paralysis. Instruction in the physical examination of the Chest is given by the Physicians and Assistant-Physicians, and in the use of the Laryngoscope, at 9 A.M. on Wednesdays, by Dr. De Havilland Hall. Mr. R. Davy gives demonstrations on Orthopædic subjects at 2.30 on Fridays. A course of Practical Surgery is given by Mr. R. Davy in three divisions: 1. October to December, Surgical Anatomy and Diagnosis and Use of Apparatus; 2. January to March, Examination of Pathological Specimens, the Use of the Ophthalmoscope, Laryngoscope, etc.; 3. May to July, Surgical Instruments, Operations on the Dead Subject. In the summer, Mr. Davy gives a course of Operative Surgery. Mr. Hebbert will give special demonstrations in Anatomy for junior students, at least twice a week in the summer. Dr. P. S. Abraham will give in the summer a course of Histology, at 1.30 P.M. on Mondays, Wednesdays, and Thursdays; and Dr. Hebb a course of Morbid Histology, at 10 A.M. on Tuesdays and Thursdays.

Appointments.—A Curator of the Museum and a Pathologist are appointed annually, each with a salary of £50; and a Medical and a Surgical Registrar, each with a salary of £40. Two House-Physicians, two House-Surgeons, and a Resident Obstetric Assistant are appointed for six months, after examination, and are provided with rooms and commons. The Surgeon's Dresser of the day is provided with commons at the Hospital table. Clinical Assistants to the Assistant-Physicians and Assistant-Surgeons, and to the officers in charge of special departments, are appointed from among qualified students. Every student must perform the duties of Out-patient Dresser for four months; and afterwards hold the office of In-patient Dresser for four months, of Out-patient Clinical Clerk for four months, and of In-patient Clinical Clerk for four months. No student is eligible as In-patient Dresser or Clinical Clerk until he has passed the Second Examination of the Conjoint Board, or an equivalent examination.

Scholarships and Prizes,—A Natural Science Entrance Scholarship, value £100; two Entrance Scholarships, each £40 a year for two years, and two Entrance Scholarships, value £20 each, tenable for two years;[1] also two Entrance Scholarships, value £20 each,

[1] The next Examination will be held at the Hospital on September 23rd and 24th. The following are the subjects. Latin: 1889, Virgil *Æneid*, Books I and V; 1890, Cicero, *De Amicitiâ; Pro Balbo.* The paper will contain passages for translation, questions in Grammar, and easy English sentences for translation into Latin. French or German—The papers will contain passages for translation into English, and questions in Grammar. Mathematics: Arithmetic—including Vulgar and Decimal Fractions, and extraction of Square Root. Algebra—Addition, Subtraction, Multiplication, and Division of Algebraical Quantities; Proportion, Arithmetical and Geometrical Progression, Simple Equations. Geometry—First Four Books of Euclid, or the subjects thereof. Experimental Physics and Chemistry—The questions in these will be elementary, and in the latter will be confined to the Non-Metallic Elements. The examination is by written papers. Notice of intention to compete, with a statement of the languages in which the candidate wishes to be examined, and a certificate of moral character, must be sent to the Dean not later than September 16th.

tenable for two years, after examination in Chemistry and Experimental Physics. An Entrance scholarship, value £20, is offered annually to dental students. Treasurers' Exhibition in Anatomy, Physiology, and Chemistry, value £10 10s., tenable for one year for first year's men. The President's Scholarship in Anatomy, Histology, and Physiology, value £21, to students of second year (to be styled Assistant-Demonstrator). After end of fourth winter, Prizes of £5 each (books or instruments) in Clinical Medicine and Clinical Surgery. Frederic Bird Medal and Prize, value £14, to students who have completed their fourth winter; subjects of examination: Medicine, Midwifery, Diseases of Women and Children, and Pathology. Chadwick Prize for General Proficiency, £21 (books or instruments), to the most meritorious student or students of any year not exceeding the fifth; subjects of examination: Anatomy, Physiology, Histology, Medicine, Surgery, and Midwifery. In most of the Classes, Special Prizes are given by the Lecturers; and Certificates of Honour are awarded in each Class. Tutorial assistance and guidance to the students in their work is given by the members of the Medical and Surgical Staff.

Students' Club.—Three of the rooms in the new School are devoted to a Club for the students, comprising reading-room, smoking-room, and restaurant. It is managed by a committee of four members of the staff and five students, and all students are eligible for admission. The annual subscription is half a guinea.

The Guthrie Society (Medical and Physical) meets once a month during the academical year.

Communications respecting the Medical School should be addressed to Dr. Donkin, the Dean of the School, from whom all particulars may be obtained. Information may also be obtained from any of the Lecturers, from the Secretary to the Hospital, or from the Secretary at the School.

London School of Medicine for Women.—The Winter Session will commence on October 1st.

The opening address will be given by Dr. Elizabeth Blackwell, at 3 P.M.

The following courses of Lectures are delivered at this school: Anatomy and Practical Anatomy, by Mr. Stanley Boyd; Physiology and Histology, by Dr. W. D. Halliburton; Chemistry and Practical Chemistry, by Mr. Heaton; Materia Medica and Therapeutics, by Dr. Sainsbury; Practice of Medicine, by Mrs. Garrett-Anderson, M.D., and Dr. H. Donkin; Midwifery and Diseases of Women, by Dr. Ford Anderson and Mrs. Scharlieb, M.D.Lond.; Forensic Medicine, by Dr. Dupré and Mrs. Dowson, L.K.C.P. and L.R.C.S.I.; Surgery, by Mr. A. T. Norton: Ophthalmic Surgery, by Mr. J. Grosvenor Mackinlay; Pathology, by Dr. A. Q. Silcock; Mental Pathology, by Dr. Mercier; Operative Surgery, by Mr. Stanley Boyd.

The Dissecting-room, the Physiological Laboratory, the Chemical Laboratory, the Library, and the Museum of Anatomy, Pathology, and Materia Medica, are open daily.

Clinical Instruction is given at the Royal Free Hospital, which contains 156 beds; 74 for surgical, 64 for medical, 12 for gynæcological, and 6 for ophthalmic cases. *Physicians:* Dr. Samuel West and Dr. Sainsbury; *Assistant-Physicians:* Dr. W. H. Mackenzie, Dr. Calvert and Dr. Andrewes; *Surgeons:* Mr. Gant and Mr. A. Boyce Barrow; *Assistant-Surgeons:* Mr. Berry and Mr. Battle; *Physician for Diseases of Women:* Dr. T. C. Hayes; *Ophthalmic Surgeon:* Mr. Grosvenor Mackinlay; *Pathological Demonstrator:* Mr. Battle.

Clinical Lectures are given once a fortnight by each of the four senior members of the staff. Instruction is also given at the Hospital as follows. Pathological Demonstration twice a week, by Mr. Battle; Minor Surgery, by Mr. Battle; Surgical Tutorial Class, Mr. James Berry; Ausculation and Physical Examination, by Dr. Calvert; Medical Tutorial Class, Dr. Sainsbury; Practical Pharmacy, by Mr. S. Barber. Students are appointed to the posts of Clinical Clerks, Surgical Dressers, and Pathological Registrar without further fee.

Fees.—The fee for the ordinary curriculum of non-clinical Lectures is £70 if paid in one sum, or, if paid in instalments, £40 for the first year, £30 for the second, and £15 for the third. The courses of lectures included in this fee are as follows: Two courses each of Anatomy, Practical Anatomy, Physiology, Chemistry, Organic Chemistry, Histology, Materia Medica, and Practice of Medicine, and one course each of Practical Physiology, Practical Chemistry, Surgery, Pathology, Midwifery, Diseases of Women, and Forensic Medicine. This course includes all the lectures required for the licence of the Apothecaries' Society London, and for the conjoint examinations of the Scotch Colleges, and allows for the repetition of attendance on Anatomy, Chemistry, Physiology, and Materia Medica. Any student having paid the above compounding fees, on a further payment of £6 6s., may attend additional courses of the classes mentioned above. Materials for the practical classes will be charged extra when additional courses are taken. Practical Pharmacy costs £3 3s. extra. The fees for the courses are: Anatomy, Practical Anatomy, Physiology, Chemistry, Medicine, Surgery, and Midwifery, one course of each, £8 8s.; Practical Chemistry, Botany, Materia Medica, Forensic Medicine, and Pathology, each £5 5s.; Ophthalmic Surgery, Mental Pathology, and Hygiene, each £2 2s. Students who do not hold a perpetual ticket, and who have attended regularly, can repeat any course on payment of £2 2s. for each course. Materials for the practical classes will, in such cases, be charged according to a fixed scale. Practical Midwifery, £4 4s. for one month; £12 12s. to £26 5s. for six months; and Vaccination £1 1s. The fee for four years' Clinical instruction at the Royal Free Hospital is £15 the first year, £15 the second, and £10 the third year; the fourth year is free. The fee for attendance at the London Fever Hospital for three months is £3 3s.

Scholarships and Prizes.—1. An Entrance Scholarship, value £30, is offered for competition at the end of September in each year. Candidates must have passed a Preliminary Examination in Arts, and the successful candidate must enter on a full course of medical study at the school.[1] 2. The John Byron Scholarship, value £20 a year for four years, is offered to ladies requiring assistance for the prosecution of their medical studies. The next award will probably be in 1890. 3. The Society for the Promotion of Christian Knowledge offers valuable scholarships on certain conditions. 4. The Zenana Medical Mission Society assists ladies who wish to go to India as missionaries. 5. Income of the Helen Prideaux Memorial Fund as a prize every second or third year. 6. Prizes and Certificates of Honour are awarded in each class at the end of the Session. The National Association for Supplying Female Medical Aid to the Women of India provides funds for the Jubilee and the Dufferin Scholarship, out of funds collected in England, and will offer a third Scholarship in 1890, value £25 a year.

Mr. Cooke's School of Anatomy, Physiology, Surgery, etc.—By decision of the Royal Colleges of Physicians and Surgeons, gentlemen rejected at their Anatomical and Physiological Examinations (Primary R.C.S. or Second Conjoint) can get "signed up" from this school for the three or six months' work, they are now required to put in before re-examination. The school meets the requirements of two classes of students, namely: 1. Students preparing for the usual Primary and Pass Examinations of the several Licensing Bodies; 2, qualified practitioners and advanced students, that is, gentlemen wishing either to obtain some of the higher qualifications, or to compete for appointments in Her Majesty's Army, Navy, and Indian Medical Services. For these special classes are provided. The instruction is given on the dissected and undissected body, with normal and pathological specimens, microscopical preparations, chemical, physiological, and surgical apparatus, splints, etc. The operations of Surgery are performed on the dead body. The school possesses a good collection of physiological apparatus, allowing of the demonstration to the class of the great bnlk of the usual practical exercises in physiology; also chemical apparatus, allowing every student not only to see, but to repeat for himself the analysis of the principal foodstuffs and fluids and solids of the body, and also all the usual reactions, tests, etc. Gentlemen preparing for the higher examinations receive special instruction in the more difficult subjects, and have the advantage of personally repeating (with certain restrictions as to the careful use of the physiological apparatus) the practical exercises in Physiology by Professors Burdon-Sanderson, Foster and Langley, etc.

Besides the above, students and practitioners are admitted to attend the practice of several of the general and special hospitals and infirmaries. Information may be obtained on application to the secretaries of the respective institutions.

[1] The subjects of examination are: 1, English; 2, Latin—Virgil, *Æneid*, Books v. and vi.; 3, Arithmetic; 4, Elements of Mathematics; 5, Elementary Physics.

NOTES CONCERNING THE PROVINCIAL HOSPITALS AND MEDICAL SCHOOLS.

UNIVERSITY OF CAMBRIDGE.—The Lectures are given during the Michaelmas, Lent, and Easter Terms, and in the Long Vacation (July, August), on three days a week in the forenoon; Practical Work and Demonstrations usually in the afternoon. Practice at the hospital daily, from 10 to 1, during the terms and long vacation. The fees are one or two guineas a term for lectures, and two to three guineas for practical work in the laboratories. The perpetual fee for hospital practice is twelve guineas. Many of the lectures in Medicine and Surgery are free to members of the University. The following is a list of the recognised teachers in the subjects of the Examination for Medical and Surgical degrees:

Chemistry: Professor Liveing; Professor Dewar; Dr. Ruhemann, Mr. Sell, Mr. Fenton (University Demonstrators); Mr. Main (St. John's); Mr. Pattison Muir (Caius); Mr. Carnegie (Caius); Mr. Neville (Sidney); Mr. Heycock (King's); Mr. Lewis (Downing). Physics: Professor Sir G. G. Stokes; Professor Thomson, Mr. Glazebrook, Mr. Shaw, Mr. Newall, Mr. Wilberforce, Mr. Fitzpatrick (University Demonstrators); Mr. Hart (St. John's); Mr. Atkinson (Trinity Hall). Biology: Professor Newton (Zoology); Professor Babington (Botany); Mr. Sedgwick, Mr. Francis Darwin, Mr. Weldon, Mr. Harmer, Mr. Gadow, Mr. Gardiner, Mr. Shipley, Mr. Potter (University Lecturers and Demonstrators); Mr. Hicks (Sidney). Pharmaceutical Chemistry: Mr Robinson; Mr. Main (St. John's). Physiology: Professor Foster; Dr. Gaskell, Dr. Lea, Mr. Langley (University Lecturers); Mr. Shore, Mr. Wingfield (University Demonstrators); Dr. Hill (Downing). Human Anatomy: Professor Macalister; Dr. Hill (University Lecturer); Mr. Douty, Mr. Melsome, Mr. Michell (University Demonstrators). Pathology; Professor Roy; Mr. Adami (University Demonstrator); Mr. Griffiths (Hospital Pathologist). Surgery: Professor Humphry; Mr. Wherry (University Lecturer); Mr. Griffiths (Assistant to Professor). Vaccination; Dr. Cory. Medical Jurisprudence: Dr. Anningson (University Lecturer). Midwifery: Dr. Ingle (University Lecturer). Dental Surgery and Anatomy: Dr. Cunningham. Hygiene: Dr. Anningson and Mr. Robinson. Mental Diseases: Mr. Coulton Rogers (Fulbourn County Asylum). Therapeutics; Professor Latham. Medicine: Professor Sir George Paget; Dr. Donald MacAlister (University Lecturer); Dr. Bradbury (Linacre Lecturer). Hospital Physicians: Dr. Latham, Dr. Bradbury, Dr. Donald MacAlister; Mr. Lawrence Humphry (Assistant Physician). Hospital Surgeons: Dr. Humphry, Mr. Wherry, Mr. Carver, Mr. Wallis. Hospital Dentists: Mr. Jones, Mr. Rhoades.

BIRMINGHAM.—QUEEN'S COLLEGE.—The classes of Physiology, Chemistry, Chemical Physics, Comparative Anatomy, and Botany, are held in Mason Science College.

The Anatomical Portion of the Museum has been largely increased, and a Materia Medica Museum, and Laboratories for Practical Pathology and for Practical Pharmacology and Toxicology, are opened.

Clinical Lectures and Lectures in special departments are given in the General Hospital and the Queen's Hospital, which have a total of upwards of 400 beds. Practical instruction is given in the use of the Microscope, Laryngoscope, Opthalmoscope, and Surgical Appliances; also in Case-taking and Bandaging, with Minor Surgery and Prescribing. Students must attend each hospital alternately for six months. No student may enter for hospital medical practice or lectures during the first year. Clinical instruction in Lunacy and Mental Disease is given at the Borough Asylum. Professor Whitcombe lectures during the summer at the College on these subjects. Students have free admission to the Eye and Orthopædic Hospitals. A course of Chemical Physics is given by Professor J. H. Poynting at 3 p.m. on Tuesdays and Fridays.

Appointments.—General Hospital: Resident Medical and Resident Surgical Assistant, two Resident Dressers, tenable for six months. *Queen's Hospital:* Resident Obstetric Assistant, tenable for six months; Resident Dresser, tenable for three months.

Prizes.—The Sands Cox Prize, value £20, annually, to students who have completed their curriculum, after examination in Medicine, Surgery, and Midwifery. Candidates must produce certificates of good conduct from the Warden. The examinations in 1890 will be held in the last week in March. Two Ingleby Scholarships, after examination in Obstetric Medicine and Surgery and the Diseases of Women and Children, open to students who have completed two years' regular attendance at the College. One or more Sydenham Scholarships, £31 10s. each, awarded annually. One or more Queen's Scholarships, value £31 10s. each, awarded annually after examination in October. The Sydenham and Queen's Scholarships are open to students entering at the College. The Russell Memorial Prize is awarded after an examination in Nervous Diseases. Medals and Certificates of Honour, annually, in each class after examination. A Senior Medical and a Senior Surgical Clinical Prize (third and fourth years), value in each department, £5 5s.; a Junior Medical and a Junior Surgical Prize (first and second years), value of each £3 3s.; Midwifery Prize (third and fourth years), £4 4s.

The Medical Tutor holds classes for Junior Students.

Further particulars may be obtained by application to the Rev. the Warden; or to Professor Windle, at the College. Information regarding Hospital Practice may be obtained from Mr. Jordan Lloyd, 21, Broad Street, Birmingham; or Dr. Simon, Newhall Street.

BRISTOL MEDICAL SCHOOL, AFFILIATED TO UNIVERSITY COLLEGE, BRISTOL.—The Medical School provides all the courses of lectures required for the diplomas of the various Licensing Bodies and the degrees of the University of London. Practical instruction is further provided by the Lecturers, the Demonstrators, and the Medical Tutor in Anatomy, Physiology, and Pathology. Clinical instruction is given at the Royal Infirmary and General Hospital. The Royal Infirmary contains 264 beds, a large Library and Museum. The General Hospital contains 200 beds, a Library and Museum. Both institutions have special departments for Diseases of Women, the Eye, etc.

Appointments—Royal Infirmary: House-Physician, House-Surgeon, and Junior Resident Medical Officer; Clinical Clerks and Dressers, also Ophthalmic, Obstetric, and Pathological Clerks are appointed. The Dressers reside in the Infirmary in weekly rotation. *General Hospital:* House-Surgeon, Assistant House-Surgeon, and Physicians' Assistant; Clinical Clerks, Dressers, Pathological Clerks, and Obstetric and Ophthalmic Clerks are appointed. The Dressers reside in the Hospital in rotation free of expense.

Prizes.—Prizes and Certificates of Honour are awarded at the Medical School after examination in the subjects of each year. Certificates alone are given for Comparative Anatomy and Hygiene. *Royal Infirmary:* Two Entrance Scholarships (in subjects of general education), value £36 15s. and £10 10s. Suple Medical Prize and Suple Surgical Prize, each a Gold Medal, value £5 5s., and about £7 7s. in money, open to students in their fourth and third years of study respectively. Clark Prize (interest of £500) to the most successful student of the third year at the Medical School. Tibbitts Memorial Prize (interest of £315), for proficiency in Practical Surgery. Crosby Leonard Prize (interest of £300), to third year's surgical students. Six Pathological Prizes to the Pathological Clerks who perform their duties satisfactorily. Midwifery Prize (in books, value £3 3s.), after practical examination. *General Hospital:* Lady Haberfield Entrance Scholarship, value £31 10s., at the beginning of the winter session, after examination in subjects of general education. Second Entrance Scholarship, value £20. Clarke Surgical Scholarship, for third year students, £15 annually. Sanders Scholarship (interest of £500), for fourth year students, after examination in Medicine, Surgery, and Diseases of Women. Martyn Memorial Pathological Scholarships, two of £10 each, awarded half-yearly, after examination in Pathology. Committee Gold and Silver Medals awarded annually to the most distinguished students of the fourth year.

Medical School.—The regulations have been brought into conformity with all the requirements of the Conjoint Board of the Colleges, and the fees have undergone corresponding modifications.

Further particulars respecting the Infirmary may be known on application to Dr. Prowse; respecting the Hospital, on application to Dr. E. Markham Skerritt. Information regarding the Medical School will be afforded by the Dean, Dr. E. Markham Skerritt.

LEEDS SCHOOL OF MEDICINE: MEDICAL DEPARTMENT OF YORKSHIRE COLLEGE.—There are Anatomical, Pathological, Botanical, and Materia Medica Museums. The Library is open to students. The Museum of the Literary and Philosophical Society is open to students at a nominal charge.

The instruction in Chemistry and Physics, Practical Chemistry,

Practical Toxicology, and Practical Pharmacy, Biology, and Botany is given in the new buildings of the Science and Art Department of the Yorkshire College.

Clinical Instruction, etc.—The General Infirmary has 325 beds; viz., medical cases, 74; surgical, 208; ophthalmic, 30; gynæcological, 12, and 36 cots are available for the treatment of children. There is also a semi-convalescent Home with 42 beds for the reception of Infirmary patients. Clinical lectures are delivered by the Physicians and Surgeons, and classes meet in the wards for practical instruction. Demonstrations of Eye and Ear Diseases, and instruction in the use of the Ophthalmoscope, and in the application of Electricity are given. There is also a Maternity Department in connection with the Infirmary. The West Riding Lunatic Asylum at Wakefield is open for the study of Mental Diseases, and a course of lectures is given by Mr. Bevan Lewis during the summer; the systematic lectures being given at the school, and the clinical at the asylum. Students can also attend the practice of the Leeds Public Dispensary, the Fever Hospital, and the Hospital for Women and Children.

Hospital Appointments. — House-Physicians, House-Surgeons, Physicians' Clerks, Surgeons' Dressers, Ophthalmic and Aural Surgeons' Dressers, Gynæcological Ward Clerks, Assistant-Physicians' Clerks, Assistant-Surgeons' Dressers, Dressers in the Casualty-Room, and *Post-mortem* Room Clerks, are appointed during the year. The house-physicians and surgeons' dressers hold office for six months; the house-surgeons for twelve months; the others for three months. The house-physicians and house-surgeons must have at least one legal qualification. Appointments are also open to students at the Leeds Public Dispensary, and at the West Riding Lunatic Asylum.

Prizes.—The Hardwick Clinical Prize, value £10, is given annually for the best reports of medical cases. At the close of each session, Silver Medals, Books, and Certificates of Honour are awarded according to merit; and at the end of the summer sessions the Thorp Prizes of £20 are given in Forensic Medicine and Hygiene.

UNIVERSITY COLLEGE, LIVERPOOL: MEDICAL FACULTY.—The Medical School contains two Museums, one in connection with the Anatomical Department, for specimens of human and comparative anatomy; the other for pathological specimens, drawings, wax models, materia medica specimens, etc. There is also a good Library and a Reading Room.

Instruction.—The Preliminary Scientific subjects are taught in the Science and Arts Department of the College; the rest in the Medical School. The Dissecting-room and Physiological Laboratory are kept open all the year, under the supervision of the demonstrators. In addition to the course of lectures on Medicine, Surgery, and Midwifery, practical instruction is given in each by the respective professors during the winter session. Clinical Lectures are delivered weekly at the Royal Infirmary, which contains nearly 300 beds, and medical and surgical tutors attend in the wards daily from 10 to 12. Special instruction in Venereal, Children's, and Eye Diseases can be obtained at the neighbouring hospitals free.

Appointments.—Royal Infirmary: Two House-Physicians and three House-Surgeons are appointed for six months, after (if there be more applicants than vacancies) competitive examination. Candidates must have a legal qualification. Three Clinical Clerks for each Physician, three or more Dressers for each Surgeon, and two Clerks to the Thornton Wards for Diseases of Women are appointed for three months in October, January, and May. *Post-mortem* Clerks are appointed for six weeks. All students must perform this duty before the schedule for the final examination is signed.

Exhibitions and Prizes.—Holt Tutorial Scholarships: two are awarded annually by the Medical Faculty, each of the value of £100, for one year. Roger Lyon Jones Scholarships (each £21 for two years): one is offered annually as an entrance scholarship to students proceeding to the Victoria M.B. degree; the other is competed for by second year's students in Anatomy, Physiology, Chemistry, and Materia Medica. The Derby Exhibition of £15 is open to the competition of third and fourth year's students in Clinical Medicine and Surgery. In addition the Medical Faculty give two gold medals and numerous silver and bronze medals, and certificates of honour yearly.

The *Debating Society* meets eight or ten times during the winter session on Wednesday evenings for the reading and discussion of papers. Prizes are given for the best papers, and for the best collection of clinical reports.

Composition Fees.—For the convenience and advantage of students reading for the Victoria M.B., Ch.B. degrees, it has been arranged that they may pay a single fee of £23 14s. to the Science and Arts Department of the College, covering all the classes required for the Preliminary Scientific Examination. And later on a second fee, payable in two equal instalments with an interval of twelve months, of £63 to the Medical Faculty, covering all the classes required for the Intermediate and Final Examinations. For students reading for Diplomas a composition fee of fifty-five guineas has been fixed, which includes all the classes required by most of the Examining Boards; and also a composition fee of fifty guineas, excluding the Chemistry classes. The composition fee for hospital practice at the Royal Infirmary is £42.

Communications should be addressed to the Dean, Mr. F. T. Paul, 38, Rodney Street, Liverpool.

OWENS COLLEGE, MANCHESTER: MEDICAL DEPARTMENT.—The Department of Medicine comprises a very complete series of laboratories, museums, and lecture-rooms. On the ground-floor of the Medical Buildings are situated the rooms in which are located the Library of the Medical Society of Manchester. These include (1) the Library, containing above 27,000 volumes; (2) a Students' Library; (3) a Reading-room, reserved for members of the Medical Society. The Medical Buildings also comprise a Students' Common Room, besides rooms for Professors and Lecturers, offices, etc.

Instruction.—In the College, the following courses (in addition to those mentioned in the table) are given:—in the winter: Organic Chemistry, by Professor Schorlemmer (T. Th. and S., 9.30); Gynæcology, by Professor Sinclair (Th. 12). Advanced Surgical Pathology, by Professor Young (Tu. at 2); Practical Pharmacy, By Professor Leech and Mr. Elborne. In the summer: Diseases of Children, by Dr. H. Ashby (W. and F., 3 P.M.); Mental Diseases, by Mr. G. W. Mould (T. and Th., 4 P.M.); Hygiene, by Dr. A. Ransome (T. and F., 2 P.M.); and Embryology (lectures and laboratory work), by Professor A. M. Marshall (M., W., and F., 1.30 P.M.); Comparative Osteology, by Mr. Hurst (M., W., and F., 9.30). Practical Morbid Histology, by Professor Dreschfeld (M. at 4, W. at 1 P.M.). Dr. Harris conducts a course of Pathology for medical men. Operative Surgery, by Professor Hare (M. at 4 P.M.). Practical Surgical Pathology, by Professor A. H. Young (Tu., 9.30); and Elementary Surgical Pathology, by Professor Young (Tu. and Th. at 2 P.M.). Two courses of Materia Medica and Therapeutics are given at separate hours on the same day; one being devoted to Materia Medica proper, and the other to the Action of Drugs; also courses of Practical Organic Chemistry and Sanitary Chemistry, by Professor Dixon; Practical Toxicology, by Dr. Dixon Mann; Practical Pharmacy, by Mr. Elborne; and Skin Diseases, by Dr. Brooke. A special course of Anatomical Demonstrations will be given on three days a week at 4 P.M.

The Royal Infirmary contains 300 beds. Associated with it are the Monsall Fever Hospital (306 beds), and the Convalescent Hospital (136 beds), and the Royal Lunatic Asylum at Cheadle, which accommodates 260 patients.

Clinical Instruction is given by the Physicians and Surgeons of the Infirmary. Clinical Classes are formed in October, January, and May; also Advanced Clinical Classes for students of the last two years. Medical and Surgical Demonstrations are given, each at 9.15 A.M. one morning weekly in the summer. Mr. Wright gives instruction in Aural Surgery (W., 12). Clinical instruction is given at the Fever Hospital; also a series of Clinical Lectures on Fever, in the Infirmary. Mr. Wright gives instruction in Diseases of the Ear. Clinical Lectures on Diseases of Women and Obstetrics will be given at the Royal Infirmary, and at St. Mary's Hospital by Dr. Lloyd Roberts and at the Manchester Southern Hospital by Professor Sinclair. Clinical instruction in Diseases of the Eye, and Opthalmoscopic Demonstrations will be given at the Royal Infirmary by Dr. Little, and at the Royal Eye Hospital by Dr. Glascott.

Appointments.—The following appointments are made: A Surgical Registrar, at £100 per annum; a Pathological Registrar, at £100 per annum; a Medical Registrar, at £50 per annum; two Assistant Medical Officers, each at £80 per annum; a Chloroformist, at £75 per annum. Resident Medical Officer, two years, £150 per annum; ditto, at Cheadle, one year, £150 per annum; ditto, at Monsall, one year, £250 per annum; Resident Surgical Officer, one year,

GUIDE TO HOSPITALS AND MEDICAL SCHOOLS IN THE PROVINCES: 1889-90.

For further particulars regarding each Hospital and Medical School, see pp. 549 et seq.

Lectures, etc.	Birmingham Queen's College.	Bristol University College Medical School.	Yorkshire College: Leeds School of Medicine.	Liverpool University College: Medical Faculty.	Owens College (Manchester Royal) School of Medicine.	Firth College: Sheffield School of Medicine.	University of Durham College of Medicine, Newcastle.
WINTER SESSION.							
Anatomy & Physiology.	Prof. Allen, Elementary, F., 4.30; Advanced, M. Tu. W. Th. F., 11	Mr. G. M. Smith and Dr. J. M. Clarke...daily	Demonstrator, Prof. Birch, daily except S., 2 (Physiology only)	Prof. Caton...Tu. W. Th. F., 9.15	Prof. Stirling...M. Tu. W. Th. F., 11.30 (Phys. only)	Dr. S. White...W., 12.30; F., 4	Mr. Williamson and Prof. Oliver...M. W. F., 9.15 (Physiology only)
Anatomy, Descriptive & Surgical.	Prof. Windle...M. Tu. W. Th. F., 12	Mr. Harsant...daily, 9	Prof. Griffith and Mr. Robinson...daily, exc. S., 10.15	Prof. W. M. Banks...M. Tu. W. Th. F., 11; (Sum.) W. Th. S., 11	Prof. Young...M. Tu. W. Th. F., 1	Mr. E. Skinner and Mr. Atkin. M. Tu. W. Th., 4; F., 6 (before Xmas.)	Dr. Howden...1st year, M. F., 9.15; Tu. and Th., 11.15; 2nd year, Tu. Th. 9.15; W., 12, S., 10.15; Regional, W. 2.15, S. 9.15
Demonstrations & Dissections	Dr. Mahood, Mr. J. Lloyd, Mr. Haslam, Mr. Marsh, and Dr. A. Kempe...daily	Dr. Williams...daily except S., 1	Dr. Oliver and assistants ...daily from 9	Mr. Thomas...daily, 9 to 5; S., 9 to 1	Prof. Young and demonstrators...daily, 9.30 to 4.30; S., 9.30 to 12	Mr. Atkin, Mr. Kilham, Dr. Roberts...M. Tu., 9 to 5, W. Th. F., 10 to 5	Dr. Howden, daily, 10 to 4.
Chemistry	Prof. Tilden...M. Tu. W. Th. F., 9.30	Mr. Coomber...Tu. Th. S., 8 (Sum.)	Prof. Smithells...M. W. F., 11.30	Prof. J. C. Brown...M. W. F., 3	Profs. Dixon and Schorlemmer. Tu. Th. S., 9.30	Mr. Williams (at F.C.)... M. W. F., 10; Tu. Th. S. 11	Prof. Bedson...M. W. F., 11
Medicine	Sir B. Walter Foster and Sir J. Sawyer...Tu. W. F., 3	Drs. M. Skerritt and R. S. Smith...M. W. F., 9	Prof. Eddison and Dr. Churton...M. W. F., 1	Prof. Glynn ... Tu. Th. S., 9.15	Profs. Morgan and Ross ...M. Tu. Th., 3	Drs. Bartolomé, Porter, and Dyson....M. W. F., 5; Mr. A. Jackson...M. W. F., 8 A.M.	Prof. Philipson..M. W. F., 5
Surgery	Profs. Pemberton and May ...Tu. W. F., 4	Mr. Dobson and Mr. J. G. Smith...Tu. Th. S., 9	Prof. McGill...Tu. Th. F., 2	Prof. Rushton Parker... M. W. Th., 3	Prof. Hare...M. W. F., 1		Prof. Heath and Dr. Arnison ...M. W. F., 6
Hygiene, etc.			Mr. Hartley				Mr. H. E. Armstrong...T., 3
Hospital Practice	General Hospital *(a)*. Queen's Hospital *(b)*.	Royal Infirmary *(c)* General Hospital *(d)*.	Leeds General Infirmary *(e)*.	Liverpool Royal Infirmary *(f)*.	Manchester Royal Infirmary *(g)*.	Sheffield Infy. *(h)*. Sheffield Hptl. *(i)*.	Royal Infirmary, Newcastle *(k)*.
Clinical Medicine	Physicians of Hospitals	Physicians *(c)* S., 12; *(d)* M. Tu. F., 2	Physicians of Infirmary Tu., 10.30	Physicians, Royal Infirmary...weekly	Physicians, Royal Infirmary...W., 9.15	Physicians of Infirmary & Hospital...Tu., 5 P.M.	Physicians of Infirmary... daily and W., 12
Clincal Surgery	Surgeons of Hospitals	Surgeons *(c)* F., 12; *(d)* W., 12	Surgeons of Infirmary Tu., 3	Surgeons, Royal Infirmary...weekly	Surgeons, Royal Infirmary...Th., 9.15	Surgeons of Infirmary and Hospital...Th., 5 P.M.	Surgeons of Infirmary... daily and Th., 10
SUMMER SESSION.							
Materia Medica	Profs. Rickards and Suckling...Tu. W. Th., 12	Dr. Prowse...Tu. Th. S., 9	Dr. Barrs...M. W. F., 9	Prof. Carter...M. Tu. W. Th. F. S., 9 A.M.	Prof. Leech & Mr. Elborne ...M. Tu. W. Th., 12 & 1	Dr. Young...M. W. F., 8 A.M.	Dr. McBean...M. W., 4; F., 5
Midwifery, etc.	Profs. Clay and Tait (Gynæcology)...Tu. W. Th. F., 1	Dr. Swayne and Dr. Aust Lawrence...daily exc. S., 8 A.M.	Mr. Wright...M. W. F., 11.30; Diseases of Women, Dr. Hellier... Tu F. (Win.), 4	Prof. Wallace (Win.)... M. W. F., 9.15; S., 10	Prof. Sinclair...M. Tu. F., 1 (Win.) Th. 12	Dr. Keeling, Mr. R. Favell Mr. Laver...M. W. F., 8 P.M.	Dr. Gibson and Dr. Nesham... Tu. W. Th. F., 3 P.M. (Win.)
Botany	Prof. Hillhouse.....M. F., 10.30; W., 3	Prof. Leipner...Tu. Th. S., 10 A.M.	Prof. Miall	Mr. Harvey Gibson...Tu. W. Th. F., 9.30	Prof. W. C. Williamson and Mr. Hick...M. Tu. W. Th. F., 2.30	Mr. Birks...Tu. Th., 8 A.M.	Dr. J. Murphy...Tu. Th. F., 4
Forensic Medicine	Prof. Wilders...M., 1; Tu., 2.30	Dr. Eagar and Dr. Harrison...M. Th. S., 10	Mr. Scattergood and Dr. Chadwick...M. Tu. Th. F., 12.30 [10	Prof. F. T. Paul...Tu. Th. S., 9	Dr. Dixon Mann and Dr. Ransome. M. T. W. Th. F. 2	Dr. Roberts...Tu. Th., 5; Toxicol., M. F., 9.30	Dr. F, Page...M. Th., 8 A.M.
Practical Chemistry	Prof. Tilden...Tu. Th., 4	Mr. Coomber...M. W. F., 9	Prof. Smithells...Tu. Th.,	Prof. Brown...Tu. Th. 10	Prof. Dixon...M. W., 10.30	At Firth College	Prof. Bedson. M. W. F., 10 to 1
Comparative Anatomy	——	Prof. Morgan...Tu. W. F., 10	Prof. Miall	Prof. Herdman (Sum.)... Tu. W. Th. F., 9.30	Prof. M. Marshall, Mr. Hurst, & Mr. Assheton M. W. F. 10.30 (Win)	——	Prof. G. S. Brady
Practical Physiology	Prof. Allen (Sum.)...M. W. F., 9, 10.30, or 11	Mr. Atchley...M. W. F., 8 A.M.	Demonstr., Prof. Birch... M. W., 9.45; F. 10	Prof. Caton & Mr. Larkin (Win.)...M. W., 2	Prof. Stirling, etc....Tu. Th. F., 10.30	Mr. F. Harrison...Tu,, 12	Dr. Oliver...Tu. W. Th., 9
Pathology	Prf. Barling. M. W., 3; F. 3.30 Demonstrator, Dr. Foxwell	Dr. Baron...(Sum.) M. W. F., 9	Dr. Jacob...Tu. Th. S., 11.30	Prof. Barron (Win.)...Tu. F., 3; (Sum.) Tu. Th. 3	Prof. Dreschfeld, Dr. Harris, and Dr. Wild, (Win.) M., 2; Tu., Th., 1	Messrs. Richardson and Banham	Dr. Drummond...M., W., F., 4
Practical Surgery	Mr. Bartleet	Mr. A. W. Pritchard (Sum.)...Tu. Th. S., 9	Mr. Robson...M. 2.30; F., 4	Prfo. Parker (Win.) M. Th. 4; oper. course in sum.	Prof. Hare (Win.)...Tu. 12; (Sum.) W., 1; F., 12	Mr. R. J. Pye-Smith	Professor Heath and Dr. Arnison...7 A.M. and 3.30
Ophthalmic Surgery	Prof. J. V. Solomon...W., 3	——	Mr. Nunneley...Tu. F., 2	Mr. E. A. Browne...W., 4	Dr. Little (Sum.)...W. F., 4; clin. M. Th., 10	Mr. Snell (Sum.)...W., 12.30	Demonstr. M. 12; Th., 9
Vaccination	Dr. Robinson	——	Mr. Holmes	——	Mr. E. Guest	Mr. Skinner	Mr. Hawthorn
Operative Surgery	——	...T. W. F., 10	——	——	——	——	——

(a.) Physicians: Dr. Wade, Sir Walter Foster, Dr. Rickards, Dr. Saundby. *Assistant-Physicians:* Dr. Simon, Dr. Foxwell. *Surgeons:* Mr. O. Pemberton, Mr. T. H. Bartleet, Mr. R. Jolly, Mr. T. F. Chavasse. *Assistant-Surgeons:* Mr. W. F. Haslam, Mr. Barling. *Obstetric Officer:* Dr. E. Malins.

(b.) Physicians: Dr. Carter, Dr. Suckling. *Surgeons:* Mr. J. St. S. Wilders, Mr. B. May, Mr. Jordan Lloyd, Mr. Marsh. *Ophthalmic Surgeon:* Mr. P. Smith. *Dental Surgeon:* Mr. C. Sims. *Casualty Surgeons:* Mr. A. F. Clay, Mr. J. T. J. Morrison.

(c). Physicians: Dr. R. S. Smith, Dr. Waldo, Dr. Shaw, Dr. Prowse. *Assistant-Physician;* Dr. Williams. *Surgeons:* Mr. Board, Mr. Prichard, Mr. J. G. Smith, Mr. Harsant, Mr. J. P. Bush. *Assistant-Surgeon:* Mr. G. M. Smith. *Ophthalmic Surgeon:* Mr. Cross. *Obstetric Physician:* Mr. Wedmore. *Dental Surgeon:* Mr. Ackland. *Diseases of Ear:* Mr. Harsant. *Diseases of Skin:* Dr. Waldo. *Operations:* Tu. F., 1 P.M.

(d). Physicians: Dr. Markham Skerritt, Dr. Harrison, Dr. B. J. Baron. *Surgeons:* Mr. F. P. Lansdown, Mr. Dobson, Mr. Pickering. *Physician-Accoucheur:* Dr. Aust Lawrence. *Assistant-Physician:* Dr. Clarke. *Assistant-Surgeon:* Mr. Barclay. *Diseases of Skin:* Dr. Harrison. *Diseases of Eye:* Mr. Pickering. *Diseases of Ear:* Mr. Pickering. *Diseases of Throat:* Dr. Baron. *Dental Surgeon:* Mr. Parson. *Operations:* Th., 1.30; Ophthalmic, M., 1.30.

(e). Physicians: Dr. Eddison, Dr. Churton. *Surgeons:* Mr. T. R. Jessop, Mr. E. Atkinson, Mr. McGill, Mr. Mayo Robson. *Ophthalmic and Aural Surgeons:* Mr. J. A. Nunneley, Mr. H. B. Hewetson. *Assistant-Physicians:* Dr. A. G. Barrs, Dr. E. H. Jacob. *Assistant-Surgeons:* Mr. E. Ward, Mr. W. H. Brown. *Dental Surgeon:* Mr. T. Carter. *Operations:* Th., 1; Eye, W., 1.

(f). Physicians: Dr. Glynn, Dr. Davidson, Dr. Caton. *Surgeons:* Mr. Bickersteth, Mr. Harrison, Mr. Banks. *Assistant-Surgeon:* Mr. Rushton Parker. *Obstetric Physician:* Dr. Wallace. *Dental Surgeon:* Mr. Phillips. *Oculist:* Mr. Bickerton. *Pathologists:* Dr. Barron and Dr. Briggs. *Surgeons to Lock Hospital:* Mr. F. W. Lowndes and Dr. Bernard. *Operations:* Tu. W., 1.

(g). Physicians: Dr. D. J. Leech, Dr. Dreschfeld, Dr. Ross, Dr. Steell. *Assistant-Physicians:* Dr. Harris, Dr. Bury. *Surgeons:* Mr. F. A. Heath, Mr. W. Whitehead, Mr. T. Jones, Mr. Hardie. *Assistant-Surgeons:* Mr. F. A. Southam, Mr. G. A. Wright. *Obstetric Physisian:* Dr. Lloyd Roberts. *Ophthalmic Surgeon:* Dr. D. Little. *Dental Surgeon:* Mr. Smith. *Operations:* S., 10.30; Eye, M., 11; Gynæcological, M., 11.

(h). Physicians: Dr. De Bartolomé, Dr. Dyson. *Assistant Physicians:* Dr. Porter and Dr. Cocking. *Surgeons:* Mr. W. F. Favell, Mr. A. Jackson, Mr. G. H. Shaw. *Assistant Surgeons:* Mr. Hallam and Mr. Atkin, Dr. Burgess. *Ophthalmic Surgeon:* Mr. Snell. *Operations:* Th., 12.30; Eye, M., 12.30.

(i). Physician: Dr. Roberts; *Surgeons:* Dr. Keeling, Mr. Thorpe, Mr. Pye-Smith. *Operations:* F., 12.30.

(k). Physicians: Dr. Philipson, Dr. Drummond, Dr. Oliver. Dr. Limont. *Surgeons:* Dr. Arnison, Dr. L. Armstrong, Dr. Hume, Dr. Page. *Assistant-Surgeons:* Mr. Dodd, Mr. Williamson. *Pathologist:* Dr. Drummond. *Dental Surgeon:* Mr. E. Fothergill.

£150 per annum; four House-Surgeons and two House-Physicians, a Resident Assistant at Monsall (salary £100 per annum); and one at Cheadle, each for six months. The House-Physicians, House-Surgeons, and the Resident Assistant at Monsall must possess a qualification which can be registered. Four or more Clinical Clerks are attached to each Physician and Assistant-Physician, and four or more Dressers to each Surgeon and Assistant-Surgeon. Additional Clinical Clerks are appointed to assist in the departments for Diseases of the Ear and Throat, and to assist the Surgical Registrar.

Scholarships, Exhibitions, and Prizes. — Dauntesey Medical Scholarship, value £100, tenable for one year. Candidates must not have attended lectures in a medical school. Subjects of Examination: General and Comparative Anatomy, with Dissections and Description of Preparations illustrating Typical Forms of Animals; Outlines of Physiological Botany; Chemistry; and either Mathematics or Latin. The successful candidate must enter to the full course of medical studies at the College. Examination will commence on October 1st, at 12 noon. A Gilchrist Scholarship of £50 per annum, tenable for three years in the College, awarded biennially, to the candidate standing highest in the Matriculation Examination of the University of London in June, if in the Honours Division; also one, annually, upon the results of the June Preliminary Examination of the Victoria University. Grammar School Scholarship, value £18, tenable for three years, open to scholars of the Manchester Grammar School between the ages of 15 and 21. Examination on October 2nd, 4th, and 5th at 9.30 A.M.; subjects in 1889, Mathematics and Physical Science; in 1890 Classics and Mathematics. A subject for an English Essay will also be set each year. The successful candidate must enter to one of the departments of Owens College. Platt Physiological Scholarship, value £50, tenable for two years, open to all persons between the ages of 18 and 25, after a written and practical examination in Physiology and Histology, and Comparative Anatomy. The examiners will take into favourable consideration any original observation submitted to them. The successful candidate must attend for one year of his tenure the class of Practical Physiology in the Laboratory of the College, and in the other year in the same or some other approved physiological laboratory. Examinations on October 7th, 8th, and 9th, at 9.30 A.M. Notice of intention to compete must be given on or before September 20th. Two Platt Exhibitions, £15 each, for first and second year's students in Physiology. Turner Scholarship of £25, to students who have completed a course of medical study in the College, of not less than four nor more than five years after examination in the subjects of the third and fourth year's courses. Dumville Surgical Prize, value £20 (in books or surgical instruments), at the end of winter session, to students of two years who have attended four courses, including one at least in Surgery. Subjects of Examinations (about middle of July, 1889): Principles and Practice of Surgery, including Surgical Anatomy and Surgical Pathology, and, at option of Examiners, examination of patients and operations on dead subject, with reports of cases. Medals and certificates are awarded on the results of class examinations in each of the following subjects: Anatomy, first and second year's courses; Physiology, Histology, Pathology and Morbid Anatomy, Medicine, and Surgery; Midwifery, Botany, Practical Chemistry, Materia Medica and Therapeutics, Medical Jurisprudence, Hygiene, Practical Surgery, Ophthalmology, and Practical Physiology; Practical Anatomy (senior and junior), Surgical Pathology, Diseases of Children, Mental Diseases, Materia Medica (first year's course) and Gynæcology. Bishop Berkeley Fellowships. The Council of Owens College propose—in December, 1889—to appoint at least two Fellowships of £100 each, capable of renewal for a second year. Candidates are invited to apply, before November 15th, in any one of fifteen departments, including Chemistry, Botany, Zoology, Physiology, Pathology, and Pharmacology. The Bradley Memorial Scholarship, value £20, in Clinical Surgery, and two Clinical Prizes, value £6 6s. each, are awarded annually to students of the Royal Infirmary in the summer session. Candidates must be in their fourth year of study, have completed their dresserships, and have spent their whole period of studentship at the Manchester Royal Infirmary.

Prospectuses may be obtained from the Registrar, Mr. H. W. Holder, M.A.

FIRTH COLLEGE: SHEFFIELD SCHOOL OF MEDICINE.—The General Infirmary contains 200 beds, including two ophthalmic wards. The Public Hospital and Dispensary contains 101 beds. Students are also admitted to the practice of the Jessop Hospital for Diseases of Women.

Besides the lectures mentioned at page 563, a course of Public Medicine is given by Dr. Sinclair White. The instruction in Chemistry and in Biology is given at Firth College.

The Library of the Medical School is open to students under certain regulations.

Prizes and certificates of honour are given at the end of each session.

UNIVERSITY OF DURHAM COLLEGE OF MEDICINE, NEWCASTLE-UPON-TYNE.—The New College Building, which has been erected at a cost of £31,000, is fitted with every convenience for study. The Medical Library of the Infirmary, the Libraries of the Durham College of Science and of the Literary and Philosophical Society; and the splendid Chemical and Physical Laboratories in the Durham College of Science may also be used by students.

Appointments.—An Assistant-Curator of the Museum is annually appointed from among the senior students. Assistant Demonstrators of Anatomy, Prosectors for the Lecturer on Anatomy, Assistant Physiologists, Pathological Assistants, Assistants to the Dental Surgeon, and Assistants in the Eye Department, are also elected. The Assistant Demonstrators of Anatomy receive £5 each; the others are unpaid. Four times in the year, Clinical Clerks and Dressers are appointed for three months.

The Royal Infirmary contains 280 beds. Pathological Demonstrations are given as opportunity offers. Practical Midwifery can be studied at the Newcastle Lying-in Hospital. Opportunities for practical study are also afforded by the Dispensary, Hospital for Infectious Diseases, Eye Infirmary, Children's Hospital, and Northumberland County Asylum, Morpeth, and Coxlodge, Dunston, Durham County Lunatic Asylums. Three months' Resident Clinical Clerkship at these Asylums may be substituted (in the University of Durham curriculum) for three months' Hospital Practice. Practical instruction in the duties of a Medical Officer of Health, and a summer course of clinical instruction at the City Hospital for Infectious Diseases are given. Arrangements are made for the complete Dental course required for the diploma of L.D.S. to be given in the College.

Scholarships, etc. — A University of Durham Scholarship, value £100, for proficiency in Arts, open annually at beginning of winter session to intending students, and to those who have attended only one winter and one summer session.[1] The Dickinson Memorial Scholarship, value £15, with a gold medal, for Medicine, Surgery, Midwifery, and Pathology; open to perpetual students who have passed the primary examination of a licensing body. The Tulloch Scholarship, interest of £400 annually, for Anatomy, Physiology, and Chemistry. The Charlton Memorial Scholarship, interest of £700 annually, open to full students entered for the class of Medicine, at end of winter session. The Gibb Scholarship, interest of £500 annually, for Pathology, at end of summer session. The Goyder Memorial Scholarship, proceeds of £325, subjects, Clinical Medicine and Clinical Surgery. Luke Armstrong Memorial Scholarship.—The friends of the late Dr. Luke Armstrong, who was connected with the College as Lecturer for a period of twenty-four years, desiring to testify their esteem and to perpetuate his memory, contributed £680, which has been invested to found a Scholarship. The Scholarship is open to all the Candidates for the Degree of Bachelor of Medicine, and will be awarded to the Candidate who obtains highest marks in the Honours Division in the Final Examinations in June and December in each year. The successful Candidate will be styled the Luke Armstrong Scholar. At the end of each session, prizes of books and certificates of honour are awarded in each of the regular classes. One year's attendance at the College is a necessary part of the curriculum for the medical degrees of the University of Durham, and is accepted by the University in lieu of one year's residence for the degree of B.A.

Further information may be obtained from the Secretary, Henry Fox, R.N.

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[1] The subjects of the examination, which will commence on Wednesday, October 9th, 1889, are: *The Gospel of St. Luke* (in Greek); Latin: Grammar; Cæsar, *De Bello Gallico*, Book IV; Virgil, *Æneid*, Book IV; Arithmetic and Algebra; Euclid, Books I and II. English History; from the beginning of the reign of James I to the end of the reign of James II. The subjects for the examination to be held on October 8th, 1890, will be the same as those given above, except the following:—Latin: Tacitus, *Annals* I. Virgil, *Æneid*, V, VI. English History: William III to the end of George II.

UNIVERSITY COLLEGE OF SOUTH WALES AND MONMOUTHSHIRE (CARDIFF).—Instruction is given in *Physics* by Professor Viriamu Jones, M.A.Oxon., B.Sc.Lond., and Mr. W. S. Hensley, B.A., Demonstrator (T. Th., noon). A junior course meets the requirements of the Matriculation Examination of the University of London. The Intermediate Course (M. W. F., 11 A.M) is adapted to the requirements of candidates for the Intermediate in Science and the Preliminary Scientific (1st M.B.) Examinations of the University of London. The Physical Laboratory is open every day except Saturday. Instruction in *Chemistry* is given by Professor C. M. Thompson, M.A., D.Sc., and Mr. J. Tudor Cundall, F.C.S., Demonstrator. The junior course (summer term, M. W. F., 10 A.M.) covers the subjects prescribed for the London University Matriculation. The intermediate course (T. Th. S., noon), together with Laboratory practice,covers the subjects required for the Intermediate in Science and Preliminary Scientific (1st M.B.) Examinations of the University of London. The Laboratory is open daily. Instruction is given in *Biology* by Professor W. N. Parker; Zoology during Michaelmas and Lent Terms (M. W. F., 2 P.M); Botany, during Summer Term (M. W. F., 2 P.M.). A more advanced course on the Zoology, Comparative Anatomy, and Embryology of the chief classes of the animal kingdom, which will include the work required for the Honours papers in the Intermediate Science and Preliminary Scientific Examinations of the University of London, is given during Michaelmas and Lent Terms. Practical Laboratory Courses in Botany (Easter Term), and in Elementary and Advanced Zoology (Michaelmas and Lent Terms), are also given.

Special Courses.—The classes and laboratories of the College afford preparation for the following examinations, among others, of the University of London: Matriculation (January and June); Intermediate in Science and Preliminary Scientific (July).

Aberdare Hall is a residential College for female students.

Fees.—Matriculation, £1 1s. Physics: junior, £2 2s.; intermediate, £3 3s. The Laboratory fee ranges from £3 3s. to £9 9s.—Chemistry: junior, £2 2s.; intermediate, £3 3s.; Laboratory (session), £3 3s., (term) £2 2s. to £4 4s. Biology, £3 3s. Zoology only, £2 2s. Botany only, £1 1s. Laboratory: junior, (session) £4 4s.; Zoology only, £4 4s.; Botany only, £1 1s.; advanced, £3 3s. A composition fee of £10 covers the cost of all lectures.

Scholarships are given on the results of examinations at entrance and at the end of the first and second years.

The Library is open to students. There is a Students' Club.

The following hospitals are also recognised by the Royal College of Surgeons for the purpose of professional education: Bath United Hospital; Bedford General Infirmary; Berkshire Royal Hospital, Reading; Bradford Infirmary; Addenbrooke's Hospital, Cambridge; Derbyshire General Infirmary; Devon and Exeter Hospital; Gloucester General Infirmary; Hants County Hospital; Hull Infirmary; Kent and Canterbury Hospital; Leicester Infirmary; Liverpool Northern Hospital and Royal Southern Hospital; Norfolk and Norwich Hospital; Northampton General Infirmary; Nottingham General Hospital; Radcliffe Infirmary, Oxford; Salisbury General Infirmary; Salop Infirmary; Staffordshire General Infirmary; North Staffordshire Infirmary; Wolverhampton and Staffordshire General Hospital; Sussex County Hospital; Worcester Infirmary.

NOTES ON THE MEDICAL SCHOOLS AND HOSPITALS IN SCOTLAND.

UNIVERSITY OF ABERDEEN.—Additional opportunities for practical instruction are afforded in the Chemical, Anatomical, Physiological, Pathological, and Hygienic Laboratories, and Anatomical and Pathological Museums, throughout the day, under the direction of the professors. Practical instruction is given also in the Toxicological, Pharmaceutical, Botanical, and Zoological Laboratories, and in the Surgical Museum and Laboratory. Courses of practical instruction are given, in summer, in Medical Jurisprudence and Hygiene by Dr. Hay; in Diseases of Children at the Sick Children's Hospital by the Medical and Surgical Staff; in Insanity, by Dr. Reid, at the Royal Asylum; in Diseases of the Ear and Larynx, by Dr. Mackenzie Booth, at the Dispensary; in Diseases of the Eye, by Dr. McK. Davidson, at the Infirmary and Eye Institution; in Diseases of the Skin, by Dr. Garden, at the Royal Infirmary and Sick Children's Hospital. The General Dispensary and the Lying-in, Vaccine, and Eye Institutions, and the Sick Children's Hospital are open daily. Practical Pharmacy, Operative Surgery, Practical Medical Jurisprudence and Hygiene, fee to each class, £3 3s., except Anatomical Demonstrations, Practical Natural History, Practical Midwifery and Gynæcology, each £2 2s.; Practical Ophthalmology, Insanity, Public Health, Diseases of the Ear and Larynx, and Diseases of the Skin, each £1 1s.; Matriculation fee, both sessions, £1; summer session alone, 10s.; Royal Infirmary: Perpetual fee, £6; or first year, £3 10s.; second year, £3. Clinical Medicine and Clinical Surgery, each £3 3s. The winter session begins on October 15th. Bursaries, Scholarships, and Fellowships, to the number of forty-two and of the annual value of £1,000, may be held by students of medicine in this University. The Degrees of B.Sc. and D.Sc. are now granted, after examination, in one of the following specified departments of science to be selected by the candidate:—(*a*) The Mathematical Sciences, including Higher Mathematics and Natural Philosophy; (*b*) the Physical Experimental Sciences, including Experimental Physics and Chemistry; (*c*) the Natural Sciences, including any three of the following: Chemistry, Zoology, Botany, Geology, Anatomy, Physiology; (*d*) Mental Science, including the subjects of Logic, Psychology, Moral Philosophy, Political Economy, History of Philosophy. For regulations apply to Secretary of the Science Department.

UNIVERSITY OF EDINBURGH.[1]—Sessional fee for Materia Medica, Chemistry, Surgery, Institutes of Medicine, Midwifery, Clinical Surgery (winter), Clinical Medicine (winter), Anatomy, Practice of Physic, Pathology, Botany (with garden fee of 5s.), Natural History (besides a charge of 10s. for laboratory expenses), Medical Jurisprudence, each £4 4s.; Practical Anatomy, Practical Physiology, Practical Chemistry, Practical Pathology, Clinical Medicine (summer), Clinical Surgery (summer), Operative Surgery, Mental Diseases, Diseases of the Eye, Practical Materia Medica and Pharmacy, Obstetric and Gynæcological Operations, each £3 3s.; Anatomical Demonstrations, Organic Chemistry (advanced), Practical Natural History, each £2 2s.; Clinical instruction in Diseases of Children (winter and summer), £1 1s.; Vaccination, £1 1s. The fee for a second course of any lectures is £3 3s.; any subsequent course is free. For a perpetual ticket at the beginning of the first course, the fee is £6 6s. Every student, before entering with any professor, must produce a matriculation ticket for the ensuing session, for which a fee of £1 is paid at the beginning of each winter session. Students first entering in the summer session pay a fee of 10s. The Library is open every lawful day during the winter session, from 10 A.M. till 4 P.M.; on Saturdays, till 1 P.M.

The following means are afforded for practical instruction, in addition to those mentioned in the table at page 554: Practical Pathology and Morbid Anatomy, under the superintendence of Dr. Greenfield, assisted by Dr. Barrett and Dr. Carter; Tutorial Class of Clinical Medicine, in the Royal Infirmary, by Dr. Murdoch Brown, under the superintendence of the Clinical Professors; Tutorial Class of Clinical Surgery, by Dr. Carmichael, under the superintendence of the Clinical Professor; Practical Surgery, under the superintendence of Professor Chiene and Dr. Wallace, Dr. Edington, and Dr. Stiles; Tutorial Class of Practical Physic, by Dr. R. W. Philip, under the supervision of the Professor; Obstetric Operations, by Dr. Simpson and Dr. Ballantyne; Organic Chemistry (advanced class), by Dr. Crum Brown; Practical Instruction in Mental Diseases, at Morningside Asylum, by Dr. Clouston, on Mondays, Wednesdays, and Fridays, at 3 (summer); Practical Botany and Vegetable Histology, by Dr. Balfour, assisted by Mr. Macfarlane. The Dissecting-rooms and the Anatomical Museum, under the superintendence of Sir William Turner; Chemical Laboratories, under Dr. Crum Brown, assisted by Dr. Gibson and Mr. John S. Ford; Physiological Laboratory, under Dr. Rutherford, assisted by Dr. Haycraft and Dr. C. W. Carlier; Physical Laboratory, under Mr. Tait; Natural History Laboratory, under the superintendence of Dr. Cossar Ewart and Dr. Purvis, Mr. W. Smith, and Dr. White; Medical Jurisprudence Laboratory, under the superintendence of Sir Douglas Maclagan and Dr. C. H. Stewart; Royal Botanic Garden, Herbarium, and Museum, under the superintendence of Dr. Balfour, assisted by Dr. Macfarlane; Materia Medica Museum and Laboratory, under the superintendence of Dr. Fraser, assisted by Dr. Tillie, are open to students.

Fellowships, etc.—Falconer Memorial Scholarship, for the encouragement of the study of Palæontology and Geology, value

[1] The minimum expenses have recently been altered, and are not now published in the Regulations of the University.

TABLE OF THE MEDICAL OFFICERS, PROFESSORS, AND LECTURERS IN MEDICAL SCHOOLS OF SCOTLAND.

For further particulars regarding each Hospital and Medical School, see p. 553 et seq. The letters (W.) *and* (S.) *in this Table denote respectively Winter and Summer Courses.*

Lectures, etc.	Aberdeen University.	Edinburgh University.	School of Medicine, Edinburgh.	Glasgow University.	Glasgow, Anderson's College Medical School.	St. Mungo's College, Glasgow.	Glasgow Western Medical School.
Anatomy (Lectures).	Dr. Struthers, 11 (W.)	Sir W. Turner, 1 (W.)	Dr. Symington, 1 (W.); and Mr. Macdonald Brown, 9 (W.)	Dr. Cleland, 2 and 11 (W.); 11 (S.)	Dr. A. M. Buchanan (jun.), 4 (W.)	—	—
Anatomical Demonstrations.	Dr. Struthers, 9 (W. and S.)	Sir W. Turner, 4 (W.); 11 (S.)	Dr. Symington and Mr. M. Brown, 4 (W); 11 (S,)	Dr. Cleland, 11 (W.)	Dr. A. M. Buchanan, 11 (W.), 11 (S.)	Mr. Clark, Junior, 11; Senior, 4	—
Dissections	9 to 4 (W. and S.)	Daily (W. and S.)	9 to 5 (W. and S.)	9 to 4 (W.); 8 to 2 (S.)	9 to 5 (W.); 6 A.M. to 5 P.M. (S.)	—	—
Physiology	Dr. McWilliam, 2 (W.)	Dr. Rutherford, 11 (W.)	Mr. J. Hunter and Dr. Noel Paton, 11 (W.)	Dr. McKendrick, 12 (W.)	Dr. Christie, 1 (W.)	Dr. J. Barlow, 10.30	—
Practical Physiology.	Dr. McWilliam, 2 (S.)	Dr. Rutherford (W. and S.)	Mr. J. Hunter and Dr. Noel Paton, 9 to 4 (W.); also Sum.	Drs. McKendrick and Muirhead (Demonstrator), 12 (S.)	Dr. Christie, 1 (S.)	—	[Diseases of Ear, Throat and Nose, Dr. W. Downie, 3 (W. and S.)]
Chemistry	3 (W.) Dr. Carnelley.	Dr. Crum-Brown, 10 (W.); 1 (S.)	{ Dr. S. Macadam, Mr. F. King, Mr. I. Macadam, Dr. Drinkwater, Mr. R. Paterson & Dr. A. P. Aitken 10 (W.) }	Mr. Ferguson, 10 (W.)	J. Robertson Watson, M.A., 10 (W.)	— 10	—
Practical Chemistry.	10 (S.) Dr. Carnelley.	Dr. Crum-Brown, 2 (W.); 11.15 (S.)	Dr. S. Macadam, etc. (as above), 9 to 5 (W. and S.)	Mr. Ferguson, 10 (W.); 9 (S.)	J. Robertson Watson, M.A., daily, 10 A.M.	— 11	—
Materia Medica	Dr. Cash, 9 (W.)	Dr. Fraser, 2 (W.)	Dr. Craig, 2 (W.), 9 (S,); Dr. Stockman 9 (W. and S.)	Dr. Charteris, 12 (W.)	Dr. Napier, 12 (W.)	Dr. Dougall, 3	—
Pharmacy	Dr. Cash, 4 (S.)	Dr. Fraser, 10 (W. and S.)	Dr. Craig, 9 and 3 (W.); 10 (S.)	Dr. Charteris, 12 (S.)	Dr. Napier, 12 (S.)	—	—
Botany	Dr. Trail, 8 A.M. (S.)	Dr. Balfour, 8 (W. & S.)	Mr. A. N. McAlpine, M. W. F., 11 (W.), 9 (S.); Pract., 10 (S.)	Dr. Bower, 8 A.M. (S.)	—	— 8	—
Natural History	Dr. H. A. Nicholson, 2 (W. & S.); Practical, 3 (S.)	Dr. Cossar Ewart, 12 (W. and S.)	Mr. Thomson 3 (W.)	Dr. Young, 9 (W.); 12 (S.)	—	— 9 (W.)	—
Medicine	Dr. Smith-Shand, 3 (W.)	Dr. Grainger Stewart, 9 (W.)	Dr. J. Wyllie, Dr. Affleck, Dr. B. Bramwell, and Dr. Gibson, 9 (W.)	Dr. Gairdner, 11 (W.); Tu. Th., 1 (S.)	Dr. Gemmell, 11 (W.)	Dr. Robertson, 12.30	Dr. McVail, 11 (W.)
Surgery	Dr. A. Ogston, 10 (W.)	Mr. Chiene, 10 (W.)	Dr. MacGillivray, Mr. Cathcart, Mr. Caird, Mr. S. Lang, Mr. Hodsdon, 10 (W.)	Sir G. H. B. Macleod, 1 (W.)	Dr. Dunlop, 1 (W.)	Dr. Knox, 11.30	Mr. Knox, 12 (W.)
Practical & Operative Surgery.	Dr. A. Ogston, 10 (S.)	Mr. Chiene, 4 (S.)	Dr. MacGillivray, etc. (as above) (S.)	Sir G. H. B. Macleod, M. W. F., 1 (S)	Dr. Dunlop, 1 (S.)	Dr. Whitson, 11	Mr. Knox.
Ophthalmic Surgery.	Dr. McKenzie Davidson (S.)	Dr. D. A. Robertson, 9 (S.)	Dr. J. Robertson, Tu. Th., 4 (W.); Mr. G. Berry, M. W. F., 3 (S.)	Dr. T. Reid, Tu. Th., 2 (S.)	Dr. Wolfe, Sat., 1 (W.); Wed., 12 (S.)	—	Dr. Fergus 3.
Diseases of Skin	Dr. Garden.	—	Dr. A. Jamieson.	—	—	—	—
Midwifery & Diseases of Women, etc.	Dr. Stephenson, 4 (W.); Practical, 11 (S.)	Dr. Simpson, 11 (W.); Practical, Tu. F., 10 (S.)	Dr. Murray, Dr. Mathison, 11 (W.)	Dr. Leishman, 2 (W.) and 2 (S.)	Dr. Wm. L. Reid, 12 (W.), 12 (S.)	Dr. Stirton, 3 (S.)	Dr. I. K. Kelly, 12 (W.) Practical, 12 (S.)
Pathology	Mr. D. J. Hamilton, 9 (W.): Practical (W. & S.)	Dr. Greenfield, 3 (W.): 11 (S.)	Dr. A. Bruce, 11 (W.); Pract., 9 (S.); Dr. W. Russell, 2 (S.); Pract., 10 (S.)	—, 3 (W.)	In Infirmary	Infirmary Pathologist, 3.30	In Western Infirmary.
Medical Jurisprudence.	Dr. M. Hay, 9 (S.), (with Medical Logic.)	Sir D. Maclagan, 11 (S.)	Dr. Littlejohn, 2 (W.); 11 (S.)	Dr. P. A. Simpson, 11 (S.)	Dr. Eben. Duncan, 11 (S.)	Dr. Glaister, 10.30	Dr. P. C. Smith.
Practical Hygiene.	Dr. M. Hay, 4 (S.)	—	Dr. Littlejohn.	Dr. P. A. Simpson and Mr. Ferguson (W.)	—	—3.30	—
Hospital	Royal Infirmary *(a)* daily, 9-10, 12-1	Royal Infirmary *(b.)*	Royal Infirmary *(b)*.	Western Infirm. *(c)*, 9; Royal Infirmary *(d)*	Royal or Western Infirmary *(d)*, 9	Physicns. & Surgs. of the Glasgow Royal Infirm.	Western Infirmary *(c)*.
Clinical Medicine	Dr. Smith-Shand, Dr. A. Fraser, and Dr. Blaikie Smith.	Drs. T. G. Stewart, Fraser, Greenfield, & Simpson (Dis. of Women) Tu., F., 12 (W. and S.)	Drs. Muirhead, Brakenridge, Wyllie, Affleck, H. Croom (Obst.), Tu. F., 12 (W. and S.)	Dr. McCall Anderson and Dr. Gairdner, 9 (W. and S.)	Physicians of Royal or Western Infirmary.	Dr. McVail, 2	Physicians of Western Infirmary.
Clinical Surgery	Dr. A. Ogston, Dr. Will, and Dr. Garden	Mr. Annandale, M.Th., 1: (W. and S.)	Mr. Duncan, Mr. A. G. Miller, M. Th., 12 (W. and S.)	Dr. G. Buchanan and Sir G. H. B. Macleod, 9 (W. & S.)	Surgeons of Royal or Western Infirmary.	Dr. Macewen, 9	Surgeons of Western Infirmary.
Insanity	—	—	—	Dr. Yellowlees, Wed. 12 Sat. 10	—	Dr. H. C. Clark, 3	—

a. Aberdeen Royal Infirmary.—*Physicians:* Dr. Smith Shand, Dr. A. Fraser, and Dr. Blaikie Smith. *Surgeons:* Dr. A. Ogston, Dr. Will, and Dr. Garden. *Ophthalmic Surgeon:* Dr. McKenzie Davidson. *Dental Surgeon:* Dr. Williamson. *Pathologist:* Professor Hamilton.

b. Edinburgh Royal Infirmary.—*Consulting Physicians:* Dr. G. W. Balfour, Sir D. Maclagan, and Dr. A. Keiller. *Physicians:* Dr. A. R. Simpson, Dr. T. Grainger Stewart, Dr. T. R. Fraser, Dr. Greenfield, Dr. C. Muirhead, Dr. Brakenridge, Dr. J. Wyllie, and Dr. Affleck. *Extra Physician and Lecturer on Diseases of Women:* Dr. J. H. Croom. *Assistant-Physicians:* Dr. A. Smart, Dr. A. James, and Dr. B. Bramwell. *Assistant-Physicians for Diseases of Women:* Dr. Berry Hart; Dr. H. F. Barbour. *Physician for Diseases of the Skin:* Dr. W. A. Jamieson. *Consulting Surgeons:* Dr. J. D. Gillespie, Dr. P. H. Watson, and Mr. Joseph Bell. *Consulting Dental Surgeon:* Dr. John Smith. *Surgeons:* Mr. J. Chiene, Mr. Annandale, Mr. Duncan, Mr. A. G. Miller, and Dr. P. H. Maclaren. *Ophthalmic Surgeons:* Dr. D. A. Robertson, Mr. G. A. Berry. *Surgeon for Diseases of the Ear and Throat:* Dr. P. McBride. *Dental Department:* Surgeons to Edinburgh Dental Hospital and School. *Assistant-Surgeons:* Dr. MacGillivray, Mr. Cotterill, Mr. Cathcart, Mr. Caird, and Dr. J. W. B. Hodsdon. *Pathologists:* Dr. Bruce, Dr. William Russell.

c. Glasgow Western Infirmary.—*Physicians:* Dr. Gairdner, Dr. McCall Anderson, Dr. Finlayson, Dr. G. P. Tennent. *Assistant-Physicians:* Dr. J. Coats, Dr. Christie, Mr. McVail. *Physician for Diseases of Women:* Dr. Leishman. *Surgeons:* Sir G. H. B. Macleod, Dr. G. Buchanan, Dr. A. Patterson, Dr. H. C, Cameron. *Honorary Consulting Ophthalmic Surgeon:* Dr. T. Reid. *Dispensary Physicians:* Dr. J. Alexander, Dr. W. G. Dun, Mr. R. S. Thomson, Dr. G. Dickson, Mr. C. O. Hawthorne. *Dispensary Physicians for Diseases of Women:* Dr. W. L. Reid, Dr. R. Kirk, Dr. M. Cameron. *Dispensary Surgeons:* Dr. Renton, Dr. Beatson, Dr. Newman. *Extra Dispensary Surgeons:* Mr. A. E. Maylard, Dr. J. Parker. *Dispensary Surgeon for Diseases of the Ear:* Dr. T. Barr. *Dispensary Surgeon for Diseases of the Throat and Nose:* Dr. J. Walker Downie. *Surgeon Dentist:* Mr. W. D. Woodburn. *Pathologist:* Dr. Coats. *Vaccinator:* Mr. McVail.

d. Glasgow Royal Infirmary.—*Physicians:* Dr. Wood Smith, Dr. Robertson, Dr. W. Anderson, Dr. S. Gemmell. *Physician for Diseases of Women:* Dr. Stirton. *Surgeons:* Dr. Macewen, Dr. Dunlop, Mr. Clark, Dr. Lothian, Dr. Knox, Dr. Fleming. *Aural Surgeon:* Dr. J. Macfie. *Dental Surgeon:* Dr. J. C. Woodburn. *Assistant-Physicians:* Dr. Dougall, Dr. Middleton, Dr. T. B. Henderson, Dr. Campbell Black, Dr. Macphee, Dr. Steven. *Assistant-Surgeons:* Dr. Barlow, Dr. J. A. Adams, Dr. Muir, Dr. Shaw, Dr. Whitson, Dr. Macintyre. *Surgeon for the Diseases of the Throat:* Dr. Newman. *Diseases of the Skin:* Dr. Provan. *Diseases of the Eye:* Freeland Fergus, M.B., C.M. *Electrician:* Dr. Macintyre.

£111 10s. 4d., for two years, but renewable under certain conditions, open to graduates in Science or Medicine of the University of not more than three years' standing; next competition probably in July, 1890. Syme Surgical Fellowship, value about £105 16s. 6d., tenable for two years, open to Bachelors of Medicine of not more than three years' standing, for the best thesis on a Surgical subject. Leckie-Mactier Fellowship, value £70 per annum, tenable for three years, open to Bachelors of Medicine of not more than three years' standing; next award in November, 1889. The examination will comprise written reports and commentaries on three Medical, three Surgical, and one Gynæcological case in the University wards in the Royal Infirmary; a written examination in Midwifery, Medical Jurisprudence, and Public Health; and an oral examination in Medicine, Surgery, Midwifery, Medical Jurisprudence, and Public Health. Freeland Barbour Fellowship, £100, tenable for one year, to the M.B. or M Ch. who has gained the highest collective marks in Anatomy, Physiology, and Pathology in the professional examinations, and is prepared to devote not less than one year to original research in Midwifery or Gynæcology in any laboratory or practical department of the University; next award July, 1890. Sibbald Scholarship, £40, tenable for three years; subjects: Chemistry, Botany, and Natural History; next competition in October, 1889. Hope Prize Scholarship, about £35, to the most distinguished junior student in the Chemical Laboratory during the winter. Thomson Scholarship, value £40, tenable for four years, in October, 1890; subjects: Botany, Zoology, and elementary Mechanics. Eight Vans Dunlop Scholarships, each £100, tenable for three years, one in March, 1890, for highest marks at preliminary examinations; one in July 1890, for highest marks (not less than 60 per cent.) in first year's subjects—Botany, Zoology, Chemistry, and Anatomy; one, in March, 1890, for highest marks (as above) in Physiology and Surgery; three (one each year) at end of third winter, for highest marks at a special examination on Anatomy, Physiology, Materia Medica, and Pathology; one in Chemistry and Clinical Pharmacy, and one in Natural History, Botany, and Geology. Coldstream Memorial Medical Missionary Scholarship, proceeds of at least £470, tenable for four years, to the students who intend to become medical missionaries; next award at Preliminary Examination in October, 1891. Buchanan Scholarship, annual proceeds of £1,000, yearly, for proficiency in Midwifery and Gynæcology. Murchison Memorial Scholarship, for proficiency in Clinical Medicine, annual proceeds of about £1,000; alternately in Edinburgh and London; competition in London in July, 1890, open to candidates from London and from Edinburgh. Stark Scholarship in Clinical Medicine, value about £100, tenable one year; awarded every alternate year; next competition in 1890. James Scott Scholarship, value £50, for proficiency in Midwifery. Ettles Medical Scholarship, value about £40, to the most distinguished Bachelor of Medicine and Master in Surgery for the year. The Gunning Victoria Jubilee Prizes: Dr. Gunning, of Edinburgh and Rio de Janeiro, has founded Eleven Post-Graduation Prizes of the value of £50 each, and each recurring triennially, namely: (1) The Monro Prize for Anatomy; (2) the Bell Prize for Physiology; (3) the Edward Forbes Prize for Zoology, etc.; (4) the Hutton Balfour Prize for Botany; (5) the Joseph Black Prize for Chemistry; (6) the Christison Prize for Materia Medica; (7) the Lister Prize for Surgery; (8) the Gregory Prize for Practice of Physic; (9) the John Thomson Prize for Pathology; (10) the Simpson Prize for Obstetrics; (11) the Alison Prize for Public Health and Medical Jurisprudence. Candidates must be either Bachelors of Medicine or Bachelors of Science of this University of not more than three years' standing. The Prizes will be awarded, with the approval of the Senatus, for (1) either (*a*) Competitive Essays written specially for the prizes, or (*b*) Theses submitted for Graduation; or (2) original research conducted under supervision of the Professor in the department in which the prize is awarded. The prizes in Anatomy, Chemistry, and Practice of Physic, in 1890. Competitive Essays are required to be lodged with the Dean of the Faculty of Medicine on or before April 30th of the year in which each prize is to be awarded, and the successful competitors will be announced annually at the Medical Graduation Ceremonial. Abercrombie Bursary of £20, for four years, to students who have been brought up in Heriot's Hospital. Two Sibbald Bursaries, value £30 each. Two Heriot Bursaries, £30 a year each for three years, open to students matriculating for the first time in the University. Applications not later than October 1st to the Governors of George Heriot's Trust, from whom further particulars may be obtained. Two Thomson Bursaries, value £25 each, tenable for four years, in March and October, at Preliminary Examination in the subjects of General Education. Five Grierson Bursaries, each £20 per annum; in the absence of certain preferential candidates, open to competition; one to the student who shall pass the best examination in the subjects of Preliminary Education; two open to students commencing the second winter session, after examination in Chemistry, Botany, and Natural History; one to students commencing the third winter session, after examination in Anatomy and Physiology; one to students commencing the fourth winter session, after examination in Materia Medica and Pathology. Two Dr. John Aitken Carlyle's Medical Bursaries, £28 each, for one year, for proficiency in ordinary class-examinations; one to a first year's student, in Anatomy and Chemistry; one to a second year's student in Anatomy and Physiology. Two Mackenzie Bursaries, each of the value of £21 5s., to students in junior and senior classes of Practical Anatomy, for industry and skill. Two Mackie Bursaries of £30 each, for students of Medicine in the University who have passed the first and second professional examinations with credit, and who, in the opinion of the Faculty of Medicine, require pecuniary assistance. Next award commencement of winter session, 1890-1; applications to the Dean of the Faculty of Medicine on or before October 31st. Competitors for the Bursaries must have studied the subjects of the examination at the University of Edinburgh. Gold medals are given on graduation to Doctors of Medicine whose theses are deemed worthy. Beaney, Prize, value £37 10s., to the candidate for degrees of M.B. and C.M.1 who shall obtain most marks in Anatomy, Surgery, and Clinicas Surgery. Hope Chemistry Prize, value £100, open to all student of the University not more than twenty-five years of age, who have worked for eight months, or for two summer sessions, in the chemical laboratory. Neil Arnott Prize, about £42, to the candidate who, having been a medical student of the University during either a summer or a winter session, shall pass with the greatest distinction the ordinary examination in Natural Philosophy for the degree of M.A. The successful candidate must continue a medical student of this University during the winter session. Ellis Prize, value about £60, every three years, for an Essay or Treatise in some subject of Animal or Vegetable Physiology; next award in April, 1890. Goodsir Memorial Prize, £60, awarded triennially. Wightman Prize, £10 10s., to student of class of Clinical Medicine for best report and commentary on cases treated in the wards. Cameron Prize of £98, to be awarded yearly to a person who has made any highly-important and valuable addition to Practical Therapeutics in the course of five years immediately preceding the date of award. Dobbie-Smith Gold Medal in Botany, in alternate years, for an Essay on a Botanical subject. Anderson Henry Prize, awarded triennially for a Botanical Essay by a student of the class of Botany, during any of the three years. Competing essays to be received by the Dean of the Faculty of Medicine by July 1st, 1890.

EDINBURGH ROYAL INFIRMARY.—*Fees:* One month, £1 1s.; three months, £2 2s.; six months, £4 4s.; one year, £6 6s.; perpetual, £12. Separate payments, amounting to £12 12s., entitle to a perpetual ticket. Clinical Medicine and Clinical Surgery, each £4 4s. for course in winter, and £3 3s. in summer. Resident Physicians and Surgeons are appointed for six months; they live in the house free of charge. Candidates must be registered as legally qualified practitioners. Non-resident Clinical Clerks are also appointed for six months. Physicians and Surgeons appoint their own Clerks and Dressers. Assistants in the Pathological Department are appointed by the Pathologists. Instruction is given in special departments.

SCHOOL OF MEDICINE, EDINBURGH.—Of the Extra-academical lecturers, some give their instruction in Surgeons' Hall; others at Minto House; others at other places. The following courses of instruction are given, in addition to those mentioned at page 554: Tutorial Classes of Physical Diagnosis and of Practical Surgery at the Royal Infirmary; Diseases of the Ear, Dr. Kirk Duncanson, lectures (winter and summer), with clinical instruction Mondays, Thursdays, and Saturdays, 12; Diseases of the Ear and Throat, Dr. P. McBride, daily, 10 (summer); Laryngology and Medical Opthalmology, Dr. Wyllie, 9 A.M. (summer); Vaccination, six weeks' courses in winter and summer, Dr. Husband; Dr. J. B. Buist, winter and summer; Practice of Vaccination, 3 P.M., Mondays, Dr. J. B. Buist; Diseases of Children, Mr. Joseph Bell and Dr. Playfair, three months' Clinical courses in winter,

and Mondays, Wednesdays, and Saturdays in summer at 10; Practical Medicine and Diagnosis, Dr. Gibson, 9 A.M. (summer); Practice of Medicine, Dr. Byrom Bramwell, 9 A.M. (summer); Practical Midwifery, Dr. P. Young, February, March, April, 1 (winter); Clinical Midwifery, Dr. Croom, 9.30 A.M. daily (Summer); Systematic Gynæcology, Dr. Croom, 5 P.M. (winter); Clinical Gynæcology, Dr. Brewis, Mondays and Thursdays, 4.30 (winter and summer); Practical Midwifery and Clinical Gynæcology, Dr. P. Young, Fridays, 1 P.M., throughout the year; Insanity, Dr. Batty Tuke, Tuesdays and Fridays, 3 (summer); Diseases of the Tropics and Climatology, Dr. R. W. Felkin, Mondays and Thursdays, 5, throughout year. Dr. Littlejohn lectures on Public Health in conjunction with Medical Jurisprudence.

There are special classes for women.

Fees.—For a first course of lectures, £3 5s.; for a second, £2 4s.; perpetual, £5 5s. To those who have already attended a first course in Edinburgh, the perpetual fee is £2 4s. Practical Anatomy (six months) £3 3s.; Anatomical Demonstrations, £2 2s.; perpetual, £4 4s.; Practical Anatomy with Demonstrations, £4 4s.; Practical Chemistry, £3 3s.; Analytical Chemistry, £2 a month, £5 for three months, or £10 for six months; Practical Materia Medica (including Practical Pharmacy), Diseases of the Eye, Diseases of the Ear, Diseases of Children, Diseases of the Skin, and Diseases of the Tropics and Climatology, each £2 2s.; Vaccination, £1 1s.; Summer courses of Clinical Surgery and Clinical Medicine, each £2 4s.; Practical Anatomy, including Demonstrations, Operative Surgery, and Practical Medicine and Medical Diagnosis, each £2 2s.; Insanity, £1 1s. The minimum cost of education in this school for the triple qualification of the Royal Colleges of Physicians and Surgeons of Edinburgh, and the Faculty of Physicians and Surgeons of Glasgow, including the fees for the joint examination, is £100, payable by yearly instalments.

Practical instruction in various subjects may also be obtained on payment of moderate fees at the Sick Children's Hospitals, Royal Public Dispensary and New Town Dispensary, Royal Maternity Hospital, and the Edinburgh Eye Infirmary.

UNIVERSITY OF GLASGOW.—Dr. Gairdner will give a special course of lectures, chiefly on Diseases of the Nervous System, on Tuesdays and Thursdays at 1 P.M. in summer. Dr. Leishman lectures on Diseases of Women at 2 P.M. on Tuesdays, Thursdays, and Fridays in the summer; and Dr. Yellowlees on Insanity at 12 noon on Wednesdays in the University, and at 10 A.M. on Saturdays in the Gartnavel Asylum.

The Chemical Laboratory is open from 10 A.M. to 4 P.M. (fee £10 10s. in winter, and £5 5s. in summer); the Physiological Laboratory from 9 A.M. to 4 P.M. winter and summer; the Zoological Laboratory from 10 A.M. to 1 P.M. in winter and summer (fee £3 3s.); and the Botanical Laboratory at 10 A.M. during January, February, and March, and from 9 A.M. to 4 P.M. in summer (fee £2 2s.). Demonstrations in the Botanical Gardens are given in the summer.

Fees, each course, £3 3s., except summer courses of Anatomy, Insanity, Lectures on the Eye, Diseases of Women, and Operative Surgery, each £2 2s. In most of the courses for which £3 3s. is charged, the fee for a second session is £2 2s.; for a third session, £1 1s.

GLASGOW.—ANDERSON'S COLLEGE MEDICAL SCHOOL.—The following courses are given in addition to those at p. 554. In winter, Senior Anatomy, Dr. Buchanan, 11 A.M.; in summer, Osteology, Dr. Buchanan, as may be arranged; Public Health, Dr. Christie, as may be arranged; Aural Surgery, Dr. Barr, Thursday, as may be arranged. The Chemical Laboratory is open daily from 10 to 5. Students of the School are admitted to the Lectures and *clinique* at the Ophthalmic Institution free.

Fees.—Each course of lectures (except Anatomy), first session, £2 2s.; second session, £1 1s.; afterwards free. Anatomy (including Dissecting Room), first session, £4 4s.; second session, £4 4s.; third session, £1 1s.; summer (including Practical Anatomy), £2 2s.; Practical Anatomy alone, £1 1s.; Osteology, £1 11s. 6d. Students who have attended classes at other schools will be admitted to such classes as they may have attended elsewhere at the reduced fees. Fees for all the Lectures and Hospital Practice required of candidates for the Triple Qualification, about £48.

The winter session will be opened on Tuesday, October 22nd, at 2 o'clock, with an Introductory Address by Thomas A. Mathieson, Esq., President.

The New Buildings are situated in Dumbarton Road, immediately to the west of the entrance to the Western Infirmary, within two minutes' walk of it, and four minutes' walk of the University. Extensive accommodation is provided for Practical Anatomy, Practical Chemistry, Practical Physiology, Practical Pharmacy, Operative Surgery, and Hygiene and Public Health. There are also provided a large Library and Reading Room, and a Students' Recreation Room. The Professor of Anatomy is assisted by four Demonstrators and three Assistant-Demonstrators.

ST. MUNGO'S COLLEGE AND GLASGOW ROYAL INFIRMARY.—The medical school which has been carried on for the last fourteen years at the Glasgow Royal Infirmary has been absorbed by, and is to be continued as, the Medical Faculty in St. Mungo's College. This college was incorporated in the spring of the present year. Its objects are not limited to Medicine, but embrace Law, Science, and Arts. Both the Medical and Law Faculties will commence work at the beginning of the present winter session. The Medical Faculty, by arrangement with the Managers of the Infirmary, who have a representation of nine on the college governing body will obtain possession of the buildings belonging to them, in which are suitable laboratories, museums, and lecture rooms, fully equipped for the purposes of a medical college. Some little dissatisfaction has been expressed at the manner in which the governors made their first appointments to medical chairs; but it has been overlooked by the critics that by the constitution of the college the governors were under implied, if not express, obligation to provide places in the college for teachers who had been in the Infirmary Medical School.

The Royal Infirmary, which is at the service of the college for teaching purposes, is one of the largest general hospitals in the kingdom. It has 582 beds, and it has special wards for diseases peculiar to women, for venereal diseases, erysipelas, burns, and diseases of the throat. At the dispensary special advice and treatment are given in diseases of the eye, ear, teeth, and skin, in addition to the large and varied number of ordinary medical and surgical cases—over 40,000 per annum—which in a great industrial centre daily require attention, students of the college and hospital get the benefit of dispensary experience free of charge, and no better or wider field for seeing hospital practice and receiving clinical instruction can be found than in the Glasgow Royal Infirmary. All appointments are open. The are four physicians' and six surgeons' assistants who board in the hospital, and act in the capacity of house-physicians and house-surgeons. These appointments are made for six months, and are open to students who have completed their curriculum and passed all their examinations except the last, or to gentlemen who have a legal qualification in Medicine or Surgery, to whom preference will be given. Clerks and dressers are appointed by the visiting physicians and surgeons. From the large number of cases of acute diseases and accidents of varied character received into this hospital these appointments are numerous and valuable to students. In the Pathological Department assistants are also appointed by the pathologist.

The session will open on Wednesday, October 23rd, at the College buildings. The fee for each class is £2 2s., except for Anatomy, which is £4 4s., but the governors have arranged a sessional fee, payment of which entitles the students to attendance not only on the curriculum classes, but all classes—nearly as many more as the curriculum classes—and this sessional fee is only slightly greater than the sum total of the fees required for curriculum classes. Students are strongly recommended to begin their course on the sessional-fee plan. Students who have already taken part of their course at this school, or in other schools, can learn on application to the Secretary what in their case the sessional fee would be.

GLASGOW WESTERN MEDICAL SCHOOL.—This school is situated in close proximity to the Glasgow University and Western Infirmary, in which latter students obtain their hospital practice and clinical lectures. Lectures and Demonstrations are given on Surgery, by Dr. D. N. Knox; on Practice of Physic, by Dr. D. C. McVail; on Midwifery and Gynæcology, by Dr. J. K. Kelly; on Diseases of Ear, Throat and Nose, by Dr. Walker-Downie; on Diseases of the Eye, by Dr. Fergus; and on Public Health, by Dr. P. C. Smith.

Fees.—For each course of lectures, except in the special courses hereafter noted, first session, £2 2s.; second session, £1 1s. Students who have attended a first course elsewhere pay £1 1s.

For the following three special courses the fee is £1 1s.,—Diseases of the Ear, Throat, and Nose; Diseases of the Eye; and Public Health.

The lectures are recognised for graduation purposes by the University of Glasgow in accordance with the regulations, the Faculty of Physicians and Surgeons, Glasgow, and the other Corporations.

GLASGOW WESTERN INFIRMARY.—This Hospital adjoins the University of Glasgow. Number of beds 400. The Clinical Courses are given by the Physicians and Surgeons, each of whom conducts a separate class, and students may attend whichever they select at the beginning of the session. Special instruction is given to junior students by tutors or assistants, and clinical clerks and dressers are selected from the members of the class. Special wards are set apart for Diseases of Women and for Diseases of the Skin. In the Out-patients' department there are special *cliniques* for Diseases of Women and for Diseases of the Throat, Ear, and Teeth. All the courses of clinical instruction are recognised by the University of Glasgow and the other Boards in the kingdom. In the Pathological Department the course consists of lectures and practical demonstrations, extending over both the winter and the summer sessions, and is recognised by the University for graduation. Eight resident assistants are appointed annually without fee from those who have completed their course.

Fees.—For the hospital practice, including the various courses of clinical instruction, £21 in one payment, or in two equal instalments for the first and second years; for six months, £7 7s.; and for three months, £4 4s.

GLASGOW EYE INFIRMARY.—*Senior Surgeon*, Thomas Reid, M.D. *Surgeons*, Thomas S. Meighan, M.D.; Henry E. Clark, M.R.C.S.; J. Crawford Renton, M.D. *Assistant-Surgeons*, D. N. Knox, M.A., M.B; A. Freeland Fergus, M.B.; A. Maitland Ramsay, M.B. *House-Surgeon*, Robert Mair, M.B., C.M. *Consulting Surgeon*, George Buchanan, M.D. 1. Gentlemen may attend as students on payment to the Treasurer of the following fees: for three months' attendance, £1 1s.; for six months' attendance, £2 2s.; for twelve months' attendance, £3 3s. 2. Students attending the Waltonian Lectures in the University of Glasgow may attend at the Infirmary for Clinical instruction during the University Session without fee. Former Waltonian students may attend on payment to the Treasurer of the following fees. For six months' attendance, £1 1s.; for twelve months' attendance, £2 2s.

MEDICAL SCHOOLS AND HOSPITALS IN IRELAND.

SCHOOL OF PHYSIC IN IRELAND.—This school is formed by an amalgamation of the medical schools of Trinity College and of the King and Queen's College of Physicians; the King's Professors of Institutes of Medicine, Practice of Medicine, Materia Medica, and Midwifery, being appointed by the latter. The departments of Medicine and Surgery are presided over by the Regius Professor of Physic, Sir J. T. Banks, K.C.B., M.D.; and the Regius Professor of Surgery, Dr. W. Colles. The teaching staff is as follows: University Professor of Anatomy and Chirurgery, Dr. D. J. Cunningham (Practical) T. Th. S., 12; (Systematic) M. W. F., 12; (Applied) Dr. Cunningham and Dr. T. E. Little, University Anatomist, M. W. F., 2. University Professor of Chemistry, Dr. J. E. Reynolds, T. Th., 2; S., 11. Professor of Surgery in Trinity College, Dr. E. H. Bennett, M. W. F., 1. King's Professor of Practice of Medicine, Dr. J. M. Finny, T. Th. S., 1. King's Professor of Midwifery, Mr. A. V. Macan, M. W. F., 4. Erasmus Smith's Professor of Natural Philosophy (Heat, Electricity, and Magnetism), Mr. G. F. Fitz-Gerald, M. W. F., 2. Professor of Institutes of Medicine (Physiology), Dr. J. M. Purser, M. W. F., 12.

The winter session commences on October 1st by the opening of the Dissecting-room. Lectures commence on November 1st. The winter courses consist of fifty-six lectures each. Attendance on at least forty-two lectures in each course is required. The summer session commences April 1st. The courses in the summer (except those of Materia Medica and Medical Jurisprudence) consist of Laboratory Instruction and Practical Demonstrations.

The Dissecting-room is open from 11 A.M. to 5.30 P.M. in the winter, and from 8 A.M. to 5 P.M. in the summer. Instruction is given daily by Professor Cunningham, Dr. Little, and three Demonstrators. A Course of Laboratory Instruction in Histology will be given in the Physiological Laboratory. On Mondays, at 3 o'clock, a Lecture will be given in the Theatre, after which, illustrative preparations will be shown. One division of the class will work from 3 to 5 o'clock, on Wednesdays and Fridays; the other from 3 to 5 o'clock, on Tuesdays and Thursdays. Each student will have his own place in the Laboratory, a Microscope, and a full set of Apparatus and Reagents. The Laboratory will be open to members of the class from 11 to 5 o'clock daily, except Mondays. The Chemical Laboratories are open daily, under the supervision of Professor Reynolds. Professor Bennett gives a complete course of Demonstrations in Operative Surgery during April and May, at 8 A.M. on Mondays, Wednesdays, and Fridays, and 11 A.M. on Tuesdays, Thursdays, and Saturdays. Professor Macan gives Demonstrations in Obstetric Medicine and Surgery on Thursdays and Fridays at 4 P.M. Practical Botany is taught in the Botanic Garden and the Herbarium by Professor Wright.

The Museums of Anatomy and Zoology, of Pathology, of Materia Medica, and of Botany, are open to the students of the School of Physic.

Scholarships, Prizes, etc.—Two Medical Scholars are elected annually by the Board of Trinity College, at an examination held at the end of June, subject to conditions stated in the College Calendar. Each Scholarship is worth £20 per annum, and is tenable for two years. A Medical Travelling Prize and a Surgical Travelling Prize, value of each £100, are also awarded in alternate years. The Professors of Chemistry, Botany, Practice of Medicine, Materia Medica, and Midwifery, and the Lecturer on Medical Jurisprudence, each give Prizes amounting to £5.

Fees.—For Anatomy, Medicine, Materia Medica, Midwifery, Medical Jurisprudence, Institutes of Medicine (Physiology), Practical Chemistry, Obstetric Medicine and Surgery (at Sir Patrick Dun's Hospital), Ophthalmic Surgery (at St. Mark's Hospital), each £3 3s.; Demonstrations and Dissections, each year, £8 8s.; Histology, £5 5s.; Surgery and Chemistry, each £2 2s.; Botany, £1 11s. 6d. Students dissecting during the fourth year pay £2 2s.

ADELAIDE MEDICAL AND SURGICAL HOSPITALS.—*Consulting Physician*, Dr. J. F. Duncan. *Consulting Obstetric Surgeon*, Dr. Lombe Atthill. *Physicians*, Dr. Henry H. Head, Dr. James Little. *Assistant-Physicians*, Dr. Wallace Beatty and Dr. H. T. Bewley. *Surgeons*, Mr. John K. Barton, Mr. Kendal Franks, Mr. F. T. Heuston, and Mr. J. H. Scott. *Obstetric Surgeon*, Mr. R. D. Purefoy. *Ophthalmic and Aural Surgeon*, Mr. H. R. Swanzy. *Dental Surgeon*, Dr. R. T. Stack.

The Hospital contains 140 beds. There are wards for infants and children, and there is a large detached fever hospital. Special hours are devoted to Clinical Instruction for the Diseases peculiar to Women, and in the Diseases of the Eye, Ear, Throat, and Skin; and students are individually instructed in the uses of the Stethoscope, Ophthalmoscope, and Microscope, in their application to Clinical Medicine. Three resident pupils are selected half-yearly. At the termination of the session, prizes in Clinical Medicine and Surgery will be awarded. In addition, the Hudson Scholarship (£30 and a gold medal), and a prize of £10 with a silver medal, will be awarded for proficiency in the subjects of clinical instruction.

Fee for nine months' hospital attendance, £12 12s.; six months', £8 8s.; summer three months, £5 5s.

Further particulars may be obtained from any of the members of the medical staff.

CARMICHAEL COLLEGE OF MEDICINE.—The dissecting-rooms will be opened on October 1st. Lectures will commence on November 1st. The following are the courses. *Winter Session:* Medicine, Dr. J. W. Moore, M. W. and F., 12; Surgery, Dr. H. Corley, T. Th. and S., 12; Systematic Anatomy, Dr. McVittie, M. W. and F., 12; Anatomy, Dr. F. Heuston, M. T. W. Th. F., 1; Physiology, Dr. J. A. Scott, M. W. F., 2; Midwifery, Dr. Macan, M. W. and F., 3; Chemistry, Dr. C. R. C. Tichborne, T. Th., 3; S., 11; Ophthalmic Surgery, Dr. C. E. Fitzgerald, W., 1.—*Summer Session*, 1890: Botany and Zoology, Dr. Cosgrave, daily, except S., 11; Pathology, Dr. Wallace Beatty; Materia Medica, Dr. G. F. Duffey, M. W. Th. F., 12; Practical Chemistry, Dr. Tichborne, T. Th., 1.30; S., 11.30; Medical Jurisprudence, Mr. Auchinleck, M. W. and F., 1: Practical Physiology, Dr. J. A. Scott, daily, 3; Practical Surgery, Dr. Corley, daily, 8. There are nine Anatomical Demonstrators, who superintend the dissections. The Physiologi-

cal De partment comprises a Histology Room, a room for Physiological Chemistry, and one for Physiological Apparatus. The Museum comprises a valuable collection of Anatomical and Pathological Preparations. There is also an extensive Museum of Materia Medica. A Students' Reading-Room has been added. *Fees*, for each course of lectures, £3 3s.; for each course of Practical Instruction, £5 5s. A second practical course can be attended for £3 3s., if no certificate be required. Systematic Anatomy and Ophthalmic Surgery are free, if no certificate be required. The Carmichael and Mayne Scholarships, each £15 in value, and £70 in Prizes, are awarded annually. For information, apply to Dr. Heuston, of the College, Aungier Street, or to any of the lecturers.

CATHOLIC UNIVERSITY MEDICAL COLLEGE.—*Winter Session:* The dissecting-rooms will be opened on October 1st. The lectures will commence on November 3rd. Anatomy and Anatomical Demonstrations, Dr. Birmingham, daily, 12, M. W. and F. (Senior), 10; Physiology, Dr. Coppinger, M. W. and F., 1, T. Th. and S. 11; Chemistry, Dr. J. Campbell, M. W. and F., 11, T. Th. S., 11; Surgery, Mr. P. J. Hayes, M. W. and F., 3; Operative Surgery, daily during course; Medicine, Dr. C. J. Nixon, T. Th. S., 1; Opthalmology, Mr. D. D. Redmond; Midwifery, Dr. J. A. Byrne, T. Th. and S., 3; Demonstrations in Dissecting-Rooms, Mr. J. F. O'Carroll, and Mr. P. R. Dillon. *Summer Session:* Materia Medica and Therapeutics, Dr. F. J. B. Quinlan, M. T. Th. and F, 1; Medical Jurisprudence, Dr. S. M. McSwiney, M. T. W. and Th., 12; Botany, Dr. G. Sigerson; Zoology, Dr. Sigerson; Natural Philosophy, the Very Rev. Gerald Mulloy, D.D., Hygiene, Mr. Chance.

The school is within a few minutes' walk of the principal hospitals of the city. It includes a complete chemical laboratory, and a well-supplied students' library.

The *Fees* are for Anatomy, Physiology, Surgery, Medicine, Midwifery, Materia Medica, and Medical Jurisprudence, each £3 3s.; Operative Surgery, Practical Anatomy, Practical Chemistry, Practical Histology, each £5 5s.

Prizes.—Six exhibitions are awarded each year, and a gold medal is offered for competition among the students of the school.

CITY OF DUBLIN HOSPITAL.—*Consulting Physician*, Dr. Banks. *Consulting Surgeon* (no surgeon has yet been appointed in Mr. Tufnell's place). *Physicians*, Dr. Hawtrey Benson, Dr. Duffey. *Surgeons*, Mr. H. G. Croly, Mr. W. I. Wheeler, F.R.C.S., Dr. H. Fitzgibbon. *Ophthalmic and Aural Surgeon*, Mr. A. H. Benson. *Gynæcologist*, Dr. W. J. Smyly. The Hospital is visited at 9 A.M.; after the visit Clinical Lectures are delivered, and Pathological Specimens exhibited. There are special wards for Fever and other Contagious Diseases, Ophthalmic and Aural Diseases, and Diseases of Women and Children; also a Daily Dispensary, and Special Dispensaries for Diseases of the Skin, Throat, Eye, and Ear, and for Diseases peculiar to Women.

Clinical Assistants to the Physicians and Dressers to the Surgeons are appointed from the most deserving of the class, and certificates awarded for the faithful performance of their duties. Medical and Surgical Resident Pupils are appointed by examination, and Special Certificates awarded if merited. A House-Surgeon is appointed annually.

The winter session commences in October and terminates in April; the summer session commences in April and terminates in July.

Fees.—Nine months' hospital attendance, £12 12s.; six months', £8 8s.; three months, £5 5s. For further particulars, apply to Mr. Wheeler, 32, Merrion Square North, or at the Hospital.

COOMBE LYING-IN HOSPITAL.—*Master*, Dr. S. R. Mason. *Assistant-Master*, Mr. E. J. Brady. *Pathologist*, Dr. J. M. Redmonds. The Hospital contains sixty-five beds, in two divisions, one devoted to Midwifery, and the other to Diseases of Women. Students can enter for practice at any period of the year. Clinical Instruction is given daily, and Lectures are delivered on the more important cases. Two Pupil Midwifery Assistants and one Clinical Clerk are selected half-yearly from among the pupils. Certificates of attendances are accepted by all the Examining Boards; and the Diploma of the Hospital is recognised by the Irish Local Government Board and the Army and Navy Board as a qualification in Midwifery. *Fees:* For six months' courses, extern pupils, £8 8s.; intern pupils, £18 18s. Particulars may be learned on application ot the Master at the Hospital.

JERVIS STREET HOSPITAL, DUBLIN.—*Physicians*, Dr. S. M. MacSwiney, Dr. W. Martin. *Surgeons*, Mr. A. Meldon, Mr. W. Stoker, Dr. J. J. Cranny, Dr. R. McDonnell, Dr. C. Gunn, Mr. T. Myles, Dr. F. C. Dwyer.

Clinical Instruction is given by the Physician and Surgeon on duty on alternate mornings, between 9 and 11. Clinical Lectures are delivered each week, and pathological specimens are exhibited. Surgical Instruments and appliances of all kinds are made the subject of Special Instruction.

Surgical Operations are performed on Tuesday and Saturday, at 10 A.M., except in cases of emergency.

Resident Pupils, Clinical Clerks, and Dressers, are appointed every six months, without additional fee, and are awarded special certificates if their duties have been satisfactorily performed. Four interns are appointed each half-year, and are provided with apartments, etc., free of expense.

Examinations in Surgery, Medicine, and Case-taking, will be held at the end of the session. A gold and two silver medals will be awarded if sufficient merit be shown.

MATER MISERICORDIÆ HOSPITAL.—*Consulting Physician:* Dr. Francis R. Cruise. *Physicians*, Dr. Christopher J. Nixon, Dr. Joseph M. Redmond, Dr. Michael A. Boyd, Dr. John Murphy. *Surgeons*, Mr. Patrick J. Hayes, Mr. Charles Coppinger, Mr. Arthur Chance, Mr. John Lentaigne. *Obstetric Physician*, Dr. Thos. More Madden. *Opthalmic Surgeon*, Mr. Louis Werner. *Dental Surgeon*, Mr. Daniel Corbett. *Pathologist*, Dr. E. J. McWeeney. *House Physician*, Dr. Louis Buggy. *House-Surgeons*, Mr. W. R. Morris and J. W. Fogarty.

This Hospital, the largest in Dublin, at present containing over 300 beds, is open at all hours for the reception of accidents and urgent cases. Fifty beds are specially reserved for the reception of patients suffering from fever and other contagious diseases Instruction at the bedside will be given by the Physicians and Surgeons daily from 9 to 11 o'clock. Clinical Instruction will commence on Tuesday, October 1st, at 9 o'clock.

A course of Lectures and Instruction on Fever will be given during the winter and summer sessions. A certificate of attendance upon this course, to meet the requirements of the various Licensing Bodies, may be obtained. Opportunities are afforded for the study of Diseases of Women in the wards under the care of the Obstetric Physician, and at the Dispensary held on Tuesdays and Saturdays. Lectures on Clinical Gynæcology will be delivered on Saturdays, at 11 A.M., during the winter session. Opthalmic Surgery will be taught in the special wards and Dispensary during the winter session. Surgical Operations will be performed on Monday, Tuesday, Thursday, and Saturday mornings, at 10 o'clock.

Connected with the Hospital are extensive Dispensaries, which afford valuable opportunities for the study of general Medical and Surgical Diseases, Accidents, etc. A House-Physician and two House-Surgeons will be appointed annually. They will hold office for one year. Eight Resident Pupils will be elected to hold office for six months from the most attentive of the class. For the current session the elections will take place on Friday, November 1st, at 10 o'clock A.M. Dressers and Clinical Clerks will be appointed, and certificates will be given to students who exhibit proficiency and punctuality in performing their duties.

Leonard Prizes: One Gold and one Silver Medal will be offered for competition annually in the subject of Medicine, and one Gold and one Silver Medal in the subject of Surgery. They will be awarded on the aggregate of marks gained by reports of cases, and at a Clinical examination to be held at the close of the summer session. Further particulars can be obtained from the Registrar or Secretary.

Certificates of attendance upon this Hospital are recognised by all the Universities and the Licensing Bodies in the United Kingdom.

Fee for nine months, £12 12s.; six winter months, £8 8s.; three summer months, £5 5s.

Further particulars may be learned on application to the Secretary, Dr. Redmond, 8, Clare Street; the Registrar, Surgeon Chance, 15, Westland Row; or any of the other Medical Officers.

MEATH HOSPITAL AND COUNTY DUBLIN INFIRMARY.—*Physicians*, Dr. A. W. Foot, Dr. J. W. Moore. *Surgeons*, Sir G. H. Porter, Mr. P. C. Smyly. Mr. R. Macnamara, Mr. L. H. Ormsby, Mr. W. J. Hepburn, Sir William Stokes.

The Hospital contains 120 beds for the reception of medical and surgical cases. An extensive dispensary, lending library, and

physical laboratory are attached. An additional ward has been erected for the reception of children.

Four Clinical Lectures will be delivered weekly, and intruction in Medicine and Surgery will be given on alternate days. The Physicians and Surgeons on duty visit the Hospital at 9 A.M.

Prizes will be given at the termination of the winter course to the best answers in their respective classes. The office of Resident Pupil is open to pupils as well as apprentices.

Further information may be obtained on application to Mr. W. J. Hepburn, 31, Upper Merrion Street, Dublin, or at the Hospital.

QUEEN'S COLLEGE, BELFAST.—The following courses are delivered:—Anatomy and Physiology, Dr. Redfern, M. T. W. Th. F., 2; each alternate Friday, 4 P.M., Practical Anatomy daily, except S., 12; Practical Physiology and Histology, Saturdays and alternate Fridays; Medicine, Dr. James Cuming, M. T. W. Th. 1; Surgery, Dr. Thomas Sinclair, M. T. W. Th., 4, Operative Surgery, 5; Materia Medica and Therapeutics, Dr. J. Seaton Reid, M. T. W. Th., 4; Midwifery, Dr. R. F. Dill, M. T. W. Th., 3; Chemistry, Dr. Letts, M. T. W. Th. F., 3; Medical Jurisprudence, Dr. J. F. Hodges, M. T. W. Th., 2 (summer); Practical Chemistry (winter), M. W. F., 10; (summer), M. T. W. Th. F., 12; Natural Philosophy, Dr. J. D. Everett, T. Th., 11; W., 1; Zoology, Dr. R. O. Cunningham, M. T. Th. F., 1; Botany, Dr. Cunningham, M. T. W. Th. F., 11 (summer).

Clinical instruction is given at the Belfast Royal Hospital. The Ulster Hospital for Diseases of Women and Children, the Belfast Lying-in Hospital, the Belfast Ophthalmic Hospital, the Ulster Eye, Ear and Throat Hospital, the Belfast District Lunatic Asylum, and the Belfast Hospital for Sick Children are open to students.

Fees.—Anatomy and Physiology, first course, £3; each subsequent course, £2. Demonstrations and Practical Anatomy, and Practical Chemistry, each course, £3. Practical Physiology and Histology, each course, £3 3s. Other Medical Lectures, first course, £2; each subsequent course, £1. Belfast Royal Hospital, Clinical Fees, winter session, £5 5s.; summer session, £2 2s.; Perpetual Fee, payable in two instalments, £10 10s.; Hospital Fee, half a guinea for each winter or summer session. Ulster Hospital for Diseases of Women and Children, and Midwifery Dispensary, six months, £3 3s. Lying-in Hospital, six months, £2 2s. Belfast District Lunatic Asylum, summer session, £3 3s. Belfast Hospital for Sick Children, £1 1s. Belfast Ophthalmic Hospital, winter or summer session, £1 1s. Ulster Eye, Ear, and Throat Hospital, winter or summer session, £2 2s. Apply to Dr. McKeown, Ulster Eye, Ear, and Throat Hospital, Belfast, for information as to this fee. Eight Junior Scholarships, of the value of £25 each, are awarded annually, after examination, to students of the Faculty of Medicine, two being awarded for each of the four years of study.

QUEEN'S COLLEGE, CORK.—The following courses of lectures are given:—Anatomy and Physiology, Dr. J. J. Charles, daily, except S., 1; Histology and Practical Physiology, T. S., 2; Anatomical Demonstrations, five days weekly, 12; Medicine, Dr. E. R. Townsend, M. W., 3, S., 12, 3; Surgery, Dr. S. O'Sullivan, M. W. F., 4; Operative Surgery, Dr. S. O'Sullivan, T. Th. S., 1, in January, February, March, and April; Materia Medica, Dr. C. Y. Pearson, T. Th., 3, S., 12; Midwifery, Dr. H. Corby, T. Th. S., 4; Medical Jurisprudence, Dr. Pearson, M. F., 3; Natural Philosophy, Mr. J. England; Chemistry and Practical Chemistry, Dr. M. Simpson, M. W. F.; Zoology and Botany, Dr. M. M. Hartog, M. W. S.; Modern Languages, Dr. O. O'Ryan.

The building in which the Medical School is located is provided with a large, well-lighted, and ventilated dissecting-room, with physiological and toxicological laboratories, materia medica, anatomical and pathological museums, as well as a room for surgical and obstetrical instruments and appliances. There are well appointed physical and chemical laboratories, and a large natural history museum in the adjoining building; and there is also a botanic garden. The College library is open daily to students of the school.

Fees.—For Practical Anatomy and Practical Chemistry, £3 each course; for Anatomy and Physiology, £3 for first course, and £2 for subsequent courses. Other Medical classes, £2 for first course, and £1 for second course. Eight scholarships (value £25 each), as well as several exhibitions and class prizes, are awarded every year to the most deserving students.

Clinical Instruction is given at the North and South Infirmaries (each 100 beds). Students can also attend the Mercy Hospital (60 beds), the Cork Union Hospital, the County and City of Cork Lying-in Hospital, the Maternity, the Hospital for Diseases of Women and Children, the Fever Hospital, the Ophthalmic and Aural Hospital. Fee for Clinical Lectures and attendance at either the North and South Infirmary, for twelve or nine months, £8 8s.; six months, £5 5s.; three months, £3 3s.; at the Lying-in Hospital and the Maternity, for six months, each £3 3s.

There will be no Introductory Address. Lectures will begin on October 21st.

QUEEN'S COLLEGE, GALWAY.—*Professors:* Anatomy and Physiology, Dr. J. P. Pye, M. T. W. Th. F., 9; Anatomy, Dr. Pye, same days, 1; Medicine, D. J. I. Lynham, T. Th. S., 2; Surgery, Dr. W. W. Brereton, M. W. F., 11; Materia Medica, Dr. N. W. Colahan, T. Th. S., 2; Medical Jurisprudence, Dr. R. J. Kinkead and Dr. Rowney, M. W. F., 12; Midwifery, Dr. R. J. Kinkead, M. W. F., 2; Chemistry, Dr. T. H. Rowney, M. W. F. S., 12; Practical Chemistry, Dr. T. H. Rowney, M. W. F., 2; Botany and Zoology, Dr. R. J. Anderson, T. W. Th., 11; S., 1.; Experimental Physics, Professor A. Anderson, T. Th., 12; Modern Languages, Professor Steinberger, M. W. F., 10. The College Library is open daily to students; also the Museums of Human and Comparative Anatomy, of Physiological Instruments, of Pathology, of Materia Medica, of Natural History, of Chemistry, and of Natural Philosophy; and the Montgomery Obstetric Collection.

Prizes.—Attached are eight scholarships of the value of £25 each; four exhibitions of the value of £12 each; two exhibitions of the value of £16 each; and sessional prizes in each of the subjects of the curriculum are awarded annnally. All scholarships and exhibitions of the second, third, and fourth years may be competed for by students who have attained the requisite standing in any medical school recognised by the College Council, and have passed the Matriculation Examination in the College.

Clinical Lectures are delivered on Tuesdays and Fridays, and practical teaching at the bedside on other days of the week, at the Galway County Infirmary and the Galway Town Hospital.

Fees.—College fee, first year, 10s.; each subsequent year, 5s.; Anatomy and Physiology, first course, £3; each subsequent course, £2; Practical Anatomy and Practical Chemistry, each course, £3; pass courses, one term, £1; each course, £2; honours courses, £3; reattendance, £1. Clinical Instruction, six months, £4 4s.

RICHMOND, WHITWORTH, AND HARDWICKE HOSPITALS.—*Physicians*, Sir J. T. Banks, K.C.B., M.D., Dr. S. Gordon, Dr. G. P. L. Nugent, Dr. J. O'Carroll. *Assistant Physician and Pathologist*, Dr. Thomas Donnelly. *Consulting Obstetric Surgeon*, Dr. G. H. Kidd. *Surgeons*, Sir William Stokes, Dr. William Thomson, Dr. W. Thornley Stoker, Dr. Anthony H. Corley. *Ophthalmic Surgeon*, Dr. A. H. Jacob. *Assistant Surgeon*, Mr. J. J. Burgess. *Resident Surgeon*, Dr. Vincent Nash. *Curator of Museum*, Mr. F. Blake Knox.

These hospitals contain 312 beds: 110 for surgical cases, 82 for medical cases, and 120 for fever and other epidemic diseases.

There will be a distinct Course of Lectures and Clinical instruction in Fevers. Operations are performed on Monday and Wednesday mornings, except in cases of emergency. A course of Practical Instruction in Ophthalmic Surgery will be given; fee, £3 3s. Practical Pharmacy is taught under the superintendence of the Apothecary of the hospitals. A Resident Surgeon is appointed every alternate year, receives a salary, and holds office for two years. Eight Residential Clinical Clerks are appointed each half year, and provided with furnished apartments, fuel, etc. These appointments are open not only to advanced students, but also to those who are qualified in Medicine and Surgery. The dressers are selected from among the best qualified of the pupils, without the payment of any additional fee.

The Richmond Lunatic Asylum, containing over 1,200 patients, adjoins these hospitals, affording facility for the study of mental diseases. The hospitals are visited at nine o'clock by the physicians and surgeons on alternate days. Two Clinical Lectures are delivered in each week, in addition to the usual daily bedside instruction.

Fees.—For the winter and summer session, £12 12s.; for the six winter months, £8 8s.; for the three summer months, £5 5s. Resident Clinical Clerks, winter, nine months' certificate, £12 12s.; summer, three months' certificate, £5 5s.; winter or summer, six months' residence, £8 8s. Honorary Secretary, Samuel Gordon, M.D., No. 13, Hume Street.

ROTUNDA HOSPITAL.—*Master*, Dr. A. V. Macan. *Consulting Physician*, Dr. J. Little. *Consulting Surgeon*, Dr. W. Colles.

Assistant-Physicians, Dr. A. J. Smith and Dr. Wm. S. Bagot.

This institution consists of two distinct hospitals, namely, the Lying-in Hospital, into which 1,200 labour cases are, on an average, admitted annually, and the Auxiliary Hospital, set apart for the reception and treatment of patients suffering from the various forms of uterine and ovarian disease; about 500 patients are received into this hospital during each year.

There is also in connection with the Hospital a large extern maternity (1,900 patients were in the past year attended at their own homes), and a Dispensary for Diseases Peculiar to Women, which is open daily.

Pupils are admitted to the practice of all these departments.

Clinical Instruction in Midwifery and the Diseases of Women is given daily, and lectures are delivered regularly during the session on these subjects.

The diploma from this Hospital is granted to pupils on their passing an examination before the Master and Assistants after a period of six months' attendance on the practice of the Hospital.

Accommodation is provided for a limited number of intern pupils.

Pupils can enter at any time.

Fees.—Intern pupils: six months, £21; three months, £12 12s.; two months, £9 9s.; one month, £6 6s.; extern pupils: six months, £10 10s.; three months, £6 6s. Female pupils are trained as nurse-tenders and midwives, for six months, on the following terms: extern pupil, £10; intern pupil (including board), £20.

Sir Patrick Dun's Hospital.—*Consulting Physician*, Dr. J. T. Banks. *Consulting Surgeon*, Dr. W. Colles. *Physicians*, Dr. J. M. Purser, Dr. J. M. Finny, Dr. W. G. Smith, Dr. Arthur V. Macan. *Surgeons*, Dr. E. H. Bennett, Dr. T. E. Little, Dr. C. B. Ball.

The physician on duty visits the wards, with his class, at 9 A.M. on Mondays, Wednesdays, and Fridays; and the surgeon on duty, with his class, at 9 A.M., on Tuesdays, Thursdays, and Saturdays. There are separate wards for Infectious Diseases, and for Diseases of Women and Children. The Hospital Dispensary is open from 9 to 11 daily.

A house-surgeon is appointed annually, and two resident pupils half-yearly.

Silver Clinical medals in Medicine and in Surgery are awarded to the students who pass the best examinations on the Medical and Surgical cases treated in the hospital during the year.

Fees.—The payment of £12 12s. to the hospital entitles the student to hospital attendance and clinical teaching during the winter and summer sessions. For the winter session alone the fee is £8 8s.; for the summer alone, £5 5s. For twelve months' instruction in Practical Midwifery, students of Trinity College, £3 3s.; other students, £6 6s.

Dr. Steevens's Hospital.—*Consulting Physicians*, Dr. J. Little and Dr. T. W. Grimshaw. *Consulting Surgeons*, Mr. G. S. Wilmot and Sir G. H. Porter. *Physicians*, Dr. H. C. Tweedy, Dr. R A. Hayes. *Surgeons*, Mr. W. Colles, Mr. E. Hamilton, Mr. R. B. McCausland.

The Hospital contains 250 beds. There is a ward entirely devoted to Syphilitic Disease, and also a detached building for Fever cases; also an extensive Out-patient Department, with separate Clinics for Diseases of the Skin and Throat.

The Hospital is visited by the physicians and surgeons at 9 A.M. Clinical Lectures are given by the physicians and surgeons. Surgical Operations are performed on Saturdays at 10 A.M., except in cases of emergency.

The Museum is open daily to the pupils of the Hospital. There is also a Lending Library.

Fees.—Hospital Practice: Nine months, £12 12s.; six months, £8 8s.; three months, £5 5s. Dressership: £10 10s. each three months.

Further particulars may be obtained from the Honorary Secretary, Dr. R. A. Hayes, 56, Merrion Square South, Dublin.

School of Surgery: Royal College of Surgeons in Ireland.—Lectures will be given as follows: *Winter Session:* Physiology, Dr. Mapother, M. W. F., 3; Systematic Anatomy, Mr. Stoker and Mr. A. Fraser, M. W. F., 12; Practical Anatomy, Mr. Fraser, T. Th S, 12; Surgery, Sir W. Stokes and Mr. E. Hamilton, T. Th. S., 1; Medicine, Dr. A. W. Foot, M. W. F., 1; Chemistry, Sir C. Cameron, M. W. F., 2; Midwifery and Gynæcology, Dr Roe, T. T. S., 2. *Summer Session*, commencing April 1st, 1889: Materia Medica, Dr. R. Macnamara, daily, except S., 1; Medical Jurisprudence, Dr. Davy, T. Th. S., 1; Botany and Zoology, Mr. Minchin, M. W. F., 2; Practical Chemistry, Sir C. Cameron, M. W. F., 11; Ophthalmic and Aural Surgery, Dr. Jacob, T. Th., 3; Practical Physiology, Dr. Mapother, and Histology, Mr. Fraser, T. Th. S., 11; Operative Surgery, Sir W. Stokes and Mr. Hamilton, daily, 11; Hygiene, Sir C. Cameron, M. W. F., 3. There is a laboratory for the study of Practical Physiology. The dissecting-rooms open from October 1st, and are available from 8 A.M. to 10 P.M. during the session; also from 8 A.M. to 5 P.M. in the summer. The dissections are under the direction of the Professors of Anatomy, assisted by several Demonstrators.

Fees.—Each course of lectures, excluding the practical courses, is £3 3s.; Dissections with Demonstrations, Practical Physiology, Operative Surgery, and Practical Chemistry, £5 5s. each. Students requiring an extra course of Dissections without a certificate, and who have taken their previous anatomical courses in the School, are charged £2 2s.; other students, £3 3s. Additional Courses of Practical Histology, when a certificate is not required, £2 2s. each. The fees for all lectures and dissections for the diploma in Surgery amount to £63; hospital attendance, £37 16s. At the termination of each session, medals are awarded in the various classes. The dissecting-rooms will open on October 1st, and the lectures will commence on October 31st.

School of Pharmacy, Apothecaries' Hall of Ireland.—A School of Pharmacy has been established under the direction of the Court of Directors of the Apothecaries' Hall of Ireland. Instruction is given in Pharmaceutical Nomenclature and Abbreviation, the Weights and Measures, Processes and Apparatus of the *British Pharmacopœia*, in the Preparation of Officinal Compounds and the Application of Tests (*British Pharmacopœia*) for Purity, in the reading in full Latin, Compounding, and Dispensing of Prescriptions, and on Incompatibility of Drugs. The Demonstrator is Mr. R. G. Montgomery, B.A., M.B. T.C.D., L.A.H. The fee for a course (three months) is three guineas. Further particulars may be obtained from Mr. C. Wright, 40, Mary Street, Dublin.

INSTRUCTION IN HOSPITALS, ETC.

Bethlem Royal Hospital.—*Medical Superintendent*, Dr. R. Percy Smith. Two Resident Clinical Assistants are appointed twice a year for six months from recently qualified medical students. Students can attend the hospital practice for three months on application. Students of Guy's Hospital and St. Thomas's Hospital during the summer can attend special afternoon ward-instruction.

Central London Throat and Ear Hospital.—*Consulting Surgeon*, Mr. Thomas Nunn. *Surgeons*, Mr. Lennox Browne, Dr. A. W. Orwin, Dr. Dundas Grant, and Mr. Percy S. Jakins. *Assistant Surgeon*, Mr. Carmalt Jones. *Dental Surgeon*, Mr. G. Wallis. *For Defects of Speech*, Mr. Van Praagh. The hospital contains accommodation for seventeen in-patients, and has an extensive Out-patient Department, which is open to all medical practitioners and students for the purpose of Clinical Demonstration and Instruction. Fee for three months' attendance, £2 2s.; for six months, £3 3s.

Chelsea Hospital for Women.—*Consulting Physicians*, Dr. R. Barnes, Dr. J. H. Aveling. *Consulting-Surgeons*, Sir T. Spencer Wells, Bart., Mr. J. Hutchinson, F.R.S. *Physicians*, Dr. A. W. Edis, Dr. Fancourt Barnes, Dr. Travers. *Assistant-Physicians*, Dr. T. V. Dickinson, Dr. J. Mackern, Dr. G. Harper, Dr. W. H. Fenton, Dr. H. T. Rutherfoord, Dr. J. I. Parsons, Dr. F. J. Waldo. *Anæsthetists*, Dr. J. Harper and Dr. Frank F. Schacht. Qualified medical men are admitted to the practice of the hospital, which has sixty beds, and to the consultations and operations, which take place at 2.30 P.M. on Mondays and Thursdays. A course of post-graduate lectures on Diseases of Women, free to qualified medical men, is delivered yearly in February and March by the physicians of the hospital.

Great Northern Central Hospital, Holloway Road, N.—*Consulting Physician*, Sir Andrew Clark, Bart., M.D., F.R.S. *Consulting Surgeons*, Frederick Le Gros Clark, F.R.S., and W. S. Savory, F.R.S. *Physicians*, Drs. Cholmeley, Burnet, Beale, Beevor, Syers, and Galloway. *Obstetric Physicians*, Drs. W. S. A. Griffith and W. R. Dakin. *Surgeons*, Messrs. W. Adams, J. Macready, C. B. Lockwood, H. W. Allingham, and C. E. H. Cotes. *Ophthalmic Surgeon*, Mr. Jonathan Hutchinson, jun. *Aural Surgeon*, Mr. W.

R. H. Stewart. *Surgeon for Diseases of the Throat*, Mr. W. Spencer Watson. *Physician for Diseases of the Skin*, Dr. Cook. *Dental Surgeon*, Mr. E. Keen. The first portion of the new building in the Holloway Road has recently been completed and the practice of the Hospital is open to practitioners and senior Students. Clinical Students are appointed in the Wards and Out-patients' Department. Further information can be obtained on application to the Honorary Secretary of the Medical Committee, Dr. W. R. Dakin, 57, Welbeck Street, W.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, BROMPTON.—*Consulting Physicians*, Dr. W. H. Walshe, Dr. Richard Quain, F.R.S., Dr. James E. Pollock, Dr. C. Theodore Williams. Dr. R. Douglas Powell. *Consulting Surgeon*, Mr. John Marshall, F.R.S. *Physicians*, Dr. E. Symes Thompson, Dr. John Tatham, Dr. Reginald E. Thompson, Dr. Frederick Roberts, Dr. T. Henry Green, Dr. J. Mitchell Bruce. *Surgeon*, Rickman J. Godlee, F.R.C.S. *Assistant-Physicians*, Dr. J. Kingston Fowler, Dr. Percy Kidd, Dr. Cecil Y. Biss, Dr. T. Dyke Acland, Dr. Robert Maguire, Dr. H. W. G. Mackenzie. *Dental Surgeon*, Mr. Charles J. Noble. Resident Medical Officer, Dr. H. D. Waugh. There are 321 beds in the two buildings constituting the hospital. Lectures and Demonstrations are given by members of the medical staff, on Wednesdays at 4, save during the vacations. Members of the medical profession are admitted on presentation of their cards. Pupils are admitted to the Hospital. *Fee*, including Clinical courses, three months, £3 3s.; six months, £5 5s.; perpetual, £10 10s. Certificates of attendance on the Medical Practice of this Hospital are recognised by the University of London, the Apothecaries' Society, and the Army and Navy and Indian Boards.

HOSPITAL FOR WOMEN, SOHO SQUARE.—*Consulting Physician*, Dr. Protheroe Smith. *Physicians*, Dr. Carter, Dr. R. T. Smith, Dr. Holland, Dr. Mansell-Moullin. *Assistant-Physicians*, Dr. Bedford Fenwick, Dr. James Oliver. *Surgeon*, Mr. Reeves. *Assistant-Surgeon*, Mr. S. Osborn. *Surgeon-Dentist*, Mr. F. Canton. *Administrators of Anæsthetics*, Dr. Dudley W. Buxton, Mr. C. J. Ogle. In connection with this institution there is now an organised School of Gynæcology open to qualified medical men and students after their third year. A limited number of Clinical Assistants to the Physicians and Surgeons in the In-patient and Out-patient Departments are appointed every three months. A course of lectures on the Anatomy and Physiology of the Female Pelvic Organs is given during each quarter. Clinical lectures are given on alternate Thursday afternoons throughout the winter and summer sessions. Prizes are given annually after examination, open to past and present Clinical Assistants. *Fee* for the three months' course, £8 8s. Further information can be obtained by letter, addressed to the Dean at the Hospital.

HOSPITAL FOR SICK CHILDREN, GREAT ORMOND STREET.—*Physicians*, Dr. W. B. Cheadle, Dr. O. Sturges, Dr. T. Barlow. *Assistant-Physicians*, Dr. D. B. Lees, Dr. Montague Lubbock, Dr. J. Abercrombie, Dr. A. Money, Dr. W. B. Hadden. *Surgeons*, Mr. Edward Owen, Mr. J. H. Morgan. *Assistant-Surgeons*, Mr. B. Pitts, Mr. W. A. Lane, Mr. C. A. Ballance. *Ophthalmic Surgeon*, Mr. R. Marcus Gunn. *Surgeon-Dentist*, Mr. A. Cartwright. There are 121 beds in the hospital at Great Ormond Street, and 52 at Highgate. The physicians and surgeons of the hospital will give Clinical Instruction in the wards, and deliver lectures during the ensuing winter session in rotation. Particulars as to times of Medical and Surgical visits and the practice of the Hospital can be had on application to the Secretary.

LONDON TEMPERANCE HOSPITAL, HAMPSTEAD ROAD, N.W. (Established 1873).—*Physicians*, Dr. James Edmunds, M.R.C.P., and Dr. J. J. Ridge. *Surgeon*, Dr. W. J. Collins, F.R.C.S. *Dental Surgeon*, Mr. A. Alexander. The Hospital contains 70 beds. The in-patients average 700, and the out-patients 3,000, a year. The medical and surgical practice of the hospital is open to students and practitioners. Classes will be held at the hospital during the winter and summer sessions for students preparing for the Final Examinations at the Hall, Colleges, and Universities. Fees for courses in all subjects, from £5 5s. a month. Appointments (vacancies for which are advertised in the medical journals), Registrar and Pathologist, Senior and Junior House-Surgeon. For particulars as to hospital practice and classes, apply at the Hospital to the Dean, Dr. W. J. Collins.

NORMAL SCHOOL OF SCIENCE.—Arrangements have been made by the Medical Schools of Charing Cross, Middlesex, St. George's, and Westminster Hospitals, for students desirous of undergoing a course of instruction in Science, such as that required for the Preliminary Scientific M.B. Examination of the University of London, to attend the Lectures and Practical Instruction in Biology, and a portion of the ordinary courses in Physics and Chemistry at the Normal School of Science, South Kensington. The fee for the whole course, which extends from October to June, is £35, of which £20 will be deducted by these four Schools respectively from the fees for the Medical curriculum, either in one sum or in equal instalments, according as the fees are paid. A separate syllabus will be forwarded to those desiring further particulars.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL AND MIDWIFERY TRAINING SCHOOL.—*Consulting Physician*, Dr. Brodie. *Consulting Surgeons*, Mr. H. Lee, Sir William Mac Cormac. *Physicians to In-patients*, Dr. Hope and Dr. W. C. Grigg. *Physician to Out-Patients*, Dr. W. S. A. Griffith. This Hospital receives nearly 1,000 patients annually, besides having a large out-patient department. Medical pupils are received at all times of the year. Pupils have unusual opportunities of seeing Obstetric complications and Operative Midwifery, on account of the very large number of primiparous cases—upwards of three-fourths of the total admissions. Clinical Instruction is given on the more important cases that present themselves. Certificates of attendance at this hospital are recognised by all Universities, Colleges, and Licensing Bodies. Monthly Nurses and Midwives are received for training. The Pupil Midwives are specially prepared for the Examination of the Obstetrical Society of London, and the examination fees are paid by the hospital in the case of every midwife who obtains the Society's diploma, and has previously passed an examination by the physicians of the hospital. *Fees.*—Medical pupils, from £3 3s. for one week to £26 5s. for three months, exclusive of board and lodging; Pupil Midwives, £26 5s. for three months; Pupil Nurses, £15 15s. for twelve weeks and £11 0s. 6d. for eight weeks, inclusive of board and lodging. For further particulars, application should be made to the Secretary, at the hospital.

ROYAL ORTHOPÆDIC HOSPITAL.—*Surgeons*, Mr. B. E. Brodhurst, Mr. H. A. Reeves, Mr. C. Read, Mr. W. H. Balkwill. *Assistant-Surgeon*, Mr. H. F. Baker. Operations are performed at 2 P.M. on Mondays. The hospital is open to all legally qualified practitioners, and students are admitted on payment of the following fees: six months, £3 3s.; twelve months, £5 5s.; perpetual, £10 10s.

ROYAL LONDON OPHTHALMIC HOSPITAL. — *Physician*, Dr. Stephen Mackenzie. *Consulting Surgeons*, Mr. J. Dixon, Sir W. Bowman, Mr. J. Hutchinson. *Surgeons*, Mr. Hulke, Mr. Lawson, Mr. Couper, Mr. Waren Tay, Mr. Tweedy, Mr. Nettleship, Mr. Gunn. *Assistant-Surgeons*, Mr. Lang, Mr. A. Silcock. There are 100 beds for in-patients. Operations are performed daily, from 10.30 until 1 P.M. Gentlemen are admitted to the Practice, and to Lectures and Demonstrations. *Fees* for six months, £3 3s.; perpetual, £5 5s. A perpetual ticket admits to Lectures and Demonstrations free. Students of the Hospital are eligible for the office of House-Surgeon, and may be appointed Clinical Assistants.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL. — *Consulting Surgeon*, Mr. Henry Power; *Surgeons*, Mr. Rouse, Mr. Macnamara, Mr. Cowell, Mr. Frost, Mr. Hartridge, and Mr. H. Juler. *Assistant-Surgeon*, Mr. B. Wainewright. The hospital contains 50 beds. The practice is open to practitioners and students from 1 to 4 P.M. daily. Special instruction is given in the Diagnosis, Pathology, and Treatment of all Eye Affections, including the Operations on the Eye, the Treatment of Errors of Refraction, and the Use of the Ophthalmoscope. Operations daily at 2 P.M. *Fees:* six months, £3 3s.; perpetual, £5 5s. For particulars, apply at the Hospital, or to Mr. Adams Frost, 17, Queen Anne Street, W.

SEAMEN'S HOSPITAL, GREENWICH.—*Secretary*, Mr. P. Michelli. *Consulting Physicians*, Dr. Robert Barnes, Dr. Richard Quain. *Consulting Surgeon*, Mr. J. N. Davies-Colley. *Visiting Physicians*, Dr. John Curnow, Dr. J. Anderson, C.I.E. *Visiting Surgeon*, Mr. G. R. Turner. *Principal Medical Officer*, Mr. W. Johnson Smith. *Dispensary Medical Officers:* Well Street, London Docks, Mr. Walter Fowler; Gravesend, Mr. R. Onslow Richmond. The hospital contains 225 beds. Apartments are provided in the house of the Principal Medical Officer for students and others who may be desirous of studying diseases incidental to tropical climates before entering the services or going abroad. There are a resident House-Physician and a House-Surgeon. A new Branch Hospital to contain fourteen beds and an Out-patient Department is in course of construction near the Albert and Victoria Docks, E.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN, LEICESTER SQUARE, W.C.—*Physicians*, Dr. H. B. Dow, Dr. Alex Bowie, and Dr. Morgan Dockrell. *Assistant Physicians*, Mr. T. J. Hitchins, Dr. Mark Hargreaves, and Dr. J. H. Vinrace. *Surgeon*, Mr. J. L. Milton. The medical officers attend every week-day at 2; and every week-night (except Saturday) at 7; also on Thursday mornings at 10 There is a School of Dermatology in connection with the hospital in which systematic and practical lectures are given twice a week, and clinical instruction every day. The sixth term will commence on Tuesday, October 8th. Lectures will be delivered as follows:—Materia Medica and Therapeutics of agents employed in the treatment of Skin-Diseases, by Dr. H. B. Dow; Principles and Practice of Dermatology, by Mr. J. L. Milton, Dr. Alex. Bowie, and Dr. Morgan Dockrell.

ST. PETER'S HOSPITAL FOR STONE AND URINARY DISEASES.—*Surgeons*, Mr. Walter Coulson, Mr. F. R. Heycock. *Surgeons to the Out-patient Department*, Mr. F. Swinford Edwards, Mr. E. Hurry Fenwick. Qualified medical men are admitted free to the practice of this hospital, which contains 24 beds, and has a large out-patient attendance (42,625 for 1888). Operations are performed and consultations are held on Wednesdays at 2.30. Clinical lectures are given every year by members of the staff.

SCHOOL OF PHARMACY OF THE PHARMACEUTICAL SOCIETY.—The School opens on Wednesday, October 2nd. Lectures on Chemistry and Physics by Professor W. R. Dunstan, M. T. W., 9; Botany by Professor Green, F. S., 9. Materia Medica demonstrations by Mr. Holmes, T., 9. Pharmacy Demonstrations and Lectures by Mr. Ince, T. Th. F., 5. The laboratories for Practical Chemistry are open from 10 A.M. to 5 P.M.; on Saturday from 10 to 2. *Director*, Professor Attfield. *Demonstrator*, Mr. F. W. Short; *Assistant-Demonstrator*, Mr. H. D. Fuge. They are fitted up with every convenience for the study of Chemistry by personal experiment. Application for admission to the school, or for further information, may be made to the professors or their assistants in the lecture-theatre or the laboratories, at 17, Bloomsbury Square. Medical students, or pupils intending to enter the medical profession, are admitted to the lectures, etc., and to a course of practical chemistry of any length in the laboratories. Professor John Marshall, F.R.S., F.R.C.S., will deliver an introductory address on Wednesday, October 2nd, at 8 P.M.

ADDENBROOKE'S HOSPITAL, CAMBRIDGE.—*Consulting Physician*, Sir G. E. Paget. *Consulting Surgeon*, Mr. Lestourgeon. *Physicians*, Dr. P. W. Latham, Dr. J. B. Bradbury, and Dr. D. MacAlister. *Assistant-Physician*, Mr. Laurence Humphry. *Surgeons*, Dr. G. M. Humphry, Mr. E. Carver, Mr. G. Wallis, and Mr. G. E. Wherry. *Dental Surgeons*, Mr. W. A. Rhodes and Mr. A. Jones. The Hospital contains 152 beds. Clinical lectures are delivered twice weekly during the academical year; and practical instruction is given daily throughout the year. Clinical clerks and dressers are appointed without payment.

BRADFORD INFIRMARY AND DISPENSARY.—*Physicians*, Dr. H. C. Major, Dr. Grabham. *Surgeons*, Dr. A. Rabagliati, Mr. J. Appleyard, Dr. T. C. Denby, and Mr. W. Lake Roberts. *Medical Officers*, Dr. J. H. Bell, Dr. D. Goyder. The Hospital contains 210 beds. Non-resident pupils are received, and have every opportunity of acquiring a practical knowledge of their profession under the superintendence of the House-Surgeon. One year's attendance is recognised by the Examining Boards. *Fee:* Perpetual, £10 10s.

CUMBERLAND INFIRMARY.—*Consulting Surgeons*, Mr. Herbert W. Page, Dr. J. A. Macdougall. *Physicians*, Dr. Lockie, Dr. Barnes. *Surgeons*, Dr. Maclaren, Dr. Lediard. *Dental Surgeon*, Mr. Warwick Hele. The Infirmary contains 100 beds. No pupils received.

DERBYSHIRE GENERAL INFIRMARY.—*Physicians*, Dr. W. Ogle, Dr. C. A. Greaves, Dr. W. Benthall. *Consulting Surgeon*, Mr. J. W. Baker. *Surgeons*, Dr. W. G. Curgenven, Mr. C. H. Hough, and Mr. J. A. Sharp. *Ophthalmic Surgeon*, Mr. E. C. Green. There are 175 beds. Pupils are admitted to the practice of the Infirmary at £5 5s. a year.

DEVON AND EXETER HOSPITAL, EXETER.—*Consulting Physician*, Dr. Drake. *Physicians*, Dr. Lewis Shapter, Dr. H. Davy, Dr. Arthur G. Blomfield. *Consulting Surgeons*, Mr. A. J. Cumming, Mr. T. W. Caird. *Surgeons*, Mr. Bankart, Mr. Harris, Mr. Domville, Mr. Bell. *House Surgeon*, Mr. Russell Coombe. *Assistant*, Mr. Reginald Martyn. The hospital contains 214 beds, including a special children's ward. There are a good Library, Museum, Dissecting and *Post-mortem* Rooms. Attendance on the practice at this hospital qualifies for all the Examining Boards. Two Resident Pupils are received. Arrangements may be made by which students can attend Midwifery. For further particulars as to fees, etc., apply to the House-Surgeon.

EYE, EAR, AND THROAT HOSPITAL, EDINBURGH.—*Consulting Surgeon*, Joseph Bell, M.D. *Surgeons*, J. J. Kirk Duncanson, M.D., G. Hunter Mackenzie, M.D., J. Maxwell Ross, F.R.C.S.Ed., and William George Sym, M.B., C.M. *Treasurer and Secretary*, A. P. Purves, Esq., W.S., 12, George Street.

GENERAL HOSPITAL, NOTTINGHAM.—*Consulting Physicians*, Sir W. T. Robertson, M.D., and Dr. Storer. *Physicians*, Dr. W. H. Ransom, Dr. J. O. Brookhouse, Dr. H. Handford. *Consulting-Surgeon*, Mr. J. White. *Surgeons*, Mr. T. Wright, Mr. J. Littlewood, Mr. H. Owen Taylor and Mr. A. R. Anderson. The hospital contains 180 beds. The Honorary Staff introduce pupils to witness the practice of the hospital, on payment of £10 10s. annually. The pupils receive instruction from the Resident Medical Officer.

GENERAL HOSPITAL FOR SICK CHILDREN, PENDLEBURY, MANCHESTER.—*Physicians*, Dr. H. Ashby, Dr. Hutton. *Surgeon*, Mr. G. A. Wright. *Assistant-Surgeon*, Mr. Joseph Collier. The hospital at Pendlebury contains 140 beds, including 28 for fever. The medical staff see out-patients daily at the Dispensary, Gartside street, at 9 A.M., and visit the hospital at 11 A.M. The practice of the hospital and dispensary is free to students accompanying the medical staff. In-patients, 1888, 1,344; out-patients 10,468.

GLASGOW POLYKLINIK, 100, Elderslie Street, a Dispensary for the Study and Treatment of Special Diseases.—There are in all six departments, namely: that for (1) Diseases peculiar to Women, under Dr. W. L. Reid and Dr. Lawrence Oliphant; (2) Diseases of Ear, Throat, and Nose, under Dr. Walker Downie; (3) Diseases of the Eye, under Dr. Maitland Ramsay; (4) Diseases of Skin, under Dr. Alexander Napier; (5) Diseases of Nervous System, under Dr. C. Workman; (6) Diseases of Urinary Organs, under Dr. Rutherford. The clinical instruction given here is open to medical students and practitioners on payment of the necessary fees.

GENERAL INFIRMARY AT GLOUCESTER AND THE GLOUCESTERSHIRE EYE INSTITUTION.—*Consulting Surgeons*, Mr. J. P. Wilton, Mr. T. S. Ellis. *Physicians*, Dr. R. W. Batten, Dr. Oscar W. Clark. *Assistant-Physician*, Dr. H. Peacock. *Surgeons*, Mr. H. E. Waddy, Mr. R. M. Cole, Mr. A. M. Sydney-Turner. *Ophthalmic Surgeon*, Mr. E. D. Bower. *Assistant-Surgeon*, Dr. J. J. S. Johnstone. *House-Surgeon*, Mr. J. Forrester Wood. *Secretary*, Mr. H. P. Pike. The hospital contains 156 beds. Resident and non-resident pupils may be admitted by the General Committee on the recommendation of a member of the Medical Board. Each pupil pays in advance £10 for the first half year, and £5 for every subsequent quarter, or portion of a quarter, of a year. Each resident pupil has board and lodging in the house, for which he pays in advance 26 guineas for the first half year, and 13 guineas for every subsequent quarter, or portion of a quarter, of a year. Each pupil pays in advance to the House-Surgeon a fee of £5 5s. for instruction, and a further fee of £3 3s. for every subsequent year or portion of a year. One year passed at this hospital, after passing a preliminary examination, is recognised by the Royal College of Surgeons.

JESSOP HOSPITAL FOR DISEASES OF WOMEN, SHEFFIELD.—*Honorary Consulting Medical Officers*, Dr. Aveling, Dr. Hime, and Mr. F. Woolhouse. *Honorary Acting Medical Officers*, Dr. Keeling, Mr. R. Favell, Mr. A. H. Laver, Dr. Martin. *House-Surgeon*, Dr. Wynne. *Secretary*, Mr. H. B. Warner. The number of beds is 45; in the Diseases of Women Department, 36; in the Maternity Department, 9. Students can attend the practice of the hospital, and be supplied with cases of midwifery.

KENT AND CANTERBURY HOSPITAL.—The hospital contains 102 beds. *Consulting Physician*, Dr. Lochée. *Physician*, Dr. Gogarty, *Consulting Surgeon*, Mr. J. Reid. *Surgeons*, Mr. Holttum, Mr. Wacher, Mr. T. W. Reid, and Mr. Greasley. *Dental Surgeon*, Mr. M. L. Bell. *House-Surgeon*, Mr. Z. Prentice. *Assistant House-Surgeon*, Mr. W. F. A. Clowes. *Secretary*, Mr. Charles H. Read. *Fees* for hospital attendance, £7 7s. Over 800 in-patients and 4,000 out-patients attend every year. Lectures are delivered weekly to the students of St. Augustine's Missionary College on Practical Medicine by Dr. Gogarty, and on Surgery by Mr. T. W. Reid. Courses of lectures are also delivered by the medical staff for the instruction and training of the nurses and probationers of

the hospital, and of the nurses and probationers of the Kent and Canterbury Nursing Institute.

LINCOLN COUNTY HOSPITAL.—*Physicians*, Dr. G. Mitchinson, Dr. C. Harrison. *Surgeons*, Mr. T. Sympson, Mr. C. Brook, Mr. T. M. Wilkinson, and Mr. W. J. Cant. *Consulting Surgeon*, Mr. S. Lowe. The hospital contains 91 beds. The House-Surgeon is allowed to take two pupils, on terms arranged by the Weekly Board, himself, and the pupils. A fee of not less than £10 10s. is paid by every pupil to the hospital. The House-Surgeon is responsible for the conduct of his pupils. The pupils remain in the hospital only when occupied in performing or observing the actual work of the hospital.

LIVERPOOL EYE AND EAR HOSPITAL.—*Consulting-Surgeons* Dr. R. H. Taylor, Dr. Nevins. *Surgeons*, Mr. E. A. Browne, Mr. R. Williams, and Mr. C. G. Lee. *Assistant-Surgeons*, Mr. C. H. B. Shears, and Mr. J. Rose. The Infirmary contains 46 beds. Evening courses of lectures on Refraction and Medical Ophthalmoscopy are delivered at this infirmary during the winter months by Mr. Edgar Browne. Students of medicine of University College, Liverpool, have free access to the practice of the infirmary.

LIVERPOOL NORTHERN HOSPITAL.—*Physicians*, Dr. Dickinson, Dr. Barr. *Consulting-Surgeons*, Mr. Manifold, Mr. H. Lowndes, and Dr. W. M. Campbell. *Surgeons*, Mr. C. Puzey, Mr. D. Harrisson, and Mr. G. G. Hamilton. *Dental-Surgeon*, Mr. Mathews. The hospital contains 160 beds. There is a special ward for the treatment of children. Clinical Lectures are delivered by the physicians and surgeons during the summer and winter sessions. Clinical clerkships and dresserships are open to all students without additional fee. *Fees:* Perpetual, £26 5s.; one year, £10 10s.; six months, £7 7s.; three months, £4 4s. Students can enter to the medical or surgical practice separately on payment of half the above fees. Practical Pharmacy, three months' fee, £2 2s.

LIVERPOOL ROYAL SOUTHERN HOSPITAL.—*Physicians*, Dr. Cameron, Dr. Carter, Dr. Williams. *Consulting Surgeons*, Mr. Nottingham, Mr. Hamilton. *Surgeons*, Mr. Paul, Mr. Rawdon, Mr. Alexander. *Pathologist and Clinical Tutor*, Mr. Macalister. *Dental Surgeon*, Mr. Royston. The hospital contains accommodation for 200 beds. Clinical lectures are given by the physicians and surgeons during the winter and summer sessions. Clinical clerkships and dresserships are open to all students. There are special wards for accidents and diseases of children; also rooms for a limited number of resident students. *Fees* for hospital practice and clinical lectures: Perpetual, £26 5s.; one year, £10 10s.; six months, £7 7s.; three months, £4 4s. The practice of the hospital is recognised by all examining bodies.

NORFOLK AND NORWICH HOSPITAL.—*Consulting Physician*, Sir P. Eade, M.D. *Consulting Surgeon*, Mr. T. W. Crosse, F.R.C.S. *Physicians*, Dr. Bateman, Dr. Taylor, Dr. Barton. *Surgeons*, Mr. Cadge, Mr. C. Williams, Dr. Beverley. *Assistant-Surgeons*, Mr. Robinson, Mr. S. H. Burton. *House-Surgeon*, Mr. H. C. Nance. *Secretary*, Mr. Howard J. Collins. The hospital contains 220 beds. One year's attendance is recognised by the Examining Boards. Clinical lectures are given by the physicians or surgeons. *Fees:* Physicians' practice, six months, £5 5s.; perpetual, £10 10s.; surgeons' practice, including dressership, three months, £10; six months, £15; one year, £20; two years, £30; perpetual, £40. Pupils, resident and non-resident, are admitted.

NORTHAMPTON GENERAL INFIRMARY.—*Physicians*, Dr. Buzzard, Dr. Jones. *Surgeons*, Mr. G. H. Percival and Mr. R. A. Milligan. There are 160 beds and a large out-patient department. Out-pupils are received, and have every opportunity of acquiring a practical knowledge of their profession. Instruction is also given by the House-Surgeon in Anatomy, Materia Medica, and Pharmacy. *Fees:* 25 guineas a year; perpetual £50. Arrangements for board and residence, etc., can be made.

NORTH STAFFORDSHIRE INFIRMARY.—*Physicians and Medical Officers*, Dr. J. T. Arlidge, Dr. C. Orton, Mr. M. H. Ashwell, Mr. J. G. West. *Surgeons*, Mr. W. H. Folker, Mr. J. Alcock, Mr. W. D. Spanton. *Dental Surgeon*, Mr. William Bartlett. The infirmary has accommodation for nearly 220 patients, including children's wards and special ovarian wards. The attendance of pupils at this infirmary is recognised by all the Examining Boards. Particulars as to fees, etc., may be obtained from the Secretary, Mr. R. Hordley, Hartshill, Stoke-on-Trent.

ROYAL ALBERT HOSPITAL, DEVONPORT.—*Consulting Surgeons*, Mr. May, Mr. C. Bulteel. *Surgeons*, Mr. F. E. Row Mr. Leah, Mr. G. Thom. *Ophthalmic Surgeon*, Mr. J. R. Rolston. *Assistant-Surgeons and Provident Dispensary Surgeons*, Mr. W. J. Gard, Mr. M. H. Bulteel, Mr. J. Harrison. The hospital contains 218 beds. The pupils of the medical staff are allowed to attend the hospital practice and to learn pharmacy on the payment of £2 2s. to the dispenser.

ROYAL EAR HOSPITAL, FRITH STREET, SOHO SQUARE, W.—Founded 1816 for the special treatment of Diseases of the Ear. During 1888, 94 in-patients and 2,760 out-patients were treated. The clinique of the hospital is open to medical practitioners and advanced students by previous arrangement with the Secretary *Surgeons*, Urban Pritchard, M.D., F.R.C.S.; Farquhar Matheson, M.B., C.M. *Secretary*, M. C. Puddy.

ROYAL EYE HOSPITAL, MANCHESTER.—*Medical Officers*, Dr. Little, Dr. Glascott, Dr. Emrys-Jones, Dr. Hill Griffith, The hospital contains 100 beds. The medical staff attend daily from 9.30 to 1. Clinical instruction is given to students.

ROYAL HANTS COUNTY HOSPITAL, WINCHESTER.—*Physicians* Dr. B. N. Earle, Dr. W. H. Harman. *Surgeons*, Mr. T. C. Langdon Dr. W. England. *House-Surgeon*, Mr. Trayton Pagden. The hospital contains 108 beds. Apprentices are received by the Committee on payment of £100 per annum, and are bound to the House-Surgeon for five years. During the first two years they are chiefly employed in dispensing; afterwards they may witness the practice, and attend clinical lectures and operations and *post-mortem* examinations. The Physicians and Surgeons are allowed to introduce a certain number of pupils; the House-Surgeon may also receive a pupil, on payment of £100 per annum. Pupils of qualified medical practitioners not belonging to the staff of the hospital may, with the consent of the Committee, become out-pupils, and see the practice of the hospital under the direction of the House-Surgeon, on the payment of £10 10s. for one year, or £21 for unlimited attendance. Out-pupils are permitted daily (Sundays excepted) to read in the Library on payment of £1 1s.

ROYAL HOSPITAL FOR SICK CHILDREN, GLASGOW.—This hospital, containing 70 beds for the non-infectious diseases of children, is open for Clinical instruction. A specially designed dispensary, or out-patient department, was opened in October last. *Physicians*, Dr. James Finlayson, Dr. Samson Gemmell. *Extra Physicians*, Dr. G. S. Middleton, Dr. J. Lindsay Steven, Dr. R. S. Thomson, Dr. Charles Workman, Dr. John Love. *Surgeons*, Dr. Hector C. Cameron, Dr. William Macewen. *Extra Surgeons*, Dr. W. J. Fleming, Mr. A. Ernest Maylard, Dr. T. Kennedy Dalziel, Dr. Quintin McLennan, Dr. R. H. Parry. *Oculist*, Dr. Thomas Reid; *Extra Oculist*, Dr. C. Fred. Pollock. *Aural Surgeon*, Dr. T. Barr. *Pathologist*, Dr. Joseph Coats. *Dentist*, Mr. Rees Price. Students, by paying the fee of £1 1s., are entitled to the practice of the hospital for twelve months from the term of entry, which may be at the beginning of February, May, or November. Further particulars may be had by applying to the Resident Medical Officer, Dr. James Watson.

ROYAL SOUTH HANTS INFIRMARY, SOUTHAMPTON.—*Physicians*, Dr. G. Scott, Dr. Thomas. *Assistant Physician*, Dr. Griffin. *Surgeons-Extraordinary*, Dr. J. K. Sampson, Dr. G. A. Lake. *Surgeons*, Dr. W. Sims, Dr. Wade, Dr. Shettle. *Assistant-Surgeon*, Dr. Keele. *House-Surgeon*, Mr. Percy Lewis. *Dentist*, Mr. C. H. Bromley. A new wing for out-patients has been opened during the past year; it contains an eye department, fitted with modern instruments, lamps, lenses, etc.; also an electrical department, containing a new set of modern batteries. The hospital contains 100 beds. Pupils, duly qualified by examination and registration, are received, and pay a fee of £10 10s. for a perpetual ticket, and £5 5s. for six months. These are under the care of the House-Surgeon. After three months in the dispensary, they see all the practice, operations, etc., and may act as clinical clerks and dressers. There being a good many surgical cases in this place, they gain a good all-round knowledge before proceeding to a regular medical school. There is a supply of modern books, and a collection relating to Osteology, and specimens of Materia Medica.

ROYAL UNITED HOSPITAL, BATH.—120 beds. *Honorary Consulting Physician*, Dr. Coates. *Honorary Physicians*, Dr. Goodridge, Dr. Cole, and Dr. Fox. *Honorary Surgeons*, Messrs. Stockwell, Fowler, and Freeman. *Honorary Assistant Medical Officers for Out-patients*, Dr. Field, Messrs. Cowan and Craddock. *Honorary Assistant-Surgeons*, Messrs. Green, Scott, and Ransford.

Dental Surgeon, Mr. Gaine. *Pathological Registrar and Curator*, Mr. H. Culleford Hopkins. The hospital is recognised by the Royal Colleges of Physicians, Surgeons, etc., and licensed for dissections. It contains a library and an excellent museum, in which are a large number of interesting specimens, both in Pathology and Comparative Anatomy. Fees for attendance: twelve months, £10 10s.; six months, £5 5s. (temporary pupils can also, by permission of the honorary staff, attend the practice of the hospital by the payments of £1 1s. for each month). Instruction in Practical Pharmacy for three months, £3 3s. For further particulars apply to the Registrar and Curator.

ST. MARY'S HOSPITAL FOR DISEASES OF WOMEN AND CHILDREN MANCHESTER.—*Physicians*, Dr. Lloyd Roberts, Dr. W. Walter *Consulting Surgeons*, Mr. Henry Winterbottom, Dr. S. Nesfield, Mr. R. Heslop. *Surgeon*, Dr. A. Donald. The accommodation for in-patients comprises 50 beds, including three for the reception of lying-in cases attended with special difficulty or danger. Out-patients are attended every day at 9 A.M. by the honorary staff, assisted by the resident medical officers. In the out-patient department, students are taught the various methods of examination and diagnosis, and the use of gynæcological apparatus; while, in the wards, they have an opportunity of becoming familiar with the diagnosis and treatment of graver cases, and of witnessing the more important gynæcological operations, which take place on Wednesday at half-past ten. The large number of maternity cases attended annually in connection with this hospital affords ample opportunity to students for receiving instruction in practical midwifery. Every student, on registering himself as a midwifery pupil, is supplied with a card, on which must be filled in the particulars of every labour at which he is present, each entry being attested by the initials of the medical officer or certified midwife in charge of the case. The hospital possesses a library, presented by the late Dr. Radford, consisting of nearly 4,000 volumes, chiefly on subjects connected with obstetrics and gynæcology. There is also a museum, containing a large number of pathological specimens, and a valuable collection of deformed pelves, casts, obstetric instruments, and anatomical models. The gynæcological practice of the hospital is free to third and fourth years' students. The fee for the midwifery practice, which includes attendance upon twenty cases of labour, as required by the examining bodies, is £2 2s. Application must be made to the House-Surgeon at the hospital.

STAFFORDSHIRE GENERAL INFIRMARY.—*Physicians*, Dr. Reid, Dr. Greaves. *Surgeons*, Mr. Weston, Mr. Blumer. There are 120 beds. The pupils of medical practitioners resident in the county of Stafford are allowed to witness the Medical and Surgical Practice of the Infirmary, and to be present at operations. The pupils of the officers of the institution are admitted to these privileges gratuitously, those of other practitioners on the payment of £10 10s. with each pupil. The assistants of a medical practitioner, having gone through a complete curriculum, are admitted on the annual payment of £5 5s.

SUSSEX COUNTY HOSPITAL, BRIGHTON.—*Consulting Physicians*, Dr. Kebbell, Dr. Withers Moore. *Physicians*, Dr. J. Rutter, Dr. W. A. Hollis, Dr. H. S. Branfoot. *Assistant-Physicians*, Dr. E. Mackey, Dr. A. J. Richardson, Dr. J. F. Gordon Dill. *Consulting Surgeon*, Mr. E. J. Furner. *Surgeons*, Mr. F. W. Jowers, Mr. F. A. Humphry, Mr. N. P. Blaker. *Assistant-Surgeons*, Mr. W. Furner, Mr. T. J. Verrall, Dr. R. Black. *House-Surgeon*, F. J. Paley, M.D. *Assistant House Surgeon*, Mr. W. D. Calvert. *House Physician*, Dr. G. G. Hodgson. The hospital contains at present 173 beds, with separate wards for children and for cases requiring isolation; and the Out-patient Department is attended by 700 to 800 patients weekly. It is recognised by the College of Surgeons and by the Conjoint Board as a hospital where part of a medical course may be spent. Out-pupils are admitted to the clinical teaching and the classes at a fee of £21 for two years. The Ormerod Exhibition, of the average value of £30, is awarded annually, after examination, to the best student of those leaving to pursue their studies at a medical school. Further information may be obtained from the House-Surgeon. A Nursing Institute has been established in connection with the Hospital under the direct superintendence of the Matron, to whom applications should be addressed.

SWANSEA HOSPITAL.—*Consulting Physicians*, Dr. G. Padley and Dr. J. Paddon. *Physicians*, Dr. J. Rawlings, and Dr. D. A. Davies. *Consulting Surgeon*, Mr. J. G. Hall. *Surgeons*, Mr. J. Thomas, Mr. H. A. Latimer. *House-Surgeon*, Mr. J. Kerr. *Ophthalmic Surgeon*, Dr. W. T. F. Davies. *Medical Officers for Outdoor Patients*, Mr. J. F. Fry, Dr. A. D. Davidson, and Mr. W. C. Humphreys. *Surgeon Dentist*, Mr. F. C. Scott. The House-Surgeon is permitted to take two articled pupils, whom he binds himself to transfer to his successors in the event of his leaving the hospital during the term of their apprenticeship. The premium or fee on the introduction of pupils is such a sum as the Committee may consider reasonable. It is apportioned between the House-Surgeon and the Institution, as the Committee for the time being may determine.

WEST OF ENGLAND EYE INFIRMARY, EXETER.—*Surgeons*, Mr. Bankart, Mr. Tosswill. *Registrar*, Mr. Roper. The Infirmary contains 50 beds. Arrangements can be made for students of the Exeter Hospital to attend the practice of the Eye Infirmary.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—*Consulting-Physician*, Dr. Millington. *Consulting-Surgeon*, Mr. Newnham. *Physicians*, Dr. Totherick, Dr. Malet. *Surgeons*, Mr. Vincent Jackson, Mr. Kough, Mr. F. E. Manby. The hospital contains 230 beds, and is a preparatory School of Medicine and Surgery. The pupils see the whole of the practice of the physicians and surgeons, and are trained in clinical work by the medical and surgical staff. Attendance at this hospital is recognised by all the Examining Boards. *Fees:* six months, £6 6s.; twelve months, £12 12s.; perpetual, £21.

PUBLIC HEALTH OR STATE MEDICINE.

SUBJOINED are the regulations of the Examining Bodies which grant degrees or certificates in Public Health or State Medicine.

UNIVERSITY OF OXFORD.—There will be held every year, in Michaelmas Term, an examination in subjects bearing on Preventive Medicine and Public Health, for the purpose of granting certificates of proficiency therein. No person will be admitted thereto who shall not have obtained the degree of Bachelor of Medicine in the University. There shall be five examiners, namely, the Regius Professor of Medicine, who shall preside over the examination, and four other professors nominated to serve for three years, subject to the approval of Convocation. These four, if members of the University, shall be members of Convocation, or Bachelors of Civil Law or of Medicine, at the least, or they may be persons not members of the University. The subjects of examination shall be Hygiene, Sanitary Law, Sanitary Engineering, and Vital Statistics. At the close of the examination, a list of the candidates who shall have received certificates shall be made in a book to be kept for that purpose, and shall be certified by the signature of the examiners. Such book shall remain in the custody of the Registrar of the University. The examination shall be under the supervision of the Board of the Faculty of Medicine. The fee to be paid before examination is £5; for the Certificate of Proficiency, £10.

UNIVERSITY OF CAMBRIDGE.—Any person whose name is on the *Medical Register* of the United Kingdom may present himself for examination, provided he be in his twenty-fourth year at least when he presents himself for the first part of the examination, and have attained twenty-four years of age before he presents himself for the second part. The applications of candidates whose names have not been on the *Medical Register* three years must be accompanied by a certificate of birth or other proof of age.

Part I comprises Physics and Chemistry; the Principles of Chemistry, and methods of analysis, with especial reference to analyses of air and water; application of the microscope; the laws of heat and the principles of pneumatics, hydrostatics, and hydraulics, with especial reference to ventilation, water-supply, drainage; construction of dwellings, disposal of sewage and refuse, and sanitary engineering in general; statistical methods.

Part II comprises laws of the realm relating to public health; origin, propagation, pathology, and prevention of epidemic and infectious diseases; effects of overcrowding, vitiated air, impure water, and bad or insufficient food; unhealthy occupations and the diseases to which they give rise; water-supply and drainage in reference to health; distribution of diseases within the United Kingdom, and effects of soil, season, and climate.

The examination in both parts is oral and practical as well as in writing. Candidates may present themselves for either part separately, or for both together.

Every candidate must pay a fee of £4 4s. before admission to *each part* of the examination.

Every candidate who has passed both parts of the examination will receive a certificate testifying to his competent knowledge of what is required for the duties of a Medical Officer of Health.

The following suggestions have been drawn up as some guide to candidates preparing for the examination. Part I. Candidates will be expected to understand the application of the general laws of Chemistry to such cases as occur in the practice of an Officer of Health. It is not expected that Officers of Health will in general be able to act as public analysts, but that they will know the methods of analysis, and be able to interpret correctly the results of professional analysts. The kinds of application of the several sciences of which the candidates are expected to show a competent knowledge will be best understood by a perusal of Parkes's *Manual of Practical Hygiene.* In the actual analysis of water and air, candidates will not be expected to make complete quantitative analyses, but to know how to apply ordinary chemical methods for the detection and discrimination of mineral and organic substances in the samples. Candidates must show a practical acquaintance with the use of the microscope. Part II. Candidates must show an acquaintance with the sanitary laws in force in England; but if any candidate have information respecting alternative laws in force in the metropolis or in Scotland or in Ireland, opportunity will be given him, alternatively, of showing his acquaintance with such laws. The rest of Part II, besides the subjects expressly mentioned is to be understood as including those of Vaccination, Disinfectants, the management of outbreaks of Infectious Diseases, with the construction of Hospitals, temporary or permanent; Endemic Diseases; Birth-rates and Death-rates; the qualities and suitableness of various Waters used for domestic purposes; the inspection of factories, mines, workshops, and common lodging-houses.

The following list of works will probably be found valuable to some of the candidates, but the necessity of reading all or any of them is not urged upon them.

Parts I and II.—Parkes's *Manual of Practical Hygiene;* G. Wilson's *Handbook of Hygiene;* Grimshaw and others, *Manual of Public Health for Ireland;* Cameron's *Manual of Hygiene;* Seaton's *Handbook on Vaccination;* *Army Medical Reports; *Reports on Hygiene;* *Reports to Privy Council and Local Government Board by their Medical Officer. Chemistry: General Principles: Fownes's *Manual of Chemistry;* Bloxam's *Chemistry;* Roscoe's *Lessons in Elementary Chemistry:* Attfield's *Chemistry.* Analysis: Bloxam's *Laboratory Teaching;* Bowman's *Practical Chemistry;* Sutton's *Systematic Handbook of Volumetric Analysis;* Frankland's *Water Analysis for Sanitary Purposes;* Wanklyn and Chapman's *Water Analysis;* Hartley's *Air and its Relations to Life;* Wanklyn's *Milk Analysis;* Wanklyn and Cooper's *Bread Analysis;* C. Fox, *Sanitary Examinations of Water, Air, and Food.* Physics: Todhunter's *Natural Philosophy for Beginners;* Ganot's *Physics;* Everett's *Textbook of Physics.* Microscopy: Carpenter's *Microscope and its Revelations;* Macdonald's *Guide to Microscopical Examination of Drinking Water;* *Hassall's *Food and its Adulterations.* Sanitary Engineering, Water Supply, Sewage, etc.: Eassie's *Sanitary Arrangement for Dwellings;* Galton's *Healthy Dwellings;* Corfield's *Dwelling Houses, their Sanitary Construction and Arrangement;* *Bailey-Denton, *Sanitary Engineering;* *Latham's *Sanitary Engineering;* *Bayles's *House Drainage and Water Service;* Tomlinson's *Warming and Ventilation;* Corfield's *Treatment and Utilisation of Sewage;* *Report of Committee appointed by President of Local Government Board on Modes of treating Town Sewage; *Reports of Royal Commission on Pollution of Rivers, especially the sixth, on Domestic Water Supply; *Report from Select Committee on Public Health Act (1875) Amendment Bill, with the Evidence; *R. Angus Smith's *Air and Rain;* *Ure's *Dictionary of Arts, Manufactures, and Mines.* Laws of the Realm and By-laws relating to Public Health. For England: Public Health Act, 1875, and the Acts of Parliament relating to the various subject-matters within the domain of Hygiene passed since that date; Artizans' and Labourers' Dwellings Acts; Vaccination Acts. For the Metropolis, or for Scotland, or for Ireland: Laws dealing with the same subject-matters as the above, and having application to the particular part of the United Kingdom; Model By-laws of the Local Government Board; Adulteration of Food and Drugs Act. Statistics: Lewis's *Digest of the English Census;* the article on "Statistics" in the *Cyclopædia of Anatomy and Physiology;* *Dr. Farr's letters to the Registrar-General in the early Reports of the Registrar-General; *Reports of the Registrar-General; *Deaths in England. Average Annual Proportion of Deaths, etc, 1861-70. Parliamentary Paper C. 874, Session 1873. Construction of Hospitals: Miss Nightingale's *Notes on Hospitals;* Oppert's *Hospitals, Infirmaries, and Dispensaries, their Construction, interior Arrangement, and Management;* Galton, *On the Construction of Hospitals;* Burdett, *Cottage Hospitals;* *De Chaumont, "Hospitals," in the *Encyclopædia Britannica*, last edition. The books thus marked * are books of reference.

The names of candidates must be sent, with the fees, on or before September 27th to the Registrary, University of Cambridge.

UNIVERSITY OF LONDON.—The special examination held once in every year in subjects relating to Public Health is now abolished. Sanitary Science is made a branch of the M.D. Examination.

UNIVERSITY OF DURHAM.—The regulations for licences in Sanitary Science are at present undergoing alteration. New regulations will be published when they have received the approval of the Senate.

ROYAL COLLEGE OF PHYSICIANS OF LONDON AND THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following are the regulations for obtaining the Diploma in Public Health: I. Candidates must be registered under the Medical Act. II. The examination, consisting of two parts, will be held in the months of June and December in each year. III. Candidates must be at least 23 years of age before being admitted to Part I, and 24 years of age before being admitted to Part II. IV. Candidates may enter for Parts I and II separately or at the same time; but no candidate's name will be published until he has passed in both parts of the examination. V. The examination in each part will be written, oral, and practical.[1] VI. The fee for each part is £5 5s., and must be paid three days prior to the day on which the examination commences. VII. A candidate who fails to satisfy the examiners in either part may present himself again at the next examination on payment of a fee of £3 3s. VIII. The examination on Part I will commence on the first Monday in the months of June and December, and the examination on Part II on the second Monday in the same months. IX. The diploma awarded is entitled "Diploma in Public Health of the Royal College of Physicians of London and the Royal College of Surgeons of England." X. A candidate intending to present himself for either part of the examination must give fourteen days' notice in writing to the Secretary at the Examination Hall, Victoria Embankment, W.C.

Syllabus for the Examination.—Part I. 1. Physics in their application to Health, with reference to—(*a*) Warming and Ventilation; (*b*) Water-Supply, Sewerage, and Drainage; (*c*) Sanitary Construction. 2. Meteorology in relation to Health. 3. Chemistry, with special reference to the Examination of Air and Water (exact quantitative analyses will not be required, neither will candidates be restricted to any particular chemical notation). 4. Microscopical Examinations, as applied to Air, Food, and Water (excluding work special to the duties of a Public Analyst). 5. Geology, in its relation to Drainage and Water-Supply. 6. Statistics in relation to Health.—Part II. 1. The origin, growth, and prevention of Disease: (*a*) Special Pathology of Epidemic and Endemic Diseases; (*b*) Influence of Climate, Season, and Soil; (*c*) Effects of unwholesome Air, Water, and Diet; (*d*) Diseases of Animals in relation to the Health of Man; (*e*) Influence of Occupation and Lodgment; (*f*) Isolation, Quarantine, Disinfection, Vaccination. 2. Sanitary Work and Administration: (*a*) Health requirements of Houses, Villages, and Towns; (*b*) the Sanitary Regulations of Households, Establishments, and Occupations, including the Construction and Arrangement of Hospitals; (*c*) the Prevention and Control of Epidemic and Endemic Diseases. 3. Statutes and By-laws relating to Public Health. 4. Duties of Sanitary Authorities and their Officers.

UNIVERSITY OF ABERDEEN.—*Regulations for the Diploma in Public Health (D.P.H.)*—Candidates for the diploma must have graduated Medicine in the University before they receive the diploma; and they must have given evidence of having attended a course of Analytical Chemistry or of Practical Hygiene. The diploma is conferred after an examination in Public Health, held

[1] The Practical Examination in Part II will include a visit to and report on some selected premises.

in March and July of each year. Candidates desiring to appear for examination at either of these periods must send their names, with the necessary fee, to the Secretary of the Medical Faculty before the first day of the month in which the examination takes place. The fee for the examination is £3 3s. In the event of a candidate failing to pass the examination, a fee of £1 1s. will be charged for each subsequent examination for which he may enter. The examination is conducted by the examiners for the Medical Degrees. The examination is written, oral, and practical.

The subjects and scope of the examination are as follows:—

1. *Physics and Meteorology.*—The general principles of Physics in so far as they relate to Heat and Ventilation, Water-supply, and Drainage; the elements of Meteorology and Climatology; practical exercises in the use of Meteorological Instruments.

2. *Chemistry and Microscopy.*—The Composition and Analysis of Air, Water, and Sewage; the Composition and Adulteration of the more common Foods and Beverages; Diseased and Putrid Food; practical exercises in the chemical and microscopical examination of air, water, and foods.

3. *General Hygiene.*—Duties of Medical Officers of Health; Nature and Construction of Dietaries; Construction and Sanitary Arrangements of Houses, Hospitals, Workshops, Factories, Towns, etc., including interpretation of plans; Ventilation, Water-supply, Sewerage, Disposal of Dead; Etiology, Prophylaxis (including Vaccination), and Control of Infectious Diseases; Unhealthy Occupations; practical exercises in examining and reporting on the construction and sanitary arrangements of houses, etc.

4. *Sanitary Law and Vital Statistics.*—Laws relating to the Public Health of Scotland, England, or Ireland, at the option of the candidate. Laws relating to Vaccination, and Registration of Births, Marriages, and Deaths. Methods and Data of Vital Statistics, mainly in so far as they relate to the birth, marriage, and death-rate of communities.

UNIVERSITY OF EDINBURGH.—This University confers two degrees in Science in the department of Public Health, namely, Bachelor of Science (B.Sc.) and Doctor of Science (D.Sc.).

Bachelor of Science.—The candidate must be a Graduate in Medicine of a British University, or of a Colonial, Indian, or foreign University specially recognised by the University Court, and must be matriculated[1] in Edinburgh University for the year in which he appears for examination or graduation. Two examinations must be passed. *First Examination.*—Fee £5 5s. Certificates must be produced showing (*a*) that the candidate has passed the First Professional Examination for graduation in Medicine in the University of Edinburgh, or one of the Universities above mentioned; and (*b*) that he has worked in a laboratory where practical instruction is given in the methods of investigating subjects pertaining to Public Health. The subjects of the examination are: (1) Laboratory work, practical, written, and oral; (2) Elements of Experimental Physics, written and oral. *Second Examination.*—Fee £5 5s. May be passed at any time after the First. The candidate must produce evidence (*a*) that he has taken a degree in Medicine; (*b*) that he has attended in the Edinburgh University two courses of instruction on subjects included in the First or Second Examination; (*c*) that he has attended a course of lectures in which instruction is given in Public Health. The subjects of the examination are: (1) Medicine in its application to Public Health; (2) Practical Sanitation; (3) Sanitary Law (of any part of the British dominions) and Vital Statistics; (4) Mensuration and Drawing. The examination in each subject is written, oral, and, as far as possible, practical. Detailed schedules in each subject are issued from time to time. The First Examination will be held on March 24th, 1890, and following days; certificates to be submitted and fee paid by March 10th, 1890. The Second Examination will be next held on November 5th, 1889, and following days; certificates to be submitted and fee paid by October 25th, 1889. Further particulars may be obtained on application to the Convener of the Science Degrees Committee, at the office of the Faculty of Medicine, University New Buildings, where the schedules for examinations are issued and the certificates of candidates examined.

Doctor of Science.—Bachelors of Science in the Department of Public Health may, after the lapse of one year, proceed to the degree of Doctor in the same Department, on producing evidence that they have been engaged in Practical Sanitation since they took the said degree of Bachelor of Science, and on presenting a Thesis on some subject in the Department of Public Health. Every such Thesis must be certified by the candidate to have been composed by himself, and must be approved of by the examiners. The Thesis must be lodged with the Convener of the Science Degrees Committee on or before January 30th, in the year in which the candidate proposes to graduate. The fee is five guineas.

Books.—The following are recommended as examples of the class of books to be studied in preparation for the above examinations.—Parkes, *Practical Hygiene;* Edward Smith, *Manual for Public Officers of Health;* Edw. Smith, *Handbook for Inspectors of Nuisances;* Douglas Galton, *Healthy Houses;* Bailey Denton, *Sanitary Engineering;* Vesey Fitzgerald, *Epitome of the Laws Affecting Health;* R.A. Scott, *Meteorology (International Series);* Binns' (Glegg's School-book Series), *Orthographic Projection.*

[1] Matriculation consists in paying an entrance fee of £1, and inserting the name in the students' album.

UNIVERSITY OF GLASGOW.—A special examination is held once in every year in subjects relating to Public Health, and commences on the third Tuesday in October. Candidates may be admitted to examination before they have obtained a qualification to practise Medicine and Surgery, but in no case shall the diploma be granted till the candidate is registered under the Medical Acts. Candidates must produce evidence that, either during their medical studies or subsequently, they have attended a course of lectures in which special instruction was given on Public Health; and that they have attended a course of Analytical Chemistry specially bearing upon the subjects of examination. Candidates who have not passed an *annus medicus* in the University of Glasgow must, before presenting themselves for examination, have attended as matriculated students in this University at least two courses of instruction, scientific or professional, bearing on the subjects of the examination. The examinations are written, oral, and practical.

The fee for this examination is £5 5s. The candidate must give notice to the Assistant Clerk of Senate, and pay the required fee, at least one calendar month previous to the examination. If, after payment of the fee, a candidate withdraw his name, or fail to present himself at the examination, or fail to pass it, the fee is not returned to him; but he may enter for one subsequent examination without the payment of an additional fee.

The examination embraces the following subjects: Duties of Health-Officer; Air and Ventilation; Food and its Adulterations; Water and Water Supply; Sewage and Drainage; Construction of Hospitals, Public Buildings, and Dwellings; Overcrowding; Manufactories; Insalubrious Trades; Cemeteries; Nuisances; Quarantine; Disinfectants and Deodorisers; Outbreaks of Zymotic Diseases; Climate, Topographical and Seasonal, its influences in relation to Health and Disease; Geographical Distribution of Diseases; Knowledge of leading Sanitary Acts of Parliament; Vital Statistics.

The following are recommended as books for study:—E. A. Parkes, *Practical Hygiene;* George Wilson, *Handbook of Hygiene;* A. H. Hassall, *Food and its Adulterations.*

A course of lectures on Public Health is delivered in the University during the winter session.

Further information with regard to the Lectures on Public Health and the Examinations for the Diploma may be obtained from Dr. P. A. Simpson, Professor of Medical Jurisprudence, University of Glasgow.

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.—The Royal College of Physicians of Edinburgh grants a certificate of Qualification in Public Health under the following Regulations.

Candidates must be already on the *Medical Register* and possess a qualification in Medicine. They are not required to attend any special course of instruction; but their attention is directed particularly to courses of lectures on State Medicine, and to the practice of Analytical Chemistry. There are two examinations, which are written, oral, and practical. Rejected candidates are not admitted for re-examination till after the expiry of six months.

Examinations.—The first examination embraces: 1. *Physics:* especially pneumatics, hydrostatics, hydraulics, and engineering in relation to sanitary operations, including a knowledge of architectural and other plans, etc.; 2. *Chemistry:* especially analysis of air, water, food, including the biology of putrefaction and allied processes, with practical chemical analysis bearing on public

health; 3. *Meteorology:* including climate, topographical and seasonal influences in relation to health and disease.

The second examination embraces: 1. *Epidemiology and Endemiology:* including the corresponding departments in the diseases of animals and plants—contagious diseases—diseases of periods of life, professions, trades, seasons, and climates; 2. *Practical Hygiene:* duties of a health officer; food, water-supply, sewerage and drainage; construction of hospitals, public buildings, dwellings, manufactories; cemeteries, including the explanation and drawing of plans; 3. *Sanitary Law and Vital Statistics.*

Meetings for both examinations are held annually in April. The first examination is held on the second Tuesday and Wednesday of the month: the second examination on the immediate succeeding Thursday. Candidates may enter for both examinations in the same week, or for one only. The examinations must be passed in their order, first and second. Candidates must appear for the second examination not later than twelve months after having passed the first. A candidate remitted at his second examination may come up again after a further period of six months.

The fees must be paid at least a week before the day of examination. The fee for each examination is £5 5s. Candidates forfeit the fee for the examination which they have been unsuccessful in passing. If a candidate who has presented himself for both examinations fail to pass the first, he is not allowed to present himself for the second, and his fee for the second is returned.

Faculty of Physicians and Surgeons of Glasgow.—Candidates must be at least one year qualified, and registered under the Medical Act. It is not obligatory on candidates to attend any special course of instruction; but candidates registered after January 1st, 1890, must produce evidence of having attended, after obtaining a registrable qualification, practical instruction in a laboratory approved of by the Faculty, and also of having for six months studied the duties of out-door sanitary work under the Medical Officer of Health of a county or large urban district. The examinations are written, oral, and practical. The examination is divided into two parts: (1) Chemistry, Physics, and Meteorology; (2) Medicine in its bearings on Sanitary Science, Sanitary Law, and Vital Statistics. Part I. In *Chemistry* candidates must show a fair general knowledge of the principles of the science and of the more commonly occurring elements. They will also be examined on air, water, and their constituent gases; combustion, and its products. They must be able to interpret correctly analytical reports on air, water, and milk. The practical examination will comprise—1, the usual modes of testing (qualitatively) for the commonly occurring impurities in water, including poisonous metals; 2, the quantitative analysis of air in respect of the amount of carbon dioxide which it contains; 3, milk analysis. In *Physics* the examination will be on the laws of heat, the principles of pneumatics, hydrostatics, and hydraulics, in their application to ventilation, water-supply, and drainage. In *Meteorology*, candidates will be examined on the elements of the science, and on the use of meteorological instruments; also on climatology. —Part II will comprise—(*a*). Laws relating to public health, including by-laws which may be enacted; effects of overcrowding, vitiated air, impure water, and bad or insufficient food, water-supply, sewerage, drainage, and the house in reference to health; nuisances injurious to health; vital statistics. (*b*). Origin, propagation, pathology, prevention and control of infectious diseases; unhealthy occupations, the diseases to which they give rise, and the means of removing or mitigating their unhealthy conditions; geographical and topographical distribution of disease, and effects of soil, season, and climate. The following books may be consulted: Parkes's *Manual of Practical Hygiene;* Galton's *Healthy Dwellings;* Husband's *Sanitary Law, a Digest of the Sanitary Acts of England and Scotland;* Fox's *Sanitary Examinations of Water, Air, and Food;* Scott's *Elementary Meteorology;* Newsholme's *Vital Statistics.* The fee is eight guineas, of which three guineas are payable on entering for the First Part, three guineas on entering for the Second Part, and two guineas on obtaining the certificate.

University of Dublin.—Doctors of Medicine or Graduates in Medicine and Surgery who wish to obtain from the University a certificate of qualification in State Medicine can do so on passing an examination in a limited course of the following subjects: 1. Law; 2. Engineering; 3. Morbid Anatomy; 4. Vital and Sanitary Statistics; 5. Chemistry; 6. Meteorology; 7. Medical Jurisprudence; 8. Hygiene; 9. State Medicine.

Candidates are required to send in their names to the Medical Registrar at least a week before the first day of examination.

Royal University in Ireland.—This University grants a diploma in Sanitary Science. It is conferred only on Graduates of Medicine of the University. Candidates must give notice in writing to the Secretaries of their intention to present themselves, and must pay the fee, £2, at least one month previous to the examination.

The examination embraces the following subjects: *Climate*—A general knowledge of meteorological conditions; the reading and correction of instruments, and tabulating the results of meteorological observations. *Physics*—Laws of heat; mechanics, pneumatics, hydrostatics, and hydraulics. *Chemistry*—Constitution of the atmosphere; pure and impure waters; food. *Geology*—With reference to water-supply and drainage, embracing the subjects of soils, clays, rocks, springs, natural gases, brackish waters, ordinary constituents of fresh and sea water. *Sanitary Engineering*—The construction of dwellings, barracks, hospitals, schools, factories, etc. *Vital Statistics, Hygiene,* including the causation and prevention of disease, *Sanitary Law.* The examination in Chemistry includes a practical part on the chemical and microscopical examination of air, water, food, poisonous substances used in manufactures, etc. The examination in Engineering embraces the reading of plans, sections, scales, etc., in connection with buildings, sanitary constructions, etc. Candidates will be required to draw up reports on the sanitary condition of dwelling houses, or other buildings, selected for the purpose, and to show the possession of a sufficient special knowledge of hygiene, vital statistics, and sanitary law, including the Public Health (Ireland) Act, 1878, Sections 15 to 159, to discharge the duties of Medical Officer of Health. N.B.—Proficiency in practical work and an adequate acquaintance with the instruments and methods of research which may be employed in hygienic investigations are indispensable.

King and Queen's College of Physicians in Ireland.—Stated examinations for certificates in State Medicine are held on the Tuesday, Wednesday, and Thursday following the first Friday of February, May, and November. Every candidate for the certificate must be a registered medical practitioner of the United Kingdom. He must return his name to the Registrar of the College three weeks before the examination, and lodge with him a testimonial of character from a Fellow or Member of the College, or from a Fellow of the Royal Colleges of Physicians or Surgeons of London, Edinburgh, or Dublin. The fee for the examination is £7 7s. for Licentiates of the College; for others, £10 10s. The examination comprises the following subjects. (The books mentioned after each subject are intended to indicate, approximately, the range of the subjects, but the examination is not necessarily confined to them.) 1. *Law:* Sanitary Law and the Law of Evidence (The Public Health Acts and the Acts incorporated therewith), the Artisans' Dwellings Acts, The Artisans and Labourers Dwellings Improvement Acts, The Vaccination Acts, Powell's *Principles and Practice of the Laws of Evidence.* 2. *Engineering and Architecture:* Construction of Dwellings, Ventilation, Sewage, Water-Supply and Drainage, Physics and Geology in reference to the foregoing (Corfield's *Dwelling Houses,* etc.; Shirley Murphy's *Our Homes,* Sir Douglas Galton's *Construction of Hospitals,* Reports of Local Government Board on Treatment of Town Sewage. S. S. Hellyer's *The Plumber and Sanitary Houses,* Page's *Introductory Text-Book of Geology.* 3. *Chemistry:* with special reference to the Constitution of the Atmosphere and its Impurities, Purity of Drinking Water, Food and Adulteration, Injurious Manufactures, Poisons (Professor Emerson Reynolds's *Elements of Experimental Chemistry,* Sir Henry Roscoe's *Lessons in Elementary Chemistry*). 4. *Climatology:* Meteorology and the Geographical Distribution of Disease (R. H. Scott's *Elementary Meteorology,* Hirsch's *Handbook of Geographical and Historical Pathology,* translated by Dr. Creighton; Professor Huxley's *Physiography*). 5. *Vital Statistics:* Life Tables, Calculation of Rates of Mortality, Drawing up of Statistical Tables and Reports (Dr. W. Farr's *Vital Statistics*). 6. *Hygiene:* The Causes and Prevention of Disease, Provision for the Sick, Duties of a Medical Officer of Health (Parkes's *Manual of Practical Hygiene,* edited by De Chaumont; Grimshaw, Furlong, Reynolds and Moore's *Manual of Public Health for Ireland*; Wilson's *Manual of Hygiene and Sanitary Science*). 7. *Medical Jurisprudence:* Pathological Anatomy

in relation thereto (Alfred Taylor's *Principles and Practice of Medical Jurisprudence*). The examinations are conducted by a printed paper on each of the seven subjects. One hour is allotted for the answering of each paper, which contains five questions. The candidates are also examined orally on a second day in the Law of Evidence, and practically in the reading of Engineering Plans, Sections, and Scales, and in Analytical Chemistry, with special reference to Air, Water, and Food. The fee paid by a Licentiate in Medicine is not returned in case of rejection; three guineas out of the fee paid by other registered medical practitioners is returned in such case.

DENTAL SURGERY.

REGULATIONS OF THE MEDICAL COUNCIL.—The following are the regulations of the Medical Council regarding the registration and education of dental students. 1. The registration of dental students shall be carried on at the Medical Council Office, London, in the same manner as the registration of Medical Students, and subject to the same regulations as regards preliminary examinations. 2. Students who commenced their professional education by apprenticeship to dentists entitled to be registered, or by attendance upon professional lectures, before July 22nd, 1878 (when dental education became compulsory), shall not be required to produce evidence of having passed a preliminary examination. 3. Pupils who have been articled to their fathers, or to brothers, with whom money transactions would be nominal, shall, in all other respects, be considered to be in the same position, in regard to registration, as those pupils provided for in the first part of Section 37 of the Dentists' Act, who have paid premiums for instruction. 4. Candidates for a diploma in Dental Surgery shall produce certificates of having been engaged during four years in professional studies, and of having received three years' instruction in Mechanical Dentistry from a registered practitioner. 5. One year's *bonâ fide* apprenticeship with a registered dental practitioner, after being registered as a dental student, may be counted as one of the four years of professional study. 6. The three years of instruction in Mechanical Dentistry, or any part of them, may be taken by the dental student, either before or after his registration as a student; but no year of such mechanical instruction shall be counted as one of the four years of professional study unless taken after registration.

THE ROYAL COLLEGE OF SURGEONS OF ENGLAND grants a diploma in Dental Surgery under the following regulations.

Candidates must produce certificates: 1. Of being 21 years of age. 2. Of having been engaged, during four years, in the acquirement of professional knowledge. 3. Of having attended not less than one of each of the following courses of lectures: Anatomy, Physiology, Surgery, Medicine, Chemistry, and Materia Medica. 4. Of having attended a second winter course of lectures on Anatomy, or a course of not less than twenty lectures on the Anatomy of the head and neck. 5. Of having performed Dissection during not less than nine months. 6. Of having completed a course of Chemical Manipulation. 7. Of having attended, at a hospital or hospitals in the United Kingdom, Surgery and Clinical Lectures on Surgery, during two winter sessions. 8. Of having attended two courses of lectures upon each of the following subjects: Dental Anatomy and Physiology (Human and Comparative), Dental Surgery, Dental Mechanics, and one course on Metallurgy. 9. Of having been engaged, during not less than three years, eighteen months of which may be taken before registration as a dental student, in acquiring a practical familiarity with the details of Mechanical Dentistry, under the instructions of a competent practitioner. 10. Of having attended at a dental hospital, or in the dental department of a general hospital, the Practice of Dental Surgery during two years. The courses of instruction and hospital practice must be by lectures or in institutions recognised by the College.

All candidates who commence their professional education on or after July 22nd, 1878, must, in addition to the certificates enumerated above, produce a certificate of having, prior to such commencement, been registered as a dental student by the General Medical Council.

Candidates who were in practice as dentists, or who had commenced their education as dentists, prior to September, 1859, and who are unable to produce the certificates required by the foregoing regulations, must furnish the Board of Examiners with a certificate of moral and professional character, signed by two Members of the College, together with answers to certain inquiries. In the case of candidates practising in, or educated in, Scotland or Ireland, the certificate of moral or professional character may be signed by two Licentiates of the Royal College of Surgeons of Edinburgh, or of the Faculty of Physicians and Surgeons of Glasgow, or of the Royal College of Surgeons in Ireland.

The examination is partly written and partly oral. The written examination comprises General Anatomy and Physiology, and General Pathology and Surgery, with special reference to Dental Practice. The oral practical examination comprises the several subjects included in the curriculum of professional education, and is conducted by the use of preparations, casts, drawings, etc. Members of the College, in the written examination, have to answer only those questions set by the Section of the Board consisting of persons skilled in Dental Surgery; and in the oral examination are examined only by that Section. A rejected candidate is not admitted to re-examination within six months, unless the Board otherwise determine. Examinations are held in May and November. The fee for the diploma is £10 10s., over and above any stamp duty.

ROYAL COLLEGE OF SURGEONS, EDINBURGH.—*Diploma in Dental Surgery.*—All candidates must pass a preliminary examination in general knowledge and have their names inscribed in the *Register of Dental Students* of the General Medical Council kept by the Registrar at 299, Oxford Street, London. A copy of Regulations, giving a list of preliminary examinations recognised for this, as well as of the subjects of the professional examinations, may be obtained of the Secretary of the Royal College of Surgeons, 1, George Square, Edinburgh. Students who commenced their professional education by apprenticeship or attendance on lectures before July 22nd, 1878, are exempt from the preliminary examinations.

Professional Education.—Candidates must produce certificates of having (1) been engaged for four years in professional studies, and of three years' instruction in Mechanical Dentistry; (2) of having attended in a university, established school of medicine, or recognised provincial school, courses on Anatomy, Dissections, Demonstrations, and Anatomy of Head and Neck, Physiology, Chemistry, Surgery, Medicine, Materia Medica, Practical Chemistry, and Metallurgy, attendance on Surgical Practice of a recognised Hospital, with Lectures on Clinical Surgery; (3) of having attended in a recognised dental hospital the following special courses: Dental Anatomy and Physiology, Dental Surgery and Pathology, Metallurgy (unless included in Practical Chemistry), Dental Mechanics; two years' course at a dental hospital or dental department of a special hospital. Licentiates of the College or registered medical practitioners are required to produce certificates of attendance on the special courses only.

Professional Examinations.—First Examination. The candidate must have attended the courses on Anatomy, Chemistry, and Physiology. The examination embraces Anatomy, Chemistry (with Metallurgy), and Physiology. The fee is £4 4s. Second Examination: The candidate must have attended the remaining courses of the curriculum, must be 21 years of age, and must pay a fee of £6 6s. The examination embraces Surgery, Medicine, Materia Medica, and the special subjects of Dental Anatomy and Physiology, Dental Surgery and Pathology, and Dental Mechanics.

FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.—The regulations as to certificates, curriculum, number of examinations, fees, and examinations are in effect similar to those of the Royal College of Surgeons of Edinburgh. A special course of Metallurgy is required, and there is an Examination in Practical Dentistry conducted in a Dental Hospital.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—Every candidate for the Licence in Dentistry of the College must pass a preliminary examination and three professional examinations. The regulations of the College which refer to the preliminary examination of the candidate for the Letters Testimonial apply to the candidate for the Dental Licence.

Professional Examinations.—The First and Second Professional Examinations will be held in July and October of each year. Should the student fail to pass in July, he may present himself in October. These examinations are identical with the second and third professional examinations for the Letters Testimonial, are conducted at the same time, and are subject to the same regulations.

The Third Professional Examination will be held in April, July,

and October. The candidate must, before admission to the Final Examination, produce evidence: *a*. Of having passed the Second Professional Examination, or of having obtained a diploma in Surgery recognised by the College. *b*. Of having attended, subsequently to registration by the General Medical Council, the following courses of lectures recognised by the College: Dental Surgery and Pathology, Dental Mechanics, of each two courses; Dental Anatomy and Physiology, Dental Metallurgy, of each one course. *c*. Of having attended for two years the practice of a dental hospital recognised by the College. *d*. Of having been engaged in acquiring a practical knowledge of Mechanical Dentistry, for at least two years in a public laboratory recognised by the College; or for at least three years under the instructions of a registered dentist. The candidate must also submit a piece of mechanical work certified to be of his own making.

A candidate holding a diploma in Surgery recognised by the College must produce certificates of one course of each of the above special dental subjects, and of half the hospital attendance and half the laboratory work required from other dental students. In this case the special dental courses, hospital attendances, and laboratory work must all be taken out after the date of the diploma in Surgery.

The fee for the Final Examination is, in the case of Licentiates in Surgery of the College and for dental students, £7 7s.; for re-examination, if rejected, £4 4s. For candidates holding a Surgical diploma other than that of the Royal College of Surgeons in Ireland, £12 12s.; for re-examination, if rejected, £6 6s.

Candidates will be examined in—1, Dental Surgery—Theoretical, Clinical, and Operative; 2, Dental Mechanics—Theoretical and Operative; 3, Dental Anatomy and Physiology; 4, Metallurgy and Physics. The examination, which will last four days, will be by printed questions and oral; and the candidates' knowledge of Operative Dental Surgery and Mechanical Dentistry will be tested in a hospital and in the dental laboratory.

Examinations sine Curriculo.—Candidates who were in practice before 1878, whose names are on the *Dental Register*, and who are unable to furnish the certificates required by the foregoing regulations, may be admitted to examination if they shall fill in the schedule of application as follows:—1. The name, age, and address. 2. A certificate of moral and professional character, signed by two registered medical practitioners and by two registered dentists. 3. The date of commencing practice, and whether such practice has been carried on in conjunction with any other business, and, if so, with what business. 4. Any certificate of general education, or degree in Arts and Medicine. 5. The particulars of professional education. The schedule of application, containing these particulars, must be sent to the Registrar of the College at least three weeks before the date of the examination; and the Council of the College will then determine whether or not the candidate shall be admitted to examination for the Dental Diploma. Such examination shall comprise the same subjects, and be conducted in the same manner, as the Second and Final Professional Examinations.

The fee for this examination is £21; re-examination, if rejected, £10 10s.

An enrolment fee of £1 1s. is payable to the Registrar of the College on the issue of the diploma.

National Dental Hospital and College.—*Consulting Physicians*, Dr. B. W. Richardson and Dr. W. H. Broadbent. *Consulting Surgeons*, Sir Spencer Wells and Mr. Christopher Heath. *Consulting Dental Surgeon*, Sir Edwin Saunders. *Dental Surgeons*, Mr. F. H. Weiss, Mr. A. Smith, Mr. G. A. Williams, Mr. A. F. Canton, Mr. H. G. Read, Mr. H. Rose. *Assistant Dental Surgeons*, Mr. W. Weiss, Mr. R. Denison Pedley, Mr. M. Davis, Mr. T. G. Read, Mr. C. W. Glassington, Mr. W. R. Humby. *Lecturers* (Winter), Dental Anatomy and Physiology: Mr. Sidney Spokes, Tuesdays and Thursdays, 6 P.M., in October, November, and December. Operative Dental Surgery and Therapeutics: Dr. George Cunningham, Mondays, 6.30 P.M., in October, November, and December. Dental Materia Medica and Therapeutics: Mr. C. W. Glassington, Tuesdays, 7.30 P.M., in October, November, and December. Dental Metallurgy, Mr. W. Lapraik, Tuesdays, 7.30 P.M., in January, February, and March. Dental Mechanics: Mr. H. Rose, Mondays, 7 P.M., in January, February, and March. Demonstrations in Dental Mechanics: Mr. Humby, Wednesdays, 7 P.M., in January, February, and March (in 1889 and alternate years). (Summer), Dental Surgery and Pathology; Mr. W. Weiss, Mondays and Thursdays, 6 P.M., in May, June, and July. Elements of Histology, Dr. J. Maughan, Mondays and Thursdays, 5 P.M., May, June, and July.

Clinical Lectures and Demonstrations are given from time to time.

Dresserships in the Extraction Room are held for three months by six senior and twelve junior students of the Hospital.

Prizes.—Six Prizes in Medals are open for competition at the end of each course of lectures. Certificates of Honour are given in each class. The Rymer Medal for General Proficiency, value £5, is awarded annually to the most meritorious student.

Fees.—General Fee for Special Lectures required by the curriculum of the Royal College of Surgeons of England, £12 12s. For the Two Years' Hospital Practice required, £12 12s. Total Fee for the Special Lectures and Hospital Practice required, £25 4s. Perpetual Fee to all Lectures, and to Hospital Practice, £15 15s. each. Single Courses: Dental Anatomy and Physiology, Dental Surgery and Pathology, Operative Dental Surgery, and Dental Mechanics, each one course, £2 12s. 6d.; two courses, £4 4s.; Dental Metallurgy, one course, £3 3s.; two courses, £5 5s.; Dental Materia Medica, £2 2s.; Demonstration of Dental Mechanics, Elements of Histology, each £1 1s. Hospital Practice to registered practitioners, six months, £7 7s.; twelve months, £9 9s.

Information respecting the Hospital Practice and the College may be obtained from the Dean, Mr. F. Henri Weiss, at the Hospital, Great Portland Street.

Dental Hospital of London and London School of Dental Surgery.—*Consulting Physician*, Sir J. Risdon Bennett, M.D. *Consulting Surgeon*, Mr. Christopher Heath. *Consulting Dental Surgeons*, Mr. S. Cartwright, Sir John Tomes. *Dental Surgeons*, Mr. R. Woodhouse, Mr. Gregson, Mr. Storer Bennett, Mr. Claude Rogers, Mr. F. Canton, and Mr. Truman. *Assistant Dental Surgeons*, Mr. W. Hern, Mr. L. Matheson, Mr. E. Lloyd Williams, Mr. G. Parkinson, Mr. L. Reed, and Mr. Paterson. *Anæsthetists*, Mr. Braine, Mr. Bailey, Mr. Bird, and Mr. Mills. *Assistant Anæsthetists*, Dr. D. W. Buxton, and Dr. F. Hewitt.

Lectures are given at this School on Mechanical Dentistry by Mr. D. Hepburn, at 4 P.M., on Wednesdays in October, November, and December; on Dental Surgery and Pathology, by Mr. Storer Bennett, at 8 A.M., on Wednesdays and Fridays, in May and June; on Dental Anatomy and Physiology (Human and Comparative), by Mr. A. Underwood, at 8 A.M., on Tuesdays and Thursdays, in May and June; on Metallurgy, in its application to Dental purposes, by Professor A. K. Huntington, at noon, on Tuesdays, in October, November, and December.

Twelve senior dressers for extraction under anæsthetics, and eighteen junior dressers for ordinary extractions, are appointed every month.

The Saunders Scholarship of £20 is awarded to the student who has obtained the largest number of first-class prizes in the winter and summer session. A prize, value £5 5s., is given for the best essay on some Surgical subject connected with Dental Surgery. First and second prizes are given in each class.

Fee for two years' hospital practice or lectures, each £15 15s. for hospital practice, perpetual, £21. Single courses: Dental Anatomy and Physiology, Dental Surgery, Dental Mechanics, and Metallurgy, each one course, £3 3s.; two courses, £5 5s.

Further particulars may be obtained on application to the Dean, Mr. Morton Smale, at the Hospital.

Guy's Hospital: Dental School.—This school was instituted in 1889. Two extraction rooms are provided in the out-patient department. A special conservation room has been built; it contains 18 dental chairs, and is fitted with all conveniences necessary for stoppings. *Fees.*—(*a*) For general and special lectures and demonstrations, and the hospital and dental practice requisite for the L.D.S.R.C.S.Eng., £70 on entrance, or 40 guineas on entrance and 30 guineas at beginning of second year. (*b*) Special lectures and demonstrations, and dental practice only, 30 guineas on entrance. (*c*) Inclusive fee for students entering for the M.R.C.S., L.R.C.P., and L.D.S.Eng., £150 in one sum, or 150 guineas in three annual instalments. The following appointments are allotted to dental students: Dental House-Surgeoncy; Assistant Dental House-Surgeoncy; Dresserships in the extraction room; Dresserships in the conservation room. Staff:—*Dental Surgeon:* F. Newland-Pedley, F.R.C.S., L.D.S.E. *Senior Assistant Dental Surgeon:* W. A. Maggs, L.R.C.P., M.R.C.S., L.D.S.E. *Assistant Dental Sur-*

geons: J. Mansbridge, L.D.S.E.; H. Murray, L.D.S.E.; H. L. Pillin, L.D.S.E.; G. O. Richards, M.R.C.S., L.D.S.E.; R.W. Rouw, L.R.C.P., M.R.C.S., L.D.S.E. *Anæsthetists:* F. W. Cock, M.D.; J. F. Silk, M.D. *Lecturers: Dental Surgery:* Mr. Newland-Pedley. *Dental Anatomy and Physiology:* Mr. Maggs. *Dental Mechanics:* Mr. Richards. *Metallurgy:* C. E. Groves, F.R.S. *Anæsthetics:* T. Bird, M.A.Oxon., M.R.C.S. *Demonstrator of Dental Microscopy;* Mr. Mansbridge. *Tutor:* Mr. Rouw. Prospectuses may be obtained from the Dean (Dr. Perry) at Guy's Hospital.

QUEEN'S COLLEGE, BIRMINGHAM.—The teaching of Dentistry is undertaken by the Queen's College, acting in association with the Birmingham Dental Hospital and the Birmingham Clinical Board, so that students may fully qualify themselves for the dental diploma of the Royal Colleges. The Dental Hospital is situated near the College, and is open daily (Sundays excepted).

Lectures on the special subjects are delivered as follows: Winter session: Anatomy and Physiology, by Mr. John Humphreys, Thursday, 5 P.M.; Dental Surgery and Pathology, Mr. C. Sims, Friday, 5 P.M.; Dental Metallurgy, Professor Tilden, at the Mason College. Summer session: Dental Mechanics, Mr. W. Elliott, Wednesday, 5 P.M.

The Birmingham Dental Hospital is open daily at 9 A.M. The staff is constituted as follows: *Consulting Physician*, R. M. Simon, B.A., M.B.Cantab.; *Consulting Surgeon*, Mr. Wilders; *Consulting Dentists*, Mr. T. R. English, Mr. Adams Parker, and Mr. C. Sims; *Dental Surgeons*, H. B. Neale, F. E. Huxley, J. Humphreys, and F. W. Richards. *Assistant Dental Surgeons*, Frank H. Goffe, W. R. Roberts, G. O. Richards, and W. Palethorpe.

Clinical Demonstrations are given from time to time by the staff upon cases of particular interest; also upon the preparing and filling of cavities, and other operations upon the teeth and contiguous structures.

Dresserships in the Extraction-room are held for three months by senior and junior students at the hospital.

The *fee* for each of the special courses in Queen's College is £4 4s.; for Dental Hospital Practice, two years, £14 14s.; one year, £8 8s.; six months, £5 5s.

BRISTOL GENERAL HOSPITAL.—Mr. Parson gives practical instruction in Dental Surgery, at 1 P.M., on Tuesdays and Fridays. *Assistant House-Surgeon*, Mr. C. A. Griffiths.

OWENS COLLEGE, MANCHESTER.—Arrangements have been made for dental students to attend the hospital practice at the Manchester Royal Infirmary, and the practice at the Victoria Dental Hospital. Lectures on the special subjects will be given in the College as follows. Winter session: Dental Mechanics, Mr. Tanner, Thursday, 4 P.M. Summer session: Dental Anatomy and Physiology, Mr. Hooton, Tuesday and Friday at 4 P.M. Dental Surgery, Mr. Campion, Tuesday and Friday, 3 P.M. Dental Metallurgy, Dr. Burghart, Monday, 2.30 P.M.

Fees.—For course of Metallurgy, £3 3s.; other lectures, one course, £3 3s.; two courses, £4 4s. Dental practice for two years at the Manchester Royal Infirmary, £10 10s.; at the Victoria Dental Hospital at Manchester, £12 12s., paid in advance.

At the Victoria Dental Hospital, patients attend at 8.30 in the morning daily, and at 7 P.M. on Monday, Wednesday, and Friday. The staff of the hospital is as follows: *Consulting Physicians*, Sir W. Roberts, F.R.S., Dr. H. Simpson, Dr. J. E. Morgan, Dr. D. J. Leech, Dr. Lloyd Roberts. *Consulting Surgeons*, Mr. E. Lund, Mr. F. A. Heath, Mr. W. Whitehead, Mr. T. Jones, and Mr. J. Hardie. *Consulting Dental Surgeons*, Mr. H. Campion, Mr. Parsons Shaw. *Dental Surgeons*, Mr. G. G. Campion, Mr. E. P. Collett, Mr. W. Dougan, Mr. L. Dreschfeld, Mr. J. W. Dunkerley, Mr. W. Dykes, Mr. W. Headridge, Mr. J. H. Molloy, Mr. H. Planck, Mr. I. Renshaw, Mr. W. Simms, Mr. H. C. Smale, Mr. W. Smithard, Mr. T. Tanner, Mr. G. O. Whittaker. *Administrators of Anæsthetics*, Mr. Alexander Wilson, Dr. J. P. Stallard. *House Dental Surgeon*, Mr. P. A. Linnell. *Dean*, Mr. H. Planck, to whom all communications are to be addressed at the hospital.

UNIVERSITY COLLEGE, LIVERPOOL.—The lecturers in the Schools of Dental Surgery in connection with this institution are as follows: Dental Surgery, Mr. E. J. M. Phillips; Dental Mechanics, Mr. E. A. Councell; Dental Anatomy and Physiology, Mr. F. T. Paul, and Dental Metallurgy, Mr. J. Royston. Lectures are given once or twice weekly, by arrangement. The fee for each course is £3 3s.; for a second course, £2 2s.

The curriculum in Dental Surgery includes Lectures and Demonstrations on all the subjects required for the Licences in Dental Surgery of the Royal Colleges of Surgeons of London, Edinburgh, and Dublin, and of the Faculty of Physicians and Surgeons of Glasgow.

Practical instruction in Dentistry is given at the Dental Hospital in Mount Pleasant. The fee is £8 8s. for two years' course.

EDINBURGH DENTAL HOSPITAL SCHOOL.—*Consulting Physician*, Dr. A. Peddie. *Consulting Surgeon*, Mr. Joseph Bell. *Consulting Surgeon Dentist*, Dr. John Smith. *Dental Surgeons*, Mr. J. Lindsay, Mr. W. B. Macleod, Mr. J. Mackintosh, Mr. A. Wilson, Mr. M. Macgregor, Mr. G. W. Watson, Mr. J. S. Durward. *Assistant Dental Surgeons*, Mr. J. Turner, Mr. W. Forrester, Mr. J. S. Amoore, Mr. J. G. Munro, Mr. Wm. Wilson. *Tutorial Dental Surgeon*, Mr. H. B. Ezard. The following lectures are given in the School: Dental Anatomy and Physiology, Mr. A. Wilson, Tuesday and Friday 8 (winter); Dental Surgery and Pathology, Mr. G. W. Watson, Tuesday and Friday, 8 (summer); Mechanical Dentistry, Mr. W. B. Macleod, twelve lectures, on Wednesdays; Practical Mechanics, Mr. J. S. Durward. The fee to Hospital Practice, including one course of Demonstrations in Gold-fitting, is £15 15s.; one course of Dental Anatomy, Dental Surgery, and Mechanical Dentistry, £9 15s.; one course of each subject separately, £3 5s.; second courses of the lectures, £2 4s. each. *Dean*, Mr. W. B. Macleod.

GLASGOW DENTAL HOSPITAL.—*Consulting Physician*, Professor W. T. Gairdner, M.D. *Consulting Surgeon*, Sir G. H. B. Macleod, M.D. *Dental Surgeons*, J. A. Biggs, L.D.S.(Glasg.); W. S. Woodburn, L.D.S.; Rees Price, L.D.S.(Eng.); J. Cumming, L.D.S.; J. R. Brownlie, L.D.S.(Eng.); Dr. J. C. Woodburn. *Assistant Dental Surgeons*, Alexander White, L.D.S.(Glas.); W. F. Martin, L.D.S.(Glas.); James Cameron, L.D.S.(Glasg.); and W. Holt Woodburn, L.D.S. *Chloroformists*, J. Brown, M.D., A. F. Campbell, and W. Wallace Anderson, M.D. Dental Anatomy and Physiology (summer), Dr. J. C. Woodburn, Wednesday and Saturday, 8 A.M.; Dental Surgery and Pathology (summer), J. R. Brownlie, Tuesday and Thursday, 8 A.M.; Mechanical Dentistry (winter), J. A. Biggs, Tuesday, 7 P.M.; Dental Metallurgy (winter), Rees Price, Wednesday, 7 P.M. *Fees:* Each course of lectures, £3 3s.; this includes two summer sessions. Hospital Practice, two years, as required for the Licence in Dental Surgery, £12 12s. Composition fee for Hospital and lectures, £23 2s. *Dean*, J. R. Brownlie.

GLASGOW ROYAL INFIRMARY SCHOOL OF MEDICINE.—Dr. J. C. Woodburn attends at the Royal Infirmary, at 3 P.M., on Mondays, Wednesdays, and Saturdays, and gives a course of Dental Surgery on these days in summer. The following course in the curriculum can be taken at this School: Anatomy, six months; Practical Anatomy, nine months; Physiology, six months; Chemistry, six months; Practical Chemistry, with Metallurgy, three months; Surgery, six months; Medicine, six months; Materia Medica, three months; Clinical Surgery, six months; Dental Surgery, six months; and attendance for two years on the Dental Department of the Hospital. The attendance on the dental clinic is free to students of the Hospital; to dental students, one year, £5 5s.; perpetual, £10 10s. Lectures on Dental Surgery, £2 2s.

REGULATIONS TO BE OBSERVED BY CANDIDATES FOR ADMISSION INTO THE NAVAL, ARMY, AND INDIAN MEDICAL SERVICES.

MEDICAL DEPARTMENT OF THE ROYAL NAVY.

1. EVERY candidate for admission into the Medical Department of the Royal Navy must not be under 21 nor over 28 years of age on the day of the commencement of the competitive examination. He must produce an extract from the register of the date of his birth; or, in default, a declaration made before a magistrate, from one of his parents or other near relative, stating the date of birth. He must also produce a certificate of moral character, and a recommendation, signed by a clergyman or magistrate to whom he has been for some years personally known, or by the president or senior professor of the college at which he was educated. 2. He must be registered, under the Medical Act in force, as possessing two diplomas or licences recognised by the General Council, one to practise medicine, and the other surgery, in Great Britain and

Ireland. 3. He must sign a declaration that he is a British subject, the son of parents of unmixed European blood, that he labours under no mental or constitutional disease or weakness, or any other imperfection or disability which may interfere with the most efficient discharge of the duties of a medical officer in any climate; and that he does not hold, and has never held, any commission or appointment in the public services. He must also declare his readiness to engage for general service at home or abroad as required. He must be free from organic or other disease, and his physical fitness will be determined by a Board of Medical Officers, who are to certify that his vision comes up to the required standard, which will be ascertained by the use of Snellen's Test Types. 4. Candidates will be examined by the Examining Board in the following compulsory subjects, and the highest number of marks attainable will be distributed as follows: *a*, Anatomy and Physiology; *b*, Surgery; *c*, Medicine, including Therapeutics and the Diseases of Women and Children; *d*, Chemistry and Pharmacy, and a practical knowledge of drugs, each 1,000 marks.

The examination in Medicine and Surgery will be in part practical, and will include operations on the dead body, the application of surgical apparatus, and the examination of medical and surgical patients at the bedside. The examination in Chemistry will be limited to the elements of the science, and to its application to medicine, pharmacy, and practical hygiene.

No candidate will be considered eligible who shall not have obtained at least one-third of the marks obtainable in each of the above compulsory subjects. 5. Candidates may be examined in the following voluntary subjects, for which the maximum number of marks obtainable will be: French and German (150 each), 300 marks; Natural Sciences, 300 marks. A number less than one-third of the marks obtainable in each of these voluntary subjects will not be allowed to count in favour of the candidate who has qualified in the compulsory subjects. The knowledge of modern languages being considered of great importance, all intending competitors are urged to qualify in French and German. The Natural Sciences will include Comparative Anatomy, Zoology, Natural Philosophy, Physical Geography, and Botany, with special reference to Materia Medica. 6. The appointments announced for competition will be filled up from the list of qualified candidates arranged in the order of merit, as finally determined by the total number of marks each has obtained in both the compulsory and voluntary subjects. 7. Successful candidates, immediately after passing the examination, will receive commissions as Surgeons in the Royal Navy, and will undergo a course of practical instruction in Naval Hygiene, etc., at Haslar Hospital.

ARMY MEDICAL STAFF.

1. EVERY candidate for a commission in the Army Medical Staff must be 21 years of age and not over 28 years,[1] at the date of commencement of the competitive examination. He most produce an extract from the register of his birth, or, in default, a declaration made before a magistrate by one of his parents or guardians, giving his exact age. He must produce a recommendation from some person of standing in society—not a member of his own family—to the effect that he is of regular and steady habits, and likely in every respect to prove creditable to the department if a commission be granted, and also a certificate of moral character from the parochial clergyman, if possible. 2. The candidate must sign a declaration on honour that both his parents are of unmixed European blood, and that he labours under no mental or constitutional disease, or any hereditary tendency thereto, nor any imperfection or disability that can interfere with the efficient discharge of the duties of a medical officer in any climate; also that he does not hold, and has never held, any commission or appointment in the public services. His physical fitness will be determined by a Board of Medical Officers, who are required to certify that his vision is sufficiently good to enable him to perform any surgical operation without the aid of glasses. A moderate degree of myopia will not be considered a disqualification, provided it does not necessitate the use of glasses during the performance of operations, and that no organic disease of the eye exists. The board must also certify that he is free from organic or other disease, and from constitutional weakness or tendency thereto, or other disability of any kind likely to unfit him for military service in any climate. 3. Certificates of age, registration of diplomas, etc., and of character, must accompany the declaration when signed and returned. 4. Candidates will be examined by the examining board in the following compulsory subjects, and the highest number of marks attainable will be distributed as follows: *a*. Anatomy and Physiology, 1,000 marks; *b*. Surgery, 1,000 marks; *c*. Medicine, including Therapeutics, the Diseases of Women and Children, 1,000 marks; *d*. Chemistry and Pharmacy, and a Practical Knowledge of Drugs, 1,000 marks. The examination in Medicine and Surgery will be in part practical, and will include operations on the dead body, the application of surgical apparatus, and examination of medical and surgical patients at the bedside. The examination in Chemistry will be limited to the elements of the science, and to its application to Medicine, Pharmacy, and Practical Hygiene. No candidate will be considered eligible for the Army Medical Staff who shall not have obtained at least one-third of the marks obtainable in each of the above compulsory subjects. 5. Candidates may be examined in the following voluntary subjects, for which the maximum number of marks obtainable will be—French and German (150 each), 300 marks; Natural Sciences, 300 marks. A number less than one-third of the marks obtainable in each of these voluntary subjects will not be allowed to count in favour of the candidate who has qualified in the compulsory subjects. The knowledge of modern languages being considered of great importance, all intending competitors are urged to qualify in French and German. The Natural Sciences will include Comparative Anatomy, Zoology, Natural Philosophy, Physical Geography, and Botany, with special reference to Materia Medica. 6. The appointments announced for competition will be filled up from the list of qualified candidates arranged in the order of merit, as finally determined by the total number of marks each has obtained in both the compulsory and the voluntary subjects. 7. After passing this examination, every successful candidate will be required to attend one course of practical instruction at the Army Medical School as a surgeon on probation on (1) Hygiene; (2) Clinical and Military Medicine; (3) Clinical and Military Surgery; (4) Pathology of Diseases and Injuries incident to Military Service. 8. All surgeons on probation will be required to conform to such rules of discipline as the Senate may from time to time enact, and provide themselves with uniform, namely, the regulation undress and mess-uniform of a surgeon, but without sword. 9. They will be required to attend the medical staff mess at Netley, and to conform to the rules and regulations thereof.

Every candidate for appointment to the medical ranks of the Army Medical Staff must possess two diplomas or licences recognised by the General Medical Council—one to practise medicine, and the other surgery, and shall be registered under the Medical Act in force in the United Kingdom at the time of his appointment. A public and open competition will be held twice in the year for the admission of qualified candidates as probationers. The number of appointments so competed for will be not less than half of the number of vacancies which shall have arisen in the last completed half-year ending on June 30th or December 31st.[2] Not less than half the number of vacancies will be filled up by competition, and it will be competent for the Secretary of State to fill up the remaining number from such qualified candidates as may be proposed by the governing bodies of public schools of medicine in the United Kingdom, or in the Colonies, as he may think proper. Every candidate so proposed must be certified by the governing body so proposing him to be duly qualified according to a standard to be laid down by the Secretary of State, and must be approved by the Director-General. The Secretary of State will from time to time fix the order of precedence and the proportion in which the several schools of medicine shall be offered the nomination of candidates. A surgeon on probation, on being so nominated, will be sent to some large station for instruction in ambulance and hospital corps duties, until the commencement of the next course of study at the Army Medical School. After passing through such course at the Army Medical School as the Secretary of State shall decide, the surgeon on probation, after passing a qualifying examination in the military medical subjects taught there, and satisfying the Director-General that he is a person of proper skill, knowledge, and character for permanent appointment in the Army Medical Staff will be commissioned as surgeon. The surgeons on probation who pass out of the Army Medical School at one qualifying examination will take precedence among each other as surgeons as follows: (*a*)

[1] Extended to 30 for officers who join expressly for service on West Coast of Africa. After three years' service on the Coast they become eligible for general service.

[2] This rule has never been acted on, as a sufficient number of candidates under the last warrant has always been forthcoming.

those appointed on nomination according to their date of joining on probation; (*b*) those appointed on competition according to the last day of the competitive examination, and in the order of merit at such examination, with priority over any joining under subsection (*a*) on the last day of the competitive examination. A surgeon's commission will bear the date of the day of his passing out of the Army Medical School.

INDIAN MEDICAL SERVICE.

1. ALL natural-born subjects of Her Majesty, between twenty-one and twenty-eight years of age at the date of the examination, and of sound bodily health, may be candidates. They may be married or unmarried. They must possess a Diploma in Surgery, or a licence to practise it, as well as a Degree in Medicine, or a licence to practise it in Great Britain or Ireland. In accordance with the rule observed by the War Office and Admiralty in respect of admissions to the Medical Staff and Naval Medical Service, no single diploma or licence is accepted as a qualification in both medicine and surgery. 2. The candidate must subscribe and send in to the Military Secretary, India Office, Westminster, so as to reach that address at least a fortnight before the date fixed for the examination, a declaration, stating his readiness to engage for the service and to proceed to duty immediately on being gazetted; also that he labours under no mental nor constitutional disease; nor any imperfection or disability that can interfere with the most efficient discharge of the duties of a medical officer. A schedule of the degrees or licences possessed by the candidate, with the sources and dates thereof, must be appended. 3. This declaration must be accompanied by the following documents: (*a*) proof of age, either by Registrar-General's certificate, or, where such is unattainable, by his own statutory declaration, form of which can be obtained at the India Office, supported, if required, by the Secretary of State by such evidence as he may consider satisfactory; a certificate of baptism, which does not afford proof of age, will be useless; (*b*) a recommendation from some person of standing in society—not a member of his own family—to the effect that he is of regular and steady habits, and likely in every respect to prove creditable to the service if admitted; and a certificate of moral character from a magistrate, or a minister of the religious denomination to which the candidate belongs; (*c*) a certificate of registration, in accordance with the Medical Act of 1858, of the degrees, diplomas, and licences possessed by the candidate. 4. The physical fitness of candidates will be determined previous to examination by a Board of Medical Officers, who are required to certify that the candidate's vision is sufficiently good to enable him to perform any surgical operation without the aid of glasses. A moderate degree of myopia will not be considered a disqualification, provided it do not necessitate the use of glasses during the performance of operations, and that no organic disease of the eyes exists. Every candidate must also be free from all other organic disease, and from constitutional weakness, or other disability likely to unfit him for military service in India. 5. On producing the foregoing qualifications, the candidate will be examined by the Examining Board in the following compulsory subjects, and the highest number of marks attainable will be distributed as follows: (*a*) Anatomy and Physiology, 1,000 marks; (*b*) Surgery, 1,000; (*c*) Medicine, including Therapeutics, the Diseases of Women and Children, 1,000; (*d*) Chemistry and Pharmacy, and a Practical Knowledge of Drugs, 1,000. The examination in medicine and surgery will be in part practical, and will include operations on the dead body, the application of surgical apparatus. and the examination of medical and surgical patients at the bedside. The examination in chemistry will be limited to the elements of the science, and to its application to medicine, pharmacy, and practical hygiene. No candidate will be considered eligible who shall not have obtained at least one-third of the marks obtainable in each of the above compulsory subjects. 6. Candidates may be examined in the following voluntary subjects, for which the maximum number of marks obtainable will be: French, German, and Hindustani (150 each), 450 marks; Natural Sciences, 300 marks. The Natural Sciences will include comparative anatomy, zoology, natural philosophy, physical geography, and botany with special reference to materia medica. A number less than one third of the marks obtainable in any of these voluntary subjects will not be allowed to count in favour of a candidate who has qualified in the compulsory subjects. The knowledge of modern languages being considered of great importance, all intending competitors are urged to qualify in French and German. Candidates presenting themselves for examination in Hindustani are recommended to study some recognised textbook, such as the annotated edition of the *Taubat-un-Nasuk*, which is the text used by candidates for the Indian Civil Service. 7. The appointments announced for competition will be filled up from the list of qualified candidates arranged in order of merit, as finally determined by the total number of marks each has obtained in both the compulsory and voluntary subjects. The Examiners in London will prepare a list in order of merit, with the marks affixed in the different subjects, to be transmitted to the Director-General, and communicated to the Professors of the Army Medical School. If any candidate is found to be deficient in any particular subject, this shall be stated, in order that he may receive special instruction on the point at Netley. 8. After passing this examination, the successful candidates will be required to attend one entire course of Practical Instruction at the Army Medical School, as surgeons on probation, on 1. Hygiene; 2. Clinical and Military Medicine; 3. Clinical and Military Surgery; 4. Pathology of Diseases and Injuries incident to Military Service. These courses are to be of not less than four months' duration; but candidates who have already gone through a course at Netley as candidates for the Army Medical Service may, if thought desirable, be exempted from attending the School a second time. 9. During the period of his residence at the Army Medical School, each candidate will receive an allowance of eight shillings per day, with quarters, or, when quarters are not provided, with the usual lodging and fuel and light allowances of subalterns, to cover all costs of maintenance; and he will be required to provide himself with uniform (namely, the regulation undress uniform of a surgeon of the British service, but without the sword). 10. All candidates will be required to conform to such rules of discipline as the Senate may from time to time enact. 11. At the conclusion of the course, candidates will be required to pass an examination on the subjects taught in the School. The examination will be conducted by the Professors of the School. The Director-General, or any medical officer deputed by him, may be present and take part in the examination. If the candidate give satisfactory evidence of being qualified for the practical duties of an Army Medical Officer, he will be eligible for a commission as surgeon. 12. The position of the candidates on the list of surgeons will be determined by the combined results of the preliminary and of the final examinations; and, so far as the requirements of the service will permit, they will have the choice of Presidency in India, according to their position in that list.

FIRTH COLLEGE, SHEFFIELD.—The following corrections, which were received after a portion of the JOURNAL had gone to press, must be made in the table on page 551: Dr. S. White lectures on Anatomy and Physiology on Mondays, Tuesdays, Wednesdays, and Thursdays at 5 P.M. before Christmas, and on Mondays, Tuesdays, Wednesdays, and Fridays at the same hour after Christmas; the time of Mr. Skinner's lectures should be 4 P.M.; Mr. Manton takes the place of Mr. Kilham as demonstrator; Mr. A. Jackson lectures at 9 A.M.; the lectures on Midwifery are at 5 P.M.; Dr. Roberts lectures on Toxicology on Tuesdays, Thursdays, and Fridays; Dr. Burgess lectures on Pathology on Tuesdays and Thursdays at 4 P.M., and Mr. Pye-Smith on Practical Surgery on Tuesdays at 1.30. Dr. Porter is appointed Physician on the Sheffield Infirmary Staff, *vice* Dr. De Bartolomé; and Dr. Burgess Physician to the Sheffield Hospital.

HOSPITAL FOR CONSUMPTION, BROMPTON.—The following corrections, which came to hand after a portion of the JOURNAL had gone to press, must be made in the staff of this hospital, on page 561: *Consulting Physician:* Dr. E. Symes Thompson; *Physician:* Dr. Theodore Williams; *Resident Medical Officer:* Mr. H. H. Taylor.

NAVAL AND MILITARY MEDICAL SERVICES.

THE VOLUNTEERS.

Mr. HAROLD GURNEY is appointed Acting Surgeon to the 2nd Volunteer Brigade Eastern Division Royal Artillery (late the 1st Essex Artillery).

The undermentioned Acting Surgeons are promoted to be Surgeons in their respective corps:—F. W. GRANT, M.D., 1st Banff Artillery; E. L. FREER, 1st Volunteer Battalion Warwickshire Regiment (late the 1st Warwickshire); W. E. HUSBAND, 3rd Volunteer Battalion Lancashire Fusiliers late the 17th Lancashire); and J. MARTIN, 2nd Volunteer Battalion West Riding Regiment (late the 6th West Riding of Yorkshire).

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1889.

Subscriptions to the Association for 1889 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, SEPTEMBER 7th, 1889.

THE MEDICAL STUDENT OF THE FUTURE.

For one reason or another, the inaugural address at the reopening of the medical schools is falling a little into disfavour. Possibly this may in part be due to the general dislike of enthusiasm which is almost cultivated as a fine art amongst educated people. It is truer now than in Byron's time that

> Enthusiasm in good society
> Were nothing but a moral inebriety;

and it must be confessed that many speakers at the 1st of October assemblies have been at times a little too poetical and romantic in their way of describing the honours and privileges of "our noble profession." As these addresses are for the most part delivered by the great and successful men of the profession, who have every reason to be grateful for the way in which the Goddess of Medicine has treated them, it was felt at times that the highly-coloured pictures they drew were rather the representations of their own particular successes than of those which are at all likely to await the ordinary medical student. We could almost detect the lecturer with his tongue in his cheek as he described the dignity, the public gratitude, and the certain competence which were sure to follow the patient student who did his hospital work creditably and refrained from music halls and late hours. His audience always had sense enough to understand that it is by no means the best and most patient work which reaps the highest reward in medicine any more than in other professions; and that often the most conscientious and high-minded medical man will be left behind in the struggle where the smart pushing man takes the prize. Nothing is easier than to be cynical and severe on such a theme, though, as usual, the cynical and easy course is the unfair and false. Sneer as we may, be as worldly and unpoetical as we please, the profession of medicine *is* a noble one, and can but fill with enthusiasm the mind of any competent and thinking man who speaks or writes about it. The reasons which urge us to any course of action are usually complex, and those which impel a man to the choice of a profession are largely so. We may assume without the least offence that most men enter on the study of medicine as the means of obtaining an honourable living; it is not necessary to pretend to any higher motives like that which should influence a student of divinity. Yet there is room, we maintain, for the influence of the very highest motives in the choice of the healing art as one's calling in life; and the influence is likely to have an actually greater scope, and the end is often even more likely to be achieved when it is concealed by the friendly covering of the less exalted motive.

There are hundreds of medical men in our land to-day who lead lives of the loftiest enthusiasm, working for the good of their fellow-men, and blessing all within the scope of their influence, pretending with a beautiful humility that they are only following their common business, while they are actually ministering angels. A doctor may live and work for fees and be respected just as any other servant of the commonwealth; he may also live and work for humanity and the love of his neighbour as though he were ordained for the proper work of the ministry. Grand and beautiful as was the work of Father Damien amongst the lepers of Molokai, there is no reason whatever why a medical man should not have done as much or even more. "Nothing great," says Emerson, "was ever achieved without enthusiasm," and we know it to be so, whatever the hard cold world may say, which, in truth, does not greatly care for anything which it cannot quite understand.

What is wanted is a noble ideal: given this, it may be exercised as freely in our profession as anywhere in this world of ours. What a man seeks at his medical school this October that shall he find. Honours, they await him; emoluments, they shall come; happiness, the great enduring pleasure that comes from a sense of duty bravely done, this too shall be his, at the price—at a fixed price and no abatement; to this let him make up his mind as quickly as may be. Let him examine himself, and know what it is he wants; he can certainly obtain it. Let the lower motive content him, he will not be disappointed. Medicine is rich enough to pay him for his pains; he shall have his house, his servants, and his gig; shall be justice of the peace, mayor of his town, and be held in honour of men. A man, by indomitable energy and perseverance, may get all he wants. As Hazlitt somewhere says, he could always gain admittance to see any famous picture in any great man's home, notwithstanding the darkest frowns of the servants; and he adds that he could, by similar means, have obtained any post under Government which he might have set his whole mind upon.

The thing, therefore, to be sure of at the outset in devoting one's self to medicine is the end proposed; if self, then not happiness of the highest sort also; if peace of mind and the purest sort of happiness be the end in view, then to live and work for others, for the advancement of the profession in its widest and grandest aspects, is the only certain way to obtain them. Old Thomas Vicary, chief surgeon to St. Bartholomew's Hospital, 1548-62, says in his curious *Anatomie of the Bodie of Man*, that the doctor must be learned, must know his principles, be seen in natural philosophy, in grammar, must speak congruity in logic, speak seemly and eloquently, know things natural and non-natural, and, above all, be good-looking, for whose face is not seemly, it is impossible for him to have good manners.

All this implies much more than is demanded for the mere cramming up for professional examinations. Be liberal in your treatment of the most liberal of all professions, and give at least as much as you take. How few men ever think of paying the least fraction of their indebtedness to science!

They consider this is all arranged for in their hospital ticket. Such men

> Know, not for knowing's sake;
> Know, for the gain it gets, the praise it brings,
> The wonder it inspires, the love it breeds.

No man striving only for his own happiness can ever attain it, because he is in the midst of forces contending against him set in motion by every other man of the same determination. Count Tolstoi has admirably explained why this struggle for individual happiness must necessarily fail of its purpose; and Mr. Browning, in his magnificent poem of *Paracelsus*—which should be known by heart by every medical student of the thoughtful sort—has pointed out how mere knowledge for a selfish end can never bring happiness, whatever else it may achieve; but that love, allied to knowledge, can transform the soul to God-like beauty. We may long, like Paracelsus in the poem,

> To wring from Heaven some wondrous good for man;

but it may not be given to many of us to do great things. Of every medical man, however, Society—having in view his great endowments, his privileges, his public estimation, and the dignity of his calling—has the right to expect maintenance of the fabric, if not its adornment; and, as he is necessarily looked up to as a "doctor," that he shall be a real teacher how to live the highest mental as well as the healthiest bodily life. As Sir J. Crichton Browne pointed out recently, this can best be done by imbuing our own minds with the prolific and ennobling thoughts of the wisest writers of the past and present; for to teach we must learn. Some will say we ask too much of the overtaxed medical student. Not so. The mental enlargement we demand can be had as relaxation between the intervals of necessary studies. One hour a day with the great poets and prose writers will enable the student to do better work in the medical school; he will not lose his time by this form of dissipation; and when he goes into the great world which lies outside his hospital, he may find his own medicine and that of his patients in the balm for troubled spirits which the philosophers and poets of all time stand by to minister. We say he will not lose his time by this expansion of his education; it will serve to digest his technical knowledge, to combine and blend his studies into a truer and sounder learning than can be tested by examination papers or rewarded by degrees.

Let no student, therefore, think that so much anatomy, physiology, medicine, and surgery, signed up and certified for at school and college, suffices to make the medical man of to-day. In one of the most suggestive of the inaugural addresses delivered in London last October, that by Dr. William Ewart at St. George's Hospital, this point was strongly emphasised. We cannot refrain from recalling a sentence or two. "Among the youths," says Dr. Ewart, "who elect to follow this calling, many do so in ignorance of what the choice implies. Of no other profession is it more true that an easy entrance examination is unkind. Ours, nowadays more than ever, is an exacting profession. Although neither genius, nor brilliancy, nor even talent are wanted, she claims energy, physical and mental, capacity for sustained efforts, earnestness, and a high moral tone."

A medical practitioner whose whole life is not that of a persevering student has no business in the profession. A man who knows nothing but what his curriculum enforces, and who makes haste to forget that as soon as it has obtained him his licence to practise, can only bring discredit on the high-minded and cultivated men who spent their lives in making smooth the path he has unworthily trodden. If medicine is to hold its high position, and retain the respect in which it is justly held, the men who are coming forward for its emoluments and distinctions must be equipped with all the richer learning which is required to enable them to hold their own in a world which is daily becoming more highly cultured, and which will certainly demand more of its medical advisers. A mental outlook bounded by six-ounce bottles and an intellect from which there is gradually fading the scanty lore gathered at the medical school with much pain and but partial comprehension far too generally characterise the middle-aged general practitioner of to-day. He of to-morrow will need to know more, and to know it in quite another way.

OPENING OF THE MEDICAL SCHOOLS.

THE traditional introductory lecture still holds its ground in most of the metropolitan schools, but in one or two its place is taken by a dinner or a simple "function" of some kind. In some of the largest of the London hospitals and in most of the provincial schools, however, the session opens with severe simplicity by mere strike of clock, without formal welcome of the new students, or social entertainment of the old ones. The following list shows the dates of opening and the nature of the accompanying ceremony, if any:

METROPOLITAN.

St. Bartholomew's Hospital—October 1st.

Charing Cross Hospital—October 1st.

Guy's Hospital—October 1st.

King's College Hospital—October 1st; 4 P.M., annual distribution of prizes.

London Hospital—October 1st; 7 P.M., old students' dinner in the New Library, Dr. J. Langdon Down in the chair.

Middlesex Hospital—October 1st; 3 P.M., distribution of prizes by Lord Sandhurst; introductory address by Mr. J. Bland Sutton, F.R.C.S., followed by a reception in the School Buildings; 7 P.M., annual dinner of past and present students and friends at the Holborn Restaurant, Dr. Douglas Powell in the chair.

St. George's Hospital—October 1st; 4 P.M., introductory address by Dr. T. Clifford Allbutt, F.R.S.

St. Mary's Hospital—October 1st; 4 P.M., introductory address by Dr. Maguire. October 2nd; 7 P.M., annual dinner at the Holborn Restaurant, Dr. Lees in the chair.

St. Thomas's Hospital—October 1st; 3 P.M., introductory address by Mr. William Anderson, F.R.C.S.

University College—October 1st; 4 P.M., introductory lecture by Mr. Rickman J. Godlee, M.S., B.A., F.R.C.S.

Westminster Hospital—October 2nd; 4 P.M., introductory address by Dr. P. S. Abraham, after which the prizes will be distributed by Professor Alexder Macalister, F.R.S.

PROVINCIAL.

Birmingham, Queen's College—October 1st.
Bristol, University College, Medical Department—October 1st.
Leeds, Yorkshire College, Medical Department—October 1st. Introductory Address and Distribution of Prizes by Professor W. T. Gairdner, Physician to Her Majesty the Queen in Scotland.
Liverpool, University College, Medical Department—October 1st.
Manchester, Victoria University, Medical Department—October 1st.
University of Durham College of Medicine, Newcastle-on-Tyne—October 1st.
Sheffield, Firth College, Medical Department—October 1st. Inaugural Address in the Lecture Room of Firth College by Mr. Charles Atkin, F.R.C.S.

SCOTLAND.

Aberdeen University—October 15th.
Edinburgh University—October 15th.
Edinburgh School of Medicine—October 1st.
Glasgow University—October 22nd. Introductory Address by Professor McCall Anderson, M.D.
Glasgow, Anderson's College—October 22nd. Introductory Address by Mr. Thos. A. Mathieson, President.
Glasgow, St. Mungo's College—October 23rd.
Glasgow, Western Medical School—October 22nd.

IRELAND.

Queen's College, Belfast—October 29th.
Queen's College, Cork—October 21st.

THE body of the late Colonel Tomline was recently cremated at Woking, the process occupying two hours and a quarter.

TWO cases of cholera, one of which ended fatally, are stated to have occurred in Hungary, near the Austrian frontier.

IT is stated that Father Conradi, one of the colleagues of the late Father Damien in the leper settlement at Molokai, has become affected with leprosy.

A SERIOUS outbreak of diphtheria is reported at East Haddon, in Northamptonshire. The character of the disease was at first excessively virulent, but both the severity and the number of cases are now said to be diminishing.

THE CONTINENTAL ANGLO-AMERICAN MEDICAL SOCIETY.

THE first general meeting of this Society will take place at the Grand Hôtel, Paris, on Monday, September 30th, at 5 P.M., and the first annual dinner will also take place at the Grand Hôtel at 8 P.M. on the same evening. The following gentlemen are Honorary Presidents of the Society: Sir Spencer Wells, Sir Joseph Lister, Dr. Richard Quain, Professor Ball, Professor Brown-Séquard, Dr. Ricord, Dr. J. S. Billings, Dr. Fordyce Barker, and Dr. Weir Mitchell. The Executive Committee includes the Hon. Alan Herbert, M.D.; Dr. Faure Miller, Dr. Chapman, Dr. Dupuy, Dr. Barnard, with Dr. T. Linn (16 Rue de la Paix) as Secretary.

AN APOLOGY TO THE SHADE OF MONTAIGNE.

SELDOM has the printer's familiar demon displayed his mischievous ingenuity in the discomfiture of "able editors" more effectually than in a quotation from Montaigne, which appeared under the heading "Topics of the Day," at p. 490 of our last issue. One has heard of Priscian being "a little scratched," but here the celebrated French essayist's genial countenance was battered out of all likeness to humanity, and his quaint and racy speech reduced to little better than a fortuitous concourse of typographical atoms. We hasten to appease his justly offended Manes by giving his words clothed and in their right mind as he wrote them:

Dire mensonge, c'est dire faulse, mais qu'on a prins pour vraye; et la définition du mot de mentir en latin, d'ou nostre français est party porte autant comme aller contre sa conscience, et par conséquent, cela ne touche que ceux qui disent contre ce qu'ils sçavent.

MR. F. A. HEATH, OF MANCHESTER.

MR. F. A. HEATH, in accordance with the rules of the institution, has resigned his position as Honorary Surgeon of the Royal Infirmary, Manchester. Mr. Heath has been connected with the institution for a period of thirty-three years, he having been appointed house-surgeon in 1853 and dispensary surgeon in 1854; Mr. Heath was elected honorary surgeon in 1866. The Board expressed their regret at the loss of an old and valued friend, and thanked Mr. Heath for his long-continued services. Mr. F. A. Southam was elected to the vacancy caused by Mr. Heath's resignation.

DEATH OF MR. WALTER J. COULSON.

WE regret to announce the death of this well-known surgeon, which took place at his residence in Harley Street on Friday, August 30th. It appears that Mr. Coulson had suffered for several years from post-nasal catarrh and exostoses in the external auditory meatus on both sides. On August 24th he was suddenly attacked with intense pain in the right ear. This increased till the night of the 25th, when the tympanic membrane burst, and pus was discharged through the external meatus. Mr. Coulson, however, still continued to suffer great pain, which was referred by him to the back of the head There were no symptoms of mastoiditis. On the 26th he had a slight rigor, and soon afterwards signs of intracranial pressure appeared. On the 29th Dr. Hughlings Jackson found him nearly comatose, and hemiparetic, with a high temperature. Diagnosing cerebral abscess in a preliminary stage, Dr. Jackson strongly urged the necessity of trephining. Mr. Victor Horsley was thereupon called in, and found Mr. Coulson suffering from left graduated hemiplegia from the face downwards, with conjugate deviation of the head, and eyes to the right. There was diminution of the deep reflexes on the left side, and exaggeration of those on the right. The temperature was higher on the paralysed side. Suppurative meningitis over the motor area was therefore diagnosed, and exploratory trephining was resorted to. The temporo-sphenoidal lobe was exposed and the dura mater opened. Very little clear cerebro-spinal fluid escaped, and the brain bulged, but repeated tappings failed to strike pus. Trephining over the middle of the fissure of Rolando revealed a large area in which the membranes were infiltrated with pus to the depth of a quarter of an inch, and the brain was softened beneath to a considerable distance. In view of the patient's critical condition, it was not considered justifiable to do anything more. During the night Mr. Coulson recovered consciousness so far as to give rational answers to ques-

tions, and he evidently understood the conversation around the bed. The course of the disease could not, however, be arrested, and death occurred a few minutes before 5 P.M. on August 30th. Mr. Coulson was buried on Wednesday. A sketch of his professional career will be given in our next issue.

THE HOME SECRETARY AND VACCINATION.

THE mayors of the municipalities in the country and others having authority outside the municipal areas have been requested by the Home Secretary to furnish to him, as regards their respective districts, returns showing the number of persons who have been imprisoned or fined for non-compliance with the provisions of the Acts relating to the vaccination of children, distinguishing imprisonments and fines, the length of imprisonment undergone by such persons, giving their names, the number of times any person has been imprisoned more than once, and the number and amount of fines paid by any person who has been fined more than once for the above mentioned offence since July 31st, 1879.

THE LADIES AT THE LEEDS MEETING.

WE take the earliest opportunity of repairing an ungallant omission in the account we gave in our last two issues of the social entertainments which will make the Leeds meeting an oasis in the memory of all who had the privilege of taking part in it. Several ladies (wives of the members in Leeds) kindly fitted up a room in the Mechanics' Institute as a club-room and lounge for ladies who accompanied their husbands, fathers, or brothers. This room was both elegantly and comfortably furnished, provided with writing materials and newspapers; and last, but not least, tea was ready daily from half-past three. Members and others were also cordially invited to join the ladies, and the unremitting attention and kindness with which these most acceptable hospitalities were dispensed completed the thoughtful care and consideration which our Leeds hosts and hostesses displayed. All the ladies who took part in the affair worked with the most untiring devotion to make their fair guests comfortable in every way. Mrs. Wheelhouse, Mrs. Rowe, and Mrs. Mayo Robson were conspicuous in their efforts. In cordially thanking these and all the other ladies concerned for a graceful idea so charmingly carried out, we are sure that we are expressing the feelings of all the members present, as well as of the ladies who accompanied them.

ANOTHER MARTYR TO DUTY.

ANOTHER young surgeon has fallen a victim to diphtheria contracted in the discharge of his professional duties. Mr. Charles Brown, M.R.C.S. and L.R.C.P.Lond., one of the house-surgeons at St. Thomas's Hospital, recently assisted at the operation of tracheotomy in a case of diphtheria. He had nearly reached the end of his term of office, and his unremitting devotion to his work had considerably impaired his health. Though suffering after this first exposure to the poison from symptoms which might well have alarmed a man of less heroic mould, Mr. Brown soon afterwards took an active part in the performance of another tracheotomy. He was almost immediately attacked by diphtheria of an unusually virulent type. Laryngotomy speedily became necessary, and, after a very brief illness, the sacrifice was completed, and another young life was added to the steadily growing hecatomb exacted from our profession by this dreadful scourge. This story is now a painfully familar one, but for one case of the kind which finds its way to the public ear there are probably hundreds which pass altogether unnoticed. To these must be added the thousands of cases in which the same terrible risk is encountered with equal courage by men who fortunately escape the possible consequences of their devotion. People in general save themselves the trouble of admiring medical heroism by hugging the comfortable delusion that "doctors never catch anything." In much the same way the War Office imagines that it shields its medical officers from the enemy's bullets by styling them "non-combatants." Mr. Brown was not only highly esteemed by his teachers and fellow students for his professional attainments, but he was respected for his personal character, and was popular with all with whom he came in contact for the charm of his manner and the sterling kindness of his heart. He had exceptional musical talents, which he exercised first in the choir of the Chapel Royal, Whitehall, later as organist at St. Mark's Church, Wandsworth and quite recently in the same capacity in the Hospital Chapel.

DR. OLIVER WENDELL HOLMES.

THE medical profession in this country will join in congratulating Dr. Oliver Wendell Holmes, "anatomist, physician, bard," to parody Lamb's description of Coleridge, on the attainment of his 80th birthday, which he celebrated on August 29th at his home, Beverly Farm, near Boston. Letters and telegrams of congratulation poured in from all over America, and many beautiful floral gifts were sent, together with a solid silver gold-lined loving cup of artistic design from his personal friends and former classmates. He greeted each visitor with a cordial grasp of the hand with all his old vivacity. His step is as elastic and his eye as bright and merry as ever, and except for a slight difficulty in hearing his powers are unimpaired. Though literature may claim the genial Autocrat of the Breakfast Table for her own, medicine has her inalienable share in the Emeritus Professor of Anatomy at Harvard. In spite of the worldwide renown which he has won in regions far removed from the dusty paths of professional life, Dr. Holmes is still at heart one of us, as he shows by many allusions even in his lightest writings. As for his more serious utterances, the distinctive note of them may be said to be the interpenetration of the scientific spirit with literary feeling. We are all proud of him as the most brilliant representative of medicine in popular literature and as a teacher who has done his share in extending and cultivating the field of medical science. With the heartiest goodwill, we send to him across the Atlantic the wish —in which all his innumerable readers must join—*In plurimos annos!*

LONDON POST-GRADUATE COURSES.

IT has always been a reproach to London that the unrivalled clinical material of its numerous hospitals is not fully utilised for the purposes of medical education. It is not that teaching power is wanting; on the contrary, the metropolitan schools could furnish among them a body of men thoroughly fitted to make London the centre of the medical world, as it undoubtedly ought to be. Owing to want of organisation, however, a large amount both of material and teaching power is wasted. Nowhere is the loss of potential educative energy more evident than in the hospitals to which no medical school is attached. It is, therefore, with peculiar satisfaction that we hail the announcement that the medical staffs of the Brompton Consumption Hospital, the Hospital for Sick Children, Great Ormond Street, the Hospital for the Paralysed and Epileptic, Queen Square, the Moorfields Ophthalmic Hospital, and the Hospital for Diseases of the Skin, Blackfriars, have decided to unite their forces, and give courses of instruction to qualified medical men in the various important branches of medical science and practice which these institutions represent. The teaching is intended to be thoroughly practical, and the convenience of men engaged in the active exercise of their profession has been studied in the arrangement of the hours at which the courses will be held. Further details of the scheme will be found in our advertising columns.

SCOTLAND.

POST-GRADUATE COURSE AT EDINBURGH.

THE session of the annual autumn post-graduate course commences on Monday, September 23rd. The course is the most complete of the series hitherto. Prospectuses may be obtained now from Professor Chiene or Dr. Claud Muirhead, Charlotte Square, Edinburgh. Those intending to avail themselves of the special courses should make application at once that arrangements may be made in advance.

VACATION LECTURES ON BOTANY.

PROFESSOR BAYLEY BALFOUR has initiated a movement for which the lay public of Edinburgh have shown themselves much indebted. Since the close of the University summer session Professor Balfour has lectured on Saturday afternoons on various botanical questions. He expressed the feeling that the magnificent Botanical Gardens of Edinburgh ought to be capable of more use than they had afforded hitherto. The results, so far as the attendances and interest were concerned, had been eminently successful. He hoped the experiment might be the starting point of something better. With a very small amount of such knowledge they could go into the fields feeling that they had a key to the splendid picture gallery of Nature.

ST. MUNGO'S COLLEGE, GLASGOW.

WITH reference to a statement which appeared in our issue of August 24th, p. 440, as to applications for the teaching appointments in the medical faculty of St. Mungo's College, Glasgow, not having been invited by public advertisement, we are asked to explain that the governors were precluded from taking this course by the constitution of the College, which is expressly designed "to absorb and continue as a part of St. Mungo's College the Glasgow Royal Infirmary Medical School." The governors had therefore no option but to take over as many of the teachers of the Royal Infirmary Medical School as they could, regard being had in every case to the fitness of the incumbent for the post. Further, we are given to understand that in the faculties of law and medicine there were some men whose appointment was considered essential to the success of the new school. It was known that these gentlemen, while willing to accept office if offered to them, would not have done so in response to an advertisement.

RESIGNATION OF PROFESSOR STRUTHERS.

AT a meeting of the Aberdeen University Court on September 2nd a letter from Professor Struthers was read, in which he begged to be allowed to retire from the professorship of anatomy, which he had held for twenty-six years. He enclosed a certificate from his medical attendant, Dr. Alexander Macgregor, to the effect that the state of his health made him permanently incapable of discharging the duties of the post. In his letter the Professor sets forth his long period of service, not only at Aberdeen, but previously at Edinburgh. He has been engaged in teaching anatomy for forty-four years, and in the *annus medicus* 1853-54 he discharged the duties of the professorship of anatomy in the University of Edinburgh in the absence of Professor Goodsir. He adds: "I think it is due on this occasion to remark that the work that has fallen to me here has not been merely the discharge of the ordinary duties of an anatomical school, arduous as the teaching of that department is. When I took office in 1863 I found the position to be an unsatisfactory one in every respect—as regards the numbers in the school, the buildings for anatomy, the museum, and other means of illustration and study. In the event of my petition being granted, I shall have the satisfaction of leaving to my successor a large and increasing class, good anatomical buildings (completed in 1881), a large and select museum of anatomy, a full provision of instruments of anatomical study and research, and a large stock of drawings—in short, a fully-equipped and prosperous school of anatomy." Professor Struthers's resignation was accepted with great regret, Principal Geddes expressing the deep sense felt by the Court of the loss of so energetic and influential a professor as Dr. Struthers had been all through his career. His activity had not been confined to his own department, for there had hardly been any important movement of recent years connected with the University in both Senatus and General Council in which Dr. Struthers had not been both prominent and influential. Among those movements he might refer very briefly to the following as typical instances: the development of the system of local examinations, in which Dr. Struthers was prime mover; the creation of medical bursaries, before him almost unknown; the institution of science degrees; and, though last, not least, the elaboration of their claim for extension of buildings, which had resulted in a concession—a somewhat tardy concession—on the part of the Government for an instalment of their claims.

PROPOSED CHANGES IN FEES FOR MEDICAL CLASSES AT ABERDEEN.

CERTAIN changes in the scale of fees for some of the medical classes in the University of Aberdeen are in contemplation. At a meeting of the University Court on September 2nd, the Secretary read a report of the Medical Faculty, which had been approved by the Senatus. The report stated that it was agreed, as the custom had hitherto been to charge a fee for not more than one practical class in connection with any systematic course of medical study recommended, that in the meantime a fee be not payable for the winter practical surgery class, but that the fee for the summer course of operative surgery be raised to three guineas. It was also agreed to recommend that the fees for the classes of practical materia medica and pharmacy and practical medical jurisprudence and hygiene be each raised from two to three guineas. With reference to the anatomy part of the subject the resolution of the Senatus agreed to be transmitted, Professor Fife dissenting, was to the effect that, in the event of Professor Struthers resigning the chair of anatomy, the Senatus should be recommended to request the University Court to make the following changes in the fees for the classes of anatomy: (1) That in order to place the class of systematic anatomy on the same footing as the other classes in the medical faculty, the fee for a second attendance to be two guineas instead of three guineas; and (2) that the fees for practical anatomy and demonstrations (exclusive of cost of materials) be so arranged that not more than six guineas in all shall be payable by each student. Consideration of the subject was deferred by the Court on the ground that the whole question would come before the University Commission at an early date.

IRELAND.

DR. MCKENNA has been elected coroner for the Cavan district.

DEATH OF DR. HENRY HARVEY BOXWELL, OF WEXFORD.

THIS gentleman, who formerly had one of the largest practices in the County Wexford, died on September 1st, aged 79 years. The deceased was a Doctor of Medicine of the University of Glasgow, and obtained the Fellowship of the Royal College of Surgeons of Ireland in 1844. He had held the post of Surgeon to the Wexford County Infirmary for the past fifty-two years.

ASSOCIATION INTELLIGENCE.

ELECTION OF MEMBERS.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member *by the Council* or by any recognised *Branch Council.*

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No member can be elected by a Branch Council unless his name has been inserted in the circular summoning the meeting at which he seeks election.

FRANCIS FOWKE, *General Secretary.*

COLLECTIVE INVESTIGATION OF DISEASE.

THE series of Maps forming the Report of the Collective Investigation Committee on the GEOGRAPHICAL DISTRIBUTION OF RICKETS, ACUTE RHEUMATISM, CHOREA, CANCER, AND URINARY CALCULUS are deposited in the Library of the Association, and are open to the inspection of members. A descriptive commentary appeared in the JOURNAL of January 19th, 1889.

An inquiry into the ORIGIN AND MODE OF PROPAGATION OF EPIDEMICS OF DIPHTHERIA is in progress.

Memoranda and forms for communicating observations may be had on application to the Secretary of the Collective Investigation Committee, 429, Strand, W.C.

BRANCH MEETINGS TO BE HELD.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT.—The next meeting of the above district will be held at Margate, on Thursday, September 19th; Mr. Knight Treves, F.R.C.S., in the chair. Members wishing to read papers, etc., should communicate at once with the Honorary Secretary, W. J. TYSON, 10, Langhorne Gardens, Folkestone.

BORDER COUNTIES BRANCH.—The autumn meeting of the Border Counties Branch will be held at Riggs Hotel, Windermere, on Friday, September 27th, at 3.15 P.M. Dinner at 6 o'clock; 5s., exclusive of wine. Members intending to read papers are requested to give notice to the Honorary Secretary.—JAMES ALTHAM, Penrith,

CORRESPONDENCE.

ENGLISH PRACTITIONERS IN SWITZERLAND.

SIR,—The amount of public feeling that this question has awakened carries it completely out of the region of mere professional politics. Switzerland is rich in health-resorts, many of which have attained their present repute almost entirely owing to the recommendation of English physicians, who, after personal inspection and occasional residence, have been accustomed to send English and American patients to the various *Kurorts.* Under the present unhappy state of things many of these patients now decline to go, not only because they prefer the guidance and advice of practitioners whose education and training are English to that of the best local talent that may have been attracted to the place, but because they feel that where there is a resident English physician the sanitary arrangements are guaranteed, at least for the time. English physicians travelling in Switzerland are constantly reminded of this prejudice, and are not infrequently placed in a very disagreeable position in consequence.

Swiss hotel keepers naturally dislike seeing their wealthiest customers making their "cures" across the frontier, and English physicians who know and like Switzerland object to be debarred from prescribing for those whom they have advised to sojourn in this delightful land. These gentlemen ask for no "exceptional reward," but merely for common justice.

No one would desire to see Swiss health-resorts invaded by hosts of English, German, and American medical adventurers, but the proposal that qualified British physicians should submit to the so-called Swiss State examination as at present constituted is simply absurd. The Federal Council might examine the degrees, diplomas, or qualifications of all foreign practitioners desiring to practise, and grant licences to as many as might be thought desirable for each canton. "Taunts and threats" are unnecessary. The Swiss, amongst their other excellent qualities, have ever shown a proper regard for their own interests.—I am, etc.,

FRANCIS PARSONS.

West Worthing.

THE ASSOCIATION AND ITS JOURNAL.

SIR,—I might have pointed out the fallacies in the arguments you used, in your "Occasional Column" in the JOURNAL of July 13th, against the adoption of suggestions I had made with the view of improving the value of the JOURNAL; but, knowing that no change was likely to result, I refrained. I am induced, however, to write again by having read in the JOURNAL of August 17th a letter signed by Sir Joseph Lister, and the discussion upon it, in the meeting at Leeds.

I was not aware that the conduct of the JOURNAL was to be discussed at the annual meeting, and on referring to the JOURNAL of August 10th, the last published prior to the meeting, I find no notice of the fact that such a discussion was to take place. I believe that, according to our rules, notice of any motion to be proposed at the annual meeting must be published in the JOURNAL, and the Council owe us some explanation as to this irregularity.

I gather from the report of the Journal Committee published in the JOURNAL of May 4th, 1889, that a circular signed by a large number of influential members of the Association suggested (1) that all articles in the JOURNAL should be signed, and (2) that advertisements should be more fully supervised. As a result of this circular, a Committee of Reference was appointed, but the Journal Committee state that to have all articles signed would "emasculate the JOURNAL," without giving, so far as I can see, any sufficient reason for such a statement. However, whether it is advisable to have all articles signed or not, this large and influential Committee, of which Sir Joseph Lister is chairman, has again approached the Council, stating that the hopes they entertained of an improvement in the conduct of the JOURNAL have not been fulfilled, and asking the Council to take such steps as shall make the JOURNAL in all respects worthy of the Association it represents. What do the Council say to this? They say any suggestions as to improvement must come through representatives of Branches in the Council. Now this seems a curious way to answer such a letter, no matter by whom it is signed. Have all the suggestions that have been adopted come through representatives of Branches? Nay, I should like to know what has ever been done that originated with representatives of Branches. It would be taking up too much space to mention the history of the Scientific Grants, of the Collective Investigation Committee, of the Research Scholarships, or of the Reference Committee; but it was not representatives of Branches who originated these, and in future must every suggestion be declined consideration till it come through a representative of a Branch? This looks like progress backwards.

But what action did the members attending the general meeting in Leeds take when this letter was put before them? They resolved, with one dissentient, "That the meeting desires to express its satisfaction with the result of the present representative system of government of the British Medical Association, and their approval of the steps taken by the Council for the management of its JOURNAL." That resolution, though carried with only one dissentient, does not alter the fact that a great many who are quite as capable of judging as any who were at that meeting, and who have the best interests of the Association at heart, are not satisfied with the steps taken for the management of the JOURNAL; and are they to be forced to resign their membership by finding their representations unheeded, and their suggestions misrepresented? for Dr. Bridgwater (President of Council) and Dr Robert Barnes (London) would apparently have us believe that this Committee desire to cease all advertising, which, they say and with truth, would hurry us rapidly into the bankruptcy court.

It is a curious coincidence, but it is worth while noticing, that Dr. Bridgwater, after pointing out how absurd the suggestions of the dissatisfied members are, proceeds to eulogise the "Editor," just as Dr. Bucknill did, when he had pointed out how stupid my suggestion was to appoint a committee to assist you in managing the JOURNAL, and how impossible it was to manage any journal by a committee.

Surely we may discuss how best to improve our JOURNAL without in the same breath either praising or blaming the present management, and as one of those who sympathise with any en-

deavour to improve the JOURNAL, I trust that the new Council will give Sir Joseph Lister's letter their most earnest consideration, and endeavour, so far as possible, to meet the views of the signatories.—I am, etc., JOHN HADDON, M.D.
Marsh House, Canonbie, N.B.

*** The subject was fully raised and treated in the relative paragraphs of the Report of Council, which was printed in the JOURNAL prior to the meeting, and set down by previously advertised notice for the general meeting, when it was again read to the meeting, and after discussion received and adopted.

UNIVERSITY INTELLIGENCE.

DURHAM.

FACULTY OF MEDICINE.—Examination for degrees in Medicine and Surgery at the College of Medicine, Newcastle-upon-Tyne. August, 1889. First Examination for the degree of Bachelor in Medicine. The following candidates satisfied the examiners:

In all Subjects: Elementary Anatomy and Physiology, Chemistry with Chemical Physics, and Botany with Medical Botany —G. H. V. Appleby, College of Medicine, Newcastle-upon-Tyne; W. H. Bishop, College of Medicine, Newcastle-upon-Tyne; R. A. Bolam, College of Medicine, Newcastle-upon-Tyne; R. Brown, College of Medicine, Newcastle-upon-Tyne; H. K. Dawson, College of Medicine, Newcastle-upon-Tyne; J. W. H. Eyre, Guy's Hospital; R. Green, College of Medicine, Newcastle-upon-Tyne; J. S. Hall, College of Medicine, Newcastle-upon-Tyne; A. S. Hedley, College of Medicine, Newcastle-upon-Tyne; N. S. Liddell, College of Medicine, Newcastle-upon-Tyne; B. May, College of Medicine, Newcastle-upon-Tyne; E. McGarity, College of Medicine, Newcastle-upon-Tyne; W. E. Peacock, College of Medicine, Newcastle-upon-Tyne; E. V. Peacock, College of Medicine, Newcastle-upon-Tyne; J. Peacock, College of Medicine, Newcastle-upon-Tyne; M. Prior, College of Medicine, Newcastle-upon-Tyne; E. Race, College of Medicine, Newcastle-upon-Tyne; R. Sterling, B.A., L.Th., College of Medicine, Newcastle-upon-Tyne; C. Stewart, College of Medicine, Newcastle-upon-Tyne; S. S. Whillis, College of Medicine, Newcastle-upon-Tyne; J. P. Willis, College of Medicine, Newcastle-upon-Tyne; G. J. Williams, College of Medicine, Newcastle-upon-Tyne.

In Elementary Anatomy and Physiology.—W. A. Clayton, College of Medicine, Newcastle-upon-Tyne; W. W. Deans, College of Medicine, Newcastle-upon-Tyne; W. Forrest, College of Medicine, Newcastle-upon-Tyne; H. M. Jones, College of Medicine, Newcastle-upon-Tyne; G. T. Wayman, College of Medicine, Newcastle-upon-Tyne.

In Chemistry with Chemical Physics, and Botany with Medical Botany.—A. Badock, London Hospital; T. Bishop, Queen's College, Birmingham; H. S. Burniston, St. Mary's Hospital; D. J. Caddy, College of Medicine, Newcastle-upon-Tyne; H. Case, College of Medicine, Newcastle-upon-Tyne; A. A. Fennings, St. Mary's Hospital; C. Forsyth, Yorkshire College, Leeds; A. J. Gardner, M.R.C.S., L.R.C.P., Yorkshire College, Leeds; T. G. S. Hodson, London Hospital; D. N. Jackson, College of Medicine, Newcastle-upon-Tyne; T. F. Keenan, College of Medicine, Newcastle-upon-Tyne; R. V. Lloyd-Williams, College of Medicine, Newcastle-upon-Tyne; G. Lowsley, St. Bartholomew's Hospital; G. W. B. Marsh, College of Medicine, Newcastle-upon-Tyne; F. H. Marson, Queen's College, Birmingham; G. E. Middlemist, College of Medicine, Newcastle-upon-Tyne; A. W. Port, St. Bartholomew's Hospital; L. L. Preston, Middlesex Hospital; W. E. Rielly, University College Hospital; J. M. Ritchie, Queen's College, Birmingham; L. W. Rolleston, St. Bartholomew's Hospital; N. F. Rowstron, St. Bartholomew's Hospital; A. W. Scott, Yorkshire College, Leeds; R. H. Sheperd, St. Bartholomew's Hospital; H. Shore, Queen's College, Birmingham; F. H. Simpson, Queen's College, Birmingham; H. Spicer, St. Bartholomew's Hospital; F. W. Standish, College of Medicine, Newcastle-upon-Tyne; J. B. Stephenson, Middlesex Hospital; F. W. Stokes, University College Hospital.

In Chemistry with Chemical Physics.—F. C. Brodie, M.R.C.S., L.R.C.P., L.S.A., Middlesex Hospital; C. Meaden, Bristol Medical School; C. M. O'Brien, Trinity College, Dublin; G. S. Ware, M.R.C.S., L.R.C.P., L.S.A., Middlesex Hospital; A. W. B. Warde, M.R.C.S., L.R.C.P.

In Botany with Medical Botany.—R. P. Mitchell, London Hospital.

MEDICAL NEWS.

MEDICAL VACANCIES.

The following Vacancies are announced:

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—House-Physician. Board and residence. Applications by September 20th to the Secretary, 24, Finsbury Circus, E.C.

COUNTY ASYLUM, Shrewsbury.—Junior Assistant Medical Officer. Salary, £100 per annum, with board, lodging, etc. Applications by September 11th to the Medical Superintendent.

COUNTY INFIRMARY, Monaghan.—Assistant-Surgeon; also to act as Apothecary and Registrar. Salary, £60 per annum, with apartments, light, coal, and rations. Applications to the Registrar. Election on September 11th.

GLASGOW ROYAL INFIRMARY AND ST. MUNGO'S COLLEGE.—Curator of the Museum and Pathologist. Salary, £50 per annum. Applications by September 20th to Mr. Henry Lamond, 93, West Regent Street, Glasgow.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway Road.—House-Surgeon. Salary, £80 per annum, with board and lodging. Applications by September 23rd to the Secretary.

IPSWICH BOROUGH LUNATIC ASYLUM.—Resident Medical Superintendent. Salary, £400 per annum, with residence, etc. Applications by September 16th, endorsed "Application for post of Medical Superintendent," to be sent to the Town Clerk's office.

LUTON FRIENDLY SOCIETIES' MEDICAL INSTITUTE.—Assistant Medical Officer. Salary, £120 per annum. Applications by September 18th to the Secretary, 25, Melson Street, Luton.

MACCLESFIELD GENERAL INFIRMARY.—Senior House-Surgeon. Salary, £100. Applications by September 14th to the Chairman House Committee, Macclesfield Infirmary.

MANCHESTER ROYAL INFIRMARY.—Honorary Assistant-Surgeon. Applications by September 21st to the Chairman of the Board.

NORTH LONDON CONSUMPTION HOSPITAL, Hampstead. — Resident Medical Officer. Salary, £40 per annum, with board, apartments, etc. Applications by September 10th to the Secretary, 216, Tottenham Court Road, N.W.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone, N.W.—Resident Medical Officer. Appointment for four months. Salary at rate of £60 per annum, with board and residence. Applications by September 18th to the Cecretary.

ROYAL ALBERT HOSPITAL, Devonport.—Resident Medical Officer. Salary, £150 per annum, with board and lodging. Applications by September 12th to the Chairman of the Election Committee.

ROYAL NATIONAL HOSPITAL FOR CONSUMPTION, Ventnor.—Assistant Resident Medical Officer. Salary, £60 per annum, with board and lodging. Applications by September 23rd to the Chairman of the Board of Management, 34, Craven Street, Strand, W.C.

ROYAL SOUTH HANTS INFIRMARY, Southampton.—House-Surgeon. Salary, £100 per annum, with board and lodging. Applications by September 20th to the Secretary.

ROYAL UNITED HOSPITAL, Bath.—House-Surgeon. Salary, £60 per annum, with board, lodging, etc. Applications by September 19th to A. E. Boyce.

RURAL SANITARY AUTHORITY, BASFORD UNION.—Medical Officer o Health. Salary, £400 per annum. Applications by September 26th to C. J. Spencer, Public Offices, Basford, Nottingham.

SCARBOROUGH HOSPITAL AND DISPENSARY.—House-Surgeon. Salary, £80 per annum, with board, lodging, etc. Applications by September 15th to the Secretary.

STAMFORD, RUTLAND, AND GENERAL INFIRMARY.—House-Surgeon and Secretary. Salary, £100 per annum, with board, lodging, and washing. Applications by September 9th to the Chairman of the Special Committee.

SWANSEA HOSPITAL.—Resident Medical Officer. Salary, £100 per annum, with board and lodging, etc Applications by September 7th to the Secretary, 9, Castle Street, Swansea.

WEST LONDON HOSPITAL, Hammersmith Road.—House-Surgeon. Board and lodging. Applications by September 25th to the Secretary-Superintendent.

MEDICAL APPOINTMENTS.

BOOBBYER, Philip, M.B., appointed Medical Officer of Health to Nottingham Borough, *vice* B. A. Whitelegge, M.D.

BOWKER, E. H., L.R.C.P. and L.R.C.S.Edin., L.S.A.Lond., appointed Surgeon to the Leeds Friendly Societies' Medical Association, *vice* J. T. Brereton, L.K.Q.C.P.I., resigned.

CRAVEN, R. M., M.R.C.S.Eng., L.R.C.P.Ed., appointed Medical Officer of Health to the Kendal District, *vice* C. E. Paget, L.R.C.P.Lond., M.R.C.S. Eng., resigned.

DAGGETT, H. J., appointed Resident Medical Assistant to the Nottingham General Hospital.

PERKS, Robert H., M.D.Brux., F.R.C.S.Eng., L.R.C.P., appointed Medical Superintendent of the Adelaide Hospital, Adelaide, South Australia.

SHARPIN, A. L., M.R.C.S.Eng., L.R.C.P.Lond., appointed House-Surgeon to the Salisbury Infirmary, *vice* L. S. Luckham, M.R.C.S.Eng., resigned.

WHITELEGGE, B. A., M.D., appointed Medical Officer of Health to the West Riding County Council.

WHITE, R. W., L.D.S., M.R.C.S., appointed Honorary Dental Surgeon to the Norfolk and Norwich Hospital.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the announcement. The first post on Thursday mornings is the latest by which advertisements can be received.

BIRTH.

JONES.—On August 31st, at Clarence House, Everton Road, Liverpool, the wife of Surgeon J. M. Jones, Army Medical Staff, of a son.

MARRIAGES.

EYTON-JONES—SAVAGE.—On August 27th, at Christchurch, Birmingham, by Canon Wilcox, B.D., the Rev. Hugh M. Eyton-Jones, B.A., third son of Dr. Eyton-Jones, Wrexham, to Jane Elizabeth, daughter of the late Benjamin Savage, Esq., London. No cards.

WHITEHOUSE—GALES.—On August 29th, at St. Cuthbert's, Benfieldside, co. Durham, by the Rev. G. H. Ross-Lewin, M.A., John Whitehouse, F.R.C.S. Eng., of Sunderland, to Florence Marian, only daughter of the late Lieutenant-Colonel Gales, J.P., 3rd Battalion Durham Light Infantry.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the office of the JOURNAL, and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

QUERIES.

HOME FOR A CASE OF INCIPIENT PHTHISIS.

A. B. would be grateful if any member could tell him of a "home" on the south coast, suitable for a lady with limited means, the daughter of a clergyman, who has been a nurse in a large hospital, and now has premonitory signs of phthisis.

TREATMENT OF DANDRUFF.

A COUNTRY MEMBER would be glad to be informed of a cure for dandruff accompanied by excessive falling out of the hair. He is at present treating a friend for it, and so far it has proved unamenable to anything he can suggest. He has tried glycerine and borax, also bay rum, and finally vaseline and perchloride of mercury, but none of these have had any effect.

HOME FOR IMBECILE CHILD.

R. D. would be glad to hear of a home for an imbecile child of poor parents, not eligible for Earlswood.

WANTED A DIAGNOSIS.

F.R.C.S.ED. writes: I was called to a confinement at 11 P.M. Child alive at 4 A.M. on the following morning. Membranes ruptured at 4.30 A.M. Child (full time) born shortly after 5, stillborn. The mother is healthy, has two living children, and has had one miscarriage brought on by riding on the switchback railway. What was the cause of death? Should I have adopted any special measures before the birth? I left the case to Nature.

ANSWERS.

INVETERATE PSORIASIS.

DR. G. E. J. GREENE (Ferns, co. Wexford) would recommend "Enquirer" to well swab the affected parts with undiluted "huile de cade" once daily for at least a week; after which, as the application is rather painful, it might be discontinued for a couple of days, and then applied again. If the parts are bathed in warm water before putting on the tar, its action is more rapid. McWade's mixture is about the best internal medicament, even though there be no history of syphilis. I am sure that, although preparations of tar have already been tried, if "oil of cade" is diligently employed in the manner indicated it will give good results.

A. S. V. G., in reply to "Enquirer," suggests that the use of an ointment with a basis of lanoline, combined with a stimulating pine oil, such as pumiline or pinol, might prove a useful adjunct to constitutional treatment.

RINGWORM.

DR. C. R. ILLINGWORTH (Accrington) writes: In answer to "Almost Disheartened," allow me to advise the application of a 1 in 4 solution of the biniodide of mercury in the iodide of sodium. There is no more potent germicide than the biniodide, and no more penetrating salt than the vehicle I have suggested. I find that one application is quite sufficient. I prepare it thus: to half a drachm of the red iodide of mercury add half an ounce of a 1 in 4 solution of the iodide of sodium in water, and shake until dissolved. Dilute this strong solution of the biniodide with three parts of water, and apply thoroughly with a camel's hair brush to the parts affected. If the application be "too thorough," a blister will be formed.

NOTES, LETTERS, ETC.

THE EFFECT OF CASTRATION ON THE VOICE.

MR. SLADE INNES BAKER (Abingdon) writes: A patient of mine, suffering from tubercular disease, had both testicles removed some three months since. Up to the present time not the slightest change can be detected in the voice, and his power of singing is not impaired.

LONGEVITY AND MALIGNANCY.

MR. W. JOHNSON SMYTH, M.B. (Essex County Asylum) writes: It is foreign to my present aim to supplement any of the very able articles that have from time to time appeared in your columns on the subject of malignant growths. My aim is rather to direct attention to a phase of the question that recent contributors have, I think, overlooked, and which is at least an interesting one. Professor Annandale has pointed out in his clinical lectures in the Royal Infirmary, Edinburgh, that in a great many of the cases of malignant disease there was a history of longevity on the part of the parents. Recently I have met a case of fatal malignant disease in a man whose father died at the age of 84, and mother at 78 (and he had an uncle 104 years of age). So, too, we have a remarkable case of longevity in the case of the parents of the late German Emperor. It would be interesting to know the experience of those whose greater opportunities in dealing with such cases would enable them to speak with much weight.

COMMUNICATIONS, LETTERS, etc., have been received from:

Mr. Arthur Jackson, Sheffield; Mr. A. Underwood, London; The Stretton Hills Mineral Water Company; Dr. D. Embleton, Newcastle-on-Tyne; Mr. A. Cory, Geneva; Dr. T. Llewellyn Nash, Dublin; Dr. Thin, London; Dr. T. Outterson Wood, London; Dr. W. W. Hardwicke, Dovercourt; Professor Rawdon Macnamara, Dublin; Surgeon in the Civil Service; Mr. H. Newman Lawrence, London; The Honorary Secretary of the College of State Medicine, London; Mr. E. E. Dufty, Rotherham, Yorks; Dr. G. Payne Best, London; Mr. J. Whitehouse, Edinburgh; Messrs. J. Maclehose and Sons, Glasgow; Dr. Beaven Rake, Trinidad; Messrs. T. Newbery and Sons, London; Mr. E. A. Gaynes Doyle, Trinidad; Mr. John Ferris, Torquay; Mr. E. A. Ryan-Tenison, Bexhill-on-Sea; Our Manchester Correspondent; Mr. A. Berrill, South Woodford; Dr. C. R. Drysdale, London; Mr. J. T. Jones, London; Dr. C. R. Illingworth, Accrington; Mr. O. R. P. Owen, Bala; Mr. A. W. Robson, Birmingham; Dr. A. R. Manby, East Rudham; Dr. M. Benson, Wigan; Mr. F. R. Humphreys, London; Mr. F. Brown, Pirbright; Dr. F. Parsons, West Worthing; Mr. W. A. Day, Redcar; Mr. C. H. Sers, London; Mr. H. D. Buss, Paris; Dr. T. Linn, Paris; Mr. H. C. Fox, Walton-on-Naze; Dr. M. Ryan, Dublin; Mr. G. R. Murray, Barrasford; Dr. S. W. Smith, Cheltenham; Mr. J. B. Galie, Swansea; Mr. J. Limont, Newcastle-on-Tyne; Mr. H. C. Gordon, Edinburgh; Dr. P. Boobbyer, Nottingham Mr. J. R. Philpots, Parkstone; Dr. Hugh Woods, London; Dr. A. T. Bretts, Watford; Mr. J. A. Dow, London; Mr. G. D. Pollock, London; Dr. A. H. N. Lewers, London; Mr. R. Lamond, Glasgow; Mr. R. A. Farrar, London; Dr. H. G. Lee, Oxford; Dr. T. Jackson, Hull; Dr. R. M. Wyckoff, New York; Mr. Henry Horton, London; Dr. R. Rentoul, Liverpool; Dr. G. B. Mead, Newmarket; Mr. G. Batho Griffiths, London; Dr. D. Campbell Black, Glasgow; Mr. L. B. Claremont, London; Mr. Frank Greaves, London; Mr. T. A. Mitchell, London; Dr. P. Caldwell Smith, Motherwell; Dr. R. B. Selby, Port William; Mr. J. P. Parkinson, London; Dr. R. H. Perks, Devonport; Mr. D. Hughes, Deal; Mr. O. T. Stephenson, Woolston; Mr. R. Weaver, London; Mr. C. J. Hewetson, Scarborough; Mr. W. P. Dester, West Hartlepool; Mr. J. H. S. May, Plymouth; Mr. Stanley Dickinson, Colne; Messrs. Burroughs, Wellcome and Co., London; Dr. R. Davison, Battle; Mr. P. O'Donaghue, Loughrea; Dr. H. T. Rutherfoord, London; Dr. A. S. Gubb, London; Mr. C. E. Oldacres, Billesdon; Mr. H. D. Parsloe, London; Dr. F. W. Cock, London; Dr. A. E. Sansom, London; Messrs. Street and Co., London; Mr. E. Burchell, London; Mr. J. E. Edwards, Chester; Mr. R. M. Craven, Southport; Mr. A. C. Wildman, Penzance; Mr. R. C. Chicken, Nottingham; Mr. J. M. Scott, Denny; Mr. W. C. Crofts, London; Mr. F. Yate, Goldaming; Mr. W. M. Jones, Rotherham; Dr. M. Handfield-Jones, London; Our Swiss Correspondent; etc.

BOOKS, ETC., RECEIVED.

A Guide to the Alterations in the British Pharmacopœia (1885), comprising an epitome of the changes. By Prosser James, M.D. Third Edition. London: J. and A. Churchill. 1889.

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AN ADDRESS

DELIVERED AT THE OPENING OF

THE SECTION OF LARYNGOLOGY,

At the Annual Meeting of the British Medical Association, held in Leeds, August, 1889.

By HENRY T. BUTLIN, F.R.C.S.,

Assistant Surgeon, and Surgeon for Diseases of the Larynx, St. Bartholomew's Hospital.

THE FUTURE POSITION OF LARYNGOLOGY.

Gentlemen,—Although the President of a Section at this annual meeting may think fit merely to take his seat at the appointed time and to declare the Section has commenced its sitting, it is generally expected that he should take the opportunity of delivering a short address. The subject of such an address may well be the work which has been performed since the last sitting of the Section, or the announcement of some new and important discovery, or with a comparatively young speciality like that which we represent, the position of the speciality, its past, its present, or its future. I have no new discovery in laryngological science to announce, nor can I point to any great or striking feature in the work of the past year. Not that no work has been done. On the contrary, the work of 1888-89 has been abundant and excellent. But it may be described almost as a work of rumination and digestion, good and salutary in the highest degree for a speciality which, still in youth, has produced and reproduced so much. Happy for us is it that such rapid production has not been too exhausting; and good, therefore, I find it that a year has passed in the consideration of what has been done done, and in acquiring new strength for active work in the future.

If I am to speak, it must be on the position of the speciality; and here, again, I am placed in the difficulty that only last year two addresses were delivered on the same subject, from two presidential chairs, by two distinguished laryngologists. My position, however, differs so widely from theirs that I am able to regard the whole question of the status of laryngology from a different point of view. I cannot claim to be a throat specialist, for I am a surgeon attached to the staff of a large general hospital, where I have been actively engaged for many years in the theory and practice of surgery—for ten years in teaching surgery—and where, in addition to the work of pure surgery, I have, for the last eight years and a half, presided over the department for diseases of the larynx.

My position has of necessity brought me closely in contact with the students, and has made me acquainted with their means, their wants, the time they have at their disposal, and the prospect there is of all or many of them becoming proficient with the laryngoscope.

During the past twenty years the ordinary pass examinations for licences and degrees have been made much more difficult. The requirements of the various boards and bodies have been much more severe in all the ordinary subjects of medical education. Students are compelled to spend a longer period in study, and a longer period means a greater sum of money. The time and money thus spent must, in the case of the large majority of students, be devoted to the learning of the foundation subjects—anatomy, physiology, and the like—and to the three great clinical subjects of medicine, surgery, and midwifery. For the study of the various specialities a longer course would be required, and a large number of students cannot afford even an extra three months which might be devoted to specialities, for the longer time and larger sum of money which have been already devoted to medical education have not thus far been repaid by larger incomes gained by medical men. On the contrary, the incomes of a large number of medical men are decidedly smaller than they were a few years ago. Competition has greatly increased in our profession, and the result of the competition is that the average medical man is often forced to perform more work for the same amount of money, or to be content to gain less money than formerly. There is a distinct tendency on the part of the public in many large and even small towns to betake themselves to provident dispensaries, and to get their doctoring done on a cheap contract by combination, apparently caring little what the quality of the doctoring is, provided only it be cheap. That provident dispensaries are or may be a great boon to the working and artisan classes I cannot doubt; but they are taken advantage of by many persons whose position and income are such that one wonders they care to place their health in the hands of some of the men who at present are in charge of some of these co-operative establishments.

The fact remains, however, that there is a disposition at present to save money in doctor's bills; and, under these circumstances, there cannot be a strong desire on the part of students and medical men to spend more money in education.

On the other hand, this very competition may lead a certain number of students to spend time in acquiring a practical knowledge of some of the specialities. For the medical man who can use the laryngoscope and ophthalmoscope has a decided advantage over the man who cannot use them, an advantage which cannot fail to be known and appreciated by patients. There are to my mind distinct indications that this feeling is actuating some of our students at the present time. In proof of this, let me relate my own experience in the department for diseases of the larynx at St. Bartholomew's Hospital. I took charge of the department, which had been only a short period in existence, in January, 1881. There were at that time only two or three lamps, scarcely any students in attendance, and there were no regular dressers. During the first year I had no dressers, and things remained much in the same condition. At the beginning of 1882, I found that a few men desired to work at laryngology, and consequently made arrangements to take on two dressers every three months. There was a difficulty in filling even this small number of places. In 1883, the number of dressers increased, and I passed through the department, in the academical year of 1883-84, 18 men, each of whom worked for three months. The number of dressers has been steadily increasing, and at the present time I pass more than fifty men through a three months' course of dressing every year. The number of days on which the patients are seen is two, in place of one each week; the number of lamps is nine in place of two. And the number of names down in my book for dressers' places is still in excess of the number I can accommodate every three months.

Part of this increase is undoubtedly due to the improved arrangements which have been made, and the assistance which the students have received from my excellent and valuable aids, Dr. Archibald Garrod and Mr. Lawrence. But it is also just as undoubtedly due to the necessity which students now feel of learning the use of the laryngoscope and rhinoscope, in order that they may be better able to compete with the crowd of rivals they will encounter on entering into practice.

With regard to the future position of laryngology, I have formed a very strong opinion. Its importance must be reckoned, and its future will depend, not on the opinion which we, as laryngologists, have of it, but on its importance to the general public.

From this point of view I believe that it stands second to none of the specialities, gynæcology alone excepted, while it is far superior in importance to some.

In estimating the value and importance of any speciality, regard must be had to the nature and frequency of the more serious diseases to which the special part of the body is subject; to the frequency and discomfort due to the minor maladies; to the difficulty of acquiring skill in the use of the various instruments required for diagnosis and treatment; to the relief which the speciality is capable of affording; and last, but by no means the least, to the aid which it can render to general medicine and surgery.

In these respects, compare laryngology with ophthalmology, and I am sure it will be found that it stands on quite an equal footing. The disabling diseases of the larynx are probably not so numerous as the diseases which disable men by blinding them, although there are two eyes and only one larynx; but the diseases of the larynx through which death seizes on us are far more numerous than are the fatal diseases of the eye. The minor maladies which distress and annoy people are numerous in both specialities. Indeed, their name is legion. Laryngitis, pharyngitis, granulations on the pharynx, adenoid vegetations in the naso-pharynx, polypi and swollen turbinated bones on the one side; conjunctivitis, corneitis, granular lids, obstructed ducts, and the various defects of vision on the other side. The skill required in the use of the laryngoscope is not at all inferior to that needed for the ophthalmoscope; many laryngeal operations require as great care and dexterity as the operations on the eye. The relief which laryngology is capable of affording in the large majority of ailments of the throat will not for a moment be denied. And, last, the aid which our speciality can render to general medicine and

surgery is not in any way inferior to that which the speciality of the eye at present renders. A single example will suffice:—The relation of paralyses of the cords to intra-thoracic tumours and various affections of the nervous centres.

Seeing the equal importance of these two specialities, I hope and expect to see laryngology, within a few years, occupying an equal position with ophthalmology in our hospitals and at the examinations. It requires and must have beds set apart for its use, a certain number of lectures devoted to the subject every year, good rooms for out-patients and operations. And at the examinations I think that candidates should be examined on all the affections of the nose and throat which can be made out without the aid of more special apparatus than a good light, a nasal speculum and spatula, just as they are now examined on the evident affections of the eye. They are not yet expected to be able to use the ophthalmoscope at the ordinary pass examinations, and a knowledge of the laryngoscope cannot therefore be insisted on.

I hope to see these things accomplished, because our speciality has earned and deserves the right to them. I expect to see it, not on account of the deserts of laryngology (for deserts do not always ensure rank and competence), but because there are clear signs that the position of laryngology is improving, and equally clear indications that it must continue to improve.

Your very presence here at this moment in a section devoted to laryngology is an indication of this advance. This is only the second time that a section has been devoted to laryngology at these meetings. This indulgence has not been accorded without opposition. When first I became a member of the Council of the Association, some four or five years ago, and proposed as a part of the programme of the annual meeting that laryngology should have a place, I could not gain a hearing. Two years ago the necessity of some acknowledgment of laryngology resulted in the formation of a subsection. Last year and this year the subsection has been replaced by a full section. The work of the last two years has fully justified the action of the Council, and I confidently hope the work of this week will be successful in establishing a Section of Laryngology on a permanent footing at these meetings.

Again, a dozen years ago, there was only one hospital in London devoted to the speciality, and scarcely one of the hospitals to which medical schools are attached possessed an organised department for diseases of the larynx. At the present time there are at least four special hospitals, and there is scarcely one of the school hospitals which has not an organised department for diseases of the larynx. Of the steady growth and development of one of these I have already given an account; and I need only add to that account that the growth has been one of at least seven years' duration, and does not in the least depend on the stimulus which may have been given to the laryngeal speciality by the prominent position it has of late occupied in the public mind.

I know full well that there are difficulties in the way of the attainment of the position I claim for laryngology; as, for instance, a certain evil name it has acquired, the jealousy which is not unnaturally felt by those in our profession who think that this new speciality takes out of their hands work of various kinds, and the comparative youth of the speciality and consequent difficulty in finding a suitable place for it in the general hospitals.

But the specialty of laryngology is so necessary and so good that I cannot for a moment doubt that it will in course of time overcome every obstacle to its reasonable development. The ill name will by-and-by give place to a good name, as the number of laryngologists increases and it is found that the large majority of them are as reputable in every respect as their medical brethren. Jealousy will be less felt when it is taken into account that a very large number—the majority, indeed—of the diseases now treated by throat specialists were practically never treated at all before the time of throat specialists, and that the incomes of throat specialists are largely derived from the treatment of diseases which were not even diagnosed before their time. It cannot be denied, of course, that in the course of years the throat specialist has gradually extended the sphere of his operations and has taken into his domain the whole of the mouth and even the outside of the neck. I doubt whether he will maintain his hold over such advanced outworks as the neck; but if he should lose them it is no great matter, for he can well afford to do without them.

Time will cure the infirmity of youth from which the speciality of the throat now suffers, and the force which gradually and with great difficulty prevailed on the general hospitals to find suitable accommodation for diseases of the eye will by-and-by prevail in like manner for diseases of the throat.

Among the various conditions which will favour the more rapid advance of this speciality I believe that none will exercise a greater influence than these two: the good name of those who practise laryngology and the excellence of the work which they perform. These conditions, gentlemen, are largely in our hands. Let us accept the trust with confidence in the goodness of our cause and a determination to forward it by every good means in our power.

A DISCUSSION
ON
TONSILLITIS, ITS VARIETIES & RELATIONS TO RHEUMATISM.

In the Section of Laryngology at the Annual Meeting of the British Medical Association, held in Leeds, August, 1889.

I.—C. W. HAIG-BROWN, M.D.,
Medical Officer, Charterhouse School.

TONSILLITIS permits of classification into several varieties, according to the method by which it is intended that the classification shall be made. If its etiology is taken as the basis, tonsillitis may be simple or specific, the specific kind being again divisible into exanthematous and diphtheritic, while the exanthematous forms can be subdivided into scarlatinal, measley, etc. Classified by its distribution, it is found to be sporadic or epidemic; while if its varieties are sought in the intensity of its symptoms, it is found to be acute, subacute, or mild. The chronic form, as a variety, has been purposely omitted, because it is not literally a tonsillitis, for the combinations of hypertrophied fibrous and adenoid tissues which are so often seen are not due to a state of present inflammation, but exist as the result of several past acute or subacute attacks. And if, lastly and most rationally, tonsillitis is classified by its pathology, according to whether the parts of the organ mainly affected be its follicular or its interstitial elements, there is the simple and natural division into two varieties, follicular and interstitial.

Now the follicular form of tonsillitis is very much more common than the interstitial; and though, in the course of a tonsillitis which is mainly follicular at the commencement, it may happen that owing to the intensity of the inflammatory process the interstitial tissue, in place of undergoing resolution, suppurates or even becomes gangrenous, these are occurrences by no means so frequent as limitation of the disease, so far as the naked eye shows us, to the follicles. That is to say, in all cases of tonsillitis the whole structure is involved; but in most cases the follicles are implicated in a greater degree than the interstitial tissue, while in a few the interstitial tissue takes a larger share in the inflammation than the follicles, and this fact affords the best opportunity for classification by dividing tonsillitis into the follicular and interstitial varieties—a division at once simple, natural, and in complete accordance with the pathological changes.

But it must not be imagined that the difference between these two forms is merely one of degree, for, if such were the case, we should not, as we do, meet with varieties of patients who are subject to recurrent attacks of tonsillitis, the one class recovering in a week or less without any abscess, the other undergoing ten or twelve days' misery with the tonsils alternately suppurating; each patient with the same variety of tonsillitis on each occasion, the follicular cases on the one hand rarely suppurating, while the interstitial cases still more rarely escape suppuration. If the difference were one of degree only, we should meet with both varieties in the same patient, finding that he had follicular tonsillitis if his throat were but slightly affected, which would develop into the interstitial variety if the inflammatory process were more intense; yet this is not what we find in practice, but rather the opposite, for the patient who has had follicular tonsillitis once will have follicular tonsillitis again, while the converse holds good for the man who has had a tonsillar abscess. It happens that I myself, as probably is the case with most of us, have seen very much more of follicular than interstitial tonsillitis, and therefore I shall ask you to allow my coming remarks upon the relations of tonsillitis to rheumatism, with a few words to be said afterwards about what I believe to be its real nature, to be taken

as referring to follicular tonsillitis only, and to let me use the word tonsillitis throughout the sequel as applying to follicular tonsillitis alone, and not to the interstitial form.

It has been my observation that tonsillitis is especially apt to occur under two quite opposite conditions of climate. One of these is when the air is saturated with moisture for several days in succession, such as is not uncommonly the case in late December and early January, while in the midst of an anticyclone the wind blows gently from the north-east and the trees drip with the damp of a thick fog. The other is when there have been several successive hot and dry days also in the course of an anticyclone with north-easterly breeze, but with the humidity of the air about 80, and of course no fog. These are the two conditions of winter and summer atmosphere respectively which most favour the development of cases of tonsillitis, and curiously also of cases of rheumatism.

But another causative relation which the two diseases appear to have in common lies in each being liable to arise under septic influences. It is a matter of wide and, I am sure, correct belief that tonsillitis frequently occurs in connection with drain poisoning, but it is not so universally recognised as it should be that rheumatism may appear under the same condition. If we admit that septic influences of all kinds are liable to engender arthritis, as we see in scarlatina, syphilis, gonorrhœa, puerperal fever, and pyæmia, we ought not to feel surprise at the appearance of arthritis under the influence of the poison inhaled from cesspools and ill-ventilated drains.

Three years ago tonsillitis was a very common disease among the inmates of a certain large institution, and so, comparatively speaking, was rheumatism. The throat cases made up 21 per cent. of the total sick list for the year, while the rheumatic added 4 per cent. It had been frequently represented to those who controlled parts of this institution that such conditions were dependent upon the improper drainage of these parts; but, as you may remember, it required a more powerful though less agreeable method of persuasion to convince these gentlemen of the truth of the representation; and then, acting upon the better judgment thus brought about, they set their houses in order. Immediately the cases of tonsillitis began to diminish in number, and so did the cases of rheumatism. The records of that establishment for the past twelve months show tonsillitis cases at 5 per cent. and rheumatism at 1 per cent. of the total cases of sickness, as against 21 per cent. and 4 per cent. in 1886.

I once took the opportunity to inquire into the history of 119 cases of tonsillitis which occurred in educated people concerning rheumatism, and from 76 of them I obtained positive evidence. In 38 there had been previously attacks of rheumatism of varying intensity, in 28 rheumatoid pains accompanied the attack of tonsillitis, and the remaining 10 had never themselves had rheumatic arthritis, but one or other of their parents had.

On looking for further clinical features of resemblance, we are at once struck by the peculiar and persistent aptitude of both disorders to recur, and by their very frequent alternations. Nor can we pass without comment the sour-smelling perspirations and the pains in the limbs and back which, quite apart from inflammation of the joints, accompany the febrile period of both diseases; and when, reflecting for a moment on the nature of elements of the inter-muscular fasciæ and the periosteum, and take into consideration the fact, doubted by none, that in rheumatism the endocardium and pericardium are liable to become inflamed; and when we further couple with this the fact that cardiac murmurs of more than transitory importance are sometimes developed in the course of tonsillitis, while coinciding with their development there is an increase of fever, and following their establishment hypertrophy of the usual parts of the myocardium, with, in some cases, later progressive failure of this compensation, it must be allowed that tonsillitis and rheumatism at any rate present certain complications in common.

A few years ago Dr. Cheadle pointed out the frequent absence of defined cause, especially in young people, for many cases of valvular disease of the heart, and I myself remarked at the time upon the equal frequency with which many cases of tonsillitis, particularly in children, were diagnosed as "febricula" for want of an examination of the throat, whereby the cause of illness would have been demonstrated; and I was delighted to find my observations on this matter in entire accordance with those of Professor William Osler, of Philadelphia, who wrote me: "I have believed and taught for some time that endocarditis might accompany follicular tonsillitis." I have, moreover, seen two cases of tonsillitis, each complicated with endocarditis, associated with the hyperpyrexia sometimes met with in rheumatic fever. It differed from rheumatic hyperpyrexia in that neither case terminated fatally, but agreed with it in that both the hearts were permanently damaged. And while upon the subject of similarity of complications, I must not omit to mention the case of a young woman with mitral stenosis and regurgitation, whom I sometimes see on account of temporary failure of compensation, who developed her first attack of tonsillitis during her first lactation, and has since had several alternating attacks of follicular tonsillitis and erythema nodosum without ever having had a rheumatic pain or a swollen joint. It is hardly necessary to emphasise the point that none of the cases of sore throat just quoted were cases of scarlatina, but the mention of this affection serves to carry our thoughts to chorea, and here we find tonsillitis and rheumatism dissimilar. Neither chorea nor iritis seem to follow upon tonsillitis unless rheumatic fever intervenes, and I have never seen tonsillitis directly followed by chorea unless the tonsillitis was scarlatinal, nor have I known iritis in any way associated with sore throat unless the latter were scarlatinal or syphilitic.

And I have not found that the treatment usually employed for rheumatism is of especial value in tonsillitis. I have frequently seen salicylates given on the second day of tonsillitis, and a rapid fall of temperature occur on the third day, but I have quite as often seen the temperature fall on the third day without the administration of any drugs at all. I have also known salicylates given on the first day without any fall of temperature on the second, but with a sudden fall on the third, which, I repeat, happens in the natural unchecked course of the ailment. I admit that salicylates are the best drugs to employ, on account of their sedative properties; but I do not think that they influence the course of the disease. Tonsillitis is a sharp but short fever, and the usual critical fall of temperature on the third day has, I believe, had a great deal to do with the supposed success of certain remedies in its treatment.

And now, having named some of the points of symptom and complication on which a comparison of the two diseases may be based, I must affirm that, to my mind, the points of similarity considerably outweigh those of difference.

Having so far established a causative and clinical relationship between rheumatism and tonsillitis, we are led to one of certain conclusions: that rheumatism is a general disease which as frequently finds expression in the throat as in the fibrous and serous membranes; or that the inflamed tonsil is the receptacle for the rheumatic poison and the medium for its conduction to the general circulation; or finally, that specific germs find their way into the body under circumstances favourable to their entry, and then evidence their presence in inflammation of the tonsils and the fibrous and fibro-serous membranes. And from analogy it is most likely that the last is the correct view. How many others of the family of specific fevers give the earliest indication of their presence in catarrh of some portion of the pharyngeal cavity! Think of scarlatina, small-pox, measles, rötheln, diphtheria, typhoid fever, and cholera; and bear in mind that one of these, scarlatina, is particularly prone to be followed by rheumatic manifestations. Now, with these facts before us, is it not very likely that what we at present call, by reason of its most evident objective symptom, "follicular tonsillitis," is itself a specific febrile disorder, hitherto unrecognised as such, maintained by the multiplication of peculiar germs in all parts of the body, but mainly, as in scarlatina, in the throat? With what other supposition are we to reconcile the sudden onset, the high fever with often slight local cause, the intense affection of the whole system, the critical fall of temperature irrespective of drugs, the frequently epidemic distribution of the disease, and its occasional spread by contagion? Neither do its precedence or its sequence by rheumatism, nor indeed the fact that it may occur without rheumatism, militate against the acceptance of this view, for the whole rheumatic train of symptoms may ensue upon any of the specific fevers—notably scarlatina and typhoid; while, on the other hand, either of these may occur without rheumatic sequelæ. Yet, again, it is impossible to avoid noticing that that specific fever which, however moderate its attack, always manifests itself in the throat (I refer to scarlatina), is the one most commonly followed by rheumatism, and that the febrile affection which we now call follicular tonsillitis, and which also never fails to attack the throat, has quite as commonly the self-same sequelæ.

Nevertheless tonsillitis bears a marked dissimilarity to many

of the specific fevers inasmuch as one attack, instead of protecting against subsequent attacks, rather favours them. But in this very manner it resembles others of the group—for instance, diphtheria and malaria, the latter undoubtedly of specific origin and particularly apt to recur. Compare it further with another recurrent disease, catarrhal pneumonia, which Koch has shown to be always bacillary in its course and perhaps so in its origin. An attack of this disease at the right pulmonary apex is very often succeeded, some time after its subsidence, without any cheesy deposit by involvement of the subclavicular portion of the left lung, showing in this neither recrudescence nor secondary tuberculosis, but a distinct second attack by the same invasive process; and it is fair to argue from this that tonsillitis is not a mere catarrh, but is a disease of the same nature due to the importation of specific germs, which, after being for a time dormant, multiply and indicate their presence by an explosion of development, their principal breeding ground being the tonsils and the lymphatic glands in connection with them, whence they are disseminated throughout the whole lymphatic and sanguineous circulations, while the denuded tonsils are fertile beds for the settling and development of many other bacteria and the dilated blood-vessels and lymphatics ready channels for their absorption.

II.—ARCHIBALD E. GARROD, M.A., M.D., M.R.C.P.,

Assistant Physician, West London Hospital.

THAT sore throat is frequently met with in association with articular rheumatism is a proposition which, I believe, no one will question at the present day, and I am convinced that in many cases the association is so close a one that it can only be explained by supposing that the throat affection is an actual manifestation of the rheumatic state. There are, however, no distinctive features by which a rheumatic sore throat can be recognised, for it assumes various forms, from the most trifling injection of the pharynx, with perhaps some swelling of the palate and uvula, to the severer varieties of follicular and parenchymatous tonsillitis. It is, therefore, difficult to discuss the subject of rheumatic tonsillitis without dealing to some extent with rheumatic pharyngitis also, and I must ask the indulgence of the Section if I wander thus far beyond the strict limits laid down for this discussion.

Although it is only of late years that the subject has attracted at all general attention in the profession, the association of sore throat with articular rheumatism has long been recognised. One author, indeed, has attributed the earliest record of a case illustrating this association to Hippocrates; but a reference to the original passage—which is contained in one of the spurious books, the fifth of the Epidemics—shows that it will not bear such an interpretation.

The name "rheumatic angina" is first met with in the writings of Stoll,[1] but it is probable that he, in common with many later writers, applied it to sore throat attributable to cold rather than to that which is attended by articular symptoms. Haygarth,[2] in his essay on rheumatic fever, published in 1805, mentions cynanche as an occasional antecedent of the attack, and adds: "Hence we learn, as far as these cases afford instruction, that persons who have been previously affected with the acute or chronical rheumatism, the gout, or sore throat are most liable to suffer from attacks of this disease, and ought, therefore, to be particularly careful to avoid exposure to coldness and moisture." Bouillaud[3] also wrote as follows in 1840: "Some patients complain of sore throat and of interference with swallowing, which phenomena are accidental and due to the coincidence of a rheumatic angina." In 1865 Fernet[4] and in 1886 Benjamin Ball[5] discussed the subject in their valuable theses, Desnos[6] described rheumatic sore throat, and in 1868 Lasègue[7] reviewed the question in an admirable chapter of his *Traité des Angines*.

In his work on the *Throat and its Diseases*, Mr. Lennox Browne[8] strongly insisted upon the close connection of tonsillitis with rheumatism, and among more recent contributions to the subject the names of Mercier,[9] Hallez,[10] Piponnier,[11] Lagoanère,[12] Kingston Fowler,[13] Haig-Brown,[14] William Stewart,[15] and Mantle,[16] may be specially mentioned. My father tells me that he was long interested in the subject, although he has written nothing about it; and Dr. Fowler states that it was owing to a suggestion from him that he undertook his investigations.

It will be most convenient to divide our subject into two parts, and to consider, first the conditions in which sore throat occurs in more or less intimate association with rheumatic lesions, and afterwards to endeavour to obtain some notion of the extent of the influence of rheumatism in the causation of sore throat in general.

Many sufferers from rheumatic fever give histories of soreness of the throat at the very beginning of their illness, but in hospital practice one seldom has an opportunity of observing this initial throat affection. Usually, indeed, the symptoms are very trifling, and quite insufficient in themselves to lead the patient to seek medical advice. Preceding the articular lesions by several days, they have usually passed away entirely before the case comes under observation; and it is only when they are exceptionally severe, or last longer than usual, that it is possible, as a rule, to study the morbid appearances.

Under such circumstances I have met with mere injection of the palate and pharynx in some cases, whereas in others there has been well marked enlargement of the tonsils and sometimes follicular patches. My impression is that tonsillitis is only present in the more severe cases, and that the ordinary transient initial sore throat of rheumatic fever is, as a rule, a pharyngitis.

M. Fernet gave as early as 1865 an admirable description of the initial sore throat of rheumatic fever, which, according to him, commences suddenly with acute pain, increased by swallowing, and is often attended by some stiffness of the neck. He describes an erythematous redness of the back of the throat, and œdematous swelling of the mucous membrane, especially of that of the uvula, attended sometimes by more or less swelling of one or both tonsils. He mentions also that the sore throat may develop at a later period of the attack, and thinks it probable that it may occur as an isolated rheumatic manifestation, although it is difficult under such circumstances to be sure of its nature.

Lasegue also calls attention to the injection and swelling of the pharynx, uvula, and palate, but although he agrees that the tonsils may become involved, he believes that this is only by extension of the inflammation, and that they are not primarily attacked.

Other observers, amongst whom are Dr. Kingston Fowler and Dr. William Stewart, of Barnsley, have described cases in which tonsillitis was followed by rheumatic fever; and M. Besnier remarks that the affection may assume the form of parenchymatous tonsillitis, and is then indistinguishable from tonsillitis due to cold.

Trousseau, Fernet, Besnier, and other authors, have laid much stress on the great pain which attends the act of swallowing in cases of rheumatic sore throat, which is certainly in some cases out of all proportion to the apparent inflammation, and may, perhaps, as they suggest, arise from the implication of the pharyngeal muscles.

Dr. Kingston Fowler estimates that sore throat is present in no less than 80 per cent. of all cases of rheumatic fever, and there can, I think, be no question that the proportion is a very large one. Between those cases in which sore throat is the initial symptom of rheumatic fever and those in which it is attended by less severe articular symptoms no clear line of distinction can be drawn; but it is especially in connection with these latter cases, in which the throat affection is proportionately so severe, that the question arises whether it is correct to suppose that the sore throat is merely the earliest manifestation of the rheumatic process, or whether the rheumatic symptoms are not rather complications of the throat affections. This latter view receives support from those cases which Dr. Mantle has so well described, in which an infectious sore throat is attended by rheumatic lesions.

Dr. William Stewart, who holds that the throat affection is the cause of the rheumatic symptoms, believes that sewer gas is an

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[1] *Ratio Medendi*, 1777, vol. i, pp. 84 and 89.
[2] *A Clinical History of the Acute Rheumatism*. 1805.
[3] *Traité du Rhumatisme*, 1840, p. 248.
[4] *Thèse de Paris*. 1865.
[5] *Du Rhumatisme Viscéral*. 1866.
[6] *Dict. de Med. et Chir. Prat.*, article "Angine."
[7] *Traité des Angines*. 1868.
[8] *The Throat and its Diseases*; 1st edition; 1878.
[9] *Bull. de la Soc. Méd. de la Suisse Romande*, 1870, iv, p. 442.
[10] *Thèse de Paris*, 1870.
[11] *Thèse de Paris*, 1876.
[12] *Thèse de Paris*, 1876.
[13] *Lancet*, 1880, ii, p. 938.
[14] JOURNAL, 1885, ii, p. 680.
[15] *Ibid*, 1882, ii, p. 939.
[16] *Ibid*, 1885, ii, p. 960.

impcrtant factor in its causation. He also believes that the form of sore throat which is associated with rheumatic symptoms is closely connected with scarlatina, if not actually scarlatinal, for he has met with it in families, some members of which were suffering from that disease; and Dr. Mantle also says that such epidemics of infectious sore throat are apt to occur in districts in which scarlatina is also present.

Now it is a well known fact that rheumatism, or a group of lesions so like those of rheumatism as to be clinically indistinguishable from them, is a common complication of scarlatina; it is also established that sore throat may be practically the sole manifestation of scarlatina, and it seems highly probable that some at least of the cases under discussion are in reality cases of abortive scarlatina. I recently had under my care an adult man in whom, after the articular troubles which followed sore throat had disappeared, the earliest clear indication of scarlatinal origin was afforded by extensive desquamation of the skin of the hands and feet. On the other hand, rheumatic symptoms are present in many cases of sore throat in which such an origin may almost certainly be excluded, and I believe that the above explanation is only applicable to a very limited number of cases.

The question next arises whether mere articular pains are correctly described as rheumatic symptoms. I believe that they are, but would limit this statement to pains which can be distinctly localised in the joints. In connection with erythema, and with chorea, similar pains are common, and there is good reason for believing that they are rheumatic; but my chief reason for holding that the articular pains which often accompany sore throat are of this nature is the fact that a very large proportion of the patients who suffer from them have either had rheumatic fever at some time or are members of rheumatic families.

It is sometimes stated that endocarditis may be developed in such cases, and even in those who suffer from sore throat, but have no articular pains. If this can be established a powerful additional argument in favour of the rheumatic origin of the articular pains will be forthcoming. At present, however, the evidence upon this point is not convincing.

Dr. Mantle has detected mitral murmurs under these circumstances, but, in his experience, these murmurs have always disappeared under observation. Dr. Cheadle[17] mentions the case of a boy, aged 6, who developed a murmur during an attack of tonsillitis, the organic origin of which was open to doubt.

In the case of a man, aged 30, who was suffering from a severe and somewhat prolonged attack of pharyngitis, and who had true articular pains, I detected a soft apical murmur and some displacement of the apex beat, but I could not satisfy myself that the murmur was heard in the axilla, or behind; and within a fortnight it was no longer heard at all.

There is another well-marked group of cases in which sore throat, usually tonsillitis, is followed by rheumatic fever, after a considerable interval. If such throat affections are rheumatic it is obvious that a rheumatic sore throat may constitute the whole of a rheumatic attack.

It is interesting to notice that among the cases dealt with in the report of the Collective Investigation Committee on Acute Rheumatism,[18] tonsillitis, when it was noted as an antecedent of rheumatic fever, in the great majority of cases preceded it by a less interval than twelve months.

I recently had the opportunity of observing an attack of acute tonsillitis in a boy, aged 14, a member of a strongly rheumatic family, who developed rheumatic fever with endocarditis and pericarditis a few months later.

Although the evidence of the rheumatic origin of the throat affection is much weaker in these cases than in those which the two events are directly associated, there is, I think, some reason for believing that it is in reality an isolated rheumatic manifestation, which may or may not be followed by a series of other rheumatic events.

In the rheumatism of children any of the various lesions of the disease may occur alone or in association with others, and some of the cases which are met with at this period of life supply the most satisfactory evidence of the existence of a true rheumatic sore throat. Speaking of such cases, Dr. Cheadle says: "Tonsillitis may occur at any period of the rheumatic series, although it most often comes first, immediately preceding arthritis." It is obvious that when tonsillitis appears as a later event in the series we may dismiss all idea of the rheumatic symptoms being complications of the throat affection. In my experience the sore throat which forms a part of children's rheumatism has usually taken the form of follicular tonsillitis, and I may briefly quote the notes of two cases which illustrate this.

A girl of 11, who had previously suffered from chorea, was brought to me as an out-patient on account of a slight return of the choreic movements. She had a mitral regurgitant murmur, some of her joints were swollen and painful, and subcutaneous rheumatic nodules were found in several situations. There could be no doubt of the rheumatic nature of the case. Within a week this patient developed well-marked follicular tonsillitis, and an eruption of erythema papulatum. She made a good recovery, and although fresh eruptions of erythema appeared she had no return of the tonsillitis. In this instance the throat affection appeared simultaneously with no less than five definite rheumatic manifestations.

Another girl, aged 15, suffered from follicular tonsillitis in association with subcutaneous rheumatic nodules, and a peculiar bullous erythema. Some months previously she had presented herself at the casualty department of St. Bartholomew's Hospital with erythema papulatum, and was found to have mitral stenosis and regurgitation, dating from a previous attack of rheumatic fever. She was at that time admitted to the hospital under the care of Sir Dyce Duckworth, and while in the ward exhibited a series of erythematous eruptions and acute pericarditis.

The association of sore throat with erythema multiforme and erythema nodosum is by no means uncommon, even in adults. Indeed, if we group together those rheumatic manifestations which are especially apt to occur in association, sore throat, erythema, and arthritis would form one such group. Both sore throat and erythema are especially apt to be attended by articular pain, or more definite arthritis; and in cases in which they are the most prominent lesion there is little liability for the endocardium to be involved, and Lasegue and others have suggested that the rheumatic sore throat is an erythematous affection of the palate and pharynx, analogous in its nature to cutaneous erythema. I may mention that in association with erythema I have met with both pharyngitis and tonsillitis.

The evidence which I have endeavoured to lay before you thus briefly is, I think, sufficient to show that both pharyngitis and tonsillitis occur so frequently in direct association with unequivocal rheumatic lesions, that they must be assigned places among the manifestations of the rheumatic state, for how else can we explain the extreme frequency of the initial sore throat of rheumatic fever, or how shall we separate tonsillitis from the other rheumatic events in childhood? At the same time, it is evident that just as chorea and erythema have other causes besides rheumatism, so there are many cases of sore throat which have no connection with this disease. It is, therefore, desirable to attempt to form some estimate of the part played by rheumatism in the causation of pharyngitis and tonsillitis in general. This task, which is necessarily a difficult one, is rendered more so by the probability that these affections may occur as isolated rheumatic manifestations, in those who have not yet shown any other indication of such tendencies.

The statistics bearing upon this question are few in number. Dr. Haig-Brown[19] found that there was a suggestion of rheumatic origin in 76 out of 119 cases of tonsillitis occurring in schoolboys, or 63.9 per cent., and Dr. Green estimates that two-thirds of all cases of tonsillitis are of rheumatic origin. With a view to obtaining further information on the subject, I have tabulated a series of 169 cases of sore throat in hospital out-patients, taking them without selection, and as nearly consecutively as circumstances allowed, throat affections due to specific fevers and those of syphilitic origin being excluded. Of the 169 patients, 102 had tonsillitis and 67 pharyngitis; 136 patients, 82 with tonsillitis and 54 with pharyngitis, were able to give fairly definite accounts of their family histories. Of the 82 with tonsillitis, 21, or about one quarter, gave histories of rheumatic fever in near relations. Of the 54 with pharyngitis, 20, or rather more than one-third, gave similar histories. Among non-rheumatic patients I have found the proportion to be about one-fifth.

Figures of this kind are, of course, liable to many sources of error, the most serious of which is the inaccuracy of the information supplied, and they must only be regarded as affording a very rough approximation. Eight patients with tonsillitis and 4 with pharyngitis had previously suffered from rheumatic fever; 29 patients had articular pains which could be localised in particular

[17] Harveian Lectures, *Lancet*, 1889, i, p. 870, note.
[18] JOURNAL, 1888, i, p. 387.
[19] *Loc. cit.*

joints, and of these 4 had previously suffered from rheumatic fever, and no less than 15 came of rheumatic families; 2 could give no family history of any kind; of these 29, 16 had tonsillitis and 13 had pharyngitis.

Table of the Cases of Pharyngitis and Tonsillitis in which there were Rheumatic Family or Personal Histories.

—	Tonsillitis.			Pharyngitis.			Total.
	Family History of Rheumatic Fever.	Family History of Rheumatism.	No Rheumatic Family History.	Family History of Rheumatic Fever.	Family History of Rheumatism.	No Rheumatic Family History.	
Coincident acute or subacute articular rheumatism	—	—	1	—	—	—	1
History of past rheumatic fever, coincident articular pains ...	1	—	1	1	—	1	4
Coincident articular pains	4	1	9	9	—	2	25
Cases in children with rheumatic manifestations	—	—	2	—	—	—	2
Coincident erythema...	1	—	—	1	—	—	2
History of past rheumatic fever ...	2	—	4	2	—	—	8
History of past joint pains (not reckoned as rheumatic)	1	—	2	—	1	4	8
Cases with no personal rheumatic history...	11	5	—	7	—	—	23
							73 or omitting cases with past joint pains only 67

In one case tonsillitis was the precursor of definite articular rheumatism. In three it was associated with definite rheumatic symptoms, and in two with erythema only. Tonsillitis was associated with a personal rheumatic history (inclusive of articular pains) in 26 cases, pharyngitis in 16. If we add to these 16 cases of tonsillitis and 7 of pharyngitis with family history only, we obtain a total of 42 cases of tonsillitis and 23 of pharyngitis in which there was some suggestion of a rheumatic origin. These figures I may express for convenience as 41.17 and 34.32 per cent. respectively.

The heart was examined in 168 cases with the following results: Murmurs indicative of organic valvular disease were present in 6 cases, in all of which definite rheumatic symptoms were present at the time or had been suffered from at some previous time. In 2 other cases murmurs, not certainly organic, were heard, and in a third the murmur was almost certainly hæmic. Abnormalities of the sounds were noticed in 11 other cases, in 5 of which there was nothing to suggest a rheumatic origin, whilst in 5 joint pains were present, and in 1 erythema.

To the arguments based upon the results of treatment I do not attach any great importance. We know so little at present of the action of the salicylates upon any rheumatic lesions except arthritis, that I do not think the good results obtained with these drugs in cases of tonsillitis afford any valid argument in favour of the rheumatic origin of this lesion. I may mention that I have not formed so high an opinion of the efficacy of these drugs in the treatment of tonsillitis as some have done, and I have sometimes seen more rapid recovery under their administration in cases which gave no other indication of a rheumatic origin than in others which were apparently of such origin.

My conclusions are as follows:—

1. Both tonsillitis and pharyngitis are sometimes manifestations of rheumatism.

2. Some evidence pointing to a rheumatic origin is obtained in about one-third of the cases which come under treatment for sore throat of either variety.

3. It is possible that rheumatism may occur as a complication of infectious sore throat, just as it frequently occurs as a complication of scarlatina; but it is probable that in many cases apparently of this kind the throat affection is really abortive scarlatina.

4. True articular pains occurring in association with sore throat afford evidence of a rheumatic origin.

5. When sore throat is the leading feature of the attack there is comparatively little tendency to affection of the endocardium or pericardium.

III.—LENNOX BROWNE, F.R.C.S.Ed.,

Senior Surgeon to the Central London Throat and Ear Hospital.

Mr. Browne still adhered to the view which he had eighteen years previously expressed in writing, that a rheumatic, or, to speak more correctly, a gouto-rheumatic, diathesis was an etiological factor of great importance in the majority of patients subject to recurrent tonsillitis. After a brief review of the literature of the subject, he only claimed what had been claimed for him by another, namely, that he was "the first to emphasise the etiological, semeiological, and therapeutic analogy between tonsillar inflammations and the arthritic diathesis;" for although the idea had been previously advanced tentatively, the enforcing of the suggestion, as he had done in his book, had at the time been received with ridicule by more than one medical review. He held that the constitutional state underlying quinsy was a combination of the influences of both rheumatism and gout, giving the clinical evidences tending to this conclusion. Regarding the special views as to the explanation of this association of tonsillitis with the arthritic diathesis, he mentioned several held by various authors. Some considered that the joint is affected from the throat in a reflex manner from an irritation of the vasomotor nerves; others trace both affections back to infection, and consider that the rheumatic pains are pyæmic. Some, who favour a gouty association, think that the principal factor is a faulty digestion or metabolism, the blood being charged with a greater number of "fatigue products." But the probably correct explanation was that of Sir Andrew Clark, who, in a letter which was read, said: "If one will think merely of the rapidity with which the tonsil manufactures and discharges lymph cells, it will not be difficult to see how a sudden suppression of this process, the accumulation of effete matters in the crypts, and the filling up the lymph spaces with products of bacteria life, and with matters undergoing evolution, may contaminate the blood and originate the troubles considered as rheumatic." These views were decidedly in accordance with the newest opinions on the physiology of the tonsil as enunciated by Hingston Fox, supported by those of Hill, and since generally accepted.

Mr. Lennox Browne did not recognise many varieties of tonsillitis, for he thought that, except superficial erythema and peritonsillitis, all other classifications were of degree rather than of kind. As to the statement that tonsillitis did not often lead to suppuration, such a termination depended entirely on the degree of inflammation, and any consideration thereof should be compared with the frequency with which effusion into joints took place in attacks of rheumatism and gout respectively. Lastly, he pointed out that all methods of treatment (of which salicylate of soda, first introduced by him in 1878 for this disease, was the most efficient) proved the rheumatic association. Although in a minority, he was not favourable to the scarification or puncturing of an inflamed tonsil unless pus was clearly established, and his objections were analogous to those held by Garrod and all the best authors to punctures and leeches in gouty inflammation. He also referred to the great benefit to be derived from the application of continuous cold, without moisture, by means of the Lieber coil. When first employed its success appeared rather to contra-indicate the rheumatic view of tonsillar inflammation, but recent experience had shown that many cases of articular rheumatism were more rapidly relieved by continuous cold than by the more ancient measures of hot fomentations and cotton-wool packing.

IV.—R. HINGSTON FOX, M.D., M.R.C.P.,

Physician to St. Luke's Medical Mission Dispensary.

The present essay is a contribution towards the study of inflammation of the tonsil, and the relation of this inflammation to a certain group of diseases, including some specific fevers, and also acute rheumatism. In order to promote clearness, the subject matter is arranged in the form of propositions; the first half of these set forth matters of fact, and in the remainder some general deductions are drawn.

1. The tonsils are inflamed in the course of several specific fevers, especially in scarlatina and diphtheria, and a membranous deposit, probably a slough, is formed upon their surface, generally in diphtheria, and sometimes in scarlatina. In enteric fever also the tonsils are often inflamed, but this disease attacks principally

certain lymphatic organs in the ileo-cæcal region of the intestines, organs which are in some respects homologous to the tonsils.

2. We have next to mention certain forms of tonsillitis, which may be classed under two main heads:

(1) *Epidemic Sore Throat*, comprehending those irregular disorders, of which outbreaks occur from time to time, in the presence of bad sanitary conditions. Besides inflamed tonsils and fever, the other symptoms vary much in character and in degree, even in the same outbreak. Some of the cases approach scarlatina, others incline to diphtheria; in others, again, bowel symptoms may be present, or acute inflammation of the joints.

(2) *Simple Tonsillitis*, so-called follicular, will include the common forms, occurring sporadically, or in groups of cases. Both tonsils are inflamed, generally with obvious enlargement, and there may be plugs or small patches of deposit, seldom any extended membrane. There is, however, much variety in the symptoms, and it will usually be found that pains in the joints and tenderness in the right iliac fossa were present near the onset of the attack.

3. No clear line of demarcation can be drawn between the five varieties of tonsillitis thus far enumerated. Cases are often met with intermediate in position between two of them, and in all degrees of severity. So-called "spotted throat," "pseudo-membranous tonsillitis," etc., must be ranged under one of the two latter heads.

In a paper on "Tonsillitis and its Relations to Scarlatina and Diphtheria," read by the author before the Medical Society of London in 1885,[1] many instances are cited of these forms of tonsillitis, especially of outbreaks of epidemic sore throat, recorded under various designations in the medical journals. In addition, reference may be made to the observations of Dr. Haig-Brown,[2] Mr. T. F. Raven,[3] and others.

4. In acute rheumatism the tonsils are often inflamed, most commonly before, or early in, the attack, but sometimes later in its course. In addition to this, it is to be noted that acute arthritic symptoms are common in connection with the various forms of tonsillitis. Thus such symptoms often occur in the course of scarlatina, occasionally in the course of diphtheria,[4] and of enteric fever,[5] and, as already stated, often in epidemic sore throat, and, in a slight degree, in simple tonsillitis. We must distinguish clearly between acute rheumatism, which is "a general disease with localisation in the joints" (Fagge) and acute arthritic symptoms, which may or may not have any connection with that disease.

Tonsillitis is one of the "seven phases" of the "rheumatic series" described by Dr. Cheadle (see below). The Collective Investigation on Acute Rheumatism last year found that 24 per cent. of patients had tonsillitis at some period antecedent to or during the rheumatic attack, besides 3 per cent. who had "sore throat" and 2 per cent. "pharyngitis."[6] It is to be regretted that the report states nothing as to the form of the tonsillitis, and whether of one or both tonsils.

The significance of acute joint inflammations is as yet full of mystery. On the one hand we see the neurotic origin of some cases of acute rheumatism, and the occurrence of acute joint trouble in tabes dorsalis; on the other, we find arthritis following dysentery or gonorrhœa, attending pyæmia, and yet again attacking the puerperal state. Further, outbreaks of an epidemic rheumatic fever, with erythema and albuminuria, have been described by several observers, especially Dr. Mantle,[7] who attributes it to bacteria found in the synovia or blood.

5. True quinsy, by which term I mean an inflammatory disease attacking one tonsil, the second often following it, and tending to suppuration in or about the tonsil, is a distinct affection from simple tonsillitis as described.[8] It commonly follows nervous exhaustion or muscular fatigue.

6. Inflammation of the tonsil, in all the forms alluded to, runs a brief course, tending, unless of malignant type, to subside in a few days, and suppuration seldom occurs, excepting in the case of true quinsy. Tonsillitis, of whatever kind, affects chiefly children and adolescents of either sex, not often those beyond middle life; it attacks rich and poor, the well-fed and ill-fed, without much distinction.

7. The three specific fevers alluded to are communicable, and one attack generally protects its subject from a second of the same disease. Such communicability and protection are much less constant in epidemic sore throat, and are usually absent in simple tonsillitis, although this affection sometimes appears to have infective characters.[9] Simple tonsillitis is, like true quinsy, extremely prone to recur in the same individual, often many times, the chronic enlargement of the tonsils, which so frequently results from this disorder, probably conducing to this liability.

Thus far we have dealt with matters of fact. We pass now to some deductive propositions.

8. Seeing that cases of scarlatina, diphtheria, epidemic sore throat, and simple tonsillitis shade off into one another as regards their clinical characters, and that cases are found holding intermediate positions between all these, it is highly probable that these four diseases are produced by causes of a similar nature. If the cause be in each case connected with a living poison introduced from without, it is not improbable that the poisons of the specific fevers have, under a process of evolution, attained to their more stable form, become able to reproduce themselves indefinitely in the human subject, and thus to cause communicable and fairly-defined diseases, such as scarlatina and diphtheria. Other less developed forms, more dependent upon putrefying animal matter for their activity, would cause epidemic sore throat or simple tonsillitis.

This is a theory not as yet capable of actual proof; but it is claimed that it is in harmony with the laws which we know to obtain in the organic kingdom, and that it explains some of the phenomena presented by these diseases.[10]

Should all these disorders be styled "specific?" This will depend upon what we mean by the term. If we require proof of a definite outside cause (Fagge), we must as yet withhold the appellation; if, on the other hand, we make communicability the chief condition, the lesser forms of tonsillitis will belong rather to the "specialised" class of Hutchinson,[11] denoting those diseases which will reproduce the same diseases for several generations, than to the "specific" disorders, which reproduce themselves without limit.

9. The evidence justifies us in associating together as allied diseases the following group: scarlatina, diphtheria, enteric fever, the forms of tonsillar inflammation classed under epidemic sore throat and simple tonsillitis, and, lastly, acute rheumatism. This might be styled the "lympho-rheumatic" group of diseases. These diseases have some of the following features in common: acute lesions of the tonsils or of other lymphatic organs of the digestive tract, arthritis, inflammation of endocardium and pericardium, and of serous cavities. Acute rheumatism stands in a different position to the other maladies, in that the period of its course is indefinite.

Dr. Cheadle has lately described[12] the "seven phases" of the "rheumatic series," namely, endocarditis, pericarditis, pleurisy, tonsillitis, exudative erythema, chorea, and subcutaneous nodules. The last alone of these is, he states, peculiar to acute rheumatism. The other phases are, indeed, more or less common to the group of diseases under review, and we may add to them other forms of erythema, and albuminuria.

With regard to heart lesions, it is common even in simple tonsillitis to find some signs of heart disturbance.[13] The second sound is markedly accentuated in the second and third interchondral spaces on the left side, and both sounds are generally reduplicated, the first being doubled in the apex region, where it is also ill-defined and murmurish, and the second in the region of accentuation.

10. The association between the diseases of the lympho-rheumatic group is further shown by the facts that often one individual is attacked at different times by two or more of the diseases named, and that these diseases attack several members of one family, whilst other families appear to enjoy an immunity from the entire group.

It is not easy to collect statistics of the prevalence of these diseases in families: but one cannot, I think, watch for such prevalence without observing abundant instances of it. Two illus-

[1] See *Proceedings of the Medical Society of London*, vol. ix.
[2] *Tonsillitis in Adolescents*, London, 1886.
[3] "An Epidemic of Exudative Tonsillitis in Children, *Practitioner*," 1887.
[4] I have recently observed a well-marked example in a man, aged 34.
[5] See an instructive discussion by Drs. Finlay, Powell, and others at the Clinical Society, March, 1887, *Lancet*, p. 664.
[6] JOURNAL, 1888, vol. i, p. 391.
[7] JOURNAL, 1887. vol. i, p. 1381; Dr. Downes, *ib.*, p. 1384.
[8] See the author's paper in *Proc. Med. Soc. Lond.*, vol. ix; also Dr. F. P. Atkinson's "Short Notes" in the *Practitioner*.
[9] Haig-Brown, *op. cit.*, p. 17.
[10] See the author's paper above cited.
[11] Lettsom. Lect., JOURNAL, 1886, vol. i, p. 55.
[12] Harveian Lecture, *Lancet*, 1889, vol. i, pp. 821, 872.
[13] *Cf.* Cheadle, *ibid.*, p. 872, note 8. Haig-Brown, *op. cit.*

trations here will suffice: (1) Two sisters married; each had a large family, now all grown up. and lived in an open city suburb. Various children of Mrs. E. suffered from rheumatic fever, scarlatina, diphtheria, and enteric fever. Mrs. X.'s children enjoyed no better average health, but not one member was attacked by any of these diseases. (2) Mr. R. died, aged 47 years, of cerebral hæmorrhage (epilepsy in early life), his wife, aged 56 years, of enteric fever. Of ten children, one son had enteric, diphtheria, and acute rheumatism (?), dying at length of renal disease; another had rheumatic fever, dying of cardiac mischief in consequence; most of the children had scarlatina; another son had "rheumatic fever with diphtheria;" another epilepsy.

In the Collective Investigation of Cases of Acute Rheumatism (already quoted), scarlet fever was recorded to have occurred in 13 per cent., whilst measles (in general the more frequent disease) was noted in less than half that proportion; enteric fever in nearly 2 per cent.

11. A review of the symptoms common to the lympho-rheumatic group of diseases gives us little ground as yet for basing any hypothesis as to the essential nature of the morbid processes. It is clear, however, that the lymphatic system, with which the tonsils, ileo-cæcal glands, serous cavities, and perhaps the joints, are connected, is especially concerned, and that many of the fibrous tissues of the body are also affected. For further light we may have to await the results of bacteriological and chemical research.

The functions of the tonsil remain to be one of the unsolved problems in medical science. Of recent years these organs with the ileo-cæcal (Peyer's and solitary) glands have generally been assigned, on structural grounds, to the lymphatic system; and in 1885 the writer stated[14] some grounds for believing that the function of these glands had to do with the reabsorption of materials from the surplus secretions; in the case of the tonsils, from the saliva.[15] Lately, Retterer has published[16] some elaborate researches into the structure of the tonsils in man and the lower animals. His conclusion is that the tonsils are, to some extent, secreting glands, but as they have no duct, he conjectures that the products of secretion pass directly into the blood. It will be seen that this attributes to the tonsil powers of absorption as well as of secretion. Dr. William Hill,[17] following Stohr's observation of leucocytes passing through the epithelial layer into the mouth, advances the theory that the tonsils, receiving material from the mouth by way of the lymph channels, supply leucocytes for "scavenging" and other purposes in the pharynx and stomach. I cannot but think that the site of the tonsils, lying as they do in the channel along which, when the mouth is at rest in the intervals of meals, the saliva is slowly trickling, must have an important bearing upon their function.[18] The tonsils are indeed covered by a thick layer of stratified epithelium, but this is soft, and when steeped in an animal fluid containing a ferment, may well permit of some important interchange going on. Schäfer's observations on the absorption of food matters by the similar glands in the intestines lends support to the same view.[19]

12. Evidence does not at present justify the inclusion of true quinsy, as described, in this group of associated diseases.

13. The tonsils are also inflamed in the secondary stage of syphilis, and as arthritic symptoms are not uncommon at the same time, and an exudative exanthem is present, we may with much probability regard syphilis as a specific fever allied to those mentioned, but with a much longer period.[20]

Dr. BARCLAY BARON (Clifton) said that so close was the association with rheumatism that the question of the condition of the heart ought always to be inquired into in cases of tonsillitis. Were this done more systematically, they would frequently find heart troubles that were now missed. Personally, he was convinced that there was a close connection between rheumatism and tonsillitis, and he never omitted to inquire into this matter in a case of inflammation of the tonsil. With reference to the time connection between the two conditions, he rarely saw tonsillitis in his cases of acute rheumatism occurring in hospital practice, although transitory sore throat, probably a pharyngitis, usually preceded the rheumatic attack; as a rule tonsillitis occurred in vaguely rheumatic cases, namely, pleurodynia, lumbar and other muscular pains, as well as joint stiffness, etc. He was not able to differentiate any distinct variety of rheumatic tonsillitis, primary or secondary. Systematic use of drugs adapted to allay rheumatic symptoms would not be given up, and he related particulars of a case of rapid cure under salicylates. Another point which he considered important was that nothing but good was done to patients by removal of diseased tonsils, whether in rheumatic people or not.—Dr. CHARLES WARDEN said he never saw a case of acute or even chronic rheumatism without some congestion of the tonsils and all the adjacent mucous membrane; the rheumatic type of tonsillitis did not, in his experience, as a rule, go on to suppuration. The successful treatment of the conditions proved the identity of the two disorders, and he had found that if cases came under treatment soon enough, they were checked by alternate doses of salicylates and iodide of potassium, with alkalies and colchicum. He believed also in the use of sulphur and guaiacum in addition.—Dr. DE HAVILLAND HALL thought it was desirable to be careful in the use of the terms employed, and that parenchymatous tonsillitis should be employed as the equivalent for quinsy, and not interstitial, as used by Dr. Haig-Brown. He agreed with Mr. Lennox Browne that lacunar was preferable to follicular, but that the latter term had taken too firm a hold on the professional mind to be discarded. Speaking from his own experience Dr. Hall favoured the view that quinsy was due to fatigue and mental overstrain, and that probably there was a gouty inheritance in many of these cases, and that the attack showed several points of resemblance to the symptoms present in acute gout. The importance of insisting on the connection between tonsillitis and rheumatism could not be over-estimated. As an example he quoted a case of follicular tonsillitis in a girl 8 years of age. In this instance the general practitioner in attendance omitted to examine the heart, but, on doing so, Dr. Hall found pericardial friction and an apical murmur. There could be little doubt that if the medical man in attendance had been aware of the connection between tonsillitis and rheumatism he would not have overlooked the importance of ascertaining the condition of the heart. Dr. Hall suggested a resemblance between follicular tonsillitis and erysipelas: in both there was a great liability to recurrence, and a tendency to spread from the point first attacked to another. —Dr. SCANES SPICER said the discussion would accentuate the importance and frequency of the connection among the profession at large. As to the essential nature of the connection it was impossible, in the present state of knowledge, to come to any conclusion. They did not know yet the essential nature of rheumatic process, whether chemical, biological, or neurotic; and there was still some uncertainty as to the structure and functions of the tonsils.

[14] *Journal of Anatomy and Physiology*, vol xx, p. 559.
[15] This view has since been discussed by Mr. Lennox Browne, Dr. Scanes Spicer and others, with more or less approval.
[16] Pouchet's *Journal d' Anatomie*, 1889, p. 345, etc.
[17] *Tonsillitis in Rheumatic States*, London, 1889.
[18] See the author's paper in *Journ. Anat. Phys.*; also Dr. Scanes Spicer, "The Tonsils," reprinted from the *Lancet*.
[19] *Internat. Journal of Anat. and Hist.*, vol. ii, No. 1, 1885, pp. 6-29.
[20] See Hutchinson on Constitutional Syphilis, in Reynolds's *System of Medicine*, vol. i.

A DISCUSSION
ON
PERICHONDRITIS OF THE LARYNX.

In the Section of Laryngology at the Annual Meeting of the British Medical Association, held in Leeds, August, 1889.

I.—F. DE HAVILLAND HALL, M.D., F.R.C.P.,

Physician to Out-patients and Physician in charge of the Throat Department at the Westminster Hospital.

MANY circumstances which have happened during the last two years have combined to render the subject of perichondritis of the larynx one of unusual interest; even the lay public have become familiar with the term, so that I think that those gentlemen to whom was intrusted the task of drawing up a programme for the Section of Laryngology deserve our thanks for selecting as one of the subjects of discussion a disease of the larynx which much stands in need of careful consideration. From all points of view, perichondritis of the larynx is a condition which should rivet the attention, whether we consider the grave consequences which may befall an individual in whom the laryngeal cartilages are diseased, even though the primary cause be comparatively innocent, or bear in mind that what appears to be simply a perichondritis may

be the commencement of malignant disease. It will conduce to the clearness of the discussion if, at the commencement, I indicate the points which, in my opinion, require elucidation, and this will, I hope, assist in confining the debate within reasonable bounds; for, unless some more or less arbitrary limit is assigned to the discussion, every speaker may attack the subject from a different position; and in this case, considering the short time at our disposal, it would be impossible to arrive at any definite conclusions. I, therefore, submit the following points for discussion, upon each of which I shall have something to say:

1. Is there such a disease as primary laryngeal perichondritis?
2. Are there any characteristics by which the laryngeal perichondritis of tuberculosis, of syphilis, and of cancer can be differentiated?
3. The occurrence of laryngeal perichondritis in enteric fever.
4. The causes of the dyspnœa of laryngeal perichondritis.
5. The prognosis in laryngeal perichondritis.
6. The treatment of laryngeal perichondritis.

I will now proceed to discuss these questions *seriatim*.

1. *Is there such a thing as Primary Laryngeal Perichondritis?*—Before we can profitably turn our attention to this question, it will be well to come to an understanding as to what is meant by a primary perichondritis, and this is perhaps best arrived at by saying what it is not. Primary perichondritis is not the perichondritis met with in syphilis, tuberculosis, cancer, enteric fever, etc., or that due to traumatism; in other words, if any distinct constitutional vice can be discovered, or any direct exciting cause detected, the perichondritis resulting therefrom would not be called primary. I would restrict the term primary perichondritis to cases in which inflammation of the perichondrium occurs as the result of catarrh, or even possibly from sudden and violent over-use of the voice, or other indefinable causes. That primary perichondritis is an entity I have not the slightest doubt, and almost all the recognised authorities on the subject agree in this view, but that many a case diagnosed as primary perichondritis really owes its origin to some definite local or constitutional condition, and is therefore secondary in the ordinary acceptation of the term, I am equally convinced. Thanks to the labours of Mr. Bland Sutton and others, we are gradually calling upon comparative pathology to assist us in settling some of the moot points in human pathology. This it can do, as the problems in the pathology of the lower animals are less intricate than in man. As an example, I may quote a case of acute necrotic perichondritis of the larynx in a pig, put on record by Mr. P. S. Hutchinson.[1] The animal, which was a fat and otherwise healthy boar, suffered from symptoms exactly resembling croup, the breathing being stridulous and very difficult. The onset had been rapid. As the dyspnœa was great, the animal was killed. At the *post-mortem* examination, there was found inflammation around the cricoid cartilage, which was partially necrosed. No considerable suppuration attended the process, but there was general œdema of the larynx. There was no ossification in this case, and the animal, though adult, was not senile. This I think I may fairly claim as an example of primary perichondritis, and if it can occur in a pig, there is no reason to doubt its existence in man. One of the difficulties in proving to demonstration that there is a primary perichondritis arises from the fact that cases of perichondritis coming on primarily are usually much less severe than those originating in some grave diathetic condition, and consequently the patients recover, and therefore the opportunity of demonstrating the nature of the malady in the *post-mortem* room is wanting. Gerhardt[2] assumes the existence of a perichondritis when there is a marked swelling with considerable redness on either lateral wall of the larynx, especially if the ventricular band projects towards the middle line, under conditions in which a perichondritis may be expected, that is, syphilis, typhoid, etc., if at the same time there exist fever, dyspnœa, and an immobility of the vocal cords which cannot be considered as due to paralysis. Now I accept Gerhardt's conclusions, but would extend them to cases in which the causes of secondary perichondritis are absent. Schroetter[3] lays stress on the possibility of primary perichondritis occurring as the result of catching cold, though of course it is much less common than the secondary variety. At the present time I have under treatment a patient who, after singing loudly while in a sailing boat at sea, suddenly lost his voice; when he came under observation, the left vocal cord, which was congested, was immobile in the cadaveric position, and there was some swelling about the arytenoid.

Now this seems to me just the sort of case in which one might fairly assume a primary perichondritis. With sedative inhalations, rest of the voice, and iodide of potassium, the patient has gradually improved, and now there is a fair amount of mobility in the affected cord. Schroetter[4] has drawn attention to the occurrence of perichondritis without purulent exudation, which can heal, as in the case I have just mentioned, with or without visible results; the formation of pus is, however, the more usual result. An instructive case bearing on this question is reported by Mr. Francis Hollinshead.[5] A man, aged 39, suffered from a troublesome hoarse cough, attended with difficulty in breathing and all the symptoms of a severe attack of laryngeal catarrh. On laryngoscopic examination the larynx was found red, swollen, and ulcerated; there were also thickening and tenderness externally. Large doses of perchloride of mercury and iodide of potassium effected no improvement. Tracheotomy was performed. The cough gradually lessened, and the thickening of the larynx and ulceration subsided. Later on a piece of exfoliated cartilage was coughed up. Two months after the operation he was able to do without the tube. Except for some feebleness of voice, the man was quite well eight years later. Now it may be objected that, if only sufficient care had been taken, some constitutional state underlying the local disease would have been discovered; but to this I would answer that the subsequent good health of the patient would hardly confirm this view. Still I fully recognise the importance of not drawing conclusions too hastily, as I once fell into this mistake and put on record in the Clinical Society's *Transactions*[6] a case which I considered to be an example of primary perichondritis. The after-history of the patient and the results of the *post-mortem* examination showed me that the perichondritis really had a syphilitic origin. A case described by Dr. Norris Wolfenden[7] shows the possibility of mistaking malignant disease of the larynx for primary perichondritis. The patient in question afterwards came under the case of Dr. Semon, and, thanks to his courtesy, I had the opportunity of making an examination, and satisfied myself as to the malignant nature of the laryngeal affection.

Ziemssen states that he has observed two cases of perichondritis in which neither during life nor on *post-mortem* examination was there any occasion found for the development of the inflammation. While, then, admitting the possibility of primary laryngeal perichondritis, I would advise an intelligent scepticism in making the diagnosis.

As a kind of transition between primary and secondary perichondritis may be mentioned the perichondritis described by Dittrich as due to "decubitus, in consequence of the pressure of the cricoid cartilage, particularly if ossified, upon the soft parts in front of the vertebral column," and, as I shall mention later on, the same theory is employed to explain the perichondritis occurring in connection with enteric fever.

2. *Are there any Characteristics by which the Laryngeal Perichondritis of Tuberculosis, of Syphilis, and of Cancer can be Differentiated?*—From what has been already stated about the difficulty in making the diagnosis of primary perichondritis, it will naturally follow that the further question of distinguishing between the causes of secondary perichondritis is often one to baffle the keenest diagnostician.

First of all, as regards tubercular perichondritis. In most cases the diagnosis can be made with ease. In phthisical cases the arytenoid cartilages are particularly liable to be affected. A very common site of tubercular ulcers is the interarytenoid fold, or they may be seen on the anterior aspect of the arytenoid cartilages. These ulcers are often very small in circumference, but, penetrating deeply, they lay bare the cartilage. The general pallor of the pharynx and larynx, and the puffy swelling of the epiglottis and arytenoid cartilages will often assist in making the diagnosis, and if tubercle bacilli are found in the secretion removed from the surface of the ulcer by the laryngeal brush, it hardly requires the corroboration of apical mischief in the lungs to clinch the diagnosis.

Schnitzler[8] records the case of a man, aged 30, who stated

[1] JOURNAL, 1888, vol. ii, p. 664.
[2] *Berl. klin. Wochenschr.*, No. 24, p. 439, 1887.
[3] *Wiener klin Wochenschr.*, Nos. 2 and 3, 1888.
[4] *Loc. cit.*
[5] *Lancet*, 1888, vol. i, p. 1129.
[6] Vol. xv, p. 195, and vol. xvii, p. 151.
[7] JOURNAL, 1888, vol. i, p. 790.
[8] *Centralblatt für Laryngologie*, Nov., 1888, p. 225.

that he had never had syphilis, and who suffered for four years from ulcers in the larynx and perichondritis of the arytenoid cartilage and catarrh of the apex of the lung. An inunction cure had no result, but iodide of potassium in 45, 60, 75 grains daily gradually dissipated all the threatening symptoms, and the ulcer on the epiglottis and the perichondritis of the arytenoid cartilages healed completely. This case emphasises the importance of treatment from a diagnostic point of view. In fact I would not like to say that any perichondritis was certainly not of syphilitic origin until I had tried the effects of full doses of iodide of potassium. It is important to bear in mind that tubercular and syphilitic laryngeal mischief may coexist, or a case, which was originally of syphilitic origin, may become tubercular, the syphilitic ulcer forming a suitable nidus for the development of the tubercle bacillus. In perichondritis of syphilitic origin the cartilage most frequently affected is the arytenoid, next the cricoid, and, lastly, the thyroid. Syphilitic perichondritis is characterised by the absence of pain, and the fact that in many cases the mischief has extended from, or is complicated with, ulceration of the pharynx, and there is possibly the history of past syphilitic manifestations.

But it is in the diagnosis of perichondritis arising from cancer that the greatest difficulties arise and the most painful mistakes are made. Just before the commencement of the illness of the German Crown Prince, I had under my care a case which illustrates the insidious nature of the malady and the difficulties which arise in attempting to make a diagnosis at an early stage of the disease. The patient, who had been a colonel in the army, was a man of magnificent physique. When first seen he gave a history of twenty years' slight hoarseness, and the laryngoscopic appearances were those of a moderate amount of chronic laryngitis. A year later he again came under observation, and there were unmistakable signs, on laryngoscopic examination, of an abscess on the right side of the larynx. This burst spontaneously, and under the influence of iodide of potassium there was marked improvement, and swallowing, which previously had been much impeded, was now accomplished without difficulty. The good general condition of the patient and the considerable improvement, both objectively and subjectively, which had followed the administration of iodide of potassium led me to hope that, in spite of the absence of any history of syphilis, the patient was suffering from specific perichondritis. Unfortunately, this was not the case. Three months after my last interview the patient died at the seaside quite suddenly, from obstruction to the breathing. He had refused to have tracheotomy performed, though warned of the possibility of the onset of dyspnœa. The *post-mortem* examination showed that the larynx was infiltrated with cancer.

On looking back to this case in the light of more recent experience, I do not see how the mistake in the diagnosis could have been avoided. Schnitzler[9] has put on record a very instructive case which illustrates the difficulties which sometimes attend the diagnosis of perichondritis of malignant origin from that due to tuberculosis. Laryngoscopic examination revealed the presence of considerable swelling of the epiglottis and extensive swelling of both ventricular bands and the arytenoid cartilages, the right one being almost immovable. The vocal cords could not be seen, except the posterior end of the left one, which appeared to be moderately congested. The subglottic region was invisible owing to the great narrowing of the rima glottidis. External examination of the neck showed that the thyroid and cricoid cartilages were much thickened, and that the surrounding tissue was infiltrated. The cervical glands formed a tumour as large as a man's fist, which at one spot showed distinct fluctuation on the left side. Examination of the lungs revealed the presence of catarrh of the apex, but the patient had never suffered from hæmoptysis, and there was no tuberculosis in his family. The sputum proved to be free from tucercle bacilli after repeated examinations. The patient had never suffered from syphilis.

Taking all these facts into account, what diagnosis could be come to? Tuberculosis was first thought of. The infiltration of the epiglottis and the swelling of the ary-epiglottic folds, which was characteristic of tuberculosis, was suggestive of diffuse tuberculous infiltration of the larynx. The fact, however, that the inter-arytenoid mucous membrane, which as a rule is chiefly affected in tuberculosis, was only slightly swollen, and that no ulceration could be detected anywhere, led Professor Schnitzler to diagnose cancer. The enlarged cervical glands and the presence of fluctuation over a circumscribed area were, however, more like scrofula than cancer. The examination of the pus from the suppurating gland showed an absence of bacilli, and an excised portion of the right epiglottic fold when examined microscopically gave a negative result. Later on there was effusion into the left pleural cavity, together with hæmorrhage from the larynx and horrible fœtor of the breath. The *post-mortem* examination confirmed the accuracy of Professor Schnitzler's diagnosis. There are two symptoms in this case which, in my opinion, are eminently suggestive of cancerous perichondritis; they are (1) the thickened and infiltrated condition of thyroid and cricoid cartilages and surrounding tissues, and (2) the occurrence of hæmorrhage from the larynx. In cancer of the larynx suppurative perichondritis may occur without a breach of the mucous membrane, so that the pus infiltrates the tissues and may come to the surface externally; whereas, in the two other common forms of perichondritis, the syphilitic and the tubercular, the necrosis of the cartilages is almost invariably due to the extension of ulceration from the surface of the mucous membrane, so that there is not the same tendency for pus to infiltrate the tissues, as it is discharged gradually through the sinuses formed by the ulceration. The occurrence of hæmorrhage from the larynx I regard as presumptive evidence of malignant disease. I have never met with it in the perichondritis of tuberculosis or of syphilis, whereas it is not at all uncommon in the cancerous form. In some cases it may be possible to remove portions of the growth from the interior of the larynx, and if these show a cancerous structure the nature of the disease is clear, but a merely negative result, as in the case of the late Emperor Frederick, is useless from a diagnostic point of view.

3. *The Occurrence of Laryngeal Perichondritis in Enteric Fever.*—There can be no doubt that laryngeal complications in enteric fever are more frequently met with on the Continent than in this country. For instance, Lüning,[10] of Zurich, states that out of 1,745 *post-mortem* examinations in enteric fever, laryngeal complications were found in 17 per cent. In 115 *post-mortem* examinations of typhoid laryngeal complications, which led to stenosis of the larynx, perichondritis with necrosis was found in 59, and in 9 other cases the ulceration extended down to the cartilage, or there was perichondrial abscess without necrosis. Ziemssen is in favour of the decubital origin of the typhoid perichondritis, and this view is supported by the record of eight cases at Tiflis.[11] In these the perichondritis came on five to ten weeks after the commencement of enteric fever, and in all without pain. This certainly looks like a condition brought about by defective nutrition rather than by any specific inflammatory process. Sestier[12] also regards the perichondritis as being due to the tendency to abscess, gangrene, and necrosis, caused by the profound debility of the convalescents from typhoid. In none of the twelve cases collected by Sestier was there ulceration at any other part of the larynx, and the same holds good in three cases related by Eve, and there is evidence for believing that in some cases, at all events, the inflammation originates in the perichondrium, and is not the result of extension of typhoid ulceration down to the cartilages. Moreover, as Eve points out, necroses of the cartilages, similar to those occurring in typhoid, are found during convalescence from variola and in glanders, thus indicating that necrosis of the larynx may be regarded as one of the sequelæ of exhausting zymotic diseases, and not a specific result. Koch, on the other hand, asserts that ulceration of the larynx is a true laryngo-typhoid state, which always coincides with the acute period of the general disease; and he is of opinion that, when in the stage of convalescence from typhoid, symptoms of laryngeal stenosis come on, they are the result of a perichondritis, and are such as usually occur in the acute illnesses of long duration. A curious feature in the perichondritis of typhoid is the absence of symptoms; this is favoured by the stupor of the patient. Even when some amount of stenosis is present, the patient has but slight characteristic marks, and as drowsiness may mask the dyspnœa, especial attention must be paid to cyanosis.

4. *What are the Causes of the Dyspnœa of Laryngeal Perichondritis?* An inquiry into the causes of the dyspnœa which is so generally met with in cases of perichondritis will be of material assistance in deciding upon the line of treatment which should be pursued. The causes of laryngeal obstruction in perichondritis may be arranged under the following heads: œdema; immobility and median position of one or of both vocal cords; abscess; im-

[9] JOURNAL, 1888, vol. i, p. 609.

[10] *Centralblatt für Laryngologie*, vol. i, p. 73.
[11] *Loc. cit.*, vol. v, p. 30.
[12] *Transactions of Pathological Society*, vol. xxxi, p. 37.

paction of the necrosed cartilage in the glottis; collapse of the cartilaginous wall of the larynx; and, finally, in the more chronic cases, the cicatrisation which follows the healing of the ulceration; this is almost entirely confined to the syphilitic cases.

Œdema is especially marked in secondary perichondritis, and it is often so extensive as to prevent a view of the deeper seated parts being obtained. Fraenkel[13] explains the immobility and median position of one or of both vocal cords as a mechanical result of the loss of insertion of the postici in the cricoid cartilage, and not as due to a paralysis of the nerves. If only a small amount of damage be done to the crico-arytenoid joint, when recovery occurs a mistake may be very readily made in regarding the fixed position of the cord as the result of paralysis of the crico-arytenoideus posticus. Semon has fully discussed this question in his article on Ankylosis of the Crico-arytenoid Joint. The diagnosis is to be made by attention to the history of the case, and a careful examination will usually reveal some alteration in the outline of the arytenoid cartilage and adjacent parts. Jurist,[14] of Philadelphia, records a case which bears upon this subject. The disease was obscure in its etiology, but supposed to be due either to a rapid acute perichondritis, or to a late syphilitic infiltration. Death was caused by prolonged laryngeal spasm. At the *post-mortem* examination, perichondritis of the cricoid cartilage was found. From a careful consideration of this case, it seems much more probable that the cords had come in juxtaposition by the loss of the insertion of the crico-arytenoidei postici, rather than by spasm of the adductors.

As can readily be conceived, the suppuration round about the necrosed cartilage may form an abscess, and in this case there may be a gradually increasing dyspnœa; and, on laryngoscopic examination, a reddish tumour may be recognised, sometimes subglottic, at other times causing so much swelling about the glottis as to prevent the cords being seen. If the abscess bursts spontaneously, or is lanced, the patient usually experiences immediate relief; this is constantly observed in cases of malignant disease of the larynx, and, if the medical man fails to recognise the true nature of the malady, the unfortunate patient is buoyed up with the hope that the worst of his difficulties are over—only too soon, however, to be undeceived by the onward progress of the disease. In connection with the evacuation of the abscess, another possible cause of obstruction to the breathing may happen, and this is the impaction in the glottis of the necrosed cartilage. When profuse suppuration has occurred, this is a risk which should always be borne in mind, as there are several cases on record in which death has occurred from suffocation from this cause before any assistance could be rendered. In proportion to the amount of destruction of the cartilages is the tendency to collapse of the larynx. Fraenkel[15] showed a preparation in which every cartilage of the larynx was more or less necrosed. In an extreme instance like this, there is no difficulty in understanding that, the framework of the larynx having been destroyed, the patency of the air-tube is lost owing to the falling in of soft parts deprived of their support. The remaining cause of stenosis of the larynx occurs almost exclusively in syphilitic cases, in which, after tracheotomy, the progress of the disease has been arrested; but, unfortunately, the development of cicatricial tissue leads to still further stenosis of the larynx, and renders the withdrawal of the cannula impossible.

5. *The Prognosis in Perichondritis of the Larynx.*—From what has been already stated it will be inferred that the prospects of a patient affected with perichondritis are very gloomy. In the rare instances in which the disease is primary and of limited extent recovery may occur, but in these cases possibly not until after tracheotomy has been performed, and it may be necessary for the patient to wear the cannula for the remainder of his life. Even if tracheotomy can be avoided much damage is generally done to the delicate mechanism of the the larynx, particularly to the crico-arytenoid joint, leading to ankylosis and consequent fixation of the cord. In secondary perichondritis the traumatic and syphilitic varieties are the most hopeful, but as already mentioned the healing of syphilitic ulceration is generally accompanied by stenosis, due to the formation of fibroid tissue, and as we shall see treatment by dilatation leaves much to be desired. In 52 cases[16] of typhoid laryngeal stenosis in which tracheotomy was not performed only 4 escaped death, and in 147 tracheotomised 77 died. These were not all cases of perichondritis, but they will serve to illustrate the grave nature of the laryngeal complications of enteric fever. In cancer of the larynx, if abscesses form and break, externally or internally, they cause a great drain on the system, and may considerably hasten the end.

6. *The Treatment of Laryngeal Perichondritis.*—At the commencement, and especially in cases of primary perichondritis, an attempt should be made to check the inflammatory process by keeping the patient in the recumbent position and forbidding him to talk, so as to ensure functional rest as far as possible. Cold should be applied externally by means of the ice-bag or Leiter's coil, and the patient should be instructed to swallow pellets of ice. Leeches applied to the throat are sometimes useful. If there be pain or tenderness, the administration of opium, in combination with small doses of tincture of aconite or antimonial wine, is indicated. If symptoms of laryngeal stenosis come on, a 20 per cent. solution of cocaine should be painted over the mucous membrane of the larynx; this may succeed in causing contraction of the swollen parts, and if this does not in itself relieve the dyspnœa, the cocaine will facilitate the use of the scarifier in cases of œdema or of the laryngeal lancet if there is evidence of the presence of pus, and suppuration may be favoured by poultices and by warm and sedative inhalations. The possibility of suffocation suddenly occurring from the separation of a piece of necrosed cartilage and its impaction in the glottis should be borne in mind, and if loose cartilage is felt it should be removed, if possible, by means of forceps. Should a severe attack of dyspnœa have occurred, tracheotomy must be performed before time has elapsed to cause the morbid changes in the lungs due to obstruction in the upper air passages. Unfortunately, when once tracheotomy has been performed, we are confronted with the difficulty of removing the cannula in those cases in which death has not occurred from exhaustion. Schroetter claims brilliant results for his plan of dilatation, but in this country, so far as I know, no cases of permanent success of dilatation of a stenosed larynx as the result of perichondritis have been recorded.

Five and twenty years ago a former colleague of mine, the late Dr. Duncan Gibb,[17] recommended that when the larger cartilages are affected, and the seat of the necrosis can be made out after immediate danger has been prevented by tracheotomy, "the thyroid cartilage must be laid open through one of its wings, so that the pent-up dead portion may be removed;" and he claims for himself the credit of being the first person to recommend the removal of necrosed laryngeal cartilage. Last year, in the annual of the *Universal Medical Sciences*, the editor[18] (Dr. Sajous) writes that he believes "that intralaryngeal abscess from diseased cartilage is best treated by splitting the larynx in the middle line, removing the dead structures, and thoroughly scraping the parts down to healthy tissue. This being accomplished, measures should immediately be taken to provide for drainage in case of continuation of the suppurative process, and to adopt such aseptic management of the parts as the conditions found may indicate. Thorough response to the indications may require precautionary tracheotomy for respiratory purposes until subsidence of the disease process has taken place, or for the purpose of securing functional rest to the larynx when such subsidence is not going to take place." I have not had the opportunity of seeing any such procedure carried out, but, given a suitable case, I am convinced that it would be the right course to pursue, rather than to allow the patient to die from exhaustion, consequent on the suppuration brought about by the necrosed cartilages acting as foreign bodies, or from septic poisoning, the result of the absorption of pus which, according to the ordinary canons of surgery, should have been evacuated by the most direct access possible. Our President (Mr. Butlin), who speaks with special knowledge on the subject, regards splitting of the thyroid in cases of malignant disease as a comparatively trivial operation, so that I trust he will be able to agree in the above remarks.

[13] *Berlin. klin. Wochenschr.*, 1887, no. 24, s. 439.
[14] *Journal of Laryngology*, vol. ii, p. 308.
[15] *Centralblatt für Laryngologie*, vol. iv, p. 103.
[16] *Centralblatt für Laryngologie*, vol. i, p. 72.

II.—GREVILLE MACDONALD, M.D.,

Physician to the Hospital for Diseases of the Throat, Golden Square.

IN the first place I will relate as briefly as possible the only two cases I have seen that could fairly be styled idiopathic; then I will make what remarks I am able from my experience of these and one or two other cases that have come under my observation.

[17] *Diseases of the Throat*, 2nd edition, p. 50.
[18] Vol. iii, p. 304.

R. J., aged 34, single, a labourer, applied at the Hospital for Diseases of the Throat on July 15th, 1886, complaining of cough and loss of voice. The former had been troublesome for the past two or three years, while the hoarseness had supervened only during the last four months. He was considerably emaciated, although vigorous and able to work. There were no hæmoptysis or night sweats. The cough was troublesome only in the morning, the expectoration being muco-purulent and not frothy. There was slight odynphagia and some dysphagia; slight dulness of the right apex and harshness of the respiratory murmur were the only abnormal chest sounds. Midway between the sternum and cricoid was an open sinus freely discharging a thin watery pus, and running directly on to the anterior surface of the cricoid cartilage. This, he said, had opened about five months previously, before which he had been suffering from enlarged glands; these had opened and cicatrised. There were two recent scars in the right anterior triangle. The thyroid cartilage was curiously flattened from before backwards, so that the angle was almost obliterated, while in structure it appeared more yielding than was natural. The laryngoscopic examination gave no evidence of this flattening internally. There was no clubbing of the arytenoids or œdema of the ary-epiglottic folds. The vocal cords were slightly congested, the left being fixed almost in the middle line. Beneath the anterior commissure was a red granular neoplasm, as large as a full-sized pea. There was no history of syphilis or tuberculosis.

In the first place, I removed the greater portion of the neoplasm, which, on microscopical examination, proved to be solely granulation tissue with no covering of epithelium. In this opinion I was confirmed by my colleague, Dr. Wolfenden, who kindly examined the specimen for me. The diagnosis of the case consequently appeared to be perichondritis. The patient was ordered cod-liver oil and hypophosphites, with an inunction of oleate of mercury, 10 per cent., to be applied over the thyroid and cricoid cartilages, and an inhalation of creasote. He began to improve immediately, and in seven weeks he was apparently quite cured. The sinus had closed, the granulation tissue below the vocal cords had disappeared, and the voice was completely restored, though the left vocal cord remained almost fixed. The apical dulness also almost disappeared. I regret that I made no examination for bacilli, and that the temperature was not noted, the man being an out-patient during the whole course of treatment.

The second case was that of R. D., aged 17, single, a carpenter, who arrived at the hospital from Chatham late on the night of April 10th, 1888, suffering from extreme laryngeal dyspnœa. This had been gradually supervening for the past three months. On making a laryngoscopic examination the glottis was invisible, the ventricular bands meeting, even during inspiration, so closely that no aperture could be seen. There was no œdema, nor did there seem to be much swelling of the intra-laryngeal structures, which rather had the appearance of being driven towards the middle line by some extraneous pressure. The arytenoids appeared to make strenuous but ineffectual attempts at movement. Externally there were four suppurating sinuses, three of them connected with strumous glands, two on the right side and one on the left, while the fourth ran upwards and forwards for about an inch and a half from near the anterior border of the right sterno-mastoid muscle on to the right ala of the thyroid cartilage. These sinuses had been open variously from four to six months. There was no alteration externally of the laryngeal configuration. There was no lung disease. The boy was fairly nourished and of good colour, while his family history was excellent. Tracheotomy was performed immediately, as the patient was *in extremis*.

The subsequent history of the case is as remarkable as it is briefly told. For three months he was an inmate of the hospital under varying lines of treatment, local and constitutional, without showing any signs of improvement in the larynx or sinuses. Antiseptics and scraping of the sinuses, mercurial inunctions, iodide of iron, full doses of iodide of potassium, cod liver oil, sprays and inhalations, all proved useless, except so far as his general condition was concerned; the ventricular bands scarcely separated appreciably. He was then placed on sulphide of calcium (one-tenth grain) three times a day. In a week the vocal cords came into view, deeply congested and almost concealed by the ventricular bands. In a fortnight two of the sinuses had closed, one being that connected with the cartilage. He was then discharged from the hospital, wearing the tracheal cannula; and with instructions to continue the sulphide pills. A fortnight after he appeared as an out-patient, and in my absence the cannula was removed by my colleague Mr. Procter Hutchinson. He continued taking the pills for another fortnight, when he appeared completely cured, save for a little redness and swelling of the vocal cords. The tracheal sinus had closed, and the voice, which had never been seriously affected, was quite restored. I ordered him an astringent spray, and told him to report himself in three months. This he accordingly did, looking the picture of health, locally as well as generally.

These cases I think need no comment, though each is interesting not only in its points of similarity, but also in those of divergence from the other. Two of the symptoms I wish to refer to briefly in reference to the diagnosis of perichondritis. The first is the external evidence of inflammation of the perichondrium, and the second is the intra-laryngeal appearance in the second case. In the patient R. J., the whole cartilaginous structure was softened and flattened, while in both there was evidence of external suppuration. In a tertiary syphilitic patient, S. N., a married woman of 46, who consulted me on January 8th, 1889, suffering from extreme laryngeal dyspnœa and complete aphonia, the whole cartilage was externally thickened and rounded, so that the anterior angle and notch were quite obliterated, and the whole immovably fixed, as if elevated during deglutition. The laryngoscopic appearances were precisely those met with in the boy, R. D., the vocal cords and glottis being concealed by the approximated ventricular bands. There appeared to be no congestion or swelling of the intra-laryngeal structures. In this case also tracheotomy was performed on the following day. I ordered sulphide of calcium, as the patient had been steadily taking iodide for a twelvemonth previously under my own observation. In a few days there appeared to be a slight improvement, but no more than is frequently seen in such cases after the trachea is opened. On the tenth day the temperature suddenly rose to 104.5° F., and the only apparent cause was intense œdematous swelling of the left arytenoid cartilage. There was considerable odynphagia. I immediately plunged the laryngeal lancet into the swelling in two or three points. The hæmorrhage was so free that I could not determine whether there was pus or not. But on the morrow the temperature was normal, and in three days the larynx was *in statu quo*. But no further improvement occurring, I reverted to the iodide, and on the 30th of last month I finally removed the cannula. The voice is improved, but the arytenoid articulations seem permanently limited in their movements. The special diagnostic points in this case are the external evidence of perichondrial thickening, and what one may call the crowding of the laryngeal structures towards the middle line by surrounding perichondrial swelling. These I cannot but think may frequently prove points of value in diagnosis.

I have had one somewhat similar case of crowding of the intra-laryngeal structures towards the middle line, which I brought before the notice of the Section last year, a case of chronic tertiary laryngitis, where the cords were so forced towards the middle line that tracheotomy was necessitated. This patient, it may be remembered, was enabled to discard the cannula only after the ablation of the left vocal cord.

Dr. Scanes Spicer said that he had no doubt primary perichondritis, at all events of the epiglottis, existed, as he had a case of a boy, aged 10, under his charge who showed no sign of syphilis or struma, and whose laryngeal symptoms came on as a result of acute catarrh with those of œdema of the larynx. Tracheotomy was done, and when the case came under his observation there was a granulating surface on the stump of his epiglottis, which was almost completely lost. The wound healed perfectly, and the only symptoms which troubled him now were occasional cough with some roughness of voice. He had never seen yet a case of perichondritis of the other cartilages that could not be referred to syphilis, cancer, or gross traumatism of some of the specific fevers. There was a general consensus of opinion among clinical observers that the neighbourhood of the crico-arytenoid articulations was most prone to perichondritis when it attacked the larynx, and it was interesting to consider what causes predisposed this region in particular to affection. Among these causes it seemed to him that the constant functional activity of the parts played an important part. Both in breathing, swallowing, and speaking the cartilages were constantly moving on each other, and the cricoid cartilage up and down the spinal column. In swallowing, too, every bolus came into contact with the plate of the cricoid, which was the only hard structure met with in the œsophagus. It was hence the parts which were functionally

most active, and which were exposed to irritation and pressure that most frequently suffered from perichondritis, whether primary or secondary. Further, it was in elderly people, when there was more or less tendency to ossification, that perichondritis was usually seen. It had been alleged that intralaryngeal manipulations were not an infrequent cause of perichondritis; in the speaker's opinion such cases must be very exceptional, and for his part he had never seen one or seen one recorded.—Mr. LENNOX BROWN was of opinion that cases of primary perichondritis was exceedingly rare; and he could only recall one case of the simple nature, of which he felt no doubt, namely, that of a boy who was attacked after going to sleep when in a state of perspiration in a hay field, exposed to an east wind. With regard to diagnosis, he did not attach so much importance as Dr. Hall to inter-arytenoid infiltration as distinguishing tuberculous perichondritis from syphilitic, because that situation was a very favourable one for syphilitic gummata. There was, however, as a rule, far more hyperæmia in syphilitic cases than in the tuberculous. A very early symptom, and one of great diagnostic importance, was subglottic swelling of the vocal cord of the effected side. Difficulty and pain in swallowing, without presence of new growth or of ulceration (malignant), or of swollen epiglottis (tubercular), were of high diagnostic importance. He thought that abscess in the case of cancer of the larynx was rare, and also that enlarged cervical glands but very rarely suppurated in this disease. He doubted over-exertion of the voice as a cause of laryngeal perichondritis, and believed that unilateral inflammation of one vocal cord, especially when recurrent, was almost invariably due to syphilis. He would not admit elimination of a syphilitic dyscrasia by negative results obtained from administration of iodide of potassium alone, but only after a steady course of mercury, either internally or by inunction, had been pursued without effect. In his experience the cartilage most frequently affected was the cricoid in its posterior aspect; next the arytenoid and cricoarytenoid articulations. Doubtless Dr. Spicer's remarks as to irritation of food, predisposed in some cases to the preference of this situation for benign perichondrial inflammations, were correct; the same, indeed, obtained in malignant disease.—The PRESIDENT said he thought a great distinction should be made between two conditions of perichondritis which Dr. Hall had classed together, namely, that which occurred in the course of the advance of cancer, and which depended on the extension of the primary disease to or through the perichondrium; and the perichondritis which occurred in association with, or as a sequel to, typhoid and other fevers. In this form of perichondritis there was not usually any previous affection of the larynx, and the inflammation appeared, so to speak, to fall bodily on the cartilage or its covering as tissues specially liable to be affected by the poison of the primary disease. This was the more curious when it was taken into account how very rare a disease perichondritis was in the human body. There was quite a large area of perichondrium covering the tarsal cartilages, the pinna of the ear, the nasal and laryngeal cartilages, and the cartilages of the ribs. But inflammation of the perichondrium covering any of these structures, unless it were that covering the cartilages of the larynx, was scarcely ever met with. Yet several of the parts covered with perichondrium were much exposed to cold and injury. The rarity of perichondritis was the more singular when it was taken into account how frequent inflammation of the periosteum was in certain situations. Taking all these circumstances into consideration, he quite agreed with Mr. Browne that every case of simple primary perichondritis of the larynx should be regarded with suspicion, and should only be admitted in the absence of every predisposing cause such as syphilis, fever, and the like.

THYROTOMY IN THE TREATMENT OF LARYNGEAL CANCER.

Read in the Section of Laryngology at the Annual Meeting of the British Medical Association held in Leeds, August, 1889.

BY SIR WILLIAM STOKES, M.D.,
Professor of Surgery at the Royal College of Surgeons, Ireland, etc.

OF the surgical questions which await time and experience for their satisfactory settlement, the one in reference to the merits of thyrotomy in the treatment of laryngeal cancer stands in a foremost place. In connection with this topic two distinct and hostile camps are occupied by authorities, some advocating exclusively an endo-laryngeal method for the removal of malignant laryngeal neoplasms, while others stoutly maintain that such a procedure is only a "sort of artistic possibility of little practical value." Between these two extremes of opinion the principles that should guide us and the practice we should adopt in such cases will doubtless be established and the mists which contribute so largely to maintain the existing unfortunate chaos of surgical opinion on the question ultimately be satisfactorily cleared away. In cases of malignant growth thyrotomy, Dr. F. Semon has observed, "should not be attempted," and this very decided opinion is practically endorsed by Gottstein, who has stated that "extirpation of malignant tumours by means of thyrotomy has not, judging by the results so far obtained, been satisfactory. In twenty cases collected by Bruns, in two death occurred soon after the operation; in one case only was there no local recurrence, but in this case death occurred twenty-two months after from cancer affecting the suprarenal capsules and the left kidney. In the remaining eighteen cases local recurrence took place, in some after two or three weeks, and only in one was there an interval of a year and a half. Recovery of voice occurred in no instance."[1]

Sir Morell Mackenzie has published a very discouraging statistical table of cases of thyrotomy. It consists of twenty-two cases of different operators; in two only of these was there a "cure" obtained, that is, there was no evidence of recurrence after three years in one, and two years and nine months in the other. Both of these cases occurred in Professor Billroth's practice. In eight others in this table, however, recurrence of the disease and death did not occur for many months after the operation, so that in nearly 50 per cent. of the entire number of these cases the results cannot be said to be altogether unsatisfactory. Mr. A. Durham has published[2] an interesting and encouraging record of five successful cases in which he performed thyrotomy for the removal of intra-laryngeal growths. All the patients were under 9 years of age. These five successful cases taken with thirty-two others collected by Mr. Durham in which thyrotomy was performed give the following results, which must be regarded with much interest. In eighteen the results were quite successful, in nine partially successful, in four temporary benefit was obtained, and in the remaining six the results were uncertain or unsuccessful. This statistical result, whatever the ultimate judgment of surgeons may be as regards the operation, proves unquestionably that many of the alleged dangers of the operation are purely imaginary, and that in truth, with due precautions being taken, it is not more hazardous, or as much so, as many other accepted and frequently performed surgical operations.

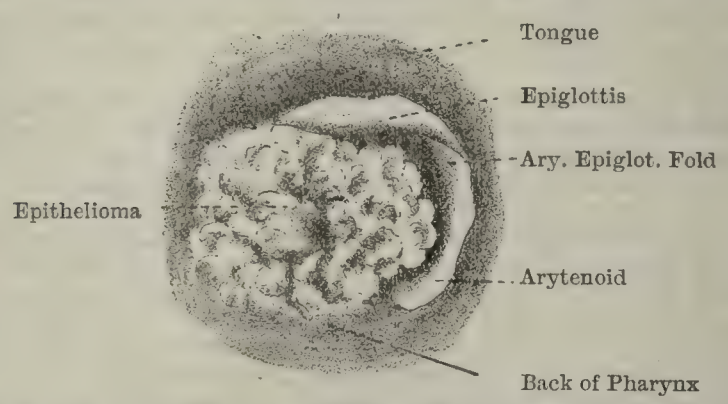
As every such case is, irrespective of the result obtained, of great importance in determining the question as to the merits of the operation, more particularly in connection with malignant and cancerous disease, I deem the following case especially worthy of record, as it will, I think, largely aid in determining surgical opinion on the subject.

S. J., aged 50, by occupation a butler, was admitted into the Meath Hospital, under my care, on April 25th, 1889, having been recommended to me by Dr. J. Murphy, of Dublin. The patient was suffering from aphonia, great dyspnœa, and dysphagia, any solid food being especially liable to give rise to extreme laryngeal irritation. The patient was a tall, sallow-complexioned, dark-haired individual, and had always led a steady, temperate life. He never had syphilis, and there was no evidence of there ever having been any hereditary cancerous diathesis. The patient was in a condition of extreme marasmus, owing doubtless to insufficient nutrition during the previous six months. He attributed the trouble to a severe cold with "sore throat," after which he became aphonic. He suffered no pain in his throat, nor did efforts to talk give rise to any. Attempts at deglutition of either solid or fluid food was accompanied with much distress, owing to some of it invariably passing into the air-passages, which always gave rise to violent spasmodic cough. There was no evidence of pulmonary, cardiac, or renal disease. There was no albumen, phosphatic or lithic acid deposit in the urine. The latter was in every respect in a satisfactory condition. On examination of the throat, the larynx externally appeared abnormally prominent. There was no involvement of the submaxillary or sublingual glands but at the edge of the sterno-cleido mastoid posterior, close to the os hyoides, there was one small enlarged gland. The laryngoscopic

[1] *Diseases of Larynx*, by Gottstein, translated by P. McBride, p. 143.
[2] *Med. Chir. Trans.*, vol. lv.

examinations, made by my colleague, Dr. P. C. Smyly, revealed a large lobulated apparently vascular growth, situated mainly on the right side of the larynx, above and completely concealing the vocal cords. The extent of the attachment of the growth could not be accurately estimated, nor could it be ascertained if the cartilages were involved in the disease; but it was observed that, having regard to the freedom with which the tumour moved up and down during the act of respiration, the probabilities were that there was no involvement of the cartilages, and that the growth was probably not sessile but pedunculated, and could be excised without removing any of the cartilages. The condition of things found at the time of the operation, which was subsequently performed by me, verified in a remarkable degree the accuracy of the diagnosis, in making which I derived so much assistance from Dr. Smyly. The structures on the left side of the larynx were found perfectly healthy.

The appearance of the growth as seen by the laryngoscope is faithfully represented in the accompanying sketch made by Dr. Smyly.



On May 10th, the dyspnœa having distinctly increased during the two days previously, and the patient's condition from this cause as well as from the dysphagia being very critical, I performed a preliminary tracheotomy about three-quarters of an inch below the cricoid cartilage, and employed for the operation a Worthington's scalpel and grooved steel director, which I found signally facilitated the speedy introduction of a cannula, and in a fortnight subsequently, when the patient had become quite accustomed to the presence of the instrument, I substituted for it a Trendelenburg's apparatus for the twofold purpose of preventing any blood entering the air passages during the performance of thyrotomy, and through which the inhalation of an anæsthetic might also be effected. Some irritation was at first induced by Trendelenburg's tube, but this soon subsided. The patient was then brought into the operating theatre and chloroform administered. No sickness or any other trouble connected with the anæsthetic interfered with the performance of the operation.

I commenced by making an incision accurately in the mesial line, commencing at the os hyoides and carrying it down to half an inch below the cricoid cartilage. All bleeding points having been carefully secured, I opened the crico-thyroid membranes, intending to divide the thyroid alæ from below upwards with a strong pair of straight scissors. Owing, however, to the cartilages being ossified, this was not found feasible, and to effect the division it was necessary to employ a small-sized straight bone forceps. In this way an opening extending from the thyro-hyoid space down to the cricoid cartilage, and involving the latter, was made. The thyroid alæ were now separated with blunt hook retractors and held aside.

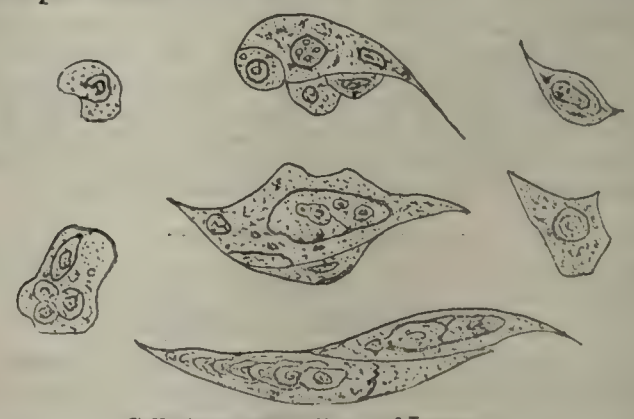
A good view was now obtained into the interior of the larynx, and I observed with much satisfaction that the disease had not involved either of the true vocal cords. The new growth lay well above them, being attached by a pedicle to the right ala of the thyroid cartilage nearer its upper than its lower margin. On passing my right index finger into the larynx, to satisfy myself as to the size and nature of the attachment of the growth, I found that there were three of them—one apparently fully the size of a walnut and the other two about the size of kidney beans. The larger tumour was attached by a somewhat narrow pedicle, and I anticipated, therefore, little difficulty in its removal. Accordingly, with a pair of strong curved scissors I commenced to detach the pedicle.

This I did, and then passed my finger into the larynx, hoping to be able to hook it out, as it were, through the opening I had made. I did not, however, succeed in this—a circumstance which caused me some anxiety, especially as at this juncture there was very smart hæmorrhage coming from the situation where the attachment of the tumour had been severed. I then passed a curved forceps into the larynx, hoping that with it I might be able to seize and remove the detached growth. This expedient did not succeed either, and I was beginning to be apprehensive as to a possible failure attending the removal of the growth, fearing that possibly it had passed upwards into the mouth and been then swallowed by the patient. My apprehensions, however, were set at rest by my colleague, Mr. Hepburn, informing me that, while I was selecting another forceps for the removal of the tumour, it was discharged from the mouth during an effort to get rid of a quantity of mixed blood, saliva, and mucus.

The two smaller growths were situated on the posterior wall of the larynx, and these differed from the first growth removed, not only as regards size but also from being sessile. They were detached by means of a Volkmann's scoop. On their removal there was a good deal of hæmorrhage, which, however, was checked mainly by sponge pressure. Two or three small vessels at the edge of the wound were ligatured and the divided larynx brought together by six points of interrupted carbolised silk suture. The edges of the skin wound were likewise held in apposition by similar sutures, but of finer silk. Sal alembroth dressings were then applied and the patient removed to his ward.

It is unnecessary to enter into details as regards the progress of the patient after the operation. The dysphagia at once disappeared, and throughout his convalescence his condition remained perfectly afebrile and aseptic. The tracheotomy tube was removed on the tenth day after the operation, and on the sixteenth day he returned to his work. Having regard to the extent of the disease which was present, and the suspicious enlargement at the side of his neck, the probabilities certainly are that sooner or later there will be a recurrence of the disease; but still, when one considers the extremely critical condition the patient was in at the time of the operation, the result as materially prolonging his life must be looked upon as eminently satisfactory.

It has been stated that, when our manipulative dexterity in performing intra-laryngeal operations is in advance of what it is at present, thyrotomy is likely to be altogether superseded. This may possibly prove true as regards benign growths; but it is hard to conceive how it could hold good as regards tumours of a malignant type. In the removal of these in other situations, there is undoubtedly a consensus of opinion among surgeons that to augment the chances of future immunity from recurrence, a very thorough and complete removal of the disease and its neighbouring tissue is indispensable, and no exception to this established fact can exist in the case of malignant laryngeal growths. It is hard, in truth, to understand how they can be so efficiently and radically treated as is necessary, by any form of snare, forceps, or cautery, no matter how great the dexterity of the operator is, or how ingeniously devised the appliances he uses may be. What I think we are more justified in anticipating, is the knowledge of how to recognise accurately the disease while it is limited and localised, and still further by more perfect antisepticism to diminish the risks which are ever present when such operations as laryngo-fissure, partial and complete excision of the larynx, are performed.



Cells from Epithelioma of Larynx.

The facts I have briefly detailed in the above case, taken with the results obtained by Billroth, Durham, Von Bergmann, Rauchfuss, Köhler, Schuchardt, and others, must go far to dissipate among surgeons the feelings of hostility to the operation to which such an impulse has been given by the antagonistic opinions of many eminent laryngologists.

In the histological examination of the three tumours I am much indebted for assistance to Dr. White, Pathologist to the Meath Hospital, and Dr. McKee, Curator of the Museum of the Royal College of Surgeons. Dr. White kindly furnished me with the accompanying drawing, illustrating the appearance of the cells as seen by the microscope.

Dr. McKee considers that structurally the tumours would be best described as an unusual combination of epithelioma with sarcoma. He observes: "One of the small tumours showed a growth of the superficial epithelium downwards, together with clusters of indistinctly laminated cells, having much the same characters as the superficial epithelium. The stroma, however, greatly preponderated over the cell clusters and consisted not of the usual round-celled infiltration with perhaps spindle cells and connective tissue, but of these together with epitheloid and giant cells, which bore no resemblance to the superficial epithelium. Examination of the other small tumours showed the superficial epithelium infiltrated with round cells right up the stratum corneum No ingrowth of the interpapillary processes could be detected, and although alveoli, containing epitheloid cells, were present the alveolation was indistinct as compared with the preceding specimen, and the contained cells differed totally from those of the superficial epithelium. The whole of the cells of this small tumour appeared to be of connective tissue origin, and, except for the presence of an unusually-marked alveolar arrangement in places, I should not have hesitated to call it a sarcoma. The third piece examined was taken from the large tumour at its junction with the healthy mucuous membrane. Here the superficial epithelium was perfectly normal, and the tumour was distinctly observed to have grown from below upwards. The interpapillary processes were shallower and broader than natural, apparently the result of pressure from beneath. The great mass of this tumour appeared to consist of sarcomatous tissue, but an unusually distinct alveolation was present, the contained cells being epitheloid in character but not compressed or laminated, and without any resemblance to the superficial epithelium."

Dr. NEWMAN advised the use of thyrotomy in two stages, the first consisting of opening of the larynx, the second the removal of the growth after twenty-four or forty-eight hours, when a more thorough examination could be made. Endolaryngeal operations should hardly ever be employed for malignant disease, as the disease could not be completely removed. Thyrotomy might be successful in the early stages of cancer or sarcoma, but when the disease was advanced, Dr. Newman preferred partial or complete laryngectomy. In sarcoma, if the growth was still encapsuled, the operation of thyrotomy might be very successful.—Mr. LENNOX BROWNE congratulated the author on the success of his case, and said that his own experience of thyrectomy would make him hesitate to repeat the operation, for he believed that just as great a prolongation of life could be attained, with less discomfort, by a simple tracheotomy; but the operation of thyrotomy and removal of the malignant growth, the suggestion of which was due to Mr. Butlin, offered much greater hope of permanent relief, especially if performed sufficiently early; he meant so soon as positive microscopical evidence, or, failing that, laryngoscopic evidence and subjective symptoms gave clear indication of the nature of the disease.

SECTION OF LARYNGOLOGY.

WEDNESDAY, THURSDAY AND FRIDAY, AUGUST 14TH, 15TH AND 16TH.

Granules in the Pharynx.—Mr. L. A. LAWRENCE read a paper based on 200 cases, mostly in hospital patients, which he had lately examined. No selection was made, the patients being for the most part warded for ordinary surgical and medical complaints. As regards the throat, it was to be presumed that the condition of these parts fairly well represented what might be noticed in the same classes in ordinary health. A "granule" was defined as an elevation in the surface of the mucous membrane varying from the size of a small pin's head to that of a split pea or bean. Any hereditary diathesis, and notably struma, rheumatism, and gout, was said to predispose to the affection, the vagueness of the etiology being a proof of their ignorance on the subject. In the 200 cases examined, there were 168 examples of granular pharyngitis; 30 patients were free from it, and in 2 young children the posterior wall of the pharynx could not be seen on account of the large size of the tonsils. Of the 168, in 48, or 28.57 per cent., there was personal or family history (sometimes both) of phthisis or struma; in 34, or 20.23 per cent., there was a history of struma or gout; in 20 there was a history of miscellaneous symptoms, or conditions such as cough, heart disease, asthma, and dropsy; and in the remaining 66, or 39.28 per cent., there was a clean bill of health, both personal and hereditary. Of the 30 in whom no granules were seen, 9, or 30 per cent., gave a history of phthisis or struma; 4, or 13 per cent., of rheumatism; 3 gave other histories, and the remaining 14 were healthy. With respect to the alleged influence of phthisis, the healthy cases exhibited 30 per cent., the unhealthy 28.57 per cent. Phthisis might, therefore, be excluded as a factor. As regards rheumatism, the numbers were 13.33 per cent. of healthy, against 20.23 per cent. of unhealthy, showing an excess of the latter of only 7.9 per cent. The part played by rheumatism might, therefore, be practically ignored. Employment did not seem to have anything particular to do with the causation of granules. In those who used the voice to excess, though the granules might be a cause of alteration in the voice, it was not clear that the use of the voice was the cause of the granules. With regard to age, the numbers in each decade were 26, 38, 40, 26, 20, 5, 7, with granules, as against 8, 5, 3, 7, 3, 2, 2, without. Thus the earlier years up to 50 showed a marked preponderance, while after that age there was a sudden fall. The disease seemed to be common to all climates; this was certainly the case as regards Europe. Eighty-two men and 86 women out of 100 of each had the complaint, showing that the different occupations of the sexes—the exposure of men and the delicacy of women—had no influence for evil. In particular, tobacco as a factor was excluded by these figures. Diathesis, age, occupation, etc., having been excluded, the author suggested contagion as a possible cause. There was the analogy of granular lids, the granules being precisely similar in structure. In most cases the patient was not aware of the existence of the granules, but in 21 of the 200 cases symptoms were present, such as a feeling of dryness and stiffness in the throat, and occasionally a tickling sensation causing cough and even hoarseness. These might become aggravated so as to become seriously troublesome. The number of granules seemed to have some effect in the production of symptoms, as out of the 21 cases referred to, 13 had many and 5 had a few granules, whilst 3 had none. The granules might be situated in any part of the pharynx, might extend upwards to the naso-pharynx or down towards the œsophagus; they might also be present in the palate and tonsils. The smaller varieties were by far the commonest, only 31 in 168 cases being of the larger sort. In 57 cases there were few—in some only one or two—granules, whilst double that number had many. Microscopically the granules showed simply lymphoid tissue. In the vast majority of cases no treatment was necessary. When symptoms were present they could be alleviated, but Mr. Lawrence did not think that a permanent cure could in the present state of knowledge be effected. Astringents were said to be useful, preference being given to chloride of zinc (gr. xxx, ad. ℥ j), applied as a paint, twice daily. "London paste" had also been used satisfactorily. An objection to the galvano-cautery was that hyperæmia at the injured site caused increased nutrition in the neighbourhood, and then sometimes induced increased growth of the granules near. Mr. Butlin had lately used a form of Meyer's ring knife bent at a suitable angle for scraping the granules from the pharynx. The general health should be attended to in combination with the local treatment. —Dr. SCANES SPICER said the statistical method adopted by Mr. Lawrence was likely to lead to further knowledge of this affection, which was important, in that it caused considerable distress. Obstruction of the nose from any cause, whether structural and permanent or erectile and variable—perhaps only occurring at night in the recumbent position, and indicated by snoring, mouth-breathing, and dry mouth in the morning—was one of the most important factors in the production of granular pharyngitis; and cure of the nasal obstruction was often followed by disappearance of the throat symptoms. In those cases in which obscure throat pain and discomfort existed, and there were none of the more commonly-recognised lesions of granular pharyngitis on the posterior wall, it was important to examine the base of the tongue where the "lingual tonsils" showed granular hypertrophic conditions similar to those seen in the pharyngeal adenoid masses, and destruction by the galvano-cautery was alike indicated in both cases if saline aperients and local application of iodine solutions did not soon remove the symptoms.—Dr. BARON agreed with Dr. Spicer as to the importance of examining the back of the tongue in cases of granular pharyngitis. It frequently happened that

patients submitted to a long and tedious course of treatment with no alleviation, and it was only when the outgrowths at the base of the tongue were systematically treated by astringents, caustics, or burning with red-hot wire, according to circumstances, that cure took place.—Dr. G. MACDONALD agreed with the remarks of the previous speakers as to the frequent association of lymphoid hypertrophy of the base of the tongue with granular pharyngitis; but dissented from Dr. Spicer's view as to nasal obstruction.

Throat and Nose Affections in Children in relation to Certain Derangements of Sleep, Temper, Spirits, Energy, Intellectual Power, and other Brain Functions.—Dr. SPICER, in reviewing the literature of the subject, proceeded to group the nervous derangements associated with throat and nose disorders in three classes: (*a*) those indicative of irritation of nerve centres (disturbed sleep, night terrors, walking in sleep, excitability, stammering, etc.); (*b*) those indicative of exhaustion or debility of nerve centres (habitual headache, dizziness, depression, drowsiness, etc.); (*c*) those indicative of defective intellectual evolution and activity (slowness of apprehension, weak memory, backwardness, etc.). The symptoms of irritation usually appeared first, and were followed by the others at varying intervals. Dr. Spicer was led to suspect an intimate connection between nervous derangements and affections of the naso-pharyngeal tracks by the frequency with which they coexisted, by the large proportion of idiot and weak-minded children in workhouses, etc., who possessed the characteristic physiognomy of adenoid vegetations, and by the frequency with which the symptoms referable to irritation disappeared, and the intellect, spirits, and temper improved, after cure of the throat or nose affection. Again, there was the analogy of the effects (such as languor, depression, etc.) produced by an ordinary cold on adults. Dr. Spicer had had many opportunities of observing that great mental depression accompanied long-standing interference with the patency of the nasal channels, and that this was removed on getting rid of the obstruction. Several cases from Dr. Spicer's own practice were cited in illustration of this; and instances were also given of slight forms of mental and nervous derangement occurring as complications of ordinary catarrh. Affections of the nose and throat were, therefore, of special importance during the growth of the organism. No definite statement could yet be made as to the proportion of cases in which such diseases were accompanied by nerve symptoms. Dr. Spicer did not think that the nose and throat affections and the nerve derangements were coincident results of constitutional weakness, but that the former were not only anterior in appearance to the latter, but exciting causes of them. He suggested that it might be possible that hypertrophic conditions in the naso-pharynx started abnormal stimuli, which passed along the terminal filaments of the trigeminus to the spheno-palatine ganglia, and were thence reflected along the vasomotor tracts, regulating the circulation of certain areas in the brain, so leading to abnormal alterations in the blood-supply, with consequent changes in nutrition and derangements of function. Mr. Yearsley's suggestion that enlarged tonsils might cause pressure on the carotids, and thus diminish the supply of blood to the brain, was not improbable, and a similar effect might be produced by adenoid vegetations. The veins were still more likely to be pressed upon, and the venous blood dammed back to congest the nerve centres. The clearing up of nasal obstruction led to improvement of the general health, because the digestion was no longer disturbed by the swallowing of unhealthy secretions, and oxygenation of the blood was favoured by the inspired air being properly warmed and moistened. Dr. Spicer summed up his conclusion as follows: 1. That certain nose and throat affections in children were among the special causes of derangements of sleep, temper, spirits, energy, intellectual power, and other functions of the nervous system. 2. That long-standing derangement of these functions in the growing child implied a defect in the nutrition of the tissues, which would leave its mark on the nervous and mental faculties of the grown adult. 3. That if no sufficient cause of derangement of the above functions could be discovered elsewhere in the economy, the condition of the nose, naso-pharynx, and throat should not be dismissed without examination and consideration. 4. That the naso-pharyngeal affections capable of causing the above derangements were principally chronic catarrh with erectile and hypertrophied condition of the mucous membrane, post-nasal adenoid vegetations, and enlarged tonsils. 5. That many of the above nervous derangements rapidly disappeared, and that others were ameliorated in a great number of cases by the cure of the local nose and throat disorder. 6. That the cases which were most likely to receive benefit from local treatment had generally also some of the following direct symptoms of nose and throat disorder: Perpetually open mouth and dropped jaw; habitual mouth breathing; snoring at night; dry mouth on waking in the morning; blockage of and inability to blow the nose; chronic and recurrent sore throat, colds, and coughs, and deafness—symptoms which demanded attention on their own account quite independently of any nerve derangement; further, the probability of benefit was increased if no sufficient cause of nerve irritation or exhaustion could be discovered elsewhere in the organism.—Dr. WARDEN stated that he quite concurred with Dr. Spicer's observations, especially with regard to disturbed and restless sleep, want of energy, extreme nervous irritability, and temper, the peculiar vacant look, open mouth, particularly in adenoid growths, and sometimes even in catarrhal affections and others. He related a case of post-nasal growth (muco-fibroma) of recurrent type, in which he had operated five or six times, and in which were strongly exemplified the prominent symptoms related by Dr. Scanes Spicer; the relief and almost total subsidence of the mental condition—fear and terror—so strongly existent in this case, being most marked after each operation, and returning gradually as the growths reappeared, vanishing again after another operation. The post-nasal growth was attached to the upper surface of the soft palate, and was suprapyramidal in shape, with a mucous polypus growing at the apex, and was also accompanied by considerable accumulation of nasal polypi.—Dr. GREVILLE MACDONALD, while congratulating Dr. Spicer on his clinical observations, and fully endorsing them, doubted whether they were yet justified in ascribing all the symptoms to reflex action. He quoted a case of epilepsy seen in consultation with Dr. John Davies, of Nottingham, and another of intellectual backwardness, both cured by removal of post-nasal growths; yet he thought these and many others might be explained by the deficient oxygenation of the blood seen in most of such patients. He stated that many cases of snoring from nasal obstruction occurred during nasal respiration, the mouth, in spite of the stenosis of the nose, being tightly closed. In such cases the diminished barometric pressure within the air-chambers was evidenced by the recession of the anterior triangles during inspiration, this diminished air-supply in its turn leading to deficient aëration of the blood. He admitted, however, that many cases were explicable only on a theory of reflex action.

On Empyema of the Maxillary Sinus, with an Analysis of Fifteen Cases.—Dr. GREVILLE MACDONALD began by asserting that the affection was to be considered a symptom rather than as a disease *per se*. His object was to bring forward certain symptoms that had hitherto been either misnamed or neglected. Among the former was the hypothetical "cleavage" of the middle turbinated bone, described as a consequence of "necrosing ethmoiditis"—so called—it really consisting in the development of an inflammatory neoplasm beneath the middle turbinated, pus from the antrum flowing from between the two structures. In cases where this was absent the pus might flow from above the middle turbinated. The principal subjective symptom was neuralgia and tenderness over the nasal or malar bones. He advocated opening the antrum from a bicuspid or molar socket, owing to difficulties in drainage when the pus was reached from the nose. He claimed a practical cure in ten of the fifteen cases.—Dr. SCANES SPICER said that unilateral purulent discharges from the nose were always suggestive of suppuration from the antrum. He did not think tenderness was common in suppuration of the antrum. The appearance of cleavage he believed to be due to inflammation and swelling of the bulla ethmoidalis.—Dr. W. ROBERTSON said Dr. Macdonald's paper reminded him of a case of antrum abscess which well illustrated the obscurity in which these cases were often involved. When the patient first came under notice she was suffering from well-marked asthmatic symptoms, together with loss of flesh. A delicacy of the lungs was spoken off by a well-known London consultant. On examining the nose a chronic blenorrhœa, complicated with polypi, was discovered. On removing the latter, the condition, although improved, was by no means cured—a most offensive discharge, with formation of crusts in left nostril, remaining. Recourse was had to syringing out the antrum, and, with the help of a little boracic lotion, about a tablespoonful and a half of very bad smelling pus was driven out of the left antrum. As strong exception was taken to the removal of a bicuspid, he perforated above this with a dentist's trephine, which gave good access to the cavity. For months, however, perfect irrigation with mild antiseptic had to be kept up, showing that lengthened treatment only would secure a successful result, even in

perfectly benign cases, no matter where the situation of the artificial aperture. Should the presence of pus during eating be offensive, the antrum could be opened under the inferior turbinated bone by means of an ordinary trocar bent to suit the direction of the cavity. There were no symptoms in the case beyond the offensive discharge from the nostril of same side, pointing to disease of the antrum.

New Olfactometer for Estimating Degree of Loss of Smell.—Dr. SCANES SPICER exhibited to the Section, on behalf of Dr. ZWAARDEMAKER, of Utrecht, the olfactometer already described and figured in the JOURNAL.[1]

Rhinoscleroma.—Two cases of this rare affection were exhibited by Dr. WM. ROBERTSON (Newcastle): 1. The patient, M. L. J., aged 33, presented total nasal obstruction, with deformity of nose; thickening and induration of alæ nasi, thickening and induration of walls of post-nasal space, which was thereby much reduced in size, with narrowing of Eustachian tubes; thickening with induration and cicatricial changes in larynx and trachea (raised semicircular band); tuberous swellings on upper gum. Symptoms unchanged for sixteen years. 2. The patient, M. H. J., aged 30, deformity of nose, nasal obstruction on both sides. Approximation of velum palati (which showed cicatricial changes, and was drawn up), to post pharynx. Almost complete obliteration of post-nasal space. Roll-like contraction of epiglottis, cicatricial changes in larynx, semicircular raised band in trachea. Symptoms lasting thirteen years.—Mr. LENNOX BROWNE said there were some signs which tended to a diagnosis of lupus, some to syphilis, and some to scrofula; and on casual examination he would have been inclined to say that the disorder was due to syphilis in a scrofulous subject. Nevertheless, Dr. Robertson had evidently paid such great attention to the subject, and had exhausted every means of arriving at a correct conclusion, that he (Mr. Browne) hesitated to offer a contrary opinion.—Dr. SCANES SPICER said the loss of a considerable portion of the epiglottis, and the thickening of the stump in the elder patient, reminded him of cases of undoubted syphilis he had seen. It was an open question whether the application of nitrate of silver to the nares had not aided the cicatricial contraction which was apparent.—Dr. ROBERTSON, in reply, said he was quite aware of the rarity of the disease, or at least of reported cases in this country. He should have been under the same disadvantage as many who had examined these cases had he not had the advantage lately of observing the ailment in Professor Schroetter's clinique in Vienna. That experience set at rest all doubt in his own mind as to these cases being veritable cases of rhinoscleroma. Mr. Lennox Browne had made a remark about venereal infection, but this had elicited only a history of gonorrhœa in the father at the age of 25 years, and even this must have become eradicated before his marriage, as witness the fact that his wife bore eight healthy children after marriage. Beyond that, syphilis as well as lupus, or a combination, as suggested by Mr. Lennox Browne, were both characterised by lesions leading to destruction of parts and loss of tissue. In these cases no loss of any part could be pointed out. The puckering of the soft palate was due to the cicatricial contraction on its upper surface, drawing it up and towards the posterior pharyngeal wall. Again, such hardness, with its characteristics, in the alæ nasi of the first patient, was entirely foreign to lesions due to either lupus or syphilis. The histological characters of the cells composing the infiltration differed from those of either syphilis or lupus, in that they were well formed and wanting in any indication of degeneration. It was not necessary to refer again to the duration of the process, the futility of treatment, and so on.

THE ANALOGY OF SUMMER DIARRHŒA AND CHOLERA.

BY SIR WILLIAM MOORE, K.C.I.E., Q.H.P.,
Late Surgeon-General with the Government of Bombay.

CHOLERA is generally regarded as a disease characterised by certain definite symptoms, the principal distinctive features being cramps, suppression of urine, and evacuations resembling water in which rice has been boiled; and it has been customary to assert that a malady is not cholera when these so-called distinctive symptoms do not present, and also if the disease does not spread epidemically. From these conclusions I venture to dissent, and for the following reasons:

1. Many cases of cholera commence as diarrhœa, after which the so-called distinctive features of cholera develop; and the question, At what stage do sufferers from diarrhœa become the victims of cholera? cannot be satisfactorily answered.

2. Terming a malady cholera only when certain symptoms occur is not consistent with what is known and admitted with regard to other diseases—diphtheria, scarlet fever, enteric fever, for examples—of all of which these are very mild cases, not presenting typical symptoms.

3. It must be recollected that cholera in its manifestations is a protean malady. Nothing better demonstrates this than the number of names under which it has been described, such as asphyxia, algide, bilious cholera, dry cholera, *febris remittens choleroidea*, hæmorrhagic cholera, white dysentery, etc.—terms all called into use by the varying nature of the malady. The disease appearing under different phases, and being described as it appeared, obtained a different appellation. The variability of cholera was noted by a Dr. Pennick, in 1832, on the presumed first appearance of the malady in this country. Pennick pointed out in what respect the English cholera differed from the previous Russian cholera. About the same time, Allan Webb asked in India: "Who can tell where cholera ends and plague begins, or distinguish between certain forms of cholera and fever?" Chevers states: "As the malarious poison produces all variations, from a fatal remittent to the mildest ague, so with the cholera poison." Sir Guyer Hunter writes: "As there are varying degrees of fever, so there are varying degrees of cholera. It may manifest itself by a slight looseness of the bowels, or as a sudden paralysis of the vasomotor system." In my *Manual of the Diseases of India*, I enumerate various peculiar phases—among which may be mentioned immediate death by collapse, without evacuations; cases resembling the sweating sickness of olden times; stools tinged with blood, or with bile; rice-water evacuations absent; cramps the only symptom; and, on the authority of Dickson, increased flow of urine.

4. The most recent surmise of the cause of cholera is Koch's comma microbe. And the previous surmise was Pettenkofer's theory, which postulates the earth with being the breeding place of the cholera germ. And now Pettenkofer has, it appears, adopted Koch's microbe as the germ. Pettenkofer's conditions are a certain degree of porosity of the ground, a certain amount of moisture indicated by a sinking of the ground water, and a certain amount of organic matter. Conditions which, by-the-bye, are not and cannot be fulfilled in various localities where cholera prevails. Now this is somewhat similar to the most recent theory of the causation of epidemic diarrhœa. Dr. Ballard, as the result of his recent investigations, says summer diarrhœa does not begin until a thermometer at 4 feet deep in the earth shows 56°, and that diarrhœa prevails so long as this earth temperature is maintained, no matter what the external temperature may be. Dr. Ballard also says the lighter the soil the more the diarrhœa (which is rather against the presumed salubrity of gravel soils). Lastly, Dr. Ballard expresses a provisional opinion that the essential cause of diarrhœa resides in the upper layers of the earth, where it is intimately associated with the life process of some micro-organism not yet detected, captured, or isolated.

5. Dr. Klein has investigated the pathology of summer diarrhœa, and he mentions empty intestines, or containing only fluid, follicular ulcerations, congested spots, denudation of epithelium, and degenerative kidney changes. Such conditions are mostly applicable to cholera.

6. Although the diagnosis of a typical case of cholera from a typical case of diarrhœa is sufficiently easy, in seasons of epidemic no one can say whether or not the latter will become the former. Moreover, there are cases which so resemble cholera that they would be "unhesitatingly recorded as cholera if cholera were epidemic at the time." This remark actually occurs in Reynolds's *System of Medicine*. Ziemssen observes: "It is impossible to distinguish one from the other, unless regard be had to the absence or presence of cholera." Sir Joseph Fayrer says "the conditions are very similar if not actually identical." Flint observes: "It is by no means easy to distinguish the first case of cholera from cholera nostras.

7. If recovery from bad diarrhœa takes place a low febrile condition often ensues, just as results after Asiatic cholera.

8. The best treatment for summer diarrhœa, whether hygienic or medicinal, is that found most suitable in cholera.

[1] JOURNAL, vol. ii, 1888, p. 1295.

9. Summer diarrhœa prevails most in the warmest weather of temperate climates, and cholera prevails most in warm climates, and usually in the hottest season of such climates.

10. Asiatic cholera has been regarded as a new disease, unknown in India previous to 1817, and in Europe previous to 1832; but there is no doubt that this is quite incorrect. There is proof positive that cholera occurred in India long previous to the great epidemic of 1817, and there is almost as certain proof that it has occurred in Europe from remote periods. Macpherson, in his *Annals of Cholera*, has elaborately and satisfactorily shown that cholera is one of the most ancient diseases of which distinct descriptions exist, prevailing both in Europe and Asia from the earliest times.

Experience has taught me not to expect to be able to recognise Asiatic malignant or true cholera, as it is distinctively termed, as a disease always characterised by rice-water evacuations, cramps, cyanosis, and other symptoms or phenomena attributed to it in textbooks; but to be prepared to meet it in insidious forms, especially in that of diarrhœa. Mere degree is not sufficient for considering a disease different in essential character. A standard author says: "The symptoms of summer diarrhœa closely resemble those of cholera, but ordinarily they are less severe;" and this, I believe, constitutes the only difference. When we consider the mode of commencement of the two maladies, the diversity of the symptoms of cholera, the presumed causes of the two diseases, the difficulty of diagnosis, the pathology, the sequelæ, the climatic conditions under which cholera and summer diarrhœa most prevail, the conclusion seems inevitable that summer diarrhœa is really cholera in a milder form than the type we generally see in the East.

OBSTETRIC MEMORANDA.

RUPTURE OF THE UTERUS DURING LABOUR FOLLOWED BY RECOVERY.

On August 20th, 1887, I was called to J. E. H., aged 29, who was in labour, being seven months advanced in pregnancy. I found an arm presentation, gave chloroform and turned, bringing down one leg without much difficulty. After waiting and finding no progress, I gave chloroform again and brought down the second leg. A male child stillborn was easily delivered. The hand had to be introduced into the uterus to remove the placenta, when a large rent in the anterior wall was discovered, the hand passing into the abdominal cavity and touching the intestines. I remember hearing a soft tearing sound, and looking down on the bed to see if I was kneeling on and tearing any part of the bedclothes. Not much blood was lost externally, and there was no very marked collapse nor any very special symptoms at the time. No ergot was given during labour; after the removal of the secundines a hypodermic injection of morphine and ergotine by my friend, Dr. Mumford, who saw her with me and confirmed the diagnosis. No vaginal injection was used during or after labour.

The patient had been married ten years, and had never had any miscarriages. Her first child was born, when she was 20 years old, at seven months, but died at the age of 5 years from scarlet fever. Her second child, when she was 27 years old, was also born at seven months, and is now living and well. The above was her third confinement, twenty-six months after the birth of the second child. The woman herself was thin, pale, and cachectic-looking, short and wiry. She was hard worked and much worried, and had often to keep very late hours. She had from a girl suffered from scanty and painful menstruation. Previous to and during her confinement she lived in the dark basement of a large London house.

The day after her confinement her temperature was 102° F., pulse 120, but for the rest of the week the temperature was under 101°, rising to 102° on the 27th, but gradually falling to below 100° during the second week, after which it suddenly rose to 104°, gradually falling to 99° during the third and fourth weeks, when it rose again to 101.5°, falling after two days to normal. This last fall of temperature was coincident with the escape *per vaginam* of half a pint of offensive purulent discharge, and the reduction of a swelling on the left side, which had extended up to the umbilicus. Two days after this she had an ordinary menstrual flow.

During the second week after labour she had profuse diarrhœa, after which the abdomen was swollen and softer. She had several rigors, with cold sweats, flushed cheeks, and chilled extremities. Five days after labour Dr. Herman saw her with me in consultation, and gave an unfavourable prognosis. The medicine she had was pil. opii, gr. j, every four hours, and, in addition, for about two weeks, liq. morphiæ, ℥xv. A few hypodermic injections of morphine were also given, but after their effect passed away she always felt more pain. Brandy was not spared, and when the pain was less quinine was given.

On October 1st she went as an out-patient to the Soho Hospital for Women, where Dr. Oliver saw her, and wrote to me that she was suffering from "pelvic peritonitis with suppuration, especially on the left side of the uterus, and involving the left Fallopian tube." She now began vaginal injections, as the purulent discharge through the vagina continued.

On October 19th she had her menses slightly. On November 19th for a whole week. On December 19th again, and since then, she has been fairly regular, often with a five or six weeks' interval, though suffering from a profuse leucorrhœa.

April, 1888, I find her walking about quite uprightly, instead of stooping forward as she has done more or less since her confinement. She tells me she has been laid up for five weeks with acute rheumatism; her menses still regular, and she is still going to hospital. June 30th, she is going about as usual.

April, 1889. During the past year she has been regular every month, losing for fourteen days, with leucorrhœa between her times.

September, 1889. About her daily duties as usual.

Dr. Garrigues, in the *Philadelphia Medical News* for March 3rd, 1888, puts together ten cases; eight of these died from shock, peritonitis, or septicæmia; the remaining two, who were delivered by turning in the abdominal cavity with extraction easily *per vias naturales*, recovered.

A. Withers Green, M.R.C.S., L.R.C.P.Lond.
Bouverie Street, E.C.

A CASE OF PROLONGED PREGNANCY.

Mrs. F., multipara, returned from the seaside to her husband on September 21st. She had had severe flooding while away. In the first week of October she menstruated, the flow being very small in amount. From the end of this week, that is, from October 6th to August 16th, when the child was born, is 314 days. About the middle of June genuine labour pains appear to have come on, and, after continuing for some considerable period, to have passed away. At the birth (head presentation, fourth position) there were no perceptible labour pains; the membranes had ruptured before my arrival. The head was fixed at the brim, and had to be delivered with forceps. The forehead was completely moulded away, the child dying a few days later from meningitis. This was the second male child the mother had lost similarly; all the female children had survived. The mother is extremely rickety, and no doubt the pelvis had suffered along with the other bones.

F. Rowland Humphreys, L.R.C.P.Lond., M.R.C.S.
Queen's Crescent, Haverstock Hill, N.W.

CASE OF INTRAUTERINE STRANGULATION.

On September 4th I was called to see Mrs. H., and found her in bed suffering from very acute labour pains. She stated she thought she was about six months' pregnant, and had not felt at all well for some time. There was some slight sickness, but no "show" or hæmorrhage whatever. Her pains had come on about three hours previous to my arrival, and the nurse informed me that the "waters had just broken." Upon examination, I found about two inches of the umbilical cord projecting into the vagina, the os uteri was well dilated, and I could distinctly feel the abdomen of the child.

I immediately found one foot, turned, and delivered. To my surprise, however, I found the neck of the fœtus so firmly encircled by another funis that the tissues were actually cut through and the head almost separated from the body. Judging from the advanced state of decomposition, death must have taken place a very considerable period before. The face was perfectly black and much swollen, the eyeballs protruded, and the scalp was emphysematous.

After a very short interval, a few sharp pains brought another child into the world. It was also dead, slightly larger than the first, but not nearly so decomposed or macerated. Strange to say, in this instance, too, I found the cord of the first child encircling

the left arm and neck of the second. It was embedded in the tissues, though not to the same extent as in the first instance.

During a pretty extensive midwifery experience I have never seen or read of such a peculiar case of double—or, as I may call it, mutual—intrauterine strangulation. I may say there was an unusually large quantity of liquor amnii, and both cords were abnormally long. To add to the complications already existing, I may add that the placenta, which had undergone a certain amount of degeneration, was firmly attached to the fundus of the uterus. I, however, managed to get it all away, and I am pleased to say the mother is doing well.

Coventry. H. CLINTON DAVIES, L.R.C.S. & P.Ed., etc.

CLINICAL MEMORANDA.

THE PERIOD OF INCUBATION OF CHICKEN-POX.

ON the night of July 21st my sons, Edgar and Sydney, slept together. Next morning there was a solitary mark on the back of Edgar, according to the testimony of Sydney. Edgar went as weekly boarder to school, but was sent home on the 23rd suffering from chicken-pox. In ten minutes after his arrival home he was in bed in an isolated part of the house.

Arrangements had been made for Sydney and a sister (Nellie) to start next day on a visit to Bridgenorth. Their luggage was already locked up and was never afterwards opened. Sydney and Nellie had tea and breakfast in the room in which Edgar sat for the ten minutes. They never saw Edgar after he came home, and they left for Bridgnorth within twenty-four hours. No person in the house kissed Edgar, and his luggage was not opened until after the others had left.

On August 4th Sydney, whilst still from home, showed the first symptoms of chicken-pox. Nellie slept with her brother on the nights of the 4th and 5th. On August 18th she also had chicken-pox. So far as can be ascertained, there was no exposure to the contagion at Bridgnorth. The bedrooms in which Edgar and Sydney slept on the night of July 23rd are in opposite wings of the house, on separate landings, and the distance from door to door is about twenty-two yards.

This record fixes the period of incubation of chicken-pox in the second case as eleven to fourteen days, and in the third case as fourteen days or less. It also conclusively proves the disease to be highly contagious in the early stage.

JOHN T. HARTILL, L.R.C.P.Lond., M.R.C.S.Eng.,
Willenhall. Past President Staffordshire Branch B.M.A.

A CASE OF PEDICULOSIS.

A. N. G., calling himself a herbalist, came to the consulting room complaining of "blood-poisoning," and, from the look of him, he might have had anything; apparently, soap and water and he had long parted friendship. He had no home; sleeping under a dyke or in any hovel. His hands were covered by crusts, except a few points which were in a state of pustulation; the fingers and palm were much inflamed and swelled, and small collections of pus were seen under the hard and thickened palmar cuticle. He was in a depressed and low condition of health and very weak. The backs of the hands were not much affected. His arms, legs, and body were one mass of scabs and filth; pustules were all over plentiful, especially on the neck and in the hairy scalp. On looking for a cause I examined closely with a pocket lens, and saw the surface one living, moving mass of animal parasites, lice, pediculi.

I saw most strenuous efforts would be necessary to "dislodge the living," so I took him into the hospital. His clothes were burnt, hair cut and burnt. He was put into a bath and afterwards smeared with mercurial ointment, and boracic starch poultices put on where there were crusts. He was bathed again in eight hours, and ointment applied again, and another bath. The inflammation subsided, and the skin was left pitted and perforated where the nests of pediculi were dislodged. Such a change has come over him I scarcely knew him again when making my rounds. He has been put on a liberal diet, and is now regaining strength.

Alloa. HAROLD STALKARTT, M.B.

EPILEPSY TREATED BY AMYL NITRITE.

HAVING read a few weeks ago in this JOURNAL Dr. Woods's treatment of epilepsy, and being called to a very severe fit in a young man who has been an epileptic from birth, and whose mind has been so impaired that, though 21 years old, he is unable to read, write, or dress himself, I determined to try amyl nitrite. After inhalation of one capsule, the convulsions ceased, and in about twenty minutes the patient was himself again, the insensibility which always followed the fits being almost nullified. Since then the drug has been tried four times, and each time with success; if administered at the commencement of the fit, the latter was aborted, and the insensibility almost completely prevented. This patient is in the habit of having, on an average, a fit daily; and frequently a succession of fits—status epilepticus. He has been a patient for years at the Epileptic Hospital, Queen Square, and has been taking bromides daily, but apparently with no effect. I hope soon to be able to give an account of the action of nitro-glycerine tablets, which he is at present taking, in the hope that they will render the fits less frequent.

I believe that hitherto the amyl nitrite has been used only in the status epilepticus, but it appears to me to be also useful in severe single fits. The *rationale* of its action has not, I think, been worked out, but obviously would seem to be due to its dilating influence on the cerebral arteries contracted during the convulsions. J. P. PARKINSON, M.B.Lond., etc.

Hillside, Child's Hill, N.W.

RARE FORM OF ANKYLOBLEPHARON.

W. B., aged 16 days, was brought to me because he could not open his eyes. I found the following rare form of ankyloblepharon present. Right: lids joined at junction of middle and inner third by a band of semi-elastic membrane. Left: at about the same site two similar bands. All three were of the natural colour of the skin, and proceeded from and were continuous with the skin just at the palpebral edge. There appeared to be no conjunctival connection; there was no persistence of pupillary membrane. After severing the bands close to their attachments, the infant opened its eyes widely, and has progressed well.

Burnley. R. RUTTLE, L.MED. ET CH. T.C.D.

HÆMORRHAGE IN NEW-BORN CHILDREN.

ON September 23rd a woman was confined of her ninth child, the tedious labour of thirty-six hours being completed on arrival upon emptying bladder and rectum. Thirty-two hours afterwards the infant passed blood in quantities sufficient to soak through the napkins into the bed, and in an hour or so vomited blood, also in large quantities. It was seen twelve hours after the first appearance of blood, and it was still passing it. Tincture of hamamelis was prescribed, and the hæmorrhage and vomiting ceased, and the child is now living and healthy. It may be mentioned that there was no difficulty in the child's breathing at birth; the umbilical cord separated naturally on the fourth day.

Pirbright, Surrey. FREDERICK N. BROWN, M.R.C.S.

PNEUMONIC FEVER.

LATELY, three cases of what I take to be the above disease occurred in my practice. As they are uncommon, it may not be out of place to record them.

A young man developed pneumonia in lodgings, and was nursed through the attack by his mother. When convalescing he was brought home, and very shortly afterwards his sister was similarly attacked. Three days later, to my astonishment, the mother became very ill. Her symptoms assumed a grave typhoid condition, and though physical signs were absent from general symptoms, I concluded this too was a case of pneumonia. I gladly availed myself of a consultation with a neighbouring practitioner, and then suggested the contagious nature of the disease, but my colleague could not agree with my diagnosis. However, in a couple of days local signs were marked, and she too recovered, though after a prolonged convalescence.

Lately, the subject of a new specific fever, pleuro-pneumonic fever, has been discussed; that such a disease exists I thoroughly believe.

Longhope, Orkney. FRED. A. NEAL.

LEPROSY IN MADRAS.

As the cause of leprosy is before the readers of the JOURNAL, I may be allowed to give my Madras notes of it, slight as they are. I was for some years Inspector of Sea Salt Factories, and marched up and down the Malabar and Coromandel coasts, some 2,500 miles. My way took me through a great number of fishing villages, and I made this note about them: "Notwithstanding their

fish diet, these men are about the finest natives I have met anywhere; they are strong and sleek, and they have a multitude of healthy offspring." As they are almost naked, it is easy to judge of their physique. They salt a great deal of fish for sale. May be they do not eat much salt fish themselves. But salt is such a powerful antiseptic, it is not likely to harbour a bacillus of any kind.

One other note I made is that leprosy is common in small communities, where the intermarriage of kinsfolk is the rule. The records of the Leper Hospital at Pondicherry might throw some light upon this point. Amongst the natives, caste barriers compel the people to marry in their own set, and the choice is sometimes so limited that it leads to the marriage of relations.

I have always thought leprosy to be contagious, but requiring a good deal of contact to propagate itself, and I have heard stories of its power in this way which I have no reason to doubt are true.

JAMES J. L. RATTEN, M.D.,
Late Professor of Surgery, Madras.

Lee Park, Blackheath, S.E.

PHYSIOLOGICAL MEMORANDA.

NOTES ON THE COMPOSITION OF CEREBRO-SPINAL FLUID.

IN connection with Dr. Haliburton's report on cerebro-spinal fluid,[1] two cases which came under my observation some years ago may be of interest. They were both cases of spina bifida. One patient died a little under 6 months old, the other survived a very little longer. In both these cases there were reasons against the adoption of radical treatment of any kind. To relieve tension fluid was repeatedly withdrawn by means of a hypodermic needle, from ℥ij to ℥j being removed at a time. In one case I find it recorded in my notes that at the first tapping the fluid was "neutral, or slightly alkaline, with a considerable quantity of albumen." At the ninth tapping ℥j of fluid was withdrawn. It was "perfectly clear, and almost colourless, containing a small quantity of albumen." Three days after that it was again tapped, and about ℥ss of fluid was withdrawn—"opalescent, like water with a small quantity of milk." Two days afterwards the child died.

In the other case it was evident that at least on one occasion when tapping was done the fluid contained fibrinogen. It happened that, probably owing to the accidental wounding of some small vessel, the fluid, as it came out through the needle, was tinged with blood. After some time it coagulated, and it was quite evident that the amount of the coagulum was far greater than could be accounted for by the fibrin of the blood itself alone.

Newcastle-upon-Tyne. FREDERIC C. COLEY, M.D.,

DR. HALLIBURTON'S report on cerebro-spinal fluid having appeared in the JOURNAL of July 27th, it may be interesting to give the results of an investigation I made on the same subject some little time ago.

The specimen examined was obtained from a case of spina bifida in King's College Hospital. Before the tapping there was no symptom whatever of any inflammatory condition. The fluid was clear, of a pale straw colour, and feebly alkaline in reaction. On boiling, it became slightly opalescent. The percentage composition was as follows:—Water, 98.903; solids, 1.097; proteids, 0.093; reducing body, extractives, etc., 0.129; salts, 0.874.

On boiling, it distinctly reduced alkaline Fehling's solution. On warming with caustic potash, it became darker, assuming a pale brownish tinge. The alcoholic extract of the residue, obtained by evaporation to dryness after separation of the proteids, was very deliquescent, and contained the whole of the reducing body. The amount of the latter, reckoned as dextrose, was 0.004 per cent. The salts consisted for the most part of sodium chloride with slight traces of sulphates and phosphates. Hardly a trace of potassium salts could be detected, although they were carefully tested for, on account of C. Schmidt's observation on the high percentage of them present in cerebro-spinal fluid.

The patient died a week after the tapping (and injection of the sac with Morton's solution) with symptoms of acute inflammatory mischief. Sixteen hours after death a few cubic centimètres of fluid were obtained from the sac. The proteids were much increased in quantity, but no trace of the reducing body could be detected on the most careful examination, nor any iodine, either free or in combination. The result of the investigation may be summed up as follows:—

1. The general characters of the fluid in this case and its percentage composition agree in the main with previous analysis.

2. In spite of Hoppe-Seyler's assertion to the contrary, although no inflammatory symptoms whatever were present, yet the reducing body was detected in appreciable quantity. This is confirmatory of Dr. Halliburton's observations. On the other hand, after death had occurred from an acute inflammatory condition, none of the reducing body could be detected in the contents of the sac. It is hardly fair, however, to deduce anything from this, owing to the length of time which elapsed after death before the fluid was obtained, and also to the fact that the sac had been injected with Morton's solution (iodine and potassium iodide in glycerine) which might have greatly modified the composition of the fluid secreted. There was no decomposition of the contents of the sac.

3. In this case also, instead of an excess of potassium salts (as there is according to C. Schmidt) hardly a trace of them could be detected. The scarcity of phosphates is perhaps noteworthy.

Only a small quantity of the fluid was obtained, and consequently, the nature of the proteids and of the reducing body, and the percentage composition of the salts, could not be investigated.

Bromley, Kent. R. T. HEWLETT, M.R.C.S.

[1] See JOURNAL, July 27th.

GYNÆCOLOGICAL MEMORANDA.

FLUSHING THE PERITONEUM.

Now that the practice is commonly adopted of washing out or flooding the peritoneum after abdominal sections, in which blood or other fluids have necessarily been effused, it is at least desirable that this should be done in the best manner possible. The fluid, whether simple warm water or boracic lotion, is usually poured into the wound from a jug. In the gynæcological department of the Leeds Infirmary, we introduce it by means of a glass funnel attached to a glass drainage tube by about two feet of rubber tubing. The drainage tube is introduced deep in the pelvis. The water enters exactly where it is wanted, and washes upwards and out of the abdominal wound all blood clots, or effused fluids. The drainage tube is left *in situ*, after by pressure removing as much of the fluid as possible. Dr. Braithwaite has also introduced what we consider a valuable means of preventing giving way of the abdominal walls at the wound; this is a not uncommon occurrence, and is very distressing to the patient some months after the operation. The linea alba, we think, should not be divided, but the peritoneum should be reached through the sheath of the rectus muscle, which is pulled aside by retractors, and afterwards covers what would be a weak place.

J. S. BRISCOE,
Resident Obstetric Officer, General Infirmary, Leeds.

TOXICOLOGICAL MEMORANDA.

TOXIC EFFECTS OF TEN GRAINS OF ANTIFEBRIN.

THE patient was a young man, aged 19, suffering from acute pulmonary tuberculosis, of about a month's duration. His temperature during that time had varied between 101° and 104° F., in spite of the successive use of antipyrin, aconite, antimony, and quinine. Antifebrin was then tried. A dose of ten grains in milk was given on May 31st, at 2 P.M. In fifteen minutes the patient was all of a glow. In half an hour he was excessively red over the whole body and perspiring profusely. At 3 P.M. the temperature had fallen from 103.1° to 98.3° F. He then complained of feeling cold and numb in the legs and feet, and began to shiver. The coldness spread up the trunk, the redness of the body disappeared, with the exception of a slight hectic blush on the cheeks, but the sweating continued. At 4.30 P.M. the patient was semiconscious, deathly pale, and cold, but still sweating, and the temperature in axilla was 97° F. At 6 P.M. I found the patient semiconscious, pale, and cold. Heart-sounds feeble, and pulse could just be felt at the wrist. Pupils dilated; respirations shallow, and of a sighing character. The thermometer in mouth and axilla would not rise above 95°. At 6.30 the patient was at his worst and apparently moribund, and the pulse could not be felt at wrist. Warm brandy with ammonia and digitalis was adminis-

tered by mouth. Hot bricks were applied to soles of feet, calves, spine, and axilla, with mustard poultice over the heart. In an hour's time the surface of the body had become warmer, pupils contracted to light, respirations and heart-sounds stronger, and pulse could be felt at wrist; but the thermometer would not rise above 95°. The treatment was continued through the night, and at 4 A.M. the next morning the thermometer registered 96.2° in the axilla; at 8 A.M. it was normal; at 11 A.M., 100.4°, and all symptoms of collapse had disappeared. The patient could recollect nothing of what had happened, and was apparently none the worse. Three days later, two grains of antifebrin were tried with a similar, though very much slighter, result. The patient lived fifteen days longer, with an average temperature of 102.6° F.

Bristol. JAMES WILDING, M.D.

PATHOLOGICAL MEMORANDA.

CARTILAGINOUS THICKENING OF SPLEEN CAPSULE.

B. D., male, admitted into this asylum, certified as a case of chronic mania about ten years ago. He was then reported as being a man in fairly good health. Since his residence here his health has varied greatly at times, being very feeble and confined to bed; he also suffered from chronic Bright's and heart disease. He gradually sank and died on August 1st. I made a *post-mortem* examination, and found nothing inconsistent with the diagnosis that was formed during life. I did, however, find a condition of the spleen that gave rise to no symptoms, and even had it, I feel confident that its condition could not have been made out, as a similar condition is not mentioned in any of the textbooks. On removing it, I found the diaphragmatic or convex surface, white, hard, and glazed, presenting in fact a cartilaginous appearance, which extended round to the internal surface. The pulp was normal, and when removed the capsule retained its shape perfectly. I examined a section under the microscope, and it presented all the appearances of white fibro-cartilage.

DAVID H. HAMILTON, M.B.

Northampton County Lunatic Asylum.

SURGICAL MEMORANDA.

NOTES ON AN OUTBREAK OF SYPHILIS FOLLOWING TATTOOING.

THE cases of syphilis after tattooing, narrated by Surgeon Barker, M.S., in the JOURNAL of May 4th, are most interesting, especially to army surgeons.

In the summer of 1887, when quartered at Landour, in the Himalaya Range, India, I happened to see and investigate with Brigade-Surgeon White, M.S., just such an outbreak of syphilis following tattooing. The tattooer, Private O., of the Lincolnshire Regiment, had obtained a great name as a skilful and artistic performer, and between January, 1887, and July, 1887, as far as we could ascertain, he had tattooed about a dozen men; of these, five developed syphilis, the rest of the men were inspected and found healthy.

Private O.'s history was as follows: He was admitted to hospital November 19th, 1886, with a hard chancre on the penis, had roseolar eruption and sore throat in the middle of December, 1886, and when he came under observation in July, 1887, he had ulceration of his throat and tongue, loss of hair, psoriasis, and mucous patches on his tongue and gums. He stated that he tried to avoid drawing blood while tattooing, which process he effected by needles; if he drew blood, he washed it off with water; if the latter was not handy, he used his saliva for this purpose. In all cases in which syphilis followed the process he had used his saliva to clean the surface.

Below, in a tabular form, is a return of the cases in which syphilis appeared.

REMARKS.—1. In none of these cases was the sore multiple, nor were there any of the sores rupial in character, being in each case of the true Hunterian variety. 2. Marked induration of the brachial and axillary glands accompanied each case. 3. The copper-coloured discoloration and induration at the seat of the primary sore continued for a long time. 4. None of the cases had suffered from syphilis previously. 5. The case in which epilepsy was present before syphilitic inoculation occurred is interesting from the fact that the primary disease (epilepsy) was much aggravated by the syphilitic poison. 6. All these cases were treated with mercury and iodide of potassium. In each case great debility followed the disease, but most of the cases had suffered in a more or less degree from ague previously, and had been sent up to Landour for their health. 7. The incubation stage was short in all the cases. 8. The sores appeared invariably at the first point pricked.

H. R. WHITEHEAD, F.R.C.S.Eng.,
Surgeon, Medical Staff.

OPERATIONS UPON AGED PERSONS.

IN the report by Mr. G. C. Peachey, in the JOURNAL of July 20th, he alludes to the age of his patient (72 years) as a reason for not performing an operation for removal of an epitheliomatous ulcer behind the lobe of the ear. I have had to perform several operations on aged persons, and have been struck with their capacity for bearing them. I forward brief reports of four cases which occur to me just now.

CASE I.—A man, aged 75, had suffered for five years from epithelioma of the lower lip, which had extended so far that nothing but complete removal of all the soft tissues, nearly to the chin, would suffice for complete removal of the diseased structures. Perfect recovery took place, and the patient lived for nine years after without recurrence of the disease.

CASE II.—A man, aged 66; case similar to the last; perfect recovery ensued, and the patient was alive and well five years after. In both these cases the severity of the operation was enhanced by the performance of a plastic operation for making a new lip, bringing up the flaps from below the chin, and united in the mesial line. These cases were fully reported as follows; Case I in the *Lancet*, August 1st, 1868; Case II in the *Lancet* of February 22nd, 1873.

Tabular Return of Cases of Syphilis following Tattooing.

Case.	Date of Tattooing.	Date of Appearance of Primary Sore.	Part Affected.	Date of Appearance and Character of Secondary Symptoms.	Remarks.
1. Private C., Lincoln Regiment	February 1, 1887	About February 21	Left forearm	Beginning of March had sore throat and roseolar eruption. End of May suffered from ulceration of throat and fauces; had also at this time syphilitic retinitis very severe. Became quite bald, and became very cachectic	States that Private O. only used his saliva to clear the surface at one place; the chancre appeared at that spot.
2. Corpl. W., Lincoln Regiment	March 14, 1887	March 25	Left forearm	Did not notice any sore throat or roseolar eruption till the end of April. At the end of May suffered from syphilitic ulceration of rectum. Glands of axilla and elbow much indurated	This man had epilepsy previous to syphilis. Fits became very frequent while suffering from syphilitic poison.
3. Private R., Lincoln Regiment	April 20, 1887	End of April	Left forearm	Sore throat and roseolar eruption beginning of May; began to lose hair end of May. In August had ulceration of throat and copper-coloured eruption on abdomen	States that Private O. used his saliva to clean surface, and that sore appeared on first spot tattooed.
4. Private P., K.O.S.B.	April 21, 1887	Between four and five weeks after	Right forearm	Sore throat and roseolar eruption six weeks after tattooing. Three months from date of tattooing ulceration of throat; loss of hair and copper-coloured eruption on body	Sore first appeared as a small pimple at the spot where the operation commenced. Private O. used his saliva to clean surface.
5. Private S., Lincoln Regiment	June 10—15, 1887	June 22	Left forearm	Did not notice sore throat or roseolar eruption. Hair began to fall out middle of August. Ulceration of throat and gumma on tongue middle of September, accompanied by copper-coloured eruption on body	Seat of chancre first place pricked. Remembers Private O. using his saliva to clean the surface.

CASE III.—A woman, aged 87, had suffered for some months from epithelial cancer, supervening upon a wart on the forefinger. After repeated attacks of bleeding, endangering her life, she consented to amputation of the finger; but the disease had so nearly reached the metacarpo-phalangeal articulation that amputation had to be performed through the metacarpal bone. The patient recovered completely in ten days, and lived six years after; no recurrence of disease.

CASE IV.—A man, aged 78, with extensive epithelioma of cheek, involving almost the whole of the face. Complete removal of diseased tissues, with perfect recovery and no return of disease. The patient lived to the age of 82.

These last two cases were fully recorded in the *Lancet* of 1877, vol. ii, p. 85, in support of a paper contributed to that journal of March 11th, 1876, by Dr. Fergusson, on the subject of "Operations on Aged Persons." Shortly after my paper appeared, Mr. Hussey, of Oxford, kindly sent me a pamphlet in which he mentions a severe operation successfully performed for the removal of a large pendulous tumour, of fifty years' growth, from the cheek of a gentleman aged 73. Hence it would appear that advanced age is not an insuperable barrier, *cæteris paribus*, to operations for removal of tumours, having a fatal tendency, or being extremely inconvenient; on the contrary, as I have stated at greater length in the papers referred to, the existence of otherwise good health in aged persons affords the greatest encouragement to the surgeon to undertake the operation.

JOHN EWENS, L.R.C.P.Lond., L.R.C.S.Ed., L.S.A.,
Surgeon to the Bristol Hospital for Women and Children.
Clifton.

REPORTS

ON

MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

GENERAL HOSPITAL, BIRMINGHAM.

SIX CASES OF DISEASE OF THE SPINAL CORD TREATED BY SUSPENSION.

(Under the care of Dr. SAUNDBY.)

Reported by T. SYDNEY SHORT, M.B., Resident Medical Officer, from the Hospital Notes.]

THESE cases have occurred in the hospital since the beginning of the present year. The suspension was carried out by means of an iron tripod and pulley with bar attached, to which the patient was slung by straps passing beneath the chin and occiput. Arm straps were also provided, but were not required in any case except that of J. J. (Case v). They were tried with him on one occasion, but did not fit accurately, and by the time that the buckles were adjusted satisfactorily he declined further suspension. In all cases the suspension was carried out for a short time at first, usually for fifteen or thirty seconds, and the time was increased daily until the patient could bear four minutes. In no case was the length of time compulsory; the man was let down at once on signalling, and it was found that there was no inclination to clutch the legs of the tripod with this arrangement. The first or second time the man could keep his toes on the ground if he liked.

The ascent was made from the ground, and both the ascent and descent were very gradual, great care being taken not to jerk the patient. J. J. (Case v) was the only man who felt any really bad effects; he became pale and felt sick and faint on one or two occasions, but got over it completely in about half an hour. Several of the men stated on different occasions that they experienced singing in the ears, or a feeling of stretching down the spine, or a numbness passing into a warm feeling down the back, but none experienced actual pain.

It cannot be definitely stated that any one of these cases derived benefit from the suspension; E. G. (Case I) certainly improved under treatment, and was able to walk better when he left the hospital, but the influence of the suspension on the result was doubtful.

CASE I.—E. G., aged 52, gardener, married; admitted January 21st, 1889. Family history good, none of nervous disease. Temperate man, not had syphilis. Had an accident ten years ago when he broke left leg, right arm, and says he fractured his occipital bone. Present illness began nine months ago with pains in the legs, a feeling of constriction round the waist, and unsteadiness in walking, especially in the dark.

On admission: Fairly well made man, rather spare than fat; no actual muscular paralysis; very ataxic. Cannot stand well with eyes open if heels are together, and not at all with eyes shut. Numbness over both legs and right hand. Some loss of sensibility to touch over the legs, other special senses normal; Argyll-Robertson pupils; myosis; knee-jerks absent; plantar reflexes absent; other reflexes normal; water has to be drawn off, he cannot pass it.

Suspended: January 27th, 30 sec., toes on ground; 28th, 30 sec., toes off ground; 29th, 1 min.; 30th, 1 min. 15 sec.; 31st, 1 min. 30 sec. February 1st, 1 min. 45 sec.; 2nd, 2 min.; 3rd, 2 min. 15 sec.; 4th, 2 min. 15 sec.; 5th, 2 min.; 6th, 2 min.; 9th, 2 min. 5 sec.; 10th, 2 min. 10 sec.; 11th, 2 min. 15 sec.; 12th, 2 min. 15 sec.; 13th, 2 min. 30 sec.; 16th, 2 min.; 17th, 2 min. 15 sec.; 18th, 2 min.; 20th, 2 min. 5 sec.; 22nd, 2 min.; 24th, 2 min. 15 sec.; 26th, 3 min. March 1st, 3 min.; 3rd, 3 min.; 5th, 3 min.; 8th, 4 min.; 11th, 4 min.; 14th, 4 min.; 20th, 4 min.; 25th, 4 min. Discharged on March 27th to come up as an out-patient. During the time he was in hospital, he improved considerably. He was taking ℥ss of potass. iodid. *ter die* all the time, and was blistered down the spine on February 13th. He was able to pass water naturally, and to walk about better. The pains in the back and arm were not so severe, but recurred at times. The girdle pain had gone when he left. He came up once a week to be suspended for 4 minutes as an out-patient, until the third week in May, and then he gave up attending. When last seen, he was complaining of numbness in the right hand, this was on May 21st.

CASE II.—E. L., aged 34, discharged soldier, single, admitted January 24th, 1889. No family history obtainable of nervous disease. He had had syphilis in 1886, and some remittent fever in India in 1877. Present illness began in 1887 with some difficulty in micturition, accompanied by pain in the lower part of the abdomen, and this pain has continued, on and off, since. Since June, 1888, he had had weakness and pains in the legs.

On admission: Strong healthy-looking man, well built but spare and wiry. No complete muscular paralysis, but loss of power, to some extent, in both legs, which have wasted, according to his account, especially about the calf muscles. Very ataxic; cannot stand with eyes shut. No loss of sensation to touch, pain, heat, or cold. Muscular sense normal; pupils react to light and accommodation. Special senses not impaired. Knee-jerk exaggerated; ankle clonus present. Plantar reflexes exaggerated. Other skin reflexes not well marked. Has girdle pain and shooting and aching pains down both legs. Put on iodide of potassium gr. 30 *ter die*, with inunction of mercury.

Suspended: February 1st, 30 sec.; 3rd, 30 sec.; 4th, 30 sec.; 5th, 33 sec.; 8th, 1 min.; 9th, 1 min.; 10th, 1 min.; 11th, 1 min. 30 sec.; 13th, 2 min.; 14th, 2 min.; 16th, 2 min.; 17th, 2 min.; 18th, 2 min.; 20th, 2 min.; 22nd, 2 min.; 24th, 2 min.; 26th, 2 min. March 1st, 3 min.; 3rd, 3 min.; 5th, 3 min.; 8th, 4 min.; 11th, 2 min. 30 sec. (a severe pain in the bladder compelled his descent—vesical crisis); 14th, 2 min. 30 sec.; 20th, 4 min. April 2nd, 4 min.; 9th, 4 min.; 12th, 4 min.; 16th, 4 min.; 20th, 4 min.; 23rd, 4 min.; 27th, 4 min.; 30th, 4 min. May 4th, 4 min.

He was discharged on May 7th, to come up as an out-patient. During the time he was in he suffered from vesical and rectal crises continually. Fundi were examined, and appeared quite normal. On February 11th he was blistered down the spine, and, on April 20th, ℥j of liquor hydrarg. perchloridi was ordered with the potass. iodid. *ter die*. At the time he went out his bladder trouble had gone, but he walked no better, and was just as unsteady on standing with the eyes shut. He came up once a week, to be suspended, as an out-patient until the third week in June, and then ceased to attend. He was last seen on June 18th, and then reported that he had just had a bad vesical crisis. He was still very ataxic.

CASE III.—H. H., aged 40, formerly clerk, married; admitted January 28th, 1889. No family history of nervous disease obtainable. Previous history good. Not had syphilis. Never had any illness except a severe attack of measles when 20 years old; always temperate man. For last eight years has suffered from very severe epigastric pain, not affected by food, and pain at the upper part of the sacrum; these pains have been present on and off all the time. For last eight months has had weakness of the legs, with numbness from the hips to the toes,

with a feeling as if he were walking on wool, and has lost power of sexual intercourse.

On admission: Very ataxic, cannot stand with feet together at all. Argyll-Robertson pupil well marked in right side, on the left no response to light or accommodation. Discs pale. fundi otherwise normal. Knee-jerk absent, plantar reflex absent. All skin reflexes rather sluggish. Feeling of numbness in the legs. Sensibility to touch impaired in legs on both sides. While he was in hospital he had lightning pains in legs, and a feeling of constriction round the waist occasionally. Sphincters were normal.

Suspended: February 1st, 30 sec., twice; 2nd, 1 min.; 3rd, 1 min. 30 sec.; 4th, 45 sec.; 5th, 1 min. 15 sec.; 8th, 1 min. 15 sec.; 9th, 55 sec.; 10th, 1 min.; 11th, 1 min. 20 sec.; 12th, 1 min. 30 sec.; 13th, 1 min. 45 sec.; 14th, 2 min.; 16th, 1 min. 30 sec.; 17th, 1 min. 15 sec.; 18th, 1 min. 30 sec.; 19th, 2 min.; 22nd, 2 min.; 24th, 2 min. March 3rd, 2 min. 25 sec.; 20th, 2 min. 30 sec.; 25th, 2 min. 30 sec. Between March 3rd and 20th he had a carbuncle on the back, and the suspension was discontinued. Discharged on April 3rd.

He was taking 3 grains of potass. iodid. *ter die* while he was in hospital, and had mercurial inunction. On February 24th he was blistered down the spine. When he went out he was suffering less from pain, but he was walking quite as badly as on admission. He was not seen as an out-patient after he left the hospital.

CASE IV.—J. M., aged 69, tailor, widower; admitted March 5th, 1889. Fairly developed but emaciated man; very ataxic in walking, and sways from side to side when standing with heels together. Pupils equal, react sluggishly to light, and normally to accommodation. Knee-jerks exaggerated; no ankle clonus present. Sensation to touch, pain, heat, and cold normal; all special senses normal with the exception of eyesight, which is weak from commencing cataract in each eye.

Suspended: March 11th, 30 sec.; 14th, 30 sec.; 20th, 40 sec.; 25th, 40 sec. April 2nd, 40 sec. Discharged April 9th. He took ℥ss of potass. iodid. *ter die* while he was in hospital. When discharged he could walk no better than on admission, but his general health had improved. He has not been attending as an out-patient since he left the hospital.

CASE V.—J. J., aged 43, machinist (until last few years a professional bicyclist); admitted March 27th, 1889, married, four children. No family history of nervous disease or syphilis obtainable. Previous history good as regards disease; not acquired syphilis. Had concussion of the brain from a fall ten years ago, from which he quite recovered. A few years before admission he drank heavily. Fairly developed, spare man. Present illness began eight years ago with shooting pains in his legs. For the previous twelve months he had suffered from what he thought were gathered corns under each little toe. The pains in his legs continued for six years on and off, and then he had a pain in his back, with difficulty of walking upstairs, and was in the hospital on the surgical side for a sore on the left foot, which was treated by operation and healed. This was two years ago, and since that time he was in for his feet three times.

On admission: The principal nervous symptoms were slight unsteadiness in walking, more marked with eyes shut, in which condition he sways a little, standing with heels together. Muscular power and sensibility good. Slight ptosis of left lid; Argyll-Robertson pupils; left larger than right. Knee-jerks absent. All other superficial and deep reflexes normal. No alteration or loss of cutaneous sensation. No paralysis of ocular muscles. No tremors. Sphincters normal. Fundi of eyes normal. Has a feeling as if the belly were being dragged towards the back, and aching pains down both legs. He was put upon potass. iodid. ℥ss, and liq. hydr. perchlor ℥j, *ter die*.

He was in hospital for one month, and during this time he was suspended seven times as follows: April 2nd, 30 sec.; 11th, 30 min.; 12th, 1 min.; 16th, 2 min.; 20th, 3 min.; 22nd, 2 min. 30 sec.; 27th, 3 min. During the time he was in he suffered a great deal from the constricting pain round the waist, and the pains in the legs which simulated sciatica. These pains never entirely left him, but were relieved for five or six hours at a time by antipyrin. He was made an out-patient on April 28th, and came up twice at intervals of a week to be suspended for four minutes; the second time he felt faint at the end of two minutes, and was let down. The pains continued in the back and legs as severe as ever, and he was readmitted on May 15th; antipyrin failed to ease him, and the pains had to be relieved by morphine subcutaneously. He was suspended again on June 4th, but signalled to be let down at the end of a minute and a half on account of feeling faint: this feeling passed off in about half an hour. He would not be suspended again, and was discharged on June 19th.

About a week after he was first admitted, he could walk more steadily, and continued to do so all the time he was under observation. The difficulty he had in walking when he left was not due to ataxia, but to a sudden giving (as it were) in his leg, when the pain became suddenly more acute than usual, and this caused a sudden and unexpected bend of his knee. The left leg was the worse, but the pains in both were severe at times, and were relieved by antipyrin, but were only completely removed by morphine. He came again on August 3rd to say that he was engaged to ride in some contests on Bank Holiday, so that he has probably improved.

CASE VI.—H. B., aged 34, labourer, formerly in the army, unmarried; admitted September 29th, 1887. No family history obtainable of nervous affection. Previous history good. Had ague in India when in the army. Six years ago had syphilis. Present illness began in 1886 with inability to retain his urine, coming on gradually, and followed in some weeks by pains round the waist and in the legs. He had ataxia early, and stated that when he was in a local hospital he had had double vision and internal squint, with a general numbness all over him, and he remembered the doctor saying he had Argyll-Robertson pupils.

On admission he had wasting of both thighs and legs, with incoordination and loss of muscular sense. There was numbness in arms and legs and over the lower part of the abdomen. Tactile sense was very much diminished over these parts. The reaction to the faradic current much diminished in all muscles of legs, but nowhere lost. He was unable to stand. Eyes were normal in every respect. Knee-jerk absent. Plantar reflex absent; other reflexes normal. He had severe pain in arms and legs.

He remained in the hospital until November 12th, 1887, and was taking pot. iodid., and having the faradic current to the muscles of the legs; he was then transferred to the Jaffray Suburban Branch Hospital, and remained there until May 4th, 1888. During his stay at the Branch Hospital he improved considerably, and could get about in the ward, pushing a chair in front of him; he could not walk with crutches, as his legs performed curious choreiform movements when he put his weight on them, and the support afforded by the crutches was not sufficient to prevent him from being thrown down. He had pot. iodid., mercurial inunction, and galvanism to his spine, with faradism to the muscles of the legs.

He was not seen for over a year and kept his bed the whole time, not having been allowed to get about with a chair. He was readmitted to the General Hospital on April 8th, 1889. General nutrition had improved during the year; he could perform all movements in bed with noticeable weakness of the muscles of his legs, and partial "dropped foot" on each side. When out of bed, he could stand with each hand on a chair so long as he looked at his feet; when he took his eyes off them, he swayed and fell. There were neither choreiform movements nor stiffness of legs.

All superficial reflexes were present, except the cremasteric and plantar. Knee-jerks absent. Pupils equal, reacted sluggishly to light, but readily to accommodation. Fundi: no atrophy of discs, but they were pale, and vessels were rather small. Still had shooting pains down the legs at times, especially at changes of weather. Had no girdle pain, and had had none since he left the Jaffray Hospital.

Sensation over the arms and hands perfect in every respect. Sensation below the knees quite absent to touch and firm pressure; for a few inches above knees it was variable, and over rest of the thigh perfect. Over this variable area he had a peculiar persistence of the sensation of a touch, so that, if touched rapidly in several places, he could not tell when he was again touched, unless an interval of about 30 seconds or even more intervened, as he felt all the touches together, and the sensation appeared to him to spread in all directions. Sensation to pain below the knees present, but blunted and delayed for about 3 seconds all over. With hot and cold objects he could tell the cold (below knees), but not the hot, unless the hot caused pain. Muscular sense below the knees quite lost. Special senses normal. Bladder and rectum normal. Sexual desire lost. No pain over course of any nerves.

He was put on ℥j of liq. hydrarg. perchlor. and with ℥ss. of potass. iodid.; but, as he very soon became salivated with the mercury, on April 28th he was ordered the iodide alone. On May

19th, blistered down spine. Suspended: April 12th, 30 sec.; 14th, 40 sec.; 16th, 50 sec.; 20th, 1 min.; 23rd, 1 min.; 27th, 1 min. 10 sec.; 30th, 1 min. 20 sec. May 3rd, 1 min. 40 sec.; 7th, 1 min. 20 sec.; 10th, 1 min. 30 sec.

On May 4th, he had severe pains down the back and legs; these, he thought, were brought on by the suspension, as he had had none for a month, and then not severely. On the 7th he had no pain, but on the 10th he had it again severely, and he declined further suspension. He was discharged on June 11th in much the same condition as on admission, and has not been seen since.

METROPOLITAN HOSPITAL.

PHTHISIS PULMONALIS IN HUSBAND AND WIFE; POSSIBLE CASE OF CONTAGION.

(Under the care of Dr. C. R. DRYSDALE.)

[From notes taken by Dr. LUCAS.]

CASE I.—C. B., aged 34, married woman, entered the Metropolitan Hospital on June 1st, 1889, and died July 24th. The patient had suffered from cough for five or six years, and had lived very badly. She married in 1886. Six years before admission, she had had hæmoptysis to the extent of about half a pint. She had much expectoration and night sweats. No history of phthisis in her family. She was much emaciated when she entered hospital. The pulse was 80. There was deficient expansion of right side of chest, and dulness of percussion at right apex. Crepitation was heard over front and back of right chest, and there was bronchial breathing on right side. The sputum contained numerous bacilli. The patient appeared moribund when taken into hospital; but rallied, and lived a month and three quarters in comparative comfort, and was most cheerful and sanguine as to her ultimate recovery. The temperature never rose over 102° F., and attained that height only on one occasion. It fell below 98° for some days before death.

CASE II.—T. B., aged 40, the husband of the above-named patient, was admitted into hospital on August 1st, 1889. He used to be considered a very strong man, and, as warehouse porter, carried great weights upstairs. Fifteen years ago he had rheumatic fever, which laid him up three months. His father was alive, aged 79. His mother died of albuminuria. Two years before admission, he had pains in the chest when at work, and began to cough. A year and a half before admission, he brought up a clot of blood, and his sputum was tinged with blood. On admission, the patient was found to be moderately well nourished. His hair was dark and he had a dusky complexion. Tongue furred. Pulse 140, weak; temperature 104° F. Chest fairly developed with fair movements. Some flattening noticed at both apices. Prolonged expiration at left apex with whiffling character. At right apex the breathing was louder and more bronchial. Bronchophony and pectoriloquy at right apex. Night sweats. The patient weighed 8 st. 11 lbs. on admission, and used, when well, to weigh 10½ st.

REMARKS BY DR. DRYSDALE.—Here is a case where a man, who had previously been in robust health and of a healthy family—for he had eight brothers and sisters alive and in good health—married a woman in 1886, who had suffered from hæmoptysis three years before her marriage, and who died in hospital of phthisis pulmonalis. The husband had the first symptoms of the disease in 1887, a year after marriage, and is at present suffering from chronic phthisis. This case is a contribution to the discussion now going on as to the part played by contagion in the spread of tuberculosis. Many statistical facts point in the direction of such contagion. Thus, the disease is absent in Alpine districts, thinly inhabited by a healthy population, as I have myself found to be the case in the high valleys near Davos; and it is most prevalent where people are most crowded in large houses with flats, as in Paris and Vienna. Thus, whilst the death-rate from phthisis in London, in 1886, was 202 per 100,000 inhabitants, it was 470 in Paris, 664 in Vienna, and 708 per 100,000 in Buda-Pest. It is probable, therefore, that the best way to prevent the ravages of this terrible disease is to attempt, as far as possible, to lessen the crowding into cities which is so prominent a feature of life in this century. It would be of great service if a column were added to the valuable quarterly reports on the health of London in the BRITISH MEDICAL JOURNAL, giving the deaths from phthisis, as that is now the great cause of death.

REVIEWS AND NOTICES.

LECTURES ON PATHOLOGICAL ANATOMY. By SAMUEL WILKS, M.D., F.R.S., and the late WALTER MOXON, M.D. Third edition, thoroughly revised by Samuel Wilks, M.D. London. 1889.

IT will very seldom happen that the author of a scientific textbook has the opportunity which Dr. WILKS enjoys of revising his own labours after an interval of thirty years. Indeed, the fate of such literary enterprises is often an unfortunate one. Many an author, with the energy and comparative leisure of youth, produces a brilliant first edition, but when the time comes for perfecting his original sketch, he finds that, fame and success having brought more crowded occupations, time is lacking for a proper revision; so that his early work fails to profit by his matured experience. Either the author himself remoulds his work with a hasty hand, and it drops into a second-rate position; or else the task of revision is entrusted to others, and the book, though in some respects improved and completed, runs the risk of losing the special characteristics which gave it its chief value. Hence we often feel that an early edition of some popular standard work is a more satisfactory monument of the author's genius than the latest; and that it would have been better for his fame (though not perhaps for the usefulness of his labours), had his literary offspring been arrested in its development.

But Dr. Wilks's lectures have been more fortunate; and he himself, as well as his readers, must be congratulated on his having been able to retouch his early handiwork with the wisdom of maturity. The first edition of these famous lectures was published in 1859 but, notwithstanding their popularity, the second edition did not appear till fifteen years later, under the editorial care of the late Dr. Moxon. Now, after a second interval of equal length, the task of preparing a third edition has fallen back, very happily, into the hands of the original author. It would be unfair to call Dr. Moxon merely an editor, since his contribution to the second edition was probably equal in extent to the original work, and there can be no doubt that his remarkable gifts and wide knowledge added greatly to its value. But the double authorship tended in some respects to efface the special stamp which Dr. Wilks's own individuality had impressed upon the first.

The publication of these lectures thirty years ago made an epoch in English pathology. Textbooks on the subject were at that time few and unsatisfactory, while the experience which Dr. Wilks brought to his task was unsurpassed either then or since. The special value of his work consisted in its being based entirely upon this experience. The author abstained, as he expressly said in his preface, from making any statement which was not supported by his own personal observations. The lectures did not claim the position of a complete textbook; and it is clear that, with such a limitation as that just mentioned, they could hardly occupy that position. No pathologist has seen and investigated everything, just as no geographer has travelled in every part of the world. But if the maker of a map should refuse to insert any place which he had not himself visited, his maps, though they would possess a certain special value of their own, could not be complete.

In the second edition this limitation was not so strictly adhered to; and the speculative intellect of Dr. Moxon led him to give a larger place to the discussion of theories and generalisations. In the present edition Dr. Wilks seems to have arrived at a happy mean. The greater part of the book consists of general statements, which must be taken as expressing the experience of the two authors, or at least of one of them; but the observations of others are frequently quoted, and the causation of many pathological conditions is fully discussed. The main limitation of the original work is, however, as we think, wisely preserved. It remains a treatise on pathological anatomy, or, as we might say still more definitely, on special pathological anatomy; and neither by its contents nor its title-page does it claim to be a textbook of pathology in the wide sense of the word. Comparatively little space is given to pathological histology, scarcely any to experimental or physiological pathology, and very little to bacteria; while there are no illustrations. On the other hand, the field which it does cover is treated very thoroughly, so that the book still retains the original stamp of first-hand knowledge, which,

with its genuine and thorough-going accuracy, have made "Wilks and Moxon" a standard work.

A comparison of this limited scope with the more ambitious aim of Dr. Hamilton's recent textbook would illustrate in an instructive manner, the true relation of morbid anatomy to pathology; but as Dr. Wilks has expressed his own views on this question, we cannot do better than let him speak for himself.

Speaking of the difficulty which there is with our present means of investigation of demonstrating all the pathological changes occurring in the body, he says, "Even when the morbid conditions are widest, we must not take them as ultimate facts, and think we have arrived at the true pathology in them. For very often the great mass of disease which we find in a body is secondary, only representing the effects of causes that escape our observation even where the proper connection of the appearances we discover is clearly traceable, which is not always the case. It is this tendency to lose sight of the causes and treat the effect as ultimate, which has brought some odium on the science of morbid anatomy. We need not, however, be alarmed at studying it too much, for by a thorough knowledge of effects we must be in a better position to apprehend the nature of their causes. Without slight to the study of etiology and nosology, we may hold that the anatomical side of diseases offers us a view of them which we can realise and know, and upon which we can mutually compare our knowledge, while the sciences of the causes and symptoms of diseases are often vague or fragmentary, being too much mixed up with tradition and hearsay or ill-contrived experiment."

Of the excellence in its own field of so well tried a work as the present, it is almost superfluous to speak. We may say, however, that a careful examination of the new edition has shown us in almost every part new additions, corrections, and improvements. Great pains have evidently been taken to incorporate the great mass of knowledge respecting diseased structure which has come to light since the publication of the second edition. The omission of distinct references to the works of the different authors quoted is a feature respecting which there may be some difference of judgment. Certainly such references are of little use to students, but to teachers and special investigators it is sometimes disappointing not to be able to trace the original authority for important facts. On the whole, it may be confidently said that there is no more satisfactory guide to the morbid anatomy of the deadhouse, especially in its bearing on clinical medicine, than the great work for which pathological science is indebted to Dr. Wilks and his lamented coadjutor.

THE DIAGNOSIS AND TREATMENT OF EXTRA-UTERINE PREGNANCY. By JOHN STRAHAN, M.D., M.Ch., etc. Philadelphia: P. Blakiston, Son, and Co. 1889.

THIS is the essay that gained the prize offered by the William F. Jenks Prize Committee for the best treatise on "The Diagnosis and Treatment of Extra-uterine Pregnancy." Whether the system of offering prizes for essays on a particular subject is likely in general to stimulate those whose work, on account of their opportunities and previous training, would be best worth having, may well be doubted. Prize essays often consist mainly of more or less ingenious arguments about other people's work, or if, exceptionally, an essay should chance to be founded on the author's own work, it is very likely to happen that, at least as regards clinical work, his observations lack the authority that belongs to extensive experience. In the present case seven candidates entered the field for the prize of 250 dollars, and, without knowing the names of the unsuccessful six, we may feel pretty certain that those from whom the profession would most desire to have a monograph on the subject of extra-uterine gestation were not among the competitors.

The essay before us consists of two Parts—Part I on Diagnosis, and Part II on Treatment. The author quotes Tait's opinion that, if the rupture happen in the free part of the circumference of the tube, the bleeding is into the peritoneum (intra-peritoneal hæmatocele), which is almost invariably fatal unless the abdomen is opened.

Speaking of interstitial gestation, we find: "Tait has never seen a preparation which could by any possibility have been diagnosed from normal pregnancy during life, or at least previous to rupture." The author also finds that these cases of interstitial gestation are extremely rare. In a typical case under the care of Dr. Lewers (which, by the way, has escaped the author's notice) the patient thought herself five months pregnant in the ordinary way, and experienced no unusual symptoms up to the time of rupture.

We may quote a passage that has an application in many branches of medical research besides that of gynæcology: "Then authors laboriously collect hundreds of worthless records of cases which probably had little in common, and draw conclusions and lay down rates of mortality and rules of practice for this and that condition, the whole thing being far more false and useless than is the Registrar-General's records of the causes of death in Great Britain. Having been a public registrar of deaths, I can testify that in most cases the medical certificate gives only the faintest idea of the seat of disease—not taking account of the many cases where the diagnosis is entirely at fault. Yet on these figures theories are being built up! The personal experience of highly-qualified and highly-gifted men who systematically record and analyse their cases is infinitely superior as a basis for argument to any form of collective investigation which has hitherto appeared." With this we entirely agree.

Speaking of the diagnosis of pregnancy, the author mentions as a sign of pregnancy an increased desire to pass urine, particularly at night, and says it is one not noticed in books. Surely an increased frequency of desire to pass water is usually enumerated among the symptoms of pregnancy, though one of little diagnostic value.

The book is an interesting summary of the present position of the subject of extra-uterine gestation. The views to which most prominence is given are those of Mr. Lawson Tait, some of the more important being that one of the chief causes of extra-uterine pregnancy is a previous desquamative salpingitis, leading to loss of the ciliated epithelium of the Fallopian tube, and so favouring the access of spermatozoa to the tube. We think there is strong evidence in favour of this view. Again, Mr. Tait believes that all ectopic gestations that have advanced to term, or nearly so, have developed beneath the peritoneum—are extra-peritoneal. Following up this view, Mr. Tait, in operating on such cases, advises that the incision should never be in the middle line, as a linear strip of peritoneum—a diverticulum, as it were, of the peritoneal cavity—corresponding in width to the anterior surface of the uterus, persists even when the pregnancy is extra-peritoneal. Making the incision in the middle line would in such cases lead to opening the peritoneal cavity, when a lateral incision would not do so.

Dr. STRAHAN has evidently taken great pains in looking up the authorities, and he has put together the results of his investigations in a very readable form. The weak point, of course, is the author's apparent want of experience at first hand in the province of surgery dealt with in his essay.

AN INTRODUCTION TO PATHOLOGY AND MORBID ANATOMY. By T. HENRY GREEN, M.D. Seventh Editon. Revised and enlarged by STANLEY BOYD, M.B., B.S.Lond., F.R.C.S.Eng.

No more striking indication of the enormous strides made in the science of pathology in our country could be offered than that seen in the appearance of "Green's Pathology" in its present form. For years this work was the guide, philosopher, and friend of all rising pathologists. It was, for long, the textbook recommended by every examining board, and, in the form so well known some years ago, it fixed the standard for most examinations. There then came a period of great pathological activity, and textbook after textbook came from the pens of various able pathologists in this country, and, for a time, "Green" was overshadowed.

Dr. GREEN, to whom the thanks of the profession are due for his discriminating and indefatigable work in the past, in collecting facts and in putting them tersely and lucidly before the student, has at length found it necessary to hand over the reins and the editorial whip to a junior colleague. Although it seems a pity that Dr. Green's experience should be no longer officially available, it will at once be seen, on careful perusal of the work, that a very efficient colleague has been selected for the post of editor, and one who can at all times obtain the assistance and advice of the originator of the work.

Mr. STANLEY BOYD has performed his share of the work most admirably. He has improved on the sixth edition, which he edited, and has recast or rewritten several very important sections in which recent advances have to be recorded. Since Mr. Boyd

took the book in hand it has expanded in every direction; the page is larger, and from 444 pages it has risen to 600. The illustrations have been increased in number from 138 to 167, and many of the additional cuts are exceedingly well executed.

In order to give some idea of the scope of the work, and at the same time indicate the alterations that have been made during this period of evolution into its present form, it may be mentioned that the introduction and the first chapter have been very considerably modified, and are now put before the reader as an introductory chapter, which deals with cells and cell-protoplasm, and the changes involved in waste and repair, and then treats of the etiology of disease, its modes of extension and termination. In the chapters on impaired nutrition, the greatest changes have been made in the section dealing with fatty degeneration, which, in the light of recent important investigations, has been entirely recast. The chapter on cloudy swelling has been introduced earlier, and takes the place of the chapter on tissue changes in pyrexia. The chapters on the various forms of degeneration then follow, and are exceedingly well written, though in some cases the information is somewhat meagre in amount.

An important alteration is the separation of the subject of the regeneration of tissues from hypertrophy. This involves a great improvement in the treatment of both subjects, and allows of very considerable and advantageous extension of the description of the processes of healing of wounds and of the transplantation of tissues. The section on tumours is somewhat enlarged; the parasite theory, of recent date, is touched upon, and there has been an attempt at reclassification of tumours. It might here be suggested that, in the light of our present knowledge of the structure and history of sarcomatous tumours, it is scarcely advisable to sandwich them between the lymphomata and lymphangiomata, and the myomata, neuromata, etc., all simple tumours. Such an arrangement is calculated to confuse the student rather than to help him in his study of neoplasms. A far better, and, one would think, more scientific arrangement in the classification adopted, would have been to take the sarcomata as representing the embryonic tissue type first (or last), the histioid or fully developed connective tissue type next, and then, those corresponding in type to the higher mesoblastic tissues.

In the case of the epithelial new growths, there is also some mixing up of the various forms. The classification adopted is neither clinical nor histological, and may lead to some misconception on the part of the student. The descriptions of the various tumours, however, are admirable, and neutralise to a great extent what may, by some, be looked upon as imperfections in the classification.

The chapters on the circulation, changes in the blood, etc., are brought up to date, and there is introduced a chapter on fever, which should prove of considerable interest, especially to more advanced students.

After tubercle, lupus and scrofula are treated of, and numerous additional facts are brought in under the heading "infective granulomata"—a term which, by the way, may now be looked upon as both antiquated and misleading, and one which in the next edition might with advantage be dropped. The inflammations of non-vascular connective tissues, bone, etc., are all brought under one heading, and then follow chapters on inflammation of the various organs and membranes. It is somewhat difficult to understand why pulmonary phthisis should come here, rather than after tuberculosis, where it would naturally fall to be considered; but this chapter on pulmonary phthisis is especially well written, and we have in it the results of Dr. Green's own reading, observation, and experience in a most condensed and intelligible form.

The diseases of the spinal cord are in this edition treated of after the lungs have been dismissed, and the section has been very much extended; in addition to which Dr. Mott contributes several very effective photo-micrographs of altered tracts in the cord in various diseases. The chapters on septicæmia and pyæmia are made to precede the chapter on vegetable parasites, instead of following that on tuberculosis. The section on vegetable parasites is also remarkably well written, and the contained matter is thoroughly up to date. A few methods for the examination and cultivation of bacteria are given in the concluding pages of the book.

Taking it altogether, the work has been well brought up to date; it is carefully written, and will give the student an accurate basis on which to build his further knowledge of pathology.

A Handbook of Cryptogamic Botany. By Alf. W. Bennett, M.A., B.Sc., F.L.S., and Geo. Murray, F.L.S. Longmans, Green, and Co.

Though not strictly a medical book, this is one which deserves notice, for it is written by teachers of medical students, by men who are in harmony with medical thought and feeling. The botany of to-day is a very different thing from what it was when Rousseau said that one misfortune of botany was that it had fallen into the doctors' hands, who did not look to Nature for what she had to show, but only with the idea of finding simples for the treatment of diseases. Botany of to-day is largely concerned with physiology, and has every right to take her place beside her better recognised sister. For the study of botany now there are the practical workshops and the gardens of every kind specially prepared for study, but yet, we are happy to say, the love of field botany is not decreasing. Edinburgh was for many years famous for its botanising excursions, which may be compared favourably with the old herbarising expeditions of our forefathers. Though it is to be feared that but few medical schools have teachers who can get classes of students to sacrifice a day's recreation of the more muscular kind for the botanising walk, yet there are teachers such as Mr. Bennett who make the field study open to all. We have only to recall his beautiful books on the Alps and his recent tourists' book for the Alps of Switzerland, which is a careful translation of Gremli's book on the same subject, to show how earnest and persevering is one of the joint authors of the book under notice.

Cryptogamic botany has great attractions for medical men, and European authorities on several of its subdivisions have been members of the medical profession. There can be no doubt that the study of these plants, which are so easily obtained and can be so readily dissected, is very attractive to busy men who yet love Nature.

We can recommend the book under notice as an excellent introduction to the whole subject. It is a book full of facts and careful observation. Authorities are fully referred to, so that anyone seeking to work at one division will find a useful bibliography. The authors begin with the vascular cryptogam, and work from the higher and better known to the lowest and the less known. They use a few new words, but are careful in justifying and defining the terms used, this being very necessary where the obscure subject of fertilisation in different groups has been studied by different men, and the parts concerned have received similar names with different annotations. The illustrations are original in most cases, and are very clear and well arranged. We may heartily welcome the book; and, for anyone wishing to take up the study, or for one interested in the physiology of reproduction as it takes place in the lower plants, nothing could be better than the book before us.

NOTES ON BOOKS.

A Manual of Musical Drill and Physical Exercises. Illustrated. By Major Cruden, M.A. (Simpkin, Marshall, and Co.)—Major Cruden has given much attention to the physical training of children, and, as a member of the School Board of Aberdeen and lecturer on physical culture, has developed the city gymnasium to a great point of excellence. The manual before us is the outcome of much practical experience, stimulated by an earnest and intelligent desire to improve the physique of children. This author, like most others, seems to design exercises mainly to develop the frame, the muscles, and the joints. This is well; but it leaves us still to look for a higher development of the science of calisthenics in England in the production of a system for exercising all the motor centres of the nerve-system, and bringing them under due control and to an aptitude for harmonious activity. Major Cruden has produced a useful manual; the exercises given are well graduated and adapted to their purpose; and the numerous woodcuts admirably illustrate the text. Well arranged class drill is a great benefit in school education; the children perform their exercises with regularity and precision after a short course of instruction, and their senses are thus quickened as well as their readiness of response. When once the gymnasium is started, the expense is not great. Parents are always anxious for education to be completed that the children may become bread-winners; but, after the pupils have been trained a quarter of an hour twice a week in the gymnasium during one year, they will keep up the habits of drill through the remainder of school-life, and the club is open to them after that.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1889.

SUBSCRIPTIONS to the Association for 1889 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, SEPTEMBER 14TH, 1889.

THE REPORT OF LORD CAMPERDOWN'S COMMITTEE.

I.

WE lately gave a summary of the report, and in a review indicated the chief recommendations, which we now examine more in detail.

It is certain that, whatever may be the outcome, Mr. Stanhope will neither hastily adopt nor summarily reject the recommendations; so that the medical services in particular and the profession at large will have an opportunity of offering criticisms on them for his consideration, which we are confident he will frankly accept in a judicial spirit. He will, indeed, have to hold the balance between conflicting opinions and interests; and we can assure him that, while medical officers have no desire to encroach upon the rights and functions of any class in the service, they, at the same time, claim that traditional prejudices, or the mere spirit of Junkerism, shall no longer be permitted to make their position unbearable or efficiency impossible in the army. They merely ask a fair field and equality of military status to enable them to carry out their duties satisfactorily to themselves, and with due advantage to the army.

We regret there should have been an unfortunate, though not unlooked for, want of unanimity in the councils of the Committee; but we trust due weight will be given to the body of the report, which doubtless represents the finding of the majority.

At every stage of his deliberations, Mr. Stanhope will be confronted with the contingent effect which changes carried out in the Army may have on the Naval, and especially on the Indian Medical, Services. For, while the Naval in many re-respects stands alone, the Home and Indian Medical Services are now so intimately connected, that it would be no surprise if coming changes did not hasten or even at once force on amalgamation. At all events, the report shows that the two services cannot well be legislated for apart; and it was a pity the Indian was not brought within the scope of the Committee's investigation, even if its labours had been thereby greatly extended.

A due analysis of the report must begin with Sir Ralph Thompson's letter of instructions. From that it is clear the Committee had its origin not merely in the complaints of economists, or from questions in the House; but also from the agitation out of doors, and largely in these columns, following the abolition of relative rank: for, in the opening sentences of the report, it is stated that the proceedings of the Committee had been materially shortened by the large quantity of evidence, and "other public information," lying ready to their hands. While Mr. Stanhope instructs the Committee to report upon the pay, status, and conditions of service, he particularly tells them that the numbers or establishment of medical officers will not come within the scope of their inquiry, as he has considered and settled that himself. This is right, because numbers and efficiency are bound up together, and the War Minister cannot shift his personal responsibility for both.

Nevertheless, the Committee think it right to report that "financial saving must be effected chiefly by limiting as much as possible the establishment of officers"—a ready and easy method of reducing estimates, no doubt, if the awkward question of efficiency would only not come in!

The instructions further state that the War Office has always contended that the abolition of relative rank made no "pecuniary" difference to medical officers, which nobody, as far as we know, ever said it did; but when it is further stated that it also made no "practical difference" to them, we distinctly demur. The position of an officer by no means chiefly depends on his pay and allowances, but largely on the official and social status which military rank confers, a matter of very "practical" importance in the performance of his duties and in his every-day life.

Under such instructions, and with the mass of already existing evidence at hand, the Committee proceeded to take oral evidence from representative officers and officials. We are sorry the evidence they thus received is not published, as it would have thrown light upon the true nature and source of the opposition to granting definitive rank and titles to medical officers, and thereby probably removed misapprehensions.

The Committee are unanimous that the present rates of pay and retirement, dating from 1879, while adequate are also necessary; they, in fact, duly recognise that, in fixing the price the State must pay for high-class medical services the comprehensive views of Sir Ralph Thompson's Committee in 1878 cannot be gainsaid. It will no doubt be suggested to Mr. Stanhope that during the past decade the medical profession has become so overcrowded that he might now make lower terms with suitable candidates for the services. We do not believe it; let him not be misled; pressure may and does exist within the profession, and medical men do closely compete in civil life; but their energies are free, and distinct prizes are before them. It is otherwise in the public services; individualism goes for little; there are no prizes, but only great risks for a present competency and a very prospective annuity.

It must be remembered that adequate pay and retirement is only relative and not absolute; the adequacy depends wholly upon the conditions of service demanded. For instance, establishments might be so reduced, and the work imposed upon individuals so increased, that relative adequacy would no longer remain. We can easily foresee that such would be the case if the medical officer had imposed upon him severe grinding daily duty, prolonged tours in unhealthy climates, or retire-

ment deferred to such an advanced age, with the risks and chances all against him, as to render it worthless for all purposes of life and enjoyment. These are points which responsible administrators must weigh when urged to exact more severe daily duties, or longer foreign service, or to defer optional retirement until 30 years' service or 55 years of age.

The recommendation that surgeons-general should serve until 62 years of age originated in a proposal of the Director-General, made on very sufficient grounds, and would assimilate their retirement to that of majors-general; but it will deprive some deputies and brigade-surgeons of promotion, especially the latter, who are retired compulsorily at 55 years of age. It must be borne in mind that the scheme of retirement in force was carefully calculated out in 1879 by actuaries, and interference with it, especially at the top, may derange the whole. Indeed, we fear the rank of brigade-surgeon will in future fare badly, for if three years' service in it be made a condition of earning the pension thereof, many who reach it will, nevertheless, have to retire on the lower pension of a surgeon-major.

We are extremely glad to find that, with the exception of Mr. Bartley, who can have little practical knowledge of the department, the Committee are not prepared to recommend interference with, and see no strong reasons for vetoing, the voluntary retirement of surgeons-major after 20 years' service.

To do so would in many cases only revive the very objectionable system of retirement by Medical Board; and by thus also declaring medical officers physically unfit seriously weaken the retired reserve. We lately have noticed a very ill-judged disposition in some quarters to minimise the importance of this admirable reserve; while at the same time it has been the cue of one-eyed economists to represent the retired vote as expended for wholly non-effective services. This is an absolute mis-statement; as well say the army reserve vote is for non-effectives, seeing the men are seldom embodied. We are persuaded the reserve of retired medical officers will readily prove of immense service during real emergency; but Mr. Bartley's proposals would entirely destroy it by preventing its formation.

At the end of the report on retirement, in view of reductions in establishments, and increasing the amount of work required from every officer, the Committee recommend the employment of civil practitioners at small home stations. Surgeon-General Balfour enters an effective dissent from this, as it is far better a medical officer should keep his men in health by sanitary vigilance than toil in a full hospital; besides which the employment of civilians would increase the amount of foreign service. But the proposal of the Committee is most effectively condemned out of their own mouths in another part, where they deprecate the employment of retired officers on the very ground on which they recommend the employment of civil surgeons. We are far from saying the moderate employment of both retired officers and civil practitioners is not of advantage, but the protest is against the indiscriminate filling up of home appointments to the grievous detriment and loss of efficiency in the active list.

We shall return to a consideration of the other recommendations in the report, especially on the subject of rank and titles, so full of interest and importance to all concerned.

THE SMELLS OF LONDON.

A PERIOD of close, warm weather, such as we have lately been experiencing, is pretty certain to have the effect of bringing out in the London press a series of complaints of offensive smells from inhabitants of the West End. The East-Enders, we presume, are either too much accustomed to bad odours all the year round to be much affected by a temporary increase in their pungency, or else their attention is otherwise engaged in matters of more absorbing interest.

Undoubtedly one cause of offence in the more suburban districts is the near neighbourhood of brickfields, where dust-bin refuse from adjoining parishes is largely used as fuel for brick-burning. One of the *Times* correspondents, indeed, asserts that "the portion of the refuse which consists of decaying animal and vegetable matter, and which cannot be well used as fuel, is destroyed by fire in the dead hours of the night and early morning; but so imperfectly is this done that a disgusting odour arises, which is wafted abroad far and wide, to destroy the health and comfort of residents for miles around."

Now, it is somewhat remarkable that the parish (Kensington) from which this complaint emanates not so very long ago determined to erect a destructor furnace for the cremation of the dustbin refuse. The vestry's scheme, however, excited so much local opposition that it had to be abandoned. We do not wish to imply that the vestry, in disposing of its refuse to local brickmakers, was desirous of teaching the "greater jury" the lesson that matters affecting the health of the parish are best left in the hands of its responsible guardians, and we can sympathise with the residents who live near the brickfields; but at the same time, if it is now brought home to the Kensington ratepayers that any method of disposal of dust refuse except that of cremation in a properly-designed furnace is bound to cause offence in the vicinity where it is carried on, the brickfield nuisance will not have been without good result.

Another and far more common complaint is the effluvium given off from sewer ventilators. And here it may be observed, *en passant*, that it seems almost impossible to enlighten the public on this question. By nearly one and all alike the open ventilators are held to blame, and the remedy suggested is to close them up—a suggestion which, if acted upon, would tend to drive the accumulated sewer gases into the interiors of the houses, and increase the danger a thousandfold. The public tends to reason only upon that which it can see—the ventilators—and leaves entirely out of account the sewers hidden beneath, which are the real cause of the mischief. Many of these sewers in all parts of London are very defective. They act fairly well so long as there is plenty of storm water to flush them; but when a drought comes they are no longer self-cleansing, deposits are formed on the inverts, which rapidly putrefy during hot weather, and give rise to the offensive gases which are the subject of complaint.

It will become imperatively necessary ere long entirely to overhaul the present existing sewers. In view of the completion of the sewage precipitation works at the Crossness outfall, it will even be expedient for the County Council to take seriously into consideration whether the separate system of

sewerage should not be adopted all over London; new pipe sewers being laid to receive the house sewage, whilst the existing brick sewers might be used for storm and surface waters only. Such a scheme looks huge and costly enough, but then it must be remembered that the annual saving from the treatment of house sewage only at the precipitation works, instead of the enormous volumes of sewage and surface water now arriving there, would, when capitalised, represent an enormous sum of money.

In the meantime much might be done to mitigate the undoubted nuisance caused by the open sewer grids in the streets. During a period of drought, such as that which occurred between June 16th and July 17th, when no rain was recorded in London, with the exception of one-fiftieth of an inch on June 24th, the sewers should be artificially flushed. Water is always cheap in London, there is plenty of it, and most of the sewer manholes are, or could be, provided with flushing gates. Yet in but very few parishes is any real attempt made to flush the sewers and wash away the stagnant liquids and solids deposited in dry weather. Then, again, nine out of ten of the sewer grids are partially or completely blocked with mud and road grit. They may occasionally be cleared, but certainly at very infrequent intervals. They are absolutely necessary under present conditions as vents for foul air, and were constructed at considerable expense in the centres of the roadways, in order that the gases might escape where they would give least offence to the houses and foot passengers, and also be most quickly dispersed. Still, the almost insignificant amount of labour required to clear them and make them of use appears to be grudged by the local authorities. If this matter was properly seen to it may safely be inferred that few complaints would be heard of individual ventilators, which, under the present system, if open, may be doing far more than their fair share of the work. Something, too, might be done by constructing additional shafts reaching from the crowns of the sewers to above the roofs of the houses. These would largely act as exit shafts, whilst the roadway ventilators in the neighbourhood would be air inlets and entirely free from offence. It has, however, been found very difficult to obtain the consent of house-owners to the erection of these shafts against their houses.

It is hardly fair to blame the vestries for the "bad smells" after they have been met by a refusal on the part of ratepayers to co-operate with them for their suppression, and it is evident that the remedy for the existing nuisances lies largely in the hands of the public. It must first, of course, be educated as to the cause of the evils from which it suffers, and then it will be in a position to "stir up" the vestries and County Council to good purpose.

THE DANGERS OF THE SUMMER VACATION.

THE unexpected death of Mr. Firth, M.P., has excited much interest during the past week. It is not so much the public services of the deceased as the circumstances of his death that call for notice in our columns. Mr. Firth fell a prey to the summer vacation, and many less known men fall victims to the same agreeable institution. The annual holiday is essentially adapted to the tastes and habits of youth, of the age, in fact, that can most thoroughly enjoy and appreciate relaxation from labour. The young tourist has physical strength and mental elasticity unknown in later years. His duties are, as a rule, of such a kind as to involve little or no responsibility when he ceases to attend to them for a few weeks. In the prime of life all these conditions are changed; unfortunately this fact is often overlooked by men who try to persuade themselves that they are still young. The digestive and circulatory functions are often seriously at fault in hard-worked men over 40. Hence such men may bear the accustomed fatigues of business, but cannot so well tolerate sudden feats of physical strength, such as long walks and steep ascents. The mind can receive but few fresh impressions, so that prolonged exertion is not associated with that charm of novelty which in youth counteracts weariness of body and soul. Unfortunately, again, there are responsibilities incumbent on the prime of life which cannot be set aside during a holiday. The least of these, the question of letters sent on from home, is a restraint very irksome to the traveller who likes to go where he pleases, in the direction of wild or picturesque scenery, rather than along the line of specified *postes restantes*.

To turn to the more special character of Mr. Firth's case, it should be remembered that he was walking alone when death overtook him. The precise pathological character of the illness to which he was subject is not recorded. The tourist, no longer youthful, is often condemned to solitary journeys or solitary walks. Solitude is a powerful agent in hastening fatigue and in increasing all the dangers of fatigue during a long walk. Should the traveller be subject to any organic disease, the risks of solitude become greatly increased under these circumstances. This fact is proved by Mr. Firth's death, as well as by a somewhat similar case, the decease of a tourist in Ennerdale which occurred not long ago. The latter victim to his vacation certainly overwalked himself, whatever disease he might have been subject to. Mr. Firth was probably in worse health when he ascended the Flegère, one of the easiest of all ascents in Switzerland. He looked and felt well when he set out on his last walk, but pure fatigue could hardly prove fatal in the course of so easy a journey.

The moral of cases of this kind is clear. The middle-aged tourist must be chary of undertaking tasks which involve physical fatigue which could be undergone with ease when he was younger. His chief want during his vacation is rest. A reasonable amount of exercise is good, but still, rest is his principal requirement. No doubt rest also requires precautions, especially against errors of diet, but hard exercise involves greater risks. In mature age the tourist who has realised the beauties of Nature in youth can contemplate them and reflect upon them with profit. Such is his holiday work. He is fitted for contemplation and reflection. He must partake with studied moderation of pleasures for which he has become less fitted. It is not an unwholesome sign when the experienced traveller tells his friends that the top of a mountain looks best when viewed from the valley. We are not taking into account exceptional individuals, who are physically young men at the age of fifty; we speak of that great majority of the mature who are too apt to rely on the experience of older friends with evergreen constitutions.

It is stated that the Queen will privately visit Strathpeffer Spa next month.

We are informed a "Humane Safety Collapsing Seat" for shop girls is now on view at the offices of the Early Closing Association in Fleet Street.

Football is already beginning to claim its annual tale of victims. A member of the Packington Football Club, Birmingham, died last week from abdominal injuries received during a match.

We are glad to hear that Professor Ray Lankester, who was attacked with serious illness while in Paris, has, under the care of Dr. Faure Miller, now completely recovered, and has returned to England.

Mr. Humphrey Lloyd Williams, M.R.C.S., J.P. for Merionethshire, has been appointed Deputy Lieutenant of the same county. Mr. Lloyd Williams is a member of the North Wales Branch of the British Medical Association.

Dr. Lutze, formerly assistant in Dr. Unna's clinic at Hamburg, has been invited to proceed to Honolulu by the Haiwaiian Government, and to remain there some time, to study leprosy, and to investigate the effect of new methods of treatment.

We are informed that the first portion of the evidence given before the Vaccination Commission is now in the hands of the Queen's printers, and will shortly be published. The rest of the evidence will appear at short intervals. The Commission will resume its sittings on October 9th.

Under the will of the late Dr. Alonzo Clark a scholarship was endowed at the College of Physicians and Surgeons, New York, for the promotion of the discovery of new facts in medical science. This scholarship has an annual income of about 900 dollars, and the Faculty of the College have conferred it for a term of three years upon Dr. T. Mitchell Prudden.

We regret to announce the death of Dr. Henry Taylor, of Nottingham. Dr. Taylor settled at Nottingham fifty-five years ago, and for a long time had one of the largest practices in the town and its neighbourhood. About fifteen years ago he retired in favour of his sons, the late Dr. Claude Taylor, Dr. H. O. Taylor, and Dr. Vernon Taylor. We have also to announce the death of Mr. William Henry Hartill, of Willenhall, in his fifty-first year. He was a justice of the peace, medical officer of health for the township, and certifying surgeon under the Factory Act. He leaves a widow and eight children.

We are informed that, in addition to those members of the medical profession already on the roll of the Order of the Hospital of St. John of Jerusalem of England, of which the Prince of Wales is Grand Prior, the sanction of the Queen, who is the Sovereign Head and Patron of the Order, has been given to the enrolment of the following as Associates: Surgeon-Major George Allan Hutton, M.D.; Joseph Dallas Pratt, M.D., F.R.C.S.; Surgeon-General Sir Robert Jackson, C.B., M.D.; William Edmund Cant, M.D., F.R.C.S.; Fleet-Surgeon Henry Charles Woods, M.D., R.N.; William Henry Platt, L.R.C.P.; Walter Pearce, M.R.C.P., M.B.; Brigade-Surgeon E. D. Tomlinson, M.D.; Deputy Inspector-General Matthew Coates, R.N., M.D.; John Martin, F.R.C.S.; James Robertson Crease, F.R.C.S.; Frederick Charles Mears, M.B., M.R.C.S.; Francis Richard Cassidi, M.D.; John Pleydell Wilton, M.R.C.S.; Alexander Theodore Brand, M.D.; Christopher Childs L.R.C.P.; Arthur Symons Eccles, M.B.; Robert Clark, L.R.C.P.; Charles Knott, M.R.C.S.; William Warman Coleman, M.R.C.S.; John Blackburn, M.R.C.S.; Edward Atkinson, M.R.C.S.

EXAMINATION IN SANITARY SCIENCE AT CAMBRIDGE.

We are requested to state that an examination in so much of State Medicine as is comprised in the functions of medical officer of health will be held at Cambridge on Tuesday, October 1st, and following days. Candidates who wish to present themselves for this examination are requested to send in their applications and transmit the fees to the Rev. Dr. Luard, Registrary, University of Cambridge, on or before September 26th.

THE STRIKE AND THE BERNERS STREET SOCIETIES.

It appears that the new buildings acquired by the Royal Medical and Chirurgical Society in Hanover Square will hardly be ready for use by next month. The great strike and other unforeseen circumstances have seriously interfered with the construction of the new Library and Meeting Rooms. The time and place of meeting on the respective occasions upon which the Medical and Chirurgical, Pathological, Clinical, and Obstetrical Societies will begin their labours in the coming winter session are at present absolutely problematical.

DEATH OF DR. MAURICE PERRIN.

The death is announced in Paris of Dr. Maurice Perrin, President of the Académie de Médecine, Inspector of the Service de Santé, formerly Director of the School at Val-de-Grâce, Physician-in-Chief of the Army of Marshal MacMahon in 1870, Commander of the Legion of Honour. Dr. Perrin commenced his career by teaching military medicine and ophthalmology at the Military School of Medicine. He was the author of several well-known works; among them may be cited, *Du Rôle de l'Alcool et des Anesthétiques dans l'Organisme;* a treatise on Surgical Anæsthesia (jointly with M. Lallemand), and a treatise on Ophthalmoscopy and Optometry.

THE ALLEGED OUTBREAK OF YELLOW FEVER IN SPAIN.

Sensational reports as to the occurrence of an outbreak of yellow fever at Vigo, which lately appeared in some of the daily newspapers, are now proved to have been greatly exaggerated. There were several cases of "gastric" fever and typhus, but none of yellow fever. The Portuguese Government, which had taken stringent measures to prevent the importation of the disease into Portugal, have now modified the precautions adopted on the Northern Frontier.

OPHTHALMIA AT THE HANWELL SCHOOLS.

At a recent meeting of the Board of Managers of Hanwell Pauper Schools, the tender of Messrs. Kirk and Randall to erect temporary dwellings for the isolation of 400 ophthalmic patients, at a cost of £19,600, was accepted. After sitting for eight years, waiting eighteen months after the issuing of their own report, and twelve months after the receipt of a specialist's report before taking action, the Committee have, it is stated, demanded of the contractors that the building shall be put up in two months; hence the heavy cost. Several gentlemen were of opinion that if four months had been allowed instead of two, £1,000 or more would have been saved; but as the penalty for non-completion is only £5 a day, the contractor can, it is suggested, take his own extension of time at a much cheaper rate. In these schools, containing 1,100 children,

upwards of 300 are severely or slightly afflicted with ophthalmia and now, in addition to these buildings, it has become necessary to engage a special ophthalmic surgeon and a staff of nurses.

THE DRINK QUESTION IN FRANCE.

THE recent Anti-Alcohol Congress in Paris showed that the dram shops of Paris have risen since 1880 from 24,000 to 29,000. In thirty years the consumption of alcohol has been trebled, and as much as 36,000,000 gallons have been manufactured out of potatoes for the French market. This shows an average yearly consumption of over twelve quarts per adult man. The consumption of alcohol doubled between 1875 and 1885. The Congress voted a resolution that inebriates should be treated as mad, and that prison hospitals should be created for them. It was also resolved that the Governments of the world should be asked to impose a prohibitive duty on alcohol, and exempt from duty tea, coffee, and other ingredients for temperance drinks.

AMBULANCE CLASSES IN CEYLON.

DR. LEES HALL, who has done good work in promoting the establishment in Ceylon of ambulance and first aid classes (in connection with the St. John Ambulance Association), is, we learn from the *Ceylon Independent*, about to carry the movement into other departments. Beginning with the railway staff in Colombo, in regard to which the general manager of the lines has readily co-operated, classes for the staff in Kandy and Nanuoya are already being started; and ambulance classes for the police are being conducted by Dr. Keegel at the police headquarters at Maradena, Mr. Campbell, Inspector-General of the Police, and Dr. Kynsey, P.C.M.O., having, it is stated, given every encouragement to the movement. Dr. Lees Hall is to be congratulated on the success he has met with.

SCARLET FEVER AT PLYMOUTH.

A SPECIAL meeting of the Plymouth Town Council was held on September 11th to consider the prevalence of scarlet fever in the borough, and a proposal to close all the elementary schools for eight weeks. It was shown that there had been 130 deaths from the disease since the outbreak of the epidemic in March, including 40 in August alone. There had been about 500 cases in all. Mr. Square said the Free Library was a source of infection; and it was moved as an amendment to the original proposition that only the Sunday schools and the Free Library should be closed. The Sunday schools were afterwards withdrawn from the proposal, and, on a vote being taken, the numbers were equal. The Mayor (Alderman Waring), though in favour of the original motion, declined to give a casting vote, on account of the smallness of the attendance. The matter was therefore adjourned for a week.

ANOTHER ELIXIR OF YOUTH.

IT is stated by a Pesth newspaper that Dr. Szikszay, a Hungarian physician, has been making experiments in the State Prison at Engelsfeld by injecting a liquid, the composition of which is not revealed, into aged persons. The results are said to be remarkable. The strength of the "subjects" was tested with a dynamometer before and after the injections. In the case of a man aged 75 the strength was found to be increased after the seventh injection from 14 to 19 kilogrammes, and after the thirteenth to 35 kilogrammes. Experiments on men and women of different ages showed, as might be expected, marked individual differences. We may take the liberty of suggesting to Dr. Szikszay that he should communicate the details of his experiments to the Imperial and Royal Society of Physicians of Vienna, and then publish them in full in some medical journal. The after results, if any, should also be made known.

THE PROSECUTION OF QUACKS.

THE Medical Defence Union is to be congratulated on the result of its recent campaign against illegal practitioners, of which full particulars are given in this week's JOURNAL by our Birmingham correspondent. The prosecutions were the first of the kind that had been undertaken in Birmingham under the Medical Act of 1858. Six summonses were taken out against three unqualified practitioners of the notorious advertising "venerialist" type, under the fortieth section of the Medical Act, for the illegal assumption of a medical title. The full penalty was inflicted in all the three cases, the fines amounting in all to £124 14s. 6d. We understand that this is only the beginning of a crusade which the Medical Defence Union is about to undertake against quacks, and we believe it intends to bring exactly similar actions in the County Court under the Apothecaries' Act. We wish this most useful body all success in its earnest endeavours to stamp out medical freebooting. Having regard, however, to the apathy of the public and to the eccentric ideas sometimes entertained by the judicial mind on such matters, we fear that it has a difficult task before it. May it prove a very Hercules in its struggle with the hydra of quackery! We may also venture to express a hope that an institution which has proved itself capable of doing such good work for the profession as the Medical Defence Union may not find its energies gradually paralysed by want of support on the part of those for whose protection it is intended.

DEPOPULATION OF FRANCE.

THE movement of population in France indicated by the summaries published for 1888 in the *Journal Officiel* cannot be read without regret. They are summed up pithily by M. Georges Michet in a few words: Diminution of marriages, augmentation of divorces, decrease of legitimate births, increase of illegitimate births, excess of deaths over births in forty-four departments. In 1888 only 276,848 marriages were celebrated—6,360 less than in 1883, and 8,719 less than in the period 1847-1860. The number of divorces was 4,708, or 1,072 more than in 1887, and 1,758 more than in 1886. The number of births has considerably diminished. In 1888 there were only 882,639 births; this is a diminution of 16,749 births compared with 1887, of 41,919 compared with 1886, of 42,000 with 1885, of 55,119 with 1884. The proportion of illegitimate births, which in 1882 was 7.5 per cent., is now 8.5 per cent. It is very unequally distributed; thus in the Department of the Seine it is 25 per cent., while in Brittany it is 2 per cent. But for the afflux of illegitimate births, "the French population," says the official, report, "would decrease." The excess of births over deaths amongst the foreign residents in France is 11,000, one-fourth of the total excess for the whole population.

THE PROPOSED SALE OF THE EAST KENT ASYLUM TO THE LONDON COUNTY COUNCIL.[1]

ON Wednesday, August 14th, the Kent County Council met finally to consider the proposal of its Finance Committee to dispose of the Chartham Asylum for £260,000 to the London County Council. In the course of the debate Lord Harris, the vice-chairman, urged upon the Council not to forget the hardship which would be entailed upon the poorer friends of the luckless patients living along the east coast by reason of the distance and expense in visiting them at Barming should the Council decide to give up Chartham Asylum. "Everyone," he added, "must recognise that those who are thus afflicted should have the most frequent opportunities possible of seeing friends and relatives from home." As this humane consideration was the *raison d'être* of the erection of the asylum in the first instance, which, with the approval of the Commissioners in Lunacy, was so heartily and so well

[1] See JOURNAL, July 20th, p. 162.

carried out by the East Kent magistrates, we are glad to find that by the large majority of 49 votes to 25 it was decided to retain the asylum in the hands of the Kent County Council.

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.

THE annual address to the members of the Northumberland and Durham Medical Society will be delivered by Professor Lawson Tait in the College of Medicine, Newcastle-on-Tyne, on October 4th, at 6 P.M. The subject chosen by Mr. Tait is stated to be "Ectopic Gestation." From what we hear the meeting is likely to be a large one. After the address the members and their friends will dine together. Members of the medical profession will be welcome both at the meeting and at the dinner. Gentlemen who intend to be present at the dinner should communicate without delay with the Honorary Secretary, Dr. Oliver, Newcastle-on-Tyne.

THE PHYSIOGNOMY OF MURDERERS.

THE new science of what, for want of a better term, we may call criminal pathology, which is showing signs of vigorous life in Italy, under the fostering care of Professor Lombroso and other medical and legal experts, gives promise of interesting results in the future. It studies the criminal as a distinct type of humanity, presenting physical as well as mental characteristics which separate him from ordinary men. That this is true to a certain extent, no one who has seen anything of criminals, or who has ever paid a visit to the chamber of horrors of a wax-work exhibition, can possibly doubt. Carlyle has, with his usual vigour of language, described his visit to a model prison, where he saw "miserable distorted blockheads.....ape-faces, imp-faces, angry dog-faces, heavy sullen ox-faces;" and, in fiction, many of the great masters of the art, especially in France, have given graphic clinical pictures of the criminal. We are prepared to admit that habitual crime is a constitutional disease, which is often inherited, and, like other diatheses, has its outward physiognomical expression. But it would be in the highest degree dangerous to found a diagnosis of criminality, in any given case, on physical peculiarities. A man's physiognomy may faithfully indicate his natural tendencies, but, unless we are content to regard every individual as nothing more than the passive slave of his own impulses, it is obviously impossible to conclude that he has actually given way to them. When Socrates was judged by some Lavater of his day to be a gross sensualist, he acknowledged that he had it in him to be so, but said he had conquered his natural bent in that direction. Professor Lombroso's description of the habitual homicide, with "the cold, glassy, immobile look; the eyes somewhat bloodshot; the nose often aquiline or hooked, always full; strong jaws, long ears, large cheek-bones, hair crisp, abundant, and dark, and the canine teeth prominent, thin lips, often nervous contractions of one side of the face, so as to give a grimacing or threatening look," may possibly be an accurate portrait of the wretch whose butcheries have so long made a reign of terror in Whitechapel, but it would hardly be safe for a detective to arrest the possessor of such physical attractions on the strength of his murderous countenance. We confess that the description gives us the impression of having been evolved, like the camel of the mythical German professor, from Dr. Lombroso's "inner consciousness" of how a murderer *should* look. Many habitual homicides—Madame de Brinvilliers and the earlier Wainwright (the surgeon), to take the first instances that occur to us—have been of particularly attractive appearance. The "high *a priori* method" is as unsatisfactory in criminal physiognomics as in other branches of science, and might lead to highly inconvenient results in practice.

THE TRANSPORT OF INFLAMMABLE LIQUIDS.

THE recent accident on the Great Northern Railway at Holloway, wherein the lives of an engine driver and fireman were lost through the ignition of the vapour of mineral naphtha, affords an illustration of the peculiar risk attaching to the transport of volatile inflammable liquids. In this instance, a number of casks of the liquid in question were caused to leak through an apparently slight collision which occurred between an engine and the truck containing them during the operation of shunting, and almost instantaneously the escaping liquid filled the air with vapour, which ignited with a flash at the engine fire, and before they had time to escape the two unfortunate men were so severely burned that they both died. The principal lesson which the occurrence teaches is the facility with which such barrels as are commonly used in the mineral naphtha trade may be caused to leak, for it appears to have been a matter of surprise among the railroad *employés* that the slight shock of contact between the truck and the engine, a shock such as must often occur during shunting, should have caused the leakage. The barrels in question were what are known as puncheons, holding about 100 gallons each, and it is probable that these are less serviceable than the 40-gallon casks commonly used in the transport of petroleum and oil of turpentine. It was admitted in evidence by the servants of the company at the coroner's inquest that the waggon containing this dangerously inflammable spirit was not so labelled as to convey to the shunters the necessary information as to character of its contents. One witness stated that he could see that the truck contained casks of "oil," but he added that it might have been linseed oil for anything he knew to the contrary. It appears essential that trucks conveying mineral spirit should be distinctly marked in some very conspicuous manner, and that special care should be taken in shunting them. An important object of the Petroleum Acts is to draw a line of demarcation between the comparatively safe petroleum or paraffin oil of commerce, which does not "flash" below the legal standard, and products of lower boiling point, such as the naphtha in question; but this distinction becomes of little value in relation to railway transport if the companies treat all "petroleum" (in the comprehensive legal acceptance of the term) alike. If the contents of the puncheons had, in the case under consideration, been petroleum or paraffin oil, there would certainly have been no such catastrophe, though the Abergele accident many years ago taught us that even paraffin oil of high flashing point when brought into contact with the engine furnace may produce a fierce fire with startling suddenness and disastrous effect. In the latter case, however, the circumstances were quite different, for there was a violent collision and the barrels were completely smashed by the engine, the oil being virtually thrown on to the fire. The Holloway accident was distinctly due to an imperfect recognition of the necessity for observing special precautions in the transport of mineral spirit as distinguished from mineral oil. The nature of the risks involved in the conveyance of the highly volatile products included in the restricted legal definition of petroleum to which the Petroleum Acts apply, and the conditions requisite to insure safety in the conduct of such traffic, are fully set forth in an exhaustive report to the Secretary of State by Colonel Majendie, C.B., H.M. Chief Inspector of Explosives, on the destruction of a vessel laden with benzoline (petroleum spirit) in the Bristol Docks at the end of last year. As is pointed out by Colonel Majendie, the chief characteristic danger arises from the readiness with which mineral spirit becomes converted into a vapour many times heavier than air, which may travel a considerable distance to a fire or light, and carry back flame to the liquid material. It is for the first time authoritatively stated in this report, on the basis of experiments made by Dr. Dupré and Mr. Reverton Redwood, that the vapour cannot be ignited by an ordi-

nary spark, but at the higher temperature of a flame it is very inflammable. As one volume of benzoline gives 141 volumes of vapour at ordinary temperature, and renders no less than 5,000 volumes of air strongly explosive, or 16,000 volumes of air inflammable, it will be seen how readily an accident may result from the escape of even a small quantity of the liquid. The spirit implicated at Holloway was what is known as "90 per cent. benzol," but its behaviour would not differ practically from that of benzoline under the conditions which prevailed.

SCOTLAND.

At a special meeting of the managers of the Glasgow Royal Infirmary, held on Tuesday, September 10th, Dr. McVail, Professor of Clinical Medicine in St. Mungo's College, was appointed a Physician to the Infirmary. The superintendent has also been instructed to afford Professor Wolfe facilities for teaching Ophthalmology, and Dr. Kelly similar facilities for teaching Gynæcology.

GLASGOW BARONY PAROCHIAL BOARD.

The Inspector's report for the first half of the present year calls attention to the great diminution in applications for relief, to the decrease of pauperism, and to the increase of lunacy. The applications for relief are the smallest number for the last ten years, their total being 2,914, while in Barnhill poorhouse the lowest number has been reached, 583, and there has been the fewest number also of boarded-out children, 391. On the other hand, the number of insane in charge of the Board in 1880 was 410, now there are 678, and the asylum is licensed for only 600. The increase in ten years is 65.3 per cent. The inspector called attention also to the large proportion of illegitimate children; of twenty-two births at Barnhill, twenty were of illegitimate children.

WEST OF SCOTLAND CONVALESCENT SEASIDE HOMES.

A new wing has been added recently to this institution, which was formally opened by Lady King, wife of the Lord Provost of Glasgow. The addition provides accommodation for servants, and thus releases a considerable portion of the old institution for patients. Since the foundation of the institution, the first of its kind, twenty years ago, 40,000 convalescents have passed through its wards; and during the past year 3,322, of both sexes and all ages, received its benefits. Of these, 2,947 were restored to health and enabled to resume their occupations, and 272 were relieved, 94 did not improve, 4 died, 173 remaining under treatment. The institution is very popular with the public, between a half and a third of the whole funds required being supplied by the *employés* of public works and the working classes generally, £1,973 16s. 5d. being received from public works last year. The total income last year amounted to £5,513 1s. 1d., and the total ordinary expenditure £4,323 8s. 1d. The directors have in contemplation the erection of a home for mothers and children, but have decided not to proceed until the necessary funds are in hand.

IRELAND.

Dr. Thomas Costelloe has been appointed medical officer of Cassaroe Dispensary.

The Lords Justices have authorised the following sums for expenditure on lunatic asylums, namely, Enniscorthy Asylum, £500; Limerick Asylum, £500; and Omagh Asylum, £2,000.

QUEEN'S COLLEGE, BELFAST.

The authorities of this College have decided to throw open the medical classes during the ensuing session to young ladies anxious to study medicine for the purpose of obtaining medical degrees. The various medical professors, at a recent meeting to consider an application from some ladies to attend the medical lectures, etc., unanimously adopted a resolution in favour of admitting female students.

THE AMALGAMATION OF DUBLIN SCHOOLS.

During the recess a committee has had charge of the arrangements regarding the amalgamation of medical schools. There have been some obstacles to overcome; but we believe that the necessary deeds are now about to be signed, and the new school will open on October 1st. The elections of the new professors will soon be carried out.

PAYMENT OF MEDICAL OFFICERS' SUBSTITUTES.

The medical officers and apothecaries of the Belfast District recently memorialised the members of the Dispensary Committee requesting them to allow them an annual holiday and pay their substitutes. They adduced various reasons for the proposed plan, and added that the system was carried out in the North Dublin Union and the Belfast Workhouse Hospital. The Committee showed that half the expense which would be incurred if the suggestion was carried out would not be returned from the consolidated fund, but that the remuneration of *locum tenens* in such case would be entirely at the cost of the ratepayers; they consequently refused the application.

TOPICS OF THE DAY.

(AN OCCASIONAL COLUMN.)

By the Editor.

In another column is published a further communication from Dr. Rentoul, of Liverpool, on the subject of the resolutions passed at his instance by the Leeds general meeting. The full proposals of Dr. Rentoul are set out in the Journal of August 3rd, p. 284, and in the communications from him published during the months of July and August in our columns. Pending the appointment by the Council of the Special Committee asked for by the subsequent resolutions of the general meeting, and as a means of affording to that Committee the materials for judgment and for further action, it is, as Dr. Rentoul points out, highly desirable that the Branches should indicate their intentions and opinions on the matter by discussing the details of his scheme, and each forwarding a full report of the extent to which they consider the proposals feasible, with indications of the method which it is proposed to pursue in the given towns and districts to bring into action his scheme or part of the scheme or any modification of it. Obviously enough, a mere platonic assent will be of little avail, nor any approval of general principles. That stage was reached many years ago and has not had much effect. A searching investigation of practical methods, plans of organisation, willing, competent organisers in each Branch, having the confidence of those who appoint them, are the first elements of progress in a matter of such complexity and diversity of interest. The one agreed basis is the common desire to bring about a diminution in the indiscriminate distribution of medical relief, which is carried on in this country to an extent unexampled in Europe. This should be a firm and sufficient basis, but it is only the ground on which to build.

There is never any lack of persons willing to move and pass resolutions on this and kindred subjects, but the pinch comes when the moment for action arrives; then divided counsels are apt to prevail. It has been found hitherto that there is a plentiful residue of practitioners willing to accept the terms of clubs and friendly societies, however much below any ideal accepted tariff or salary: a considerable body of physicians and surgeons who are at the service of the hospitals, whatever the "abuses" of the in- or out-patient departments may be, and an army of hospital secretaries and governors who contend that "sickness can-

not be jobbed," and who are systematically indifferent to "wage limits," to say the least. Then the sentiment of the increasing masses of industrial wage-earners whose purses are being drawn upon by shop and factory collections for hospital support has to be considered, so that it would not be prudent to consider that much more than theoretical advance can be made by any schemes as to which these various classes are not sounded in the respective districts. Local committees might be able to ascertain first how far a scheme such as Dr. Rentoul has sketched out would be assented to in particular districts by the profession itself. This could be done after discussion of the scheme itself, and expressions of opinion could be obtained by a circular addressed to every member of the profession within the circumscription, containing details of the scheme locally proposed, with a schedule of queries in blank for acceptance or objection to the separate features of the scheme, and a blank form of adhesion. The answers would require digestion, and the "abstinences" would require investigation. But in this way some solid numerical and reasoned basis for local report and subsequent action could be obtained. Nor do I see at present how a practically successful result is likely to be obtained by any less painstaking and searching investigation. The organisation of our Association affords unequalled—and, indeed, the only existing—machinery for such an effort, while the results could hardly fail to impart information valuable to the profession and the public, and most opportune for the promised Royal Commission.

THE suggested Royal Commission on Hospital Administration is, by the wording of the petition, limited in its scope to the metropolis. A resolution passed at the Leeds annual meeting of the Association raises the question of the wisdom of that limitation, and desires its enlargement to the country generally. It is certain that the mischiefs of the present state of things are as deeply felt in other great cities, and even, we believe, in many country districts as in London. If this be so, it will be for the Branches of the British Medical Association to bring that view, by letter from their President and Council, before the Lord President of the Privy Council, by whom mainly the issue of the Royal Commission and the terms of the reference to it will be decided.

IN every committee formed it would seem to be important that the leading hospital physicians and surgeons of the place should be well represented. Their sympathy in principle may rightly be assumed in the vast majority of instances. But it is in the translation of principles into action that difficulties occur. A. thinks that such a thing should be done in a matter in which he is otherwise interested. Quantum? How much does he think it? How far will he back his opinion? What effort, what sacrifice will he make for it? This applies to all classes concerned. Such a battle cannot be won without sacrifices. They must sooner or later fall on someone. "Omne magnum exemplum habet aliquid ex iniquo quod contra singulos utilitate publicâ rependitur." There will be recalcitrant hospitals, recalcitrant clubs, societies, and dispensaries in no small number. If a considerable minority of professional men hold out the sacrifices of the majority may be nullified, as I understand was the case at Birmingham, where an apparently perfect organisation and complete union were, after great labour and sacrifice, brought to nought by the intervention of a few who refused to be bound, and by the determined action of the local workmen's societies, who quickly filled up vacant professional appointments by advertisement at their own rate.

No response has been made to the request recently put forward in the JOURNAL for a history of the subsequent events of that movement for the raising of the remuneration of medical men by sick clubs, which was so ably generalled by Dr. Heslop. It would be important that it should now be made known, and there must be many men in Birmingham competent to give an account of the facts, who would render a professional service by doing so.

THE question of professional privileges and courtesies to British medical practitioners in Switzerland was stated by Dr. Keser in these pages with much point and compactness, and there is no man better qualified to state the case of his Government and countrymen. It may be assumed, therefore, from the incompleteness of his argument, that the case is not a very good one. In Dr. Keser's opinion, then, "Reciprocity is not to be discussed," for the reason that "the Swiss authorities" consider that some English qualifications are not to be compared with the Swiss State examination, that is, that the English uniform minimum qualification is so far inferior to the Swiss uniform minimum that English qualified practitioners as a whole cannot be admitted to practise medicine in Swiss health resorts without danger to the lives of these hardy mountaineers—a pretty compliment to the General Medical Council and to our examining bodies in 1889. That may be passed over as not much to the point, supposing it to be well founded; for the question is not one of practising among the Swiss and tampering with their delicate constitutions by ignorant though qualified British medical practitioners, but among the British visitors who have been tempted or ordered by British advice for the most part to resort there, and who prefer to be maltreated by their own medical practitioners abroad as well as at home, and do not ask to be protected by the paternal care of "the Swiss authorities" from the consequences. "Haud ignara mali." They are not tempted to forego their past experiences even by the promise of "many Swiss doctors who take the trouble to come to England and learn the English language." There is no need to handicap the lame horse; and, accepting Dr. Keser's assurance that "English patients as a matter of fact very often prefer them to their own countrymen," there seems the less reason for imposing the legislative disability so ungraciously and ungenerously proposed by those who are putting pressure on the Swiss authorities.

THE extreme pressure applied by the Government on the last days of the session, and in a very thin House, to pass the Diseases Notification Bill, shut out the possibility of considering desirable amendments. The official reports in favour of the dual notification system, and the repeated decisions of the Police and Sanitary Committee in favour of that system, after hearing the arguments against it, supported Mr. Ritchie in his decision to apply that system to this Bill also; it being that in vogue in a majority of the "notification towns" in possession of actual experience. To a Bill pushed through with so much vehemence and haste some subsequent amendments, such as may be suggested by further experience of its working will be a natural supplement. Meantime, its voluntary character has been extended to London also, and it remains to be seen whether the metropolis will adopt it. The leading medical officers of London have already declared strongly in favour of it; and the whole weight of sanitary authority is in favour of the general principle of the Bill, however much details may be objected to. Oddly, enough, those people who object to compulsory vaccination do not seem to object to the much more serious infringements of personal liberty, with much less obviously advantageous consequences, which frequently follow a compulsory notification of contagious diseases, where isolation cannot be rigidly carried out in the house, or where certain businesses are carried on. In fact, where vaccination is rejected, compulsory notification and isolation are recognised, as at Leicester, as of the first necessity. Will they always suffice? That is an experience which time alone can afford, and the time is not yet.

THE Conseil Municipal of Arbois, the natal city of M. Pasteur, has achieved a new title to the admiration of the civilised world. By 42 votes to 10, it is said to have decided—according to the *Débats*—to rebaptise the Rue Pasteur, which is henceforth to be called Rue de la Gare. It is stated that the municipality of Arbois desires in this way to punish M. Pasteur for having, in an address to the children of the primary schools, spoken in respectful terms of "God and the Fatherland" ("Dieu et la Patrie"). After this, is it possible to say that human folly has its limits?

TRIPLETS.—In 7,600 labours at the Leipzig Lying-in Department within the last six years, two cases of triplets were included. In the first case there was one placenta, common to the three children; one chorion, but three distinct amnia, and the sex was the same in all three. In the second each fœtus had a distinct placenta, chorion, and amnion, and one was not the same sex as its two brethren. The different conditions observed in the above cases are in accordance with the theory that one-yelk twins are always of the same sex. Hence double monsters are also of the same sex, and acardiac fœtuses agree in sex with their normally formed brethren, since both these forms of monstrosity arise in the course of development of one-yelk twins.

MEETING OF THE BRITISH ASSOCIATION.

THE British Association for the Advancement of Science (to give it its full style and title) meets this year at Newcastle for the third time, the previous occasions on which the city on the "coaly Tyne" was honoured by its presence having been in 1838 and 1863. Nothing has been neglected by the local committee that could add to the scientific and social attractions of the gathering, or conduce to the comfort and enjoyment, intellectual and material, of their distinguished visitors. At present everything seems to promise that the meeting will be as great a success as any in previous years, though the number of tickets sold up to Wednesday afternoon was only 2,128, showing an attendance considerably less than on some former occasions.

The first general meeting was held in the Drill Hall, on the evening of Wednesday, September 11th, when the outgoing president, Sir Frederick J. Bramwell, D.C.L., F.R.S., M.Inst.C.E., resigned the chair to his successor, Professor W. H. FLOWER, C.B., LL.D., F.R.S., F.R.C.S., Pres.Z.S., F.L.S., F.G.S., Director of the British Museum of Natural History.

The new President then delivered his inaugural address, in which, after referring to the meeting of the Association at Newcastle, twenty-six years before, and the titles of that city to scientific as well as commercial renown, he proceeded to deal with the subject of museums, which, he said, was still little understood, though, fortunately, beginning to attract attention. A committee of members of the Association was now collecting evidence on it, and had already issued some valuable reports. During the present year an association of curators and others interested in museums had been founded for the purpose of interchange of ideas on the organisation and management of these institutions. There was no record of any permanent or public collections of natural objects among the ancients. With the revival of learning in the Middle Ages the collecting instinct sprang into existence with considerable vigour. All the earliest collections were formed by, and maintained at the expense of, private individuals, and were rarely if ever associated with any systematic teaching or public benefit. One of the earliest known printed catalogues of such a museum was that of Samuel Quickelberg, a physician of Amsterdam, published in 1565 at Munich. In the same year Conrad Gesner published a catalogue of the collection of Johann Kentmann, a physician of Torgau, in Saxony, comprising about 1,600 objects, chiefly minerals, shells, and marine animals. Soon afterwards Rudolph the Second of Germany laid the foundations of the magnificent museums by which the Austrian capital was now distinguished. In England the earliest important collectors of miscellaneous objects were the two John Tradescants, father and son, the latter of whom published in 1656 a little work called "Musæum Tradescantianum; or a Collection of Rarities preserved at South Lambeth, neer London." When societies for the advancement of knowledge were established, these bodies frequently made the formation of a museum part of their function. The earliest instance of this in England was the museum of the Royal Society in Crane Court, of which an illustrated catalogue was published by Dr. Grew in 1681. The idea that the maintenance of a museum was a portion of the public duty of the State or of any municipal institution had, however, nowhere entered the mind of man at the beginning of the last century. Even the great teaching bodies were slow in acquiring collections. The Italian universities, where anatomy was taught as a science earlier and more thoroughly than anywhere else in Europe, soon found the desirability of keeping collections of preserved specimens, and the art of preparing them had attained a high degree of excellence at Padua and Bologna two centuries ago. But these were generally the private property of the professors, as were nearly all the collections used to illustrate the teaching of anatomy and pathology in this country within the memory of many still living. Passing next to the special subject of his address, Professor Flower said that a "Natural History Museum" should embrace a collection of objects illustrating the natural productions of the earth, and in its widest and truest sense should include, as far as they could be illustrated by museum specimens, all the sciences which dealt with natural phenomena. Though the experimental sciences had not hitherto depended on museums for their illustration, yet the great advantages of collections of the various instruments by means of which these sciences were pursued, and of examples of the methods by which they were taught, were yearly becoming more manifest. As science grew, subdivisions multiplied, and the dividing lines not only became sharper but frequently required revision. Difficulties of readjustment arose not only from the mechanical obstacles caused by the size and arrangements of the buildings and facilities for the allocation of various kinds of collections, but still more from personal interests. Professorships and curatorships of this or that division of science were founded and endowed and their holders were usually tenacious either of encroachment upon or of any wide enlargement of the boundaries of the subject they had undertaken to teach or to illustrate: and in this way, more than any other, passing phases of scientific knowledge had become crystallised or fossilised in institutions where they might least have been expected. He might instance many European universities and great museums in which zoology and comparative anatomy were still held to be distinct subjects taught by different professors, and where, in consequence of the divisions of the collections under their charge, the skin of an animal, illustrating its zoology, and its skeleton and teeth, illustrating its anatomy, must be looked for in different and perhaps remotely placed buildings. For the perpetuation of the unfortunate separation of palæontology from biology, and for the maintenance in its integrity of the heterogeneous compound of sciences called "geology," the faulty organisation of museums was in great measure responsible. With regard to minor defects in organisation, no one could deny that great improvements had lately been effected in some of the museums in this country, on the Continent, and in America. The first consideration in establishing a museum was that it should have some definite object to fulfil, and the next was that means should be forthcoming not only to establish but also to maintain the museum in a suitable manner to fulfil that purpose. What a museum really depended upon for its success and usefulness was not its building, nor its cases, nor even its specimens, but its curator; yet he and his staff in many —he might say most—of our museums were the last to be thought of. A museum must grow, or it would perish, and the cost and labour required to maintain it in a state of vitality were not yet fully realised either in our great national collections or in our smaller local institutions. The real objects of forming collections were two, which were quite distinct and often conflicting. The first was to advance the knowledge of some given subject; the second, to diffuse knowledge among persons who, without the opportunity of making a profound study of any branch of science, wished to possess some knowledge of the world around them, and of the principal facts ascertained with regard to it. The main cause of the failure of the majority of museums—especially museums of natural history—to perform the functions that might legitimately be expected of them was that they nearly always confounded these two distinct objects, and, by attempting to combine both in the same exhibition, practically accomplished neither. In the arrangement of specimens designed for research, the principal points to be aimed at were: the preservation of the objects from all influences deleterious to them, especially dust, light, and damp; their absolutely correct identification and record of every circumstance that need be known of their history; their classification and storage in such a manner that each one could be found without difficulty or loss of time; and, both on account of expense as well as convenience of access, they should be made to occupy as small a space as was compatible with these requirements. They should be kept in rooms provided with suitable tables and good light for their examination, and within reach of the necessary books of reference on the particular subject which the specimens illustrate. Furthermore, the rooms should be so situated that the officers of the museum, without too great hindrance to their own work, could be at hand for occasional assistance and supervision of the student. In collections arranged for instruction the conditions under which the specimens were kept should be totally different. Their numbers must be strictly limited; none must be placed too low or too high for ready examination; there should be no crowding of specimens one behind the other. Every specimen should be good of its kind, and all available skill and care should be spent on its preservation, and rendering it capable of teaching the lesson it was intended to convey. Every specimen should have its definite purpose, and no absolute duplicate should be allowed. The purpose for which each specimen was exhibited, and the main lesson to be derived from it, should be distinctly indicated by the labels affixed, both as headings of the various divisions of the series and to the individual specimens. A well-arranged educational museum had been defined as a collection of instructive labels illustrated by well-selected specimens. In arranging a museum, the curator should carefully

consider its object, the class and capacities of the persons for whose instruction it was founded, and the space available to carry out this object. He should then divide the subject to be illustrated into groups, and consider their relative proportions, according to which he should plan out the space. Large labels should next be prepared for the principal headings, as the chapters of a book, and smaller ones for the various subdivisions. Certain propositions to be illustrated, either in the structure, classification, geographical distribution, geological position, habits, or evolution of the subjects dealt with should be laid down and reduced to definite and concise language. Lastly should come the illustrative specimens, each of which as procured and prepared would fall into its appropriate place. As it was not always easy to obtain these at the time that they were wanted, gaps would often have to be left, but these, if properly utilised by drawings or labels, might be made nearly as useful as if occupied by the actual specimens. One of the best illustrations of the different treatment of collections intended for research and instruction respectively was to be seen in Kew Gardens, where the herbarium answered the former, and the public museums of economic botany the latter purpose. A similar distinction was carried out in the collections of systematic botany in the natural history branch of the British Museum; and the same principles were gradually pervading every department of the institution.

Leaving the subject of museums, Professor Flower devoted the concluding part of his address to the discussion of some of the biological problems which at present occupy the minds of scientific men. He brought his remarks to a close with the following words:

"For myself, I must own that when I endeavour to look beyond the glass and frame some idea of the plan upon which all the diversity in the organic world has been brought about, I see the strongest grounds for the belief, difficult as it sometimes is in the face of the strange, incomprehensible, apparent defects in structure, and the far stranger, weird, ruthless savagery of habit, often brought to light by the study of the ways of living creatures, that natural selection, or survival of the fittest, has, among other agencies, played a most important part in the production of the present condition of the organic world, and that it is a universally acting and beneficent force continually tending towards the perfection of the individual, of the race, and of the whole living world. I can even go further, and allow my dream still thus to run:

> Oh yet we trust that somehow good
> Will be the final goal of ill,—
> That nothing walks with aimless feet,
> That not one life shall be destroyed
> Or cast as rubbish to the void
> When God hath made the pile complete."

BRITISH PHARMACEUTICAL CONFERENCE.

THE twenty-sixth annual meeting of the British Pharmaceutical Conference was opened at Newcastle-on-Tyne, in the Durham University College of Science, on Tuesday, September 10th, the President, Mr. CHARLES UMNEY, F.C.S., F.C.I., etc., being in the chair. The first meeting of the Society, which is an offshoot of the British Association, was held at Newcastle-on-Tyne in 1863, and this year it has returned to that city in company with the parent Association. The next annual meeting will be held at Leeds.

The objects for which the Society was founded were to hold an annual conference of those engaged in the practice or interested in the advancement of pharmacy, with the view of promoting their friendly reunion and increasing their facilities for the cultivation of pharmaceutical science; to determine what questions in pharmaceutical science require investigation, and, when practicable, to allot them to individuals or committees to report thereon; to maintain uncompromisingly the principle of purity in medicine; to form a bond of union amongst the various associations established for the advancement of pharmacy by receiving from them delegates to the annual conference. These objects have been steadily kept in view at the meetings of the Conference during the last twenty-six years. Its progress was at first slow; but it gradually gained ground, and the number of members and friends attending the present meeting amounts to 2,000.

The President opened the proceedings with an address on The Maintenance of the Principle of Purity in Medicine. After a brief retrospect of early attempts to suppress fraud in the compounding of medicines, he said that it was not till the tenth edition of the *London Pharmacopœia* that there was any real knowledge of manufacturing pharmacy. Since the first Newcastle meeting the rival pharmacopœias of London, Edinburgh, and Dublin had been fused into a national pharmacopœia. This had been advantageous in helping forward and maintaining uniformity and purity in medicine. The *British Pharmacopœia*, 1885, was an excellent type of what such a book should be, for it adopted a standard that ensured efficiency, and did not attempt to introduce rare and exceptional quality that was only occasionally obtainable, to the exclusion of that which was to be had of uniform excellence without difficulty. There was, perhaps, no work upon which an expert had to use his judgment with so much tact and skill, so that he might keep both in touch and tune with the medical profession, the pharmacist, the drug merchant and manufacturer, as when he was called upon to edit a national pharmacopœia. He might be misled by statements based on imperfect information or defective manipulation, and he could not in all cases obtain facilities for checking the accuracy of published results. The suitable editing of a pharmacopœia became apparent when the editor, knowing the requirements of the medical profession and the capabilities of pharmacists and manufacturers, adopted standards and framed "characters and tests" which were acceptable to all concerned without imperilling the purity of medicine. Pharmacists should do all in their power, not only when in their own business premises, but also in their public and private capacities, to impress upon the public that household remedies should invariably be purchased of a simila strength and quality to those medicines physicians direct to be used in compounding their prescriptions. It was also most desirable that pharmacists should co-operate with the Medical Council in their desire to make the *British Pharmacopœia* preparations legal for sale, and those of old pharmacopœias obsolete and illegal. The sale of Food and Drugs Act had materially aided in maintaining and advancing purity in medicine, but the working of the Act had not been without friction, due in many cases to the imperfect knowledge of officials. The highly trained pharmacist had neither sought nor obtained the post of public analyst to anything like the extent that was desirable. It might be that, notwithstanding his acquaintance with pharmacy, he lacked chemical and microscopical skill. If this were so, more complete instruction should be given in these subjects, and students should give themselves up to systematic work for two or three years at least. Possibly the clause in the Sale of Food and Drugs Act which provided that no person should be appointed as analyst for any place who was engaged, directly or indirectly, in any trade or business connected with the sale of food and drugs in such place had prevented pharmacists from seeking the appointment. Obviously they were at a disadvage, as compared with professional men, under this regulation. The regulations with which the Excise had surrounded our manufactures, and which were unequalled in number and stringency in any country in Europe, were thought necessary in the past, in order that the duty on alcohol might be more easily and accurately collected. This impost had produced a depressing effect on the manufacturing pharmacy of this country, which could not have advanced either the purity of medicine or our commercial position. For England to have been compelled to purchase in the markets of Germany her alcoholic medicinal preparations, which the exigencies of her trade required should be exported in bond to her colonies and elsewhere, was most humiliating. Happily, within the past year there had been an amendment, and the Excise regulations had now to some extent been removed, and at last there was an opportunity of producing most of our alcoholic medicinal preparations, with permission to export them under suitable drawbacks. These concessions would be of commercial value, and the manufacturing pharmacist would have an opportunity in the future of guaranteeing that his products were what they professed to be, and the standard of purity in medicine would thereby be legitimately maintained and advanced. England produced chloroform, ether, and other substances from alcohol without opportunity of competing with Germany and other countries, for the Excise took no account of the heavy pecuniary loss entailed in manufacturing such liquids from duty-paid alcohol, and gave no rebate either for loss or for duty to the manufacturer on exportation. Why England should be driven to Germany and elsewhere for many of its alcohol derivatives, of which hydrate of chloral was an excellent type, and why alkaloids, as atropine, veratrine, aconitine, and a legion of other preparations, should be imported, to the detriment of our trade and the demoralisation of our rising chemists and pharmacists, he

could not conceive. Alcohol free of duty for medicinal purposes, or some facility to work with pure alcohol under supervision, was a most serious and urgent necessity. The President went on to say that he fully concurred in the views expressed at the last meeting of the British Association as to the decline of chemistry in this country, at least in so far as its application to the manufacture of substances for use in medicine was concerned. Two causes had, in his opinion, militated against advancement in the production of medicinal substances in England—namely, stringent Excise regulations and the meagre opportunities of education and research that had up to a very recent date been available in this country. This reproach, however, should not now continue. The Pharmaceutical Society had at considerable cost equipped a research laboratory, which would, before this century closed, produce many men competent to undertake research and manufacture. The Pharmaceutical Society had not unlimited funds, and its moneys could not all be spent to aid research, but "ways and means" would be no barrier if men were forthcoming.

On Wednesday, September 11th, an important paper on Arsenic in Glycerine was read by Mr. Siebold. He said he had examined a number of samples of glycerine, and had found that a large proportion contained arsenic. The quantity of arsenious acid was considerable, varying from one in four thousand to one in six thousand. Some samples were free from arsenic. The results of Mr. Siebold's analyses were regarded as very serious by the members of the Conference, and the bearing of the facts brought to light on a recent case was pointed out.

BRITISH DENTAL ASSOCIATION.

THE annual general meeting of the British Dental Association was held this year at the Royal Pavilion, Brighton, on August 21st, 22nd, 23rd, and 24th; Mr. Alderman RYMER, J.P. (Croydon), being the President-elect for the year.

The proceedings opened with a reception on the evening of Wednesday, August 21st, by Mr. Rymer at the Pavilion, which was followed by a vocal and instrumental concert.

Thursday, August 22nd.

After the meeting of the Representative Board the annual business meeting was held, at which, in the unavoidable absence of the President, Mr. Daniel Corbett, of Dublin, the chair was occupied by Mr. J. Smith Turner. The Honorary Treasurer, Mr. F. Canton, having reported satisfactorily on the finance of the Association, the Honorary Secretary, Mr. Morton Smale, read his report, in the course of which he referred to the successful prosecution under the Dentists Act, 1878, which had been carried through during the past year, and expressed a hope that the machinery of the law would soon be brought to bear upon that class of quack who, unable to assume the title of dentist, endeavoured to evade the Act by styling their premises "dental institutes," etc.

Under a recent addition to the by-laws the following gentlemen were elected as Vice-Presidents of the Association: Sir John Tomes, F.R.S.; Sir Edwin Saunders, F.R.C.S.; and Dr. J. Smith (Edinburgh), F.R.C.S.Ed.

It was decided to hold the next annual meeting at Exeter, and Mr. J. T. Browne-Mason, of that city, was chosen as President-elect.

Mr. Fisher, of Dundee, reported certain steps he had taken in connection with the grant of £10 made to him at the annual meeting, 1888, to assist him in preparing certain casebooks for the use of secretaries of Branches for obtaining statistics from charity and working schools regarding the condition of the children's teeth. Specimens of the casebooks, which had been most carefully prepared, were shown to the meeting. The necessity for arousing public opinion on this important question was dwelt upon by the Chairman and Mr. George Cunningham.

Dr. Rentoul's propositions with regard to dealing with the abuse of medical charities were laid before the meeting, and the question was referred to the Representative Board for careful consideration.

Mr. S. Lee Rymer, J.P., the President for the year, who, notwithstanding a great and recent domestic bereavement, consented, with praiseworthy public spirit, to occupy the chair, then delivered his inaugural address, in which he considered the increasing longevity of the human race in relation to the improved hygienic and sanitary conditions under which we live.

At the conclusion of the Presidential address an adjournment for luncheon took place.

After luncheon an interesting demonstration on practical microscopy was given under the supervision of Mr. Caush, of Brighton, the various stages in grinding down a section of a tooth being practically demonstrated by a selected number of Mr. Caush's pupils.

During the afternoon a series of four papers were read upon the subject of Anæsthetics for Dental Surgery, in which the views of various schools of thought were ably expounded. The Dublin school, who principally favour ether for prolonged operations, was represented by a paper by Dr. F. R. Cruise. The merits of chloroform naturally found their champion in a Scotchman, Mr. Bowman Macleod, of Edinburgh. Dr. Dudley Buxton, of London, contributed a very valuable treatise on the exact nature of nitrous oxide narcosis, illustrated by pulse-tracings; and Dr. Frederic Hewitt (London) completed the subject by discussing certain anæsthetic mixtures. The most interesting portion of this paper consisted in the account of some original researches by the author into the effect of the exhibition of a mixture of one part of oxygen and seven parts of nitrous oxide gas. Dr. Hewitt's experiments in this direction had not extended over a sufficient length of time to enable him to dogmatise upon the question, but his results so far seemed to show that the mixture of $\frac{1}{8}$th oxygen increased the anæsthetic period and robbed it of many of its attendant unpleasantnesses, such as blueness of the face and stertorous breathing; in fact, it was evident, from a demonstration given after the paper was read, that the anæsthesia produced by this mixture was not attended by any of the usual symptoms of nitrous oxide narcosis.

In the evening a garden party, concert, and *soirée* were held in the gardens of the Pavilion, at which there was a large attendance of members and friends, including many influential medical men. The evening proceedings terminated with a dance under the dome.

Friday, August 23rd.

After an early meeting of the Benevolent Fund of the Association, the series of papers on Anæsthetics were discussed, the principal feature in the discussion being a practical and instructive speech by Mr. G. H. Bailey (London), who strongly supported the claims of nitrous oxide gas as the best anæsthetic in dental surgery.

In the afternoon interesting papers were read by Mr. J. Humphreys, of Birmingham, on The Comparison of the Teeth of Tertiary Mammals with those of the Present Day; by Mr. J. H. Reinhardt, on Vulcanite Work; by Mr. George Cunningham, on Implantation; and by Mr. R. Denison Pedley, on Iodoform in Dental Surgery.

In the evening the annual banquet was held at the Pavilion, the chair being occupied, in the regretted absence of Alderman Rymer, by Mr. John Dennant, of Brighton. Among the speakers were the veteran fighter for dental reform, Sir John Tomes—who, in proposing "The Medical Profession," laid stress upon the services of the medical profession in assisting the progress of the dental branch—and Mr. Smith Turner, who, in replying for "The Association," which had been proposed by the Vicar of Brighton, explained the objects they had in view in educating themselves, their medical friends, and the general public with regard to their professional status. Among the guests of the evening were MM. Dubois, Godon, and Ronnet, who represented the International Dental Congress at Paris, and Dr. Bonwill, of New York.

Saturday, August 24th.

Demonstrations were given at the Dental Hospital, Queen's Road, by Dr. Hewitt, on the mixture of nitrous oxide gas and oxygen; Dr. Bonwill, on rapid respiration as an analgesic agent; and Mr. George Brunton, of Leeds, on the extended or Howard method of operating; also at the Pavilion, by Messrs. Rilot, Mansell, Maxwell, Harrison, Wood, and Stoner, on gold filling; and by Messrs. Hern, Gartrell, and Hayman, in other points of operative interest.

During the meeting an excellent exhibition of dental apparatus was provided by the principal dental manufacturing firms.

The annual museum was this year confined to a limited number of subjects, the most attractive of which was, perhaps, the microscopical section. Under the able supervision of Messrs. Caush and Harrison, of Brighton, this department was most perfectly arranged, and was very thoroughly appreciated by those members who were interested in this branch of science.

A very successful excursion on the Saturday concluded the meeting.

Much of the success of the meeting was undoubtedly due to the courtesy of the Mayor and Corporation, who placed the Pavilion, with all its splendid facilities for the reception of the members, both in their scientific and social gatherings, at the service of the Association. A full report of the meeting will be published in the September issue of the *Journal of the British Dental Association* (September 15th), which will contain the papers and discussion on Anæsthetics, if space permits.

ASSOCIATION INTELLIGENCE.

COUNCIL.

NOTICE OF MEETING.

A MEETING of the Council will be held in the Council Room of the Association, at No. 429, Strand (corner of Agar Street), London, on Wednesday, the 16th day of October next, at 2 o'clock in the afternoon.

FRANCIS FOWKE, *General Secretary.*

September 12th, 1889.

NOTICE OF QUARTERLY MEETINGS FOR 1889. ELECTION OF MEMBERS.

A MEETING of the Council will be held on October 16th, 1889. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting, namely, September 26th, 1889.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member *by the Council* or by any recognised *Branch Council.*

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No member can be elected by a Branch Council unless his name has been inserted in the circular summoning the meeting at which he seeks election.

FRANCIS FOWKE, *General Secretary.*

BRANCH MEETINGS TO BE HELD.

BORDER COUNTIES BRANCH.—The autumn meeting of the Border Counties Branch will be held at Riggs Hotel, Windermere, on Friday, September 27th, at 3.15 P.M. Dinner at 6 o'clock; 5s., exclusive of wine. Members intending to read papers are requested to give notice to the Honorary Secretary.—JAMES ALTHAM, Penrith,

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT.—The next meeting of the above district will be held at the Royal Seabathing Infirmary, Margate, on Thursday, September 19th, at 3 P.M.; Mr. Knight Treves in the chair. The Directors of the Royal Seabathing Infirmary invite members to luncheon from 1 to 2, at the Infirmary. The dinner will take place at 5 P.M., at the Nayland Rock Hotel; price, 6s. 6d. (exclusive of wine). Agenda: The Chairman, On Non-Dispensing. Dr. Henry Lewis will propose the following resolution: "That the disproportionate growth of the out-patient department in all hospitals demands a general inquiry, as well as the subject of provident dispensaries, medical aid associations, and sick clubs. Mr. W. L. Chubb, Notes of a Case of Empyema.—W. J. TYSON, Honorary Secretary, 10, Langhorne Gardens, Folkestone.

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT.—A meeting of the above District will be held at the Queen's Hotel, Hastings, on Thursday, September 26th. Meeting at 3.30 P.M., dinner at 5.30. A. C. Routh, Esq., will preside. Gentlemen desirous of reading papers or showing cases, should communicate with the Honorary Secretary, T. JENNER VERRALL, 97, Montpellier Road, Brighton.

SOUTH MIDLAND BRANCH.—The autumnal meeting will be held at Higham Ferrers, on Thursday, October 3rd, 1889, under the presidency of John Crew, Esq. Gentlemen wishing to bring forward communications, etc., are requested to intimate their intention to the Honorary Secretary, without delay.—C. J. EVANS, Honorary Secretary.

EAST ANGLIAN BRANCH: ESSEX DISTRICT.—The next meeting of this district will be held at the Horn Hotel, Braintree, on Tuesday, September 24th, at 2 P.M. Dr. Sinclair Holden, President of the Branch, will preside. Members wishing to read papers, etc., are requested to communicate with the Honorary Secretary as soon as possible, in order that particulars may appear in the circulars.—C. E. ABBOTT, Honorary Secretary, Braintree.

SPECIAL CORRESPONDENCE.

EGYPT.

[FROM OUR OWN CORRESPONDENT.]

The Native Egyptian as a Subject for Surgery.—The Soudanese from the same Point of View.—Laparotomy at Kasr-el-Aini.—How to Stamp out Small-pox.—Mr. Baldwin Latham and the Drainage of Cairo.—Dr. Sidky Bey.

THE native Egyptian is an extremely good subject for surgical operation. Clot Bey, the founder of modern medicine in Egypt, has it that "it requires as much surgery to kill one Egyptian as seven Europeans. In the native hospitals, the man whose thigh has been amputated at two o'clock is sitting up and lively at six, and the woman who has had her breast removed for cancer, and her axilla completely dissected out, is walking the corridor next morning." Shock is almost entirely unknown, and dread of an impending operation quite an exception. In explanation may be noted the resignation inculcated by their religion; the very small proportion of meat in, and the total absence of alcohol from, their diet; and in general their regular, abstemious, out-of-door life.

The Soudanese inhabiting Egypt, on the other hand, are in one or two respects most unfavourable subjects for surgery. Their bones become carious on the slightest provocation, and the carious process is of a low type and most obstinate to treatment. Cure by scraping or other ordinary means is most rare, and amputation is frequently followed by caries of the bone of the stump, and generally the case terminates by the supervention within a very short period of pulmonary phthisis. Similarly, a sinus or fistula of the soft parts will rarely heal; and in many cases where long sinuses have been slit up, the wounds, in spite of every form of application, have remained for months without a sign of granulation, the surface continuing perfectly smooth and unchanged. The Soudanese in Egypt, especially the women, seem to be almost entirely deficient in vitality, and certainly appear to have the power of dying at will. So great is their tendency to suppuration, and so certain, if this occur, is the ultimate termination of the case in phthisis, that occasionally almost heroic operations have to be undertaken as affording the sole chance of cure.

The following case, lately treated at Kasr-el-Aini Hospital by Dr. Milton, is in this connection very interesting. The patient was a fine Soudanese woman, between 25 and 30, who, in September, 1888, had been operated on for a very large pyosalpynx, occupying the whole of the right side of the abdomen. An incision had been made opposite to the middle of the anterior surface of the right kidney, and two large drainage-tubes inserted. When she re-entered the hospital in May last, there was an opening in the right lumbar region, and a sinus, about seven inches long, leading to a round tumour the size of an large orange, situated just above and to the right of the uterus. Bearing in mind the idiosyncrasy of the Soudanese, Dr. Milton considered that it was hopeless to attempt a cure by dilatation and drainage of this intra-abdominal sinus and cavity. He accordingly performed laparotomy, the primary incision extending from the pubes to the umbilicus, and disclosing a tumour in the broad ligament with a thick neck running down to the external opening. The tumour was first separated from the uterus, when it was found that its outer part and neck were so bound down to the deeper tissues that the abdominal wall had to be divided transversely from the umbilicus to the opening of the sinus, opposite the anterior surface of the kidney. The tumour and its neck were then dissected off two coils of intestine, from the liver, and from the kidney, and finally the portion of the abdominal wall surrounding the sinus was excised, and the whole abscess cavity, sinus, and opening, removed. The peritoneal cavity was then carefully washed out, the peritoneum sewn together with catgut, and the wound in the abdominal wall, which had a total length of sixteen inches, united with silver wire stitches, traversing the whole thickness. The time occupied in the operation was three hours and a half. No antiseptic was employed; recently boiled distilled water was used for irrigation; and all instruments had been baked for three hours at 130° C. On the fifth day, the wound was dressed and the stitches removed, when it was found that the skin was united along nearly the whole of the wound, but that pus existed beneath, and that a probe could be passed between the closed peritoneum and the united skin from one end of the wound to the other. It seemed

hopeless to attempt to overcome the tendency to suppuration; but as after opening the abdominal cavity to remove one sinus, all risks had to be taken to avoid the formation of another, the united skin was slit up everywhere except at the angle of junction of the transverse and vertical incisions. The wound was then thoroughly disinfected with sublimate solution (1 in 1,000), and in a very few days was granulating in a satisfactory manner, and is now practically healed.

As small-pox is apparently maintained in Egypt by importation from the Soudan, a proposition has been made by the Sanitary Department that all intending immigrants should be compulsorily vaccinated at Assouan. Riaz Pacha seems to have approved highly of this reasonable measure, but there are apparently some difficulties regarding its application; the medical branch of the army which is now charged with the sanitary administration of the frontier province not looking upon it with much favour.

The services of Mr. Baldwin Latham, the eminent sanitary engineer, have been secured with a view to his preparing an exhaustive report on the best means of draining Cairo. This desirable measure has been arrived at through the instrumentality of Sir Evelyn Baring, whose eldest son lately went through a severe attack of enteric fever. This illustrates Sydney Smith's celebrated saying about the burning of a bishop in a locked railway carriage. Mr. Latham is expected to arrive in Cairo about the middle of next October.

Dr. Sidky Bey, the subdirector of the Sanitary Department, has left for Europe on three months' leave. After assisting at the Congress in Paris, it is his intention to proceed to London, where he hopes, during a six weeks' stay, to make himself acquainted with the medical institutions of the metropolis.

BIRMINGHAM.

[FROM OUR OWN CORRESPONDENT.]

Prosecutions of Unqualified Practitioners.—Epidemic of Scarlet Fever.—Prosecutions for the Sale of Bad Meat.—Charge of Negligence against a Medical Practitioner.

AT the Birmingham Police Court recently three successful prosecutions were instituted by the Medical Defence Union against certain well-known quacks, who practise mainly at the expense of those who imagine themselves the subjects of "nervous debility" and allied troubles. The first case heard was that of C. F. Groom, who has practised with the second defendant (Marston) under the title of Hunter and Co., and whose name has been removed from the list of the College of Surgeons. There were three charges against him: that he took and falsely used the name of a Member of the College of Surgeons; that he unlawfully pretended to be a physician; and that he unlawfully took the name or title of doctor of medicine. Marston, who is a carriage builder, was summoned for taking the name of Dr. Hunter, thereby implying that he was registered under the Medical Act, and for falsely pretending to be a doctor of medicine. The third defendant, named Key, has been practising as Curtis and Co., and has undergone previous conviction for practising as Dr. Key, M.R.C.P., L.A. In each case the deputy-stipendiary convicted on two of the summonses referring to the assumption of the title of "doctor;" but he dismissed the other summonses without apparently giving any reason for his decision. The full penalty and costs were inflicted in each of the convictions, so that each of the defendants' penalties amounted to over £40.

There is a serious epidemic of scarlet fever in Birmingham now, about forty new cases having been admitted into the City Fever Hospital during the past week, bringing the total up to considerably over three hundred. The officials of the Health Department are doing all in their power to limit the spread of the disease.

A very important case was recently heard at the Birmingham Police Court. A butcher was charged with exposing for sale for human food eighteen beeves' hearts, and with preparing for sale thirty pieces of beef, twelve pieces of veal, twenty-two pieces of mutton, a beeve's tongue, etc., all of which were unfit for food. All these materials were found by Inspector Latham, were seized by his order, and subsequently condemned by a justice of the peace. Defendant's counsel raised an objection before the magistrate which induced them to dismiss the summons. It appears that the only person "authorised" to lay information is Superintendent Birckley, and the Act insists that only the person authorised shall inform. Latham not being an "authorised" person, the objection was held to be fatal, and the magistrates refused to amend the certificate. For the sake of the health of the poor people in Birmingham, it is to be hoped that either more care will be exercised by the Corporation officers in the future or that magistrates may have power to amend the certificates.

A coroner's jury recently found a verdict of "Manslaughter" against Dr. Evans, whom they considered guilty of gross carelessness in his attendance on a Mrs. Mason in her confinement. Dr. Evans was called in by a midwife, and appears to have found it necessary to perform some obstetric operation, subsequent to which he found a rupture of the uterus; this was confirmed by a neighbouring practitioner, but the woman was considered to be in such a hopeless condition that no attempt was made either to empty the uterus or to prevent peritonitis by operative measures. The following day Dr. Gilroy was requested to see the woman, and he delivered her of a dead child. The patient died on the fourth day after the rupture is alleged to have been produced. Dr. John Clay, who gave the chief evidence as to the *post-mortem* examination and as to the question of malpraxis, stated that he found a rupture of the uterus, and peritonitis, the result of the rupture. The rupture he considered was caused by violence, and not by natural causes. He further stated that immediately after the laceration occurred operative measures should have been resorted to, which would have given the patient a chance of life. After an extremely fair summing up by the deputy-coroner, Dr. Evans stated that the injury was caused by the woman's own violence, and the jury, after a very short deliberation, found the verdict above mentioned. The accused was liberated on bail in two sureties of £100 each. The case came before the magistrates last week. The deputy-stipendiary, after hearing the medical evidence, stopped the proceedings, remarking that he did not think there was a case for a jury.

MANCHESTER.

[FROM OUR OWN CORRESPONDENT.]

Epidemic of Typhoid at Burnley—Manchester Infirmary Board—Appointment of a Medical Officer of Health.

A SEVERE epidemic of typhoid fever is prevalent at Burnley in Lancashire. Nearly seventy cases were reported within three or four days. Some of the officials of the Workhouse have been attacked by the disease. Mr. Henley, one of the inspectors of the Local Government Board is making inquiries into the outbreak.

At a monthly meeting of the Manchester Infirmary Board, Mr. E. S. Heywood in the chair, the following appointments were made:—House-Physicians: Alfred Hopkinson, M.B., C.M.Cantab., and T. N. Kelznack, M.B., Ch.B.Vict.; House-Surgeons: John Halliwell, M.R.C.S., L.R.C.P., T. Herbert Sykes, M.R.C.S., L.R.C.P., T. Sinclair M'Gowan, M.B., Ch.B.Vict., M.R.C.S., B Sc. Lond., and J. Dunlop, M.B., Ch.B.Vict.; Resident Student at Cheadle: Alfred Ashton, M.B., Ch.B.Vict.; all for a period of six months from September 1st.

At a recent meeting of the Barton Board of Guardians Dr. Race, Patricroft, was elected by a large majority Medical Officer of the Barton-upon-Irwell Union Workhouse, Patricroft, in succession to Dr. Roe, resigned.

CORRESPONDENCE.

THE RELATIONS OF THE GENERAL AND SPECIAL HOSPITALS.

SIR,—The changing relations of the general and special hospitals illustrate what one may call the destiny of circumstances. The growth of special hospitals, which some men who have earned, or have had thrust upon them, the rank of physicians and surgeons to the general hospitals deplore, is inevitable. It is the natural result of the progress of medical science. The motto of the College of Physicians: "ὁ βιος βραχύς ἡ δε τεχνή μακρή," which comes from the days of Hippocrates, expresses the ancient sense of the vast scope of medicine. If life was then too short to grasp it, what shall be said of it now? Life is not longer. It is doubtful whether the intellect of man is more powerful. And what shall be said of the actual boundaries of our art? If boundaries there be, they are incessantly falling back. The knowledge of to-day will be but a part of the knowledge of to-morrow. Nothing is so prolific as science. Impelled by this innate force, there comes the added stimulus of individual ambitions. As science grows and

creates new fields of observation and experiment, so must there arise more labourers to cultivate these fields. We might liken the old typical general hospital—a real general hospital no longer exists—to the ideal general medicine of the days of Hippocrates. At the beginning of the century perhaps such a hospital might still have been found, and some old hospitals still struggle to keep up the semblance of "purity." But at the present day it is an impossible anachronism. The so-called general hospital of to-day is an imperfect aggregation of special hospitals. And this composite structure has arisen out of the concurrent action of the two forces cited: the innate expansive power of science and the goad of individual ambition.

The opposition encountered by the supporters of special hospitals has also been felt by the founders of new medical societies. Taking the Medical Society of London and the Royal Medical and Chirurgical Society as representative of the old general hospitals, we cannot fail to see that from these centres a similar process of fission has been going on. Within quite recent times we have witnessed a rapid evolution of special societies. The Medico-Psychological appears to have started the movement in 1841, the Pathological followed in 1846; then in quick succession came the Epidemiological in 1850, the Obstetrical in 1858, the Clinical in 1867, the Physiological in 1876, the Ophthalmological in 1880, the Society for the Advancement of Medicine by Research in 1882, the Dermatological in 1882, the British Gynæcological in 1884, the Neurological in 1886, the Public Health Medical Society in 1886, the Sanitary Institute, the Laryngological and Rhinological in 1888; and surely others will follow in irrepressible confidence. The creation of these societies was met with more or less jealousy and opposition, but they flourish notwithstanding. And this subdivision of medicine into parts, made for the purpose of more convenient and thorough research, and of providing freer scope of action for independent investigators, is but a manifestation of a law that prevails in natural science, Medicine simply follows in the wake. Taking the Royal Society as the parent, we find emanating from it, directly or indirectly, the Linnean, the Astronomical, the Chemical, the Botanic, the Zoological, the Meteorological, the Geographical, the Physical, the Microscopical, and others.

Nor can it be said that the parent societies or the sciences they were organised to promote have suffered from this division of labour. They still constitute the central regulating power which attracts all the parts into the solidarity of a system, showing their mutual relations and interdependency. Still each society, howsoever allied to the rest, thrives by its individual energy.

Just as there is not, and cannot be, a general hospital on the old model, so there is not, and cannot be, a strictly general scientific society. The members who constitute the leading societies all cultivate some one or two branches of science more especially; and many find they can do this better by working in the more special societies. What constitutes a general hospital? At the present day a general hospital is a more or less harmonious conjunction of specialities, controlled and crippled by subjection to the more strictly medical and surgical departments. It may be truly said that they have been admitted on tolerance under pressure from without. When ophthalmology, aural surgery, gynæcology had sprung up and achieved a hold upon the general mass of the profession and the public through the energy of independent labourers, then the general hospitals yielded reluctantly to the force of circumstances, and gave a few beds and a subordinate rank to teachers of these departments. Under such conditions the specialities cannot flourish. Until recent years the obstetric physician was not allowed to treat surgically the cases which were committed to his charge, and in one metropolitan hospital his hands are still tied. To realise the absurdity of this restriction we have only to reflect that the treatment of the more essentially gynæcological cases is mainly surgical.

It was surely unreasonable to expect that men seeking knowledge and reputation in the proper spirit would submit to such thraldom. They make their opportunities elsewhere, hence special hospitals. To a great extent similar restrictions work to the discouragement of other special departments. It has been said, indeed, that no special department can be fairly cultivated in a general hospital. The proof is this; many, if not all, the physicians and surgeons of the general hospitals, obeying individual bents and the forces that rule modern medicine, cultivate with more particular care one or more special fields. To do this effectively they soon discover that special hospitals present the most abundant clinical material, and the greatest freedom of inquiry and practice. This is one fact.

Another fact is that young men who look for admission to the general hospitals cannot afford to be idle, or to let their faculties rust, and so seek work in the special hospitals; and when they succeed in getting attached to the general hospitals, they do not find it always desirable to throw up the special hospital in which they have found congenial and profitable occupation. In the general hospitals they are doomed for some years, the most active of their lives, to the drudgery—often a mockery of medicine—of the out-patient department. And even after having attained full rank many still hold on to the special hospitals, where they find free scope for work.

The following facts are significant: Taking the staffs of the London general hospitals to number approximately 195, there are only 31 members who do not hold office in some special hospital as well; with scarce an exception every special hospital in London has attached to it a Fellow of the College of Physicians, or a Fellow of the College of Surgeons, who holds office in a general hospital. It is true that in many cases the position in the special hospitals is that of consulting physician or surgeon. In one hospital (St. Thomas's) the late treasurer tried to put in force a law that no one on its staff should hold office in another hospital. Notwithstanding this, 18 members of the staff out of 24 hold office, many doing active duty elsewhere. Obvious deductions from these facts are that special hospitals are recognised, approved, and worked by the physicians and surgeons of the general hospitals; that the general and the special hospitals stand together as integral parts of the hospital system of London, each supplementing the other in supplying medical relief to the poor, and in promoting science and education.

No doubt it may be said that there are special hospitals and special hospitals (that is, necessary and superfluous, good and bad), but who shall draw the line between them? Will the mass of the profession or the public accept the dictum of the officers of the general hospitals, and ostracise all institutions which these officers do not acknowledge as legitimate? It is wise to accept the inevitable, and to trust to the practical judgment of the public to correct and resist abuses. The inquiry by the proposed Select Committee into the organisation of the medical institutions of London will certainly throw a broader light upon the questions involved, but in the meantime we cannot fail to see that no arbitrary line can be drawn between the general and special hospitals, that they are bound together by the needs of scientific research, of professional comity, and public utility.—I am, etc.,

F.R.C.P.

THE CLIMATE OF NEW ZEALAND IN PHTHISIS.

SIR,—In the JOURNAL of May 18th, p. 1144, is a letter from Dr. Bakewell, of Auckland, protesting against medical men at home sending to New Zealand consumptives who are precluded by their disease from supporting themselves in England, and who have therefore, and for the reasons stated in his letter, no chance of doing so here. While I would, with your permission, accentuate this warning, I am desirous of correcting an erroneous impression, which the last paragraph of his letter is likely to make on the minds of most readers. The matter is of sufficient importance to invalids, to the reputation of medical men at home, and to the well-being of this country, to demand much more attention than it has hitherto received. It cannot be too forcibly reiterated that consumptive clerks, tradesmen, and others dependent on their earnings, are better at home among their friends than here, as the chances of obtaining suitable employment are very remote indeed, and any possible benefit from the climate is more than neutralised by the prospect of becoming paupers.

Dr. Bakewell says "the various climates in New Zealand are not particularly suitable for consumptives on account of the extreme variations of weather, even within twelve hours." The climates of New Zealand are indeed various from the almost tropical climate of Auckland to the Scotch-like climate of Dunedin, with its severe frosts, snow, and rain—the moist warmth of Auckland during the rainy season being probably most favourable to the existence and reproduction of the bacillus tuberculosis, while the other has probably little advantage over the climate of North Britain. On the other hand, there are places in New Zealand

which offer many conditions favourable to the recovery of pulmonary consumption in the earlier stages. Briefly stated, these conditions are found in the mild and short winters, the comparatively dry genial atmosphere, the absence of excessive summer heat, and especially in the almost perpetual blue sky, and sunshine which dwarfs into insignificance the best records of sunshine at home. This sunshine all the year round admits of such a free open-air life that there are very few days in the year during which an invalid cannot take suitable outdoor exercise, and it also suggests the explanation of one peculiarity of the climate for which invalids ought to be prepared—namely, the relatively cold nights; the days are warm owing to the sunshine, the nights in winter consequently feel cold from the time the sun sets; but in the occasional cloudy weather of winter and spring the difference between the night and day temperature is very trifling. Invalids ought to receive such special instruction about clothing and exercise as to prepare them for these changes of temperature. If medical men in the British Islands will form an intelligent appreciation of the merits, and with due regard to the suggested limitations send out only suitable cases possessing such pecuniary resources as shall remove them from fear of want, I do not hesitate to say, from my personal experience, as well as from that of my patients, that many will live here in comparative health and comfort who would rapidly succumb to the disease at home.

One more caution: it is a hazardous thing to send out young men alone, even in the earlier stages, except some few gifted with more common sense and prudence than the majority; for unless accompanied by relatives, or coming here to friends who will look after them, that fatal hopefulness of consumptives seems, in many cases, so to efface from their minds all consciousness of delicacy that they lead lives most unsuitable to invalids, or possibly reside in a climate little better than that they have left, not even consulting a doctor until forced by some symptoms to do so, when our help may be solicited too late. During my residence of a little more than two years I have been painfully impressed by illustrations of this danger repeatedly occurring in my practice.

There are, no doubt, many parts of New Zealand still unsettled, or only very thinly populated, presenting favourable climatic conditions, but there are two cities, the merits of which have been established on the personal experience of competent observers, as well as on theoretical considerations, to which suitable cases of pulmonary disease may be sent with the assurance of finding the favourable climate which I have described; I refer to Napier in the North Island and Nelson in the South Island. Tauranga has also a suitable climate, but is a small place. Napier is hotter than Nelson. About two years ago pulmonary delicacy determined me on coming to Nelson, and I have found the climate most beneficial to myself as well as to other members of my family. If reasonable precautions are taken, I believe the effects of the cold nights to be tonic and invigorating, and especially so during the many warm summer months, when comfortable rest is promoted by the pleasantly cool nights.

Assuming, for the sake of illustration, that certain parts of England are suitable resorts for patients suffering from phthisis, it would be quite as rational for medical men living in some less favoured country to order consumptive patients to "the British Islands," allowing them to reside in any place they might fancy from the Orkneys to the Isle of Wight, as to send them to New Zealand without specific instruction where to go.—I am, etc.,

Nelson, New Zealand. WM. J. MACKIE, M.D.

LONDON POST-GRADUATE COURSES.

SIR,—Your remarks "on the reproach to London that the unrivalled clinical material of its numerous hospitals is not fully utilised" were much called for. It is to be hoped that the reproach is in a fair way of being a thing of the past.

The preliminary announcement in your advertising columns of a post-graduate course for next year we must hope is but the beginning of what will ultimately become an established institution in London. I would, however, take exception to the length of the courses. Two months is undoubtedly too long, and will prevent many provincial men from attending. To be successful, in my opinion, the session should not extend over four or five weeks. Many men on holiday could then avail themselves of the opportunity of attending. It should be no very difficult matter to give even eighty lectures in a session of four or five weeks' duration. Again, I should be afraid that a fee of 10 guineas would be calculated to restrict the numbers.

Edinburgh gives magnificent value for an almost nominal fee, and, with the special classes formed at moderate fees, bids fair to be a great success. Permit one word of commendation as to the hearty and enthusiastic manner in which one and all of the Edinburgh staff, which includes some of the distinguished professors of the University and some of the ablest extra-mural lecturers, unite to make the Edinburgh course successful. Truly it may be said to be a labour of love with them.

Could not the Chelsea, Samaritan, or Soho Hospitals unite and allow those who wish to acquire a thorough knowledge of gynæcology an opportunity of doing so?

I trust the committee of management of the forthcoming post-graduate course will pardon me making these suggestions. I would venture to express the hope that the scheme may prove a thoroughly successful one.—I am, etc., SCIENTIA.

September 9th.

ROYAL MEDICAL BENEVOLENT COLLEGE.

SIR,—I was most unfortunately aware that by Act of Parliament subscribers to the Epsom College have the *right* to vote at the elections, but I have yet to learn that the Act *compels* them to use their permissive powers. If all the life governors and subscribers refused to vote, it would be the duty of the committee to elect the most deserving cases. The Act, moreover, does not compel the Council to admit on the voting lists fifty candidates for ten vacancies; they do this of their own accord, and, whilst benefiting the ten, they make the forty worse off than ever. And, besides this, the Act does not prevent the Council from asking the subscribers to send them their votes for administration. If the Council can do nothing else, they can at least reduce the number of candidates on the list, and no explanation has yet been given why this has not been done. It would be far better to let the candidates draw lots than allow the present canvassing to continue. It is no excuse to throw the blame on an Act of Parliament unless all means have failed to obtain a fresh one. I may add that in the case of the St. John's Foundation School for Sons of the Poor Clergy sufficient votes are sent to the committee to enable them to "carry the election," and they therefore tell the candidates that it is useless to canvass. This is a good way out of the difficulty, and can be tried without any infringement of the Act of Incorporation.—I am, etc.,

J. A. DOW.

Charity Voting Reform Association, 30, Charing Cross, S.W.

MEDICO-LEGAL AND MEDICO-ETHICAL.

PRACTITIONERS AND HOSPITAL MEDICAL OFFICERS.

T. J. writes: A., who is a patient of mine, obtains an outdoor ticket to attend at the infirmary. Dr. B., one of the honorary-assistant surgeons, states that an operation is needed, and as she objects to go into the infirmary, offers to perform the operation at the patient's home, although he is informed that I am their medical attendant. He brings his partner to administer an anæsthetic, performs the operation and charges one guinea. A. informs me that she did not know the "doctor" until she saw him at the hospital.

*** Assuming that the above is a correct version of the facts of the case, and that Dr. B. was duly informed that T. J. was the family medical attendant, there can, we think, be no doubt that he (Dr. B.) should, under the circumstances related, have sought for a consultation with him (T. J.) ere proceeding to operate; and that in omitting to do so he failed, however unintentionally, in his duty to a professional brother.

AN UNSATISFACTORY NEIGHBOUR.

Z. writes: In reference to the case reported in the JOURNAL of August 31st, under the above heading, I was called by a patient to attend Y., living in the next street, who she said was "sitting up in bed gasping for breath and spitting blood," and in her opinion "dying." I immediately went and prescribed. I knew perfectly well that Y. was under the care of J. J. G. I make it a rule in my practice that when summoned to a fellow creature in a dying condition (as this man was said to be), to go without delay and without asking questions, and then if I find that a medical man is in attendance, I tell the friends to let the doctor know what has been done and inform him myself.

If my action in this case has been contrary to medical etiquette, surely it will be admitted by all to have been governed by the laws of humanity. Between 8 and 10 P.M. of the same evening, four messages were received to go at once to see Y., and I explained, as I had done before, that it was quite impossible for me to see the patient again without J. J. G.'s sanction. I had received no written reply to my note to J. J. G., but a verbal message that no answer was necessary, and that J. J. G. would see me the following morning.

At 11 P.M. I was again summoned to Y., and decided to call on J. J. G. at once. I did so, and explained the whole matter to him. I desired him to consider the visit I had paid to Y. as paid by me on his behalf; this he unhesitatingly declined, and refused to go on with the case. No other course being open to me, I attended the patient until his death.

The fact that the urgent message came from Y.'s house, was a fair presumption that Mrs. Y. knew that I was sent for. Having given you the facts of the case as they occurred to me, I ask you for your criticism.

*** In giving insertion in its entirety to Z.'s exculpatory letter in deference to the special request made in his private note, we may remark that if the sentiments therein expressed had formed the basis of his communication to J. J. G. in the first instance, no exception could have fairly been taken thereto. We cannot, however, ethically ignore the fact that, in the communication alluded to, he spontaneously prefaced it with the following ill-advised observations: "I find that my interpretation of the laws of etiquette differs from that of my neighbours, and I much regret this; still it is a pity that there should be any want of confidence between one man and another. Mrs. Y. did not send for me; a patient of mine, a friend of theirs, summoned me in haste." In view of such admissions, confirmed as they are moreover by the above letter, we need scarcely add that we cannot conscientiously acquit him of an unethical line of procedure in the case.

TITLES AND DOORPLATES.

M.R.C.S. writes: I should be glad to know whether a member of the British Medical Association has a right to put M.B.M.A., after his name on his door-plate, as a dispensary man in this neighbourhood does so, his only qualification being L.S.A. Can anything be done to prevent him?

*** In reply to our correspondent's query, we would refer him to the answer given to "Surgeon," in the JOURNAL of August 31st, page 502, under the head of "Wrongful Assumption of Titles." Failing the intervention of the "candid friend," therein alluded to, the Medical Defence Union may perhaps be consulted with advantage; for we need scarcely remark that for any individual practitioner to institute legal proceedings in such a case would be an invidious task.

IN response to our comments on the same subject in the JOURNAL of August 31st, a correspondent informs us that a practitioner in his neighbourhood has "M.D.Lond., F.R.C.S.Eng.," after his name on his doorplate. With regard to this, we can only say that we shall not cease to discourage, as far as may be, the exceptional and inexpedient deviations from the time-honoured custom of the faculty—believing, as we do, that such innovations and ill-judged flourish of titles and degrees tend not only to detract from rather than enhance the innovators' proper status in the estimation of the educated sensible public, but will unquestionably lower them in that of their professional brethren.

THE RIGHT OF PROPERTY IN PRESCRIPTIONS.

LIBERATOR writes: An old lady relative of mine, Miss S., has been staying lately at an English watering place, and has there been attended in a serious illness by Dr. M., who wrote for her several prescriptions, which she found very useful. On her leaving last week to return to her home in London, Dr. M. called to say good-bye, and, to her surprise, ordered her maid to bring him all the prescriptions he had written, which he deliberately tore up and destroyed before her eyes, although Miss S. protested. May I ask if Dr. M. had any right to do this? Miss S. having paid him the usual fees for his visits, etc., it would seem to me she had every right to any benefit she could obtain from the prescriptions, one of which she was particularly anxious to go on using, as it gave her much relief. Dr. M. did not object to her using it, but told her she must send to him for the medicine.

I should be much obliged if you will tell me if you consider Dr. M. has acted professionally or otherwise.

*** If, as we assume, our correspondent's lady relative has, as above related, conveyed to him the real facts of the case, there cannot, we think, be any doubt that the action of Dr. M., in deliberately and under protest destroying the prescriptions for which she had paid his usual fees, was unjustifiable; and that, having legitimately acquired them by *de facto* payment of his fees, she had an indisputable right to retain them for her personal use.

ATTENDANCE ON THE CHILDREN OF MEDICAL MEN.

H. H. writes: I also have received an account for 10s. 6d. from "M.D." for attendance on my daughter, and I think at the same school, for an attack of scarlet fever. I also was at first surprised, but came to the conclusion that, as the necessary medicine had been supplied, it was not quite fair to expect "M.D." to be actually cash out of pocket. I had previously written a letter of thanks for very kind attention; and I wrote to the lady superintendent to say that I should hold the father of the pupil, who was the means of introducing the fever into the school, responsible; and, if I pay the 10s. 6d., I shall immediately apply for repayment to the said father; and, if he does not pay, I shall at once test his liability in the county court; and I advise "One of Them," who has used surly expressions, to do likewise. I have sufficient proof to fix the liability on the father before alluded to, whom I consider responsible not only for all the 7s. 6d.'s, 10s. 6d.'s, and other sixpences charged by "M.D.," but also for the expense and worry the lady superintendent and her family were put to in consequence of the gross carelessness of the unfortunate pupil's parent.

NAVAL AND MILITARY MEDICAL SERVICES.

THE BATTLE OF TOSKI.

MAJOR-GENERAL SIR F. GRENFELL, commanding the Nile Field Force, has sent in his report on the action fought near Toski, on the Soudan Frontier, on August 3rd. Respecting the medical arrangements, he says:—

"When the reconnaissance developed into a general action, Surgeon-Major Hayes quickly returned to camp, arranged an increase of eighty beds on the seventy already organised, improvised a bearer column, and all wounded received first field dressings as they fell, and seriously wounded men were conveyed to hospital by stretcher parties and camels. This rapid organisation reflects great credit on Surgeon-Major Hayes and the following officers of his department:—Surgeon Morse, S.M.O., first column; Surgeon Lewis, Extemporised Bearer Column; Surgeon Pinching, S.M.O., second column; and I have every reason to be satisfied with all his arrangements for Egyptian wounded. In addition to the care of Egyptian wounded, Surgeon-Major Hayes had arranged for a large number of Dervish sick and wounded, and has worked night and day to alleviate their sufferings. He is a most able, active, and energetic officer."

THE NAVY.

FLEET-SURGEON J. D'A. HARVEY has been placed on the retired list of his rank at his own request. His commission as Surgeon dates from August 17th, 1869; that of Fleet-Surgeon March 23rd, 1880.

Surgeon A. W. E. B. BARRETT, who entered the service August 25th, 1881, has been allowed to withdraw from it with a gratuity. He was surgeon of the *Cygnet* during the naval and military operations in the Eastern Soudan in 1884-85, and has the medal with Suakin clasp and the Khedive's bronze star for the campaign.

The following qualified candidates have been appointed Surgeons from August 22nd:—GEORGE ALLAN, M.B., WILLIAM J. MAILLARD, M.B., PERCY V. JACKSON, OSWALD M. JONES, NICHOLAS C. RIDLEY, ALFRED H. L. COX ERINGTON, F. S. M'KAY, and ALEXANDER MACLEAN, M.B.

The following appointments have been made at the Admiralty:—WILLIAM M. LORY, Surgeon to the *Penelope*, additional, for Ascension Hospital, August 28th; PERCY W. BASSETT-SMITH, Surgeon to the *Nankin*, August 28th.

The following appointments have been made at the Admiralty:—CHARLES W. HAMILTON, Surgeon, to the *Wye;* T. J. CROWLEY, M.D., Surgeon, to the *Boscawen;* WILLIAM E. BEAL, Surgeon, to the *Sultan;* GEORGE K. BELL, Surgeon, to Chatham Hospital, September 9th; E. T. COOK, Surgeon, to the *Cambridge;* L. BIDWELL, Surgeon, to the *Britannia;* E. H. M'KERRY and C. G. MATTHEWS, Surgeons, to the *Royal Adelaide;* J. GRANT, Surgeon, to the *Asia;* G. A. HOLROYD, Surgeon, to the *Vernon;* T. AUSTEN, Surgeon, to the *Excellent;* J. CHAMBER, Surgeon, to the *Royal Adelaide*, for Plymouth Hospital, for temporary service; E. B. TOWNSEND, Surgeon, to the *Duke of Wellington*, for Haslar Hospital; E. GRIFFIN, Surgeon, to the *Magpie;* A. M. FRENCH, Surgeon, to the *Beagle*, in lieu of a staff-surgeon; J. ACHESON, Surgeon, to the Plymouth Division Royal Marines; E. E. BRAY, Surgeon, to the *Téméraire;* and F. J. LEA, Royal Marine Artillery Division at Eastney.

THE MEDICAL STAFF.

BRIGADE-SURGEON C. S. WILLS, C.B., has been granted retired pay. Entering the service as Assistant Surgeon August 7th, 1866, he became Surgeon March 1st, 1873; Surgeon-Major December 10th, 1875; and Brigade-Surgeon April 2nd, 1887. He served in the Zulu war in 1879 as Principal Medical Officer and Sanitary Officer at the Base; Director of Hospitals; Director of Medical and Surgical Stores and Supplies; and Field Inspector of Lines of Communication from Base to Lower Tugela (mentioned in dispatches, medal, and nominated Companion of the Bath).

Surgeon H. E. B. FLANAGAN died at Bangalore, Madras, on August 8th, of trphoid fever, at the age of 31. He entered the service March 6th, 1880.

Deputy Inspector-General J. J. CLIFFORD, M.D.Edin., formerly of the 9th (Queen's Royal) Lancers, died at Slough on September 3rd. His commissions were dated:—Assistant-Surgeon August 7th, 1846; Surgeon August 28th, 1857; Surgeon-Major August 7th, 1866. He retired on half pay December 2nd, 1871, with the honorary rank of Deputy Inspector-General.

The following officers of the Medical Staff on the Bengal Establishment, who have either completed, or will before April, 1890, complete, five years' foreign service, will proceed to England during the ensuing trooping season, and will be detailed by the Surgeon-General, Her Majesty's Forces, for duty with troops embarking in the several troopships:—Surgeons-Major R. N. MALLY; W. F. STEVENSON, M.B.; G. HARE; G. D. N. LEAKE; R. DRURY, M.D.; S. H. CARTER, M.B.; E. A. MAPLETON, M.B.; Surgeons J. M. IRWIN, M.B.; W. G. MACPHERSON, M.B.; R. J. S. SIMPSON, M.B.; D. SEMPLE, M.B.; G. M. H. COLMAN, M.B.; E. H. L. BELL, M.B.; R. H. FIRTH; G. NELIS; and W. H. LENDRUM, M.D.

Surgeon-Major C. E. DWYER and Surgeons J. MEEK, M.D., and J. KEATLY, who are serving in the Bengal command, have each leave of absence for six months on medical certificate.

Surgeon JAMES PERCEVAL MYLES has been seconded for service with the Egyptian army.

Deputy Inspector-General CHARLES ROBERT BOYES, M.D., late of the 60th King's Royal Rifles, died at Edinburgh on September 1st. He entered the service as Hospital Assistant August 17th, 1826; became Assistant-Surgeon November 22nd, 1827; Surgeon July 2nd, 1841; Surgeon-Major January 12th,

1855; and Honorary Deputy Inspector-General on his retirement, November 3rd, 1856. He served as Surgeon of the 1st Battalion of the 60th Rifles in the Punjab campaign in 1848-49, and was present during the second siege operations at Mooltan, and the capture of that fortress; at the battle of Goojerat, the pursuit of the Sikh army until its surrender at Rawul Pindee, the occupation of Attock and Peshawur, and the expulsion of the Afghan force beyond the Khyber Pass (medal with two clasps).

ARMY MEDICAL RESERVE.

SURGEON WILLIAM COATES has resigned his commission, which dated from June 11th, 1887.

INDIAN MEDICAL SERVICE.

BRIGADE-SURGEON J. G. PILCHER, Bengal Establishment, Civil Surgeon of Darjeeling, is appointed to officiate as Inspector General of Civil Hospitals, North-West Provinces and Oude, during the absence on privilege leave of Deputy Surgeon-General W. R. RICE, M.D.

Surgeon H. M. BRABAZON, of the Bengal Establishment, has leave of absence for six months.

The services of Surgeon J. H. SELLICK, Bengal Establishment, Officiating Medical Officer 23rd Native Infantry, are placed temporarily at the disposal of the Chief Commissioner of Burmah.

Surgeon H. ST. C. CARRUTHERS, Madras Establishment, District Surgeon of Rajahmundry, has leave of absence for one year on medical certificate. Surgeon J. W. EVANS, Madras Establishment, Civil Surgeon of Cochin, is directed to act as District Surgeon of Rajahmundry during the absence of Surgeon Carruthers.

Brigade-Surgeon B. T. SUFFREIN, Madras Establishment, is appointed to officiate as Deputy Surgeon-General, Myingyan and Mandalay Districts, *vice* Deputy Surgeon-General De Fabeck, on furlough.

Surgeon S. E. PRALL, Bombay Establishment, is granted leave to proceed out of India for 182 days on medical certificate.

The Queen has approved of the admission of the following as Surgeons: Bengal—FAIRLIE RUSSELL OZZARD, ADAM R. S. ANDERSON, JOHN TELFER CALVERT, EDGAR JENNINGS, THEODORE MAYO STILES, and ARTHUR GERVASE HENDLEY; Bombay—WILLIAM S. O. RICKETTS, CHARLES MALCOLM MOORE, GEORGE WILLIAM JENNEY, and CHARLES TILSON HUDSON.

THE VOLUNTEERS.

ACTING-SURGEON E. VAUDREY, M.B., 1st Volunteer Battalion Derbyshire Regiment (late the 1st Derbyshire), is promoted to be Surgeon.

MEDICAL OFFICERS OF THE NAVY.

STAFF-SURGEON writes: Having seen in the JOURNAL of August 31st an extract from the report of Lord Camperdown's Committee to the effect that "We are glad to be able to state that the medical service of the navy is, so far as we can see, in a satisfactory and contented condition," allow me to point out how our service could be rendered still more satisfactory and ourselves more contented by a few concessions.

1. On promotion to the rank of staff-surgeon after twelve years' service, most of us are rather rusty, especially if the greater part of our time has been spent on board small ships, where the amount of practice amongst specially selected and healthy men must of necessity be small. More especially is this the case with those of us who have not been fortunate enough to secure a hospital appointment during our service as surgeon. In the Navy the practice is, and must necessarily be (owing to the peculiar circumstances in which we are placed, especially in small ships that have not got a "sick bay" in which cot cases can be treated), to send our serious cases to hospital, where we frequently have no opportunity, owing to removal to other parts of the station of our ship, of following the course of the disease, treatment, etc.; and so too frequently we see the beginning of an interesting or instructive case, and rarely see the termination of it, whether that be restoration to health, or death, with the succeeding necropsy, unless we are fortunate enough to hold a hospital appointment, which is only held for three years abroad, and about eighteen months or two years at home. A man rarely or ever gets a second hospital appointment as a surgeon, and the majority of us get promoted to the higher rank without ever having served in a hospital, through no fault of our own. Contrast this with the army, where I have known a surgeon two years my junior, a man of about two years' seniority, to be in sole charge of a station hospital abroad, and doing practically the same duties that are performed in our service by a deputy inspector-general of thirty years' service or more. I would therefore suggest that every surgeon should be appointed to a foreign hospital for three years, or to a home hospital for two years, the appointments to go by seniority and rotation, to give each surgeon, especially the senior ones, a chance—the only chance in many cases—of becoming practically acquainted with the modern treatment of disease and injuries. On promotion to the rank of staff-surgeon, we should be appointed supernumerary to one of the naval hospitals, if at home at the time of promotion, or if abroad on return home, for at least six months, on full pay, and not placed on half pay, as is now the case until sent abroad again. A staff-surgeon should also be given a chance of attending the post-graduate courses now so popular; but to do this full pay should be granted, as he could hardly afford to go through the course and pay the fees (this the Admiralty might do) on his half pay of 12s. a day, especially if he was a married man with a family. The other professional officers of the navy are permitted to go through a full pay course on promotion, namely, commanders, captains, engineer and marine officers at the Royal Naval College, gunnery and torpedo ships, and why should the privilege be withheld from medical officers alone?

2. All compulsory half pay should be abolished, except as a punishment for misconduct. When we pay off a ship, or come home on promotion, after we have had our leave, we should be appointed to one of the home hospitals as supernumeraries, the same as is now done with our sick berth staff. Voluntary half pay to be granted to those officers desiring it.

3. The question of full pay leave requires readjusting throughout the service for all ranks. A man serving at home can get six weeks' full pay leave for every year served at home, but a man serving abroad can only get a fortnight for each year served abroad. Surely this is an anomaly, and "one of those things that no fellow can understand." And why should a lieutenant in command get no leave on returning home, and another lieutenant get six or seven weeks? And why should a paymaster get leave, and, if he happens to be a secretary, get none? Captains and commanders get no leave on returning from foreign service. Leave for foreign service should be put on the same footing as that for home service, and six weeks given to all ranks for every year served abroad, leave for odd portions of a year to be regulated by scale as at present. Our leave, both at home and after foreign service, is absurdly small compared to that granted to army medical officers, whose time abroad is mostly spent in comfortable quarters on shore, with every luxury and none of the hardships and drawbacks with which service in the navy is inseparably connected. People on shore marvel at the small amount of leave we get on returning home after an absence of nearly four years, sometimes more, from our families, wives, and children. These are the chief points on which I think the majority of my *confrères* will agree with me in considering need reform. We can only contrast our service with the army. There we see surgeons in charge of hospitals after two years' service or less, their whole practice being hospital practice—the easiest, pleasantest, and only satisfactory kind. They have no compulsory half pay except through ill-health, and in the matter of leave they can get a month to our week, and a week to our day.

If not too late, I trust the Committee may have their attention drawn to the matters referred to in this somewhat lengthy letter, small in themselves, and if granted costing the country very little, but all tending to make our service more popular and ourselves more contented. Should it be unfortunately too late (I had no idea there was a Committee sitting) to bring these matters before the notice of the Committee, I trust that the powerful advocacy of the British Medical Association may be enlisted on our side, with a view to having these grievances remedied.

THE SURGEON-GENERAL BENGAL MEDICAL SERVICE.

A CORRESPONDENT writes: You speak, in the JOURNAL of July 27th, of the "monstrous" proposal to place the military medical administration in Bengal under the Civil Indian head. The position of the military medical officers of the Bengal medical service is most unsatisfactory. The military medical administration in Bengal is under a Surgeon-General of the medical staff, and eleven deputies divided between the medical staff and the Indian service. There is but one Surgeon-General in the Bengal service, which, since 1881, has been monopolised by the civil department, under the title of Sanitary Commissioner.

The three senior Deputy Surgeons-General in military employ have lately been passed over by their junior, who has been all his life in civil employ; while the former have long records of war service, the latter has none. Surely such grievous supersession should be remedied. The only way would be to separate the civil from the military entirely, and to amalgamate the latter with the medical staff. Let each province have its sanitary civil medical service, and no central figure-head is required. The present state of the military medical part of the Indian service is very unsatisfactory, and can only be remedied by amalgamation.

CIVIL PRACTICE BY ARMY MEDICAL OFFICERS.

ETIQUETTE wants to know whether army surgeons on full pay are allowed to practise and oppose civil practitioners; if not allowed, what steps should be taken to stop them so doing?

*** There is no regulation forbidding army medical officers attending private patients; but we are sure such custom systematically pursued by full pay officers would meet with official disfavour. Army surgeons are much too great rolling stones to gather private patients, and any opposition they can give to civil practitioners must be very trifling.

LORD CAMPERDOWN'S COMMITTEE: MR. BARTLEY'S DISSENT.

A MILITARY MEMBER writes: Many consider it hard to be stranded in retirement when fit to serve; but if the Surgeons-General are to get an extension of two years, why should not other ranks?

*** Yes; the retirement scheme at present in force was fully calculated out in all its bearings in 1879; if altered in one part it is liable and likely to throw the others out of gear. We notice this editorially.

THE RECOMMENDATIONS OF THE COMMITTEE.

X. writes that he doubts if these recommendations will be acceptable to medical officers, as they would leave them in the same hybrid position as heretofore. He does not think the witnesses examined before the Committee, and who gave evidence in favour of a double title, were altogether representative of the feeling of the department. As Brigade-Surgeons would simply be Surgeons-Lieutenant-Colonel, the same as all those over twenty years' service, it would look as if these officers were put back into a rank out of which they had been promoted. All promotion will be seriously retarded by the increased age allowed Surgeons-General, which will especially hit Brigade-Surgeons, who will be shelved at 55, He suggests that Deputies and Brigade-Surgeons should be classed together as Surgeons-Colonel, the former being on the staff, and the age retirement of Brigade-Surgeons increased. He has compared the ages of the fifty junior Colonels in the *Army List* with the fifty Brigade-Surgeons, and finds the former have the average age of 47 and the latter of 51.

*** There is a good deal to be said in favour of placing the Deputies and Brigade-Surgeons in one list, and it has been already suggested that the former should be called Surgeons-Colonel on the Staff.

BIS DAT QUI CITO DAT wants our opinion as to whether or when the recommendations of the Committee will be acted upon generally; if the new titles will be used by militia, volunteer, and reserve medical officers; or by retired medical officers. He thinks the new titles cumbersome, but certainly better than none at all.

*** We most certainly think the report and recommendations of the Committee will necessitate no long-delayed action on the part of the War Minister, but the form that action will take is quite another matter. We presume any change of title would necessarily extend to all ranks, at al events on the active or reserve lists.

ROYAL MEDICAL CORPS" is suggested by "Brigade Surgeon" in place of "Royal Medical Staff," as in the recommendations of Lord Camperdown's Committee.

MEDICAL STAFF writes: The decision of the Committee on Rank and Title will naturally attract most attention. If the evidence given before the Committee pointed to all the conclusions on this subject, including the double title, why not publish it? Where are the large number of medical officers who would be displeased with a military title? Did not the famous analysis show that 80 per cent. desired substantive or honorary rank and titles? The dissent of the military members is probably the real cause for refusing military titles, because it would be displeasing to them. A warrant, framed on the report, will not be accepted as a final solution of medical grievances.

EXCHANGES.

A SURGEON-MAJOR draws attention to a recent circular in which great objection is taken to medical officers applying for an exchange after they have received orders of readiness for foreign service. It is understood it arose from an application of an officer to exchange when under orders for Egypt on what looked like active service. This naturally irritated the authorities. But, not content with promulgating the order, a local principal medical officer caps it with the following emphatic addition: "In future, exchanges (*sic*) will not be forwarded after the officers have received their orders." This is a practical prohibition of exchanges. Is the interpretation of this local functionary to supersede the regulations on exchanges?

EMPLOYMENT OF RETIRED MEDICAL OFFICERS.

P. H. writes that if the chief of the recommendations of the Committee are carried out, he does not think the Medical Staff should grumble; he points out the inconsistency and contradiction involved in deprecating the employment of retired officers while recommending that of civil surgeons. Can it be the object was to deter medical officers from retiring with the hope of obtaining employment?

*** We readily noted this inconsistency for editorial comment.

M.D. also points out the inconsistency of deprecating the employment of retired officers while recommending that of civilians. Why should one or other be employed to the prejudice of the active list? Or why should retired appointments be limited to home? Why not abroad, if men can be got to take them? He would also like to know how mobilisation in India is to be effected by calls upon the active lists only? Why should not a reserve of Indian medical officers be formed? When the strain and the inevitable breakdown comes, will the medical department be blamed?

AMBULANCE CLASSES.

A MEMBER wishes to know what is the best book for information (1), etc., on forming a St. John Ambulance class, and (2) to whom should application be made as to examination of members for certificates.

*** 1. *Shepherd's Handbook*. 2. Chief Secretary, St. John's Gate, Clerkenwell, London, E.C.

PROMOTION BY EXAMINATION OR MERIT?

LIABLE TO RECALL writes: You will doubtless be inundated with letters on the recommendation of the Committee; I write to point out that it is said preference in promotion should be given to those distinguished under specified conditions. Well, some of those passed over and forced to retire were qualified under these conditions, although declared unfit by an examination now wholly condemned. Is there to be no compensation for such unfortunates?

NAVAL RETIREMENT AT SIXTY-TWO.

A NAVAL MEDICAL OFFICER writes: The Committee represent the Naval Medical Service as apparently contented; but why should they not therefore have left well alone, instead of this proposal to retain Inspectors-General on the list till 62? The recommendation may be approved by some four officers, but is condemned by the other 396 naval medical officers. It will block promotion for some three years and a half straight off, and be even worse when younger men get into the rank. The proposal is not merely unpopular but unfair to all the senior officers now serving on the list.

PRECEDENCE IN THE *ARMY LIST*.

M.S. writes; The precedence assigned to the Medical Department among the departments in the *Army List* is not carried out in the lists of the staff of general officers at home and colonial stations; the principal medical officer is invariably and ignominioasly placed last. This is a matter that should at once be rectified. The ignorant or pure civilian naturally thinks the medical must be the inferior of all the departments; perhaps this is the object in keeping up these paltry but damaging misplacements.

OLD ASSOCIATE writes: Can a Surgeon-Major and A.M.R.O. retain the latter if he resigns the former, with permission to retain rank and wear uniform?

*** We should think it would depend upon age and fitness.

RETIRED OFFICER writes: A deep debt of gratitude is due to you for great exertions on our behalf; it would be a great boon to retired medical officers if the recommendations of the Committee were applied retrospectively in defining the status of retired brigade surgeons and surgeons-major, of twenty years' service.

THE "JOURNAL" AND THE MEDICAL STAFF.

H. C. writes: Allow me to contribute my thanks to you for the great trouble you have taken on behalf of the medical staff; we are under a great debt of gratitude to you.

HOSPITAL AND DISPENSARY MANAGEMENT.

OUT-PATIENT HOSPITAL REFORM AND PROVIDENT DISPENSARIES.

SIR,—I have in the JOURNAL of August 3rd, p. 284, tried to lay my views before the profession as to the manner in which the out-patient departments of hospitals and of dispensaries should be reformed. Far be it, however, from me to suggest that all those "wage earners" who are making under 20s. per week should be encouraged to seek charitable aid. I would rather follow out the Manchester system, and, as they do there, suggest that the person so situated should be admitted at a lower rate of payment to the provident dispensary than is levied on well-to-do members. All charitable relief should be only temporary, not permanent.

As regards the proposed Public Medical Service I referred to in the JOURNAL of June 22nd, may I ask the Branches, when they are discussing the Resolutions as printed in the JOURNAL of August 3rd, p. 284, to give their opinion on two other points? First, as to whether we should fix a confinement fee; and secondly, as to whether we should fix a fee for "home" visits—of course giving doctors the power of refusing to make a "home" visit, that is, a visit to the patient's home, else we would not secure so good a class of doctors. If we can arrange a Public Medical Service for those wage-earners who are making up to 45s. per week per family, and give them medical, surgical, and dental treatment, and medicines from the chemist's, then perhaps it would be better to draw up a scale of fees for confinements and home visits, as has been done for vaccination. This seems to be a growing wish with members of our Association.

Now, as regards Provident Dispensaries, I am aware a great many doctors object to what is known as the provident dispensary. They do not, I think, object so much to the provident system as to its great abuse. A few who hold hospital appointments object to it because they see in it a reflection of their own actions, and think one charity is quite sufficient! Some who hold club appointments object to it for this reason: when a doctor contracts to treat a club patient for, say, 3s. or 4s. per annum, he generally hopes to secure the club patient's wife and family; he calculates on securing the confinement and vaccination fees, and also those due to illness of the children. I say nothing of such objections—in fact, I had rather not notice such issues, for it is so like the pot calling the kettle black when one hears a doctor who holds a provident dispensary or club lecturing one who is attached to a hospital.

Others, again, object because the rules of the provident system have been drawn up with an utter disregard as to whether the proposal rests on a sound financial basis. Remember I am not now speaking of a charity proposal. No tables of the rates of sickness seem to have been consulted. Little or no attention seems to have been given to the fact that the extremes of life are admitted on equal terms of payment with adults; in fact, infants are admitted at a lower rate of payment, although their average rate of sickness may be put down at fourteen days per annum, while the adult generally averages nine days. Even the industrial classes escaped this unpardonable blunder, and grasped the importance of an "age limit," for they admit only those between the ages of 18 to 50. Suppose the originators of our Medical Sickness Society had not secured the services of an eminent actuary, is it likely we should have adopted the proposal? Yet evidently the promoters of the provident dispensary scheme never thought of doing this, or, if they did, they have not acted up to it. Had they done so, it would have saved much subsequent trouble. However, this is only another proof of what I have elsewhere said of the fatal tendency we medical men have of trying to introduce the element of charitable aid even when we are dealing with well-to-do wage-earners. Again, the originators do not seem to have even fixed a rigid "wage limit," and with the result that the provident dispensary is now as grossly abused as are sick insurances and hospitals. Again, they made a rule which must prove deadly to any insurance scheme—namely, that a person, by paying what is known as the "sick entrance fee," had the power to demand immediate treatment. Fancy any insurance company giving imme-

diate benefits, and that, too, without a medical certificate! Therefore a great part of the failure of the provident scheme is due to this—that there is little or no use paying while well, as there is no difficulty in joining when sickness comes. Here the very essence of the insurance system is perfectly ignored, as this allows the wage-earner to join when ill, and to leave off paying when well. Take, again, another rule, which says: "Not more than four children of a family shall be charged for, all the others being free to benefits." What is the result of this? Dr. Stewart, of Manchester, has shown that fully 13 per cent. of provident (!) dispensary members are treated as free or charity cases; this, too, in a provident insurance. But perhaps this is what business men call "taking a number at a reduction!"

Again, there is no "sliding scale" for ages. All insurance companies have been very careful to take particular note of this, as it would be unreasonable to expect all ages to pay a similar amount. Our provident dispensary promoters evidently professed to take in old men, adults, infants, and chronic invalids; even persons suffering from acute illness are invited to join. As regards the remuneration of the medical staff, this is insultingly low. In the JOURNAL of January 18th, 1887, I published statistics of eighty-eight provident dispensaries. I found that the doctors were paid on an average a little over 6d. per visit. Dr. Stewart found it to be 4½d. Perhaps a wage-earner will say that this is amply sufficient; well, ask this working man if he is not paid from 6d. to 10d. per hour, and if he does not generally secure double wages if he work after 5.30 P.M.; yet he expects the skilled workman—one who has served an apprenticeship of some fifteen years, and who has expended from £600 to £800 on his education—not only to work at a lower wage than he does, but to go out perhaps on a winter night, to walk a mile or so, to prescribe for a patient, and then to walk home (for I do not think the wage-earner would allow him to take a cab at 5s.), and all for the magnificent fee of 4½d., medicines thrown in. Why, even the privy and cesspool cleaners are better paid. This is hardly good enough. If the working man says it is, then offer to give him 4½d. for every time you are called out at night, knocking him up and making him go with you. He will then see the absurdity of his argument. For my part, I cannot see why some men sitting in their snug study have drawn up a scheme which gives a doctor 4d. for a night visit, and I cannot understand why they try to cram so degrading and so very offensive a proposal down our throats; for rather than pay a night visit for these four coppers to a class of the community who consider themselves many grades above paupers, who do not advance the plea of poverty, and who would feel insulted if we told them they were in reality charity cases, I would rather go out for nothing, treating them as charity cases, than give them the power of even pretending they were paying me for my services. And so I hold that the doctor who goes out for such a fee is prostituting himself, and is degrading his profession. If his wife and children are starving, he should make some other start in life; or if he is treating these well-to-do people for this sum, so as to starve out a neighbouring practitioner, he may be doing a sharp business trick, but I question the morality of his conduct. Yet what are we to do? At 72 London hospitals the doctors are paid at the rate of 6½d. per patient, not per visit. All one can say is "God help us," for with our many quotations from sacred scripture, we are as villainous and cut-throat a body of men as ever pretended to be so exalted and philanthropic. It was very fine, no doubt, to listen to the Bishop of Ripon preach as he did, but for my part I still hold my own ideas of those doctors who, under the guise of doing good, secretly take the life's bread from their "brother," and so make many a doctor's home hungry and sad. We do not wish to restrain, but to guide, charity.

Scarcely any provident dispensary has troubled itself with drawing up a scale of surgical fees. Perhaps these are included in the 4d.! The Shipston-on-Stour is the only one which has tried to grapple with this point. Again, no dental tariff seems to have been drawn up. Perhaps the scale to be suggested for the Public Medical Service would do. Another step in the downward direction is the rule which appoints midwives; thereby granting that they are as good as doctors.

I am, however, a firm believer in the provident system. It is the one suited to the financial condition of wage-earners of limited means. It can, and should be, placed on a firm financial basis. And first I would say that the provident system cannot be self-supporting, whatever theorists may say to the contrary. Why, even the Forester's Society has 13,971 honorary members, and look what they make from fines and lapsed membership. Practical Germany has recognised this plain fact. There they have compulsory insurance against sickness, accident, and old age for the wage-earning classes, and the employer has to pay one-third opposite the two-thirds paid by the *employé*. The rent and taxes of a provident dispensary, cost of coal and gas, printing and stationery, drugs, wages of collector and dispenser, should be defrayed out of an honorary subscription list. Some have such a list, but it is not sufficient, for I notice that although 88 dispensaries have an income of £52,252 from members' payments, still the medical staff receives only £34,989. The doctors, therefore, lose £17,262 by this unbusiness like transaction, this money going to pay for the requirements of the members, that is, the fee has to pay besides the visit, the collector and dispenser, printing, coal, and gas for the members.

One more point must be noted. If we charge at the rate of 1s. per man and wife, sixpence for each member of a family (taking four as an average), and allow six bottles of medicine at 2d. per bottle, this will put a cost of 42s. per annum on each family, or 7s. per member per annum, a not too large sum when we consider the great advantages offered.

I have called attention to a few of the most glaring faults of the present provident system so as to show the great amount of work required. For my part, I wish the Council of our Association would spend £50 in obtaining the opinion of a skilled actuary so as to find out the true working basis for a provident scheme. The Council has done a good work for science. May we ask them to do a little for the general practitioner? I am certain we have only to approach the Council in a friendly spirit, and present our petition to them. All of them have the interest of the members at heart, and I am fully persuaded that before another year is over our Council will not only have drawn up a scheme which will, if worked, guide and direct true charity in its proper channel, but which will, with the co-operation of the Branches, develop a scheme by which the industrial classes of this country will have the power of providing themselves with a very efficient Medical Service.

One thing we must have, and that is, hospital co-operation. No one can point to a provident dispensary having succeeded when it has had to compete with a neighbouring free hospital. But I think those doctors acting on hospital staffs are willing to help. The present condition of affairs is a disgrace to us all, and the sooner we get rid of it the better. I do not wish to be a prophet of evil, but I have no hesitation in saying that the epitaph of a provident system will be, if it do not secure hearty and genuine co-operation, "it died because it had not the good wishes and active encouragement of our brethren on the hospital staffs."

Mr. Ernest Hart, speaking at the Leeds meeting of the British Medical Association, said he hoped the Branches would at once call meetings to discuss the Resolutions, and that he would give as much space as possible for a report of discussions. It now remains to be seen whether the members will shake off their—almost proverbial—apathy, and tackle this question of hospital and dispensary reform. If they do not care to help themselves, they must not expect to be spoonfed. The Council is waiting for their reports.

We should all feel thankful to Mr. T. Holmes, Sir Spencer Wells, and others, for their dogged perseverance in this provident proposal. Will anyone say that, had they secured the hospital co-operation for which they have fought for over twenty years, we should not now have a well-directed service? But what provident scheme could carry on a healthful and vigorous life when it has to compete against the demoralising and baneful influences produced by indiscriminate and ill-guided charity?—I am, etc.,

Liverpool. ROBERT R. RENTOUL, M.D.

EYE, EAR, AND THROAT HOSPITAL, CORK.

THE nineteenth annual report shows a large increase in the work done by this hospital. During the year 3,922 patients were attended to, of whom 316 were admitted as intern patients. The financial statement shows an increase in the annual subscriptions, but not at all in proportion to the increase of the demands upon the resources of the hospital. The alterations and additions to the hospital, rendered absolutely necessary from overcrowding, etc., and commenced last year, have been, in a great measure, carried out; and the sanitary arrangements, which were found to be extremely inadequate, have been thoroughly overhauled. The outlay for these absolutely necessary works has been considerable, and a small debt has been incurred, which we trust the public will soon enable the committee to clear off.

THE FORTY-THIRD REPORT OF THE COMMISSIONERS IN LUNACY.

In the issue of the JOURNAL of August 10th we briefly referred to some of the statistics in this report, and we alluded to the increase in the number of lunatics of all classes, comparing it with that of other years. The total increase, as compared with 1,752 of the previous year, numbers 1,697, of which 1,461 are of the pauper class, 175 of the private class, and 61 criminals.

There are some points with regard to this increase which we wish to refer to, as well as some other matters of importance that require further consideration. With reference to the increase among private patients—which numbers 175 and stands against a decrease of 2 in the total number in the previous year—it is important to notice that it is the largest increase since 1883, and it is worth while to compare it with the figures of the previous year as affecting the different kind of asylums in which it occurred. For instance, in the previous year the increase of private lunatics in county and borough asylums was only 10, last year it was 66; on the other hand, in the registered hospitals it was 83, compared with 169 the year before, whilst the last year's increase of 14 in the licensed houses stands against an actual decrease of 179 in the year before. The latter point is remarkable, and may to some extent be accounted for, as the Commissioners suggest, by those remaining under care in idiot asylums, which "represent, probably, cases never previously brought under supervision." However this may be, the fact remains that a considerable portion of the public still prefer the private to the public asylums, and this can possibly be accounted for by the more intimate domestic relationship which exists between the doctor and the patient and the patient's friends in many of these institutions. Again, the subsidence of the agitation with reference to them may have had something to do with checking the exodus of patients which undoubtedly took place under its influence. The increase of criminal lunatics is accounted for by the removal of cases from Woking Prison to Broadmoor. The increase among paupers is below that of the previous year, and does not call for special remark.

We note with approval that an increased number of persons "not quite sane" have sought and obtained admission into registered hospitals as voluntary boarders, and we rejoice to think that as it becomes more generally known among the public patients can be so admitted, there will be a larger increase in the number of those who will avail themselves of the power to place themselves under treatment before more grave symptoms are allowed to develop, with the greater prospect of ultimate recovery, and also avoiding the stigma which attaches to certification.

We quite agree with the Commissioners that, owing to the unsettled state of the lunacy laws, and, consequently, the unwillingness of medical men to certify, there has been a tendency to increase the number of uncertified lunatics "in illegal charge," who would otherwise have swelled the number of private patients, and also added to the increase of 1,697 above referred to. This increase raises the ratio from 28.87 to 29.07 insane persons per 10,000 of the population, or an advance of 0.20 over the preceding year.

With regard to causation, we find "hereditary influence ascertained" heads the list with a percentage of 20.5; next comes "previous attacks" with 16.6, and then "intemperance in drink," 13.4. About the latter cause we have long been somewhat sceptical, holding that, in many cases, great care is necessary in coming to a definite conclusion as to whether the intemperance may be the effect and not the cause of the insanity.

There are 23 suicides recorded, of which 16 were in county and borough asylums, but none in either a provincial or metropolitan licenced house. No suicide occurred in an "observation dormitory;" one, however, occurred in a single room, where the patient was placed for excitement by an attendant; we trust this patient was so placed by medical authority. In the cases of suffocation in an epileptic fit only one case happened in an observation dormitory, but 3 occurred in asylums where they were crowded out of the observation dormitories.

Patients to the number of 4,815 were discharged recovered, as against 4,545 so discharged in the previous year. the percentage of the recoveries on the number of admissions being 38.71. It would appear that 5,113 patients have died, and in 3,875 instances *post-mortem* examinations have been made. The Commissioners very properly continue to insist upon the importance of having a *post-mortem* examination made, if possible, upon every case, and if argument were needed in favour of it we need only point to the cases given in this report, wherein severe injuries were discovered in the *post-mortem* room which were not suspected to exist during life. These are by no means rare, and owing to the nature of the cases under treatment are bound to occur from time to time.

Commenting upon the erection of a fourth asylum at Claybury in Essex for the county of Middlesex for 2,000 patients, which is estimated to cost £305,000, the Commissioners make the following remarks, which we consider especially worthy of attention at the present time:—"Unless the medical staff is ample and the organisation in such large asylums is very complete it becomes a matter of serious consideration how far the patients can receive the individual attention so necessary for their recovery. In none of our public asylums is the medical staff at present too strong; in many it would be an advantage if it were strengthened with the view of further advancing clinical observation and promoting pathological investigation." We heartily echo every word of this, and we think the remedy is clearly indicated by providing small detached lunatic asylum hospitals for the reception of the acute and recent cases more on the lines of general hospitals, fitted with every appliance that science can suggest, and with an ample staff of physicians and surgeons, so that every case admitted into them can be subjected to a more critical medical examination than we believe to be possible in the present state of things. The medical staff of each of our asylums is hampered with too much of the routine work of administration.

There are 442 single patients returned as registered on January 1st last, that is, patients who are certified, but living separately in private houses. We approve of the clause in the Lunacy Amendment Act which will permit one or more patients being received into a private house under special conditions. With regard to "restraint and seclusion," mechanical restraint seems to have especially occupied the attention of the Commissioners. They state their belief that there will always exist some cases in which it will be necessary for surgical and special reasons, but condemn it in any form where it is employed with a view to mere economy. We think no hard-and-fast line can be laid down with regard to it; that "Conollyism" must never be the one law to be insisted upon, but that the medical superintendent of the asylum should have full discretion. It is a matter for regret that in several instances the Commissioners have omitted to give the number of persons secluded, the number of times, and the duration of each seclusion, and in some others have even omitted all mention of this "statutory inquiry." In one asylum they say "seclusion has not been resorted to since the last visit, but we observed several patients kept in single rooms by nurses placed at the shut door to prevent egress." The "open-door system," as it is called, is carried out in a similar manner, that is, the doors are unlocked, and "nurses placed at the shut doors to prevent egress."

By the death of Mr. Charles Spencer Perceval, and the resignation of Dr. Rhys Williams, the Commissioners have lost two valuable colleagues.

The Commission, with the approval of the Lord Chancellor, appointed Mr. Harold Urmson to succeed Mr. Perceval, and the Lord Chancellor appointed Dr. Clifford Allbutt to succeed Dr. Rhys Williams.

PROPOSED PUBLIC MEDICAL SERVICE.

L.R.C.P.LOND. writes: One important point seems to have been overlooked in the discussion anent the proposed Public Medical Service, and that is, the utter inability of the medical officers of the various friendly societies to prevent persons in receipt of good incomes from participating in the sick benefits of these clubs. In this town, for instance, which is essentially a working men's town (having been once described by Lord Beaconsfield as "a town of slated cottages") there are many who to my knowledge have joined one or other lodge when young and struggling men, and now having risen to a fair competence by sheer hard work, still continue their contributions to the club, and when ill call in the club doctor. Should he refuse to attend without further remuneration, he would be instantly dismissed by the lodge, and another appointed in his stead, most probably a stranger, who would take not only the club, but would of course also add one more to the list of general practitioners practising in the town. It must be remembered that these lodges and courts are legally constituted societies, which manage their own affairs, and would most certainly resent any interference or attempt to dictate, on the part of their medical officer.

In the present overcrowded condition of the profession it is sheer folly to suppose that men (well qualified in every way) cannot be found to accept these posts, and I have myself known of instances where from one to two hundred applications have been received from all parts of the country, for one of such appointments.

Reform the out-patient department of the hospitals by all means, for such institutions only serve to pauperise the recipients of their charity, but to start a crusade against the existing registered provident clubs and lodges, must surely prove a fruitless task.

There can be no doubt whatever that the facilities for entering the profes-

sion are such that if something be not shortly done to raise the standard of the qualifying examinations of the lesser Boards (preferably by a State examination, which everyone should pass before his name can be placed upon the *Register*), the profession of medicine must, to quote the words of one of your correspondents, "soon be reduced to the status of costermongers and labourers."

DR. HUGH WOODS (Highgate) writes: The use of the hospitals by people for whom they were never intended, by people whose means and position render hospital aid unnecessary and undesirable, can only be prevented by fixing a definite wage limit, to which an inflexible adherence shall be exacted. The hardship caused by an absolute rule of this kind would be so small that it might safely be neglected; whereas an uncertain and variable standard such as those at present in use, for example, the style of dress, and the like, causes serious friction, annoyance, and unfairness, and is, in fact, worse than what it seeks to remedy. Whether the wage limit should be the same in all hospitals is a question for serious consideration. It certainly should vary as little as possible, and not at all without solid grounds. The wage limit should allow all genuine cases to receive gratuitous treatment. It is far better to place the wage limit pretty high, and adhere to it absolutely, than to leave the admission or rejection of patients to the humours of an inspector. The uselessness of some existing systems of checking abuse is palpable. I think no one will say, for instance, that the abuse of the out-patient department at St. Bartholomew's Hospital is at all efficiently checked, although they have a regular system for the purpose. At some of the hospitals it is customary for the inspector to charge apparently good-class patients such fee as he judges right. Is not such a state of affairs on the face of it very wrong? I need not point out its harmful results.

If the hospital managers are really in earnest in wishing to check the influx of well-to-do patients, they must adopt methods worthy of men of business with some knowledge of the world. I cannot conceive any common-sense objection to making absolute rule excluding persons with incomes over a fixed limit, placed at a generously high amount, so as to prevent all real hardship. The hospital managers will surely be capable of devising methods to enforce such a limit. It can be done effectively by requiring a distinct declaration as to income on admission to hospital, and if such declaration is shown by subsequent inquiry to be false, prosecuting the person obtaining charitable aid by fraud. There is no worse dishonesty than that which steals from the poor, and why should it go unpunished. Of course immediate assistance should always be given in urgent cases without inquiry either as to income, or as to religious belief.

The proposed Public Medical Service will, I hope, be so established as to afford medical aid to those who, while able to pay for such assistance, can afford only fees calculated on the narrowest scale. In establishing such a service, care must be taken that in regarding the wants and interests of the large towns, the necessities of country districts may not be neglected.

In many country districts the help derived from hospitals may be almost neglected, and we have only the help of Poor-law medical system to consider. Now, in country places there is undoubtedly a large class of poor who are, however, by no means paupers, for whom a proper system of cheap medical help is greatly needed. It is a pity to know that while there are far too many men in the medical profession for the work to be done, still at the same time there are vast numbers of persons who are unable to obtain at all a fit amount of medical attendance.

I think that a well-devised medical service on self-supporting principles might remove this lamentable state of affairs, and do a lasting benefit to public health. I think it probable that the rules which ought to guide such a service in large towns might require important modifications when applied to country districts. A rigid uniformity would not be necessary to maintain unity of system.

Dr. Rentoul's scheme for relief of out-patients might probably be well combined, from the first, with a suitable provident system which would supply medical assistance at the homes of those contributing. The provident system, if properly managed, seems the best way of providing home attendance on the sick poor. The payments should be such as are fair, both to the poor and to the doctors. It is past all question that too great cheapening of medical services is very injurious to the public.

The great desirability of a Public Medical Service of a complete kind, intended for the help of the poor, who are not paupers, and restricted to them, is evident to anyone who carefully considers the present relations of the public and the medical profession. Such service should be completely self-supporting, and independent of charity. A wise co-operation will enable cheap medical aid of a high character to be afforded to the poor, without lowering the remuneration of the doctors to such a degree as to make it impossible for them to earn an honourable subsistence, at the same time that they do their duty to their patients.

HOSPITAL ABUSE.

DR. COTTENHAM FARMER (Gray's Inn Road) writes: As a sample of the absolute disregard of the ordinary rules of medical etiquette as shown by hospital surgeons, let me produce this as an example: The manager of a large drapery establishment, a private patient of my own, with good salary, has two children. The elder child meets with an accident, running a needle into the sole of its foot. Pain and inflammatory symptoms are set up, but the presence of pus was somewhat doubtful upon her last visit, and I considered rest and pressure properly indicated.

This morning the servant comes into my surgery to say the child had been taken to Great Ormond Street Hospital, and they would like to see the needle. I need not say the needle was not forthcoming, and I consider such conduct disgraceful on the part of any medical institution.

RESORCIN IN ECZEMA.—Dr. Unna strongly recommends in the treatment of seborrhœal eczema the application of linen cloths soaked in solution of resorcin. His formula is resorcin and glycerine of each 10, alcohol 180, mixed and diluted with four parts of water. In eczema with much secretion he applies a thin layer of cotton wadding soaked in the solution, which is then covered with some waterproof material, and kept in position with a bandage.

OBITUARY.

SAMUEL OSBORNE HABERSHON, M.D.LOND., F.R.C.P.

THE death of Dr. Habershon, of which we gave a brief notice in a recent number of the JOURNAL, has deprived the upper ranks of the medical profession in London of a most distinguished and valued member. He is the third physician, having at one time been on the staff of Guy's Hospital Medical School, who has died during the present year, the two others being Dr. L. Wooldridge and Dr. Owen Rees.

Dr. Habershon was born at Rotherham, Yorkshire, in 1825, and was nearly 64 years of age at the time of his death. He was educated at Brampton, near Watt, and at Ongar, Essex. In 1840 he became a pupil of the late Mr. Ebenezer Pye-Smith, of Billiter Square, City, who had the singular good fortune to send to Guy's Hospital four students who afterwards became physicians to that institution—namely, Drs. Habershon, F. W. Pavy, P. H. Pye-Smith, and J. J. Phillips. In that same year Dr. Habershon went to Guy's Hospital, where he heard Dr. Addison give the introductory lecture. As a student, both at the hospital and at the University of London, at which young Habershon shortly matriculated, he gained many very valuable prizes, amongst them three gold medals and two exhibitions at the First M.B. Examination in 1846, and two gold medals and a scholarship at the Second M.B. Examination in 1848. He took the M.D. degree in 1851. In 1849 he was appointed demonstrator of anatomy and tutor at Guy's Hospital, and subsequently lectured on comparative anatomy (two years); morbid anatomy and pathology (three years), during which time also he was curator of the museum; materia medica and therapeutics (seventeen years); and the theory and practice of medicine (four years). In 1854 he became assistant physician to the hospital, in 1866 was appointed physician, and resigned this latter post in 1880, being at that time senior physician. It may be remembered that the late Mr. Cooper Forster, who was then senior surgeon, also resigned his appointment, and that these resignations were the outcome of the unfortunate differences which at that time existed between the treasurer and the physicians and surgeons respecting the nursing of the patients in the hospital.

Besides his position in the Borough Hospital, Dr. Habershon held many other appointments. He became M.R.C.P. in 1851 and F.R.C.P. in 1856; was appointed examiner in materia medica to the College of Physicians in 1869; censor in 1874-5; examiner in medicine, 1876-7; Lumleian lecturer, 1876; member of the Council, 1877-8-9; Harveian orator, 1883; senior censor, 1885; and vice-president, 1887. He was for many years physician to the Star Life Assurance Office; he gave the Hunterian oration at the Medical Society of London in 1863, and the Lettsomian lectures before the same Society in 1872, and was, in the following year, elected as its president. He was also president of the Metropolitan Counties Branch of the British Medical Association in 1880.

But, not content with these labours, Dr. Habershon was a voluminous writer. His chief work was that on Diseases of the Abdomen, Stomach, etc., the first edition of which appeared in 1857, and the fourth edition only last year, 1888. Another book, devoted to Diseases of the Stomach, has passed through three editions; and a third, on the Pathology of the Pneumogastric Nerve, the subject of his Lumleian Lectures in 1876, was translated into Italian in 1879. In twenty consecutive numbers of the *Guy's Hospital Reports* he published no less than twenty-eight papers on various subjects, in which he gave the fruits of his widely-extended experience in the wards and *post-mortem* room. He published other papers also in the weekly medical journals and the *Medico-Chirurgical Transactions*. He had formerly, when in the dissecting-room, made many most careful dissections of the pneumogastric nerve, and had thereby had his attention particularly drawn to the intimate connections existing between the various organs supplied by it. This knowledge formed the basis of much of his future interest in, and insight into, diseases of the stomach and neighbouring organs. He for many years enjoyed a high reputation in this and other countries as an authority in such diseases, and had an extensive consulting practice.

But Dr. Habershon was something more than a physician of the body. Being from his youth, and while still a student at Guy's, a zealous Christian, he devoted himself to religious and philanthropic work of all kinds, especially amongst Nonconformists; and for years conducted a Sunday evening service amongst the poor in the

vicinity of Grosvenor Square. In conjunction with some others he originated the movement known as the Christian Medical Association, which was intended to further the activity of Christian life amongst medical men and students. In spite of much opposition, this movement gained ground, and is continued as the Medical Prayer Union at the present day. He was, indeed, an upright, honourable gentleman, a Liberal in politics, and absolutely the reverse of a time-server, being accustomed to express his opinions fearlessly, and to hold to them tenaciously, even in the face of strong opposition. When one knew him well, one could always foretell his views on any event of the day, or on any question of political controversy, and he would state them unreservedly when his opinion was asked. Nevertheless, he was not anxious to convert others to his way of thinking; nor did he parade his views in public.

As a lecturer he was practical and most methodical, expressed his ideas clearly to his class, and always gave one the impression of being master of his subject. In dealing with his patients he was gentle to a degree, and was ever an uncompromising opponent of heroic methods of treatment where milder measures seemed to hold out hopes of success. As an example of this may be cited his work on *The Injurious Effects of Mercury in the Treatment of Disease*, a book that possibly helped to discourage the former excessive use of that drug. On the other hand, where the case was one imperatively calling for a decisive step he would urge it. Thus, he was the first in England to suggest the operation of gastrostomy in a case of malignant stricture of the œsophagus, and the operation was performed by Mr. Cooper Forster so long ago as the year 1858. Dr. Habershon, indeed, impressed everyone by his accurate and painstaking methods as much as by the soundness of his judgment in his treatment of disease.

He was never strong physically, but no sign of serious disease had shown itself until last year, when he had three severe attacks of dyspepsia. In November hæmatemesis supervened, from which, however, he recovered. In the spring of this year, after the shock caused by the death of his wife, there was a renewal of severe dyspeptic symptoms, but Dr. Habershon struggled gallantly at his work until about six weeks before death, when attacks of hæmatemesis recurred, and speedily reduced his strength. He died on August 22nd of simple ulcer of the stomach, as verified by *post-mortem* examination. In the first part of his illness he was attended by Sir William Jenner, latterly by Dr. Andrew and Sir Alfred Garrod, whilst his son (Dr. Herbert Habershon) and Dr. Gilbart Smith were also in constant attendance. It may be noted as a curious coincidence that the disease of which he died was that which he had perhaps studied the most, and upon which his opinion was chiefly sought by other practitioners when dealing with cases of the kind.

Dr. Habershon started in practice in Finsbury Circus, but soon removed to Wimpole Street. When his reputation as a painstaking physician had been already made, he migrated in 1867, on the death of Dr. Brinton, to the house in Brook Street which that physician had occupied. In that same house, Dr. Habershon continued to reside until the day of his death. In 1854 he married Miss Grace Ince, of Hammersmith. As already stated, that lady predeceased her husband by about four months. They have left three daughters, one of whom is married, and a son, Dr. Herbert Habershon, who is one of the casualty physicians to St. Bartholomew's Hospital.

WALTER JOHN COULSON, F.R.C.S.Eng.

Mr. Walter Coulson, an account of whose fatal illness was given in our last issue, was born at Penzance in 1834, and was therefore fifty-five years of age at the time of his death. He received his professional education at St. Mary's Hospital, becoming a Member of the College of Surgeons in 1857, and obtaining the Fellowship by examination in 1860. He was soon afterwards appointed Assistant-Surgeon to St. Mary's and the Lock Hospitals, and was mainly instrumental in establishing St. Peter's Hospital for Stone, of which institution he was Senior Surgeon at the time of his death. In the early years of his professional life he was closely associated in practice with his uncle, the late Mr. W. Coulson, from whom he afterwards inherited a fortune which made him one of the richest men in the profession. Independence of medical practice as a means of livelihood did not, however, make Walter Coulson indifferent to professional success. He was a born surgeon, sound in judgment, fertile in resource, and deft in manipulation. He had the art of inspiring confidence in the sufferers who sought counsel of him, and in all his relations to brother practitioners he was a model of integrity. His contributions to surgery were of solid value; they included monographs on Stone in the Bladder, and on Syphilis, an edition of his uncle's work on *Diseases of the Bladder and Prostate*, besides several papers on subjects connected with his chosen domain of practice.

A man of such natural gifts and varied attainments would doubtless, under the stern but beneficent stimulus of necessity, have achieved a place in the very first rank of metropolitan surgeons. Had this, however, been his destiny, it is doubtful whether he would have been a happier man, and it is all but certain that he would not have been so widely beloved as he was. No one could know him even superficially without liking him; and more intimate acquaintance hardly ever failed to lead to deeper regard. His charming social qualities won for him troops of friends, whose affection was so far beyond the ordinary standard of such relations among men of the world, that when his illness took a serious turn men whose eyes were quite unused to the melting mood wept like children.

Walter Coulson was one of the most generous of men, and no one in difficulty or distress ever appealed to him in vain. He gave away thousands of pounds in this way.

Any account of Mr. Coulson would be incomplete that did not include mention of his truly English ardour as a sportsman. He was an excellent shot, and a keen rider to hounds, regularly attending the Cheshire and Bedfordshire meets. He was extremely fond of sea-bathing, but gave it up in deference to the advice of a friend, who feared it might aggravate the chronic post-nasal catarrh from which he suffered. It is possible that the habit may have had some causal relation with the aural exostoses of which he was the subject.

Mr. Coulson was buried at Highgate on Wednesday, September 4th, in the presence of Surgeon-General Mackinnon, Sir Morell Mackenzie, Sir William Dalby, and several other old friends.

LAWRENCE TRENT CUMBERBATCH, M.D.St.Andrews, M.R.C.P.Lond.

The sudden death of Dr. L. T. Cumberbatch on August 18th, which we announced in a recent issue, has caused a widespread feeling of regret both in metropolitan professional circles and throughout a large section of the public in the West End of London. A few particulars as to the fatal attack and an account of his life and character, for which which we are indebted to an intimate friend of the deceased gentleman, himself a man of the highest eminence in the profession, will no doubt be interesting to many of our readers.

Dr. Cumberbatch had attended on the Friday previous to his death at the Economic Life Office, of which he was physician, and appeared, to those who saw him, to be in his usual health, and discharged his duties on that day without any trouble or fatigue. He left town on the same evening for Scotland for a few days' yachting with some friends, prior to a proposed longer absence on the Continent. On the Saturday after his arrival at his destination he appeared in every respect well, though perhaps somewhat fatigued with the night journey. On the Sunday morning at breakfast his friends did not observe the slightest evidence of any coming change, and he was in his usual good spirits. But soon after this he was seized with severe pain in the chest. He had complained of a slight attack of a similar character some days previously, and this he had attributed to indigestion. But the pain became very severe, and within half an hour of its onset he ceased to breathe.

Some few of his professional friends who were intimate with him were not quite unprepared for this sudden termination of the life of one so universally beloved by all who knew him, and who, to the day of his departure from town, was full of life and energy. Some few years back Dr. Cumberbatch discovered that his pulse had suddenly fallen to forty in the minute. On this occasion, in consultation with some of his professional friends, he was strongly advised at once to lessen work—to avoid all night work—and consequently to give up active attendance on midwifery cases, and only to practise in this department in consultation; for of midwifery practice he had a larger share than most men at the West End, and this work had told on him. He followed this advice; but, neverthless, his energy and activity were called into full action by the large amount of private practice which now fell to his share as a general physician. Indeed, to the last week of his residence in town he was as much occupied as he well could be, and he longed for a holiday and change of air.

Dr. Cumberbatch, who was, we believe, the son of a clergyman residing in the neighbourhood of London, studied at Trinity College, Dublin, where, in 1846, he took his B.A. degree. He next applied himself to the study of medicine, first at Dublin and afterwards in Paris for a short time. In 1848 he became a Member of the Royal College of Surgeons of England. He next worked as assistant with a medical practitioner at Chipping Norton, and here it was he acquired that sound practical knowledge which, aided by zeal, good sense and judgment, and quick appreciation of all the general indications of mischief or disease, rendered Lawrence Cumberbatch one of the most judicious and soundest practitioners in every department of his more special line of practice.

He was to have entered the army as an assistant-surgeon, and an appointment was obtained for him with this object, but it was not to be. The then Director-General of the Army Medical Department refused to appoint him, as his diploma of the College could not at the time be produced, and so, fortunately for him, and for many others who subsequently benefited by his skill and advice, he decided to try his professional fortune in London. He had relations and connections of good position in the West End, and in a short time he was able to feel that his success was by no means uncertain. These satisfactory results soon made it desirable that he should assume a higher grade in the profession; accordingly, in 1886, he took the M.D. degree at St. Andrews, and was admitted a Member of the Royal College of Physicians of London.

The late Sir Charles Locock influenced him largely as regards taking up midwifery as the chief department of his practice. The late Dr. Cape and Dr. Gream were also fully alive to the great skill and good judgment of Dr. Cumberbatch in all cases of difficult labour, and learnt that he was implicitly to be trusted under all circumstances when either of them had occasion to be absent. So his work increased, and with it the general as well as the professional estimate of the worth and ability of him whom we now have to mourn, and of whom the writer of these few lines can only speak with the greatest feeling of regret, and with the highest appreciation of his excellent qualities, professional and general.

Dr. Cumberbatch was very largely occupied for many years in extensive practice, chiefly amongst the upper classes of society in the West End of London. His success was due to his talent, industry, honesty, and to his gentlemanlike and strictly honourable conduct throughout a long professional career. He was well read, and a good scholar. He was generous-minded in every sense of the expression; liberal in his charities, hospitable in his social life, full of anecdote and pleasant conversation, and in every respect a most sincere, most trustworthy friend.

We need not draw aside the curtain of his happy married life. He leaves a widow to mourn the loss of a devoted husband, and two daughters and three sons that of a fond and attached father. He died in his 66th year.

JOSEPH BRAMPTON WRIGHT, M.D.Edin., M.R.C.S.Eng.

The death of Dr. J. B. Wright, of Southsea, at the comparatively early age of 48, is an illustration of the danger of severe physical exertion undergone without adequate preparation by middle-aged professional men in the excitement of their annual holiday. About the beginning of June Dr. Wright went to Switzerland, where for three weeks he gave himself up to mountain climbing, in spite of very unfavourable weather. He was the subject of varicose veins in the left leg, and the unwonted fatigue and exposure eventually induced phlebitis. Soon after his return to this country his condition became so serious that, after consultation between Mr. Bryant and Drs. Ward Cousins and Wallace, his local advisers, amputation was decided on as a last resource. The operation was performed by Dr. Ward Cousins. Dr. Wright rallied to some extent, but died of exhaustion on July 30th.

Dr. Wright was educated at the University of Edinburgh, where, after a distinguished career as a student, he took his Doctor's degree in 1864; he had been admitted a Member of the Royal College of Surgeons of England in the previous year. He practised for many years in the midland counties, where he earned the confidence of an extensive circle of patients and the respect of all classes. His devotion to his professional duties at length affected his health, and a few years ago he settled in Southsea, where he soon gained a prominent position among the medical men of the neighbourhood. Dr. Wright's activity was not confined to his own profession; he took a practical interest in all matters affecting the welfare of the public, and was zealous in the furtherance of many religious works. Dr. Wright, who was a member of the British Medical Association, leaves a widow and four children.

LOUIS PILKINGTON JACKSON, L.R.C.S.& P. and L.M.Edin., L.F.P.S. and L.M.Glasg.

We regret to announce the death of this promising young practitioner, which took place at Plymouth on September 1st, after an illness of only four days. On August 28th Mr. Jackson complained of sore throat, but, as he was subject to such attacks, he did not attach much importance to the condition. Three days later, however, he was found to be suffering from scarlet fever, and, in spite of every care at the hands of Mr. Bean and Dr. Clay, with the advantage of the advice of Messrs. W. J. Square, Mr. Paul Swain, Mr. Russell Rendle, and Mr. Connell Whipple, who saw the case in consultation, he died on the following night. Mr. Jackson had recently been busily engaged in attendance on patients suffering from scarlet fever, of which there has been a severe epidemic in Plymouth for some time. During this year he had had no fewer than 800 cases under his care.

Mr. Jackson, who was a son of the late Captain Pilkington Jackson, R.N., received his medical education at King's College, and obtained his qualifications in 1886. He had been in practice in Plymouth for only eighteen months. He held the appointment of Assistant-Physician to the Plymouth Public Dispensary, and was a certifying surgeon under the Factories Act. Only a few weeks before his death he was elected medical officer to the Millbay and Devonport Stations of the Great Western Railway. He held several other public appointments, and was greatly respected for his uprightness of character not less than for his professional skill by all with whom he was brought in contact. By the poor he was particularly beloved for his constant and unobtrusive kindness.

Mr. Jackson, who was a member of the British Medical Association, leaves a young widow in delicate health and one little boy, for whom the greatest sympathy is felt.

WILLIAM CORNFOOT STRETTELL MILLER, M.D.

On Friday, August 30th, the grave quietly closed over the remains of one of the most promising of the young physicians of Edinburgh. It is with feelings of no ordinary grief that we announce the sadly early death of Dr. William Cornfoot Strettell Miller. But a fortnight since we saw him well and vigorous, bright with holiday plans, eager for the winter's work. Now his task is finished, and he rests sweetly and peacefully in the Grange Churchyard.

William Cornfoot Strettell Miller, the elder son of the late Captain Miller, Peninsular and Oriental Service, was born in 1854. After a thorough school training at Madras College, St. Andrews, he went into business and resided for some time in New Zealand. In 1879 he threw this aside, and devoted the energies of a most eager nature to the study of medicine at Edinburgh University. There he obtained much distinction, and acted as prosector in the anatomical department with conspicuous ability. In 1885 he graduated as Bachelor of Medicine and Master in Surgery, and soon after became resident surgeon in the Royal Infirmary. Few residents have carried away a better record for devotion to duty or professional attainment. His patients even yet speak of him in unwonted terms of personal regard. In 1887 he graduated as Doctor of Medicine with highest honours. For his thesis on the Myology of the Seal he received a gold medal and the Gunning Anatomical Prize. The substance of this research has since been published in the *Challenger Reports*. Dr. Miller then prosecuted his studies at Dublin and Berlin, and in the spring of this year returned to commence practice in Edinburgh. While apparently in the enjoyment of his usual health, he was suddenly struck down with symptoms suggestive of enteric fever. A few days of a not easily controllable pyrexia were followed by grave prostration, which ended in death on August 27th.

JOHN JOBSON, F.R.C.S.Eng., L.S.A., J.P.

We regret to announce the death of Mr. John Jobson, a well-known practitioner in the North of England, which took place at his residence in Bishop Auckland on August 23rd. Mr. Jobson, who was in his 80th year, was the son of Mr. Edward Jobson, of Elswick. He began his medical education by being apprenticed to his uncle, Dr. Frost, of Newcastle. He then became assistant to Dr. Leighton, of Newcastle, Dr. Dennis Embleton being a pupil under that practitioner at the same time. After studying in the

old Borough Schools, he became a Licentiate of the Apothecaries' Society in 1832; in 1841 he was admitted to the Membership of the Royal College of Surgeons of England, of which he became a Fellow in 1858.

Mr. Jobson laid the foundation of his local fame by the energy which he displayed during the outbreak of cholera at Sunderland, Newcastle, and Gateshead in the latter part of 1831. In 1832 he settled at Bishop Auckland, where his professional skill and grace of manner combined with real kindness of heart soon placed him at the head of the profession in the town and surrounding district.

Throughout his whole career Mr. Jobson took the keenest interest in all public movements. He was one of the active promoters of the Town Hall and Market Company, and for twenty-two years he was chairman of that company until its winding up in 1888. He was also chairman of the Bishop Auckland Gas Company for many years, and probably the only meeting of the directors which he ever failed to attend was that held on August 2nd of the present year. He was medical officer of health for the Bishop Auckland Local Board, and it was his not infrequent boast that that town was one of the healthiest in England.

When the volunteer movement was first initiated in the Auckland district, Mr. Jobson took a keen and active interest in its promotion. He was elected lieutenant of the Auckland company, and passed through all the grades to the command of the battalion (the 2nd Volunteer Battalion Durham Light Infantry), which position he held for several years. In 1867 his name was placed on the Commission of Peace for the county of Durham, and he was for many years the only magistrate resident in Bishop Auckland.

By the death of Mr. Jobson the medical profession loses a member of the greatest natural acumen, sharpened and developed by ripe experience; the town of Bishop Auckland loses one of its most active and devoted citizens; the county of Durham an upright and enlightened magistrate; and the community at large the example of a long life made successful in the truest and fullest sense by the practice of every private and public virtue.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

HEALTH OF GLASGOW.

According to Dr. J. B. Russell, the medical officer of health, the present year in Glasgow will be remarkable for its high infant mortality In the spring a widespread epidemic of measles was the cause of much loss of infant life, and now diarrhœa and its consequences are responsible for an increasing death-rate. During the fortnight ending August 24th diarrhœa caused 51 deaths, of which 46 were of children whose average age was only 8 months. The total infant deaths were 133, the highest rate among infants for several years, 96 of which were ascribed to convulsions, atrophy, and debility. Of the total deaths in the community, those of children under 5 years accounted for 51 per cent. The total number was 422 for the fortnight, representing a death-rate of 20.8 per 1,000. In Belvidere Hospital there are at present 317 cases, as against 231 at the corresponding period last year, and of these 112 are cases of scarlet fever, 75 whooping-cough, 71 enteric fever, and 51 measles.

POOR-LAW MEDICAL OFFICERS.

Dr. S. W. Smith (Cheltenham) writes: Having served as a rural medical officer of health for the last fifteen years, ending December, 1888, perhaps my experience may be useful as regards the appointment of Poor-law medical officers to such posts. They have their value in this way; many medical men obliged to travel over extensive areas can see and report much more than one person possibly is able to do. Poor-law doctors have a direct interest in reducing epidemic disease to the narrowest limits. Rich magistrates think, though, that they should be underpaid for so doing as the shoe pinches the doctor when disease spreads with the aid, or I should rather say the culpable inaction, of the ratepayers and their representatives. The sanitary reports of Poor-law medical officers from time to time, as summarised by their annual reports, would be congenial work, barring a serious reservation. It must be borne in mind that a district doctor should always be out and about. He cannot do this if he is to be harassed with bothering and impossible statistics. These should be relegated to the board-room authorities. They are vexatious and annoying, seemingly purposely inflicted. They entail a weight on the mind. It is not possible to be sitting constantly at this work, and be called away every few minutes to make up bottles of "stuff," or else run and see a peddling case of chronic or other sickness. The present system, so far as the parish doctors are concerned, would answer well enough with modifications, as the necessity arises. Formerly doctors were allowed extra fees for fractures and dislocations. These brought in much more than the £20 annual "remuneration" for health work now does. But as a set off against this fact, we were allowed to charge some of the people trifling fees for visits and medicines. Still, this did not make good the loss to us as compared with the extra-fee system. But it had the very desirable effect of keeping people off the books for, "once a pauper always a pauper." Thus the rates have been appreciably reduced owing to the above system to the gratification, I believe, of the guardians.

As a dispensary doctor I found the committee of gentlemen did their utmost to sustain the confidence of the patients in their medical officer. I did not find so as a district medical officer; I can guess one reason for this. I beg leave to suggest the following arrangement: 1. A minister of health. 2. A medical central board of health. 3. A skilled medical officer of health for several counties combined. 4. The services of the Poor-law medical officers as subsidiary medical officers of health. 5. Inspectors of nuisances. 6. Forensic medicine and a chemical expert combined for each county.

As an ex-medical officer of health I can now speak out with, I trust, advantage to the service all round. If the late lamented Dr. Rogers's scheme for dispensaries, after the Irish pattern, should hold good for towns, then the same plus allowance for the expense of conveyance to indigent patients should be adopted for country districts which, although called small places, muster all told a population of nearly 20,000 people over as many thousands of acres.

EMPLOYERS' LIABILITY ACT.

A Union Medical Officer of a District asks what is a fair charge for him to make under the "Employers' Liability Act," for attendance on the following cases: 1. An indoor servant lad sent to catch a pony, was kicked, and had fractured arm. 2. A brewer's draymen fell from a dray and badly fractured his thigh. 3. A young lad, working for a large landed proprietor, fell from a hay-mow, and ran a hay-fork into his abdomen, requiring constant attendance for three weeks, ten miles off.

*** We consider two guineas for the first case, three for the second, and five for the third, would be a fair charge to make, but we much doubt whether the "Employers' Liability Act" could be made applicable in any of these cases.

THE ROYAL COLLEGE OF PHYSICIANS ON QUARANTINE.

Dr. L. Manche (Malta) writes: Though it may seem presumptuous on my part to contradict the the report that such an authoritative body as the Royal College of Physicians was pleased to forward to the Colonial Office, with regard to the proper period of detention for purposes of quarantine in yellow fever, cholera and small-pox, still, I only claim to play the *rôle* of the flint stone, and, therefore, with all the deference due to the four distinguished physicians composing the special committee, I take the liberty to state:

1. That it is not correct "that the incubation period of yellow fever and cholera is uncertain." It is as certain as that of any other communicable disease. Though no definite limit can be assigned to the period during which the system tolerates the poison in any particular disease—hence the difference in time between the action of the same cause and the manifestation of the particular disease in different individuals—yet it is not far from the truth to say that such incubation period, in both yellow fever and cholera, may be fixed between ten and twenty days; not wishing to go over the rich literature of these two diseases in support of my conclusion, I refer the reader only to what Dr. La Roche [1] and Professor Parkes [2] state about the incubation of yellow fever and cholera respectively.

2. That even if the period of incubation were uncertain, it would not follow "that it is unwise to impose quarantine restrictions in the case of these diseases." It is a fact admitted by every medical man who knows, either by experience or after reading anything about yellow fever and cholera, that they are both communicable and transportable from their place of origin to other countries far away, by means of persons, whether sick or well, and of clothing or other articles containing the contagion.

It suffices here to quote what Dr. Hirsch [3] says about yellow fever: "But if the question concerning the contagious character of yellow fever is decisively answered in the negative, just as certainly do all facts point conclusively to communicability of some kind.....At the present day we cannot longer doubt that the instances of yellow fever in European ports have always been associated with the arrival of infected ships.....Ships have got yellow fever only when they have been in direct or in indirect intercourse with other ships already infected, or with an infected shore; and there is not in the whole literature of yellow fever, a single accredited instance of the occurrence of the disease on board a ship voyaging to, or moored within the yellow fever zone, in which that condition has not been fulfilled;" and finally, "where an infected ship is placed under strict quarantine, only those inhabitants of the post take the disease who have for one reason or another gone on board;" and on the other hand, what Dr. Macnamara [4] says as to cholera: "The more we study the history of cholera, the better shall we understand that every outburst of the disease which has occurred beyond the confines of India might invariably be traced back through a series of cases to that country; the disease has never broken out spontaneously in any other part of the world; no amount of filth, bad food, or climatic influences have, up to the present time, induced a widespread epidemic of cholera."

I admit with Dr. Parkes, "that it is usually impossible to have rigid quarantine; for nothing short of absolute non-communication would be useful, and this is impossible except in exceptional cases....." such as those of "an island, or an inland village, far removed from commerce, and capable, for a time, of doing without it," which is the case in Malta. But, on the other hand, this great hygienist continues to say: "This difficulty, however, of carrying out efficient isolation is no argument against taking every precaution against communication, and keeping a strict watch and control over every possible channel of introduction."

[1] Dr. La Roche, *On Yellow Fever*, vol. i, at p. 511.
[2] Dr. Parkes, *Practical Hygiene*, at p. 453.
[3] Dr. Hirsch's *Geographical and Historical Pathology*, vol. 1, p. 373.
[4] Dr. Macnamara, in *Quain's Dictionary*, vol. i, page 239.

Now, I ask, how is it possible to act according to such sound recommendations, unless persons coming from an infected place and very probably carrying about them the germ of the disease, be placed under observation in an isolated place, until the incubation period is over, thus making sure that the disease shall not develop itself afterwards, and that there exist no more danger of its communicability?

3. I cannot agree with the committee, which "is further strongly opposed to such restrictions generally, which it considers harmful and vexatious." It would lead me too far were I to repeat what I have proved in my previous communications as to the advisability of quarantine, or better *Sfratto*, wherever it is practicable. On the present occasion, therefore, I would merely ask the College of Physicians and the generality of British medical men, Why is it only in Great Britain that the idea prevails that quarantine restrictions are useless and harmful, while thousands upon thousands of other professional men, scattered all over the world, who have had ample opportunity of making themselves acquainted with epidemics of plague, yellow fever, cholera, small-pox, etc., and who have devoted their lives to the study of such communicable diseases in all their bearings, are of a quite contrary opinion, and are still recommending to the governments of their respective countries the advisability of quarantine restrictions, in order to prevent the introduction of these diseases and their spreading in an epidemical form?

4. As to the last paragraph of the committee's report relative to small-pox, besides being wanting in clearness, as the *Practitioner* said, it is contradictory and clashing with the preceding one. If restrictions generally are considered painful and vexatious, why is an exception made with reference to small-pox? Why should it be said that suitable precautions, based on the knowledge that the incubation period of the disease does not usually exceed a fortnight (and therefore is just as uncertain as that of yellow fever and cholera) are desirable? Why not recommend that vaccination should be universal, and thus do away with all restrictions and isolation of cases, on the plea, so often resorted to, that no seed grows on a sterilised soil, so much so that cholera may be harmlessly introduced in any place, provided its sanitary conditions are perfect? That would surely be more logical.

MEDICAL OFFICERS OF HEALTH.

MR. NEWTON WADE (Aysgarth) writes: As by the new regulations coming in force in January, 1892, every medical officer of health is required to take a certificate in sanitary science, will those officers at present holding appointments be required to obtain the said certificate, or does the law only apply to those seeking office after the date in which the law comes into force?

*** The new law would only affect an officer who had to be re-elected.

MEDICAL OFFICERS OF HEALTH AND DR. GRIMSHAW'S AMALGAMATION SCHEME.

DR. P. O'DONAGHUE, F.R.C.S.Ed., L.K.Q.C.P. (Loughrea), writes: Seeing in the JOURNAL of August 31st a communication from Dr. Grimshaw, Dublin, read in the Section of Public Medicine at Leeds, advocating the combination of the offices of registrar of births and deaths and medical officer of health with that of poor-law officer, I, after a long experience of holding all these offices combined, beg to caution the profession against such a combination. To compel the dispensary doctor to be *ex-officio* registrar and medical officer of health would be the greatest injustice, and often imperil the doctor's position, because trouble in one office would cause the loss of all.

I was registrar of births and deaths for twenty-four years, and resigned it. The clerk of the union, who is the superintendent registrar, for unworthy reasons, gave me trouble; the Registrar-General protected me. Still, after some time, I thought it more prudent to resign; and if the medical officership were attached, I would also resign it, so contemptuously was I treated. Again, I was involved in a sanitary case, started on partisan grounds. I acted most conscientiously and carefully, but as my view of the case did not accord with that of the authority, my position was made most uncomfortable, my fees refused, the vice-chairman stating "he could not trust my reports;" and I am unhappy dreading another such case; whereas, if I were not *ex-officio* medical officer of health, I could resign it as I did the registrarship, and mind my dispensary, where, it must be remarked, I never got trouble.

Hence, I would solemnly warn the profession against the great danger of attaching any office *ex-officio* to a purely medical one. In no case should medical men be forced to accept or retain offices they have no desire for.

As somewhat bearing on the above subject, with the resulting corollaries, I must say he would be a bold man who denied that the address of Claudius G. Wheelhouse, our President at Leeds meeting, was not only *facile princeps* there, but was the best and most convincing, so far as medicine ministers to humanity, or that Dr. Ogilvie Grant said the wisest thing at the Sections when he contrasted the engineer and the seasoned general practitioner.

VERIFICATION OF A DIAGNOSIS.

FROM a further communication sent us by the medical practitioner in charge of the case of scarlet fever, it appears that we were in error in supposing that the case mentioned in the JOURNAL on July 20th, page 156, under the above heading, was not properly reported to the local authority. According to our informant's statement, it was a previous case of scarlet fever which was not duly reported owing to a misapprehension on his part. Having already expressed the opinion that the medical officer of health was not justified in examining the case without first obtaining the medical attendant's consent, we think that any further comment is unneeded. We can only express a hope that to both sides the desirability of establishing more cordial relations when working for the public good will now become apparent.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns, including London, which have an estimated population of 9,555,406 persons, 5,402 births and 3,151 deaths were registered during the week ending Saturday, August 24th. The annual rate of mortality in these towns, which had been 18.8 and 19.2 per 1,000 in the two preceding weeks, declined to 17 2 during the week under notice. The rates in the several towns ranged from 11.1 in Brighton, 12.4 in Bradford 14.3 in Derby, and 14.6 in Huddersfield to 25.5 in Cardiff, 26.5 in Preston, 29.2 in Newcastle-upon-Tyne, and 34.0 in Plymouth. In the twenty-seven provincial towns the mean death-rate was 19.2 per 1,000, and exceeded by 4.3 the rate recorded in London, which was only 14.9 per 1,000. The 3,151 deaths registered during the week under notice in the twenty-eight towns included 394 which were referred to diarrhœa, 60 to whooping-cough, 50 to scarlet fever, 49 to diphtheria, 41 to measles, 41 to "fever" (principally enteric), and 1 to small-pox; in all, 636 deaths resulted from these principal zymotic diseases, against 785 and 811 in the two preceding weeks. These 636 deaths were equal to an annual rate of 3.5 per 1,000; in London the zymotic rate was equal to 2.4, while it averaged 4.4 per 1,000 in the twenty-seven provincial towns, and ranged from 0.4 in Brighton, 0.6 in Halifax, and 1.8 in Oldham to 6.5 in Hull, 9.5 in Preston, 10.5 in Sunderland, and 14.7 in Plymouth. Measles caused the highest proportional fatality in Bradford, Sunderland, Wolverhampton, and Preston; scarlet fever in Derby and Plymouth; whooping-cough in Portsmouth, Oldham, Bradford, and Sunderland; "fever" in Preston, Sunderland, and Birkenhead; and diarrhœa in Plymouth, Wolverhampton, Newcastle-upon-Tyne, Preston, and Sunderland. Of the 49 deaths from diphtheria recorded during the week under notice in the twenty-eight towns, 37 occurred in London, 3 in Plymouth, and 2 in Bolton. Small-pox caused 1 death in Leeds, but not one in London or in any other of the twenty-eight large towns; and no small-pox patients were under treatment in any of the Metropolitan Asylums Hospitals on Saturday, August 24th. These hospitals contained, however, 836 scarlet fever patients on the same date, against numbers increasing from 538 to 780 in the eight preceding weeks; 93 cases were admitted during the week, against 120, 95, and 81 in the three preceding weeks. The death-rate from diseases of the respiratory organs in London was equal to 1.4 per 1,000, and was considerably below the average.

During the week ending Saturday, August 31st, 5,659 births and 3,091 deaths were registered in twenty-eight of the largest English towns, including London, which have an estimated population of 9,555,406 persons. The annual rate of mortality in these towns, which had been 20.5 and 17.2 per 1,000 in the two preceding weeks, further declined to 16.9 during the week under notice. The rates in the several towns ranged from 9.0 in Derby, 9.7 in Leicester, 13.2 in Oldham, and 13.4 in Brighton to 24.0 in Plymouth, 24.5 in Preston, 25.6 in Newcastle-upon-Tyne, and 29.7 in Wolverhampton. In the twenty-seven provincial towns the mean death-rate was 18.3 per 1,000, and exceeded by 3.2 the rate recorded in London, which was 15.1 per 1,000. The 3,091 deaths registered during the week under notice in the twenty-eight towns included 296 which were referred to diarrhœa, 60 to whooping-cough, 52 to diphtheria, 51 to scarlet fever, 48 to measles, 36 to "fever" (principally enteric), and not one to small-pox; in all, 543 deaths resulted from these principal zymotic diseases, against 811 and 636 in the two preceding weeks. These 543 deaths were equal to an annual rate of 3.0 per 1,000; in London the zymotic death-rate was 2.1, while it averaged 3.7 per 1,000 in the twenty-seven provincial towns, and ranged from 0.0 in Derby, 0.6 in Halifax, and 1.1 in Portsmouth to 7.0 in Sunderland, 7.5 in Preston, and 10.0 in Plymouth. Measles caused the highest proportional fatality in Bradford and Preston; scarlet fever in Plymouth; whooping-cough in Wolverhampton and Birkenhead; "fever" in Preston and Wolverhampton; and diarrhœa in Preston, Hull, Blackburn, Wolverhampton, and Sunderland. Of the 52 deaths from diphtheria recorded during the week under notice in the twenty-eight towns, 32 occurred in London, 4 in Manchester, 3 in Salford, 2 in Blackburn, and 2 in Sheffield. No fatal case of small-pox was recorded either in London or in any of the provincial towns, and no small-pox patients were under treatment in any of the Metropolitan Asylums Hospitals on Saturday, August 31st. These hospitals, however, contained 934 scarlet fever patients on the same date, against numbers steadily increasing from 538 to 836 in the nine preceding weeks; 133 cases were admitted during the week, against 81 and 93 in the two previous weeks. The death-rate from diseases of the respiratory organs in London was equal to 1.8 per 1,000, and was slightly below the average.

In twenty-eight of the largest English towns, including London, which have an estimated population of 9,555,406 persons, 5,429 births and 2,972 deaths were registered during the week ending Saturday, September 7th. The annual rate of mortality in these towns, which had declined from 19.2 to 16.9 per 1,000 in the three preceding weeks, further declined to 16.2 during the week under notice. The rates in the several towns ranged from 13.2 in Leicester, 13.9 in Bristol, 14.0 in London, and 14.5 in Wolverhampton to 20.7 in Manchester, 25.4 in Plymouth, 26.0 in Preston, and 26.9 in Newcastle-on-Tyne. In the twenty-seven provincial towns the mean death-rate was 18.1 per 1,000, and exceeded by 4.1 the rate recorded in London, which was only 14.0 per 1,000. The 2,972 deaths registered during the week under notice in the twenty-eight towns included 255 which were referred to diarrhœa, 63 to "fever" (principally enteric), 59 to scarlet fever, 58 to whooping-cough, 40 to measles, 37 to diphtheria, and not one to small-pox; in all, 512 deaths resulted from these principal zymotic diseases, against numbers declining from 811 to 543 in the three preceding weeks. These 512 deaths were equal to an annual rate of 2.8 per 1,000; in London the zymotic death-rate was equal to 2.1, while it averaged 3.4 per 1,000 in the twenty-seven provincial towns, and ranged from 0.5 in Derby and in Birkenhead, and 1.4 in Cardiff to 5.6 in Salford, 6.2 in Sunderland, 10.0 in Preston, and 11.3 in Plymouth. Measles caused the highest proportional fatality in Newcastle-on-Tyne, Sunderland, and Preston; scarlet fever in Plymouth; whooping-cough in Sunderland; "fever" in Bradford, Norwich, Plymouth, Bolton, Preston, and Huddersfield; and diarrhœa in Leicester, Blackburn, Newcastle-on-Tyne, Hull, and Preston. Of the 37 deaths from diphtheria recorded during the week under notice in the twenty-eight towns, 30 occurred in London, 2 in Liverpool, and 2 in Preston. No fatal case of small-pox was registered, either in London or in any of the twenty-seven provincial towns; and no small-pox patients were under treatment in any of the Metropolitan Asylums Hospitals on Saturday, September 7th. These hospitals contained 983 scarlet fever patients on the same date, against numbers increasing from 538 to 934 in the ten preceding weeks; 112 new cases were admitted during the week against 81, 93, and 133 in the three previous weeks. The death-rate from diseases of the respiratory organs in London was equal to 1.7 per 1,000, and was below the average.

HEALTH OF SCOTCH TOWNS.

In the eight principal Scotch towns, 770 births and 468 deaths were registered during the week ending Saturday, August 3rd. The annual rate of mortality in these towns, which had been 19.6 and 17.9 per 1,000 in the two preceding weeks, rose again to 18.3 during the week under notice, but was 2.2 per 1,000 below the mean rate during the same period in the twenty-eight large English towns. Among the Scotch towns the lowest rates were recorded in Dundee and Perth, and the highest in Leith and Paisley. The 468 deaths registered in these towns during the week under notice included 77 which were referred to the principal zymotic diseases, equal to an annual rate of 3.0 per 1,000, which was 1.9 below the mean zymotic death-rate

during the same period in the twenty-eight English towns. The highest zymotic rates were recorded in Glasgow and Paisley. The 208 deaths registered in Glasgow during the week under notice included 25 which resulted from diarrhœa, 6 from whooping-cough, 5 from "fever," and 2 from scarlet fever. Two fatal cases of diphtheria were recorded in Leith, and 3 of measles in Edinburgh. The death-rate from diseases of the respiratory organs in these Scotch towns during the week was equal to 2.4 per 1,000, against 2.2 in London.

In the eight principal Scotch towns 717 births and 475 deaths were registered during the week ending Saturday, August 10th. The annual rate of mortality, which had been 17.9 and 18.3 in the two preceding weeks, rose again to 18.6 during the week under notice, and was 0.2 per 1,000 below the mean rate during the same period in the twenty-eight large English towns. Among these Scotch towns the lowest rates were recorded in Aberdeen and Leith, and the highest in Glasgow and Paisley. The 475 deaths in these towns during the week under notice included 107 which were referred to the principal zymotic diseases, equal to an annual rate of 4.2 per 1,000, which was slightly below the mean zymotic death-rate during the same period in the large English towns. The highest zymotic death-rates were recorded in Dundee and Paisley, and the lowest in Aberdeen and Greenock. The 213 deaths in Glasgow during the week included 23 from diarrhœa, 14 from whooping-cough, 5 from "fever," and 3 from diphtheria. Four deaths were referred to measles in Edinburgh, and 3 in Leith. The death-rate from diseases of the respiratory organs in these towns was equal to 2.4 per 1,000, against 1.8 in London.

In the eight principal Scotch towns 763 births and 455 deaths were registered during the week ending Saturday, August 17th. The annual rate of mortality, which had risen from 17.9 to 18.6 per 1,000 in three preceding weeks, declined again to 17.8 during the week under notice, and was 1.4 per 1,000 below the mean rate during the same period in the twenty-eight large English towns. Among these Scotch towns the lowest rates were recorded in Aberdeen and Greenock, and the highest in Glasgow and Perth. The 455 deaths registered in these towns during the week under notice included 87 which were referred to the principal zymotic diseases, equal to an annual rate of 3.4 per 1,000, which was 1.0 below the mean zymotic death-rate during the same period in the large English towns. The highest zymotic rates were recorded in Leith and Paisley. The 210 deaths registered in Glasgow during the week under notice included 23 from diarrhœa, 12 from whooping-cough, 4 from measles, and 2 from diphtheria. Three fatal cases of diphtheria occurred in Edinburgh and 2 in Dundee. The death-rate from diseases of the respiratory organs in these towns was equal to 2.2 per 1,000, against 1.9 in London.

During the week ending Saturday, August 24th, 787 births and 462 deaths were registered in the eight principal Scotch towns. The annual rate of mortality, which had been 18.6 and 17.8 per 1,000 in the two preceding weeks, rose again to 18.1 during the week under notice, and exceeded by 0.9 per 1,000 the mean rate during the same period in the twenty-eight large English towns. Among the Scotch towns the lowest rates were recorded in Greenock and Edinburgh, and the highest in Glasgow and Paisley. The 462 deaths in these towns during the week under notice included 89 which were referred to the principal zymotic diseases, equal to an annual rate of 3.6 per 1,000, which was slightly above the mean zymotic death-rate during the same period in the large English towns. The highest zymotic death-rates were recorded in Leith and Paisley. The 212 deaths registered in Glasgow included 24 from diarrhœa, 5 from whooping-cough, 3 from diphtheria, and 3 from measles. Five fatal cases of measles were recorded in Leith. The death-rate from diseases of the respiratory organs in these towns was equal to 1.9 per 1,000, against 1.4 in London.

In the eight principal Scotch towns, 815 births and 449 deaths were registered during the week ending Saturday, August 31st. The annual rate of mortality in these towns, which had been 17.8 and 18.1 per 1,000 in the two preceding weeks, declined again to 17.6 during the week under notice, but exceeded by 0.7 per 1,000 the mean rate during the same period in the twenty-eight large English towns. Among the Scotch towns the lowest rates were recorded in Greenock and Aberdeen, and the highest in Leith and Paisley. The 449 deaths registered in these towns during the week under notice included 74 which were referred to the principal zymotic diseases, equal to an annual rate of 29 per 1,000, which was slightly below the mean zymotic death-rate during the same period in the large English towns. The highest zymotic rates were recorded in Leith and Paisley. The 195 deaths registered in Glasgow during the week under notice included 14 from diarrhœa, 11 from whooping-cough, and 5 from diphtheria. Three fatal cases of scarlet fever were recorded in Edinburgh, and 3 of measles in Leith. The death-rate from diseases of the respiratory organs in these towns was equal to 2.2 per 1,000, against 1.8 in London.

During the week ending Saturday, September 7th, 782 births and 423 deaths were registered in the eight principal Scotch towns. The annual rate of mortality in these towns, which had been 18.1 and 17.6 per 1,000 in the two preceding weeks, further declined to 16.5 during the week under notice, but exceeded by 0.3 per 1,000 the mean rate during the same period in the twenty-eight large English towns. Among these Scotch towns the lowest rates were recorded in Perth and Paisley, and the highest in Aberdeen and Glasgow. The 423 deaths registered in these towns during the week under notice included 66 which were referred to the principal zymotic diseases, equal to an annual rate of 2.6 per 1,000, which was slightly below the mean zymotic death-rate during the same period in the large English towns. The highest zymotic rates were recorded in Glasgow and Leith. The 215 deaths registered in Glasgow during the week under notice included 13 from diarrhœa, 10 from whooping-cough, 6 from "fever," and 3 from diphtheria. Three fatal cases of diphtheria were recorded in Leith and 2 in Edinburgh. The death-rates from diseases of the respiratory organs in these towns was equal to 2.1 per 1,000, against 1.7 in London.

HEALTH OF IRISH TOWNS.

The deaths registered in the sixteen principal town districts of Ireland during the week ending Saturday, August 17th, were equal to an annual rate of 23.0 per 1,000. The lowest rates were recorded in Drogheda and Wexford, and the highest in Dundalk and Lurgan. The death-rate from the principal zymotic diseases averaged 5.0 per 1,000. The 165 deaths registered in Dublin during the week under notice were equal to an annual rate of 24.4 per 1,000 (against 20.7 and 24.8 in the two preceding weeks), the rate for the same period being only 16.6 in London and 15.4 in Edinburgh. These 165 deaths included 34 which resulted from the principal zymotic diseases (equal to an annual rate of 5.0 per 1,000), of which 25 were referred to diarrhœa, 4 to whooping-cough, and 3 to "fever."

In the sixteen principal town districts of Ireland the deaths registered during the week ending Saturday, August 24th, were equal to an annual rate of 22.5 per 1,000. The lowest rates were recorded in Kilkenny and Lurgan, and the highest in Waterford and Sligo. The death-rate from the principal zymotic diseases averaged 4.1 per 1,000. The 170 deaths in Dublin during the week under notice were equal to an annual rate of 25.1 per 1,000 (against 24.8 and 24.4 in the two preceding weeks), the rate for the same period being only 14.9 in London and 14.6 in Edinburgh. These 170 deaths included 33 which resulted from the principal zymotic diseases (equal to an annual rate of 4.9 per 1,000), of which 25 were referred to diarrhœa, 4 to "fever," and 2 to whooping-cough.

MEDICAL NEWS.

THE Queen has presented a coloured portrait of herself on satin to the Station Hospital at Quetta.

MEDICAL MAGISTRATE.—Dr. Bird, R.N. (retired), has been appointed a Justice of the Peace for the County of Cork.

AN anonymous donor has generously offered to rebuild a new wing (for men) to the Felixstowe Convalescent Home.

CHOLERA is said to be so prevalent at Pekin that, with the exception of the Custom House officials and some other functionaries, all foreigners have taken refuge in the mountains.

A MAN, aged 54, who was bitten by a rabid dog on July 5th, and treated at the Pasteur Institute from the same date to July 26th, is stated to have died of hydrophobia on August 10th.

THE monthly return of the Secretary of the Dogs' Home, Battersea, shows that 3,563 lost and unmuzzled dogs were taken into the home during August.

THE offer of the Mayor of Bangor to subscribe £500 towards the erection of an infectious hospital has been supplemented by a gift of £100 from Alderman Richards.

BY a recent decree of the Holy Synod of Russia, it is enacted that elementary instruction in medicine shall be given in the Orthodox seminaries of the empire.

MARGATE DRAINAGE.—The Corporation of Margate have signed a contract for £58,291 with Messrs. Cooke and Son, of London, for the completion of the drainage of the borough.

THE epidemic of small-pox which was lately raging at Milan appears to be fast subsiding. As against 161 cases in January and 236 in April, there were only 55 in June, a number which fell to 28 in July.

THE Duke of Cambridge on September 7th laid the memorial stone of the Woolwich and Plumstead Cottage Hospital at Shooter's Hill, as a memento of the Queen's Jubilee, on a piece of ground given for the purpose by the War Office.

PROFESSOR LEXIS, of Göttingen, has recently published statistics showing that there are in the German universities twice as many students as can hope to make a living by the professions which they are preparing to enter.

GURJUN OIL IN LEPROSY.—A systematic trial of the gurjun oil treatment, from which Father Damien and several members of his afflicted flock at Molokai are said to have derived benefit, is now being made at the Leper Hospital at Agra. Six typical cases have been selected, and the results are being closely watched by the medical officers of the hospital. Their report will be looked forward to with interest.

GOLD MEDAL FRUIT ESSAY.—We are requested by Mr. O. C. T. Eagleton, the Clerk of the Worshipful Company of Fruiterers, to announce that the prize of twenty-five guineas placed at the disposal of the Company by H. R. Williams, Esq. (Past Master), for an essay on profitable fruit-growing for cottagers and others with small holdings, and the gold medal provided by Dr. Hogg, the proprietor of the *Journal of Horticulture*, have been awarded to Mr. J. Wright, of 36, Alma Road, Wandsworth, the winner in the competition.

FRUIT AND EGGS.—Professor Fresenius, of Wiesbaden, after a long series of chemical analyses, declares that an egg contains as much nourishment as a pound and an ounce of cherries, a pound and a quarter of grapes, a pound and a half of russet apples, two pounds of gooseberries, and four pounds of pears; and that 114 pounds of grapes, 127 pounds of russet apples, 192 pound of pears, and 327 pounds of plums are equal in nourishment to 100 pounds of potatoes.

VANISHING PRESCRIPTIONS.—It is said that a Paris stationer has invented an ink warranted to fade off the paper in a week, without leaving the slightest trace. To say nothing of the advantages of such a discovery to fickle lovers and shifty politicians the use of this convenient liquid may perhaps commend itself to medical practitioners who have strong opinions on the question of vested interests in prescriptions.

LITERARY INTELLIGENCE.—A second edition of Dr. A. M. Brown's work on the *Animal Alkaloids* is nearly ready. The new edition will contain an article on "Auto-intoxication in Health and Disease." Messrs. Hirschfeld Brothers are the publishers. —The concluding portion of Professor McKendrick's *Textbook of Physiology*, entitled "Special Physiology," and including Nutrition, Innervation, and Reproduction, will be issued in a few days by Messrs. James MacLehose and Sons, Glasgow. The first volume, containing General Physiology, was published last year.

APOTHECARIES' HALL OF IRELAND.—At the annual meeting of the Governors and Council of the Apothecaries' Hall of Ireland, convened by statute of incorporation on August 1st, 1889, the following members were duly balloted for and elected office-bearers for the ensuing year:—*Governor:* Charles F. Moore, M.D., F.R.C.S.I. *Deputy Governor:* Richard G. O. Flaherty, M.B. T.C.D., L.R.C.S.I. *Court Examiners and Directors:* Patrick Charles Baxter, B.A., M.D.T.C.D., F.R.C.S.I.; Edward H. Bolland, M.D.; Thomas Collins, M.R.C.S.; John Evans, L.A.H.; Robert Montgomery, M.R.C.S.; Robert J. Montgomery, B.A., M.B.T.C.D., F.R.C.S.I.; Henry P. Nolan, M.D.; Edward J. O'Neil, M.D., L.R.C.S.I.; Sir George Owens, M.D.; Michael J. Moore, M.D.; John Ryan, M.D.; James Shaw, L.R.C.S.I.; George Wise, M.D. *Representative on the General Medical Council:* Thomas Collins, M.R.C.S. *Secretary:* Robert Montgomery, M.R.C.S. The laboratory is under the management of Professor Tichborne, LL.D., F.C.S., L.A.H.I.

TREATMENT OF WARTS.—Altschul recommends the treatment of warts by Unna's method, namely, mercurial ointment, containing 5 to 10 per cent. arsenic. The ointment is spread on linen, and applied over the wart, which gradually softens, and is finally absorbed without leaving any mark. The method is painless. The treatment of warts by arsenical paste is by no means a new one, and its efficacy has been frequently confirmed.

MEDICAL VACANCIES.

The following Vacancies are announced:

BOYLE UNION, BALLYFARNON DISPENSARY.—Medical Officer. Salary, £110 per annum, and fees. Applications to Mr. Thomas Rea, Honorary Secretary, Annaghloy. Election on September 23rd.

CHESTER GENERAL INFIRMARY.—Surgeon (Visiting). Salary, £80 per annum, with residence, etc. Applications by September 21st to the Chairman of the Board.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—House-Physician. Board and residence. Applications by September 20th to the Secretary, 24, Finsbury Circus, E.C.

COUNTY WEXFORD INFIRMARY.—Surgeon. Salary, £120 per annum, and house. Election on September 30th.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark Bridge Road, S.E.—House-Surgeon. Salary, £70 per annum, with board, washing and residence. Applications by September 23rd to the Committee of Management.

FLINTSHIRE DISPENSARY.—House-Surgeon. Salary, £100 per annum, with furnished house, etc. Applications by October 7th to the Secretary, Board Room, Bajillt Street, Holywell.

GLASGOW ROYAL INFIRMARY AND ST. MUNGO'S COLLEGE.—Curator of the Museum and Pathologist. Salary, £50 per annum. Applications by September 20th to Mr. Henry Lamond, 93, West Regent Street, Glasgow.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway Road.—House-Surgeon. Salary, £80 per annum, with board and lodging. Applications by September 23rd to the Secretary.

IPSWICH BOROUGH LUNATIC ASYLUM.—Resident Medical Superintendent. Salary, £400 per annum, with residence, etc. Applications by September 16th, endorsed "Application for post of Medical Superintendent," to be sent to the Town Clerk's office.

LUTON FRIENDLY SOCIETIES' MEDICAL INSTITUTE.—Assistant Medical Officer. Salary, £120 per annum. Applications by September 18th to the Secretary, 25, Melson Street, Luton.

MACCLESFIELD GENERAL INFIRMARY.—Senior House-Surgeon. Salary, £100. Applications by September 14th to the Chairman House Committee, Macclesfield Infirmary.

MANCHESTER ROYAL INFIRMARY.—Honorary Assistant-Surgeon. Applications by September 21st to the Chairman of the Board.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone, N.W.—Resident Medical Officer. Appointment for four months. Salary at rate of £60 per annum, with board and residence. Applications by September 18th to the Secretary.

ROYAL NATIONAL HOSPITAL FOR CONSUMPTION, Ventnor.—Assistant Resident Medical Officer. Salary, £60 per annum, with board and lodging. Applications by September 23rd to the Chairman of the Board of Management, 34, Craven Street, Strand, W.C.

ROYAL SOUTH HANTS INFIRMARY, Southampton.—House-Surgeon. Salary, £100 per annum, with board and lodging. Applications by September 20th to the Secretary.

ROYAL UNITED HOSPITAL, Bath.—House-Surgeon. Salary, £60 per annum, with board, lodging, etc. Applications by September 19th to A. E. Boyce.

RURAL SANITARY AUTHORITY, BASFORD UNION.—Medical Officer of Health. Salary, £400 per annum. Applications by September 26th to C. J. Spencer, Public Offices, Basford, Nottingham.

ST. VINCENT'S HOSPITAL, Dublin.—Assistant-Surgeon. Applications by September 21st to the Honorary Secretary.

ST. VINCENT'S HOSPITAL, Dublin.—House-Physician. Applications by September 21st to the Honorary Secretary.

ST. VINCENT'S HOSPITAL, Dublin.—House-Surgeon. Applications by September 21st to the Honorary Secretary.

SCARBOROUGH HOSPITAL AND DISPENSARY.—House-Surgeon. Salary, £80 per annum, with board, lodging, etc. Applications by September 15th to the Secretary.

WEST LONDON HOSPITAL, Hammersmith Road.—House-Surgeon. Board and lodging. Applications by September 25th to the Secretary-Superintendent.

MEDICAL APPOINTMENTS.

COUCH, J. KYNASTON, M.R.C.S.Eng., L.R.C.P.Lond., appointed Chloroformist and Pathologist to the Swansea Hospital.

CROOKE, G. F., M.D., M.R.C.S., appointed Physician for Out-patients to the Queen's Hospital, Birmingham, *vice* E. Hogben, M.D.

DUNLOP, J., M.B., B.Ch.Vict., appointed House-Surgeon to the Manchester Royal Infirmary.

EDELSTEN, Ernest A., M.A., M.B., B.Ch.Oxon., M.R.C.S.Eng., L.R.C.P.Lond., appointed House-Surgeon to the East London Hospital for Children, Shadwell.

EWENS, H. L., M.B., B.Ch., M.R.C.S.Eng., L.R.C.P.Lond., appointed Resident Medical Officer to the Children's Hospital, Birmingham, *vice* E. T. Roberts, M.B.

HALLIWELL, J., M.R.C.S.Eng., L.R.C.P.Lond., appointed House Surgeon to the Manchester Royal Infirmary.

HOPKINSON, Albert, M.A., M.B., B.C.Camb., appointed House-Physician to the Manchester Royal Infirmary.

KELYNACK, T. N., M.B., B.Ch.Vict., appointed House-Physician to the Manchester Royal Infirmary.

MCALDOWIE, A.M., M.D., M.B., C.M., F.R.S.E., appointed Honorary Medical Officer to the North Staffordshire Infirmary, *vice* C. Orton, M.D., appointed Consulting Physician to the Infirmary.

MCGOWAN, J. S., B.Sc.Lond., M.B., B Ch.Vict., M.R.C.S.Eng., appointed House-Surgeon to the Manchester Royal Infirmary.

RICHARDSON, M. J., M.B., C.M., appointed Assistant House-Surgeon to the Rotherham Hospital, *vice* G. H. O'Reilly, M.B., resigned.

SULLY, A. M., L.R.C.P.Lond., M.R.C.S.Eng., appointed Assistant Resident Medical Officer to the Children's Hospital, Birmingham, *vice* H. L. Ewens, M.B., resigned.

SYKES, J., M.R C.S.Eng., L.R.C.P.Lond., appointed House-Surgeon to the Manchester Royal Infirmary.

THRESH, J. C., L.R.C.P.Edin., L.M., L.F.P.S.Glas., L.M., L.S.A.Lond., appointed Medical Officer of Health to the Chelmsford and Maldon Sanitary Authority, *vice* A. H. Downes, M.D.Aber., resigned.

TUNSTALL, John Ogle, M.D.Lond., M.R.C.S.Eng., appointed Senior Resident Assistant Medical Officer to the Birmingham Workhouse Infirmary.

WEATHERLY, A. J., M.R.C.S.Eng., L.R.C.P.Lond., appointed Civil Medical Officer of the first class, to the Kurseong Division of the Darjeeling District; also appointed Consulting Medical Officer to the Darjeeling Himalayan Railway.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the announcement. The first post on Thursday mornings is the latest by which advertisements can be received.

BIRTH.

THOMPSON.—On September 1st, at Priory House, Launceston, Cornwall, the wife of W. F. Thompson, M.B., of a son.

MARRIAGE.

BALLANTYNE—MATHEW.—On the 5th instant, at Sawston Congregational Church, Cambs, by the Rev. G. T. Ennals, Leytonstone, assisted by the Rev. G. Borrow, Sawston, John William Ballantyne, M.D., F.R.C.P., Edinburgh, eldest son of the late John Ballantyne, Birkdale, Windermere, to Emily Rosa, second daughter of the late George Mathew, Worsted Lodge, Cambs.

DEATHS.

JACKSON.—On September 1st, at 9, Princess Square, Plymouth, Louis Pilkington Jackson, L.R.C.P., etc. Aged 26. Dearly loved and deeply mourned.

KERNOT.—On the 5th instant, at his residence, Bishnauth, First Avenue, Brighton, Charles Noyce Kernot, Esq., M.D., F.R.C.S.E., Lic.Med., etc., of Dalhousie Square, Calcutta, aged 49 years. Indian and Australian papers please copy.

OPERATION DAYS AT THE LONDON HOSPITALS.

MONDAY.....10 A.M.: Royal London Ophthalmic.—10.30 A.M.: Royal Free (Ophthalmic Department).—1.30 P.M.: Guy's (Ophthalmic Department); Royal Westminster Ophthalmic.—2 P.M.: Central London Ophthalmic; Hospital for Women; Royal Orthopædic; St. Mark's; London.—2.30 P.M.: Chelsea Hospital for Women.

TUESDAY.....10 A.M.: Royal London Ophthalmic.—1.30 P.M.: Guy's; Royal Westminster Ophthalmic; St. Bartholomew's (Ophthalmic Department); St. Mary's.—2 P.M.: Cancer Hospital, Brompton; Central London Ophthalmic; London; Westminster.—2.30 P.M.: St. Mark's; West London.—4 P.M.: St. Thomas's (Ophthalmic Department).

WEDNESDAY....10 A.M.: National Orthopædic; Royal London Ophthalmic.—11 A.M.: St. Mary's (Orthopædic).—1 P.M.: Middlesex.—1.30 P.M.: Royal Westminster Ophthalmic; St. Bartholomew's; St. Thomas's.—2 P.M.: Central London Ophthalmic; Great Northern Central; London; Royal Free; University College; Westminster.—2.30 P.M.: St. Peter's; Samaritan Free Hospital for Women and Children.—3 to 4 P.M.: King's College.

THURSDAY.....10 A.M.: Royal London Ophthalmic.—1 P.M.: St. George's.—1.30 P.M.: St. Bartholomew's (Ophthalmic Department); Guy's (Ophthalmic Department); Royal Westminster Ophthalmic.—2 P.M.: Central London Ophthalmic; Charing Cross; Hospital for Diseases of the Throat; Hospital for Women; London; University.—2.30 P.M.: Chelsea Hospital for Women; North-West London.

FRIDAY.....9 A.M.: Metropolitan; St. Mary's (Ophthalmic Department).—10 A.M.: Royal London Ophthalmic.—10.30 A.M.: Royal Free (Ophthalmic Department).—1.15 P.M.: St. George's (Ophthalmic Department).—1.30 P.M.: Guy's; Royal Westminster Ophthalmic.—2 P.M.: Central London Ophthalmic; East London Hospital for Children; King's College; London; St. Thomas's (Ophthalmic Department).—2.30 P.M.: West London.

SATURDAY.....9 A.M.: Royal Free (Department for Diseases of Women).—10 A.M.: Royal London Ophthalmic.—1 P.M.: King's College.—1.30 P.M.: Royal Westminster Ophthalmic; St. Bartholomew's; St. Thomas's.—2 P.M.: Cancer Hospital, Brompton; Central London Ophthalmic; Charing Cross; London; Middlesex; Royal Free; University.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 1.30; Skin, M. 1.30; Dental, M. W. F., 9.

CHELSEA HOSPITAL FOR WOMEN.—M. Tu. W. and F., 1.30.

GREAT NORTHERN CENTRAL.—Medical and Surgical, M. Tu. Th. F., 2.30; Obstetric, W., 2.30; Eye, Tu. F., 10; Ear, M. F., 2.30; Diseases of the Skin, W., 2.30; Diseases of the Throat, Th., 2.30; Dental Cases, W., 2.

GUY'S.—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F. 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu. 1; Skin, Tu., 1; Dental, Tu. Th. F., 1.30.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th. S., 1.30; o.p., W. F., 1.30; Eye, M. Th., 1.30; Ophthalmic Department, W., 2; Ear, Th., 2; Skin, F., 1.30; Throat, F., 1.30; Dental, M. Th., 9.30.

LONDON.—Medical, daily, exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p. W. S., 1.30; Eye, Tu. S., 9; Ear, S., 9.30; Skin, Th., 9; Dental, Tu..9.

MIDDLESEX.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 9.30; o.p., W. 1.30; Eye, W. S., 9; Ear and Throat, Tu., 9; Skin, Tu., 4, Th. 9.30; Dental, M. W. F., 9.30.

NATIONAL ORTHOPÆDIC.—M. Tu. Th. F., 2.

NORTH-WEST LONDON.—Medical and Surgical, daily, 2; Obstetric, W., 2; Eye, W., 9; Skin, Tu., 2; Dental, F. 9.

ROYAL ORTHOPÆDIC.—Daily, 1.

ROYAL FREE.—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Dental, Th. 9.

ST. BARTHOLOMEW'S.—Medical and Surgical daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, W. Th. S., 2.30; Ear, Tu. F., 2; Skin, F., 1.30; Larynx, F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9.

ST. GEORGE'S.—Medical and Surgical, M. T. F. S., 12; Obstetric, Th. 2; o.p., Eye, W. S. 2; Ear, Tu., 2; Skin, W., 2; Throat, Th., 2; Orthopædic, W., 2; Dental, Tu., S., 9.

ST. MARK'S HOSPITAL.—Fistula and Diseases of Rectum, males, W., 8.45; females, Th., 8.45.

ST. MARY'S.—Medical and Surgical, daily, 1.45, o.p., 1.30; Obstetric, Tu. F., 1.45; Eye, Tu. F. S., 9; Ear, M. Th., 3; Orthopædic, W., 10; Throat, Tu. F., 1.30; Skin, M. Th., 9.30; Electro-therapeutics, Tu. F., 2; Dental, W. S., 9.30; Consultations, M., 2.30; Operations, Tu., 1.30; Ophthalmic Operations, F., 9.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, Tu. F., 2; o.p., W., 1.30; Eye, M. Tu. W. Th., F, 1.30; o.p., daily, except Sat., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Tu. F., 1.30; Children, S., 1.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1.30; Obstetrics, M. Th., 1.30; Tu., W. F., 2; Eye, Tu. F., 2; Ear, M. F., 9; Skin, W., 1.45, S., 9.15; Throat, Th., 1.30; Dental, W., 9.30.

WESTMINSTER.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1; Eye, M. Th., 2.30; Ear, M., 9; Skin, W., 1; Dental, W. S., 9.15.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the office of the JOURNAL, and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

QUERIES.

"LOOSE CARTILAGE" IN KNEE-JOINT.

A MEMBER writes: I have had a case of bursitis over patella, containing a "loose cartilage," in a girl aged 12, caused, as she says, by a lady shaking her, and giving her a kick on the edge of the patella. Two days after she came to me complaining of the loose body, and fainted on the slightest touch. With rest and iodine the swelling went down, and the body (size of pea) was removed a few days after. They are going to law, and as it is an unusual case I would like to know if any member could suggest anything. Is it possible for the loose cartilage to come on two days after the alleged shake or blow, or could it be caused by anything else?

ANSWERS.

M.B., M.S.—The subject was very recently dealt with in our pages.

ARBUTUS.—The postage of the JOURNAL to Australia varies according to its weight, that is to say, according to the number of pages of which it consists. If the weight is within four ounces the postage is one penny, but now that the JOURNAL is so much larger than it used to be, the average charge is twopence.

THE M.R.C.P.LOND.

GRATEFUL.—We should recommend our correspondent to "get up" Celsus in the original; if he does this he will be pretty safe so far as Latin is concerned. Messrs. Cassell and Co. publish a useful French dictionary. For medical terms there is nothing equal to the *Dictionnaire de Médecine*, of Littré and Robin, which, besides giving the English, German, Italian, and Spanish equivalent under each word, contains full glossaries of the medical terms used in all these languages, and in Latin and Greek.

TREATMENT OF DANDRUFF.

P. M. S. writes: In answer to "Country Member," I would suggest the following ointment to be applied to the roots of the hair every night for a fortnight or so. ℞ Ung. hydrarg. nitr. ʒj; vaseline ʒvij. The hair to be cut short and well brushed every morning.

R. T., in reply to a "Country Member," suggests the following ointment, used as a pomade: Red oxide of mercury, ammoniated mercury, of each ten grains; Spermaceti ointment, an ounce.

DR. H. LAIRD PEARSON (Birkenhead) writes: Personal experience enables me to recommend the following: ℞ Hydrarg. perchlor. ʒss; glycerine ʒv; eau de Cologne ʒv; aq. ad ʒxx. M. Ft. Lotio No 1. ℞ β naphthol ʒij; alcohol. ethylic. ʒxx. M. Ft. Lotio No. 2. ℞ Acid. salicyl. ʒij; tr. benzoin co. ʒiss; ol. olivæ ad ʒx. M. Ft. applicatio. Wash the head thoroughly with terebene soap; rinse well and dry with a rough towel; rub in some of the No. 1 lotion and dry with towel; next apply lotion No. 2, and allow it to evaporate off; finally rub in thoroughly a small quantity of the oily application. The treatment should be carried out daily for a month, and then every alternate day for a fortnight. The dandruff disappears in a few days, and the hair becomes vigorous and supple in a remarkably short time.

E. MANSEL SYMPSON, M.B. (Lincoln), writes: I have used the accompanying formula with very good results, both in simple alopecia, and that attended by, or perhaps rather caused by, dandruff. ℞ Tr. cantharidis, ac. acet. dil. āā ʒss; sp. rosmarini ʒj; glycerin. ʒss; aq. rosæ dulc. ad ʒviij. Ft. lotio. Let this be well rubbed into the roots of the hair with a small sponge or a flannel, and let special care be taken not to wash the head, for as far as I have seen, washing only aggravates the evil. Good brushing and combing should be quite sufficient to keep the hair clean. The formula given above is slightly altered from one of the late Mr. George Nayler's.

TREATMENT OF WORMS.

DR. A. CORDES, M.R.C.P.Lond. (Geneva), writes: In answer to "Member," JOURNAL, August 24th, p. 448, I would advise him to try rectal injection with cod-liver oil, or with sublimate solution, $\frac{1}{2000}$, or with a saturated solution of sugar in water.

MEDICAL LIBRARY FOR A JUNIOR PRACTITIONER.

.Sc., F.R.M.S., etc., writes: 1. What book or books would you advise as the best practical and most excellent for a junior practitioner in Australia or the

United States on surgery, obstetrics, gynæcology, nose, skin, ear, and children (both on medical and surgical diseases), including treatment in all? 2. Are Edis's *Diseases of Women* and Bryant's *Surgery* considered good reliable works?

*** 1. Walsham's *Surgery*, Lusk's and Galabin's *Midwifery*, Lewers's *Diseases of Women*, Matthews Duncan's *Clinical Lectures on the Diseases of Women*, Doran's *Handbook of Gynæcological Operations*, Cresswell Baber's *Guide to the Examination of the Nose*, Macnaughton Jones's *Diseases of the Ear and Nose*, Crocker's and Malcolm Morris's *Skin Diseases*, Goodhart's *Diseases of Children*. 2. There are many other excellent manuals, including the works of Bryant and Edis mentioned by our correspondent.

How to Get Appointed Certifying Factory Surgeon.

A Member wishes to know what steps are necessary to take in applying for an appointment as certifying surgeon under the Factory Act, and to whom the application should be made.

*** Application for the appointment should be made to Alexander Redgrave, Esq., C.B., H.M.'s Chief Inspector of Factories, Home Office, Whitehall, stating age, professional standing, and any circumstance that might lend weight to the application. If the applicant have political interest which he can bring to bear on the Home Department, his chance of success will not be lessened.

Inveterate Psoriasis.

Dr. D. Campbell Black (Glasgow) writes: I have frequently demonstrated to students of the Royal Infirmary here that inveterate psoriasis is removed by the free application of liquor epispasticus about once weekly. After the application the patches should be simply covered with cotton wool. The virtue of all external applications in psoriasis appears to be due to their stimulating property, and to the extent that they possess this so does their efficacy consist. Perhaps "Enquirer" will kindly state his result if he should try this method of cure.

Dr. Richardson (Torquay) would suggest that "Enquirer" should, if all other things fail, send his case of psoriasis to a warm relaxing climate, such as Torquay, where cases of dry skin disease do remarkably well.

NOTES, LETTERS, ETC.

Charing Cross Hospital: Erratum.—Mr. Stanley Boyd is the Lecturer on Anatomy Descriptive and Surgical, *not* Anatomical Demonstrator, as stated in the table on page 536 of the Journal of September 7th.

Yeomanry Ambulance.

W. J. Naismith, M.D., F.R.C.S.E., Surgeon A.Y.C. (Ayr) writes: Some time ago you were good enough to publish a description of the "sword-stretcher" used by the Ayrshire Yeomanry, an example of which was exhibited at the meeting of the British Medical Association, in Glasgow, last year. The "clamp" we now use is a great improvement on the one then exhibited, and through the kindness of Dr. Caverhill, Surgeon of the Berwick and Lothians Yeomanry, it was shown at the meeting of the Yeomanry Medical Association at Leeds, this year. I have had two or three applications for them; and, for the convenience of any of my brethren in other regiments who would care to try them, I shall be happy to have them made here and forwarded, if desired. They are made at five shillings the pair. One man out of every four in the "Section" carries a pair of clamps, rolled up in the blue canvas constituting the body of the stretcher, and buckled behind the cantle of his saddle, after the manner of the old valise; every man carrying an Esmarch's triangular bandage, either in his pouch-belt or pocket of his stable jacket. Thus, wherever we have four swords, we have a portable, rapidly adjusted, and sufficiently useful stretcher for short distance work. We carry about no apparatus, loads for band-horses, or any impedimenta whatever. So on leave being obtained for ambulance drill, whenever the call is sounded, the men trot out at once from their troops, rallying on the surgeon, and prepared for drill on the spot.

The Jones Indemnity Fund.

The following additional amounts have been received in answer to the appeal made in the Journal of July 20th, on behalf of Dr. Jones, of Edmonton:

	£	s.	d.
Sums already acknowledged	24	15	6
F. de Havilland Hall, M.D.	1	1	0
G. Henty, M.D.	0	10	6
W. H. Plaister, Esq.	0	10	6
Total	£26	17	6

Further subscriptions to meet Dr. Jones's legal expenses of over £60 will be gladly received by Dr. J. W. Hunt, 101, Queen's Road, Dalston, N.E. The list will be closed next week.

"Poliklinik."

H. J. Jones, M.D. (Heidelberg) writes: Your correspondent of August 10th, Mr. Rushton Parker, is quite right in saying that "policlinic" means "town clinic," but it is not equivalent to out-patient department, but means in Germany visiting the sick poor in their own homes; and it is usual there for medical students, after having acted as clinical clerks and attended the hospital out-patient department, to join the "policlinic" under the guidance of a professor, very much in the same position as a "parish doctor" with us. I should not trouble you with this letter, only it appears to me the plan might be carried out in England, and to a certain extent be of use in preparing medical students for general practice, as much as apprenticeship formerly did.

Dr. Cullingworth's Treatment of the Umbilical Cord after Birth.

Mr. E. H. Ryan-Tenison (Bexhill) writes: I find that starch to which an equal proportion of pure oxide of zinc is added exceedingly efficacious. The cord is first wrapped in a square 2 to 3 inches by 2 to 3 inches of boracic lint; the end is then powdered with the above-named preparation, and tied up in the usual way. The results have so far been excellent; when the cord drops off, as it does usually on the fourth or fifth day, a piece of salicylic wool is applied over the umbilicus.

Caution to Medical Practitioners.

A Victim writes: During last week a man answering the following description has called, about 8.30 in the morning, at the houses of two neighbouring medical men, pretending he had come from a patient; and on the servant coming downstairs after delivering the message, man and property (in one case a heavy marble clock) had gone. Age about 30, height 5 feet 7 inches: complexion, pale; hair, and very slight side-whiskers, dark; dress, black; diagonal jacket suit; hat, black, hard, round felt; appearance of a gentleman's man servant.

As he will now probably leave this neighbourhood and visit another, I write to put other medical men on their guard.

Ergot in Childbed.

Mr. C. Fryer (Shanklin) writes: The article in a recent number of the Journal, on Ergot in Childbed, is an interesting one to those engaged in midwifery practice, as ergot has always been considered a drug of undoubted value, and one largely prescribed in the puerperal state. From the clinical experiments of Dr. Pinzoni, it seems to be difficult to decide whether he considers ergot, speaking generally, a drug to be prescribed in most cases of labour, or one rather to be feared.

Taking some of the facts stated in Dr. Pinzoni's article, and weighing one against the other, I find the scale tells rather against the use of ergot. Its bad effects: 1. No influence on temperature, here of no value. 2. No influence on pulse, of no value. 3. Involution of uterus unaided, or sometimes retarded, here decidedly of no value. 4. Milk is retarded or suppressed, here not only of no value, but decidedly hurtful. Now, its supposed good effects: 1. Clots are readily expelled. 2. Supposed to be a prophylactic against puerperal fever, if so of great value, but if fever has set in it hastens septic absorption.

If ergot has been proved to retard the involution of the uterus, surely it is to be prescribed with some reluctance in childbed, and also on account of its influence over the secretion of the milk, two most important points connected with the treatment of all cases of labour.

Dr. Pinzoni in his experiments gave ergot daily, but he does not state for how long; I suppose for the puerperal month. On the whole I conclude, from Dr. Pinzoni's experiments, that we must not look upon ergot as such a valuable drug as it has hitherto been regarded.

Death from Chloroform.

Dr. J. Higham Hill (Bedford Square) writes:—Referring to an account of a recent death under chloroform at University College Hospital, which appears on page 88 in the Journal of July 13th, where it is stated that "all the usual means of resuscitation were adopted but without avail," it would be interesting to know whether the inhalation of nitrite of amyl was included among these means.

Judging from the particulars of the case, the apparent mode of death, and the meagre account of the *post-mortem* appearances, this was a casualty in which the use of this powerful and convenient agent was certainly worth a trial, and its well known action upon the heart and blood vessels, etc., would have justified a fair hope of success if applied promptly at the right moment.

Such accounts of death under anæsthetics should, in my opinion, be more fully and precisely detailed as regards the condition of the patient before and during the administration, the means adopted for resuscitation, and the *post-mortem* appearances, if they are intended to be of value towards the prevention of these unfortunate occurrences, which is, I presume, the main object of recording them in medical journals.

Qualified and Unqualified Assistants.

A Member writes: Referring to the letter published in the Journal of August 17th, as being addressed to the General Medical Council, and alluded to by Mr. Wheelhouse in his presidential address to the British Medical Association last week, I should like to write a few words, which, coming from one who was a qualified assistant for some years, may be interesting just now.

The unqualified assistant is, in my experience (not a small one), frequently drunken, and dishonest as well as professionally incapable. On the latter point I shall mention one or two circumstances from personal knowledge. An unqualified assistant (40 years of age), who had acted as such for twenty-two years, prescribed bicarbonate of soda and infusion of quassia for a patient suffering from profuse hæmoptysis. The same gentleman asked me to see a case with him in which he found a difficulty of diagnosis. He exclaimed, "I wish she had fits. I'm death on fits." The case turned out to be one of ordinary pneumonia. On one occasion my principal was summoned by his unqualified assistant, who had been for nearly twelve hours attending a case of midwifery, which he considered required instrumental aid. In the absence of our principal, I went to the case, and, on my arrival, found rupture of the membranes all that was requisite to complete delivery in less than a quarter of an hour. With regard to the qualified man, I think there are very few who have not seen sudamina in their hospitals, therefore their want of knowledge in such a case cannot be ascribed to the present curriculum. The thinking public will, I imagine, agree with me when I say that the unqualified assistant is imposing on them, and that his employer is encouraging such imposition for his own gain; and this not only at their expense, but also at that of men who have spent both time and money in obtaining their qualifications.

Mr. Wheelhouse's Address.

Dr. T. Laffan (Cashel) writes: I hope the above address will be brought under the notice of the general public, and that that of members of Parliament will be especially called to those portions of it which have reference to pupilage as the best mode of commencing medical studies. The Privy Council is now medical king, and to it, and not to the medical corporations, must the mass of the profession look for the reform so ably advocated by Mr. Wheelhouse. Hence the necessity of putting the address in lay hands. I would suggest to Mr. Wheelhouse to republish it in pamphlet form, and send a copy to each member of the Legislature and to each Privy Councillor. I would observe that, in order to make pupilage a reality, it should be registered from the commencement of the apprenticeship, otherwise practitioners would be found base enough to sign certificates for apprenticeships never served. There should also be some proof that the practitioner possessed opportunities for teaching, and possibly even the will and capacity to teach.

The great English colleges throw no obstacle now in the way. It is different with their obscure Irish rivals. Intending students and candidates

for diplomas would best consult their own interests by turning their faces London-wise, as three-fourths of them ultimately will find employment outside Ireland.

DR. SPENCER SMYTH, F.R.C.S. (Bournemouth) writes: Being a practitioner of some status (M.R.C.S. 1842), I have been much interested in perusing the address delivered by Mr. Wheelhouse, F.R.C.S., at the meeting of the British Medical Association at Leeds, in which mention is made of pupilage with some medical practitioner *prior* to entering as a student at a recognised school of medicine. In former days the system of apprenticeship was compulsory; but then the term was too long—three to five years. I would propose that a youth, *after* passing the required preliminary examination in Arts, should be confided to the care of some general practitioner who has charge of patients in some hospital or workhouse infirmary, Poor-law union or public dispensary, where the pupil would have every facility afforded him of acquiring elementary knowledge of medical and surgical cases, so that by this means it would give him a taste or dislike for the profession, as also afford an opportunity to his parents or guardians of judging if he be in every way suitable for the work he will be called upon to undertake. Also, by being with a practitioner, the pupil would have the opportunity of making himself cognisant of the nature of drugs and the dispensing of medicines. One year at least—two years better—should be so passed.

I consider the age of 18 years ought to be the lowest period at which a student is permitted to enter a recognised school of medicine, when four years should be devoted to study, before being allowed to present himself for his final examination. If no pupilage be passed, then five years ought to be undergone. Students of the present day, even with additional work, endeavour to become fully-fledged practitioners after four years' study, whereas in days gone by six and seven years were required.

THE LEPERS AT ROBBEN ISLAND.

A CORRESPONDENT writes: The anonymous writer of the article on the "Lepers at the Cape," in this month's number of *Blackwood's Magazine*, has certainly brought before the public notice something of the lives of misery of those afflicted with leprosy in one of our colonies, of whose progress and rapid civilisation Englishmen are wont to be so proud. The article is written in a markedly emotional and pathetic tone; but the point of importance is, how much of the description is true when its adventitious details are removed, and whether a state of things such as represented is allowed to exist uninterrupted by the Colonial Government.

On the whole, the account—judging by what I saw when I visited the island a few months ago—is correct. The rotten, tumbling down wooden sheds are low and have little or no light—which, taken by itself, may be an advantage, in that it hides something of what might be seen within; but, nevertheless, it is also a drawback, as it prevents the medical man from being able to examine with anything like accuracy a patient lying in one of the beds. I found the floor of earth full of holes, and in places saturated with the discharges of past generations of lepers; the atmosphere stifling and offensive; complete absence of articles of furniture or decoration, even of china for washing purposes.

There is no regular system of nursing, patients who are able to be about, if they be so well-disposed, attending on those in whom the disease has run to a further stage. There are no forms of amusements or even of systematic work for those who are as yet able to be up. The patients lie during the long hours of the day on the ground, clad in shabby, filthy rags, under what shelter they can find from the blazing southern sun. The only forms of existence which appear at all at home are the myriads of flies, which sometimes cover the exposed parts of the diseased creatures' bodies.

Sights such as these are revolting even to the minds of those well steeled to the ordinary spectacles of poverty and disease concomitant with modern human existence. No wonder, then, that the reflections of anyone visiting Robben Island with even a vague notion of hospital arrangement and sanitary details should be enough to stir such a one to attempt something on behalf of its unfortunate inhabitants, the majority of whom are doomed to a life of slow decay through no fault of their own, whose only shadow of hope—however vague that may be—is in the complete death of what remains of their mortal frame, to close for ever from their view that awful molecular death which has for years encroached upon their members.

Some will say, But after all these creatures are for the most part blacks; and, as experience teaches us that they, through the process of modern civilisation, must die off before the civilising force, why should we do more to prolong their existence? As members of a profession whose aim and object is to preserve the life of all living beings under all circumstances, absolutely impartial as to the exact form or species with which we are brought into contact, our duty is, primarily, to see to the well-being of the individual, and, secondarily, to that of the community at large; and, this being so, we cannot for one moment accept such a short-sighted though possibly patriotic philanthropy. Let us trust that this outcry may arouse some sympathy from the Government—for we must charitably conclude that it has been an oversight and not wanton indifference on the part of those responsible.

SHORTHAND FOR MEDICAL STUDENTS.

MR. H. F. SEMPLE, M.R.C.S.Eng., L.R.C.P.Lond. (Ladysmith, Cape Colony, South Africa) writes: In the JOURNAL of June 15th I see with pleasure a report of a meeting held in London for the purpose of advancing the study of that useful accomplishment, shorthand, among students. At this meeting it was agreed that Pitman's system of shorthand should be the subject of study. This is, I think, a pity, as there are many more excellent systems than Pitman's. My object in writing is to suggest to students and medical men who have not too much time to spare for acquiring this useful accomplishment to compare the System of Cursive Shorthand, by Hugh Callendar, B.A.Camb., and published by C. J. Clay and Son, Ave Maria Lane, London, with Pitman's or any other system, which from experience I have found to be easier to learn, quicker to both read and write, and more correct than Pitman's. I have used both systems, and I am confident that anyone who compares the two will agree with me as to the vast superiority of "Cursive" shorthand, for medical men especially.

COMMUNICATIONS, LETTERS, etc., have been received from:

Mr. C. E. Abbott Braintree; Dr. F. H. Daly, London; Mr. F. C. Spurgin, Stratford St. Mary; Dr. J. W. Hunt, London; Mr. R. H. Belston, Boston; Mr. J. S. Maskew, Fawley; Dr. J. Richardson, Torquay; Mr. G. G. Clarke, Morpeth; Mr. T. Richmond, Glasgow; Dr. F. Dale, Burnley; Mr. A. C. Dixey, London; Mr. B. F. Costelloe, London; Dr. T. Oliver, Newcastle-on-Tyne; The Editor of the *Sanitary Record*, London; Mr. E. P. Jackson, Plymouth; Dr. G. E. J. Greene, Ferns; Mr. H. L. Pearson, Birkenhead; Dr. Leslie Phillips, Birmingham; Mr. E. A. Edelsten, London; Mr. J. K. Couch, Swansea; Mr. W. P. Dester, West Hartlepool; Our Birmingham Correspondent; Mr. F. Simms, London; Dr. F. W. Edridge-Green, London; Mr. A. C. Jackson, London; Mr. K. Jones, London; Dr. Monckton, Maidstone; Mr. W. T. Cole, Holywell; Mr. H. Lawson, London; Dr. J. B. Baron, Bristol; Mr. C. Umney, London; Messrs. Spurgeon and Son, Maldon; Mr. B. Redwood, London; Mr. S. Oliver Eades, Ipswich; The Registrar of Owens College, Manchester; Mr. E. Meacham, Manchester; Dr. J. T. Arlidge, Stoke-upon-Trent; Messrs. G. Back and Co., London; D. F. Thompson, M.B., Launceston; Mr. J. H. Easterbrook, London; Mr. R. Ruttle, Burnley; A. N. Montgomery, M.B., Glasgow; The Secretary of the University of Durham College of Medicine, Newcastle-on-Tyne; Our Paris Correspondent; Dr. A. E. F. Longhurst, London; Dr. H. Woods, London; Dr. R. Rentoul, Liverpool; Mr. T. Jenner Verrall, Brighton; Mr. J. M. Scott, Denny; Mr. H. C. Davies, Coventry; Mr. R. Thomason, Hereford; Dr. C. Begg, Edinburgh; Mr. F. N. Brown, Pirbright; Mr. N. Stowers, London; Dr. W. K. Sibley, London; Geo. Black, M.B., Torquay; Dr. M. A. Ruffer, London; Dr. G. Smith, London; Mr. A. W. Green, London; Dr. R. M. Wyckoff, New York; Dr. Percy Smith, London; Dr. K. Grossmann, Liverpool; Dr. Cranstoun Charles, London; Dr. S. Herbert Habershon, London; Dr. Ward Cousins, Southsea; Mr. C. Braid, Walsall; Mr. Lawson Tait, Birmingham; Dr. J. S. Nairne, Glasgow; Mr. J. W. Wilson, Plymouth; Dr. B. Anningson, Cambridge; Mr. H. Beck, London; Dr. E. M. Sympson, Lincoln; Mr. J. H. Vinrace, London; Mr. A. V. Trow, Kidderminster; Messrs. Burroughs, Wellcome, and Co., London; Mr. F. P. H. Hughes, Weston-super-Mare; Mr. G. Meadows, Hastings; Dr. A. Hirst, Prestwich; Dr. T. Churton, Leeds; Mr. Kershaw, London; Sir W. Dalby, London; Dr. Greville Macdonald, London; Dr. Haig, London; Mr. Lennox Browne, Paris; Dr. Styrap, Shrewsbury; The President, St. Thomas's Hospital; Mr. E. L. Pope, London; Mr. C. B. Lockwood, London; Dr. Lewers, London; Dr. Walter Pearce, London; Dr. J. Holmes Joy, Tamworth; Dr. J. Anderson, London; The Secretary of the University of Durham; Dr. Louis Parkes, London; Dr. Sinclair, Lancing; Dr. J. Johnston, Bolton; Dr. Leech, Whalley Range; Mr. A. Foxwell, Birmingham; G. Birt, M.B., Stourbridge; Dr. W. A. Michie, London; Dr. J. B. Hellier, Leeds; Mr. R. R. Leeper, Glasnevin; Mr. H. Lamond, Glasgow; Mr. A. D. H. Leadman, Boroughbridge; etc.

BOOKS, ETC., RECEIVED.

Transactions of the Gynæcological Society of Boston. New series, vol i. Boston: Cupples and Hurd.

Hygiene and Public Health. By Louis C. Parkes, M.D., D.P.H. With illustrations. London: H. K. Lewis. 1889.

On Bedside Urine Testing. By George Oliver, M.D.Lond., F.R.C.P. Fourth edition. London: H. K. Lewis. 1889.

A Manual of Pathology. By Joseph Coats, M.D. London: Longmans and Co. 1889.

Blackie's Modern Cyclopædia. Edited by Chas. Annandale, M.A., LL.D. Vol. iii. London: Blackie and Son. 1889.

Transactions of the American Surgical Association. Volume vii. Edited by J. Ewing Mears, M.D. Philadelphia: P. Blakiston, Son and Co. 1889.

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REMARKS
ON
THE PREVENTION OF HYDROPHOBIA BY M. PASTEUR'S TREATMENT.

Read in the Section of Medicine at the Annual Meeting of the British Medical Association, held in Leeds, August, 1889.

By M. ARMAND RUFFER, M.A., M.D.Oxon.

The disease which is popularly called hydrophobia is one which from the days of Aristotle has attracted the attention of medical men. They, as well as the general public, had been struck by its remarkable peculiarities, and, during many centuries, popular credulity surrounded the disease with fabulous stories, some of which are believed even now, whilst others have left their trace as popular sayings and proverbs. And yet hydrophobia is in some parts of the country by no means frequently met with. There are many medical men who have never seen a case, or who have seen one or two at most, in the course of a long and busy lifetime, during which they may have watched hundreds die of typhoid fever, phthisis, and other infectious diseases. The chief interest of hydrophobia, however, lies in the fact that the fate of human beings inoculated with the hydrophobic virus remains doubtful for some considerable time after the bite. The friends and the medical attendant of a patient bitten by a hydrophobic animal know that the life of that man may suddenly come to an end. During a period extending over many months—over a year even—that man has to wait, believing that nothing can be done for him to prevent the breaking out of the disease. He knows, of course, that he has many chances of escaping, but that, if the first symptoms make their appearance, he is hopelessly doomed to a most painful and horrible death. The medical man who may have cauterised or even sucked the wound, until recently believed that so far his work was at an end, and that all he could do was to wait, and, if the symptoms set in, to mitigate as much as he was able the sufferings preceding the inevitable end.

We need not wonder, then, that when in 1885 M. Pasteur stated, at the Académie des Sciences de Paris, that he had discovered a method to prevent the occurrence of hydrophobia after a bite, the medical and public press rang with the news. But although patients flocked from all parts of the world to the Laboratory of M. Pasteur, in the Rue d'Ulm, many scientific men openly expressed their doubts as to the value of the treatment. Since 1885, however, the number of people who have submitted themselves to the preventive treatment for hydrophobia exceeds 9,000. Over twenty antirabic institutes have been built in various parts of the world, in which patients have been inoculated by independent observers. From the data collected in the statistics published by the directors of these establishments, it is possible now to form a correct opinion as to the value of M. Pasteur's treatment.

Another set of opponents have relentlessly attacked M. Pasteur because his knowledge has been acquired by means of experiments on animals. Let me say at once that it is not my intention to waste the time of this Association by discussing this last kind of opposition, but at the same time it will be necessary for me to show how this newly-gained knowledge has been acquired.

A few minutes must be devoted to the description of the most important clinical phenomena of the disease and to studying the localisations of the virus in man and animals.

The modes of obtaining the virus will occupy us next, and after the process of inoculation has been fully explained, the theory of antirabic vaccination will be entered into.

Lastly, an account of the results of the treatment, as shown by the statistics published by the different antirabic institutes, will conclude this paper.

Hydrophobia is a specific infectious disease. As far as we know, it never originates *de novo*, but is always propagated from one animal to another by inoculation. The virus is a particulate virus, and is most probably a living micro-organism. Several observers have described micro-organisms in the spinal cord, and even in the organs of animals and men dead of hydrophobia, but unfortunately the attempts of others to see these micro-organisms again or to cultivate them have failed. Unlike ordinary putrefactive micro-organisms, it is endowed with very little power of resistance, being easily destroyed by heat, drying, or sunlight. It is destroyed by exposure to sunlight in fourteen to thirty hours; steam at 100° C. destroys it in thirty minutes. A temperature of 50° to 60° C. in one hour; of 45° C. in twenty-four hours; of 58° for one hour; and of 62° C. for four minutes completely destroys its virulent properties. The oxygen of the air seems to have a very deleterious effect on it, as when kept in closed sealed tubes it remains virulent for three or four weeks even in the heat of summer. Low temperatures (30° C.) have no effect on it.

The effects of drying the virus will be explained further on.

Experimentally it has been demonstrated that rabies may be successfully inoculated by injecting the virus obtained from the central nervous system of an animal which has died of rabies (rabbits, dogs, etc.) under the skin of another animal, or into its veins, into the peritoneum, into the muscles, eye, or under the dura mater after trephining. Of these various modes of inoculation there is only one which is absolutely certain to reproduce the disease, namely, inoculation under the dura mater. That method is successful in a hundred per cent. of the cases so treated. Whether herbivora (rabbits) or carnivora (dogs) be used for these experiments, all the other modes of inoculation, excepting perhaps the introduction of the virus into the anterior chamber of the eye, are occasionally unsuccessful (Pasteur).

The wound through which the pure virus is introduced heals in a perfectly normal manner as a rule. Many observers have stated that wounds produced by the bite of a mad dog heal slowly, and only seldom by first intention. That statement is correct, but this delay in healing is simply due to the fact that the saliva, even of a healthy animal, contains numerous other micro-organisms, which are introduced together with the hydrophobic virus into the wound. A wound produced by a bite of any animal is practically always a septic one. When the pure hydrophobic virus is used the wound heals by first intention in man and in animals.

At the Pasteur Institute, where between 100 and 200 subcutaneous injections are made every day in man abscesses are of exceedingly rare occurrence. The wounds of rabbits, when the pure hydrophobic virus is injected under the skull, invariably heal by first intention, provided efficient antiseptic precautions have been taken during the necessary operation.

The period of incubation, that is, the time elapsing between the date of the bite and that at which the first symptoms set in, varies in man. Cases have been reported in which hydrophobia is supposed to have occurred on the same day, the next day, or within a week after the bite. These were most probably cases of acute mania or tetanus (Hunter), and may be safely excluded from statistics of hydrophobia.

A period of thirteen days (Tardieu, Jouffroy) is the shortest space of time at which the symptoms of hydrophobia make their appearance after a bite. Inquiries made by the Conseil du Comité d'Hygiène show that, of 170 deaths occurring after bites from rabid animals during a period extending over ten years (1862-1872), 38 occurred within the first month, 112 before the end of the second, 147 within three months, 158 within four months, 6 deaths occurred during the fifth month, 4 during the sixth, and 2 during the eighth. Occasionally the period of incubation extends over a year. Valentin has published a case in which hydrophobia made its appearance eighteen months after the inoculation. Disser has seen death follow fifteen months after a bite, and I know myself of a death which occurred more than fifteen months after a superficial bite of a rabid dog. In the *Annales de l'Institut Pasteur* will be found the history of a man who died twenty-seven months after being bitten by a rabid dog. The period of incubation seems to be shorter in young people. It is distinctly shorter after face bites than after bites in the limbs. In the report of the Comité d'Hygiène of 139 cases of deaths by hydrophobia, the average duration of life after face bites is found to have been 48 days; after bites in the limbs, 69 days. Although the average duration of life after fatal face bites is stated to be 48 days, it is nevertheless in many cases far shorter, and death frequently results within one month of the bite, as we shall see when we study the statistics published by the different antirabic institutes.

The symptoms of rabies in man have been so well described by numerous observers, that it is needless to speak of them at length. They may be divided into three stages: the first is characterised

by melancholia, together with pains which often start from the wound, though not always so; the second is the so-called convulsive state, in which the symptom hydrophobia, that is, the fear of water, is often very prominent. But hydrophobia is only a symptom, which may be slight or may be even totally absent during the whole course of the disease; a fact which Morgagni in the eighteenth century had already noted. In dogs this particular symptom is for the most part absent. A rabid dog does not fear water; it puts its head under water, but is unable to drink, on account of the pharyngeal spasms, or of the paralysis of the lower jaw. Man, in the majority of instances, does not fear water, but avoids it, because the effort of drinking, the sight, the sound, even the thought of water give rise to the most painful respiratory and pharyngeal spasms. In some cases a patient is able to drink with an effort right through the course of the disease. Sometimes the hydrophobia, a prominent symptom at first, completely disappears, and the patient is able to eat and drink, voraciously even, for some hours before the fatal termination.

Moreover, hydrophobia is a symptom which is present in other diseases, and therefore, although at the suggestion of our President to-day, I have called this disease up to now hydrophobia, merely because it is usually designated by this name, yet I hope that medical men will give up the term and call the disease by its proper name, "rabies," reserving the term hydrophobia for one of its most characteristic symptoms in man.

The third stage is characterised by progressive muscular weakness and by gradually increasing paralysis. At last the patient dies exhausted by the spasms, or more frequently through paralysis of the respiratory centre. The end is sometimes very sudden, and the patient falls down dead without any symptoms leading the looker-on to suppose the fatal termination to be so near.

In rabbits the course of the disease is, as a rule, different. The attacks of agitation are absent, and it begins by a paralysis of the posterior limbs, which gradually spreads to the trunk muscles and then to the anterior limbs. This paralytic form of rabies is frequently met with in the dog also (dumb madness), and has been occasionally described as occurring in man. Some of M. Pasteur's patients having died of the paralytic form of rabies after undergoing the preventive treatment, it was stated by some of his opponents that their deaths were due to the inoculation of the rabbit's virus. The answer to this accusation is that the virus taken from a dog suffering from the convulsive form of the disease may produce the paralytic variety when inoculated into another dog, and *vice versâ*. Moreover, patients bitten by animals suffering from convulsive rabies have undoubtedly died of the paralytic form of the disease, even when they had not been subjected to any preventive treatment whatever. Gamaleïa has recorded twenty deaths from paralytic rabies in patients bitten by rabid animals who had undergone no treatment. Indeed, this form of rabies appears to be far more common than it is generally believed to be, for, of ten patients who died of rabies at Odessa, four died of paralytic rabies (Gamaleïa). Dr. Uffreduzzi, Mr. Horsley, and Dr. Bristowe have recently recorded similar cases, and I feel convinced, that now that attention has been drawn to the subject, like facts will shortly be put on record. It is a noteworthy fact that, although in ten out of twenty cases recorded by Gamaleïa, paralysis began in the limbs injured by the bite, in seven others it did not make its first appearance on the bitten side. I cannot enter into the details of the progress of this form of the disease, and I must refer those who are interested in this subject to the paper by Gamaleia in the *Annales de l'Institut Pasteur* for 1888, and to Mr. Horsley's and Dr. Bristowe's papers.

The prognosis of rabies in man, when once the first symptoms have made their appearance, is always fatal, and I do not know of any single authenticated case in which the patient has recovered. But the case is somewhat different in dogs. In 1881 M. Pasteur inoculated three dogs with rabies; two were seized shortly afterwards with the symptoms of the disease, and died. The third one showed the first symptoms and recovered. That third dog was trephined twice in 1882, and inoculated each time under the dura mater with the virus of rabies. That first mild attack, however, had vaccinated the animal against a further attack of rabies, so that the inoculations under the dura mater were followed by no evil effects. Although unique, this fact was one which helped to convince M. Pasteur that it was possible to vaccinate against rabies.

The *post-mortem* appearances in the central nervous system, peripheral nerves, and other organs of patients and animals dying of rabies are so well known that it is unnecessary to describe them here. Moreover, there are other and far better means of settling the existence or non-existence of rabies, namely, by means of the experimental method. If a piece of the central nervous system of an animal, suspected to have died of rabies, be crushed with a little sterilised water, and a drop of this emulsion be then injected under the dura mater of a rabbit the symptoms of rabies, provided the man or animal really died of the disease, will shortly make their appearance in the inoculated animal, that is, in the majority of cases, within eighteen days.

The virus is present in the nerves, though not constantly so, and rabies has been produced by the inoculation of the blood (Uffreduzzi, Babes), of the urine (Bouchard), of the liver, kidneys, spleen, and salivary glands. The experiments of Bouchard are important, because they may possibly help to explain some cases of so-called spontaneous rabies in which the mode of inoculation cannot be traced. If a rabid animal passes its water on the ground another dog, with perhaps a small cut on one of its feet, passing over that spot may thus be inoculated with rabies.

But though occasionally found in most organs and most secretions of the body, including perhaps milk, it is often absent; whereas its presence can always be easily demonstrated in the cerebro-spinal axis. If a rabbit be trephined and inoculated under the dura mater with an emulsion made with the medulla of a rabid animal—a dog, for instance—the first symptoms of rabies appear, as a rule, within fifteen days; never in a shorter period than nine days. If an emulsion made with the medulla oblongata of this first rabbit be inoculated under the dura mater of a second the incubation period becomes shorter, say eleven days. If a third rabbit be now inoculated with the virus of the second, a fourth with the virus of the third, and if rabbits be thus inoculated successively from each other, the period of incubation becomes gradually shorter and shorter until it lasts only six to seven days. Eighty successive inoculations are necessary to produce the form of the disease characterised by the short incubation period. When the incubation period lasts only six to seven days the virus becomes what M. Pasteur calls "fixed," that is, the period of incubation is of six to seven days always, and the animal dies on the tenth day after inoculation. The importance of this fact cannot be over-estimated, for it was absolutely necessary, before a preventive treatment could be applied, to be provided with a constant and regular supply of virus of the same strength. At the Pasteur Institute, where patients are inoculated every day, one rabbit is trephined daily, and, as the animals always die on the tenth day, it supplies in its turn the virus necessary to the day's inoculations.

Now, if a spinal cord of a rabbit which has died after being inoculated under the dura mater with the fixed virus be hung up in a sterilised bottle, the air of which is dried by means of caustic potash placed at the bottom, and if it be kept at a temperature of 25° C. it is found that, when inoculated under the dura mater of another rabbit, after being dried during one day, it still reproduces rabies, but that the inoculated animal dies one or two days later than it would do if it had been inoculated with the fresh fixed virus.

If before inoculation it has been dried:

2 days	it	produces	death	in	11 to 17 days,	postponing it for	1 to 2 days.
3	,,	,,			14 to 16	,, ,,	4 to 6 ,,
4	,,	,,			12 to 15	,, ,,	2 to 5 ,,
5	,,	,,			17 to 20	,, ,,	7 to 10 ,,
6	,,	,,			12 to 22	,, ,,	2 to 12 ,,
7	,,	,,			23 to 29	,, ,,	13 to 19 ,,
8	,,	,,			24 to 27	,, ,,	14 to 17 ,,
9	,,	,,			27 to 40	,, ,,	17 to 30 ,,
10	,,	,,			32 to 36	,, ,,	22 to 26 ,,
11	,,	,,			30 to 35	,, ,,	20 to 25 ,,

These are the results of Dr. G. Bordoni Uffreduzzi, obtained after a long and careful series of researches. The spinal cord, dried twelve, thirteen, and fourteen days, contains the living micro-organism no longer; it is harmless. The spinal cords dried nine, ten, and eleven days often contain no active micro-organisms. This increasing length of the incubation period shows that the number of micro-organisms in the spinal cord steadily diminishes with each day's drying, until at last, after eleven days, sometimes even after eight days, the tissue contains no living micro-organisms at all.

The cerebro-spinal axis of an animal dead of rabies, however, does not only contain the micro-organism which produces the disease, but in it are to be found those substances which the micro-organisms have elaborated during their life in the spinal cord.

The yeast plant, growing in a solution of sugar, will produce

alcohol, carbonic acid, etc.; other micro-organisms give rise to colouring matters (bacillus prodigiosus, pyocyaneus). In fact, every living micro-organism excretes substances as a result of its life, just as higher animals excrete a certain quantity of urea, carbonic acid, etc., every day. We know now, since the experiments of Salmon and Smith, of Charrin, of Chamberland and Roux, of Chantemesse and Widal, that some pathogenic micro-organisms when growing in suitable mediums may produce chemical substances which, when injected into an animal, enable that animal to resist the action of the specific micro-organism producing the disease.

To take an example: If the micro-organism which, when inoculated, produces that horrible disease called "malignant œdema," be allowed to grow in beef-broth at a proper temperature, and if, after a time, the fluid in which it has lived be carefully heated to 110° C., so that all the micro-organisms in it are killed, the fluid will contain nothing but dead micro-organisms and the soluble substances produced by these micro-organisms during their life in the beef broth. If some of this fluid be injected into a guinea-pig, and if two or three days afterwards the bacillus of malignant œdema be inoculated into the same animal, it will be found that the micro-organism is unable to produce malignant œdema in that guinea-pig. The guinea-pig, in one word, has been previously vaccinated by the sterilised fluid. The same organisms, taken from the same culture, which have proved harmless to the first vaccinated animal, will kill another animal of the same breed in eighteen hours if that animal has not previously been vaccinated by the injection of the sterilised fluid.

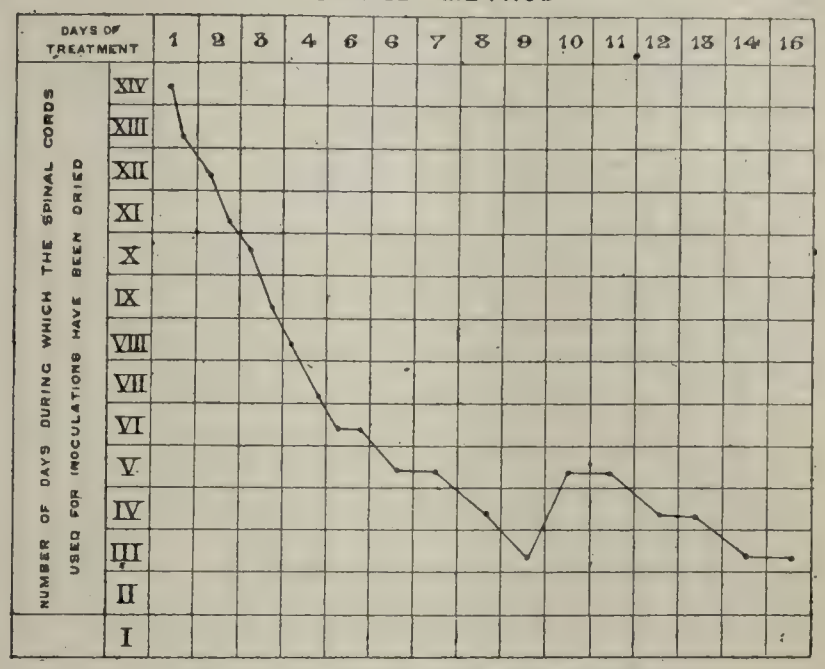
Although M. Pasteur never isolated these vaccinating substances himself, yet he was the first to point out that vaccination could most probably be accomplished by means of chemical substances, and in his famous letter to M. Duclaux, published in the first volume of the *Annales de l'Institut Pasteur*, he pointed out the probability of the existence of such vaccinating substances, and he thus opened a new field for original research.

If an emulsion of the spinal cord of a rabbit which has just died of rabies be injected under the skin of a dog, two things are introduced; first, the micro-organisms of hydrophobia; and secondly, the poisons elaborated by the same micro-organisms during their life in the spinal cord. Remember, now, that a period of fourteen days at least must elapse before that living micro-organism is able to give rise to the first symptoms of rabies. The chemical substance, however, probably produces its vaccinating effect at once, or within a short period after its injection, so that, when the disease ought to break out, the animal has already been rendered capable of resisting the action of its specific organism through the absorption of this chemical vaccinating substance.

If two or three drops of an emulsion of the spinal cord of a rabbit just dead of rabies be injected under the skin of a dog, a small number of organisms and a very small quantity of the vaccinating poisons are injected, and rabies will almost certainly follow. If, on the other hand, a very large quantity of the same emulsion be injected (one to ten, twenty, thirty cubic centimètres, or more), a large number of micro-organisms are introduced, but at the same time a large quantity of the vaccinating substance is injected as well. And M. Pasteur, and after him Bardach, have proved that it is possible to vaccinate dogs against rabies by introducing into their system one, five, ten, fifteen, twenty, or thirty cubic centimètres of an emulsion made with the fresh spinal cord of a rabbit, immediately after its death from rabies. The only possible explanation of this fact is, that vaccination in these cases is due to the large quantities of soluble vaccinating substances introduced with each injection. Unfortunately, that mode of vaccination frequently fails, and hence it cannot be applied to man.

M. Pasteur, however, got over the difficulty in the following way. You will remember that the inoculation of a spinal cord, which has been dried for fourteen, thirteen, and twelve days, at a temperature of 25° C., no longer produces rabies in an animal inoculated with it. Cords dried during twelve, eleven, and ten days contain far fewer micro-organisms, sometimes none, but they still contain some amount of vaccinating substance; and, indeed, M. Pasteur has proved this to be so, as he has been able to vaccinate dogs with the emulsion of dried spinal cords of rabid animals, which were proved to no longer contain any living micro-organisms, but still contained the vaccinating substances. If, therefore, a man be inoculated on the first day of treatment with an emulsion of a spinal cord dried during fourteen days, and with a spinal cord thirteen days old, on the second day with one twelve days old, he has during that period of time been inoculated with vaccinating substance alone, without any active micro-organisms. It must be remembered also that the emulsion of the eleven days spinal cord which is then inoculated, even if micro-organisms be present in it, contains a large dose of vaccinating substance. If, then, every day the number of micro-organisms injected for preventive treatment becomes greater and greater, at the same time more and more vaccinating substance is introduced with each injection.

SIMPLE METHOD



N.B. EACH DOT STANDS FOR ONE INOCULATION.

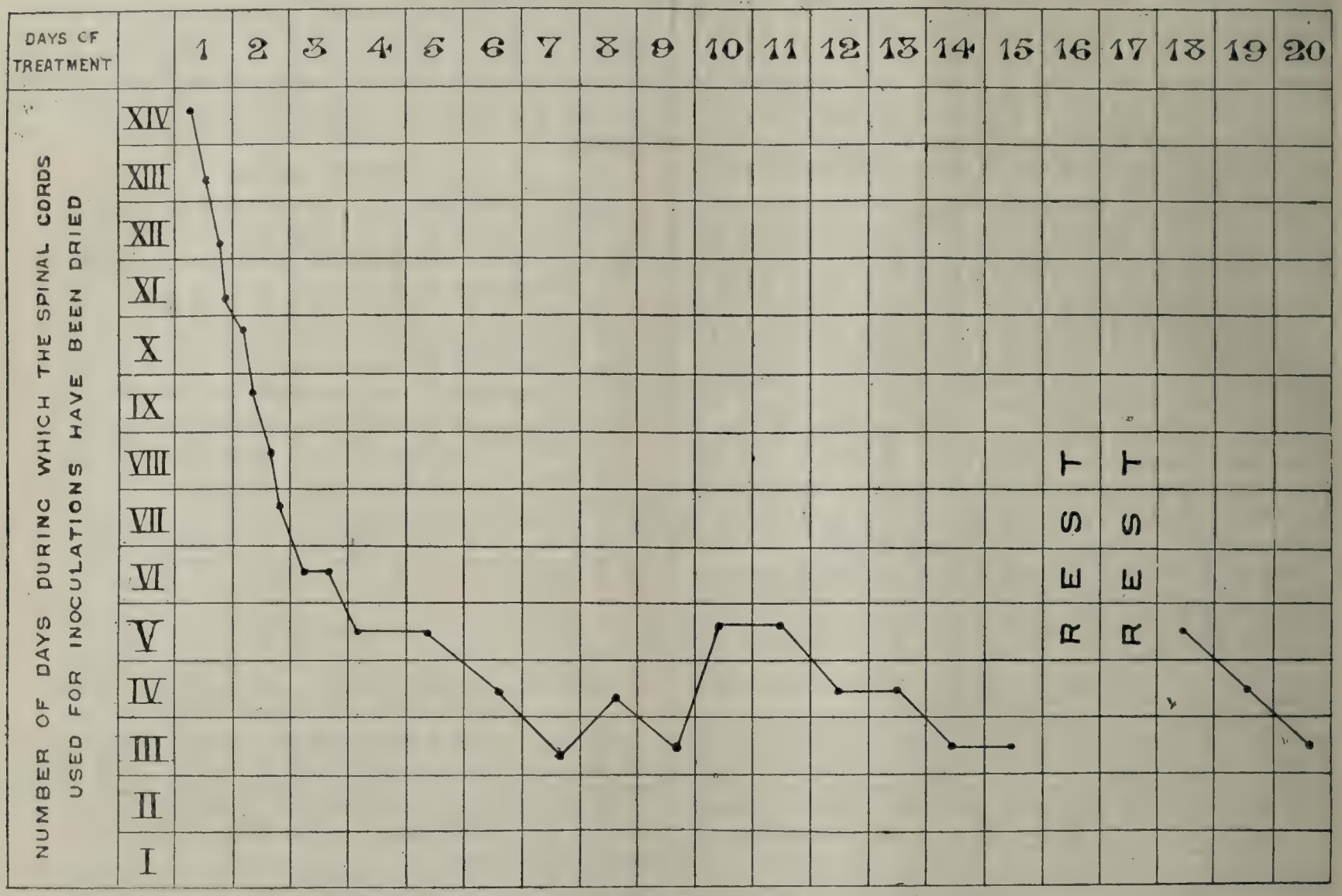
In the simple method employed by M. Pasteur, he injects on the first day an emulsion made with the spinal cord dried during fourteen days, and with one dried thirteen days; on the second day, an emulsion made with one dried during twelve days and with one dried eleven days; on the third, with one dried ten days and nine days, etc.

Several deaths having occurred when this method was used after severe bites by wolves or face bites by other animals, M. Pasteur came to the conclusion that the method used was not powerful enough, and he therefore invented and used a second or intensive method. The simple method has also been modified, and the two methods now in use at the Pasteur Institute at Paris are explained by the diagrams.

The intensive method is chiefly used for face bites. The incubation period in the case of face bites is often extremely short, and hence it is necessary to inject large quantities of vaccinating substance as soon as possible. Whereas in the simple method the cord dried six days is only injected on the fifth day, in the intensive treatment it is injected on the third day; the other differences in the two modes of treatment are best seen on studying the tables. Each injection consists of about $\frac{1}{2}$ a cubic centimètre of spinal cord crushed in 2 cubic centimètres of sterilised beef tea.

It is interesting to know how complications such as abscesses, erysipelas, etc., are avoided in these injections. In the first place, the syringes in use are carefully sterilised each day by prolonged boiling. After each injection the needle is dipped into oil heated to a temperature of 105° to 110° C., thus providing against the inoculation of syphilis and other diseases. Further, the cords which, when crushed, are to be injected, are proved to be free of all the micro-organisms of putrefaction in the following manner: one piece of each cord is placed in sterilised beef broth and kept for twenty-four hours at a temperature of 38° C., the cord being only used if the beef broth in which a portion of it has been placed remains perfectly aseptic. I may state that I have seen many thousands of inoculations at the Pasteur Institute without ever seeing an abscess.

The injections are made into the subcutaneous tissue of the abdomen. The patients occasionally complain on the second or third day of a little tenderness and redness. This entirely disappears on a hot poultice being applied every night after a warm bath. They feel no evil effects whatsoever either during or after the treatment.



We now come to the question of the real value of M. Pasteur's treatment, and I think the question you wish me to answer is the following one. Supposing one of my patients or myself to have been bitten by a rabid animal, would the chances of life be greater by trusting to luck, or by at once going to be inoculated according to M. Pasteur's methods? In order to answer that question fully, it is necessary to know what the average mortality used to be in people bitten by rabid animals before the invention of M. Pasteur's treatment. Statistics of deaths occurring among patients bitten by rabid animals, and who declined to undergo M. Pasteur's treatment, must also be studied. There are several series of statistics which were published before the discovery of M. Pasteur, and some which have been made independently of M. Pasteur since his first publications. It is necessary to make a distinction between the people bitten by dogs, cats, and other domestic animals on the one hand, and people bitten by wolves. Now, in the first class of cases the mortality has been variously estimated. Faber has tabulated the cases of 145 people bitten by rabid animals in the kingdom of Wurtemberg, and he found that the mortality amounted to 19 per cent. At the General Hospital in Vienna, in 1860, it was found that of 115 persons bitten by rabid animals 25 died (mortality 21.73 per cent.). Leblanc states that of 32 people bitten by dogs undoubtedly rabid 5 died (mortality 15.82 per cent.). During the year 1887, 44 people bitten in Paris by rabid animals declined to undergo M. Pasteur's treatment, and 7 of them died (mortality 15.9 per cent.). Other statistics show a mortality varying between 20 and 50 per cent., but these numbers are probably too high because they are derived from official reports, the officers of the State being more likely to know of the fatal cases than of those which ended in recovery, and I shall, for the sake of argument, assume the mortality to be 15 per cent.

On the other hand, in the case of wolf bites, the statistics of Renauld, Vallet, du Mesnil, Bombarda, and Gamaleïa, comprising together 1,296 cases of wolf bites, show a mortality of 60 to 64 per cent. Thus, for instance, one wolf at Ewanguliezenvic, in Russia, bit 35 men and 23 women. The wounds were cauterised with caustic potash, but, nevertheless, 24 men and 15 women died (mortality 67.24 per cent.) within six months. The mortality also varies according to the part of the body which has been bitten. The statistics of the Comité d'Hygiène from 1862 to 1872 show that of people bitten on the face 88 per cent. died (50 cases); on the hands 67.25 per cent. died (113 cases); on the upper limbs 30 per cent. (40 cases); on the lower limbs 21.21 per cent. died (33 cases); on the trunk 31.81 per cent. died (22 cases); on the face and hands 2 men died out of 8 persons bitten.

This mortality is probably far too high, because it stands to reason that an official body like the Comité d'Hygiène would be at once informed of the fatal bites, but would take no notice of most of the cases which end in recovery. At the same time these figures show that face bites are far more dangerous to life than wounds in other parts of the body. Indeed, according to Leblanc's statistics, comprising, it is true, only very few cases, the mortality after face bites amounts to 80 per cent.

The statistics taken at the Pasteur Institute are made in the following way: Careful inquiries are made from each patient as to whether the animal which has bitten him was rabid or not. Whenever possible the head of the dog, cat, or other animal which has inflicted the wounds is sent to M. Pasteur's laboratory. An emulsion is made with the brain of that animal, and injected under the dura mater of a rabbit. If it is not possible to send the head, a certificate from a veterinary surgeon who has seen the animal is obtained, and at the same time careful inquiries are made as to the number of persons and animals which the rabid

beast may have bitten. The statistical tables are then divided into three columns. In the first column (A) are placed all the people who have been bitten by animals which have been proved to be rabid, the proof being by the inoculation from some part of the central nervous system of the biting animal reproducing rabies when inoculated into a guinea-pig or a rabbit. In this column are also placed people who have been bitten by an animal which has bitten other people or animals who have died of rabies. In the second column (B) are reckoned people who have been bitten by animals certified to be rabid by veterinary surgeons. In the third column (C) we find those who have been bitten by animals suspected of being rabid.

During the period extending from November, 1885, to January, 1886, 2,164 human beings bitten by animals proved to be rabid were inoculated at M. Pasteur's Institute in Paris. Of these, 32 died (mortality 1.47 per cent.). On the other hand, 518 persons strongly suspected of rabies were submitted to the same treatment, and of these 3 died (mortality 0.58 per cent.). Notice that in the statistics are reckoned those even who died immediately after treatment, and before, in many cases at least, it could have had any beneficial effect. Amongst the 2,164 people, 214 were bitten in the face and head; of these, 186 had been bitten by animals proved to be rabid. Nine of the latter died, giving a mortality of 4.83 per cent. Notice, however, that 136 of these had been treated by the simple method. The mortality after the simple method amounted, therefore, to 6.61 per cent. Not satisfied with these results, M. Pasteur inoculated 50 by the intensive method; none of these 50 patients died. The mortality amongst people bitten in the hands was 1.22 per cent.; amongst those bitten in the limbs and body, 0.66 per cent., whereas the lowest mortality in persons not treated is 15 per cent.

Before proceeding with the statistics of the Pasteur Institute, I must say a few words of the statistics published in other countries, for the value of any particular mode of treatment is better judged when results obtained by independent observers are examined. Antirabic institutes have been established in a great many countries, and I give you the results as far as they are known.

Bujwid in the last six months of the year 1886 inoculated 104 people bitten by animals proved to be rabid, or which were most probably so. He lost 1 patient. He then tried a weaker treatment on 193 people; 8 of these died, amongst them being all those who had been bitten in the face. M. Bujwid then determined to give the intensive treatment a trial. He inoculated 370 people bitten by animals undoubtedly rabid; 4 of these were bitten by wolves in the face, 30 in the face by rabid dogs. All these 370 people are alive now, more than one year after the last inoculation. M. Bujwid, in a private letter to me dated July 29th, 1889, tells me that he has inoculated 146 people this year, of whom 1 has died. He also tells me that in his part of the country, and during his time of office at Warsaw, 31 people who were not inoculated died of rabies, although, as he remarks, very few people refuse to be inoculated nowadays after having been bitten.

At St. Petersburg, 484 people were inoculated from July 13th, 1886, to September 13th, 1888. The mortality is somewhat higher, being 2.68 per cent.

At Odessa, Dr. Gamaleïa inoculated 324 people in 1886 by the simple method, mortality 3.39 per cent. In 1887, he inoculated 345 people by the intensive method, mortality 0.58 per cent., whilst in 1888 the mortality amongst 364 people amounted to 0.64 per cent. Dr. Bardach, the present director of the Institut Antirabique of Odessa, has been kind enough to send me the following information. Twenty-six people were inoculated after being bitten in the face by dogs proved to be rabid; of these one child, 7 years old, died. It is only fair to state that this unfortunate child arrived at Odessa fourteen days after the bite, and that it died on the nineteenth day after being bitten, that is, on the fifth day of treatment, before the latter would have produced any effect. All the patients who recovered had been most fearfully bitten, one of them having had the face almost torn off by eight dreadful bites, and bitten eleven times in the hand besides; another of them having had thirteen deep wounds inflicted by a rabid wolf in the face. Of the 333 other people inoculated by Dr. Bardach only two died (mortality 0.63 per cent.). Among the successful cases was one with thirty deep wounds, the results of bites from a wolf proved to be rabid. Among the 333 above mentioned were 7 men who had never been bitten, but who insisted on being inoculated as a preventive measure (mortality *nil*).

At Moscow Dr. Gwozdreff inoculated 107 persons in 1886 by the simple method (mortality 8.40 per cent.). In 1887, with the intensive treatment, the mortality was 1.27 per cent. amongst 280 inoculated people. Dr. Jules Goldendach (Chef de l'Hôpital Empereur Alexandre III at Moscow), in a private letter, informs me that at Moscow, during the year 1888, 431 persons were inoculated according to M. Pasteur's method; 328 were bitten by rabid animals (mortality 1.82 per cent.), whilst of 70 bitten by wolves 10 died (mortality 14.28 per cent.); 3 of the deaths occurred in patients bitten in the face and head. One of them died only ten days after the treatment was finished, the 2 others dying during the progress of treatment, that is, before the preventive inoculations could have had any effect; 7 of the 11 deaths following wolf bites occurred in people bitten in the face and head, whilst 8 of them took place either during the progress of treatment or within 14 days after the last preventive inoculations, that is, 15, 19, 21, 24, 27, 28, 33, 44 days after the bite. Of the two others, 1 died 45 and the other 51 days after being bitten.

These Russian statistics are extremely interesting, for a great many of these patients were bitten by rabid wolves, and we know that after bites from these animals the mortality in non-inoculated people varies between 60 and 64 per cent. Gamaleïa, in 1888, collected 119 cases of persons bitten by wolves and inoculated according to M. Pasteur's methods; of these, 8 died (mortality 6.72 per cent.). M. Pasteur's treatment, therefore, saved 63 of his people from a painful death.

In Italy, at Turin, Dr. Guido Bordoni Uffreduzzi has inoculated 531 persons, 486 patients having been bitten by animals undoubtedly rabid. Of these 10 died (mortality 1.88 per cent.). Here, again, we can judge of the value of the intensive treatment as compared with the simple method, for, on examining Dr. Uffreduzzi's statistics, we find that he submitted 373 persons to the simple treatment and that 9 of these died (2.54 per cent.); whereas of the 158 persons inoculated by the intensive method only 1 perished (0.56 per cent.). Of 43 patients bitten in the face and inoculated by him he only lost 1. At Lisbon Dr. Baratieri has inoculated 335 persons up to November, 1888, and lost 2 patients (mortality 0.59 per cent.).

Dr. Luigi di Blasi has kindly sent me the following account of his inoculations at Palermo. He has inoculated 343 persons since March, 1887, 66 being treated by the simple (mortality 3.03 per cent.) and 277 by the intensive method (mortality 0.72 per cent.); 170 patients had been bitten by animals proved to be rabid. Of 21 patients bitten in the face 1 died; whilst of the 322 patients bitten in various parts of the body 3 perished.

At Naples Professor Cantani, assisted by Drs. di Vestea and Zagari, has inoculated 347 people, of whom 296 had been bitten by animals proved to be rabid (mortality 1.72 per cent.). It is noteworthy that, during a period of seven months, Professor Cantani had to close his antirabic institute for want of funds, M. Pasteur's opponents being very powerful at Naples. During that period, however, 9 persons died of rabies at Naples, and the Pasteur Institute had to be reopened.

At Constantinople 34 persons had been inoculated up to November, 1888, of whom not one has died.

At Havana Dr. Tamayo has inoculated 170 persons (mortality 0.60 per cent.).

I have shown you now conclusively, I hope, that M. Pasteur's treatment has given good results in other countries, and when applied by independent observers. Let us now return to M. Pasteur's own statistics. The following four tables will, better than any words of mine, show you the results of his inoculations:—

TABLE I.—*January 1st to December 31st, 1887.*

	A.	B.	C.
Number of persons inoculated ...	1778	1501	277
Mortality *a.*	1.34 per cent.	1.52 per cent.	0.78 per cent.
,, *b.*	1.12 ,,	1.26 ,,	—
,, *c.*	0.73 ,,	0.93 ,,	Nil.

TABLE II.—*Patients bitten in the Face and Head, and having undergone M. Pasteur's Treatment in Paris during the year 1887.*

	A.	B.	C.
Number of persons inoculated ...	145	127	18
Mortality *a.*	7.61 per cent.	7.87 per cent.	5.55 per cent.
,, *b.*	4.18 ,,	4.72 ,,	Nil.
,, *c.*	2.03 ,,	2.51 ,,	Nil.

TABLE III.—*January 1st to December 31st, 1888.*

	A.	B.	C.
Number of persons inoculated ...	1626	1371	255
Mortality *a.*	1.16 per cent.	1.31 per cent.	0.39 per cent.
,, *b.*	0.79 ,,	0.94 ,,	Nil.
,, *c.*	0.55 ,,	0.65 ,,	Nil.

TABLE IV.—*Patients bitten on the Face or Head, and having undergone M. Pasteur's Treatment during the year 1888.*

	A.	B.	C.
Number of persons inoculated ...	123	109	14
Mortality *a.*	7.33 per cent.	8.25 per cent.	Nil.
,, *b.*	4.80 ,,	5.41 ,,	Nil.
,, *c.*	2.44 ,,	2.75 ,,	Nil.

Explanations.—Column A. in each table includes all the cases inoculated at the Pasteur Institute during the year. Column B. includes only patients bitten by animals proved to be rabid at the time they inflicted the wound. (This corresponds to columns A. and B. in M. Pasteur's own tables.) Column C. gives the number of patients bitten by animals which, though presumably rabid, could not be proved to have been so.

Mortality *a.*=Total mortality, including patients dying during the progress of treatment. Mortality *b.*=Mortality after those who died during treatment have been excluded. Mortality *c.*=Mortality after those who died within fourteen days after the completion of treatment have been excluded. *The lowest mortality in people bitten by rabid animals and not inoculated amounts to 15 per cent. at least.*

One remarkable fact in this connection is that in the year 1887 350 people were bitten in Paris by rabid animals; 306 of these people were inoculated by M. Pasteur; 3 of them died = 0.97 per cent.; 44 trusted to luck, and declined to be inoculated, and of these 7 died. Mortality, 15.9 per cent. These facts were elucidated by careful inquiries made by Dr. Dujardin-Beaumetz, who is not in any way connected with the Pasteur Institute.

There is one question which I have not touched at all as yet, and it is this: Are there any cases on record in which it can be proved that death has followed as the result of M. Pasteur's treatment? I say, and I say it without the least hesitation, there are no such cases on record. Indeed, a great many of the men working under M. Pasteur in Paris, in the rabies department of his Institute, have been inoculated as a preventive measure. In fact, all the medical men, assistants in that department, who are skilled both in bacteriology and clinical medicine, have been inoculated, together with the laboratory attendant. Many medical men have done the same without feeling any evil effects either then or afterwards.

What are we to conclude from this? What is our answer to the question which was put in the first place? I think it is simply this: "If I or one of my patients were bitten by a rabid dog, or by a dog suspected to be rabid, or if I held an official post in an antirabic institute, I should at once go myself, or send my patient to be inoculated." And that is the advice which M. Pasteur and all those who work with him give, and not only give, but have themselves followed.

Gentlemen, you have been told how this knowledge was acquired, and how it has been applied to man, so that now patients bitten by rabid animals have a great chance of recovery. I am very sorry that time does not allow me to do more, for it would have been interesting to see how M. Pasteur was led to his wonderful discovery. His method has only been the last step in a long list of researches on preventive inoculations in other diseases.

Rabies is a disease which has been known for centuries. On it the labours of clinical and veterinary men have been freely expended; and what is the result? Simply this, that rabies is almost unanimously pronounced to be an incurable disease. Then when there seems to be no hope, when the very idea of preventing rabies after a bite appears to be a chimera, the disease is studied by a man who knows little medicine or veterinary surgery, but who has spent his life in pursuing experimental investigations. He finds a method of inoculating the disease with certainty; he shows that the virus is in all probability a micro-organism, that it is always to be found in the cerebro-spinal axis, and that animals can be vaccinated against it; and, lastly, he applies to man that method which has been gained solely by means of experiments on animals, with the result that he and his pupils have been able to save more than 1,000 human lives.

M. Pasteur has taught medical men a great lesson, a lesson which many scientific men had in vain tried to enforce before him. It is that, although the healing art must necessarily make use of the data supplied to it by clinical observation, yet the present and future progress in medicine is and will be chiefly due to the application of experimental methods to its study; the most important of these methods consisting in experimenting upon the lower animals.

The PRESIDENT, in introducing Dr. Ruffer, stated that his reason for trying to obtain for the Section an authorised account of the most recent work and its results in the Pasteur Institute was that he desired that the Section should discuss the practical question, Should we, or should we not, recommend persons bitten by a rabid animal to undergo Pasteur's treatment? Dr. Ruffer's name was suggested to him by M. Pasteur.—Dr. ALFRED T. BRETT would like to state a few facts from personal experience. In forty years he had only seen two cases of hydrophobia. He lived at Watford, in Hertfordshire, and four months since a dog of Dr. Cayley became undoubtedly rabid. The muzzling order was made in Herts, but not then in Middlesex. A dog strayed into Herts and bit a boy. Dr. Brett was in Paris, and saw the Pasteur Institute; on returning he was told of the boy, and from information, and from the certificate of the Veterinary College, he came to the conclusion the dog was mad. Dr. Brett consulted Sir James Paget and the Professor of the Veterinary College, who advised the boy to be sent to Paris. Dr. Brett sent him. He stayed fourteen days, and the cost was £12. The board of guardians paid the expense. The boy was now quite well. The practical point was that it was of no use to have the muzzling order in one county and not in another. Dr. Brett had strong faith in the Pasteur treatment. —Dr. DRYSDALE (London) said he would like to commence his remarks by a reply to the question put by the President. If he were bitten by a rabid dog, he would at once submit himself without delay to the inoculation process of M. Pasteur. In 1886 he had first studied the plan in Paris, and since that date he had every summer spent a short time at the Pasteur Institute of Paris. He begged to be allowed to testify to the extreme honesty and care exhibited by all persons connected with that establishment in carrying out the difficult process invented by Pasteur. Although the statistics cited by Dr. Ruffer were full of important evidence as to the value of these inoculations, it was not these statistics that had convinced him that Pasteur had acquired the power of preventing the outbreak of hydrophobia. The physiological proof was the real one which had done so, just as he had been convinced of the value of vaccination in preventing small-pox by Jenner's early experiments, which consisted in first vaccinating a patient, and then in a month subsequently inoculating him with small-pox with no effect. Pasteur had done the same in the case of forty dogs which he had first inoculated with the preventive method, and had then inoculated them with virus under the dura mater without the occurrence of the disease, which under ordinary circumstances would inevitably have occurred. Under such circumstances, Pasteur was justified in assuming that a similar treatment would prevent the explosion of the fatal end of rabies in man by treating this disease of long incubation by a similar process, and the statistics brought forward by Dr. Ruffer were a splendid confirmation of the truth of the physiological theory. He could not help expressing his personal obligations to M. Pasteur as the greatest benefactor to mankind that had existed in this century since the days of Jenner, and he only regretted that the medical profession could not claim him as a member. In this country he had found, even recently, many very distinguished medical men still sceptical as to the advantages of Pasteur's pro-

cess, but he would ask such gentlemen to devote a little of their valuable time not only to reading the literature of the subject, but in acquainting themselves by personal inspection with the way in which the processes were carried out in the laboratories of Paris. The unwearied care, patience, and intelligence abounding on all sides in that Institute, he maintained, could not fail to bring conviction to the mind of all inquirers after truth that there was perfect honesty in all the work carried on by Drs. Grancher, Roux, and others in that establishment; and that, therefore, the statistics brought forward by Dr. Ruffer might be taken as trustworthy and accurate in the highest degree. To conclude, he would say (1) that the number of Pasteur's friends and pupils who had inoculated themselves preventively, and sustained no damage whatsoever, showed how innocent the process was; and (2) that the physiological proof and the subsequent statistics had given all the data requisite for replying to the question "Should I send a patient bitten by a rabid dog to be submitted to Pasteur's inoculation?" in the affirmative, "Yes, and without an hour's unnecessary delay."—Brigade-Surgeon O'DWYER pointed out that the Government of Malta had prepared at a comparatively small cost a Pasteurean laboratory for protective inoculation against hydrophobia, and he urged that, instead of waiting for the creation of an elaborate building, we should start at once with a moderate institution on the Malta scale, which he thought could be effected at a cost of £200 for installation, and kept up for a sum of about £300 a year. He further added that, although hydrophobia was very prevalent in the Island of Mauritius, in the neighbouring Island of Bourbon, eighty-nine miles distant, a case of that disease was never known to have occurred. He complained of the unreliability of statistics concerning cures from hydrophobia from some foreign countries by protective inoculation, as the persons who formulated them were often pecuniarily interested in the institutions where inoculation was performed. Although he had the highest opinion of veterinary science, he objected to consider a dog to have been mad on the certificate of a veterinary surgeon, except that gentleman found the animal to have been mad by the direct inoculation of a portion of the animal's nervous system into the body of another animal, and so producing the disease. If M. Pasteur told him an animal was undoubtedly hydrophobic, he had no hesitation in believing him, as he was not a *savant* who was led away by his enthusiasm.—Dr. SAUNDBY said that, while they owed a great debt of gratitude to Dr. Ruffer for the admirable manner in which he had presented this subject, and to M. Pasteur for his splendid scientific services, they owed to themselves to discuss the matter critically, and apart from enthusiasm. As Dr. Ruffer had said, the basis for their judgment of the value of this treatment must be the estimate formed of the number of persons bitten who subsequently developed rabies. The last speaker had shown how difficult this was. Dr. Eddison had stated that until the recent epidemic, the disease had been unknown for forty years, although rabies in dogs had been continuous, and was so exceptionally severe twenty years ago, that a Local Government inquiry was held, and a large number of dogs were destroyed. In Birmingham no death from hydrophobia had occurred for forty years until the other day, when a young man who was bitten in Ceylon had died; yet rabies had not been extinct, and only a few months ago a reputed mad dog was destroyed in the middle of the city after having bitten twenty-two persons; yet no case of hydrophobia had happily occurred up till now. Dr. Drysdale had said that he attached less value to the statistics, being convinced by Pasteur's physiological proof, which he said was precisely the same as that by which Jenner proved the value of vaccination. But this was not the case. Had Jenner vaccinated everybody who had been exposed to the contagion of small-pox, and then attempted to show that because only a small percentage got small-pox his method had protected the remainder, people would at once have said, we do not know how many such people become infected ordinarily, and therefore we cannot judge of the value of the method. M. Pasteur might have inoculated a large series of animals by subdural injections, and given the world the result of his subsequent preventive treatment. This would afford at least a better test of his method than any yet put forward. With regard to the danger of the method, he admitted the value of the fact that a large number of laboratory assistants had been submitted to treatment without ill effect. But it must not be forgotten that Professor Peter, one of the leading physicians in Paris, believed that a case had died under his care from this cause. On the practical question he agreed with Dr. Ruffer, and would himself submit to the treatment and recommend it to others, as the balance of evidence was in favour of the view that its dangers were not great, while its possible benefits were enormous.—Surgeon-General Sir WILLIAM MOORE drew attention to the statement made by the late Dr. Samuel Wright, of Birmingham, in his work on the saliva, that injections of healthy saliva into rabbits must, in the same manner as described by the lecturer, produce hydrophobic convulsions. He would not delay the meeting by remarking on how this bore on Pasteur's treatment, but he would ask if this had been reinvestigated. If not it was desirable it should be. Then, as regards the incubation, it was as difficult to explain incubation of three months as thirty-three months, or of three years as thirty years. They had a long incubation of syphilis. Cases of three, seven, even twenty-one months had been recorded, and he had himself seen a case which he believed to be over six. As regards fatality, several cases of recovery were recorded; one by himself in the Indian *Annals of Medicine*. It had been stated that the diagnosis was easy, but that did not accord with his experience. Shivering was sometimes a prominent early symptom. Before we could accept Pasteur's system the incubation of hydrophobia must decided; and moreover, it must be shown that all persons bitten and taken to Pasteur would have got hydrophobia, which they certainly would not.—Dr. VAUGHAN HARLEY, having worked in Paris in the Pasteur Institute, supported the statements of Dr. Ruffer, as he well knew how carefully he had worked out the statistics while there.—Dr. DAVID W. TORRANCE, medical missionary from Palestine, said it might be interesting to notice in comparison a treatment pursued in Syria that he had seen. Women who had been bitten by wolves were put into a dark hovel and fed on bread saturated with the saliva of a religious Moslem sheikh, probably mad—a curious antidote, which never was successful.—Dr. GEORGE HARLEY said it was pleasing to see the unanimity of opinion existing in the meeting regarding the value of the facts that had just been laid before it. And, as no one expected that a great question like this would either be solved in a day or by one individual, it was the duty of everyone to add his quota to the general fund. He would therefore call attention to one or two errors which he thought were often overlooked in discussing the question of rabies: First, the term "mad dog," which had been used by one of the speakers, ought to be entirely abolished when speaking of rabies. Madness in the dog, or in the horse, or any other animal, meant insanity, just as it meant insanity in man, and that was an entirely different form of disease from rabies, which was a febrile disease associated with delirium, just in the same way as delirium was associated with scarlet or any other form of fever. Secondly, it was equally wrong to suppose that rabies was the product of the hot weather, for rabies occurred in the Arctic circle as well as in the torrid zone. Dr. Kane, in his Arctic voyages, told how sixty-five of his sledge dogs died from rabies. Consequently it was an absurdity to speak of the "dog days." Thirdly, he believed it was as wrong to suppose that it was the germ, constituting the *fons et origo* of the disease, which either induced the symptoms or killed the patient, for, as he had shown (on the previous day), it was an error to imagine that it was the loss of the albumen that caused death in Bright's disease. So, in rabies it was not the germs themselves, but the poisonous products they developed in the victim's system that were the true agents of death. Fourthly, although the virus of hydrophobia could not be said to act as a chemical agent, he thought that the poisoning substances it developed in the animal body were as truly chemical agents as strychnine, which had an equally powerful effect on the nervous system, though giving rise to a different chain of symptoms.

M. PASTEUR AT HOME.—The members of the Société de Médecine Pratique, of Paris, recently visited the Pasteur Institute, where they were received by M. Pasteur himself. The distinguished biologist delivered a short address, in which he spoke of the danger of placing dogs that had been bitten in quarantine for a short time, and then releasing them, instead of having them at once destroyed. This culpable negligence often led to disastrous results. M. Pasteur was particularly emphatic in affirming that rabies is never spontaneous.

MR. ROBERT MUSGRAVE CRAVEN, D.P.H.Camb., and assistant medical officer of health for the borough of Southport, has been appointed medical officer of health to the combined sanitary authorities of the county of Westmorland, in succession to Dr. C. E. Paget, who a few months ago was appointed medical officer of health for the county borough of Salford.

A DISCUSSION
ON
FIBRINOUS MEMBRANES WITHIN THE SPINAL CANAL OCCURRING IN GENERAL PARALYSIS.

In the Section of Psychology at the Annual Meeting of the British Medical Association, held in Leeds, August, 1889.

I.—JOSEPH WIGLESWORTH, M.D.Lond., M.R.C.P.Lond.,
Medical Superintendent Rainhill Asylum; Lecturer on Mental Diseases, University College, Liverpool.

We are all of us familiar with the fact that membranes, both hæmorrhagic and fibrinous in nature, are frequently found within the cranium in insane persons, occupying the subdural space, and being more or less loosely attached to the inner surface of the dura mater. This condition has, indeed, from time to time attracted a good deal of attention. But less widely known and recognised is the fact that membranes of a somewhat similar character are at times met with within the spinal canal. It is doubtless in part due to the circumstance that the spinal cord is not examined in a routine way at every necropsy that these membranes are so rarely seen; but, making all allowance for this, there is no doubt that they occur in the spinal canal far less commonly than in the cranium. The following brief notes, therefore, of three cases of this nature which have come under my observation may be of interest.

Case I.—H. C., aged 41, admitted into Rainhill Asylum on January 5th, 1880. She had been married twenty years, and had had three children. Her husband had been out of work for some time, and they had been short of food, and the husband attributed his wife's illness to the privations she had suffered. The patient had exhibited a change of disposition some six weeks before admission, and the day previous to this she had some form of paralytic attack, in which she lost power over her hands and feet, and was unable to speak. Her mental symptoms on admission were decidedly those of dementia; she was generally dull, could hardly be got to answer questions, and was wet and dirty in her habits. There were at this time no distinct motor signs of general paralysis. In a few months' time she improved considerably, became fairly bright and rational, and occupied herself with needlework. She still, however, exhibited some mental dulness, with a little impairment of memory. Her condition remained very stationary for about two years and a half after this, when she had one day (January, 1883) a distinct epileptic fit. From that time forward she had epileptiform seizures at intervals, and her condition underwent steady deterioration, the usual muscular tremors of general paralysis then becoming marked. In January, 1884, she had for about a fortnight pretty constant twitchings of the muscles of the head and face and left upper extremity. At the beginning of February she was so weak as to be confined to bed, and sloughing sores had commenced to form over sacrum and trochanters. These increased with very unusual rapidity, the one on the sacrum rapidly attaining an enormous size. Sores also formed on the trunk wherever it was exposed to special pressure; thus one appeared a little below the right scapula, and one in the left axilla at the spot where the thermometer was placed for taking the temperature. On February 22nd of this year (1884) the patient died.

The necropsy was made on the following day (nineteen hours after death). The brain, which weighed 1,125 grammes, presented the usual characters of general paralysis, adhesion and decortication being confined, however, to a few places in the frontal regions. There was also a small cyst (apparently an old hæmorrhage) situated in the white matter of the left hemisphere, above the apex of the lenticular nucleus, and opposite the inner surface of the third and part of the second frontal gyri. On opening the spinal canal a fibrinous-looking lamina, from one to two lines in thickness, was found lying upon the external surface of the dura mater, on its posterior aspect; it occupied the mid-dorsal region, extending from about the third to the seventh dorsal vertebra; it was attached both to the dura mater and to the walls of the spinal canal, but the connections were loose, and it was easily detached as a separate membrane. The spinal cord, which weighed, with the dura mater, thirty-one grammes, was for the most part normal, but in the lower cervical region there was some distinct softening of the central grey matter.

Case II.—W. R., aged 28, single, seaman, admitted December 14th, 1882. He had mildly grandiose ideas when admitted, but these were at no time very pronounced, and soon subsided, leaving him fairly rational. Indeed, for some months there seemed very little wrong with him mentally, but he had the tremors of the lips and tongue so characteristic of general paralysis. He remained in this state for about a year, and then began to fail both mentally and physically; but still, as throughout his illness, the signs of motor enfeeblement predominated over those of mental failure. In May, 1884, he had got so feeble as to be confined to bed, and bedsores formed and spread with great rapidity. These appeared not only in the usual positions, namely, over the sacrum and trochanters, but large sloughs formed over both heels, and on separating left the os calcis exposed on each side. He died on June 6th, 1884. The necropsy was made the same day.

The brain, which weighed 1,210 grammes, presented considerable thickness and opacity of the arachnoid, and the pia mater was decidedly too adherent, but decortication was slight, and occurred only along the edges of the marginal fissure. The gyri were considerably wasted, and the cortex was rather dark, and much thinned in the anterior parts of the brain. On opening the spinal canal a fibrinous looking membrane, similar to the one described in the last case, was found lying on the outer surface of the dura mater at its posterior aspect.

Case III.—F. C., aged 50, married, seaman, admitted June 20th, 1888, suffering from dementia with general paralysis. The mental condition was one of general dulness, and the muscular tremors were well marked. Pupils two millimètres, did not act to light but acted to accommodation. He remained in a quiet demented condition with very little change for six months, up, indeed, till the evening of December 19th, when he was reported to have had some sort of a seizure, and, appearing to be weak in his legs, was put to bed. On December 20th he lay quiet in bed, and could not be got to speak a word; he did not, indeed, appear to understand anything that was said to him. His head was slightly thrown back; took no food. On the following day (21st) he was distinctly weaker, and more comatose. He lay on his back with his head strongly retracted, and directed slightly to the left; his arms were flexed on his abdomen, and kept rigid; his legs also were semi-flexed and partially rigid; conjunctivæ suffused; made a slight moaning noise at times, but could not be got to speak; pulse 60; temperature subnormal, below 95°. He died at 11.55 P.M. on this day, December 21st, 1888. The necropsy was made on the morning of the 23rd. The brain was firm, and weighed 1,451 grammes. There was great opacity of arachnoid, with slight injection of pia mater; the pia mater was everywhere too adherent to the cortex, but decortication only occurred in a few places—in the left hemisphere, in the supra-marginal gyrus, and in the right hemisphere at the upper end of the posterior central gyrus, and at the anterior part of the angular gyrus. On opening the spinal canal a membrane was found lying on the outer aspect of the dura mater; it was of a soft fibrinous consistence, and was for the most part pale in colour; but at one small spot at the lower part it had distinctly the appearance of partially decolorised clot; it was everywhere coherent, and could be detached as a separate membrane; it was loosely attached anteriorly to the dura mater and posteriorly to the posterior aspect of the spinal canal; at the lower part its adhesion to the latter was most marked, but towards the upper part it was more closely connected with the dura mater; it was almost entirely confined to the posterior aspect of the dura mater, and extended from about the lower cervical to the lower dorsal region; in the upper dorsal region it extended for a short distance along some of the nerves proceeding from the cord, appearing to envelop these, which themselves looked somewhat red and swollen. The dura mater itself seemed healthy, and did not appear at all thickened. The spinal cord presented nothing abnormal to the naked eye. As regards the thoracic viscera, there was considerable congestion of the lower lobe of the left lung, and the aortic valves exhibited some fibroid thickening. The abdominal viscera presented nothing worthy of note.

Such, then, being a brief record of the facts observed, there remains for discussion the pathological nature and significance of these membranes. Are they of inflammatory or hæmorrhagic

origin; and is their nature essentially similar to that of the membranes met with in the cerebral subdural space? The material at my disposal is not sufficient to enable a definite answer to be given to these questions; but a few points may be noted.

It will not have escaped observation that all the three cases recorded above occurred in persons suffering from general paralysis. I have elsewhere shown [1] that the somewhat similar cerebral subdural membranes, although occurring in all forms of insanity, are nevertheless met with much more commonly in general paralytics—that, in fact, these latter membranes are more frequent in general paralysis than in all other forms of insanity put together. This fact would, therefore, seem to indicate an affinity between the two sets of false membranes, spinal and cerebral. It will have been observed also that in these three cases the membrane was confined to the spinal canal, and that there was no membrane associated therewith within the cranium.

If we are to judge from the cases described, the spinal false membranes have a more purely fibrinous character, with less of the hæmorrhagic element, than is the case with their cranial congeners. In the two cases first recorded, indeed, the membranes were purely fibrinous in nature, and there was nothing in their appearance especially indicative of a hæmorrhagic origin; but in the third case, whilst the greater portion of the membrane resembled the others, there was a small spot at the lower part continuous with the rest of the membrane, which was distinctly hæmorrhagic, and exactly resembled a venous thrombus of some days' standing, in which the blood was in process of becoming decolorised. This fact would, therefore, point to a hæmorrhagic origin for the membrane. It is worthy of note that in none of the cases observed was there any evidence of inflammation in the spinal dura mater.

There is one important difference between the spinal and the cranial false membranes. In the spinal cases the membrane is attached to the external surface of the dura mater; this condition, at any rate, existed in each of the three cases described above.[2] In the cranium, however, it is the invariable rule for the attachment to be on the internal aspect. This fact is important, and might lead to the belief that the two sets of membranes were not allied in their pathogeny, did we not recall the different arrangement of dura mater in cranium and spinal canal. In the cranium the close adhesion of the dura mater to the bone opposes a mechanical obstruction to any effusion, hæmorrhagic or fibrinous, between the two; whilst in the spinal canal such obstacle is not merely non-existent, but the numerous venous plexuses which lie between the outer surface of the dura mater and the walls of the spinal canal afford ready material for such effusion should occasion demand.

There is not much to be said as regards the symptomatology of these cases. In the first two the existence of the membrane was not suspected during life, and the only especially noteworthy feature about them was the severity of the bedsores and the unusual rapidity with which they developed. This may, indeed, have been the direct result of the irritation occasioned by the membrane; but as, in the second case at any rate, there was some concomitant softening of the central grey matter of the cord, it would not be wise to draw any positive conclusion. In the third case, however, I ventured to make a diagnosis during life on account of the symptoms of irritation of the spinal nerves which existed—to wit, the retraction of the head and rigidity of the extremities. These symptoms were clearly accounted for after death by the fact that several of the spinal nerves were enveloped by the effusion, and therefore presumably irritated thereby.

It will have been observed that I have avoided the use of the term "pachymeningitis" in describing these cases. This has been done for two reasons: first, because the word implies that the phenomena described are the result of inflammation—a doctrine which I consider to be by no means clearly proved; and secondly, because the use of the term would tend to create confusion with another well-known condition of the cord, with which the present affection appears to have nothing whatever to do.

On the whole, then, without expressing too confident an opinion upon insufficient data, I incline to the belief that the membranes described are the result of a hæmorrhagic effusion within the spinal canal, and that an inflammatory process is not concerned in their formation.

[1] *Journal of Mental Science*, January, 1888.

[2] This is simply my experience; it is not intended to be implied that membranes are never found on the internal aspect of the spinal dura mater.

II.—R. PERCY SMITH, M.D., M.R.C.P.,

Resident Physician and Medical Superintendent, Royal Bethlem Hospital.

E. M., a retired major, aged 51, was admitted to Bethlem Hospital on May 31st, 1888. No family history of insanity or other disease could be obtained. The patient himself had been naturally of a bright and even disposition, and had retired from the army for some years. Beyond ague and fever in India, for which he had been for a time sent home on leave, and "rheumatic gout," with which he had been laid up for a fortnight three years ago, he had enjoyed good health. He had been a sober man, and there was no evidence of syphilis. Four years ago he had lost a good deal of money, and since then had made some bad speculations which worried him.

The earliest symptoms of the present illness were noticed about a year before admission, when he began to show extravagant notions. For about six months he had had stammering and alteration in speech, and for the last few weeks he had been making mistakes in money, was constantly walking about, very irritable in temper, and sleeping badly. His memory failed, and once he wandered aimlessly away from home for twenty-four hours, with no means, and without being able to give an account of where he had been when at last found by his friends.

On admission, he was found to have twitching of the lips on speaking, tremor of tongue, constant smacking and sucking action of the mouth, and exaggerated knee-jerks. His pupils were equal, and acted to light and accommodation. He had exalted ideas, loss of memory, and a happy acquiescence in anything suggested for his care or treatment.

On June 4th he had a convulsive attack affecting entirely the right side of his face and right limbs, with deviation of head and eyes to the left and contraction of pupils. He was unconscious for about three hours, and on recovery no hemiplegia remained, but he was found to be aphasic, saying "Yes" in answer to most things or muttering unintelligible sounds, and being unable to read or to name articles shown to him. After about a week his memory for words improved slightly, but he became markedly demented and his gait tottering. At the end of August he became much weaker; he slept most of the day; his appetite was voracious and he seemed more aphasic; his knee-jerks remained exaggerated.

On October 2nd he had a succession of epileptiform convulsions, affecting almost entirely the right side, and leaving his right limbs notably weaker than the left. On October 7th convulsions recurred, affecting both sides, but the right most, the right arm being rigid and contracted; and from now till his death on October 14th he remained unconscious, with frequent convulsive attacks affecting both sides of the body. For a short time before death the limbs were all flaccid, the breathing rapid and stertorous, and there were constant twitchings of the facial muscles. There was great congestion and lividity of the face resulting from the interference with respiration. The temperature during the last few days was raised to 101-102° F.

Post-mortem examination forty-three hours after death.—Rigor mortis in the legs; skull cap somewhat thin and soft; cerebral dura mater normal; no pachymeningitis; great excess of subarachnoid fluid all over the surface of the brain, especially marked over the upper ends of the ascending frontal and parietal convolutions; pia mater sodden and thick, but peeling readily from the surface of the brain; arteries at base somewhat atheromatous. Convolutions everywhere somewhat thinned, and on section grey matter very pale in colour and the edge ill-defined, especially over the whole of the frontal region; no naked-eye changes in Broca's convolution; left lateral ventricle somewhat dilated, right apparently normal; no sign of disease in ganglia at base or in white substance of the hemispheres; pons and medulla normal to the naked eye; white substance of brain somewhat soft and pale.

Spinal Cord.—Dura mater distended by fluid in lower part; along the cervical and dorsal regions were numerous hæmorrhagic patches on the outer surface of the dura mater, principally on the dorsal aspect, of irregular shape, and varying in length up to two inches, and consisting of recently-clotted blood lying in the meshes of a thin gelatinous material; no pus, lymph, or signs of actual inflammation of dura mater. In the lower cervical region the anterior surface of the dura mater was firmly adherent to the posterior surface of the bodies of three vertebræ by old firm thin adhesions; no caries of bone, no compression of the cord. Inner surface of spinal dura mater normal; no bony plates

in arachnoid. Spinal cord firm, swelling on section; grey matter everywhere pale; no naked-eye signs of sclerosis. The aorta was very atheromatous, and the aortic valves rigid and leaking slightly, and the left heart dilated. Both lungs showed hypostatic congestion. The kidneys showed early granular disease.

This case bears on the paper read by Dr. Wiglesworth on Fibrinous Membranes within the Spinal Canal occurring in General Paralysis of the Insane. The absence of any signs of recent inflammatory change in the neighbourhood of the hæmorrhagic patches is noteworthy, as bearing on the question as to whether such patches are inflammatory or merely hæmorrhagic in origin. The *post-mortem* appearance was suggestive of the blood having been recently effused, probably during the constant convulsive seizures of the last week of the patient's life, which were undoubtedly due to cerebral and not spinal causes. That the patches were merely hæmorrhagic is rendered probable also by the fact that the patient had arterial disease, though no vessels could be seen in the immediate neighbourhood of the patches. The condition gave rise to no symptoms that could be interpreted during life as due to it, and there was no *post-mortem* sign of pressure on the cord. The presence of these patches on the external surface of the dura mater is also noteworthy, the similar patches found within the cranium in some cases being usually between the dura mater and the arachnoid.

The specimen was shown at the last November meeting of the Medico-Psychological Association.

III.—Professor AUGUSTE VOISIN, M.D.,

Physician to the Salpêtrière, Paris.

I have often found star-shaped bodies (corps étoilés), the result of fibrinous exudation, and encrusted with carbonate of lime, in the subjects of general paralysis; these bodies were adherent to the posterior part only of the spinal arachnoids.

SECTION OF PSYCHOLOGY.

Wednesday, Thursday, and Friday, August 14th, 15th, and 16th.

The Future Provision for Pauper Lunatics.—Dr. Hack Tuke discussed the question of boarding out pauper lunatics with strangers; the payment of a more liberal sum to the relatives of patients for their maintenance at home; the extent to which workhouses ought to be utilised; the operation of the Government grant in aid of pauper patients confined in asylums; and, lastly, the advisability for providing separate buildings for the acute and chronic cases. Reference was made to the experience of Dr. Mitchell, the late superintendent of the Wadsley Asylum, Dr. Major, the former, and Dr. Bevan Lewis, the present, Medical Director of the Wakefield Asylum, as opposed to the boarding out of pauper lunatics with strangers. On the other hand, it was shown that the remuneration of relatives for taking charge of their insane friends worked favourably. Dr. Duckworth Williams's experiment at Hayward's Heath was adduced to show what could be done in this direction. Evidence was afforded that the use of workhouses in Yorkshire had been resorted to with advantage. The Commissioners in Lunacy favoured increased use of the workhouse for chronic cases, provided there was proper accommodation in the lunacy ward. The effect of the capitation grant in filling asylums with chronic cases was insisted upon. The Local Government Act and the Lunacy Act were referred to in relation to it. In regard to asylums, the buildings for acute cases should be distinct, although in close relationship with the central establishment, and be more expensively built than the blocks for chronic patients. Hospital arrangement for the sick and acute cases was advocated, but too much had been expected from medical treatment of recent cases, a large proportion of patients brought to asylums being incurable, even when recent.—Dr. Ringrose Atkins, as an Irish superintendent, was glad to hear the propositions made by Dr. Hack Tuke. From his personal experience he was in favour of extending workhouse accommodation for chronic and harmless lunatics, if there was to be any control in the present increasing cost of the pauper insane. In Ireland he feared there would be grave objection to the boarding out of individual cases, though he considered it might be possible, under certain circumstances, to introduce the colonisation system. He did not think that separate hospitals for the treatment of acute cases would afford such results as to justify the much greater cost which these structures would involve.—Mr. S. W. North advocated the maintenance of a large number of suitable cases in workhouses, the necessity for a supervision of these institutions by persons familiar with the condition of the poor and the administration of the poor-law, able to recognise its use in the interests of the sick as regards care, and, when this was hopeless, the interests of those who had to bear the cost. Mr. North advocated longer periods of probation in workhouses or other suitable places before resorting to the asylum.—Dr. Bevan Lewis remarked on the difficulty of dealing with statistical matter off-hand. He felt that he naturally drifted into the scientific aspect of insanity, and advocated a much larger proportion of officers (medical) in asylums. Dr. Bevan Lewis also advocated the extension of the clinical assistant staff and the pathologist for all asylums alike, and referred to the vast difficulties in the way of scientific research on the part of the superintendent and assistant staff.—Dr. Douglas desired, from the general practitioner's point of view rather than the specialist's, to urge the necessity of dealing efficiently with early or pre-asylum stages of insanity. He had frequently met cases unsuitable for asylums who would have been much better cared for, and with a greater hope of cure, in some temporary place. There were great legal difficulties, but the success of Dr. Norman Kerr's Committee made it possible to hope they might be removed. To increase the proportion of cures it was desirable for specialists and general practitioners to unite in an endeavour to bring mental cases under early and proper care.—Dr. Joseph Wiglesworth said the boarding-out system of lunatics, however successful in Scotland, was quite inapplicable to densely-populated districts such as South Lancashire. Without doubt a large number of cases now sent to asylums might be suitably cared for in workhouses. This question was intimately bound up with the Government capitation grant, which should either be done away with altogether or extended to lunatics in workhouses. These points, however, concerned the care of the chronic insane, and the question was a more important one whether they could not make a determined effort to do more for the cure of the recent cases. To do this they must hospitalise asylums more; they must have small buildings, properly officered and equipped, to which all recent cases should first be sent, and from which the cases which proved incurable could be drafted into the larger institutions. The increased knowledge thus obtained would without doubt in time bring about an increase of the recovery rate.—Dr. Yellowlees agreed with Dr. Tuke that boarding out to any great extent was impracticable where the population around was busily and remuneratively engaged. It was not worth their while to take up this new avocation. Home care with relatives, subsidised where necessary, he thought ought to be much more frequently used. As to institutional care, much misleading and pernicious nonsense had been written about curative asylums, where the recoveries were to be 80 per cent.; but, on the other hand, he deemed it a misfortune that the West Riding had had so many admirable asylum superintendents, and so had repeated at Wadsley and at Menston the old mode of provision, which he could not but deem a mistake. He had long thought that they should have near all our large centres of population *brain infirmaries*, just as they had infirmaries for diseases of the eye, the ear, the lungs, and other organs. These should be small but perfectly equipped, and from these patients likely to be incurable should be transferred to the county asylum, either at once or as soon as speedy recovery was found to be unlikely. He thought this greatly preferable to the sending such patients to workhouses, which he would reserve entirely for patients who had passed through the asylum and had got all the benefit it could give them. But for the majority he deemed the county asylum, as supplemented by the brain infirmaries, much better. The county asylums in this scheme should not be magnificent palaces at all; and, as the vast majority of its inmates were incurable, economy both in construction and in administration should be a prominent feature.—Dr. Nichols (of the Bloomingdale Asylum, New York) said the State asylums in America, which were their most numerous and important institutions for the insane, more nearly corresponded to the county asylums of England than any others they had. They differed in generally taking patients from all classes of society. In making general available provision for the insane, many of the large States had been divided into asylum districts, and an asylum provided for each district. The care of the pauper chronic insane in almshouses was almost universally condemned in the United States, though it was very widely practised on the plea of necessity; and the first great practical step taken for their removal from almshouses was the establishment of the very large New

York State Asylum for the Chronic Insane at Willard. Since that time another asylum of the same character had been established at Binghampton, New York, and another at Worcester, in the State of Massachusetts; but the care of the chronic insane of the large States in one or more central asylums involved excessive cost for transportation and the practical banishment of patients from their homes and relatives. At the National Hospital for the Insane at Washington a large accumulation of chronic cases had been provided for in separate buildings at much less cost per patient accommodated than the original hospital edifice, and he thought the tendency of opinion and practice was towards the solution of this pressing and important problem of caring for the chronic insane in a similar way. A Bill to effect such a solution had been before the Legislature of the State of New York for two years, and the strong probability was that it would ultimately become law. By supplementing the systematic district asylums, which were usually, as they always should be, situated on large areas of land, with cheap but entirely comfortable buildings, fittings, and furniture, and giving their inmates a plain wholesome fare, the chronic insane could be taken care of without the expense of a separate institutional organisation, recurrent and spasmodic cases could be transferred backward and forward between the chronic and the acute departments as occasion required, and the patients kept in the vicinage to which they belonged, which appeared to him to present more advantages and fewer objections, at least in their situation, than any other practicable scheme for properly providing for the chronic pauper insane that had been proposed. Such conditions, with respect both to the character of families and of patients, as appeared to justify the boarding-out system of providing for the chronic poor insane, did not yet exist in his country, though they might in time do so in some sections of it. It seemed to him that very great care should be taken in selecting families to be allowed to board the insane of their own blood, lest sympathy and imitation acting with a common heredity should promote the development of eccentricities, if not of actual derangement. On the other hand, he should be afraid that families in the attitude of boarding masters of the insane of their own blood would sometimes treat them with the excessive authority, if not harshness, that consanguinity was so often thought to warrant.—Dr. MERSON said the system of discharging partially recovered or incurable harmless cases had been carried out to a considerable extent in Hull with fairly satisfactory results. He found no difficulty in getting relatives to take care of such cases, even without remuneration, and had no doubt that if small allowances were made the system might become extensively tried. He could not help thinking that the difficulties in dealing with cases in this way in the West Riding had been greatly exaggerated by previous speakers. It had been said that the density of the population in the district seriously interfered with it, but he could point out that the population of the Hull Asylum was drawn entirely from an urban population, and if the system could be carried out to a limited extent in such a population, he had no doubt it might be more largely used in the West Riding, and still more so in less populous districts. With regard to the question of curative hospitals, he entirely agreed with what Dr. Douglas had said about the importance of getting cases of threatened insanity under treatment in the early premonitory stages, before even a certificate of insanity could be given. The difficulty was in getting people to place themselves under care in asylums as at present constituted. The establishment of brain hospitals as departments of general hospitals, to which resort could be had without the necessity of certification, appeared to be the direction in which they ought to work. The increase of medical staff, as advocated by Dr. Lewis, would, no doubt, be very desirable, and would greatly tend to increase our knowledge of insanity and its causes, and thereby ultimately to prevent its occurrence; but he had little hope of any increase in the proportion of cures of the insane as at present admitted into asylums.—Dr. CHAPMAN said the President's paper presented the subject so fully and, in all its points, was so clearly in accord with what appeared to him (the speaker), to be true, both in its facts and opinions, that he could find nothing for destructive criticism, so much easier than further elaboration. The only point that perhaps admitted of a remark from him would bear on the proportion in which patients might be divided between asylums and elsewhere. He had always regarded something about or a little over 60 per cent. as the proportion that required asylum treatment, and herein he was, he thought, quite in accord with the President; but as to the remaining 33 to 40 per cent., whilst he entirely agreed that when a densely populated county like Yorkshire was in question, when they came to an agricultural county like Hereford the matter took a different aspect. There the workhouses were so small, and the number of lunatics belonging to each district so few, that a special ward with attendants was out of the question, and the only patients that could be maintained in them must be capable of mixing with the ordinary inmates. On the other hand, the conditions were eminently suitable for maintaining them in their homes with their friends, and if sufficient money allowance and supervision were available, the proportion of cases that might so reside would be 18 to 20 per cent., or even more, perhaps up to 30 per cent. of the total lunatics. He might say, perhaps merely as an expression of ignorance, that he thought boarding out, in the sense of residence with non-relatives, was contrary to the genius of the English people, so that even in Herefordshire, he should not expect it to prove applicable to any extent. He was also substantially in agreement with Drs. Yellowlees and Bevan Lewis in their remarks. Dr. Yellowlees had, perhaps, been a little unjust to their predecessors, in that whilst explaining away the favourableness with which their recovery rate compared with ours, he left them the full benefit of their higher death-rate. The two, however, were closely related. They had really a much larger proportion of those cases that were now discriminated as recent and acute, and these, as was shown, afforded many more recoveries and also many more deaths than the other classes of patients. His own opinion, nevertheless, was that, in view of this advantage, their recovery rate did not compare favourably with that of the present day. He might, perhaps, be allowed to express his great satisfaction that they had, on so great an authority as Dr. Tuke, so full a discussion of the subject founded on so large and laborious a collection of materials as the statistics of lunacy in Yorkshire which had been presented to them displayed.—Mr. J. PEEKE-RICHARDS said in order to prevent the increase of admissions into pauper asylums, more care ought to be exercised by the certifying medical man in sending quiet and harmless patients with slight delusions to asylums, for when once they were admitted then the difficulty arose in getting rid of them. The boarding-out system would be surrounded with the greatest difficulties in London, and would require an enormous amount of supervision to prevent abuses. Had the boarding out of pauper children proved a success? The removal of these quiet cases (for the best part the workers in the asylum) would doubtless increase the weekly cost, as the work must be done somehow, and paid labourers had to be employed. Should the boarding-out system be carried out there would always have to be a certain number of beds kept vacant in the asylum, as he presumed that the supervising medical officer would have the power to send back at any time a case, or probably cases, that he thought relapsing. These vacant beds would mean loss of income.—Dr. SHUTTLEWORTH alluded to the necessity of special provision for imbeciles, as distinguished from lunatics, in the north of England. At the present time the Royal Albert Asylum at Lancaster was the only institution specially adapted for the training of imbeciles; it could accommodate only 600, the number of pauper inmates being limited to 100, yet the census returns recorded about 2,500 imbeciles under 20 years of age resident in the seven northern counties. Dr. Shuttleworth mentioned with approbation the recommendation arrived at by the Royal Commission on the Blind, Deaf-mutes, and Imbeciles to the effect that in the provinces special institutions for the feeble minded of the pauper class should be established by the County Councils on the model of the metropolitan district asylums at Darenth.

The Double Brain and the Discordant Action of the Hemispheres.—Dr. IRELAND, in opening the discussion, said his object was to raise the discussion in order to obtain information on this subject, and induce those who had charge of the insane to make it an object of study. At present the problem was still obscure. Though the hemispheres of the brain at first sight looked quite symmetrical, on a more careful study, a certain amount of asymmetry was observed. The two hemispheres were unequal in weight, the right being the heavier—contrary to what might be expected, for the left had most work to do. The corpus callosum united homologous parts of the two hemispheres by its transverse fibres, and through the longitudinal band, called the tapetum, united the frontal and occipital lobes. There were three or four cases of total deficiency of the corpus callosum in which no particular deficiency of mental powers or of co-ordination had been noticed during life. The same result appeared in cases where the

organ had been destroyed by disease. Dr. Ireland maintained that a man could attend to several mental processes at once, though he generally directed his attention mainly upon one. The man who attended to only one subject at once was the absent-minded man. Observation had proved that when one hemisphere was destroyed ordinary mental work could still be conducted by the remaining hemisphere. There was a presumption that the mental powers would be weakened by the loss of one half of the cerebrum, but there was the case of the great anatomist Bichat, who died at 33, in whom one hemisphere was found to be considerably larger than the other, and to have pushed the falx sidewards. Dr. Ireland had studied cases of wounds of one side of the brain in soldiers. One symptom was extreme distress in making any exertion, especially mental. This, he believed, was owing to the injured side being compelled to work simultaneously with the uninjured hemisphere. As long as the two sides of the brain worked simultaneously and reproduced similar images no discord was noticed, but when, from disease of one hemisphere, unequal or varied impressions resulted, mental derangement followed. He mentioned instances of unilateral hallucinations of sight and hearing, and referred to those cases in which insane patients believed in the intrusion of another being into their thoughts. There were cases of melancholia in which the patient, though seemingly quite apathetic, nevertheless knew and remembered everything which happened. This might be explained by supposing one hemisphere to be less diseased than the other. Unequal disease of the hemispheres had also been observed in general paralysis and epilepsy. Dr. Ireland mentioned several cases of lesions principally affecting one side of the brain, and quoted the observations of Dr. Luys on this subject, some of which were confirmed by *post-mortem* examinations. It was in that kind of insanity which the French call *folie lucide* in which they would expect to find lesions of one side of the brain. These individuals were afflicted with delusions which they often succeeded in keeping under. Though mental work was done by two separate lobes, nevertheless we each felt ourselves one being. How could one side of the brain compare its own impressions with the other side? How could it know anything save its own impression? How could unity come out of a double series of impressions? Was there not something behind which read off the impressions in the two hemispheres and fused them into one, and directed them to a common object? A recent writer on the subject, not finding duality of the brain, had looked for it in the multiplicity of the sympathetic fibres of the viscera. He (Dr. Ireland) did not know how to refute this theory, as he could not rehearse in his own mind the logical process by which it had been reached. He wound up by exhorting the members to study the problem and attack it on all sides. If they made careful observations on the subject, and published them they would assist one another towards its solution.—Sir J. CRICHTON BROWNE expressed his regret that he had not heard the whole of Dr. Ireland's paper, and was not, therefore, in a position to criticise it. He adopted Dr. Hughlings Jackson's view that the left side of the brain was the leading hemisphere in voluntary movements, the left side being chiefly voluntary, the right side chiefly automatic. He commented upon the phenomena of right and left handedness.—Dr. BATEMAN (Norwich) suggested that the assumed difference of function in the two hemispheres might be due to difference in the chemical, and especially in the histological, structure of the convolutions of the two sides of the brain, a subject which he thought had not received the amount of attention that it deserved. In reference to Dr. Ireland's remarks on double personality, he agreed with him as to the probability of the existence of a something separate from the brain—an *ουσια*, an immaterial *nescio quid* which superintended and controlled all our cerebral operations.—Dr. WIGLESWORTH said that if he understood Dr. Ireland correctly, his proposition was that in insanity one hemisphere was healthy and the other disordered, and that it was the discordant action of the two which produced the disease. Without for a moment denying that such a condition might exist, there seemed very slender evidence for applying this view to the general run of cases in asylums. The phenomena of unilateral hallucinations were rare, and hence inapplicable to the great mass of cases. Cases of double consciousness were explicable on different lines, and there was absolutely no proof whatever for supposing, when two trains of thought were being simultaneously carried out, that one of these was being conducted in one hemisphere and one in another. The facts of pathology were also against this view. When lesions were noted in the brain of insane patients, these were almost always more or less bilateral. It was true, especially in certain cases of general paralysis, that one hemisphere was more diseased than the other, although the cases where this difference was decided were in a distinct minority. But out of a series of several hundred *post-mortem* examinations on insane patients, he could recall no case where one hemisphere was distinctly diseased and the other absolutely healthy (excluding, of course, gross lesions, such as those dependent on vascular obstructions). Whilst thinking, therefore, that Dr. Ireland's view might possibly be applicable to some processes, such evidence as they had appeared directly opposed to it as an explanation of insanity in general.—Dr. BEVAN LEWIS remarked on the obscurity of the subject and the courage with which Dr. Ireland had approached it. He was inclined to regard all cases of double consciousness as illustrative of a dual activity of the brain of hemispheric distribution. Such cases were frequent in epilepsy and general paralysis.—Dr. FLETCHER BEACH said there were three points which seemed to prove that there was a double brain; the first was the fact that a person was able to execute fine complicated movements on the piano, and at the same time carry on a conversation. At first his whole attention had to be directed to the movements which he was making, but after a time these movements became automatic, and he was able to converse as well. The next point was that in a case of atrophy of the brain, which was under his care, the girl was fairly educated, and yet after death one hemisphere weighed only 5 ounces and the other 20 ounces. The third point was the feeling which many people experienced of being in certain circumstances, and the idea occurred that they had been in the surroundings before. Of course, it was absurd to suppose that one could experience things which had never occurred before. Dr. Maudsley's explanation was that the impression occurred in one hemisphere, and was then transferred to the other hemisphere with such rapidity that the individual was unable to experience it.—Dr. RINGROSE ATKINS mentioned a case which he had recorded bearing on the subject. It was that of an elderly female patient, who suddenly became affected with aphasia. On *post-mortem* examination a chronic lesion of the speech centre was discovered, and, further, a small hæmorrhage injuring the commissure fibres in the corpus callosum. It appeared to him that these lesions pointed to the existence of dual centres acting together in health, but in disease the right taking up the action of the left or leading side, the occurrence of the hæmorrhage dividing the path of communication, and thus destroying the power of function of the two.—Dr. YELLOWLEES said each man had but one mind, although it acted through a double brain. That the intention to perform an act which was operated through the left hemisphere had originated as a mental intention or wish in that hemisphere was a pure assumption.—The PRESIDENT observed that the general result of this discussion evidenced the belief in the functional independence of the brain, while all maintained mental unity. Nothing struck him as more significant than the fact that while destruction or disease of one hemisphere might destroy the sensory and motor functions of the other half of the body, there was no parallel affection of the mind; that while there was hemianæsthesia there was no semi-ego. He related a remarkable case of double personality—or, rather, loss of personal identity—in which the patient went to look for himself under the bed. He did not quite agree with Dr. Ireland that two processes of thought could be carried on at the same time. What appeared to be so was really a voluntary mental act and an involuntary motor act. Thus, he had seen a bandmaster keep time with his batôn while turning his head in the opposite direction to see a Royal Princess receive an address in the room. He observed that as long ago as 1780 the importance of the double brain had been insisted upon by Simon du Puy, and that Esquirol had distinctly referred some cases of insanity to different degrees of excitement of the two hemispheres at the same moment. He tendered to Dr. Ireland the thanks of the Section for his very interesting paper.

Optic Nerve Atrophy preceding the Mental Symptoms of General Paralysis of the Insane.—Dr. WIGLESWORTH, Rainhill Asylum, said that optic nerve atrophy was frequently met with in general paralysis, but usually as a late symptom; sometimes, however, it occurred early. He narrated a case in which optic atrophy was the first sign of the disease, preceding by some time the mental symptoms. Given a case of primary optic nerve atrophy, for which no cause was apparent, associated with obscure mental symptoms, the probabilities were that the case might turn out to be one of general paralysis. Hence this sign might at times give valuable aid in

diagnosis.—Dr. PERCY SMITH said that two cases he had seen at Bethlem bore on Dr. Wiglesworth's paper. The first was that of a man, aged 35, who was admitted to Bethlem Hospital in October, 1886, and who was blind from optic nerve atrophy on admission. There was a history of syphilis, and, three years before admission, his sight began to fail, and this failure progressed to total blindness. The duration of the symptoms of mental disease was, however, only eighteen months, so that the ocular symptoms preceded the mental by eighteen months. The knee-jerks were exaggerated, and there was no condition approaching locomotor ataxy. The patient eventually died in convulsions. No *post-mortem* examination was allowed. The next case was that of a married woman, aged 45, who was admitted to Bethlem Hospital in April, 1886, suffering from general paralysis, with advanced optic atrophy. The duration of the mental disease from the earliest symptoms was said to be eight months, and, though there was no very clear history of when the sight began to fail, there was reason to believe that, if not preceding the mental symptoms, yet the optic nerve atrophy had been a very early sign, and had progressed concurrently. In this case, also, the knee-jerks were exaggerated. At the *post-mortem* examination numerous cortical wastings were found. He said, further, that the men most likely to meet with these cases were either ophthalmic surgeons, general physicians, or physicians in lunacy practice, rather than men resident in asylums.—Dr. YELLOWLEES mentioned a precisely similar case.

Treatment of Mental Disease by Hypnotic Suggestion.—Dr. AUGUSTE VOISIN, Physician to the Salpêtrière, Paris, made a communication on the treatment of insanity and neuroses by hypnotic suggestion, and on the application of the method to the moral and instinctive perversion of backward and imbecile children. He stated that until within the last few years no serious attempt had been made in this direction, and that it was generally supposed that the insane could not be hypnotised. Dr. Voisin had been able to develop this method in his hospital and private practice. Catalepsy ought to be carefully avoided, because the hypnotised individual ought to be able to preserve the use of his senses, especially of hearing. He was convinced that hypnotism was only useful when it was possible to make use of suggestion, and he was firmly of opinion that, as Braid had said, the hypnotic state originated in the nervous system of the hypnotised person. Having described the basis of hypnotic treatment and of suggestive therapeutics, Dr. Voisin detailed the various categories of the insane with regard to whom he had made observations. By this treatment he had cured persons suffering from hallucinations and delusions, and from disturbances of special and general sensation. Suicidal ideas and acute and furious mania had disappeared under the use of this method. Cases of insanity were cited which had only been calmed after several hours. The treatment had also succeeded in the mania and agitation observed during the catamenia. Patients in this category had even remained asleep for from six to eight days. The method had also succeeded in dipsomania and in morphinomania. Dr. Voisin had also been fortunate enough to cure obstinate cases of onanism in this way, and had applied the method *à la moralisation des enfants dépravés*. He had thus completely transformed their habits of thought, and had brought them to love the good, whereas formerly they had only loved the evil. He had also succeeded in curing amenorrhœa in the insane, which was a frequent cause of nervous and mental troubles; he particularly insisted upon this point as proving it was possible to influence the functions of the sympathetic system.—Dr. YELLOWLEES said his attitude of mind towards this paper was simply one of amazement. Here was something that cured mania, banished hallucinations, cured love of drink and morphine, stopped masturbation, improved the memory, made imbeciles wise, and bad folks good; moreover, it cured amenorrhœa, and the patient menstruated as directed. It resembled nothing so much as the waving of a conjuror's wand, and saying to disease, "Begone." Moreover, in nine-tenths of the cases the cure was permanent. If all this were true, their vocation was gone, and they must seek some other profession. Dr. Voisin must not deem them disrespectful if they were a little incredulous as to these wonderful results. It might be that there was something in the vivid Gallic nature that we had not here, or something in Dr. Voisin's method that they did not know. Certainly they had seen no such results from hypnotism here, and certainly he had never heard of results so amazing as those enumerated in Dr. Voisin's paper. Nothing would be so satisfactory to the Section as to get a demonstration of his method from Dr. Voisin at the Wakefield Asylum next day, and he would earnestly ask for this.—Dr. MACLEOD asked if any explanation of the details of the method of hypnotism by which these beneficial results were brought about could be given? Could this power be used for evil, and a sane or good person be driven to insanity or evil, by suggestion, under the power of hypnotism?—Dr. LANGDON DOWN stated to the meeting that he had witnessed with the President some cases of hypnotism when the patients declared that, under the influence of suggestion, control over the bowels in constipation and over the uterine function could be obtained. Hypnotism was readily produced by the physician, and in several cases the patients assured them that they had benefited by the principle of suggestion.—Dr. TUCKEY had paid a visit to Nancy last year, and had the pleasure of watching Dr. Liébault's clinic there for a couple of weeks. One could not fail to be struck by what one saw there, and during the last few months he had practised the method when opportunity arose. His experience was, however, still so limited, amounting to less than 150 cases, that he could only speak confidently on a few points. He had found it successful in the treatment of dipsomania, masturbation, occupation neuroses, such as writers' cramp, and various neuralgias. The Rev. Arthur Tooth, of Woodside, Croydon, was employing hypnotic suggestion with much success in his institution for inebriates, and he expressed the pleasure he would have in showing his cases and method to medical men. Out of the first hundred cases he only failed to influence hypnotically twenty-one patients. But his experience in the treatment of melancholia by hypnotism had so far been disappointing. Only six persons out of the hundred were sufficiently deeply influenced to be susceptible to post-hypnotic delusions or suggestion. The common idea, therefore, that the patient was, subsequently to hypnotism, a mere tool in the hands of the operator, was erroneous in the immense majority of cases. However, the practice of hypnotism should be carefully guarded and watched. A short experience would convince the inquirer that hypnotic suggestion was a powerful therapeutic agent, and it was of immense importance that its place in medicine should be as soon as possible placed on a scientific and certain basis in this country.—Dr. IRELAND thought that perhaps Dr. Voisin had made too sweeping claims for the success of his method of treatment. He himself could not hope that nine-tenths of the patients so treated would derive benefit, but he had no doubt that in some cases much good might result from hypnotism. Braid, of Manchester, had claimed cures quite as startling as those stated by Dr. Voisin. He published a case in which milk was brought into one mamma in a woman, the other remaining flaccid. There were instances of women being violated when in the hypnotic condition. He, however, did not think that because the remedy was capable of abuse it should be proscribed. The same objection might apply to chloroform.—Dr. ROBERTSON had visited the Salpêtrière Asylum in Paris during the Congress of Hypnotism, and bore evidence to the truth of the statements of Dr. Voisin. He regarded hypnotism as a powerful agent either for evil or good, and would accordingly suggest that it should only be practised by medical men.—Dr. PERCY SMITH agreed with Dr. Yellowlees in the feeling of amazement experienced in hearing these results. He also agreed with Dr. Voisin in the statement that great patience was necessary in making these experiments, and, judging from some which he had made at Bethlem, he thought that a large amount of hypnotising of insane patients in a hospital could only be undertaken at the expense of other work. In the past winter he had subjected sixteen patients in Bethlem to experiments, with the assistance of Dr. A. T. Myers, who obtained the services of a professional hypnotiser. The following rules were laid down: 1. That any experiments of this sort in the insane should be entirely directed to a therapeutic end, and not merely to elucidate physiology. 2. That the term "mesmerism" should be avoided in speaking on the matter before patients. 3. The patient not to be alone at the time, and, if a female, that a nurse should always be present. He was obliged to state that the results had been almost entirely negative—in fact, he had not been able to get insane patients into the hypnotic state. It seemed almost impossible to secure the necessary attention. He did not think it necessary to fatigue the meeting with details of all the cases, though it was important to publish failure as much as success. He briefly mentioned the methods used, and suggested that in all probability patients in France were more susceptible than in England. He thought that the matter should not be put off lightly, and that evidently more experience was needed before a final opinion could be given as to the value of hypnotism in the treatment of insanity.—Dr. GOODALL remarked that he could only corroborate Dr. Percy

Smith's remarks as to the want of success of hypnotism in the wards of Bethlem. Several cases were tried, and many for prolonged periods. One or two patients were induced to take food who had previously refused. He was of opinion that instead of experimenting on several patients for short periods, it was advisable to devote more time to one case.—Dr. RINGROSE ATKINS had no experience in the use of hypnotism in the treatment of the insane, but he had seen many experiments amongst the sane. Many years ago, when very young, he had seen Dr. Stone the eminent American hypnotiser, induce this condition in individuals where there was no collusion whatever; several gentlemen whom he knew completely lost their identity when in the hypnotic state; the will of others was rendered quite powerless, and was done without any special precautions. In 1882 he had had the opportunity of seeing the experiments of Dr. G. M. Beard in this direction, experiments which he should say were discredited by some but where very wonderful results were obtained. He considered, however, that it was a different matter to hypnotise an insane person where the attention was entirely diverted from what was being done, and where there was no concentration of the mental state. Dr. Voisin's results were most interesting and important, and their success might be due to the more impressionable temperament of the French people.—Dr. TURNBULL SMITH said that only one in twenty cases in sane people were insusceptible, that was to say, nineteen cases were successful, but in some cases they required many attempts before success attended their results. In his opinion it was from staring that most successes were procured, and this result was from exhaustion of the optic nerve.—The PRESIDENT heartily agreed with the sentiment that they should treat Dr. Voisin's paper with respectful attention. He had a special interest in the attempt to treat the insane by hypnotism, having as long ago as 1865 published an article in the *Journal of Mental Science*, giving instances in which hallucinations were temporarily induced in the sane, and advocating the use of healthy suggestion by hypnotism in the insane. The notion was thought by many to be extraordinary if not absurd. In one case a female who was melancholiac, who had to be fed artificially, was induced to take food by hypnotic suggestion. The success of the method had, however, not been so great in the treatment of insanity as he had expected; it was, therefore, very gratifying to find Dr. Voisin able to report so favourably upon it, and he felt inspired with fresh hope. Was not the system after all but an exaggeration and systematisation of our present endeavour to treat patients from the moral side? What we wanted was that a few really scientific young medical men should master the method, and pursue it resolutely. Either French lunatics were more susceptible, or French doctors were more persevering—probably both. The practice should be restricted to medical men, and all public exhibitions of hypnotism should be prohibited by law.

Hypnotism, with a Criticism on Certain Experiments at La Salpêtrière.—Dr. BATEMAN (Norwich) read a paper on hypnotism with special reference to some experiments at La Salpêtrière which had been quoted as proving certain theories in reference to the localisation of the faculty of speech, and the object of the communication was to show the fallacy of this deduction. After some preliminary remarks about hypnotic phenomena, and a description of the two conditions known as hysterical lethargy and the cataleptic state, the nature of the experiments was described, as reported in the *Progrès Médical*. The condition of hysterical lethargy was induced in a female patient. Whilst in this state it was found that by raising one eyelid and stimulating the retina one-half of the brain was thrown into a condition of catalepsy, but there was noticed this remarkable difference between the two sides, that whereas opening the left eye in nowise interfered with the power of speech, opening the right immediately destroyed it. For instance, a patient was hypnotised; the left eyelid was then opened and the left retina stimulated, thus plunging the right hemisphere into a state of catalepsy. There was no change from a linguistic point of view; the patient continued to speak, to write, and to gesticulate. The process was modified; the left eyelid was closed, and the right opened, with corresponding stimulation of the right retina, thus plunging the left hemisphere into a state of catalepsy. Immediately all communication with the external world was suppressed; the patient neither spoke, wrote, nor gesticulated. "Le masque facial reste muet" The above experiment was repeated with another patient, who knew by heart some verses of poetry. Whilst in the hypnotic state she repeated certain verses distinctly. On the left eyelid being raised she continued to recite, but on the left lid being closed and the right opened, thus producing catalepsy in the left hemisphere, she straightway ceased to speak in the middle of a verse, sometimes even in the middle of a word. On closing the right eye she began her recitation at the very place at which she left off, recommencing sometimes in the middle of a word! These experiments having been cited as evidence in favour of localisation of speech in the left anterior lobe, Dr. Bateman denied that they were of any value either for or against localisation; and, after quoting the opinions of Bernheim, Hack Tuke, and others, which tended to attribute the above results to "suggestion," Dr. Bateman objected on anatomical grounds to the inference attempted to be drawn from these experiments, by pointing to the discrepancy which existed as to the decussation of the fibres of the optic tracts, one author, Professor Grasset, maintaining that there was a triple crossing; and, unless it could be proved that all the fibres from one retina found their way to the opposite hemisphere, the experiments would lose all their force. Dr. Bateman then entered at considerable length into the course of the fibres of the optic tract, observing that, in order to establish any connection between these experiments and the localisation of speech, it was necessary to assume that the fibres of the optic tract found their way into the anterior lobe, the supposed seat of speech, which was by no means universally admitted, and even denied. After reference to the researches of Professor Hamilton, of Aberdeen, Dr. Ross, and Dr. Gowers upon this point, Dr. Bateman concluded by saying that "our knowledge of the exact construction of the visual centre, of the precise distribution of the fibres of the optic tract, and of the relation of the two visual centres to each other was at present so imperfect as not to justify the originators of the above interesting experiments in quoting them as evidence of the localisation of speech in the left hemisphere of the brain."

Some Cases of Insanity Treated by Massage.—Dr. G. H. SAVAGE said that of late there had been too great a tendency to treat all cases of neurosis by massage. This treatment was not only of no use, but was really harmful in some such cases. It might be taken for granted that it was rarely if ever useful in ordinary cases of insanity; in cases of emotional self-consciousnesses it was bad, both the solitude and the bed being contra-indicated. In hypochondriacal states it was generally harmful, and in most cases of active melancholia it was not useful. He had hardly ever seen it do good in cases in which, with the emotional depression, there were well-marked delusions, such as those of unworthiness or ruin. Its chief use was in those cases in which the mental depression was associated with physical weakness, loss of flesh, and deficient action of the gastro-intestinal tract. In such cases bed and feeding did well enough, as a rule, but in some massage acted more rapidly. For such cases the massage treatment should differ somewhat from that in use ordinarily. He preferred an ordinary medical nurse, lady if possible, to take the whole charge of the case. The masseur should be looked upon as an important aid, but not as the chief person or means of treatment; the massage should be associated with cheerful companionship and some occupation however simple. The massage should be continued as long as the general health was feeble, and as long as the appetite was bad. The object was like putting salt in the food given by stomach tube to create a desire for food, and then to supply it in a suitable form and quantity. He related a specially interesting case of melancholia cured after four years of profound depression.—Dr. WARNER had employed massage in many cases of chorea, with low nutrition and loss of body weight, in conjunction with forced over-feeding and rest in bed; the results had encouraged him rather to trust to rest and feeding than to massage.—Dr. NEEDHAM had employed massage in some cases of melancholia, and in two or three had seen excellent results from it. Its chief value in these cases seemed to be due to its influence in stimulating the muscular apparatus in the circulation, and so supplementing active exercise, improving digestion, and relieving constipation.—Dr. WILBERFORCE made some remarks on the need for distinguishing with more precision than had usually been adopted the cases for which massage was appropriate, especially in nervous cases as distinguished from voluntary muscular exercise.—Dr. PERCY SMITH referred to three cases in Bethlem Hospital, in two of which the treatment was quite unsuccessful in curing the mental disease, though there was great physical improvement. They were both cases of stupor, and in one the effect of the physical improvement appeared to be that the depression passed into excitement, another a case of melancholia with mal-nutrition.—The PRESIDENT said he had been disappointed with the results of massage in what appeared likely cases for its employment; in

others, however, it had been of use. It improved the appetite often when the mental symptoms were not much ameliorated. Massage, like hypnotism, had suffered from quacks, and if care was not taken it would get into bad odour, and whatever use there was to be obtained from it would be lost sight of.

A Contribution to the Etiology of Idiocy.—Dr. G. E. SHUTTLEWORTH, Medical Superintendent, Royal Albert Asylum, Lancaster, briefly referred to the various etiological systems adopted by Séguin, Sengelmann, Langdon Down, Ireland, Kerlin, and others; and commented unfavourably upon certain oft-quoted American statements as to the causes of idiocy. He then brought forward his own statistics with regard to the causes of mental defect in the 1,300 cases received into the Royal Albert Asylum, ranging the causes under three heads:—(1) Those acting before birth; (2) those acting at birth; and (3) those acting subsequently to birth. He showed that in the vast majority of cases two or more factors contributed to the etiology. In his experience, the most common factors in the first group were—(*a*) a tubercular or scrofulous family history; (*b*) an insane or neurotic heredity; (*c*) maternal ill-health during pregnancy, accident, or shock (the mother's account of the last to be received with caution); (*d*) intemperance of one or both parents. Parental consanguinity and inherited syphilis were, no doubt, often causes, yet not so frequently as had been supposed. Under the second head, the influence of primogeniture was discussed, as also that of instrumental delivery as compared with unassisted protracted parturition. In the third class the most frequently assigned cause was eclampsia (infantile convulsions); but oftentimes this might be the effect, and not the cause, of nervous instability. The febrile disorders of childhood, and their sequelæ, figured as causes in some 10 per cent. of the author's cases; and cases attributed to injury were almost as numerous. But parents' statements with regard to these matters needed to be taken *cum grano*, as they were naturally disinclined to recognise or acknowledge congenital and ancestral defects. The author's experience, indeed, led him to deprecate the too hasty acceptance and publication of assigned causes, which had little scientific value till sifted, a process only possible as time brought to light the facts of family history.

Some Further Facts respecting the Causation of Idiocy and Imbecility.—Dr. FLETCHER BEACH, Medical Superintendent, Darenth Asylum, referred first to scattered papers of his dealing with some of the causes of idiocy and imbecility. In the present paper he proposed to touch upon all the known causes and give his experience, which might perhaps differ slightly from that of others whose patients were drawn from a higher class of society. In considering the subject, some causes would be found to exert their influence chiefly before birth, others at birth, and still others at some time—it might be years—after birth. Of all the causes, hereditary predisposition played such an important part that Moreau, of Tours, found it present in nine-tenths, and the author in 76 per cent., of his cases. Next in order the author would place intemperance, combined with other causes (rarely was imbecility due to one cause), on account of the parents of his patients not at present considering drunkenness a disgrace. A history of phthisis would take the third place, and maternal impressions the fourth. He was of opinion that, owing to the important part taken by hereditary predisposition in the production of the idiocy and imbecility of the patients under his care, convulsions in infancy, epilepsy, fevers, and injuries should take a more prominent position as causes than was accorded them by some, whose experience led them to express a different opinion. Tedious labour, consanguinity of parents, and congenital syphilis—especially the latter two—were not such common causes as many supposed. The histories of the cases were obtained from the parents, and corrected by knowledge received from relations and parish officials.—Dr. LANGDON DOWN felt gratified at the confirmation of his own published observations by the valuable papers to which they had listened. Dr. Langdon Down desired to call attention to the developmental class of idiots to which he had previously adverted. Emotional disturbance of the mother during gestation was, in his opinion, a most important factor, and the kind of idiocy which resulted was depending on the period of gestation at which the disturbance took place.

Idiot Brains.—Dr. SHUTTLEWORTH exhibited a series of idiot brains.

Sections of the Brain of the Marmoset stained by Weigert's and Pal's Methods.—Dr. BEEVOR showed sections of the brains of marmoset and monkey stained by Weigert's and by Pal's hæmatoxylin methods. The whole brain was hardened by bichromate of potash (3 per cent.) for six months, and, after embedding in celloidin, sections were cut; and, after being stained by hæmatoxylin (gr. iv to ℥ss alcohol absolute, and ℥j of water) for twenty-four hours, the sections were washed in water, and then, in the case of Weigert's method, transferred to a solution of ferricyanide of potash and borax (gr. vj of each to ℥j of water); and, after complete differentiation, the sections were washed in water, dehydrated, and mounted in Canada balsam. With Pal's method, the sections, after staining by hæmatoxylin, and washing in water, were treated by a solution of permanganate of potash (one-quarter per cent. in water), until a distinct differentiation was observed between the white and the grey matter; after this the sections were bleached in Pal's solution (pot. sulphite and oxalic acid, gr. iij of each to ℥j of water), until the grey matter was bleached white; probably this effect would not be produced the first time, and the section must be washed in water and passed again through the solution of permanganate of potash, followed by that of sulphite of potash, and then by water; this process must be repeated until the grey matter became quite white. The white fibres should be stained dark blue or black. The hæmatoxylin solution should be made fresh, and its power of staining was increased by adding a very minute quantity (1 per cent. of saturated water solution of lithia carbonate) just before using. Serial sections of the marmoset's brain in different directions were shown, and also some sections of the monkey's brain. After Pal's method the section could be stained by carmine.

A REVIEW OF METHODS FOR THE EXACT REGISTRATION OF SOME COARSE CHANGES IN THE BRAINS OF THE INSANE.

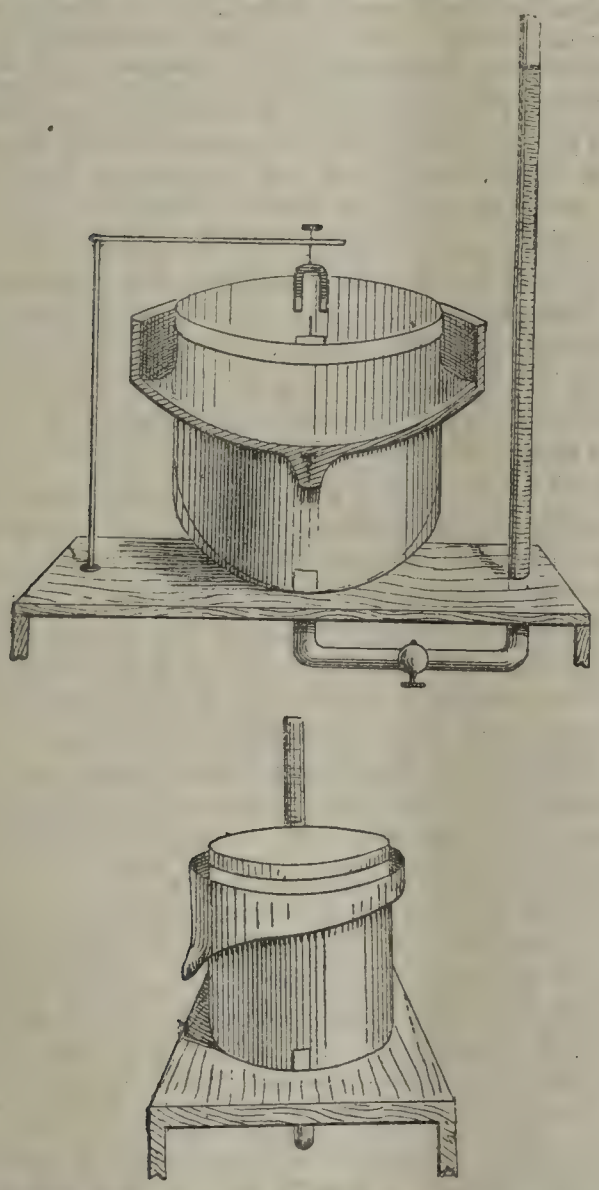
Read in the Section of Psychology at the Annual Meeting of the British Medical Association held in Leeds, August, 1889.

BY F. ST. JOHN BULLEN, M.R.C.S.,
Pathologist to the Wakefield Asylum.

HOWEVER fluent and happy may be the language in which the written descriptions of morbid appearances are made, it must be obvious that, unless the terms of expression in which they are couched be those of an undeniably exact and indisputable kind—so far as is possible, at least—and capable of representing accurately to the reader those states observed by the writer, errors without number can arise. With the most conscientious bias may step in, and the more enthusiastic the inquirer the more danger there is, perhaps, of the same assuming faulty proportions, and thus, from this latitude of expression, all terms of description possessing extensibility are dangerous. Therefore our attention should be ever directed towards the devising of means by which the personal element in recording may be negatived, and unequivocal statements replace those accounts which, however carefully and veritably essayed, have their vividness and exactness to a great extent alone in the mind of him describing, and must fail in the transmission of such recall of conditions to others. Unfortunately, it goes without saying, these much-to-be-desired methods are neither easily devised nor when devised applied in many cases; but some approach to greater accuracy (by the persistent use of methods already of acknowledged service) than has hitherto been attained is certainly prospective as regards many features of which we need note. And, moreover, even if means suggested and employed are at first crude and unsatisfactory, it is to be hoped and endeavoured that other modes more perfect may improve or supplant. Even now, if we reckon up the methods of investigation at present open to us in dealing with the brain, we find in any single organ ample labour for several workers, so great in number and importance are the varied features demanding prolonged and assiduous inspection and so delicate the manipulations often required. If we include microscopic examination in our research, the task is almost illimitable, and the latter's importance is indeed great out of all comparison with the coarse methods. Yet these latter may yield facts of much import and special value, thus all means adapted to their careful study must prove worthy of consideration. It may

be, hence, admissible to take a cursory view of such means as are at present to our knowledge serviceable and in actual use with us. Taking in hand first the varying conditions of skull-structure and conformation, we see that in this department alone very considerable labour may be expended. It is customary in the West Riding Asylum to preserve in every instance a ring of the skull, which is taken through the occipital protuberance behind and through the frontal bone at about an inch above the root of the nose. This ring is useful apart from furnishing certain measurements, in being a chronicle of the thickness and density of the osseous structures. Its depth is about 0.75 cubic centimètres only, so that bundles of the segments can be (separately labelled) stowed away in small space for convenient inspection. Further, an accurate modelling of the skull-cavity by means of paraffin wax is obtained. The uses of this have been previously summarised by Dr. Bevan Lewis; briefly recapitulated, they are: the procural of a perfect mould of the cranial cavity, from which can be ascertained its volume, and which serves for subsequent comparison with that of the brain and estimation of the amount of wasting suffered by the latter, and as a means by which all requirements for craniometrical observations are furnished. It is easy, again, to obtain a faithful representation of the cranial interior from this model by the use of plaster-of-paris. If the method adopted by Dr. Tuke for estimating the capacity of the cranial cavity be preferred for any reason, we have found it convenient, after plugging the foramen magnum with a tightly-fitting cork, to brush the remaining orifices over with just liquid paraffin wax, which almost immediately sets, and forms a thin yet resistant film, quite occluding. The amount used is most inconsiderable, but can be approximately estimated by simply melting a known weight of the wax. No escape whatever is traceable after this process has been applied. Valuable records are also obtained by taking paraffin-wax moulds of the brain hemispheres, and casting plaster models from them. The mode of application will need to be varied according as to whether a cast of the entire organ is desired, with a view of showing its characters as a whole, in regard to peculiarities of contour due to atrophic changes, internal softenings, etc., or to obtain, more especially, representations of the convolutory arrangement for study. In the latter case the hemispheres are best separated and laid on the mesial surface, some small block being placed beneath, that the convexity of the exposed aspect being further increased, the wax may better penetrate into the opened fissures. Whatever result be aimed at, the method used is simply that of pouring wax sufficiently liquefied from a spouted vessel over the brain surface until a thick enough coating is secured. When fairly set, which is speedily accomplished, an immersion in cold water completely consolidates it and renders it fit for removal. Very perfect plaster casts can be procured from these, and, indeed, are of superior use for some purposes to photographs or to methods of preserving the brain, inasmuch as the latter often cause shrinking and distortion of the original shape of the organ, whilst the predescribed mode is effectual in securing an exact counterpart. More particularly useful will this process be found when it appears needful to examine the interior of the brain at the same time that the external features necessitate being made permanent. We have not found the pursuance of this procedure to act unfavourably on the brain cortex as regards subsequent microscopic investigation; of two portions taken from the same organ and respectively subjected and non-subjected to the action of the wax, no obvious difference was found. The lowest temperature at which complete fluidity is obtained is, of course, used, whilst if special sites of the cortex are previously decided upon for examination, the membranes can, as indeed they always should be for the latter purpose, be left unremoved, which still further diminishes the chances of penetration. The most satisfactory method of preserving the brain itself is that of Giacomini's, described in the July number of the *Journal of the Neurological Society* for 1880. The process, as there given, has been considerably modified in its performance at the Wakefield Asylum, and the preparations now obtained, as compared with those made on the original formula, are sufficiently superior to justify the description of the procedure at present adopted. The brain is first immersed in a saturated solution of zinc chloride. The exact proportion in which the salt exists to the water I am unable to give, but usually about six pounds is added to ten litres of fluid. The commercial chloride of zinc generally contains some white powder, which is precipitated when the former dissolves, and may be mistaken for the first indication of a fully saturated solution. After the brain has been three days in the preceding, the membranes are stripped, either whilst it is in the chloride liquor, or else when it has been transferred to water for this purpose. It is then replaced in the solution, and allowed to remain in such for about a month, until which time, if the concentration be proper, free permeation of the brain will not have taken place, and consequently the latter not have sunk. If a weaker solution be used, the brain will subside more speedily, and will prove eventually that it has not obtained a fit consistence. When the period for chloride-immersion has expired, removal to spirit is accomplished, and the organ allowed to soak for about fourteen days; the bottom of the jar in which it is contained being well covered by wool to protect the brain from pressure. At the end of this time the organ is transferred to glycerine, and is passed through three strengths of the latter. This procedure is both economical and effectual. The fresh glycerine, forming No. 3 of one performance of the process, becomes No. 2 on the second, and No. 1 (or the weakest) on the third. In this last, the brain is first deposited, and remains for some seven to ten days, is then placed in the glycerine of medium strength for about fourteen days, and in the third or strongest quality for a time varying from one to six months, the sinking indicative of complete absorption occasionally not taking place before this latter period. Wrapping in clean soft rags until all draining has ceased then follows, and finally some three coats of varnish are applied (what is called "paper-hangers'" being by far the best). The more perfect is the result the less hurried are any of the stages, and, plenty of time being given, the contour and consistence are most excellently preserved. The latter, indeed, becomes increased to almost wooden hardness, and the organ may be handled to any extent without fear. The difference in the results between the process as originally and as now performed is indicated in one way by the brain weights before and after the treatment. As examples: Brain prepared in 1886—before, 1,740; after, 820. Brain prepared in 1888—before, 1655; after, 1145; or, the membranes being stripped, as 1550 and 1475 respectively. The apparatus which has been hitherto used for obtaining the specific gravity of the whole brain has nothing to distinguish it from Stevenson's except some difference in the size and inclination of the mouthpiece. After a considerable number of trials with this apparatus (nearly 150), I am sufficiently dissatisfied with the results to suppress them. The objections appearing more weighty are these: in an ordinary bell jar of circular shape, the diameter which is ample for the long axis of the brain is much over-sufficient for the transverse; thus a larger superficies than needful exists, and so the vertical displacement is minimised. Hence a considerable quantity of fluid can be added without producing any appreciable rise of level. This, unless it can be made certain that the extreme limit, short of overflow, has been reached is a serious fallacy, and I have found, in the case of the before-mentioned jar, when this point has seemingly been gained, that fluid may still at times be added, owing to the uncertain amount of accumulation around the escape orifice as a result of cohesion. If the bulk of the fluid, indeed, be very carefully augmented, the level will be raised to a point much above that at which it will stand after the overflow has taken place, inasmuch as the cohesion of the liquid to the lip of the mouth being overcome, the influence of molecular attraction acting from the sloping gutter of the jar is sufficient to accomplish this. Another undesirable feature is the delay ensuing on the overflow through a limited aperture, which it is not of service to make free in a vertical direction, since the rise of fluid is not much. Again, owing to the escape of fluid being in one direction only, a current thither is established which has sufficient force to materially aid the aforesaid influence of molecular attraction. This form of apparatus I take, then, not to fulfil certain conditions implied, if accuracy is sought after, such being rapidity, in order to prevent the ready imbibition by the brain of the fluid, as far as possible; easy overflow, by means which should not involve any resistance to free and ready escape on the one hand nor inducement to accumulation on the other; efficient collection and graduation of the displaced fluid, the method of estimation being sufficiently precise to afford measurements in 1 cubic centimètre; an accurate mode of ascertaining the highest level which can be reached short of an overflow; and a jar for immersion, more adapted to the shape of the brain, in order that, the plane superficies being diminished as far as possible, the displacement of fluid may be increased in proportion vertically. A fluid of higher specific gravity than water should be used in order

to diminish the exchange between the brain and such medium, which is prejudicial to the accuracy of the results. I have just had completed a rough model of an apparatus which I think will embrace fairly accurately the foregoing requirements. Its characters are these: Around the upper part of a glass bell-jar runs a gutter-like trough, the floor of which has a sharp downward inclination to the spout through which the trough empties itself. Over the jar is suspended a small magnet, which is capable of being adjusted by a fine screw to a required level, and in completion of this part of the apparatus, a needle fixed in the centre of a cork-dial (to float on the surface of the fluid held in the jar). A tube opening into the floor of the jar curves from it outwards and upwards, and then ascends vertically. It is graduated in cubic centimètres, and the communication between it and the jar is controlled by a stop-cock. The mode of working is as follows: The highest level to which the fluid in the jar can be brought without overflow is found after a few trials, and the magnet is so adjusted that at this point the needle of the cork-float touches the metal. I may here say that I have found, after several experiments with a jar of large superficies, that a couple of cubic centimètres added is sufficient to diminish an almost inappreciable distance, and cause the needle point to adhere to the magnet. The graduated vertical tube is then filled and the level of fluid carefully noted (the connection with the bell-jar being shut off). The latter is now filled to its extreme capacity, and the body whose specific gravity is to be taken lowered carefully in. When no



more fluid runs over the edge of the jar and the oscillation of its contents has ceased, the stop-cock commanding the communication between the jar and vertical graduated tube is opened and the fluid held in the same allowed to flow in gently until the cork-float once again touches the magnet. The difference between the level of fluid in the tube before and after this shows by graduation in cubic centimètres the amount displaced from the jar, which for corroboration may be compared with the overflow collected from the gutter-like trough surrounding the jar

This process, once performed for ascertaining the weight displacement, is repeated to obtain the volume. Such experiments as have at present been made by me with this apparatus show considerable accuracy, which promises to be made quite complete when a perfect model has been constructed. With regard to taking the specific gravity of small portions of the cortical and medullary substance, the method still used at the Wakefield Asylum, and, as far as I know, not replaced by any other one elsewhere, is that of Dr. Sankey, as originally described. There is one morbid change which it is highly important to measure the extent of correctly—namely, atrophic thinning of the grey cortex. It has been noted in a considerable proportion of the synopsised cases, but merely in the form of arbitrary statements, so far as I am aware, and without accurate measurement. This latter it is less easy or more unsatisfactory to make than would seem probable. The variations in depth are, expectedly, very delicate, and the definition of the lower layers of grey matter indifferently apparent, especially under conditions of pronounced anæmia or degeneration being badly demarcated from the white substance. In fact a line of separation is—indeed, naturally so—only clear under favourable circumstances when viewed by the naked eye, and magnifying rather hinders than helps. With regard to such modes of measurement as are feasible, it appears to me that as, from the preceding, these naked-eye markings must be somewhat coarse, the simpler the means used the better. Through the kindness of Dr. H. Major I was furnished with specimens of his tephrylometer, but, after frequent and careful trials, I am compelled to confess that the objections mentioned in the *Psychological Medicine* of Drs. Bucknill and Tuke have weight. The column of brain undoubtedly undergoes elongation, whilst it is also difficult to secure horizontallism of the grey matter in the tube. Blood-stained fluid, too, is often superimposed and obscures the demarcation. Traction on the brain column may be avoided to some extent by either section with a scalpel made across the imbedded end of the tube prior to withdrawal, or by separating a portion of the convolution whose depth of grey cortex is to be estimated before plunging the instrument in. The hair-divider compass used by Dr. Tuke I have not tried; it is doubtless capable of registering very delicate variations. The simple method employed by myself consists of a glass slip 3 inches by 1, made by Zeiss, on which 50 millimètres divided into 0.5 millimètre are inscribed. It requires no more precaution in using than the avoidance of a film of moisture between it and the cortex, which both obscures and magnifies, and the maintenance of both head and hand in absolute steadiness during application. I have no reason to be dissatisfied with this more primitive form of instrument, though its finest divisions are the half millimètre. In making any series of measurements it is, of course, necessary to fix upon certain definite sites of the cortex, and none, I think, can be better chosen for ordinary purposes than those included in Pitré's series of sections. It is advantageous, in estimating the depths in these different regions, to have the outlines of the sections cut on a slate slab, and to mark them down with chalk as they are measured. Few parts of the brain-exploration appear to me to deserve more attentive investigation than does the arterial system, and, from systematised measurements of the vessels, I should incline to hope for results full of value. There are some remarks made by Dr. Lowenfeld, in his recent work on *Cerebral Hæmorrhage*, relative to the connection of certain vascular conditions with heredity, so pregnant of suggestion, that it may be pardonable in the consideration of this portion of the subject to recall them briefly. His statements embrace the following: "That the development of the brain does not run parallel with that of the body, so development of the cerebral vascular apparatus cannot go in entire proportion under normal circumstances; and as the relation in size of the brain to the body varies, so that between the cerebral vascular system and brain, and not the general arterial apparatus, is the standard to be regarded. Varying relations between the brain and its vessel-system may exist through a superaverage development of the former with one of the latter, in proportion to that of the general arterial system, or with a formation of the brain-vessel apparatus on the scale of lowest limits of physiological development; or, lastly, by this being in excess in proportion to a medium or underaverage brain. These preceding dicta are arrived at in the following way: Examination of the width of the cerebral vessels in relation to the weight of the brain, and to the width of the aorta (as presenting the expression of the entire remaining arterial system), and also as to absolute dimensions (made in healthy

brains with healthy vessels). Thus, taking the united breadth of both carotids and vertebrals as representing the collective value of the brain-vascular system, the quota of such falling to each 100 grammes weight of cerebrum varies between 0.175 and 0.315 centimètres, or, with a fixed weight of brain, the vessel-breadth (taking 1 as the minimum of the arterial area) lies betwixt 1 and 1.8. The circumference of the aorta increases to the end of life; that after the age of 50 being, however, merely a dilatation from lessened elasticity. The relative cerebral vascular breadth also increases up to the age of 50, and is partially, but not altogether, an appearance of age, therefore. That this last is minor in influence compared to other causes of variation is shown by the average relative breadth of the brain vessels varying between the ages of 20 and 50 from 23 to 25 only, or, in other terms, as 8.6 only, the minimal value. This is the difference occasioned by age. But betwixt the age of 20 and 30, and 30 and 40, the relative breadth fluctuates to the extent of 50 per cent. of the minimum, and from the age of 40 to 50 to 41 per cent. Further, neither absolute nor relative measurements run entirely parallel with those of aorta. Hence the ensuing conclusions are arrived at: That the relation of the arterial system of the brain to the weight of the latter is subject, even under normal conditions, to considerable variations; that deficient development of the former (as indicated by minimal value of relative breadth) can certainly coincide with a corresponding condition of the entire arterial system, but that this is in nowise always the case; and that defective condition of brain vessels may exist with an otherwise well-developed vascular system." I have given the preceding (as concisely as possible) because it seems to me to well indicate the direction in which investigation deserves pushing, and also furnishes the scheme for such. The measurements were made with a delicate compass (hair-divider ?), and the distance between the points marked off on a micrometer glass slip. They were not taken on the day of section, but from twenty-four to thirty-six hours after death, to avoid the very important influence of death rigor. The same portions of the same vessels were always chosen; the carotid just below the bifurcation, the basilar directly above the union of the vertebrals, and the latter immediately below this point.

Dr. BEEVOR had used Giacomini's method of preserving brains, and had not found the method of much use for coarse sections of the brain, as the differentiation of the colour between the white and grey matter was not well preserved; but, for showing the convolutions of the brain, it was very well suited. Mr. Bullen had improved the methods so that there was less shrinkage than formerly, and he was to be congratulated on his paper, which was an indication of the exceedingly valuable pathological work which was being done at the West Riding Asylum.—Dr. WILBERFORCE SMITH made some observations on the value and results of a routine habit of examining the carotid pulse in the neck.—The PRESIDENT had been successful in employing the glycerine and chloride of zinc method in preserving the brain.

DRAFT REPORT OF THE COMMITTEE APPOINTED TO INVESTIGATE THE AVERAGE DEVELOPMENT AND CONDITION OF BRAIN FUNCTION AMONG CHILDREN IN PRIMARY SCHOOLS.

IN some introductory remarks the PRESIDENT reminded the Section of the action taken last year in appointing a committee to investigate the average development and condition of brain function among the children in primary schools. That Committee had prepared a report of the work done by certain members of it, and several separate reports of other members would be presented for adoption. It must be clearly understood, however, that in adopting the general report drawn up by Dr. Warner, or the separate ones, they did not in the slightest degree commit the Psychology Section to the correctness of the details contained in them. To Dr. Warner they were all greatly indebted for the labour and time he had expended on the preparation of the tables accompanying this report, but he did not ask them to acquiesce in the tests and opinions he had adopted in testing mental defects by external physical signs. Dr. Tuke then called on Dr. Warner to present the draft report of the Committee.

Dr. WARNER, in moving the adoption of the report, said a large part of this report was published in the JOURNAL of July 27th. A list of 41 cases was given of the pupils, among the 5,000 pupils seen, who appeared, for various reasons stated, to be "exceptional children" from the educational point of view. It was pointed out that, while conditions of over nerve mobility were most common among girls, this sex presented the smallest proportion of dull children; on the other hand, boys presented the highest number of cases of defects in development and mental dulness. It was distinctly stated that the number of cases presenting "some nerve signs" was not to be taken as representing the proportion of children unfit for ordinary education. The frequent alliance between conditions of defect in development of visible parts of the body and mental dulness as reported by the teachers, low nutrition, and nerve defects, was pointed out in the statistics presented. Defective form of palate appeared more frequently to coincide with brain defects than did the epicanthic fold of deformed ears. A list of various defects found was given, and it was pointed out that *petit mal* was to be found among school children.

Dr. SHUTTLEWORTH, in seconding the adoption of the report, urged that the draft report on London schools, as printed, should be accepted by the Section as a portion of the general report on the subject of the physical development and brain state of school children. He mentioned that he had himself made an independent examination of some primary schools at Lancaster, but he did not propose to bring forward these statistics now, but was content, on the present occasion, to be a junior partner in the report so ably drawn up by Dr. Warner. He had had the privilege of accompanying Dr. Warner in the examination of a large national school in London, and he was bound to say that, starting with some prejudices against that gentleman's methods, he was much gratified with the fairness of the examination of the pupils and the subordination of the preconceived bias to the observation of actual facts. If the importance of this inquiry needed emphasising such emphasis was given by the report of the Royal Commission on Blind, Deaf-mutes, and Exceptional Children, who referred to the inquiries of Dr. Warner's Committee with interest, and quoted some of the figures. General Moberly, who appeared before the Commission as representing the London School Board, stated that there were 20 idiots attending school and 435 not attending. Under the head of those under 13 and permanently disabled there were a little under 3,000, 596 attending, 2,358 not attending. Surely this was an argument for opening the schools under the Board to such an inquiry as this Committee was carrying on.

Dr. FLETCHER BEACH supported the adoption of the report, and he did so specially because he had been associated with Dr. Warner in the examination of four or five schools. At the outset Dr. Beach was anxious that not too much prominence should be given to the association of nerve symptoms with mental defect or exceptional children; but he was bound to confess that Dr. Warner was specially careful that his ideas should not be unduly pressed. In two schools the visit was made soon after the examination of the Government inspector, and then the proportion was 1 in $7\frac{1}{2}$. This was thought to be too great, and on a subsequent visit the proportion was 1 in 10. Dr. Moberly, Chairman of the Subcommittee of the Deaf and Dumb and Blind of the School Board of London, told Dr. Beach that he had recently tried to have special classes appointed by the School Board for the education of exceptional children, but without avail; it was to be hoped that the reports now presented might have an influence for good. Dr. Beach wished that the schedules and paper of suggestions drawn up might be approved by the Section.

Dr. IRELAND said that he had made a report about the Board School of Prestonpans. In this parish there were 2,265 inhabitants, and 502 children on the school roll. There was only one school, where all the children were compelled to go. He found in this school five decidedly imbecile children, fifteen dull of hearing, and twelve shortsighted. He did not think that to establish special schools for very dull children would be popular in Great Britain. There were such special schools in Germany and Norway, which were conducted through special methods, but he thought that in this country the difficulty would be met by having special arrangements for backward children in separate rooms of the large board schools. He read portions of a report from Jakob Sœthie concerning the success of the school for backward children under his charge at Bergen.

The following report, presented to the Committee by Dr. Savage, was then read:—

I have had no time to undertake personal investigation of the schools, but in consulting practice I have many opportunities of seeing and examining such children, and I am convinced that though the percentage is small, the total is yet considerable, and

that there is a large number of all classes of children unfit for the general education given in board and public schools. I believe that a teacher of some years' experience readily detects such children, but hitherto no fixed points have been discovered, from which it may at once be decided that such and such a child is unfit for general education. In my experience there are the two great distinctions, first, those children who from moral rather than intellectual defects are unfit for general training; and secondly, those who are intellectually defective. I find in the first class children who are dull, often solitary and unsocial. With these peculiarities the head shape has, in my experience, but little to teach us, the expression of face is often a great aid; in these children there may be apparent attention and application but with little gain; they appear to be left out of all friendship by the rest of the normal children. A much more serious group of children unfitted for general education is that in which there is distinct loss of moral power; these children are social and not solitary, they are often bright and restless. I do not know of any special signs either physical or from expression which will lead one to detect such children. As to the intellectually defective, I find there is a large group in which the children are defective in power of application: they understand a thing, but at once pass on to the next, without allowing time for the fixing of mental impressions. Some of these children pass for great students, but their reading leaves very little behind. In some of these there is marked restlessness, and this is well recorded in some of Dr. Warner's observations. Defect of power of attention with or without restlessness is common, and in some of these children, though musical and similar sensory impressions may be received, retained, and reproduced, yet the children are unable to comprehend the simplest numerical relations. There may be distinct defect in the general recording process, so that the memory appears to be absent, and these children are readily pointed out by the teachers, though they have little or no physical expression of the defect, or they may be even harder to detect and classify, for they may have special aptitudes with correlated defects, the born musician may be incapable of mathematical or general training. In my experience these highly specialised children are very few in any class, and are almost unknown in such schools as those of King Edward at Witley and London. The restlessness and want of power of attention strike me as the most readily recognisable symptoms of many forms of intellectual defect hindering general education. As to sensory defects, these have been so carefully studied, in part at least, by the Commission on the Blind, etc.,[1] that I need only say that the neglected deaf readily pass into a state of weakness of mind and their defect necessitates special means of training, and the more full this is, and the sooner, as far as the age of patient is concerned, it is begun, the better for the public and the children. I have it on the authority of a former teacher of the deaf and dumb of a great city, that by the time the children were sent to their schools they were generally partially weak-minded as well, and so it was hard to get any good results from such material. The head size and shape have, in some cases, great value, but it will not do to select only those with defective heads for special training. I believe a misshapen head is more often associated with intellectual and moral defects than one only below the normal size, I invariably examine the height and width of the palate, and I am convinced that in many cases it confirms the diagnosis of congenital defect if the palate be high and narrow. It is difficult to know how best to classify speech defects which may interfere with ordinary teaching, and which may yet, by special training, be relieved or cured. Some writers on idiocy make the power of speech the keystone of their system of classification, and I consider that very much is to be learnt from it. Stuttering and stammering may be quite independent of other defects, but in many cases the children thus affected come of nervous stock, and some, at least, have other defects correlated to it. In many cases there are to be recognised other sense defects allied to stammering, and these uncertain and spasmodic performances of function; these conditions which I always look upon as allied to the feeling of doubt greatly affect the power of acquiring knowledge. This field of observation needs investigation. To this discursive introduction I add the result of the experience of the two head teachers at King Edward's Schools, where there were on December 31st, 1888, 239 boys and 240 girls, 183 having been admitted during the year. The children have lost their fathers, belong to the lower classes, and are trained for domestic service and as artisans, or for the army, etc. They are admitted after passing a medical examination at the age of about 11, and are, therefore, to a certain extent, a specially selected class, free at least from gross bodily or sensory defect.

[1] *Times*, July 25th and 27th.

Report of Mr. Smith, King Edward's Schools, Witley, schoolmaster.—Moral defects in boys may depend (*a*) on congenital defect, (*b*) on bad surroundings. In such boys there is often intellectual activity. The degrees of defect are: 1, Wanton mischief; 2, lying and cheating; 3, thieving; loss of conscious responsibility. Such defects not to be detected at once. In such, association under careful supervision is better than isolation. Dull boys often are the more moral. Intellectual defects are less common than moral ones. Of 240 boys, 12 would be markedly deficient, but only 6 need special arrangements for education. Such defects are easily detected by experienced teachers, but no rule can be given to guide the judgment. Such boys always assume knowledge, as if to throw the teacher off the scent, but when detected as deficient they are depressed. There is generally a want of facial expression in these boys; they are often violent and passionate without cause. I have studied head shapes, and find no certain aid to be obtained from this. I believe one may learn more in five minutes' conversation with a boy than from any amount of speculative examination of head and body.

Report of Miss Wilson, King Edward's Schools for Girls, London, schoolmistress.—Only 1 in 200 unfit for general class education. These have heavy aspect and are often restless. This dulness often joined with cunning. Easily moved to tears. Single teaching often advances these children fairly well.

Dr. YELLOWLEES paid a high tribute to the wonderful enthusiasm of Dr. Warner, and he hoped he would not be misunderstood when he said that enthusiasts were in danger of becoming extremists. Referring to the printed report of investigations on the London schools, he said the reporters seemed to him to have done their work too well, and with a minuteness of detail which, if applied even to the sacred ranks of the British Medical Association, would assuredly result in the tabulation of many members. He thought such conditions as "nervousness" and "mental dulness" far too vague, and often perfectly consistent with average mental health and with ordinary school education. The statement of the teacher and a conversation with the pupil he deemed far more important than such physical signs as the mode of projecting the hand, which was variable and uncertain. The observations in the reports overlooked the moral obliquities of childhood which, as referred to by Dr. Savage, were so very important. That really feeble-minded children required a special and modified education all agreed; and this should be in a separate class, not in a separate school. But, when they tabulated so large a proportion of children as in these tables, the public were apt to laugh at them as mere faddists, imagining that they wished separate instruction for all. No one had any such idea, and it would be a serious injury to the merely nervous children to be associated only with the feeble-minded. The question had a public and social aspect as well as a scientific and medical one. In the latter let them be as minute in their observations as they pleased, but in the public aspect of it a practicable and reasonable line must be drawn.

Mr. WILKINSON, Chairman of the Leeds School Board, said that he was present to show that those who were engaged in the practical working of elementary education were ready to welcome and assist in any effort to improve the present system of education. It was a most difficult and complex problem, and if all who were interested in it were to approach it with mutual confidence, the result would be sure to be beneficial. That the dull children were a drag upon the whole school was self-evident, but what to do with them was not so easy. A separate school for them would be an injustice to them, as it would stamp them for all life; but it might be possible and advantageous to put them into separate classes with special teachers.

Professor SMITHELL, Professor of Chemistry, Leeds College, expressed the opinion that the subject was one that should be considered both by teachers and medical men, in order to obtain if possible the body of evidence necessary to interest and convince the public. He considered it would be extremely difficult to constitute a class of "dullards" on a medical diagnosis only, and that the isolation of such a class would be resented both by the pupils and their parents. He thought also that a large portion of the dull children who acted as a drag on the education of others were dull not entirely by innate dulness, but largely because of the want of educational methods attractive and stimulating enough to develop their dormant intelligence. He thought that the inquiry would be more instructive, say, ten years hence, when it

was to be hoped our methods of education would be vastly improved.

Dr. LANGDON DOWN was glad to find, in the report of Dr. Warner, and in that of Dr. Savage, a recognition of what he had long taught of the correlation of cranial forms with mental defect. He felt, while much might be done by a study of cranial defects, there was a danger that the ratepayer might be alarmed by the cost of special schools. Dr. Langdon Down thought that a large number of children of a backward character might be advantageously trained in separate class rooms. While agreeing with Dr. Yellowlees that there was a tendency to too great refinement in the report, he also thought that great praise was due to Dr. Warner for the time and trouble he had given to the subject. He was most anxious for an extension of educational training for the really feeble-minded of the poorer classes in various counties such as was now existing in the metropolis.

Dr. BOWERS desired to emphasise the remarks of a previous speaker, and to express his opinion that dull children were manufactured by the cast-iron requirements of modern education codes, and that it would be possible to carry on their education in general classes much more advantageously than in special classes, far less in separate schools, where the teachers' work was judged by the general state of the classes, instead of, as at present, by the passes of each individual child.

Dr. WILBERFORCE said that medical observation could be reduced to numbers in a degree much greater than had hitherto been effected. This was true in regard to ordinary medical work, and must especially apply to extensive observation in schools. Mr. Galton's precise methods were only an indication of much more that could be done in the same direction. Dr. Warner's interesting methods of investigation had been truly described as possessing too much refinement for extensive employment.

Dr. FLETCHER BEACH moved that these reports be adopted, the Committee dissolved, and that a residual Committee, consisting of Drs. Hack Tuke, Shuttleworth, Ireland, Yellowlees, Fletcher Beach, and Warner, should have power to publish them, and use the funds granted by the British Medical Association for that purpose.

Dr. SHUTTLEWORTH, in seconding the resolution, took the opportunity of mentioning, in connection with the remarks of Dr. Ireland, that in Norway the great merit of separate classes for feeble-minded children was the provision of extra teaching power for these classes. One teacher was provided for ten of the abnormal children—a very liberal allowance as compared with one to thirty, the proportion of teachers to normal children. It was manifest that three times the ordinary teaching power was calculated to make an impression.

The following resolutions were proposed by Dr. YELLOWLEES and seconded by Dr. WARNER: (1) "That a Committee be appointed to study further the conditions of development and brain-power of children, and to bring such studies under the notice of school teachers. (2) That the Committee have power to add to their number from outside the medical profession, and to communicate on this subject with various educational bodies. (3) That the Committee be authorised to apply for money grants, and to publish a report."

The resolutions were carried unanimously.

The following resolution, moved by Dr. YELLOWLEES and seconded by Mr. NORTH, was carried: "That the Section of Psychology of the British Medical Association, having conducted an investigation and considered their report as to the average development and brain-power among children seen in primary schools, is of opinion that a Scientific Committee should be appointed by the Government for the further elucidation of this question."

TYPHOID AT THE WEST END.—On September 10th, Dr. W. H. Corfield reported to the Committee of Works of the parish of St. George, Hanover Square, that he had failed to trace any connection between the recent outbreak of typhoid fever at the West End and the milk supply. As an illustration of the difficulty of such an investigation, he mentioned that one firm which had furnished some of the dealers who supplied the houses in which cases had occurred with a portion of their milk, obtained their own supply from about sixty different farms.

THE sum of £3,000 has been contributed this year by the working classes to the revenue of the Wolverhampton General Hospital. This is an increase of £200 upon that of the previous year.

THERAPEUTIC MEMORANDA.

ANTIPYRIN IN RENAL DISEASE AND DIABETES.

IN the summer of 1888, while acting as honorary medical officer to the Cottage Hospital, Clevedon, Somerset, the following case came under my care.

On the card over the patient's bed was written, "J. B., aged 29, Bright's disease." The matron informed me that the case was regarded as hopeless. The patient was admitted March 3rd, 1888, having been in good health till two months before. She was then seized with a diphtheritic sore throat, and soon after ordered to Clevedon for change of air. On the journey she caught cold, and dropsy quickly supervened. From the date of admission to the following June, in spite of careful nursing and medical treatment, the malady made steady progress.

I saw her for the first time on June 14th. There was then extreme general dropsy, the abdomen, face, and extremities being tensely distended with dropsical effusion, great pain in the back, especially the lumbar region; intense headache, failing vision, heart action weak and irregular, difficulty of breathing, owing probably to a pushed-up diaphragm and pleural effusion; the skin sallow, tense, and shining; urine scanty, of high specific gravity, and loaded with albumen; anæmia and general prostration. The condition of the eyes was very characteristic, the lower lids forming two distended translucent pouches; but the condition of the ocular conjunctivæ was very striking; these were, to a large extent, raised from the sclerotic in transparent bladders of effusion, producing chemosis, and seriously endangering the circulation of the cornea.

From previous slight but inconclusive observations of antipyrin in renal cases, and with a view to relieving the intense headache, I ordered three grains twice a day, with strict instructions that the action of the heart should be carefully watched. The need for this precaution was quickly demonstrated by the increased irregularity, fainting, etc.

On the third day the dose was reduced to three grains daily. From this date general amelioration of symptoms was observed, and constant steady improvement recorded. After a few days a tonic supplemented this treatment, and in the course of three weeks a great change was observable. The dropsy was much less, the intense headache relieved, the appetite improved, and the patient much brighter and more hopeful. By the beginning of August she was up and about visiting friends. All traces of dropsy had disappeared, the general health was good, and there remained only a small quantity of albumen in the urine. On August 13th she was discharged for a convalescent home.

With regard to the effect of antipyrin in diabetes, I may be allowed to cite the following case, though incomplete.

While spending some of the winter months at Arcachon, a clergyman, aged 64, consulted me. He had been in failing health for some time, and his French physician was treating him for diabetes. I found a large quantity of sugar in the urine. I again adopted the antipyrin treatment, and the same cardiac intolerance was manifested. I reduced the dose to three grains daily. At the end of three weeks his health was much improved, and the amount of sugar reduced to one-fourth. I afterwards lost sight of the case.

Nice. M. H. FEENY, M.R.C.S., L.R.C.P.Ed., L.M.

CLINICAL MEMORANDA.

SUDDEN DEATH FROM ANKYLOSTOMIASIS.

R., a Hindu, aged about 40, arrived at a Coolie house in the country about 5 P.M. on July 6th, 1889. He came from the direction of Port of Spain, and was a vagrant. During the next day he complained of feeling ill, but his symptoms were vague, and no doctor was sent for. He died at 9 P.M.

On the information of the police, I made a *post-mortem* examination the next day. The duodenum and jejunum contained large quantities of dark, tarry blood and mucus, together with a great number of the ankylostoma duodenale. The stomach was inflamed, and contained several ounces of dirty, reddish liquid. The brain and other viscera were healthy, and the man was muscular, well developed, and not markedly anæmic.

In view of the obscurity of the history, I sent the stomach and intestine to Mr. McCarthy, Government Analyst, but he failed to

detect any poison. It would therefore appear that the ankylostomiasis was the cause of the sudden death.

Dr. Lutz, in his monograph, does not mention sudden death in this disease, but he describes a condition of cardiac irritability, presumably reflex. As no organic disease of the heart was found in this case, it may be that the reflex condition was the immediate cause of death.

BEAVEN RAKE, M.D.Lond
Trinidad.

CASE OF ANÆSTHETIC LEPROSY.

M. B., widow, native of Ayrshire, aged 70 years, was born in Ayrshire in 1819, and married a farm servant in Wigtownshire in 1835. In 1837 she accompanied her husband to Demerara, where she lived continuously for twenty-five years. At the end of ten years her husband died, and after living as a widow for four years she married a second time, and ten years afterwards this marriage was dissolved by the death of her husband. During her residence in Demerara she was constantly in the habit of using fish, both fresh and salted, as an article of diet, and she suffered much from fever and ague. In 1862 she returned to this country. She had in all six children, who all died in infancy, with the exception of one girl, who married, went to America, and disappeared. In 1863 she went out as children's nurse in a gentleman's family to Ceylon, where she remained about four months; and after returning to this country she again left it in 1864 for Australia, where she lived in good service with one family for four years. In 1868 she returned to Scotland, and she found employment in an upholsterer's shop in Glasgow. After working there for about six months her hands began to lose feeling, so that she could not hold a needle, and she had to give up that employment. In 1869 she went to Ayrshire, and worked in a wool mill, picking motes out of the webs of cloth, which she was able to do in spite of the numbness of her hands, by using her eyesight to guide the fingers. Ultimately the fingers of both hands contracted, so that she could not work, and from time to time, after some apparently slight injury, the fingers ulcerated and bones were discharged. About 1875 she was unable to maintain herself, and since then she has been in receipt of parochial relief. Her eyesight began to fail about five years since, and for the last twelve months she has been quite blind.

Present State.—She is quite blind. She is closely confined to bed, and has been so for the last three or four years, from general weakness and debility, but she takes food fairly well, and she is very patient. She is very intelligent mentally. Her hands and forearms to above the elbows are anæsthetic, and the skin of both forearms, but more especially the right, is thickly covered with spots of pigment about the size of pins' heads. She complains of suffering severe pains in her forearms and hands at times, which she describes as like a thousand knives cutting her. There is no thickening observable about the ulnar nerves. Both hands are contracted, but more especially the right one, in the palm of which the flexor tendons are prominent, and various phalanges are wanting in both hands. Right hand: The thumb and fingers are all strongly flexed. The distal and middle phalanges of the index finger, the distal phalanx of the middle finger, and the distal phalanx of the ring one, are all wanting, but on each finger there is a horny spot representing nail. The distal phalanx of the little finger is shortened, the nail is present. Left hand: The thumb and fingers are flexed, but not so firmly as in the right hand. The bone of the distal phalanges of the index and middle fingers are wanting. The nails are both present as horny spots. There is a superficial ulceration of the skin on the radial side of the right thumb caused by her lifting incautiously a hot potato. Owing to the numbness of her hands they are very easily injured, even in taking her food, but the ulceration resulting appears to heal readily enough. Both her feet are anæsthetic, but there is nothing abnormal in their appearance, except that the nails are generally thickened. She is almost completely bald.

This woman has been under my observation for nearly twelve years, and during that time the disease has never shown any active symptoms, the only changes have been increasing debility and loss of eyesight.

ROBERT B. SELBY, M.D.
Portwilliam, Wigtownshire.

POST-SCARLATINAL NEPHRITIS AND URÆMIA.

THE following case I think worthy of note as presenting some of the less common features of uræmia:

R. B., aged 15. Scarlatinal rash appeared on December 23rd, and desquamation began four days later, freely on the back, wrists, and forearms, neck, shoulders, and legs. She got ill during desquamation with rigors, and only passed from one to two ounces of urine daily, which was loaded with albumen, but did not contain blood corpuscles. There was no œdema of the face or elsewhere. Retching and vomiting occurred. I kept her in bed and treated her for the nephritis. A rash appeared one day in large red blotches on the face, neck, body, and arms, with slight itching, and had gone by the next day, being probably urticaria.

On January 19th the pulse in the morning was only 56; urine more abundant and still highly albuminous. During that evening she complained of headache, and retched and vomited a great deal, and about 8 o'clock she suddenly lost her sight, and about four hours later convulsions came on, with a condition of stupor and loss of consciousness. She sweated profusely. The convulsions recurred frequently until about 6 o'clock in the morning, when they ceased. She frothed at the mouth, but did not bite her tongue. Teeth clenched firmly; pulse 120, full and bounding; head turned towards left shoulder; pupils equal, dilated, and not acting to light; no lateral deviation of the eyes; incontinence of urine, which lasted for two or three days after. The amblyopia continued for twenty hours. The ophthalmosopic appearance of the disc and retina, both during the amblyopia and afterwards, were normal. Two days later complete loss of power came on in the left arm and leg, with intense sensitiveness to touch and pain, which lasted for nearly a month, and gradually improved, the hyperæsthesia disappearing before power of movement returned. After this she slowly recovered, but was some months before she was able to get about.

During the convulsive stage I treated her with calomel and jalap, and rectal injections of chloral. I would have used pilocarpine, but that she sweated so profusely. Later on I used bromide of potash and chloral, and Sir James Simpson's "poor man's vapour bath," consisting of soda water bottles filled with hot water and wrapped in stockings, and packed around the patient.

The interesting points in the case are, in my opinion: The absence throughout of œdema or anasarca; the occurrence of urticaria; the pulse rate on the morning of the attack, prophetic of imminent convulsions; the subsequent hemiplegia, with hyperæsthesia and hyperalgesia, and deviation of the head and neck to the same side.

FRED. TRESILIAN, M.D., M.S.
Enfield.

A CASE OF INSULAR SCLEROSIS.

THE notes of the following case, which I have recently had the opportunity of seeing with Dr. Bothwell, of Topsham, near Exeter, are, I think, worthy of being put on record.

J. P., aged 38, was for nearly five years in the Royal Engineers, and was discharged in 1876 "as unfit for further service." His family history is bad. There is consumption in the family. His youngest sister is insane, and another brother, older than himself, is said to suffer from severe nervous affection and "to be always on the tremble." His maternal grandfather was also insane. His personal history is as follows: Though never a strong man, he has enjoyed fairly good health; has never had syphilis, but he says that he distinctly remembers having caught severe chills on several occasions in 1871 and 1872, from having had to work in the water a good deal while in the Engineers. He felt no immediate ill-effects from his immersions, however, for it was not until 1875 that his present symptoms first appeared. He was then working at the Pimlico Stores as a master tailor, and while there had dreadful pains in the head, and very little sleep for three months. He was then sent to the Curragh Camp, and had not been there long before the pains returned in the head and also in the small of the back. He was then in the military hospital for about twelve months with what he describes as paralysis in both legs and one arm. His speech also was affected at this time. His account of his early symptoms is as follows: In 1875 he first complained of weakness in the legs, more especially at first in the left leg, and he noticed that he was easily tired, and that on attempting to walk the left leg seemed to lag behind the right. Gradually this weakness increased in both legs and was associated with a stiffness, more especially in the calves. He noticed on rising in the morning a slight shaking in the legs, and on getting out of bed the shaking continued until he managed to get the feet firmly planted on the ground or resting against something.

From the Curragh Camp he went to St. Thomas's Hospital, and was admitted under the care of the late Dr. Murchison. I am

indebted to Dr. H. W. G. Mackenzie, of St. Thomas's Hospital, for the following report of his condition on admission. He was in the hospital from January 1st to February 12th, 1876. The diagnosis then made was disseminated sclerosis. His condition on admission was as follows: "Great muscular weakness, especially in legs, and tremor on exertion. Speech slow; articulation peculiar; no anæsthesia; no ataxy; no affection of bladder or rectum." There is no note about tendon reflexes or of nystagmus. He improved slightly while in the hospital, and it is not recorded that he had any fits.

After leaving St. Thomas's he went to Sidmouth, where it appears that he became worse, becoming partially unconscious and helpless; and that this state of things continued for some months, and there was also dysphagia. At this time epileptic fits first occurred, and at first they were very severe and of constant occurrence. The fits have continued at irregular intervals since this date (1876), but there has not been a fit for seven months until the other day, when he had one of brief duration. For the past six years he has hardly walked at all, for he feels awkward on attempting to walk, on account of the stiffness of the legs. On awakening in the morning he often finds that the legs are rigidly drawn up, and he is obliged to sit up in bed and press upon the knees before he can get them down again. Occasionally while in bed violent fits of trembling occur in the legs. Five or six years ago the arms were weak and trembling, and he was unable to feed himself; but this weakness gradually disappeared, and now he can use both arms very fairly well.

Present Condition.—He is a tall and well-developed man, with ingrowing eyelashes. His appearance does not denote high mental development; but he is particularly cheerful over his present condition, and anticipates great results from any treatment suggested. The arms are well developed and the chief movements normal. The thigh and leg muscles are firm and well-developed. There is nothing approaching muscular wasting, but there is distinct loss of power in the flexors. He cannot perfectly flex the thighs on the pelvis, and completes the movement by catching hold of the the thigh, and so bending it. There is some loss of power in the flexors of the knees and ankles. The knee-jerk is excessive, short, and sharp. There is no marked rectus contraction as he lies in bed. Well-marked ankle-clonus. The legs are extended in bed, and the calf-muscles particularly feel hard. There is some resistance in attempting to flex the leg at the knee. As he gets out of bed he pushes the extended limbs before him, and they are thrown into a condition of trembling until he gets the feet on the floor, and even then the trembling continues in the toes for a short time. The gait is characteristic. He supports himself by the bed or some other object, and as he walks with the upper part of the body bent forwards, the legs drag behind him and adhere closely to one another, so that each rubs forcibly against the knee of its fellow. The toes catch against the ground, the heel is some inches off the floor, and, as he puts one leg before the other, the toes are seen to be dragged across the inside of the heel and along the instep of the opposite foot. As he stands upright the calf-muscles are felt to be rigidly contracted. There is some weakness of the trunk muscles, and he complains of an aching pain in the lumbar spine. The electric irritability of the muscles to both faradisation and galvanism is normal. There is no loss of ordinary sensibility, and he is quite conscious as to the positions and movements of his limbs; and closure of the eyes occasions no increased uncertainty of movement. The posterior columns of the cord are not affected. There is troublesome constipation, and some incontinence of urine at night. The discs are pale, but not atrophied. There is corneal opacity in the left eye from ingrowing eyelashes. There is no nystagmus; pupils react to light. His speech is somewhat slow, with a peculiar emphasis on the last word of each sentence. At times his speech is merely thick. The urine is light-coloured and alkaline, specific gravity 1018; no albumen and no sugar.

Remarks.—The case is of some interest, and especially from the diagnosis having been made so long ago as 1876 by Dr. Murchison, and it is remarkable how very little the chief symptoms have altered in the succeeding twelve years. The dominant symptoms in this case are spinal, and the condition of "spastic paraplegia" in the lower extremities is remarkably like that of primary lateral sclerosis; but the general history of the case, the cerebral symptoms, and in later years the supervention of epileptic fits, clearly place this case in the category of insular sclerosis of cerebro-spinal type. Unfortunately, the case throws no additional light on the etiology of this affection. There is the predisposing influence of a neurotic tendency. The elder brother in America, who is said to be "all of a tremble," very probably is suffering from the same disease. I believe the exciting cause is undoubtedly the exposure to wet and cold on several occasions soon after he joined the Engineers, more especially as there is no history of any injury, or of any acute disease, or of syphilis.

Arthur G. Blomfield, M.D.Aberd.,
Physician, Devon and Exeter Hospital.

FATAL RESULT OF A WASP STING.

J. B., aged 28, a farm labourer, was standing close to a pond on Thursday, August 29th, when he was stung on the right side of the neck by a wasp. He took no notice of it; but the next day, late in the evening, both sides of his neck began to swell, and on Saturday, the 31st, things looked so serious that I was sent for. I found the neck, cheeks, lower jaw, and even the pectoral muscles attacked with acute cellulitis. Careful inquiry elicited the fact of the wasp sting, and that when he received the lesion he had a boil under his left ear; also that, though a very healthy-looking and well-nourished man, he was sadly troubled with constipation, and a member of a family among whom boils and abscesses were very common—thus evidently showing a natural tendency to suppurative mischief. The treatment consisted of disinfectants both internally and externally, hot poultices, milk *ad libitum*, stimulants as far as could be tolerated, and plenty of fresh air; but, in spite of all, septicæmia, with violent rigors and delirium, supervened on the sixth day, and he died on the ninth day after the reception of the sting. No abscess formed, but the cervical tissues were very much indurated. August 29th was a very hot day, and, following as it did a period of rainy weather, the conditions were very favourable to the rapid decomposition of dead organic matter, whether animal or vegetable, and it is highly probable the wasp may have been feeding on some putrescent material previous to stinging the unfortunate man. As he had nothing whatever to do with the cattle, and as all the horses and cattle on the farm where he was employed are quite healthy, it is clear this was not a case of anthrax or malignant pustule, but death due to a wasp sting received when the system was not healthy.

Boroughbridge. Alex. D. H. Leadman, L.R.C.P.E., etc.

NOTES OF A CASE OF TRICHINOSIS.[1]

On March 12th, 1889, I was asked by one of my assistants, Dr. McAleer, to see a woman, aged 30, suffering for about ten days from what he thought must be acute spinal meningitis. We discussed the case as we went along, and I suggested it was possibly a rare form of enteric fever, spinal meningitis being so uncommon. After examining the patient, however, we came to the conclusion it was a case of trichinosis, and, through Dr. McAleer's help, I was enabled to obtain the following notes.

M. A. B., aged 30, married thirteen years; has had six children, five of whom are now living; family history good; no previous illness. She was particularly fond of raw meat, and, when cooking any, was accustomed to eat small portions of the lean. On February 23rd she bought some home-cured ham, eating, as usual, some of it raw. On February 27th, a very cold snowy day, she went to Barnsley, where she had a severe attack of shivering and vomiting. On reaching home she sat in her wet clothes for some time, and on going to bed she had great difficulty in pulling off her boots on account of the swelling of her feet. Her face, hands, and legs were also swollen, and her eyes twitched.

On February 28th she could hardly open her eyes on account of the puffiness of the lids; her eyes were bloodshot and painful; there was intolerance of light, great pain in all her muscles, cold sweats and shivering, choking sensations, vomiting, and diarrhœa. She continued in this condition until March 2nd, when she consulted Dr. McAleer, complaining chiefly of severe pain in the bowels. She was ordered to bed, and attended at her own home.

March 4th. Pain in legs, which she was unable to move, very severe; could not grasp with her hands; pain and swelling round wrists; swelling of abdomen; headache; delirium; no albumen in urine.

March 6th. Swelling in legs, arms, and eyelids increased. Profuse perspirations; temperature 103°, pulse 120; general muscular pains, sardonic grin, difficulty of speaking and of swallowing, but no stiffness of jaws; thirst, loss of appetite, no power over legs, dyspnœa, tongue coated.

[1] Read before the annual meeting of the Yorkshire Branch of the British Medical Association at Sheffield.

March 8th. Temperature 103.2°, pulse 125; muscular pains increased, and most severe in calves of legs; could not sit up in bed; dyspnœa increased; no albumen in urine.

March 12th was the day I first saw her, and she was then commencing to get better. I found her lying on her back in bed with the thighs slightly bent on the abdomen, and the legs on the thighs. She looked very ill and worried, and had a most peculiar retraction of the corners of her mouth, very similar to a commencing *risus sardonicus*. Temperature 102°, pulse 115; profuse perspirations; heart-sounds and respiratory sounds normal; the abdomen was not tympanitic; there was pain on pressure on the right iliac fossa but no gurgling, but the same pain on pressure was present equally all over the abdomen and all over the body generally, more so on the thighs and much more so in the calves; there was no diarrhœa; there was no special tenderness, beyond the general tenderness everywhere over any region of the spine. There was no loss of sensibility anywhere; both legs appeared paralysed from the knees downwards, but this paralysis was only apparent, being caused by the agonising pain occasioned by the slightest movement. Both calves were swollen and hard to the touch. The knee-jerk was exaggerated, and ankle-clonus was present in the right leg, which was the worse of the two. The pupils were slightly dilated but answered to light, and both optic discs were perfectly normal. There had been no retention, nor incontinence of fæces or urine. There had been œdema of face, arms, and legs, but there had been no albumen in the urine, some of which I examined and found healthy.

She gradually improved, and on March 20th her temperature was normal. Swelling and pain in arms and legs almost gone, but the legs were still weak; no perspirations. She got quite well in about five weeks' time. I saw her a few days ago, when she said she was quite well, but that still she sometimes had slight stiffness and pains in her legs. Practically the duration of the illness was twenty-one days—from February 27th to March 20th. Bristowe says the diseases most likely to be confounded with trichinosis are (1) acute tuberculosis, (2) acute rheumatism, (3) enteric fever. The termination of this case excludes the first. The muscular pains, not joint pains, are against the second, to which in fact, beyond the perspirations, it had no resemblance. The sudden onset, the general œdema, and the short course are all against the third.

A disease much more difficult to distinguish from trichinosis is acute idiopathic spinal meningitis, but the absence of sphincter troubles—in fact, of any paralysis, the exaggerated knee-jerk and ankle-clonus, the œdema, the age, and sex of the patient, and the rapid recovery—are strongly against this disease. The vomiting and diarrhœa, coming on four days after eating raw ham, accompanied by severe fever; the œdema of eyelids, face, arms, wrists, etc., without any albumen in the urine, and the severe muscular pains all over the body without any loss of motion or sensation seem to me to point clearly to this being a real case of trichinosis, ending favourably probably from the small amount of the raw meat that was consumed.

I made inquiries at the shop where the "home-fed" ham was brought, and found that it was American, and that all was sold on the same day. No attempt has yet been made to harpoon any of the diseased muscle, but I intend doing so, and I shall be glad of any hint as to the best mode of procedure.

W. Makeig Jones, M.R.C.S., L.S.A.,
Medical Officer of Health, Swinton Union District.

SURGICAL MEMORANDA.

THE RADICAL TREATMENT OF VARICOSE VEINS.

The following case will be of interest on the above subject. D. J., a labourer, aged 21, consulted me on February 4th in consequence of the great distress and annoyance he was suffering from a varicose condition of the veins of both legs, but principally the left. On examination I found the left saphena greatly distended and very tortuous, and appeared like a bunch of purple grapes in the popliteal region; the right was not so bad, although distinctly varicose. I immediately recommended an operation for the total occlusion of the vein, in preference to the palliative treatment by elastic stockings or rubber bandages. After the patient had consulted with his friends he determined to run the risks of the operation (if any) and allow me to operate. On February 8th I inserted a number of harelip pins along the course of the vein, each pin dipping well down under the vein, and placed about an inch from its fellow. I then compressed the vein by a figure-of-eight ligature over a small piece of bougie lying over and perpendicular to it. I completed the operation by injecting into the vein where most distended four drops of the liq. ferri perchlor., as recommended by Erichsen, and kept the limb suspended for a few days. There was severe pain for the first twenty-four hours, for which I prescribed morph. mur. ¼ gr. every two hours. This had the desired effect. There was little or no constitutional disturbance, and pain was entirely gone by the third day. I removed the pins ten days afterwards. There was slight suppuration along the track of the pins, which continued for a few days. Other than this there were no bad symptoms. I applied a dressing and a bandage to the limb, and allowed the patient up on the thirteenth day. He resumed work three weeks after the day on which I inserted the pins.

On March 14th he came and showed himself, and what was once a large distended vein is transformed into a tough and fibrous cord. The patient informs me that he has neither pain nor ache along the track, and suffers no distress whatever in his work. Of course such a happy state of things may not continue, but such a good result so far speaks well for the radical treatment of varicose veins.

R. D. Patterson, L.K.Q.C.P.I., L.R.C.S.I.
Caledon, Co. Tyrone.

TOXICOLOGICAL MEMORANDA.

CASE OF POISONING BY HYOSCYAMUS.

Instances of poisoning by this drug being apparently rare, the following notes may be somewhat of interest.

Mrs. S., aged about 50, had been in the habit of occasionally taking tincture of hyoscyamus for gastrodynia. On September 30th I was suddenly summoned at 3.30 P.M. to attend her, she having swallowed by mistake, about five minutes previously, six drachms of tincture of hyoscyamus *B.P.* In the meantime she had taken some mustard and water. I found her much excited, pulse rapid, 130, regular; pupils equal and reacting to light and accommodation. Free emesis was immediately produced by zinci sulph. and vinum ipecac., followed by copious draughts of warm water. In from twenty to twenty-five minutes after taking the poison the pupils began to dilate; pulse 120, and there was now great weakness and trembling of limbs, marked dryness of throat, and flushing of face. She walked with assistance to the bed, though with difficulty, and her extremities were cold. In a short time her pupils were fully dilated, and no longer reacting to accommodation or light, no headache. At 4.30 P.M., although sensible and answering questions rationally, she had difficulty in speaking and seemed confused, but not giddy. At 5.30 P.M., she tried to rise from the bed, but found herself powerless to move her legs, both upper extremities were also almost completely paralysed, and her power of grasping was feeble. She was now slightly delirious, wandering in thought and manner. At 8.30 P.M. pupils still dilated; pulse 84, irregular; she was still delirious, but if spoken to sharply answered questions rationally. Later on she was reported to be progressing favourably. On visiting patient the following morning I found her much better, having slept three hours. Vomiting had occurred during the night, which she attributed to pain in the stomach probably due to the mustard. The bowels had been well relieved by an aperient administered the previous night; tongue clean; pupils smaller, but still rather dilated; pulse regular, 84; dryness of throat had disappeared; she could walk, though there still remained great weakness of limbs; was now able to grasp firmly, and her speech was once more normal. The following day she had recovered completely.

The respiration was unaffected throughout. A slight deafness with which she was troubled was much aggravated whilst under the influence of the drug.

West Brighton. Arthur H. Dodd, L.R.C.P.Lond., M.R.C.S.

The late Surgeon-General David Wyllie, who died at Hamburg on August 24th, has bequeathed by his will £2,500 to the infirmary of his native town, Montrose, and £2,500 to its public charities.

Hydrophobia.—A boy, aged 8, who was bitten by a dog on June 8th, died of hydrophobia recently in St. Bartholomew's Hospital.

REPORTS

ON

MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

SUSSEX COUNTY HOSPITAL.

CASE OF BRONCHIECTASIS TREATED BY ANTISEPTICS AND DRAINAGE.

(Under the care of EDWARD MACKEY, M.D., M.R.C.P., Physician to the Children's, and Assistant-Physician to the County, Hospital at Brighton.

THE observations of Dr. Finlay recorded in the JOURNAL for October 13th, 1888, induce me to forward for publication the following notes.

E. S., male, aged 20, never strong, but without phthisical history, began to cough about four years ago, and had "inflammation of lungs" a year afterwards. The following winter he had dyspnœa, slight hæmoptysis, and offensive expectoration, with physical signs of consolidation at the right base, and of bronchitis. Fœtor of sputum ceased in summer, to recur in the following winter.

When admitted to the County Hospital on February 27th, 1888, he was thin and sallow, with clubbed nails, and having attacks of violent cough, with expectoration—8 to 12 ounces of muco-pus in twenty-four hours. (No tubercle bacilli found in many examinations.) Height nearly 6 feet; weight, 8 st. 10 lb.; temperature 100.6°; pulse 90; respirations 24. Chest flattened in front; heart apex and sounds normal; over the greater part of both lungs coarse moist sounds are heard; there is no marked dulness at either apex; fremitus and vocal resonance are increased over the right base, which is dull on percussion except for a limited area about the size of a five-shilling piece, 1 inch below and 1 inch internal to the angle of the scapula; and here there is tubular note, "tympanitic" dulness, large bubbling *râles*, bronchial or cavernous breathing, and pectoriloquy most marked on whispering; measuring from spine, the maximum intensity of such signs is 4 inches from the eighth dorsal vertebra; dulness with bronchial breathing and some coarse *râles* extends to the fifth dorsal above and to the twelfth below, the latter dulness being almost absolute. As bearing on the diagnosis of a basic cavity it is to be noted that these physical signs varied in such a manner as could be explained only by supposing such cavity more or less full of secretion; for example, on March 1st the dulness was "tympanitic, the *râles* were "crepitant," the bronchophony less marked. On the 4th the sounds were larger, "splashing," whispered pectoriloquy very marked. Next day there were no *râles* or bronchophony until after some deep breathing and coughing, then as before; the dulness and the tympanitic sound would also vary over a limited area near the angle of the scapula. The purulent expectoration would be retained sometimes for hours, then brought up several ounces at a time, especially in the early morning, when it would be most fœtid.

In consultation it was agreed that bronchiectasis existed more or less in both lungs, with evidence of large dilatation or cavity about 1 inch below the right scapular angle; but operative interference was deferred for further trial of remedies. These comprised stimulant expectorants, with benzoin and sulpho-carbolate of soda, and carbolic steam spray 1 in 40. Later, ¼ grain doses of sulphide calcium were given, and as the medicine was lessened a pill of creasote was substituted, and the same drug inhaled constantly on oro-nasal inhaler. A resorcin spray, 2 to 4 per cent., seemed to relieve more than the carbolic. Iodine was painted over the chest walls.

Some improvement occurred, so that by March 15th the amount of purulent expectoration was reduced to 3 or 4 ounces *per diem*, and the temperature was normal or subnormal for many days together, but at intervals of five or seven days it would rise suddenly to over 102°, with rigor, nausea, and *malaise*, lasting about twenty-four hours, when he would be relieved generally by a freer expectoration. Cod-liver oil and port were added to his treatment.

On March 24th, though he was on the whole better, the fœtor of the sputum was almost as much as at first. Hyposulphite of sodium, in 10 to 20 grain doses, was substituted for the sulphide of calcium with a distinctly good effect.

On April 6th he had gained 2 pounds in weight, and was feeling better than for many months past, but the average expectoration was about 6 ounces, and, although usually less offensive, it was sometimes as bad as ever, and the intermittent pyrexia still occurred. Moreover, although the general condition of the lungs was better, the signs of cavity in the right base were even more marked and over rather larger area. In the hope of further controlling suppuration there, an intrapulmonary injection of beech creasote (15 ♏ of a 3 per cent. solution in almond oil) was given by a long hypodermic syringe as near as possible to the affected part (about 2½ inches from the surface of the chest wall). No special pain, but slight cough followed.

On April 10th, 13th, and 16th, Mr. Verrall repeated the injections, still without any drawback; and on the 19th two injections of 10 ♏ each were given. On the 21st, however, the sputa were still fœtid, and the physical signs similar. On the 23rd, two injections were again given, but after these he complained of more pain, and blood appeared in the sputum for several hours.

There are now many cases on record when similar injections were practised with advantage for a longer time, but in this instance I am afraid their influence was unfavourable, for after April 23rd he became more feverish and suffering, and the amount of expectoration increased to 14 ounces on the 24th, and to 18 ounces on the 25th; whilst on the 26th symptoms of septicæmia were so marked that it was decided to attempt drainage of the main cavity at the right base.

Mr. Verrall accordingly cut down to the intercostal muscle at a point about one inch below and one inch internal to the scapular angle, being immediately over the area of tympanitic dulness, splashing sound, etc. The wound proved to be deeper and the operation more tedious than expected, and the giving of chloroform was not judged safe. The pleura being reached and found by the finger to be adherent, a silver trocar with cannula was passed into the lung substance. It was, perhaps, not long enough or large enough for the desired purpose, and, although some drops of purulent expectoration came, there was no free discharge as hoped; therefore no free opening was at once made into the lung. As preparatory to this, one or two punctures were made with the aspirator needle, and then so much hæmorrhage and cough occurred that the operation had to be interrupted, the small cannula being left *in situ*. The respirations, which had been, as a rule, 24 to 34 per minute, now went up to 48, and kept from 30 to 40; and the amount of expectoration remained at 15 to 20 ounces *per diem*. I could not feel, therefore, that we had gained by the operation, and on May 2nd Mr. Verrall opened the lung freely enough to put in a drainage tube. At this time the probe and the finger passed through pleura into an elongated cavity, from which nearly an ounce of sanguineo-purulent discharge came. The wound was syringed once or twice daily with boracic lotion, and a saline with aconite alternated with the hyposulphite.

May 5th. Drainage tube readily slips out, but the opening into lung is easily found by finger. Outside wound filling up. Sputa lessened to 10 ounces.

May 8th. Discharge from wound has appearance and smell of sputum, showing at least free communication. Tube retained by tapes round body.

May 11th. Better as to pyrexia, appetite, and general condition. Sputa almost odourless (8 ounces).

May 12th. Relapse occurred in night; sputa again fœtid. Iodised injections used and tasted.

May 14th. Fœtor better, but condition worse. Much cough being caused by iodine injection, permanganate substituted with advantage. Sputa increased to 14 ounces. Temperature 102° F. Crepitation in right axillary region, with coarse *râles* and dull patches in other parts. Tube shortened to avoid any pressure on lung. To have effervescent ammonia, with bark, etc.

May 19th. Tube removed. Poultices.

Unfortunately, the pneumonic gangrenous condition continued to spread to other parts of the lungs, and the patient died exhausted, after a convulsion, on June 1st.

For the following notes of the *post-mortem* examination I am indebted to Mr. Gerald Hodgson, our house-physician.

Right Lung.—Base very tough. Pleura over lower lobe adherent and densely thickened. Many fibrous tracts, running inwards, separated irregular cavities which riddled all the lower lobe. The end of one of these was opened by the operation about one inch from lowest margin. Upper lobe consolidated, with a few small fibrous cavities.

Left Lung.—Congested and œdematous. Several gangrenous patches, size of walnut, on lower lobe. No cavities or fibrous disease, as seen in the other lung.

FOLLOWERS' HOSPITAL, JALUA.

CASE OF LITHOTOMY WITH COMPLICATIONS.

(Under the care of E. HAROLD BROWNE, Surgeon I.M.S.)

K., a delicate-looking boy, aged 7 years, was brought to this hospital with all the symptoms of stone, and, on introducing a sound into the bladder, a calculus was detected.

The history elicited from the child's mother informed us that there had been pain at the end of micturition for about five months; that blood was passed occasionally, and that retention of urine had occurred several times, but that on each occasion natural relief had been experienced after a few hours.

On admission, there was a certain amount of cystitis present; the urine was thick and cloudy, containing a good deal of mucus, and on microscopical examination a large number of blood cells were seen, together with abundant crystals of oxalate of lime.

Operation had to be delayed for a few days, as the hospital was not supplied with the necessary instruments, that is, a grooved staff could not be obtained. Hence one was ordered from Bombay, and in the meantime the bladder symptoms were treated, while the little patient's general condition was improved by means of comfort, cleanliness, and good food. One evening retention of urine occurred; the hospital assistant endeavoured to pass a silver catheter, but merely succeeded in making a false passage in the attempt; and an hour or two later natural relief was experienced. A very severe attack of cystitis occurred the following day; there was high fever, with much suprapubic and perineal pain, and the child passed a thick mucilaginous substance which was barely fluid as it left the urethra.

The next morning the patient was in a critical condition, so I determined to operate. Chloroform was administered by an assistant, and patient attempts were made to pass a grooved staff into the bladder (the instruments having very fortunately just arrived). It was impossible, however, to avoid entering the false passage, so all hope of reaching the bladder in this way was abandoned. Hence I passed a staff with a median groove as far as it could follow the urethral canal, that is, up to the point where a false passage had been made. It was then given over to an assistant to hold, and I cut down upon the groove; found the upper end of the urethra, but, owing to the contused state of the portion below, it was impossible to find the continuation of the canal, and the bladder could not be reached from this point. Accordingly, abandoning the perineal operation, I proceeded to open the bladder above the pubes. The rectum was packed with pieces of soft sponge attached to long bits of twine (by which they could subsequently be removed); and, an assistant being directed to make pressure upwards and forwards with a finger in the rectum, I examined the patient, and found that he was bearing the anæsthetic well.

I then made the usual incision in the median line, and, after a little dissection, came upon the lower border of the peritoneum, which extended downwards to within half an inch of the lower extremity of the incision. Displacing this gently upwards, and introducing my index finger deeply into the pelvis, the bladder was with difficulty reached, and could be felt small and contracted. Happening to look at the patient at this juncture, I found that respiration had ceased, the assistant who had been entrusted to administer the anæsthetic having evidently become so engrossed in the operation as to have neglected his special charge. Laying aside the knife, I picked up the child by the heels, and, holding him head downwards, dashed cold water on his face. This producing no improvement in his condition, I placed him on the table again, and proceeded to perform artificial respiration. Minutes passed without any apparent result; we dashed cold water on the face at intervals of a few seconds, but still there was no response, and the three assistants who anxiously watched my efforts declared that the child was beyond recovery. I persisted in my attempts, however, and presently we saw signs of returning animation. A fresh application of cold water to the face produced a deep inspiration, and the patient was soon out of danger. As soon as he had thoroughly recovered, I again put him under the influence of chloroform, proceeding very cautiously, and, when sufficiently under the anæsthetic, I completed the operation; it was very difficult to steady the bladder, owing to its depth, but I succeeded eventually; made a small incision through its coats, introduced my index finger, felt the stone, passed in a pair of dressing forceps, and removed the calculus.

The subsequent history of the case was satisfactory; urine passed freely through the suprapubic wound until the tenth day, none escaping at the perineal incision, which had completely healed at the end of a week. On the tenth day a small quantity of urine passed by the natural passage, and at the end of a fortnight all the urine was voided through the urethra, the wound healing completely on the twenty-sixth day.

As will be seen, this case was attended with trouble, difficulties, and complications throughout. Had I been able to operate shortly after the child's admission, he might have been saved a good deal of suffering; but delay was unavoidable, producing the first complication—retention. Then came a series of disasters: a false passage, which prevented a staff being passed into the bladder; hence lateral lithotomy was not practicable. Further, the median operation could not be performed, as the lower end of the urethra could not be found; so the only measure left was to open the bladder above the pubes. This proved to be anything but an easy matter, as there was no sound in the organ by which it could be pushed up into the wound, nor could the viscus be distended with fluid. There was no apparatus at hand by which air or fluid could be injected into the rectum and retained there, and a very inferior substitute was provided. And, lastly, came the most trying complication of all—the almost fatal narcosis—which, but for the prompt and patient efforts made, would have added another case to the already large number of deaths from the administration of chloroform.

REVIEWS AND NOTICES.

REPORT OF A COMMITTEE OF THE CLINICAL SOCIETY OF LONDON, nominated December 14th, 1883, to investigate the subject of Myxœdema. (Supplement to Vol. xxi of the Society's *Transactions.*) London: Longmans, Green, and Co. 1888.

THIS volume is an important contribution to medical literature. In preparing a monograph on the subject of myxœdema the Clinical Society has responded to a much felt want, and it is needless to say that the want has been supplied in the completest manner possible. The origin and inception of the undertaking will be referred to presently. Where so much has been written in so many languages the task of collating alone would be one of great difficulty, and there would still remain the need of an authoritative dictum upon many points of doubt and controversy.

We have here at once a summary of actual knowledge and a strict definition of its limits. The report is divided into six sections, in which are considered, after a short historical summary, the clinical and pathological facts connected with myxœdema, the chemistry of the tissues in man and animals, the results of experimental observations upon animals, and of extirpation of the goîtrous thyroid gland in man. The conclusions of the Committee are appended, and a bibliography of myxœdema is added to facilitate reference.

A paper read by Sir William Gull before the Clinical Society in 1873 contained the first allusion to the disease now called myxœdema. It did not deal with the pathology of the latter, but was entitled "On a Cretinoid State Supervening in Adult Life in Women." The report says "the use of the word 'cretinoid' appears to have been a remarkable instance of insight." Meanwhile, Dr. Ord was engaged on observations which he had begun in 1861, and in 1877 he presented to the Royal Medical and Chirurgical Society of London a communication on "Myxœdema, a Term proposed to be applied to an essential Condition in the 'Cretinoid' Affection occasionally observed in Middle-aged Women." The name was suggested by the fact that a mucin-yielding œdema was the most prominent feature in the cases reported. The clinical facts and pathology of those cases were detailed, and the *post-mortem* condition of the thyroid gland described.

After this cases were reported elsewhere, and the occurrence of the disease amongst men became known. In 1881 M. Charcot's observations were added to the clinical aspect of the subject, and he proposed that the name "cachéxie pachydermique" should be given to the disease. The next step was taken by M. Jacques L. Reverdin in 1882, when, in a paper read before the Société Médicale of Geneva, he published the results of many

cases in which the thyroid gland was removed for goître. The symptoms described resembled those of myxœdema, but this fact escaped notice at the time, and was subsequently reverted to by M. Reverdin in June, 1883. These papers, as the report remarks, seem to have escaped the attention of English observers.

Meanwhile, in April, 1883, Professor Kocher described to the Congress of German Surgeons the symptoms which he had observed to follow total extirpation of the thyroid gland in goitre. These symptoms he attributed to a condition of chronic asphyxia from injury to the cervical structures in the operation, and he gave to them collectively the name of "cachexia strumipriva." In November, 1883, Dr. F. Semon brought this paper to the notice of the Clinical Society, pointed out the resemblance between the symptoms in Kocher's "cachexia strumipriva" and those of the disease known in England as myxœdema, and inferred the existence of a common cause for both of these and for cretinism—namely, loss of function of the thyroid body. This view was subsequently adopted by Kocher.

When, a year later, Paul Bruns published a case in which extirpation of the thyroid gland in a child was followed by the symptoms of myxœdema complicated by various arrests of development, that is, by the state previously described as sporadic cretinism, a great advance appeared to have been made, and this induced the Clinical Society of London to appoint a committee to investigate the entire subject of myxœdema and its allied conditions. The present volume is the result of its labours.

That part of the report which deals with the clinical aspect of myxœdema is founded upon the description of 109 cases. The complete records are given in the form of tables at the end of the volume, and from these a subcommittee has drawn up (1) a detailed and (2) a general analysis of the symptoms, with notes on treatment and its effects. The recognised symptoms taken together are said to constitute a well-defined and distinct disease. In the words of the report, myxœdema must be regarded as a "clinical entity." Much remains to be learnt respecting its causation. The influence of locality and of social condition is not apparent. Alcohol and syphilis have no part in its production. Tubercle alone is frequently associated with it, and may perhaps be a predisposing cause. Mental disturbance and neuroses form a large part of its manifestations, and sometimes precede its recognition, but whether they are not in such cases early symptoms rather than causes is not decided.

From amongst the symptoms of myxœdema the report gives the following typical signs: "The marked increase of the general bulk of the body; the firm swelling of the skin, not pitting on pressure, inelastic, adherent to the parts beneath and not affected by gravitation; the dryness and roughness of the skin tending, with the swelling, to obliterate all lines of expression; the imperfect nutrition of the hairs, leading to their loss; the local tumefaction of the skin and subcutaneous tissue noticed in various parts of the body, but most frequently in the supra-clavicular regions; the turgescence and infiltration of mucous membranes, leaving in the mouth an affection of the teeth homologous with that of the hairs just mentioned; the remarkable physiognomy; the slow, painful utterance, monotonous voice, and leathery quality of tone thereof, with curious nasal explosion at short intervals during speaking; the slowness of thought and movement; the slowness of perception and response; the defect of memory; the frequent occurrence of mental disorders of an irritable and suspicious character, or of hebetude and somnolence alternating with excitability; the tendency to fall, owing to the disorder of co-ordination; the subnormal temperature of the body; the aggravation of all symptoms in cold weather; and the diminution or apparent absence of the thyroid gland."

The labours of the subcommittee on the pathology of myxœdema yield striking results of a positive and negative character. Thirty-one fatal cases were considered, and the tissues and organs were examined microscopically in 20. It is affirmed that "the only constant pathological change exists in the thyroid gland. The lesion, moreover, was in every instance of the same nature." The gland is almost always reduced in size and of a yellowish or pale colour. Microscopically, "the morbid condition seems to begin as a small-celled infiltration of the walls of the vesicles, and this is accompanied or soon followed by epithelial proliferation in the vesicles themselves. In a more advanced stage the gland becomes converted into a delicate fibrous tissue, in which clumps of small round cells, clearly the remains of the vesicles, are scattered." Interstitial changes occur in the organs, heart, liver, kidneys, sympathethic and submaxillary gland in a proportion of cases. Of greater importance are alterations in the skin and subcutaneous tissues. In the skin there is hyperplasia and development of connective tissue mainly in the neighbourhood of the sudoriparous and sebaceous glands and around the hair follicles. The process is inflammatory and irritative, and the anatomical lesions produced are adequate to account for the loss of the hair and nails, and the suppression of function in the sweat and sebaceous glands. Such appearances are sufficiently common, and must be regarded as secondary effects in some stages of the majority if not of all cases. The increase in bulk of the body generally is ascribed to an overgrowth of subcutaneous fat. There is no mention of the mucin-yielding, intercellular substance, the presence of which was taken to be the most prominent symptom in Dr. Ord's earlier cases, and which gave its name to the disease. In a few instances was noticed an unusual interval between the bundles of fibrous tissue in the corium; but "this open-textured condition is quite exceptional, and it differs in no respect from what is seen in ordinary œdema." The question raised here and partly answered on pathological grounds is naturally of great interest, and it is followed up in the report of Dr. Halliburton on the chemical investigation of the tissues and organs from cases of myxœdema in men and animals. Dr. Halliburton made a large number of analyses, and found that the increase of mucin as found by Dr. Cranstoun Charles in Dr. Ord's first case has not occurred in subsequent examples, and, moreover, that the increase is less marked in men than in animals experimented upon. It is to be observed that the case referred to presented at the time of death the full swelling of myxœdema, while in others the patients have died "in the atrophic period of the disease" (Dr. Ord); and in others, again, the subcutaneous connective tissue has become replaced with fat and the source of mucin so removed.

Section V is a report by Professor Horsley on experimental researches into the function and pathology of the thyroid gland. It is preceded by a short historical account of the older theories and of the methods of experimentation formerly in use. The precautions with which experiment must be controlled and the fallacies to which conclusions from it are exposed are concisely pointed out. It is evident on anatomical and physiological grounds that the thyroid gland is of great importance to the newborn and growing animal. It undergoes degeneration and atrophy in approaching senility, "which condition closely corresponds in many particulars to the myxœdematous state." The variations of the gland in connection with certain states of physiological activity are traditional but not sufficiently ascertained.

The effect of total extirpation of the thyroid differs in different animals. It is negative in rats and rabbits, while the operation must be regarded as fatal to carnivora.

In dogs, death almost invariably ensued in a short period, after symptoms of acute cachexia, spasms, paralysis, coma, anæsthesia, tetanoid contracture, and diminished temperature. The state of the tissues has not been investigated *post mortem*, but during life there are important changes in the blood, namely, a diminution of the red corpuscles and an increase of leucocytes. The experiments upon ruminants are too few to be the basis of conclusions, but the history of one instance is highly instructive. The subject was a sheep, from which the gland had been entirely removed, and it had seemingly made a complete recovery when it was accidentally exposed to cold a year and nine months after the operation, and died with all the symptoms of acute myxœdema. In this the influence of cold, a well-known exciting cause in the human subject, is recognised in the sheep also as determining the onset of the disease. Moreover, in this case the *post-mortem* examination showed gelatinous infiltration of all the subcutaneous tissue, which under the microscope was evidently mucinous degeneration of the ground substance, and by chemical analysis was shown to be actually mucin.

The most decisive of Professor Horsley's experiments were performed upon monkeys. In this case complete extirpation was followed by symptoms resembling those occurring in other animals, but further capable of modification under the influence of temperature. Thus was produced: 1, Acute myxœdema; 2, chronic myxœdema or cretinism. In the first the symptoms appear within a few days after the operation, run a rapid and continuous course, and terminate in death after an average duration of twenty-four days. Prominent amongst the symptoms are disturbances of motion, sensation, and the mental powers; subnormal temperature following an initial rise, anæmia, leucocytosis and fall of blood-pressure; failure of nutrition with mucinous

degeneration of the connective tissues, increase of mucous secretion, usually atrophy and falling out of the hair, and sometimes enlargement of the spleen. Thus in many ways the condition resembles idiopathic myxœdema, cachexia strumipriva, and exophthalmic goître.

When the monkeys operated upon were kept at a temperature of about 90° F. the average duration of life was 125 instead of 24 days, and the character of the symptoms was notably altered. To this condition Professor Horsley gives the name of "chronic experimental myxœdema" or cretinism. "It seemed as if the animal had been enabled to pass through (1) a neurotic and (2) a myxœdematous stage into (3) a marasmic and cretinic one." Mucinous degeneration was replaced by wasting, and, instead of mucin, fibrous or cirrhotic changes were found *post mortem* in the tissues. In this we seem to find some solution for a difficult problem in the morbid anatomy of myxœdema; and it naturally leads to a consideration of the second part of Dr. Halliburton's report, that upon the chemistry of tissues in animals. In acute experimental myxœdema was found a notable increase of the quantity of mucin in the skin, tendons, salivary glands, and blood; while this was not observed in the chronic or cretinic condition produced by the influence of warmth.

Professor Horsley comments upon the analogy presented by the course of the tissue changes in idiopathic myxœdema when the disease is prolonged to the cretinic state. The occurrence of anæmia and leucocytosis as a prominent manifestation in acute experimental myxœdema is significant, and, taken together with other facts, pathological and anatomical, it would seem, as Professor Horsley remarks, to lend support to the old view that the gland was concerned with hæmatopoiesis, and not only of corpuscles, but of the other elements of the blood as well. But, whatever the function of the healthy gland, there can be no dissent from the view that its loss is the determining factor in the production of the symptoms enumerated above.

Allusion has already been made to a paper published by Dr. Theodor Kocher, of Berne, in 1883, on "Thyroidectomy and its Sequelæ," in which is drawn an admirable picture of myxœdema as a result of extirpation of the thyroid, and his paper was the more suggestive and valuable that the writer was at the time unacquainted with the disease as known in England. When brought to the notice of the Clinical Society of London by Dr. Felix Semon, it was the immediate occasion of the work under review. At the request of the Committee, Dr. Semon put himself in communication with medical men in all countries who were known to have excised the thyroid, and the final section of the report deals with the information derived from their replies.

The evidence as to the occurrence of anything like myxœdema after total extirpation is very contradictory. Thus, Professor Kocher operated on 32 cases and Professor Reverdin, of Geneva, on 18, with the result that the symptoms of myxœdema afterwards developed in a large majority of the subjects; while, on the other hand, of 146 operations in Professor Billroth's clinic, the sequence is recorded in only two, and in not one of 15 performed by Professor Bardeleben.

The conclusions derived from the result of partial operations are even less satisfactory. After reviewing the whole series of records, Dr. Semon draws his inferences with the necessary reserve. His conclusions may be given in his own words:—

"That there is an affection following in a certain number of cases total, and, in a much smaller proportion, partial extirpation of the goîtrous thyroid gland in man, which is clinically identical with primary myxœdema. As in the primary disease the symptoms are not always equally well developed in the operative variety, and in this respect important differences appear to obtain between the cases of total, and those of partial, extirpation of the thyroid gland. The only real addition, however, to the symptoms of the primary malady which sometimes occurs in the operative variety when the operation has been performed on children, namely, the stunting of the growth of the body, finds its natural explanation in the fact that primary myxœdema almost always attacks persons in whom the period of evolution of the body has been completed."

In eight cases only have *post-mortem* examinations been made, and this number is clearly too small to establish the pathological identity or otherwise of the two varieties. Comparison of a table furnished with the report, and setting out the results of 408 cases of thyroidectomy performed by 56 different operators shows (1) that females, though more liable to the cachexia than males, are so in a far less degree than is the case in primary myxœdema; (2) that the great majority of the patients affected are between 10 and 30 years old. But the latter fact loses much of its significance in view of the further one that the greatest number of operations are also performed within the same limits of age.

Dr. Semon declines to ascribe a cause to cachexia strumipriva—a cause proved and explained by the facts elicited in his correspondence, and demonstrable by statistics with which alone he is concerned. But he has himself shown that "the peculiar cachexia has not followed any other serious operation in the neck, involving the great vessels and the sympathetic nerve. What applies to operation applies also to disease. The positive fact of the sequence occurring in one form only of operation among many having similar associations takes a first position. It is the explanation of the non-occurrence of myxœdema in operative cases which has to be sought, not the justification of the clearly established fact that myxœdema followed one operation and no other." (Dr. Ord's summary as chairman of the Committee.)

The last pages of the report are given to a general statement of the conclusions of the Committee. Certain of these may be specially alluded to, as defining the limit of our knowledge at the present time. Thus, it is said that "pathological observation, while showing cause for the changes in the skin observed during life, for the falling off of the hair and the loss of the teeth, for the increased bulk of the body as due to the excess of subcutaneous fat, affords no explanation of the affections of speech, movemens, sensation, consciousness, and intellect, which form a large part of the symptoms of the disease."

Some of Mr Horsley's experiments bear upon this point. He stimulated respectively the cortex, corona radiata, and spinal cord of monkeys in both the acute and chronic forms of experimental myxœdema, and took tracings of the muscular contractions obtained. In this way he found gross changes of a degenerative character in the functional activity of the central nervous system; this commencing with the higher centres and leading finally to complete and universal loss of function. It is affirmed that the excess of mucin observed in the original instance is not a general condition, but belongs rather to certain stages of the disease; and with this qualification it is pronounced to be characteristic of myxœdema in man. "The full analysis of the results of the removal of the thyroid gland in man demonstrates, in an important proportion of the cases, the fact of the subsequent development of the symptoms exactly corresponding to those of myxœdema," and prominence is given to the development of accessory thyroids or the accidentally incomplete removal of the main structure as a factor in determining negative results after operation. Atrophy and surgical injuries of the trachea and neighbouring structures are rejected as causes of operative myxœdema (cachexia strumipriva), and the disease in its various forms (primary myxœdema, cachexia strumipriva, and sporadic cretinism) are held to depend upon, or to be associated with, destruction or loss of function of the thyroid gland, the ultimate cause of such destruction or loss in the idiopathic condition not being at present evident.

In an appendix is given the result of Dr. Stephen Mackenzie's investigations on the weight of the thyroid body at different periods of life, and in persons dying from various causes.

DISSECTION OF THE HUMAN BODY. By JOHN CLELAND, F.R.S., etc. Third Edition, thoroughly revised by JOHN YULE MACKAY M.D. London: Smith, Elder and Co. 1888.

THAT this work meets a want is shown by its having already reached a third edition. On the present occasion Professor CLELAND has enlisted the services of his senior demonstrator, Dr. J. YULE MACKAY, to carry out the work of revision. That the task has been well done it is needless to say, although the correctness of previous editions must have made it an easy one.

As its title implies, the book is a guide to the dissection of the human body, and the preface states that it is merely to be used as a supplement to systematic works on anatomy. The seventh edition of Quain's *Anatomy* is specially spoken of under that heading; but this is perhaps an oversight, inasmuch as that work long ago reached its ninth edition. Further, the hope is expressed that even as an aid in preparing for examinations the book may not be useless. The science of anatomy has made great strides since the last edition of Quain, and it is to be regretted that a work more suitable for the requirements of the present higher examinations could not have been referred to. The spirit of ana-

tomy is so altered that a student might know Quain or Ellis from cover to cover and yet fail to do well at such an examination as the recent ones of the London University. Indeed, we question whether the phraseology in which the questions are couched would always be understood. But we cordially agree with the principle which underlies this work. The author is correct in saying that the student will with its aid cultivate his manipulative powers and his observation. We take it that a training in these two things is the great good of a thorough training in anatomy, and anything which aids is worthy of praise. But manipulation and observation are not all that anatomy ought to give. Such an equipment is too little for our needs. The efforts of the transcendentalists and of modern morphologists show that it may be made to train the mind to habits of the widest generalisation. With the qualifications which have been mentioned, the present work is a minute and very correct guide to dissection. The directions for the use of instruments are so explicit that they even tell the way in which the fingers should be held and the wrist turned—things better taught by example than by precept. We also note that the order of dissection is much the same as in London schools; and this leads to the remark that the fact that, as different methods of dissection prevail in different schools, the demand for works of this nature must always be somewhat limited. Whilst, as we have said, the details are exceedingly accurate, yet we feel that it would have helped if a general statement of the object in view had been put at the beginning of each branch of the subject. As an instance of what is meant, the paragraph upon the face may be referred to. One of the objects of the dissection of this region is to show the attachments of the muscles, but we question whether one who carried out the instructions given would see their relations to, and action upon, the skin of the face. But it is more particularly to the accounts of the dissection of the more difficult regions that the student will turn for guidance. If those which are given be followed, the most important structures will certainly be seen, but we note that no directions are given for the finding of the otic ganglion, the dissection of the capsule of Tenon; whilst the reference to the lenticular ganglion is more of the nature of a very brief description than of a direction for its discovery and dissection. Occasionally, too, matters upon which there may be differences of opinion are introduced without that fact being mentioned. For instance, the forward movement of the condyle of the jaw in opening the mouth is attributed to the external lateral ligament, and the condyle takes the interarticular fibro-cartilage forwards with it. Now most anatomists attribute both the movement of the condyle and of fibro-cartilage to the action of the external pterygoid muscle.

The literary style is very simple, clear, and good, and falls very rarely into what may be called "textbook English," and we only occasionally find sentences with such redundant phrases as "namely, the structure known as," and such-like. In reviewing this work the want of an index was greatly felt, and we conclude with the hope that in future editions this may be supplied.

MEMOIRS AND MEMORANDA IN ANATOMY. Vol. I. By JOHN CLELAND, M.D., F.R.S., etc., JOHN YULE MACKAY, M.D., C.M., and ROBERT YOUNG, M.A., M.D. London: Williams and Norgate. 1889.

THIS work is a striking evidence of the zeal and energy with which the study of anatomy is being pursued, and of the enthusiasm with which Professor CLELAND and his demonstrators devote themselves to it. The range of subjects treated of in these pages is a very wide one, and beyond that which the title of the book might lead us to expect, and questions of teratology form a large bulk. For instance, such things as the following are discussed: birds with supernumerary legs, hermaphroditism, abnormalities of the intestines, the classification of anomalies, and acephalus. Amongst other contents may be noted articles on the arterial system of the chameleon, on the viscera of the *gymnotus electricus*, the relation of the aponeurosis of the internal oblique muscle and transversalis to the deep epigastric artery and inguinal canal, and many other questions of interest. These various contributions are illustrated with a number of figures, which are, as a rule, fairly good. A detailed criticism of these various essays would require a larger space than we can command, but some of the more interesting and important may be alluded to. Professor Cleland's essay upon Supernumerary Limbs ought to be studied by all teratologists, and the law which he formulates, "that in cases of supernumerary legs connected with the sacrum or perineum, the legs developed as the proper legs of the animal belong originally to two different pelvises, being the right limb of a left pelvis and a left limb of a right pelvis; and that, in these circumstances, the appended limbs may be two, or one or two may be suppressed, or there may be a composite limb formed by the undivided blastema for two adjacent limbs of two pelvises." The exact meaning and importance of this law is not at first appreciated, but before Professor Cleland formulated it the most obvious mistake has always been made, even by the most skilful observers, as to the identity of these supernumerary limbs.

We cannot say that Dr. YULE MACKAY makes the causation of extroversion of the bladder any clearer by his essay on Genito-urinary Malformations. Our knowledge of the morbid anatomy of these malformations is fairly complete, but it seems quite out of the question to anticipate their explanation except by elucidating the development of the allantois and fœtal membranes connected with it. Aid in this direction is to be found in recent communications to philosophical *Transactions* and in the works of His. The abnormality of the pelvis can hardly be looked upon as a cause of extroversion of the bladder; both affections are due to the same cause, which, so far as we know, has not been thoroughly explained. Further, it seems strange nowadays to find an observer offering a hypothesis of the development of the bladder, instead of drawings and descriptions of the actual process. In making these remarks we do not wish to detract from the merit of Dr. Mackay's work, but to suggest the line in which he might, in our opinion, obtain more substantial results. Dr. Mackay's contributions to the anatomy of the circulatory system are particularly good. Our textbooks on anatomy and physiology take their account of the anatomy and development of the aortic arches from Rathke, whose account is wonderfully clear, and seems to bear the impress of truthfulness. However, Dr. Mackay has elsewhere thrown doubt upon Rathke's views, and now continues his proofs and arguments, and certainly shows that current views are quite insufficient to explain the various abnormalities which are met with.

The memoranda at the end of the book are very suggestive, and afford plenty of food for reflection. We shall await the next volume of these essays with interest.

THE FROG: AN INTRODUCTION TO ANATOMY, HISTOLOGY, AND EMBRYOLOGY. By A. MILNES MARSHALL. Third Edition. London: Smith, Elder and Co. 1888.

THE favour in which this small work is held is well deserved, for the directions which it gives are clear, precise, and, we need scarcely add, correct. The opening sentences show that the book is more particularly intended for the author's own pupils, and the most explicit rules and information are given as to all that belongs to the laboratory and the work done there. In the beginning of an excellent paragraph on drawing it is said, "It is absolutely essential to draw your dissections, and this must on no account be omitted." This direction has our heartiest commendation, and we wish that it could be inculcated in every student of anatomy, human or comparative, and that every teacher would see that it was enforced. The other rules for drawing and for the use of the microscope are very clear and good, and the same applies to the succeeding chapters upon the anatomy and development of the frog.

As regards the principle which underlies the method of training to which this book is a guide, we feel that there is room for difference of opinion. It is a matter for regret, we think, that so many are allowed to enter the medical profession without some knowledge of biology, or without that which is even more important, a training in the methods of biological research. It may be said without hesitation that anyone who had worked through the directions which Professor MARSHALL gives would be well furnished in the latter respect, and the only doubt which lingers upon the mind is whether it would not make too great a demand upon the time. Without doubt, in the course under the writer's own superintendence this objection is done away with, and time is found for the dissection of other types.

The last chapter is devoted to an account of the development of the frog, but in this instance the plan of the rest of the book is departed from. Elsewhere the fullest directions are given for the dissection and manipulation of each structure, but the chapter in question is merely descriptive, and directions are not given to

enable the student to investigate for himself. The information itself is clear, but falls far short of anything which would assist a medical man, for instance, in his pathology. However, it is to be remembered that we are referring to an "introduction," and not a complete work, but, as we gather from the preface, part of a complete scheme.

SELECTED MONOGRAPHS. London: New Sydenham Society. 1888.

THIS volume comprises Raynaud's two essays on "Local Asphyxia," translated by Dr. Barlow; a paper by Klebs and Crudeli on "The Nature of Malaria;" another by Marchiafava and Celli on "The Origin of Melanæmia;" and a third by Neugebauer on "Spondylolisthesis," the translation of the last three having been made by Dr. Drummond, of Rome.

Seeing that one is indebted to Professor Raynaud for first demonstrating the probable existence of a common law underlying and linking together gangrenous affections of apparently different origin, it is almost unnecessary to insist upon the importance of and the interest attaching to, the original essays, dated respectively 1862 and 1874. They are admirably written, and are models of clinical observation and philosophical generalisation. After briefly discussing the general considerations on spontaneous gangrene, the author narrates a series of cases upon which his observations have borne, and points out the difficulties experienced in the endeavour to explain the strange and formidable phenomena. After collecting and observing a number of such cases of spontaneous gangrene, the author ultimately arrived at the conclusion that the common character of them all was the absence of a material, appreciable obstacle to the course of the blood, whether arterial or venous.

Passing on to the pathological history of this class of affections, the author dispassionately considers the various possible explanations, concluding in favour of vascular spasm as the fundamental cause, though he carefully avoids more than a suggestion to this effect, leaving its accuracy to be determined by subsequent observation. In his "New Researches on the Nature and Treatment of Local Asphyxia of the Extremities," the author points out that "local asphyxia" and "symmetrical gangrene" are not two distinct maladies, but two degrees of one and the same malady, the latter often not being reached. He confirms and elaborates his hypothesis of vascular spasm, and proceeds to show that, as a matter of fact, obvious spasm, perfectly appreciable in the smaller vessels, does occur; and, moreover, that it is possible to modify the asphyxial state of the extremities from a distance, and especially by acting upon the cord by means of the electrical current. At the same time, he warns that local contra-irritation is likely to be followed by disastrous results.

The results obtained from the employment of electricity have led him to attribute whatever success has attended this treatment to its sedative effect on the vasomotor centre or centres. The translator has added an appendix, by way of postscript, to Raynaud's memoirs, on some of the additions which have been made to our knowledge of the disease in question, and he gives a brief analysis of several cases of spontaneous symmetrical or asymmetrical gangrene arising independently of obvious vascular obstruction, which have appeared in English and American medical journals. These serve to bring into prominence the association of the disease, in some of them, with hæmoglobinuria and malarial disease, facts not noted by Raynaud. He also confirms and adds to Raynaud's schedule of treatment.

We then come to the well-known monograph by Klebs and Tomasi-Crudeli, on the nature of malaria, containing an elaborate account of their methods of research and the results obtained. The discovery of the bacillus of malaria in the air, water, and soil of the Pontine Marshes and elsewhere possesses a historical interest, and throws a new light on the pathogeny of this disease. It results from these investigations that malarious affections may be produced artificially in animals by inoculation with cultivations of organisms found in the soil of malarious places.

The memoir by Marchiafava and Celli, on the alterations in the red corpuscles in malaria infection, and on the origin of melanæmia is a natural sequel to the preceding, and opens up a wide field of research in what may be termed "hæmatology."

The concluding monograph is a contribution to the history and etiology of spondylolisthesis, by Neugebauer, of Warsaw, translated by Dr. Fancourt Barnes. The author has the merit of having first conclusively demonstrated that in many cases this deformity arises from some breach of continuity, either traumatic or congenital, in the neural arch, and his conclusions were confirmed by a committee appointed by the Obstetrical Society of London, for the purpose of examining the specimen and reporting thereon. The author suggests that pathologists should carefully examine the pelvis in all fatal cases of injury from falling, in order to detect commencing or advanced spondyl-olisthesis. This memoir should prove of interest to obstetricians, as throwing light on a hitherto ill-understood variety of pelvic deformity.

THE GUIDE FOR IRISH MEDICAL PRACTITIONERS. By Professor R. J. KINKEAD, M.D.Dubl., J.P., etc. Pp. 591. Dublin: John Falconer.

THAT excellent little book, the *Irish Medical Directory*, contains much useful information on the various Acts of Parliament appertaining more especially to the duties of medical officers of the poor law, the police, and the different public institutions in Ireland. Dr. KINKEAD has in this *Guide for Irish Medical Practitioners* embodied these different Acts, and has added much valuable matter on the relations of medical men to each other, and on those medico-legal topics of primary importance to medical officials in the various departments of the public services, touching also on the relations of the practitioner to the public in private practice.

Dr. A. H. Jacob, in the preface he has written to the work, points out that the actual working members of the profession in Ireland do not exceed 1,800, and that of these 1,050 are connected with the Poor-law medical services. When we reflect that a considerable number of medical men, exclusive of the above, are attached to the prison medical service, the lunacy service, and the county infimaries, the necessity for having such a simple and reliable guide as that prepared by Dr. Kinkead is obvious.

The work is divided into three parts. Part I deals with the memorandum and articles of association of the Irish Medical Association, a body constituted to watch over and generally protect the interests of the profession in Ireland. There are two excellent chapters on the ethical bearings of medical men to each other and to their patients under the heads of "Consultations" and "Professional Responsibilities," that would be read with advantage by many on both sides of the Channel, though it is no secret that the unwritten law of medical etiquette and honour is in no part of the world more highly esteemed and carefully protected than in Ireland. This section closes with a brief review of the Medical Acts.

Part II deals fully with the various enactments providing for the government of the Poor-law medical charities, lunatic asylums (public and private), prisons, and county infirmaries; while it also gives the details and illustrates the working of such Acts as the Public Health, Labourers, Inebriates, and Habitual Drunkards, Factory, and other Acts. This is the most valuable portion of the *Guide*, the codification of the various Acts being elucidated by copious notes, and the particulars of cases which have been argued in the courts illustrative of the disputed bearings of the Acts of Parliament in several instances.

Part III succinctly gives advice on such questions as malpraxis, the rules for medical evidence, and the fees of witnesses. There are some important hints on the conduct of the medical advisers in cases of poisoning, and the cautions necessary in giving testimony before the coroner. The chapters on abortion and infanticide are too meagre, and in any future edition these subjects should be more fully considered.

The work closes with a useful chapter on the rules of life assurance. The care with which medical advisers of assurance companies should protect themselves from all suspicion of either carelessness or complicity with fraud is, however, hardly sufficiently insisted on.

We have thus briefly sketched the plan of this work. It is one of those books which will find a welcome place on the writing-table in every Irish medical practitioner's study, and a reference to it in moments of emergency will often save him much time, and may prevent both anxiety and trouble.

MEDICAL MAGISTRATE.—The name of Mr. John Bark, M.R.C.S., has been placed on the Commission of the Peace for the borough of Bootle-cum-Linacre. Mr. Bark is one of the honorary surgeons to the Liverpool Stanley Hospital, and a member of the Bootle Town Council.

NOTES ON BOOKS.

Health Resorts: Home and Foreign. (W. H. Allen and Co., 1889.) "Where shall I go for a healthy holiday?" is a question frequently addressed to the medical practitioner by those temporarily out of health, as well as by the confirmed invalids; and it is one which it is not always easy to answer. But more frequently the question is addressed by the busy worker to himself at this season of annual relaxation, and in such cases the difficulty of making a selection where so many conflicting considerations have to be taken into account, and so many claimants for patronage exist, frequently ends in an injudicious choice being made, with the result that the full benefit which should be derived from the holiday is not obtained. In these cases the annual holiday number of our contemporary the *London Medical Recorder* cannot fail to be both useful and interesting. The benefits, as well as the drawbacks, of holidays at sea are described by Dr. Symes Thompson and Dr. G. Thin, the former giving a special account of a voyage to the Cape, and of the climate of South Africa. The Black Forest as a health resort is described by Dr. Vincent Harris, whilst Dr. J. Macpherson contributes some very valuable Notes on the baths in the Rhine Valley. Dr. F. O. Buckland describes the spas of Bohemia, the springs and baths of Kissingen, and the mineral waters of Bath; and Dr. Bottentuit, the waters of Plombières. Madeira is described by Dr. Grabham, and Orotava, Teneriffe, by Dr. Perez, the results of a lengthened residence being in each case recorded. Coming nearer home, some of us will be agreeably surprised to find from Dr. Edgar Flinn's account of the summer health resorts of Ireland, that the Emerald Isle has many health-giving localities which, however, are not yet adequately appreciated. Oban, by Dr. Baily, and many other Scotch resorts are also described. The greater part of the little volume, however, is taken up with some very concise and, in most cases, well written accounts of some eighty English resorts, both seaside and inland, the health properties and sanitary condition in each case being specially described, in addition to an indication of the ordinary attractions of the several places. The whole book is well up to date in every respect, and shows signs of having been compiled with considerable care and from authentic materials.

Chemistry; General, Medical, and Pharmaceutical. By JOHN ATTFIELD, F.R.S. Thirteenth Edition. (London: Gurney and Jackson. 1889.)—Within twenty-two years a demand has arisen for thirteen large editions of this admirable manual. The author may be allowed to give his own account of the changes and additions made in this edition for the demonstration of the latest developments of chemical principles, and the latest applications of chemistry to pharmacy. "On nearly every page will be found some indication of the recent rapid growth of the science and the art of chemistry, while the paragraphs on such subjects as the following have been considerably expanded:—the difference in the activity of free and combined nitrogen, the economic production of oxygen, molecular formulæ, the nitrites of ethyl and amyl, sulphonic compounds; primary, secondary, and tertiary alcohols; certain benzene derivatives, the ketones, animal alkaloids, ptomaines, constitution of alkaloids; chemistry of hyoscyamine, cocaine, etc.; morbid urine, assay of opium, atomic weights, etc. The periodic law is also briefly noticed. On the other hand, synthetical and analytical processes which have become more or less superseded have been either omitted or described less fully. The whole work has thus been kept within the limits of a learner's manual, while the author has endeavoured faithfully to portray the present relationship of chemistry to at least those areas of medicine and pharmacy with which students should become familiar in the days of their studentship. The voluminous index will maintain the usefulness of the book to them afterwards in the course of the practice of their respective callings." Few text-books have been so successful, or are so carefully kept up to the high-water mark of the most recent progress.

References to Papers in Anatomy: Human and Comparative. By JOHN STRUTHERS, M.D. (Edinburgh: Maclachlan and Stewart. 1889.)—In preparing this pamphlet, Professor Struthers set an example which other men of science would do well to imitate, for the benefit of purely scientific readers, and for the special convenience of medical men, teachers, and students. The pamphlet consists of a list of the large number of monographs and separate publications prepared by its distinguished author. Its peculiar feature is the brief summary of each monograph. The plan of the pamphlet is so good that we will quote one reference as an example of the whole: "35. On the Error of regarding the Flexor Longus Pollicis Pedis Muscle of Man as, normally, a Flexor of the Great Toe only. (June 3rd, 1863, *Edin. Med. Journ.*, vol. ix, p. 84.) *Contents*—The so-called slip from the flexor pollicis to the flexor communis in reality a tendon from the former to the second toe, or also to the third, rendering flexor pollicis an internal flexor communis. Its zoological affinity. What rather is remarkable in man is the independence of the flexor pollicis of the hand." This summary is equally succinct and instructive. The example might well be imitated by many of our scientific physicians, surgeons, and anatomists who publish works in three or four different papers, monthly magazines, and society archives yearly. Much unnecessary trouble and waste of time would be saved to medical men who seek for information on any particular anatomical subject, yet are not familiar with current scientific periodicals only studied by professional biologists. The purely medical worker does not always know where to look for the scientific enlightenment which he desires.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS,
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

STERILISED MILK.

SAMPLES of Dahl's sterilised milk have at various times been examined by us. The preservation in each case was perfect, and the quality and composition that of genuine milk, containing a fair amount of fatty and non-fatty solids. No preservative or antiseptic substance was present, the milk, as its name implies, having been rendered free from germs by a special process. We cordially approve of any scheme whereby the milk supply is rendered proof against disease and decomposition, and recognise the difficulty of treating an article so prone to danger of various kinds as milk. Dahl's sterilised milk, in all respects but one, fulfils all reasonable requirements which may be made of such an article. The one defect, which seems inherent to unsweetened preserved milk, is the separation of the cream, which in course of time collects together in a tenacious layer, which cannot very easily be subdivided again. The efforts of the manufacturer, now the problem of conserving milk in its natural state is completely solved, should be concentrated upon this important detail.

TEA EXTRACT.

THE principle underlying the manufacture of the Santha Tea Extract is a good one, namely, to remove from the tea the greater portion of the tannin by precipitation with albuminous matter, and thus to render the tea less astringent and more digestible. The same reduction of tannin is indeed carried out by most tea drinkers by the addition of milk to tea, the casein rendering insoluble and precipitating more or less tannin. The Santha Tea Extract yields when dissolved in water (which it does with a great deal of difficulty), an infusion which is not astringent. It is unfortunately almost entirely devoid of the odour and aroma of tea, instead of which it possesses that of hay, which will not commend itself to many tea consumers. The manufacture of a tea extract which shall contain unimpaired the odour of good tea, and readily dissolve in water, has hitherto, to our knowledge, not been successfully carried out. We can only hope that the Santha Tea Company will be able to perfect its process and remove the defects which we have pointed out.

FOOD MEAL.

SOME months ago we favourably noticed the "Perfect" Food Biscuits, made by Messrs. J. Henderson and Sons. The Ground Biscuits are now brought into commerce under the name of "Perfect" Food Meal. They possess all good qualities of the biscuits, that is to say, they are highly nitrogenous, rich in phosphates and oil, and of a very good flavour.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1889.

SUBSCRIPTIONS to the Association for 1889 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, SEPTEMBER 21ST, 1889.

THE REPORT OF LORD CAMPERDOWN'S COMMITTEE.

II.

WHILE the recommendations on pay and retirement will give general satisfaction, we fear those relating to rank and title will evoke considerable divergence of opinion.

They will probably be considered by some medical officers, who looked for more finality, as practically useless; but many others, less sanguine, will regard them as steps forward in the general position, which it were wise to make the best of at present. Nearly all would doubtless have been pleased had the Committee boldly advised the formation of a Royal Medical Corps, with definitive military rank and titles, such as we believe are now actually being created in the French and Russian armies. But in this country our army ideas are less advanced, and the Medical Department finds itself still confronted with social jealousies, and a sort of feudal caste spirit, which obstinately opposes comprehensive organisation.

The remarkable nature of this obstruction is illustrated in the curiously lame and inconsequent "dissent" on rank and title appended to the report by three members of the Committee. These gentlemen admit discontent, especially among the younger officers, but trace it back almost entirely to the abolition of the regimental system—of which, unfortunately for the argument, these officers never had any experience at all! They evidently do not like to say that the abolition of relative rank was really at the bottom of the agitation. In any case, they do not seek to allay it by genuine remedies, for they consider it unreasonable; see no necessity for better titles, simple or compound; and, instead of giving increased status or authority, suggest rather that medical officers should be "relieved," as it is delicately put, from the heavy burden of modest command which at present they exercise over their immediate hospital establishments! This extraordinary proposal, worthy of the dark era preceding Sidney Herbert's Commission, would, of course, be fatal to efficiency, and is directly contrary to all advances in military organisation during the past thirty years; yet it unmistakably shows the persistent reactionary spirit still at war with medical organisation.

While there is no denying that the report, as a whole, falls far short of the true ideal, which time alone will evolve, it nevertheless, we think, materially strengthens the urgent demand of medical officers for an intelligible army status. It recognises the existence of grievances, and proposes remedies. The exigencies of the situation, we suppose, compelled the suggested rehabilitation of relative rank—we do no say restoration—because we have always thought that so long as any other than substantive rank exists the actual abolition of relative rank is, in the very nature of things, an impossibility.

We have no wish to cause embarrassment by recalling unfortunate official utterances on the value of the rank, but would only remark that whether in its essence a sham or a reality it was at one time well accepted, and long did good service in the army. But the chief point in the report is that the revived relative rank shall in future be expressed in self-interpreting compound titles. We are aware that there are considerable differences of opinion as to their value; they have been described as cumbrous and un-English, yet they are combinations identical with the existing titles of Surgeons-Major and General, which have not been found objectionable. They would, at all events, have the merit of clearly expressing, in definite and intelligible form, the equivalent military rank of the holder, which we certainly think a distinct advance. Perhaps their very simplicity is distasteful to the three dissentients who apparently seek to distract Mr. Stanhope's attention from the recommendation by dragging the red-herring of similar terrible naval titles across his path. We, indeed, never heard of anyone who proposed similar naval titles, simply because they could have no parallel application in the two services; the rank value of such titles as lieutenant and captain is, of course, wholly different in the army and navy.

There is a difficulty in the application of the proposed new titles in the half-and-half position occupied by the departmental rank of brigade-surgeon. We regret that rank, which is of the first importance to the mass of medical officers, should have received such scant recognition from the Committee. It was specially created in 1879 by way of compensation to a large body who, from various causes, are practically debarred from ever reaching the purely administrative grades. But though conferring increased departmental status, pay, and pension, it was from the beginning fatally marred by carrying no increase in relative military rank, a blot which was made the unjust excuse for witholding the pay of the rank in India. Yet the Committee, perhaps inadvertently, would stereotype the blot by including the so-called brigade-surgeons among surgeons-lieutenant-colonel instead of the surgeons-colonel, a position to which we think they are clearly entitled, first, from being selected, and, secondly, as being semi-administrative officers. As, under the new designations, the title of deputy surgeon-general would disappear, we strongly recommend Mr. Stanhope to make one rank and title of deputies and brigade-surgeons. We believe such a proposal was placed before the Committee in evidence, with the practical suggestion that, from such a consolidated list, all purely administrative officers under the rank of surgeon-general should be selected and gazetted as surgeons-colonel on the staff, with, of course, extra pay during tenure of appointment, and increased pension after so many years in it, if not meanwhile promoted to the rank of surgeon-general. If it be, as it un-

questionably is, desirable to bring the medical into parallel lines with the general army staff, here is an opportunity of doing so. The position of surgeons-colonel on the staff would thus be closely assimilated to those of commanding colonels of artillery and engineers on the staff. The enlarged surgeon-colonel list would also be of very great administrative advantage in the selection of principal medical officers both in peace and war, and would give comparatively young officers a chance of showing administrative ability before the very fag end of their service was reached.

All will give unqualified approval to the recommendation, from which there is no dissent, that the corresponding army rank of medical officers be made clear in all regulations, warrants, and commissions, and that no change be made in these regulations without the full concurrence of the heads of departments. The recommendation made in the dissent, that young medical officers should for a time be attached to regiments, will, we think, meet with general approval. Most old medical officers look back with much pleasure to the time spent with regiments, which they feel was advantageous both to themselves and their corps. Such attachment would also largely bridge over the present much to be regretted estrangement between regimental and medical officers. There are other points, especially those on conditions of service, which we must defer for future consideration.

INSANITY IN IRELAND.

In looking over the last Commissioners' Blue Book for Ireland we find the total number of lunatics under care and treatment in the various institutions to have been 15,685 on January 1st last, an increase of 422 for the previous year. Of the total number, 7,923 were males and 7,762 females, actually 161 more males than females. This is a striking contrast to the proportion of males and females in England and Wales, which stands at 38,455 males to 45,885, or nearly 9.1 females to 7.5 males.

No less than 951 more males than females were in the Irish district asylums, and 200 more men than women had been admitted during the year. The poorhouses, on the other hand, show a preponderance of 779 females (including idiots) over the males, the excess in the former class in these institutions making up, to some extent, for the enormous difference in the asylums.

Apart, however, from this balancing of numbers, we should still have expected to find a much larger proportion of females to males in the district asylums, more especially when we consider the immense emigration which has been going on for so many years. During the last decade it is stated that no less than 776,000 individuals have emigrated (presumably the greater part of these would be men), and that 78,600 emigrated during the last year.

That this emigration has produced an important change in the proportion of the insane to the sane population is only what we should expect. Such a serious drain as we have indicated upon the strongest and healthiest part of the population must tell upon the quality of those left behind. The infirm and insane go to swell the numbers in asylums and poorhouses, and a comparatively large number of weakly ones remain to assist in keeping up the population. We have evidence of this from the fact that the ratio of lunatics to the population is 36 per 10,000, and the Commissioners themselves say that "this proportion has been undergoing a progressive and marked change in Ireland through emigration and the abandonment of the mentally afflicted by their departing relatives." This is by no means an unusual result of emigration. Wherever a country is over-populated and its resources undeveloped, or incapable of further development, as in many of the congested outlying districts in Ireland, we find a steady exodus of the bread-winners—the bone and muscle of the community—with a corresponding rise in the proportion of paupers and lunatics to the population. We have an instance of this to an even greater extent, in the Isle of Man, where, with a population of 53,000 inhabitants, there are 166 lunatics in the asylum and 40 to 50 outside,[1] running up the ratio of lunatics to the population to over 40 per 10,000. There also the same factors are at work. The Manxmen are proverbially an enterprising and adventurous race; splendid sailors and first-rate colonists; loyal and law-abiding; but the resources of their country are limited, and they emigrate in large numbers. Even in their case, although the ratio of lunatics to the population is so high, the proportion of the sexes among the insane is 90.9 females to 75.7 males, which is a marvellously close approximation to the proportions in England and Wales given above.

We may take it for granted therefore, from the necessarily cursory glance we have given at the facts we have mentioned (for there are many other aspects of this question which we are compelled to leave untouched), that the increased and, unfortunately, apparently increasing ratio of lunatics to the population in Ireland may be accounted for to a large extent by excessive emigration. Can we in any way account for the disproportion between the sexes among the insane in the district asylums? In this direction we cannot do better than inquire into the causes of insanity given by the Commissioners in the cases admitted into these asylums during last year. They are tabulated as follows:—

Causes.	M.	F.	T.	Excess. M.	Excess. F.
Moral	213	260	473	—	47
Physical	584	393	977	191	
Hereditary	293	279	572	14	
Not known	423	376	799	47	
	1513	1308	2821		

From this we gather that the females are only more numerous than males where "moral causes" are at work; and, on looking further into details under this head, we find the greatest differences under the following causes given by the Commissioners:—"Grief, fear, and anxiety" account for 31 more females than males; "domestic quarrels and afflictions" 49 more, whilst under the heading of "poverty and reverse of fortune" there are 21 more men than women.

Turning to the causes where the males are so greatly in

[1] At the time of the last census there were 42, namely, 17 males and 25 females so returned.

excess, namely, the "physical causes," we see that the chief differences occur in "intemperance and irregularity of living," where there are 204 males and only 61 females, an increase of no less than 143 males; in "cerebral diseases and affections," an increase of 46 males; and in "effects of climate" (whatever that may mean) 32 more males. It must be borne in mind that we mention only the larger differences.

We can readily see from this brief survey of the various causes producing insanity how, in the course of a very few years, intemperance and irregularity of living, so much in excess among the men, together with the inevitable accumulation of the uncured cases resulting therefrom and remaining in the asylums, might be sufficient in themselves to account for the great preponderance of male lunatics in the district asylums. There are, no doubt, many other facts bearing upon this interesting question, and we may mention one which seems especially worthy of notice, namely, that whereas the proportion of male lunatics to the male population in Ireland is a little higher than in England and Wales, the proportion of female lunatics to the female population is lower.

INSANITARY HOUSES IN LONDON.

THE very localised outbreak of enteric fever in the parish of St. George's, Hanover Square, has started a voluminous correspondence in the public press on sanitary matters generally. As usual in such cases, from the number of side issues raised, the correspondence becomes of a most perplexed character, and the general result to the public is a sense of profound mystification. Two suggestions, however, of a practical nature have been brought forward which aim at placing London sanitation on a better footing, and are therefore deserving of consideration.

The first is that of Dr. C. H. Allfrey, who advocates the education of local surveyors and inspectors of nuisances in all sanitary matters, and their examination in these subjects before being allowed to hold posts of responsibility under sanitary authorities. Dr. Allfrey suggested that the Sanitary Institute should take up this work, but the Institute has already taken it up, and for a number of years has given lectures and practical demonstrations, and held examinations for the very men in question. It only remains for local boards and town councils throughout the country generally to avail themselves of the facilities now supplied by the Institute for appointing capable certified men to the posts at their disposal. Many of the large towns and some of the metropolitan parishes have already done so; and we believe Mr. Ritchie has now under consideration a scheme for securing the appointment of properly qualified public sanitary officials (other than medical officers of health, whose qualifications for office have already been the subject of enactment), which will be incorporated in the next Local Government measure. Such being the case, it is evident that the question of expert sanitary officials is already fairly advanced, and we can hopefully await its still further development.

The other proposal is that of Mr. Wootton Isaacson, M.P., who, being anxious to ensure the better sanitary condition of houses in the metropolis, intends to bring in a Bill next session making it illegal for house agents or anyone else to let or sell houses, etc., unless a certificate is produced, furnished by a Government inspector, notifying that the premises are in a perfectly sanitary condition and fit for occupation.

With the merest outline of the Bill, thus sketched by Mr. Isaacson, before us, it is hardly possible to say much in criticism; but in principle it appears to approach very nearly the Sanitary Registration of Buildings Bill, on which we felt it our duty to comment unfavourably in the JOURNAL of April 6th, p. 785. The system of official sanitary certification of houses we believe to be wrong, as tending (1) to hamper the local authorities in the performance of their duty under the Sanitary Acts, (2) to engender a false state of security in the minds of tenants and owners, and (3) to place greater obstacles than even now exist in the way of the tenant of an insanitary house (even Government officials may pass insanitary houses as sanitary) obtaining compensation for loss of health.

Of course very much would depend upon the capacity of the certifying officials. To secure the large number of capable men that would be required the Government would have to institute a new class of civil servants. They would have to be selected by competitive examination, and after appointment would look to the Government for pay and emoluments. No doubt highly-trained inspectors could thus be obtained for the work, were the Government willing to create and organise the service, and become responsible, as it would have to do, for the sanitary certificates issued by its servants. Failing the Government's assent to a scheme of that nature, the certifying experts must be created from amongst engineers, architects, or surveyors, for whose knowledge of sanitary matters there would not be any reliable guarantee, unless the proposal in the Sanitary Registration of Buildings Bill were adopted—namely, that of allowing the Local Government Board to grant licences in sanitary practice to engineers or architects who apply for them; and if these licences were granted without inquiry or examination, they would be worse than useless as indications of sanitary knowledge.

On the whole, we think that efforts in this direction are misdirected and useless. *Caveat emptor* should be the motto of those who buy or lease houses. If the landlord or agent knowingly makes false misrepresentations as to the state of the drainage, the tenant can recover compensation by action at law. But it is far better that every intending tenant should act on his own initiative, and employ someone on whom he can rely to inform him as to the exact sanitary condition of the house he wishes to occupy before completing the purchase or signing the lease. Those who take a house without any inquiry as to the state of the drainage have only themselves to blame if they subsequently suffer from their over-confidence. Surely the subject has now been sufficiently long under discussion to have had some of its bearings comprehended even by the most apathetic.

PROFESSOR FLOWER ON MUSEUMS.

THE inaugural address of the President of the British Association was devoted to the subject of museums. No person in the world is more fit to speak of museums than Professor Flower. The state of perfection to which he brought the collection at the College of Surgeons is well known; and a few years since he transferred his services to the natural his-

tory branch of the British Museum, which, being established at South Kensington, has been strangely confounded by some newspapers with another well-known institution in the same locality. Our profession can congratulate itself in having taken a creditable part in perfecting museum management. Not only are pure science and medicine very intimately allied, but the necessities of medical schools involve the formation of museums. As there are many such schools, there are many local museums. This is in accordance with the spontaneous, decentralising character of Anglo-Saxon institutions. On the other hand, whilst eleven school museums exist in London, there is besides the splendid central collection at the College of Surgeons.

Thus, as far as quantity goes, medicine cannot complain, and the good quality of the Lincoln's Inn Museum is acknowledged throughout the scientific and medical world; nor must we overlook fine collections at Edinburgh, Dublin, and elsewhere. Nobody can deny that the Museum of the College is a type, an ideal of museums and museum-management, thanks to Hunter, Clift, Owen, Quekett, Flower, and Stewart. The state of the medical school museums in London requires more scrutiny. Professor Flower laid down the law that the real objects of forming collections were two, which were quite distinct and often conflicting. The first was to advance the knowledge of some given subject; the second was to diffuse knowledge among persons who, without the opportunity of making a profound study of any branch of science, wished to possess some knowledge of the world around them, and of the principal facts ascertained with regard to it. In the case of medical school museums the first object is paramount, for the second hardly applies to medical students, who must make a thorough study of certain branches of science, and should take part in the advance of knowledge. At medical schools the facilities for making anatomical collections are great. As for pathology, material is never wanting, and the officials of the schools naturally take a pride in the steady increase and improvement of their pathological museums.

Professor Flower rightly dwelt on the importance of the curator. There can be no doubt that the medical school system in London acts unfavourably in respect to curatorships. Such appointments are, like nearly every other school appointment, looked upon as stepping stones to more popular posts on the hospital staff. The sciences of anatomy and physiology do not suffer thereby, but the museums do. Where curatorships are made as permanent as possible, museums are best managed. A curator who is more of a fixture than a demonstrator of anatomy or a registrar can devote himself to the interests of his museum, and make use of the activity, enthusiasm, and industry of those who hold the latter appointments. The young registrar has generally an analytical method of working at pathology; he spends much time investigating some special subject which circumstances offer to his observation. The work of the curator is rather synthetical than analytical; he must see that his museum is as perfect as possible in a general sense, especially in respect to the arrangement and cataloguing of specimens.

Above all he must not only prepare, but also keep up, a good catalogue, and know how to label specimens. Professor Flower rightly spoke of labels as an essential part of museums; in fact, they are at the same time a part of each specimen and a variety of catalogue. Indeed, it is best that the printed description from the catalogue be affixed to the specimen whenever possible; in the case of dry preparations this excellent arrangement can always be carried out. This method is particularly advantageous to the busy staff, and to strangers who visit the museum for study and comparison with other collections. The issue of annual supplements to the catalogue, a practice started by Professor Flower and imitated at several medical schools, is especially to be commended. If brought to perfection, the busy worker in or outside London can ascertain, before leaving his house or his reference library, how many hospitals scattered over the metropolis he need visit in order to find specimens illustrating the special subject to which he happens to be devoting his attention.

THE epidemic of scarlet fever at Plymouth still continues. There were thirteen deaths from the disease during the week ending September 14th.

THE St. Thomas's Hospital old students' annual dinner will take place on October 1st, 1889, at six for half-past, in the Governors' Hall, St. Thomas's Hospital; Dr. John Harley in the chair.

MR. JAMES FLEXMAN, M.R.C.S., L.S.A., a well-known and highly-respected medical man who had practised for many years at Southmolton, died at King's Lynn on September 8th, at the age of 73.

A "CHURCH parade" recently went through Chelsea and the adjoining districts for the benefit of the Victoria Hospital for Sick Children. The sum collected amounted to £299 12s. 7d., and, after deducting £26 15s. for expenses, a balance of £272 17s. 7d. was handed over to the hospital.

AT a meeting of the Keighley Board of Guardians on September 18th it was stated that the medical officer had reported that 84 per cent. of the inmates of the local workhouse and infirmary were suffering from lead poisoning. The water is supplied by the Keighley Corporation, and is said not to undergo any filtering process.

THE total number of persons who attended the meeting of the British Association, which has just been brought to a close, is officially stated to have been 2,437. The number at the previous meeting at Newcastle in 1863 was 3,335, while the attendance at the Manchester meeting in 1887 amounted to 3,838.

AMONG the leading officers of the British Association on whom the degree of D.C.L. was conferred by the University of Durham, on September 14th, were Professor Flower, President of the Association, and Professor Sir William Turner, President of the Section of Anthropology. The degree was also conferred on Professor Burdon Sanderson, President of the Section of Biology, in his absence through ill-health.

THE WOLVERHAMPTON GENERAL HOSPITAL.

WE are pleased to learn that Dr. C. A. MacMunn, so well known to the scientific world for his investigations in physiological spectroscopy, has been appointed Honorary Pathological Officer to the Wolverhampton General Hospital. The Royal Society has granted Dr. MacMunn a sum of money in aid of his investigations, and now

that he has a proper field for the exercise of his high talents as an original worker, further results not only in the somewhat abstruse region of science which he has made his own, but in general pathology may, we hope, be looked for.

SECTION OF PUBLIC MEDICINE: A CORRECTION.

Our attention has been called to an error of considerable importance in one of the three resolutions passed in the Public Medicine Section at Leeds on the subject of town refuse. In the third resolution the words "for the collection of house refuse or other excreta" should have been "for the collection of house refuse *other than* excreta."

REGISTRATION OF PLUMBERS.

In the Section of Public Medicine, at the recent meeting of the British Medical Association, at Leeds, Dr. H. Tomkins, of Leicester, moved, and Dr. Caldwell Smith, Motherwell, N.B., seconded the following resolution, which was unanimously passed: "That this Section strongly approves the movement set on foot by the Worshipful Company of Plumbers, as serious defects in the plumbing work of dwelling houses are constantly leading to disease and ill-health, and demonstrate the need that exists for the more rigid supervision of plumbers and their work."

THE LATE DR. ROYSTON-PIGOTT.

Dr. G. W. Royston-Pigott, F.R.S., died last week at Eastbourne, in his seventieth year, and received the honour of a public funeral there on Wednesday last. He was a man of high scientific attainments, and a prolific contributor to the *Philosophical Transactions*. He graduated M.A. at Cambridge in 1844, and M.D. in 1851.

SCARLET FEVER IN LONDON.

We are glad to be able to state, on the authority of the medical officer of health for St. Pancras, that the alleged "outbreak" of scarlet fever in Camden Town "does not exist." As regards the metropolis generally, however, the fact remains that within the last few weeks scarlet fever has been steadily on the increase, and, on September 17th, 1,070 cases were under treatment in the hospitals of the Metropolitan Asylums Board. It is feared that it will shortly be found necessary to open the South-Western Hospital at Stockwell.

SCARLET FEVER AT BIRMINGHAM.

The epidemic of scarlet fever at Birmingham has assumed considerable proportions. We are informed by Dr. Hill, the medical officer of health, that there were on September 18th 325 patients in the City Infectious Hospital, which is now quite full. On account of the pressure on the resources of the hospital, the Health Committee of the City Council has made arrangements with neighbouring local authorities to treat scarlet fever cases from the city in their fever hospitals, and in accordance with these arrangements ten cases have been removed to the Aston Infectious Hospital, and five to that of the King's Norton Rural Sanitary Authority. Nine of the nurses and one of the cooks at the hospital have recently been attacked with the disease, as has also Dr. Hill's son, Dr. Eustace Hill, the assistant-surgeon to the hospital, who is now prostrate with a severe attack of scarlet fever, associated with diphtheria, and lies, we regret to hear, in a critical state.

RAILWAY ACCIDENTS AND AMBULANCE.

Attention has been directed in the *Times* to the want of stretchers and ambulance material at railway stations and in passenger trains. It is stated that 977 persons were killed and 3,826 injured in railway accidents last year, of whom a large proportion were railway servants. There are many accidents where lives are unnecessarily endangered by the neglect to provide the means of giving first aid. Wherever railway servants have had the opportunity of acquiring first-aid knowledge by attending the lectures of the St. John Ambulance Association, they have shown the greatest alacrity in availing themselves of it. It is proposed that, in order to promote ambulance knowledge, the railway companies should provide a stretcher to be kept at every railway station, and in every guard's van a small supply of splints, triangular bandages, and simple tourniquets, for the arrest of hæmorrhage. The Mines Regulation Act makes the provision of these appliances at every mine in the kingdom compulsory. The railway companies would, therefore, be wise if they made this provision spontaneously. The St. John Ambulance Association is well able to instruct efficient bodies of railway ambulance men if the railway companies will give facilities for so doing and supply the necessary equipment.

"DOCTORS' ORDERS."

"Doctors' orders" are too often looked upon by the laity as arbitrary enactments of professional pedantry, which your true Briton shows "the freedom that runs in his blood" by defying or evading Nor is this absurdity confined to the ignorant, for one often hears people who should know better boasting of their deliberate neglect of advice which they have paid a big fee to obtain. The moral which we wish to enforce has lately been pointed by a case which occurred in the London Hospital in a manner which we hope will bring it home, at least in some measure, to the public mind. A man suffering from typhoid had some grapes secretly given him by a friend, whom he asked to procure them for him. He became worse soon after eating them, and in three days he died from perforation of the intestine. The coroner trusted that the public would take warning by the case, and all medical officers of hospitals and nurses will, for the sake of their own comfort if from no higher feeling, fervently echo the wish. Melancholy and constantly repeated experience makes them dread "visiting days," as almost inevitably followed by general rise of temperature throughout the ward, and too often by intestinal disturbance of one kind or another. It is hardly to be wondered at that fruit, and even food, should be smuggled in by sympathetic relatives, for in convalescence from acute ailments the appetite is often ravenous almost beyond belief. This is naturally hailed by the friends as a sign of returning health, and it seems hard to withhold the food which is so eagerly craved for. It cannot be too widely known that, in typhoid fever especially, what is wanted before everything is rest for the ulcerated intestine, and unexpected death when everything seemed to promise speedy recovery has often been due to the clamorous hunger of the patient overthrowing the judgment of the medical attendant. If this can happen even to well-informed professional men, it is a thousand times more likely to occur to persons who have no knowledge of the patient's real condition, and only see his suffering. There is probably not a hospital in the kingdom in which relapses and disasters due to the ignorance of well meaning friends are not of frequent occurrence

THE TELEPHONE AS A CAUSE OF EAR TROUBLES.

As civilisation advances, new diseases are not only discovered, but are actually produced by the novel agencies which are brought to bear on man's body and mind. The increase of insanity throughout the world is unquestionably due to the "storm and stress" of our crowded modern life, and almost every addition which science makes to the convenience of the majority seems to bring with it some new form of suffering to the few. Railway travelling has its *amari aliquid* in the shape of slight but possibly not unimportant jolting of the nervous centres; the electric light has already created a special form of ophthalmia; and now we have the

telephone indicted as a cause of ear troubles, which react on the spirits, and indirectly on the general health. M. Gellé has observed, not in women only, but in strong-minded and able-bodied men, symptoms of what we may call "aural overpressure" caused by the condition of almost constant strain of the auditory apparatus, in which persons who use the telephone much have to spend a considerable portion of each working day. In some cases, also, the ear seemed to be irritated, by the constantly recurring sharp tinkle of the bell, or by the nearness of the sounds conveyed through the tube, into a state of over-sensitiveness which made it intolerant of sound, as the eye, when inflamed or irritable, becomes unable to bear the light. The patients suffered from nervous excitability, with buzzing noises in the ear, giddiness, and neuralgic pains. In addition to these subjective symptoms, M. Gellé in some cases found objective lesions, such as a subinflammatory condition of the membrana tympani. A similar condition of things is often seen in persons who spend a large portion of their lives amid the jar and crash of machinery. All the trouble speedily vanishes if the ear is allowed a sufficient measure of physiological rest; this it can only obtain by the cause of the evil being withdrawn. The victims of "telephone tinnitus," if we may so baptise this latest addition to the ills that flesh is heir to, seem all to be of markedly nervous organisation, and the moral may be drawn that such persons should not use the telephone. Mr. Edison has already done something to increase the plague of "nerves" which afflicts our generation, and, if his brilliant career as an inventor is not cut short, there can be little doubt that he will do yet more.

PUERPERAL FEVER AT LIMEHOUSE.

THE daily papers report an inquest held on September 16th by Mr. Wynne Baxter, on the death of a woman named Eleanor Bamforth, at Limehouse, from puerperal fever. From the evidence it appeared that the mother and aunt of the deceased, although uncertificated, were in the habit of attending confinements. The aunt is reported to have delivered the deceased; it was, however, stated that the mother was present in the room at the time; and, in the absence of evidence to the contrary, the probability is that she may have made examinations though the aunt managed the actual delivery. It came out at the inquest that the mother, Mrs. Lyddon, had had six other deaths from puerperal fever in her practice since July the 24th; and that at an inquest held on one of the fatal cases on the 5th of August she had been warned by the coroner to give up attendance on midwifery for at least a fortnight. She seems to have disregarded the warning, and several of the women she attended died. Our contemporaries, regarding the circumstances from the lay point of view, head their account "Deaths from Puerperal Fever—*Extraordinary Evidence.*" The italics are ours. Unfortunately the melancholy story is far from being extraordinary to medical readers. More than forty years ago, Semmelweis demonstrated the contagious nature of puerperal fever, and showed that for it, "prevention is not only better than cure," but is practically the only cure, prevention meaning absolute cleanliness in the surgical sense of everything in the surroundings of the lying-in woman. By far the most important thing, however, is the thorough cleansing of the attendant's hands and finger nails; for this purpose a nail-brush is essential. In every case, before making an examination, the hands should be thoroughly soaked in some efficient antiseptic, such as 1-1000 corrosive sublimate solution. Obviously a fair amount of intelligence and some education are requisite to fit anyone for carrying out rational prophylaxis of this sort, and it is therefore unfortunate that, in the present state of the law, anyone is free to attend midwifery without any certificate of competence whatever. It would certainly be better for lying-in women to be left to the unassisted resources of Nature, rather than be attended by those whose touch may very possibly mean death. Till the law is altered it would be affectation to expect that epidemics similar to the recent one in Limehouse will not recur.

TWO MEDICAL LIBRARIES.

MR. J. B. BAILEY'S account of the rise and progress of the library of the College of Surgeons, an abstract of which is given elsewhere, is an interesting and inspiring illustration of the development of a vast organism from a segmentation-nucleus of the humblest "minimitude," to use Sir William Turner's latest addition to the vocabulary of science. The idea of founding a library had long been entertained by the "rude forefathers" of English surgery, but want of accommodation, and still more perhaps want of liberality in voting the necessary funds, for a long time hindered its growth. In spite of this, it has now developed into a collection of medical literature almost rivalling the famous museum in completeness. The library of the British Medical Association has grown more in the first few months than that of the College did in the first quarter of a century of its existence. This gratifying state of things encourages the belief that the object of those who took the initiative in founding our library may be fulfilled within a shorter period of time than they ventured to hope. If every member of the Association throughout the world were to act on the suggestion of John Hunter to the surgeons of his day, and present a copy of every work, whether book or pamphlet, which he published, modern medical literature in the English language would be represented almost to the full extent of its output. As the library grew, foreign literature would be more and more attracted to it, so that after a time a magnificent collection of books would be formed at comparatively small expense. Almost the whole of the periodical literature of the day could by the system of exchanges be procured free of cost, and a place where foreign journals could be readily consulted by anyone without the necessity of paying a heavy subscription for the privilege would in itself be a boon to very many. Even if money has eventually to be spent pretty freely to carry out the great idea we have sketched out, there could not be a worthier employment for the surplus which careful management may from time to time leave in the hands of the Treasurer than the purchase of books, which are the real "sinews of war" to scientific workers.

THE HISTORY OF MEDICINE.

THE active workers who have their shoulders to the wheels of the triumphal car of modern medicine are as a rule too busy with the present and future of the art of healing to have much attention to spare for its past. Medical writers are rare and infrequent cultivators of historical research; their studies in that direction seldom extend beyond a dip into some warehouse of references like Ploucquet's *Literatura Medica Digesta* to procure the materials for a cheap display of erudition, or a hunt after evidence which shall demolish the priority of a rival worker. It is not only in this country that the subject has fallen into unmerited neglect. In France, Daremberg, Lorain, and Maurice Raynaud seem to have left no successors; and in Germany, where one might have looked for better things, the history of medicine has fallen out of the programme of University studies. Yet it is not so long ago that every German university had a special lecturer on the subject, but, as the chairs fell vacant, they have been left unfilled, till now there is but one professor of the history of medicine in the Fatherland, in the person of Dr. A. Hirsch, of Berlin. It will hardly be denied that a knowledge of the history of medical ideas is essential for the right comprehension of the present position and tendency of medical thought. It is gratifying, therefore, to note that the Prussian Minister of Education is making an attempt to revive the study in Germany. All professors henceforth to be appointed to the chair of hygiene in any univer-

sity will be also expected to lecture on the history of medicine as a part of his regular duties. The intention of the new ordinance is admirable, but the association seems an odd one; for one would think, *a priori*, that it was precisely hygienists who had least to do with the history of medicine. Is it too much to expect that the subject will some day be taught in England as a desirable luxury at least, if not a necessity, of medical education? The College of Physicians would seem to be the fittest body to establish such a chair, but where could a competent teacher be found to fill it?

COMPULSORY NOTIFICATION OF INFECTIOUS DISEASE.

In another column we print a circular letter which has been issued by the Local Government Board to sanitary authorities explaining the provisions of the Infectious Disease (Notification) Act of last session. Throughout the metropolis that Act comes into operation on October 30th next, after which date it will be the duty of every medical practitioner attending on or called in to visit a patient, forthwith, on becoming aware that the patient is suffering from an infectious disease to which the Act applies, to send to the medical officer of health for the district a certificate stating the name of the patient, the situation of the building, and the infectious disease from which he considers the patient to be suffering. Outside the metropolis, sanitary authorities will for the present have the option of adopting the Act or not as they think fit, and doubtless a large proportion will avail themselves of the new powers. The importance of this Act from a public health point of view cannot be overrated. The general principle that the local sanitary authority should receive immediate information of the occurrence of infectious disease has long been universally upheld, as much by medical men as by the general public. The British Medical Association was amongst the earliest advocates of "compulsory notification;" and year after year the need of a general Act dealing with the question has been urged upon Parliament by the Select Committee on the Police and Sanitary Regulations in Private Bills. Doubtless the recent Act will require to be amended, supplemented, and extended in operation on a future occasion, but, in the meantime, medical men may be relied upon loyally to carry out their new obligations. We trust that, with cordial co-operation between the medical profession, the public and the sanitary authorities, the new arrangements will work smoothly and greatly benefit the health of the community.

LEPROSY AT THE CAPE.

In the Cape Colonial Parliament the Prime Minister was lately asked whether the Government intended to take steps to prevent lepers from carrying on the trade of fruiterers and dealers, and whether sufficient power was vested in the Government to compel the segregation of those suffering from leprosy. The Prime Minister (Mr. Tudhope) replied that at present the Government had no power to deal with such cases. An Act was passed in 1884 making the segregation of lepers compulsory, but, owing to the condition of the finances of the country, it was found impossible to incur the expense, which was estimated at between £90,000 and £100,000. From that time to the present the Government had only been able to segregate those lepers willing to be removed. Next year it was proposed to proclaim the Act, which would give the Government power to remove such persons as those referred to. It had been stated that leprosy was on the increase, but from the returns received from 74 districts it appeared that such was not the case. From those returns it was ascertained that 34 districts were free, and in the remaining 42 districts there were 358 lepers. In 1885 similar returns were called for, when the number was over 500. The sum of £2,500 had been placed on the estimates to be devoted to additional accommodation on Robben Island for persons afflicted with this disease.

IS LEPROSY HEREDITARY?

Ortmann, in the *Archiv f. Derm. und Syph.*, Heft iii, 1889, gives a concise abstract of a paper by Dr. Armauer Hansen, in which the author gives the result of an interesting investigation. He went to America to visit the lepers who had emigrated from Norway, and examined in the States of Wisconsin, Minnesota, and Dacota lepers who had originally left Norway, and their descendants born in America. He arrived at the interesting result that of 160 lepers who had emigrated to America, the offspring had remained free to the third generation. This result, the author believes, shows emphatically that leprosy is not a hereditary disease. The fact that, of the 160 emigrants, only 16 or 17 are still alive without any new case having sprung up does not, in his view, show that leprosy is not contagious. He considers that the different mode of life in the new country does not afford the same opportunity of contagion that is given by the peculiar conditions of life in Norway.

INCUBATION PERIOD OF LEPROSY.

König reports[1] the case of a man, 32 years of age, who when he was 16 years old, came from Sweden into Norway. In 1876 he associated with another servant, who was a leper, and who had open ulcers on the lower extremities, and who a year afterwards died of leprosy. He shared a room with this man, and sometimes slept in the same bed with him. He ate and worked with him. For nine years afterwards he was perfectly well, when in August, 1886, after a chill, he developed febrile symptoms, which kept him three weeks in bed. He again appeared to be quite well, when in June, 1887, he had symptoms of conjunctival catarrh. In August of the same year he developed febrile symptoms and unmistakable symptoms of leprosy. The author considers that, as leprosy developed in a healthy man, the son of healthy parents, who came from a country where there is no leprosy, the disease must have been communicated to him, and he assumes that the time of communication was when he lived with the leper. There was thus an incubation period in this case of nine years.

THE ESTABLISHMENT OF A NEW REMEDY.

There is always a charm about a therapeutic novelty, and it never fails to be accepted, before it has been thoroughly tested, as a panacea. Particularly instructive, as illustrating the history of the rise of a new remedy, are the paragraphs on antipyrin in that wonderful compendium, Sajous' *Annual of the Universal Medical Sciences*. Some sixteen pages, teeming with references, are devoted to this new drug, which has the misfortune to bear the chemical name "dimethyloxychinicin." These pages deserve serious study, for undoubtedly antipyrin has proved dangerous as well as useless in many instances, although the deaths recorded by the critics of the drug may not all be due to its action, but rather to other circumstances which have not been taken into account. All writers seem to agree that, except in a few remarkable instances, antipyrin reduces temperature; few believe that it has more than a temporary effect. Granting then that antipyrin does not poison if administered cautiously, its virtue turns on the question of the direct deleterious effects of high temperatures.

SENSIBILITY TO PAIN IN THE ARAB AND NEGRO RACES.

The war in the Soudan has helped to confirm the old impression that wild Arabs and negroes are very indifferent to death, but this indifference is undoubtedly due in great part to the doctrines of Mahometanism, which promise a certain and immediate paradise to all Moslim who fall in action with the Giaour. That the Arabs,

[1] *Monatsh. f. prakt. Derm.*, vol. viii, No. 9, p. 425.

and above all the negroes, are far less sensitive to pain than Europeans and Americans, there can be no doubt. Dr. Felkin, in the course of a paper read in June before a society in Edinburgh, observed that when he first operated on Arabs and negroes he found that both races bore pain remarkably well. The Arabs underwent operations with extreme fortitude. Dr. Felkin held that fortitude to be a disregard of pain induced by custom and training, and due also to peculiar mental characteristics, which may be expressed by the terms self-control, self-repression, or dogged endurance. With the negroes, the cause of their stoical indifference to pain appeared at first sight quite different from the cause of Arab fortitude. They appeared to have hardly any dread of pain. Dr. Felkin was determined to find an explanation for this fact, if possible. He tried, by a series of observations, to ascertain whether the general sensibility of the negro was equal to or less than that of the average European, and found that the relative tactile sensibility of Europeans, Arabs, and negroes was roughly in the proportion of 1, 2, and 3. Dr. Felkin afterwards discovered that, as a result of education, the acuteness of touch in negroes was increased by one-third. The uncivilised negro, again, has less anticipation and consciousness of physical pain, owing to the less sensitive nature of the nervous system.

SCOTLAND.

THE Council of University College, Dundee, decided, on September 18th, to proceed at once to the election of a Professor of Physiology.

PRESENTATION TO DR. FORBES, FOCHABERS.

ON August 23rd, Dr. Forbes, of Fochabers, who has laboured in the town and its neighbourhood for twenty-eight years, was presented with a phaeton and a purse of sovereigns. At the same time a silver tea-service was given to Mrs. Forbes as a souvenir of the occasion.

IRELAND.

DR. DUNLOP, medical officer for Hollywood Dispensary, Castlereagh District, has resigned, after a service of thirty-two years. He was popular with all classes of the community, being deservedly respected and esteemed.

CORK CORPORATE GRANTS TO CHARITABLE INSTITUTIONS.

A PRESENTMENT from the Inspector of Lunatic Asylums for a sum of £2,019 5s. 8d., being the sum chargeable to the County of the City of Cork for the expenses of the Cork Lunatic Asylum, came before a special meeting of the Town Council last week. The presentment was rejected, but, as the law compels them to pay it and it will be passed by the Recorder, the action of the Council does not appear very wise. A deputation next appeared in support of an application from the Cork Fever Hospital for a sum of £500, which was refused, but a sum of £300 was unanimously agreed to.

DUNDRUM CRIMINAL LUNATIC ASYLUM.

IT is gratifying to state that during the past year no untoward or serious accident occurred to person or property; although among the male prisoners some very violent and maliciously disposed were to be found. The present accommodation is too restricted in the male divisions; so much so that an addition of from twelve to sixteen beds is needed, and also a day-room provision for twenty-five patients. Dr. Ashe, resident medical superintendent, does not approve of the substitution of earth for water closets, but, under existing circumstances, there is no alternative. This inconvenience must continue until the conclusion of a feasible arrangement, if one can be arrived at, between the Board of Works and the adjoining resident householders in regard to a definite system of sewerage.

THE ROYAL BARRACKS.

THE improvements now being carried out at the Royal Barracks are of a very extensive character, and it is hoped that the many defects which have been found will be thoroughly corrected. Portions of the buildings at the angles of the several blocks in the Palatine and Royal Square have been removed, so as to provide ample external ventilation. The old floors have been removed in several of the rooms, and the insanitary accumulations underneath cleared away. Louvre ventilators are being placed at the top of each of the staircases, and similar provision will be made in the officers' rooms. The prison and the adjacent stables and a further range of stables and lumber rooms extending about 250 feet have been demolished, and the site will be planted. The riding school will also go, as it is to be provided for in the new cavalry barracks. The troops which were removed to the camp in the Phœnix Park still remain there; but it is stated that arrangements are being made for their removal to the extensive buildings and grounds in which the Royal Dublin Society's horse shows are held. This would be a great improvement on the open camping ground, particularly as the troops begin to feel the approach of winter.

COMPLAINT AGAINST A HOSPITAL.

SOME of the newspapers which delight in creating a sensation have been calling attention to the circumstances attending the death of a girl named Ellen Norris in the Whitworth Hospital. The charges are that a *post-mortem* examination was held without permission; that her friends were not allowed to see her; that she died without the services of the Roman Catholic chaplain; and that there were several wounds on her body. The governors, having investigated the case, have sent a letter to the mother of the child in reply to a communication from her. It appears that the patient was suffering from typhoid fever, and the physician desired that, in her own interest, she should not be visited. Her progress was most favourable; but one evening she began to vomit, and she was at once seen by the resident surgeon and the pupils. Suitable treatment was carried out. She was seen several times between that time and her death, which took place quite unexpectedly at two in the morning. When the symptoms became suddenly alarming, an order was being made out for the presence of the chaplain. Intimation was sent to the parents next morning, and a *post-mortem* examination was made twenty hours after death. It was found that death was due to perforation of the intestine. No wound other than the one necessary to reach the intestine was inflicted before or after death. Upon this statement there is further comment. Insinuations of neglect are made; yet, if anything appears, it is that the child was most thoroughly cared for. The death was due to a well-known cause in typhoid fever, and the whole history shows that it was unnecessary, in the judgment of those attending, to send for the clergyman until pronounced and fatal symptoms set in. Of course, a protest is made against the *post-mortem* examination; but in that respect we do not see that the hospital authorities did anything unusual. Clearly such examinations are necessary, and in this case it was important that the actual cause of death should be made out.

THE BRITISH ASSOCIATION.

Section of Biology.

President's Address.—At the first meeting of the Section on Thursday, September 12th, the President (Professor J. S. Burdon Sanderson) was prevented by illness from being present. His address was accordingly read by Canon Tristram, one of the Vice-Presidents. In it Dr. Burdon Sanderson said it had long ceased to be possible in the course of an annual address to give an account even of the most important advances made in biology during the preceding twelve months. This was due partly to the vast dimensions of each of the various branches of knowledge included under the term biology, and partly to the increasing divergence between morphology and physiology. From this sundering of sciences which were till recently intimately united physiology chiefly suffered. The physiologist had first to determine what were the chemical and physical endowments of living matter in general, and of each of the varieties thereof which constituted the animal and plan torganism in particular. Then he had to determine how these processes were localised so as to constitute the special function of each structure, and the relation between structure and function in each case. Physiology first studied man and the higher animals, and proceeded to the higher plants, then to invertebrates and cryptogams, ending where development began. From the beginning, her aim had been to correlate function with structure, the principle being that every appreciable difference of structure corresponded to a difference of function; and, inversely, that each endowment of a living organ must be explained as springing from its structure. As function was more complicated than structure, the result of that method must be to bring investigators face to face with functional differences which had no structural differences to explain them. They would in each case come to this issue—plurality of function with unity of structure, the unity being represented by a simple structural element, whether it was retinal cone or cell, possessed of numerous endowments. Structure must at that point cease to be a guide, and two alternatives were then open, namely, to fall back on "that worn out *deus ex machinâ* protoplasm," as if it afforded an explanation of everything which could not be explained otherwise; or to use analyses of function as a guide to the ultra-microscopical analysis of structure. The first of these courses was wrong, the second right, for in following it the fundamental principle was still adhered to that living material acted by virtue of its structure, using that term in a sense which carried it beyond the knowledge that could be gained either by the scalpel or the microscope. It might be anticipated that the future of physiology would differ from the past chiefly in this respect—that histology, once the guide of physiology, had now become her handmaid. The President went on to say that the questions which at present most urgently demanded solution in physiology were those relating to the endowments of apparently structureless living matter. With this view, what had to be done was first to select those cases in which the vital process offered itself in its simplest form; and secondly, to inquire how far in these particular instances—under the guidance of that fundamental principle, the correlation of structure with function, of mechanism with action—inferences might be drawn as to the mechanism by which these vital processes were carried out. The most distinctive property of living matter as compared with non-living was that it was ever changing while ever the same; in other words, life was a state of ceaseless change. Two kinds of change must be distinguished, both equally characteristic of living organisms, namely, those of growth and decay, and those of nutrition. Growth belonged rather to morphology, and he proposed to speak only of the other kind of change which included all other vital phenomena. The term "nutrition" expressed this very inadequately. "Exchange of material" had been used for half a century to designate the sum of the non-developmental activities of an organism; for this Professor Foster had given the very acceptable substitute, "metabolism." Seen from the morphological point of view, the whole plant and animal kingdom constituted the unfolding of a structural plan which had been once latent in a form of living material of great apparent simplicity. From the physiological side, this apparently simple material was seen to be capable of the discharge of functions of great complexity, and therefore must possess corresponding complexity of mechanism. It was the nature of this invisible mechanism that philosophy thirsted to know. Although little progress had yet been made, the existing knowledge of the subject had so far taken consistent form in the minds of the leaders of physiological thought that it was possible to distinguish the direction in which the soberest speculation was tending. The non-developmental vital functions of protoplasm were the absorption of oxygen, the discharge of carbon dioxide and water and ammonia, the doing of mechanical work, the production of heat, light, and electricity. All these except the last were known to have chemical actions as their inseparable concomitants. The President next discussed the relation of oxygen to living matter and vital process, and went on to say that the word "life" was used in physiology in a technical sense, as denoting a state of change with permanence. In this restricted sense the question "What is life?" was one to which the answer was approachable; but in a higher sense—higher because it appealed to higher faculties in our nature—the word suggested something outside of mechanism, which might perchance be its cause rather than its effect. Thirty years ago the discovery of the cell as the basis of vital function was new, and the mystery which before belonged to the organism was transferred to the unit, which, while it served to explain everything, was itself unexplained. The discovery of the cell seemed to be a very close approach to the mechanism of life; but now they were striving to get even closer, and with the same result. If what he had said was true, there was little ground for apprehension that the habit of scrutinising the mechanism of life tended to make men regard what could be so learned as the only kind of knowledge. The tendency was certainly rather in the other direction. What had to be guarded against was the mixing of two methods, and, so far as physiologists were concerned, the intrusion into their subject of philosophical speculation. "Let us," said Dr. Burdon Sanderson in conclusion, "willingly and with our hearts do homage to 'divine philosophy,' but let that homage be rendered outside the limits of our science. Let us, if we are so inclined, cross the frontier and philosophise; but for my part, as a physiologist, I feel more disposed to do my best to furnish professed philosophers with such facts relating to structure and mechanism as may serve them as aids in the investigation of those deeper problems which concern man's relations to the past, the present, and the unknown future."

Section of Anthropology.

Examinations in Bodily Efficiency.—The proceedings in this Section commenced with the reading of a paper by Mr. Francis Galton, F.R.S., "On the Advisability of Assigning Marks for Bodily Efficiency in the Examinations of Candidates for the Public Services." Mr. Galton said he did not refer in any way to the pass examinations now made by medical men in order to eliminate candidates who were physically unfit. The reform asked for was to give additional marks to those youths who, being fit for service, were at the same time exceptionally well fit as far as bodily efficiency was concerned. The view that literary examinations were indirect tests of bodily efficiency could be shown to be erroneous. Various measurements of Cambridge students had been made during the last two or three years by Dr. Venn, F.R.S. The number of those who were measured was 1,095, and they were divided into three classes—(1) high-honour men; (2) low-honour men; and (3) poll men—that was to say, those who did not compete for honours, but took an ordinary pass degree. The result was that the physical efficiency of the three classes proved to be almost exactly the same, except that there appeared to be a slight deficiency in eyesight among the high-honour men. Otherwise they were alike throughout; alike in their average bodily efficiency, and alike in the frequency with which different degrees of bodily efficiency were distributed among them. It seemed therefore to be most reasonable whenever two candidates were almost on a par intellectually, though one was superior physically, that the latter should be preferred. The tests would include measures of strength, breathing capacity, agility or promptness, keenness of eyesight and of hearing. Mr. Galton also read a paper "On the Principle and Methods of Assigning Marks for Bodily Efficiency," in which he gave details of the mode of physical examination proposed.

President's Address.—The President, Sir William Turner, M.B., F.R.S., Professor of Anatomy in the University of Edinburgh, then delivered an address on "Heredity." After some introductory remarks he said that by heredity he meant that special property through which the peculiarities of an organism were transmitted to its descendants throughout successive generations, so that the offspring, in their main features, resembled

their parents. The first aspect of the question which had to be determined was whether any physical basis could be found for heredity. Was there any evidence that the two parents contributed each a portion of its substance to the production of the offspring, so as to establish a physical continuity between successive generations? The careful study, especially during the last few years, of the development of a number of species of animals mostly, but not exclusively, among the invertebrata, had established the fact that the young animal arose by the fusion within the egg or germ-cell of an extremely minute particle derived from the male parent with an almost equally minute particle derived from the germ-cell produced by the female parent. These particles were technically termed in the former case the male pronucleus, in the latter the female pronucleus, and the body formed by their fusion was called the segmentation nucleus. It required the higher powers of the best microscopes to see these nuclei and and follow out the process of conjugation. The pronuclei and the segmentation nucleus were, however, complex both in chemical and molecular structure. From the segmentation nucleus produced by the fusion of the pronuclei with each other, and from corresponding changes which occurred in the protoplasm of the egg which surrounded it, other cells arose by a process of division, and these in their turn also multiplied by division. These cells arranged themselves in course of time into layers, which were termed the germinal or embryonic layers. From these layers arose all the tissues and organs of the body, both in its embryonic and adult stages of life. The starting-point of each individual organism—that is, of each new generation—was therefore the segmentation nucleus. Every cell in the adult body was derived by descent from that nucleus through repeated division. As the segmentation nucleus was formed by the fusion of material derived from both parents, a physical continuity was established between parents and offspring. But this physical continuity carried with it certain properties which caused the offspring to reproduce not only the bodily configuration of the parent, but other characters. In the case of man, along with the family likeness in form and features, there was a correspondence in temperament and disposition, in the habits and mode of life, and sometimes in the tendency to particular diseases. By the continual process of division of the cells the substance of the segmentation nucleus was diffused throughout the body of the new individual produced through its influence, so that each cell contained but an infinitesimal particle of it. The parental dilution, if he might say so, was so attenuated as to surpass the imagination of even the most credulous believer in the attenuation of drugs by dilution; and yet these particles were sufficient to stamp the character of the parents, of the grandparents, and of still more remote ancestors on the offspring, and to preserve them throughout life. It was not every cell in the body that could act as a centre of reproduction for a new generation; certain cells, named "germ-cells" and "sperm-cells" were set aside for that purpose. These cells, destined for the production of the next generation, formed but a small proportion of the body of the animal in which they were situated. They were, as a rule, marked off from the rest of the cells of its body at an early period of development. The exact stage at which they became specially differentiated for reproductive purposes varied, however, in different organisms. The germ-cells, after their isolation, took no part in the growth of the organism in which they arose, and their chief association with the other cells of its body was that certain of the latter were of service in their nutrition. The problem, therefore, for consideration was the mode in which these germ or reproductive cells became influenced, so that after being isolated from the cells which made up the bulk of the body of the parent, they would transmit to the offspring the characters of the parent organism. After referring to the theories of Darwin and F. Galton on the subject, Professor Turner said that intimately associated with the conception of heredity was that of variability. Heredity might be defined as the perpetuation of the like; variability as the production of the unlike. It might be asked, Was it possible to offer any feasible explanation of the mode in which variations in organic structure took their rise in the course of development of an individual organism? Certain facts might be adduced as offering a basis for the construction of an hypothesis. Prior to the conjugation of the male and female pronuclei to form the segmentation nucleus a portion of the germ-plasm was extruded from the egg to form what were called the polar bodies. Weismann explained this curious phenomenon on the hypothesis that a reduction of the number of ancestral germ-plasms in the nucleus of the egg was a necessary preparation for fertilisation and for the development of the young animal. He supposed that by the expulsion of the polar bodies one-half the number of ancestral germ-plasms was removed, and that the original bulk was restored by the addition of the male pronucleus to that which remained. As precisely corresponding molecules of this plasm need not be expelled from each ovum, similar ancestral plasms were not retained in each case; so that the diversities would arise even in the same generation and between the offspring of the same parents. The segmentation nucleus was not a homogeneous structureless body, but was built up of different parts. Most noteworthy were the extremely delicate threads or fibrils, called chromatin filaments, which were either coiled on each other or intersected to form a network-like arrangement. In the meshes of this network a viscous—and, so far as was yet known, structureless—substance was situated. Before the process of division began in the segmentation nucleus these filaments swelled up and then proceeded to arrange themselves at first into one and then into two star-like figures before the actual division of the nucleus took place. It was obvious, therefore, that the molecules which entered into the formation of the segmentation nucleus could move within its substance, and undergo a readjustment in size, and form, and position. But this readjustment of material without doubt applied to the entire molecular structure of the segmentation nucleus. As the cells of the embryo from which all the tissues and organs of the adult body were derived were themselves descendants of the segmentation nuclei they would doubtless inherit from it both the power of transmitting definite characters and a certain capacity for readjustment both of their constituent materials and their relative positions towards each other. One might conceive, therefore, that if in a succession of organisms derived from common ancestors the molecular particles were to be of the same composition and to arrange themselves in the segmentation nucleus and in the cells derived from it on the same lines, these successive generations would be alike; but if the lines of adjustment and the molecular constitution were to vary in the different generations, then the products would not be quite the same. Variations in structure, and to some extent also in the construction of parts, would arise, and the unlike would be produced. Moreover, in the higher organisms, and in multicellular organisms generally, an individual was derived, not from one parent only, but from two. Weismann emphasised this combination as the cause of the production of variations and the transmission of hereditary individual characters. If the proportion of the particles derived from each parent and the forces which they exercised were precisely the same in any individual case, then one could conceive that the product would be a mean of the components provided by the two parents. But if one parent were to contribute a larger proportion than the other to the formation of a particular organism, then the balance would be disturbed, the offspring in its character would incline more to one parent than to the other, according to the proportion contributed by each, and a greater scope for the production of variations would be provided. These differences would be increased in number in the course of generations, owing to new combinations of individual characters arising in each generation. As variations, when once they had arisen, might be hereditarily transmitted, the Darwinian theory might be defined as heredity modified by variability. Many variations which might arise in the development of an individual, and which were of service to that individual, would tend to be preserved and perpetuated in its offspring by hereditary transmission. On the other hand, variations which were useless or even detrimental to the individual were also capable of being hereditarily transmitted. Several striking instances of congenital defect or malformation thus handed down from generation to generation were adduced, and the transmission of a tendency to particular disease, such as tuberculosis, cancer, gout, rheumatism, and hæmophilia, was alluded to. In the transmission of deformity or disease, consanguinity in the parents was an important, though by no means constant, factor. If both parents were physiologically perfect, it might be expected that the offspring would also be so, but should both be physiologically imperfect, it might be anticipated that the imperfections, if of a like nature, would be intensified in the children. In this lay the risk of consanguineous marriages, for no family could lay claim to physiological perfection. With reference to the transmissibility of characters which had been "acquired" by the parent, that term had not always been used with the same signification. In its wider meaning it might cover all the characters which

made their first appearance in an individual, and which were not found in its parents, in whatever way they had arisen; first, whether their origin were due to such molecular changes in the germ-plasm as might be called spontaneous, leading to such an alteration in its character as might produce a new variation; or, secondly, whether their origin were accidental, or due to habits, or to the nature of the surroundings, such as climate, food, etc. Characters produced in the germ-plasm itself and all other characters resulting from this latter cause, Weismann named "blastogenic;" characters first appearing in the body itself and following from the reaction of the soma under direct external influences, he termed "somatogenic," and he suggested that to those the term "acquired characters" should be restricted. Under the latter head were included the effects of mutilation, the changes which followed from increased or diminished performance of function, those directly due to nutrition, etc. Weissmann maintained that all blastogenic characters could be transmitted, while the somatogenic could not. Sir William Turner agreed with much that had been said by Weismann, as to the want of sufficient evidence to prove that a mutilation in the parent could be transmitted to the offspring. He would, however, search for illustrations of the transmission of somatogenic characters in the more subtle processes affecting living organisms rather than in those produced by violence. All biologists would, he thought, agree that the soma was influenced or modified by its environments. If modifications so produced were capable of so affecting the germ-plasm of the individual in whom the variation arose as to be transmitted to its offspring, then such variations might be perpetuated. He could not accept the proposition that somatogenic characters were not transmitted, and he thought they formed an important factor in the production of hereditary characters. By accepting this theory, a more ready explanation could be obtained how men belonging to a race living in one climate or part of the globe could adapt themselves to a different climate. On the theory of the non-transmissibility of acquired characters, long periods of years would have to elapse before the process of adaptation could be effected. It was known, however, that this was not necessary to produce a race possessing well recognisable physical characteristics. In proof of this, the example of the citizens of the United States was referred to. Sir William Turner concluded by saying that whatever might have been the origin of man's frame, whether by evolution from some animal form or otherwise, it could scarcely be expected ever to attain greater perfection than it at present possessed. Man, however, was also endowed with a spiritual nature, and the kind of evolution which was to be hoped and striven for was the perfecting of this spiritual nature, so that the standard of the whole human race might be elevated and brought into more harmonious relation with that which was holy and divine.

Development of the Wisdom-teeth.—A paper on this subject by Dr. R. LEVI was read, in the absence of the author, by Dr. J. G. GARSON. In January and December, 1885, and in November, 1886, when inspecting the conscripts born in the years 1864, 1865, and 1866, in the military districts of Monza (Lombardy) and Ancona (Marche), he noted the development of the wisdom-teeth. The total number of individuals examined was 732—namely, 366 natives of the military district of Monza (Lombardy) and 366 of the military district of Ancona (Marche). Their average age was 20 years and 5 months. The two groups were divided as follows in regard to the number of the wisdom-teeth:

Number of the Wisdom-teeth.	Lombards.			Marchigiani.			Total.		
	Number of cases.	Proportion per cent.	Total of wisdom-teeth.	Number of cases.	Proportion per cent.	Total of wisdom-teeth.	Number of cases.	Proportion per cent.	Total of wisdom-teeth.
0	173	47.3	—	155	42.4	—	328	44.8	—
1	43	11.7	43	48	13.1	48	91	12.4	91
2	61	16.7	122	67	18.3	134	128	17.5	256
3	30	8.2	90	22	6.0	66	52	7.1	156
4	59	16.1	236	74	20.2	296	133	18.2	532
Total	366	100.0	491	366	100.0	544	732	100.0	1,035
Average number of wisdom-teeth in each individual.	1.34			1.49			1.41		

The small number of individuals who had an odd number of wisdom-teeth was pointed out. This was evidently a consequence of the fact that the wisdom-teeth appeared generally two by two.

Left-Leggedness.—Dr. W. K. SIBLEY read a paper, in which he argued that man was naturally left-legged. Standing working with the right hand, there was a tendency to balance on the left leg. Race paths were nearly always made for running in circles to the right, and the majority of movements (such as dancing, running, etc.) were more readily performed to the right. In walking, it was natural to bear to the right; crowds as well as individuals did so. Troops started off with the left foot; the left foot was placed in the stirrup or step of the bicycle in mounting; the left foot was the one from which a man took off in jumping. From measurements made by Dr. Garson of the skeletons of the two legs, in 54.3 per cent. the left leg was the longer, and in 35.8 the right. From measurements of 200 pairs of feet, it was found that in 44 per cent. the left, and in 21.5 the right was longer, while in 34.5 they were equal.

SECTION OF CHEMISTRY.

Representation of the Chemical Elements by Physical Forms.—Dr. ISAAC ASHE, M.D.Dub., F.K.Q.C.P.I., read a paper on this subject, and showed models illustrating his views. He pointed out that when the combining weight of an element was divided by the number representing its combining power, or valency, as compared in both cases with hydrogen, the quotient in many cases presented the fraction one-half, instead of an integer number; and that in many other cases, particularly in the triad series, an integer quotient, with unity for a remainder, was to be obtained by doubling the combining weight before dividing. Hence he inferred that an element having half the weight of hydrogen would be found to be the primordial element out of which the other elements were constructed. This hypothetic element he proposed to call dimidium. The number of atoms of dimidium which would go to form any given element would be double the number representing the combining weight of that element as compared with hydrogen. Assuming the existence of this primordial linear element, and representing its atoms by small metallic bars of brass wire, the author had constructed a series of models of the chemical elements, in which their combining power, their positive or negative condition, and their modes of combination, were expressed, as well as their combining weight. The forms adopted for the elements in these models were also shown to correspond with the arrangement of the elements in series by Newlands and Mendeleeff, elements belonging to the same series having corresponding forms. The author suggested that simple geometrical forms, that is to say, the equilateral triangle and the square, were the combinations into which the primordial element would first have entered, and all the models were accordingly constructed out of these forms, along with the simple bar. There were other secondary forms constructed out of the triangles and squares, and the models of many of the elements were then constructed out of these secondary forms. The author suggested that probably metals combined with non-metals by lateral interpenetration, a salient angle of the former corresponding with a re-entrant angle of the latter; but that two non-metals combined by superposition, corresponding angles being applied one to the other. What was known as the nascent condition of elementary atoms was explained as consisting in a sliding movement between two atoms which had been combined, so that one of these was removed gradually from the other, while a third gradually replaced it by a similar sliding movement, the atom so removed necessarily entering into combination with a fourth.

THE SWISS FEDERAL DIPLOMA IN MEDICINE.

IN view of the attitude lately assumed by the Swiss Government towards English medical men practising or proposing to practise their profession in Switzerland, the following information relative to the examinations which must be passed before the Federal Diploma in Medicine can be obtained may be of interest to some readers. It is extracted from an official publication of the Swiss Federal Council, entitled *Règlement pour les Examens Fédéraux de Médecine du 19 Mars, 1888*, which contains all the enactments of the Swiss Legislature relative to the practice of medicine, dentistry, veterinary surgery, and pharmacy. The medical examinations are held at Bâle, Berne, Geneva, Lausanne, and Zurich. They

are conducted by commissioners selected from among the professors in the Swiss medical schools and practitioners, each of the localities named having examining boards consisting of from four to five members for the examination in natural science, two to three for that in anatomy and physiology, and five to eight for the "professional" examination. These examiners are nominated by the Federal Council for a period of four years. The examinations are under the direction of a Central Committee appointed every four years by the Federal Council, and consisting of five members usually chosen from each of the five localities in which the examinations are held. Each member of the Central Committee is the local president of the examining board in the place which he represents, and as such receives the applications of candidates, decides on their admission, exercises general supervision over the course of the examinations, presides at the *vivâ voce* sittings, fixes the amount of fees to be paid to the examiners, and generally acts as business manager of the board. Every year the Central Committee publishes full particulars as to the dates of the various examinations in each locality, the dates of entering names, etc. The examinations, are, as far as circumstances allow, open to all medical practitioners and students.

Candidates who wish to present themselves for examination must apply in writing to the local president of the place where they reside. Foreigners, however, must send their application, together with a *curriculum vitæ*, directly to the president of the Central Committee.

In order to obtain the medical diploma, three examinations have to be passed: 1, in natural science; 2, in anatomy and physiology; 3, in professional subjects. Before admission to the first of these, the candidate must present a certificate of having passed a satisfactory examination in: 1, Latin (Livy, Cicero, Virgil, some portions of Horace and Plautus); 2, Greek (Homer, Xenophon, some portions of the orators, of Plato and of Sophocles); 3, Mother tongue (history of its literature, written composition on some literary, historical or scientific subject); 4, a second national Swiss language; 5, for Greek, either a third national Swiss language, or English may be substituted; 6, History and Geography (ancient, mediæval, and modern history, physical and political geography); 7, Algebra (equations of the second degree, arithmetical and geometrical progression, binomial theorem); 8, Geometry (plane and solid, plane trigonometry, elementary theorems of spherical trigonometry, conic sections); 9, Natural History (principal types of animal kingdom and general knowledge of human body, organs of higher plants, principal families of natural system, the more important minerals); 10, Physics and Chemistry (general properties of bodies, mechanics of solids, liquids, and gases; principal laws of acoustics, optics, heat, electricity, and magnetism; principal chemical elements, and their most important combinations). He must also present certificates of having attended theoretical courses of botany, zoology, comparative anatomy, physics, and chemistry, and a further certificate of having done practical exercises in a chemical laboratory on qualitative and elementary quantitative analysis.

Certificates of having passed an examination in subjects of general education before a foreign authority may, in certain cases, be accepted instead of the above. This depends on the manner in which the certificate is drawn up, on the school from which it proceeds, and on the practice followed in the country in question relative to the admission of corresponding Swiss certificates. It belongs to the Central Committee, or, by way of final appeal, to the Federal Home Office, to decide as to the acceptance of these certificates. The first part of the medical examination consists in *vivâ-voce* questions on the following subjects: Physics, chemistry, botany, zoology, and comparative anatomy. Before admission to the second part the candidate must present certificates (*a*) of having passed the first part; (*b*) of having attended theoretical courses of anatomy, histology, embryology, and physiology; and (*c*) of having dissected during two semesters, and of having worked with the microscope. The examination itself is subdivided into two parts—a practical portion (including a written essay), and an oral portion. The former includes: 1. Making and explaining an anatomical preparation in a period of four hours, and giving explanations of other preparations that may be submitted to the candidate, or answering questions on anatomy that may be asked; 2, making and explaining histological preparations; 3, the composition of a written essay on a physiological subject with closed doors. In the oral portion, the candidate has to answer questions on anatomy, histology and embryology, and physiology. Before admission to the third or professional part of the medical examination, candidates must have passed the second part or some other examination recognised by the Central Committee as equivalent, and must present certificates of having attended at least the following theoretical courses: general surgery, general pathology, morbid anatomy, hygiene, forensic medicine, and pharmacology. He must also present certificates of having attended at least two semesters in the medical, surgical, and obstetrical clinics respectively, one semester in the ophthalmic and psychiatric clinics, of having taken part in a course of surgical operations, in a course of obstetrical operations, and in a course of *post-mortem* examinations. The examination comprises two divisions: practical (including a written part) and *vivâ voce*. The subjects of the former are: 1, Morbid Anatomy (including the actual *post-mortem* examination of at least one of the great cavities of the body, with questions thereon; 2, Pathology and Therapeutics. This includes: *a*, the analysis of a case of disease and the compilation at the same sitting of a complete history of the disease. Six hours at most are allowed for this. If the candidate fails to acquit himself satisfactorily in this, a second test of the same kind must be undergone; *b*, the examination of one or more patients, with questions on the cases. 3, Surgical Anatomy, including tests of the same kind as those in medicine just described. Besides this, proof of skill in the application of dressings must be given, and the candidate must perform at least two operations on the dead body, and answer questions on regional anatomy and operative surgery; 4, Obstetrics, including the analysis of an obstetrical or gynæcological case with questions thereon, and the diagnosis on the "dummy" of the various positions of the fœtus, together with the performance of one or more obstetrical operations thereon, with questions in the same connection on prognosis, the theory of instruments, etc.; 5, Ophthalmology, including the examination of cases, with *vivâ voce* questions; 6, Forensic Medicine and Hygiene, including a written essay (analysis and report) on a medico-legal case, which may, if necessary, be fictitious, and on various psychiatric cases. The subjects of the oral examination are the following:—General pathology and morbid anatomy, special pathology and therapeutics (including diseases of children), surgery, midwifery (including gynæcology), hygiene, forensic medicine, mental diseases, and materia medica. The fees payable for these various examinations are as follows:—For that in natural science, 20 francs; for that in anatomy and physiology, 30 francs; for the "professional" examination, 120 francs. Candidates who have been entirely rejected in one examination have to pay the full fee when they present themselves again. Those who have only the oral part of the "professional" examination to submit to a second time pay half the corresponding fee. For the diploma a further charge of 20 francs is made. Foreigners pay double fees in all cases in which there is no treaty to the contrary.

The examinations are held in French, German, or Italian. The Swiss federal diploma confers the right to practise medicine in Switzerland, and exempts those who possess it from the greater part of the examinations for the degree of doctor in medicine of the Swiss universities. Those who have obtained the diploma with the marks "very good" or "good" have only a thesis to present; those who have passed with a lower mark have to undergo a further examination in the subjects in which they have shown themselves weak.

THE LIBRARY OF THE ROYAL COLLEGE OF SURGEONS.

In a recent number of the *Library* an interesting account of the foundation and progress of the library of the College of Surgeons is given by Mr. J. B. Bailey, the present librarian. Like many other flourishing institutions, the present fine collection of medical books in Lincoln's Inn Fields has risen from a very small beginning. When the Surgeons severed their ignoble connection with the Barbers in 1745 there was a very good library of surgical books, embracing early editions of ancient writers and a quantity of old surgical manuscripts. This collection was unfortunately dispersed, and the present library dates only from 1800, the year of the Charter of Incorporation. Several years before that date, however, John Hunter had suggested to the old Corporation of Surgeons the desirability of establishing a library. In a letter dated August 14th, 1786, he pointed out that the fact of their not possessing a "public surgical library" was "a circumstance so extraordinary that foreigners could hardly believe it." "If," he proceeds, "a custom had been established at the

time the Surgeons were incorporated that every member should send a copy of his publications to the Company's library, it would have at present contained the works of many of the best writers in surgery, which might have proved a valuable collection of instructions for the improvement of the profession." By way of setting an example, the great biologist presented to the Company "the few observations on anatomy and surgery" which he had published. These books were the nucleus of the present magnificent collection. The first grant of money ("a sum not exceeding £50") towards establishing a library was made in July, 1800, and for some years the expenditure under this head averaged less than £80 a year.

In 1816 Sir Charles Blicke invested £300, the proceeds of which were to be devoted to the purchase of books. The progress of the library was at first very slow; there was no librarian, and the books were almost inaccessible. In 1827, however, there was a burst of energy on the part of the authorities, and in that and the two subsequent years the sum of £5,269 was spent in the purchase of books. It was not till 1829 that the first librarian was appointed in the person of Dr. Willis, to whom the library owes much of its completeness in the domain of the older medical literature.

Dr. Willis resigned in 1845, and Mr. T. Madden Stone superintended the library work till 1853, when Mr. John Chatto was appointed. On that gentleman's death in 1887 he was succeeded by the present incumbent. In 1833 a Library Committee was appointed, and this form of government still continues. When the Hunterian Museum was erected in 1813, two rooms were allotted to the library, but this accommodation was soon found inadequate. It continued to grow, and in 1834 Mr. Guthrie stated before the Select Committee on Medical Education that the library then contained 18,000 volumes, and that the College would add several thousand more to that number as soon as the new building was completed.

The library was reopened on February 15th, 1837. From that date till last year very little extra accommodation was provided for the library. The statistics of the library which have been published from time to time are, according to Mr. Bailey, very misleading.

In the preface to the catalogue of 1849, the number of books was stated to be 48,390 volumes, whereas at the present day the number of volumes is only 40,000. The difference is due to the methods of counting; in 1849 each thesis and pamphlet was counted as a volume, even though several were bound up together. In the later figures the number represents the books as they actually stand on the shelves. The enormous increase in scientific periodical literature in recent years is evidenced by the fact that, whilst in the catalogue of 1860 the number of journals and "Transactions" was 152, it has now risen to 360. For some time before his death Mr. Chatto had been at work on a new catalogue; but as no part of it was in print when Mr. Bailey assumed office, that gentleman resolved to begin afresh. The catalogue which he is preparing is in one alphabet, authors and subjects. The titles under subjects are repeated as many times as necessary, but are not given with the same fulness as in the entry of the author's name. The contents of the journals are not given, but many reprints of important papers are sent to the library, and these are all catalogued. Mr. Bailey concludes by giving a list of the bibliographical curiosities which the library contains. These, however, are neither numerous nor particularly valuable.

ASSOCIATION INTELLIGENCE.

NOTICE OF QUARTERLY MEETINGS FOR 1889.
ELECTION OF MEMBERS.

A MEETING of the Council will be held on October 16th, 1889. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting, namely, September 26th, 1889.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member *by the Council* or by any recognised *Branch Council.*

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No member can be elected by a Branch Council unless his name has been inserted in the circular summoning the meeting at which he seeks election.

FRANCIS FOWKE, *General Secretary.*

COUNCIL.
NOTICE OF MEETING.

A MEETING of the Council will be held in the Council Room of the Association, at No. 429, Strand (corner of Agar Street), London, on Wednesday, the 16th day of October next, at 2 o'clock in the afternoon.

FRANCIS FOWKE, *General Secretary.*

September 12th, 1889.

BRANCH MEETINGS TO BE HELD.

BORDER COUNTIES BRANCH.—The autumn meeting of the Border Counties Branch will be held at Riggs Hotel, Windermere, on Friday, September 27th, at 3.15 P.M. Dinner at 6 o'clock; 5s., exclusive of wine. Members intending to read papers are requested to give notice to the Honorary Secretary.—JAMES ALTHAM, Penrith,

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT.—A meeting of the above District will be held at the Queen's Hotel, Hastings, on Thursday, September 26th. Meeting at 3.30 P.M., dinner at 5.30. A. C. Routh, Esq., will preside. The Abuse of Hospital Out-patient Departments and the establishment of a Public Medical Service will be discussed. The Chairman will relate a case of Strychnine Poisoning. Mr. Verrall: a Case of Intussusception. Gentlemen desirous of reading papers or showing cases, should communicate with the Honorary Secretary, T. JENNER VERRALL, 97, Montpellier Road, Brighton.

SOUTH MIDLAND BRANCH.—The autumnal meeting will be held at Higham Ferrers, on Thursday, October 3rd, 1889, under the presidency of John Crew, Esq. Gentlemen wishing to bring forward communications, etc., are requested to intimate their intention to the Honorary Secretary, without delay.—C. J. EVANS, Honorary Secretary.

EAST ANGLIAN BRANCH: ESSEX DISTRICT.—The next meeting of this district will be held at the Horn Hotel, Braintree, on Tuesday, September 24th, at 2.30 P.M. Dr. Sinclair Holden, President of the Branch, will preside. Programme and Business Agenda.—To arrange the place and date of next meeting, and to nominate a member of the District, resident in or near such place of meeting, to take the chair thereat, provided the President of the Branch does not attend. Dr. Mead (Newmarket) will state some facts respecting the present position of the Medical Defence Union. Mr. E. H. Carter (Chelmsford) will open a discussion on the Abuse of the Out-patient Department of our Medical Charities. The following papers have been promised: Dr. T. Colcott Fox (London): New Methods of Treatment and New Applications in Skin Diseases. Mr. T. Simpson (Coggeshall) will show a case or drawing of Scleroderma, and exhibit six drawings done by a camel's hair pencil held in the mouth. Mr. C. E. Abbott (Braintree) will show a case of Elephantiasis Arabum. —C. E. ABBOTT, Honorary Secretary, Braintree.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.—The next meeting will be held at the Westgate Hotel, Newport, on Friday, October 4th, at 1.30 P.M. The following addresses and papers have been promised: Mr. W. H. A. Jacobson (Guy's Hospital): The Diagnosis of Renal Calculus, and the Chief Conditions which Simulate this Disease. Mr. E. S. Wood (Pontypool): Medical Aid Association, Limited, Newport. Mr. O. E. B. Marsh (Newport) will show a Case of Genu Valgum treated by Osteotomy. Dr. A. G. Thomas (Newport): Case of Empyema successfully treated—patient shown. Mr. A. W. Loveridge (Newport): Notes of a Case—patient shown.—ALFRED SHEEN, M.D.; D. ARTHUR DAVIES, M.B., Honorary Secretaries.

SPECIAL CORRESPONDENCE.

NEWCASTLE-UPON-TYNE.

[FROM OUR OWN CORRESPONDENT.]

The Pharmaceutical Congress.—The Pathological Society.—The Clinical Society.

AT the Pharmaceutical Conference which lately met here, several papers of considerable professional interest were presented. Mr. Proctor made a communication on Tinct. Sennæ; he considered it discreditable to the medical profession that this inert preparation of an active drug should remain in the *Pharmacopœia.* Mr. Siebold read a paper on Lithia, in which he said the faith of many medical men in the superior virtues of lithia amounted almost to superstition. His opinion was that lithium salts in gout and calculus appeared to be much overrated; he thought that theoretical grounds should be carefully considered, and rational

conclusions arrived at. Several other interesting papers were read, and a most successful meeting was held.

The medical societies of the district are busily engaged preparing their programmes for the coming session; the Northumberland and Durham Medical Society, with Dr. Murphy as president, hold their first meeting on October 4th, when Professor Lawson Tait is to deliver an address; the meeting will be held in the Examination Hall of the New Medical College; the meeting will not be limited to members of the Society only: all qualified practitioners will be welcomed. After the address, the members will hold their annual banquet, and this, also, will be open to any qualified practitioner who may desire to be present. It is very probable that this will be the largest medical gathering which has ever been held in the North of England, except the meeting of the British Medical Association. I sincerely hope the expectation will be amply realised.

Under the presidency of Dr. Beatley, the Clinical Society is likewise putting its affairs in order. For the first time the papers and proceedings of the meetings will be published at the end of the session, and it is hoped that members will be thus stimulated to greater exertions to increase the practical value of their contributions. The Society commences its session with considerably over one hundred members, and it promises to be in a few years the largest medical society in the North.

SHEFFIELD.

[FROM OUR OWN CORRESPONDENT.]

Sheffield General Infirmary.—Ambulance Work in Mines.—Proposed Cottage Hospital.—Death of Miss Ray.

THE report presented at the annual meeting of governors of the Sheffield General Infirmary showed that the institution was in a satisfactory condition. The expenditure had exceeded the ordinary income, but the deficiency was more than covered by legacies, and the capital account had been increased. Satisfaction was expressed at the greatly improved nursing of the institution, under the able guidance of the new matron. Somewhat fewer patients had been admitted into the infirmary than during the previous year. A similar fact has been noted as to other institutions in the town. The great improvement in trade may be held to account for this in a great measure, and, if so, it is highly creditable to the working classes that with better wages they are less inclined to seek gratuitous relief. The infirmary has received about £200 more during the past than in the previous year from Hospital Saturday and Sunday Funds.

Mr. F. N. Wardell, the Government Inspector of Mines for Yorkshire, has just issued his annual report. Speaking of the usefulness and beneficial effects of the St. John Ambulance Association, he says they become more and more apparent as its numbers increase. He had personally witnessed and heard of cases where the invaluable knowledge of first aid had been, in all human probability, the means of saving life, and certainly of minimising pain and suffering. He points out that the stretchers, splints, bandages, and ambulance appliances, now required by law to be kept at the mine ready for use, were previously voluntarily maintained at many colleries.

A cottage hospital is proposed for Mexborough, for people in that and the neighbouring districts of Wath, Swinton, etc., and other places. It is intended to have fourteen beds. The patients will be entitled to the attendance of any doctor they please. The proposal has been warmly taken up.

Sheffield has recently had to deplore the loss by death of a most estimable lady, closely connected with the medical profession. Miss Ray's father had been an eminent surgeon in the town, and her interest in her father's profession, and all objects connected with it, was very great. To hospitals, widows, and orphans she was a true friend, but her considerate generosity towards all worthy objects and people was widespread. Her house was a centre of philanthropic and benevolent work.

EXECUTION BY ELECTRICITY.—At a recent meeting of the Paris Academy of Sciences, a communication from Mr. Edison was read respecting the use of electricity as a means of inflicting capital punishment. He is of opinion that an alternative current will cause death without pain, but he adduces no experimental evidence in support of that contention. The matter was referred to the Medical Section of the Academy, which is to have the assistance of M. Marcel Desprez, the electrician, in drawing up a report on the subject.

CORRESPONDENCE.

FALMOUTH AS A HEALTH RESORT.

SIR,—You did me the honour to publish a letter of mine under the above heading on August 31st. I was prompted to write it by the belief that Falmouth and its vicinity had not received that attention from our profession which it merited, and I now venture to recur to the subject because a further stay of a fortnight has enabled me to explore the neighbourhood more fully, and to make various inquiries both among residents and visitors. My general conviction as to the capabilities of Falmouth as a health resort remains unchanged, and I am satisfied that, if the authorities only recognise their advantages in this respect, there will be many invalids who are now regarded as fit subjects to be sent by long and often exhausting journeys to southern climates who will prefer this corner of Cornwall to the shores of the Mediterranean. I am strong in the belief that the better my professional brethren are acquainted with the features of the district, the more they will appreciate the benefits it is likely to confer upon many of their patients. The rainfall is considerable (it is stated to be 44 inches), but, owing to the geological formation of the locality, the clouds have no sooner discharged their contents than the roads and paths are dry again, and the visitor can walk abroad, rejoicing probably in a brilliant blue sky and in genial sunshine.

It is only fair to state that the old town of Falmouth proper is not the part that invalids would select for their residence, even if accommodation is to be obtained, but the higher-lying modern streets and roads, that overlook the harbour or the sea, would naturally be selected, according to the aspect required in each case. Thus, during a part of my stay I lived in a house facing due south, and the remainder was spent in one facing the east and overlooking the town, the entire harbour, with the castles of Pendennis and St. Mawes at each side of the entrance of the harbour. The climate appeared to me to offer a marked difference in the two cases. As yet there are few houses on the cliffs immediately facing the open sea on the south, but there is a large hotel which I have heard most favourably spoken of, that occupies an admirable position, and close to which are sheltered walks, which would be well adapted for invalids desiring to inhale the purest ozonised air and to take gentle exercise. Nothing but the open sea intervenes between the land at this spot and the South Pole.

It would require a treatise to discuss the various indications that should determine the choice of Falmouth as a summer or winter residence, but the general healthiness of the locality, the dryness of the soil, the low range of night and day temperature, the exquisite verdure and general loveliness and variety of the scenery will enable your readers to form a tolerably correct estimate of the class of patients that Falmouth and its vicinity are suited for. It is much to be desired that one or other of the very intelligent medical men whose acquaintance I had the good fortune to make there may publish their experience of the climatic character and influence of Falmouth in detail.

It may be well to state, in conclusion, that a visit to this south-western corner of England is not embittered by the long bills that are apt to grieve the frugal mind at more fashionable health resorts, and that housekeepers are well pleased both with the price and quality of the essential articles of diet.—I am etc.,

London, September 14th. EDWARD H. SIEVEKING.

ENGLISH PRACTITIONERS IN SWITZERLAND.

SIR,—As I am the only British practitioner in Switzerland who, before beginning to practise in that country—now nearly four years ago—went to the trouble of passing the State examination, which gives the right of practice throughout the land, I may be permitted to say a few words in reference to the general question of English practitioners in Switzerland.

It is most undesirable that any international ill-feeling should grow up in regard to the matter. In the present instance I believe the dispute largely turns upon the fact that the issue has not been sufficiently cleared. More is actually demanded in words than is wished for in fact. What I believe is actually desired by the English physicians who send patients abroad and by English travellers generally is that the health resorts they seek should be provided with competent English medical men, and nothing could be more reasonable; but what is demanded is that the right to practise in England should carry with it the

right to practise in Switzerland. Whether this looks altogether reasonable to an Englishman I am by no means sure, but to a Swiss it bears an aspect the reverse of just. It demands a privilege for Englishmen which is denied to natives of the country. When a young Swiss has taken his degree of Doctor of Medicine, it might be thought that he would be allowed to exercise his profession. But no; he must pass the State examination. If, now, the right to practise in England conferred also the right to practise in Switzerland, a Swiss student would score a point by taking his degree in England. Instead, then, of having another examination still to pass, he would simply have to register his diploma in England to avoid the State examination of his own country. If the Swiss authorities do not see any cogent reason for making matters easier for foreigners than for natives of the country, can they justly be charged with intolerance? Moreover, they do not forget that if a Swiss medical man wishes to practise in England, he must pass an examination in order to be a recognised member of the profession there.

The more reasonable one's demands are the more likely to be granted. The terms on which medical graduates of Swiss universities are admitted to the State examination might be asked for on behalf of the graduates of British universities. To grant this privilege would be no small international courtesy. Would it be reasonable to look for more?

It must also be borne in mind that there would be inconvenience for the Swiss authorities in having to deal with medical men who could not answer official documents in the language of the country, who would most likely not know the sanitary regulations in force, and who would be unable to give the various notifications required by law, to say nothing of their probable unacquaintance with the pharmacopœial preparations and the weights and measures in use.

Personally, I am most desirous that the health resorts of Switzerland should all be provided with competent British practitioners, but I do not think that this object would be attained by giving permission to practise to everyone that chooses to ask for it. By such means a class of itinerant practitioners would be created who would practise perhaps a fortnight, perhaps two or three months in a district, and then move on. Men of this kind would not raise the *prestige* or the reputation of the British practitioners in the eyes either of their fellow-countrymen or of strangers, and physicians at home might well have some hesitation in sending out cases to men whose permanent residence in a place could not be counted upon. Whereas, if a man underwent the State examination, it would be some guarantee that he had made up his mind to live in the country.

There are still some places in Switzerland where, if an Englishman chose to take the federal diploma, he would be well rewarded for his pains; and anyone who thinks it worth his while to practise there might surely also think it worth his while to undergo the necessary examination.

Last year the Canton of Graubünden (Grisons) made some graceful and wise concessions. Permission to practise was accorded to the English medical men at Wiesen, at St. Moritz, and at the Maloja. But this was only for a definite period and in a limited district. There is, however, reason to expect that in view of what the health resorts in question owe to their English medical men, a more favourable consideration will be given to their claims when the question next comes up for decision. At the same time, such cases ought to be regarded as quite exceptional, and as instances of great international courtesy.—I am, etc.,

WILLIAM R. HUGGARD, M.A., M.D., M.R.C.P.LOND.

Davos Platz, Switzerland, September 13th.

SIR,—My letter of August 28th had been carefully worded, as I wanted to state, not my own views, but what I believe to be the general impression in Switzerland.

Perhaps you will allow me to add that I do not see myself why a sufficient number of well-chosen English practitioners should not be allowed to practise in Swiss health resorts amongst English-speaking patients. A sort of local option might be adopted with advantage to all concerned, on the condition, of course, that corresponding concessions would be granted to Swiss practitioners in England. Then it sometimes occurs that an English tourist travelling in Switzerland is seized with illness, and expresses a wish to be attended by an English physician who happens to be on the spot or in the neighbourhood: in a case of this kind permission to practise during the course of the illness ought to be granted without any difficulty. Reciprocity, pure and simple, would not be of much use to Switzerland unless extended to the colonies, and even then its advisability might be questioned. No one can therefore claim it as a right. At present Swiss diplomas can be registered in England under certain circumstances, but they do not by themselves give the right to practise. I was informed this morning that, so far, the only countries which have come to an agreement with England as regards reciprocity are two comparatively unimportant British colonies; this shows that there are many difficulties in the way.—I am, etc.,

J. KESER, M.D.

Harley Street, September 14th.

MEDICAL CIVIL SERVANTS AND THE PENSIONS BILL.

SIR,—In common with all the members of our profession in the Civil Service, I notice with great satisfaction the article in the JOURNAL of August 31st touching the manifest injustice to us, as a body of public servants, involved in the alterations embodied in the Civil Service Superannuation Bill. When I entered as a surgeon in a branch of the Civil Service where the work is both difficult and dangerous, I was led to believe that on retirement I should be entitled to a pension on the authorised scale, with the addition of seven years for professional services; also that my pension or superannuation allowance would not be formed by deductions from my annual pay; and that, in the event of my office being abolished, I should receive extra superannuation allowance by way of compensation. In the above-mentioned Bill are clauses that aim at the repeal of power to grant the addition for professional services, and also the extra allowance for abolition of office. Either in this Bill or in the recent Treasury minute, authority is sought for the formation of a pension fund by accumulated deductions from the annual pay. There is a widespread belief that if these measures become law their application will be retrospective; this adds an additional element of bitterness to the situation. In that case many who, like myself, are standing for promotion will find the financial value of their appointment very considerably reduced. That such harsh terms should be imposed on all future candidates for appointments in the Medical Department of the Civil Service goes to the making of a solid grievance. That it should be sought to make their application retrospective constitutes the grave indictment of breach of faith against the Government. Again, as often in the past, have medical servants of the country to look to the BRITISH MEDICAL JOURNAL as their champion and defender against contemplated injustice and wrong. Pray, sir, do not let the matter rest, but use your powerful aid in our defence, bearing in mind the following points: (1) the professional bonus on retirement; (2) compensation for abolition of office; (3) a superannuation allowance not deducted from pay. Failing all efforts to prevent these new conditions of service from being imposed on all future candidates, we should, at any rate, succeed in maintaining the existing rights of those of our profession who are now in the pay of the Government.—I am, etc.,

A SURGEON IN THE CIVIL SERVICE.

VERDICT OF MANSLAUGHTER AGAINST A MEDICAL MAN.

SIR,—Being the practitioner alluded to in the JOURNAL of September 14th, against whom a coroner's jury returned a verdict of manslaughter, at Birmingham, recently, I shall feel much obliged if you will kindly place before your readers the following particulars of the case. I have already stated them partly in the proceedings before the coroner and magistrate. I was summoned to attend the deceased by a midwife whom I knew.

My first visit was at 9.30 P.M., of July 24th. I found the deceased walking about the room in pain.

History.—Age 23, strong, healthy, very muscular. Second pregnancy stated end of seventh month. First in the workhouse three years ago; she said it was very difficult, being instrumental. Very apprehensive of this. Had been told at the hospital that she must have hurt herself. According to her the liquor amnii was evacuated thirty-one hours. Pains erratic, false, abortive.

External Examination.—Abdomen small; questioned her, last menstruation 195 days ago. Palpation, no contractions; placental *bruit* audible; fœtal heart inaudible.

Vaginal Examination.—Vagina greatly dilated, thin, in contact with pelvis, dry, natural temperature. Former rupture of perineum. Uterus, thin, soft, closely applied to the fœtus, whose head was presenting. Cervix uteri hypertrophic, elongated, and intensely indurated. Os uteri not in the least dilated; pelvis normal, except the sacral promontory, which was sharp and plainly felt through the vagina.

Diagnosis.—Former chronic inflammation of the cervix, and possibly of the lower part of the body. Prolapse. I apprehend great difficulty.

Second visit, 10 A.M., 25th. Condition of parts exactly as before. Had been tossing about all night with erratic and abortive pains. Learnt that she had been out walking in the street, which conduct so astonished me that I passed a No. 9 catheter, to ascertain if the liquor amnii were really evacuated. It was grasped; from this I learned that it was, and also, that there was constriction, irregularity. and induration of the cervical canal.

Third visit, 4 P.M., 25th. Patient very restless, throwing herself about. Condition of parts exactly as before, with the exception that there was suspicious tenderness on pressure in the pelvic fascia and around the uterus. Pulse 92; pains erratic.

Fourth visit, 6 P.M., 25th. Liquor amnii evacuated fifty-one hours. Probable duration of this abortive labour seventy hours. The condition of the os exactly as before.

At this stage I will invite the attention of the profession to a consideration of my reasons for attempting to deliver. 1. Seventy hours' pain had produced no progress, and the longer I waited the less chance there appeared to be of the os dilating naturally. The waters were drained off fifty-one hours, and with every turn of the woman the already weakened uterus was concussed between the child's head and the sharp sacral promontory. 3. I already suspected, rightly or wrongly, that pelvic mischief had commenced. 4. She had grown excessively impatient and restless in consequence of my non-interference, and persons of her class are not amenable to reason.

My intended procedure was as follows: Digital dilatation so as to admit three fingers, or to about an inch and a half in diameter. Podalic version by two fingers in the uterus, as I have often done before. Eviscerate and perform craniotomy, if necessary, after allowing more time for dilatation.

I commenced a few minutes past six to insinuate my little finger to second joint, an arduous and painful proceeding, which lasted an hour. I learned that the cervix was intensely hard and unyielding, and the canal was surrounded by dense bands, so that my finger could not remain *in situ* for more than a few seconds without its extremity becoming swollen and painfully congested. At 9 P.M. I had dilated the os up to two fingers during these three hours. The woman was turning from side to side in a most unruly manner; I had not even once felt the child. At this time I just began to insert the tips of my three fingers. On feeling the increased pressure she suddenly raised herself on her heels and head, and violently concussed her buttocks against the mattress twice in succession, thereby expelling my fingers. I let her rest for about five minutes. On passing my two fingers into the cavity of the uterus I felt what I for a second mistook for the umbilical cord I found as quickly that it was the small intestine protruding through a rupture in the posterior wall of the body of the uterus. It was severed from the mesentery, and it followed my fingers down into the vagina, where I examined it carefully with lamp light. It was severed from the mesentery for about ten inches, and that portion was already dead from cutting off of the blood-supply. My diagnosis was that this particular injury was irrevocably fatal, so I discarded abdominal section and Porro's operation at once. I returned the bowel through the rent, which reached almost down to the os internum. As I considered it necessary, or rather advisable, to empty the uterus, and try and get it to contract so as to prevent or decrease the hæmorrhage which I feared was pouring into the peritoneal cavity, I inserted my two fingers into the lower angle of the rupture, and tore it on down through the cervix. I then for the first time passed my hand into the uterus, and found that the child had escaped through a large rent extending obliquely upwards and to the left border within an inch and a half of the fundus, and the intestines were bulging in. Even in face of this calamity I did not so far forget myself as to ruthlessly explore the abdomen for a useless fœtus. My idea was not to interfere further, but allow her to die. I called in Dr. Clark, and we chloroformed her. We passed our hands again into the uterus and found it empty. We both agreed that it was a hopeless case and that she would soon die, and not to interfere further.

Fifth visit, 4 A.M., 26th. Found her restless, no signs of collapse, leaning with her head over the top rail of the bed, body at an angle of 45°. A protuberance at the pelvis. I considered that the fœtus had again descended by gravitation into the pelvis or uterus. I offered to relieve her, but she declined.

Sixth visit, 11 A.M. She suffered from intense vomiting. I again thought of extracting the fœtus, as I was almost sure that it had re-entered the uterus. It was only for the purpose of satisfying her mind. Ordered a mixture containing 5 grains chloral every half hour, to relieve spasms, but to be stopped on the approach of somnolence. I did not examine.

Seventh visit. I was informed by a messenger that I need not call again, as another doctor had been summoned. However, I went down at 5 P.M., to remove my instruments. I saw two practitioners in attendance on the deceased. The husband, an ignorant boy, coolly informed me that "he had to bring in those other two blokes to finish my job," and that he would not pay my my fee—15s.

My connection with the case terminated, and I have now laid the facts before the profession as I laid them before the jury and the magistrate. I was, however, found guilty of "gross ignorance" because I admitted honestly that I had caused a rupture. I was not allowed to reason on the case, but I contend that I did not cause the primary oblique fatal rupture of the body, but only a continuation of it, or a secondary vertical innocuous rupture of the cervix for the purpose of effecting delivery, and stopping hæmorrhage.

It was asserted that I caused the rupture. I shall assume that I did. Then I must have done so by instruments, version, or ergot. None of these means were employed. Rupture by thrusting my hand into a uterus, which would have been uncalled for. If I did I must have ruptured from below upwards, or from a constricted to a dilated portion, consequently I must have seized the child, as it could not possibly have escaped into the peritoneal cavity, as my hand would necessarily block the rent as I made it But it did escape.

If I assume that my finger caused it, it would naturally follow the course of the longitudinal fibres and be vertical, not oblique. If, again, my finger caused it, any surface would be equally liable to yield, and not alone that just lying over the promontory.

The Predisposing Causes.—The fact of abortion occurring was some evidence that the tissues were diseased. Whitehead found it so in 275 cases out of 378 examined similar to this. Rigidity of os, prolonged abortive pains, the woman's violent conduct, the presence of chronic induration and disease discovered by myself, were all predisposing causes in this case.

Exciting Causes.—The two violent concussions when the woman raised her body about a foot and a half and struck her buttocks against the mattress might fairly be considered the cause of the rupture, especially as the promontory of the sacrum projected through it. Beatty says in a case that he had when master of a new lying-in hospital, Dublin, 1838: "The patient was very restless, getting out of bed occasionally and walking about, and when in bed continually changing her position;" also "the unusual prominence and shortness of the sacrum furnished an explanation of the readiness with which the rupture took place."

In conclusion, I will just mention that a report appeared in the paper to the effect that the coroner had been informed that the Treasury intend to prosecute me, both in the interests of the relatives and of the profession.—I am, etc.,

FITZWILLIAM R. A. EVANS, L.C.S.I., L.C.P.I., L.M.

Monument Road, Birmingham, Sept. 17th.

NAVAL AND MILITARY MEDICAL SERVICES.

A "NON-COMBATANT" ON THE BATTLEFIELD.

A NOTIFICATION appears in the *Gazette* of September 17th that the Queen has conferred the decoration of the Victoria Cross upon Surgeon John Crimmin, of the Bombay Medical Service, for his conspicuous bravery in the action near Lwekaw, Eastern Karenni, Burma, on January 1st. Lieutenant Tighe, 27th Bombay Infantry (to the mounted infantry of which corps Surgeon Crimmin was attached) states that in the action near Lwekaw, Eastern Karenni, on January 1st last, four men charged with him into the midst of a large body of the enemy who were moving off from the Karen left flank, and two men fell to the ground wounded. He saw Surgeon Crimmin attending one of the men about 200 yards to the rear. Karens were round the party in every direction, and he saw several fire at Surgeon Crimmin and the wounded man. A Sepoy then galloped up to Surgeon Crimmin, and the latter joined the fighting line which then came up. Lieutenant Tighe further states that very shortly afterwards they were engaged in driving the enemy from small clumps of trees and bamboo, in which the

Karens took shelter. Near one of these clumps he saw Surgeon Crimmin attending a wounded man. Several Karens rushed out at him. Surgeon Crimmin thrust his sword through one of them, and attacked a second. A third Karen then dropped from the fire of a Sepoy, upon which the remaining Karens fled.

CHANGES OF STATION.

THE following changes of station among the officers of the Medical Staff of the Army have been officially notified as having taken place during the past month:—

	From	To
Dep. Surg.-Gen. H. F. Paterson, M.D.	Colchester ...	Hong Kong.
Surgeon-Major W. S. M. Price ...	Canterbury ...	Bengal.
,, M. M. Gallwey, M.D. ...	Bengal	Londonderry.
,, M. Knox	Londonderry ...	Bengal.
,, R. M. Bradford ...	St. Helena ...	Woolwich.
,, B. B. Connolly ...	Dublin	WoolwichArsnl.
,, J. M. Beamish, M.D. ...	Weedon	Aldershot.
,, B. M. Blennerhassett ...	Curragh	Bengal.
,, A. L. Browne, M.D. ...	Strensall	Egypt.
,, G. B. Hickson... ...	,, ...	York.
Surgeon K. S. Wallis	York	Aldershot.
,, A. W. P. Inman, M.B. ...	Castlebar	Dublin.
,, C. A. Webb	Brecon	Devonport.
,, J. Watson, M.D.	Antrim	Armagh.
,, A. Hewett	Redcar	York.
,, P. M. Carleton, M.D. ...	Netley	Belfast.
,, E. L. Maunsell	Aldershot... ...	Bombay.
,, C. H. Clabburn, M.B. ...	Piershill	Edinburgh.
,, L. W. Swabey	Netley	Aldershot.
,, A. G. Kay, M.B.	Dover	Canterbury.
,, E. J. E. Risk	Chatham	Gravesend.
,, J. W. Beatty, M.D.	York	Sheffield.
,, E. D. Farmar-Bringhurst ...	Cork	Waterford.
,, G. W. Brazier-Creagh ...	Netley	Castlebar.
,, H. O. Trevor	,, ...	Curragh.
,, C. R. Bartlett	,, ...	Aldershot.
,, R. Kirkpatrick, M.B. ...	Edinburgh ...	Perth.
,, A. A. Pechell, M.B.	Netley	Curragh.
,, J. J. C. Donnet	Egypt	—
,, A. E. C. Spence	,, ...	—
,, C. Birt	Derby	York.
,, A. Stables, M.B.	Egypt	—
,, A. De C. Scanlan	Dover	Aldershot.
,, B. A. Maturin	Half Pay ...	Home District.
,, H. T. Baylor...	Egypt	—
,, H. E. Cree	Sheffield	Strensall.
,, H. T. Knaggs	Egypt	—
,, J. Ritchie, M.B.	Preston	Malta.

THE NAVY.

FLEET-SURGEON STEPHEN SWEETNAM has been placed on the retired list at his own request, with permission to assume the rank of Deputy Inspector-General of Hospitals and Fleets. His commission as Surgeon is dated September 17th, 1858; that of Staff-Surgeon December 21st, 1874; and that of Fleet-Surgeon April 1st, 1881.

The following appointments have been made at the Admiralty:—HENRY N. M. SEDGWICK, Fleet-Surgeon, to the *Duke of Wellington;* HENRY A. CLOSE, Fleet-Surgeon, to the *Northumberland, vice* Sedgwick; RICHARD J. BARRY, Staff-Surgeon, to the *Phaeton;* JOHN W. SLAUGHTER, B.A., M.B., Surgeon, to the *Ajax;* REGINALD T. A. LEVINGE, Surgeon, to the *Hotspur;* GEORGE WELCH, Surgeon, to the *Defiance*, additional for temporary service; JEREMIAH SUGRUE, Surgeon, to Haslar Hospital; WILLIAM G. STOTT, M.B., Surgeon, to the *St. Vincent;* S. BAMFIELD, Fleet-Surgeon, to the *Durham;* H. E. MARSH, Staff-Surgeon, to the *Serapis;* E. R. MULOCK, Staff-Surgeon, to the *Assistance.*

A court-martial assembled on board the *Royal Adelaide*, at Devonport, on September 17th for the trial of Surgeon EAST APTHORP, of Her Majesty's ship *Cambridge*, on a charge of stealing two £5 notes, the property of Surgeon Hayes, of the Royal Naval Hospital, Stonehouse. The prisoner and the prosecutor spent a night together convivially, and subsequently the latter invited the former to his rooms. There the prisoner mentioned having some difficulty in meeting his mess bill, upon which the prosecutor showed him his cash box, which contained plenty of money, and promised to assist him if necessary. After the prisoner left two bank-notes were missed. The prosecutor, having the numbers, sent on board the *Cambridge* and stopped those which the prisoner had in the meantime tendered to the messman, and which corresponded to the missing notes. The prisoner, in defence, practically admitted taking the notes, but merely as a loan, and not with any felonious intent. The court found him guilty, and ordered him to be dismissed Her Majesty's service with disgrace.

THE MEDICAL STAFF.

SURGEON-MAJOR IGNATIUS MCDONOGH O'FARRELL, F.R.C.S.Ireland, is promoted to be Brigade-Surgeon ranking as Lieutenant-Colonel, *vice* C. S. Wills, C.B., granted retired pay. He entered the service as Assistant-Surgeon October 1st, 1862; became Surgeon March 1st, 1873; and Surgeon-Major April 28th, 1876. The *Army Lists* do not assign him any war service.

Surgeon W. P. FELTHAM, who went on half-pay on account of ill-health on February 18th last, is now restored to the full pay establishment in succession to Surgeon-Major J. A. Smith, deceased.

ARMY MEDICAL RESERVE.

SURGEON-MAJOR BURFORD NORMAN having resigned his commission in the 1st Volunteer Brigade, Southern Division Royal Artillery, ceases to be an officer of the reserve.

Surgeon J. A. MACKENZIE, M.B., has resigned his commission, which was dated May 2nd, 1888.

Surgeon R. B. GRAHAM, F.R.C.S.Edin., 1st Fife Artillery Volunteers, to be Surgeon, ranking as Captain.

INDIAN MEDICAL SERVICE.

SURGEON J. F. EVANS, Bengal Establishment, is transferred from the officiating medical charge of the 19th Punjab Infantry, to the medical charge of the 18th Bengal Infantry, *vice* Brigade-Surgeon H. Potter, M.D., appointed Medical Storekeeper at Allahabad.

Surgeon A. R. EDWARDS, Bengal Establishment, is appointed to the officiating medical charge of the 19th Punjab Infantry, *vice* Surgeon J. F. Evans.

Surgeon D. M. DAVIDSON, Bengal Establishment, from the officiating medical charge of the 18th Bengal Infantry, is appointed to the officiating medical charge of the 23rd Pioneers, *vice* Surgeon J. H. Sellick, who has been temporarily transferred to civil employment.

Surgeon G. F. W. BRAIDE, Bengal Establishment, from the officiating medical charge of the 1st Sikh Infantry, is appointed to the officiating medical charge of the 5th Punjab Cavalry, *vice* Surgeon H. Fooks.

Surgeon H. FOOKS, Bengal Establishment, is appointed to the medical charge of the 1st Sikh Infantry, *vice* Surgeon A. Silcock, M.B., transferred to civil employment.

Surgeon-Major J. A. HOWELL, Bombay Establishment, is appointed to be Civil Surgeon of Karwar, *vice* Surgeon-Major W. G. H. Henderson, transferred.

Surgeon R. J. BAKER, M.B., Bombay Establishment, is directed to act as Obstetric Physician at the Jamsetjee Jejeebhoy Hospital, and Surgeon M. A. T. COLLIE, M.B., Bombay Establishment, as Resident Surgeon of the European General Hospital, during the absence of Surgeon-Major J. Arnott, M.D.

Surgeon W. H. BURKE, M.B., has been appointed Assistant-Surgeon to the Sassoon Hospital at Poona, and Teacher of Surgery and Midwifery at the Poona Medical School, *vice* Surgeon-Major J. B. Eaton, M.B. Surgeon G. H. BULL, M.D., will continue to act during Surgeon Burke's absence.

Deputy Surgeon-General HENRY CAYLEY, of the Bengal Establishment (retired), is appointed Professor of Clinical and Military Medicine at the Army Medical School. He entered the service as Assistant-Surgeon January 29th, 1857, and became Brigade-Surgeon April 19th, 1884, retiring with the honorary rank of Deputy Surgeon-General April 29th, 1887. He was engaged during the Indian Mutiny campaign in 1857-58 in the Benares, Allahabad, and Goruckpore districts (medal).

Surgeon-Major H. B. PURVES, Bengal Establishment, is promoted to be Brigade-Surgeon. His first commission bears date October 2nd, 1865.

Brigade-Surgeon ALEXANDER GARDEN, M.D., late of the Bengal Establishment, died at South Hampstead on September 14th, at the age of 56.

THE VOLUNTEERS.

SECOND LIEUTENANT H. W. MANN, M.B., is appointed Acting-Surgeon to the 1st Inverness Artillery, which corps he joined as Second Lieutenant October 27th, 1888.

Acting-Surgeon J. A. BRIGHT, 3rd Volunteer Battalion Somerset Light Infantry (late the 3rd Somerset), has resigned his commission, which bore date February 24th, 1875; he is permitted to retain his rank and uniform.

Mr. DAVID SKINNER is appointed Acting-Surgeon to the 2nd Volunteer Battalion King's Own Scottish Borderers (formerly the 1st Berwickshire).

Acting-Surgeon F. D. S. MCMAHON. 2nd Volunteer Battalion Duke of Cornwall's Light Infantry (late the 2nd Cornwall), has resigned his appointment, which dated from May 12th, 1888.

Captain C. S. TICEHURST is appointed Acting-Surgeon to the 3rd Volunteer Battalion Hampshire Regiment (late the 3rd Hampshire). Surgeon Ticehurst has been connected with the corps since February 23rd, 1881, when he joined it as Second Lieutenant, becoming Lieutenant July 1st, 1881, and Captain October 29th, 1884.

Acting-Surgeon C. H. GWYNN, M.D., 2nd Volunteer Battalion Shropshire Light Infantry (late the 2nd Shropshire), is promoted to be Surgeon in the same corps.

EMPLOYMENT OF RETIRED OFFICERS.

COLONIAL writes: The Committee object to the employment of retired officers at home, as it increases the foreign service of those on full pay. Many who retire at twenty years' service look forward to home employment, probably after fifteen years abroad. But why not employ retired officers who are willing to serve in certain colonies? That would increase the home full pay service.

*** We notice one retired officer is employed at Halifax, Nova Scotia. That is a precedent and a beginning.

LITERARY INTELLIGENCE.—The second part of the fifth edition of Professor Michael Foster's *Textbook of Physiology* is on the eve of publication.—Mr. W. North's "Roman Fever," an inquiry into the origin of the malarial fevers of the Roman Campagna, with special reference to their supposed connection with pathogenic organisms, is also announced.—From the official report on publications in Southern India, recently issued by the Madras Government, we learn that in medicine part of the Sanscrit work, "Ashtanga Hrithayam," with a Telugu commentary, has been published; and a small book on the Mahommedan treatment for improving the blood has been printed in Tamil.—An Encyclopædia of Hygiene and Public Health is now in course of publication in France, under the direction of M. Jules Rochard. The two first parts have already appeared. They contain articles on Anthropology, by M. Quatrefages; on Demography, by M. Bertillon; and on Climatology, by MM. Le Roy de Méricourt and E. Rochard.—It is stated that next year a new periodical, entitled *Centralblatt für allgemeine Pathologie und pathologische Anatomie*, will appear under the editorship of Professor Ziegler, of Jena, and Dr. von Kahlden, of Freiburg.

MEDICO-LEGAL AND MEDICO-ETHICAL.

WHO IS TO PAY?

G. H. writes: In June, 1888, a gentleman, whose family are private patients of mine, but who, himself, is a member of a Court of Foresters, for which I am surgeon, met with an accident. He was passing under a railway bridge which was being constructed over Argyle Street, Glasgow, when an iron hammer fell from the bridge, striking him on the head, and inflicting very severe injuries. He resided at Pollokshields, a distance of nearly three miles from here, and had to be visited morning and evening for several weeks. He eventually made a good recovery, and had no permanent injuries. The railway company admitted liability, and although not formally engaging me to attend the patient, agreed to my attending him, made appointments with me to meet their medical officer, and on my patient's convalescence insisted on my accompanying him to the coast and remaining with him at least over the first night. They would not allow me to send my assistant, remarking that I alone was the responsible party. I was the only medical man in attendance, and it was from my report of the injuries that the claim for damages was made out. In January of the present year the company paid my patient £800, which was to cover the claim for medical attendance. At the lawyer's request I made out my account, which amounted to £42—a sum which, he said, was, under the circumstances, very moderate; but, instead of paying me that sum, my patient returned the account, stating that, as he was a Forester, he was entitled to medical attendance free, but was willing to make me a present of £25. This offer was made in such an offensive way that I declined it; and there the matter rests.

I hold that his being a Forester did not prevent my having a claim against the railway company; that they admitted their liability for medical expenses; that they paid a large sum of money to cover these expenses; and that I was as much entitled to my fees as if they had paid these fees themselves and had given a less sum to my patient.

*** We do not know the exact nature of our correspondent's contract with the Court of Foresters; but, assuming that it was such as to include the professional services rendered in this particular case, we do not consider that you have any claim against your patient. Nor do we think you have any claim against the railway company, for in the absence of any special contract as to your services they were only responsible to your patient, and have, it seems, come to a settlement with him.

THE EVIDENCE OF RECENT PREGNANCY.

L. M. writes: I am at present discharging the duties of *locum tenens* for a friend in this town. On August 17th I received an order from the coroner to make a *post-mortem* examination on the body of a newly born infant found dead beside the river here. I did so, and found the child had been born at full term, had not been attended to by a skilled person, had been born alive, and that there was no evidence to show how it had come by its death. A young woman was arrested by the police on suspicion of being the mother of the child; she stated that a fortnight previously she had had an abortion at three months. I received an order from the police superintendent on August 19th to proceed to the barracks and make an examination of the young woman, with a view to determining if she had recently been confined. I refused to make the examination unless I had the full and free consent of the woman to do so in the presence of two witnesses. Having explained this to the girl, and the nature of the examination, she gave her consent freely, saying she was anxious it should be done to establish her innocence. I made the examination, and found she had been recently delivered of a child; no doubt remains on my mind on that point. The prisoner was then brought before a magistrate, and I was present. Before my evidence was taken I heard the magistrate dogmatically state to the clerk of the justices that it was impossible to tell that a woman had been delivered a fortnight after the event. I gave as my evidence that the young woman had been delivered of a child at or about full term between twelve and thirty days ago. She was remanded to next day.

At the coroner's court I gave as my evidence *re* the dead child that it was born at full term, had not lived more than twenty-four hours and not less than a few minutes, that there were no signs of violence, and that there was no evidence to show how it had come by its death. Being asked about the young woman, I stated she had been delivered of a child in the same words as I had done before the magistrate. The police failed to connect the woman with the body of the child that was found, and an open verdict was the result.

The woman was then brought up on August 20th before the same magistrate as I have before referred to, in the chair, and a young brother justice, on a charge of concealment of birth. I gave my evidence as before, and after a few minutes' consideration of the evidence the court declined to send the young woman forward for trial on the ground that there was not sufficient evidence against her.

Now, Sir, having as briefly as possible given the details of the proceedings, I am anxious to know: (1) Is it customary for medical evidence to be counted of no weight in cases of this kind? (2) If medical evidence is nominally of importance, is it advisable that the matter should be seen to by those interested in medical matters? (3) Or are decisions of this kind, in the face of presumably the skilled evidence of honourable men, so common that the matter is unworthy of notice?

*** It is laid down by Guy and Ferrier, with reference to the diagnosis of recent delivery in the living, "that the examination should be made without delay; for the signs may disappear before the tenth day; and *as a general rule after that date the results are not satisfactory.*" The italics are ours. L.M. will see, therefore, that in swearing that the woman in question had been delivered of a child at or about full term between twelve and thirty days previously he was deciding a question definitely in the affirmative which the high authorities quoted are of opinion cannot be positively decided upon after such an interval of time. We think, therefore, that the magistrates were justified in refusing to send the case for trial.

A VERSATILE PRACTITIONER.

MEDICUS.—The practical association of dentistry with the examination and treatment of hæmorrhoids, etc., as depicted by our correspondent, is not, as he justly observes, an agreeable one to contemplate. Nevertheless, if the dentist in question is legally qualified in the two several and distinct professions, there is no legitimate restriction to his practice other than the unpleasant association of ideas in connection therewith, a quiet dissemination of which among his would-be *clientèle* would probably prove the most effective means of eventually dissociating them. We are clearly of opinion that, under the circumstances related, our correspondent would be fully justified in advising his patients to consult some other dentist.

SPECIALISTS AND GENERAL PRACTITIONERS.

T. A. M. writes: Will you kindly inform me if it is right, after a consultation with a so-called specialist, for him (the specialist) to see and afterwards prescribe and treat that patient to whom he was introduced, without the knowledge of the usual attendant (the introducer), and what is your opinion as to his conduct?

*** If the facts be as above stated the line of conduct pursued by the "specialist" in question was in contravention of the rules of the profession, and contrary, moreover, to his own true interest, in so far as such action would tend to deter our correspondent, and others when made known to them, from seeking his consultative advice in the future, and, as we view, justly so.

HOSPITAL AND DISPENSARY MANAGEMENT.

THE PUBLIC MEDICAL SERVICE.

DR. HUGH WOODS (Highgate) writes: As nothing but good can result from the freest possible discussion of a scheme which has the intrinsic merits of Dr. Rentoul's sketch of a Public Medical Service, I will try to point out one or two details which seem to require discussion.

I believe many consider that it would be better to modify his plan so as to arrange for the patients always to see the doctor at his own house, and not at a central consulting room. Why not appoint a secretary to each branch, who should issue tickets to patients entitling them to (1) advice, or advice and medicine; (2) visit, or visit and medicine; (3) attendance at confinement; (4) consultation of two doctors; (5) attendance for a period on a provident system? Such a secretary might work a larger district than could be conveniently provided for by a single set of consulting rooms, and the doctors would not be taken out of reach of other more profitable patients.

Supposing that the above system were adopted, would it not be well to allow any medical man, who is recommended by three other respectable practitioners, to be enrolled as an officer, provided he engages to conform to all the rules of the service, and is approved by the general board?

The secretary of a branch would allow each patient to choose any one of the whole list of officers of the branch, and mark the name of the selected doctor on the ticket. If all medical men were allowed to participate there would be no fighting for appointments, and consequent jealousies. Besides, an organisation of this kind would be capable of exerting a wholesome control over medical practice in general. I see no objection to including consultants in the scheme, if, indeed, it is at all desirable that there should be a distinct class of consultants.

Another point to which I wish to call attention is the question of supplying medicine to patients. It is found in practice that a doctor, in any but very high class general practice, cannot afford to have his medicines supplied by a chemist. Fees are too low to allow of this. Medicines cost a doctor comparatively little if he dispenses them himself. When people can get "advice and medicine" from men with high degrees and diplomas for 4½d, will the doctor be able to get a reasonable fee if 4d. goes to the chemist?

Again, in country places it is better for the doctor to supply his own medicine, and I hope the Public Medical Service will apply to country places as well as towns. While doctors continue to supply their own medicines, I fear the custom cannot be broken without loss.

The Public Medical Service must be prepared to hold its own against competition of all kinds. The question of fees is a very difficult one, and especially when a provident system is contemplated. The task of discussing the details of the working of the Public Medical Service is a very important one, and requires immediate and careful attention, so that the experiences of the past may be put to good account. But is it necessary to settle the details of the working of the Service before it is started? I think not. It seems to me that we ought first to organise a body capable of deciding as to details for itself.

I would suggest that the Association should content itself with forming an organisation which would be capable of laying down rules for its own guidance. Let the Association devise a constitution for the Public Medical Service, and set it on foot. Suppose, for instance, it be a central board controlling branches, and the branches electing members of the central board, and so on. Then why not the Association create a central board to begin with by requesting the Branches of the Association to elect members? The central board, thus constituted, could organise branches, make rules, decide as to fees, etc. Later on the Public Medical Service would elect its own central board and be independent of the Association. What we need to decide is the constitution of the Service, the mode of defraying its working expenses, etc. We ought to bring the Service into existence and let it act for itself.

A powerful organisation for supplying medical aid to the poor, with the parent Association to support it, might perhaps, later on, take in hand the much-needed general control over hospitals and such institutions. If the Public Medical Service showed itself worthy of confidence it is possible that

the State and the public would soon see the wisdom of endowing it with extensive powers. We cannot launch it at once into full manhood, but let us try to communicate to it a system capable of vigorous growth and high development.

HOSPITALS AND PROVIDENT DISPENSARIES.

DR. THOMAS F. HIGGINS (Manchester) writes: In the discussion upon the above important subject, a great deal has been said about the "Manchester system" in reducing the abuses. It certainly has reduced the abuse in one direction (free hospitals), but only to increase it to a still greater degree in another (provident dispensaries, and small hospitals where a recommend for a week can be procured for 1s.).

The abuse of the Manchester and Salford provident dispensaries, with one of which I have been connected for several years, and therefore speak from personal knowledge, is very great, and is steadily increasing. Any step taken to check abuse must equally apply to all charities.

The Manchester and Salford provident dispensaries, as at present managed, are undoubtedly charities, differing from free hospitals only in the fact that the members are compelled to contribute regularly 1d. per week whether they are ill or not, while at free hospitals the recipients may or may not, according to their circumstances, contribute something to the "box."

The promoters and members of provident dispensaries say that they are not in any respect charities, and that they pay for everything they get, including the medical men's services. What is the so-called remuneration of the medical men? Dr. Rentoul, of Liverpool, found it amounted to 6d. in 1887; Dr. Stewart, of Manchester, 4½d.; I found it to amount to 3d. in 1889; that is for the work done during the year 1888.

The gradual decrease in the "remuneration" of the medical man is accounted for as follows: 1, doing away with the age limit (60); 2, increase of members from the most unhealthy portion of the community (those who are healthy never trouble to join such institutions); hence increase of medical work. I think even those members who abuse provident dispensaries must agree with us when we refuse to recognise 3d. as adequate remuneration for our services. We are not paid; on the contrary, we are large contributors to the support of provident dispensaries. For instance, 3d. is exactly one-tenth of the smallest fee received by any respectable general practitioner, from the poorest patient seen and advised at his own surgery (a large percentage of provident dispensary patients have to be visited at their own homes); therefore nine-tenths of our work is given free to the members of provident dispensaries.

The twenty-eight medical officers of the Manchester and Salford dispensaries received last year £2,347 14s. 6¾d. That multiplied by ten will give you what we have subscribed in hard work, namely, in round numbers over £20,000. Add to this the fact that Manchester merchants subscribed £6,000 to start the dispensaries; this proves beyond doubt that they are charities supported principally by the medical officers, and slightly by the honorary subscriptions and ordinary members' subscriptions. Their abuse ought to be as strictly guarded against as free hospitals.

The support of provident dispensaries should be more evenly divided; it is unfair that the "lion's share" of their support should fall upon the medical men. Not only so, but they are called upon to treat people, who have been admitted as members, who have no claim whatever to be advised at 1d. per week.

My object in proving that the Manchester and Salford provident dispensaries are charities (to which the recipients contribute more than those of free hospitals) is this: the members, and those invited to become members, are told by the local committees that they pay for everything they get, it is no charity, and thereby encourage abuse. Before they can assert that they pay for everything they get, they must first believe that 3d. is adequate remuneration. I would ask those who believe so, if there are any, to consider the pay of a dock labourer, and compare it with that of the pay of a provident dispensary medical man, who, by the way, is not paid for overtime or night-work.

If they insist upon paying their medical men at a less rate than dock labourers, what will be the result? In time it may produce a class of medical men who would consider themselves perfectly justified in giving only that which they are paid for, namely, 3d. worth of their skill. If it were possible to reduce the relation between doctor and patient to the level of a pure commercial transaction, the members who now abuse dispensaries could have nothing to complain of if they got full value for their 3d. Such a condition of things, fortunately for the profession and the public, is impossible. Both would suffer; the public more than the profession. It is the duty of medical men to lay bare the facts, and the public will not be slow to see how much their own interests are concerned.

The provident dispensary system is a good one, and would be a great boon to the poor people in large cities if the benefits were restricted to, say, families earning up to 40s. per week, regulated by a sliding scale. Such families are now being crowded out by others earning over that sum.

I may add that anything received by provident dispensary medical officers barely covers the increased working expenses incurred.

UNIVERSITY INTELLIGENCE.

DURHAM.

FACULTY OF MEDICINE.—Examination for degrees in Medicine and Surgery and for the Licence in Sanitary Science at the College of Medicine, Newcastle-upon-Tyne. September, 1889.

Second Examination for the degree of Bachelor in Medicine. The following candidates satisfied the examiners:

Honours—Second Class.—C. Forsyth, Yorkshire College, Leeds; C. H. D. Morland, M.R.C.S., L.R.C.P., St. George's Hospital; J. A. Kendall, College of Medicine, Newcastle-upon-Tyne.

Pass List.—T. M. Allison, College of Medicine, Newcastle-upon-Tyne; E. W. P. Baines, College of Medicine, Newcastle-upon-Tyne; E. C. Bridges, St. Bartholomew's Hospital; T. Buckham, College of Medicine, Newcastle-upon-Tyne; A. Cox, College of Medicine, Newcastle-upon-Tyne; C. V. Dingle, College of Medicine, Newcastle-upon-Tyne; R. B. Duncan, St. Mary's Hospital; E. France, College of Medicine, Newcastle-upon-Tyne; A. Gurney, London Hospital; T. Hartley, College of Medicine, Newcastle-upon-Tyne; W. C. Haswell, College of Medicine, Newcastle-upon-Tyne; A. J. Hopper, College of Medicine, Newcastle-upon-Tyne; F. Hunton, College of Medicine, Newcastle-upon-Tyne; N. Magoris, College of Medicine, Newcastle-upon-Tyne; J. P. Molyneux, Owens College, Manchester; K. W. Poole, M.R.C.S., L.R.C.P., London Hospital; W. Turnbull, College of Medicine, Newcastle-upon-Tyne; J. D. Wardale, College of Medicine, Newcastle-upon-Tyne; A. W. B. Warde, St. Bartholomew's Hospital; A. C. Waters, M.R.C.S., L.S.A., London Hospital; J. Wood, Owens College, Manchester.

Examination for the Licence in Sanitary Science.

W. H. Coates, M.B., M.R.C.S., L.R.C.P., L.S.A.; J. Stokes, M.B.Durham.

Examination for the Licence in Sanitary Science for Medical Officers of Health of Five Years' Standing.

N. Hardcastle, M.R.C.S., L.S.A.; T. S. Maguire, M.D.Durh.; E. Sergeant, M.R.C.S.Eng., L.R.C.P.Lond.; W. D. Steel, M.D.Aber.; C. R. Stratton, L.R.C.P., L.R.C.S.Edin.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

THE INFECTIOUS DISEASE (NOTIFICATION) ACT, 1889.

THE Local Government Board have sent a circular to all district boards and vestries in the metropolis, together with an order prescribing the form of notification certificate for use by medical practitioners and a memorandum for their guidance. The circular is as follows:

Local Government Board, Whitehall, September 13th, 1889.

SIR,—I am directed by the Local Government Board to draw the attention of the district boards to the provisions of the Infectious Disease (Notification) Act, 1889, which received the Royal assent on the 30th ultimo, and which, it is hoped, may materially assist the local authorities of England and Wales in checking the spread of infectious disease, by enabling them to obtain early and accurate information with respect to the cases of infectious disease occurring within their districts.

The Act will, after October 30th, 1889, extend to every London district—that is to say, to the city of London and the several parishes and districts under the jurisdiction of the metropolitan vestries and district boards, and the Local Board of Woolwich.

The local authorities for the purposes of the Act will be, in the City of London, the Commissioners of Sewers; in Woolwich, the Local Board of Woolwich; and in the remainder of the metropolis the vestries and district boards acting under the Metropolis Management Acts.

Section 3 of the Act provides that where an inmate of any building used for human habitation within a district to which the Act extends is suffering from an infectious disease to which the Act applies, then, unless such building is a hospital in which persons suffering from an infectious disease are received, the following provisions shall have effect—that is to say:—

"(*a*).—The head of the family to which such inmate (in the Act referred to as the patient) belongs, and in his default the nearest relatives of the patient present in the building, or being in attendance on the patient, and, in default of such relatives, every person in charge of or in attendance on the patient, and in default of any such person the occupier of the building shall, as soon as he becomes aware that the patient is suffering from an infectious disease to which the Act applies, send notice thereof to the medical officer of health of the district.

"(*b*).—Every medical practitioner attending on, or called in to visit the patient, shall forthwith, on becoming aware that the patient is suffering from an infectious disease to which the Act applies, send to the medical officer of health for the district a certificate stating the name of the patient, the situation of the building, and the infectious disease from which, in the opinion of such medical practitioner, the patient is suffering."

Every person required by this section to give a notice or certificate who fails to give the same will be liable, on summary conviction in manner provided by the Summary Jurisdiction Acts, to a fine not exceeding 40s. If, however, a person is not required to give notice in the first instance, but only in default of some other person, he will not be liable to any fine if he satisfies the Court that he had reasonable cause to suppose that the notice had been duly given.

A notice or certificate to be sent to a medical officer of health in pursuance of the above provisions may be sent by being delivered to him, or by being left at his office or residence, or may be sent by post addressed to him at his office or at his residence. Where, in any district of a local authority, there are two or more medical officers of health of the authority, the certificate must be given to such one of them as has charge of the area in which the patient referred to in the certificate is, or to such other of them as the local authority may from time to time direct.

It will be observed that Section 3 refers only to cases where the patient is an inmate of a building used for human habitation. Section 13 of the Act, however, declares that the provisions of the Act shall apply to every ship, vessel, boat, tent, van, shed, or similar structure used for human habitation in like manner, as nearly as may be, as if it were a building, and that a ship, vessel, or boat lying in any river, harbour, or other water not within the district of any local authority within the meaning of the Act, shall be deemed for the purposes of the Act to be within the district of such local authority as may be fixed by the Board; and, where no local authority has been fixed, then of the local authority of the district which nearest adjoins the place where such ship, vessel, or boat is lying. This section will not, however, apply to any ship, vessel, or boat belonging to any foreign Government, nor will the Act extend to any building, ship, vessel, boat, tent, van, shed, or similar structure belonging to Her Majesty the Queen, or to any inmate thereof.

The expression "occupier," which occurs in Section 3, is defined by Section 16 as including a person having the charge, management, or control of a building,

or of the part of a building in which the patient is; and in the case of a house the whole of which is let out in separate tenements, or in the case of a lodging-house, the whole of which is let to lodgers, the person receiving the rent payable by the tenants or lodgers, either on his own account or as the agent of another person; and in the case of a ship, vessel, or boat, the master or other person in charge thereof.

Section 4 of the Act enables the Board from time to time to prescribe forms for the purpose of certificates under the Act, and requires any forms so prescribed to be used in all cases to which they apply. The Board, in pursuance of this power, have issued an order, a copy of which is enclosed herewith, prescribing the form of certificate required by the Act to be sent to the medical officer of health by the medical practitioner.

The Board also enclose a memorandum for the information of medical practitioners, which they suggest might accompany each supply of forms of certificates.

The Act requires the local authority to gratuitously supply forms of certificate to any medical practitioner residing or practising in their district who applies for the same, and to pay to every medical practitioner for each certificate duly sent by him in accordance with the Act a fee of 2s. 6d. if the case occurs in his private practice, and of 1s. if the case occurs in his practice as medical officer of any public body or institution.

Where a medical practitioner attending on a patient is himself the medical officer of health of the district, he will be entitled to the same fee as if he were not such medical officer.

Any expense incurred by a local authority in the execution of the Act are to be paid as part of the expenses of such authority in the execution of the Acts relating to public health; but the greater part of these expenses, so far as they are incurred in respect of places within the Metropolitan Asylum District, will be recouped to the local authority if the directions of Section 10 of the Act are observed, which provides that where a medical officer of health receives, in pursuance of the Act, a certificate of a medical practitioner relating to a patient within that district he shall within twelve hours after such receipt forward a copy thereof to the managers, and that the managers shall repay to the local authority the amounts paid by the authority in respect of those certificates of which copies have been sent to the managers, as required by that section.

The infectious diseases to which the Act applies will in all cases include the following diseases: Small-pox, cholera, diphtheria, membranous croup, erysipelas, the disease known as scarlatina or scarlet fever, and the fevers known by any of the following names: typhus, typhoid, enteric, relapsing, continued, or puerperal. If the local authority of any district to which the Act extends desires that the Act shall in their district apply to any infectious disease other than the above, they may from time to time, by resolution, order that the Act shall in their district apply to such disease. In such a case at least fourteen clear days before the meeting at which the resolution is passed is held, special notice of the meeting and of the intention to propose such resolution must be given to every member of the authority. The order embodied in the resolution may be permanent or temporary, and, if temporary, the period during which it is to continue in force must be specified therein, and any such order may be revoked or varied by the local authority by which the order is made. But no such order, or any revocation or variation of it, will be of any validity until approved by the Board.

When it is so approved, the local authority must give public notice thereof by advertisement in a local newspaper, and by handbills, and otherwise in such manner as they think sufficient for giving information to all persons interested. They must also send a copy thereof to each registered medical practitioner whom, after due inquiry, they ascertain to be residing or practising in their district.

The order will come into operation at such date not earlier than one week after the publication of the first advertisement of the approved order as the local authority may fix.

In the case of emergency the resolution may be passed at a meeting of which three clear days' notice has been given. In any such case the resolution must declare the cause of the emergency and be for a temporary order, and a copy of the resolution must be forthwith sent to the Board and advertised, after which the order will come into operation at the expiration of one week from the date of the advertisement. But unless approved by the Board it will cease to be in force at the expiration of one month after the resolution is passed, or such earlier date as may be fixed by the Board.

As the Act will take effect in the metropolis on October 30th next, the local authority should, as early as practicable, furnish every medical practitioner residing or practising in their district with the forms of certificate which have been prescribed, and the Board suggests that they should, without delay, take such steps as may appear to them to be most convenient for giving notice of the requirements of the Act to the inhabitants of the district. Judging from the experience of a large number of provincial towns in which provisions similar to those contained in the Act have been put in force by means of local Acts, the Board do not anticipate that the local authority will have any practical difficulty in securing a due compliance with the provisions of the statute, and the Board feel assured that the authority will take such action in connection with the notifications which they will receive as will materially assist in checking the spread of infectious disease in the metropolis.—I am, Sir, your obedient servant,

HUGH OWEN, Secretary.

This circular only applies to London. On September 19th the Board issued a somewhat similar circular to all sanitary authorities outside the metropolis, pointing out especially the procedure to be followed in adopting the Act.

SIR,—With the greater portion of your paragraph on p. 614, in "Topics of the Day," I fully agree; but I regret to say that you have inadvertently fallen into an error in supposing that the acceptance of the Act is optional in London; for Clause 2, relating to the "Extent of the Act," remains precisely as it was in the Bill. It is only in the provinces that the acceptance is optional.

The most important alterations of the Bill as regards the profession are in Clause 3 (*b*), and in the added Clause 11. In the former the medical attendant is no longer required to give "the name of the person who appears to him to be primarily liable to give the notice," which is an improvement obtained at the last moment by Sir Walter McLaren, M.P. But, in the added clause, a direct sanction is given to the vicious combination of private practice with the discharge of the public duties of a medical officer of health; for it runs thus in its second paragraph: "Where a medical practitioner attending on a patient is himself the medical officer of health of the district, he shall be entitled to the fee to which he would be entitled if he were not such medical officer." This is altogether at variance with the oft-repeated declaration of the Police and Sanitary Committee of the House of Commons, and also of the Society of Medical Officers of Health themselves. Under these circumstances we cannot look for any permanent cohesion between the two portions of the profession, and it will certainly behove general practitioners to be on their watch-tower.—I am, etc.,

D. BIDDLE.

Gough House, Kingston-on-Thames, September 16th.

HEALTH OF ENGLISH TOWNS.

DURING the week ending Saturday, September 14th, 5,443 births and 3,062 deaths were registered in twenty-eight of the largest English towns, including London, which have an estimated population of 9,555,406 persons. The annual rate of mortality in these towns, which had been 19.2 and 16.2 per 1,000 in the four preceding weeks, rose again to 16.7 during the week under notice. The rates in the several towns ranged from 13.2 in Derby, 13.3 in Brighton, 13.4 in Salford, and 13.7 in Birkenhead to 26.7 in Blackburn, 27.0 in Halifax, 27.5 in Preston, and 31.4 in Plymouth. In the twenty-seven provincial towns the mean death-rate was 18.3 per 1,000, and exceeded by 3.5 the rate recorded in London, which was 14.8 per 1,000. The 3,062 deaths registered during the week under notice in the twenty-eight towns included 272 which were referred to diarrhœa, 72 to scarlet fever, 56 to diphtheria, 54 to "fever" (principally enteric), 45 to whooping-cough, 30 to measles, and not one to small-pox; in all, 529 deaths resulted from these principal zymotic diseases, against numbers declining from 811 to 512 in the four preceding weeks. These 529 deaths were equal to an annual rate of 2.9 per 1,000; in London the zymotic death-rate was equal to 2.1, while it averaged 3.5 per 1,000 in the twenty-seven provincial towns, and ranged from 1.5 in Birkenhead, 1.7 in Norwich, and 1.8 in Portsmouth and in Oldham to 6.8 in Newcastle-upon-Tyne, 6.9 in Blackburn, 9.0 in Preston, and 14.7 in Plymouth. Measles caused the highest proportional fatality in Newcastle-upon-Tyne; scarlet fever in Oldham, Huddersfield, Bolton, and Plymouth; whooping-cough in Huddersfield; "fever" in Preston and Nottingham; and diarrhœa in Plymouth, Hull, Newcastle-upon-Tyne, Blackburn, and Preston. Of the 56 deaths from diphtheria recorded during the week under notice in the twenty-eight towns, 41 occurred in London, 2 in Manchester, and 2 in Derby. No fatal case of small-pox was recorded in any of the twenty-eight towns, and no small-pox patients were under treatment in any of the Metropolitan Asylums Hospitals on Saturday, September 14th. These hospitals, however, contained 1,067 scarlet fever patients on the same date, against numbers steadily increasing from 538 to 983 in the eleven preceding weeks; 143 new cases were admitted during the week, against 133 and 112 in the two previous weeks. The death-rate from diseases of the respiratory organs in London was equal to 1.8 per 1,000, and was slightly below the average.

HEALTH OF SCOTCH TOWNS.

IN the eight principal Scotch towns, 804 births and 488 deaths were registered during the week ending Saturday, September 14th. The annual rate of mortality in these towns, which had declined from 18.1 to 16.5 per 1,000 in the three preceding weeks, rose again to 19.1 during the week under notice, and exceeded by 2.4 per 1,000 the mean rate during the same period in the twenty-eight large English towns. The lowest rates were recorded in Paisley and Edinburgh, and the highest in Aberdeen and Dundee. The 488 deaths registered in these towns during the week under notice included 79 which were referred to the principal zymotic diseases, equal to an annual rate of 3.1 per 1,000, which slightly exceeded the mean zymotic death-rate during the same period in the twenty-eight large English towns. The lowest zymotic rates were recorded in Perth and Paisley, and the highest in Glasgow and Leith. The 200 deaths in Glasgow during the week under notice included 17 which resulted from diarrhœa, 6 from whooping-cough, 5 from measles, 4 from "fever," and 2 from diphtheria. Three fatal cases of measles occurred in Leith, and 2 of diphtheria in Edinburgh. The death-rate from diseases of the respiratory organs in these Scotch towns during the week was equal to 2.4 per 1,000, against 1.8 in London.

HEALTH OF IRISH TOWNS.

DURING the week ending Saturday, August 31st, the deaths registered in the sixteen principal town districts of Ireland were equal to an annual rate of 22.1 per 1,000. The lowest rates were recorded in Lisburn and Wexford, and the highest in Armagh and Waterford. The death-rate from the principal zymotic diseas esaveraged 4.4 per 1,000. The 180 deaths in Dublin during the week under notice were equal to an annual rate of 26 6 per 1,000 (against 24.4 and 25.1 in the two preceding weeks), the rate for the same period being only 15.1 in London and 16.2 in Edinburgh. These 180 deaths included 33 which resulted from the principal zymotic diseases (equal to an annual rate of 4.9 per 1,000), of which 26 resulted from diarrhœa, 6 from "fever," and 1 from whooping-cough.

In the sixteen principal town districts of Ireland the deaths registered during the week ending Saturday, September 7th, were equal to an annual rate of 20.4 per 1,000. The lowest rates were recorded in Dundalk and Newry, and the highest in Sligo and Kilkenny. The death-rate from the principal zymotic diseases averaged 3.2 per 1,000. The 126 deaths registered in Dublin during the week under notice were equal to an annual rate of 24.4 per 1,000 (against 21.5 and 26.6 in the two preceding weeks), the rate for the same period being only 14.0 in London and 12.7 in Edinburgh. These 126 deaths included 15 which resulted from the principal zymotic diseases (equal to an annual rate of

23 per 1,000), of which 11 were referred to diarrhœa, 2 to whooping-cough, 1 to measles, and 1 to "fever."

During the week ending Saturday, September 14th, the deaths registered in the sixteen principal town districts of Ireland were equal to an annual rate of 21.1 per 1,000. The lowest rates were recorded in Wexford and Dundalk, and the highest in Drogheda and Newry. The death-rate from the principal zymotic diseases averaged 3.7 per 1,000. The 166 deaths registered in Dublin during the week under notice were equal to an annual rate of 24.5 per 1,000 (against 26.6 and 24.4 in the two preceding weeks), the rate for the same period being only 14.8 in London and 15.1 in Edinburgh. These 166 deaths included 20 which resulted from the principal zymotic diseases (equal to an annual rate of 3.0 per 1,000), of which 15 resulted from diarrhœa, 4 from "fever," and 1 from scarlet fever.

MEDICAL NEWS.

DR. MANSON estimates the number of lepers in China at from 200,000 to 300,000.

A NOVELTY IN VACCINATION.—The following advertisement has just appeared in a provincial newspaper: "Wanted, a Doctor to Vaccinate a Child in a Hygienic manner."

A TELEGRAM from Teheran states that cholera has appeared in the neighbourhood of Kerind, near the Western Frontier, having been imported from Bagdad.

IT is announced that a monthly journal devoted to epidemiology is about to be established at Kiew, under the direction of "Government Medical Inspector" Dr. Ssachnowski.

THE Department of Botany of the British Museum has acquired the collection of microscopic slides made by the late Professor de Bary.

THE total number of students now attending the German universities is 29,491; of these, 8,883 are studying medicine; 7,713, philosophy and natural sciences; 6,835, law; and 6,060, theology.

THE Council of the German Association of Medicine has addressed a petition to all Governments, asking that women may be admitted to study medicine at all the German universities.

MEDICAL VACANCIES.

The following Vacancies are announced:

BOSCOMBE HOSPITAL AND PROVIDENT DISPENSARY, Bournemouth.—Resident Medical Officer. Salary, £60 per annum, with board and residence. Applications by September 23rd to Henry A. Garrett, Esq., Secretary, Pinedene, Boscombe, Bournemouth.

BOYLE UNION, BALLYFARNON DISPENSARY.—Medical Officer. Salary, £110 per annum, and fees. Applications to Mr. Thomas Rea, Honorary Secretary, Annaghloy. Election on September 23rd.

CAVAN UNION, BELLANANAGH DISPENSARY.—Medical Officer. Salary, £120 per annum, and fees. Applications to Mr. Charles Fitzpatrick, Honorary Secretary. Election on September 26th.

COUNTY WEXFORD INFIRMARY.—Surgeon. Salary, £120 per annum, and house. Election on September 30th.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell, E.—House-Physician. Board and lodging. Applications by October 10th to the Secretary.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark Bridge Road, S.E.—House-Surgeon. Salary, £70 per annum, with board, residence, etc. Applications by September 23rd to the Committee of Management.

FEMALE LOCK HOSPITAL, Harrow Road.—Assistant House-Surgeon. Board and lodging. Applications by September 23rd to the Secretary.

FLINTSHIRE DISPENSARY.—House-Surgeon. Salary, £100 per annum, with furnished house, etc. Applications by October 7th to the Secretary, Board Room, Bajillt Street, Holywell.

GENERAL HOSPITAL, Birmingham.—Resident Registrar and Pathologist. Salary, £100 per annum, with board and lodging. Applications by September 28th to the House Governor.

GENERAL HOSPITAL, Birmingham.—Assistant House-Surgeon. Residence, board, etc. Applications by September 28th to the House-Governor.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway Road.—House-Surgeon. Salary, £80 per annum, with board and lodging. Applications by September 23rd to the Secretary.

HOSPITAL FOR DISEASES OF THE THROAT, Golden Square, W.—Resident Medical Officer. Salary, £50 per annum, with board, etc. Applications by September 30th to the Secretary.

JOINT COUNTIES ASYLUM, Carmarthen.—Junior Assistant Medical Officer. Salary, £100 per annum, with board, lodging, etc. Applications by October 10th, to the Medical Superintendent.

LEICESTER INFIRMARY AND FEVER HOUSE.—House-Surgeon. Salary, £120 per annum, with board, lodging, etc. Applications by October 5th to the Secretary.

LONDON FEVER HOSPITAL, Liveroool Road, Islington, N.—Assistant Resident Medical Officer. Salary, £120 per annum. Applications by October 1st addressed to the Secretary.

LONDON HOSPITAL, Whitechapel Road, E.—Assistant Surgeon. Applications by September 24th to the Secretary.

METROPOLITAN HOSPITAL, Kingsland Road, N.E.—Junior House-Surgeon. Salary, £40 per annum, with board, etc. Applications by September 28th to the Secretary.

NOTTINGHAM GENERAL HOSPITAL.—Resident Surgeon's Assistant. Board, lodging, etc. Applications by September 23rd to the Secretary.

ROYAL LONDON OPHTHALMIC HOSPITAL, Moorfields, E.C.—Junior House-Surgeon. Salary, £50 per annum, with board and apartments. Applications by September 30th to the Secretary.

ROYAL NATIONAL HOSPITAL FOR CONSUMPTION, Ventnor.—Assistant Resident Medical Officer. Salary, £60 per annum, with board and lodging. Applications by September 23rd to the Chairman of the Board of Management, 34, Craven Street, Strand, W.C.

RURAL SANITARY AUTHORITY, BASFORD UNION.—Medical Officer of Health. Salary, £400 per annum. Applications by September 26th to C. J. Spencer, Public Offices, Basford, Nottingham.

SALFORD ROYAL HOSPITAL, Salford.—House-Surgeon. Salary, £80 per annum, with board, etc. Applications by September 23rd to the Secretary.

WEST LONDON HOSPITAL, Hammersmith Road.—House-Surgeon. Board and lodging. Applications by September 25th to the Secretary-Superintendent.

MEDICAL APPOINTMENTS.

BETTS, W. A., M.B., C.M.Edin., appointed Junior House-Surgeon to the Boro' Hospital, Birkenhead, *vice* L. McWhannell, M.B., promoted.

BULTEEL, Marcus H., L.R.C.P.L., M.R.C.S.Eng., appointed Certifying Factory Surgeon for Devonport and Stonehouse District, *vice* L. Pilkington Jackson, deceased.

FENWICK, J. C., appointed Clinical Clerk to the Northumberland County Asylum, *vice* C. W. Turner, M.R.C.S.

FOXWELL, Arthur, B.A., M.B.Cantab, B.A.Lond., M.R.C.P., appointed Honorary Physician to the Queen's Hospital, Birmingham, *vice* Sir James Sawyer, M.D.Lond., resigned.

GABE, J. R., M.D., M.R.C.S.Eng., L.S.A.Lond., appointed Public Vaccinator for Holborn, *vice* J. Morton, M.R.C.S.Eng., L.S.A.Lond., deceased.

GIBSON, James, M.B., C.M., L.F.P.S.G., L.M., appointed Medical Officer of Health to the Greetland U. District.

HEATON, George, M.B., B.Ch., appointed Resident Surgical Officer to the General Hospital, Birmingham, *vice* E. N. Nason, M.B., M.R.C.S.

MANSELL-MOULLIN, C. W., M.D., F.R.C.S., appointed Surgeon to the London Hospital, Whitechapel Road, E., *vice* J. Couper, F.R.C.S.Eng., resigned.

MACMUNN, C. A., M.D., L.R.C.S.I., appointed Honorary Pathological Officer to the Wolverhampton and Staffordshire General Hospital.

MEDCALF, E. S., L.S.A., L.R.C.P., appointed Medical Officer of Health to the Town of Hove, *vice* W. Kebbell, M.D., resigned.

PACKMAN, Alfred C. A., M.D., M.R.C.S., appointed Medical Officer of Health for the Rural Sanitary District of the Hoo Union.

PURSLOW, C. E., M.D.Lond., M.R.C.S.Eng., Honorary Medical Officer to the Birmingham Lying-in Charity, appointed Honorary Obstetric Officer to the Queen's Hospital, Birmingham, *vice* A. F. Hawkins, F.R.C.S., resigned.

SNELLEN, Herman, jun., M.B., Mast. Surg. Utrecht Univ., appointed House-Surgeon to the Bristol Eye Hospital.

SWAN, J. H., L.M., L.K.Q.C.P.I., L.R.C.S.I., appointed Assistant Surgeon to the County Infirmary, Monaghan, *vice* G. Faris, M.B., B.Ch., resigned.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the announcement. The first post on Thursday mornings is the latest by which advertisements can be received.

BIRTHS.

COLE.—At Addah, Gold Coast Colony, on Saturday, July 27th, the wife of Sylvester J. Cole, M.B., C.M., Assistant Colonial Surgeon, of a daughter.

RENDALL.—On September 8th, at Aix-les-Bains, the wife of Stanley M. Rendall, M.D., of a son.

MARRIAGES.

M'WILLIAM—WISE.—On September 12th, in Glencraig Church, by the Rev. Canon Harding, brother-in-law of the bride, assisted by the Rev. J. Hare Duke, D.D., Rector of the parish, John Alexander M'William, M.D., Regius Professor of the Institutes of Medicine in the University of Aberdeen, to Edith Constance, youngest daughter of James L. Wise, Esq., Glencultra, Craigavad, Co. Down.

ROBERTS—LEWIS.—At the Congregational Church, Walter Road, by the Rev. Evan Jenkins, J. S. H. Roberts, L.R.C.P.Lond., M.R.C.S., 6, Dynevor Place, Swansea, to Eliza Wheatcroft (Tiny), daughter of the late John Lewis, Fairfield House, Mount Pleasant, Swansea.

DEATHS.

BENTON.—On September 8th, at Weymouth, after a few days' illness, Samuel Benton, M.R.C.S., of 2, Bennett Street, St. James's, second son of Philip Benton, of North Shoebury, Essex, aged 39.

CHADWICK.—On the 14th inst., at Codford St. Mary, Wilts, Mary Elizabeth, wife of George F. Chadwick, L.R.C.S., L.R.C.P., and eldest daughter of the Rev. R. W. Fiske, Rector of Stockton, Wilts.

DUCKWORTH.—On the 14th instant, at Westgate-on-Sea, after a short illness, Annie Alicia, wife of Sir Dyce Duckworth. M.D.

FLEXMAN.—September 8th, at The Chase, King's Lynn, James Flexman, Esq., M.R.C.S., formerly of Southmolton, Devon, and for many years coroner of that borough, aged 72.

LUDLOW.—On the 17th inst., at Hinckley, Thomas Sutton Ludlow, M.R.C.S. and L.S.A., aged 62. Friends will please accept this, the only, intimation.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the office of the JOURNAL, and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

QUERIES.

TREATMENT OF GREASY SKIN.

M.B. would feel obliged for any suggestions regarding the treatment of a greasy condition of forehead and nose. He has already tried the remedies prescribed for acne oleosa, namely, astringents after washing with benzine, and creasote with oil.

ELECTRICAL ENGINEERING.

Γλυψος would be glad to be informed how to get a young friend into an electrical engineering office or works so as to acquire a good knowledge of that branch of science.

ANSWERS.

EXAMINATIONS IN PSYCHOLOGICAL MEDICINE.

LUNACY.—If our correspondent will write to the Secretary of the Medico-Psychological Association, Dr. Fletcher Beach, the Darenth Asylum, near Dartford, Kent, he will give him every information.

LUNACY ACTS AMENDMENT ACT.

J. A. C.—The Lunacy Acts Amendment Act was passed and received the Royal assent at the end of last month.

THE SWISS STATE EXAMINATION.

M.B., C.M., writes: 1. Where can I procure full information as to the Swiss State Examination? 2. Have English practitioners to put in residence at any Swiss college before they are qualified to try the examination? 3. Has the examination to be passed in German?

*** 1. Full information as to the examination in question is given in this day's JOURNAL, at p. 677. 2. No residence is required. 3. The examination may be passed in French, German, or Italian.

TREATMENT OF DANDRUFF.

DR. W. A. MICHIE (Greenwich) writes: In reply to "Country Member," I beg to recommend the following lotion: ℞ Liq. hyd. perch. (gr.iv-ʒj) ʒiiss; liquor. potassæ ʒiij; aq. ad ʒvj. M. Fiat lotio. To be well rubbed into scalp twice a day. The efficacy of the remedy, which will be apparent after a few applications, is due to the yellow oxide which is thrown down. When the disease has been removed an occasional application of the lotion will prevent a recurrence, while at the same time the growth of the hair will be favoured. In those disposed to pityriasis alba the use of spirituous lotions, ointments, and oily substances, I believe to be highly injurious as tending to aggravate rather than remove the disease.

J. T. recommends citrine ointment as a certain cure, with perseverance.

NOTES, LETTERS, ETC.

SUCKING THE THUMB.

MR. S. O. EADES (Ipswich) writes: I cannot agree with "D. H. G.," in the JOURNAL of August 31st, where he maintains the popular idea that thumb-sucking tends to interfere with the nutrition of infants, making them pale, bloodless, etc. On the contrary, I always advise parents to encourage this habit, especially during dentition. Sucking the thumb causes the salivary glands to pour out their secretion, thus moistening the mouth and aiding digestion; the pressure of the thumb eases, while the teeth are "breeding," the irritation and pain of the gums, and helps, when the teeth are sufficiently advanced, to bring them through. Sucking of the thumb, moreover, makes a cross infant contented and happy, and frequently induces a restless babe to fall into a sweet refreshing sleep. After dentition is completed it is likely to become a habit with a child; in that case it may be readily cured by smearing its thumb with a paste of aloes and water; one or two applications will suffice, as after tasting the bitter it will eschew its former enjoyment. I may add that thumb-sucking, in my opinion, is far preferable to ivory, india-rubber rings, nipples, etc., we see so frequently given to these poor mortals by their loving mothers.

A NORTH-COUNTRY hotel-keeper offers the following inducement to invalid visitors: "Ample bed accommodation. Posting in all its branches. Hearse kept."

CASE OF ABSOLUTE IMPERFORATE HYMEN.

DR. O. R. P. OWEN, of Henblas, Bala, North Wales, has forwarded to us notes of a case of this kind. The patient was a young girl, aged 17, who suffered from the usual symptoms, complete amenorrhœa with lumbar and hypogastric pains. The vaginal orifice was found to be totally occluded by a thick fibrous membrane, without any opening of any sort, and resembling the presenting head of a fœtus. The membrane and adjacent distensible soft structures were much swollen; fluctuation could be distinctly felt. Dr. Owen and Dr. S. F. Clement came to the conclusion that the case was one of absolute imperforate hymen, with retention of menstrual flux in the vagina. The patient having been put under chloroform, Dr. Owen cautiously punctured the membrane with a trocar attached to "Allen's surgical pump." He found the point of the trocar freely movable in a cavity after penetrating three-eighths of an inch, but no fluid could be withdrawn by the pump, although he tried carefully for some little time. The trocar was withdrawn, and a few spots of very dark semifluid blood discharged from the trocar wound. A probe was then inserted, and a large cavity, extending beyond the length of the probe, was found. The occluding membrane was then opened to the extent of an inch or so, by means of a director and a blunt-pointed bistoury. About twenty ounces of tarry fluid escaped. A strip of carbolised lint was then inserted between the edges of the wound, and the patient was left quiet in bed until the evening, when the vagina was carefully washed out with carbolised water (1 in 40) and replugged. She was then perfectly comfortable, and all feeling of pain and oppression had left her; there was no elevation of temperature. The after-treatment consisted in keeping her at rest, and keeping the edges of the wound apart with carbolised lint. There was never any elevation of temperature or any bad symptom after the operation. She is now perfectly recovered, and there is a patent opening to the vagina three-quarters of an inch in length. He adds that the external genitals generally are not largely developed, though perfect. On August 27th menstruation commenced; the flow was free and good colour and quantity, without pain or constitutional disturbance. Dr. Owen's case, though not extremely rare, is of importance, as the opening of an imperforate vagina is a serious matter. In relation to this case we may refer to the lecture "On Retention of Menses" in Dr. Matthews Duncan's *Clinical Lectures on the Diseases of Women*, where the author endeavours to show that it is often the vagina itself which is imperforate, the hymen, not imperforate, lying in its normal situation. That authority recommends the opening of the septum by Paquelin's cautery, without any hypogastric pressure or syringing.

NITRITE OF AMYL IN EPILEPSY.

DR. A. AMBROSE (Buckhurst Hill) writes: In the JOURNAL of September 14th I see amyl nitrite mentioned in connection with single epileptic fits. The following occurred some eighteen months ago. I was called to see a patient at some little distance in the middle of the night, and found him just recovering from a fit; in a few minutes he had another. I caused him to inhale nitrite of amyl, with immediate good effect; and left the bottle, one ounce, about half full, with directions that if another fit occurred the inhalation was to be repeated. In two or three hours another fit came on, and owing to some mistake a large teaspoonful was poured down his throat. After an hour the mistake was discovered. I was sent for, and succeeded in getting up a good deal of the amyl nitrite by hypodermic injection of apomorphine. But the point which I wish to emphasise is that the patient, although previously frequently attacked, has not had a fit since.

LEPROSY.

MR. FRED. SIMMS (Mandeville Place, W.) writes: The question of the contagiousness of leprosy appears to be the burning question of the day, and there seems to be more of a disposition to grant that people may take it from one another by actual inoculation during the stage of ulceration and by faulty vaccination. It is exceedingly likely also that a native wet nurse, showing no signs of the disease herself, may yet infect her nursling, and we may suspect that if the bacilli of phthisis, diffused in the breath or fouling the air when expectorated, may cause consumption, so also may the seeds of leprosy be likewise sown when the lungs break down, as they very often do, and before the integuments.

A letter recently arrived from the West Indies says, perhaps with some degree of exaggeration, "If lepers are to be locked up, I fear they will have to take half the white creoles," that is, half those of European parentage born in the West Indies, and these are people who come and go about the world, and to this country more especially, once a year during the summer, and oftener. Can it be said that there is no danger to us here, for there are several lepers amongst us; and should not this importation be stopped at its point of departure? In the West Indian islands segregation can be made very easy, for there are many small islands, such as some of the Grenadines and those of the Gulf of Paria, in which settlements can be formed. The East Indians are already preparing their measures of separation.

CONSANGUINEOUS MARRIAGES AND DEAF-MUTISM.

MR. ALFRED H. HUTH writes: I see that the Commissioners who were appointed to report on the blind, the deaf, and the dumb consider themselves justified in stating, with all the weight of their official position, that consanguineous marriage is one of the causes of deaf-mutism. The public will naturally suppose that they have obtained unimpeachable evidence for so grave a charge, while all the evidence they offer is:—

1. That in the Alpine districts of Italy deaf-mutism is more common than in other districts. They do not, however, state whether this is independent of goitre and crétinism, or whether they consider goitre is caused by consanguineous marriages.

2. That in the Irish Census Report of 1881 (not 1871, as they erroneously say), "in 135 cases where the parents of mutes were related previously to marriage, 84 were in the degree of first cousins, 40 in that of second, 10 in that of third, and 1 in that of fourth." And that hence the nearer the relationship the greater the proportion of deaf-mutism. Really, Sir, I think that we have a right to expect that Royal Commissions should have some slight acquaintance with the matter they are supposed to be inquiring into before they favour us with their report. The real facts are as follows, which I have tabulated:

Relationship.	No. of Marriages.	No. of Congenital Deaf Mutes.	Average per Marriage.
1871.			
First cousins	85	128	1.50
Second cousins	63	89	1.41
Third cousins	32	40	1.25
Fourth cousins	7	11	1.57
Fifth and sixth cousins ...	14	19	1.35
Total	201	287	1.43
No relationship	2,804	3,216	1.14
Total	3,005	3,503	1.16
1881.			
First cousins	84	123	1.46
Second cousins	40	46	1.15
Third cousins	10	21	2.10
Fourth cousins	1	1	1.00
Fifth and sixth cousins ...	—	—	—
Total	135	191	1.45
No relationship	2,452	2,972	1.21
Total	2,587	3,163	1.22

By which we see that so far from there being any increased proportion of deaf-mutism with increased propinquity of relationship, the greatest was in 1871, in marriages between fourth cousins; and in 1881, in marriages between third cousins.

Or to take another piece of evidence that was before them, in response to the inquiries of the Foreign Office (Papers Respecting Deaf-mutes. Miscellaneous. No 1, 1886, pp. 60, 61), the parentage of certain deaf-mutes at schools was as follows:

Relationship.	Families.	Deaf-Mutes.	Per cent. on Total.	Average per Family.
Uncle and niece ...	1	1	0.078	1.00
First cousins ...	45	63	4.930	1.40
Second cousins ...	10	19	1.485	1.90
Third cousins ...	7	11	0.860	1.60
Fourth cousins ...	2	3	0.234	1.50
No relation... ...	880	1,181	92.410	1.34

3. Further, Mr. Buxton is quoted as considering so-and-so. Now, I have frequently seen Mr. Buxton quoted, but I have never yet succeeded in tracing any statistics supplied by him. When he does, it will be time enough to consider their bearing.

4. The Commissioners quote 2,485 cases of deaf-mutism, of which they say 99 were derived from marriages between "cousins." That is, rather less than 4 per cent. were so derived. The proportion of consanguineous marriages to non-consanguineous marriages in the United Kingdom, thanks to the vagaries of our legislators, is not known; but we have every reason to believe that it is greater than 4 per cent., it may be 6 or 7, and we can hardly expect consanguineous marriages to produce less deaf-mutism than other marriages.

Upon this evidence the Commissioners say: "We think, from the evidence and statistics before us, that consanguineous marriages should be strongly discouraged."

Sulphonal.

Dr. Gilbert Richardson, M.A., M.R.C.P. (Putney) writes: That the experience of any member of the Association may be of some value with reference to the use of a comparatively new drug is my excuse for troubling you with a short note and a few observations about the hypnotic qualities of sulphonal. I have used sulphonal in a certain number of mental and allied conditions during the year, and have found it a much more useful remedy than any other recent introduction to our list of soporifics. In the following case its use was so strikingly useful that I should like to record it, as briefly as possible, as an illustration of its value.

Mrs. X., aged 47, has for more than ten years taken alcohol in large quantities, with intervals of temperance; she has had four previous attacks of delirium tremens, the third of which, as well as the attack which forms the subject of the present note, was attended by epileptiform convulsions. Four weeks after the commencement of this last illness, the patient was maniacal, very violent, destructive, suicidal, and had marked delusions and hallucinations. Owing to her extreme restlessness and sleeplessness the greatest difficulty was experienced by her nurses in keeping her in bed at night. Opium, cannabis indica, bromide, hyoscyamin, digitalis, sp. æther. sulph. co. were tried in various combinations with very partial success; hyoscin gr. $\frac{1}{100}$ was tried and failed. Sulphonal gr. xv was then given at 10 P.M., and the dose repeated at 12.30; the patient went to sleep at 1 and slept till 6. Next night 30 grains were given at 10 P.M., and patient slept from 11.5 to 5.15. Next night she slept from 11.15 to 9.30 under the influence of the same dose. The dose was shortly after reduced to 15 grains, and was continued for fourteen nights, the sleep obtained being always more than seven hours. The patient became gradually quieter and more rational; the tongue cleaned; she took more nourishment, and made a satisfactory recovery. With five other somewhat similar cases I have obtained results almost equally gratifying.

If these results are anything more than accident, they must give sulphonal a strong claim upon our attention, for there do not appear to be any unpleasant after-consequences almost inseparable from most of the better known narcotics; while among the newer remedies, urethan is too mild to be of much service, paraldehyde is disagreeable, and hyoscin has the objection of having to be given subcutaneously.

I have been unable to discover whether any theory has been advanced with reference to the nature of the action of sulphonal. Compared with normal sleep, that induced by its action seems to be more placid; the pulse action is reduced by about eight to ten beats in the minute; the respirations are less by about three. These observations were made with 15-grain doses. I found that 30-grain doses did not produce much longer sleep, but were followed by drowsiness during the day. I am aware that it has been given in the night sweats of phthisis, and its action compared with that of belladonna, but on the heart its action does not seem to be similar.

I have found sulphonal useful in cases of migraine—more so in some instances as an immediate remedy than antipyrin or soda salicylate with citrate of caffein. But I will not attempt to trespass further upon your indulgence than to say in conclusion that, as one's own experience is too small to decide whether this favourable verdict will be upheld upon a more extended trial, I hope that some members may be induced to relate their experiences, and also to inform us upon what theory it is probable that the action of sulphonal is based.

An Early Form of Lanolin.

Dr. F. William Cock (Porchester Houses, W.) writes: Recently, in looking up a reference in P. Pomet's *Histoire Générale des Drogues*, folio, Paris, 1694, I came across an account of a substance called "œsipus humida." It is described as being collected from the breasts and inner part of the thighs of sheep, and from the surface of the water in which sheep are washed. It is stated to be mouse-grey in colour, with a strong odour, so strong indeed sometimes as to be insupportable, but that it is reported that, if it be kept long enough, it becomes sweeter, having an odour something like ambergris. Pomet says it enters into several Galenical compositions. Thereupon I looked up Joannes Renodœus's *Dispensatorium Medicum*, Genevæ, large 12mo, 1623. He gives the preparations of it, and a formula for a ceratum œsypatum, containing in all eleven ingredients. This, he states, is very useful for nodosities in any part, pain in the stomach, and hardness of the liver. Pomet states, in his time, that œsypus, with the oils of camomile and lilies, was used for "fluxions de gorge." It seems to have been well known in the seventeenth and eighteenth centuries. Bailey, in his *English Dictionary*, 1724, says, "Œsypus, a certain oily substance boiled out of a particular part of the fleece, used most to sweat." Bartholomew Parr, in his *Medical Dictionary*, 4to, 1809, says, "Œsype (from ὀις, a sheep, and ῥυπες, sordes), the greasy sordes of wool."

Quinine in Pregnancy.

E. A. Gaynes Doyle, L.R.C.P.L., M.R.C.S. (Acting Resident Surgeon, San Fernando Hospital, Trinidad, W.I.) writes: In the Journal of June 1st Mr. Leonard G. Peters writes:—"I have for the last few years been in the habit of giving quinine as a remedy for obstinate cases of vomiting in pregnancy, but have never seen a case in which it has given rise to the least sign of miscarriage or abortion."

My experience, and that of other practitioners here, is the opposite of the above. Here, where malarial fevers of all types are the commonest diseases, and where quinine is one of the everyday drugs used, one has ample opportunities of watching the effect of the drug in pregnancy. Evacuation of the contents of the uterus in cases of remittent fever in which quinine is given is by no means rare. No other drug will cure the fever but quinine; antipyrin will lower the temperature and ward off lung or brain complication, but as soon as the effect of the antipyrin had gone off the patient is in the same state of danger as before. In such a case quinine must be given, the point at issue being whether you will allow both mother and child to succumb, and, if not, which one.

I cannot speak positively as to how long the effect of the drug may last. In a few cases I can call to mind where the abortion occurred a few days after the stopping of the medicine, the fever having left the patient. In these cases I stop the drug as soon as possible. My favourite dose is 5 grains every two, three, or four hours, dissolved with citric acid in effervescence with carbonate of ammonia; a little digitalis added prevents the trembling and weakness often complained of, and allows a greater toleration of the drug so far as these symptoms alone are concerned. This action of digitalis is not limited to pregnant cases only. In treating pregnant women suffering from malaria, the possible premature expulsion of the fœtus is constantly held in mind by the medical attendant. That malaria of itself does not act as a cause I do not believe. First, many women suffer from intermittent fever for years with little or no treatment, and during that period give birth to children at full time. This is well seen amongst the Indian population and outlying districts here. Secondly, women suffer from short attacks of remittent fever, recover with or without proper treatment, and run their full course. I do not say that every pregnant woman to whom quinine is given aborts, but that a number do, and that from the drug, is beyond a doubt. I have in such cases over and over felt the uterus contract, and the patient suffer preliminary pains whether the expulsion occurred or not, and these symptoms to subside on stopping the quinine and giving nothing.

Hydrophobia and Muzzling.

Mr. John Ferris, L.R.C.P., L.R.C.S.Ed., F.R.C.V.S.L. (Torquay), writes: Those who know the nature of this fearful disease will not venture to argue that in this case prevention is not better than cure. It appears, however, that the Privy Council and the London County Council were not unanimous in wishing to abolish this disease from among us. Will you be good enough to allow me to give a few reasons why muzzling of dogs should be effectually carried out throughout the kingdom? 1. Rabies is a specific disease. 2. It can only be propagated by contagion. 3. Climate, season, want of water and of food do not have any influence over it. 4. The virus is of a specific nature. 5. Rabies in the dog cannot be produced except by direct inoculation. 6. The specific virus resides mainly in the secretions furnished by the mucous membrane of the mouth. 7. It never inoculates when it is applied to the sound surface of the skin. 8. The reason so many escape hydrophobia after being bitten by a rabid animal is the fact that they are wounded through their clothes, and the fangs are cleansed from the virus. 9. The only means of stamping this fearful malady out is by muzzling and establishing a quarantine of all dogs imported.

Imagination is said to have a wonderful influence upon diseases of this kind, but we all agree that it cannot be originated unless the virus be introduced from a rabid animal. We certainly have to thank M. Pasteur for kindly undertaking the treatment of cases sent to the Pasteur Institute. Sir James Paget, when speaking at the Mansion House on July 1st as a delegate from the Royal Society, said that the meeting recorded its conviction that the efficacy of the antirabic treatment discovered by M. Pasteur is fully demonstrated. This is most satisfactory so far, but our object should be to afford protection and to do all in our power to prevent the disease, and it is simple enough to muzzle dogs, as they do not object in the least; in fact, they can be taught to fetch their muzzle.

Whether a patient follows M. Pasteur's treatment or not, I maintain that whenever he has been bitten by a rabid animal or one suspected of having rabies the wounded part should be at once excised, and the raw surface freely treated with caustic, potash, nitric acid, the actual cautery, etc. I have found sucking the wound immediately and applying nitrate of silver successful treatment. I may here mention a case of a soldier in India, who was bitten on three different occasions by a rabid dog on the hands and fingers, when the above named treatment was adopted with success. Dogs are frequently reported to be suffering from rabies when some other disease exists; for example, I have seen distemper in dogs show symptoms analogous when the disease is centred in the nervous system, and this is not an infrequent occurrence.

Antipyrin in Cancer of the Cervix Uteri.

Mr. M. V. C. Marquis, L.R.C.P., L.R.C.S., L.F.P.S., L.M., etc. (Bombay), writes: I find it highly advisable for the benefit of the patients, and for further experiments, to communicate to the profession the favourable result I have obtained of antipyrin, admirably subsiding the pain immediately after its administration in a case of cancer of the cervix uteri; though this beneficial effect was of a short duration, still it was of great importance and satisfaction to the patient. Being summoned to see an European lady, come from Port Natal, apparently under 40 years of age, I found her suffering from cancer of the cervix uteri in an advanced stage. She complained of severe lancinating pain, worse at nights, disturbing sleep, and of intense fœtor of the discharge, and of many other things. She also stated that, having consulted with several other physicians, she had obtained no relief. The characteristic severity of the pain and fœtor of the discharge had reduced the patient to a pitiable condition. It occurred to me that antipyrin perhaps would do her some good, so forthwith I prescribed ten grains of it to be given at once in my presence; and great was my surprise, still greater being the satisfaction of the patient, to see the pain, which was so severe just before, stopped altogether immediately. Now I repeat the same when the pain comes on, and have seen no unpleasant symptoms arising attributed to antipyrin. I shall communicate my further results.

London Cemeteries and So-called Burial Reform.

Mr. Johnson Herbert (Whitley) writes: In a recent issue of the Journal I noticed that the Home Secretary, at the instance of Mr. Byron Reed, M.P., acting on behalf of the Church of England Burial Reform Association, published returns of the number of bodies at present interred in the principal metropolitan burial places. The total number of bodies registered as buried in metropolitan cemeteries is given as 1,276,875, although I am inclined to think the above figures are very much below the mark. It would appear the Association proposes to approach the Government with a view to obtaining fresh legislation preventing burial in improper soil, overcrowding, etc. The published returns of the Home Secretary cannot fail but to be of the greatest possible use, as far as London is concerned at any rate, and I would suggest that similar and correct returns be asked for of all the burial places throughout England, Ireland, Scotland, and Wales. I think there can be no two opinions but that fresh legislation is urgently required, only it must be conducted on safe lines; in which case I do earnestly trust that the Government will be solely guided in this serious matter by the ripe opinions of genuine sanitarians, most of whom, I am happy to say, are amongst the first rank in our own profession,

I have come to the conclusion long ago that the Church of England Burial Reform Association know practically nothing whatever about the sanitary aspect of the disposal of our dead, and in fact have, in my humble opinion, for a number of years now, been doing a vast amount of harm, by advocating a system of burial in our graveyards, whereby the dead are harming the living by destroying the soil, fouling the air, contaminating water springs, and spreading broadcast the germs of disease.

Leprosy and Food.

Dr. N. S. Durrant, Government Medical Officer (Carriacou, Grenada, West Indies) writes: With reference to the remarks in Mr. Hutchinson's first article concerning leprosy originating from the use of certain articles of food, perhaps you might consider the following observations worth noting. I was summoned to see a woman afflicted with anæsthetic leprosy, whose fingers and toes had long since departed, and whose feet were dwindling away. She wished to show me a large ulcer on the sole of her foot, and for that purpose removed a bread poultice, and threw it out of doors, where it was greedily devoured by the fowls.

I cannot help thinking that if any such fowl was killed shortly afterwards, improperly cleaned (especially an organ such as the gizzard), and perhaps imperfectly cooked, on a bacillus theory it might infect some individuals with defective gastric secretions not powerful enough to destroy the germ, and such opportunities of infection would frequently enough occur in places where leprosy was endemic, and this might originate it in Europeans, resident in such localities apart from any accidental inoculation. The use of pork where leprosy exists might also convey the disease.

As the majority of the blacks in this island, and in Grenada, live on salt fish and Indian meal all the year round, if salt fish did originate it, it should be more common. Heredity, inoculation, and a possible cause such as narrated, I believe to be almost the sole means by which leprosy is spread and continued.

COMMUNICATIONS, LETTERS, etc., have been received from:

Dr. Julius Althaus, London; Dr. T. E. Satterthwaite, London; Dr. Fitzgerald, Folkestone; Surgeon-Major Sheehy, Highgate; Mr. Brindley James, London; Surgeon W. S. Reade, A.M.S.; Dr. Karl Grossmann, London; Our Glasgow Correspondent; Dr. C. Holman, Reigate; Dr. McCall Anderson, Glasgow; Mr. W. Anderson, London; Mr. G. H. Wilkins, London; J. Gibson, M.B., West Vale; Mr. C. A. Verell, Macclesfield; Mr. R. Black, Brighton; Dr. Cranstoun Charles, London; Dr. J. Pirie, Priors Marston; Dr. A. G. Beale, Tunbridge Wells; Mr. R. Ruttle, Burnley; Dr. S. A. K. Strahan, Northampton; Mr. H. Rainsford, Stoke-by-Clare; Our Newcastle Correspondent; Dr. D. Biddle, Kingston-on-Thames; Mr. J. Cantlie, Hong-Kong; The Secretaries of the Royal Geographical Society, London; Mr. T. F. Higgins, Manchester; Mr. F. H. Moore, Littleport; Messrs. G. Back and Co., London; Dr. Major Greenwood, jun., London; The Editor of the *Financial World*, London; Dr. O. Wood, London; Mr. J. Stokes, Rotherham; Dr. A. Duke, Dublin; Mr. C. Smith, London; The Secretary of the New South Wales Branch of the British Medical Association, Sydney; Mr. E. Roberts, Swansea; Dr. T. Sinclair, Belfast; Dr. G. H. R. Dabbs, Shanklin; Mr. A. Smith, Dublin; Dr. C. S. Jeaffreson, Newcastle-on-Tyne; Our Egyptian Correspondent, Cairo; Messrs. H. and J. Reading, London; Dr. F. Payne, London; Mr. M. H. Bulteel, Stonehouse; Dr. J. H. Warren, Boston, U.S.A.; Dr. W. H. Corfield, London; Dr. A. Packman, Rochester; Dr. J. M. Scott, Denny; Mr. E. C. Hope, London; J. T.; Mr. E. White Wallis, London; Dr. A. Ambrose, Buckhurst Hill; Sir E. Sieveking, London; Dr. W. R. Huggard, Davos Platz; Dr. J. Keser, London; Medicus; Mr. T. C. White, London; Dr. J. R. Day, London; Mr. Lawson Tait, Birmingham; Dr. C. A. MacMunn, Wolverhampton; Mr. J. J. Pitcairn, London; Dr. Norman Kerr, London; Miss M. Keightley, London; Mr. R. Jones, London; Dr. W. Macvie, Liverpool; Dr. J. F. Goodhart, London; Dr. C. E. Purslow, Birmingham; Mr. J. Martin, Huddersfield; Dr. W. Robertson, Jesmond; Dr. M. Ryan, Dublin; Mr. C. Baird, Walsall; Dr. H. Woods, London; Mr. M. H. Palmer, Newbury; Dr. A. G. Blomfield, Exeter; Dr. M. Cameron, Glasgow; Dr. D. Campbell, Calne; Dr. J. F. J. Sykes, London; Dr. Louis Parkes, London; Mr. C. E. Abbott, Braintree; Mr. G. H. Douthwaite, Monkwearmouth; Dr. W. H. B. Hector, London; Dr. Nicholson, London; Mr. W. Taberner, Wigan; Dr. J. W. Murray, Chorley; Mr. C. H. Maskew, Worcester; Dr. Lewers, London; Dr. E. G. Younger, London; Mr. C. Hailes, Clifton; Mr. J. C. Thresh, Manchester; Dr. Isaac Ashe, Newcastle; Mr. C. Sanders, Bideford; Dr. H. Thorn, London; Mr. A. G. R. Foulerton, Chatham; Dr. W. R. Tolerton, Malmesbury; Jeyes' Sanitary Compounds Company, London; Mr. F. H. Moore, Ely; Dr. W. H. Dawson, Great Malvern; Dr. Rentoul, Liverpool; K.; Mr. C. N. Lee, Dunfermline; Mr. C. E. Liesching, Tiverton; Mr. W. H. Truslove, London; Mr. T. W. Alsop, Glasgow; Dr. A. B. Judson, New York; Mr. Heath, Kew; The Dean, Charing Cross Hospital, London; Mr. J. Munro Scott, London; Dr. W. Pearce, London; Mrs. M. Marshall, London; Dr. G. S. Middleton, Glasgow; Medical Staff; Dr. A. Sheen, Cardiff; A. M. Sheild, M.B., London; Mr. Lockwood, London; Mr. F. Evans, Birmingham; Mr. T. J. Verrall, Brighton; etc.

BOOKS, ETC., RECEIVED.

The Diseases of the Madras Famine of 1877-8. By Alex. Porter, M.D., F.R.C.S.I., M.R.I.A. Madras Government Press. 1889.

What to do in Cases of Poisoning. By William Murrell, M.D., F.R.C.P. Sixth edition. London: H. K. Lewis. 1889.

A Textbook of Organic Chemistry. By A. Bernthsen, Ph.D. Translated by George M'Gowan, Ph.D. London: Blackie and Son. 1889.

Windows of Character and other Studies in Science and Art. By Professor Edward P. Thwing, M.D., Ph.D. New York: Holbrook and Co. London: S. W. Partridge and Co.

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INTRODUCTION TO A DISCUSSION
ON
THE TREATMENT OF GLAUCOMA.

In the Section of Ophthalmology at the Annual Meeting of the British Medical Association, held in Leeds, August, 1889.

By JONATHAN HUTCHINSON, F.R.C.S., LL.D., F.R.S.,
President of the Royal College of Surgeons.

The discussion which I have been requested to open concerns a large subject, and one in which our judgments can be helped only by our experience. There is at the present day not much room for speculation as to the theory of the glaucomatous process when we have to decide as to the best treatment of a case of glaucoma. Valuable as have been the labours of Mr. Priestley Smith, Dr. Brailey and others, in respect to the pathological anatomy of glaucoma and its antecedent conditions, they cannot be held to have helped us much in reference to the selection of special methods of treatment as adapted to special cases. As to these, we must trust chiefly, if not solely, to the recorded experience of those who have practised them. Impressed with this fact, and seeing around me not a few whose experience is more valuable and extensive than my own, I do not intend on the present occasion to occupy much of your time with statements of my own views. I shall, I believe, better discharge my duty if in a simple and literal manner I introduce the subject for your discussion.

My first endeavour must be to limit and define the questions which we have to consider. I expect that it will be generally admitted that for all forms of primary glaucoma approaching acuteness, iridectomy holds its ground as the operation which affords the best prospect of advantage with the least risk. In these cases eserine may give temporary relief, but it is not to be trusted. If there is any exception to this statement, it is as regards those cases in which acute symptoms have been developed by the use of atropine. In some of these it would appear that eserine may suffice for a complete cure. In saying this I am thinking of cases which have been recorded by Mr. Snell and others. As regards other operations, sclerotomy, with its various modifications and the so-called cyclotomy, I think we may say that although very useful, they are, in competition with iridectomy, only second best. To this another statement of much importance may perhaps be added. It is that eyes saved from acute glaucoma by operation (I mean those only in which a recovery has been completed) seldom, or never relapse. My own experience supplies me with no exception to this. Glaucoma scarcely ever recurs in an eye which has been completely relieved by an iridectomy. I make this assertion in reference chiefly to acute forms of the disease, but it will be of interest to note whether it be not true also of the recurrent or subacute form, and even of glaucoma simplex.

Having, then, asked you to admit that iridectomy, or its equivalent—and it has perhaps no equivalent—is the established and unassailable treatment for acute primary glaucoma, I have next to say a few words as to *secondary* forms. We meet with increased tension of the glaucoma type in connection with a great number of other maladies, after injuries, and in association with relapsing cyclitis, with iritis, and even with keratitis. In cases of syphilitic keratitis, its long persistence may become a distinct source of danger to the eye. In a certain number of these cases of so-called secondary glaucoma, it may be open to doubt whether the atropine, so frequently and often so freely used for their treatment, may not be the cause of the increased tension, rather than anything inherent in the disease itself. At any rate, it may be broadly said that in all these cases atropine should be at once laid aside and eserine substituted. This change will often suffice for the removal of tension; if it does not, iridectomy should be performed. The mention just made of secondary glaucoma and its connection with iritis, etc., may suitably introduce the question, whether not a few of the erratic forms of increased tension be not in direct association with gouty tendencies. I allude especially to the recurring subacute and feebly congestive forms which we meet with in persons much below the age at which glaucoma usually shows itself. My experience has been that, in most of these, there is a strong history of inherited gout. It by no means follows from this that what are popularly considered the specifics for gout will prove useful, for the association is with inherited tissue-proclivity, and not with the dietetic habits of the individual. Some good will, however, I believe, always be obtained from such remedies as aconite, from the free use of counter-irritation, and, above all, from prolonged and definite change of place of residence. My experience has been that most of these cases are cured by iridectomy, but that the results are by no means so sure as in the acute disease, or in persons more advanced in years, and I recommend it with some misgiving, well knowing that it is sometimes followed by disastrous results. I could produce, however, some very triumphant cases in this class. In one instance, a lady in whom, at the age of 34, I operated on both eyes, retains now at 50 almost perfect sight, although she has used her eyes most freely. I have, therefore, no hesitation in saying that in the recurrent glaucoma of the young, associated, as I think it usually is, with gout, iridectomy is indicated if eserine is found insufficient.

The disease known as *Hæmorrhagic Glaucoma*, or rather glaucoma with hæmorrhages, is probably in very frequent dependence upon gout. It is probable that the hæmorrhages are usually secondary to the increase of tension, and due to the venous turgescence caused by it. Thus they are evidences of weak vessels, and as such their evil prognosis may be well understood. No more unfavourable cases for operation can be mentioned than glaucoma of the hæmorrhagic type. They are usually in the first instance examples of simple glaucoma, and as such liable to all the risks which are well known to attend it, and next they have the added danger of proved unsoundness of vessels. Yet I do not think that in cases which otherwise demand operation and in which eserine and other means have failed, iridectomy should necessarily be declined because of the presence of retinal hæmorrhage. The operation should, however, be deferred as long as possible, for the prognosis is very unhopeful.

Having thus dealt with the treatment of acute glaucoma, with some of the various secondary forms, that caused by atropine, the recurrent and subacute forms seen occasionally in young persons, and finally with the hæmorrhagic glaucoma of advanced life and damaged vessels, there remains, I think, only to speak of the most chronic form of all—the insidious painless type known as *Glaucoma Simplex*. Here, if I mistake not, we approach the main topic of our discussion. It is for simple glaucoma that as yet we have no satisfactory treatment. In respect to it opinions are still at variance, and whilst some hold that the operation, although uncertain and often disappointing, if not injurious, ought yet to be performed; others think that it is better to trust to eserine, strong convex glasses, remedies for gout, and the like. As to the operations to be done, opinions are also somewhat divided, and good authorities there are who hold that sclerotomy does more to relieve the tension than iridectomy. The distrust in iridectomy in this disease pervades the whole ophthalmic profession, and is not restricted to any school or country. On the Continent, and especially in France, it has perhaps been yet more strongly expressed than amongst ourselves. Everybody has had case after case in which after the most careful performance of iridectomy, the tension has promptly returned and the disease progressed, if anything, more rapidly than before. In some instances it has resisted repeated operations, and in many the patient, disappointed by the first, has declined to submit to others concerning which nothing more definite could be promised.

I do not possess any statistics of my own experience in reference to the treatment of chronic glaucoma which would be in the least worthy of your attention. I must be content to record only my general impressions. As regards the operative treatment, if I were to speak solely of the strictly simple cases, I should have to record very discouraging results. I have had repeatedly cases in which, after the performance of an iridectomy, which appeared to be quite satisfactory, the patient never again saw well, and the disease progressed with seemingly increased rapidity. I have had exceedingly few in which the disease was arrested. Nor have such items of knowledge as have come under my notice, from the practice of my friends, been favourable. Having become, as a rule, reluctant to operate I have, in several cases, known that my patients passed into the hands of other surgeons. In no single case of this kind in which I have been informed of the result has it been satisfactory. It is right that I should explain that the impression which I have just stated is that which was in my mind when I commenced the preparation of this paper. The result of

the references to my notebooks, which I have made during its preparation, has been to make me feel that I had taken too gloomy a view of my results, and allowed unfavourable cases to make too deep an impression on my memory.

As regards the causes of disappointment after iridectomy for chronic glaucoma they have, in my cases, been various. In very few hæmorrhage, in some speedy recurrence of tension, in some iritis and irritability, in yet others rather rapidly-increasing pallor of the disc, with only doubtful increase of tension. The operation which I have done has almost always been iridectomy upwards. I have not tried sclerotomy more than once or twice. My iridectomies have perhaps, as judged by recent standards, not been always sufficiently large, nor have I always been persevering enough in following up the disease by repeated operations when tension recurred. Some differences in practice in these respects may perhaps explain the fact that the picture drawn by Mr. Nettleship in the painstaking record of his operation results, published in the *Moorfields Reports*, is in brighter colours than any which I can offer. My own results, from operations in acute glaucoma or any type approaching to it, have been most satisfactory, but I must admit that those in the chronic forms have been but too often most discouraging.

That it is possible for the nervous system in some way to take a large share in the development of glaucoma in eyes predisposed to it, is, I think, very probable. The onset of the disease is not infreqently referred by the patient to a mental shock. In a remarkable case of this kind I recently operated on both eyes for acute glaucoma in a lady who had been suddenly awakened in the middle of the night by cries of "Murder" in the next house. She was much alarmed, and within two hours one of her eyes became very painful, and the next day the other followed. She could not remember that she had had any premonitory symptoms.

Several cases of simple glaucoma which I had under observation, and in which the discs have shown steady increase of pallor after the operation, have been accompanied by great depression of spirits, in some instances amounting to melancholia. I find also in the records of cases by other observers that mental disturbance has been observed in association with glaucoma. Mr. Nettleship has especially noticed in connection with glaucoma in early life that his patients were sometimes defective in intellect.

No one can doubt the extreme importance as regards the prevention of glaucoma in all its forms of the employment of appropriate convex glasses. This applies, at any rate, to those cases—a large majority—in which glaucoma occurs in association with hypermetropia and presbyopia. As regards the exceptional cases in which one meets with it in myopia, it may be that the disuse of cancave glasses is the measure indicated. Mr. George Walker, of Liverpool, has enthusiastically advocated the use of strong convex glasses as a measure of treatment after glaucoma has declared itself, and has recorded some cases in which great benefit appeared to be obtained. His recommendation certainly seems worth consideration, as also the associated proposition that it may be well to encourage presbyopic hypermetropes to use somewhat stronger glasses than are absolutely required, with the hope of preventing the development of glaucoma. In this way conditions analogous to myopia may be artificially induced, and they are well known to be but little liable to take on glaucoma.

I have not used hitherto the term "malignant glaucoma." I find this term employed by writers with, perhaps, no very definite significance. At any rate I have not been able to give a more precise meaning to it than simply *glaucoma which relapses in spite of operative treatment.* Inasmuch as these relapses occur under various conditions, it seems scarcely desirable to employ for them a somewhat equivocal expression, which might imply a greater approach to sameness than they really display. In some of the worst forms of recurrence, with persisting tension, the condition may probably be associated, as has been suggested by McHardy and others, to displacement forwards of the lens. In such cases extraction of the lens, although under some conditions a dangerous procedure, is the measure indicated.

Before I proceed to sum up the points for our discussion I may perhaps be permitted to suggest that the term glaucoma, unless we are content to translate it as simply equivalent to increase of tension, has perhaps almost served its purpose. The cases in which increase of tension constitutes the most dangerous factor are to be classified in groups, which differ widely from each other. It is only regarding some of them that our information is as yet at all nearly complete. Much remains for careful observers to do before we can feel confident as to the nature, causes, and natural course of what we call chronic glaucoma,[1] more especially in its simple form. What we have to seek are not the rules of treatment for a substantive malady—"glaucoma," which is to be considered as being always the same in nature, however different in rate of progress—but rather those which may apply to increase of eyeball tension occurring under a great variety of clinical conditions and in connection with very various causes.

I have already referred to the very excellent lectures on the treatment of chronic glaucoma which were recently published by Mr. Nettleship in the Ophthalmic Hospital *Reports*. From them and from the papers of Dr. Brailey and Mr. Priestley Smith, Mr. Snell, Mr. McHardy and others I have borrowed very freely in what I have said. I will now venture to submit for your discussion the following propositions:—

1. As a rule a free iridectomy is the safest and best treatment for all forms of primary glaucoma.

2. It is always well to use eserine before resorting to operation. In a very small minority eserine will be found to completely relieve the symptoms, and in a still smaller group the relief given by it may be permanent.

3. The continued use of eserine will very seldom suffice to prevent the recurrence of glaucomatous tension, and in any case in which, in spite of it, the sight is declining and the field contracting an operation should be resorted to.

4. The cases in which eresine is most useful are, first, those in which the disease has been induced by atropine, and next those in which the disease recurs after long intervals.

5. The more nearly any case approaches to the type of acute glaucoma, the more probable it is that iridectomy will put an end to the process.

6. The more absolutely simple the case is, that is the more entirely free from pain, congestion, perception of haloes, etc., the less is there to be hoped from an operation.

7. Cases of simple glaucoma are not as a rule benefited by the continuous use of eserine, and the choice lies between letting the disease run its course and an operation. The progress of simple glaucoma is often very slow, and the interval is often long before the second eye is affected.

8. It follows from the last proposition, if simple glaucoma occurs in an old person, or to one in feeble health, that the patient's sight may easily last out his life.

9. Iridectomy for simple glaucoma is often followed by immediate deterioration in sight and advancing pallor of the disc, with or without recurrence of increased tension. It can by no means be regarded as a harmless operation. When iridectomy is done for simple glaucoma, it should always be done very freely, and the patient should be prepared for the possibility that a second operation may be requisite.

10. In the first instance, iridectomy is preferable to sclerotomy

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[1] In searching my case-books for examples of simple glaucoma, I found the following under date February 8th, 1884:

"Mr. Mackinlay, of Stratford Place, brought to me a very interesting example of the chronic form of glaucoma. It affected both eyes, and almost equally, and had reduced the vision to 10 Jäger left eye and 12 right eye respectively. The patient was a gentlemen from Cornwall, a stout florid man, who had suffered from gout. He said that he had had some eye symptoms for three years, seeing colours round flames, etc., but his more definite symptoms dated back only for three months; during that time his vision had rapidly declined. He could still see $\frac{20}{50}$ with a little puzzling. The increase in tension was very decided, almost 2. The discs were cupped, and there was vigorous arterial pulsation. There was no duskiness of the eyes, and the media were quite clear. It was at Mr. Bowman's suggestion that Mr. Mackinlay brought him to me, as it was recognised to be a case in which an operation might very possibly prove disappointing. It was clear, however, that there was nothing else to be done, and I advised that both eyes should be immediately iridectomised."

Thinking this a good case to follow up, I applied to Mr. Mackinlay for a report as to result, which he kindly sent me as appended:—

Sequel of Case seen in Consultation with Mr. Jonathan Hutchinson, February 8th, 1884.—Patient a male, aged 57. Glaucoma. February 10th, 1884. I did iridectomy upwards, both eyes, under ether. February 23rd. Patient returned to the country. April 20th. Came to see me. Has had some photophobia, which is now lessening. October 5th, 1885. Came to see me to-day. Right eye tension normal, and left eye somewhat +? Right eye vision = J. 8 slowly and J. 10 well; left eye vision = J. 8 slowly and J. 10 well, of course with glasses for his presbyopia; has given up smoking, and only takes a moderate quantity of port wine occasionally. October 25th, 1886. Patient wrote to me (*vide* letter) saying "the eyes are about the same as when you saw me last," etc.—J. G. MACKINLAY, August 8th, 1889.

In the letter referred to the patient states: "I went and saw the *Mikado* last week, sat it all out; can manage to read letters and telegrams, but cannot read the newspaper. I never use the discs or drops, as I find I am better without. I can do with any amount of light, whether it is moonlight, electric light, or gas light. Altogether I think I am very fortunate."

At the present date (August, 1889), in answer to inquiries, the patient reports that he keeps his sight as at last note.

but if a relapse have occurred, then the latter may, in the hands of one well experienced in its performance, be a better procedure for a second operation.

11. A certain number of glaucoma cases more especially those occurring in young adults, and in association with a definite inheritance of tendency to gout, should be treated with reference to that fact.

12. A certain number of cases of secondary glaucoma, especially those in connection with iritis, cyclitis, etc., are susceptible of permanent relief by eserine, and do not require an operation. This remark probably applies to most cases of increased tension in association with interstitial keratitis.

13. Although, as has been admitted, the prognosis after operation for simple glaucoma is always doubtful, it is yet the surgeon's duty to resort to operation in all cases in which the disease is definitely advancing, very old patients being alone excepted.

14. If after an operation for glaucoma, recovery has once been well established, and the increase of tension completely relieved, it is very rare indeed for the disease to recur. Eyes once saved usually wear well.

The PRESIDENT (Mr. Critchett) tendered the cordial thanks of the Section to Mr. Hutchinson for his admirable and exhaustive address. He agreed entirely with the large majority of the propositions which had been brought forward, and it was only on some minor points that he ventured to differ. He was inclined to doubt the wisdom of making a very large iridectomy in cases of simple glaucoma. The plan which he followed was to make an iridectomy of moderate size, using by preference a keratome, and making his incision in the sclerotic. If the anterior chamber proved to be shallow, he passed the point of the keratome slightly to one side as soon as it entered the anterior chamber, so that he might have the shelter of the iris both in introducing and in withdrawing the instrument. Should this operation not be successful in relieving the increased tension, he always supplemented it by the performance of sclerotomy, carrying his knife well back into the sclerotic, and leaving nothing undivided but the conjunctiva. This latter operation might be repeated whenever the condition of the eye demanded it, and his custom in dealing with cases of glaucoma simplex was to inform the patient, first, that the initial operation might probably be followed by some appreciable declension of sight, and, secondly, that the treatment of the case might involve several operations. The method described above had given very satisfactory results in many instances. Mr. Critchett used pilocarpine rather more frequently than eserine, because the latter often produced troublesome conjunctivitis.—Dr. MULES, in referring to the operation of iridectomy preparatory to sclerotomy for chronic glaucoma, said that he made the smallest iridectomy possible above with a Tyrell's hook, solely with the object of making a large sclerotomy three days afterwards, cutting through the whole segment of the sclera, and leaving no bridge; prolapse of the iris was thus rendered impossible.—Dr. DAVID LITTLE (Manchester) directed his observations on the treatment of glaucoma to the usual form of the disease, and first as to the premonitory stage. In this stage one frequently got a clear history of obscuration or dimness, iridescent vision and other minor symptoms, lasting for a short time, then passing completely away, and then recurring again and again at longer or shorter intervals of time; but it was not often one saw a case during the attack. It was quite certain that such cases at some time or other broke out into acute or subacute glaucoma, or developed into the chronic form, and the danger was that they might not come under the ophthalmic surgeon before sight was seriously and permanently damaged. He considered therefore it was of the greatest importance to deal effectually, if possible, with this disease, in the very earliest stage. At one time he had been contented not to interfere with those cases, beyond correcting the refraction, and watching carefully till the disease had become more pronounced. Since the introduction of eserine, this remedy checked the premonitory attack at once, and so long as it was used, there might be no recurrence, but if discontinued the attack recurred. He had watched cases treated in this way for twelve and even eighteen months, and his experience was that the eserine treatment was not permanent. It was of no use in chronic glaucoma. For some time now he had been in the habit of recommending and practising a small upper iridectomy in all cases in which the premonitory stage had been distinctly and satisfactorily made out. He had treated more than a dozen cases in this way, and all with perfectly good results. It might be thought bold and risky practice to perform iridectomy on an eye which appeared at the time in all respects normal; but if carefully done under cocaine or chloroform, it was perfectly safe. In acute and subacute glaucoma he always performed iridectomy, using eserine preparatory to the operation. In the chronic form his practice was the following: In cases unattended by an increase of tension and of slow progression, he left them alone; in other cases with tension above normal and which were usually more rapidly progressive, he had always found operation of the greatest benefit. After an extended trial of sclerotomy, he had now almost abandoned it entirely, preferring iridectomy as the more reliable operation. In most cases he used a bent keratome, broad and short pointed, but where the anterior chamber was shallow or the eye deeply set, or in a prominent eyebrow, he selected a Graefe's knife.—Mr. BERRY referred to Lojetchnikoff's statistics.—Dr. MACNAUGHTON JONES said he particularly wished to draw attention to the advantage of pilocarpine over eserine in various glaucomatous conditions. He had in 1879 read a paper in the Association on the relative advantages of these myotics. The irritation and pain often attending the use of eserine were absent with pilocarpine. In those cases of acute glaucoma following the use of atropine he had known the sudden instillation of eserine cause retinal hæmorrhage. Lately he had used in some cases $\frac{1}{2}$ or $\frac{1}{4}$ per cent. of cocaine with pilocarpine or eserine. He instanced three cases of the occurrence of acute glaucoma following nervous shock. In these the disease had been allowed to drift, no iridectomy being performed, and permanent blindness resulted. He was in favour of iridectomy in chronic glaucoma, rather than sclerotomy. This conclusion was come to from the far more satisfactory results. He preferred the keratome for operating. He specially drew attention to the relation existing between inherited gout in women and the occurrence of glaucomatous symptoms in women during the menstrual epoch.—Mr. CROSS said in simple chronic cases of glaucoma, where iridectomy promised so little, the use of mydriatics had seemed to him of extreme service, and so long as the field of vision and central acuteness were maintained he would do no operation, and he had several patients whom he had thus satisfactorily watched for several years; but if the eye were losing ground he performed sclerotomy with a keratome, leaving the iris intact unless it should prolapse, when the sclerotomy must be converted into an iridectomy. With the keratome the sclerotomy could be made very scleral and oblique towards the corneo-iritic angle. In any eye, when the pupil did not perfectly contract to eserine, he should recommend iridectomy. Sclerotomy he only used as a part of the treatment by eserine, and when the pupil freely contracted. He thought, in women, glaucoma was particularly common at the menopause. Here iridectomy had usually been done with advantage; but, as the normal loss of blood did not occur the eye got congested and the tension of the eyeball again rose. The treatment in this case clearly should be energetically applied to the menstrual function. With regard to the rise of tension in interstitial keratitis, as alluded to by Mr. Hutchinson, this, the speaker thought, usually depended upon specific inflammation of the ciliary body, which then obstructed the filtration angle—Dr. HILL GRIFFITH said the smallness of the number of cases of glaucoma in Scotland, as compared with England, was possibly due to the tendency to gout being very much less. He was satisfied with the curative effect of iridectomy in all cases except glaucoma consummatum. He based his opinions on 60 tabulated cases of his own, and about 500 he had seen during his connection with the Royal Eye Hospital, Manchester.—Mr. MACKINLAY said he quite agreed (as he believed they all did) with Mr. Jonathan Hutchinson's remarks as to the employment of iridectomy in cases of acute glaucoma, and for this disease he believed it to be the remedy above all others; but with simple passive glaucoma the matter was different, and he felt that with ophthalmic surgeons a very grave responsibility rested in advising their patients for the best when suffering from that dire disease; and although he could confirm Mr. Berry's statement as to the late Mr. Walker's remarks about its rarity in Scotland, in London, at any rate, they had cases more or less always under their care. He had but little personal experience of sclerotomy, but from cases which he had seen and heard of and read of he had not gained sufficient confidence to recommend it in preference to iridectomy; and when eserine and pilocarpine failed, as they generally did sooner or later, valuable as they often were for a time, he advised the patients to have iridectomy performed, explaining, at the same time, its risks and uncertainty of success, as he did not like to stand by and watch them going hopelessly

blind. He used a narrow linear knife, preferring it for several reasons to any form of keratome; and he considered that the iridectomy should be a large one, and the incision made, as Graefe pointed out, 1 millimètre behind the clear cornea. His colleague, Mr. McHardy, had also pointed this out, and read a paper on the subject before the Ophthalmological Society in 1884. He then stated that the external chord of the section should be 10 millimètres, or, better still, 12 millimètres, that is, about the same as the diameter of the cornea. Without doubt they did not know all the predisposing causes of glaucoma; in some cases certainly there might be a neurotic condition, and in many of them a gouty diathesis existed. In the case of the gentleman to whom Mr. Hutchinson referred, whose eyes he (the speaker) iridectomised in the spring of 1884, there was a clear history of gout, as he had had an acute attack in his feet some two years before.—Dr. SWAN M. BURNETT (Washington) thought that this discussion had fixed iridectomy as the sheet anchor in glaucoma more firmly than it had ever been. It had also, it seemed to him, lent more hope to its victim of the chronic simple form than they had hitherto dared to indulge in. In regard to the latter form, it had always been a question with him as to whether all the cases so called were really glaucoma as they at present understood it. He was quite sure that many of them were what Graefe first called "atrophy with excavation," and were primary nerve lesions, in which, of course, an operation could be of no benefit. In respect to the influence of nationality and race, he would state that his clinic at Washington had a large contingent of negroes, and while they had an immunity from certain eye diseases—notably trachoma—they still suffered from glaucoma, and particularly, it seemed to him, in the chronic simple form.—Mr. ADAMS FROST said they appeared to be all agreed as to the treatment of acute glaucoma, at any rate with regard to the eye actually affected. Dr. Little had, however, raised the question, What was to be done with the second eye when it presented only premonitory symptoms? He had hitherto performed iridectomy as a preventive measure. But a catastrophe that recently occurred to him would make him hesitate in the future. He had operated with success on the first eye, vision being improved from hand-reflex to $\frac{6}{18}$: the other eye had $\frac{6}{9}$, but the patient lived at a distance, could not come again, and had seen haloes. Accordingly he performed iridectomy. On removal of the bandage he found vision only perception of light, and the fundus reflex absent. This was probably due to hæmorrhage into the vitreous, as the lens was clear. Sclerotomy he formerly practised, but abandoned it because of its uncertainty, both in regard to its results and to the operation actually performed. It always seemed to him that they were working somewhat in the dark, and that the operation varied very much. With regard to the question of operating at all in glaucoma simplex, he relied more upon the visual field than upon the intraocular tension. As long as the field underwent no further contraction, he was contented with using eserine, but he preferred iridectomy as soon as the field definitely got worse. He always used a Graefe's knife in preference to the keratome, partly because the anterior chamber was often shallow, and partly because, since cocaine had come into use, he had more and more discarded the keratome, because, if the patient proved unsteady, he thought the risk of wounding the lens was lessened.—Mr. OLDHAM had been very unhappily impressed with the results he had observed of iridectomy performed for chronic glaucoma, so much so as to have almost abandoned the operation in such cases. He recommended the use of convex glasses, with the instillation of eserine, or, still better, pilocarpine, the operation only to be performed in case of very definite exacerbation of the symptoms.—MR. HUTCHINSON, in reply, thanked those who had spoken for their kindly criticisms of his conclusions. He did not think that it would be profitable to attempt to follow the statements of each speaker separately. He would endeavour to take them *en masse*, and was glad to know that in the main there was a remarkable unanimity; almost all appeared to agree in the opinion that iridectomy was, on the whole, the best operation for acute glaucoma; and, further, that there was no need for the very large removals of iris which some had recently advocated. In reference to glaucoma simplex, Mr. Oldham had expressed a strong opinion against any operative interference whatever. The balance of judgment was, however, the other way, and seemed inclined to the view that repeated operations ought to be performed. Nothing that had been said induced him to change his opinion as to the comparative merits of sclerotomy and iridectomy. In the future, in chronic cases, he thought that he should still use iridectomy, and that he should not aim at making an extravagantly large coloboma. He should, however, from the outset bargain with his patient for as many and as frequent repetitions of the procedure as might be necessary. The patient's mind should be prepared beforehand for this, and then there would be less of disappointment at apparent failure and more willingness to go on with operative treatment. Meanwhile, more detailed and larger statistics as the results of treatment and no treatment in glaucoma simplex were much to be desired. As to pilocarpine, which several speakers had praised as preferable to eserine, he had purposely not referred to it in his paper, as he had not had experience of its use. He had not found solutions of eserine open to the objections which had been described, and thought that it accomplished without inconvenience all that could be hoped for from myotics. Probably the strength of the solution used made the difference. He was accustomed to use a weak one (half a grain to the ounce or less).

A DISCUSSION
ON
THE TREATMENT OF IMMATURE CATARACT.

In the Section of Ophthalmology at the Annual Meeting of the British Medical Association, held in Leeds, August, 1889.

I.—This discussion was opened by the President of the Section Mr. G. ANDERSON CRITCHETT, in an address which was published in the JOURNAL of August 24th, p. 414.

II.—T. PRIDGIN TEALE, M.B., M.A., F.R.S., F.R.C.S.,
Consulting Surgeon to the Leeds General Infirmary.

MR. TEALE described his method of extraction without iridectomy. He said his earliest experience in extraction of cataract was with the semilunar flap. With this operation he had, on the whole, very good results; but the operation was a difficult one, and was liable at times to serious drawbacks from large prolapse of the iris. When the various modifications were introduced by v. Graefe and others he departed from the "old flap" for a time and used one of the modifications combined with iridectomy which were in vogue. His results were, on the whole, less satisfactory than with the old flap. He resumed the flap operation, modifying it sometimes in the direction of making a shallower flap. For about ten years (from 1863 to 1873) he oscillated between the two methods, and then settled down finally into the operation now described, which, with occasional exceptions for special reasons, he has followed consistently for the last sixteen years. In very rare cases he performs a preliminary iridectomy. The knife he uses is a very narrow-bladed Sichel's cataract knife, made at the instance of Mr. Hartley. The knife enters the cornea close to its outer margin about the level of its horizontal equator, traverses the anterior chamber, and makes a counterpuncture at a corresponding point at the inner margin of the cornea. As soon as the counterpuncture is well established and the point of the knife projects about one-eighth or one-sixth of an inch, the edge of the knife is turned rather rapidly forwards, and the section is completed by a vertical cut through the remainder of the tissue of the cornea. The horizontal portion of the incision is about midway between the margin of the pupil and the base of the iris. After the extraction of the cataract the shallow flap which has been made falls into its place and fits accurately, leaving an absolutely smooth surface. The perfect cases are most perfect, and are unapproachable by any operation of which iridectomy forms a part; and the less perfect cases obtain, as a rule, very useful sight.

III.—H. BENDELACK HEWETSON, M.R.C.S., F.L.S.,
Ophthalmic and Aural Surgeon, Leeds General Infirmary.

MY object in joining in the discussion upon the operation for senile cataract is not so much to speak on the subject *de novo*, but rather to supplement what I have already said at the previous meetings held at Cardiff, and, last year, at Glasgow, by showing a representative series of cases upon which I have operated without iridectomy in either eye. It will be seen that the section is made with a (double-sized) Graefe's knife (which has been made for me by Messrs. J. Wood and Co., of York), at a point either above a line drawn midway between the upper edge of the cornea and

the edge or the pupil, which is held somewhat contracted (not dilated, as some imagine) by the instillation of eserine in the solution of cocaine, applied previously to produce local anæsthesia. This is to prevent the edge of the iris from flapping over the edge of the knife, just as the counterpuncture is completed and before the knife-edge is turned quickly and promptly outwards, to complete the so-called "trapdoor cut," all is entirely corneal. The operation then proceeds in the usual way. I may repeat that this to me is an entirely safe proceeding, and is not fraught with the dangers which those who do not practise it fancy it incurs. I always use it in cases of uncomplicated senile cataract. I must again lay stress on the great importance of preserving the antiseptic nature of the operation in all its phases, in order to rid our percentage of the occasional occurrence of cases of panophthalmitis. In my practice, I have the eyelashes clipped close the day before operating, and the eye washed out immediately before with lotio carbol. (1 in 80). The removal of the lashes prevents clogging and sticking of discharges afterwards. At the operation, so far as the instruments are concerned, they are dipped in the same solution, and the hands very carefully washed. I still use Mr. Mayo Robson's dry eucalyptus spray—the whole time during the operation—blown into the eye from his spray-producer, pumped by an assistant; and I am inclined to lay great stress upon not speaking over the patient. I am quite convinced this latter is a true source of danger in the minute spray-like particles of saliva ejected from the mouth, which certainly are always spirting out whilst we speak, and may, nay must, if we talk, settle on the wound. That our breath is also a source of danger I have no manner of doubt, since few of us are free from carious teeth, and it is well known that pathogenic microbes infest the mouth and carious teeth. With all these precautions, I have been able, the last few years, to get a high average of successes, about 97 per cent. There is less astigmatism produced, and it is highly important to retain an active circular pupil. Occasionally a slight adhesion of the iris to the section takes place in cases where there is a shallow anterior chamber; but this is quite unimportant, and does not promote after-changes in the eye, as was originally predicted. Finally, I may say that I never think of performing iridectomy for cataract, except where it is demanded by some well understood complication; and I am glad to add that my friend, Professor St. John Roosa, of New York, adheres invariably to the practice, and has asked me to mention this to the meeting. The pads I use after the operation consist of salufer wool, as prepared by Mr. Robson, and are allowed to remain for at least five days untouched.—[Mr. Bendelack Hewetson showed thirty cases of double senile cataract, as illustrative of the above remarks on his methods of operation, and, on the following day, performed several such operations before the President and members of the Section, in the small theatre at the General Infirmary.]

IV.—SIMEON SNELL, M.R.C.S.,

Ophthalmic Surgeon, Sheffield General Infirmary.

I HAVE had the opportunity of bringing under your notice three patients who have undergone the operation for extraction of cataract, without iridectomy, by the method to be described further on in the paper I am about to read. They have been selected for the following reasons; all the cases have undergone operation in both eyes, and in the case of the two men a considerable interval has elapsed since the first cataract was extracted in each. They are, again, both advanced in life. In the case of the woman, both eyes have been operated upon, but at a more recent period. All the cases possess pupils perfectly free, round, and moveable. Moreover, in the men especially, the line of incision is represented by a faint mark only. Lastly, these cases are not selected merely as typical and good cases, but as those who had undergone operation in both eyes who were willing and able to travel such a distance for your inspection.

One of the most prominent questions of the day in ophthalmic surgery is undoubtedly whether or not the performance of iridectomy is essential in the operation of cataract extraction, or, indeed, on the other hand, whether it is not preferable to leave the pupillary membrane intact. Some of us, at all events, have for long deemed a mutilation of the iris as unnecessary.

In a paper read at the annual meeting of this Association at Worcester in 1882,[1] on Extraction of Cataract by a Shallow Lower Flap with a Record and Analysis of 121 Operations, I thus expressed myself: "With respect to the performance of iridectomy, it will be presently shown that in less than half the cases a portion of iris was removed. The rule I follow is simply this. Should the iris show signs of clinging about the wound after the escape of the lens, and not readily receding, a small piece is cut off, or, indeed, sometimes I excise a portion before the removal of the cataract or the rupturing of its capsule. If, for various reasons, I fancy there be a little more risk in the operation in a given case, an iridectomy is performed. Generally speaking it is almost a matter of indifference as to whether a segment of iris be removed or not, as I am certain that cases do better for the iridectomy. For cosmetic reasons one would avoid it as much as possible."

Seven years have passed since these words were written, and I shall be able to show you that instead of receding from the opinions then expressed, I have somewhat advanced upon them. Now, however, several, who were formerly habitual mutilators of the iris, have come to question the necessity, or even prudence, of such a procedure. A return even to the old flap operation is spoken of. Schweigger and Knapp are a goodly host in themselves on the side of non-iridectomy, and the latter has recorded a brilliant series of one hundred cases performed without the excision of iris with only one loss.[2] It is true that the majority of those performing the Graefian operation, however modified, adhere to iridectomy and extol its virtues.

It seems to me that there is a good deal to be said on both sides. All from experience have learnt more or less to rely on a particular method, and it is as much out of the question to expect those accustomed to excise iris all at once to cease to do so, as it is that those who avoid iridectomy should henceforth practise it. Besides this, a measure of eclecticism may be as necessary in this as our chairman has shown[3] it to be in the kind of operation performed. For my part I should be sorry never to perform an iridectomy, and I should be more sorry to perform it as a matter of routine.

My opinion as to the performance of iridectomy in cataract extraction is nearly the same as I expressed in my former paper. It appears to me that the iridectomy, generally speaking, is unnecessary, and my practice has been to dispense with it largely. Taking one time with another, it has not been performed in more than one third of the cases operated on since by the method described in my previous paper. The last forty-seven consecutive operations, hospital and private, performed on males have all been successful. In this series only twelve iridectomies, or one-quarter, were made. Moreover, of this number, in one iridectomy was necessitated by the onset of glaucomatous symptoms, owing to rapid development of cataract; two had preliminary iridectomies in connection with immature cataracts, and two may be regarded as accidental, owing to premature escape of aqueous at the time of operation. In only one of this series did vitreous escape, and this occurred during the efforts to remove cortex by the "lid manœuvre;" no iridectomy was performed. Some of these cases are recent, and accurate visual results are not yet recorded. The results of which I have records merely show that those in cases without iridectomy are not inferior to those obtained in the same series in which iridectomy was performed. Seven out of the twelve iridectomy cases have results noted; and of these six were $\frac{2}{10}$ and above. Eighteen of the non-iridectomy cases have visual results recorded, and of these, fourteen were $\frac{2}{10}$ and above. In each class the results as given are immediate and without correction of astigmatism.

Generally speaking the proportion of iridectomies has been a little more than a third, over a series of years. In the last sixteen cases, however, there were only three iridectomies, but in addition there were three instances in which iris was excised in connection with Forster's operation for maturation of incomplete cataract. A comparison of results shows that visual acuteness is as good without as with iridectomy, I am disposed to think a little better.

Since my previous paper I have particulars of 301 additional operations performed by the method then described. No fixation forceps nor speculum are employed. An assistant draws down the lower eyelid, and the operator draws upwards the upper one, and fixes the globe with his finger. Sometimes I dispense with an assistant, spreading open the eyelids and fixing the globe by the fingers of one hand, whilst operating with the other. The section is below, and it is corneal. A Graefe's knife is used. The puncture and counterpuncture are in the sclero-corneal junction. The knife is entered flat just below the centre of the pupil, and

[1] JOURNAL, 1883, vol. i, p. 44.

[2] Knapp's *Archives of Ophthalmology*, 1888, p. 51.

[3] JOURNAL, 1883, vol. ii, p. 955.

then the edge is turned directly forwards and the section completed. The summit of the flap will thus lie midway between the edge of the pupil and the periphery of the iris. A case operated on successfully by this method when no iris has been removed leaves nothing, as in the cases shown, to be desired. The appearance is normal, and after a time the scar left by the corneal section is only visible by searching for it. In a few cases eserine has been employed immediately after operation; its need or usefulness was not very evident, and its use was discontinued.

Antiseptic precautions have been adopted, perchloride of mercury solution having been employed for bathing the eye, and alcohol for dipping the instruments in, or sometimes for this purpose the mercuric solution was used. The plaster method[4] of after-treatment, with which I will only here add my continued satisfaction, has been employed in about the last 150 cases.

I shall not trouble you with reporting the whole of these 301 cases to which allusion has been made. My notes do not in all points permit of my doing so. I will merely in some particulars analyse the series. Out of the 301 cases referred to, vitreous is stated to have been lost in eighteen instances, or 6 per cent. In six of these it is stated that the capsule was tough or dense, and it was whilst tearing or withdrawing this that vitreous escaped. Nine of these losses occurred in operations associated with iridectomy, eight in non-iridectomy cases, whilst one is uncertain. Considering the greater proportion of non-iridectomy operations to those in which iridectomy has been performed, it suggests the non-interference to be less prone to occasion loss of vitreous. I believe this to be so. In the last 94 operations vitreous has only been lost once, and in this series those without iridectomy are in the proportion of nearly three to one.

All the cases in which vitreous was lost recovered good or useful vision; one only is mentioned as doubtful.

It is often asserted that the avoidance of iridectomy is prone to occasion prolapse of iris. This, at all events, is not the case as regards the operation I have described. I find only three instances of real prolapse in the total of 301 cases. Each recovered good sight, one having $\frac{2}{10}$, another $\frac{2}{100}$, and the third, more recent, has a good result, not more accurately recorded at present. There are several others—I have no complete record—in which the iris has become more or less attached to the wound. I am inclined to think this has been more frequently the case when the iris has been removed at the time of operation than when it has not. Any way, I do not believe that these entanglements occur more frequently than in other modes of operating, when it is not very rare, I think, to find little points, especially at the corners of the wound, where the iris has become caught. Bearing on this subject are two others:

1. *Glaucoma.*—Only two patients presented glaucomatous symptoms. One was a lady aged 73, and the other a man aged 77. In the former tension manifested itself within a few months, and in the other a considerable time (two years?) afterwards. In both iridectomy had been performed at the time of operation. Sclerotomy relieved the case of the man, and an iridectomy that of the lady. Recovery of vision occurred in each instance; the lady's was, however, a mild case.

The second point is that no case of sympathetic ophthalmitis has shown itself in this series, nor in my previous operations by the methods here described.

The results may be stated in this way. In the 301 cases, 20 may be regarded as failures, giving a percentage of 6.6. Analysing this statement, it appears that in private cases the percentage is barely 1.7; that in men—making out of the 301 a total of 177—there are only 8 failures recorded, or a percentage of 4.4. The percentage of failures is raised to the point mentioned before by the less proportion of successes in women in hospital practice. This has occurred not so particularly at one period, but appears generally true.

I am inclined to think that in many cases the physique of the women in our manufacturing towns is inferior to that of the men, and that they are less cared for as to food and nourishment, especially when getting on in life. I do not know the experience of others as to their results in cataract cases in women in hospital. My own is that the losses are greater than in men, and my efforts have not yet been successful in bringing the two to an equally small percentage of failure. In private I find that women are equally, perhaps more, fortunate in results than men under the same circumstances.

The relation of iridectomy to the failures is as follows:—Eleven occurred in cases operated upon with iridectomy, 6 in cases without, whilst in 3 it is not stated. Now if we even take the 3 not classified ones and add to the 6 failures in cases without iridectomy, we have only 9 failures to record against 11 with iridectomy. Considering that the iridectomy cases form only something over a third of the series, it is clear that the percentage of loss is greater in the cases with iridectomy. This is, I believe, the case, even after allowing a wide margin for the fact that it is quite possible that the iridectomies contain a less proportion of altogether smooth cases.

It is quite probable that I have included among the failures cases which, according to other published statistics, might have been regarded as doubtful. A corresponding decrease in the percentage of losses would then have been, of course, recorded.

In conclusion, allow me to add the interesting fact that one of my patients who underwent operation some few years since, without iridectomy, and who is blind from cataract in the other eye, has been this year an exhibitor in the Academy. He is an amateur, and I do not think he sent a picture in before the operation; at all events, if he did he was not successful.

[4] *Vide* my articles, *Lancet*, vol. ii, 1886, and JOURNAL, 1888, vol. i, p. 176.

V.—G. A. BERRY. M.B., C.M., F.R.C.S.E.,

Ophthalmic Surgeon, Edinburgh Royal Infirmary.

MR. BERRY discussed what appeared to him, after a very considerable experience of extractions performed with antiseptic precautions, to be the extent of the advantages gained. His method of antiseptics had all along been the same, and was as follows:—The instruments were immersed in a 5 per cent. solution of carbolic acid for not less than five minutes. They were then transferred, before use, to a saturated solution of boracic acid. A 1 to 5,000 solution of corrosive sublimate was used to wash out the conjunctival sac before operating, and the same solution was frequently poured on the eye, squeezed from pieces of absorbent cotton, during the operation. The dressing consisted of a piece of lint saturated in the same solution, applied wet, and covered with a piece of gutta-percha tissue; over this was placed some cotton wool and a bandage, or pieces of plaster.

While he regarded the introduction of corrosive sublimate as a great advance in ocular surgery, he could not too strongly deprecate the tendency to place too much faith in it, or in any known antiseptic applicable in cataract extraction.

He had seen a diminution in the proportion of corneal suppurations since using antiseptics in the manner described. He had not, however, nor had anyone else with sufficient material at his disposal, seen them disappear altogether. Another point had reference to bad and presumably septic inflammation of the iris. With respect to such accidents, his cases treated antiseptically did not show any decided improvement when compared with the results from non-antiseptic treatment.

The following questions naturally suggested themselves:—1. Why was it that while with antiseptic measures the chances of infection were materially diminished, so far as the external wound was concerned, such measures did not get rid of suppuration there altogether? 2. Why were the same measures relatively inefficient in the case of the iris? And 3. What other means might be relied upon to lessen the risks of septic inoculation?

The introduction of organisms into the wound might be made by the instruments used in the operation, or by the fluids from the conjunctival sac. There could be little doubt that a large proportion, possibly the whole, of the advantage gained by antiseptics in cataract extraction was due to asepticity of the instruments used. It was clearly a duty therefore which every operator owed to his patient to use effectual means to render his instruments aseptic.

With regard to inoculation from sources within the eye, or rather within the conjunctival sac, it had been shown that the action of corrosive sublimate solutions as germicides was less certain when in contact with albumen. Even thorough washing out of the conjunctival sac with the ordinary solution of corrosive sublimate did not effectually kill the organisms which it might contain. It was evident, therefore, that the danger of inoculation from the eye itself could not be altogether obviated. He thought, however, that there were sufficiently good theoretical grounds for assuming that, at all events here and there a case, which might

otherwise have presented a self-inoculated suppuration of the corneal wound, might escape solely owing to the use of the corrosive sublimate solution. It seemed reasonable to suppose, that although the corrosive sublimate solution might not effectually destroy all the micro-organisms, it might destroy some, or perhaps while not actually killing any, might lessen their vitality, and thus turn the balance in favour of the resisting power of the divided cornea. The solution might be supposed to effect this in two ways, first as a germicide, and secondly by actually washing away the fluids containing the germs. Possibly the latter manner was the only efficient one.

Two preventative measures therefore suggested themselves:—1. To diminish the number and modify the virulence of the micro-organism; and 2, to perform the operation in a manner calculated to interfere as little as possible with the vitality of the wounded tissues.

The former question had already been discussed. With regard to the latter, anything calculated to promote rapid healing must in the same proportion favour the vitality of the wounded tissues. The wound must be subjected to as little bruising as possible, and the subsequent adaptation of the opposing surfaces must be good. The first indication was complied with, by making the section sufficiently large, and clean cut. The importance of using a perfectly sharp knife, and of avoiding, as much as possible, any sawing motion in making the incision could not be exaggerated. The more patent the lymph channels, the more perfect must be the agglutination which constituted the first step in the healing. The power which the living lymph in the lymphatics had of causing the destruction of micro-organisms had received numerous demonstrations lately.

Next in importance to a clean section came the avoiding of bruising of the cut surfaces during the extraction of the cataract. The practice of removing cortical matter by pressure with the thumb on the cornea, through the lid, was obviously one which must increase the risk of self-inoculation.

With regard to septic inflammations of the iris, it might be asked why they were less capable of being checked by the usual antiseptic method of operating, and how they could be avoided? His own experience of extractions without iridectomy was so very limited that he could only refer now to cases in which iridectomy formed part of the operation.

In the first place, except where intraocular injections were made, the antiseptic solution did not come so intimately in contact with the wounded iris as it did with the sectioned cornea, so that the organisms which entered the eye by the external wound were not unlikely relatively or absolutely greater in number; they were not washed away in the same manner. Further, it was not unlikely that the conditions of vitality were different, and no doubt the aqueous humour played some part in favouring the development of the germs.

The only practice which it appeared to him might reasonably be expected to lessen the proportion of such cases was the performance of a preliminary iridectomy. In considering clinical experiences, they must be struck by the comparative rarity of bad iritis after iridectomy. This was the more striking, as in a considerable proportion of eyes for which iridectomy was performed the possibilities of self-infection were abundantly present.

Mr. Berry concluded by recapitulating his views as follows:—1. Asepsis of all the instruments used could be readily effected, and thus one of the most important sources of infection avoided. 2. A 1 to 5,000 corrosive sublimate solution, especially when frequently poured on the eye during the operation, probably diminished the risk of, though it certainly did not render altogether impossible, corneal suppuration as the result of self-inoculation. 3. Attention to well-known rules in connection with the details of the operation was of great importance, especially the proper use of a sharp knife. 4. Septic iritis was less readily under control of the corrosive sublimate solution, and probably best avoided by the performance of a preliminary iridectomy.

Mr. MACKINLAY said that some years ago he saw a series of cataract extractions done without iridectomy, and he was far from satisfied with the after-results. He certainly was in favour of iridectomy in cases of senile cataract, either at the time of extraction, or in preference, as a preliminary operation, done at least some weeks before; and he had been influenced in his opinion, not only by his own observation, but also by the large experience of others who had had long and extensive operative work, notably the President's father (the late Mr. Critchett) and Dr. Little, of Manchester. He did not attach any importance to the cosmetic aspect of the iridectomy question; in nearly all old people the upper lid drooped and disguised the coloboma; moreover, he contended that if the iridectomy had been of a proper size, the portion of iris remaining contracted and dilated fairly well in different intensities of light, and there was no photophobia to worry the patient. The iridectomy should be moderately small and have nearly parallel edges; the coloboma, in fact, should be like an inverted keyhole. Without iridectomy he did not care for the risks of prolapse, the risks of anterior synechiæ, or of iritis (suppurative or otherwise), and the possible still remaining serious likelihood in some cases of getting in the future glaucomatous symptoms in the eye operated upon, or sympathetic ophthalmitis in its fellow.—Mr. ADAMS FROST was in the habit of performing iridectomy, or "mutilation of the iris," as it was now the fashion to call it, in cataract extraction. He had, however, performed extraction without it in a certain number of cases, selecting those which appeared especially favourable, either from complete maturity or other reasons. On the whole, he had not been satisfied with the results. The number of operations was, of course, insufficient to speak positively. They had been sufficient, however, to show some of the difficulties and objections to the operation; one of these appeared to him to be the stretching and bruising to which the iris was subjected. This could only be avoided by placing the section nearer the corneal centre, a course which presented obvious objections. The difficulty had, in several cases, led him to alter his intention, and to perform an iridectomy. Another great objection was that fragments of cortex got behind the iris, where they were out of sight and out of reach. The pupil appeared black, and the patient could count fingers well, but in a few days the whole pupil had been filled with opaque lens matter. With respect to cosmetic effect, he thought too much was made of it. The coloboma was usually entirely covered by the upper lid, and in any case was not easily seen through strong convex glasses.—Dr. MULES (Manchester), with respect to antiseptics, mentioned the opinion of Dr. Meyer "that patients occasionally carried in themselves germs which no care on the part of the operator could prevent from developing severe and destructive changes in the eye;" he adopted this view, and accepted it as a true explanation of many otherwise puzzling cases. With regard to extraction, he suggested that each member of the Section should place himself in the position of an operatee, and then he believed that a preliminary iridectomy, to be followed three weeks later by extraction, would be the operation selected.—Dr. W. J. COLLINS considered, however much micro-organisms might be excluded by irrigation and sprays, yet the experiments of Chauveau showed that septic fluids absorbed from the intestinal canal or by intravenous injection might occasion acute suppuration *in loco*. Besides, carbolic acid of such strength as was requisite to destroy septic organisms could not be put into an eye with impunity. Dr. Collins said he put his instruments in boiling water before operating and washed out the conjunctival sac with saturated solution of boracic acid. He had always operated with iridectomy; the average results were better, though a few brilliant results might be attractive where iridectomy was not practised. He also preferred a peripheral capsulotomy. The operation of extraction without iridectomy might be the operation of the future, but it was not that which gave the best average results at the present time.—Dr. GROSSMANN said he could only repeat what he had said last year at Glasgow. He had quite abandoned iridectomy, and he had had no reason to be dissatisfied. The "new" operation was certainly not more difficult than the old method with iridectomy. Concerning the bruising of the iris through stretching, he had never seen anything to corroborate such an anticipation, although he had been brought up to consider this procedure a very dangerous one. Cocaine and antiseptics had rendered the operation very simple, whereas years ago it had been a most hazardous one. As for the cosmetic effect, this was certainly of no weight; and he, too, thought too much importance had been attributed to this point. He could, however, on the other hand, not omit to mention the great comfort some patients had derived from a movable round pupil. It enabled them to face the light much more freely, and to see much better than where a coloboma had been made, and often helped considerably to correct the astigmatism. If most of those present would that day, in the case of their own eyes, decide on an operation with iridectomy, it by no means followed that this would be the same ten or twenty years hence, when the so-called new method would have had a fair and impartial trial, and its advan-

tages and shortcomings would be more clearly recognised by all.—Dr. LITTLE (Manchester) said the subject of cataract extraction was a wide one, and he would only refer to a few points. He was one of those who were brought up in the iridectomy school, and followed the the teachings of Graefe. He had a large experience in extraction with iridectomy, and had always obtained excellent results, equally good to any statistics hitherto recorded by other operators. He was not therefore disposed to substitute any other operation, unless it was clearly shown that that operation was a better one, and it certainly had not yet been shown that extraction without iridectomy had been attended with better results, if so good. Mr. Teale, in supporting the latter method, had not furnished them with very definite results, neither had Mr. Snell. In Mr. Snell's 300 cases it would be interesting to know the resulting vision, the exact condition of pupil and iris, the prevalence of iritis, and the number of secondary operations. It was true, however, that Dr. Knapp had given them a very accurate record of 200 cases, and though he showed about 70 per cent. of secondary operations (a very large number), yet his results did not seem to be of a higher standard (certainly very little) than by the iridectomy method; besides, he did not agree with Dr. Knapp that secondary operations on the capsule were free from danger. The section Mr. Teale describes was very similar to the one practised by Le Brun and Liebreich many years ago—in 1873-4. Dr. Little said he operated upon a good many cases after this plan with rather indifferent results, and since that time he had always hesitated to adopt similar methods. The last six weeks, however, he had performed fifteen extractions without iridectomy, being desirous of giving that operations a fair trial, and giving the accurate results of a given number of cases at some future time. Of the fifteen cases one was followed by prolapse of iris, five cases showed two or three slight iritic adhesions to capsule, seen after atropine, so that the pupil was not capable of full dilatation; all the others were perfect results. The occurrence of even slight iritis might seriously interfere with the result in the flap operation, but not so with iridectomy.—Mr. CROSS said if it was essential to aim at complete removal of the lens iridectomy was indicated, for without it fragments and *débris* tended to slip under the iris fold, where their presence was overlooked, or if recognised their removal was much more difficult than where a coloboma had been made. Moreover, any lens material that might be left behind at the time of the operation tended to be washed out of the wound as the aqueous collected again. This was easily effected if the corneal wound was in direct communication with the capsule; but if, on the other hand, the iris intervened there was a great tendency for it to be worked up against the cornea. Extraction without iridectomy was undoubtedly often followed by anterior synechia; in old weak eyes the incarcerated iris was likely to inflame, and the inflammation to spread inwards, causing irido-cyclitis or capsulitis. A good result without iridectomy was preferable to that when iridectomy had been done, but he thought iridectomy was a safer proceeding, and there was no evidence to show that the former method gave us better visual results than the latter. Despite the free use of eserine at the time of and after the operation, there was always the fear of blockage of the corneal wound by the iris, which could not occur where the iris was cut away. Though anterior synechiæ had been avoided, iritis and secondary capsule seemed very prevalent in the operation without iridectomy, requiring discissions which were not devoid of risk. On the contrary, the non-removal of the iris rendered the operation easy, and healing was more rapid if no complication occurred. The question was not yet settled between the two methods; increasing knowledge would tend to indicate which should be selected in each particular case.—Mr. W. J. CANT (Lincoln) said he was one of those whose mind was not absolutely made up as regarded the question of operating with or without iridectomy; but he wished to say that he had performed the latter operation fifteen times, and the success had been everything that could be wished. It seemed to him that most cataracts could easily be extracted by this method, and his experience was that iritis did not occur more often nor were secondary operations more frequently required than in the operation with iridectomy. The operation was as easy without iridectomy, and the pain less during its performance, and there was no bleeding into the anterior chamber which sometimes occurred with division of the iris. On the whole, he thought it was the operation that would be adopted by most surgeons in the future, as the rule, although it was probable a few exceptional cases would require iridectomy. If any cortical matter was left after the nucleus was extracted, Mr. Cant used a specially constructed syringe which easily removed it. He had not lost a case, nor had he ever had prolapse of the iris, although on one or two occasions the base of the iris was adherent to the cicatrix; but this was not of any importance. Mr. Cant never used a speculum, and the knife preferred was one similar to Mr. Teale's, but not quite so broad at the base.—The PRESIDENT thought that those ophthalmic surgeons who adhered rigidly to the operation without iridectomy must often find themselves placed at a great disadvantage when they had to deal, as must sometimes be the case, with a cataract which was much less ripe than they had anticipated. In such a case he personally would undoubtedly prefer a peripheral incision of the capsule, so that any lenticular fragments which might remain after the operation should be safely enclosed in the membrane to which the lens was accustomed; but where no iridectomy was performed the operator had no alternative but a central capsular discission, with the very possible result that the soft lens substance might cause traumatic iritis and other kindred troubles. He agreed with Mr. Berry that the operation should be accomplished with the least possible amount of bruising or violent traction, and he inclined towards a rather large incision.

NOTES OF A CASE OF SCLEROTITIS, APPARENTLY OF DENTAL ORIGIN.

Read in the Section of Ophthalmology at the Annual Meeting of the British Medical Association, held in Leeds, August, 1889.

BY JOHN HERN, M.D.EDIN., M.R.C.S.ENG.,
Ophthalmic Surgeon Darlington Hospital.

IT was with considerable reluctance that I decided to bring a single case before the members of this Section, but ultimately resolved to do so, thinking it probable that other cases of the kind have been met with, though, so far as I can ascertain, not published. My attention was drawn to the dental organs as a reflex cause of ophthalmic affections by an excellent paper read before the Odontological Society[1] (and published in its reports), by Mr. Power; but it is evident from it that sclerotitis has not been noticed by him as one of the affections of probable dental origin.

Mrs. Y., aged 38, a healthy, well-developed woman, the mother of three healthy children; no history or other signs or symptoms of syphilis or rheumatism, or any other morbid constitutional tendency. The husband and relations are also well known to me, and have no particular constitutional tendency to disease.

On March 27th, 1888, Mrs. Y. consulted me for a severe pain referred to the point of emergence of the left infra-orbital branch of the superior maxillary division of the fifth, and shooting up over the left nasal bone; this pain came on in paroxysms several times during the day, and, as the patient described it, "inflamed her eye." On examining the left eye, tension seemed slightly above the normal, but, on comparing it with the right, they were found to be as nearly as possible the same; the eye was not tender to the touch, but at the upper margin of the cornea, about two lines external to the vertical meridian, a distinct patch of sclerotitis was observed, the contiguous corneal substance being quite hazy in its superficial layers. The patch at this time was about the size of the flat surface of a split pea. Although six-grain doses of quinine several times a day relieved the pain, the patch gradually spread outwards and downwards along the corneal margin, involving its superficial layers almost to the pupillary margin. I noticed the patch spread and enlarged most on those days when the patient complained of most pain referred to the infra-orbital region.

In August, 1888, my notes of the case read as follows: "Sclerotitic patch has spread from the vertical meridian above to four lines internal to vertical meridian below, and has also extended two lines nearer the posterior pole than when first seen five months ago. Tension plus $\frac{1}{2}$ to 1 L. Pain now referred to all three divisions of the fifth (supra-orbital, infra-orbital, and the mental branch of the inferior dental); also pain in the upper and lower teeth of left side, especially the former. Patient complains that on taking anything, either hot or cold, into the mouth, the teeth ache (especially the left uppers), and that pains shoot up into the left eye."

The condition of the eye became gradually worse until late in

[1] Odontological Society's *Transactions*, vol xvi, page 11.

the following month (September). There being an increase in the pain referred to the teeth, I asked my brother, William Hern, who was spending his holiday with me, to see the case, which he accordingly did, and discovered an exposed nerve in the second left upper bicuspid, and at once advised its removal, considering it the probable cause of the pain. The vision of the left eye was carefully tested late in September, and found to be $\frac{20}{30}$ L. Tension+1 L.

On October 5th the tooth was extracted, and sent direct to my brother for a report on its *post-mortem* condition, which I will give in his own words: "Upper second bicuspid of left side affected with a very large and deep carious cavity on its anterior surface, involving the pulp chamber, and a smaller and shallower one on its posterior surface. On splitting, the pulp was found to have been alive, its free surface ulcerating and covered with thin greenish pus, its deeper parts intensely red and injected; the pulp tissue altogether being in a state of great irritation, and a potential cause of much pain, both local and reflex." He also says: "I have seen several cases amongst my patients at the Dental and Middlesex Hospitals of undoubted reflex ophthalmic disturbance due to dental caries, in which the lesion was less clearly marked than in this case. In a few cases which have been sent me from Moorfields or from the out-patient ophthalmic department of my own hospital, an exposed pulp in some lurking position has most commonly been found to be the irritating cause."

As to the progress of the case after the extraction of the tooth, the pain disappeared immediately and did not recur. For a fortnight the condition of the eye appeared to remain absolutely stationary, and then gradually the lesion gave in, and disappeared in from six to eight weeks, leaving a slight haziness of the cornea, with the usual thinning of the sclerotic, giving the blue coloration of the choroidal pigment over the seat of the sclerotitic patch. Tension in L. became equal to that of the R., and sight returned to the extent of $\frac{20}{30}$.

Having given a fair trial to all the recognised methods of treatment before the extraction of the tooth, I at that time ceased to administer all internal remedies, and simply applied a solution of boracic acid locally. Although the *post quod ergo propter quod* is not a safe method of reasoning, yet the gradual spreading of the patch up to the time of the extraction of the tooth, the sudden check produced thereby, the gradual diminution, dating from a fortnight after the extraction, and, finally, the gradual return of the eye to its normal condition, point, I think, to the probability that in this case, at any rate, we have an example of an irritative lesion reflexly produced, in which the afferent nerve is the superior maxillary, or second division of the fifth nerve, and the effer entthe first division of the fifth and probably its nasal branch.

INFANTILE OPHTHALMIA (BLENNORRHŒA NEONATORUM) AND ITS PREVENTION.

Read in the Section of Ophthalmology at the Annual Meeting of the British Medical Association, held in Leeds, August, 1889.

By KARL GROSSMANN, M.D.,
Ophthalmic Surgeon to the Stanley Hospital, Liverpool.

The matter which I propose bringing before this meeting to-day is not a new one, neither do I expect to meet with any serious opposition to the remarks with which I shall conclude.

The efforts of therapeutics at the present time are directed preeminently towards prevention rather than towards cure. We have come to this position by degrees, and I need only mention the names of Pasteur, Lister, and Koch to characterise at once the wholesome movement in the midst of which the present generation has the good fortune to find itself. If some men have been going too far in attributing almost every complaint to the invasion of a micro-organism, we have on the other hand gained an invaluable treasure in the knowledge that one of the most important rules of treatment is the most scrupulous cleanliness. Dirt is, surgically speaking, matter in the wrong place, and therefore obnoxious, at least as a mere intruder if not as an actual offender. Exclusion of all obnoxious matter is the great principle which has led to such astonishing success in recent surgery; and in medicine it has given the impulse to the rapid development of hygiene, the branch which sees in the prevention of diseases the best remedy.

Even in ophthalmology, where we have for a long time been accustomed to results unparalleled in general surgery, we have adopted, every one of us I trust, the antiseptic *régime*, modified of course to our special requirements. Is it not therefore time that we should try to stamp out a disease which not only can be cured completely if treated in time, but which also, as we now know, can be easily prevented altogether? Is it comprehensible that this disease, which causes the blindness of about one-third of all the inmates of our blind asylums, makes its ravages, now as in years gone by, to maintain the population of these institutions?

It is not difficult to find out the cause of this gloomy state of affairs. Let us take a typical case from our hospital practice. A woman, confined about two or three weeks ago, brings her child to us. Before she says anything, a glance at the eyelids swollen and glued together, probably with some creamy discharge oozing out, is usually eloquent enough, and with a sigh, "probably too late again," do we examine the poor little creature. Alas, too often our anticipations are realised. Sometimes one, usually both corneæ have been perforated, the iris has prolapsed, and the mischief is done for life. Maybe we can hold out a hope to restore some sight by an artificial pupil later on, but that entirely depends on the seat and the extent of the injuries.

And how did this come about when we know it could have been prevented if taken in time? The same sad old tale: "Three or four days after birth baby caught a cold." The mother either did nothing to it, or if she did anything at all it usually was a bread and milk poultice or something similar.

The near connection of infantile blennorrhœa with gonorrhœal discharge has been conclusively demonstrated for a great number of cases by the presence of that peculiar micro-organism to which the name of "gonococcus" or "diplococcus pyogenes" is given. It occurs in agglomerations of two, which form the shape of an 8; hence the latter name. Whether this diplococcus, which is so constant in gonorrhœal discharges, is also to be made answerable for all cases of purulent ophthalmia in the newborn is a question which is at present still an open one. I have repeatedly failed to discover it in discharges from the conjunctiva; and my observations in this direction are not uncorroborated. At the fifty-seventh meeting of the German Medical Association, Dr. Kroner of Breslau gives the result of his examinations of ninety-two cases of blennorrhœa. He was unable to discover the gonococcus in twenty-nine cases, in spite of the most careful examinations; in sixty-three cases, however, the micro-organism was readily detected. This led him to the conclusion that the ophthalmo-blennorrhœa may be produced not only by the gonorrhœal secretion of the maternal vagina, but also by other vaginal discharges of a less specific nature.

Be that as it may, the fact remains that the ophthalmo-blennorrhœa of the newborn admits of a cure—I should almost like to say, in the words of the label on the Ofen bitter water, "speedy, sure, and gentle." We know it is far more profitable to cure quickly purulent ophthalmia in a child than in an adult. Evidently the infantile cornea is better supplied with nutrition, and chemosis does not occur so easily; and whereas in the adult we have to fear destructive processes in the cornea sometimes within a few hours, which we cannot always keep off, the eye of the newborn shows much greater tolerance, and usually only gives way after a few days of irrational treatment, such as poulticing and other domestic remedies.

I have tried different remedies—nitrate of silver, corrosive sublimate, liquor chlori, iodoform, sulphate of copper, carbolic acid, peroxide of hydrogen—and I must say they all give good results, either alone or in combination. I have done this in order to convince myself that there is no special remedy particularly to be recommended as a specific; they all answer admirably, although I have chiefly relied upon nitrate of silver until lately, when I have used β-naphthol with great advantage. It does not matter much which of these remedies we apply on the whole, iodoform being rather objectionable on account of its odour, and I mention them only in order to show that as far as treatment is concerned we have ample means to cope with it successfully and quickly. But the little patients are brought to us usually when the gravest harm is already done.

To have shown where the root of this deleterious disease lies, and how we can readily get at it, is the great merit of Dr. Credé, of Leipzig. He pointed out that it was far more within the range of the obstetrician than of the oculist to prevent ophthalmo-

blennorrhœa in the newborn altogether. In a paper[1] which I read eight years ago, before one of the Branch meetings of this Association I first drew attention to this method which, slightly modified at present, consists in the following: As soon as the umbilical cord is attended to the child is washed, and the closed eyes wiped with a clean rag or pad of cotton wool. The eyes are then opened, and one drop of a 2 per cent. solution of nitrate of silver is dropped into each eye by means of a rounded glass rod.

I will give here a compilation of the results as published by Credé in 1887:

Before using any prophylactic treatment.

1874	...	323	births, of which	45	blenn. =	13.6	per cent.
1875	...	287	„ „	37	„	12.9	„
1876	...	367	„ „	29	„	9.1	„
1877	...	360	„ „	30	„	8.3	„
1878	...	353	„ „	35	„	9.8	„
1879	...	389	„ „	36	„	9.2	„
1880 (Jan. to June)		187	„ „	14	„	7.6	„

After introduction of prophylactic treatment.

1880 (June to Dec.)		200	births, of which	1	blenn. =	0.5	„

The percentage was reduced from 13.6 to 0.5 (or more correctly speaking to 0.0), because it was found that in that one case the prophylactic treatment had been omitted by mistake.

Thus the great value of Credé's method has been fully established. The only objection which has been made against it is that the 2 per cent. solution of nitrate of silver is perhaps rather strong—too strong to put into a healthy eye of the infant. Against this it may be said that weaker solutions seem to do equally well down to 0.5 per cent., and that weak solutions of sublimate (0.03 per cent.) and other antiseptics have been used with the best success. If any irritation takes place it is only the case in premature children, and has, as far as I could convince myself, never been followed by any serious results.

The prophylactic method of Haussmann is free from this drawback. He lays great stress on the disinfection of the maternal mucous membrane, and on all the instruments used during birth. It goes without saying that he also advocates a careful cleaning of the face and eyelids of the newborn, but he stops short of the instillations into the conjunctival sac. Still, from the comparison of the two methods, that of Credé seems to deserve our complete support. Koenigstein tried both in the Vienna clinic on a large scale, and found the following result: of 1,300 children treated by Credé's method, 0.5 per cent. were affected, while the method of Haussmann showed 2 per cent. in a series of 1,541 cases of birth.

I give here some statistics gathered in some of the large Continental obstetrical institutions since the introduction of the prophylactic treatment.

Credé himself publishes for

1880,	out of	211	cases,	1	case of blenorrhœa
1881	„	400	„	1	„ „
1882	„	418	„	2	„ „
1883	„	131	„	0	„ „

The Berlin Charité, which used to have from 13 to 9 per cent. between the years 1876 and 1880, came down in 1883 (first batch), out of 460 cases, 7=1.5 per cent.; (second batch), out of 260 cases, 0=0.0 per cent. Bonn, 1883, out of 703 cases, 4=0.5 per cent. Dresden, 1887 (first batch), out of 1,000 cases, 4=0.4 per cent.; (second batch), out of 420 cases, 0=0.0 per cent. Giessen, 1885 to 1887, out of 330 cases, 0=0.0 per cent. Marburg, 1884 to 1888, out of 943 cases, 0=0.0 per cent. Grosswardein, 1883 to 1888, out of 714 cases, 1=0.15 per cent.

These statistics are eloquent enough; they prove that the evil can be coped with successfully, and how this may be done.

In 1884 a deputation (committee) selected from the Ophthalmological Society was in communication with the Registrar-General concerning this subject. The propositions made by that committee were not accepted, and nothing seems to have come of it in the meantime. It was pointed out by the Registrar-General that, if the suggestion of distributing printed slips were adopted, additional labour and expense would be incurred. About two years ago the Committee of the Bradford Eye and Ear Infirmary made an attempt to carry out this idea by supplying the registrars of their district with such slips. The expense was a very small one—about 25s.; and it was thought that, at that rate, the cost for the whole United Kingdom would come to about £30 per annum. Whether the distribution of those slips has helped to diminish the occurrence of the deleterious instances of blenorrhœa neonatorum I have not been able to ascertain satisfactorily, but let us inquire one moment into this question of expense.

It has been estimated by the committee referred to before that about 30 per cent. of the blindness met with at present was caused by infantile ophthalmia. This means, of course, total blindness of both eyes, and comprises, according to the last census, about 7,000 individuals. If we were to add those cases where one eye only has been destroyed, or where sight has been left just sufficient to get along somehow, this number would be greatly increased; but let us, for argument's sake, take the number as low as 7,000, and let us calculate, similarly to what Magnus did for Prussia, what these 7,000 blind individuals mean.

If we take a very moderate average of the weekly earnings of a healthy person, we may put it down at 20s., or yearly, £52. The blind is not only unable to earn his living, but, on the contrary, must be kept and fed. Let us say he requires about 1s. a day for his keep, etc., which would make about £18 a year. He therefore represents an annual loss of £52+£18=£70. This is a very moderate calculation, but still it brings us for the 7,000 blind individuals to a total of £490,000, or about half a million of annual loss, which might be easily prevented, not to speak of the enormous amount of misery which could have been avoided at the same time. Will these simple figures be eloquent enough to make the situation a little clearer? Will they help to demonstrate that a small amount of extra labour would be well spent?

Quite recently the Local Government Board were asked to have some directions of advice printed on the vaccination cards which are given by the registrars for births. This demand was declined, and, as I think, very rightly, for the reason that it would not be expedient to give optional directions and compulsory ones on the same paper. And I do not think that such cards, even if distributed, would be sufficiently effective with an indifferent populace to stamp out the disease in question. Preventive measures ought to be taken of a far more thorough nature, and they should be made compulsory.

It is now the general custom in this country that among the poorest classes confinements are attended by a midwife when a medical man cannot be present. Here, then, is given the principal starting-point for any wholesome and wholesale reform. This has been recognised by several foreign States, where regulations to this effect have already been adopted, as, for instance, in Saxony, the regulations for which I have here printed for your inspection.

I will not go into any more details, but simply submit to your discussion the following reformatory suggestions:

1. Each midwife ought to be instructed during her time of apprenticeship about the symptoms and treatment of infantile ophthalmia. This ought to be notified on her certificate.

2. Every newborn child ought to be subjected to the preventive instillation of a weak solution of nitrate of silver or other suitable solution—that is, equally useful and non-poisonous (one drop, after the eyelids have been cleaned out with cotton-wool, and the hands and arms of the child have been well washed). The midwife ought to be compelled to do this in every case.

3. In every case where the signs of an inflammation of the eyes occur from the third day to the end of the confinement, the midwife should be compelled to give notice to a medical man (in cases of the poor, to the parish doctor or some other authority).

4. In case the midwife omits any of these points, her certificate should be withdrawn and a fine imposed.

The PRESIDENT quite coincided with the views expressed in Dr. Grossmann's paper, and would be very glad if Dr. Grossmann would persevere in his efforts towards so desirable an end as the stamping out of infantile ophthalmia. He also agreed that sometimes cases were observed where even the greatest care was not able to prevent disaster; of course, these cases were very rare.—Dr. ILLINGWORTH said if their curative measures could be improved preventive ones would not be required. He found invariably, from a fairly large experience, that the biniodide of mercury would cure the disease in from four to five days.—Dr. BURNETT (Washington) was much pleased to listen to the valuable paper of Dr. Grossmann, since it was in the same line in which there was an attempt to do some work in the United States. At a recent meeting of the American Ophthalmological Society Dr. Lucien Howe, of Buffalo, had brought forward some statistics

[1] An abstract of this paper is published in the first number of the *Liverpool Med.-Chir. Journal*, 1881. I should feel inclined to ask you not to read it; it was one of my first English compositions, and is very badly worded, written in a regular "English as she is spoke."

showing that blindness was increasing in the United States in an enormously greater ratio than the population. The Society had appointed a committee—of which Dr. Howe was chairman, the other members being Dr. Andrews, of New York, and the speaker—to investigate and report on the question of preventable blindness. The committee was not yet ready to report, but Dr. Howe had visited Europe and Egypt gathering material, and before long it was hoped something tangible in the way of statistics and suggestions would be offered. But at any rate enough had been discovered to substantiate the statement of Dr. Grossmann that a very large part of the blindness was due to purulent ophthalmia of infants, which they knew now was preventable. Here, of course, the all-important thing was prevention, but this could only be carried out by the midwives, nurses, and general practitioners. How were they to second them? was the question. Much might be done by individual effort, but without doubt legislation of a very strict nature was essential to the proper and efficient carrying out of any plan. They, however, must do all in their power to arouse the people and the authorities from their apathy in the matter. Some such plan as that suggested by Dr. Grossmann was no doubt good as an initiative, but they must not relax their efforts until the strong arm of the law took hold of the matter and protected the community against a disease which was nothing less than a national calamity.—Mr. LINDSAY JOHNSON stated that he entirely agreed with Dr. Grossmann that it mattered very little what antiseptic was used, provided always that the eye were left uncovered and the pus immediately syringed out whenever it accumulated. He had repeatedly cured cases in a few days with the use of a 1 per cent. solution of common alum, and he thought most gentlemen present would agree that the rapid removal of pus was of far more importance than the kind of antiseptic used.—Mr. SIMEON SNELL said the importance of the subject could not be overrated. He thought it would be well for the Section at its first meeting next year to adopt a resolution urging the subject on the attention of the authorities, and to get it confirmed at a general meeting of the Association, as was done at the International Medical Congress in London in case of colour-blindness in sailors, railroad *employés*, etc. Besides any public or joint action much could be done by them as individuals. For instance, for some time he had distributed cards, setting forth the dangers of the disease, to parents or friends attending at the Sheffield General Infirmary with babies with purulent ophthalmia, and desired them to keep them in a prominent place in the house, and to draw their friends' and neighbours' attention to them. He had referred to these and also to other ways in a paper read before the Yorkshire Branch in February last year,[2] and had then travelled over much of the ground treated of by Dr. Grossmann. He gave there also statistics of the frequency of blindness from this disease in the children at the Sheffield School for the Blind carefully examined by himself, the percentage being 38.3. Whilst agreeing as to the value of Crédé's plan, he remarked that in the paper alluded to he had recorded the excellent results obtained at the Hospital for Women, Sheffield, by simply giving attention to the eyes immediately the head was born, and washing with pieces of lint and tepid water the eyes and adjacent parts. In the last 2,000 labours no case of purulent ophthalmia occurred. Korn had recorded also his experience, and had found this method sufficient after a trial of less simple methods.

MUSCULAR ADVANCEMENT.

Read in the Section of Ophthalmology at the Annual Meeting of the British Medical Association, held in Leeds, August, 1889.

BY F. R. CROSS, M.B.LOND., F.R.C.S.,
Bristol.

IN cases of faulty position of the eye and its visual axis, where we should not expect tenotomy to do much good, the operation of advancement has deservedly grown in favour with ophthalmic surgeons of recent years. I have had many opportunities of doing this operation, and feel that it is a safe and satisfactory procedure, and one that can be widely applied. I therefore venture to make some remarks bearing upon it, although I cannot expect to add anything to the knowledge possessed by those present at such a meeting as this.

In the consideration of an operative procedure for the correction or improvement of any malposition in the visual axis sound anatomical knowledge of the orbital muscular mechanism and the structures supporting the globe and limiting its movements in different directions is of the first importance.

Each eye globe is part of a ball-and-socket joint, closely resembling the hip or shoulder in being supported partly by its capsule and partly by the periarticular muscles, which surround and are in most intimate connection with it. The socket, partly muscular, partly aponeurotic, is so fixed to the anterior half of the orbit that it suspends the globe in such a way that no shifting of the eyeball is possible beyond a rolling in the socket.

The capsule is itself fixed to the wall of the orbit (being suspended from its roof), and strengthened by a network of aponeurosis from the recti muscles, whose tonicity tends still further to maintain its position.

The internal surface of the capsule is attached posteriorly to the groove on the surface of the scleral continuity of the optic nerve, and is further fixed by the ciliary vessels and nerves which perforate it. Just in front of these it is free from the sclerotic, except for the prolongation forwards from it of a little connective tissue, which, passing forwards, becomes more definite, and is known as the subconjunctival tissue, and at the circumcorneal margin unites capsule and sclera, so that they here form one structure.

The outer surface of the capsule is in close contact with the structures that lie outside it; posteriorly it rests on the fibro-fatty mass in the back of the orbit; and in front it forms the subconjunctival tissue. Its intermediate portion lies underneath the orbital muscles, sending backwards fascial coverings over them. Anteriorly it is prolonged forwards, folding around the tendons to their insertion into the globe, and then passing still further forwards the prolongations reunite to form a fan at the outer edge of the cornea.

The prolongations of Tenon's capsule, forming the sheaths of the tendons, are in such intimate relation with the muscles that they act as auxiliary tendons, and require the fullest consideration in an operation, and so does the anterior attachment of the capsule, for an alteration in its position means an altered relation of the visual axis.

It is not sufficient merely to divide the tendon itself, except when the case is very slight, because these slips of Tenon's capsule also need division. Being in direct continuity of the fasciæ of the muscles, and enclosing their tendons, they act as auxiliary vincula between the muscles and the eyeball, whose relative position they are sufficient to maintain to a considerable extent after the tendon has been divided.

The ocular muscles lie outside Tenon's fascia, but their tendons are closely associated with it, and together are like the meshes of a net. Thus, when any change in the direction of the pupil is required they all act in unison, a proper tension is maintained throughout all the fibres of the capsule, and an equable pressure is exerted on the globe of the eye. The capsule also is prevented getting into folds under the varying movements.

The capsule with its intimately associated muscles is moreover rendered more perfect, and a more stable socket for the movements of the eye, by means of fanlike prolongations which pass all round to the walls of the orbit from the sheaths of the muscles. The most important and strongest of these passes out from the sheath of the external rectus, just as the muscle gets under it; it is directed to the outer wall of the orbit, 2 millimètres behind and a little above the external palpebral ligament. It contains muscular bundles and constitutes the "external orbital muscle."

This small muscle is of much importance in tending to draw the sheath of the external rectus out towards the wall of the orbit, and away from the globe of the eye. In the primary position of the eyes, the external rectus wraps closely round the globe, and is in actual contact with it from behind forwards for a distance of 13 millimètres; and this amount of contact is increased when for any reason the eye is rolled inward.

With efforts of extreme convergence, as in high degrees of myopia, the increase in contact surface produces an increase of pressure along the outside of the antero-posterior diameter of the eyeball, and causes a lengthening in the antero-posterior diameter of the eye. The abduction exercised by the external orbital muscle upon the sheath of the external rectus lessens this inward pressure upon the globe. It also acts as a stop tendon to excessive action of the muscle, and as a retractor pulley.

The degree to which each muscle of the eyeball wraps round

[2] *Lancet*, 1888, vol. ii, p. 413.

the globe is of much importance as regards either its freedom of movement, or its steadying action upon the globe.

The muscle which is most closely applied to the eye is the inferior oblique, being in contact with it for a distance of 17 millimètres, whilst, on the contrary, its antagonist, the superior oblique, has only a surface contact of 5 millimètres. Moreover, the inferior oblique is a good deal involved in the lower folds of the aponeurosis of the orbit, which becomes continuous with the "inferior orbital muscle of Muller," whilst the tendon of the superior oblique is very free.

Thus the latter muscle is capable of a very free range of action; it carries the pupil rapidly and extensively throughout the downward movements, which are of such constant importance for our safety in progression, and for a knowledge of what is going on around us. Whilst the skyward tendency of the inferior oblique is very limited (it is almost *nil* in the middle line), and requires no great freedom of action, the inferior oblique is mainly concerned in regulating and modifying the active tendency of its antagonist; and for the performance of this passive function its extensive fixation and its large contact with the globe of the eye is well adapted.

Second only in freedom of movement to the superior oblique comes the internal rectus muscle. This has only a surface contact with the eye of 6 millimètres, and it is inserted 6 millimètres from the cornea. This forward insertion gives it a very powerful control over the inward movements of the pupil, which are of such constant importance in the maintenance of binocular vision; for normal vision is a continuous effort of the ocular muscles for binocular fixation of the pupils. In the constantly varying convergence of the eyes the external recti are only passively engaged, but they are always stretched in definite and steady antagonism with the more energetic interni. Their stability is largely due to the considerable surface contact with the eye that they possess, to a degree which is just double that of their antagonists.

Returning to the connections of Tenon's capsule with the wall of the orbit: a fibrous band passes inward and forward from the sheath to the rectus internus; this is thinner and of less importance than that already described on the outer side, but it also contains a few muscular fibres (the internal orbital muscle) which connect the sheath with the upper part of the crest of the lachrymal bone. The sheaths of the superior and inferior recti are attached respectively to the upper and lower lid, so that elevation and depression of the pupil is accompanied by a slight upward or downward movement of the lid.

In any surgical interference it is necessary to appreciate the association of the faulty muscle with the orbital capsule and with its associated prolongations, and also the conditions of the antagonist muscles. The capsule itself may be adherent to the eyeball, or contracted after inflammation, or it may be atrophied and imperfectly support the globe.

All the various movements of the eyeball consist of rotations within the capsule, about a point within the eye which is always fixed, and which is known as the centre of rotation of the eyeball. This point lies 13.5 millimètres behind the summit of the cornea, and is 1.7 millimètres behind the anatomical centre of the eye. The orbital muscles essentially act in pairs. The movements of the first pair (internal and external rectus) are simple; they consist of a pure adduction or abduction along a horizontal plane, around a vertical axis. This absolute simplicity renders surgical interference with them easy and definite.

Upward and downward movements in the vertical plane, on the other hand, are produced by the complex associated action of the superior and inferior rectus with its appositely named oblique. Each muscle of the second pair draws its insertion inward as well as up or down; and this rotatory movement renders operations upon their tendons uncertain. If undertaken great care must be exercised to disturb the subconjunctival tissue as little as possible, and to divide merely the tendon itself, leaving the vincula from Tenon's fascia untouched. About 2 millimètre correction can be produced on each of these muscles. The third pair, or obliqui, roll the globe outward, and with this action the superior depresses the eyeball and the inferior elevates it. Their tendons are practically out of reach of the surgeon.

The muscular forces that act upon the globe of the eye are multiple, and their combinations complicated. Even adductions and abductions are not merely due to the contraction of the internal and external rectus. In fact, in every movement of the eye all its muscles are in action, one or more being extremely active, whilst the rest supply the necessary opposing pressure and control. Antagonist muscles are rarely completely counterbalanced, but any slight insufficiency is compensated by movement of the head. Normal vision requires a continuous effort on the part of the muscles of the eyeball to maintain binocular fixation of the pupils.

If any muscle or group of muscles acts irregularly, or if adhesions exist among the fibres of Tenon's capsule, or its proper relations be interfered with, there will be a want of coincidence of the visual axes, and diplopia or squint is the result. In slight errors it is difficult to detect the faulty muscle; it may be necessary to define the relative positions of the double images, and to correct them by means of prisms; but this subjective testing is less satisfactory, at any rate, when operative interference is contemplated, than some objective methods. The field of fixation may be mapped out by aid of the perimeter, or it is easy to record the range of the pupil, especially in the horizontal plane (which is practically by far the most important) by noting its relations to the external canthus or to the lower punctum lachrymale. Where abnormal position of the globe is due to excessive action of a muscle tenotomy is required; when it depends on defective action advancement is indicated; a displacement of more than 4 millimètres requires operation. I have never had any satisfactory result from passive stretching of the muscles of the eye.

The object of treatment is (1) the restoration of binocular vision. Even after tenotomy this result is frequently not obtained, and it can scarcely be hoped for in the majority of cases of advancement. To give the eyes the appearance of binocular fixation, or so to improve the position that orthoptic exercises, or, still further, interference later on may end in the restoration of binocular vision. To replace a squint of 25° by one of 5° is of use to the visual sense as well as for cosmetic reasons.

Delicate children occasionally suffer from external strabismus, due to insufficiency of the interni, and not at present associated with myopia. All the muscles of such eyes are usually weak, and advancement of the recti interni gives good results. The external strabismus associated with myopia is usually cured by use of concave lenses, aided perhaps by prisms, but in such cases tenotomy of the interni is often indicated. The myopic eye is large and its axis elongated and not easily shifted, as the muscles wrap round it to an abnormal extent, especially the external rectus. The pressure of the muscles, although to some extent neutralised by the orbital muscles of the capsular ligament, tends still further to lengthen the axis of the globe, and to increase the myopia. Muscular advancement in those cases will increase the strangulation, which, on the contrary, will be relieved by section of the external rectus, and by this an increased convergence may be effected of about three millimètres for each eye. At the same time, it must be confessed that many myopic eyes possess a very good range of movement, and under certain circumstances advancement would be preferable to tenotomy.

The hyperopic eye is often associated, especially in extreme degrees, with ill-developed muscles and impaired movement. Where internal squint coexists in these cases, the external recti should be advanced with or without tenotomy of the interni. Where any malposition is entirely due to faulty anatomical arrangement in one eye only, the movements of its fellow being perfectly normal, operative procedures should be confined to the faulty eye.

The principle of muscular advancement has been applied by different methods to congenital or acquired ptosis with excellent result. The main application of advancement is, however, in those cases where extreme divergence has followed an injudicious operation for internal strabismus. Myotomy of the internal rectus is usually followed by divergence, and the same disappointing result also follows after a certain number of well-executed tenotomies in children. I believe it will be found in a good many of these cases that one or both eyes are myopic or will become so.

In the performance of this operation two main plans have been adopted: 1. *Vorlagerung*, rolling the eye-globe into the required position under the separated tendon, and maintaining it there by traction stitches through the sclerotic or the opposing muscle, without any section through the tendon. 2. *Vornähung*, the stitching forward of the tendon towards its new position on the globe.

Jules Guerin performed the original operation on the first method, which was modified and improved by von Graefe. For the second method we are indebted to the late Mr. Critchett, and his well-known operation is the basis of all the more modern procedures. The operation that I perform consists of two separate parts: 1, the application of the sutures to the tendon and to the

capsule, and the separation of these tissues from the eye-globe; 2, the application of the sutures to the globe of the eye, and the fixing of the globe and of the tendon in their proper relative position.

In the first step of the operation care should be taken not to interfere with the attachments of the tendon to the globe, until the former is securely fixed by one or more ligatures. I prefer to puncture the tendon, as in Snellen's operation for tenotomy, or even to stitch it in the middle line. A suture is then passed around each half of the tendon at a little distance from the sclera, and firmly tied. The tendon can now be severed from the eyeball, and the stitches should be passed through the capsule, one above and the other below the tendon, more or less deep according to the amount of advancement required. This will be sufficient for a moderate effect. In other cases a more definite hold can be given on the capsule and accessory bands by darning the stitches through them and any tissue that is subconjunctival. Catgut or silkworm-gut are the best materials for these anterior stitches. Still more effect can be produced by also involving the muscle towards the equator of the eyeball in a darning suture by the help of two or three needles; or this posterior suture may be effected by means of a silk thread, which is passed in and out from one edge of the muscle to the other, overlapping into the connective tissue on either side of it. This stitch may be used as a pulley to draw forward the muscle and capsule. With the exception of this one, I think all the sutures should be fixed, especially where they are attached to the globe.

The second part of the operation provides the attachments of the sutures to the globe. Much the best plan is to introduce two separate sutures underneath a moderately wide surface of the conjunctiva, and to tie this fold of conjunctiva tightly in a double knot. Two long ends are left at each ligature. Running loops, which some authors advocate, are, I think, wrong in principle; they are uncertain in action, and likely to cut through the tissue which holds them. A fixed tied knot round a good fold of conjunctiva cannot cut out in the same way, whilst it affords a fixed point for attachment of the tendon.

It is better to use the conjunctiva as the *point d'appui* rather than the aponeurosis, which may become displaced by traction, or than the deeper tissues; for episcleritis, or even sloughing of the cornea, may be thus induced. Where only a slight advancement is required, the fixation knots may be put close to the inner edge of the cornea, but it will be usually better to put them in the central vertical line of the eye above and below the cornea.

The threads from the fixing knots are quite superficial, and it is now easy to tie on to them the several sutures that were passed through the tendon in the first step of the operation. By means of double surgical knots the eye can be firmly fixed upon the tendons in any required position; and where any change is likely to be needed, bow knots can be used. The deep pulley suture can be easily withdrawn after it has served its purpose. All the other stitches, being capable of absorption, are left until they loosen themselves, and the fixation knots are easily removed at any convenient time. This method is simple, and can be readily adapted to any case, however simple or however severe. It is, I think, nearly always necessary to divide the opposing muscle, except in very slight cases, or it keeps up a continuous reflex drag upon the stitches; and, when I have left it untouched, it has been necessary to cut it at a subsequent operation.

By the operation we aim to effect replacement of the position of the globe and re-establishment of binocular vision. We also require that a free action should be given to the advanced (internal rectus) muscle. It is of importance, therefore, that the tendon should be free from the eyeball, except at its insertion. Any excessive adhesions produce mechanical interference with free movements, and may cause pain. All unnecessary manipulation at the time of the operation must be avoided, especially towards the equator of the eye; for any development of granulation tissue may result in adhesions, which at the equator would distinctly interfere with the movements of the eye.

In very severe cases, however, the posterior stitches must be used, and the eyeball, which at first may be almost fixed in its improved position, will with time, and as the replaced muscle gains power, gradually become more movable and free, as is the case with other joints. There will be a continuous tendency to improvement and towards natural conditions, and eventually a very good result will be attained.

So long as there is a certain amount of muscle fibre remaining, and the nerve mechanisms that regulate this are in a healthy condition, there is, in my opinion, no eye so misplaced—at any rate, in the horizontal plane—but that a combination of tenotomy and advancement will effect a practical cure. Five illustrative cases are appended. [Cases III and IV were exhibited at the meeting, and also photographs of Case V.]

CASE I.—E. M., aged 8. The tendons of both internal recti had been cut in March, 1887, for internal strabismus. In January, 1889, there was a wide divergence of the right eye; the left showed some incompetence of the internal rectus, but the right internal rectus was unable by any effort to adduct beyond the middle line. The right internal rectus was advanced by an upper and lower stitch through the tendon, and by a deep-running stitch through muscle and capsule and any subconjunctival tissue that could be caught up in the needle. These stitches of catgut were fixed above and below the cornea in the middle line. Considerable reaction followed. The external rectus was also cut. Now, seven months after the operation, the left eye fixes; vision, $\frac{5}{5}+1$ D. $\frac{5}{5}$. The right eye diverges 2 lines, but careful examination shows that it is really the left internal rectus which is incompetent; it can only draw its cornea inwards to a line with the punctum, whilst the right eye can be adducted well under the caruncle. Right vision, $\frac{5}{3}^{5}_{6}+4\frac{5}{2}^{5}_{4}$. Its internal rectus is thoroughly competent, and only a slight conjunctival swelling remains over the incision.

Fields of fixation:

	35°		40°	
Right external	45°+55°	internal	45°+50°	external.
	45°		40°	

CASE II.—Miss T., aged 18. A very delicate young lady, who for seven years was laid up with spinal complaint, and could scarcely move. Has still very imperfect control over legs. At 10 years old left internal rectus divided for squint.

May, 1889. Right eye, muscles act well, $\frac{5}{5}$—.25$\frac{5}{6}$; left eye, squints out 6 mm. $\frac{6}{12}$. The external rectus is very strong, but the internal can only by the strongest effort draw the pupil just beyond the middle line. Considerable neuralgia behind the globe.

June 24th. Advancement of internus. The result not being quite perfect and a feeeling of strain existing, the external rectus was cut on July 6th.

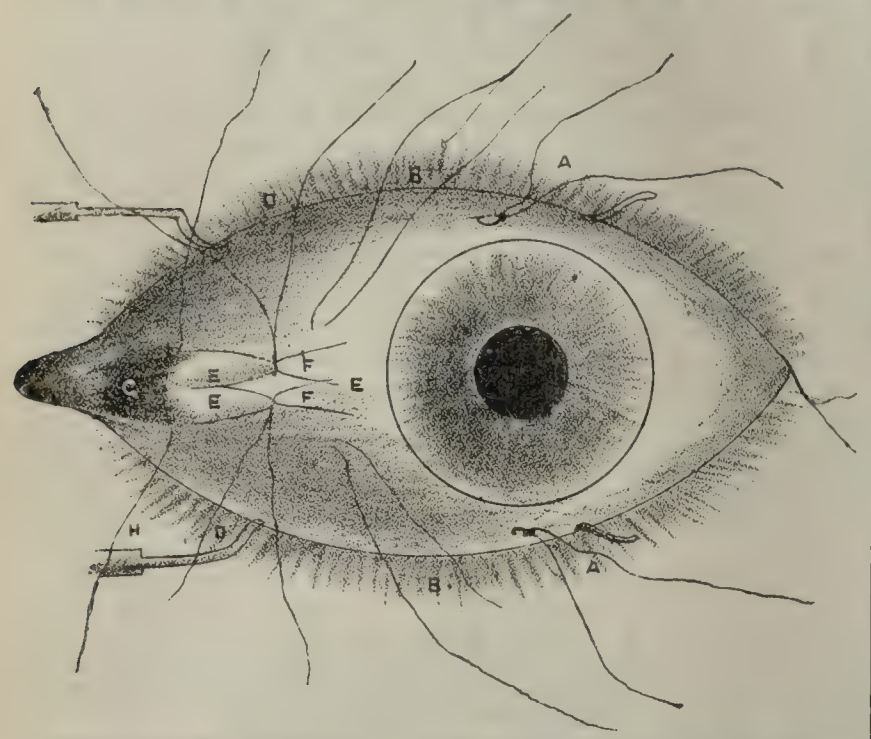
July 16th. Slight inward turning of right eye; spectacles ordered. R. + .25. L.+1.25=+1 cyl. / 45°.

July 27th. Eye s straight and keeps 10. No one could notice any defect of internal rectus, which can move the edge of the cornea barely into contact with the caruncle. Outward, the edge of the cornea barely can reach the external canthus. The neuralgia complained of before the operation has ceased. The operation is a complete success.

CASE III.—C. W. H., aged 29, at 4 years fell upon the sharp point of a ninepin, and internal squint followed. Five years afterwards (twenty years ago) the right eye was operated on for the squint. He says that almost directly afterwards the eye turned quite outwards, and remained there; that fearful pain followed the operation and lasted several weeks. [The eye continued for some time inflamed with proud flesh, and was much affected by dust or exposure. This operation was evidently a myotomy.] Until now the site of the wound has been tender, and very sensitive to conditions of health. In February, and again in September, 1888, efforts were made by an ophthalmic surgeon to explore the eye by an operation on the inner side (advancement); no improvement followed; but in October, 1888, he cut the external rectus with some improvement (as shown in the photograph). The efforts made on the inner side of the eye had caused the formation of much cicatricial tissue, over which the conjunctiva was irregularly puckered; this gave a very unpleasant appearance, and rendered the operation difficult to do and to finish neatly. I advanced the right internal rectus on March 31st. The patient remained in hospital fourteen days.

August 1st. Subconjunctival tissue still swollen, but less than before the operation. In extreme action of the external recti, the right cornea is short of the external canthus two lines, whilst the left underlies the canthus one line. On looking across the nose with each separately, the inner edge of the pupil of the left eye reaches the punctum; of the right eye, the inner edge of the cornea reaches a line beyond the punctum. When he looks at 20 feet the visual axis appear rather divergent, but no homonomous diplopia can be detected. The right eye image six inches on the right of, and the same distance above that of the left. The internal rectus is a little too fixed inward, and the globe is a little tied down by adhesions. The diplopia gives him no trouble; he

corrects it by the position of the head. He occasionally sees night-lights double. Vision is perfectly binocular at 4 to 6 inches from the eyes, and a little in the lower field. L., $\frac{6}{18}$ +3.50 cyl. /; R., $\frac{6}{5}$ +4.50 cyl. /. There is a slight feeling of weakness in the eye, but all discomfort has ceased. (Patient shown.)



A. Sutures through conjunctiva.
B. Sutures through the capsule.
D. Sutures through divided tendon.
E. Internal rectus tendon.
F. Tendon slit into two, and to each part a suture is fixed.
G. Internal rectus muscle.
H. Sutures darned through the muscle.

CASE IV.—W. D. J., aged 30, a compositor, a delicate, nervous man, says that he squinted when 2 years old, and that an operation was done to correct this at 6 years old. He believes that soon after this operation the left eye turned out. For twenty years he has done all his work in the printing trade with his right eye. He considered the left eye practically useless. He has not worn any glasses.

On June 20th, 1888, W. D. J. came to me with marked external strabismus. Left eye fixes distant objects $\frac{5}{6}$ 16J, barely improved by + 1 D + 1 cyl − slight conus. Inner edge of left cornea only just with an effort reaches the punctum as left fixes object in the middle line. Right squints outward 9 millimètres, and by extreme effort can converge just inside the middle line. Vision of right, $\frac{5}{6}$ −5D $\frac{5}{6}$.

June 29th. Tenotomy of external recti.

July 16th. Muscular advancement of right internal rectus, with perfect result as regards this muscle, but the left internus being incompetent, this was advanced on November 2nd.

The cosmetic result is now excellent, and the movements of all muscles in each eye is quite perfect. (Patient shown.)

CASE V.—T. J., a sea captain, trading on the West Coast of Africa, first consulted me in December, 1881. He was then aged 41. There was external strabismus of the left eye to such an extent that the pupil looked out at the external canthus when the right eye was in the first position. In fact the visual axes formed with one another a right angle (when the right eye was looking north the left eye was looking east), and there was scarcely perceptible movement possible with the left eye inwards. Vision, right, $\frac{6}{6}$ 16 J. + 4.50, $\frac{6}{9}$ 1 J. Left, $\frac{5}{6}$ 16 J. + 4.50 $\frac{6}{18}$ 4 J.

He said that an operation for inward squint had been done ten years before, and that since that time he had always squinted outwards. In 1877 he was ordered spectacles, and he thinks since that the squint outward is more pronounced.

The cast was so extreme that I did not advise any operation, but it was evident that great discomfort existed from severe conjunctival irritation at the middle of the eye, where the cornea should properly have been.

In May, 1889, Captain J. came back with corneal inflammation of the right eye, and as this required to be covered up, I recommended him to have an attempt made to straighten the left eye.

A wide vertical conjunctival incision was made; a ligature then passed around the stronger central portion of a thin aponeurosis which represented the internal rectus, and side stitches were passed above and below this; also a deep stitch by means of three needles involved the muscles far back; a free separation of all the parts from the globe was then made on the outer side; strong cicatricial bands representing the external rectus. The tissues on the inner side involved in the sutures were then separated from the globes, and attached to fixation knots above and below the cornea.

A month afterwards there was displacement outwards of only 2 millimètres; a good deal of thickening and granulation tissue occupied the site of the advancement. He could no longer, by the greatest effort, diverge the outer edge of the cornea beyond the external canthus; and the internal rectus could draw the centre of the pupil 3 millimètres across the middle line. There was some ulceration of the cornea on the inner side of the left eye from strangulation, but the eye was now quite comfortable and free from neuralgia and irritation which had for years before troubled him much.

Three months after the operation, eye movements distinctly improving. Cosmetic effect excellent.

A DISCUSSION
ON
THE REMOVAL OF BONY GROWTHS FROM THE EXTERNAL AUDITORY CANAL.

In the Section of Otology at the Annual Meeting of the British Medical Association held in Leeds, August, 1889.

I.—This discussion was introduced by the President of the Section, Mr. GEORGE FIELD, in an address which was published in the JOURNAL of August 24th, p. 415.

II.—SIR WILLIAM DALBY, M.B.Cantab., F.R.C.S.

Aural Surgeon, St. George's Hospital.

A BRIEF account of the circumstances under which the removal of bony growths from the external auditory canal by means of drilling came into use may, I think, possess some interest to this Section. Previous to the end of the year 1874 it had been present to my mind that the occasion would some day present itself when the immediate removal of a bony growth in this situation would become imperative, in consequence of the obstruction which it formed to the escape of pus behind it, pus which came from a tympanic cavity through a perforation. I had previously removed bony growths in four urgent cases by a method suggested by Dr. Clarke, of Bristol, namely, by passing into the growth through three needles a continuous current of electricity from six pairs of plates of a Stöhrer's battery. By this means the life of the growth was destroyed, and in a few weeks the dead bone became so loose as to be readily extracted. This process however occupied too much time to be of any use in cases where it was necessary at once to give relief. The difficulty which I had anticipated came under my notice in January, 1875.

A gentleman, aged 30, consulted me under the following conditions: A thick fœtid purulent discharge from the right ear blocking up the canal, pain in the ear, dull pain and uneasy sensations in head. The perforation took place when he was 4 years old, after scarlet fever. It being quite obvious that the growth should be removed without delay, I obtained the assistance of Mr. George Edgelow, who was at that time dental surgeon to St. George's Hospital. After seeing what was required, he had several drills made for the purpose such as he thought would be most useful, and on January 9th I drilled away the chief part of the bony growth and gave free egress to the discharge; after which all unpleasant symptoms passed away. I may say that the base of the tumour being broad it was not cut away at the base, but the upper three-fourths ground away; the first part of the proceeding consisted in drilling a hole into the centre, and, by a process of enlarging this, drilling away the upper part and then grinding down this surface.

Within six months of this date I operated in a similar manner on three other cases, but in each one the circumstances and the conditions were in several respects different. One was where a

large bony growth filled the canal on one side but in which there was no perforation, and it was thought best to remove it as the patient was going for several years to New Zealand, and the necessity might arise whilst he was away. This growth also had a large base, and took a long time to drill.

The next was in a gentleman who has three bony growths in each ear, meeting at their apices; a sufficiently large opening for the passage of sound was established by drilling. It was curious as showing the tendency to heredity that five years later I operated for the same thing on this patient's brother, and that I then saw their father who had a similar affection.

The other case was in a young man who had double perforation and whom I had three years previously taught to use a cotton pad, and which had given him good hearing in one ear. He then presented himself with a large bony growth in the other ear, which had been there when I first saw him, but had since increased, probably from the incessant local irritation of the discharge.

In a paper on this subject in the *Lancet* of January, 1876, I mentioned that I had employed the dentist drill in the treatment of these cases, and added: "I know of no such ready method of destroying these bony growths when their removal becomes imperative." I shall state further on how some of the difficulties which attended their removal in these early cases may be diminished. I have next to notice that in the following year, 1876 Dr. Mathewson, of Brooklyn, removed an exostosis, and that he recorded it in the report of the first International Otological Congress. In the following year I had the opportunity of seeing the first case in which Mr. Field operated. He brought the patient to me soon after the growths had been drilled away. They were completely taken away, and the meatus was filled as it usually is at that time with bone granulations during the process of repair. In this case, as has been recorded by Mr. Field, the relief was complete. Some time afterwards Mr. Field was good enough to show me the method which he employed by means of a steel guard to prevent the possibility of the drill slipping forward beyond the area occupied by the growth.

I will give the reasons why I have not found it necessary to employ this precautionary aid, in speaking of the methods which I have found to be the best in combating the difficulties attending the removal of these growths. These difficulties consist chiefly in the following:

1. The tediousness of the process owing to the extreme hardness of the growths.
2. The oozing of blood, which obstructs a clear view of what is being done in the action of the drill.
3. The tendency towards a wobbling movement of the drill.
4. The danger of the drill slipping.
5. The decision which must be arrived at as to the best method of drilling in accordance with the size, position, and number of the growths.
6. The difficulties when the external opening of the meatus is very small.

It must be borne in mind that in all the cases in which I have operated I have employed reflected light, and in the first series of cases good diffused daylight.

1. As to the tediousness of the operation. In the first three cases the patients were from thirty to fifty minutes under ether. They were laid upon a sofa close to a window, an ordinary dentist drill worked with the foot by Mr. Edgelow was used, and to be level, so to speak, with the work it was necessary to kneel on the ground; this I found to be extremely fatiguing, and in the fourth case Mr. Braine, who gave ether, suggested that the patient should be placed upon a flat couch raised a little higher than an ordinary writing table, so that I could sit upon a chair and so work with greater comfort. This idea I have followed out in all future cases, and the advantage of this I am sure will be found by everyone to be very great indeed, as the fatigue experienced is greatly diminished. What, however, is of more importance is that the time occupied can be lessened to at least one-third by the use of an electric drilling machine, which was introduced to my notice by Mr. Augustus Winterbottom, now the dental surgeon to St. George's Hospital. This consists of an ordinary Cutriss electro-motor, to the spindle of which is attached a long flexible arm, terminated at its free extremity by a hand-piece adjusted to hold any required instrument. The rate of the revolution is completely controllable by means of a resistance coil, and can be varied from 200 to 5,000 turns a minute.

It was found after various experiments that 2,500 revolutions was the limit of speed which could be used; for if the velocity was not sufficiently great, it was impossible to grind the tumours rapidly away without exerting pressure, and all such force it was most desirable to avoid for fear of slipping through the growth and injuring adjacent tissues. On the other hand, if the velocity was too great, such tremendous friction was produced that the burrs became immediately heated to a temperature which caused them to lose their temper and be blunted.

In fact, when I first began to use this machine, although in experimenting on a piece of bone or tooth that had been extracted the extreme speed could be used and rapidly cut through with extraordinary facility, it was found that twenty or thirty burrs were used up on these ivory growths, so that the speed had to be reduced to from 2,000 to 2,500 revolutions per minute. At this pace, however, the rapidity with which the growths can be ground away compared to what can be done by a machine turned with the foot is most remarkable.

2. The oozing of blood, which obstructs a clear view of what is being done. This used to be exceedingly troublesome. It was constantly necessary to dry the blood with absorbent cotton, and begin again throughout the entire proceeding. At the increased velocity the bleeding gives no trouble at all; the heat produced by the friction coagulates the albumen, and so checks the hæmorrhage.

3. The tendency to a wobbling action of the drill. This is obviated by being careful that the notches in the drills are not too deep; if they are too deep, it is almost impossible to keep the instruments steady, especially when they first touch the growth.

4. The danger of the drill slipping. In the machine turned with the foot it is undoubtedly necessary to exercise a certain amount of pressure in dealing with a substance so hard as the ivory growth, and no doubt it was this necessity which induced Mr. Field to use the steel guard to which I have referred. At the increased velocity there is not the necessity to exercise anything beyond pressure so slight, that supposing the drill to have passed through or by the growth, it would be in no danger of slipping onwards, as there is not enough pressure behind to induce this movement. This I regard as an immense advantage, and particularly so inasmuch as in a large proportion of cases in which an operation is necessary the growths so fill up the meatus that there is not space enough to get anything behind. Indeed it is well known that in many cases the growths so block up the canal that the smallest probe can scarcely be passed between them or between them and the meatus.

5. The best plan to be adopted in drilling. Generally speaking the best plan will at once suggest itself when the size and position of the growths have been considered. For example, when there are several, say three, the usual number meeting at their apices, it will be sufficient to grind down their apices till a fair sized canal is obtained. If there is one large growth which blocks up the canal to be dealt with, I have adopted the plan of first drilling into the centre of the growth, and gradually enlarging the opening, first with fissure burrs, then with conical ones, and, finally, with oval and round borts. In this way the upper half will generally come off. In some instances it has been enough to hollow out the growth; its life has been destroyed, and some weeks later its dead and shrivelled form has become loose in the meatus, and it has been removed as a loose foreign body by a hook, forceps, or syringing. (Specimen shown.)

6. When the external meatus is unusually small, and especially when added to this the growth is far enough in the meatus to make it difficult to put in a very large speculum, and so, with the speculum in position and light reflected down it, drill through this. I have not as yet had to drill with a condition like this, but, in common with others, may at any time meet with it; then I am quite sure that I shall be glad enough to make use of the plan which has been so successfully adopted by Mr. Sheild in a case which I saw exhibited at the Medical Society. Anyone who saw this case had an opportunity of observing a most perfect success; and besides the condition which I have named, I can fancy cases in which the partial separation and turning back of the external ear might be most desirable before commencing to remove an exostosis. There is no reason that, with this preliminary step, a drill should not be used; but whatever mode of removal be adopted, it would, without doubt, make it a comparatively easy matter, inasmuch as the growth would then present itself externally instead of in the secluded position in which it ordinarily lies.

With regard to the origin of bony growths in the external

auditory canal, I have seen no reason to alter the opinions which I expressed in the paper already referred to in 1876, when I said "that they are sometimes congenital, I feel tolerably confident; that they remain without any perceptible change in size for many years, I have satisfied myself beyond question; and that they should at one time increase synchronously (as they undoubtedly do) in either canal, and at another affect one ear only, is at least interesting if not capable of explanation. It would seem that they are at times called into existence by an irritation, so to speak; by the irritating influence of a discharge coming through a perforate tympanic membrane, and constantly passing over the meatus; at least, such an explanation appears not improbable when an exostosis is found in the ear so affected, whilst the other (a healthy ear) is free from these growths; but, on the other hand, such a theory will not hold true when the ear in question is to all appearance, and shown by all known tests, to be in perfect health, save the bony enlargement itself." The opinion also which I expressed at the International Medical Congress that sea-bathing appeared to induce the formation has been fortified by further experience.

I beg in conclusion to offer for consideration an opinion in regard to the removal of these bony growths—namely, that such removal should be strictly limited to cases in which they interfere with the free egress of discharge from a perforate membrane, or by completely closing the canal, interfere with the passage of sonorous vibrations, for it should be remembered that a very small passage is quite sufficient for purposes of hearing, and that if this becomes closed by a collection of cerumen, it may readily be removed by a small hook, so that any risk of water getting behind the growths by the use of a syringe is avoided. This simple treatment, conducted abont once a year, is all that is needed, and especially applies to those cases in which the growths remain, as they often do for many years, without perceptible increase. Should they increase up to complete closure, it will be time enough to remove them, or to remove sufficient of them to ensure the passage of sound, patients being, of course, carefully warned against putting their head under water either by bathing or in their bath at home.

III.—A. MARMADUKE SHEILD, M.B.Cantab, F.R.C.S.,

Assistant-Surgeon and Surgeon in charge of the Aural Department of Charing Cross Hospital.

DISPLACEMENT of the auricle from the skull posteriorly, as a method of treatment for certain cases of exostosis of the canal, has, possibly, not attracted the notice it deserves in this country. With the exception of the operation performed by myself, presently to be narrated, I can find no published case in the records of English surgery. Though some of our leading authors refer to the operation as an exceptional method of removing certain impacted foreign bodies, they do not allude to it as a mode of attacking exostosis. I am indebted to Mr. Purves for information regarding this operation; and he referred me to an operation of Knapp's performed in 1884, and published in the *Archives of Otology*, vol. xiv, 1885. The operation was long and tedious, but completely successful. The operator lays great stress on applying the chisel to the bone at the base of the growth, and not to the growth itself. The great force needful and used in this case illustrates how freely these growths can be dealt with when under complete command. Roosa and Buck, in America, have had recourse to it in cases of impacted foreign body. Langenbeck and Schwartze have adopted it in Germany. Knapp's case seems to have attracted little notice in America, for in a courteous letter Professor Roosa informs me that he is not aware of the operation having ever been performed, and that he will put the idea into execution on the first opportunity. Professor Schwartze, of Halle, in a latter dated June 26th, 1889, says he has performed and advised the operation, and so have some of his colleagues. The idea of detaching the auricle for cases of foreign body is like many other "inventions" of modern surgery, a very ancient one. It is referred to by Paulus of Ægina. In his sixth book, published about the year 1532, he speaks of it thus: "Wherefore, having placed the patient in a proper position, with his ear turned upwards, at the base of the ear, behind what is called the lobe, we make a small lunated incision, and with the circular part of an earpick we extract the body which is lodged therein."

It will here be convenient to introduce a short account of the operation performed by myself on September 17th, 1888. I was then not aware that the operation had been done on the Continent. The case was shown before the Medical Society of London on October 22nd, 1888, and formed the subject of a paper printed in the *Transactions* of the Society. Its details were briefly as follows: A young woman had long suffered from increasing deafness on the right side. A few days before admission she had become quite deaf, with attacks of agonising pain, vertigo, and vomiting. On examination the bony canal was found quite blocked up by an exostosis the size of a large pea, which sprang by a broadish base from the posterior wall. The watch was heard only on contact. The operation was performed as follows: A curved incision 1 inch in length was made below and behind the auricle, at its junction with the skin of the mastoid region; this was gradually deepened until the bone was reached. There was free bleeding from the posterior auricular vessels, which was, however, readily controlled by sponge pressure and pressure forceps. When the junction of the cartilage with the bone was clearly defined the former was divided, and the lining membrane of the canal was pushed forwards, so that the exostosis was reached almost behind the periosteum. The exostosis could now be seen and just touched with the pulp of the little finger. A small sharp chisel was applied to the bone at its base, and some smart taps with a mallet soon cut through the osseous tissue and separated it. The auricle was replaced, and accurately adjusted by superficial and deep sutures, and the parts externally and internally dressed with iodoform. A quantity of ceruminous material was washed out with the syringe. The after-history of the case was one of uninterrupted recovery; all bad symptoms vanished, the hearing was at one restored, and the auricle united with so little deformity that when the patient was shown it was with some difficulty that the scar of the operation could be demonstrated. The membrana tympani was intact, and there was no history of previous otorrhœa.

It is of importance that the cartilage should be incised at its exact junction with the bone, if this is done inferiorly, as Trolstch suggests, the operator can approach further towards the interior of the canal. Bleeding may be troublesome, since the small vessels necessarily divided are not far from the parent trunk. Sponge pressure readily arrests this, and it is better not to proceed unless the parts are well exposed to view. The average length of the adult auditory canal is about $1\frac{1}{4}$ inch. The length of the cartilaginous canal is, roughly speaking, a little less than half this measurement. Accordingly by this operation we may approach fully half an inch nearer to the site of any operation performed in the bony canal, a matter of no small moment.

I would further draw especial attention to the fact that this operation fully exposes the narrowest part of the canal, and that hence any growth or foreign body too large to pass may be more readily extracted. Should the cartilaginous canal be narrowed by chronic inflammation or from any other cause, this operation may be most useful when an exostosis has to be dealt with. It must be recollected, however, that this proceeding is not applicable to every case of aural exostosis. The dense ivory multiple exostoses, with bases broader than their summits, usually require the operation of drilling, as unanimously recommended and generally undertaken. The marvellous rapidity of the revolutions of the improved drill do away with the need of exerting much pressure and hence minimise the danger of slipping of the instrument. In cases of great difficulty, however, I cannot but think that the operation of displacing the auricle would afford useful access to the growth, which thus could be more directly acted upon by any machine the operator may select. For though the distinguished President of this Section recommends the introduction of a curved guard, it is only right to remark that in certain cases the canal is quite blocked by the exostosis, there is no room for such an instrument, and it is in just these cases that operation becomes the more urgently necessary.

Cases of cancellous exostosis with narrow necks may be readily removed by the scissors or snare, *per vias naturales*. Yet if they entirely block the canal, it is exceedingly difficult to get these instruments to act upon them. Should the external canal be narrowed the difficulty is increased. The force used is a matter of importance. In my own case the blows upon the chisel could hardly have been judiciously exerted unless the part operated upon was quite under command.

Lastly the performance of this operation is surely justified in cases where severe cerebral symptoms suddenly arise in connection with exostosis. This demands a speedy removal of the growth. The following conclusions may be arrived at.

1. That the operation of displacing the auricle is free from any special difficulty or risk, and gives remarkable access to the deeper parts of the canal.

2. That it may be undertaken in special cases of impacted foreign body, or in cancellous exostosis, or possibly as an adjunct to the operation of drilling.

IV.—THOMAS BARR, M.D.Glas.,

Surgeon Glasgow Hospital for Diseases of the Ear.

It is admitted by all that a large number of cases of exostosis of the external auditory canal do not call for any form of treatment, either operative or otherwise—cases in which the lumen of the canal, while to some extent interfered with by one or more osseous growths, is still amply sufficient to admit the sonorous condensations and rarefactions. Such forms of exostosis are not infrequently observed conjoined with other affections of the ear for which we have been consulted. I wish, however, in this short communication to refer to those cases in which the osseous tumour seems to close entirely the external canal of the ear, producing almost total loss of hearing power, and yet where, after a period of treatment not involving operation, the hearing returns to its previous condition. The following three cases taken from my notebook illustrate what I mean.

The first was that of a joiner, aged 47, who consulted me three years ago owing to serious loss of hearing. The lumen of the left external auditory canal was occupied by a reddish, globular mass, evidently springing from the posterior wall, probably about the junction of the osseous with the cartilaginous portion. It was impossible to pass a fine wire loop between the wall of the canal and the tumour at any part of its circumference. When touched with a probe the tumour was felt to consist of a hard, resisting substance, covered with somewhat swollen, thickened skin. In the right ear there was no trace of exostosis, but the hearing of this ear had for fourteen or fifteen years been practically lost, so that the patient relied exclusively upon the left ear, which was the seat of the bony growth, and it was in consequence of the serious and sudden impairment of the hearing in this ear that he anxiously presented himself for advice. For five years he had on four occasions become suddenly deaf in his left, or as he called it his good ear, but on each occasion the act of syringing had cured the deafness. After the last of these, however, which happened in July, 1885, he thought that the hearing did not return so completely or satisfactorily as before. About a fortnight previous to his first visit to me he called on his family doctor regarding another matter; and the doctor, interested in the condition of the ear, which he had treated in July, looked into it and remarked that there was another collection of wax, which he attempted to remove with an instrument, causing great pain. On the way home from the doctor's house he became quite deaf on that side. In both ears the tick of a watch, which in normal hearing is perceived 40 inches from the ear, was not heard even on pressure upon the auricle. The watch was heard, however, on both sides when applied to the temple. The whispered voice was understood only when close to the ear on the right side, but not at all on the left. The vibrating tuning-fork, when applied to the middle line of the head, was heard better; indeed, almost exclusively on the left, that is the worse ear. There was, in addition to the deafness, a constant and most disagreeable buzzing in the left ear. It may be mentioned that, as a boy and lad, he was very fond of bathing, and, living as he did on the banks of a canal, he was in the water very frequently. However, for two years he had given up bathing, owing to his suspicion that it injured his ears. The patient was very averse to the idea of operation, and determined to wait for a time. I thought it might be possible, by the employment of slight local abstraction of blood, and counter-irritation behind the ear, to remove the tumidity of the cutaneous lining, and allow of the restoration of a chink through which sound waves might again pass. I therefore applied leeches over the tragus and the liniment of iodine over the mastoid process. I attempted also on several occasions to inject a weak warm solution of bicarbonate of soda, by means of a fine vulcanite tube pushed in as far as possible between the tumour and the wall of the canal. After a few days the hearing somewhat improved, so that the watch was audible when pressed upon the ear. He returned to his home in a distant part of the country, and after four months he wrote me, saying that the hearing had for two months been all that he could desire. As he was to inform me, in the event of his becoming worse, we may assume that the hearing has continued fairly good.

The second case was in the person of an eminent Scotch divine, who has during the past six years been twice under my care for extreme loss of hearing in the right ear. Just inside the external canal of the ear there is a globular bony growth, which apparently completely closed the canal. On each of the occasions on which the reverend gentleman consulted me a slight inflammation, with the formation of some granulation tissue, had taken place at the orifice of the ear. The finest probe or loop could not be pressed between the growth and the wall of the canal. Removal of the granulation tissue and careful antiseptic cleansing and drying brought about, in the course of two weeks, restoration of the previously good hearing. Only the finest aperture or free space between the growth and the walls of the canal at the anterior part was then found to exist, and no disturbance of the hearing has taken place for fully three years.

The third was the case of a gentleman, 74 years of age. He was sent to me by a medical practitioner more than two years ago, with such extreme deafness in both ears that loud shouting near to the ear could not be heard; there was, however, no tinnitus. In the right ear the deafness was due to chronic purulent inflammation of the middle ear, with evidently labyrinthine complication. In the left a globular bony swelling completely occupied the lumen of the canal just within the orifice of the ear. The question of operating was considered, but the patient had insuperable objections. I thought it probable that the recent loss of hearing in the left ear was due, partially at least, to swelling of the cutaneous lining over the bony tumour, as well as to the presence of ceruminous secretion beyond the obstruction. I employed leeches over the tragus, the liniment of iodine behind the auricle, over the mastoid, and the occasional injection through a very fine tube introduced as far as possible between the growth and the walls of the canal of a warmed solution of bicarbonate of soda. For several weeks no change in the hearing was apparent, but afterwards gradual improvement took place, and when I saw him last, three months after he had first visited me, the hearing had returned and was as good as it had been previous to the occurrence of the deafness. A little chink now existed between the tumour and the wall of the canal. The purulent disease of the other ear was treated successfully in so far as the secreting process was brought to an end, but the hearing in this ear did not improve.

These cases show that we need not always, even where the external auditory canal seems entirely closed by bony growths, resort to operative measures; that at any rate, where patients have insuperable objections to operation, we are not justified in prognosticating a permanent state of deafness. In many cases a little delay would, in the absence of urgent conditions, such as purulent retention in the deep parts, be no disadvantage. We know that a very narrow chink is sufficient to admit of the sonorous waves; that if from any cause the cutaneous lining of the canal or over the osseous tumour is temporarily swollen, the chink is readily closed. In the first case, for example, there is no doubt that, owing to the slight irritation caused by examining and manipulating the ear, the skin lining the tumour became swollen, closing the fine fissure which had previously existed between the tumour and the anterior wall of the canal. After the gradual disappearance of the swelling, the previously existing space was restored. In these three cases congestive swelling was, no doubt, the cause of the closure of the chink, but we know that the closure is often brought about by the presence of ceruminous and epidermic accumulation, and then the removal of these will immediately restore the hearing. In such cases as I have related, however, where slight, almost imperceptible swelling of the cutaneous lining produces the closure, we are apt to regard operative removal as the only method likely to improve matters; but it is well to remember, in considering the question of operation, that there are cases in which the hearing may spontaneously, or as the result of simple treatment, be restored; and that operation may often thus be postponed for years, and may, indeed, never be called for.

V.—RICHARD ELLIS, F.R.C.S.Edin.,

Senior Surgeon to the Newcastle-on-Tyne Throat and Ear Hospital.

Mr. Ellis related a case of osseous growth of the auditory meatus simulating a foreign body and causing deafness. The patient, a girl aged 17, came under his care at the Newcastle-on-Tyne Throat and Ear Hospital for deafness of the right ear, for which, it was said, no cause could be assigned, as she had been perfectly healthy. The deafness, it was stated, had come on gradually, and at the present it was complete for ordinary hearing purposes as regards the affected ear. On examination it was found that the watch could only be heard on contact, but the

tuning-fork, when placed in vibration on the vertex, was heard loudly in the affected ear, thus clearly indicating some derangement of the conducting apparatus. On introducing the aural speculum it struck a hard substance supposed to be a foreign body, but gave no pain. A probe could be passed round this body, which was diagnosed as an exostosis springing from the annulus or bony portion of the tympanic ring. Fortunately, the external or presenting portion of the growth, from its nipple-like form, allowed of its being seized by a dentist's curved forceps, and, on consultation with the dental surgeon, Mr. W. Graham Routledge, who was present at the time, a strong twisting and pulling force was applied, and it came away as shown here. Its removal was followed by pretty free hæmorrhage. The girl remained under care for a week, when the ear was carefully syringed and some clotted blood removed, on which it was found that the hearing was completely restored. In an experience of 10,000 aural patients he had never seen a growth of this nature before in one so young.

VI.—Professor ADAM POLITZER, M.D.,
Vienna

The following short communication was read on behalf of Professor Politzer, by Mr. George Stone (Liverpool).

1. The first specimen is a skull, which was found in the island of Borneo by Dr. Schwarz, during the expedition of the Austrian frigate *Novara*, and was afterwards added to the collection of skulls in the Anatomical Museum of Vienna. In the right external auditory meatus there is, on the posterior wall, corresponding to the inner superior portion of the os tympanicum, a flat elevation of the bone, and symmetrically with this a similar one in the external meatus of the left ear. Here we notice besides, on the inner portion of the lower and anterior wall of the meatus, an exostosis of the size of a small pea, broad at its base and directed backwards and inwards, and by which the lumen of the inner part of the meatus is markedly narrowed. With the exception of these peculiarities there are no signs of any pathological process, either on the external meatus or in the tympanic cavity. As to the nature of this exostosis, whether it is to be regarded as a peculiarity of race or as a pathological production, there is nothing to enable us to determine.

2. Of no less interest is the second specimen, a temporal bone with a pedunculated exostosis at the entrance of the osseous meatus. This preparation was presented to me for my collection by Professor Zuckerkandl, of Vienna, who found it in a charnel-house, and pronounced it to be the temporal bone of a male adult. As to what caused the exostosis could not be determined from the examination of the rest of the temporal bone. The growth springs from the outer part of the anterior convoluted portion of the tympanic bone, with a small, slender pedicle, and, about as large as a pea, it occupies, with its uneven, tuberculated surface the anterior half of the lumen of the external meatus. The space between the exostosis and the lower wall of the meatus just allows a sufficient view in the direction of the inner wall of the tympanic cavity, on which no anomaly can be proved to exist. On the other parts of the external surface of the temporal bone there is no evidence of any pathological change.

3. An exostosis of the size of a pea, arising from the lower wall of the meatus. This was removed from a healthy man who had never had syphilis, and who came to my clinic for a slight middle-ear catarrh. The exostosis was attached by a constricted base to the lower wall of the osseous meatus at its outermost edge, so that, on drawing back the auricle, it immediately became visible behind the outer opening of the ear. The tumour being favourably situated, its removal by means of a flat gouge was at once proceeded with, and by two moderately strong blows of the mallet the exostosis was cut away from its base. The surface of the wound, sprinkled with iodoform powder, was completely cicatrised in a few days without suppuration occurring.

4. Microscopic sections through a roundish, compact exostosis on the posterior wall of the meatus. The small, flat tumour, half the size of a pea, is from an elderly man in whom the lumen of the external meatus was narrowed by several exostoses, arising from the anterior, inferior, and posterior walls, and attached by a rather broad base. After chiselling away the exostosis resting upon the posterior wall, there remained, after moderate suppuration, a sufficient width of the meatus. The microscopical examination of the decalcified exostosis showed a dense, here and there lamellar, structure of the osseous tumour (eburnation), with scanty vascular formation in the bony mass.

Sir William Dalby said that, thanks to the late Dr. Cassells, to the specimens sent by Professor Politzer, and to what had been said at that Section, the pathology of bony growths was now fairly well understood, both as related to ivory growths, namely, hyperostoses, and those arising from the juncture of the bony and cartilaginous canal, namely, true exostoses. The first case operated on by himself was January 9th, 1879. He found now, by using an electric drilling machine, he secured increased rapidity and safety when it became imperative to remove them. This necessity he thought should be confined to cases where the growths prevented the escape of pus coming from a perforate membrane, and those cases in which they so completely closed the canal as to induce great deafness.—Professor Urban Pritchard agreed with Sir William Dalby in his pathological division of these bony growths. But he usually divided the multiple hyperostoses again into two, those due to old standing otorrhœa and those due to some other cause. He believed these latter were due to gout as a strong predisposing cause, with frequently bathing as an exciting cause. In all cases the single pedunculated exostoses should be removed, and removed early. Multiple exostoses, in the large majority, should be left alone, but when they were likely to completely occlude, or when from accidental form they could more easily be removed, they might be removed. But where otorrhœa existed, and there were exostoses which were blocking, they should be removed.—Dr. Thomas Barr was impressed with the uniformity of statements made by patients as to the entrance of water into the ear as an exciting cause of osseous growths. The great majority of such patients had been brought up by the seaside or riverside, and were very frequently in the water. These growths seemed to be much less frequent in Scotland than in London, judging from the experience of speakers. Their frequency in hospital patients as compared with private patients was very striking. His experience of patients suffering from this disease did not bear out the view of a gouty origin.—Professor Guye (Amsterdam) said he had only once operated on exostoses according to the method of Knapp, but had found the bone at the base of the exostosis very hard indeed. He agreed with Dr. Barr that very often the process might be arrested and operation made superfluous by simple measures, especially by keeping an opening between the exostosis and the wall of the meatus by a probe and a little oil.—Mr. R. Ellis (Newcastle-on-Tyne) agreed with some of the preceding speakers as to gout, at least as to its frequent connection with aural exostosis. In many cases he had seen there was a distinct history; in others, a strong suspicion. Again, they were generally known to occur in middle-aged men who had lived rather freely, especially as to malt liquors. Although this case of his own occurred in a female, he believed that these growths very rarely occurred in females; indeed, out of numerous cases, that narrated by him that day was the only case in which he had found it necessary to operate in the case of a female.—Mr. Charles G. Lee (Liverpool) referred to the infrequency of exostoses in the neighbourhood of Liverpool. A case lately occurring in his practice was that of a lady who had been addicted to sea bathing, and thought that their comparative infrequency in the female sex was perhaps due to the habits of females.—Mr. Marmaduke Sheild said there was no proof that gout *per se* caused the growth of exostoses in other parts of the body. Nevertheless, in the gouty, eczema and other irritations of the lining membrane of the canal were common, and this might easily be a predisposing cause of bony growths which thus were said to occur in the gouty.—Mr. Bendelack Hewetson remarked on the extreme rarity of aural exostoses in Yorkshire. No single example had ever occurred in large infirmary clinics over a period of many years, and in private practice it was very rare, and only occurred in the higher classes of patients. He believed it to be intimately associated with a gouty diathesis. As to the various modes of operation, he thought that all must agree that it was a purely mechanical question, which must be decided according to the peculiarities of the individual case. He had only operated successfully with the dental drill, supplemented by the chisel and hammer, when it was necessary. He was sure it was better to combine the two methods, except in rare instances. He was struck by the avoidance by the various speakers on this subject of the question of anæsthetics. It seemed to be of great importance not to give an anæsthetic if possible, but to locally anæsthetise the usually very tender outer covering of the exostosis by a cocaine solution of 10 per cent., especially during the operation. He had recently successfully

removed an ivory exostosis, very "sessile," occupying an interval of one hour and forty minutes' duration, the pain being kept well within bearable limits by the repeated instillation of the cocaine solution. The great assistance to the operator was obvious. The foot dental drill was used, and the whole operation completed with two drill points, lent him by his friend, Mr. Henderson Nicol, surgeon dentist, of Leeds. The subsequent progress of the case had been eminently satisfactory.—Mr. GEORGE JACKSON asked the meeting if anyone had met with any case of exostosis arising from a violent blow, and related a case in which an exostosis was said to have arisen from violence in the case of a man, who when a boy was thrown down on the deck of a trawler and violently kicked on the ear. The exostosis when seen completely blocked the ear, and was accompanied by occasional discharge, with head symptoms; the man refused any interference.—Mr. WILLIAM HILL (London) said that his own operative experience was limited to twelve cases which he had helped Mr. Field to drill. The guard had only been necessary on one occasion. On clinical grounds non-pedunculated osseous growths were best classified as hard and soft. Soft growths were invariably, in his limited experience, in association with suppurative discharges and more frequently met with in women, amongst whom ivory hyperostoses were rare. He alluded to a case of Mr. Field's, of complete circumferential hyperostosis in which the lumen of the meatus was reduced to a mere chink, and in which the hearing had been much improved by the only possible operation—that of drilling. Both soft growths and pedunculated ones could be easily treated by either snares, chisels, or forceps, but for the mole-hill-shaped ivory growths no operation appeared to be so safe and sure as the drill. The guard was useful in removing the apices of small multiple exostoses when the lumen of the meatus had been increased by the removal of the larger growths.—In reply to a question, Sir WILLIAM DALBY said he had never seen less than 14 cases of osseous growth in one year, and never more than 40 in one year. The greatest number he had operated upon in one year was 9.—The PRESIDENT said he had operated on 21 cases in the past 18 months; 12 of them in both ears, all men, double ivory exostoses; 3 in one ear, ivory exostoses, in men. Six of the softer growths in one ear, all in women, and all had had discharge from the ear at same time. Out of the 15 men (27 ears operated on), only 2 had had any discharge of pus before operation, and that from pressure of the growth on the opposite wall. When pus had been coming away from the ear for some years previous to the formation of an osseous tumour, the growth would be soft invariably, and was very easily removed without drilling 1. Colonel T., aged 45 very deaf, was told he must give up his regiment unless he got relief. Used the drill; operation lasted 25 minutes right ear, 15 left. Was obliged to go out in 10 days' time in command of his regiment to the Cape. Mr. Field heard from him afterwards to say he was hearing perfectly in both ears. Cause, sea-bathing. 2. Mr. R., aged 34, stockbroker, very deaf in both ears, very depressed about himself. Operated on both ears by dental drill worked by electricity; altogether lasted 50 minutes. Had seen him a week ago, was quite well, and regained his hearing in both ears. Attributes growths to bathing. 3. Mr. B., aged 39, operated double exostoses; one ear stone deaf, the other very deaf at times. Operation lasted 40 minutes. Quite well. 4. Mr. W. S. M., aged 6, sent to the speaker by Dr. Stephen Mackenzie; sent home from India for extreme deafness. Used electric drill both ears; operation lasted 40 minutes. Had very great pain in one ear afterwards, but subsequently returned to India with perfect hearing. 5. Mr. W. Y. C., aged 55, a magistrate, sent to me by Dr. Trouncer. This gentleman had to give up his work on account of loss of hearing. Drilled both ears in 35 minutes. Went back to his work in a month's time with perfect hearing. 6. Mr. G., aged 30, both ears drilled; 40 minutes' electric drill. Great pain afterwards; regained hearing in one ear; the other, from which he had had a chronic discharge for many years, improved. 7. Mr. W., aged 52, sent by Dr. Horne; drilled both ears 45 minutes; some pain afterwards in both ears, but took longer than most patients to get well. 8. Mr. T.; drilled both ears in 50 minutes; got quite well. 9. Rev. J. R., aged 40; drilled both ears; got well. 10. Dr. R. P., aged 43; drilled both ears in 35 minutes; got quite well. 11. Mr. J., aged 37; drilled both ears; improved. 12. Mr. A. B., drilled both ears in 50 minutes; ten days ago going on satisfactorily. In two of these cases he was sure it would have been impossible to use the chisel and mallet, as the growths were very deeply seated, and extended right across the meatus. Next three cases were in men, hard growths, drilled in one ear. 13. Mr. M., aged 51, sent by Mr. Thomas Smith; operated on one ear 20 minutes; got quite well, and regained his hearing. He was very deaf in the other ear from childhood, with large perforation, but there was no growth of bone. 14. Mr. A. B. W.; operated one ear, lasted 15 minutes; quite well afterwards. 15. Mr. C. B., aged 22; had a very large growth blocking up one year; operated on a fortnight ago; going on well. 16, 17, 18, 19, 20, and 21. Softer growths in one ear, all in women, and easily removed. These cases, he thought, went to strengthen conclusions long since arrived at: That aural exostoses could be easily removed with the drill. That in cases of multiple exostoses it was well to remove the apices of two or more exostoses in one meatus, or the operation might have to be repeated. That they must not be considered as at all necessarily the outcome of gout, rheumatism, or syphilis. That some cases of multiple exostoses became wedged together, so that increase at the extremities was arrested, and a triangular central space was left large enough to afford a free passage for sound, rendering operative measures unjustifiable. On the other hand, their speedy removal was indicated wherever they hindered the elimination of discharge: caused much pain by pressure: or prevented audition. In closing the discussion, Mr. Field said he preferred, after experience with both instruments, to use the foot drill, because it was more under control and more easily stopped than the electric drill. In operations the apex of the growth must be removed, otherwise the growth would return. He did not agree with the opinion that osseous growths were caused by gout; they were more likely to be due to mechanical irritation of the ear. His operations now rarely lasted more than twenty minutes for each ear, and he seldom had recourse to the guard, although that instrument had been of much use to him when less experienced. Mr. Field felt bound to say something in reply to some remarks which had fallen from Sir William Dalby regarding his (Mr. Field's) claim of priority in operating for the removal of ivory growths of the auditory meatus by means of a drill driven by a dental engine. Sir William Dalby doubtless had used the dental drill at the date claimed for the removal of an osseous growth in the ear, but reference to Sir William Dalby's three cases brought out the fact that they were not instances of ivory hyperostoses, but merely those soft osseous growths which occasionally resulted from continued suppurative discharges from the tympanum, and which were as easily and usually removed by other methods. He was still of opinion that the removal of ivory growths had not, up to the time of his (Mr. Field's) first operation in 1877, been carried out in this country by Sir William Dalby or anyone else. The latter was present at Mr. Field's third drilling operation for ivory exostosis in 1878, and announced in the presence of others that he had never performed such an operation. It was not until Mr. Field had published two long series of cases some years later that Sir William Dalby laid any claim to priority. Mr. Field had letters and memoranda in his possession which left no doubt in his mind that it was not his memory which was at fault.—Sir WILLIAM DALBY explained that he was present at the operation mentioned by Mr. Field in order that he might witness the use of the steel guard used by the latter.—At the suggestion of Mr. URBAN PRITCHARD, the matter was allowed to drop.

ON APROSEXIA, BEING THE INABILITY TO FIX THE ATTENTION AND OTHER ALLIED TROUBLES IN THE CEREBRAL FUNCTIONS CAUSED BY NASAL DISORDERS.

Read in the Section of Otology, at the Annual Meeting of the British Medical Association, held in Leeds, August, 1889.

BY DR. GUYE,
Professor of Otology at the University of Amsterdam.

DURING the last ten or twenty years a great number of authors in various countries have drawn attention to disorders of the nose, and to the remote effects of such disorders in other organs. Voltolini was the first to observe the dependence of many cases of asthma on the nasal polypi. Hack, the lately deceased professor in Freiburg, described a series of pathological nasal reflexes, and, although the rather complicated theory by which he tried to

explain them is open to deserved criticism, he has the merit of having promoted observations and discussions which have much enlarged our knowledge of these pathological reflexes.

I believe it is generally admitted that we have the right to consider as pathological nasal reflexes only such symptoms as can be looked on as modifications of the normal nasal reflexes. So may the normal expiratory nasal reflex, sneezing, be changed in nasal cough and in asthma; so may the vasomotor reflex be exaggerated and produce local hyperæmia of various regions of the head and face, morbid sensitiveness to alcholic stimulants; so may the secretory reflex give rise to unnatural flowing of tears and to conjunctivitis, as in hay fever. But besides abnormal reflexes, nasal disorders will produce disturbances in contiguous organs which are open to other more simple mechanical interpretation. All aurists are but too well acquainted with the influence of nasal disorders on the tympanic cavity, and on the organ of hearing.

That nasal disorders, acute coryza, as well as the most chronic forms of nasal obstruction, influence the cerebral functions in a more or less serious manner has been known to all who have given any attention to diseases of the nose; but it has not, I believe, received the attention it deserves, especially of the general practitioner. If it were known generally how many cases of chronic headache, of inability to learn or to perform any mental work, are due to chronic disease of the nose, many of these cases would be easily cured, and the number of children victims of the so-called over-pressure in education would, I firmly believe, be notably reduced.

I have for a long time past made a point of studying the impairment of the cerebral functions by disorders of the nose, and I have given the name of aprosexia (from *προσέχειν τὸν νοῦν*) to one of the symptoms which seem to me to be next to headache, the head-symptom, or in other words, the elementary and generally the initial symptom. What I call aprosexia is the inability to fix the attention on any definite more or less abstract subject. A young man—a student, for example—will try to read. After having read a sentence he will have to read it again, three, four times and more, and in some cases he will then know what he has read, and go on, always struggling with the same difficulty. In other cases he will not know it even after reading it repeatedly, and will throw away the book or newspaper and fear to take it up again. If it was a lesson which he had to learn, and he has at last been able to master it, after one or two days he will have forgotten all about it, and have to begin anew. The slightest mental exertion will give him headache, he will not be able to learn anything by heart, and will not get on with his studies. Some schoolboys will feel an inability to get on with some special branch of study—for example, mathematics—others with history, being unable to remember any dates or numbers. The headache will be sometimes permanent, but mostly intermittent; in some cases it will be there regularly in the morning after rising, in others it will come up at school-time, as the result of the slightest mental exertion.

The first case which struck my attention was that of a boy whose sister was under my treatment for ear disease in connection with nasal obstruction. The father asked leave to bring me his boy, who had no ear-disease but who could not breathe through the nose, and could not learn anything. I found an absolute nasal obstruction, and the boy, who had been to school for a year, had not been able to learn more than the three first letters of the alphabet. I removed a mass of adenoid tumours from the naso-pharyngeal cavity, and when his father brought him again, a week later, he told me that his son had learnt the whole alphabet in that week, and that he thought him all right now.

This case remained for a long time a unique one in my observations, and it is only since more general attention has been given to the remote effects of nasal disorders, that I found out how numerous are the cases resembling this one in more or less particulars.

It is with aprosexia as with giddiness in Ménière's disease. If the aurist asks all his patients complaining of ear disease if they suffer or have suffered from giddiness, he will receive an affirmative answer in a great number, perhaps in the majority of his cases. If the physician in all cases where giddiness is complained of makes a rule of examining the state of the ears, he will as well as the aurist discover a relation between giddiness and ear disease in a great number of cases. But the patient will rarely find it out for himself; on the contrary, very often he will be quite incredulous when he is told that his giddiness and his vomiting are caused by the state of his ears. So you may treat a great number of cases of nasal obstruction, may be, on account of secondary aural or perhaps laryngeal lesions; and if you do not inquire after the existence of aprosexia or headache, very few patients will complain of these symptoms. If, on the contrary, you make a rule of inquiring after them in every case, you will be astonished at the frequency of these complaints. It is of more importance still that the medical men in general practice be impressed with the frequency of that relation, and that they make it a rule in every case of habitual headache and inability to work and loss of memory, to inquire after the state of the nose, and to ascertain if the normal nasal respiration be not impeded, and habitually or temporarily superseded by breathing through the mouth.

I will not tire your attention, gentlemen, by the particulars of numerous cases, some of which I have published in the *Deutsche medicinische Wochenschrift*, 1887, No. 43, and 1888, No. 40. I will only give a summary of them in a few words, and then make a few remarks on the interpretation of the symptoms and on their treatment.

Some of the cases are boys at school or at college, who complain of headache as soon as they have been for an hour or two at school. The master, seeing that they are unable to work, sends them to take a walk or sends them home to take a holiday of some weeks. They are treated by rest and iron, and when they come back the same symptoms recur. After a local treatment of their nose and naso-pharynx, and generally as soon as their nasal respiration is restored, they are quite well, and get on with their work as others.

Then I have seen students working for an examination who, having tried repeatedly to read with a special tutor, and observing that after a week they had forgotten everything, gave it up for half a year, and tried again with the same result. After a local treatment of the same kind as mentioned above, their working power was restored, and they took their degree after a few weeks' work.

Nearly all the cases I observed were boys or young men at school or at the university. The only female case was a young girl preparing for the study of pharmacy, an exception which confirms the rule. As a rule, in fact, cases of aprosexia nasalis are found in young people studying or preparing for study, or especially for examinations, and generally they would be looked on as cases of over-pressure in schools.

Now I am far from denying the existence of over-pressure in education, especially in the latter half of the nineteenth century, nor of our duty to try to keep it within rational limits. But when we see a number of cases, which to a superficial observer are victims of over-pressure in schools, give way to a local treatment of the nose, we must acknowledge that what is looked on as the result of over-pressure is very often caused by a morbid state of the individual, and is open to a very effective treatment.

As to the physiological interpretation of the symptoms of aprosexia, we must first keep in mind that in a psychological aspect the inability to direct the attention on a particular subject, and to fix cerebral impressions in the memory looks much like a symptom of fatigue or cerebral exhaustion. But we cannot logically call something a symptom of fatigue when it exists very markedly in cases where there can be no question of fatigue.

It may of course be, and in fact it is, very often caused by fatigue; and, in the same sense as Dr. Charlton Bastian, speaking of aphasia, in a meeting of this same Association two years ago, said very rightly that after a certain age we all of us suffer more or less from aphasia, so I might say that we all suffer from aprosexia when we are tired or overworked. But the question is, How is it that this cerebral symptom of exhaustion is produced by nasal disorders? I think in this way: Cerebral exhaustion must be the consequence of one of two causes. Either the nutrient matter which has to repair the loss produced by the function of the brain is not yet sufficiently procured or assimilated or the products of the "tissue-change," which have to be eliminated, are incompletely removed. This removal will, according to physiological principles, have to take place, partly, at least, by means of the lymph vessels; and, in this respect, we must point to the fact found by Axel, Key, and Retzius, that large lymph vessels leave the cerebral cavity together with the fibres of the olfactory nerve. It is highly probable that structural changes in the nasal mucous membrane, and especially such as will exert pressure on the lymphatics, will impair or prevent the current of the cerebral lymph through the nasal mucous membrane. The retention of the products of the chemical processes in the tissues of the brain will lead to results which we may expect to be the same as those of physiological exhaustion, that is, of fatigue.

Besides structural changes, it is evident that local hyperæmia, which is so frequently seen as a pathological nasal reflex, will be apt to produce the same pressure on the lymphatics. And in this respect some cases of paroxysmal vasomotor aprosexia are very interesting. In these cases the aprosexia was not constant, but was produced especially by causes which influence the vasomotor reflexes, as change of temperature, coming from the cold in a warmed room, and the paroxysms were accompanied by very marked redness of a spot on the forehead, corresponding to the frontal sinus. These paroxysms lasted from a quarter of an hour to an hour or more, and the patient was unable to understand and to recollect things which were told or explained to him during that time, which he could do quite well as soon as the paroxysm was over.

As to the way in which headache is produced in cases of disorders of the nose, especially by swelling of the mucous membrane, I have proposed the following explanation. The air contained in cavities communicating with the nose will be resorbed, and so its pressure diminished, as soon as the free communication with the nose is impaired by the swelling of the mucous membrane. So it is with the tympanic cavity, with the frontal and other sinuses. Such a cavity will then begin to act as a dry cap, and produce collateral hyperæmia *in vacuo*. We have, so to say, an *experimentum crucis* for this sort of headache in the experiment of Politzer. In this experiment air is not only drawn into the tympanic cavity, but at the same time into the sinus communicating with the nose; and, in fact, when such patients are treated by Politzer's insufflation at the time when headache is present, we see it almost constantly disappear for a shorter or longer period. We see the same happen very often in cases where an acute catarrh of the tympanum produces tenderness of the mastoid process, which tenderness, in its first stage at least, disappears after an insufflation by Politzer's bag.

A few words about the relation between aprosexia and neurasthenia. A friend of mine, who is a psychologist, had the kindness to give me, as his opinion on my first publication on the subject, that he quite agreed with me as to the description of aprosexia, and that he had found the symptoms in a number of patients, but that he was inclined to consider aprosexia as a symptom of neurasthenia. I would not like to go so far as that. It is true of aprosexia, as well as of other pathological nasal reflexes, that they mostly occur in neurasthenic patients. But when by a local treatment all the symptoms are cured and the patient restored to health, I think it is more natural to consider the local disorder as the cause of the symptoms than to look on that disorder as a symptom of general neurasthenia. A different question is this, If a neurasthenic disposition is a necessary soil for the production of nasal reflexes and of aprosexia? And this question, I think, we are not yet able to solve definitely for the present. I think we are not far from the truth if we admit, from an etiological view, three forms of aprosexia, that is, 1, physiological aprosexia as the result of cerebral over-exertion or fatigue; 2, neurasthenic aprosexia, where the cerebral exhaustion is produced by abnormal irritability and restlessness; and, 3, pure nasal aprosexia, where the exhaustion is produced by retention of the products of tissue change. Of course, the three forms will admit of various combinations and complications.

If you will allow me to add a few words on the treatment which I have found successful in most of my cases, it would be this. After a careful examination I generally treat at the first consultation the naso-pharyngeal cavity; after a week I treat one side of the nasal passages, and after another week the other side. If there are important anomalies in the septum narium, I remove them either with Dr. Bosworth's saw or with the chisel. The mucous membrane of the spongy bones, and especially that of the inferior one, I cauterise with solid nitrate of silver melted on the point of a silver probe, after having used cocaine previously. At the same time I make the patient syringe his nose two or three times daily with appropriate solutions of chloride of ammonium and salt ($\frac{1}{2}$ per cent. of the first and 1 per cent. of the second), and I let him wear at night a contra-respirator to control his nasal respiration during sleep. Lastly, I have found it very useful in a number of cases to let the patient make a gaseous menthol insufflation after the syringing, and with the same instrument which the patient uses for that purpose, he can be taught to apply a Politzer's douche, which often is a great relief to him. When the secretion in the nose is very scanty, I found the internal administration of iodide of potassium in solution (1 to 2 grammes *de die*) very useful. Sometimes I prescribe the liq. chlor. ferri, 5 to 10 drops, three times a day internally, and 2 to 10 drops in a tumblerful of 1 per cent. salt solution for syringing the nose. Of course, the individual predilection and habit of each medical man will make him take different ways to come to the same end, the cure of the patient. And this will be attained in a great number of cases. According to my experience, the prognosis is very good on one condition, and that is, that we have to do with real acquired aprosexia, and not with cases of congenital idiocy even of a slight degree. I say this because parents having heard of aprosexia, are very prone to consider their weak-minded children as suffering from that disease, and to make themselves illusions as to the result of the treatment. It is very important not to indulge in these illusions in any case where the inability to do mental work is congenital, even when we see such children having nasal obstruction and breathing through the mouth. But when it is ascertained that the patient has a good intellect, and that the development of his aprosexia has coincided with nasal obstruction and breathing through the mouth, then there is hope; and in such cases I would like to make a variation on the words made popular by Catlin, "Shut your mouth and save your life," and to say: "Shut your mouth and save your brain."

ON SOME CAUSES OF BACKWARDNESS AND STUPIDITY IN CHILDREN:

AND THE RELIEF OF THESE SYMPTOMS IN SOME INSTANCES BY NASO-PHARYNGEAL SCARIFICATIONS.

Read in the Section of Otology at the Annual Meeting of the British Medical Association, held in Leeds, August, 1889.

By WILLIAM HILL, B.Sc., M.B.Lond.,

Senior Demonstrator of Anatomy and Assistant in the Aural Department, St. Mary's Hospital; formerly Registrar and Pathologist, Central London Throat and Ear Hospital.

It is not at all uncommon to find children who suffer from deafness, the result of enlargements of the lymphoid (tonsillar) tissues of the naso-pharynx and fauces, described by their parents and teachers as being backward and even stupid. This backwardness and stupidity is usually accounted for by the defect in hearing, and the characteristic foolish expression of such children has been explained on purely physical grounds, as due to the obstruction in the proper air-way resulting in the open mouth and pinched, fallen-in condition of the alæ nasi. The fact, however, that children, the victims of nasal and pharyngeal obstructions, often suffer from headaches, especially when engaged in study, and frequently evince marked inability to fix their attention on their lessons or work for any length of time, has in recent years led many to suspect that these symptoms were not altogether due to the deafness, and that the stupid adenoid physiognomy, though partly explicable on physical grounds, was in part a reflection of some evident hampering of the cerebral functions. It is true that mouth-breathing and faulty respiration, added to insanitary surroundings, are admittedly prejudicial to the general health of young persons; but there is good reason for believing that these factors, added to impairment of the sense of hearing, are insufficient to account for the mental deterioration so often met with. That inability to fix the attention, and other allied neuroses, popularly ascribed to "over-pressure," are frequently associated with obstructions in the nose and throat was first unequivocably insisted on by Professor Guye, of Amsterdam, two years ago. That *savant* coined the term "aprosexia" to designate this condition.

Recent observations of my own made during the last twelve months have tended to confirm Professor Guye's views. I have been much struck by the fact that operations on children, undertaken for the relief of deafness associated with adenoid growths, enlarged tonsils, and hypertrophic catarrhal conditions of the nose, have frequently resulted in such an immediate improvement in the mental acuteness of the patients as was altogether incommensurate with the often slight immediate improvement in the sense of hearing. It has appeared to me that naso-pharyngeal scarifications have resulted in such a speedy relief of the aprosexia and other cerebral symptoms as could not reasonably be accounted for on the ground of correction of faulty respiration and an improvement in the general health.

I have been led to conclude that operative procedures probably

act beneficially by relieving congestions of the intracranial lymphatic and venous systems, as suggested by Professor Guye. It is well known that the intracranial veins and sinuses communicate with the veins of the frontal, ethmoidal, and sphenoidal air sinuses, and through these with those of the nose and naso-pharynx, and with the pterygoid plexus; and Axel, Key, and Retzius have proved that the intracranial lymphatics pass out of the skull along the course of the nerve-sheaths; further, those lymphatics which pass out through the cribriform plate of the ethmoid along with the olfactory nerves are in direct connection with the nasal and naso-pharyngeal lymphatics, which converge to and eventually enter the follicular lymphoid glands of the nose, naso-pharynx, and fauces. I have elsewhere contended that the various tonsils and follicular glands are *par excellence* lymph-secreting organs, which pour leucocytes and serum into the alimentary and respiratory tracts; in hypertrophic conditions of the tonsils (induced by contact with irritating nasal and oral fluids in morbid conditions of the system, or as the result of the exanthemata and other fevers and insanitary surroundings), the mucous membranes of the pharyngeal and faucial tonsils become thickened and thus prevent lymph-leakage and diapedesis of leucocytes into the pharynx, it follows that there results tension in the converging lymphatic systems; and as these latter form part of an anterior cranio-nasal lymphatic system, it is easy to understand that hypertrophy and abeyance of function of the nasal and pharyngeal lymphoid glands will bring about an increase in intracranial tension through lymphatic stagnation and congestion. This tension is immediately relieved by naso-pharyngeal scarifications, and the free bleeding which invariably takes place at the same time reduces any venous congestion that may exist, and this not only in the cranium, but within the nasal mucous membrane also, for I have frequently observed well-marked enlargements of the inferior turbinated bodies due to venous engorgement of the erectile tissue and adenoid and polypoid hypertrophy of the middle turbinated body rapidly subside after the removal of enlarged tonsils and adenoid growths of the naso-pharynx.

Now Ferrier has pointed out that extirpation of the præfrontal lobes in monkeys is followed by a marked impairment of the faculty of attention and observation, and it is not unreasonable to suppose that aprosexia and other symptoms associated with lymphoid overgrowths and obstructions in the nose and pharynx are the outcome of lymphatic and venous stagnation and tension in the structures occupying the anterior region of the cranium. Through the courtesy of Dr. Robert Jones, the Medical Superintendent of the Earlswood Asylum, I have been permitted to examine some of the backward idiotic and imbecile children of that institution. As is well known, most of such cases, excepting the hydrocephalic, exhibit the low sloping forehead indicating especially the small size of the anterior lobes of the brain, but a strikingly large number are subjects of the strumous or of the syphilitic diathesis. They are nearly all mouth-breathers, night-snorers, and the victims, *inter alia*, of some form of nasal or pharyngeal obstruction. Many are deaf, all aprosexic.

Most writers have given struma and syphilis a very prominent place in the etiology of idiocy and imbecility, and adenoid growths of the naso-pharynx, hypertrophied tonsils, enlarged glands in the neck, and general overgrowth of the lymphoid tissues of the nose and throat are most frequently met with in individuals the subjects of the strumous and syphilitic diatheses. The question arises, whether want of cerebral development on the one hand and morbid conditions of the nose and pharynx on the other hand in strumous and syphilitic subjects have a casual or causal relationship. Does lymphatic stagnation within the cranium, as the result of hypertrophy and abeyance of the secretory functions of the tonsils and and other lymphoid glands of the nose and throat interfere with cerebral development and function? In bringing this notion forward I am not for a moment suggesting that naso-pharyngeal scarifications are likely to improve the brains of idiots whose physical and psychical development was checked in the very early years of life or *in utero*; but if the fact be true that nasal and pharyngeal lymphoid obstructions interfere with the development of the cranial and intracranial structures, then it behoves us to pay more attention to such obstructions in very young individuals if we would lessen the number of stupid children.

It is a matter of everyday experience with aural surgeons to find that deafness and aprosexia in association with catarrh and hypertrophy of the lymphoid glands of the nose and pharynx date from an attack of one of the exanthematous fevers more especially in strumous and syphilitic children; from my own, as yet limited, observations on backward school children I am led to believe that aprosexia and allied conditions often result from the above mentioned pathological causes when there is no deafness present to direct attention to the *fons et origo mali*. The relief afforded by naso-pharyngeal scarification is often remarkable. I need scarcely add that not every child with deafness of naso-pharyngeal origin is aprosexic, and not every sufferer from aprosexia is deaf; nor is it contended that all the supposed victims of over-pressure suffer from nasal and pharyngeal obstructions, but it is probable that a certain, as yet undetermined, proportion do so.

The stupid looking lazy child who frequently suffers from headache at school, breathes through his mouth instead of his nose, snores and is restless at night, and wakes up with a dry mouth in the morning, is well worthy of the solicitous attention of the school medical officer.

NEW ANTISEPTIC ARTIFICIAL MEMBRANA TYMPANI,

WITH REMARKS ON THE TREATMENT OF PERFORATION AND OTHER DISORDERS OF THE MIDDLE EAR.

Read in the Section of Otology at the Annual Meeting of the British Medical Association, held at Leeds, August, 1889.

By JOHN WARD COUSINS, M.D.Lond., F.R.C.S.,
Senior Surgeon to the Royal Portsmouth Hospital, and the Portsmouth and South Hants Eye and Ear Infirmary.

Some of the most striking results of simple surgical treatment follow the successful application of artificial drumheads in cases of chronic middle-ear disease. Individuals who are unable to distinguish clearly sonorous vibrations, or to follow ordinary conversation, find themselves, by the introduction of a little mechanical contrivance into the ear, suddenly placed in a new world of sound. Many of my patients have expressed their surprise at the simplicity of the treatment, and their satisfaction that they could so easily practise it themselves. If these statements are true, how is it that in every town and village of this country sufferers from permanent deafness and aural disease are to be found who have never given any kind of artificial membrane a trial? The fact, however, admits of a very easy explanation. Medical men engaged in the arduous duties of general practice really take very little interest in chronic middle-ear affections, and they regard their treatment as unsatisfactory and often practically hopeless. Many patients, partially deaf, are remarkably indifferent about their aural troubles, and parents often ignorantly neglect them in their children, and look upon "a running at the ear" as a constitutional error that ought not to be rashly checked. Every day a large number of chronic cases attended with serious deafness are seeking relief at the special institutions, and it is really astonishing to find how small a proportion of them have ever undergone any regular treatment.

Aural Diseases in which Artificial Drumheads are Useful.—The special forms of middle-ear disease in which the hearing power is improved by the insertion of an artificial drumhead are capable of well-marked definition. 1. It is especially useful in cases of perforation, but the probable increase in the hearing power cannot be estimated by any preliminary examination. The amount of benefit certainly does not depend upon the size or position of the injury, for in every case there are other abnormal conditions which exert a variable influence upon the result. It is almost impossible to have any loss of substance in the membrane without also some other structural changes in the tympanum. 2. The artificial drumhead is also beneficial in other alterations of the membrane involving abnormalities of tension in the conducting apparatus. It may be used with marked benefit in chronic middle-ear disease attended with ossicular changes and atrophy of the drum, or in cases of cicatricial collapse caused by inflammatory thickening of the membrane and lining of the tympanic cavity. In fact, in all cases of accommodative loss from alterations in the contents of the tympanum, the artificial membrane may be hopefully employed, provided the Eustachian tube is unobstructed and the naso-pharynx fairly healthy.

Early Efforts to Compensate for the Loss of the Membrane.—The great value of mechanical aids in diseases of the tympanum has long been recognised. Half a century ago methods were devised by surgeons for closing the opening of the drum in cases of

perforation. The notion obstinately clung to their efforts that it was absolutely essential to completely fill up the aperture with some material, and leave the external meatus free and unobstructed. This practice of plugging the perforation proved dangerous, and was sometimes followed by disastrous results, so that, after many trials with various materials, the attempt to treat mechanically the injured membrane was for a time abandoned.

About thirty years ago the late Mr. William Harvey stated [1] that Itard introduced the practice of inserting cotton wool at the bottom of the meatus. Subsequently, Delean applied a piece of wood, and Tod a little pad of lint. The following list shows the various kinds of artificial drumheads which have been introduced up to the present time:—

Moistened cotton pellet, Mr. Yearsley. (1) Cotton ball attached to thread; (2) disc of adhesive plaster; (3) disc of sublimated gauze, Dr. Turnbull. Disc of oil silk, Dr. C. M. Thomas. Cotton pellet fixed by collodion, Dr. Barr. Disc of sized paper, Dr. C. J. Blake. Compound disc of india-rubber, cotton wool, and flannel, Mr. George Field. Solid piece of india-rubber, Dr. Burkard Merian. Solid piece of india-rubber on fine stem of silver wire, Mr. Toynbee. India-rubber tube as long as canal, Professor Politzer. India-rubber disc attached to rubber tube, Professor Lucae. Circular patch of pellicle of egg, Dr. Walker Downie. Cylinder of gold, Dr. H. B. Richardson. Glycerine thickened with tannin, Dr. Michael. Plug of boracic acid powder, Dr. Farquhar. Little roll of paper, author unknown.

It is not my intention to advocate the special excellence of any of these devices. No doubt all of them have been found useful; but not one of them is adapted for indiscriminate adoption. Up to the present time the pellet of cotton-wool has been more extensively employed by aural surgeons than any other form of artificial tympanic membrane, but its constant use is attended with many disadvantages. The patient must be taught the method of using the pellet, and adjusting it in his ear with forceps. Sometimes the cotton ball is not completely withdrawn, and the portion that remains in the meatus becomes foul and dangerous from purulent saturation. It may be put in too firmly, so that the upper part of the passage is converted into a shut sac, and the drainage of the tympanum prevented. It is my experience that few patients can be induced to persevere with the cotton pellet, because it is so liable to get out of position, and requires so much dexterity in putting it in and taking it out of the meatus.

During the debate at the annual meeting last year,[2] Dr. Barr expressed the opinion that the cotton pellet properly applied was a very valuable aid to hearing in suitable cases. He said that it ought to be tried in various sizes and shapes, and also in various positions, and that the many failures which occurred in practice arose from the want of sufficiently painstaking efforts in these directions. Whenever the cotton pellet got out of position and habitually became misplaced, he found it an excellent plan to immerse the cotton in collodion, and then carefully fix it in the meatus. It is scarcely necessary, otherwise I could refer to other eminent authorities in corroboration of my statement that the cotton pellet, the most universally employed of all artificial drumheads, is really difficult to manage. If the surgeon requires so much patience and skill in its adjustment, how can it be applied efficiently by the majority of patients?

As regards the artificial tympanic membrane in the form of an india-rubber disc, it is sometimes useful, but is seldom persistently worn, as the metallic stem attached to it is irritating and uncomfortable, and its vibration in the meatus causes constant annoyance. A short time since a gentleman consulted me respecting long-standing perforation and chronic otorrhœa. He was wearing an artificial drumhead of this description, which had been recommended to him by an aural surgeon, and he informed me that it was of much assistance to him, but that he was unable to wear it constantly in consequence of the vibration of the stem. On examination, I found the meatus so narrow, and the posterior wall so much distorted and thickened, that it was impossible to examine the perforation, or introduce any other kind of artificial drumhead.

An Efficient Artificial Membrane.—The essential qualities of a good artificial drumhead are somewhat numerous, and they can be tabulated as follows:—1. The artificial membrane must, first of all, decidedly improve the hearing power both for distance and conversation. 2. It must be so constructed that it can be easily placed in the right position and readily removed. It ought also to be especially adapted for self-application. 3. It must be extremely light and delicate in structure, so that it causes no sensation or irritation in the meatus by its presence. 4. The artificial drumhead ought also to be an efficient protector to the injured organ, and a screen for maintaining the moisture of the exposed tympanic cavity. 5. It should be capable of fitting the varying capacity of the external meatus, so that when once placed in position it is not liable to displacement. 6. It ought to be a convenient vehicle for the application of local astringent and deodorising remedies. 7. The contrivance should be obtainable at a trifling cost, so that a new artificial membrane may be used as often as necessary.

The New Antiseptic Artificial Drum.—The new membrane which I desire to submit to the criticism of my professional brethren is represented in Fig. 1. In shape it is exactly like a hat with a very high and tapering crown and a broad and flat brim, having a short ribbon attached to the edge. It is just firm enough in substance to retain its shape in the ear, and yet the material is so soft and flexible that it causes no sensation by its presence. It is stained a delicate flesh colour, and is made in several sizes, to suit the varying capacity of the external meatus. When in position the crown rests near the tympanic membrane, the brim upon the meatal wall, and the little ribbon or handle behind the tragus. The method of manufacture has been worked out by a series of experiments. The material is composed of compressed cotton fibre swollen by prolonged immersion, and saturated in an antiseptic oil and ether. The soft material is then firmly compressed in a little machine that I have designed for the purpose, and afterwards dried by artificial heat.

One marked feature of the new antiseptic membrane is its extreme lightness. The weight varies a little according to the size, and this has a range from one-sixth to one quarter of a grain. I have often introduced it without the patient being aware that anything had been put into the meatus. Another special quality consists in the facility with which it can be introduced and removed by the patient himself. The little instrument for the self-application of the artificial membrane is depicted in Fig. 2. The probe end is inserted into the crown of my little hat, and in this way it can be accurately placed in the meatus, and then detached from the instrument by the aid of the sliding collar. Patients very soon get into the way of adjusting it, and slipping it into position with just the right amount of pressure for securing the best result. The forceps is intended to be used for the removal of the artificial membrane, and in doing this, patients are guided by their tactile sensibility. Traction is made upon the handles, which ought always to be easily found resting behind the tragus.

It is a matter of great practical importance in every case that the artificial membrane should be selected to suit the shape and capacity of the external ear. It is my practice to regulate the height of the crown by the sensations of the patient, and the breadth of the brim by the size of the meatus. It must not fit too tightly, but simply rest in contact with the meatal wall, so that after it has been put into the right position it does not get easily displaced.

Fig. 3 presents a diagrammatic section of the ear, showing the usual position of my artificial drumhead. It is not necessary to place the crown upon the perforation, or in contact with the remnants of the tympanic membrane. The surgeon cannot select the point of contact by any internal scrutiny of the organ, but in every case he must be guided by the sensations of the patient and the improvement produced in the hearing power.

The artificial drumhead may be regarded also as an ear protector and a local antiseptic remedy. I have recently made some impregnated with the oils of eucalyptus globulus and pumuline pine in combination with other aromatic substances, and their agreeable fragrancy renders them extremely grateful to some patients, especially those who have suffered from offensive discharge. Other patients with perforation of the tympanic membrane, but without serious deafness, have used them as ear protectors with great comfort. In such cases the artificial membrane forms a screen between the middle ear and external meatus, and acts as an efficient shield during rough and cold weather.

With reference to the length of time an artificial membrane can be retained in the ear, I recommend a fresh one to be introduced every day, and of course this is absolutely necessary in all cases of otorrhœa. It should be taken out during the night, and put in directly after the local treatment is finished in the morning. Some patients make one of the drumheads do for two or three

[1] *The Ear in Health and Disease*, by William Harvey.
[2] See JOURNAL, September 1st, 1888.

days. A medical friend, who has been using my little hat for several months, informs me that he has often kept one in his ear for a week without removing it. Of course this is a detail which must vary in different cases, and patients soon learn to arrange it for themselves.

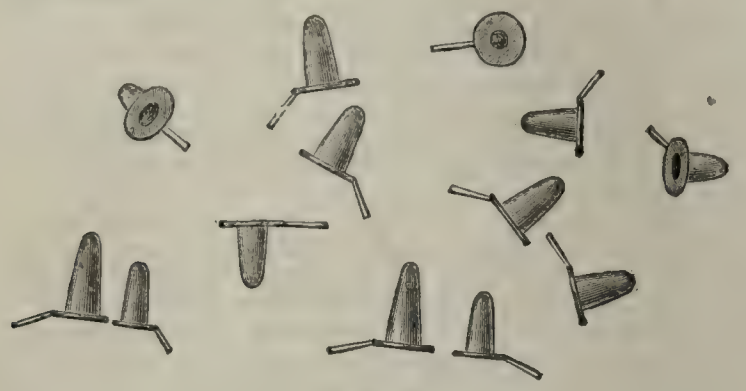


Fig. 1.

The antiseptic artificial membrane does not require to be moistened before introduction. If the passage is dry it should be wiped out with a weak solution of boracic acid or any deodorising lotion. On two occasions only have patients complained of some temporary irritation from its presence in the meatus. One was a case of gouty eczema of the auricle, and in the other the external ear was particularly tender and irritable from chronic inflammation. Under these circumstances a morsel of lanoline containing cocaine can be used with great relief just before the introduction of the artificial drumhead, and I always direct that the membrane should only be retained for a few hours at a time until the sensibility of the meatus has subsided.

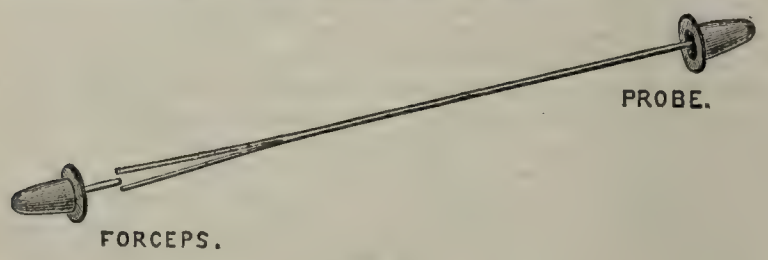


Fig. 2.

Antiseptic Treatment in Middle-Ear Disease.—I must now refer to several practical matters connected with the treatment of perforation of the tympanic membrane and chronic suppurative disease of the middle ear. It sometimes happens that good results can be obtained by simply adjusting the artificial drumhead and

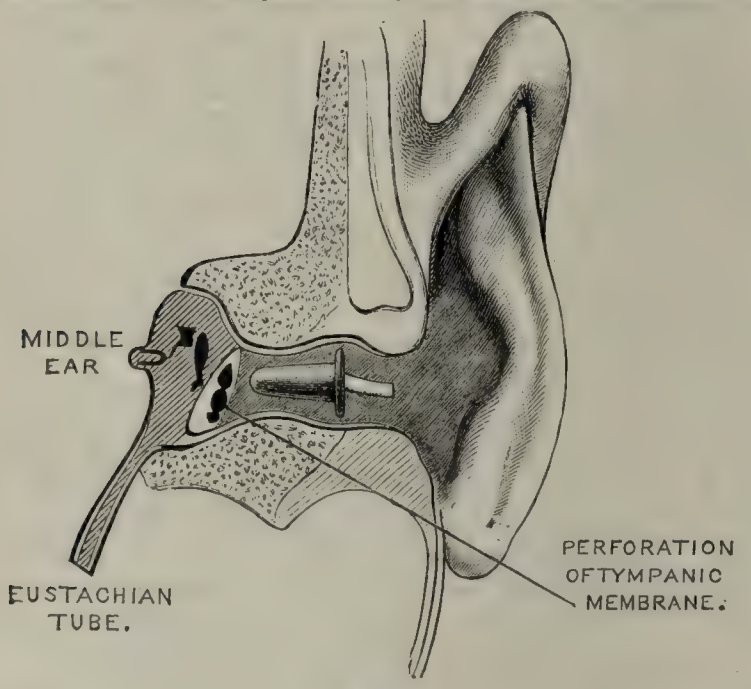


Fig. 3.

replacing it as often as necessary. In a large majority of these distressing cases, however, other important remedial measures must be diligently practised, and the ear must always be thoroughly deodorised before the introduction of the artificial membrane. The external meatus must be kept clear by washing, and, in some cases, this must be repeated two or three times a day. It



Fig. 4.

is only by persistent and gentle irrigation that the inspissated secretion can be removed from the tympanum, and this should be carefully and regularly done with lukewarm and astringent



Fig. 5.

lotions, applied with a glass syringe or aural douche. Often the injured organ is too sensitive for treatment by injection, and the external passage can only be filled with the warm

solution. This must be retained for a minute or two, and the operation repeated over and over again until the ear is effectually cleansed. The meatus should then be gently wiped out with pinol wool, and for this purpose I use the aural probe (Fig. 2), as with it the soiled material can be instantly cast off by slipping over the point the sliding collar. Parents must always be taught to carry out this deodorising treatment, and to examine the ears of their children several times a day, so that they may be sure that the fœtid odour is effectually destroyed. In cases of profuse otorrhœa I do not recommend the use of the artificial membrane until the discharge has been relieved and the excoriations around the meatus have been successfully treated. Care must be taken that the purulent secretion from the diseased tympanum is not mechanically pent up, for plugging the ear with cotton wool or any other substance is a very dangerous practice. Our poor patients come to us quite ignorant of the gravity of their condition, and of the imminent peril which often surrounds them from inflammation of the bony structures and the risk of septic absorption.

Again, in all cases of chronic middle-ear disease it is essential to examine the naso-pharynx and test the condition of the Eustachian tubes. For this purpose I often use my hand-ball injector and evacuator, and whenever chronic tubal obstruction is present, I teach my patients to apply the instrument for themselves, and also diligently to carry out daily antiseptic treatment. It is often only after weeks of perseverance and attention that the full comfort of the artificial drumhead can be secured and the improvement in the hearing power fairly estimated.

Value of Artificial Drumhead.—In a communication On the Value of Artificial Aids to Hearing,[3] read at the last annual meeting of the Association, Dr. Laidlaw Purves remarked: "Our assistance is not asked by a patient to enable him to hear the tick of a watch or the sound of a tuning-fork, but to restore him as far as may be possible to conversation with his fellow men." It is for the improvement of the hearing power in conversational intercourse, and for the protection of the injured organ during the ordinary purposes of life, that I can confidently recommend the antiseptic artificial membrane. It may require sometimes a little patience to learn its exact adjustment, but the effort will be followed by real benefit and diminished risk. The intensity of the sonorous vibration is often immediately increased, and patients have voluntarily told me that they could define sounds which before appeared to them to be only a noise. The sensibility of the organ is magnified, and the hearing power is so far improved that the patient does not appear deaf in ordinary conversation. Intercourse with friends is made easy, the hearing distance is increased, and in place of earnest looks and strained attention the countenance expresses both pleasure and repose. As a general rule the help afforded by the artificial drumhead is more pronounced in perforation than any other form of middle-ear disorder; still I have seen many successful applications in other forms of injured membrane.

I have now tested the value of the new antiseptic membrane in more than 100 cases of midle-ear disease, and, out of this number, all but three have experienced decided benefit. I always tell my patients that they may hope for progressive improvement, but that they must not expect to realise the full amount of relief until they have regularly carried out the local treatment, and worn the artificial drumhead for at least two or three months.

The following illustrations are taken from my notebook. Both these cases, and many more like them, have recently been examined by my colleague, Mr. Childe, Dr. C. C. Claremont, Dr. Conan Doyle, Surgeon-Major Lennon Brown, Surgeon Wardrop, and many other professional friends. Fig. 4 has been taken from the photograph of a patient, aged 16 years, and it exhibits the position of the drumhead during traction on the pinna. Her mother stated that she had suffered from disease of the ears since infancy. The perforations were large on both sides, and involved nearly the whole surface of the membranes. About five years ago, the deafness appeared to have been much aggravated by repeated blows on the ears at school. During the last two years, she has been very deaf, and the discharge copious and fœtid. On the right side she complained of constant tinnitus—a somewhat rare symptom in perforation, and probably excited by a collection of inspissated secretion over the fenestra ovalis. Local treatment had been regularly carried out for four months, in combination with the daily application of the artificial membranes. The hearing power had much improved, and conversation with her indicated scarcely a trace of deficiency. She stated that she could follow the sermon at church, and her appreciation of musical sounds had also much improved.

A sketch taken from the photograph of a patient, aged 26, is seen in Fig. 5. The tragus is drawn forwards to expose the artificial membrane and the handle in position. She had been married some years, and had had two children. Her mother stated that her hearing was lost when she was twelve years of age, and that her friends "had always to halloa at her." On examination both membranes were found destroyed. The aural discharge was fœtid but moderate in quantity. The ears were at once deodorised, and the artificial membranes inserted. The hearing power was immediately very considerably increased. During the last four months she has regularly carried out the antiseptic treatment, and has daily introduced the drumheads. She could now hear well and exhibited no apparent deafness in conversation. She stated that musical sounds were clear and distinct, and that she could hear a watch one inch from her right ear.

Now, I am quite aware that local treatment assiduously carried out will do much to improve cases of this description, but it is my experience that persistent attention to cleanliness, in combination with mechanical assistance, will give far better results, with a fair prospect, too, of progressive improvement.

The new antiseptic artificial membranes together with my aural probe, can now be obtained from Messrs. Burroughs and Wellcome at a very trifling cost.

[3] JOURNAL, September 1st, 1888.

DR. WARD COUSINS gave a demonstration in the theatre of the Leeds Infirmary on Thursday afternoon, August 15th. The attendance of several patients labouring under chronic middle-ear disease had been very kindly arranged by Mr. J. A. Nunneley. The cases were all severe forms of deafness with otorrhœa and perforation. Dr. Ward Cousins deodorised the ears with boracic acid and then inserted the antiseptic artificial membranes. He explained the method of self-application and the value of his new aural probe. Many members of the Association were present, and the results were considered, in three cases out of four, very satisfactory.

BRITISH MEDICAL ASSOCIATION.

FIFTY-SEVENTH ANNUAL MEETING.

PROCEEDINGS OF SECTIONS.

SECTION OF OPHTHALMOLOGY.

WEDNESDAY, THURSDAY, AND FRIDAY, AUGUST 14TH, 15TH, AND 16TH.

A Modified Hook for the Removal of the Remains of Lens Capsule.—Dr. ADOLF BRONNER said that in many cases of discission or linear extraction of cataracts, it was found that part of the lens capsule was left, and that it covered the pupil, thus greatly impairing the vision. In most cases the capsule could be torn up with the help of one or two discission needles. In some cases, however, in which the capsule was very tough, or, if thin, tough bands were in the way, or if the capsule were very adherent to the iris, it had to be removed with the forceps or hook. The great drawback to forceps was that it was very difficult to keep them perfectly aseptic, and he personally had a great dread of introducing any forceps into the interior of the eye. Hooks could very easily be made perfectly aseptic. The drawback in this case was that it was often very difficult to get them out of the cornea, as the end of the hook caught in the edges of the wound through which it was introduced. He had had a hook made which was bent in such a manner that it could very readily be withdrawn from the corneal wound. The advantages which the hook seemed to have over the forceps was not only that it could easily be made aseptic, but also that the aperture in the cornea, through which it was introduced, need not be nearly so large as that for introducing the forceps, and also that in cases of tough capsule the capsule could be much more readily caught hold of with the hook than with the forceps.

Ophthalmic Trophoneuroses.—Dr. P. H. MULES read a paper on this subject. He hoped to initiate for certain forms of eye disease a reclassification based on a definite pathological unit. This reclassification would give a common starting point for many affections hitherto of doubtful origin. The function and diseases of

the fifth nerve had been much studied, but he was not aware that the changes in the eye due to peripheral neuritis had been specially investigated. There was nothing better established in pathology than the existence of trophoneuroses. There was, however, a striking difference between active and passive lesions to the nutritive fibres of the peripheral nerves, and the resulting effects on the tissues supplied by the affected nerves. Experiments had shown that if proper protection were afforded, the eyes, after section of the trigeminals, presented nothing more than slight neuroparalytic hyperæmia of the iris and conjunctiva. It had further been proved that this of itself was never sufficient to cause alteration in the nutrition of the tissues. Irritative lesions, on the other hand, were capable of determining various trophic troubles in the parts supplied by the affected nerves. Samuel electrically irritated the Casserian ganglion of rabbits, and thereby induced inflammation in about twenty-four hours, followed by acute blenorrhœal conjunctivitis, sometimes corneal ulcer, but no iritis. Many examples existed of eye affections dependent on spontaneous permanent lesions of the whole fifth nerve, but what he wished to bring forward was the evidence of nutritive changes (in many cases of a curable nature) resulting from primary neuritis of the trunk, branches, or ocular ending of its ophthalmic division. Neuritis proper might be divided into acute and chronic, whilst peripheral neuritis was represented by inflammatory lesions of a terminal nerve organ which might originate in it, or spread to it from any point of nerve-trunk or branch outside the skull or spine. Among the most important diseases inducing or modifying neuritis were syphilis, gout, and rheumatism. Amongst peripheral lesions of the ophthalmic nerves was frontal neuritis, which was often associated with an attack of herpes. Associated with this form was not infrequently found neuritis of the lachrymal, supratrochlear, and nasal nerves. Only with the latter was any danger to be apprehended. Not only could the iris be inflamed by direct transmission through the long ciliary nerves, but the same cause might possibly act by irritation of the lenticular ganglion through irritation of its nasal branch. The less grave trophoneurotic affections of the cornea and conjunctiva (such as corneal herpes, solitary and multiple phlyctenulæ of the conjunctiva) were well known. Among the graver varieties were deep ulcers, simple diffuse keratitis, essential shrinkage of the conjunctiva, and certain forms of scleritis, episcleritis, cyclitis, and iritis. He had already referred to the iritis occasionally associated with herpes frontalis as being due to naso-ciliary neuritis. Herpes iridis was not yet clinically recognised, but he believed it to be capable of demonstration. The simple idiopathic iritis occurring in young persons, especially in neurotic girls, at or soon after puberty, had all the features of a typical trophoneurosis. A case was referred to in which iritis seemed to be distinctly rheumatic in origin. The patient was a girl, aged 13, who seemed to be suffering from the trophoneurotic iritis of puberty. She developed bilateral chorea. Arsenic was given in full doses. The chorea rapidly subsided, and with it passed away the iritis and papillitis. A similar explanation held good of gonorrhœal iritis. The iritis followed, never preceded, a joint affection, and had all the characters of a peripheral nerve lesion resulting from arthritis, not from any specific gonorrhœal taint. Examples of gouty trophoneuroses in young persons or adults had been collected by Mr. Hutchinson. They were mostly peripheral nerve lesions of the same type as the rheumatic.

Aneurysm in the Right Orbit Cured by Digital Compression.—Mr. A. H. BENSON (Dublin) related the case of a man, aged 38, who nine months previously, while fencing with single sticks, received a severe blow with the point of the stick on the outer side of the orbit. The skin of the external canthus and outer portion of the upper lid was cut and bruised. Two months later the right eye was noticed to be more prominent than the left. The conjunctiva was also congested and chemosed. His vision at that time (September, 1888) was, right $=\frac{6}{18}$, left $=\frac{6}{36}$. When first seen by Mr. Benson, on February 2nd, 1889, the sight of the eye had remained unchanged for months; there was no pain, but a throbbing noise in the right temple and eye. The eye was protruded directly forwards, its motion being restricted in every direction. The lids were thick, the whole ocular conjunctiva chemotic, with large tortuous veins, most marked at the outer side. On everting the upper lid, the external portion of the superior *cul-de-sac* was found filled with dark tortuous veins, looking like a mass of worms. The ophthalmoscope showed slight myopic astigmatism, worse in the left eye. The transparent media were normal, but the veins of the right retina were fuller and darker than those in the other eye. With the stethoscope applied over the globe, a loud pulsating *bruit*, synchronous with the pulse, could be heard. No visible pulsation of the globe was observable, nor could thrill be felt with the hand. Tension was normal in both eyes. Compression of the right common carotid completely stopped the *bruit*, which at once returned on removing the pressure. A diagnosis of aneurysm in connection with some of the orbital arteries far back was made, and digital pressure determined on. A cast of the face was taken before commencing treatment. On March 18th digital pressure of the right common carotid against the vertebræ was applied for five minutes, then on successive days for 9, 11, 13, and 14 minutes respectively. Digital pressure, varying in duration from ten to fifteen minutes, was kept up night and morning till April 20th. On some days the *bruit* could hardly be heard, on others it was louder than ever. The appearance of the eye was unchanged. It was therefore determined to try continuous pressure, and, with the aid of relays of assistants, complete occlusion of the common carotid was kept up for two hours and a half. Next day the appearance of the eye was wholly changed. The conjunctiva looked almost normal, the œdema gone, the veins much smaller, those in the superior external *cul-de-sac* having altogether disappeared. The patient stated that he no longer heard the puffing sound. For the next two days compression was kept up. No vascular *bruit* could then be heard with the stethoscope, and the appearance of the eye was normal. No further pressure was applied, but the man was kept quiet till May 13th, when he was discharged perfectly cured. At present (August, 1889) some proptosis was still present, but the dilatation of the pupil was wholly gone, and, according to the patient's statement, the eye felt just the same as before the accident. [Four casts showing the changes which took place during the treatment were exhibited.] The result in this case seemed to be almost unique. Of eleven cases of traumatic aneurysm tabulated by Rivington, only one was cured; in two the treatment was so badly borne that it had to be discontinued, while in eight no benefit resulted.

Observations on the Therapeutical Effect of the Violet End of the Spectrum on Vision.—Mr. G. LINDSAY JOHNSON, M.A., B.S., F.R.C.S., read a paper on this subject. In a case of retinitis, accompanied by partial retinal detachment, in which he had prescribed the constant use of blue glasses, he noticed an evident increase in the visual field and a corresponding improvement in vision. It occurred to him that if a blue glass, which admitted more or less of the red end of the spectrum, and fitted to frames which allowed a considerable amount of daylight to reach the eye, was the cause of this improvement in vision, the uninterrupted and exclusive action of the blue end of the spectrum might produce a more favourable result still. After examining and preparing a very large number of coloured glasses and solutions Mr. Johnson succeeded in obtaining a glass which absorbed all the spectrum except the red and a portion of the orange, as well as one which cut off all the red, orange, and yellow rays to within 10° of the B line. This latter he termed "spectrum blue," being the nearest approach to a theoretical blue that he could get by art; while the former he called "spectrum red." Previous to obtaining the spectrum-blue glass he devised a pair of goggles, in which the glass was replaced by a trough made by fitting two thin circular plates of glass into a ring, having their surface parallel and at $3\frac{1}{2}$ milimètres apart. This trough was filled with a solution of ammonio-sulphate of copper; but it had to be abandoned owing to the bleaching action of light on the solution. The spectrum-blue glass above mentioned, however, formed an excellent substitute. Carefully worked pieces of this glass were fitted into spectacle-frame goggles, which fitted so close round the orbit that no light could possibly enter which did not filter through the glass. For ventilation the sides of the cups were made of two thicknesses of finest wire-gauze, enclosing one of fine crape in between. The patients were instructed to fit on the spectacles the instant they awoke in the morning, after bathing the eyes and before pulling up the blind, and not to remove them until they retired to rest at night. During the past three years a great number of patients had been treated with the spectrum-blue glasses in the above way. Of the various eye diseases so treated detached retina, optic neuritis, and neuro-retinitis afforded the most satisfactory results. In nearly every case of detached retina the field of vision was largely increased, although in only four cases out of about thirty treated was the retina actually seen to have returned to its position. In every case of neuro-retinitis, due to temporary causes, the vision returned rapidly after a few days, although in some cases the vision had been declining or

stationary for weeks previously. Mr. Johnson found that cases which could be benefited by the use of the glasses showed improvement as a rule within three days, and if no improvement showed itself at the end of a week none could be expected. Very few cases of relapse had been noticed, even after the glasses had been discontinued. In order to ascertain the reason for the increase in the visual field, which was so marked and regular a feature, Mr. Johnson had two rabbit hutches made, one glazed with spectrum-red and the other with spectrum-blue panes, and constructed so that, while allowing of complete ventilation, no light could reach the animals at any time except what came through the glass. [A model of the rabbit hutches, as well as numerous diagrams of the fields of vision, were submitted.]

Tumours of the Optic Nerve.—Dr. W. G. SYM (Edinburgh) read a paper on this subject. He began by narrating the case of a girl aged 3 years in whom, about a year before coming under observation, exophthalmos of the left eye suddenly occurred during whooping-cough. That condition had for a time increased, but had then remained stationary for some months. Latterly, although no increase in the protrusion had taken place, the child had become very irritable, often put her hand to her forehead as if in pain, and had fallen off in point of health. The eye was quite blind; a firm body prevented the return of the globe to the orbit; there was no yielding to pressure; there was neither thrill, pulsation, nor *bruit*. On thrusting the finger in at the inner canthus, a distinct, firm tumour could be felt. The child was taken into the Edinburgh Royal Infirmary by Dr. Berry, who attempted to remove the tumour without extirpating the eye. The inferior and internal recti were divided, and on pushing the finger between them along the globe, the tumour was found to be attached to the nerve, and to be so large that enucleation of the eye was necessary to obtain room. After the eye was removed, the tumour was seen on the optic nerve like a second eye behind the first. The anterior two-thirds were removed in one piece, and the rest picked away with forceps and scissors. After the operation the parents considered the little patient "a new child altogether." Three months afterwards she was quite well, without any sign of recurrence. Dr. Woodhead reported the tumour to be a sarcoma probably arising from the fibrous tissue surrounding the nerve-bundles. When entire it must have been half as large as the eye. The number of cases of tumour of the optic nerve published up to the present time was sixty-nine. With regard to age, it was found that 60 per cent. of the cases occurred under 20. Of sixty-four cases, thirty-four were females and thirty males. The tumours included myxomata, sarcomata, myxo-sarcomata, and fibromata, with a few examples of glioma, neuroma, scirrhus, psammoma, etc. The commonest situation of the tumour seemed to be a short distance behind the globe, leaving an unaffected piece of nerve between that and the tumour. In the great majority of cases the tumour was covered by a stout sheath—the dural sheath of the nerve. In forty-five cases the left nerve was affected twenty-nine times, the right sixteen times. Exophthalmos was the most striking symptom, and sometimes the only one. The commonest displacement of the cornea seemed to be outwards and upwards as well as forwards. Early blindness was an important symptom, and was valuable in distinguishing a nerve tumour from an orbital tumour. Photopsia was not complained of. In adults diplopia was often the first symptom noticed by the patient. It occurred when the pressure from behind produced a slightly altered direction of one eye, the two images of an object then falling on non-associated parts of the two retinæ. This symptom was not observed in children, partly because they could not explain their troubles, and partly because the false image was very quickly suppressed in them. In a large number of cases pain was conspicuously absent; when it did occur it was usually late, and it was ominous of advance towards the brain. In forty-eight cases examined with the ophthalmoscope, the fundus was normal in three; in twenty-one there was congestion or inflammation of the papilla; and in nineteen the disc was pale and atrophic. In one case there was hæmorrhagic retinitis. Hypermetropia was mentioned in six cases. With regard to diagnosis, Graves's disease was excluded by the age of the patient, the resistance of the protrusion, and the amaurosis. The only condition likely to give rise to difficulty was tumour of the wall or other constituents of the orbit; slight protrusion, a blind eye, a history of transient diplopia, slight restriction of the movements of the globe, neuritis or atrophy seen on ophthalmoscopic examination with absence of pain pointed to a nerve tumour. But in such cases the diagnosis could only be made with certainty after the operation was begun. Before operating it was important to ascertain whether the growth had spread into the cranial cavity. There was no certain indication of this. It might, however, be suspected from increase of the symptoms, particularly the pain, with the possible presence of "head symptoms." With regard to the question of removing the growths while sparing the eye, attempts to do that had been made in fifteen cases. In four of these the operation could not be completed without enucleation. Of the remaining eleven, in five the eye was destroyed by suppuration, and had to be removed very shortly afterwards, and in one death occurred on the seventh day. In forty-nine operations there were seven deaths, and of these two occurred in cases in which the eye was left; all the deaths were caused by septic meningitis. The result of trying to save the globe was therefore not encouraging. The prognosis depended on the nature of the tumour and the possibility of thorough eradication. In the cases cited there were nine recurrences, and eighteen were well when last heard of. The records in the other cases were incomplete.

OBSTETRIC MEMORANDA.

TWIN LABOUR AT TERM: ONE CHILD LIVING, THE OTHER DEAD AT FIFTH MONTH AND MACERATED.[1]

A. W., a single woman, aged 25, was confined for the second time on February 17th, 1889; she was previously confined in August, 1883. She last menstruated in May, 1888, and came to her home on August 8th, 1888. She stated she was fairly well up to October 26th, 1888, when she went from home part of the day and was much upset. On her return home she became very hysterical, and afterwards felt as though she were in labour, but there was no discharge.

I was called upon to attend her about 5 in the morning of February 17th, 1889, and found her in labour, head well down, but pains lingering. I administered a dose of ergot, and in a quarter of an hour the pains became stronger and a healthy female child was born. The uterus remained abnormally large after the expulsion of the child, and within a few minutes a second child was expelled, presenting the usual appearance of a sixth month child. The cord was separated at the umbilicus, and the skin peeled off when touched.

On making traction on the cord attached to the living child, the placenta came away, and with it a second placenta about the size of an ordinary saucer, quite blanched and almost flat. The mother had no bad symptoms after labour, and the living child was well developed and apparently healthy. The mother stated that she had an altercation with the putative father in October, which upset her very much, and she felt as though something had dropped in her stomach.

The second fœtus presented the usual appearance of a child between the fifth and sixth month. The head felt like a bag of shells, and, on cutting through the skin, the cranial bones were found floating in a quantity of dirty reddish-brown fluid.

I have never come across a similar case in my own practice, nor can I call to mind any case of which I have read, though I have an idea that such cases have been recorded. I am told on reliable authority that similar cases occur among sheep.

Topsham, Exeter. G. G. BOTHWELL, L.R.C.P.Ed., etc.

CURE OF AMENORRHŒA: CAUSE OR COINCIDENCE?

ON March 2nd, 1888, I was consulted by a strong, healthy country girl, aged 19, who, however, looked considerably older. I was informed that her menses had stopped at the beginning of December, 1887, and from that time she had been continually labouring under various disorders. She had menstruated for the first time at 16 years of age; since that time she always enjoyed good health, and worked very hard in the fields. From the age of 12 she had been obliged to work hard to support herself and her mother. The symptoms of which she complained were frequent headache, sometimes with intolerance of light, throbbing in the head, severe pains in the side and back, irregularity of the bowels, derangement of the appetite, and impairment of strength. She informed me that every month a menstrual molimen occurred, consisting in rigors, pains in the back and loins, weight at the lower part of the abdomen, lassitude, and dyspnœa, but without any discharge. All these symptoms passed away in two or three

[1] Read at an intermediate meeting of the South-Western Branch of the British Medical Asscciation.

days, to be succeeded by frequent headache and depression of strength and spirits. After a careful examination in order to exclude pregnancy, I used preparations of iron, iodine, strychnine, bromide of potassium in large doses, purgatives, leeches to the breast and to os tincæ, stimulants, and hot vaginal injections. None of these remedies, however, afforded any relief to the patient. On January 20th last she fell down from a terrace and knocked her back very badly against the rocks. I was called to attend her, and, besides the pain at the back, I found that she had a slight discharge from the vagina. I prescribed a liniment to relieve the pain, and ordered perfect rest to the patient. The day after the girl informed me that the menses had returned copiously during the night. Since then menstruation continues regular, and the patient enjoys very good health.

Malta. G. F. INGLOTT, M.D., D.M.O. (Malta).

SURGICAL MEMORANDA.

TREATMENT OF BUBO BY COMPRESSION.

HAVING seen a large number of cases of bubo treated in hospital here and elsewhere, and in consequence of the protracted retention of men in hospital, which I have known in some cases to exceed three months when incisions were made, and which was rendered necessary till all the incisions healed and inflammation subsided, I have been trying, if possible, to see if there is some means of stopping the inflammatory process other than by incisions of any kind, especially out here during the hot season, where wounds probably heal up much more slowly than in England, for various reasons; the recovery, perhaps, being retarded by the men themselve being somewhat below par, and materially aided by the depressing effect of the very hot weather we have just been having. The following treatment, as detailed below, I have found most efficacious, and comparatively speedy as compared with others I adopted; the cases by it recovered rapidly, and were soon discharged from hospital, thus preventing the long stay in hospital, which very often occurs as a result of, and is rendered necessary by, the treatment by incision. The treatment which I usually adopt now in these cases of bubo when seen early is, first, to apply a piece of lint saturated with a solution (composed of extract of belladonna and glycerine, equal parts) over the bubo, and a piece of oil silk or some protective material over this, to prevent soiling of the linen and bandage; over the whole a spica bandage is applied firmly at the groin where the bubo exists, so as to apply steady pressure. The bandage should be applied carefully and smoothly, so that the pressure may be applied exactly, and distributed uniformly over the part, but not too tightly, as it will then do more harm than good probably; the degree of pressure necessary will soon be ascertained after the application of the bandage a few times. The patient should then be allowed to get up, though the amount of exercise should be very limited, of course, at first. When the inflammation has quite subsided, and only some induration of the glands exists, the bandage is only necessary just to keep up the pressure for a few days. I found by the above method that, in almost every case, the inflammation subsided in a few days, and the men were fit to be discharged from the hospital to duty very much sooner than in those cases in which incisions were made. Of course there may be, and undoubtedly are, some cases where the inflammation has gone so far before one sees the case that it becomes absolutely necessary to make an incision; in such cases as small an incision as possible should be made at the most dependent point, and pressure the same as before applied with an antiseptic pad, so as to bring together as closely as possible the walls of the abscess cavity which has been left after the evacuation of the pus; if this is not done, the cavity will go on discharging for weeks, till it has all granulated up from the bottom. I can strongly recommend this treatment as being most efficacious, and rarely failing if carried out properly from beginning to end. The application of the amount of pressure requires a little care at first.

I have seen cases treated in various ways, but the results obtained by this method of treatment, in my experience, have been by far the most satisfactory, both as regards the shorter duration of time that the men are detained in hospital as well as the confinement to bed, which, to say the least of it, in this climate and season of the year is most uncomfortable, and, what is perhaps more important still, the necessarily shorter period they are kept from duty.

Jhansi, India. H. E. DRAKE-BROCKMAN, Surgeon Bengal Medical Service.

TOXICOLOGICAL MEMORANDA.

CASE OF CODEINE POISONING.

WHILE taking temporary charge of the General Dispensary at Birmingham, I called soon after four o'clock on the afternoon of August 21st upon a patient in an advanced stage of phthisis. On going upstairs I found him in bed, and he remarked: "I've just drunk a half-quartern of cough mixture. To tell you the truth, doctor, I'm tired of living; I'm a burden to myself and my wife." It appears that about ten minutes before my visit he poured out the remnant of his cough linctus into a tumbler and drank it off. The medicine was some that had been left over from a previous attendance at the dispensary. Knowing that a mixture of codeine, of the strength of one grain to the drachm, was in common use at that institution to soothe the cough of phthisis, I concluded it would be better at once to empty the stomach. The patient's pulse was 142, small, weak, and compressible; respiration 30, sighing. After drinking several tumblerfuls of warm water, with and without mustard, he vomited freely, and, towards the latter part of the process, called out he could "taste the cough stuff." I then gave him some whisky, and soon afterwards left him, with directions I was to be called in case of certain symptoms arising. On returning a few hours later he was drowsy, but, on being disturbed, woke up with a violent start. His pupils were small (not pin-point), but it seems not smaller than their wont; and they showed no reaction to light. His pulse was 120, full and bounding, a marked contrast from the previous condition; and a red blush was present from elbow to wrist on each arm. He complained of a confused feeling in the head. Tactile sensation seemed perfect all over the body, but he was troubled with an intense itching over the arms and trunk, and to a lesser degree down the legs. While talking to me he was rubbing and scratching himself violently and incessantly. Directions were given to keep him awake for the next five hours, and to administer ten minims of ether every hour, with some black coffee in the intervals. The itching ceased about an hour after my second visit, and the drowsiness passed off at 12.30. He was allowed to fall asleep at 2 P.M.

Next morning, the pulse was 108, feeble, and he presented the ordinary symptoms of advanced phthisis. During the day there was a slight recurrence of the itching. On the second day after I found him eating a chop, and feeling better, according to his own account, than he had done for a long time. Since then he has relapsed into a melancholic state.

I ascertained that the linctus contained codeine, and that the patient had not used any for many weeks previously. So far as can be judged, he must have taken about eight grains of the alkaloid. Much of this was probably vomited, as it was swallowed on an empty stomach; but, for the same reason, some of it was probably absorbed in the interval of a quarter of an hour that took place before emetics could be brought to work.

The most noteworthy symptoms seem to have been the intense irritation of sensory nerve-endings and altered blood-pressure. Probably many of the manifestations were masked or modified by the advanced phthisical condition; but, imperfect as the case may be, the rarity of the occurrence may perhaps warrant this short note.

DAVID WALSH, L.R.C.S.& P.ED.

General Dispensary, Birmingham.

POISONING BY YELLOW OXIDE OF MERCURY.

THE cases reported of poisoning by this substance are few. I therefore offer the following. On Monday, July 15th, my servant asked me for "some more of that powder I gave him a year or two ago to make an ointment of, as the sheep had got maggot." The next morning I mixed a powder of 3 drachms of yellow oxide with 1 of red, and gave it my daughter to give to the man. I should have given red oxide alone, but my supply was much less than I thought. The man himself had been unwell for some weeks; a fortnight before, I had given him a small powder for his own ailment; he forgot that he had asked me for the sheep powder, and thinking it was meant for himself, stirred it in a cupful of milk and took the whole, rinsing the cup with more milk to secure the whole. In three minutes he began to vomit, and in fifteen minutes diarrhœa commenced; both were profuse for thirty or forty minutes. At this point I was informed of what had occurred. My partner, Dr. Edsell, kindly come at once to my assistance; we gave large draughts of milk and beaten eggs; the vomiting was so intense that a mere touch of the throat with the stomach-pump tube was

sufficient to re-excite it when it flagged; the diarrhœa had almost ceased an hour after the taking of the powder; there was great pain across the lower part of the abdomen, which lasted two or three days, together with cramp in the lower extremities. It may reasonably be a question whether the symptoms were due mainly to the red or the yellow oxide; the most notable point seemed to be the rapidity with which the vomiting and diarrhœa set in, and their intensity for about the first hour; there was some, but no great, salivation for about four days.

Thame. HERBERT G. LEE, M.D.

TOXIC SYMPTOMS PRODUCED BY HANDLING PRIMULA OBCONICA.

I HAVE been much perplexed for some months by a series of cases of a most obstinate rash, which looked to me, as well as to some others, very much like urticaria, but which others, again, designated eczema. The cause of it was quite a puzzle to me, and so, indeed, was its effective treatment. I noticed, however, that it usually occurred on exposed parts only—the hands, wrists, and face—and nearly always, so far as my experience went, in well-to-do people who spent much time in greenhouses.

I am much indebted to a lady for showing me a letter in the *Gardener's Chronicle* of August 3rd last, who has herself been a sufferer for more than eighteen months from this rash, accompanied with dyspeptic symptoms. She has paid great attention to diet, and tried many medicinal remedies, local and general, but could obtain no relief except by going away. On her return home, however, the rash invariably reappeared. She spends very much time in her greenhouse, and has been in the habit of often handling the primula obconica. Since reading the letter in the *Gardener's Chronicle* she has left off touching the plant, except by way of experiment, and has been free from her trouble; but by way of experiment she has handled the plant a few times, which has always resulted in the return of the rash and the dyspeptic symptoms. Farther, two of her nephews, who have been staying with her, have handled the plant to test its effect upon them, and have suffered from the rash in the same way.

In one case which I have recently seen the irritation of the skin was intense, and there was extreme swelling of the face, with much œdema of the eyelids, so as to cause a horrible temporary disfigurement. The cause, therefore, seems very clearly indicated, it being obvious that the primula obconica must be let alone, unless one wishes to be stung; but it may be well that these effects should have been observed that they may not be confounded with eczema or other diseases of obscure origin.

Billesdon. CHARLES E. OLDACRES, M.R.C.S.

REPORTS
ON
MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

HOSPITAL FOR EPILEPSY AND PARALYSIS, REGENT'S PARK.

EPILEPSY AFTER VACCINATION.

(Under the care of Dr. ALTHAUS.)

ON May 23rd, a young man was admitted at the above institution as an out-patient, in whom vaccination appears to have acted as the exciting cause of epilepsy. Dr. Althaus states that he has seen a number of cases, in very young children, in which the first occurrence of epileptic convulsions was attributed by the parents to vaccination, but that in all those cases there appeared to be reasonable doubts about the *post* and *propter hoc*. In the present case, however, it is perfectly clear that the blood-poisoning caused by revaccination was, indeed, the exciting cause of the seizures.

K. H., a letter-carrier, aged 19, a sturdy-looking lad, comes from a healthy family, and is one of ten living children, none of whom have shown the slightest trace of a neurotic tendency. As a boy he had measles, but no other ailment. He had been vaccinated as a baby, but, in accordance with the regulations of the Post Office, he had to be revaccinated when, in June last year, he applied for a situation as postman. At that time he was perfectly well and strong, and his habits had always been steady. The vaccine took very well, but the lad soon afterwards began to feel ill, and swellings appeared in almost all the joints of the body. He was, however, in bed only for a day, which excludes the idea of rheumatic fever. He soon got up again and began his duties, and had his first epileptic fit about a month after he had been inoculated. Since then he has had fits about once a month, and they occur both in the daytime and at night. He has fallen down unconscious in the street on several occasions, while delivering letters, and has been on the sick-list four times during the last eleven months for a month or three weeks at a time. On the last occasion when he was ill he had fourteen fits in a single night. The symptoms of the seizure are well-marked. He suddenly turns his head to the side, becomes unconscious and rigid, gets black in the face, bites his tongue, foams at the mouth, and is convulsed for three or four minutes; after which he recovers himself. He does not pass the excreta during the fit. If taken in the street, he has a very short aura, and then falls down. In the intervals between the fits he complains of headache, giddiness, and loss of memory, but there is no sign of organic brain-lesion.

Of the acute infectious disorders, it is chiefly scarlatina which appears to act as an exciting cause of epilepsy in children; after this come measles and typhoid fever; but vaccination has not hitherto been credited with producing this complaint. The present case is all the more interesting on account of the age of the patient, at which epilepsy does not commonly originate, and of the perfectly clean bill of health presented by his family and by himself previous to the vaccination. The blood-poisoning, which unquestionably originated in this young man from the inoculation, may have resulted from some slight admixture of blood with the vaccine-matter, although there is no actual evidence that such was the case; but, looked upon in this light, it would show once more the supreme importance of the most scrupulous care on the part of vaccinators with regard to this momentous point.

RADCLIFFE INFIRMARY, OXFORD.

TWO CASES OF CEREBRAL HÆMORRHAGE IN CHILDREN.

(BY WM. COLLIER, M.D., M.R.C.P.LOND., Physician to the Infirmary.)

CASE I.—J. B., aged 13, was admitted into the Radcliffe Infirmary on March 13th, 1889, with symptoms of heart disease, dyspnœa, swelling of the feet, and pain over the cardiac region, which had come on about a month previously. Had never had rheumatism, but had had symptoms of heart trouble at various intervals for many years past. On examination the heart was found to be considerably enlarged, and a loud double murmur at the apex was discovered. During his stay in the hospital his temperature varied between normal and 101.4°; occasionally falling and keeping to nearly normal for two or three days, and then shooting up and oscillating for a period. As no other cause could be found to explain the temperature, it was regarded as a case of ulcerative endocarditis. About six weeks after admission he was suddenly seized during the night with a fit of a convulsive nature; the attack lasted a few minutes, at the end of which time he became quiet and drowsy. An hour later another convulsive attack came on, and he rapidly passed into a condition of profound coma, with stertorous breathing and widely dilated pupils; there was marked rigidity and flexion of both arms, with clonic spasms; the legs were also affected, but to a less extent; he remained in this condition for about four hours, gradually becoming more and more cyanosed, and died asphyxiated.

Necropsy.—On examination of the heart, a number of warty vegetations were found at the free edge of the cusps of the mitral valve; the other valves were healthy. The spleen was enormously enlarged, weighing 21½ ounces; on section it exhibited a number of recent infarcts. The kidneys also showed several infarcts, but of an older date. On examining the brain, an enormous recent blood clot, which on removal was found to weigh 2 ounces, was found occupying the right supramarginal convolution, but did not communicate with the lateral ventricle. The exact source of the hæmorrhage could not be discovered.

REMARKS.—In this case, there can be little doubt that a small clot of fibrin was carried from the diseased mitral valve to one of the vessels of the brain, blocking it so that the vessel gave way behind the block, fatal hæmorrhage following.

CASE II.—L. W., aged 6½, was admitted into the infirmary on March 20th, and died on March 28th, 1889. Her illness commenced about three weeks before, with headache, vomiting, weak-

ness of the legs and arms, and an increasing disinclination to move about. On admission it was observed that she had decided ptosis of the right eyelid, with paresis of the muscles of the left side of the face. There was loss of power, and some rigidity in the left arm and both of the legs, the left more than the right; she was unable to stand without some support. Pupils were equal, and reacted to light. She was quite sensible, and complained of severe frontal and vertical headache. After admission all the symptoms increased in severity. The paralysis grew more marked, and she became more drowsy, and vomited at intervals. The ophthalmoscope showed well marked double optic neuritis. The temperature rose a few hours before death to 108°.

Necropsy.—On examining the brain, the pons was seen to be much enlarged, especially on the right side. Occupying the posterior half of the interpeduncular space, covering the posterior perforated space, was a quantity of flocculent lymph and gelatinous material resembling blood clot. On washing this away a small vein, about the size of a No. 1 English catheter, was found completely blocked by a dark clot. At the inner margin of the right crus a blood clot, about the size of a large cherry, which had pushed the crus somewhat outwards and had partly eroded its substance, was found. On further examination, this clot was seen to be continuous with a larger clot which occupied the greater part of the substance of the right half of the pons. No disease of the bones of the skull or of any other part of the body was discovered.

REMARKS.—In this case the cause of the hæmorrhage is very obscure. The history points to its having been a slow oozing of blood into the tissues of the brain rather than a sudden effusion. A vein was found plugged for a considerable distance; it was thought the walls of the vessel might have given way behind the plug.

REVIEWS AND NOTICES.

LEÇONS DE THÉRAPEUTIQUE ET DE CLINIQUE MÉDICALE DE L'HÔPITAL BICHAT—MALADIES DU CŒUR ET DES VAISSEAUX, ARTÉRIO-SCLEROSE, AORTITES, CARDIOPATHIES ARTÉRIELLES, ANGINES DE POITRINE, ETC. (Lectures on Therapeutics and Clinical Medicine delivered at the Hôpital Bichat—Diseases of the Heart and Vessels: Arterio-sclerosis, etc.) Par HENRI HUCHARD, Médecin de l'Hôpital Bichat. Paris: Octave Doin, 1889.

THIS is a bulky and weighty volume of 887 pages. Much of it is of great value and bears evidence of laborious compilation. It is to be regretted, however, that the author has not attempted to condense the mass of material which he offers to the reader; the value of the book would be greater if it were less diffuse.

It is not to be assumed that this is a systematic treatise on diseases of the heart and vessels; it deals with only a small portion of this great subject, and chiefly with the relations subsisting between diseases of the arteries and diseases of the heart, and the therapeutic indications in regard to these associated conditions. At many points, however, the author's observations radiate so that they may almost be said to be "de omnibus rebus et quibusdam aliis." The work begins with a long discussion concerning therapeutic indications, passes on to a study of the pulse in typhoid fever, professes to consider arteritis and aortitis, and the states of heart associated with these diseases; at length and with great ability deals with angina pectoris, and concludes with a dissertation on digitalis, and on therapeutic agents which especially influence the heart and vessels.

The author is no believer in the clinical value of the sphygmograph. He says: "It cannot be too often repeated that sphygmographic tracings are powerless to inform us in any way, as has been believed until now, as to the condition of arterial tension." This is a sweeping condemnation of instruments of precision and graphic record, and probably Marey, François-Franck, Burdon Sanderson, and Lauder Brunton would have something to say in extenuation. It can scarcely be denied that some precious physiological lessons have been taught by the use of the sphygmograph and instruments of its kind, and, though the interpretation of their records in conditions of disease may be difficult, it seems contrary to the policy of a highly-educated scientific observer to condemn them absolutely as aids to diagnosis. The author teaches us to recognise by our ordinary powers of observation the differences between low arterial tension (hypo-tension) and high tension (hyper-tension). [Would not the prefixes sub- and super- be better?] Low tension is recognised by the following characters of the heart-sounds:—(1) Acceleration, (2) similitude of the two sounds, (3) equality of the silences. These conjoined constitute embryocardia, that is, a condition resembling that of the fœtal heart as distinguished from tachycardia, a mere quickening of the action. Embryocardia is of dangerous or fatal augury. The author thinks that in some cases of rapid action of the heart—in exophthalmic goître, for example, when the rate may be 140 to 160 and upwards per minute—it is possible for the ear to appreciate the normal relation of the sounds, and so differentiate the case from the more dangerous condition of the fœtal rhythm. We are of opinion that all observers will not agree with him. The signs of arterial high tension are said to be chiefly the accentuated second sound heard in the second or third right intercostal space and the exaggerated precordial shock of the impulse. The author considers that acute aortitis, which some observers, as Constantin Paul and Jaccoud, deem too vague to possess a specific morbid anatomy, is nevertheless recognisable. Its two fundamental signs are dyspnœa and pain—it is marked by an increase of percussion dulness over the aorta, by pulsations of the arteries and prominence of the subclavians; these signs and symptoms occurring in an acute course, as distinguished from the slow evolution of aortic atheroma involving the orifice and constituting the affection known among our *confrères* as the "Maladie de Hodgson."

General thickening of the arteries is considered in relation with atheroma. These affections are two distinct localisations of the same morbid process, namely, inflammation affecting the arterioles. Interstitial nephritis, before being a disease of the kidney, is an affection of the whole arterial system. Moreover, the inflammatory process may involve not only the arterial but the venous system. As there may be endo- and peri-arteritis, so there may be endo- and peri-phlebitis, with consequent thickening (sclerosis) in each case. The heart is involved in like manner, so that there may be a cardio-sclerosis, which may be either hypertrophic or atrophic. Atheroma is the effect of, first, inflammation, secondly, degeneration (necrobiosis). Its first stage is an obliterating arteritis of the vasa vasorum; following this are the degenerative changes, due to the blocking of the supply of arterial blood to the wall of the vessel; coincidently, there is an excessive proliferation of fibrous tissue. Arterio-sclerosis, however, is not wholly and everywhere a persistent morbid change in the arteries. In its early stages it determines a state of spasm, more or less generalised, of the whole arterial system. So the condition of high arterial tension is brought about, and the vicious circle with the attendant symptoms, which are elaborately described, is established.

The portion of the work dealing with angina pectoris is a storehouse of valuable information. True angina pectoris is defined on anatomical data as an inflammatory lesion of the aorta, localised in the neighbourhood of the coronary arteries, or a lesion of the coronaries without aortitis, leaving, as a consequence, a narrowing of the calibre of these vessels, a diminution of their lumen, and, as an effect, ischæmia of the cardiac muscle. The affection may be initiated by lesions of the aorta, the coronary vessels, the myocardium, or the pericardium; it is predisposed to by a state of arterial supertension and the slow and insidious development of arterio-sclerosis.

The symptomatology of true angina pectoris is given in an exhaustive manner. The inquiry as to its etiology is illustrated by abstracts of 123 cases, in which the *post-mortem* examination demonstrated conclusively the existence of stenosis of the coronary arteries. The author considers it as proved that true angina pectoris is caused by arterio-sclerosis. Sudden death in the affection is explained by the fact that the muscle of the heart in the course of the arterial disease is so insufficiently nourished as to be in imminent danger of paralysis; then a further occlusion from arterial spasm or possibly thrombosis occurs, the blood supply becomes arrested, and function ceases. Such is true angina, but there are many false anginas which are varieties of neuralgia, and how shall these be differentiated?

True angina pectoris occurs generally after the age of 40. It is more common in men; it is provoked by effort, seldom occurring spontaneously; it is rarely periodic and nocturnal; the attacks are not accompanied by other symptoms; the pain is intensely acute and constricting, substernal, and usually localised at the level of the aorta; the attacks are of short duration; the attitude

of the patient is one of motionlessness and silence; the disease is nearly always fatal.

False angina pectoris may occur at all ages, even in a child of 6; it is more frequent in women; attacks are generally spontaneous, periodic, nocturnal, and associated with other neurosal symptoms; pain less severe than in true angina, but sensation that of distension of the heart; site of pain diffused over heart-region; attack often of long duration—162 hours; attitude of agitation; prognosis favourable. Pseudo-angina may also occur from reflex irritations and from some toxic agents, especially tobacco. We are of opinion that this classification is too artificial. We know that many observers have noted cases of angina pectoris, and even have witnessed fatal attacks when the subjects have used no muscular effort. To take the fatal termination of angina as a sign of differentiation between the true and the false rivals the ancient receipt for distinguishing between wholesome and poisonous mushrooms. Even if practical it is scarcely scientific.

Observations are not wanting in which no lesions of the coronary arteries whatever were discovered *post mortem*, though the signs were typically those of angina pectoris. Experience seems to point to the conclusion that in the majority of cases of angina pectoris there is a persistent high tension in the arterial system; that in such the state of arterial constriction may be acutely aggravated by slight or indeterminate causes; that the effect of such arterial contraction is to induce cardiac ischæmia and syncope, and in these subjects obstruction of the coronary arteries is commonly, but not invariably, found after death. On the other hand, signs and symptoms of angina, which in some cases proves fatal, may be observed in persons who have presented no signs of persistently high arterial tension; in these, also, there is very probably the acute supervention of arterial constriction with syncope as its result, but no lesion of the coronaries is found *post mortem*. Though the author cites the high mortality as a criterion of true angina pectoris, he is nevertheless very hopeful as to treatment. The rules given are very judicious. As regards medication, the iodides are the most important agents, the author, for many good reasons, generally preferring the sodium to the potassium iodide, administered for protracted periods. Of 80 cases—considered by the author to have manifested true angina pectoris — thus treated, 43 were absolutely and definitively cured, 22 manifested improvement, and 15 died. In the fatal cases, 11 showed signs of organic disease of the aortic valves. The author discusses at great length many other therapeutic measures, and his observations deserve very careful attention.

Manuel Pratique de la Garde-Malade et de L'Infirmière. Publié par le Dr. Bourneville, Redacteur en chef du *Progrès Médical*, Médecin de] Bicêtre, Directeur des Ecoles Municipales d'Infirmières, Député de la Seine, etc. Avec la collaboration de MM. Blondeau, de Boyer, etc. Quatrième édition, revue et augmentée. Paris: aux Bureaux du *Progrès Médical*. 1889. (Practical Manual for the Nurse and Attendant upon the Sick. By Dr. Bourneville and others. Fourth Edition. Paris, 1889.)

From these volumes we are enabled to trace the history of the technical education of nurses in Paris. In 1878, the Salpêtrière, and very soon after the Bicêtre hospitals, began to establish courses of instruction for those who aspired to positions on the nursing staff of hospitals. These courses, theoretical and practical, became very complete, the lecturers and teachers being well-known and competent men. To illustrate the lectures, and to serve as aids to instruction, the five volumes before us were published; the first, on anatomy and physiology (illustrated by many woodcuts); the second, on the general administration of the Paris hospitals and the duties of the nursing staff therein; the third, on dressings and certain minor operations in surgery; the fourth, on the duties of the monthly nurse and on the elements of pharmacy, with a third part on the special duties of attendants upon the insane; the fifth volume, on hygiene, etc.

We learn as to the course of instruction for nurses that the lectures are given twice a week, from eight to nine in the evening, from October 1st to August 1st, each professor giving eighteen lectures. Besides these, practical instruction is given from six to eight times each week in classes. At the end of the course an examination takes place, and a diploma is conferred upon such pupils as obtain at least the minimum of marks in one of the three examinations held during each course, the general maximum of the marks being 175 and the minimum 115. The possession of this diploma is the passport for the employment of the nurses in the great hospitals. To obtain such a diploma requires considerable application and aptitude.

A perusal of these volumes has suggested to us certain reflections. In the first place, though members of the medical profession in England may accept with satisfaction the compliment implied in the statement that they are pioneers in the work of systematic education for nurses, and that many works for the guidance of attendants upon the sick have been published in this country, they must make the retort courteous that no such complete manual as the one before us has been published here. It may be added that the want of such a publication is distinctly felt. To adapt the French manual to English readers would be an impossible task, not only because of the differences of administration in the two countries, but because much of the argument of the book in things ethical and theological would probably offend the susceptibilities of many English readers.

Another reflection induced by the volumes is, that it seems a desirable thing that the facilities for a complete and systematic education of nurses should be greatly extended. In some of our metropolitan hospitals a very complete course is given, and the competency of the probationer is subsequently tested by a theoretical and practical examination, the reward of merit being a pass certificate. In the scheme described in the manuals before us the diploma which is conferred, after passing the examination, is said to be the passport for employment in hospitals, but no mention is made of its serving as a recommendation for private nursing engagements. It is surely a desirable thing that the sick who remain at their homes should have some guarantee that they shall be provided with the like nursing skill which is allotted to patients in hospitals. Experience shows—and this lesson will be daily more and more enforced upon the public—that the powers of a good nurse do not come by Nature, but require, besides the moral attributes of a gentle manner and kind heart, technical skill and knowledge only to be acquired by training. It is obvious that such training can be thoroughly and adequately given only in hospitals. It is most desirable that, not only in London, but throughout the country, wherever there is a hospital, there should be a training school for nurses. It cannot be denied that these are too few at present. The certificates issued by these institutions should be valuable guides to the medical practitioner in his choice of a nurse for his patient. It seems to be now a burning question whether there shall be established a "general register" for nurses. If it be conceded that it is desirable for one who aspires to be a nurse to receive the elaborate education which the volumes we are now considering indicate, it must be acknowledged that such education, under existing conditions, must be possible only for a small minority of those who are engaged in nursing. We have said that it is very desirable that the facilities for such education should be largely increased; but the proposal to establish a general register, when the number of those qualified to be placed upon it is so small, and when the development of the facilities for due training is as yet so incomplete, would appear to be, at the least, premature. Moreover, it is by no means certain that a certificate issued by any central authority would be of more value to a nurse that that coming from the local institution where she received her training, the authorities of which would have a better opportunity of judging character and conduct as well as diligence and aptitude.

There is, on the part of the medical profession, an earnest desire to promote the well-being and to elevate the social status of nurses of the sick. The best mode of accomplishing these ends is to afford facilities for a sound education; the next is that nurses shall be properly recognised and duly remunerated by an appreciative public. There may in these days be just a slight danger of their suffering from the over-zeal of their friends and from the results of a benevolence which, if exercised in too exuberant a degree, may take the undesirable form of patronage calculated to injure their sense of self-respect.

Recollections of a Nurse. By E. D. London: Macmillan.

Under the professional name of "Sister Emma," we here have glimpses of a lady nurse's career, mostly between the years 1875 and 1885. She touches lightly, pleasantly, and modestly on her varied experience as a private nurse at home, and abroad in a more public capacity—first, in connection with the University Mission

at Zanzibar; secondly, in South Africa under the Stafford House Committee; and, lastly, in Egypt with the National Aid Society. Sister Emma is an excellent specimen of those devoted, unselfish women who, as nurses, are ever ready to sacrifice themselves in ministering to others.

She adopted her profession as a life career, working up step by step from probationer to superintendent; that means a good deal. Perhaps a nurse's worst trials are during the probationary training; Sister Emma says as much, and confesses then to "very hard work." She says: "My feet used to blister with the constant trotting about, and my hands from wringing out hot flannel for fomentations." But the trials of nurses do not end with their training, for they have sometimes much to put up with in attendance on irritable patients. Sister Emma mentions having been "sent to nurse an old gentleman who had had fourteen nurses in one month;" this irascible old fellow, probably racked with arthritic gout, used to throw pillows and cups of tea at the nurse's head; truly a veritable old Trunnion!

Sister Emma's recollections are almost purely personal and descriptive, but occasionally she throws out excellent practical suggestions connected with her work. We are especially pleased to find that her good sense and feeling never desert her, and she never diverges into critical remarks on the medical men under whom she served; this at once stamps her as a true nurse, having a just estimate of the nature and extent of her functions.

Her recollections of the voyage to Zanzibar are just those of all travellers who get their first glimpse of Eastern civilisation in the Mediterranean. She soon discovers at Zanzibar the essential difference between the Eastern and Western races in her contact with Arabs and Sidis—those queer compounds of childish simplicity and almost diabolic cunning. We gather that her Zanzibar experiences were not altogether satisfactory; within two years the climate, work, food, and insects had landed her in a severe attack of remittent fever, from which at the same time her companion nurse, Miss Jones, unfortunately died. From being originally a stout woman of eleven stone, Sister Emma, when invalided to England in 1877, weighed but eight stone three pounds.

Her trying tropical experiences, however, did not deter her from returning to Africa in 1879 as a superintendent, under Dr. Ross, Commissioner of the Stafford House Committee. Her duty now was to minister to sick and wounded soldiers during the Zulu wars. The Committee, as is well known, sent out not only nurses, but hospital stores, and even luxuries in the greatest abundance. Needless to say, people so equipped soon became vastly popular in the military hospitals—sometimes, we fear, almost at the expense of discipline. She had the usual experiences of Natal travelling: thunderstorms, swollen rivers, fearful roads, jolting waggons, life in tents and shanties, improvised furniture, indifferent food. But her stout heart never quailed, and, when the rough Africander on the box-seat of a 'bus made her take the reins, he was surprised to find that the gentle nurse could handle them well and keep the six horses straight on the track! She was soon at work under the Army Medical Department, and, being a skilful cook, constantly prepared delicacies (from indifferent raw material), which were a real boon to the sick soldier.

We sometimes detect her thinking, and almost asking, Why do not the authorities provide more delicate feeding and better cooking for sick soldiers in the field? This question has often occurred to the civilian mind, which knows little or does not think of the absolute limits which the best military organisation must put on field hospital supplies. The mobility of the military machine is everything, and to hamper it with anything but the barest necessaries is to court disaster; only the simplest food and stores can be taken to the front; luxury marching with an army has ever meant defeat.

There has been of late a tendency to disparage the ordinary hospital orderly, and we are pleased to find Sister Emma bearing testimony to his worth; she says: "We had not many orderlies, but the ones we had were good." When the nurses left Natal, Surgeon General Holloway expressed the high appreciation in which they were held by the Army medical officers.

In March, 1885, the National Aid Society made an appeal on behalf of the sick and wounded in Egypt, and Sister Emma volunteered her services as a "cooking sister," which were accepted by the branch belonging to Her Royal Highness the Princess of Wales. So to Suez she went, and began cooking and serving out good things, as she had done before in South Africa. From Suez she moved to Cairo, and up the Nile with stores for the hospital at Assiout; she describes the heat as fearful and the dust as suffocating. The stores of the Society were most ample and varied, and distributed with a free hand; but, like a true nurse, she says: "In no case did I ever give anything without the sanction of the medical officer in charge." This, indeed, is the only condition on which aid societies can possibly be allowed to dispense stores in military hospitals.

Towards the end of her book she says: "The question of feeding the sick and wounded seems to me a very great one." Most undoubtedly; it has exercised the brains of the ablest and wisest military administrators; it is always a question of expense, and generally one of transport. The principle which ought to govern it seems to be this: Carry only a minimum of hospital impedimenta to the front; bring back the sick and wounded to the supplies; equip hospitals on the lines of communication and at the base as thoroughly as possible, but attempt nothing but elementary functions in the field hospitals. Hence, therefore, medical officers have arrived at the conclusion that the efforts of women nurses and aid societies should be confined to the stationary hospitals, leaving the sterner work of the front to the regular medical staff.

Sister Emma's example is one to be followed; she lets fall a most encouraging sentence to all intending nurses: "How grateful one finds most hospital patients!" That is her experience both among the rich and poor, in civil life at home and with soldiers in foreign lands. The occasional irritability of a patient is thus altogether lost in the universal gratitude which the nurse receives.

We take leave of this book with kindly feelings, and, should it ever be the reader's fate to want a nurse, he could wish for none better than "Sister Emma."

THE PHYSIOLOGY OF THE DOMESTIC ANIMALS: A Textbook for Veterinary and Medical Students and Practitioners. By ROBERT MEADE SMITH, A.M., M.D., etc. With over 400 Illustrations Philadelphia and London: F. A. Davis. 1889.

THE appearance of this work, one of the most complete of its class, is most opportune. It will be much appreciated, as tending to secure the thorough comprehension of function in the domesticated animals, and, in consequence, their general well-being—a matter of world-wide importance. With a thorough sense of gratification we have perused its pages; and, although unable to detect much original work of a strictly physiological nature, we must testify to the clearness of expression shown in the able collection, classification, and logical arrangement of the material particularly associated with the subject.

In his preface the author draws attention to the fact, lamentable in the face of the increasing value of the domesticated mammalia, that function in them is much more a matter of deduction than of study of the individual. In England legislation has arrested the possibility of an extension, compatible with modern ideas and requirements, of investigations into animal functions, and yet modern physiology rests upon such a basis. In England adequate experimental research at all in proportion to the subject involved is out of the question. The introduction to the book is most clear and valuable; throughout we find clear expression, clear reasoning, and that patient accumulation of facts so valuable in a textbook for students, and we strongly recommend this one to the notice of heads of veterinary schools. Rarely has the nature of osmosis been so so clearly explained, while the portion dealing with general physiology is most complete.

To the practical man, however, Part II, Book 1, will prove extremely interesting, and it remains to be seen whether following implicitly in practice the theories here elaborated upon food and feeding will lead to more successful management. Hitherto digestion in herbivora has not received the attention its importance to the feeder would seem to demand, but in this book it is thoroughly and exhaustively considered. The author states that, in the horse, investigation has demonstrated that, if the animal is fed upon a mixed diet, greater proportions of assimilable matter are extruded with the fæces than if fed upon a simple diet. This would rather point to mixed diets being an extravagance, but practically it is found that a mixed diet is economical, and well assimilated if carefully balanced in its proportions to the requirements of the system. On page 689 we notice the recommendation of three meals a day for the horse; but, after discussing the smallness o his stomach and other important anatomical details, we were prepared for at least double that number, which in practice is found preferable.

Under the Physiology of Movement the author is not so much at home, evidently for want of more precise anatomical know-

ledge. In the horse, the fascia lata of the hind quarter is alluded to as a muscle, while the consideration of some of the levers in the limbs is open to question, as the point of movement of the limb is made of more importance than the advancement of the body over the limb while the foot is on the ground. We regret the absence of any reference to the physiology of the digit in the horse.

We must pay a tribute of praise to the numerous coloured diagrammatic plates, but would point out that one of each two of the following plates is redundant—Nos. 1 and 3, 47 and 53, 77 and 138. The book is marked throughout by most painstaking labour, clearness in expression, lucidity of reasoning, and the immense quantity of information is arranged in a perfect and pleasant style.

THE APPLIED ANATOMY OF THE NERVOUS SYSTEM, ETC. By AMBROSE L. RANNEY, A.M., M.D. Second edition. Pp. 791; fig. 238. London: H. K. Lewis.

THIS is a work of some magnitude, in which the anatomy, physiology, and pathology of the nervous system is treated in a minute and systematic manner. The subject is divided into four parts, besides a short general introduction; the first part deals with the brain; the second with the cranial nerves; the third with the spinal cord; and, lastly, the fourth with the spinal nerves. A good and complete index is given at the end. The type is clear, and the execution of the numerous figures is excellent.

In his preface the author says that this edition of his work, compared with the first, is practically a new work, and adds that it must be of necessity, to a large extent, a discussion of the views of others. He also lays stress upon the use which he has made of diagrams, of which a large number are given, and inasmuch as the subject has been treated in the course of lectures their use may have been expedient. As regards the first point, the reference to authorities, we find that the quotations are numerous and fairly well up to date, but we note that no reference is made to the investigations of Gaskell, or to those of Herringham. The first of those observers throws great light upon an obscure branch of anatomy and physiology, and the essay of the latter, although a much less ambitious undertaking, places a most involved and confused branch of anatomy upon a scientific basis. Indeed, nothing could be more striking than a comparison of the exposition which is here given of the anatomy of the brachial plexus with a scientific exposition of it. First there is a diagram of the plexus copied from Gray; next one from Hirschfeld; then a figure from Hirschfeld. Now we venture to think that anyone might study these, and the tables which accompany them, without ever realising the simplest of the rules which govern the origin and distribution of the various nerves, and which account for their anomalies. A nerve consists of two elements, namely, nerve fibres and connective tissue. The latter is but the clothing of the nerve fibre, and no one will understand the origin, course, and distribution of nerves until he has learnt to study them with their clothes off. From lack of appreciation of this principle our author is content to trace the descendens noni to the hypoglossal, and leave it there, saying nothing about its relation to the first and second cervical nerves, or to the pneumogastric.

We also gather from what is said about the hypoglossal nerve that the absence of a ganglionic enlargement is sufficient evidence of the absence of ganglionic elements. Recent researches show that this view is erroneous, and that the various nerves require to be investigated by the latest methods of histological research, and by the light of comparative anatomy, and more especially of comparative embryology. So far as ordinary textbook anatomy goes, that which is given seems correct and clear; but, as may be gathered from the above, this standard is not sufficient for the requirements of modern investigations. Here and there figures have been copied with insufficient discrimination, for instance, one from Hirschfeld (Fig. 139), in which there are several inaccuracies; and others are given which we hardly expect to find in a book of this kind.

The chapter on cerebral topography gives a summary of the opinions of those who have written upon the subject; but, as a consequence, results are given which have been arrived at by a great many different methods. The time has not arrived for order to have sprung out of the chaos of this branch of topographical anatomy; but it is beginning to be recognised that existing methods are wanting in many respects, and that there is a good deal of variation in the convolutions themselves, in their relation to the skull, and in the anatomy of the skull itself. No attempt is made to give an idea of the relative value of the different methods which are described; and yet in a book which purports to be printed from lectures, guidance and advice might certainly be looked for. It is true that doubt seems to be felt as to some of the landmarks which are given; for instance, the stephanion is spoken of as a point which can usually be felt. Most surgeons prefer points which can always be ascertained. But we must not blame Professor RANNEY for the confusion which surrounds cerebral topography; we only regret that he has not more clearly given his own opinions, and that the whole work is so colourless. It seems to us to be a matter for regret that so much time, trouble, and expense have been expended upon a work which is, so far as anatomy and physiology are concerned, little more than an able and clear epitome. The clinical and pathological parts of the work are written with a firmer hand, and are more what we might expect in a work of such pretensions.

Great care has evidently been taken in the work of revision, and we have met with very few misprints. In the index, however, "Puskinje" and "Vicq de Azyr" obtrude themselves; and American methods of spelling seem at times to have no justification beyond, perhaps, an ambition to be different from others.

URINES; DÉPÔTS; SÉDIMENTS; CALCULS; APPLICATIONS DE L'ANALYSE UROLOGIQUE À LA SÉMÉIOLOGIE MÉDICALE. Par E. GAUTRELET. Avec préface du Professeur M. le Docteur LÉCORCHÉ. Paris: Baillière et Fils. 1889.

THE chemical analysis of urine has rightly assumed at the present day an importance of the first order in the practice of medicine. It is no longer limited to the mere detection of certain abnormal principles, or to a simple search for albumen or sugar; for biological chemistry, by enabling us to penetrate more deeply into the elementary constitution of the urine and its constituents, and by bringing to light in this fluid the greater number of the products of organic assimilation and disassimilation, has led physiologists and physicians to a closer insight into the mysteries of life, as well as to higher and more comprehensive hypotheses in explanation of vital phenomena generally. To find, for example, in this renal secretion the great measure of the nutritive exchanges in the economy, and to appreciate, according to the variations in its principal constituents, the mode of reaction of the cell elements of the organism, have now become the chief as well as the true objects of urinary analysis. In this work M. GAUTRELET, who is decidedly a chemist of great merit, has not limited himself to the isolated study of each of the numerous principles found normally or abnormally in urine; but he has also tried to trace the relationship among them, and to show their connection with the simple or complex products of alimentation, of the tissue changes, or of the waste occurring in the organic fluids of the body.

The book opens with a brief sketch of the minute anatomy and physiology of the urinary apparatus, followed by an excellent summary of the physical, chemical, and physiological properties of the urine. The first two parts of the work deal in general with an enumeration of the urinary elements, and with a careful study of the normal type of the urine, together with the modes of qualitative and quantitative research for its chief constituents. All this technical part is marked by great clearness and scientific precision; but the sections devoted to the volumetric methods are too limited in the processes given, while those described are much too briefly stated, we think, to be of advantage to any but chemists who have already had some experience in this kind of analysis. The dosage of phosphoric acid, for example, is given very baldly; while that of chlorine is very incomplete, as the only process referred to is Mohr's, by means of a standard silver nitrate solution, which may serve very well when the chlorides are abundant, but proves most unsatisfactory when they are in small amount, as in fevers. The only other fault, however, we intend to find is with the treatment of the albumens. This, we are compelled to say, we regard as very feeble and incomplete, taking into consideration the modern advances made in this direction. But M. Gautrelet has devised a very ingenious apparatus, which appears to us to effect a decided advance in the determination of the nitrogenous constituents of urine. It is named by him a "uro-azotimètre," and by its means a volumetric determination can easily be made of the urea, the uric acid, and the kreatinin by three successive experiments.

The third part of the book contains valuable semeiological de-

ductions and practical applications of the results obtained by the technical analyses, and is full of new opinions and original theories. Although we are not in accordance with the author in some of his statements, we feel bound to confess that he supports them with great ability. Indeed, his book is most able, interesting, and suggestive, and is well deserving of attentive study.

NOTES ON BOOKS.

Transactions of the Gynæcological Society of Boston. New Series. Vol. i. (Boston, U.S.A. Cupples and Hird. 1889.)—This Society was founded in 1869, and seven volumes of transactions were published, 1869-72, under the title of *The Journal of the Gynæcological Society of Boston.* The first instalment of the new series forms a very handsome volume, for which the editor and publisher deserve credit. The beautiful lines from Goethe's *Faust*, "Grau, theurer Freund, ist alle Theorie, und grün des Lebens goldner Baum," which form a kind of text on the title-page had best been left untranslated. The illustrations are not equal to the text when we take into consideration the excellence of the plates in many current publications, owing to photogravure and other improved methods of engraving and printing. The subjects of discussion include many familiar topics, such as the ethics of abortion, the functions of the ovary, and the character of different forms of pelvic inflammation in women. Drs. Harriman and H. M. Field contribute two good practical papers on constipation in women. Dr. Helen Betts's communication on the dress of women and its relation to the etiology and treatment of pelvic disease, is worth consideration. The shelves of medical libraries already groan under the weight of *Transactions*, but these new archives which are here reviewed should, nevertheless, not be excluded.

The British Gynæcological Journal, being the Journal of the British Gynæcological Society. Edited by FANCOURT BARNES, M.D. Part XVIII. August, 1889. (London: John Bale and Sons.)—This part includes several interesting communications, abstracts of which have appeared in our Society reports. Of high pathological importance is Dr. R. T. Smith's Case of Diffuse Fibrosis. There was fibroid thickening of the ovaries and other pelvic viscera, the peritoneum, the intestines, and the stomach. Drs. Bristowe and Hilton Fagge have described this condition as affecting the stomach. A fuller report of the pathological appearances in this case is forthcoming. There was ascites with emaciation, and, on tapping, nodular masses were felt, so that cancer was naturally diagnosed. The case may throw light on many other instances of obscure abdominal disease ending fatally. A specimen of Primary Tubercular Salpingitis deserves notice. The tube was removed by Dr. Heywood Smith. On naked-eye inspection it appeared to be invested with fibroid growths. When examined under the microscope the growths proved to be masses of tubercle.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS,
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

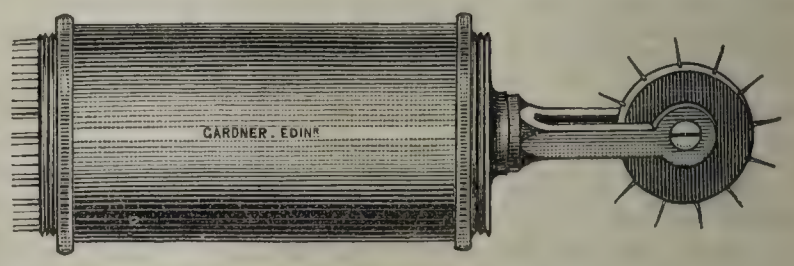
FRAME FOOD PREPARATIONS.

THE bran of wheat and of other cereals contains, as is well known, a large quantity of albuminoids, oil, and phosphates. In the bran itself they are practically useless for human food on account of the overwhelming proportion of cellulose with which they are combined, because the latter is indigestible itself, and causes serious irritation of the intestinal canal. "Frame food extract" consists of these food materials, ingeniously extracted and separated from the cellulose of bran. The composition is particularly favourable. According to Dr. P. Frankland, whose analysis we have verified, it includes no less than 21 per cent. of albuminoids, and 7.5 per cent. of phosphate of potash, together with 48 per cent. of sugar, dextrin, and starch. The extract itself is in the form of a dry brown powder, of an agreeable biscuit-like odour and slightly bitter taste. It forms the basis of a number of preparations, such as frame food porridge, frame food jelly, and frame food bread, the whole of which are good and nutritious articles of food. Frame food makes available for human food a portion of an article which has hitherto been a waste product, of little use even for the feeding of animals.

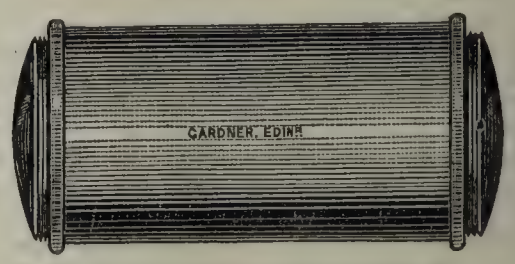
THE DERMIC PUNCTATOR.

THE accompanying woodcuts represent an instrument, open and shut, which I have devised and used for some time. Its object is—by means of dry needle puncture alone, or followed by moist applications—to induce counter-irritation expeditiously over a great or less extensive area in all cases suitable for treatment by that method. Having found it to be most convenient and effectual for the purpose, the description of it will, I hope, be of use to others.

The needles, by means of the spur or stamper, are rapidly moved over the part to be operated upon with sufficient pressure to penetrate the derma without bleeding, and this process may be repeated from time to time with little felt inconvenience to the patient. The efficacy of this dry application of the needles is materially enhanced, and may be indefinitely continued by immediately brushing over the punctures with any of the counter-irritant applications commonly in use.



When ordinary blistering fluid, reduced to one-fourth of its usual strength by the addition of three parts of sulphuric ether, is thus used, it is immediately productive of a crop of pin-head vesicles, unattended by pain, or shock, or the usual strangury of cantharides applications. The vesicles shortly disappear by absorption, a layer of dry cotton-wool being the only dressing required.



The *B. P.* croton oil liniment, reduced in strength in the same proportion by sulphuric ether, and applied in the same way, also yields pin-head vesicles, which do not coalesce nor pustulate as is apt to be the case when that liniment is used. A like result follows the application of strong acetic acid applied by itself. Any of the anodyne or rubefacient liniments may be used in their ordinary strength. The vesicant applications over the chest in phthisis are very relieving, and in acute and chronic bronchial catarrh they have been found curative.

The needle application is very serviceable in many of the disorders connected with hysteria, and in nearly all spasmodic and painful affections of the nervous system. The marks left on the skin by the instrument disappear after a time.

The punctator can be obtained from Mr. J. Gardner, cutler, Edinburgh.

ANDREW SMART, M.D., F.R.C.P.Ed.,
Senior Assistant Physician to the Royal Infirmary, Edinburgh.

DYSPEPSIA CAKES (POWDERED).

THIS preparation we have noticed before, the dyspepsia cakes of Dahl's agency having been previously analysed and commented upon by us. The powder now before us is almost tasteless, and has somewhat the appearance of sawdust, but is nevertheless remarkably poor in cellulose, and correspondingly rich in true food materials.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1889.

SUBSCRIPTIONS to the Association for 1889 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, SEPTEMBER 28TH, 1889.

THE REPORT OF LORD CAMPERDOWN'S COMMITTEE.

III.

ALTHOUGH pay and status take precedence in the inquiry, yet the conditions of service really are of more primary significance. We have already pointed out that pay, retirement, nay, even rank and title, can only be considered adequate relatively to the conditions of service; for the value of the former may be reduced or even destroyed by imposing unduly onerous terms upon the latter. It is a commonplace of those who would, intentionally or thoughtlessly, seek to grind the faces of medical officers, to quote as an argument the usually exacting character of civil practice. It is unfortunately too true that the general practitioner, in many instances, undergoes an amount of day and night work such as neither falls nor would be submitted to by any other educated man in the community; yet he faces it as a free agent, with some power of regulating visits and fees. But the service medical officer has neither freedom nor optional powers; and any attempt to exact from him for a fixed salary, and under rigorous regulations, similar hard duties, would not be long endured. Let economists, therefore, clearly recognise the principle that in the services limited pay will not stand against unlimited duties, or fixed remuneration against indefinitely increased work. Such considerations make it evident that the conditions of service must and will in the end dominate and determine every other question.

The Committee condemn the frequent changes in stations and duties to which medical officers have been subjected, and which undoubtedly were aggravated by the complete unification of the department. The necessity for these changes, though partly inherent in the new system, was, we fear, increased through reductions in numbers, and in some instances intensified by ill-regulated administration on the part of principal medical officers. The Committee suggest that "a plan should be devised" to obviate frequent changes; but it is easier said than done. In any plan, however, it will be necessary to carefully regulate the primary posting at headquarters of medical officers to districts and commands. In recent years we have heard of a good many misfits through posting unsuitable men to particular duties and stations, under an absurd administrative theory that all medical officers are, or should be, equally fit for any or every duty or vacancy turning up. Such uniformity never yet was or will be; and it is just as necessary in the medical department as in other walks of life to select individuals for posts, duties, and stations, which personally and professionally they best fit into. Careful initial selection would therefore go some way towards lessening the necessity of recurring changes when round men find their way into square holes.

We fear that, unless a sufficiently strong establishment of medical officers is kept up, the proposal of the Committee to fix a certain number in regiments would only increase the mobility of those unattached. In the old regimental days, the unattached staff assistant-surgeon of the period bitterly complained of being knocked about in order to give his regimental brother fixity of tenure. Care must be taken that this old grievance is not reproduced.

The recommendation that medical officers should enjoy the same privileges as so-called combatants, when incapacitated by disease contracted in and by the service, is but simple justice and common sense. How any distinction came to be drawn between them in the matter of sick leave passes comprehension, but it is none the less glaringly absurd, offensive, and unjust. The proverbial tenacity with which inequitable regulations, based on finance, are adhered to should not deter Mr. Stanhope from carrying out this recommendation.

The contemplated increase in tours of foreign service to six years is condemned by the Committee, who very properly say that continuous foreign service should not exceed five. We never could understand how adding a year to tours of foreign service could in the end alter the proportion between it and home service; it looks merely on a par with a certain famous expedient for lengthening a blanket. But if carried out, it could not fail to increase the already heavy risks to health and life in the department. That such risks are grave realities is well shown in certain tables appended to the report. In Table 13 we find that, during the five years 1883-87, the deaths among medical officers were in the ratio of 13.28 per 1,000, against 7.87 among officers of the Line; and in Table 14, over the wider range of twenty years, 1868 to 1887, the same ratios stood at 14.63 and 10.48. Would these serious figures be improved by exacting heavier duties and longer tropical service from medical officers?

But the gravity of the risks is not fully expressed in the heavy mortality of those actually serving, for we find in Table 15, calculated by actuaries over a period of forty years, that even medical officers who weather the storm and seek shelter in retirement carry with them up to old age a less "expectation of life," at every period, than combatant officers and government annuitants. The odds against medical officers on the non-effective list, between thirty and forty years of age, is simply appalling, showing that those retired through invaliding during the first half of their service must, as a rule, be utterly broken down. It is thus painful to reflect that the proposals to exact more work from individuals, both by piling up the daily duties and increasing the length of the foreign tours, simply means a still heavier death-rate in the active list, and a further lessening of the expectation of life among those retired. For the sad facts in these tables are only to be

accounted for in the nature of the duties and character of the service which fall to medical officers. Surely a branch of the army which encounters such risks should not be dealt with in a niggardly manner as regards pay, status, or sick leave!

There are other interesting and important points in the report which we will refer to in due course.

THE DISCUSSION ON CATARACT EXTRACTION AT THE LEEDS MEETING.

ALTHOUGH Mr. Critchett, in his eloquent address[1] dealt exclusively with the treatment of immature cataract (than which it would be difficult to find a subject of more practical interest to surgeon and patient), the papers and discussion that followed entirely ignored this question. With the exception of Dr. W. J. Collins's exhaustive paper on the Analysis of Cataractous Lenses (which was evidently the outcome of much hard work), and Mr. Berry's on Intraocular Suppuration, the whole day was devoted to a consideration of the best method of operating on mature cataract, especially as to whether iridectomy should or should not be performed. Leeds appears to be a stronghold of extraction without an iridectomy, or, as the advocates of the operation love to call it, "simple extraction." Mr. Teale, Mr. Hartley, and Mr. Hewetson all perform this operation, and an immense number of cases which had been operated on were exhibited by them, as well as some by Mr. Snell, of Sheffield, who also operates without an iridectomy. It was unfortunate that members had not an opportunity of seeing these cases before the termination of the discussion, as they illustrate many points referred to in several of the speeches, and about some of them further information would have been desirable.

Mr. Teale's operation is, we believe, performed only by himself and Mr. Hartley; he uses a knife which resembles Graefe's, but is twice as broad; the puncture and counter-puncture are in the cornea in the horizontal meridian. As soon as the counter-puncture has been made, the edge is turned forwards and made to cut out at right angles to the surface of the cornea. A rectangular flap is thus made, its free edge being quite straight and lying midway between the centre and periphery of the cornea. It is much to be regretted that no opportunity was afforded of seeing Mr. Teale perform this operation; judging from its description alone it seemed to many present that it would be extremely difficult to obtain a flap of the specified shape in all cases, and with a knife such as described, without causing considerable bruising and displacement of the parts. But an actual demonstration might have shown both these opinions to be erroneous.

We much doubt whether the discussion led to the alteration of a single opinion as to the desirability of performing or omitting iridectomy. The "central, circular, movable pupil" as opposed to the "mutilated iris" no doubt sounds well, but among the Leeds cases were a large proportion of irregular pupils, more or less adherent to the corneal cicatrix. One of the most striking favourable points about the cases was the narrowness of the scar left by the incision. It is possible that this was due to its having been made at right angles to the surface instead of obliquely, although this does not appear to have been Mr. Teale's object in making it thus. One speaker struck a true note when he said that we should aim not for the most brilliant result in a few cases, but for the highest possible average result.

The statements made by Mr. Teale and the President as to the operative procedures followed at different times by Sir W. Bowman and the late Mr. Critchett were of great interest, the more so as no written record exists of these. When we speak of Graefe's, Critchett's, or Bowman's operation we are apt to forget that such operations were not devised offhand, but were the outcome of many minor modifications made tentatively, and as the result of long experience. The most successful operator will be he who, watching each case carefully, is ever on the look out for minor points in which improvement is possible; but he who ranges himself as a partisan in favour of a particular operation, and says "I will, or will not, do an iridectomy in all cases," crystallises, and makes no further progress.

Mr. Berry's paper on the Causes and Prevention of Suppuration was highly suggestive, and the fact which seems to be now clearly established, that it may occur independently of inoculation from without, is one that will bring some comfort to those who have lost cases from this cause, after the most scrupulous antiseptic precautions. It is to be hoped that it will not also tend to relaxation of such precautions.

[1] JOURNAL, August 24th, p. 414.

THE DEAF AND DUMB.

THE report just issued of the Royal Commission on the Deaf, Dumb, and Blind gives evidence of careful inquiry and laborious investigation.

It involves several questions of medical and general interest, and is on the whole satisfactory, although necessarily somewhat of a compromise.

The proportions of deaf to the general population, which in 1861 was one in every 1,484, decreased in 1871 to one in 1,742, and in 1881 to one in 1,794; whilst the attendance at school has increased from 1,300 in 1851 to 3,138 in 1888, and, if the law and attendance officers did their duty, would have now risen to about 5,000.

A large number of the congenital deaf are the children of deaf-mutes. Mr. Graham Bell believes that, if the deaf-mutes of the United States are brought together in institutions, and encouraged to associate and intermarry, as they are now, a deaf variety of the human race will be established in a few generations. The evidence is also very strong that consanguineous marriages tend to the production of deaf children.

The causes of non-congenital deafness are chiefly scarlet and other fevers in early childhood, when prompt and efficient treatment has not been available. With more accurate and widespread knowledge of the symptoms and treatment of ear disease, it may well be hoped that these cases will markedly diminish.

Of the total number of the deaf, from 12 to 25 per cent. possess some hearing power; many of them may be benefited by ear-trumpets and other mechanical appliances, whereas, if the ear is neglected and disused, it becomes further impaired. It is truly melancholy to find that many children of 3, 5, or even 10 and 12 years of age, who have acquired speech before losing their hearing, are placed with deaf children, taught by signs, and thus become totally "deaf and dumb."

It is needless to say here that dumbness has no physiological connection with deafness; but the two have been so indissolubly connected that to many it seems little short of a miracle to teach the deaf to speak. The Commission reports in favour of day schools for the deaf, where the parents take pains to keep up the instruction given at school; but, where the homes are squalid and the children neglected, a residential institution on the "boarding-out system" is to be preferred. Compulsory education is rightly insisted on. It should last eight years, commencing at 8 and continuing to 15 years of age. Drawing and various mechanical trades are recommended.

At one time the system of signs and the manual alphabet was accepted in this country. It is now being rightly superseded by the "pure oral system," which discards all signs except natural gestures, and by teaching the deaf to speak and "lip read" raises the deaf to the level of the hearing. The Royal Commission is tender towards the advocates of the "sign" and the "combined systems." In schools where these methods of teaching have prevailed change to the "pure oral" can be only gradually made. In a few years, however, the "pure oral" system will have shown such results as to supersede all others in England, as it has already done in Italy, Germany, and France.

To conduct an international investigation is of course beyond the scope of a Royal Commission. Evidence, however, of a more cogent kind than any to be found within the British Isles is open to those who can inspect the foreign schools. A visit to the deaf and dumb institutions of Frankfort or Vienna, or a few hours passed at one of the two schools at Milan, to which the labours of Count Tarra, who, to the deep regret of all interested in the education of the deaf, died last June, were so nobly given, would convince the most sceptical of the marvellous results to be attained by the "pure oral" system. Signor Fornari, the chief of the largest school at Milan, welcomes English visitors with alacrity, and explains with wonderful perspicuity the principles and processes on which his scientific work is conducted.

The Italian language no doubt is peculiarly well suited for lip reading; the German is perhaps scarcely less so, whereas the spoken form of English words is so unlike their written form that greater difficulties have to be met. German teachers have lately learned much from the Italians, whilst we in England are still striving to teach on the plans in vogue in Germany twenty years ago. Prejudices existing against the oral method of teaching are dispelled by inspection and experience. Not long ago the number of children taught in England on this plan was but a few score; now 1,563 are taught on the "pure oral," 545 on the "combined," and scarcely 1,000 on the "manual" and "sign and manual" systems taken together.

There is no evidence that the sign system is best suited for the stupid and the oral for the intellectual. If there is intelligence enough for the first a little patience will secure greater success by the second, although considerations of economy favour the plan which requires the fewest and the least highly-trained teachers. English children are found to be more backward in speech than the Italian and German children, but their general intelligence is remarkably good. With improved teaching all obstacles will be overcome.

The existing training colleges at Ealing and in Fitzroy Square supply fairly efficient teachers, but a Government grant is more urgently needed for teachers of the deaf than for the ordinary teachers in elementary schools. A high class of teachers of both sexes will doubtless arise when it is realised what splendid opportunities are opening before those who are trained and fitted to take charge of the improved schools to be created under the advice and authority of the Royal Commission. State aid is given in all Continental countries, in America, and in our colonies, and cannot surely be long withheld here.

It is recommended "That in all schools and institutions the general health, hearing, and sight of deaf children should be periodically inspected by a medical practitioner." Children taught to exercise their throats and lungs in speaking are less disposed to affections of the throat, the bronchi, and the lungs than deaf-mutes, who are discouraged from making any sound. The exercise of the respiratory organs by tending to the oxygenation of the blood, etc., promotes growth and general vitality. The speaking deaf are found to be less puny, less prone to throat and lung disease and to chilblains, and are altogether better nourished than mutes.

The feeling of the medical profession has been again and again strongly expressed as to the superiority of speech over signs, and it may be hoped that, thanks to the self-sacrificing and persistent efforts of the Commission, this superiority will soon be universally recognised.

LAPAROTOMY FOR HYDATID OF THE LIVER.

In an elaborate paper on the treatment of echinococcus cysts Dr. Davies Thomas says that it is not possible to estimate the value of tapping, parasiticide injections, and electrolysis, because the cure which often appears to follow is frequently illusory. He sees reason to believe that tapping operations fail to cure in fully 40 per cent., and probably in a larger proportion. Taking aspiratory punctures and ordinary tapping operations together, the deaths amounted to nearly 18 per cent.; but the mortality following aspiratory puncture, whether single or multiple, was only about half that of punctures with an ordinary fine trocar. Dr. Thomas believes that the greater the number of punctures required the smaller the probability of cure, and points out that, though simple puncture is generally devoid of risk, it has been known to cause sudden death, sometimes apparently from shock—sometimes, however, in the case of pulmonary hydatids, from suffocation by the fluid contents of the bladder-worm. The objection to puncture as the mode of treatment for internal hydatids, however, lies less in the occasional perils of the operation than in its frequent inefficacy.

Dr. Thomas considers that nothing can be said in favour of parasiticide injections into the sac and the employment of electrolysis that does not apply with equal force to simple puncture; and, moreover, each possesses drawbacks of its own. The statistics of abdominal section for hydatid of the liver compiled by Dr. Thomas are extraordinarily good. He has collected sixty-eight cases thus treated with only seven deaths; in one of these seven cases the patient died suddenly during the operation from sudden arrest of the heart due to a hydatid

[1] *Australasian Medical Journal*, June, 1889.

cyst in it; in two others there were multiple hydatids in the body. Even including these three cases, the recoveries amounted to within a fraction of 90 per cent. The method by two stages, producing peritoneal adhesion by incision and packing with carbolised gauze (Volkmann's method) showed a mortality of a fraction over 19 per cent.; the operation by caustics gave a mortality of 33.68 per cent., while that by the *canule à demeure* was 26.66. The cases treated by Volkmann's method only numbered twenty-one, but even so the statistical evidence appears to be strongly in favour of abdominal section as the safer procedure. Where unruptured cysts present on the convexity of the liver, the treatment offers greater difficulty, for Dr. Thomas states that thoracic incisions show a high rate of mortality. As to pulmonary hydatids, however, the risks and disadvantages of puncture are so great and the results of radical operations on the whole so favourable, that Dr. Thomas considers that there ought to be but little difficulty in making a choice of treatment in ordinary cases. Where a hydatid, whether of the liver or of the lung, has ruptured into the pleura, free incision into the pleura appears to be the only treatment which holds out a fair promise of success.

THE India Leper Bill is postponed for further reports.

AT the meeting of the Metropolitan Asylums Board held on Saturday, September 21st, it was reported that there were 1,123 scarlet fever cases under treatment in the hospitals of the Board.

IT is stated that Prince Albert Victor, during his visit to India, will probably be requested to lay the foundation-stone of a leper hospital.

DR. LAUDER BRUNTON is about to pay a three months' visit to India, as the guest of the Nizam's Government, for the purpose of testing the results of the Hyderabad Chloroform Commission.

THE annual dinner of old students of St. Bartholomew's Hospital will be held in the Great Hall of the Hospital, on Tuesday next, October 1st, at half-past 6 o'clock. The chair will be taken by Mr. John Langton, Surgeon to the hospital.

THE VICTORIA CROSS.

AT present this distinction is held by 183 officers and men of the army, of which number 13 are medical officers, 10 belonging to the Army Medical Department, 2 to the Cape Rifles and Yeomanry, and 1 to the Indian Medical Service, namely, Surgeon Crimmin. Only 3 are serving on the active list, namely, Brigade-Surgeon Temple, Surgeon-Major Reynolds, and Surgeon Crimmin.

CONTINENTAL INTEMPERANCE.

THE Belgian Patriotic League against alcoholism is about to issue a new illustrated monthly journal in Flemish. The official journal of this active association gives a serious epitome of disastrous results arising from the expenditure in one year in Belgium of 125,000,000 francs on alcoholic beverages, among which 70,000,000 litres of gin were consumed. Among these consequences are 80 per cent. of hospital inmates from drinking, with prisons, asylums, and mendicity depôts filled with the drunken. Since 1872, taking into account the increased population, insanity has augmented 45 per cent., crime 74 per cent., suicides 80 per cent., mendicity and vagabondage 150 per cent. In Germany 406,000,000 of marks were spent on alcohol during the twelve months, just 24,000,000 less than on the war budget. In that country nearly one-third of the sick, one-half of the poor, and 70 per cent of criminals are incorrigible drinkers.

THE OBSTETRICAL SOCIETY OF LONDON.

THE first meeting of this Society for the coming session will be held at eight o'clock in the evening of Wednesday, October 2nd, at the Society's Library, 54, Berners Street, next door to the now abandoned rooms, till recently belonging to the Royal Medical and Chirurgical Society.

MR. REGINALD HARRISON.

WE are informed that a presentation will be made to Mr. Reginald Harrison on the occasion of his leaving Liverpool for London at a dinner to be given to him by the medical profession on Saturday, October 5th. Subscriptions to the testimonial (not to exceed one guinea) will be received by the Honorary Secretary, Dr. A. Barron, 31, Rodney Street, Liverpool, or by Mr. Jones, at the Medical Institute, Liverpool.

SCARLET FEVER IN BIRMINGHAM.

THERE were, on Wednesday last, Dr. Hill informs us, 323 scarlet fever patients in the Birmingham Infectious Diseases Hospital, or practically the same number as that reported last week. In addition to these there still remain 15 cases in the hospital belonging to the Aston Manor Local Board, and 5 in that belonging to the King's Norton Rural Sanitary Authority. The number of cases reported shows no appreciable diminution, while there were on Wednesday 22 cases waiting for removal; the Health Committee are in consequence contemplating the acquisition of more land on which to erect additional wards for the reception of cases. Dr. Eustace Hill's condition happily shows a distinct improvement, but it is still a somewhat critical one, owing to complications.

OPHTHALMIA IN PAUPER SCHOOLS.

THE managers of the Central London School District are, as has been pointed out, not alone in their difficulties with regard to the prevalence of ophthalmia among the children under their protection. At the recent meetings of the guardians of the Strand Union, Mr. T. Prescott has called attention to the prevalence of ophthalmia at the Edmonton Schools, remarking that at least one-half of the children there were affected with the disease. The number of children affected was on the increase; sick children were allowed to bathe in the same water as healthy ones. It was decided, upon the motion of Mr. H. R. Emden, seconded by Mr. T. H. Belcher, that a weekly return should be prepared of the children suffering from the disease. In the event of the number appearing on the increase, further steps will be taken.

MEDICAL DEFENCE UNION.

A MEETING of the Medical Defence Union was held at Northampton, in the Board room of the Infirmary, on Thursday, September 19th. In the absence of Mr. Lawson Tait, through illness, the chair was taken by Dr. A. H. Jones, the President for Northamptonshire. Among those present were Dr. Easby, Messrs. Crewe, Thompson Foster, and R. Watkins, Vice-presidents for Northamptonshire; Dr. Newman, Vice-president for Lincolnshire; and Dr. Mead, Honorary Secretary. Dr. Mead gave an account of the history of the Union, and explained its objects and working. The following resolutions were passed unanimously:—1. That the meeting fully approves the steps that have already been taken in regard to the formation of a District Association in connection

with the Medical Defence Union, and beg to tender their thanks to Dr. Mead for all the trouble he has taken in the matter. 2. That the existing officers for Northamptonshire and surrounding district remain in office for twelve months, when another general meeting shall be called for the purpose of deciding the local organisation which shall be adopted, and electing Presidents, Vice-presidents, and Council. 3. That the thanks of this meeting be tendered to Mr. Lawson Tait for the efforts he has made on behalf of the Union, while it regrets his absence on this occasion on account of illness.

FATAL HÆMORRHAGE FROM THE STUMP OF THE UMBILICAL CORD.

UNCONTROLLABLE hæmorrhage on separation of the cord in the new-born infant is not common. It is very serious; only 32 per cent. of recorded cases appear to have recovered. Dr. Tross, of Karlsruhe, describes a case in the *Berlin. klin. Wochenschrift.* The infant was five days old; as the stump of the cord was in process of separation, severe hæmorrhage set in. A single vessel was found to be the source of bleeding, but all attempts to tie it securely failed. The umbilical tissues were secured by transfixion, but free hæmorrhage took place from the tracks made by the transfixing needle. The tissues were firmly tied above the seat of transfixion, and the hæmorrhage at last ceased. The stump was swabbed with perchloride of iron, and wool containing that salt laid upon it, and retained by means of a binder. In the night hæmorrhage recurred; the mother, acting on Dr. Tross's advice, at once tied another ligature round the parts below that which he had applied, but in vain; the child died. The entire integuments assumed, after death, a remarkable lemon-yellow tint, which steadily increased. The blood which escaped during life showed no disposition to coagulate. The above is described by Dr. Tross as a case of omphalorrhagia neonatorum spontanea.

COUNTRY HOLIDAYS AND RURAL EPIDEMICS.

THERE has been a serious outbreak of diphtheria at East Haddon, there being on September 10th no fewer than 80 cases, the majority children, and the deaths up to that time 16. The Medical Officer of Health to the Brixworth Rural Sanitary Authority (Mr. A. F. Williams) reports that the first case (one far advanced) came under his notice on August 25th. The sanitary conditions of many of the cottages and surroundings were bad, and capable, if not of originating the disease, of fostering its development. The schoolroom was fitted up as a hospital for the convalescent, and other measures taken, though isolation was impossible, as the disease had spread to such an extent before it became known. The medical officer has come to no definite conclusion as to the cause of the outbreak, but refers to a rumour that the disease was imported by some children from the East End of London; and he adds that, in his opinion, children sent from densely populated parishes in towns should have a certificate to show that they have not been exposed to any contagious or infectious disease for a certain time previously. The water-supply of the village appears to be anything but satisfactory, and should command the immediate attention of the sanitary authority.

DANGERS OF NEPHRECTOMY FOR FLOATING KIDNEY.

MANY surgeons hold that removal of a movable or floating kidney is not justifiable. The amount of constitutional disturbance caused by the anomaly is, in their opinion, seldom so grave as to demand one of the most severe varieties of abdominal section. The opposite kidney may be diseased or even absent. The sudden removal of a displaced yet active and healthy kidney is also dangerous, because its fellow may not be able to take upon itself at once the functions hitherto discharged by two organs. The strain on the eliminating glands after a severe operation is great. Dr. Hager, of Wandsbeck, has published a case illustrating this source of danger. The details are given in the *Berliner klin. Wochenschrift.* A floating right kidney was removed from a woman aged 22, who suffered from anorexia, nausea, vomiting, debility, and occasional tonic and clonic convulsions. Bandages and belts were applied and kept on for a long time without any relief, therefore nephrectomy was performed. Within twenty-four hours of the operation free hæmorrhage occurred, and the patient recovered but slowly from its effects. For a short time she began to improve in general health, but soon became steadily worse. Dr. Hager discovered that the left kidney had become displaced. Renal calculi were passed occasionally. Nephrectomy was successfully performed; in the course of that operation the renal pelvis was examined, but no calculi could be felt. After convalescence, however, the patient grew worse, and remained subject to uræmic symptoms. Dr. Hager considers nephrectomy unjustifiable, and believes that nephrorrhaphy is indicated in floating kidney. The method of doing the latter operation might yet be improved so as to give better results.

THE WINTER SESSION.

NEXT week another winter session begins, reminding the freshman that his battle of life is commencing, and the mature medical man that time and opportunities fly. "October the first" is always a term, a symbol of some significance to any man in our profession, even to the practitioner who has not worked in a medical school for half a century. It is in medical schools, however, that the date has a practical meaning. The introductory lecture or annual dinner is an institution more or less sentimental in character. The former is the better in many respects, being addressed to new students, who are more immediately interested than anybody else in the coming session. We will not discuss the advantages or disadvantages of the introductory address. Most medical schools have discarded it. Lecturers on a hospital staff are not necessarily good speakers, and those who can discourse with eloquence on the subjects which they teach cannot always frame and deliver good inaugural orations. The youth of the present time are, perhaps, more sophisticated than their predecessors, and at least hardly need to be told that medicine is a noble profession, and that they must work to do good rather than to earn money. Lastly, the freshman should learn as soon as possible that his profession depends upon matters of detail rather than on abstractions. The annual dinner is a pleasant institution enough, where no high professions are made; and in these days of over-competition and jealousy the after-dinner speeches extolling the school and its staff are, after all, not entirely uncommendable. The duties of the teachers towards new students are well known, and perhaps the very first warning that the freshman should receive is that he must not waste or idle away his first session.

LECTURES AT THE SANITARY INSTITUTE.

A COURSE of lectures for sanitary officers, specially adapted for candidates preparing for the examination for inspectors of nuisances held by the Sanitary Institute, will be given at the Parkes Museum (74A, Margaret Street, W.). The lectures will be given on Tuesdays and Fridays at 8 P.M., a fee of 6s. being charged to cover the necessary expenses. The following is the programme of the course:—October 8th, Introductory Lecture on the General History, Principles, and Methods of Hygiene, by Sir Edwin Chadwick, K.C.B.; October 11th, Water Supply, Drinking Water, Pollution of Water, by Dr. Louis Parkes; October 15th, Drainage and Construction, by Professor H. Robinson, M.Inst.C.E.; October 18th, Ventilation, Measurement of Cubic Space, etc., by Sir Douglas Galton, K.C.B., F.R.S., etc.; October 22nd, Sanitary

Appliances, by Dr. W. H. Corfield; October 25th, Scavenging, Disposal of Refuse and Sewage, by Mr. H. Percy Boulnois, M.Inst.C.E.; October 29, Food (including Milk), Sale of Food and Drugs Act, by Mr. Charles E. Cassal, F.C.S.; November 1st, Infectious Diseases, Methods of Disinfection, by Mr. Shirley F. Murphy, Medical Officer to the London County Council; November 5th, General Powers and Duties of Inspectors of Nuisances—Methods of Inspection, and November 8th, Nature of Nuisances (including Nuisances the abatement of which is difficult), by Dr. J. F. J. Sykes; November 12th, Sanitary Law—General Enactments, Public Health Act, 1875, Model By-Laws, and November 15th, Sanitary Laws and Regulations Governing the Metropolis, by Mr. A. Wynter Blyth, Medical Officer of Health for St. Marylebone.

FRUIT-GATHERING AND THE SPREAD OF INFECTION.

WE have frequently had occasion to criticise the imperfections of those sections of the Public Health Act, 1875, which relate to infectious diseases. Those clauses were framed with the object of preventing the spread of infection; but cases are constantly arising in which flagrant disregard on the part of individuals of the safety of the community at large pass unpunished, owing to the narrowness of the statutory provisions, or to some legal quibble as to the exact meaning of particular words or phrases. An instructive case in point came before the magistrates of the Malling Petty Sessions on September 9th. The proceedings in question were taken at the instance of the Maidstone Rural Sanitary Authority against a local fruit-grower for allowing his red currants to be picked in his orchard by children who were still in the desquamating stage of scarlet fever, and for sending the fruit so gathered to a London market. The proceedings were taken under Section 126 of the Public Health Act, which provides that "any person who.....gives, lends, sells, transmits, or exposes without previous disinfection any bedding, clothing, rags, or other things which have been exposed to infection from any such disorder," (that is to say, "any dangerous infectious disorder"), "shall be liable to a penalty not exceeding five pounds." But, unfortunately, the magistrates dismissed the case, on the ground that "fruit" could not be regarded as coming within the meaning of the term "other things," as it is not a "thing" *ejusdem generis* with the articles which are definitely specified in the section. This decision may or may not be good law, but, as the point is a matter of considerable importance, it would be well if the decision of a higher Court could be obtained upon it. If the decision is right, it is to be hoped that the law will soon be so amended and strengthened as to enable such cases as that to which we have called attention to be properly dealt with. In the meantime there is a distinct public danger in the handling of fruit or other food by persons who are in a condition to transmit infection, and every available precautionary measure should be adopted.

DEFECTS OF HEARING IN CRIMINALS.

A FURTHER contribution to criminal pathology has been made by Dr. Gradenigo, of Turin. He tested the hearing and examined the ears of 110 healthy criminals, with the result that he found more or less marked deficiency of hearing in 55 out of 82 men (67.3 per cent.), and in 15 out of 28 women (53.5 per cent.). From control tests applied in the case of 67 healthy non-criminal individuals, the average frequency of defective hearing was found to be 44.6 per cent. in men and 22 per cent. in women. Tröltsch gives the average proportion of such defect as 33 per cent. in the case of adults. It will thus be seen that criminals show a marked preponderance over other persons in respect of partial deafness. Lesions of the middle or inner ear were found in all cases, the former being by far the more frequent under 40, and the latter after that age. Dr. Gradenigo attributes the impairment of hearing in criminals to the bad hygienic conditions in which they live, whereby they are more exposed than other people to rheumatism, affections of the nose and throat, syphilis, blows on the head, etc. In a certain proportion of the cases, however, Dr. Gradenigo found well-marked degenerative or senile changes in the ears of criminals aged from 25 to 30. Dulness of tactile sensibility, of taste, and of smell have already been proved to be among the physical characteristics of criminals; we are now assured that they are also, as a rule, more or less deaf. It will probably soon be shown that they are inferior to law-abiding citizens in point of sight. It is simply a marvel how such defenceless beings so often escape falling into the hands of the police. We do not quite see how these facts harmonise with Professor Lombroso's view that the criminal is a reversion to the savage type; it is difficult to conceive anything more unlike the noble savage, with his marvellous acuteness of the special senses, than the human mole, *sans* eyes, *sans* taste, *sans* touch, *sans* everything, whom we are asked to accept as his representative in civilised life. In any case, it is a comforting reflection that if habitual criminals are really persons of such degraded physique as the new Italian school teaches, they will gradually be eliminated in the struggle for existence as unfit to survive.

RUMINATION IN MAN, OR MERYCISMUS.

DR. PAUL GALLOIS has lately had an opportunity of studying gastric digestion, by keeping under his observation for some time a *mérycole*—that is to say, a human being who ruminated. The patient was a man, aged 30, in good health. In 1882, he had a very mild attack of typhoid fever. Some time afterwards, he noticed that shortly after a meal his food came up in mouthfuls from his stomach without nausea, and he instinctively masticated the fragments and swallowed them again. He could not say for certain when he first took to ruminating; this is the rule with *mérycoles*, who often, after due thought, remember that their habit existed during their childhood. Dr. Gallois's patient grew tired and disgusted of his ruminations, and cured himself by discouraging the regurgitation of food and eating but sparely at each meal, confining his dietary to substances easy of digestion. Large meals had always been followed by free regurgitation, and the least digestible substances were the most freely brougnt up into the mouth. Without any further treatment, this patient cured himself of his ruminating habit, and has not indulged in it for a year. Dr. Gallois studies this case in a paper published in the *Revue de Médecine* last spring. The "çud" brought up first after a meal included samples of everything swallowed. This did not confirm Kuss's theory that liquids pass straight into the duodenum along a supposed channel made by muscular contractions of a tract of the walls of the stomach. The first "cud" was red like wine and smelt of wine; thus liquids must remain in the stomach for some time with the solid ingesta. Later, the cud became true chyme; then solid pieces of undigested salad-leaves, gristle, etc. came up with the chyme; lastly, solid fragments of this kind were alone regurgitated. If the patient swallowed them, they were thrown up again, and he often spat them out to save trouble; yet, if unable to do so, as when in society, he managed to chew them up so fine that at length the stomach sent them on into the duodenum. The patient had no dyspeptic symptoms. The phenomenon of rumination in his case did not show that the stomach (as Blanchard supposed) had the power of selecting indigestible matter and throwing it up. Were that theory true, such matter would have come up first, and with pain or nausea; in this case it remained till it came up without any more digestible material. This case, again, seems to prove that the cardiac orifice of the stomach is insufficient in a *mérycole*, and probably has no selective power in any subject. On the other hand, the case indicates that

the pylorus has that power, though in a purely mechanical sense. The sphincter is resistent and contracted at the beginning of digestion; then it lets liquids, next grumous material, and lastly solids through into the duodenum. In cases of dilatation of the stomach, the fluid contents are expelled with difficulty into the small intestine; no dilatation existed in Dr. Gallois's case. In normal digestion, the evacuation of the stomach continues, no doubt, throughout digestion, and does not take place suddenly and completely at one stroke, but gradually, the most solid ingesta passing last.

REGISTRATION OF PLUMBERS.

A COURSE of instruction has been arranged for apprentice plumbers at the Merchant Venturers' School, Bristol, between October 1st and the end of April. The course will comprise subjects specified in a special syllabus prepared by the Plumbers' Company, among them being elementary geometry in its various relations to plumbers' work; the elements of descriptive geometry, with special reference to the reading of working drawings; free-hand drawing, including dimensioned sketches; hydrostatics and hydraulics as far as necessary to make pupils understand the action of simple appliances; chemistry and metallurgy. Workshop practice will be conducted on two nights in the week. The course of instruction will be assisted by demonstrations in the chemical laboratory, and will be followed by examinations, at which prizes will be awarded by the company.

LEGISLATION FOR INEBRIATES AT HOME AND ABROAD.

IT is satisfactory to learn from the ninth annual report of the inspector under the Inebriates Acts that there has been an increase of 50 per cent. in the number of admissions to the seven retreats licensed for the treatment of inebriety. The admissions during the year amounted to 99. As the proportion of inmates not under the Acts is, speaking generally, one-half, there have been some 200 patients under treatment. In various unlicensed homes there have been at least 200 more, so that no fewer than 400 inebriates have in the course of the past twelve months been resident in special institutions established professedly for the cure of this disease. There are, however, at the lowest computation more than double that number who ought also to be undergoing therapeutic care. Though this provision is much more ample than it was only a few years ago, the large number of inebriates at present neither under control nor curative influences calls for extended accommodation. As the Inebriates Acts are now permanent, there is much more encouragement for the outlay of capital than when there was only a measure expiring during the present year. The two licensed retreats with a disinterested proprietary are the Dalrymple Home for gentlemen, at Rickmansworth, and St. Veronica's Retreat, at Chiswick, for Roman Catholic females. The proportion of cures in both these retreats has been considerable. The reports from the licensees of the other retreats are generally favourable, and they all unite in the expression of the opinion that their work would be rendered greatly more valuable by empowering the proper authorities to compulsorily place in residence inebriates whose will power has been so paralysed that they are unable to apply voluntarily for admission. The inspector reports that the amendments embodied in the recent Act of 1888 have contributed to the efficient working of our existing legislation. This official recognition of the value of proposals pressed on the Home Secretary by the Inebriates Legislation Committee ought to be peculiarly gratifying to the members of the Association. Germany and Norway have now homes for the treatment of inebriate addiction, and in the former country it is anticipated that Parliament will pass a Bill dealing with this subject comprehensively, including compulsory clauses. In France these views have been adopted at several recent congresses, the International Congress on Alcoholism especially formulating thorough-going legislation for accidental and pathological as well as for chronic alcoholics. This congress recommended a medico-legal inquiry in criminal cases complicated with alcoholism, and the detention in a State hospital for purposes of cure, instead of a penal term in a gaol, of the accused who is held to have been irresponsible from the offence having been committed while the offender was under the influence of alcohol.

DEATH FROM SUBLIMATE IRRIGATION AFTER ABORTION.

SEVEN years since, Tarnier introduced the practice of washing out the vagina with weak corrosive sublimate injections. The results proved satisfactory, and the injections came into vogue in German and English, as well as in French, lying-in hospitals, extending freely into private practice. Like every thorough method of counteracting deadly agencies in the human organism, sublimate irrigation is not free from danger, and although it greatly reduces the death-rate and proportion of puerperal fever cases in long series of labours, some cases of mercurial poisoning will occur in those series, notwithstanding the most careful administration of the remedy. In this country Drs. Dakin and Boxall have published very minute observations on mercurialism under the above-noted conditions; they appeared in the *Transactions of the Obstetrical Society* for 1886 and 1888. Dr. Legrand read before the Anatomical Society of Paris, in April, a case of twin abortion, retained placenta, and death from acute mercurialism. Between the birth of the first and second child, 10 litres of a 1 in 2,000 solution of sublimate were employed to wash out the uterine cavity, twice at an interval of three hours only. Immediately after each injection of sublimate a 2 per cent. solution of boracic acid was thrown up into the uterine cavity; but sublimate had been several times employed for vaginal injection. After the extraction of the second child the boracic solution was injected into the uterine cavity. The intra-uterine injections were discontinued, and boracic and carbolic solutions were used for the vagina. A day later gingivitis, salivation, colic, and dysentery set in, and carried off the patient in five days. The kidneys were large, pale, and very œdematous; they contained mercurial salts in solution. The palate was ulcerated; the œsophagus, stomach, and small intestine healthy. The mucous membrane of the entire large intestine was covered with eschars and ulcers, most marked on the summits of rugæ. The ulcers began in the cæcum, were least abundant in the transverse colon, and most marked towards the anus. The above conditions have been noted in many other cases of death after sublimate irrigations in childbed. The kidneys were diseased. Keller, of Berne, has already pointed out the danger of mercurial irrigation when these organs are not healthy. The English authorities just quoted both dwell on this danger. Dr. Legrand relates that the ulcerated intestinal mucosa swarmed with bacteria. This fact, he adds, must make us despair of ensuring intestinal antisepsis by means of corrosive sublimate.

IRELAND.

ST. VINCENT'S HOSPITAL, DUBLIN.

DR. QUINLAN, who has been visiting physician to St. Vincent's Hospital for thirty years, has retired from the active staff, and has been appointed consulting physician.

THE AMALGAMATED SCHOOLS.

THE deed of amalgamation of the schools of the Royal College of Surgeons, the Carmichael, and the Ledwich has at last been signed. The new school will open on October 1st, and we can

now tender our best wishes. Its future will largely depend upon the energy and loyalty with which the teachers work. The Council of the College will be the governing body, and may be trusted to exercise a constant and thorough supervision. The new school has to compete with that of Trinity College, which is so splendidly equipped, but the rivalry cannot fail to be beneficial to medical education in Dublin.

DEATH OF DR. ADRIEN, OF BALBRIGGAN.

THIS gentleman died last week at his residence, Oldtown, Balbriggan, aged 87. Deceased for forty years held the post of medical officer to Balrothery Union, and enjoyed a very good practice in and around Balbriggan. His father, it may be noted, was surgeon to Newgate Gaol, and attended the unfortunate Lord Edward Fitzgerald while in prison. Dr. Adrien leaves two sons, who are both members of the medical profession, namely, Dr. John Adrien, of Drogheda, and Dr. Edward Adrien, of Balbriggan.

THE LATE DR. E. J. HARMAN.

THE remains of the late Dr. E. J. Harman were interred last week in Seagoe Cemetery, near Lurgan. The deceased, who died in his 70th year after a tedious illness, held for twenty years under the Lurgan Board of Guardians the position of medical officer for Lurgan No. 2 (Moyntaghs) Dispensary District. About three years since he resigned, and received the highest retiring allowance possible under the Superannuation Act. Dr. Harman was much esteemed in the district in which he practised for so many years.

THE VICTORIA CONVALESCENT HOME, BELFAST.

THE foundation stone of this institution was laid upon September 19th, by the Marchioness of Dufferin and Ava. It is in connection with the Queen Street Hospital for Sick Children, and will provide much needed accommodation for convalescent cases. It was very prudently decided not to commence operations until a sum sufficiently large to build and endow the proposed hospital had been raised. This has now been accomplished, over £3,000 having been subscribed. The site of the hospital is on the Saintfield Road, about three miles from Belfast. At the ceremony the chair was occupied by Mr. E. Higgins. Mr. Charles Duffin presented an address to Lady Dufferin, who replied.

THE ADMISSION OF WOMEN TO THE BELFAST MEDICAL SCHOOL.

AN application was recently made by three young ladies to the medical professors of the Queen's College, Belfast, to have the medical classes thrown open to women. The Arts classes of the College were opened to women some years ago with results in every way satisfactory, and we understand that the above application has been favourably entertained by the medical professors. The next question will be the opening to women of the medical practice of the various hospitals, especially the chief teaching institution in Belfast, the Royal Hospital. It is believed, however, that no difficulty is likely to arise on this side. Experience has shown that young men and young women can be taught conjointly at the bedside without inconvenience.

THE WHITWORTH HOSPITAL CASE.

ON Wednesday, September 18th, the Board of Superintendence of Dublin Hospitals held an investigation into the circumstances attending the death of Ellen Norris in the Whitworth Hospital. Viscount Powerscourt presided, and it is announced that the report will be shortly published. Not content, however, with the investigation made by the governors of the hospital itself, the aid of the coroner was invoked by the relatives and their friends, and the body was exhumed. An inquest was held on Friday, and the decision of the hospital board was fully borne out. The jury unanimously found "That the deceased, Ellen Norris, died in the Whitworth Hospital, on the 24th of August last, of typhoid fever, and that every Christian attention was paid to her while she was in the hospital." We have already stated the charges which were made, and it is satisfactory to be able to state that the Roman Catholic clergyman swore at the inquest that every care was taken to secure religious consolation for all patients in the hospital. Dr. T. Myles examined the body at the instance of the coroner, and proved that there were no wounds save that made at the *post-mortem* examination. The result of this much-investigated case has been to clear the hospital authorities fully, and the newspapers have with one exception frankly acknowledged this. The "exception" is not satisfied, and has not the grace to acknowledge that its sensational paragraphs, bristling with innuendoes, were without justification. Some day, perhaps, an action for libel will test the question whether the "baiting" of a hospital can be indulged in with impunity.

ADULTERATION OF DRUGS.—At a recent meeting of the St. Pancras Sanitary Committee it was decided, at the suggestion of Dr. Walter Smith, to instruct the inspector under the Adulteration Act occasionally to "sample" drugs.

THE Berlin Academy of Sciences has granted the sum of 1,500 marks to Professor L. Brieger for the furtherance of his researches on ptomaines, and a like sum to Dr. Fleischmann, of Erlangen, in aid of his investigations on development.

DR. ARTHUR BÖTTCHER, Emeritus Professor of Pathology and Morbid Anatomy in the University of Dorpat, and at one time co-editor of the *St. Petersburger medicinische Wochenschrift*, died on July 29th, in the fifty-eighth year of his age.

MR. JOHN WOOD has given £1,000 to meet a deficit of that amount in the building and furnishing account of Wood's Hospital, Glossop, which was founded by his uncle, the late Mr. Daniel Wood, in the Jubilee year, at a cost of £25,000.

FIRST AID IN GERMANY.—During the coming winter semester courses of instruction, including practical demonstrations and exercises on first aid in cases of accident, will be given by duly qualified medical men in all the Prussian technical high schools.

BY an order of the Marine Board at Trieste, dated September 9th, vessels arriving from Egyptian ports on the Red Sea or Mediterranean are required to prove, in the case of Bosnian and Herzegovinian pilgrims, that they have undergone a satisfactory quarantine and disinfection.

LEPERS IN LISBON.—With reference to the spread of leprosy in Portugal, the *Correio Medico de Lisboa* asks how much longer lepers will be allowed to use the omnibuses and other public vehicles in Lisbon. We imagine that even non-contagionists will admit that this is carrying the *laissez aller* policy a little too far.

THE GERMAN DERMATOLOGICAL SOCIETY.—The next annual meeting of this Society will be held at Berlin in connection with the International Medical Congress. Professor Caspari, of Königsberg, has been appointed President; Professor Neisser, of Breslau, Secretary; and Professor Lipp, of Graz, Treasurer, for the year 1889-90.

EDUCATIONAL GARDENS.—School gardens for practical instruction in rearing trees, vegetables, and fruit now form part of the educational appliances of nearly every public and private school in Austria. There are nearly 7,769 such gardens in Austria alone, not including Hungary. The gardens also comprise botanical museums and appliances for bee-keeping.

HOSPITAL FOR VIENNA STUDENTS.—The Association for the Care of Sick Students at Vienna has purchased a house in the Laudongasse, at a cost of 55,000 florins, which is to be opened in the course of the coming academic year for the reception of students suffering from illness or injury. It is now being fitted up as a private hospital with accommodation for forty patients. It is estimated that the cost of maintenance will be 15,000 florins a year.

SANITARY INSTITUTE CONGRESS.

THE eleventh congress of the Sanitary Institute was opened at Worcester on Tuesday, September 24th. Mr. G. W. HASTINGS, M.P., in the course of the Presidential address, urged the necessity of proper appliances for the disposal of sewage, and was strongly in favour of placing the liquid sewage directly on the land, instancing Reading as a town which, by means of a well adapted sewage farm, disposed of the whole of its refuse without further trouble, with the advantage of ensuring an abundant milk supply to its inhabitants. In connection with this subject was the necessity for looking after the construction of drains and sewers and all the appliances connected therewith. In this connection he alluded to the excellent work which was being done by the Plumbers' Company in London by training and registering skilled workmen for the purpose. Another leading influence on health was that of occupation. Their beautiful porcelain manufacture in Worcester still occasioned, in some instances, danger to the health of those engaged in it; but a great deal had been done to remedy that, especially in the improved size and ventilation of the rooms. Inventors were continually at work, not only to improve productions, but also to improve health. One of the most remarkable of these of late was the new machine for bottle-making, which was now successfully at work. Under the old plan of making bottles by blowing, the throat and lungs of the workmen had been so much affected that their lives extended to not much more than 30 years' duration; but with the new machine all blowing was done away with, and there was no reason why the longevity of bottle-makers should not equal that of any other artisans. Under the head of the influence of food on health, Mr. Hastings dwelt upon the new powers which the recent Local Government Act gave to County Councils for the prevention of the pollution of rivers and streams, and he trusted they would be wisely made use of in the county of Worcester and in the kingdom generally. In regard to the question of milk, dangers arose from a want of control over the management of dairies. He instanced two outbreaks of scarlet fever which had resulted from the use of milk supplied from infected cows, the one at Hendon and the other at South Kensington. He was aware that the origin of the attack was still to some extent the subject of controversy, but he felt bound to express his own strong opinion that the evidence in the Hendon case went to prove that scarlet fever could be produced in human beings through the agency of milk by a disease in cows, appearing slight in its nature, and not differing much from the ordinary vaccine disease, which was a prophylactic against small-pox. It was necessary to arm municipal authorities with extended powers in this respect, and as Chairman of the Police and Sanitary Committee of the House of Commons, he had framed and introduced session by session into a number of local Bills clauses enabling corporations to deal not only with dairies within their own boundaries, but also outside their jurisdiction wherever these supplied milk within their borough. He advised that these exceptional provisions should be made universal. He referred with satisfaction to the enactment in the last session of Parliament of a measure for the notification of infectious diseases. He had now for seven Parliamentary sessions seen provisions of this nature inserted by the Committee to which he had referred in a number of local Bills, until no less than four and a half millions of population had been subject to them. In no single case, so far as he was aware, had there been any complaint of the system. It had had an immense effect in diminishing the spread of zymotic disease by enabling medical officers of health to hear of the first outbreak, and to take prompt measures for its suppression. No doubt some portion of the medical profession had raised objections to the measures; but the example of Edinburgh, a city in which the profession were remarkably influential and distinguished, showed that no real injury was done to them by notification. The system there, after years of trial, has been thoroughly approved by the profession. Notification had by a recent Act been made compulsory in the metropolis. It now, therefore, extended over more than eight millions of population; and what was good for so large a proportion of the people must surely be good for the whole. It was to be hoped that the sanitary authorities, both in town and country, would see the expediency of adopting, by every means which the Act provided, this easy and efficacious preventive against the spread of disease. In conclusion, he spoke of the interest taken by the people of Worcester in sanitary matters, and urged the importance of sanitation on those who might still be indifferent to it.

A collection of sanitary appliances and apparatus was exhibited at the Skating Rink, where also lectures on Cookery were given by Dr. Strange, of Worcester.

The sectional meetings were commenced on Wednesday. In Section I, "Sanitary Science and Preventive Medicine," Dr. G. WILSON, M.A., M.D., F.R.S.E., delivered an address on "The Policy of Prevention in some of its Social and Sanitary Aspects." He first glanced at the long roll of diseased conditions and premature deaths which depended on the laws of heredity—hereditary consumption, scrofula, gout, syphilis, cancer, hereditary insanity and nervous ailments, hereditary criminality, hereditary intemperance, hereditary vagrancy. Unthriftiness in marriage led too often to intentional neglect of the children, amounting to culpable homicide. It largely accounted for false thrift, under the name of infant life assurance, spreading its baneful influence even into innocent village communities. He doubted whether public opinion was sufficiently advanced to enforce a certificate of health on the part of persons about to marry; but he thought the time was at hand when some check should be put on the appalling waste of infant life which disgraced our civilisation by prohibiting marriages unless the man could produce reasonable proof that he was in a position to maintain a wife. As regarded all classes, it might be said that too early marriages—like marriages which took place too late in life, if not infertile—resulted in the birth of children afflicted with a lower vitality. Physicians who had carefully studied the subject maintained that no woman should marry before 21, and as regarded the other sex it might generally be said that the responsibilities of married life would be all the more safely faced if marriage were delayed until the age of 25. But a vast amount of sickness might be averted and a number of lives might be prolonged to mature age if ordinary medical practice were based as much on preventive as on curative lines. Apart from the inherent causes of disease which were included in the general term "heredity," there was a long list of other causes which, beginning with parental neglect or ignorance in the rearing of children, or in early training, were in after years largely under individual control, and therefore avoidable. We had to look outside the body for influence or agents which operated as causes of disease in all its multiform phases. The great bulk of these belonged to the domain of domestic hygiene, and depended mainly on a personal disregard of the laws of health—errors in diet, abuse of the luxuries of life, worry and overwork, idleness, want of self-control, irregular modes of life, errors in clothing, and, above all, intemperance. It was true that diseases arising from impurities in air and water, unwholesome or insufficient food, and zymotic contagions still contributed largely to ordinary medical practice; but year by year they were becoming less prevalent. While preventive medicine owed its success to medical research, the teaching of it was practically ignored in most medical schools, and the practice of it was detrimental to the pecuniary interests of the profession. To speak plainly, there was no disguising the fact that so long as the family medical practitioner continued to be paid to attend only on people when they were ill, and not to conserve the health of the household, there would be a constant drag on public health progress. The fault was in a system of practice which depended on the fact that public credulity in the power of cure still reigned paramount, while public faith in prevention was practically dormant. Few medical men would have the courage, when called upon to attend a case of illness in which a change of regimen was alone required and medicine useless, to order the regimen and omit to prescribe the medicine. Homœopathic globules were as harmless, and perhaps would do him as much good, as anything else, for after all, in the great majority of cases, the so-called cures were to a large extent faith cures—the *vis medicatrix naturæ* did the work, and the doctor merely assisted Nature's efforts. But he would rather point out how curative and preventive medicine might go hand in hand for the promotion of public health and the abatement of human suffering. It was a question which had been previously discussed by others as well as himself, notably by Dr. Ogle, of Derby, who had long advocated this change in family practice. All that was required to bring about the change was that the ordinary medical attendant should be paid by an annual stipend or retaining fee—a system largely followed in India and other places abroad. It was true that in this country the same kind of practice prevailed to a certain extent. The proprietors of mines and other large works paid medical men so much a year to attend on their workpeople, while members of sick clubs, friendly societies, provident dispensaries, and paupers were also attended in this way

but the misfortune was that a great majority of these appointments were scandalously underpaid, because they were regarded by medical men as stepping-stones to general practice. Having dealt with other branches of the subject, he glanced at the studies of M. Pasteur, of Koch in Germany, and Klein in this country as developing the "germ theory of disease." He could not help believing that the statistical results of M. Pasteur's treatment so powerfully supported his theory that it became a duty to afford persons bitten by rabid animals the opportunity of submitting themselves to this form of protective inoculation. Coming to the subject of the dangers attaching to our milk-supplies, he said that in numerous outbreaks of scarlatina, milk had been the medium by which the contagium of the disease had been distributed, and in many outbreaks of typhoid fever the disease had been propagated by washing out the milk cans or diluting the milk with sewage-polluted water. Now the State had enforced the provisions of the Cowsheds and Dairies Order, though it had been practically ignored in most parts of the country.

Dr. STRANGE (Worcester) read a paper on "The Results of Fifteen Years' Sanitation in the City of Worcester." He described the measures taken for the purification since his appointment in 1872, and said he had succeeded in converting Worcester from what he described as "a malodorous, dirty, and unhealthy city to one sweet, clean, and salubrious."

A short discussion followed, in which Dr. Carpenter (Croydon), Mr. Jaynes (Kettering), and Mr. Pike took part.

"The Sanitary Aspects of the Pottery Manufacture" was the title of the next paper, by Dr. ARLIDGE, physician to the Royal Staffordshire Infirmary.

The Congress then adjourned.

FIRST INTERNATIONAL CONGRESS OF PHYSIOLOGY.

THIS Congress, which owes its establishment to the initiative of our own Physiological Society, held its first meeting at Bâle on the 10th, 11th, and 12th of the present month. The chief part of the labour of organisation fell on Professor Miescher, of Bâle, and his assistant, Dr. Jaquet, who must be congratulated on the success of the meeting. One hundred and twenty-three physiologists, representing all the principal civilised nations, answered the appeal of the organising Committee; among that number were 20 Englishmen, 25 Germans, 20 Swiss, 19 Frenchmen, 10 Italians, 7 Austrians, 7 Belgians, 5 Americans, 4 Russians, 3 Swedes, 1 Dutchman, 1 Portuguese, and 1 Roumanian. The list of names includes nearly all the leading spirits of modern physiology. Among our own countrymen were Professors Michael Foster, Gerald Yeo, and V. Horsley, with Drs. Gaskell, Waller, Halliburton, Langley, Gamgee, Beevor, etc. It was decided that German, French, and English should be the official languages of the Congress, and Drs. Kronecker, Dastre, and Gaskell were appointed Secretaries. The Congress was welcomed in the name of the Cantonal Government of Bâle by M. Zutt, Councillor of State. The proceedings were opened by Professor Miescher, who delivered an inaugural address.

The following is a list of the principal papers read: Paths of Transmission in the Brain, by Professor His, of Leipzig; Cerebral Fatigue, by Professor Mosso, of Turin, who exhibited an instrument, the "ergograph," devised by himself for measuring muscular force in voluntary work, in excitation of the median nerve, and in direct stimulation of muscle; Exact Localisation of Movements in the Cortical Substance and Capsule, by Professor Horsley, who, with the collaboration of Dr. Beevor, demonstrated the facts brought forward by experiments on a monkey under the influence of ether; Excito-secretory Filaments in the Cervical Sympathetic, by M. Arloing, of Lyons; Thermogenic Substances, by MM. Charrin and Ruffer; Glycosuria Produced by Extirpation of the Pancreas, by Drs. Minkowski and von Mering, of Strasburg; Electrical Changes in the Spinal Cord after Excitation of the Cortex, by Messrs. V. Horsley and F. Gotch; Action of the Liver on Poisons, by M. Roger, of Paris; Electromotor Reactions of the Human Heart, by Dr. A. Waller; A New Blood Ferment, by Dr. Denys, of Louvain; Photodermatic Function (the action of light on animals without eyes), by M. Dubois, of Lyons; Physiology of the Commissural Fibres, by Dr. Stefani, of Siena, etc.

The Congress was brought to a close, in true English fashion, with a dinner, at which Dr. Holmgren, of Upsala, occupied the chair, and specimens of post-prandial, or rather inter-prandial oratory were given by the Rector of the University of Bâle, and Professors Heidenhain, Dastre, Mosso, and Kronecker. It was decided to hold the next meeting in three years at some town in Belgium or Switzerland, to be determined on later.

INVESTIGATIONS AS TO THE HEARING OF SCHOOL CHILDREN.

The physical condition of the school population is now happily attracting much attention, and the investigations of Dr. Thomas Barr as to the hearing power of the pupils in the schools of Glasgow form an important communication.

Researches as the extent and effects of defective hearing in children attending school have been carried out in America, France, and Germany, but never till now in Great Britain. These researches have yielded the following results:—

	Children examined.	Found defective.	
Sexton, New York ...	570	74	or 13.0 per cent.
Weil, Stuttgart ...	4,500	1,501	,, 33.37 ,,
Moore, Bordeaux ...	1,768	300	,, 17.0 ,,
Bezold, Munich ...	1,885	414	,, 22.0 ,,
Barr, Glasgow ...	600	166	,, 27.66 ,,
	9,323	2,455	or aver. of 26.33 ,,

Dr. Barr examined 600 children between the ages of 7 and 14, equally divided as to sex. Hearing was found defective in 166 pupils. Some idea of the relative extent of the defect of hearing may be gathered from the following table:—

A.—Children with BOTH *Ears affected* (600 *tested*).

1. *Speech* heard at a distance of less than two yards from ear, and *watch* at less than seven inches 23
2. *Speech* heard imperfectly at six yards from ear, and *watch* heard at less than twenty-one inches 20
3. *Speech* heard imperfectly at six yards from ear, and *watch* heard at distances varying from twenty-one inches to thirty-eight inches 15

B.—Children with ONE *Ear, or mainly one, affected.*

1. *Speech* heard at a distance of less than two yards from ear, and *watch* at less than seven inches 16
2. *Speech* heard imperfectly at six yards from ear, and *watch* heard at less than twenty-one inches 54
3. *Speech* heard imperfectly at six yards from ear, and *watch* heard at distances varying from twenty-one inches to thirty-eight inches 38

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The first section (*A*) consists of those whose hearing is so defective as to involve considerable strain on the attention during oral teaching. Those occupying No. 1 of this section would receive little or no benefit from oral teaching until they were placed on the bench close to the teachers. Those belonging to section (*B*) would suffer disadvantage chiefly when so placed in the class that the dull ear would be turned towards the teacher. The children belonging to No. 1 of this section would hear the teacher satisfactorily only when the good ears were turned towards the teacher.

As a comparative test between children who were regarded by the teachers as bright with those who were backward scholars, the teachers were requested to select seventy of each group. The results of the examination are as follows:—

A.—Children with BOTH *Ears Affected.*

	Bright Children.	Backward Children.	Total.
1. *Speech* heard at a distance of less than two yards from ear, and *watch* at less than seven inches ...	4	6	10
2. *Speech* heard imperfectly at six yards from ear, and *watch* heard at less than twenty-one inches	0	2	2
3. *Speech* heard imperfectly at six yards from ear, and *watch* heard at distances varying from twenty-one inches to thirty-eight inches ...	0	2	2

B.—Children with ONE *Ear, or mainly one, Affected.*

1. *Speech* heard at a distance of less than two yards from ear, and *watch* at less than seven inches ...	0	2	2
2. *Speech* heard imperfectly at six yards from ear, and *watch* heard at less than twenty-one inches	3	12	15
3. *Speech* heard imperfectly at six yards from ear, and *watch* heard at distances varying from twenty-one inches to thirty-eight inches ...	7	4	11
	14	28	42

The result of this comparative test shows *twice as many with defective hearing among the backward children as among the forward children.*

The practical advice which Dr. Barr gives to the teachers is summed up in the following paragraphs:

1. Teachers should keep in view the fact that in every class of fifty children, there are probably about a dozen or more who have some defect of the hearing, and are, therefore, placed at a disadvantage as compared with their normally hearing fellows.

2. Children who are known to suffer from defective hearing should always occupy a position on the bench nearest to the teacher; and, if the defect is limited to one ear, the child should be placed so that the better ear shall be turned to the teacher.

3. Children whose hearing is extremely defective, or who are totally deaf, should not be placed in the ordinary classes, but should be taught in a separate class by one who is qualified to teach the German method of articulate speech and lip reading.

4. In the cases of children whose progress is unsatisfactory, and who are inattentive, dull, and idle, their capacity for hearing should be ascertained by proper tests, and if defective hearing is found, information of the fact should be sent to the parents, and their position in the class so arranged as to minimise the bad effects of the defective hearing.

5. If the ear disease from which a child suffers is attended by a discharge of matter from the interior of the ear, the child should cease to attend school until a doctor's certificate of fitness is furnished by the parents.

6. In all schools the head masters should issue stringent instructions to the assistants or pupil teachers that boxing the ears must never on any account be practised on children.

7. In the construction of new schools it is desirable that the class-rooms should not exceed twenty feet in length or breadth, or better, that the shape should be that of a parallelogram, with a long side of twenty-five feet and a short side of fifteen feet—the teacher occupying the position of centre of one of the short sides, and that the number of scholars in one class and room should not exceed fifty. If, as is frequently the case, the teacher stands in the centre of the long side of a parallelogram, especially in a large room, the children to the extreme right and left are badly situated for hearing.

8. In the selection of a site for a new school, a position should be chosen as far removed as possible from noisy works or main thoroughfares, the class-rooms should be situated as far as practicable from the public streets, and they should not lead directly off main staircases.

9. The wall separating class-room from class-room or from a staircase, should be sufficiently thick and of such material as to form bad conductors of sound. Wood, especially fir, is obviously unfitted for entering into the construction of such partition walls.

10. In order to guard against colds in the head, a common source of deafness in school children, class-rooms should be supplied with sufficient appliances for ventilation to do away with the necessity for opening windows while the class-rooms are occupied by the children.

THE MEDICAL SCHOOLS: ALTERATIONS IN BUILDINGS.

ST. BARTHOLOMEW'S HOSPITAL.

A LARGE bacteriological laboratory is being fitted up, and will shortly be complete.

CHARING CROSS HOSPITAL.

The medical school is being considerably enlarged. In addition to other improvements, new physiological and pathological laboratories will be erected, and an extra reading and writing room provided for the use of the students.

ST. THOMAS'S HOSPITAL.

The thorough ventilation of the library has been effected at a considerable expense. The works have been executed by Verity, of Regent Street.

UNIVERSITY COLLEGE, LONDON.

In the anatomical department a much-needed improvement has been effected by the reconstruction and extension of the northern portion of the block hitherto known as the small dissecting-room. The new building, which is in two storeys, contains a small theatre for demonstrations, a commodious operative surgery room, a preparation room, and two work and store rooms for the professor and his assistants. Additional lavatory accommodation for the students has also been provided, and the professor's study has been enlarged. The rooms, which are well lighted, are fitted with all necessary conveniences, including work-tables and sinks, with hot and cold water supply, gas, and hot-water warming apparatus. There is a lift for the conveyance of heavy objects between the two floors. The alterations, as carried out, have met with general approval, and constitute a valuable addition to the medical school. The expense of this improvement will occasion an addition of about £1,300 to the building debt. Two new laboratories will shortly be established, in place of those already existing. One will be under the direction of Mr. Victor Horsley, F.R.S., and will be devoted to the study of pathology. The second will be a botanical library, under the charge of Prof. Oliver. A considerable amount of new apparatus for each of these laboratories has recently been purchased.

CAMBRIDGE.

The new buildings for the Anatomical Department, including a museum, dissecting rooms, class rooms, and a lecture theatre, have made considerable progress during the long vacation; they will probably be ready by next May term. It is much regretted that the needed extension of the physiological buildings has had to be postponed for want of funds.

QUEEN'S COLLEGE, BIRMINGHAM.

A new theatre has been fitted up for lectures on medicine, etc., the former medical theatre being now reserved for anatomy. The dissecting-room has been entirely refitted with new illuminating, ventilating, and heating apparatus, and with tables of an improved type. The Council have passed the plans for a new anatomical museum and pathological laboratory, which will be ready for use at the commencement of next summer session.

SHEFFIELD SCHOOL OF MEDICINE.

The new buildings, which were formally opened by Sir Andrew Clark at the beginning of the winter session 1888-9, have been in use for the last year, and have satisfied all the requirements of the teachers and students.

YORKSHIRE COLLEGE, LEEDS: MEDICAL DEPARTMENT.

Although the lectures in chemistry, physics, and biology, and practical instruction in these sciences and in toxicology and pharmacy, are given in the spacious new buildings of the Science and Art Department of the College, the number of students has so increased that part of the above lectures, etc., will be delivered during the coming session in a room at the Infirmary which the Board have lent for that purpose. An excellent site has been purchased for a new medical school, and it is intended shortly to canvass for funds with which a new building may be erected.

ASSOCIATION INTELLIGENCE.

COUNCIL.

NOTICE OF MEETING.

A MEETING of the Council will be held in the Council Room of the Association, at No. 429, Strand (corner of Agar Street), London, on Wednesday, the 16th day of October next, at 2 o'clock in the afternoon.

FRANCIS FOWKE, *General Secretary.*

September 12th, 1889.

NOTICE OF QUARTERLY MEETINGS FOR 1889. ELECTION OF MEMBERS.

A MEETING of the Council will be held on October 16th, 1889. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting, namely, September 26th, 1889.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member *by the Council* or by any recognised *Branch Council.*

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No member can be elected by a Branch Council unless his name has been inserted in the circular summoning the meeting at which he seeks election.

FRANCIS FOWKE, *General Secretary.*

BRANCH MEETINGS TO BE HELD.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.—The next meeting will be held at the Westgate Hotel, Newport, on Friday, October 4th, at 1.30 P.M. The following addresses and papers have been promised: Mr. W. H. A. Jacobson (Guy's Hospital): The Diagnosis of Renal Calculus, and the Chief Conditions which Simulate this Disease. Mr. E. S. Wood (Pontypool): Medical Aid Association, Limited, Newport. Mr. O. E. B. Marsh (Newport) will show a Case of Genu Valgum treated by Osteotomy. Dr. A. G. Thomas (Newport): Case of Empyema successfully treated—patient shown. Mr. A. W. Loveridge (Newport): Notes of a Case—patient shown.—ALFRED SHEEN, M.D.; D. ARTHUR DAVIES, M.B., Honorary Secretaries.

SOUTH MIDLAND BRANCH.—The autumnal meeting will be held at Higham Ferrers, on Thursday, October 3rd, 1889, under the presidency of Mr. John Crew. The President invites the members attending the meeting to luncheon at the Manor House at 1 o'clock, and will be glad of a reply from those gentlemen intending to be present. The meeting will be held at the Town Hall adjoining at 2. Dr. Rentoul's propositions will be brought before the meeting by the Chairman, and the opinions of the members present solicited thereon. Mr. Milligan will relate two cases of Goître treated by Division of the Isthmus. Dr. Bower will read a paper on the Provisions of the Lunacy Amendment Act, 1889. Mr. Percival: On Salufer and Salol as Antiseptic Dressings. Dr. Newman: Treatment of Retention of Urine due to Prostatic Enlargement by External Urethrotomy. Mr. Skelding: Naso-Pharyngeal Growths and their Relation to Health in Children. Mr. Owens: Two Cases of Lymphadenoma.—C. J. EVANS, Honorary Secretary.

SOUTH-EASTERN BRANCH: EAST SURREY DISTRICT.—The autumn meeting of this District will be held at the White Hart Hotel, Reigate, on Thursday, October 10th, at 4 P.M., Mr. F. B. Hallowes, of Redhill, in the chair. Dinner 6 P.M., charge 7s., exclusive of wine. Mr. Pearce Gould will read a paper on the Treatment of Strumous Glands, and describe some surgical cases of interest recently under his care. Other papers have been promised. Members will please communicate with the Honorary Secretary, P. T. DUNCAN, M.D., Croydon.

LANCASHIRE AND CHESHIRE BRANCH.—The autumn meeting will be held in the Town Hall, Blackburn, on November 6th. Gentlemen wishing to read papers or show specimens are requested to communicate at once with the Honorary Secretary, so that the titles of their communications may appear on the circulars convening the meeting.—CHARLES EDWARD GLASCOTT, M.D., Honorary Secretary, 23, St. John Street, Manchester.

SPECIAL CORRESPONDENCE.

PARIS.

[FROM OUR OWN CORRESPONDENT.]

Kola.—M. Verneuil on Microbes in Tumours.—"Conjugal Diabetes."—Hydrochlorate of Hyoscine as a Sedative.—Criminal Anthropology.—General News.

MM. HECKEL and Schlegden-Lauffen's researches on kola seed have led MM. Mounet and Dujardin-Beaumetz to test this substance therapeutically. The tree which furnishes kola seed (Sterculia acuminata) is abundant on that part of the coast of Africa which is situated in the inter-tropical zone. The seed contains 2.348 per cent. of caffein, 0.028 per cent. of theobromine, 23 per cent. of starch, 2 per cent. of tannin, a red substance which is an active tonic, an essential oil possessing aphrodisiac properties; this latter must be eliminated before using the seed either as a drug or food stuff. The large quantity of caffein and theobromine contained in kola seed renders it a valuable cardiac stimulant. Kola is also valuable in treating chronic atonic dysentery such as attacks Europeans who reside or travel in hot climates; the tannin and the red substance contained in kola are the principles which render it therapeutically valuable in dysentery. M. Heckel, knowing that the negroes in the centre of Africa eat this grain when they take long journeys in barren regions, conceived the idea that it might be utilised as an article of diet for troops and the horses following the regiments. In order to realise this idea the essential oil of the seed had to be eliminated. Drying the seed resulted in the disappearance of nearly all of the oil, but there still remained a small quantity. M. Heckel succeeded in expelling this small residuum by steeping the seed during two or three days, according to the season of the year, in water, 16° to 18° C., containing 1 per cent. of carbonate of soda; then, drying and slightly roasting the seed before it became thoroughly dry. With the seed thus treated and freed from the essential oil possessing aphrodisiac properties, M. Heckel prepares chocolate powder for the use of the soldiers and an oat-cake for the horses. Both the chocolate and oat-cake have been tried by French soldiers carrying on military manœuvres in the Alps, which are of an excessively fatiguing character, requiring physical strength and powers of endurance. The army surgeons of the 7th, 23rd, and 24th Battalion of Alpine Chasseurs have reported on the rations furnished by Professor Heckel, and all have concluded that they sustain physical force, and increase the energy of the men. Nine men of the 7th Battalion who received these rations marched nineteen consecutive hours; at the twelfth hour they only showed slight symptoms of fatigue; when the march was over, they resumed their usual military duties at the fixed hours; their condition was thoroughly satisfactory, both mentally and physically. M. Sanson, Professor at the Agricultural School at Grignon, has also tested the worth of M. Heckel's cake, made with kola seed, and has ascertained that horses like it; its nutritive properties are equal to that of twice its weight of oats; also that it exercises an action on muscular force; horses after feeding on it can endure severe fatigue without showing symptoms of exhaustion.

M. Verneuil's conclusions as to the presence and influence of pathogenic microbes in tumours are as follows: tissue of new formation of a malignant character, such as cancer, sarcoma, epithelioma, may at a given moment contain different microbes, of which neither the origin, kind, nor quantity can be accurately determined. The presence of these microbes may for a long time be innocuous, but, on the other hand, in some cases results in the rapid increase in softening and ulceration of the tumour. Microbes are not found in lipoma, fibroma, nor in cancers and sarcomas characterised by an initial slow development, but are almost always detected in softened and ulcerated tissue. These microbes, besides exercising a morbid influence on the surrounding tissues, affect also the general economy, and constitute a febrile element. During excision of the morbid growth, they are communicated to other parts of the wound, and are capable of provoking septicæmia, which may prove fatal.

M. Debove has published a list of cases which tend to prove that diabetes can be transmitted from man to wife and from wife to husband. The first case was that of a husband whose wife was diabetic, but, not having a firm faith in the analytical chemist, he substituted a sample of his own urine, in which sugar was also found, being out of health at the time. He consulted Dr. Debove, who, on a careful analysis, came to the same conclusion as his mistrusted predecessor. Another patient died from interstitial nephritis; his wife was diabetic. Dr. Debove, in his wards, had ten cases of conjugal nephritis. In another instance, husband and wife presented two forms—one, diabetes insipidus; the other, diabetes mellitus. M. Lecorché, in his *Traité du Diabète*, has recorded cases of conjugal diabetes, and suggests that it may be explained by the fact that the diet of married persons is generally similar, and that there is also a community of the trials and troubles of life.

M. Magnan, who has lately tested hydrochlorate of hyoscine in his wards, finds a dose of 1 milligramme in five minutes renders the patient calm; he appears as if slightly intoxicated by alcohol, his feet seem rooted to the ground, he ceases talking. This drug is valuable in the treatment of insanity; under its influence lunatics become calm, and this condition is not transitory. In delirium tremens it induces healthy sleep. A child of 13 suffering from tic, under its influence was cured of the spasmodic movements. A hysterical patient suffering from profuse perspiration of the hands and arms was entirely relieved by means of an injection of $\frac{1}{2}$ milligramme, the perspiration was arrested in two minutes.

The most important papers read at the Congress of Criminal Anthropology were those of M. Lombroso and M. Manouvrier. M. Lombroso's views as to the physical characteristics of criminals have already been given in detail (JOURNAL, September 14th, p. 612). M. Manouvrier stated that the most highly gifted specimen of mankind may in certain given conditions become a criminal; the characteristics enumerated by M. Lombroso have in many instances been observed in men of spotless character; therefore they cannot be accepted as undeniable indications of criminal propensities. The presence of the metopic suture is considered as an indication of criminality. M. Manouvrier examined in the Paris catacombs, 28 crania, and in 5 this suture existed. The presence of this suture must not be considered an anomaly, but only a peculiarity. The man who was free from all the anomalies cited by M. Lombroso as indications of criminality would, in M. Manouvrier's opinion, be an abnormal specimen. M. Contagne read an interesting paper on the influence of professions on crime. Psychical functions, he asserts, are differently influenced by different callings. M. Contagne divides society into nine classes, and he has observed that since 1829 there is greater percentage of crime among the labouring classes, agricultural and others.

The Paris Conseil Municipal has decided to create a new chair of biology, which is to be filled by M. Pouchet, well known by his zoological works. His first lecture will be given at the Salle St. Jean, Hôtel de Ville.

A curious trial recently took place at Dijon. Two Hindu doctors, Théoula and Pakeroula, came to France from Delhi, accompanied by an ex-soldier of the English army, for the purpose of selling a collyrium which was vaunted as a specific for eye diseases. The most important ingredient in this preparation is a diamond worth £16, which the patient has to provide, and the doctors and the ex-soldier undertake to have melted and mixed with flour, sugar, dry nuts, olive-oil, and bitter almonds. The magistrates doubted that the amalgamation prescribed was effected; the three would-be healers were tried for practising medicine illegally and dispensing, also for swindling, and have been condemned to six months' imprisonment.

In order to stem the tide of depopulation, the French Chamber of Deputies have accepted M. Gavel's proposed law, which accords to mothers and fathers of seven children the right of exemption from certain taxes. It would be wiser, perhaps, to move for a strict inquiry into French baby-farming, and adopt energetic measures to prevent the loss of infant life attending this system.

The statue erected to the memory of Paul Bert, at Auxerre, was recently unveiled. An Annamite Prince read a speech in his native language in honour of the departed *savant* and diplomatist. M. Dastre, Professor at the Sorbonne, summarised in his speech the scientific and political careers of Paul Bert.

A statue to the memory of Henri Bouley, the well-known veterinary surgeon, was also lately unveiled. It stands in the large courtyard of the Ecole d'Alfort. M. Faye, Minister of Agriculture, was present at the ceremony; also M. Chauveau, general inspector of veterinary schools, and member of the Institute. The assembled company afterwards visited the laboratories, which are under the direction of M. Nocard, the principal of the Alfort School.

The dispensary founded by Mme. Édouard André was inaugurated a few days ago. It is situated in the Rue St. Jean Marie Jego, in the centre of the third arrondissement, which is one of the most thickly populated. Last year Mme. André gave her jewels to the Philanthropic Society; the sale of them realised 400,000 francs (£16,000). With this sum the expenses of building the dispensary have been defrayed, and the remaining capital has been invested, the interest of which is devoted to meet the annual expenses of the dispensary, otherwise called "La Maison des Bijoux" (the house of the jewels).

Among the congresses lately held at Paris has been one of anti-vaccinators. The president was a Belgian, M. Boeus, who stated that small-pox is not so fatal as is believed; also that the use of candles, instead of gas or lamps, which give a strong light, prevents small-pox patients from being marked.

The necessity for rigorous inspection of all forms of food and drink is daily demonstrated. A few days ago a Parisian family of six exhibited symptoms of being poisoned after eating roast veal. M. Cochery, the police commissioner of the district (Faubourg du Temple), made a strict inquiry, and discovered that several similar cases had occurred in the same neighbourhood.

VIENNA.

[FROM OUR OWN CORRESPONDENT.]

The Anthropological Congress.

THE Congress of the German and Vienna anthropologists was opened at Vienna on August 5th. About two hundred scientists were present, among whom were Professors Virchow and Waldeyer, of Berlin; Dr. Grempler, Breslau; Baron Tröltsch, Berlin; Drs. Naue, Munich; Bartels and Voss, Berlin; Krause, Hamburg; Pater, Berlin; Mestorf, Kiel; Pulsky, Buda-Pesth; Graf Wurmbrand, Professors Ernst Brücke, Zuckerkandl, Vienna, etc.

The President of the Vienna Anthropological Society, Baron Ferdinand von Andrian-Werburg, first spoke of the late Crown Prince Rudolph, who took a great interest in the Anthropological Congress, and pointed out that the Congress had lost much of its splendour and importance by his death.

The Austrian Minister of Public Instruction, Dr. v. Gautsch, then welcomed the Congress on behalf of the Government, and Dr. Richter, in the place of the Mayor, saluted the Congress in the name of the city of Vienna.

Professor Virchow then took the chair, and in an address, which lasted about an hour and a half, gave a sketch of the past and future of anthropology, and pointed out what progress the science had made during the twenty years which had elapsed since the meeting of natural scientists at Innsbruck. Certain prejudices of the past had been abandoned, and new problems arose for the future. The first task which lay before the Congress would be to create a uniform method of investigation. The principal questions for investigation were, How single races might be transformed into each other; how far the influences of the climate and the manners of living, etc., played a part in giving origin to the development of new races; and from this the conclusion would have to be derived that the existing races had developed from simple ones. Professor Virchow objected to the determination of nationalities by the form of the skull. Among the German tribes there were as many great differences as among the Slavonian ones. In such cases, the idea of blood-relationship had to be abandoned, as there was a certain number of Slavonians who were much nearer to a certain number of Germans than to their Slavonian brethren. The blood elements among the Poles, no doubt, stood in a closer relationship to the Germans than to the dark Southern Slavonians. The task of investigation would be to determine exactly the elements of mixture in the various nationalities, and to find out whence the short and thick skulls and the long and narrow ones were derived. They had a particular interest in making these studies in Austria-Hungary, as the remains of the old nations had been preserved in the Austro-Hungarian monarchy to a higher degree than in any other country of Europe. Speaking of the Darwinian theory, Professor Virchow said that it had been tried in vain to find those intermediate links which should bring man and the ape into connection; the proper "proanthropos" had not yet been found. We could not even determine the descent of single races from each other. We could now state that among ancient nations there was none which stood in a nearer relationship to the ape than ourselves. At present there was no tribe of people in the world with which we were not acquainted. Each living race was human, and we had not yet found one which we should be justified in considering as being apelike. The fact that in some peoples appearances which were common to the apes, such as the prominences of the skulls, were met with, could not be looked upon as a sufficient reason for considering them as apelike. Evidence could be adduced that in the course of 5,000 years no remarkable change in the types had taken place. Professor Virchow then spoke on partial heredity, regressive metamorphosis, and the resemblance of atavistic and acquired properties; he also mentioned the rare appearance of men with six fingers and cats without tails, and attempted to answer the question bearing on inherited and acquired deformities. Professor Virchow concluded by giving a summary of the progress of anthropology in the last twenty years. What could, in his opinion, be done in the next twenty years with certainty consisted in clearing up the anthropology of the European people so far as to obtain exact data with reference to the connection of the European tribes among each other, and to elucidate their differences.

SWITZERLAND.

[FROM OUR OWN CORRESPONDENT.]

Trephining for Cerebral Tumour.—Mechanical Treatment of Whooping-Cough.—Pea Soup as a Substitute for Fluid Meat Food for Invalids.—Transplantation of Teeth.—Swiss Inaugural Dissertations in 1888.

AT a recent meeting of the Medicinisch-pharmaceutischer Bezirksverein von Bern, Dr. Lardy showed a patient with cerebral tumour, in whom trephining had been performed by Professor Kocher three weeks previously, in order to relieve symptoms produced by increased intracranial pressure. An exact localisation of the tumour was impossible, the symptoms being limited to choked discs, deterioration of vision, headache, and unsteady gait. Two openings were made in the skull, one posteriorly on the right side, just below the tentorium cerebelli, the other anteriorly, on the left side, on the edge of the hairy scalp. Extreme tension of the dura mater was found at both points. Posteriorly, a considerable cerebellar hernia formed. It was at once removed with a sharp spoon, and the wound closed with sutures. Anteriorly a small glass drainage-tube was inserted, on account of slight bleeding from

veins of the pia. The wounds healed by first intention in 48 hours. Four days after the operation congestion of the discs disappeared entirely, and the sight of the left eye considerably improved. The right eye, however, showed no amelioration, marked atrophy of the disc having already developed. The patient's general state also improved, his gait became steadier, and headache disappeared. On examination about seven weeks after the operation the improvement still continued.

In the *Correspondenzblatt fuer Schweizer Aerzte*, No. 14, 1889, p. 417, Dr. O. Naegeli, of Ermatingen, describes a new purely mechanical method for treatment of whooping-cough. Given a paroxysm, the author, standing in front of the patient, firmly catches the ascending rami of the lower jaw with his forefingers, and middle fingers placed just in front of the lobes of the ear, places his thumbs on the chin, and, by strong and steady traction and pressure, pushes the jaw forwards and downwards. The procedure may be very conveniently modified by making traction with the right thumb and forefinger placed on the alveolar process behind and below the middle lower incisors and the remaining fingers under the chin, while the left hand is fixed on the child's forehead for purposes of counter-traction. If the patient stands with his back to the operator, the latter places his thumbs just above the angle of the lower jaw in front of the ears, the forefingers on the zygomatic arches, the remaining fingers on the chin, and then pushes the jaw forwards and downwards. Traction may be made still more rapidly by putting the forefingers into the patient's mouth, on the alveolar process behind and below the back molars. No force should, of course, be applied to the child's teeth. As soon as the jaw has been moved in the way indicated, the patient is told to inspire deeply. The procedure is said to cut short the spasm almost instantly, which effect is explained partly by its diminishing the muscular tone in a reflex way, partly by its mechanically lifting up the epiglottis (through raising the larynx with the hyoid bone) and opening the rima glottidis. A systematic inhibition of the paroxysms by means of the manipulations has a markedly favourable influence on the course and issue of the disease. The disease becomes milder, vomiting ceases, expectoration greatly lessens, hæmorrhages, as well as complications caused by increase in the arterial tension during the spasmodic attacks, are prevented all through, and the total duration of the affection is shortened, while all bad after-effects are avoided. The same manipulations also give admirable results in spasmodic cough of any origin. The method is very simple, and may be easily learned by nurses, mothers, etc. It is entirely painless, hence little patients subject themselves to it very willingly, and, even after having experienced the striking relief obtained therefrom, try to perform the manipulations on their jaw by their own hands.

Dr. Ris, of Kloten, emphatically recommends pea soup as an excellent substitute for beef tea for invalids, convalescents, and more especially for patients suffering from cancer of the stomach, or diabetes mellitus. Take peas, water, and sufficient amount of some soup vegetables; add one-half per cent. of carbonate of soda; and boil the whole until the peas are completely disintegrated; then let the soup stand until sedimentation is complete, and decant the fairly clear thin fluid above the deposit. The product is stated to resemble a good meat soup in its taste, to be at least equally digestible; and, at the same time, to surpass the very best meat soup in nutritial value. The latter statement may appear surprising, but the author reminds us that peas (as well as beans or lentils, either of which may be used instead of peas) contain a considerable proportion of legumen, that is, a vegetable albumen which is easily soluble in a faintly alkaline water, is not coagulated by heat, is easily absorbed and equal to the albumen of egg in its nutritiousness.

Discussing the question on the transplantation and reimplantation of teeth, Dr. Nieriker, of Zurich, gives the following rules for securing a satisfactory result: remove the whole pulp from the dental root canal; disinfect the latter and fill up with a zinc cement; thoroughly scrape out the periosteum, keep the tooth in a corrosive sublimate (1 per mille) or carbolic (5 per cent.) solution for a few minutes, insert it into the alveolus and duly fix it between its neighbours.

In the course of 1888, 56 inaugural dissertations were issued by the Zurich (14), Basle (17), Berne (20), and Geneva (5) medical faculties. Of the number, 11 were written by foreigners (4 Poles, 3 German, 1 British, 1 American, 1 Russian, 1 Roumanian), and 45 by Swiss; 4 by women (3 at Berne, 1 at Zurich), and 52 by men.

EGYPT.

[FROM OUR OWN CORRESPONDENT.]

The Abbassieh Lunatic Asylum.—Lunacy in Egypt and England.—The "Wakfs."—The Dervish Wounded.—Death of Sister Hughes.

THE lunatic asylum at Abbassieh, which contains 300 beds only, but which has hitherto sufficed for the requirements of the whole of Egypt, has at length begun to overflow, the number of inmates throughout July and August having been in excess of the accommodation. In order to meet the emergency it was proposed that the least agitated among the lunatics should be transferred to the Wakfs, or ecclesiastical commissioners, who are supposed to take care of the indigent poor; and Government having approved of this arrangement, the Minister of the Interior gave orders that delegates from the Wakfs and Sanitary Department respectively should visit Tourah, where the principal poor-house is situated, and report on its suitability for the object in view. They did so, but the result of their labours is not encouraging. The poor-house, or "takia," as it is called in Arabic, according to these gentlemen, is not fit to keep animals in, let alone human beings. It consists of a series of filthy non-ventilated dens, surrounded by a wall excluding all access of fresh air, and destitute of every sanitary accommodation. The head of the Sanitary Department, on receiving this report, very naturally objected to the transfer of the poor lunatics, who, lying on mats in the corridors at the asylum, were infinitely better off than they would be under the tender mercies of the Wakfs, and applied again to the authorities for further instructions in the matter, suggesting that a building should be rented to receive the surplus lunatics. This idea the Minister highly approved of, but, added he in a postscript, the budget must not be exceeded. It is the old story of bricks without straw.

In England, according to Sir J. Crichton Browne, there were on the first day of the present year no fewer than 84,407 insane persons in lunatic asylums in Great Britain and Ireland; and 27,266 more boarded out or dwelling in their own homes, making a total of 111,673. In Yorkshire alone, with a population of 3,250,000, or less than half that of Egypt, the number accommodated in asylums was 4,050, and the total for the county, including idiots, no fewer than 5,911. These figures are, indeed, startling: and the Egyptians may think themselves fortunate that in this respect, at least, they are in a better plight than their protectors. Lunacy, however, is on the increase in the country, and alcohol and education are probably accountable for it. Civilisation is, of course, a blessing, but it has also its drawbacks, and this is one of them.

The land revenues possessed by the Wakfs are said to be enormous; and they are also reputed to be the owners of vast sums in cash and convertible securities. They are a public body, the head or director being appointed by Government; and yet they furnish no balance sheet, and decline systematically to give an account of their stewardship. It is much to be desired that a commission should be named to hold a searching inquiry into the manner in which their trusts are administered; for there are not wanting people who declare that corruption is rife, and that moneys bequeathed for special purposes never reach their destination. The Wakfs is the only administration in Egypt, with the exception of the School of Medicine, in which there is no European leaven amongst the administrators. Both are equally in need of reorganisation.

During the late operations up the Nile, a large number of so-alled Dervishes—including women and children—were wounded and taken prisoners; and though, of course, prisoners of war, were handed over to the civil authorities for treatment and maintenance. Dr. Crookshank, Director of Prisons, was ordered to Assouan to take charge, not only of the sick and wounded, but also of all prisoners, amounting to some thousands, and was directed to call on the Sanitary Department for all he required in the way of medical aid, equipment, medicines, etc. The War Office authorities were thus relieved of all trouble in the matter, and the exciting part of the affair being over, and medals, crosses, and other decorations duly earned, the gallant heroes were able to proceed on leave, and exhibit their laurels in their native land. This division of labour seems to an unprejudiced observer to be hardly fair; but more remains behind. All this extra labour and worry is to be done without reward; and the heavy expense unavoidably entailed has to be met without exceeding budgets already reduced within starvation limits.

The Cairo Nursing Institution and Anglo-Egyptian society in general have just sustained a most severe loss by the death of Miss Miriam Bristowe Hughes, lady superintendent at Kasr-el-Aini Hospital, who succumbed to typhoid fever on August 25th, in the flower of her age. Hardly a year in Egypt, Sister Hughes had contributed largely to the improvement of the hospital, where her loss will leave a blank not easily to be filled. She was originally trained at St. Bartholomew's Hospital, and had devoted several years to nursing before she came to Egypt. It is a sad comment on the sanitary condition of the country that of the two ladies who came to form the nucleus of a nursing institution some fourteen months ago, one should have been permanently invalided, and the other should have died from preventable disease.

NOTES FROM ITALY.

Trephining in Epilepsy—Outbreak of True Cow-pox.

Dr. Luigi Sartorari, of Bardolino, has lately recorded[1] a case of Jacksonian epilepsy in which trephining was had recourse to without success. The patient, a man aged 25, had four years before suffered from a severe attack of what was diagnosed as cerebral congestion, following a drunken debauch, in which he received a severe blow on the head. This illness gave rise to left-sided hemiparesis, which seemed to be completely cured three months later. Ever since that time, however, the man had been subject to epileptic fits, which occurred at irregular intervals of from eight to fifteen days. At the beginning of the present year a fire took place in his house, and he underwent great bodily fatigue, besides grievous mental anxiety, in extinguishing it. The following night he was seized with fits of extreme violence, and when Dr. Sartorari first saw him they had occurred at intervals of a few minutes for a period of seventy-five hours. Between the fits he was comatose. During the fits the corner of the mouth and the face were drawn to the left side, the eyeballs rolled upwards and to the left; this was followed by rigid extension of the left arm and leg. After a few seconds this condition gave place to rapid clonic convulsions of the whole of the left side; the fingers of the left hand were flexed and the thumb bent into the palm. On examining the head Dr. Sartorari found a depression on the right side of the skull, running backwards horizontally for 6 centimètres, and 7 centimètres above the auditory meatus. Though hopeless of success, owing to the rapidly-deepening prostration of the patient, Dr. Sartorari proceeded to trephine over the right motor area. The depression in the bone was found to affect only the outer table and the diploë, the inner table being perfectly sound and smooth. An incision into the dura mater gave issue to blood, together with about half a coffee-spoonful of yellowish oily-looking matter containing cream-coloured clots. The pia mater was opaque and infiltrated; the brain pulsated but did not protrude from the wound. The wound was thoroughly cleansed and dressed. For about half an hour no fits occurred, and a flicker of consciousness returned for a few minutes, but death took place four hours after the operation.

The Animal Vaccination Committee of Milan has recently had a windfall in the form of a supply of lymph derived from a herd of cattle in which cow-pox had spontaneously broken out. On August 3rd the Prefect of Sondrio (N. Italy) announced that natural cow-pox had appeared in a herd in the commune of Cosio, in Valtellina, at a height of 2,000 mètres, near the top of the Tagliata Alp. The eruption had shown itself on the udders on June 27th, and of the eighty cows only four had not been attacked. The herd was examined on August 8th by a veterinary surgeon, who found marks of the disease in a great many of the animals. One of them was found to have pustules still full of lymph, from which some glass tubes were filled and despatched to Milan. On August 13th the Milanese Committee inoculated a healthy cow with this lymph in more than fifty places. On the 19th it was found that all these points had taken; and on the 20th, after careful examination of the bovine vaccinifer, which was found to be perfectly healthy, the lymph was successfully used on the human subject. This is the twentieth time in twenty years, and the third in the present year, that the Milanese Committee has been enabled to renew its lymph supply in the same manner, the last occasion having been in March of the present year. It is obvious, therefore, that the recent severe epidemic of small-pox in Milan has not been due to any deficiency in the quality of the lymph-supply. It is notorious that a large proportion of the population is still either altogether unvaccinated or insufficiently protected.

[1] *Gazzetta degli Ospitali*, August 28th, 1889.

CORRESPONDENCE.

LONDON POST-GRADUATE COURSE.

Sir,—The criticisms of your correspondent "Scientia," in your issue of September 14th, are, on the whole, friendly to the scheme of the post-graduate course, which the Committee of Delegates propose to publish soon *in extenso*, but I should like to add a few words in explanation of some of the points to which he objects.

First, as regards the length of the course. "Scientia" says two months is too long, and will prevent many provincial men from attending, and that it is no very difficult matter to give eighty lectures in a session of four to five weeks. But in order to secure the services of the senior members of the staffs of the various special hospitals, as well as that of the juniors, we have been compelled to fix on only afternoon and evening hours for the demonstrations, as it is hardly to be expected that busy physicians and surgeons can attend in the forenoon, the usual home-consultation hours, at hospitals situated for the most part at some distance from their houses.

Nor should a fee of ten guineas for no less than eighty demonstrations be objected to, which include practical teaching at five of the leading special hospitals of London; and it will always be open to practitioners, who do not require the whole course, to enter for the demonstrations of one or more hospitals at a proportionate fee.

With regard to "Scientia's" suggestion as to the co-operation of certain hospitals for the study of gynæcology, I may state that it was intended to associate one of the hospitals for women's diseases with the scheme, but it was found impossible on account of the strong objections raised to examinations of the female patients. Though at present five hospitals are included in the course, it is not improbable that others may be added at a later date, and the scheme placed on even a broader basis than at present.

Much is said about the excellent post-graduate course given in Edinburgh and the low fee charged for it, and in the prospectus of that course, which lies before me, I see much to admire and to follow; but I also note that, though the matriculation fee is so low, the fees for the special courses amount in all to ten guineas, the same as that of the proposed London courses. Edinburgh, however, includes several demonstrations in medicine and surgery in the original matriculation fee.

And I would ask "Scientia" where is there in Edinburgh, or, indeed, in any European city, anything equivalent in number of beds or variety of cases to the great special hospitals of London, in some of which instruction has been given for years, but whose material we are now for the first time attempting to organise more systematically for teaching purposes.

That success may attend our efforts is, I am glad to see, the hearty wish of "Scientia," and I am sure of all who desire to advance the knowledge and science of the medical profession.—I am, etc.,

C. Theodore Williams,
One of the Delegates of the Post-Graduate Course.

ENGLISH PRACTITIONERS IN SWITZERLAND.

Sir,—Dr. Huggard, in his letter to you on this subject in the Journal of September 21st, makes some very serious mistakes. For example, he says: "What is demanded is that the right to practise in England should carry with it the right to practise in Switzerland." That is not what is demanded by English practitioners; they simply ask to be allowed to practise in health-resorts among their own country people. Again, he says: "If a Swiss medical man wishes to practise in England, he must pass an examination in order to be a recognised member of the profession there." Nothing of the kind. He may practise to any extent he pleases provided that he does not pretend to practise under an English qualification. Moreover, if the Swiss medical authorities thought proper to apply, under the seventeenth section of the Medical Act of 1886, to the Privy Council, they could have their qualified practitioners placed on the list of foreign graduates, which would give them all the rights and privileges of English registered practitioners. He further remarks: "Anyone who thinks it worth his while to practise there might surely also think it worth his while to undergo the necessary examination." Few practitioners would be found to agree with him, for this gentleman, having obtained the degree of

Doctor of Medicine and Member of the College of Physicians of London (qualifications which would enable him to practise throughout the British dominions, over the extent of which, as it is said, the sun never sets), thought proper to go through a series of examinations to obtain a qualification to practise in the small Republic of Switzerland. It should surely be unnecessary to follow such an example as this.—I am, etc.,

HEALTH RESORT.

UNCERTIFICATED MIDWIVES.

SIR,—We are glad to see that public attention is at last being called to the crying evil of uncertificated women practising as midwives. The recent cases reported in various papers of death through puerperal fever, conveyed to six poor lying-in women by an uncertificated midwife, set forth in a striking manner the need of legislation as to the employment of untrained and irresponsible women.

Though there are at present many well-trained and certificated midwives in practice, the uncertificated woman will continue to be employed, to the great detriment of mothers and infants; and nothing but compulsory registration—that is, by Act of Parliament—will meet the case. It is earnestly hoped, therefore, that the Bill for the Registration of Midwives, notice of which has been given in the House of Commons, will shortly extend to the mothers of England that protection in childbirth which they can command in every other European country.

The Midwives' Institute has been quietly and steadily working towards this end for the last eight years, and will gladly supply all information on the subject to anyone desiring it.—I am, etc.,

MARGARET NICHOLL,
Secretary to the Midwives' Institute.

15, Buckingham Street, Strand, W.C.

INSANITARY HOUSES IN LONDON.

SIR,—As you mention my name in your leader of September 21st, perhaps you will allow me to make a few remarks in reference to it. It is certainly satisfactory to be able to note, as you do, that the question of expert sanitary officials is so far "fairly advanced that we may hopefully await its further development." Thanks are certainly due to the Sanitary Institute for the part it has already taken in the good work; but, as I have said elsewhere, and as I have pointed out to the Secretary of the Institute, the regulations (a copy of which I have before me) are wanting in two points. There should be a preliminary examination in general subjects, of such a character as to guarantee as far as possible the candidate's social position. The present requirements—legible handwriting and correct spelling—are insufficient. It must be obvious that an official who lives upon the same social level, and is "hail fellow well met" with the very class which is chiefly responsible for the delinquencies to guard against which he is appointed, cannot be altogether independent, though I would gladly hope that cases of actual dishonesty or conscious yielding to influence may be comparatively rare. Of course I am attacking the system under which such cases are insufficiently guarded against, and not the class for which it is responsible, as one of the correspondents of the *Times* ("R. S. S.") seemed to think. The other point in which I think the Sanitary Institute's examination is weak is that it makes insufficient provision for the practical instruction and examination of surveyors in sanitary construction, and in the practical testing of the soundness of such construction. My idea is—and I hope that Mr. Ritchie's scheme will run upon those lines—that legislation should provide for the compulsory employment by all local sanitary authorities of properly-qualified, well-paid sanitary officials. I think that in many instances the offices of surveyor and sanitary inspector might with advantage be combined. Such officials should be of a certain social standing, and hold a position, as it were, intermediate between that of the sanitary engineer or architect and the medical sanitarian, and should possess a thorough practical as well as theoretical knowledge of his business. Reverting for the moment to the education and qualification of such officials, I would add that I do not propose that the Sanitary Institute should monopolise them. It has taken the lead in the matter, and when it has established a thoroughly sound standard of examination I am sure it will be only too pleased to see the universities follow its useful example.

I agree generally with your criticisms of Mr. Wootton Isaacson's Bill, but I should like to see what he proposes to do centrally carried out to a certain extent locally. *Caveat emptor* is a good motto. No one has a greater objection to "grandmotherly" legislation and to the swamping of individual responsibility than I have; and were the interests of the "emptor" alone in question, I would admit its applicability. Unfortunately, however, a careless "emptor" may endanger the health of a large household, or even of a small community, should he happen to keep a school or a hotel, for instance. I think it would much simplify any contemplated legislation if it were to cover all such cases. Local authorities claim—and the best "urban" by-laws include sanitary provisions—a voice in the construction of new dwellings. Is it not a logical sequence that they should have the same voice in the maintenance of the efficiency of the sanitary arrangements, when defects only discoverable by skilled inspection may have a widely-spread detrimental influence upon the health of the community? Drains and pipes are at least as likely to get out of order and repair as other structural or ornamental portions of a house; and, whilst the consequences are more serious, the defects are more likely to be overlooked. In my opinion, periodical inspection by a thoroughly competent inspector should be insisted upon by all local sanitary authorities. The frequency of such inspection, and the question of upon whom the expense should fall, or in what proportions, would be matters of detail for after consideration; but I think that it would probably be found convenient to follow Mr. Isaacson's suggestion so far as to adopt the normal unit of lease—seven years—(7, 14, 21), coinciding so often, as that period would do, with changes of tenancy.—I am, etc.,

Constitutional Club, September 24th. C. H. ALLFREY.

THE MEDICAL DEFENCE UNION.

SIR,—An editorial paragraph in the JOURNAL of September 14th provokes some comment. You are pleased to congratulate the Medical Defence Union on its successful prosecution of quacks, and you hope its energies will not be paralysed by a want of support. Such a condescending approval of the Medical Defence Union by the official organ of the British Medical Association reminds me of a certain class of benevolent people who are so charitable as long as they can use other people's purses. But I am afraid that the managers of the Defence Union will find their income injuriously affected by this crusade, as I have already requested my name to be taken off the list of members, and others, no doubt, will do the same.

The prosecution of quacks may very fitly be undertaken by the British Medical Association, which so highly approves of the step, or by the corporations; and the entire profession has a right to expect that this duty should be taken in hand by these representative and responsible bodies. But the Medical Defence Union, so I thought, was founded for the protection of its own members against the risks that beset them in having to defend themselves against unjust charges, in actions for damages in courts of law, in the certifying of lunatics, and misfortunes of a like kind. In restricting their functions to this useful work the managers of the Union will find their highest and best claim for support.—I am, etc., W. H. DAWSON, M.D.

St. Helens, Great Malvern, September 17th.

FLUSHING THE PERITONEUM.

SIR,—Dr. J. S. Briscoe should become a Fellow of the British Gynæcological Society and read its *Transactions*. When he does so he will find that flushing the peritoneum from a jug has long since been discarded, and that a very simple method of washing has been described, varied according to well defined requirements, by which the cleansing is accomplished in a method much better than that which he described. In a very few instances, however, such as the large incisions required by hysterectomies when there have been extensive adhesions, it may be as well to revert to the old plan of the jug which I recommended when I first introduced flushing the peritoneum some ten or twelve years ago.

In the matter of opening the peritoneum through the sheath of the rectus, Dr. Briscoe is also a little behindhand. In Birmingham this has been the almost uniform practice for fifteen or sixteen years.—I am, etc., LAWSON TAIT.

Birmingham.

SECTION CUTTING OF HARD TISSUES.

SIR,—As the demonstration at the recent meeting of the British Dental Association at Brighton, on microscopical section cutting of hard tissues, was productive of so much interest, may I, as the

originator of the plan adopted, be allowed a short space to give an account of that process for the benefit of those readers of the JOURNAL who may be desirous of making sections of osseous or dental tissues for microscopical examination?

The directions usually given in works on microscopical manipulation generally direct that thin slices of the tissue having been cut with a fine saw, the section thus obtained should be rubbed down to the required thinness on a hone, being held down by a cork. I need not say to those who have tried this plan that it is tedious in the extreme, and unsatisfactory in its results. I tried it many years ago, and was so convinced of its inefficiency that I have since then adopted the plan exhibited by Mr. Caush and his pupils at Brighton, and which proved all that could be desired.

The section of hard tissue having been sliced off with a fine spring saw, is placed between two plates of ground glass with some pumice powder and water, and one glass is rotated on the other till the section is ground so thin that, unless care is used towards the latter part of the process, the section disappears altogether; but stopping short of that catastrophe, the section is extremely thin, and preserves its parallelism to perfection, a very desirable quality if it is to be photographed through the microscope afterwards. After being used for some time the ground glasses, becoming too smooth for rapid work, may be reserved for finishing and polishing the section.

This is not the only important point displayed in the Brighton demonstration; the method of subsequently mounting the sections introduces a novelty, and needs a word of explanation. Many sections of hard tissues when mounted in Canada balsam present a total absence of structure, as the mountant has run in and become absorbed, to the entire obliteration of all histological details. Therefore the plan I introduced and still advocate is to place the sections when ground and polished in distilled water, which sinks into the structure, filling up all cellular or tubular cavities. The Canada balsam should not be too liquid, but moderately firm, even requiring a slight warming to make it workable. Some being placed on the microscopical slide, the section is taken out of the water and its surfaces dried by a warm, clean finger passed over them; it may then be slid under the surface of the balsam and the cover glass slightly warmed, then pressed down, and the superfluous balsam excluded. The tissue now being full of water, the balsam cannot run in, and consequently all obliteration of its histological character is prevented.

I am sure that if any of the members of our Medical Association are working in this direction, they will derive much advantage from the adoption of these methods, and that must be my excuse for wishing to encroach upon your already well-filled pages by this communication.—I am, etc., THOS. CHARTERS WHITE.

Belgrave Road, S.W.

NOTIFICATION OF INFECTIOUS DISEASES IN SCHOOLS.—By a recent regulation school teachers in France are obliged to notify to the sub-prefect of the department the occurrence of any case of epidemic disease which may occur among the children under their charge. Besides this, they must forward to the same official a quarterly return of cases of epidemic disease which have occurred during the previous three months. The statistics thus collected will be forwarded in due course to the central authorities of the Public Help and Sanitary Departments.

CHOLERA IN ASIATIC TURKEY.—Bagdad and Bussorah have, according to a correspondent of the *Times*, been visited by an epidemic of cholera. The disease was first noticed in obscure inland spots, whence it spread to the port of Bussorah, near the head of the Gulf of Persia. From the first, the Ottoman Government left nothing undone in the way of quarantine to prevent it spreading up the Tigris, but all efforts proved unavailing. At Bagdad a severe outbreak has occurred, many dying daily; in the absence of systematic registration, it is impossible to say how many.

DEATH-RATE IN BELGIUM.—In 1888 the population of sixty-nine large towns in Belgium was nearly two millions. The average mortality was 21.2 per mille. The lowest death-rate was that of Warrenne (14.1) and Morlambelz (15.1); the highest was that of Grammont, which reached the high figure of 34. The death-rate of Brussels was 21.2, the same as the average for the sixty-nine towns collectively. One reason for the high death-rate in Belgium is said to be the relatively considerable mortality among children. Thus, in Brussels, out of 1,000 infants born alive, 193 die in the first year.

MEDICO-LEGAL AND MEDICO-ETHICAL.

A SHABBY DEFENCE.

DR. J. W. COOK brought this week an action in the Colchester County Court to recover fees for attending a boy who had been run over, and whose father, an innkeeper, declined to pay, on the ground that the doctor was called by the cabman who was the cause of the accident. His honour, Judge Abdy, characterised the defence as a very shabby one, and ordered the father of the boy to pay the amount claimed with costs.

WHO IS TO PAY?

FIAT JUSTITIA asks how he should have dealt with the following case, and how he should proceed with it. A young woman came to his surgery ostensibly to consult him for abdominal pain. She proved to be in labour, which advanced so rapidly that she could not be sent away even if she had had a home to go to, which she had not. In half an hour she gave birth to a living child. Our correspondent applied to the police, who refused assistance, but referred him to the parish authorities. After a suitable time, the patient, having received all necessary attention from him, was removed from his house by the relieving officer, through whom he applied to the parish for payment for the "trouble and inconvenience he had been put to." He was informed that the Committee refused to entertain his case.

*** We consider that our correspondent acted properly throughout, but we cannot see that he has any legal claim on the parochial authorities, having received no directions from any official to attend the case. The only person responsible to him for a fee is the patient, and he himself must be the best judge as to her capability of paying it.

THE M.R.C.S. DIPLOMA AND GOVERNMENT APPOINTMENTS.

DR. T. A. WHITE (Territet, Switzerland) writes: 1. Could a man holding only the M.R.C.S.Eng. and L.M. be elected to a Government appointment should he be the only candidate?

2. Could a registered medical practitioner of many years standing, and who has been absent from England say for twenty years in either British possessions or not, be able to return to England and take up practice by only asking to have his place of residence re-registered?

*** 1. The validity of the appointment must rest entirely on the condition under which it is made, that is to say, as to the nature of the qualification, professional or other, required.

2. "A registered practitioner" does not lose his privileges as such, no matter how long he may be absent from England. If a practitioner's name has been removed from the *Register* in consequence of his failure to supply information required as to change of address, he can have his name restored by proving his identity and paying a fee of 5s.

THE RIGHT OF PROPERTY IN PRESCRIPTIONS.

M.D. writes: The answer given to "Liberator," page 622, September 14th, seems to me somewhat arbitrary, if not misleading, and not at all just to Dr. M. I am quite willing to accept "Liberator's" testimony in this case as an example of difficult and dangerous data to found an opinion on, but a prescriber would probably have hesitated before he condemned Dr. M. on such a questionable statement. What is the supposed motive of Dr. M. in the answer to "Liberator's" question? Now, suppose I prescribe gr.ss morphine to relieve my patient's agony would I be justified in allowing my patient to go on repeating that prescription after I had once suspected, or, worse, been informed that my patient persisted in repeating it because it had been of "benefit" to her? Would a coroner exculpate me of all blame or responsibility at the inquiry if he were informed that I took no account of the risk she was running to her well-being, neither had I offered any resistance to her repeating the dangerous prescription. The prescription was in her own possession; she could keep it, but if her servant brought it to me at my request, as was done in this case, I certainly would consider it my moral right to destroy it. Legally, a little trouble could be given by such a proceeding, as I suppose the law would demand me to hand the prescription over to the custody of the authorities; but how few of us would send for a policeman over the prescription?

If something of this kind of reasoning was not in Dr. M.'s mind when he took the prescription, why did Miss S. not go to the chemist and have it dispensed without the prescription? Surely any humane chemist would have repeated the palliative if no danger were attached to it? I should be very pleased to have an expression on this judgment, as there is yet more in it.

*** While a careful reconsideration of the question submitted by "Liberator" in the JOURNAL of September 14th, page 622, leaves no doubt upon our mind of the justness, moral and legal, of the reply thereto (supported as it is, moreover, by the principle laid down in the *Code of Medical Ethics*, page 89, to which we would refer our correspondent) relative to the absolute right of patients to retain for their personal use the prescriptions legitimately acquired by *de facto* payment of the practitioner's fees, we willingly, in accord with the principle of *audi alteram partem*, give insertion to "M.D.'s" letter of protest. Though altogether differing therefrom, we deem it well to remark that, had he less hastily (by return) sought to impugn the answer as "somewhat arbitrary and unjust, if not misleading," he would, we are induced to think, on further reflection, have hesitated to give public expression to the views therein set forth, on which we offer no

comment other than to reject his assumed morphine case as inapplicable to the special point and general principle involved, and to assure him, moreover, that the writer of the opinion in question is, and has been for half a century and more, a legally qualified "prescriber."

NAVAL AND MILITARY MEDICAL SERVICES.

LORD CAMPERDOWN'S COMMITTEE.

MEDICAL STAFF writes: The leading military journals seem unanimous that the chief recommendations should be embodied in a Royal Warrant, and that the Quixotic objections of the dissentients on rank and title should not be allowed to block the way towards some settlement. As an old officer, he thinks the designation "Royal Medical Staff" with the compound military medical titles would improve matters. With distinctive belts, lace, and uniform generally, he sees no occasion for a "Geneva" badge, which would be offensive to the majority, and is no longer worn by the quartermasters of the Medical Staff. Medical men, civil or military, do not require to be ticketed. If extra years are to be given to surgeons-general, will senior brigade-surgeons or deputies receive compensation for loss of promotion? He thinks the short service system advocated by Lord Camperdown and Mr. Macnamara should be tried. It would ultimately reduce the serious non-effective list. The numbers qualifying for retirement must be reduced. A check should be put upon the ill-regulated administration by which medical officers are hustled about within districts, to their own detriment and that of the service. The Medical Staff Corps wants reforming.

R. S. thinks the suggested titles of Royal Medical Staff or Royal Medical Staff Corps might be equally applied to the medical staff of some royal hospital. He thinks the only possible title is that of Royal Surgeons, which would have a close analogy to other royal corps, namely, Royal Artillery and Royal Engineers.

K. asks: Can nothing be done to stop the introduction of the new nomenclature? The new titles will never be understood by the people and never used. Why not give the only understandable military title, which would cost the State nothing? The retention of surgeons-general till 62 will but further crowd the retired list by men who see their way blocked. This will be the real outcome, not a reduction of the non-effective vote.

The title, which costs nothing, is just the one for which the opponents of medical organisation would rather pay any amount than give to medical officers.

SURGEON-MAJOR (retired) fully endorses the suggestion that retired officers should have the benefit of the new titles recommended by the Committee, especially brigade-surgeons and surgeons-major over twenty years' service. Their present titles mean nothing in civil life. All of us are under a debt of gratitude for your advocacy of our rights.

Mr. J. P. HUNT, Barrister (Lincoln's Inn) writes: In the JOURNAL of September 21st you are good enough to devote considerable space to the recommendations of the Camperdown Committee, and I am pleased to see the just rights, which I have never ceased to bring to the notice of the War Office and the public, form, one and all, recommendations on which the Committee are unanimous. So far as I understand the report, medical officers will now be permitted to reckon one year on half-pay, the result of ill-health caused in and by the service, towards promotion and retirement, as provided for in Article 71, Pay Warrant, 1884, which the Secretary of State for War then refused on the ground that medical officers were non-combatants, but which the recommendations of the Committee in paragraph 4 "Service" now strongly urge. "Admissions into the service," paragraph 7, recommends the abolition of the unjust precedence granted to the Indian and naval medical officers, and paragraph 6 will no longer permit the payment of medical officers in India at a lower rate than at home. These are substantial recommendations, and will remove much bitter feeling at present existing in the department, and prevent men who have done good service being passed over for promotion merely because their zeal had led them to sacrifice their health to the calls of duty.

THE MEDICAL STAFF.

BRIGADE-SURGEON WILLIAM FOLLIOTT, F.R.C.S.Ireland, is granted retired pay. He entered the service as Assistant-Surgeon, October 1st, 1862; became Surgeon, March 1st, 1873; Surgeon-Major, April 28th, 1876; and Brigade-Surgeon, May 8th, 1889. He served in the war with Afghanistan in 1878-80, and has the medal granted for that campaign.

Deputy Surgeon-General R. W. MEADOWS, Principal Medical Officer at Devonport, has been ordered to embark for Gibraltar.

Deputy Surgeon-General H. F. PATERSON, M.D., has been appointed Principal Medical Officer at Hong Kong, *vice* Deputy Surgeon-General R. Lewer, ordered home.

Surgeon W. G. A. BEDFORD, M.B., has been selected for the appointment of Assistant-Instructor at the Depôt and Training School at Aldershot.

INDIAN MEDICAL SERVICE.

SURGEON W. E. JENNINGS, M.B., Bombay Establishment, is directed to act as Civil Surgeon of Jacobabad, in addition to his other duties.

THE MILITIA AND VOLUNTEERS.

CAPTAIN and HONORARY MAJOR O. T. DUKE, of the 5th Battalion Rifle Brigade (late the Queen's Own Royal Tower Hamlets Light Infantry), and who was formerly a Surgeon-Major in the Indian Medical Service, is now promoted to be Major in his corps.

The undermentioned Acting-Surgeons are promoted to be Surgeons in their respective corps: W. HAINING, M.D., and E. J. LLOYD, M.D., 1st Cheshire and Carnarvonshire Artillery; A. O. WILEY, 1st Volunteer Battalion West Yorkshire Regiment (late the 1st West Riding of Yorkshire); R. B. SMITH, 1st Volunteer Battalion Leicester Regiment (late the 1st Leicestershire).

Mr. WILLIAM JOHN LAWRIE, M.D., is appointed Acting-Surgeon to the 2nd Volunteer Battalion Scots Fusiliers (late the 2nd Ayrshire).

Surgeon A. YOUNG, 1st Volunteer Battalion West Kent Regiment (late the 1st Kent), has resigned his commission, dated September 2nd, 1882.

The Rev. Canon J. D. KELLY, M.A., is appointed Acting-Chaplain to the Manchester Division of the Volunteer Medical Staff.

EXCHANGES OF ARMY MEDICAL OFFICERS.

MEDICUS writes: You are quite right in your note under this heading in the JOURNAL of September 14th as to exchanges being in future virtually prohibited if this absurd new rule is adhered to, and now is the time for medical officers to bestir themselves. It is evident that the military authorities have issued an order under a misapprehension, and the heads of the medical staff have taken no pains to set it right. The Queen's Regulations are intended to apply to officers ordered abroad at short notice with a probability of active service, but it was never contemplated to include all officers warned in ordinary course for the reliefs of the year, many of whom are not required to embark for months; on the contrary, it is precisely under these latter circumstances that the majority of exchanges take place. The only way to put matters right will be to let the Military Secretary or His Royal Highness know how the matter really stands; at present, they are simply misled.

HOSPITAL AND DISPENSARY MANAGEMENT.

PROPOSED SCALE OF FEES FOR THE PUBLIC MEDICAL SERVICE OF ENGLAND.

Fees to be paid by Wage Earners who are making under 45s. per week per family, from all sources. All payments to be immediate.

MEDICAL FEES.—Visit at a branch: 2s. for the first, and 1s. for subsequent visits during the same illness; or 4s. per week in advance for five visits (with or without prescription).

Visit at patient's home: from 11 A.M. to 6 P.M., 2s.; from 6 P.M. to 11 A.M., 5s. (with or without prescription).

Consultation at patient's home before 6 P.M., 10s. 6d.; after 6 P.M., 20s. for each doctor.

Visiting a second, third, or fourth patient at the residence of the first patient treated, 2s. each for the first day visit, and half this fee for subsequent visits.

When the patient lives more than two miles from the doctor's residence, and when he has to visit at this patient's home, the doctor may charge the cost of cab for out and home journey.

	£	s.	d.
Remaining all night with a patient	1	0	0
Remaining with a patient after the first half-hour, per hour, or part of an hour	0	5	
Not more than two visits a day to be paid to a patient unless he or his relatives request further visits to be paid			
LETTERS AND CERTIFICATES OF ALL KINDS.—2s., exclusive of postage.			
VACCINATION.—With human lymph, including subsequent inspection and filling up certificate, 2s. 6d.			
With calf lymph, ditto, 3s. 6d.			
OBSTETRIC FEES.—Abortion or premature labour (with three subsequent visits)	1	0	0
Normal labour (including three subsequent visits)	1	5	0
Labour, with forceps	1	10	0
,, ,, turning	1	15	0
,, ,, craniotomy	2	2	0
,, ,, transfusion	2	2	0
Anæsthetic at any of the above	0	7	0
Removal of after-birth without conducting confinement ...	1	0	0
Dilatation of cervix with tents, bags, or instruments... ...	0	10	0
Help, in connection with difficult labour, from another doctor ...	1	0	0
Induction of premature labour, and completion of such labour...	1	15	0
Treatment of severe *post-partum* hæmorrhage	0	10	6
Treatment of *ante-partum* hæmorrhage (exclusive of confinement fee)	0	7	6
Examination of wet nurse	0	2	0
Operation for recent rupture of perineum	0	5	0
Cæsarean operation	2	10	0
Irrigating vagina or uterus	0	2	6
GYNÆCOLOGICAL FEES.—Treatment of minor affections of uterus...	0	2	0
Removal of small tumours from vulva, vagina, or cervix ...	0	3	6
Introducing pessary (pessary included)	0	2	0
Curetting interior of uterus	0	7	0
Operation for atresia of vulva, vagina, or cervix	0	7	0
Operation for imperforate hymen...	0	7	0
Operation for old rupture of perineum	1	1	0
POST-MORTEM FEES.—External examination of dead body ...	0	7	6
Post-Mortem examination, partial...	1	0	0
,, ,, complete	2	2	0
Written statement regarding *post-mortem* examination ...	0	10	6
SURGICAL FEES.—Passing catheter...	0	2	0
Removal of small tumour ... ... 3s. 6d. to	0	10	0
Removal of tonsils, or enlarged glands	0	10	0
Removal of nævus, tenotomy, circumcision...	0	10	0
Harelip, operation for	0	10	0
Reduction of hernia	0	10	0
Removal of ingrowing nail, or opening of abscess ...	0	2	6
Treating simple wounds, burns, or scalds	0	2	0
Treatment of simple or compound fracture or dislocation (apparatus included) of the arm... ...	0	15	0
,, ,, ,, ,, ,, ribs or clavicle	0	12	6
,, ,, ,, ,, ,, thigh or leg ...	1	10	0
,, ,, ,, ,, ,, jaw ...	0	10	0
Amputation of finger or toe	0	10	0
Testing sight (glasses not included) per visit	0	3	6

Operation on eyelid or eye	from 5s. to	1	0 0
Treatment of disease of the ear		0	2 0
Operation on ear by knife or snare		0	3 6
Washing out of stomach		0	5 0
Chloroform or ether administration		0	7 0
Consultation at branch (see above)		0	7 0
Consultation at patient's home (see above)...		0	10 6
Testing urine, chemically and microscopically		0	2 0
Removal of nasal polypus		0	5 0
Removal of foreign body from ear or nose		0	2 0
Tracheotomy...		0	12 6
Skin-grafting		0	2 6
Paracentesis of the thorax or abdomen		0	7 6
Tapping hydrocele		0	5 0
Operation for fistula *in perineo*		0	7 6
Operation for internal hæmorrhoids		0	12 6
Operation for imperforate anus		0	10 6
Cupping, dry or wet		0	5 0
Venesection		0	7 6
Leeching		0	2 6
Washing out the bladder or bowel		0	3 6
Seton, or issue		0	2 6
Administering an enema		0	2 6
Wet packing		0	2 6
Application of constant or induced current...		0	3 0
Stretching or stitching a nerve		0	10 6
Arresting arterial or venous hæmorrhage		0	2 6
Removal of foreign bodies from eye or throat		0	2 6
First treatment of a sprain of upper or lower limb		0	2 6
Operation for paraphimosis		0	10 6
Injecting bowel with air or fluid for intussusception		0	4 6
Reduction of strangulated hernia		0	10 6
Operation for strangulated hernia		1	0 0
,, rectal ulcer		0	2 6
,, ,, fissure		0	2 6
,, ,, stricture		0	7 6
Extraction of foreign body from urethra		0	3 6
Treatment of urethral stricture by bougie, per sitting ...		0	2 6
,, ,, operation		0	15 0
Puncture or aspiration of bladder		0	4 6
Crushing stone in the bladder		0	10 6
Aspiration of joints or cavity		0	4 6
Strapping testicle		0	2 6
Extirpation of testicle		0	10 6
Plugging the nostrils		0	4 6
Measuring and fitting felt or plaster jacket...		0	3 6
Doctor's assistance at an operation at patient's home or at branch, equal to that mentioned as the full surgical fee			
Excision of the breast		0	10 0
In case the fee for an operation is not mentioned in the above list, such fee shall be fixed at a meeting of the branch committee, at which at least three-fourths shall be present. Scale of fees to be revised every fifth year. The above scale of fees refers to operations performed before 7 P.M. After that hour an extra half fee may be charged.			
DENTAL FEES.—Extraction per tooth		0	1 0
Extraction each extra tooth		0	0 6
,, under gas		0	2 6
,, ,, and each extra tooth		0	0 6
Stopping with amalgam, per tooth		0	2 0
,, ,, gold ,, ...		0	4 0
Extractions under ether or chloroform		0	12 6
Artificial tooth, with vulcanite plate		0	4 6
,, ,, ,, ,, and each extra tooth ...		0	2 0
Scaling teeth		0	2 6
Examination of all the teeth without operation		0	2 0
Small operations on the gums, or removing tumour		0	3 6
Regulating apparatus for deformed jaw or teeth, made of tin or vulcanite		0	7 6
Visits to patients' home, the same as medical fee for such			
Cleansing and stopping of root, the same fee as stopping of tooth			
Administration of ether or chloroform by doctor for dental operation		0	7 0
CHEMIST'S CHARGE.—4d. per prescription. In case more than one prescription is dispensed at one time for the patient, such as a mixture, pills, ointment, or liniment, the sum of 3d. shall be charged for each. No prescription to be renewed for the patient by the chemist until the patient has been again advised by the doctor. No copies of prescriptions to be given by the chemist to the patient. All prescriptions to belong to the doctor who wrote them.			

The above scale of fees may be revised every fourth year.

I have drawn up this scale of fees after prolonged deliberation, and after having taken the opinions of doctors, dentists, chemists, and employers of labour. The scale is drawn up greatly in favour of the wage earner, and the fees quoted are much below those paid by the Poor Law. I would suggest that the scale of surgical, obstetric, gynæcological, dental, and vaccination fees, and those for letters and consultations, be adopted as the scale for the provident scheme, while the fees relating to visits and medicine be considered separately.

In none of the above surgical fees do the amounts mentioned include subsequent visits, these being charged at the usual rate for visits. Nor do they include the fee for an anæsthetic. They do include material used for dressings. In these cases, when the surgical fee is fixed at, say, for instance, 2s. 6d., this means that this fee covers all the charge; and, therefore, does not give the doctor the right to charge the surgical fee *plus* the fee mentioned for a visit. In the JOURNAL of June 22nd, 1889, I did not include "home" visits in my proposal, but since then many doctors have asked me to do so. This we can readily do until the provident scheme is in working order. I have been asked to draw up a scale of fees which will compete against bogus dispensaries and commercial medical charities. I had rather not do so, as we have the deplorable example of the provident dispensaries to guide us in avoiding such errors.

In this proposal we should give each doctor the right to refuse treatment to those whom he considers ineligible, such as fever cases, or those suffering from acute illness, which should be treated at home. Also, doctors would be given the option of refusing to visit a patient at his home, although he would treat patients at the branch two or three times each week at certain hours. By having a branch in each district of large towns the doctors would not be required to travel more than a mile or so, and so would save much time. Those who wish to further post themselves up on this proposal should refer to the JOURNALS from June 22nd to August 10th, 1889.

It has been suggested that the "poverty scale," which qualifies for admission to the medical charity—namely, 25s. and 20s.—is too high. If the Branches think so, and wish it reduced to 20s. and 15s. respectively, I shall be agreeable. It is sad to think that a single wage earner making 20s. per week is to be considered so thriftless and poverty stricken as to be eligible for free medical treatment. In connection with this wage question I think we can draw valuable help from recent Acts passed in the German Empire. There the wage-earning classes are compelled by law to insure against sickness, accident, and old age. Each person is made to pay about 2 per cent. of the "normal local wage." Each community fixes this wage. The working men are, therefore, divided into four classes. The lowest class is formed by those whose maximum wage is £17 10s. a year. The second class is £27 10s. a year; the third class is £42 10s., and the fourth class is £48 a year. To us it is strange that the maximum wage per annum in Germany reaches only £48. In this country we do not encourage such a one to be thrifty, but invite him to throw himself on the parish. Hence the thrift of one nation, and the thriftlessness of the other. In Germany about 900 out of every 1,000 lay by in good times, in England not 200 per 1,000 do so.

I think it rests upon us as an Association to do two things in connection with this question:

1. To rid our medical charities of present abuses, so that they may carry on a magnificent work untrammelled by doubts in the public mind as to the genuineness of their mission of mercy.

2. To draw up a scheme by which the eight and a half millions of the industrial classes of this country may be able to provide themselves with efficient medical, surgical, and dental treatment and medicines, thereby securing for themselves fair and reliable treatment for a fair fee. If the Branches of our Association accomplish this task, a good and lasting work will be done; but as the Council has to report within six months, it is imperative that the Branches send up their report at the earliest. I shall be glad to answer any questions.

ROBERT R. RENTOUL.

Liverpool.

WORKING MEN AND THE HOSPITAL MOVEMENT.

A FEW years ago the working men of Bolton, through a representative committee, organised a scheme for systematic contributions throughout the large industrial establishments in the town to the Bolton Infirmary and Dispensary, and the result has been most gratifying. This year's contributions alone show a grand total of £1,503, an advance of nearly £250 on last year, and an increase of £700 or £800 on the amount usually contributed before the system of weekly contributions was inaugurated. This year the carding, weaving, and winding operatives alone raised £539, the iron trade realised £304, the operative cotton spinners collected £10, and the colliers in the district gave £121.

ALLEGED ABUSE OF HOSPITALS.

P. W. PERKINS CASE, M.D. (W. Croydon) writes: Very many practitioners will thank Dr. Rentoul for the complete way in which he has indicated the abuse of our present out-patient hospital system. He proposes a "public medical service." I desire to point out that the service adopted by the Metropolitan Provident Medical Association nearly corresponds with what is required of his proposed public medical service, and works fairly well. As its *modus operandi* may not be generally known, please allow me briefly to mention it.

First, there is a convenient local dispensary provided where the medical staff attend at appointed times to see patients and prescribe; a dispenser also attends, and a secretary to receive payments, etc., or each medical officer arranges that his patients may consult him at his surgery.

Secondly, all dispensary members may select from the staff, pay an entrance fee, and are given a form to take to their selected surgeon, who may or may not accept them. They are entitled to benefit one month after joining, or at once on payment of 10s. each to the dispensary, and with their selected surgeon's sanction.

Thirdly, each surgeon states to the secretary what area of district he is willing to accept.

Fourthly, the secretary keeps a list of all patients accepted by each surgeon, which list each surgeon can see at any time. The secretary receives all payments from members, and pays each surgeon half that amount, the other half goes to pay dispenser, drugs, rent, etc. Midwiferies are a guinea, and paid in full to the surgeon.

Fifthly, the dispensary is managed by a committee of members appointed at the annual meeting, and the medical staff are, *ex officio*, members, but all matters medical and pharmaceutical for consideration are referred to a sub-committee of the medical staff to report to the general committee.

Sixthly, it is proposed, but not yet accomplished, that all local practitioners of a length of residence to be agreed upon may be on the dispensary staff if they so desire; also, that these institutions be affiliated with general hospitals, each surgeon sending such members to the hospitals as he deems necessary. Minor details I will omit.

Here, Sir, is payment by members in health to provide against sickness. Each surgeon decides the selection of his own patients, does no dispensing, has no money collecting, and from the small wage-earning class gets as much as he thinks they can pay, otherwise he refuses them as dispensary patients; moreover, a surgeon with a large list of members is paid accordingly, whilst a surgeon with a small list is paid proportionately. This plan is that recommended, I believe, by the Charity Organisation Society to relieve the existing abuse of our present out-patient hospital system.

G. writes: As one of the medical officers of the Manchester and Salford Provident Dispensaries Association, I fully endorse Dr. Higgins's statements in the JOURNAL of September 21st as to the abuse of the system.

I have kept a record of work done for clubs and for the dispensary for the last two years, and I find, on comparing the visits paid and the fees received, that I am paid seven times as much for a visit to a club patient as for a visit to a dispensary patient. If visits and consultations are considered as of equal account, the result is not so striking, but still overwhelmingly in favour of club practice. The inadequacy of the remuneration is not by any means the worst feature of the system; poor it is, but having once learned to lean on it as a source of income, we cannot afford to relinquish it, and are consequently entirely in the hands of the committee. A lay committee, composed mainly of working men, pays little attention to professional scruples, it considers them ridiculous, and accordingly we become responsible, as medical officers to the provident dispensary, for acts from which we shrink in our private capacity. I refer mainly, but not exclusively, to advertising. We advertise extensively, and in many objectionable ways; perhaps the most objectionable is the handbill containing the names, addresses, and qualifications of the medical officers; these are, at certain seasons, scattered broadcast in the mills and workshops; they are thrust into the hand of the passer-by in the street, and slipped into the letter-box or under the door of every house in the neighbourhood.

We undoubtedly took up the provident dispensary system in despite of the better judgment of the bulk of the profession in Manchester and Salford, who stood strictly aloof. We made it a "going concern," and if it has now become our master, and a very hard master, we have ourselves to thank for it.

RETIRED SURGEON-MAJOR T. HOLMESTED (Eastbourne) writes: I venture to send you the enclosed few ideas regarding hospitals. They are based on the idea that all the existing public hospitals are intended for the benefit of the sick poor. The spirit of the gift is for the most part to be obtained, and if present day requirements differ from those ruling at time of constitution, then the proper course is to abide by the spirit of the gift rather than by the mere letter.

1. A central office is needed with telephonic communication with all the hospitals and chief police stations, for the following reasons. *a*. A man meets with an accident; the policeman or the passer-by takes him to the police office; the central office is communicated with, and the reply is, "Take the injured man to ——— Hospital, where a bed is ready." *b*. Or a person you are interested in needs, you think, or your doctor thinks, hospital treatment. You write to central office; they send you a form to fill in and return; they then reply a bed is vacant and ready at ——— Hospital; since the patient has means she must pay —s. a week. By this the sick and the beds adapted to them are brought together; there is no tedious hunt from one hospital to another, no half killing the patient in the prolonged ordeal; *c*. The circumstances of the patient are taken into consideration, and, if thought proper, the patient or his friends have to pay certain maintenance charges in accordance with their means, and this is done in a fair way by an unprejudiced central office.

2. Working men ought to be on the boards of hospitals to prevent useless, undesired luxuries. A working man keeps himself, family, pays rent, etc., all for a sum less than what is needed to keep one patient now, so common sense says the present system must be bad.

3. Hospital Contributions.—These are raised at an enormous expense, each separate hospital having its own collecting establishment, so for every £1 given only 14s. goes into the hospital purse. If the present competing system were removed, and application only made from a central office, probably for every £1 given 19s. 6d. would go into the hospital purse.

4. Regarding administration. If at each hospital medical officers were made specialists, changing about yearly or at longer intervals, then the yearly medical reports would be of great value to general practitioners, for a specialist seeing one hundred cases of inflammation of lungs in the year could give something definite as to cause, prevention, and treatment; though, if he only saw six mixed up with ninety-four miscellaneous cases, his report would be valueless; the same with every other disease.

DURING the month of August the police in London seized 3,290 dogs. Forty-seven dogs, either rabid or supposed to be so, were killed in the streets; 19 of these were proved by *post-mortem* examination to have been suffering from rabies. The number of persons reported to have been bitten by dogs was 1,681.

INDIA AND THE COLONIES.

NEW ZEALAND.

THE NEW MEDICAL PRACTITIONERS BILL FOR NEW ZEALAND.—The new Medical Practitioners Bill, which is to be introduced by Mr. Stevens in the Upper House of the New Zealand Legislature in the coming session, contains seventy-six clauses, and is divided into three parts. Part I provides for the constitution and election of a general medical council for the whole colony, to be called the General Council of Medical Education and Registration of New Zealand. It is to consist of twelve members elected from among the legitimate medical practitioners residing in the colony. The first members of the Council are to be appointed by the Government, who will also nominate the first president and vice-president. The members and officers so appointed will hold office for three years only. In the year 1892 the first election will be held, and thereafter the elections will take place quinquennially. Part II relates to the medical register which the Registrar-General will be required to keep correct, in accordance with the regulations of the Medical Council. The qualifications for registration are to be (1) present proved registration on the New Zealand or English *Register*; (2) proof of having passed a qualifying examination in medicine, surgery, midwifery, etc., held by the University of New Zealand for degrees in those subjects; (3) proof of having passed a preliminary examination, which, in the opinion of the Medical Council, is equivalent to that of the New Zealand University matriculation for medical students, and having passed through four years' regular medical study, and received a diploma from some qualified medical body recognised by the Medical Council entitling to practise in medical surgery and midwifery. The Council may require the Registrar to strike off the register the names of practitioners convicted of felony or perjury, or "guilty of infamous or disgraceful conduct in a professional respect," or may suspend him from practice for such period as they think fit, but not on account of a conviction for a political offence in a foreign country, or for an offence which, in the opinion of the Council, does not disqualify him for practising. A person who has been suspended or struck off the register may appeal to the Supreme Court, and the Court may confirm, reverse, or modify the Council's decision, but the members of the Council will not be liable personally to any action at law on account of their official action in these respects. No unregistered person will be allowed to hold any public medical appointment, and the penalty for procuring or attempting to procure registration by means of false pretences will be three years' imprisonment with hard labour. Any person falsely representing himself to be a registered practitioner, and if unregistered receiving payment for practising, or using (for the purpose of practising) any medical title, will be liable, on summary conviction, to a penalty of £50. Part III. contains various general provisions. Every medical practitioner is required, under penalty of £50, to take out an annual licence, the fee for which is two guineas. A charge of £1 is to be made on deposit of diploma, and 10s. for every alteration of the registered qualification or addition to it.

OBITUARY.

PROFESSOR RUDOLPH VOLTOLINI, M.D., Breslau.

LARYNGOLOGY has lost one of its most prominent representatives in the person of Professor Rudolph Voltolini, of Breslau, who died on September 11th, in the 71st year of his age. He was born in 1819, and studied medicine at Breslau and afterwards at Berlin. After spending some years in medical practice, he qualified as *Privat Docent* of Laryngoscopy, Otoscopy, and Rhinoscopy at Breslau in 1860. In 1868 he was appointed Extraordinary Professor of these subjects, the chair being expressly created for him.

Voltolini was an enthusiastic toiler in the field of medicine which he had chosen for his own. He has been not unjustly called the father of rhinoscopy, and he certainly did more to improve the *technique* of that difficult art and to popularise the practice of it than any other teacher. He was also one of the first to apply the galvano-caustic method introduced by Middeldorpf to the treatment of diseases of the nose and larynx. He was

indefatigable in the invention and modification of instruments, and his literary activity was very great. He was one of the editors of the well-known *Monatschrift für Ohrenheilkunde* up to the time of his death, and a frequent contributor to other periodicals. His principal works were "On the Galvano-caustic Method and its Employment in Diseases of the Larynx," 1876; "Rhinoscopy and Pharyngoscopy," 1879; "Diseases of the Nose and Naso-pharynx, with a discussion on Electrolysis," 1888.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

INFECTIOUS DISEASE NOTIFICATION IN THE PROVINCES.

In our last issue we published a circular letter which had been addressed by the Local Government Board to all the sanitary authorities within the metropolis in reference to the Infectious Disease (Notification) Act, 1889, which comes into force in London on October 30th next, but which (except in those towns that already possess powers of the same kind under local Acts) will only come into operation in urban, rural, and port sanitary districts outside the metropolis on being expressly adopted by resolution by each sanitary authority individually. It may, therefore, be convenient if we briefly recapitulate the provisions of the Act which will affect them. In the event of their local authorities adopting the Act it will involve upon every medical practitioner attending on, or called in to visit, a patient forthwith, on becoming aware that the patient is suffering from an infectious disease to which this Act applies, to send to the medical officer of health for the district a certificate in the prescribed form, stating the name of the patient, the situation of the building, and the infectious disease from which, in the opinion of such medical practitioner, the patient is suffering. The form of certificate has been prescribed by an Order of the Local Government Board, and copies of the form are to be supplied gratuitously by the local authority, who will also pay for every certificate sent by a medical practitioner in accordance with the requirements of the Act a fee of 2s. 6d., if the case occurs in the course of his private practice, or a fee of 1s. if the certificate is given in respect of a case occurring in his practice as medical officer of any public body or institution. This certification will be in addition to a notification to be given by the "head of the family" to which the patient belongs, or, in his default, by the "occupier" of the building. The certificate is to be given in respect of a case of infectious disease to which the Act applies occurring in any building, not belonging to Her Majesty, used for human habitation, unless such building is a hospital in which persons suffering from an infectious disease are received; and also in a case occurring in any ship, vessel, or boat not belonging to Her Majesty or to a foreign Government, or in any tent, van, shed, or similar structure used for human habitation and not belonging to Her Majesty, in like manner as nearly as may be as if it were a building. The penalty for default in sending the certificate will be a fine not exceeding 40s. If the medical practitioner attending on a patient is himself the medical officer of health of the district, he will be entitled to the fees to which he would be entitled if he were not such medical officer. A notice or certificate to be sent to a medical officer of health in pursuance of the Act may be sent by being delivered to him, or by being left at his office or residence, or may be sent by post addressed to him at his office or at his residence. Where in any district of a local authority there are two or more medical officers of health of the authority, the certificate must be given to such one of them as has charge of the area in which the case occurs, or to such other of them as the local authority may from time to time direct. The infectious diseases to which the Act applies will in all cases include "small-pox, cholera, diphtheria, membranous croup, erysipelas, the disease known as scarlatina or scarlet fever, and the fevers known by any of the following names: typhus, typhoid, enteric, relapsing, continued, or puerperal." Other diseases may also from time to time be added by a resolution of the sanitary authority, approved by the Local Government Board. It may be added that by Section 11 of the Act it is provided that a payment made to any medical practitioner in pursuance of the Act shall not disqualify that practitioner for serving as member of the council of any county or borough, or as member of a sanitary authority, or as guardian of a union, or in any municipal or parochial office. The Act applies, with certain necessary but slight modifications, to Scotland and Ireland, as well as to England and Wales.

METROPOLITAN INSANITARY AREAS.

Dr. J. F. J. Sykes, medical officer of health for St. Pancras, in an elaborate report prepared for the information of the local vestry's sanitary committee, concerning the insanitary and overcrowded areas which exist throughout the parish of St. Pancras, speaks of these areas as being not only a disgrace to the parish, but a moral and physical danger to all around. Dr. Sykes points out that many of the dwellings reported as insanitary can be more effectually controlled by by-laws for the control of such dwellings which stand in the front rank of preventive measures than by the "tedious and time-consuming" procedure of the Nuisances Removal and other Acts. The visitor who has visited the dens in which the poor live on these insanitary areas gives the following description of the state of things he found to exist.

He says: "Medina Place is partly demolished, but the *débris* of the houses remains. Argyle Place is connected with Medina Place by a narrow, filthy passage, in which refuse of all kinds poison the atmosphere. Here children abound and play. The kitchen of a house at the corner of Riley Street hard by is occupied by a one-armed man, his wife, and three children. A bed in a corner, a three-legged stool, a chair, and a few pieces of crockeryware constitute their furniture. Half-a-crown a week is the rent, and the children often go hungry. In Churchway the visitor found much filth, poverty, and wretchedness. Two rooms of a cottage were occupied by a man, his wife, and ten children. In the front room of an adjoining cottage were found a young coal carrier out of work, his wife, and five children, the youngest six weeks old and the eldest 7 years. All the children were ragged and almost naked, and the eldest was crying with hunger. Owing a week's rent, the landlord had given the coal carrier notice to quit, and his wife, careworn and haggard, said with a sigh: 'No one cares whether we are alive or dead.' Other houses are described as extremely insanitary, as destitute of furniture, and as tenanted by hungry people, in one case by a woman, who said 'she had not had bite or sup for two days.'"

WORKHOUSE MEDICAL OFFICERS AND THE LUNACY ACTS AMENDMENT ACT.

X. Y. Z. asks: What is the position of a workhouse medical officer under the new Lunacy Act with regard to the certifying of lunatics for asylums?

*** The provisions of the new Lunacy Act as to lunatics in workhouses do not come into force until May 1st next. They are as follows:—

1. Except in the cases mentioned in the Lunacy Act, 1885, and this Act, no person shall be allowed to remain in a workhouse as a lunatic unless the medical officer of the workhouse certifies in writing—*a*, that such person is a lunatic, with the grounds for the opinion; *b*, that he is a proper person to be allowed to remain in a workhouse as a lunatic; *c*, that the accommodation in the workhouse is sufficient for his proper care and treatment, separate from the inmates of the workhouse not lunatics, unless the medical officer certifies that the lunatic's condition is such that it is not necessary for the convenience of the lunatic or of the other inmates that he should be kept separate.

2. A certificate under this section shall be sufficient authority for detaining the lunatic therein named against his will in the workhouse for fourteen days from its date.

3. No lunatic shall be detained against his will or allowed to remain in a workhouse for more than fourteen days from the date of a certificate under this section without an order under the hand of a justice of the peace having jurisdiction in the place where the workhouse is situate.

4. The order in the last preceding sub-section mentioned may be made upon the application of a relieving officer of the union to which the workhouse belongs, supported by a medical certificate under the hand of a medical practitioner, not being an officer of the workhouse, and by the certificate under the hand of the medical officer of the workhouse hereinbefore mentioned.

5. The guardians of the union to which the workhouse belongs shall pay such reasonable remuneration as they think fit to the medical practitioner who, not being an officer of the workhouse, examines a person for the purpose of a certificate under this section.

6. If, in the case of a lunatic being in a workhouse, the medical officer thereof shall not sign such certificate as in this section mentioned, or if at or before the expiration of fourteen days from the date of the certificate an order is not made under the hand of a justice for the detention of the lunatic in the workhouse; or, if after such an order has been made, the lunatic shall cease to be a proper person to be detained in a workhouse the medical officer of the workhouse shall forthwith give notice in writing to a relieving officer of the union to which the workhouse belongs that a pauper in the workhouse

is a lunatic and a proper person to be sent to an asylum, and thereupon the like proceedings shall be taken by the relieving officer and all other persons for the purpose of removing the lunatic to an asylum, and within the same time, as by the Lunatic Asylums Act, 1853, provided in the case of a pauper deemed to be a lunatic and a proper person to be sent to an asylum, and, pending such proceedings, the lunatic may be detained in the workhouse.

7. If the medical officer of a workhouse omits to give such notice to a relieving officer as by the last preceding subsection provided, he shall for each day or part of a day after the first day, and before the notice is given during which the alleged lunatic remains in the workhouse, be liable to a penalty not exceeding ten pounds.

8. Every relieving officer who fails to perform the duty by this section imposed upon him shall for each offence be liable to a penalty not exceeding ten pounds.

9. The guardians of the union, to which a workhouse belongs, may direct that any lunatic detained therein be discharged or removed therefrom.

10. For the purposes of this section, an asylum provided for reception and relief of the insane under the Metropolitan Poor Act, 1867, shall be deemed to be a workhouse, and the managers of such asylum shall exercise the powers and perform the duties by this section conferred and imposed upon the guardians of the union to which a workhouse belongs, and notices to be given to and proceedings to be taken by a relieving officer shall, in the case of a lunatic in any such asylum, be given to and taken by one of the officers of the asylum to be nominated for the purpose by the managers of the asylum.

11. An order under Section 3 of the Lunacy Act, 1885, shall not authorise the detention of a lunatic after the expiration of fourteen days from its date, except under the conditions mentioned in this section.

12. As regards every pauper in a workhouse at the date of the commencement of this Act (May 1st, 1890) as to whom a certificate has been signed under Section 20 of the Lunacy Acts Amendment Act, 1862, no certificate or order of a justice under this section shall be required.

Where a pauper lunatic is discharged from an asylum, hospital, or licensed house, and the medical officer of the asylum, or the medical attendant of the hospital or house, is of opinion that the lunatic has not recovered, and is a proper person to be kept in a workhouse as a lunatic, the medical officer or medical attendant shall certify such opinion, and his certificate shall accompany the notice of discharge, and the lunatic may thereupon be received and detained against his will in a workhouse without further order if the medical officer of the workhouse certifies in writing that the accommodation in the workhouse is sufficient for the lunatic's proper care and treatment, separate from the inmates of the workhouse not lunatics, or that the lunatic's condition is such that it is not necessary for the convenience of the lunatic, or of the other inmates, that he should be kept separate.

VENTILATING SHAFTS.

DOWN DRAUGHT writes: In erecting a ventilating shaft from a public sewer against the gable end and chimneys of a dwelling-house, how many feet above or below the level of the chimney pot ought the shaft to terminate?

*** Ventilating shafts from sewers should, whenever possible, be carried up the sides of houses, so that their ends terminate at a considerable distance from all windows and chimneys. If they must be brought up alongside a chimney stack, it would, in our opinion, be preferable for them to terminate some three feet or more below the chimney pots rather than above, as, although in the latter position the exhaust action would be greater, there would be a tendency on occasions for foul gases to find their way into living rooms. If carried up above the chimney pots, the additional height given to the shafts should be not less than six feet. They must be very securely fixed when no longer supported by brickwork.

EMPLOYERS' LIABILITY ACT.

IN the reply given to a Union Medical Officer of a District, under this heading, in the JOURNAL of September 14th, p. 630, it was stated that five guineas would be a fair charge to make for visiting a case requiring constant attendance for three weeks, at a distance of ten miles. The amount of the fee should have been *fifteen* guineas.

MEDICAL OFFICERS OF HEALTH AND OTHER PRACTITIONERS' PATIENTS.

MEDICAL OFFICER OF HEALTH writes: During the existence of an epidemic is it part of my duty as medical officer of health to personally examine private patients of other medical men stated to me to be suffering from the disease? My board appear to think that I should personally examine every case, private or otherwise, and give my opinion as to the correctness of the diagnosis.

*** It forms no part of the duties of a medical officer of health under a compulsory notification Act to examine patients certified to be suffering from an infectious disease. He could only do so, having due regard to professional etiquette, after obtaining the consent of the medical practitioner in attendance. Where any doubt exists as to the nature of the disease, or as to its being of an infectious character, the attendant medical practitioner should seek a consultation with the medical officer of health.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns, including London, which have an estimated population of 9,555,406 persons, 5,284 births and 3,117 deaths were registered during the week ending Saturday, September 21st. The annual rate of mortality in these towns, which had been 16.2 and 16.7 per 1,000 in the two preceding weeks, further rose to 17.0 during the week under notice. The rates in the several towns ranged from 12.4 in Brighton, 12.7 in Derby, 12.8 in Leicester, and 14 2 in Halifax to 25.3 in Sunderland, 26.9 in Newcastle-on-Tyne, and 27.5 in Preston. In the twenty-seven provincial towns the mean death-rate was 18.5 per 1,000, and exceeded by 3.3 the rate recorded in London, which was only 15.2 per 1,000. The 3,117 deaths registered during the week under notice in the twenty-eight towns included 279 which were referred to diarrhœa, 68 to diphtheria, 58 to scarlet fever, 57 to whooping-cough, 45 to "fever" (principally enteric), 29 to measles, and one to small-pox; in all, 537 deaths resulted from these principal zymotic diseases, against 512 and 529 in the two preceding weeks. These 537 deaths were equal to an annual rate of 2.9 per 1,000; in London the zymotic death-rate was equal to 2.2, while it averaged 3.5 per 1,000 in the twenty-seven provincial towns, and ranged from 1.5 in Birkenhead, and 1.7 in Birmingham and in Leicester to 5.8 in Salford, and in Newcastle-upon-Tyne, 6.1 in Norwich, 7.3 in Plymouth and 9.5 in Preston. Measles caused the highest proportional fatality in Newcastle-upon-Tyne, Halifax, and Preston; scarlet fever in Blackburn and Plymouth; whooping-cough in Bolton and Sunderland; "fever" in Norwich and Preston; and diarrhœa in Hull, Huddersfield, Salford, Newcastle-upon-Tyne, Norwich, and Preston. Of the 68 deaths from diphtheria recorded during the week under notice in the twenty-eight towns, 44 occurred in London, 5 in Salford, 4 in Manchester, 3 in Sheffield, 3 in Preston, 3 in Derby, and 2 in Birmingham. Small-pox caused one death in Sheffield, but not one in any other of the twenty-eight large towns; and no small-pox patients were under treatment in any of the Metropolitan Asylum Hospitals on Saturday, September 21st. These hospitals contained, however, 1,130 scarlet fever patients on the same date, against numbers steadily increasing from 538 to 1,067 in the twelve preceding weeks; 126 cases were admitted during the week against 112 and 188 in the two previous weeks. The death-rate from diseases of the respiratory organs in London was equal to 1.7 per 1,000, and was considerably below the average.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday, September 21st, 800 births and 419 deaths were registered in the eight principal Scotch towns. The annual rate of mortality in these towns, which had been 16.5 and 19.1 per 1,000 in the two preceding weeks, declined again to 16.4 during the week under notice, and was 0.6 per 1,000 below the mean rate during the same period in the twenty-eight large English towns. The lowest rates were recorded in Perth and Leith, and the highest in Paisley and Edinburgh. The 419 deaths registered in these towns during the week included 74 which were referred to the principal zymotic diseases, equal to an annual rate of 2.9 per 1,000, which was equal to the mean zymotic death-rate during the same period in the large English towns. The highest zymotic rates were recorded in Perth and Edinburgh. The 175 deaths registered in Glasgow during the week under notice included 9 from whooping-cough, 7 from diarrhœa, 4 from diphtheria, 3 from measles, 3 from "fever," and 2 from scarlet fever. Five fatal cases of whooping-cough occurred in Edinburgh. The death-rate from diseases of the respiratory organs in these towns was equal to 2.6 per 1,000, against 1.7 in London.

HEALTH OF IRISH TOWNS.

IN the sixteen principal town districts of Ireland the deaths registered during the week ending Saturday, September 21st, were equal to an annual rate of 23.9 per 1,000. The lowest rates were recorded in Lisburn and Waterford, and the highest in Armagh and Drogheda. The death-rate from the principal zymotic diseases averaged 4.1 per 1,000. The 192 deaths registered in Dublin during the week under notice were equal to an annual rate of 28.4 per 1,000 (against 24.4 and 24.5 in the two preceding weeks), the rate for the same period being only 15.2 in London and 17.9 in Edinburgh. These 192 deaths included 31 which resulted from the principal zymotic diseases (equal to an annual rate of 4.6 per 1,000), of which 18 were referred to diarrhœa, 8 to "fever," and 3 to whooping-cough.

MEDICAL NEWS.

PROFESSOR BARDELEBEN has been elected Dean of the Medical Faculty of the University of Berlin for the coming academic year.

IT is proposed by a number of the late Professor Bamberger's pupils to place a portrait of him in the workroom attached to his clinic.

A CHAIR of hygiene and bacteriology is about to be established in the University of Königsberg. Dr. Karl Fränkel, first assistant to Professor R. Koch, of Berlin, will be called to fill it.

BY decree dated July 29th the Portuguese Government is empowered to make contracts for the drainage of Coimbra on the Berlier system or any other which may seem preferable.

IN addition to his other decorations, Professor Billroth has lately received the Cross of a Commander of the Portuguese Order of St. James and the Servian Order of St. Sawa of the first class.

PRESENTATION.—Dr. E. P. Thurstan's intended departure from Southborough for the Canary Islands has been chosen by his many friends as a fitting occasion for presenting him with a cheque of £100 and a letter expressive of the high esteem in which he is personally held and their great regret at his departure from amongst them.

DR. SCHAAFFHAUSEN, Professor of Anthropology, General Physiology and Pathology in the University of Bonn, celebrated the fiftieth anniversary of his obtaining his Doctor's degree on August 31st.

DR. VIAULT, of Bordeaux, has been commissioned to follow out Paul Bert's experimental researches on the influence of elevation on the respiratory function in the mountain table-lands of Peru, Ecuador, and Bolivia.

DR. WIDERHOFER, of Vienna, who has been travelling with the Empress of Austria as her medical attendant, was recently thrown from a mule, and sustained a fracture of the collar-bone, besides severe contusions of the back.

POISONOUS BANK NOTES.—It has been found that Schweinfurth's green has been used in printing the fifty-franc notes of the Bank of Switzerland. Two cases of poisoning have lately occurred which have been traced to this cause. The sufferers were a clerk who moistened his thumb with his lips in counting the notes, and a printer who had to handle them when wet.

MEDICAL VACANCIES.

The following Vacancies are announced:

BALLINROBE UNION.—Medical Officer. Salary, £100 per annum, with £33 6s. 8d. as Consulting Sanitary Officer. Applications to Mr. John Walsh, Clerk of Union. Election on October 19th.

COUNTY WEXFORD INFIRMARY.—Surgeon. Salary, £120 per annum, and house. Election on September 30th.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell, E.—House-Physician. Board and lodging. Applications by October 10th to the Secretary.

FLINTSHIRE DISPENSARY.—House-Surgeon. Salary, £100 per annum, with furnished house, etc. Applications by October 7th to the Secretary, Board Room, Bajillt Street, Holywell.

GENERAL HOSPITAL, Birmingham.—Resident Registrar and Pathologist. Salary, £100 per annum, with board and lodging. Applications by September 28th to the House Governor.

GENERAL HOSPITAL, Birmingham.—Assistant House-Surgeon. Residence, board, etc. Applications by September 28th to the House-Governor.

HOSPITAL FOR CONSUMPTION, Brompton.—House-Physicians. Applications by October 19th to the Secretary.

HOSPITAL FOR DISEASES OF THE THROAT, Golden Square, W.—Resident Medical Officer. Salary, £50 per annum, with board, etc. Applications by September 30th to the Secretary.

JOINT COUNTIES ASYLUM, Carmarthen.—Junior Assistant Medical Officer. Salary, £100 per annum, with board, lodging, etc. Applications by October 10th, to the Medical Superintendent.

LEICESTER INFIRMARY AND FEVER HOUSE.—House-Surgeon. Salary, £120 per annum, with board, lodging, etc. Applications by October 5th to the Secretary.

LONDON FEVER HOSPITAL, Liveroool Road, Islington, N.—Assistant Resident Medical Officer. Salary, £120 per annum. Applications by October 1st addressed to the Secretary.

METROPOLITAN HOSPITAL, Kingsland Road, N.E.—Junior House-Surgeon. Salary, £40 per annum, with board, etc. Applications by September 28th to the Secretary.

MITCHELSTOWN UNION, GALBALLY DISPENSARY.—Medical Officer. Salary, £115 per annum, and fees. Applications to Mr. Patrick Walsh, Honorary Secretary, Killinane. Election on October 2nd.

PLYMOUTH PUBLIC DISPENSARY.—Physician's Assistant. Salary, £60 per annum. Applications by October 8th to the Honorary Secretary.

PLYMOUTH PUBLIC DISPENSARY.—Second Medical Officer for Provident Department. Applications by October 8th to the Honorary Secretary, W. H. Prance, Esq., 7, Athenæum Terrace, Plymouth.

ROYAL LONDON OPHTHALMIC HOSPITAL, Moorfields, E.C. — Junior House-Surgeon. Salary, £50 per annum, with board and apartments. Applications by September 30th to the Secretary.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, King William Street, West Strand.—Surgeon. Applications by October 3rd to the Secretary.

STOKESLEY UNION.—Medical Officer for Workhouse and Stokesley District. Salary, £54 per annum, with extras. Applications by October 19th to T. Sowerby, Esq., Clerk, Stokesley.

UNIVERSITY COLLEGE, Dundee.—Professor of Physiology. Salary, £350 per annum, with two-thirds of fees. Applications by October 15th to Messrs. Shiell and Small, 5, Bank Street, Dundee.

WESTERN GENERAL DISPENSARY, Marylebone Road, N.W.—Honorary Surgeon. Applications by October 7th to the Honorary Secretary.

WESTERN GENERAL DISPENSARY, Marylebone Road, N.W.—Honorary Dental Surgeon. Applications by October 7th to the Honorary Secretary.

MEDICAL APPOINTMENTS.

BROWN, H. H., M.D., B.S.Lond., F.R.C.S.Eng., appointed House-Physician to the Wolverhampton and Staffordshire General Hospital, Wolverhampton, *vice* A. Evans, M.D.

CAMPBELL, A. W., M.B., C.M.Edin., appointed Junior Assistant Medical Officer to the County Asylum, Shrewsbury, *vice* M. P. Ledward, M.R.C.S., L.S.A.

CRISP, J., L.R.C.P.Lond., M.R.C.S.Eng., appointed House-Surgeon and Secretary to the Stamford, Rutland, and General Infirmary.

GOUGH, J. H., M.R.C.S., L.R.C.P., appointed Resident Medical Officer to the Royal Albert Hospital, Devonport, *vice* R. H. Perks, M.D., F.R.C.S.

GUILDING, L.M., M.A., M.B., B.Ch.Oxon., M.R.C.S., appointed Assistant Surgeon to the Royal Berkshire Hospital, Reading.

HUNT, R., M.R.C.S., L.R.C.P.Lond., appointed Honorary Surgeon to the Blackburn and East Lancashire Infirmary, *vice* W. H. Stephenson, M.D., L.R.C.S.Edin., deceased.

JOHNSON, R. S., L.R.C.P., L.R.C.S.Ed., appointed Second Assistant Medical Officer to the St. Marylebone Infirmary, *vice* L. Hickey, M.R.C.S., L.S.A., M.B.Durh., resigned.

KER, Mrs. Alice, M.D., L. and L.M.K.Q.C.P.I., appointed Medical Officer to the Wirral Children's Hospital, *vice* T. A. Palm, M.D., M.B., C.M., resigned.

LACE, F., M.R.C.S. and L.R.C.P., appointed House-Surgeon to the Royal United Hospital, Bath, *vice* H. A. Spencer, M.R.C.S., L.R.C.P., resigned.

MCWHANNELL, L., M.B., C.M., appointed Senior House-Surgeon to the Borough Hospital, Birkenhead, *vice* E. Scott Sugden, M.B., M.R.C.S., resigned.

MILLER, H., M.D., appointed Public Vaccinator to the Birkenhead Union, *vice* P. M. Braidwood, M.D., resigned.

PINKERTON, J., M.D., M.Ch., L.M., appointed Medical Officer to the Wirral Children's Hospital, *vice* C. Knox, L.K.Q.C.P.I., M.R.C.S.Eng., resigned.

RICHARDSON, W. J., M.D., M.Ch., appointed Medical Officer of Health for Ravensthorpe, *vice* Dr. Marsden, resigned.

ROWE, E. L., L.R.C.P., L.R.C.S.Edin., appointed Resident Medical Superintendent to the Ipswich Borough Lunatic Asylum, *vice* B. Chevallier, M.B., M.D.

SIMS, G. S., L.R.C.P.Lond., M.R.C.S., L.S.A., appointed Surgeon to the Derby Borough Police.

WATKINS, Ernest, L.R.C.P., L.R.C.S.Ed., appointed Assistant Medical Officer to the Luton Friendly Societies Medical Institute.

WATSON, W. R. K., M.B., C.M., appointed Resident Clinical Assistant to the City Asylum, Birmingham, *vice* Mr. Ensor, resigned.

WHITELEY, D. L., appointed Honorary Surgeon to the Wallasey Dispensary, *vice* F. H. Potts, resigned.

DIARY FOR NEXT WEEK.

TUESDAY.

SOCIETY FOR THE STUDY OF INEBRIETY, 11, Chandos Street, Cavendish Square, W., 4 P.M.—Mr. H. Ernest Trestrail: Some of the Circumstances which Favour the Development of Inebriety, and how to meet them. The President: Is there an Arsenic Inebriety?

WEDNESDAY.

OBSTETRICAL SOCIETY OF LONDON, 8 P.M.—Specimens will be shown. Dr. Herman: 1. A Contribution to the Anatomy of the Pelvic Floor; 2. On the Changes in the Pelvic Floor which accompany the Slighter Degrees of Prolapse.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the announcement. The first post on Thursday mornings is the latest by which advertisements can be received.

BIRTH.

DAY.—On September 21st, at 4, Upper Surrey Street, Norwich, the wife of Donald D. Day, F.R.C.S., of a son.

MARRIAGES.

EVE—COX.—On September 19th, at St. Mary's, Harrow-on-the-Hill, by the Rev. F. Hayward Joyce, Vicar, and the Rev. T. Smith, Frederick S. Eve, F.R.C.S., of 125, Harley Street, Cavendish Square, to Caroline Ella, only daughter of Herbert E. Cox, of Ashleigh, Harrow. No cards.

HAYWARD—DAVIES.—On September 21st, Charles W. Hayward, M.D.Edin., M.R.C.S., L.R.C.P.Lond., of Liverpool, to Lillie, only daughter of Thomas Davies, Esq., J.P., of Bootle.

HUNT—LILLY.—On September 18th, at St. Mary's Church, Spondon, Derbyshire, by the Rev. P. Lilly, M.A., Vicar of Collaton, South Devon, uncle of the bride, assisted by the Rev. R. Lethbridge Farmer, John Aspinall Hunt, L.R.C.P., M.R.C.S., The Poplars, Ockbrook, Derbyshire, eldest surviving son of Edward Hunt, Bartlewood House, Ockbrook, to Minnie Beatrice, sixth daughter of O. M. Lilly, The Croft, Spondon, Derbyshire. No cards.

MCLEAN—LAWSON.—On September 25th, at All Saints' Church, Fulham, by the Rev. W. Goodwin Kerr, M.A., William W. L. McLean, M.R.C.S.Eng., L.R.C.P.Lond., younger son of J. W. McLean, Esq., of Fulham Park Gardens, S.W., to Minnie, youngest daughter of John Lawson, Esq., of Italian Villa, Hurlingham Lane, S.W.

NEILSON—TULLIS.—On September 19th, at Blackfriars Parish Church, Dennistoun, Glasgow, by the Rev. Thomas Somerville, M.A., assisted by the Rev. Albert Goodrich, D.D., Henry J. Neilson, M.D., Bulwell, Nottingham, to Annie Keil, eldest daughter of John Tullis, Esq., Inchcape, Dennistoun, Glasgow.

PRATT—MOXON.—On September 19th, at St. Giles's Church, Northampton, by the Rev. R. A. White, M.A., W. Sutton Pratt, L.R.C.P.Lond., M.R.C.S., of Weedon, Northants, to Eleanor Mary, second daughter of William Moxon, M.R.C.S., etc., of Derngate, Northampton.

PUDDICOMBE—COLSON.—On September 19th, at the Parish Church, Arundel, Sussex, by the Rev. A. J. Hughes, M.A., Francis Morgan Puddicombe, Surgeon R.N., son of the late Robert Bruce Puddicombe, Esq., R.M.L.I., to Florence Bessie Tricket, second daughter of Charles Colson, Esq., M.I.C.E., of Clifton House, Sliema, Malta.

THOMAS—EYRE.—On September 21st, at St. Matthew's, Gosport, by the Hon. and Rev. Canon Brodrick, Rector of Alverstoke, assisted by the Rev. Charles Tanner, Vicar, William Thomas, M.R.C.S.Eng., L.R.C.P.Ed., Rhyl, to Elizabeth Mary, the only daughter of William Scott Eyre, Royal Clarence Yard, Gosport.

DEATH.

ACLAND.—On Tuesday, September 17th, at Roseneath, Eastbourne, Aimée Sarah Agnes Dyke, the beloved child of Theodore and Caroline Acland, aged 4 months.

OPERATION DAYS AT THE LONDON HOSPITALS.

MONDAY.....10 A.M.: Royal London Ophthalmic.—10.30 A.M.: Royal Free (Ophthalmic Department).—1.30 P.M.: Guy's (Ophthalmic Department); Royal Westminster Ophthalmic.—2 P.M.: Central London Ophthalmic; Hospital for Women; Royal Orthopædic; St. Mark's; London.—2.30 P.M.: Chelsea Hospital for Women.

TUESDAY.....10 A.M.: Royal London Ophthalmic.—1.30 P.M.: Guy's; Royal Westminster Ophthalmic; St. Bartholomew's (Ophthalmic Department); St. Mary's.—2 P.M.: Cancer Hospital, Brompton; Central London Ophthalmic; London; Westminster.—2.30 P.M.: St. Mark's; West London.—4 P.M.: St. Thomas's (Ophthalmic Department).

WEDNESDAY....10 A.M.: National Orthopædic; Royal London Ophthalmic.—11 A.M.: St. Mary's (Orthopædic).—1 P.M.: Middlesex.—1.30 P.M.: Royal Westminster Ophthalmic; St. Bartholomew's; St. Thomas's.—2 P.M.: Central London Ophthalmic; Great Northern Central; London; Royal Free; University College; Westminster.—2.30 P.M.: St. Peter's; Samaritan Free Hospital for Women and Children.—3 to 4 P.M.: King's College.

THURSDAY.....10 A.M.: Royal London Ophthalmic.—1 P.M.: St. George's.—1.30 P.M.: St. Bartholomew's (Ophthalmic Department); Guy's (Ophthalmic Department); Royal Westminster Ophthalmic.—2 P.M.: Central London Ophthalmic; Charing Cross; Hospital for Diseases of the Throat; Hospital for Women; London; University.—2.30 P.M.: Chelsea Hospital for Women; North-West London.

FRIDAY .....9 A.M.: Metropolitan; St. Mary's (Ophthalmic Department).—10 A.M.: Royal London Ophthalmic.—10.30 A.M.: Royal Free (Ophthalmic Department).—1.15 P.M.: St. George's (Ophthalmic Department).—1.30 P.M.: Guy's; Royal Westminster Ophthalmic.—2 P.M.: Central London Ophthalmic; East London Hospital for Children; King's College; London; St. Thomas's (Ophthalmic Department).—2.30 P.M.: West London.

SATURDAY.....9 A.M.: Royal Free (Department for Diseases of Women).—10 A.M.: Royal London Ophthalmic.—1 P.M.: King's College.—1.30 P.M.: Royal Westminster Ophthalmic; St. Bartholomew's; St. Thomas's.—2 P.M.: Cancer Hospital, Brompton; Central London Ophthalmic; Charing Cross; London; Middlesex; Royal Free; University.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 1.30; Skin, M. 1.30; Dental, M. W. F., 9.

CHELSEA HOSPITAL FOR WOMEN.—M. Tu. W. and F., 1.30.

GREAT NORTHERN CENTRAL.—Medical and Surgical, M. Tu. Th. F., 2.30; Obstetric, W., 2.30; Eye, Tu. F., 10; Ear, M. F., 2.30; Diseases of the Skin, W., 2.30; Diseases of the Throat, Th., 2.30; Dental Cases, W., 2.

GUY'S.—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F. 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu. 1; Skin, Tu., 1; Dental, Tu. Th. F., 1.30.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th. S., 1.30; o.p., W. F., 1.30; Eye, M. Th., 1.30; Ophthalmic Department, W., 2; Ear, Th., 2; Skin, F., 1.30; Throat, F., 1.30; Dental, M. Th., 9.30.

LONDON.—Medical, daily, exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p. W. S., 1.30; Eye, Tu. S., 9; Ear, S., 9.30; Skin, Th., 9; Dental, Tu..9.

MIDDLESEX.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 9.30; o.p., W. 1.30; Eye, W. S., 9; Ear and Throat, Tu., 9; Skin, Tu., 4, Th. 9.30; Dental, M. W. F., 9.30.

NATIONAL ORTHOPÆDIC.—M. Tu. Th. F., 2.

NORTH-WEST LONDON.—Medical and Surgical, daily, 2; Obstetric, W., 2; Eye, W., 9; Skin, Tu., 2; Dental, F. 9.

ROYAL ORTHOPÆDIC.—Daily, 1.

ROYAL FREE.—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Dental, Th. 9.

ST. BARTHOLOMEW'S.—Medical and Surgical daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, W. Th. S., 2.30; Ear, Tu. F., 2; Skin, F., 1.30; Larynx, F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9.

ST. GEORGE'S.—Medical and Surgical, M. T. F. S., 12; Obstetric, Th. 2; o.p., Eye, W. S. 2; Ear, Tu., 2; Skin, W., 2; Throat, Th., 2; Orthopædic, W., 2; Dental, Tu., S., 9.

ST. MARK'S HOSPITAL.—Fistula and Diseases of Rectum, males, W., 8.45; females, Th., 8.45.

ST. MARY'S.—Medical and Surgical, daily, 1.45, o.p., 1.30; Obstetric, Tu. F., 1.45; Eye, Tu. F. S., 9; Ear, M. Th., 3; Orthopædic, W., 10; Throat, Tu. F., 1.30; Skin, M. Th., 9.30; Electro-therapeutics, Tu. F., 2; Dental, W. S., 9.30; Consultations, M., 2.30; Operations, Tu., 1.30; Ophthalmic Operations, F., 9.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, Tu. F., 2; o.p., W., 1.30; Eye, M. Tu. W. Th., F. 1.30; o.p., daily, except Sat., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Tu. F., 1.30; Children, S., 1.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1.30; Obstetrics, M. Th., 1.30; Tu., W. F., 2; Eye, Tu. F., 2; Ear, M. F., 9; Skin, W., 1.45, S., 9.15; Throat, Th., 1.30; Dental, W., 9.30.

WESTMINSTER.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1; Eye, M. Th., 2.30; Ear, M., 9; Skin, W., 1; Dental, W. S., 9.15.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the office of the JOURNAL, and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

QUERIES.

HERPES ZOSTER.

"SHINGLES" would be obliged to any reader who could suggest a good local application in herpes zoster. He has found the routine practice of dusting with flour most unsatisfactory.

QUININE IN PREGNANCY.

A MEMBER writes: I am at present giving a young married lady, three months pregnant, one-grain doses of quinine twice daily for morning sickness. She has had a previous miscarriage, and I am most anxious to prevent another. On reading Mr. E. Gaynes Doyle's letter of September 21st regarding the action of quinine on the pregnant uterus, I doubt if I should continue this treatment. Mr. Doyle mentions five-grain doses. Would one-grain doses be dangerous, or should it be stopped altogether?

ANSWERS.

DURATION OF CONSTIPATION.

H. M. R. writes: What is the longest time that complete constipation has been known to last without a fatal issue? A friend told me that a patient had gone forty-three days without defæcating, but as the woman had hysteria the case was open to doubt.

*** We find in *Neale's Digest* (875, 3) a case referred to of two years' duration (*Ranking's Abstracts*, i, 1860, p. 275), with the suggestive addition, "no fæces *post mortem*." Dr. Lauder Brunton in the JOURNAL, February 14th, 1885, p. 316, speaks of a case in which the bowels were opened "regularly" once in three months. Perhaps some of our correspondents may have additional facts bearing on the subject to communicate.

VARNISHING SPHYGMOGRAPHIC TRACINGS.

A. G. B.—The varnish usually used for rendering sphygmographic and similar tracings permanent is either friar's balsam or white hard varnish dissolved in spirit. Either should be allowed to run gently over the tracing, which should then be drained from excess of varnish. When dry the tracing is permanent.

FACTORY SURGEONS.

A CORRESPONDENT writes: Is only one factory surgeon appointed to a district?

*** Only one factory surgeon is appointed to a district—using this term as applied officially to an area recognised by the Home Office as a district. A district may be a single town or a large country area, or a portion of a town if it be a manufacturing one. Some large towns are divided into several districts, each having its own certifying surgeon.

SKIM AND SEPARATED MILK.

NEMO.—Skim milk is merely milk from which a certain proportion of the milk fat has been removed. The term has originated from the old method of obtaining cream by "skimming" it from the surface of milk which had been allowed to stand for a certain time. It is obvious that the amount of fat left in a milk by the application of such a process must depend upon a variety of circumstances, and accordingly the percentage of fat found in "skim" milk varies considerably. In large establishments the separation of cream from milk is now carried out by the use of centrifugal machines called "separators," and milk from which the fat has been removed in this way is called "separated" milk. A far more complete separation of fat is effected by the use of these machines than by any other method, it being possible to reduce the amount of milk fat below one-tenth per cent. on the milk. Both "skim" milk and "separated" milk are therefore simply milk from which a proportion of fat more or less great has been removed. The question of nutritive value evidently depends upon the value that is to be attached to cow's milk as a food when it contains its normal proportion of fat and when it has been partially or almost wholly deprived of this constituent. The fat is regarded as one of the most important constituents of milk, and its removal of course lowers the nutritive value of the food, but this must not be under-

stood to mean that the "skimmed" or "separated" milk is of no value for feeding purposes.

NOTES, LETTERS, ETC.

Medical Civil Servants and the Pensions Bill.

ONE OF THEM writes: Allow me to add a few words to what has already been said by you on the Civil Service Superannuation Bill, which I am afraid is only "scotched, not killed." As a prospective measure it is calculated to injure the service, the "abolition of office" clauses so tending to affect security of tenure, that men would hesitate to enter a service where permanency of employment would no longer be ensured as an equivalent for higher remuneration. The enforced contribution to a superannuation fund is synonymous with reduction of pay, and young men of the future will be wise enough to discriminate between real and apparent income. It is, however, as possibly retrospective in action, that we in the Civil Service view the Bill with alarm. No doubt, as Mr. Goschen affirms, there is no vested interest in abolition of office, but there decidedly is in tenure of office. The civil servant takes up his appointment on the understanding that so long as he performs his duties efficiently he is assured of permanent employment, and, therefore, unless it were possible to give him back the years of his life, and replace him in the position he was taken from, he has a vested right in permanency of office; or, if for any reason outside himself, his services should be no longer needed, to compensation.

The enforced contribution to a superannuation fund, which, as a prospective measure, would be merely a roundabout way of reducing the scale of pay, would retrospectively be plain, unvarnished robbery.

Two other measures—the substitution of five for three years in calculating the average income on which to compute the retired pay, and the withdrawal of the additional terms to actual service in the case of professional men, call for unqualified condemnation. The necessarily late entrance into the service of professional men, together with the proposed alteration of the term of years on which the average pay would be calculated, would so affect the pension, that it would no longer be a suitable provision for a man when his working days were past, for to earn the full retiring pay (not a superfluous income to the majority of civil servants) entails a servitude of forty years, to obtain which would be practically impossible to professional men without the added years of service, and to obtain it, computed on the maximum pay, would be quite exceptional were five years' average to be substituted for three. To make this Bill retrospective would be simply a breach of public faith. If the public dislike the idea of the non-effective pay involved in the few additional years to professional service, there are plenty of honest ways of obviating it. One evident method would be to calculate the entrance pay of the professional servant on the presumption that he had already served the number of years between the actual date of his appointment and that at which he might have entered as a non-professional. If instead of trying to gain popularity by an endeavour to injure the prospects of those who have served their country faithfully the promoters of the Bill had brought forward a measure for pensioning the widows and orphans of those whose meagre allowance prevented them doing so themselves, it would be more in accordance with abstract justice, if not with political expediency.

Quinine in Pregnancy.

DR. LEONARD G. PETERS (Salford) writes: I beg to submit the following in reply to Dr. E. A. Gaynes Doyle's courteous criticism on my notes on the effects of quinine in pregnancy, if you think it worth inserting.

1. My notes referred especially to neuralgia and vomiting occurring during pregnancy; and I believe my observations, together with the similar effects observed by others, of drugs which relieve neuralgias elsewhere, also in many cases relieving the vomiting of pregnancy, tends to confirm the belief that a relation exists between neuralgia of the uterine nerves and the vomiting of pregnancy.

2. My opinion is that quinine restores a normal tone to the muscular fibres of the uterus, as it does to similar structures elsewhere.

3. Dr. Braxton Hicks has called attention[1] to the normal alternate contraction and relaxation of the uterus during pregnancy; may not this be what Dr. Doyle has observed in some of his cases in which expulsion has not taken place, when he says he has felt the uterus contract after giving quinine? Quinine may, and I believe does, cause this normal condition in cases where, from altered uterine tone, it is not marked.

4. Fevers of all kinds are admitted to be exciting causes of abortion, and especially the severer types; also, I believe, any rapid changes of temperature.

5. In my experience abortion occurs most frequently in the early stage of eruptive fevers and in the later stage of non-eruptive fevers, or at the commencement of convalescence; this may or may not be a general rule.

6. In the case of remittent or other fevers quinine may possibly be the indirect cause of abortion by bringing about an abatement of the fever, and so introducing a stage during which, in my experience, abortion is very liable to occur. In typhoid I have seen a patient pass through the severer stages, but as soon as lysis has set in premature labour followed.

The Conjoint Board.

TAUNTON writes: I wonder if there are many men the victims, like myself, of the errors and arbitrary decisions of the Conjoint Board?

In 1887 I requested the secretary to forward to me a schedule to be filled up prior to examination, informing him of my registration as a medical student in 1883, before the institution of the conjoint scheme. This he did; and in a weak moment I filled in the required details, on the understanding that I was not prejudicing my cause thereby. Shortly afterwards, having passed the examination at the Apothecaries' Hall, and the surgical portion of the conjoint examination, I applied for my diploma of M.R.C.S., and was met, to my astonishment, by a pointblank refusal, on the score of my not having passed the medicine and midwifery.

Situated as I am, a country practitioner, without pathological specimens and hospital work at my command, it is doubtful if the Conjoint Board ever will be satisfied. Meanwhile I am made to suffer in many ways for the original error of their clerk, and their more recent refusal to rectify the mistake. Perhaps some one could give me the benefit of his experience under the same trying circumstances.

[1] *Obst. Trans.*, vol. xiii, quoted by Roberts.

Medical Practice in Assam.

ONCE AN ASSOCIATION SLAVE writes: I think it only right that young practitioners who fancy they will make money and have an easy life by coming out to Assam as medical officers to "Associations" should have a little advice on the subject from one who knows. In the first place, no fortune is to be made, and our young doctor will find out very soon to his cost that all is not gold that glitters. He will hear about the appointment of a medical officer to an "Association," pay so much, horse allowance so much, servant's allowance so much; this looks very good. Then the work—medical charge of so many gardens within a radius of so many miles, and each garden has a native doctor living in the factory. This seems all very bright; he counts how much he can make, or rather save, per annum. Then he hears there is lots of society, so many married ladies; this he at once notices, as Indian accouchement fees are high, 250 rupees. Bungalow with so many rooms rent free, or for a small nominal rent. Lots of shooting, tennis, cricket, polo, volunteering, etc. Well, I must say this all looks simply beautiful while one is in England. Now for the reality.

On arriving in Calcutta he may, but in all probability will not, see his agreement; on arriving in Assam he gets a view of it and signs for a term of three years or four years. When he gets settled to work his first troubles begin. He has to buy horses; this he does, but then finds that syces, or grooms and grasscutters, are next to impossible to get, also that various other servants without whom he cannot get on are equally hard to find. The gardens may give him the loan of a coolie or two; these are always weedy ones, not able to do half work, yet the poor doctor will have to pay them 3 or 4 rupees more than the various men connected with the gardens ever pay. The servants' allowance will pay about one-fifth part of what they actually cost him. His horse allowance he will find not sufficient, as before he has been many weeks in the country the so many gardens to be looked after only means "head factories," and he will have half as many again or more out gardens to look after, and these will be at various distances far outside his given radius, but he cannot complain, or if he does he will be told "It is your work, Sir!" Then comes another point. After attending one or two midwifery cases (European ladies) he naturally asks the honorary secretary of the Association what fee he is to ask for, and is met with the same reply from the honorary secretary as he had before: "No fee. Why, this is your work! We give you a ready-made practice; you had not to buy; what next will you want?" This is exceedingly hard, as the doctor must keep on his daily work of visiting the various other gardens, besides looking after his lady patient, or the managers on the neglected garden or gardens will report him to the honorary secretary, who will lay the matter before the committee, and then when his reply (the doctor's) is sent in, all the correspondence is sent round the district for the perusal of the various members, no matter how delicate or private a matter it may be. The doctor is in medical charge of all the gardens in the Association, but he has the following masters: the honorary secretary, committee, and each and all of the managers on the gardens. How he is to pull with all is the question, and very easily answered; it will be impossible. Added to all this, he must act as midwife and nurse, and do their work in all cases, or nearly all, of accouchement, and this in the tropics is not by any means agreeable or conducive to his being able to work hard next day. The native doctors he will have will, with some very few exceptions, be simply boys or young men, who will not or cannot carry out his instructions. In his work the doctor will find dysentery, cholera, etc.; he will advise change of water, wells, lines, etc.; he is told it would be far too expensive; then if he loses a few cases he gets an official asking "the cause of this death-rate," though the manager knows quite well. He will have annoyances like this: Some friend (?)—'and the doctor always will have one or more'—who will tell him, "Oh, Mr. ——, as I know, does not love you, but don't vex him; he says 'you are very apathetic,' now try and please him." This, more than probably, from the honorary secretary, and you knowing you are and have been working most carefully for said Mr. ——, rather hurts you, and you let him see it; that is all your dear friend (?) wanted, as it would never do to let the doctor be a favourite with all. Then, again, after your three years are up, and you think, "I will stay on, they will certainly give me some increase," the honorary secretary replies "No," consequently you do not stop on. Exactly the end worked for; another man at low pay required.

My advice is, do not come to "Assam Medical Associations." If you do, have your agreement explained to you by a good lawyer, as of course in it you bind yourself in 1,000 Rs., etc., and a young doctor knows very little of law. Let him find out the ordinary cost of horses in Calcutta and their freight to his destination, make a regular arrangement that he be supplied with four good servants, namely, two syces, or grooms, or even grasscutters, one panewalla, or water-carrier, and above all one mehter or sweeper, as without him your life will be simply miserable. All above applies only to the Associations. Where the doctor is medical officer to any good and large company he is invariably treated as he should be, and has nothing to complain about.

Coroners and Medical Witnesses.

DR. SOLOMON C. SMITH (Halifax) writes: A paragraph in the JOURNAL of August 3rd, page 289, on "Coroners and Medical Witnesses" is so *à propos* to my question the week before as to the right of medical men to refuse a certificate in cases of doubt, that I venture to draw attention to it. As matters stand at present, it seems to me that the doctor is placed on the horns of a dilemma; if he gives a certificate in a case in which there is afterwards shown to have been foul play he will certainly be censured by the coroner, and probably by the judge, notwithstanding that the Act binds him under a penalty to give a certificate in every case which he has attended during the last illness; if, on the contrary, he exercises his discretion, and refuses a certificate in a case in which he has a doubt, but in which the jury ultimately return a verdict of death by natural causes, he runs great risk of being treated like the medical man referred to in your paragraph, who evidently only escaped censure by being absent, the foreman stating as the feeling of the jury: "We desire to express our regret that these poor people should have been put to the pain and exposure of a public inquiry," that is, by the doctor refusing a certificate and so necessitating an inquest.

No doubt the Act, badly drafted as it is, must be put up with until such time as the necessary reforms in the coroner's court in its relations to the medical profession and the registrars are undertaken, but in the meantime it would be an immense advantage if the Registrar-General could be induced to have some words introduced into the certificate-form which would make it plain whether the doctor has, or has not, the power to withhold it.

The Sale of Cocaine.

Mr. G. Herbert Douthwaite, M.R.C.S.Eng., L.R.C.P.& S.Edin. (Sunderland), writes: A few days ago I was hurriedly called to see a woman, whom I found to be in an apparently dangerous condition. Her whole body seemed to be convulsed, she was unconscious, the pupils being greatly dilated, and her eyes possessed for the time being a peculiar stare. On her regaining consciousness I asked the patient (who had at one time acted as hospital nurse) several questions, and I ascertained that she had taken about 16 grains of hydrochlorate of cocaine. She had, I learnt, been in the habit of injecting small quantities of this substance into her system in order to relieve the pain of sciatica. On ascertaining at what shop she had obtained the drug, I went and saw the proprietor. He was an unqualified druggist and a patent medicine vendor. On my mentioning the matter to him he bluntly informed me that cocaine was not a scheduled poison, and therefore he should continue to sell it as freely as before. Of course, that being the case, I felt helpless to interfere. Could not something be done at least to regulate the sale of this dangerous drug, especially by unqualified men?

Unqualified Assistants.

Sine Diploma writes: "A Member," writing in the Journal of September 14th concerning unqualified assistants, brings four distinct charges against them, namely, that they are frequently "drunken" and "dishonest," that they are "incapable of diagnosis," and "incompetent to prescribe!" I suppose I must here add "frequently." He also hashes up an old tale, which every medical man must remember having heard in his student days; the gentleman, however, to give it piquancy relates it as a fact—an American one, we conclude. Of course, any remarks I may make in refutation only apply to ourselves *versus* the "newly fledged" *diplomé*. If he be a medical man of some years' standing, the fact of his wishing to take a qualified assistantship speaks for itself—"drunken, dishonest, or incapable." I think a consensus of opinion, taken from medical men who have assistants, would be that so far as "drunkenness and dishonesty" are concerned, "'tis six of one and half-a-dozen of the other;" and the opinion of the public at large that "drunkenness" is not "a complaint" confined to the assistant only. As to the capabilities of the two—fledgling and unqualified—in "diagnosis and prescribing," the "*sine diploma*" man, who at any rate must have had practical experience as apprentice or pupil, is the better of the two; in this will be found the reason why we are still marketable goods, and obtain, in some cases, almost equivalent salaries.

Granted the originality of "A Member's" piquant dish, during a few years' experience as unqualified assistant I have myself seen the theoretically qualified man in a quandary. One, a case of hour-glass contraction of uterus, which was not diagnosed, and when explained I was requested to undertake myself. Another, and this the case of a self-reliant individual, inguinal hernia, patient, a boy, aged 15 years, almost moribund from extreme exhaustion through excessive vomiting. The lad had been treated for two days for the sickness only, the real cause never being ascertained, and ultimately "given up." I reduced the rupture without much difficulty, and the patient soon rallied.

Yet one other. I went out one night with a M.R.C.S., L.S.A., to see an old woman who had been taken suddenly ill—a fit, they thought. On entering the house our clever apothecary, taking a seat by the patient with great professional air, gently feeling the pulse in the meanwhile, said:—"Awh! has the patient ever been taken like this before?" One of the many neighbours standing round, some even grinning at such a time as this, replied, "Oh, no, sir, she be dead, and has been this 'alf hour." Tableau!

In conclusion, I can only add that were it not that one cannot and the other can sign a death certificate, we should command as large a salary as the newly qualified man, and be certainly preferred by the patients. "A Member," I think, forgets when he brings charges that many of that class he despises are not only men that read but also think, and are as much *sans peur et sans reproche*, as their more fortunate "certified to kill" brethren, only, unluckily, they are also men *sans argent*, oftentimes the only cause of their being *sans diplôme*.

Duke's Rapid Uterine Dilator.

Dr. Alexander Duke (Dublin) writes: In justice to myself will you kindly allow me to state that several of the rapid uterine dilators bearing my name and now on sale are not faithful copies of my pattern? They are not reliable, cannot give satisfaction, and would bring discredit on a useful instrument. The original makers are Messrs. Arnold and Sons, Smithfield; and any of the dilators purporting to be the same (that I have seen) were utterly worthless imitations, as they could not bear the necessary strain.

To Correspondents.

Our correspondents are reminded that prolixity is a great bar to publication, and, with the constant pressure upon every department of the Journal, brevity of style and conciseness of statement greatly facilitate early insertion We are compelled to return and hold over a great number of communications, chiefly by reason of their unnecessary length.

COMMUNICATIONS, LETTERS, etc., have been received from:

Dr. Norman Moore, London; Mr. W. Cocking, Sheffield; Dr. R. Maguire, London; Dr. H. Green, Plymouth; Rev. F. Lawrence, York; Dr. A. Ruffer, London; Mr. T. H. Woolley, Birmingham; Mr. H. V. Pearson, Tunbridge Wells; Brigade-Surgeon P. Cullen, M.D., Wokingham; Mr. H. B. Robinson, London; Dr. W. J. Richardson, Ravensthorpe; Mr. W. Allsworth, London; Dr. R. J. Reece, London; Mr. W. Scott, Glasgow; Mr. W. Kirkland, Derby; Mr. N. Davey, Abergavenny; Mr. R. Ruttle, Burnley; Mr. R. Jones, Liverpool; Dr. Norman Kerr, London; Dr. M. Ryan, Dublin; Miss A. McConnell, London; Dr. W. P. Fox, London; Mr. G. R. Leeper, Ederney; Dr. T. M. Watt, Hovingham; Mr. F. H. Moore, Ely; Mr. J. E. Blomfield, Sevenoaks; L. Hickey, M.B., London; Mr. W. McLean, London; Mr. F. R. Carter, Stratford-on-Avon; Dr. John Reid, Sydney; Professor C. J. Wright, Leeds; Dr. A. H. Jones, Northampton; Dr. J. Allan, Leeds; Dr. J. G. Carstairs, Sydney; Mr. Welsh, Stoke Bishop; Dr. C. A. MacMunn, Wolverhampton; Mr. C. W. Hayward, Liverpool; Messrs. Romeike and Curtice, London; Mr. F. M. Puddimore, Teignmouth; Dr. J. M. Scott, Denny; Mr. G. W. Harris, Whitehaven; Mr. A. C. Morton, North Walsham; The Secretary of the Sanitary Institute, London; Dr. R. Harvey, London; Mr. C. B. Lockwood, London; Dr. R. A. Packwood, Somerset Bridge, Bermuda; The Secretary of University College, London; Dr. T. Scattergood, Leeds; Dr. Bertram C. A. Windle, Birmingham; Mr. G. Rendle, London; Dr. T. M. Madden, Dublin; Dr. Halliburton, London; Mr. A. Northcott, London; Dr. C. Theodore Williams, London; Dr. Leslie Phillips, Birmingham; Dr. G. H. Savage, London; Dr. A. J. Beehag, Sydney, N.S.W.; Dr. Rentoul, Liverpool; Mr. Clark Bell, New York; Dr. T. Churton, Leeds; Mr. A. G. R. Foulerton, Chatham; Dr. Arlidge, Stoke-on-Trent; Dr. O. Wood, London; Dr. Louis Parkes, London; Mr. G. F. Chadwick, Codford St. Mary; Dr. J. A. Mackenzie, London; Mr. T. Holmes, London; Mr. A. Barron, Liverpool; B. Lane, M.B., Limavady; Mr. H. Rainbird, Saxilby; Surgeon-Major D. C. G. Bourns, Shoeburyness; Mr. G. Davison, London; M.D.; Mr. M. H Feeny, Derby; Dr. D. H. Sprague, London; Mr. N. E. Davies, Sherborne; Dr. F. J. B. Quinlan, Dublin; Dr. Andrew Smart, Edinburgh; James Simpson, M.B., Edinburgh; Mr. C. A. C. Smelt, Marlborough; Mr. H. E. Allen, London; Mr. T. Lucas, Barwell; Mr. G. Goodman, Birmingham; Dr. Purslow, Birmingham; Mr. Mayo Robson, Leeds; Mr. H. N. Barron, Rugby; Dr. J. Williams, Brewood; Mr. J. Crisp, Stamford; Mr. G. S. Sims, Derby; Mr. W. Thomas, Brighton; Ambulance; Dr. C. H. Allfrey, London; Dr. T. C. Allbutt, Leeds; Mr. A. G. Osborn, Dover; Dr. R. Wade Savage, London; Medical Staff; Mr. A. C. Dixey, London; Medicus; Messrs. Dulau and Co., London; Mr. Cassal, London; Mr. C. R. Straton, Wilton; Mr. C. H. Bishop, London; Mr. W. R. Edmond, Chew Magna; Mr. H. B. Hewetson, Leeds; S. A. Jolly, M.B., London; Dr. A. W. Head, London; Dr. Balding, Royston; Mr. J. Lowe, Brighton; Mr. J. A. Mackenzie, London; Mr. C. R. O. Garrard, Pendleton; The Editor of the *Charity Record*, London; Mr. L. G. Peters, Salford; Dr. T. O. Dudfield, Callow End; Mr. J. Bland Sutton, London; Professor W. T. Gairdner, Glasgow; Dr. P. T. Duncan, Croydon; The Dean of the London School of Medicine for Women; Dr. G. Herschell, London; etc.

BOOKS, etc., RECEIVED.

An Elementary Treatise on Human Anatomy. By Joseph Leidy, M.D., LL.D Second Edition, rewritten. London: Smith, Elder, and Co. 1889.

On the Causes, Treatment, and Cure of Stammering. By A. G. Bernard M.R.C.S., L.R.C.P. London: J. and A. Churchill.

On the Principles and Exact Conditions to be Observed in the Artificial Feeding of Infants. By W. B. Cheadle, M.A., M.D.Cantab., F.R.C.P. London: Smith, Elder, and Co. 1889.

A Textbook of Physiology. By M. Foster, M.A., M.D., LL.D., F.R.S. With Illustrations. Fifth Edition, largely revised. Part II, comprising Book II. London: Macmillan and Co. 1889.

Handbook of Practical Botany. By E. Strasburger. Edited from the German by W. Hillhouse, M.A., F.L.S. London: Swan Sonnenschein and Co. 1889.

The Various Manifestations of the Rheumatic State. Lectures delivered before the Harveian Society of London. By W. B. Cheadle, M.D. London: Smith, Elder, and Co. 1889.

On Static Electricity in Medicine and Apostoli's Methods in the Treatment of Uterine and Peri-uterine Disease. By Henry McClure, M.D. London: H. Renshaw. 1889.

An Epitome of the Synthetic Philosophy. By F. Howard Collins. With a Preface by Herbert Spencer. London: Williams and Norgate. 1889.

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INTRODUCTORY ADDRESS:
A PLEA FOR THOROUGHNESS.

Delivered at the Opening of the Medical Department, Yorkshire College, Leeds.

By WILLIAM T. GAIRDNER, M.D., LL.D.,

Professor of Medicine in the University of Glasgow; Physician in Ordinary to the Queen in Scotland.

Some few weeks ago I read in a newspaper somewhere a paragraph which, whether written in jest or in earnest, I thought at the time might be made the text for some remarks more or less suitable to the present occasion. You will, perhaps, laugh at me, or suppose that I am laughing at you; but, at all events, I will pray you to laugh *with* me when, in the presence of this august assembly, I venture to read the said paragraph. Here it is:—

"*An Automatic Doctor.*—A Dutch apothecary has just taken out a patent for a novel automatic machine in the shape of a wooden figure formed like a man. The figure will be covered with compartments labelled with the names of various ailments. The sufferer has only to place a piece of money in the compartment upon which the name of his illness is inscribed, and forthwith will appear a pill or powder suited to his case. The machine is constructed upon the same principle as the ordinary automatic chocolate and bonbon machine. A Dutch paper predicts a brilliant future for this very original doctor."

Now I am not going to ask such of the young men now before me as are applying themselves to medical study, Is this your ideal? That would be not only too absurd, but even (but for its absurdity) insulting to an audience whom I am desirous above all things to attract and to please; but I am entitled at least to ask, Why is this *not* an ideal form of medical advice and prescription for a considerable proportion of those who may require such aid in sickness? In the attempt to answer this question I believe we shall find a few nuts to crack which may occupy us profitably for some portion, at least, of the time usually devoted to an address such as this. Think, in the first instance, of the immense comfort and convenience of the proposed arrangement. Why, you might have these machines at almost every railway station, always ready for use just as you pop your penny into the slot when in quest of a cheroot, or of the wax vestas to light the same. Only, let us hope, for the sake of the poor doctors who are not automatic, that the "piece of money" to be automatically administered—the fee, in fact—would never degenerate lower than half-a-crown. With this proviso, one seems to see how the thing might work tolerably well in some cases. There are a good many of the "thousand natural shocks that flesh is heir to"—perhaps even a majority of them—very easy to name, and very well defined, indeed, to the sufferer. And some of these are, moreover, very easily put a stop to, if you take them at the very beginning. *Principiis obsta* (here you have it all made clear to the most ordinary capacity) no trouble, no nervousness, no hesitation nor procrastination, no embarrassing or uneasy confidences with a man of skill; only half-a-crown in the slot, and there you are—liver, stomach, heart, lung, brain, biliousness, colic, blood-spittings, rheumatism, neuralgia—all under control, without a moment's delay, and by the most approved remedies in each case, at every railway station and in every public place. Surely there is something to be said, *primâ facie*, on behalf of such an arrangement as this.

I am pleading, you observe, the case of the "automatic doctor" as against the living flesh-and-blood doctor, in these words; and some of you, who are readers of Carlyle, may be reminded *(longo intervallo)* of the severe, almost savage, irony (worthy of Dean Swift) of his proposal to substitute "cast-metal parsons" for our spiritual guides and instructors. In both cases the suggestion proceeds upon the lines of economy and convenience; and, further, on the assumption that the automatic is nearly if not quite as good, for certain purposes, as the living article. But it might further be maintained, in the case of the "automatic doctor," that it is by no means a necessary part of the case that the machine-made should entirely supersede, or even replace, the living doctor of medicine. If some more or less fastidious persons object to be prescribed for anonymously, why should there not be an acknowledged, even a distinguished, living authority behind the dummy, or even more than one? Fancy a well-organised group of "automatic doctors," perhaps with some distinctive uniform, literally doing the work of Sir William Jenner or Sir Andrew Clark, so far at least as prescriptions go, in every railway station in England, by carrying the most famous and successful of their acknowledged recipes, ready made up, in the most economical way possible, to almost every sick person who can define his own ills to himself sufficiently to profit by their skill thus imparted. I am assuming, of course, that there will be a copyright in the recipes thus used, and that the law will protect the authors of them from piracy, so that an "automatic doctor," who may represent a great physician by using his recipes, shall do so only by previous arrangement with him. Can there be a doubt, do you think, that very considerable professional incomes might be made in this way, and that hundreds—nay, thousands—of comparatively poor persons would eagerly avail themselves of the help that could thus be had at every man's door, without a visit to London, or from London, and a correspondingly heavy professional honorarium?

You will allow that I have argued the case of the dummy or automatic doctor at least as well as the newspaper from which I derived my information; and indeed, so as to present it with every possible advantage, and in the most really professional form attainable, or perhaps imaginable.

I will now proceed to inquire, a little more seriously, what it is that hinders a manner of treating disease like this from being habitually adopted, or, at least, admitted frankly as in accordance with an enlightened medical opinion; for we may take it as certain that the "automatic doctor," carrying the authority of Sir William Jenner or Sir Andrew Clark, is just as remote a contingency as would be Carlyle's "cast-metal parson" doing the work of either Canon Liddon or Mr. C. H. Spurgeon. Why is it, in other words, that in matters of health and disease, there is not only no possible substitute for the living man as a counsellor, but that even the living man, to satisfy the just expectations of an enlightened public opinion, must undergo the training, acquire the experience, and generally go through the hard and life-long discipline alike of intellect and character, which you, my young friends, are now only beginning to appreciate, and which finds its final expression in some of our greatest physicians and surgeons?

Had it been even possible to formulate adequately any considerable portion of the medical art in the manner required for merely mechanical prescription, not only would this have been done long ago, but the progress of the ages would have given such stability to the results that the treatment of disease in this nineteenth century would have been mostly stereotyped, as one might say, beyond the possibility of change or revolution. Instead of this, we have the curious fact evidently before our eyes, that in no previous age of the world has so little importance been attached to formulæ, or so much to the labours, experience, and opinions of individual men dealing with disease, as in the present. I am not speaking, observe, of disease as matter of doctrine, or as treated of in books, or in the lecture-room; but of disease as occurring in the sick chamber, or hospital. You will find it, I believe, to be the simple truth, that at no time in the world's history have the medical advisers of the sick been so little hampered by traditions as at present; at no time have the methods, the formulas, the remedies of past ages undergone more revolutionary changes; and yet at no time have the living influence, the character, the personal status of the physician and surgeon been more adequately maintained than precisely in this latter end of this nineteenth century of ours. So much is this the case, that if you take up a book which represents the traditions of even less than half a century ago, you will find these traditions almost entirely superseded, and even hopelessly out of accord, on many points of the first importance, with the matured opinion of almost everyone of our greatest masters of the art at this present hour, either in England, or in any part of Europe. Not one in a hundred of the medicinal formulæ so copiously scattered over the pages of Copland's *Dictionary*, for instance, obtains any considerable amount of favour or support to-day; not one acute disease probably is treated as he and the greater number of his contemporaries would have treated it; nor is there a single article, perhaps not a single page, of that immense and voluminous work, on which the merest tyro of to-day would not be amply justified in writing numerous emendations and improvements, founded on the instructions and

experience of a four years' medical curriculum; and yet medical opinion, as such, and especially individual medical opinion and influence, far from losing in weight owing to this prodigious amount of destructive criticism and revolutionary change, are of wider scope and further reach than ever before. On all this, considered as historical fact, I have had to expatiate a good deal of late years in various addresses and papers, some of which have lately been collected into a volume.[1] I am therefore the more disposed, in the present instance, to forego the argumentative defence of this position, and to assume it as proved, in order to make its consequences instructive, if possible, for you.

One consequence of this state of things I have already foreshadowed, or rather affirmed; namely, that real knowledge, by which I mean something quite different from learning, or hearsay evidence of mere opinion, about disease and its cure, counts for more in the individual man, even in the most ordinary general practitioner, than it ever did before. Not so very long ago it was possible for any man, with a very ordinary amount of industry and scholastic attainments, so to saturate himself as it were with the doctrine of a particular teacher, or school, as to command a certain amount of attention and respect for opinions enunciated in terms of that doctrine, however remote they might be from the facts of a case under observation at the moment. The fever in this man, an actual patient, was, on very slender evidence, adjudged to be a "malignant," or a "putrid," or a "low nervous" fever; it arose from this or that depravation of the humours, this or that *materies morbi*, this or that entirely supposititious or hypothetical change in the blood, in the nervous system, in the solids of the body, according as the man speaking to you was a humoralist or a solidist. A very few obvious indications sufficed here for the diagnosis; that is, to enable the fever to be placed in the nosology, and so to get a name. The treatment followed almost as a matter of course from the name, or rather from the theories or hypotheses connected with the name, according to the school, or system of doctrine, in which the observer had been trained.

Now, I am far from saying that this method of viewing and of treating disease is altogether extinct, even at the present day; but I am free to affirm that it has been very much modified. Any one of you, gentlemen, after even a four years' curriculum, will be in a position to form a far more direct, sounder, and less ambiguous judgment upon many cases of fever and acute disease than any man who wrote at large upon them, even in the first third of the present century, because you will have to apply tests and to use methods of observation and physical means for the detection of local changes which were then almost unknown. Do not let this assurance, however, make you conceited, or contemptuous of our forefathers; there is still plenty of room to say that neither they nor we have anything like a complete knowledge of any fever or any acute disease.

When I hear a man talking at large and dogmatically about "biliousness"—a term of Abernethy's, which neither Abernethy nor anyone else has been able to explain further than that it requires blue pill; or about "congestion of the brain," or anæmia of the same, which he cannot have seen and does not know at all as really existing; or about "irritation of the mucous membrane"—so beautifully vague that it may mean almost anything; or about "hyperæsthesia," or "hyperæmia," or, to use a more modern phrase, "neurasthenia," I know that he is in the stage of mental progress represented by those old theoretical views of the fevers to which I alluded a moment ago. He is using words, not to set forth knowledge, but to conceal and gloss over essential ignorance; his diagnosis, and prognosis, and treatment will probably all follow the same lines, and be based upon some intangible theory, or current hypothesis of his own or someone else's invention, and not upon the plain facts and carefully-studied details of the case before him. Therefore it is that I urge upon you, young men, to get into the habit of steering clear, if possible, of all such mere vague and misleading phrases. Try to think of diseased phenomena as men do who have and who use, up to a certain point, the means of knowing them as facts, and not merely speculating about them; men armed with the stethoscope, and ophthalmoscope, and laryngoscope, etc., and with chemical and microscopical tests at hand, and the thermometer, sphygmograph, etc., to give the exact indication of fact which should place you out of the bearing altogether of these survivals of ancient, sometimes even of mediæval, theory, which may for a time usurp the place of medical science, but are no more closely related to real knowledge—that is to say, the true *science*—of disease than the atoms of Democritus or Lucretius or the vortices of Descartes are entitled to rank as physical science in the modern acceptation of the words.

Now, the attitude of mind which I am commending to you—for as a mere attitude of mind it is of more value to you than oceans of "cram," or even of crude information about disease in respect of your future career—must be cultivated; and it must be cultivated early if it is to rule in any considerable degree your education as medical students or practitioners. This is all the more necessary to be said—indeed, to be insisted on—because the opposite attitude, which for distinction's sake I will call the "automatic" attitude, is still widely prevalent, and is much more easily learnt. It did not require the suggestion of an "automatic doctor" to teach us that much of our casual prescribing is, as it were—or was not long since—done by machinery or by rote.

It is very easy to lay hold of one or two leading symptoms or complaints, and to call them a disease. It is very easy then to take down a little book of formulæ, it may be the recipes of very distinguished physicians—to look out the appropriate name of the disease supposed to exist, and then to have a shot at it with the first recipe that comes to hand. That is what I am calling the automatic method. But the true physician knows that the diseases of our poor humanity in their ever-varying aspects are not thus to be formulated; and further, he knows that what he has got to treat, and to cure if he can, is not the disease, as regulated and named by custom, but the man who is afflicted by the disease—the whole man, and not only a part of him; all his disordered functions or altered structures, and not only the particular point where he feels the pain. Therefore it is that the "automatic" method, easy as it is in many cases to learn and to apply, will not do even for this nineteenth century, and will be thoroughly exploded in the twentieth. Easy? yes, but just because it is easy, it is correspondingly fallacious. It ignores, or sets aside without due consideration, all that a more carefully disciplined modern physician places in the front rank of importance—hygiene, the inquiry into causes, and treatment of the highest order depending upon these. It recognises only the disease and its assumed antidote, and thereby for the most part fulfils Voltaire's well-known sarcasm, that the art of medicine consists in putting a number of drugs of which one knows little into a body of which one knows even less. There is a fatal facility in this method, which has made it specially appropriate for quacks in all ages. To use the words of Hamlet to his faithless friends Rosencrantz and Guildenstern, when the latter declares his inability to play upon the pipe: "'Tis as easy as lying: look you, these are the stops. Do you think that I am easier to be played upon than a pipe?"

I do most earnestly trust, gentlemen and students of this medical school, that between these two contrasted attitudes of mind as respects disease and its cure, you will decide early, and be safely guided by your teachers as to which you are to choose; for upon the choice you make depends almost entirely (apart from mere individual, moral, and intellectual characteristics) whether you will be found really advancing the art and science of medicine, or whether you will be of those who sink deeper and deeper into the ruts of routine practice and retrograde theory, as life goes on. But I cannot persuade myself for a moment that in a school which can boast of three or four generations of such distinguished and progressive surgeons as the Heys and the Teales, and which even to-day and yesterday has, or has had, such leading spirits as Clifford Allbutt and Wheelhouse, there can be a moment's doubt as to your decision. With such traditions and such examples before you, it is morally almost impossible that you should become, or wish to become, "automatic doctors."

I will only in a few words point out to you what is, in my opinion, the most important kind of discipline for enabling you to tread successfully the strait and narrow way that leads, not to the attainment of a high and varied medical culture (as to which you must, in the main, depend upon your teachers and on the authorised curriculum), but rather to the state of mind which alone makes such attainment possible; for you must take it from me that at every step in your career the "automatic doctor," in one insidious form or another, will stand athwart the path of progress, and may even with some of you tend to stifle the nobler impulses by proving how very successful he is—with the public. From the merely lucrative point of view, there are but few even of our most successful physicians who could compete with the highly automatic money-making machinery of Holloway's pills and ointment, or Old Dr. Jacob Townsend's sarsaparilla. From

[1] *The Physician as Naturalist.* 1889. Glasgow: James Maclehose and Sons.

any other than the merely lucrative point of view—and happily, in the end, with most of you, I trust even from the point of view of a reasonable worldly prosperity, it is most undesirable that you should yield in the very slightest degree to this insidious form of temptation.

Now, it is at this point that I find it needful to have a very few words with my friend, Mr. Wheelhouse, not, I trust, inappropriate to the present occasion, concerning some of the remarks which he made here a few weeks ago in that most admirable address of his as President of the British Medical Association. I do not suppose at all that we differ greatly in essentials, or perhaps even in details; certain I am that we have both one object at heart, the advancement of our profession, alike in its essential usefulness, and in the good opinion generally entertained of it, which, indeed, forms a part, and a large part, of its usefulness to the public. But some of the remarks in that address appear to me to be open to an interpretation which possibly is not the one intended, but which, at all events, I desire not to allow to pass current without a *caveat*.

It seems to be assumed or suggested that, in order to keep a medical education upon what are supposed to be practical lines, it is necessary that every student before getting his name on the *Medical Register* shall have had opportunities of seeing, handling, and, in a certain sense, treating almost every kind of common disease and every ordinary type of infectious fever. By parity of reasoning it would equally be necessary, as a security to the public, that every man admitted to the *Register* should have done every minor, or even possibly every ordinary major, operation, so that nothing should come to him hereafter so as to find him quite devoid of previous experience.

Now, while I am as anxious as Mr. Wheelhouse or anyone else can be, to improve, in every reasonable sense, the practical side of a medical education, I venture to say that what I have now put into words of my own as being suggested by the address referred to is not, to my mind, even a good practical ideal. Moreover, if any such ideal is to be carried out or attempted, it will be absolutely necessary for the General Medical Council to go back on their late resolutions with respect to the "covering" of unqualified medical assistants; for, without some sort of "covering," lawfully or unlawfully, how is this extent and variety of practical experience, which is regarded as essential, ever to be attained by the majority of students or of undergratuates? It will be conceded that in order to make an experienced as well as a properly instructed practitioner, it would be requisite that he should have had opportunities of setting fractures and reducing dislocations; of performing venesection; of passing the catheter, not only in the normal subject but through strictures and other difficulties; of treating and of observing throughout, with a certain amount of responsibility, cases of measles, pneumonia, typhus and typhoid fevers, phthisis, small-pox, rheumatism with and without cardiac complications. Why not also of performing operations in strangulated hernia, tracheotomy, ligaturing of arteries and veins, and other cases of emergency, which, according to the programme just referred to, ought, if possible, to form a part of the training necessary to fit a man completely for all the necessities of general practice?

I apprehend that it is only necessary to put the case in this form in order to show that there is a fallacy somewhere, I do not say in Mr. Wheelhouse's argument, but in the conclusions to which I suppose his argument will, if carried out logically, apparently lead. I will, therefore, here affirm that my own view of what is essential to a practical medical education differs in some respects from that which I have presented above, using (it may be erroneously) the name of Mr. Wheelhouse. Speaking from my own experience as a teacher, I hold that the hitherto unsolved problem of a perfect medical education is to be sought in a direction nearly the opposite, or converse, of that just indicated—namely, not that the student or candidate for a diploma should have seen and done personally almost everything, or even many things, but that he should have seen and done comparatively a few things in such a way as to give a proper foundation, or leverage, as it were, for attempting successfully others which have necessarily lain outside the possibilities of a young man's experience; and accordingly I have come to regard it as of far greater importance that every case observed or dealt with in any way by the student, or in his presence, should be thoroughly observed, and its treatment thoroughly understood, than that a much greater number and variety of cases should be so observed and so treated as to beget habits of imperfect observation and loose thinking—in short, the habits which, in their developed form, give origin to the "automatic doctor" aforesaid.

This general principle being affirmed (for it would be out of place, I think, to go further on the present occasion), I am content to leave the practical questions arising out of it for settlement by wiser heads than yours or mine, with only one additional remark. It has been several times affirmed by way of criticism on the present curriculum of the schools, that a young man may have gone through it all, most carefully and well, and yet never have actually seen a case of measles. Well, that is a misfortune, and to the extent of my own personal influence, under the difficulties arising inevitably from recent sanitary legislation, I have always done my very best to remedy it, or even to render it impossible in the case of my own students. But I hold it to be far less of an evil that a man should go out into practice, not having seen a case of measles, than that he should have seen and handled and treated hundreds of cases of all manner of common diseases after the frisky manner of Mr. Robert Sawyer and Mr. Benjamin Allen, the undying literary types of the *ancien régime*, under the system of compulsory apprenticeship. And I sincerely trust that if any attempt is made, as seems likely, to restore to the medical curriculum whatever may have been good in that system, it will be under such wholesome regulations as to time, place, and manner as will effectually give substance and reality to the instruction afforded, and avoid perpetuating in a new generation, or perhaps in two or three of them, the routine practice and the slovenly and hasty diagnosis which could alone make the suggestion of an "automatic doctor" a possible thing.

These, however, gentlemen, are considerations not for you (at least in this stage of your career) but for your seniors, and especially for the General Medical Council, and Mr. Wheelhouse as an influential member thereof. I trust I have not in any way exceeded the bounds either of duty or of courtesy in submitting to you and to him these remarks (somewhat longer, perhaps, than I intended) on this most important subject. What remains for you is to avail yourselves fully of the splendid opportunities that lie open to you in this medical school and in your magnificent hospital, for laying the foundations, both broad and deep, of a medical discipline that will stand the strain and support the weight of the responsibilities that will by-and-by be laid upon you. How this is to be done in detail I have already considered in several of the addresses included in the volume I spoke of, of which this is in part the echo in a somewhat different form. The gist of it all is that the instincts of the naturalist, the love of Nature and of fact, the reverent study of the laws of biological science, and of the physical sciences which underlie the phenomena of living as of all other matter, form the salt which redeems all our professional work alike from barrenness and from falsehood in principle. You first encounter these laws and phenomena in your study of chemistry and anatomy, zoology and botany. I advise you to lay the foundation well there, and by no means to lay the flattering unction to your souls that any of these are useless studies, because they seem not to be immediately practical. Apart from their manifold applications in practice, they are of untold value as a discipline. And, as I have insisted elsewhere, this discipline at an early stage of your medical career is of special importance, because it is of a kind almost overlooked in much of your earlier school education. What you learn in these scientific departments—always supposing that they are taught practically, and not only in books and lectures—is to come to a closer grip with Nature and with fact, and not to be deceived and deluded either with false shows or learned philosophies and philosophisings. And this is a kind of knowledge—the knowledge of things as opposed to words and abstract ideas (for so Michael Faraday called it)—which is often greatly deficient even in educated minds, and the want of which is felt at every stage of a medical career. Let thoroughness, therefore, enter into all your dealings with these earlier studies—those of your first and second years. It is not merely that you are gaining information, but that you are forming habits.

Then, as regards the application of the habits so formed to your studies in medicine and surgery proper, I will ask you to-day to receive and to ponder only one or two suggestions from a teacher, some of whose early pupils are now grey-haired practitioners. I do not propose to speak of doctrinal instruction, the value or even the correctness of which depends largely on the teacher, but only of clinical instruction. In this, as in everything else, there is a right way and a wrong, and the difference between the two ways consists almost entirely in what I have called thorough-

ness. If you learn thoroughly to know even one case—diagnosis, prognosis, and treatment, and all about it—in a humane as well as a scientific spirit, you may rest assured that you have got something which will remain with you all your life. If you learn otherwise than thoroughly to know after a fashion a great many cases, you have also got something that may remain with you as a life-long possession, but that something is simply a bad habit of working; while in the other case it is a good habit, and, over and above this, a valuable addition to your positive knowledge. I can remember now single cases seen by me forty years ago, and some of them are so printed in the memory that they have all the vividness as well as the value to me as though they were of yesterday. Now I am going to say to you what may seem to be, but is not, a reflection upon particular teachers or pupils. There is a way of perking and pluming one's self upon a diagnosis, as who should say: "See how rapidly and surely I can do it. A single glance at the expression, a moment with the stethoscope, a word or two of conversation, and the thing is done, and the whole case is before my mind." This, according to my experience, is a very fatal bad habit both for the teacher and the taught. No doubt rapidity of diagnosis comes with experience, and is not without a certain value; but, in teaching, the first and the last lesson is always, or ought to be, thoroughness; and thoroughness, in the sense in which I am using the word now, is not consistent with aiming at these lightning flashes of intuition. A true diagnosis risks nothing; it aims at being exact, not at all at being wonderful or rapid. Therefore it is never a thing to make a show of, or to boast one's self about; and he that does it in that boastful spirit is, in the very act of doing so, setting a bad example and teaching a bad habit.

What shall we say then of those out-patient rooms where twenty, thirty, or forty cases are disposed of in an hour, not only as to diagnosis but also as to treatment? What again of those immensely busy practices, where the mere multitude of the cases, or the distance to be traversed, make it well-nigh impossible ever to complete a diagnosis. Can these be considered as fit fields for gathering sound clinical instruction, or for maturing the crude experience of young aspirants whose chief desire is, according to the programme I mentioned a little while ago, to have personally seen and treated almost every common form of disease? I do not stop, as you will observe, to argue out these questions, for I have no time to do so; but I state, without the slightest hesitation, my own sincere conviction, that for sound clinical teaching and for the formation of correct ways of observing, and thinking about and treating disease—such habits in short, as will be serviceable for a lifetime—the first and absolute rule is thoroughness; there must be no hurry. An hour, or even more, spent over one case (always supposing that the state of the patient admits of this) is out of all calculation more valuable than five minutes each over twelve cases, or even ten minutes each over six cases. And therefore I say again that the maxim which should guide our superiors in laying down the law of practical instruction is *non multa sed multum;* not a great multitude of cases just seen, or very superficially observed: but a smaller or much more moderate number, the deliberate and careful observation and management of which in detail may form, as Tennyson sings, the stepping-stones on which to rise to the higher levels of a more rare, or a more difficult, or a more advanced experience.

Gentlemen, I have done. I had a good deal more that I should have liked to say to you, but the lapse of time warns me that there will be some of you, at least, waiting anxiously for the end of my sermon. It now only remains for me, as an outsider, to wish you all possible success, and all possible happiness and efficiency, in the studies of this medical school during the present session. I have endeavoured to indicate to you only the broad lines on which such success and such efficiency are to be sought. It is for you, so far as lies in you, to make the application.

FRANCE AND ITS BEVERAGES.—The consumption of coffee in France during 1888 amounted to 66,969,246 kilogrammes, being 1,752 grammes for each inhabitant. The consumption of tea was only 516,834 kilogrammes, or 13½ grammes per head. In the same year, the production of alcohol amounted to 2,162,000 hectolitres, which gives a consumption of nearly 4 litres per head. Taking individual towns, the consumption at Rouen averaged more than 16 litres, at Havre 15½, at Amiens 11, at Brest between 10 and 11, at Paris 6½, and at Lyons a little over 5 for each inhabitant. From this it would appear that, roughly speaking, the South of France is three times as temperate as the North.

INTRODUCTORY ADDRESS
ON THE
NEED FOR A LIBERAL EDUCATION IN MEDICINE.

Delivered at St. George's Hospital at the Opening of the Medical Session.

BY T. CLIFFORD ALLBUTT, M.D., LL.D., F.R.S., ETC.,
Commissioner in Lunacy.

GENTLEMEN,—The delivery of an address on the anniversary of a school of medicine is an old custom, and one honoured by distinguished men, yet neither age nor distinction has protected it from some adversity of modern criticism. With this royal water the spirit of our time assays all things great and small, lowly and exalted, and by this test accepts, changes, or rejects them. I believe, however, that a true economy will approve these addresses and use them still. A bare contract may answer the wit, but will not fill the hearts of men, nor kindle the fire of young disciples. To hundreds of young men to-day is a great day, not only because on this day they enter upon a new calling, but even more also because to-day is to them the first day of freedom. How vividly I remember—nay, how keenly I still feel—the emotion of that day in my own life—the day when I first entered my own sitting-room, sat beside my own table, and took my life into my own hands! I took up my life, as now you take up each of you your own, with a joy beyond words and laughter—that joy in the possession of my own faculties, for better or for worse, which is the birthright of certain races of men. We know not then the burden of life, so easily we carry it—so easily that for the first few years we are apt to knock it about a good deal and even to make some lasting dints and scars upon it, not always in very honourable conflict. Still, with all that, the freedom of the city within ourselves is a priceless boon, and one which no brave man would give away, whatever the burdens and hardships that freedom brings with it. Indeed, to take our freedom in both our hands, and to step forth into vacancy therewith, would be a cruel irony; we should be as one that beateth the air. There are adventures before us, work to break our strength upon, olive and wild parsley to win, great captains to follow, and a mistress to worship. Your mistress, gentlemen, is the Art of Medicine, and your freedom is her service. *Studia libertate proveniunt.* You will not begin work with gestures and vociferations, but, as English boys begin a great cricket match, with a seriousness, even a solemnity, of bearing consistent with the deepest intensity of purpose and the hope of standing side by side with the best of us. All men conscious of strength are calm enough to wait till they know where to use it, and will bide their time. The best soldier best loves discipline, and looks most loyally to his commander. He knows his powers are too good to waste, and the stronger he is the deeper his devotion. Those of us who are growing old, whose fires burn lower, whose limbs are laggard, involve ourselves in our wisdom and try to avert our envious eyes from your precious gift of youth. I try sometimes to comfort myself in my age by remembrance of my tingling resentments when, in the former years of my practice—and they seem but as yesterday—I was politely postponed as too young for confidences. My dear young friends, we who pride ourselves on the price of experience, on our sagacity, the gift of time, would give them all twice over for your boon of youth. Some day, when it is gone, you will wistfully look back for it; but when a man looks back his Eurydice is gone! And what of all qualities of youth is the most precious? That which we older men try to breathe again from you, try to rekindle by the light which is upon your young faces—the quality of enthusiasm. To-day I, unworthy, am to many of you the first teacher of medicine, and the first words you hear in the porch shall be these: Work with us and keep us young. If you keep us young, we shall not destroy the spontaneity of your life; we shall not limit the range of your outlook by the bounds of our dogmatisms. You shall keep our minds flexible, and we will temper your energies. Above all things, know that we call you not here to run your minds into our moulds. We call you here on an excursion, on an adventure, on a voyage of discovery into space as yet uncharted. We have passed before you

through the gate of Hercules; we have touched sometimes on the happy islands; we, like the great Ulysses, shall lead you through our experience, "whither gleams beyond an untravelled world." Every hour shall save "from that eternal silence something more, a bringer of new things." Would it be well, then, when we see you upon the threshold of our house, that we should not step forth and give you welcome; that we should leave you to file silently into dusty lecture-rooms, and to stand in tail to inscribe your names on the roll? That would be as dreary a setting forth as a marriage at a register office; and, if I have but a boxwood flute, I will pipe to you to-day.

Gentlemen, your eyes are to be fixed, not to-day only, upon men; now upon your teachers, who are to be men and not pumps. Those who would set aside all commemoration to-day would to-morrow set aside all courses of lectures. Why, in the name of goodness, say they, is the student to be brought to the lecture-room to hear words drawn from sources open to all; to fill laborious notebooks with facts already printed in their manuals? If a lecturer is but a pump doubtless you would do better to go to the springs for yourselves. But, surely, that which impressed us in our lecture-room days was far less the facts of our profession and far more the character and influence of the men who awakened and liberated our thoughts. I carried away, not rows of note-books—dead arid things—but an impregnation. At St. George's my lessons were the fire, the rapidity, the impatience of fallacy of Bence Jones; the deliberate sagacity of Fuller; the methodical learning and rectitude of Barclay; and in these I speak only of the dead. In Paris I admired the marvellous flexibility, acuteness, and urbanity of Trousseau; the heroic industry and penetration of Duchenne of Boulogne; the philosophic breadth of Bazin; and, if last not least, the great erudition of Daremberg, an erudition which his critical insight and catholic temper enabled him to wield so easily. He happily is yet spared to us, as are the teachers of Cambridge—my Alma Mater—as life-giving to me, but so near me that I cannot here speak of them as I would.

Your lecturers shall, in like manner, inspire you with fervour of spirit, shall teach you the way to handle our materials, the methods of our investigation of them, and the kind of ideas which we think will interpret them. Of finite knowledge we have nothing to fix in you, of finite mental form we have nothing, of systematic doctrine we should offer but a temporary scaffolding. You will not, indeed, have to go over all the ground that we have done. Our fathers saved us many a weary march in barren lands, and you will shorten the labours of your children. Knowledge, you remember, has no royal highways; she may be hidden beside the feet of the humblest wayfarer, and has revealed herself to him whose eyes are open when finer pilgrims have pressed haughtily on. In knowledge there is no great and no small; nay rather, accuracy in what you call small things is not only a virtue of method but also of morals—an ethical and vital sense of the infinity of creation, and of the patient unsleeping instancy of things; on the other hand, what the world calls great things may be to the eye of wisdom as nought. Of this pride and this humility the lives which we live before you should be an example. Do not think that all this is vague declamation. If it be so, I fail indeed; for, to my mind, the idea of a university consists in a true conception of the force and value of personal teaching. How can an impersonal board be a university? A university is the collective soul of its dead and of its living teachers, an abiding inspiration, a *mater alma philosophiæ*. A university will teach you not to regard your studies within her gates as ends in themselves, but to regard them as progymnasmata or exercises; and if it cannot give a liberal education to every one of its sons it can, at any rate, teach them all to know that there are such things as ideas, and to conceive the need of them. A university is a permanent embodiment of the ideal of wisdom as opposed to technical furniture—of the ideal of mental culture as opposed to the collection of "tips" and devices in the memory. Lectures, therefore, should not be comprehensive so much as stimulating, individual, and even discursive. They should aim rather at the illumination of life than the direction of study, and cordial engagement to thought rather than the exhibition and transference of acquirements. Fresh and novel perceptions may be welcome, even if precocious or unfounded, if also they are broadly conceived and keep the mind of the student alert:

> .....The blossoms of Eternity lie hid
> In the dim kindling buds of dreams that keep
> A fluttering pulse within Time's broken sleep.
> Dreams are not idle, dreams have saved the world.[1]

[1] *Afterthoughts*, by Joseph Truman.

Again, it is as much the duty of a lecturer to mark off the gaps and crudities in his knowledge as to set forth realised truth. If I seem, in this way, to be addressing myself more to teachers than to disciples this is but a seeming, for my first purpose is to reveal to the newcomer of to-day that he comes, not as a subject, but as a junior fellow and colleague. The youngest of you can at any rate beat the bushes for us. *Multi pertransibunt et augebitur scientia.*

Dr. Pusey used to say that "Truth often depends more upon the character of him who enforces it than on its own," and this, gentlemen, is true not only of your lecturers, but of yourselves. All of you will go forth soon, some of you are now going forth, to teach others, not, it may be, from such chairs as this, but each from his place in the world. What mental habit will you take with you, how will you practise, how will you teach? The humblest of you will have some teaching to do, formal or informal. It has so happened that few men have had the opportunities which I have had of forming judgments of our profession as a whole. On the one hand, in London and in the old universities I have not ceased to associate with the leaders of medicine; and, on the other, I have in the north of England laboured incessantly with the rank and file. Among the leaders of our own, as of all other callings, we find men of great and varied endowments, who have each their own mastery and faculties too strong and individual to have owed very much to methods of education; but in the rank and file I must say that a certain lack of mental training and impenetrability to ideas too often makes itself seen. I am not now speaking of those practitioners who fulfil no more and have aimed at no more than common usefulness, but I speak of men who should be more than this.

On another occasion I have said, and to-day I repeat, that for personal virtues, for a certain ethical habit, which, in its loftiness, simplicity, and unselfishness, is perhaps incomparable, the general practitioners of medicine offer a noble example to all other men; for they carry their high standard of conduct with a humanity, a moderation, and a modesty which do not invariably adorn the righteousness of other men. Yet with all this breadth of practical ethics we do not generally find a corresponding breadth of mental culture. The master mind of Western civilisation has drawn a distinction between the τεχνικὸς and the φρόνιμος, between the man who is well equipped as a craftsman, trained to quick observation and ready dealing with the things of to-day, and the man who may or may not be so well skilled in practical matters, but whose knowledge is far wider and deeper; who has, in a word, a training in philosophy. The mere practical man, valuable as he is, has but a simulacrum of knowledge, a kind of sham or surface instruction, and having no knowledge of principles, he tends to routine and is unprogressive and wasteful. He is a man of opinions, and as science undermines opinions and treats opinions with some irony and sarcasm, perhaps indeed with some injustice, the practical man tends to wince from science, and will even thank God that he is not a philosopher. His usefulness, then, great as it may happen to be, is essentially temporary and provisional.

It is far otherwise with the man whose mind is opened to ideas, who is moreover prepared for life not merely by the appropriation of the thoughts of others but by the enlargement and development of his own intellect; for indeed we should not only become familiar with the laws of phenomena within our own pursuit, but also with the modes of thought of men engaged in other discussions and researches, and even with the laws of knowledge itself—that highest philosophy. Now this mental training, although it happily exists in a few, is not by any means the note of English medical practitioners as a class. This defect is to be referred to two causes: first to the want of leisure and of contemplative life among them, and secondly to the lack of university education.

The duties of the family practitioner are all abroad. Unlike the lawyer, he has not to put his thoughts to the test of pen and paper; and so complete is his divorce from the desk, that even his few spare hours are dissipated. In course of time, the ability even to write a letter becomes atrophied. Happily, however, there are compensations for us. Law and medicine both are liberal pursuits, and promote mental and ethical elevation, as opposed to trade, which, when untempered by the arts of invention, is an illiberal pursuit; and in these days of small profits and close industry, when commercial men can no longer find leisure for self-culture, may be, and often is, actually degrading. Indeed, medicine has an advantage over law in this, that it is more in contact with positive truths, while at the same time it is no

less in contact with civil and moral phenomena. Hence the practice of medicine, as we see every day, tends especially to cultivate that kind of critical spirit which we call "common-sense." Nevertheless, I repeat, the English doctor too often lacks reasoning power, breadth of view, and flexibility of mind. So, you may retort, does the common run of all men. But, gentlemen, on the whole, we have greater advantages in the kind of our calling, and should stand better. Moreover, I am setting no abstract ideal before you. You will observe that I have spoken of English practitioners—of those educated in England, but not at universities. Now by English I mean not the Scotch, whether practising in England or at home. When called in consultation by a Scotchman, I expected to meet a man of philosophical mind; when by an Englishman, I expected to meet an honourable man, a shrewd man, a practical man, but not a man of philosophical mind. Now, why is this? Because the Scotchman has been educated at a university; his knowledge has been tested in his own university, and at Scotch universities philosophy is held in honour; whereas the Englishman has usually been educated only at a technical school, and his acquirements tested haphazard in a sort of wit combat with a viewless Board wholly unconnected with his schools. Indeed, the very existence of philosophy—the *mater studiorum*—has been unrevealed to him. And now my old friend Mr. Wheelhouse—the President of that young giant the British Medical Association (the only organisation of our profession which is based on broad principles and formed for a great future), member of the Medical Council of Education, and whose personal abilities mark him out as one of the most powerful men in our profession at this day—Mr. Wheelhouse proposes to make this state of things ten times worse than before. By submitting youths to a five years' apprenticeship to working doctors at a time when their minds are expanding and impressionable, at a time when an ardent love for higher study and a yearning for ideas spring up in the heart, he would send them not where they can feel the influence of great men present and past, not where learning is seen in all her variety and in all her provinces, not where he may associate with men of his own age whose minds are occupied with other forms of culture and in training for other callings, but he is to be confined to one mind, however able; to one profession, however honourable; to one set of ideas, however fruitful. And as a matter of fact, we know that the ruling mind will often be something less than great, the set of notions too often commonplace, and the teaching at best a teaching, and not a cultivation.

Gentlemen, this is but to perpetuate the common-mindedness which I suggest is already our danger—a fault due in part to our defective education, in part to our lack of leisure. I say we are already too narrow and channelled in our thought, and too shoppy; and we are to improve our education by intensifying this very habit of mind! We are to make our education more comprehensive by shutting up our students with individuals; we are to strengthen their reasoning powers by therapeutical drill; we are to substitute the ideas of the middle-class parlour for the traditions of a university!

But, says Mr. Wheelhouse, your university student comes into practice so confoundedly ignorant; my purpose is, above all things, to make him an efficient practitioner, to teach him how to manage patients and how to recognise German measles. If, Mr. Wheelhouse would say, after doing this he can chatter about Shelley and Herbert Spencer, he is welcome to his accomplishments; but the bread studies must be complete. Certainly; with this I wholly and ardently consent. No one can be more opposed than I am to superficial *Schöngeisterei*—to literary fribbling and dilettanteism—in the place of solid attainments and practical skill. But one may get roast pig without burning down one's house, and I contend—with an exception to be hereafter discussed—that a man whose mind has been enlarged and strengthened by a university course will, after a briefer drill, make a more skilful practitioner than one whose technical craft is gained by routine and is not vitalised by a comprehension of principles. It is no truism, gentlemen, to repeat in this place that knowledge is one and indivisible, and that he who is content to pick up isolated chapters of learning has no living knowledge at all.

The medical journals of late years have been infested by letters from qualified men, who, although not "M.D.s," desire to use the title of "Dr." They say, with a not quite ingenuous play upon words, that, being called "doctors" in a colloquial sense, they should be entitled "Dr." in the academic sense. They add with more truth that all practitioners approximate in qualification should have an equivalent nomenclature. It is difficult to see where would be the ultimate advantage of holding the title when it had ceased to be distinctive, and the disadvantages of carrying a professional label into general society seem obvious. It would be better that we should all return, like other gentlemen, to the sweet simplicity of misterhood. Meanwhile, however, the grievance is an acute one. A good student is admitted into one of the guilds of the higher class, which, knowing that they have no academic quality about them, honestly decline to allow their craftsmen to use university titles; while an inferior student slips into the profession by way of one of the guilds of the lower class, which may have no such honesty, and are said to have connived at the irregular use of university titles. Straightway the worse man puts "Dr." on a red lamp by the side of his better brother, who has to content himself with "Mr." on his more modest brass-plate. Nay, further, some universities have degraded themselves *pro vice* into mere examining boards, ignoring the truth that a university degree signifies a formation of mind, a habit of thought engendered by living within the influences of an organisation of all faculties; ignoring the truth that graduation signifies a life, and not a mere register of proficiency. These universities have given degrees without the residence which alone can give character to the student. The mischief all this does is not yet fully seen, although the more thoughtful men of our profession are now aware of it. Not the least of its harm is the baneful effect which it has upon the older universities, which, as at Cambridge, are driven to compete for medical students, not only by the most excellent method of enlarging and improving their apparatus and cheapening costs, but also by the less excellent method of narrowing the scope of their training.

Everywhere an endeavour is made to pursue two incompatible courses, namely, at once to keep up with the vast extension of professional studies, and at the same time to shorten the student's career. To strive with this impossibility, men are brought into special studies at an earlier age, and a due civil and philosophical training is denied to them. I am not one of those who regard the classical as the only real education, any more than I so regard the scientific; neither alone suffices. An educated man cannot become so on one study alone, but must be brought under the influence of natural, civil, and moral modes of thought. The late Rector of Lincoln, to whose paper on Oxford Studies, published in 1855, all educational reformers are deeply indebted, then spoke as follows: "The necessary tendency of advancing civilisation is to divide and subdivide the applications, as of labour, so of thought. The professions tend to split up into branches, and skill in one becomes more and more incompatible with skill in another. The more a subject has been explored, the more time does it take each succeeding student to follow the steps of his predecessors. To prevent the disabling effects of this speciality of pursuit, it becomes the more requisite to secure at starting a breadth of cultivation, a scientific formation of mind, a concert of the intellectual faculties..... Clearsightedness, sagacity, philosophical reach of mind, are to a great degree communicable by training.....The difficulty is to get mental cultivation recognised at all by those who have it not. Cleverness, talent, skill, fluency, memory—all these are understood and rated in the market. A cultivated mind, just because it is above all price, is apt to be overlooked altogether. It argues some discernment and a considerable degree of education in a society in which such gifts are even appreciated as useful. And let it once establish itself, even under false pretences, such is its marvellous ascendency, that, like refined manners, it will conquer, and propagate, and extend itself by sympathy, by imitation, and, above all, by education. In this subject, eminently, it is true that the beginning is everything." These, gentlemen, are words of rare wisdom. Lay this foundation first, put your trust in this, and technical training will come far more rapidly, far more efficiently, and far less wastefully afterwards.

I have hinted, however, that there is one special case in the teaching of our students—a seeming exception to the common rule of mental training first, and technical training second—namely, in respect of the practice of surgery, not in its more abstract functions, but as a handicraft. It is a commonplace in the profession that a philosophical surgeon and a fine operator do not always coexist in the same person. No doubt manual skill must be taught from youth; and in the education of a surgeon, therefore, if not of all persons, some means, not necessarily anatomical, are to be taken from an early age to confer delicacy and dexterity of handling.

But you will say we cannot afford all this; *il faut vivre*, and we have neither time nor money to spend on real studies; we must

go for bread. Well, then, gentlemen, you may have to take a back seat. But is this so? In the first place, excuse my rudeness, but it may be with you as with the *ewig weibliches*—the eternal womankind—you are lovely, but there are too many of you. The meshes of the net may be too large. As was said of the profession of the law, there is some room in the upper storeys, but the basement is crammed.

I am sure we could ill spare any one of the ingenuous faces I see before me; but, when you have well sped, you will come over to my side as regards the propriety of largely extending the curriculum, both in respect of preliminary and of special education, even at the cost of lessening our numbers. As it is, we make ourselves, by our very numbers, the prey of the hucksters who too often form the majorities of our local councils, and who are able to point triumphantly to piles of applications from highly qualified men driven by the increasing competition in the ranks of the profession to find rest in any quiet place outside it, however meagre the pay.

Urban or district councillors, conscious of their ability to be as good doctors as any of us had they not better avocations, say publicly that any handy man can do the sanitary work of a city or a province. They decline therefore to pay for supererogatory qualities. The greatest danger in the future of democracy is its blind hatred to payment for special mental ability; men of but a little more than average ability are scarce; they are a natural sport, and should be selected. They should be secured for the public services at the price of their scarcity and of their profits in private adventure, for none is more wasteful than a dull official person. Your vestryman, however, values all other men at a rate a little under his own. He will boast one day of his success in cutting down the doctor's salary, and on the next expends £1,000 upon the researches of Mr. Mullins. In Bunyan's dream, Messrs. Simple, Sloth, and Presumption lay asleep, a little off the path, with fetters upon their heels. Unhappily they are now awake, their fetters are struck off, and they are put upon the jury of Vanity Fair; and that brisk lad whom the pilgrims met coming down the crooked lane from the country of Conceit, and whose name was Ignorance, is the justices' clerk. Public bodies dare not evade the charges of the lawyer. Both at home and in the city good law means money, and bad law is too soon found out and Demas discredited. But the evils of bad sanitation are not instantly obvious to the people. Pestilence and death are good old customs with which it is rash to meddle in an innovating spirit. Collectively we call them Providence, and it may be blasphemous to talk of evading them. In any case our sanitary mistakes are soon buried underground, and by the widow and the orphan are remembered in silence. So unchidden the tradesmen who too often govern us can satisfy their jealousy of scientific men, and boast in the market place of their penny wisdom.

Now, gentlemen, what is our defence? To turn a saying of Coleridge, we must create the taste by which we are to be appreciated. We must lay hold faithfully of Mark Pattison's words that "such is the marvellous ascendency of mental cultivation that, like refined manners, it will conquer and propagate and extend itself by sympathy, by imitation, and, above all, by education." But you may say is it not an impertinence in me thus to preach a university education to students who cannot as yet all enjoy it? Is it not an unkindness as well as an impertinence?

I trust not. It is in no play with words when I say to you that you are all members of that chief university—the world. This world-university has indeed one drawback. Like Peruvian bark, there is much husk in it, and it needs two stomachs to digest it. The university of the world, gentlemen, has much husk in it and needs the time of two lives for its digestion.

In local universities, therefore, we form microscosms; we select and compact the properties of the world in alkaloidal forms, so that worldly wisdom may be taken in more readily and less wastefully. When these local universities cease to represent universals—are no longer of the essence of the living world from which they draw their being—they grow sterile as Oxford in the last century. You have then in the world at large that education of which a university is a compendium. This all of you have; it may be less convenient, but it is even more efficacious if you can use it economically. Now of young men, the world means for one Ouida and the Vaudeville; for another Mr. Burne Jones, Mr. Oscar Wilde, and Ballades in Blue China; while for a third a pair of whitelegged chestnuts and the prescription of bread pills for old ladies make life itself. Charming things all of them, but not universals. If the world is to be your university, your selection must be early and rigorous. Virility, imagination, and intellect must come first, and, if then you retain a taste for trappings and pedlery, they may come afterwards.

When I began to practise, or rather to offer to practise, I had a large share of the contemplative life, and by good luck I turned it to account. I read three books to enlarge my medical mind, namely, Grote's *History of Greece*, Gibbon's *Decline and Fall*, and Mill's *Logic*. Rather by accident than by design, I fell upon these three, but if to these can be added some great work of imagination (every man who has been at school can keep up his Homer with but a little trouble, and in any case has Shakespeare at his side), I think no finer culture could be had. This every student can do. This, and far more than this, an old friend of mine determined to do and did in the spare hours of a practice perhaps the most exacting and unrewarding I have witnessed. So, gentlemen, you may attain to the university mind even if you have not been rubbed against university bricks. But ere long I trust the largest and the richest city in the world will do what Yorkshire and Lancashire have done in their degree—will establish the largest and richest university in the world. Those who see farthest are now calling for it, and it is coming; but, I fear, not during your curriculum. What a chance now for a millionaire, or even for a demi-millionaire, to evade oblivion!

Acquit me, then, of any charge of shrewishness in the words I have spoken—words spoken in sympathy. I trust, indeed, when with returning steps you issue from these gates again into life, that you will show yourselves men as practical as the President of the British Medical Association can desire. It shall be no fault of St. George's if you do not. Nevertheless, I agree with Mr. Wheelhouse that an apprenticeship to the domestic side of your work, a familiarity with its lesser marks and byways are necessary. These we cannot teach here. After your faculties are trained and strengthened in their main branches, your lesser shoots shall be duly laid in. But, with capacities thus enlarged, one year's apprenticeship would do the work of five in earlier age; and an obligation upon young men thus to apprentice themselves before the completion of their studies would have my approbation and active support.

At Cambridge, there used to be a step called the Licence to Practise, which was not granted until a year had elapsed after first graduation; this step, now disused, might well be revived in the manner I have indicated. And, thus apprenticed, you would not only receive, but give also. The practitioner who received you would, while finishing your dexterities, learn, in his turn, the freshest ideas of the schools; an ever new and eager young graduate, year by year, would quicken his thoughts, and not permit them to become atheromatous. Fancy yourselves, gentlemen, not bottle-washers, but missionaries *in partibus*—ministers of light!

Man, like an ant or a rook, is a social animal. Alone he withers, in society he organises himself, and compasses his ends. Mind impregnates and quickens mind, none suffices for itself. Men say, and say ungenerously—not regarding the kind of our art, not regarding the temptations of our calling—See how these doctors differ, see how they love one another! We, and not we alone, gentlemen, give cause for these gibes; let us give cause for gibes and japes no more. We differ from each other in part because progress depends upon differentiation, but in part because we are not large-minded enough to see the principles of things. We have gone through a fixed routine of education which hampers us. We do not see that, if a man really understands his subject, he is able to make that understanding clear to intelligent laymen. We too often pronounce opinions rather than enlighten our subject. "Knowledge and opinion," says Hippocrates, "are two things; the former begets knowledge, the latter ignorance." Where the remedy for this lies I have shown at too great length already. Then we mistrust each other. Why? Because medicine, of all callings, demands the most sensitive personal honour, the most vigilant regard to others, the closest brotherhood; more than divinity, because it is practised for gain; more than law, because it is practised in the closet and not in the forum under the eyes of men. In no profession is selfishness more tempting, in none is detraction more easy and more secret, in none is smartness more immediately rewarded, in none is a vulgar ideal so glittering, or worldly success so near the hand of supple and talented persons. Nowadays we "manufacture our celebrities as we go on," and the pet of the penny papers and the monthly reviews, always something less than the best, is run after by the public with ovine sequacity.

I, who have been in the thick of the fight, now standing aside, may speak more plainly to you than I could do when my own

gain or emulation might have seemed to disturb my vision and to warp my sentiments. *Spectatum satis et donatum jam rude quæris.*

I will venture, then, before we part, to offer some advice to those of you who will soon enter life. You will find that, both in respect of competition and of consultation, the elements of mistrust are not inactive. The temptation to score off another man's openings seems to some persons irresistible in spite of the certain turn of the wheel against themselves another day. Perhaps they hope to win on the average. How mean it is! How mean even between rivals! But for a consultant to act thus by word, or even by look or gesture, is cowardly and base indeed. At the moment the consultant has enormous power, and should therefore err on the side of generosity, especially in the absence of his brother practitioner. And yet who does not know the raised eyebrow, the shrug, the "I could an I would" air of the fashionable consultant, as he listens condescendingly to the patient's report of his own doctor's opinions. *Salus ægrotantis suprema lex*, the patient's safety is before all else; that must be clearly posited; but his safety rarely comes even into pretence. The occasions are very rare in which the safety of the patient involves a breach of consent between his doctors. In my experience a family attendant is always very glad to try any plan of treatment which seems reasonable, and it is the duty of the consultant, where treatment is manifestly changed, to speak of the change, not as dictated by himself, but as the result of a joint consultation. In most cases he can truthfully add that a change would not have been made unless the previous treatment had been well tried in vain. Changes of diagnosis, except in case of grave error, can usually be developed gradually, so that sudden declarations of change of opinion are avoided. But the public may say, Is this reticence fair to us? Certainly, if the patient's interests be safeguarded—that is, if the doctor in charge be not an ignorant fool or a shifty knave, and in these cases, the consultant must, by letter or visit, keep a sharp eye on the progress of the case—the reticence is not only harmless to the patient, but of the greatest value to him. Nothing does a sick man more harm than to have his confidence shaken in his doctor, and to chop horses in midstream is rarely desirable. Even where a difference between two medical men is irreconcilable—and such cases have occurred to me from time to time—the difference can be amicably arranged. In thirty years I never had to supplant my brother on this account. The family doctor must be charged with the duty of setting forth the difference to some sensible friend of the patient, and in my experience this has always been done most conscientiously. Such cases are usually obscure and difficult, and it becomes the consultant in his turn to point this out, and to express a willingness to call in a third physician to aid in the decision. If all parties are straight and unselfish, these difficulties are readily adjusted. Indeed, with seasoned practitioners, consultations are always smooth, and nearly always welcome on both sides.

It is you touchy young men, just out of the schools, who give us the trouble—who bridle up at the suggestion of a consultation, and declare that nothing more can be done. An older man knows that a good talk over a case is, at any rate, a pleasant meeting, and probably valuable to him at least in bringing about an orderly revision of the symptoms and in refreshing the confidence of his patient. He knows, too, that when a doctor is sick himself he calls out for a consultation sooner than a layman does, and runs from one doctor to another in defiance of all convention. I never knew a sick doctor who failed to consult at least three London physicians in a forenoon, usually concealing from each his visit to the others. The fact is life is dear not to doctors only: to me it is marvellous, not that patients slip off to consultants, but that, with the fear of death before them, they are so loyal to their own advisers.

Always, then, welcome consultations. Anticipate, if possible, the patient's wishes in the matter, or, at any rate, the wishes of his friends. Never repeat the silly boast, "My patient has such confidence in me he does not want a consultation." I used in secret to hear rather too often the other side of that story, and if the patient should not want it you ought to want it. The public is right in regarding a consultation as at least a tribute to the sacredness of human life, and it keeps doctors up to the mark. For these reasons, if I had my way, no man, not even a pauper, should die of acute or obscure disease without a consultation. State clearly always whom you consider would be the best consultant for the case, but, having done this, meet any honest man the patient really wishes for. In the height of my practice I gladly met any of my juniors—even my own pupils—if things pointed to it; and very pleasant consultations we used to have. At the same time, it is better that professed consultants should not only, of course, never visit any patient alone, but should even discourage frequent calls at chambers if the visits, losing the feature of consultations, begin to merge into sole charge. Under such circumstances I always regarded it as my duty to suggest that an ordinary attendant should be selected, and consultations held as occasion required. But I regret to add that often I never saw the patient again.

I cannot wonder that an honourable reticence has less attraction for us, that a calm and patient temper seems too slow for us, and that the bonds of fraternity are weakened when self-seeking, ostentation, and *finesse*, if they do not take men into the first rank of our profession, at any rate make a very good thing for very many of them. The spirits of the faithful have thus been tried, not in our day only, but in all times of luxury and pride. But perhaps in all ages, certainly in our own, I am thankful to say that purity, disinterestedness, and devotion not only bring peace with them, but even in the world itself surely win that success which a wise man would seek.

We of our generation prevailed over our fathers, you in your turn will prevail over us, and a mightier reaper shall prevail over us all. Our fathers called us into these halls, and set before us the record of a noble tradition, the example of noble life; we call to you, and you shall call to your children, and thus so long as sickness and sorrow abide amongst us, we frail men of a day shall still raise our eyes to that lofty conception of our duty which Hippocrates himself set forth in the first chapter of his scriptures, a conception which, with all our shortcomings, I trust and believe has been handed on by his successors undimmed and undefiled to this day.

ABSTRACT OF A POST-GRADUATE LECTURE ON THE VARIOUS POINTS TO BE CONSIDERED IN THE SELECTION OF AN ANÆSTHETIC.

Delivered at Charing Cross Hospital.

BY FREDERIC HEWITT, M.A., M.D.CANTAB.,

Instructor in, and Lecturer on, Anæsthetics at the London Hospital: Joint Administrator of Anæsthetics at Charing Cross Hospital; Assistant Anæsthetist at the Dental Hospital of London.

IT is always a matter of importance, and often one of considerable difficulty, to decide what anæsthetic should be employed in a particular case. We have not only to take into account the length and nature of the operation about to be performed, but we have also to carefully consider the general condition of the patient who is about to be entrusted to our care. Putting aside highly exceptional cases, clinical experience has proved that general anæsthesia may be safely induced and maintained in all subject provided that the anæsthetic which is most suitable under the special circumstances be employed; and, conversely, it may be said that if the general state of the patient and other points be overlooked or disregarded and an inappropriate anæsthetic administered, difficulties and dangers will be liable to arise. At one time the choice of an anæsthetic for ordinary surgical operations lay between ether and chloroform; but with the knowledge we at present possess it is obvious that the question is not as simple as it then appeared to be. Ether possesses advantages in many cases, chloroform in others; and there are other agents which, under certain conditions, should be employed in preference to either of the foregoing. Thus there are some cases in which nitrous oxide alone will suffice for producing anæsthesia; in other instances this gas, followed by a small quantity of ether, should be employed; in a third series of cases ether will be found to be the most appropriate agent (usually preceded by a small quantity of nitrous oxide); in a fourth section the A. C. E. mixture will be tolerated better than any other anæsthetic; in a fifth set of cases chloroform diluted with alcohol should be administered; and in a comparatively small number of instances undiluted chloroform must be given.

The accompanying table represents the results of several years' practical work in the operating theatre and elsewhere, and it is submitted, not with any wish to dogmatically insist upon the

(I.) Length of anæsthesia required.	(II.) Anæsthetic to be Employed unless Contra-indicated.	(III.) Examples of Suitable Cases.	(IV.) Contra-Indications to Anæsthetic Mentioned in (II.): (*a*) By Reason of Nature of Operation.	(IV.) Contra-Indications to Anæsthetic Mentioned in (II.): (*b*) By Reason of Morbid or Other Condition of Patient.
30 seconds or less.	Nitrous oxide.	Tooth extraction; opening an abscess; incising a whitlow.	1. Operations requiring perfect quietude and total muscular relaxation.[1] (Nitrous oxide with a small quantity of ether should be employed in these cases.)	1. Children under three years. (A. C. E. mixture best anæsthetic.)
30 to 60 seconds.	Nitrous oxide and air alternately.	Slitting up a sinus; avulsion of toenail; temporary application of actual cautery.	1. Operations requiring perfect quietude and total muscular relaxation.[1] 2. Nasal or oral operations with hæmorrhage. (Nitrous oxide with a small quantity of ether should be employed in these cases.)	2. Patients suffering from pulmonary, pleural, or other conditions attended by embarrassed breathing. (A. C. E. mixture or chloroform diluted with alcohol should be employed.)
	Nitrous oxide with a small quantity of ether.	Rectal, vaginal, or urethral operations;[1] breaking down adhesions of joints; certain dental operations; post-nasal adenoids.[2]	1. All operations within the upper air-passages with actual cautery. (Chloroform, chloroform diluted with alcohol, or nitrous oxide administered intermittently with air, must be employed in these cases.)	3. Extreme asthenia; collapse. (Pure ethylic ether sparingly administered from a cone or towel should be given in such cases.)
Over 60 seconds.	Nitrous oxide followed by a quantity of ether proportionate to length of operation.	Ordinary surgical cases.	1. All operations within the upper air-passages with actual cautery. 2. Operations in mouth or nose of too long duration to be performed after a full dose of ether,[4] for example, cleft palate, long cases of epithelioma of tongue or floor of mouth, etc. 3. Operations in which venous engorgement would constitute a serious difficulty or danger, for example, removal of glands at root of neck, tracheotomy, operations upon the brain or its membranes, etc. 4. [Abdominal surgery.[5]] (Chloroform, or chloroform diluted with alcohol should be used in above cases.) 5. Removal of tonsils. (A. C. E. mixture best anæsthetic, as a general rule.)	1. Children under three or four years. 2. Old people.[3] 3. Extremely fat subjects. 4. Persons suffering from affections of the air-passages or pleuræ, with but slight embarrassment to respiration. 5. Morbus cordis, with feeble or irregular cardiac action (including fatty degeneration of the heart). 6. Extreme abdominal distension. 7. Cases highly intolerant of ether. (A. C. E. best anæsthetic in above cases.) 8. Extreme asthenia; collapse; for example, neglected strangulated hernia. (Pure ethylic ether sparingly administered from a cone or towel best anæsthetic.) 9. All conditions causing such narrowing of the upper air-passages as to produce temporary or abiding difficulty in breathing, for example, tumours of the soft palate, aneurysm pressing upon the trachea, laryngeal diseases, etc. 10. Affections of lungs or pleura attended by dyspnœa or cyanosis, for example, advanced phthisis, empyema, pulmonary œdema in the course of morbus cordis. 11. Marked atheroma. 12. Advanced renal disease. (Chloroform, preferably diluted with alcohol, best anæsthetic in these cases.)

[1] Although nitrous oxide narcosis may be unattended by reflex movement, jactitation, and rigidity, these phenomena are liable to manifest themselves, more especially in strongly-built men, highly nervous and hysterical subjects, alcoholics, habitual smokers, children, and those undergoing operations upon the genito-urinary passages.

Mr. Braine's plan is the most satisfactory. He places the patient under ether (preceded by nitrous oxide), raises him to the sitting position with the head bent forward, and, having opened the mouth with a gag, permits the operator to have free access to the naso-pharynx. The blood and dislodged adenoid growth escape through the nose and mouth, and respiration is not interfered with.

[3] Generally speaking ether should not be administered to patients above 60 or 65 years of age; but if a brief operation has to be performed upon such a patient, and the latter is not markedly atheromatous or emphysematous, ether preceded by nitrous oxide may be safely employed.

[4] In many of these cases it is possible and desirable to give gas and ether to deep etherisation, and to leave the operator plenty of time for the operation; and in the event of the anæsthesia thus produced being insufficient, chloroform or chloroform diluted with alcohol may be subsequently administered through the mouth or nose by means of the tube of Junker's inhaler.

[5] In abdominal surgery chloroform possesses many advantages over ether, but considering the greater risk which attends the administration of the former agent, it is questionable whether these advantages should be allowed to influence the administrator in the choice of the anæsthetic. Respiration is much quieter under chloroform than under ether; the engorgement of the parts is considerably less than when the latter anæsthetic is used; and the tendency of the patient when emerging from the anæsthetic state to cough and strain is certainly less after chloroform than after ether. Opinions vary with regard to the relative frequency of vomiting after these anæsthetics; but it seems tolerably certain that, whilst chloroform and the A. C. E. mixture are less frequently followed by vomiting than ether, *obstinate* vomiting is most common in those cases in which chloroform has been employed. In conclusion it may be affirmed that, so far as the actual performance of the operation is concerned, chloroform possesses advantages over ether, but that the risk to the patient upon the operating table is certainly greater under the former than under the latter anæsthetic.

Note on the Administration of Anæsthetics during Labour, Passage of Renal Calculi, etc.—In these cases the A. C. E. mixture or chloroform (preferably diluted with alcohol) should be employed, and need only be administered till the relief of pain occurs, that is, until an analgesic effect is produced. If it should become necessary to use the forceps or perform other obstetric operations the patient should be placed under ether, unless contra-indicated.

views expressed, but with the hope that it may serve, however unworthily, to direct attention to a branch of therapeutics which has hardly received its due share of consideration.

NOTES ON LEPROSY AS OBSERVED IN ANTIGUA, WEST INDIES.

By JOHN FREELAND,
Government Medical Officer.

At this particular time, when leprosy is being brought so prominently forward in the medical and lay press of England, and the question is so frequently asked whether contagion takes any important part in the spread of the disease, I may perhaps be excused for wishing to record an experience of over thirty years in the observance and treatment of this most ancient and loathsome malady. And as such an authority as Mr. Jonathan Hutchinson has lately published notes on acquired leprosy, in which he states that there is far less divergence in professional opinion, and a far nearer approach to unanimity as to the cause of the disease than is generally believed, I take it for granted that his remarks represent, as near as possible, the opinions of the medical profession in England, where (owing to the rapid and easy steam communication which now exists between all parts of the world) imported cases for treatment or climate have lately become sufficiently numerous to give some weight and authority to the views which he so clearly expresses.

And, first, with regard to the disease. I have always recognised but two forms of leprosy—tuberculated and non-tuberculated; the mixed form being merely a combination of the two varieties, but with always such a decided and marked preponderance of the symptoms of one or the other that it may be easily recognised and classified.

It is by some considered that, in every form of leprosy, the specific poison (or bacillus lepræ, if you will) is usually deposited or finds entrance into the body through food in a certain state of decomposition, and that it may lie passive for years, or until it is perfected, or accidentally fructified, either by the entrance of another organism or through certain favourable circumstances by which it can only be rendered active; and it would appear that, so long as this agent continues dormant, it is not possible for its presence to be either recognised or suspected. So soon, however, as the necessary conditions are fulfilled and the poison set free, we have certain manifestations which depend solely for their character upon the locality where the poison is deposited; and indeed so marked and regular are those symptoms that we can at once foretell the particular form of leprosy which is about to be developed.

Tubercular lepra (or patches of hyperæmia) is always accompanied by pyrexia of a more or less marked character, and of such a decided nature as to indicate, or at least excite, suspicion in the mind of the experienced practitioner; but on this fever I shall not enter here fully, merely calling attention to its presence, and pointing out that all forms of leprosy are more or less ushered in, nourished, and fully developed by successive febrile exacerbations as we find occurring in the subjects of elephantiasis Arabum, or big-leg, of the tropics—indeed, the great similarity of the febrile exacerbations with which tubercular leprosy and the last-named disease are ushered in and accompanied has always appeared to me very striking. The eruptions or leprous spots peculiar to both varieties of leprosy are also very characteristic, and in their early stages unquestionably hyperæsthetic, although they may afterwards become, although not invariably, perfectly anæsthetic.

When this eruptive or spot-patch stage has existed for some months, and has at intervals during that period been accompanied by febrile exacerbations, we know that the disorder is progressing; or the disease may at this stage be suddenly arrested, the febrile paroxysms lessening or entirely ceasing, and the patient becoming gradually able to resume his ordinary occupation—retaining, however, unmistakable spots, mappings, or even local paralysis, which, although disfiguring, tend in no marked degree to lessen his powers or debar him from his ordinary pursuits.

This unaccountable arrest in the development of the lepra poison, which sometimes occurs both in tubercular and non-tubercular leprosy, and without which the malady would in the one case run on to tuberculation and ulceration, and in the other to extensive destruction, sloughing, and necrosis, is certainly very remarkable, and would appear at first sight to depend solely upon the non-appearance of the febrile paroxysms; for lepra poison, like that of elephantiasis Arabum, although it may lie dormant in the system, can neither make progress nor go through its various stages unless accompanied by successive febrile exacerbations; these exacerbations may, however, be so slight in non-tubercular leprosy as to be hardly noticed, but, if looked for when the disease is extending, will generally be recognised by a slight increase of heat following upon a marked and diminished temperature, attended also perhaps with only a little nausea and headache. In other instances, particularly when the tubercular symptoms predominate, the fever and its accompaniments may run high, with even a temperature of 105°.

The old island doctors who practised among the slaves many years ago used to say that the factor which developed or fructified the lepra poison from a dormant into an active agent was a specific fever, with successive paroxysms, extending over long periods; and at each exacerbation the poison was deposited either in the true skin (tubercular leprosy), or in the substance of the nerves (non-tubercular leprosy), and that the disease became intensified only in proportion to the continuance and degree of the febrile paroxysms. These good men, however, might possibly have attributed effect to cause, and *vice versâ*.

On the subject of contagion I certainly agree with Mr. Hutchinson when he says that the profession divides itself into two camps, one asserting contagion, and the other denying it; but I think that the contagionists, or those who believe that contagion takes an important share in the spread of the disease, are, in this part of the world at least, in a decided minority. No one, I imagine, would absolutely deny that contagion might be artificially effected by inoculation, but the chances of such an event happening accidentally are so remote that it can hardly be taken into account.

The risks of contamination, as Mr. Hutchinson points out, are far other than those of contagion, and in these islands are considered and proved by experience to be only lengthened or prolonged contact, which includes[1] eating with, wearing the clothes, sleeping in the same bed, breathing the same air for months, continued cohabitation, as well as washing the clothes or ulcerated surfaces of these unfortunate people for any lengthened period. And when a gentleman of such high attainments and experience as Mr. Hutchinson says: "We admit lepers into our hospitals and observe no precautions; we allow them to mix freely with their relatives, and permit leprous husbands to continue cohabitation with their unaffected wives, and no ill results ensue;" that there has not been in England within his knowledge a single instance of even suspected contagion, and that he has never seen a patient in whom the disease had not been acquired during residence abroad;—when I read such statements, and couple my experience with so high an authority, calling to mind at the same time leprous patients sent to London for advice and climate, who have continued for years residing in the same house, breathing the same air, and in more than one instance sleeping in the same bed with their English relatives, without propagating the disease, I feel borne out in my long-expressed opinion that cases sent to Britain for treatment seldom or never spread, even by the means which I have already related as acknowledged factors in this part of the world.

The question, then, arises, Does the leper poison become less virulent for want of something when it is removed from the surroundings in which it originated; or are the persons with whom the leper is sometimes (nay, often) thrown in contact after he leaves his home and country less susceptible of the poisonous influence? I feel convinced that the close and constant contact of the diseased with the healthy, such as I have described as frequently occurring to my certain knowledge in England, would as surely propagate the disease here as it appears unlikely to do there.

When leprosy was common throughout Britain, it was then, no doubt, quite as likely to spread there under the same conditions as we now consider it likely to spread here; but Britain is no longer the abode of leprosy; the necessary fertilising agent has apparently died out, for we see imported cases arrested at every stage; we see the leprous and the healthy living together and sleeping together for years without any ill effects following; in fact, the disease, as now seen in England, cannot be propagated or spread. The fertilising agent died years ago, and imported cases make little progress there, only retaining those character-

[1] The natives or negroes, as a rule, do not use knives or forks, but dip their fingers into the food.

istic signs of leprosy which they brought with them from a leprous country.

Mr. Hutchinson goes on to say, as leprosy can begin without inheritance, is not associated with poverty, dirt, climate, or hardships, and is, besides, with the utmost difficulty contagious, "he is driven to the conclusion that it must depend upon some very special kind of poison of rare occurrence taken in connection with food." Now there is unquestionably a great deal of truth in this statement, for, as he totally denies the possibility of leprosy being propagated in England even under the very exceptional circumstances recognised here, and which can hardly be called contagion, it leaves us to seek the true cause of the spread of the disease not only, as he says, in food, but in that particular kind of food which, although now entirely discarded, was formerly largely consumed by all classes in England. And may not that particular kind of food be some fish which has now entirely disappeared from British waters; or, like some of the fish still in our seas, which develop poison at certain seasons, and that poison rendered characteristic only when accompanied by decomposition?

The chief food of the negroes and lower orders here has been for generations past a salted fish called cod, but it might be anything else. It is imported from the United States of America. As health officer I can truly say that it does not always arrive or keep here perfectly sweet, nor did the effluvium from this food ever remind me very forcibly of the hay-fields of England.

INOCULATION AND VACCINATION FOR SMALL-POX AMONGST THE CHINESE.

By JAMES CANTLIE, M.B., C.M., F.R.C.S.,
Hong Kong.

The question of vaccination is apparently exciting attention in England just now; and that the anti-vaccinators are obtaining a hearing from the fact that a Royal Commission is at their instance to investigate matters, it is evident that an important scientific expedient is upon its trial. As all eyes are upon the question, it may be interesting to know what is going on on the other side of the world amongst a people who have known and practised inoculation for many centuries, and to whom also vaccination has been made known by foreigners for nearly 100 years.

In this article the following significance is attached to terms: (1) Inoculation means the direct infection of small-pox; (2) variolous lymph means material gathered from a person inoculated; (3) humanised variolous lymph refers to lymph gathered from a person through whom variolous lymph has passed; (4) active and passive humanised variolous lymph are terms meant to indicate the degree of power in lymph so named.

Inoculation.—Inoculation has been practised amongst the Chinese from dim antiquity, and its origin is lost in mythical genesis. At the present day, as from early times, three methods of the artificial production of small-pox are practised: (*a*) The scab from a dried small-pox pustule, after being pulverised, is blown up the nostril. (*b*) The clothes of a person suffering from small-pox are worn by the person to be infected. (*c*) The matter from a small-pox pustule is inserted beneath or on the abraded skin. By a mucous membrane, by the skin, and by the circulatory system directly sums up the category of the process of inoculation. The result in every case is similar—provided the process takes—except that in the last mentioned a special local pustule is developed in addition to the general eruption of pustules over the body, and it is from these special local pustules developed at the seat of inoculation that variolous lymph is gathered for further infection.

Inoculation is only practised when an epidemic of small-pox is actually in the midst of a community; at other times it is impossible to get the Chinese to listen to the benefit of preventive measures. This is only a further proof of the semi-civilised form of Chinese government and their empiric attempts at science. But inoculation is a rare event, and it is only when the supply of humanised variolous lymph has run out that the process is reverted to. In the community of Hong Kong, even when native—that is, humanised—variolous lymph is no longer available, the vaccinators (Chinese doctors) will fall back on vaccine matter as supplied by foreigners rather than employ inoculation. It will therefore be readily seen that the same humanised variolous lymph may be used for years—may, in fact, have been at Hong Kong when the place was first taken by the English nearly fifty years ago.

We have no knowledge from careful inquiry amongst the very oldest Chinese doctors—and some of their experiences date from the peopled history of the island—other than that they are dealing with the lymph then introduced. In fact, what is now being used is passive, not active lymph. The power of lymph is known to behave as do ferments; and as with ferments, so there is a history of increased activity, gradually tending to decline, and finally to a loss of fermentation power. From what is observed as to the protective power of humanised variolous lymph, this process of activity and passiveness is the only possible explanation to be advanced to explain the enormous prevalence of small-pox amongst the Chinese. When a Chinaman is asked if he ever has had small-pox, he answers, "Not yet," implying thereby his likelihood of catching it. He regards small-pox, in spite of all his professed practice of inoculation, as we do measles.

In Hong Kong in November and December, 1887, and January and February, 1888, there prevailed one of the worst small-pox epidemics ever known. Suffice it to say that there were "known" to have died of small-pox in Hong Kong in the month of December, 1887, as many people as died in Britain during the whole of 1887. The population of Hong Kong is but 200,000, that is, about the size of the town of Hull. Moreover, there was an epidemic in at least two large towns in England during that year.

What inferences are to be drawn from this statement?—

1. That the preventive measures against small-pox, though believed to be known and practised amongst the Chinese, are neglected.

2. That the lymph they are using is passive, humanised, variolous lymph, that is, lymph which, though fit to raise a bastard pustule, has lost the power of protecting the subject against not only catching small-pox, but that it renders no protection against a fatal issue.

3. That preventive measures used in the height of an epidemic, at any rate as attempted by the Chinese, are useless to stay the death-rate. All this is easily understood when it is remembered that in Hong Kong they may be using lymph derived from its parent source fifty years ago.

4. Reinoculation — what we call revaccination — is never practised; and from what we know of infant vaccination it would seem to confirm the belief that a single insertion in infancy is valueless for adult protection.

Vaccination.—Vaccination amongst the Chinese, at any rate in Southern China, has been practised since the end of the last century. The East India Company brought vaccine matter from India to Macao (a Portuguese settlement at the mouth of the Canton river), and vaccination was practised upon the Chinese there, and in Canton. Whilst a small-pox epidemic prevailed, which it did with more or less severity annually, there was no difficulty in getting subjects; but when the scare was over the Chinese did not see the necessity for vaccination. Lymph became exhausted now and again, and a fresh supply had to be obtained. This fresh supply was obtained from India or from Manilla. Manilla, the farthest outpost of Spain, was in the early days more in touch with the Pacific shores of South America than with the Asiatic littoral, so much so that vaccine virus was conveyed from South America to Manilla to replenish the played out stock there. A long, long way to reach its destination was the precious fluid carried. From Spain across the Atlantic, and then across the broad continent of South America and over the treacherous Pacific, was the route chosen, without steam to aid its advance, and the dense jungle tracts impeding its reaching its destiny. Such was the belief, however, in the efficacy of vaccine matter as a preventive of small-pox, and such the care of His Most Catholic Majesty for his distant subjects. The lymph was many times freshened on the way by reinsertion, so that by the time it reached Manilla an active lymph was obtainable. From the two sources enumerated was vaccine lymph introduced, not only to Macao, but to Canton. We read that A-He-Qua, a Chinese vaccinator, was engaged in the practice of his art in the Hall of the British Merchants in Canton in the year 1800. Lymph was brought by the East India Company ships to replenish A-He-Qua's supply, enabling him to practise vaccination many years. By this method vaccine matter was introduced into Southern China, and the practice is now widespread.

Revaccination and Reinoculation.—As stated above, revaccination and reinoculation are not practised by the Chinese. During the epidemic of small-pox in Hong Kong, referred to above, only two adult Chinamen were, to my knowledge, revaccinated. These were educated

men of the most liberal type, but no such practice is thought of by the Chinese doctors or the public. Were we convinced that Chinese children were universally vaccinated we could have an excellent proof of the futility of infantile inoculation or vaccination for adult protection, as judged by the enormous death-rate. But whatever is the belief, it is a fact that vaccination is rather the exception than the rule, except when an epidemic is rife.

Vaccine Matter.—To Hong Kong vaccine matter is brought from England, and by each mail a certain number of tubes are imported. Vaccine when brought out during the winter and used at once is generally active and reliable, but if imported during the hot weather many tubes have to be thrown away. Instead of bringing lymph by the Red Sea route we are trying the Canadian Pacific route, and hope to get an improvement in our supply. The most reliable lymph met with here is the Japanese calf lymph. It is stored in fusiform-shaped tubes, and sealed with wax at each end. The Japanese authorities allow of the lymph being mixed with glycerine. It is thoroughly reliable, develops enormous scars, and causes much constitutional disturbance even in revaccination. We are also attempting the importation of lymph from India, but the experience of the Dutch in Java, who have already made the attempt, and are many days nearer India than we are here, does not favourably impress one with the possibility of success. My own attempts with lymph from India have not been successful.

THE MINERAL WATERS OF BRIDES-LES-BAINS.

By C. E. FITZ-GERALD, M.D.,
Folkestone.

The little town of Brides-les-Bains, in Savoy, possesses natural advantages unrivalled, or at any rate unsurpassed, by those of any watering place in Europe. I have long been seeking a spa which had at the same time a really active mineral water, an Alpine climate and scenery, and a good hotel. At Brides-les-Bains all these advantages are combined. The bathing establishment is situated in a beautiful but somewhat narrow valley, through which rushes the mountain torrent of the Doron, a tributary of the Isère. It is sheltered from the north by lofty wooded mountains, whose bases are covered with smiling vineyards, and their summits clothed with walnut-trees, sycamores, acacias, and pines; while at either end of the valley tower lofty, snow-clad mountains, which not only impart grandeur to the scene, but refresh the air by the cool currents which come from their glaciers.

Brides is essentially a bracing place. It is situated at an altitude of about 1,800 feet above sea-level, while the salt baths of Salins are some 300 feet lower down the valley. The best season to visit Brides is from the middle of May to the end of June, and again from the middle of August to the middle of September, when the climate is almost perfect, ranging from 65° to 70° F. It is, I think, a great mistake to go there, as the French do, in July and the early part of August, when the temperature is decidedly too hot. From noon till 2 P.M. it is often too warm for walking, and the patient may with advantage take a *siesta* after the midday *déjeuner*; but the mornings and evenings are deliciously cool, fresh, and invigorating, and there is none of that sultriness at night so often experienced in Continental towns, and which is so fatal to sound and refreshing sleep.

The waters of Brides may be described as mildly aperient, slightly alkaline and tonic; their more active ingredients are sulphate of soda, sulphate of magnesia, bicarbonate of lime, carbonate of iron, with a trace of iodine and arsenic. They may be compared with the waters of Marienbad and Carlsbad though, unlike the latter, they do not contain carbonate of soda; their action is at once tonic and aperient, and they are superior to many mineral waters in that they do not upset the digestion. On the contrary, they act on the bowels without griping; they favour the secretion of bile, soothe the mucous membrane, and improve the appetite. The waters issue from the source at a temperature of about 80° F., and should be taken in doses of about eight ounces on an empty stomach; it is well to let an interval of from ten to twenty minutes elapse between each dose. From two to four glasses *per diem* is usually sufficient to secure two or three loose, bilious evacuations. Their action is also mildly diuretic and diaphoretic; their analysis is as follows:

	Grammes.
Carbonic acid gas	0.1258
Silica	0.0340
Bicarbonate of lime	0.4032
„ magnesia	0.0230
„ protoxide of iron	0.0191
Sulphate of lime	1.7680
„ magnesia	0.5079
„ soda	1.2576
Chloride of sodium	1.9471
„ potassium	0.0899
„ lithium, Arsenic, Iodine	Traces.
Organic matter	0.0052
Total, per litre	6.1808

The taste of the waters is vapid, but not unpleasant; in fact, the patient soon comes to look forward agreeably to his morning drink. On issuing from the source the waters are quite limpid, but deposit a sediment of iron and lime after prolonged exposure to the air; when bottled, they remain for long periods unchanged, and bear transportation perfectly well. They seem to have a special action on the liver and portal system, and most certainly (in spite of all theories to the contrary) favour the flow of bile through the intestines. The Brides waters are an almost typical aperient, for, although certain in their effect, they are gentle and painless in their action, and, unlike many alkaline aperients, do not lose their effect by repetition; being also an excellent tonic, they improve the digestion, and exhilarate instead of depressing the spirits. They act admirably in all the Protean diseases resulting from the retention of uric acid in the system, notably in gout, chronic rheumatism, dyspepsia, gastric catarrh, and "Indian liver." In obesity their action is marked, and most beneficial; they appear to act partly by their purgative effects, and partly by stimulating the eliminative action of the liver and favouring oxidation.

Dr. Delastre, a highly intelligent resident physician, who has made a special study of the action of the Brides waters, claims that they have a special, and indeed specific, action in cases of diabetes.

A system of shampooing, similar to that of Aix, is practised at Brides, the treatment being also supplemented by the use of the powerful salt baths of Salins, which are situated some two miles distant. The waters of Salins-les-Bains issue from their source at a temperature of 95° F.; they are strongly impregnated with chloride of sodium, and also an appreciable quantity of iron and arsenic, and are highly charged with carbonic acid gas. They are used chiefly as baths, although they may be taken internally in certain conditions; they are suitable in cases of scrofula, anæmia, general debility, and chronic rheumatism.

The treatment at Brides may be described as "waters supplemented by baths;" at Salins as "baths supplemented by waters." Both places manufacture and export pastilles from the salts extracted from the waters, those of Brides forming an excellent laxative, far superior, to my mind, to those of Carlsbad; those of Salins consisting of carbonate of iron, arsenic, and chloride of sodium, are principally used in cases of anæmia and chlorosis.

One great feature of Brides—its speciality, indeed—is what is called there the "combined cure," that is, the administration of the purgative waters of Brides, supplemented by the bracing and tonic salt baths of Salins, a combination which will at once commend itself to the physician.

One great advantage which Brides possesses over most other watering places is the beauty, variety, and accessibility of the surrounding walks, drives, and excursions. The most delightful walks present themselves almost before one is well beyond the grounds of the Hôtel des Thermes (the hotel *par excellence* of the place); walks, moreover, suited to every capacity, from "the pottering around" of the gouty and rheumatic to the mountain climb of the athlete. You may stroll gently on over well kept paths, through lovely woods, and by the side of rushing torrents; drive along excellent roads to various interesting places, or to spots commanding extensive views; or make numberless mountain ascents. The flora and fauna, too, of the neighbourhood are calculated to gladden the heart of the naturalist from their beauty and luxuriance.

Why then is Brides, which combines all these great natural advantages, so (comparatively) unknown and unvisited by the English? Its scenery and climate are far superior to Carlsbad, or

indeed almost any other watering place, and it enjoys a great reputation with French doctors for its efficacy in the treatment of obesity and liver complaints.

The reason is not far to seek. Brides is somewhat inaccessible: one travels rapidly by express to Aix, but then comes a delay of two hours before proceeding by a small line to Albertville, whence one must take either the diligence or a private carriage to Brides, a drive of from three hours and a half to four hours and a half, through beautiful and romantic scenery. The railway is shortly to be opened as far as Moutier, a distance of only three miles from Brides, and the service of trains is to be accelerated, so this source of delay will be ere long ameliorated. In the meantime, the charges for carriage hire from Albertville to Brides, or for short excursions, are excessive, and prejudicial to the interests of the place.

Then, again, the bathing arrangements are not good; the baths are small, inconvenient, ill-managed, and primitive to a degree. There is not even a swimming bath at either place, although at Salins there is practically an inexhaustible supply of ferruginous, highly saline water at 95° F., which needs only a proper receptacle to become the finest natural saline thermal bath in Europe.

There is also an almost entire lack of amusement for young people—there is not even so much as a tennis-court in the neighbourhood. The prices for living are also high, and the hotel *cuisine* is neither adapted to a weak digestion nor so good as it should be. In both these respects Brides compares unfavourably with some other more accessible watering-places. All these are, however, minor drawbacks to the health-seeker; and I am convinced that Brides and Salins, with their really efficacious waters, their pure, bracing air, and their lovely scenery, have only to be better known in order to be largely visited by the English invalid.

To make Brides a success in the immediate future, capital must be expended on it; foolish attempts to make large profits in a short season must give place to a more enlightened policy, and Brides-les-Bains will then take the place she deserves in the front rank of mineral watering-places.

CLINICAL MEMORANDA.

GUMMATOUS GROWTH SIMULATING RUPTURE OF A MUSCLE.

During April I was consulted by J. B., aged 55, concerning a growth which, he stated, had suddenly made its appearance in the right hypochondriac region. On examination I found in the situation of the right rectus abdominis a fulness about two inches square. The upper border was well defined and sharp, and the hand could be introduced above it, whilst the lower extremity was less distinct, fading into the general substance of the rectus. The patient was positive that the fulness had arisen suddenly, and added that he had been lifting heavy weights lately. The history and general characters of the growth pointed to a rupture of the rectus muscle, but the symmetry and unimpeded facility with which the abdominal parietes could be contracted rendered this highly improbable. On careful questioning I elicited the fact that he had formerly served in the army, and whilst in India, about sixteen years ago, had contracted a sore on the penis. With the characteristic indifference of his class, he did not appear to have observed any constitutional symptoms, but his wife, to whom he was married shortly after his return from abroad, had had a succession of miscarriages and one dead child. On this I decided to place him on iodide of potassium, and after a week's treatment with full doses the growth had sensibly diminished, although the upper border was still as defined as ever. The after-progress of the case presented nothing unusual, and the steady decrease of the growth under the iodide proved it to have been a gumma occupying one of the quadrilateral segments of the rectus. The situation being somewhat novel, I have thought the case worthy of record from a diagnostic point of view.

Alexander T. Scott, M.R.C.S.

Parkhurst Road, N.

IMPACTION OF A SPLINTER OF GROUSE BONE IN THE ŒSOPHAGUS.

The impaction and retention of foreign bodies within the folds of the gullet are not infrequent, and therefore do not perhaps call for special notice; but as the consequences of their retention may, from a variety of causes, prove serious, and even fatal, and as their removal is not always readily effected, the following case may be worthy of record.

Mrs. A., a lady of medium build and stature, called on me on the evening of September 6th, stating that whilst eating some grouse at dinner, a quarter of an hour previously, she felt an uneasy sensation in her throat, as though something was sticking there, and that she thought she must have swallowed a piece of bone; she took a copious draught of water, hoping to dislodge it, but without effect; accordingly, being a stranger in the locality, she went to the nearest chemist, and was sent on to me.

On inquiry, she complained of a sharp pricking pain in her throat, at a point a little below the sternal notch, with a sense of constriction across the top of the chest, aggravated by deglutition or talking. Examination of the pharynx revealed nothing; the call for relief was pressing, and, as the depth of the foreign body precluded all hope of extraction by forceps, I placed her in a chair, before a good light, and proceeded to introduce an expanding probang, which passed without material resistance or movement on the part of the sufferer; and having got, as I thought, well below the foreign body, whatever it might be, I then expanded the probang and steadily withdrew it; this operation happily entangled the piece of bone and brought it into her mouth, together with a fragment of cress which apparently had been swallowed with it. Immediate relief was experienced; the lady took a draught of water to test the freedom of the gullet, which proved to be quite clear, and suffered no further inconvenience.

Experience assures me that some of the chief elements of success in such and similar cases are a quiet determination on the part of the patient to assist the operator, the early treatment of the case, and the passage of the probang well below the foreign body before any attempt at extraction is made.

Arthur E. T. Longhurst, M.D.

Wilton Street, S.W.

SURGICAL MEMORANDA.

CASE OF RECURRENT PERITYPHLITIS SUCCESSFULLY TREATED BY ABDOMINAL SECTION.

Early in August, I was asked by Dr. Leslie Phillips to see with him in consultation a patient of his, aged 27, who had suffered from recurrent attacks of perityphlitis since last Christmas. They were of more or less severity and duration, and occurred on the following dates in the present year: from February 1st to April 4th, from May 8th to about the 12th, July 11th till August 16th—the last attack being the most severe. In each case the characteristic egg-shaped tumour was present, and increased during the acute stage of the attack and diminished during the quiescent period. When I saw him it was in its quiescent condition, but distinctly marked. I agreed entirely with Dr. Phillips's diagnosis of perityphlitic suppuration, and concurred with his recommendation that it should be dealt with by operative interference. On August 20th, the patient was put under an anæsthetic by Dr. Leslie Phillips, and, assisted by Drs. Arthur Johnstone and Robert O'Callaghan, I made an incision over the cæcum, about three inches long and about an inch from the anterior superior spine of the ilium, dissecting carefully down till I opened a suppurating cavity on the outside of the cæcum. This I thoroughly washed out with plain water, and then, in tracing the indurated mass into its elements, I discovered the vermiform appendix, swollen to about three times its normal size and very hard. Dissecting the adherent tissue from its base, I became impressed with the belief that it contained a foreign body close to the opening into the cæcum. I slit open the vermiform appendix, about half an inch from its free end, and gave exit to a small quantity of purulent fluid. I then passed a celluloid catheter, about No. 6 size, through the opening in the appendix as far as it would go. I found it was arrested just at the point where it seemed to me the canal was occupied by a foreign body. Gentle manipulation, with a little pressure, forced this foreign body into the cæcum. I left the catheter in the canal of the appendix. During the dissection the peritoneal cavity had been opened, and the next thing to do was to close this by stitching the free margin of the cæcum to the edge of the peritoneum at the rent. I then placed a piece of drainage-tube in the deepest loculus of the abscess, and closed the wound round the drainage-tube and the catheter. The catheter was removed by Dr. Phillips on Aug. 23rd, and the drainage-tube on the

26th. The wound healed rapidly, and the patient made an admirable and uninterrupted recovery.

I have twice in cases very similar removed the vermiform appendix, finding it thickened, swollen, and suppurating; but, though both my cases recovered, I am disposed to think that the risk of the operation is somewhat increased by this detail, and the satisfactory result in the present instance leads me to believe that it may be altogether unnecessary. Certainly I shall continue to follow the new plan of opening the appendix, and draining it independently, until I find some reason to revert to my former practice of removing it. I may say, that the foreign body which I believed had been contained in the vermiform appendix was never found, although carefully looked for.

Birmingham. LAWSON TAIT, F.R.C.S.

CASE OF EXTRAORDINARY ABDOMINAL INJURY.

AN extraordinary abdominal injury occurred at Clondalkin, a few miles outside Dublin, during the haymaking season last summer. A man, aged 22, was working at the construction of a hayrick, and, instead of taking advantage of a ladder laid against the rick for descent, slid down the side of the rick. Making an effort to clear the back of the rick he alighted on the handle of a pitchfork which was stuck upright into the ground about two feet from the base of the rick. The handle entered his perineum, lacerating it to its full extent. With an effort he got off the pitchfork and walked round to the other side of the rick, when he fell down in a collapsed condition. He was then conveyed to Dr. Steevens's Hospital, where he was attended to by Dr. Myles, who washed out the wound in the perineum and found the sphincter ani completely lacerated and the lower end of the rectum "in a pulp," as he expressed it, the fæces escaping involuntarily with clots of blood. He could discover no laceration into the abdominal cavity. On examination over the abdomen a peculiar splashing sound was elicited in the right iliac fossa, and the abdominal muscles were found board-like in their rigidity. At 6 P.M. Dr. McCausland and I made a further examination, and found urine escaping from the bladder mixed with blood. A known quantity of corrosive sublimate solution was injected into the bladder, which returned immediately in its entirety, negativing any communication with the perineal wound. He continued every five or ten minutes passing urine intimately mixed with blood; there was no ecchymosis in the loins, no pain felt down the ureters, nor anæsthesia in the upper part of either thigh. The patient rallied somewhat from the shock under the influence of opium, but died at 4 A.M. next morning. On *post-mortem* examination the abdomen was enormously and uniformly distended with gas, and decomposition had already set in. Although the examination was made within twenty-four hours of death *rigor mortis* was well marked; the perineum was lacerated from the central point to the coccyx. On incision an enormous quantity of gas escaped, the omentum and small intestines were found covered with a thick layer of fæces, and a considerable amount of fluid was found in the pelvis (probably introduced in washing out the perineal wound). The small intestines were bruised and congested in several places; all the organs were congested and scattered here and there; over the visceral peritoneum of the intestines were little spots of adherent lymph, as though a certain amount of reaction had taken place before death. On examination of the kidneys the left was found lying in a huge clot of blood in a lacerated and bruised condition; the rectum was lacerated in a longitudinal direction to the extent of 2 inches in its first stage close to the brim of the true pelvis on its left side. The ureter, bladder, and prostate were uninjured.

This case is interesting in many particulars. In the first place the handle of the fork, which I presume was straight, totally disregarded the direction of the various anatomical stages of the rectum and passed throughout the viscus to its entire length without actually rupturing it. Secondly, the fact that the man got off the fork, leaving it in very much the same position, according to the evidence of an eye-witness who swore to it at the coroner's inquest. ARMSTRONG H. S. TODD, M.B., B.Ch., B.A.O.Dub.,
House-Surgeon, Monkstown Hospital.

NON-OPERATIVE TREATMENT OF FRACTURED PATELLA.

THE following case illustrates the results that may be attained by the non-operative treatment of fractured patella:—

On the night of July 11th I was called to attend R. G., aged 22, who when attaching a rope to the side wall of a house, and when partially under the influence of drink, fell to the ground, alighting on his left knee, the distance being about 27 feet. On examining the joint I found it greatly swollen and contused, the limb being fixed in a semi-flexed position, and any attempt at extension being attended with severe pain. I at once detected that there was extensive fracture of the patella. On closer examination I discovered that there was a comminuted fracture, the patella being smashed into three different segments. After having the patient removed to his own house, I first directed my attention to the local inflammatory mischief, and to this end I put on a back splint and applied leeches, and followed this up by an evaporating lotion. After a few days I was enabled to bring together the three separate pieces of the patella; this I did by means of broad strips of adhesive plaster placed in different positions around the joint. I then put up the injured limb in a M'Intyre's splint, and kept it in this apparatus till August 4th, when I removed it, together with the strips of adhesive plaster, and applied a plaster-of-paris bandage extending from the ankle to high up on the thigh. I allowed the patient to hop about with the use of a stick; and when I removed the bandage, after being on five weeks, I was gratified to find that there was perfect bony union of the fragments and a fairly movable joint. I told the man to keep moving about, and to use gentle passive motion twice a day. I saw the patient from time to time, and observed that he was steadily and gradually regaining the perfect use of the joint in all its movements. At present there appears to be no defect whatever in the joint—neither lameness nor stiffness. And the man informs me that when at work "it is as strong as the other, and neither pain nor ache in it."

In this case I cannot say what lesion (if any) the ligament within the joint sustained, but I think the results prove that in some cases we may hope for, and expect to have, useful limbs without exposing the patients to the additional risks and dangers in every case of opening up the joint for the purpose of wiring together the fragments. Should such a state of things exist in any case of fractured patella as to require wiring the fragments, the plan recommended and practised by Mr. Myles, an account of of which is given in the JOURNAL of March 16th, will commend itself in preference to the severe proceeding of exposing the joint.

R. D. PATTERSON, L.R.C.S.I., L.K.Q.C.P.I.

Caledon, Co. Tyrone.

AN UNUSUAL DISLOCATION.

AT midnight, on June 12th a man was brought to my house, who, as he expressed it *vid* the window, "had turned his foot round." He was able to hobble in, and could bear a little weight on the injured foot. On examination his foot presented a most curious aspect; it was, as he had described, turned completely round; the posterior aspect of the os calcis passed from under the articular surface of the tibia, and the whole foot pointed in directly the opposite direction to that it should have done. About three inches of the fibula, which were broken off, were twisted behind the tibia. Reduction was effected by a moderate amount of traction accompanied with a rotatory movement, the foot coming into a right position with a rather unpleasant sort of scrunching sensation. The application of splints completed the treatment. The accident was caused by the foot slipping when carrying a bag of meal on his back.

Dislocations of the ankle are not common. This, I apprehend, was an exaggerated form of the outward dislocation.

Boreham, near Hastings. A. R. BARNES, M.B., etc.

OBSTETRIC MEMORANDA.

TWIN LABOUR: HÆMORRHAGE FROM DETACHED PLACENTA.

MRS. M., aged 29, primipara. The husband of the woman came to my surgery at 2.30 P.M. with the message that his wife was flooding profusely, and believed that she would be dead before I should arrive. I inquired if the child was born; he replied, "No." I at once concluded that it was a case of placenta prævia, so started off at once. On arriving, I found the patient alive and that is all; she appeared to be in a state of shock, almost pulseless and cold. I ordered a small quantity of brandy to be given. I then made an examination, and found a head presenting and the

uterus sufficiently dilated to introduce the instrument; but, before doing so, I considered what would be my best plan of treatment—wait until she rallied, or deliver at once. The balance of thought favoured delivery at once. If I had waited for the patient to rally, the hæmorrhage would continue, owing to the uterine contractility ceasing; and knowing full well that the source of hæmorrhage came from a detached placenta, or a portion of it, so that to wait would be no benefit, and very likely place the life of the patient in jeopardy, I at once delivered with the instruments. The child was stillborn. The placenta was at the mouth of the uterus. I removed that, but, finding the abdomen still large, I suspected another child. Such was the case. I ruptured the membranes and turned at once, as everything had to be done by the help of the hand, owing to the uterine inertia. The second child was born alive, is living, and is likely to live. I waited for an hour after all was over, giving small quantities of milk and brandy frequently. The pulse at the wrist could now be distinctly felt. I now left the patient for the space of seven hours with orders that the brandy should be continued. At the end of the seven hours I again visited the patient, and found her much better. She was now able to respond to any question put to her, and I believe she will now improve hourly, and be in a fair road for recovery.

The points of interest in this case are: The hæmorrhage before the birth of children; first child stillborn, owing to a detached placenta; the second child born alive, where the placenta was attached, in spite of the mother being in a bloodless condition; two separate after births. I report this case at length, thinking it may be of use to my fellow practitioners how to act when similarly placed as I was, when no second opinion could easily be got, which is a great boon to town practitioners.

R. T. E. Davies, L.R.C.P., M.R.C.S., L.S.A., etc.
New Tredegar, near Cardiff.

REPORTS

ON

MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

ST. MARYLEBONE INFIRMARY.

FIVE CASES OF LOCOMOTOR ATAXY TREATED BY SUSPENSION.

(Under the care of Mr. John R. Lunn.)

[Reported by Lewis Hickey, M.B., Second Assistant Medical Officer.]

The following five cases have been treated in the infirmary during the present year by suspension. We were indebted to Dr. de Watteville for a valuable demonstration in this method of treatment. They were suspended from the chin and occiput; arm straps were only used in raising the patient off the ground. In one case only, W. A., were any favourable results obtained, and in only one case were medicinal remedies employed.

Case I.—W. A., aged 58, married, silversmith, was in the army eight years; had syphilis in 1856; temperate; has been greatly exposed to the wet. His father walked with an unsteady, jerky gait for some years before death, at 65. One sister died with hemiplegic symptoms at 28, and another from a similar disease at 35. Present illness commenced in 1882 with dulness of sensation in the feet and cramps in the legs.

On admission, he was a well-made, muscular man; gait very ataxic, and could only walk a few yards, and that with a stick; could not stand erect with his feet together; no anæsthesia, but blunted and delayed sensation in both legs below the knees: pupils equal, contracted, react normally; fundus normal; patellar reflex absent.

Suspended, June 7th, 40 secs.; 11th, 2 min.; 15th, 2 min.; 22nd, 2 min.; 27th, 3 min.; 29th, 3 min. July 2nd, 3 min.; 4th, 4 min.; 6th, 3 min.; 9th, 3 min.; 11th, 3 min.; 13th, 3 min.; 15th, 1 min.; 16th, 1 min.; 18th. 1 min.; 20th, 1 min.; 23rd, 1 min.; 25th, 1 min.; 27th, 1 min.; 30th, 1 min. August 1st, 1 min.; 3rd, 2 min.; 6th, 2 min.; 8th, 2 min.; 10th, 1 min.; 13th, 1 min.; 15th, 1 min.; 17th, 1 min. All this time the patient was taking 15 grains of iodide of potassium daily. He improved remarkably, and on leaving could walk over half a mile without a stick; no change in ataxic character of gait or in the sensation of the feet and legs. Always experienced, after suspension, a sharp pain in the lumbar region of the spine, lasting about an hour.

Case II.—H. B., aged 57, painter, unmarried; has not had syphilis; has always been temperate; has not suffered from lead poisoning; has been exposed to the wet a great deal, and has carried very heavy weights on his head.

Present illness began in 1875 with pain across the lumbar region and in the thighs, followed after about eighteen months by unsteady gait. He has been a patient here for four years. Before suspension he walked with difficulty; ataxic gait; could not stand erect with his feet together and eyes shut. Patellar reflexes and ankle-clonus absent. Argyll-Robertson pupils. Loss of control over bladder and rectum. Has severe lightning pains in the legs, but no gastric crises. No anæsthesia.

Suspended, July 15th, 1 min.; 18th, 1 min.; 20th, 1 min.; 23rd, 1 min.; 25th, 1 min.; 27th, 1 min.; 30th, 1 min. August 1st, 1 min.; 3rd, 1 min.; 6th, 1 min.; 8th, 1 min.; 10th, 1 min.; 13th, 1 min; 15th, 1 min.; 17th, 1 min.

Noticed no improvement at all in any symptom; complained of a giddiness lasting some hours after suspension.

Case III.—L. M., aged 45, needlewoman, married twice. Has not had syphilis. Temperate. Has not been exposed to wet. Was frequently and seriously ill-used by her husband. No important family history. Present illness began in 1884 with shooting pains in the legs, followed after a few months by girdle pains and vomiting. She had been under observation since 1887. A thin, spare woman, with ptosis on the left side (appeared during a gastric crisis). Walks with an ataxic gait; cannot stand with her feet together and eyes shut. There is anæsthesia of both legs and thighs, upper part of chest, parts of the face, and in the hands and arms. Patellar reflex and ankle-clonus absent; plantar reflex diminished. Pupils equal, contracted, and do not react to light or accommodation. Fundus normal. Has severe gastric crises and lightning pains. No urinary troubles.

Suspended, May 10th, 30 secs.; 13th, 30 secs.; 14th, 40 secs.; 16th, 2 min.; 20th, 3 min.; 27th, 2 min.; 28th, 3½ min.; 29th, 4 min. June 5th, 3 min.; 7th, 3 min.; 10th, 3 min. July 31st, 1 min. August 2nd, 1 min.; 5th, 1 min.; 7th, 1 min. A severe and prolonged gastric crisis interrupted the treatment, and the patient wished not to recommence it. as she experienced no improvement.

Case IV.—F. S., aged 73, newsman, married. Has not had syphilis. Temperate. Had a severe fall in 1850, which resulted in some paresis of the legs, but which quite disappeared, although he never felt able to walk as far after the accident as he had been accustomed to before. Present illness began in 1878, when he noticed some tingling of the legs, and that, a little later, the ground felt soft. In the same year he suffered from lightning pains and gastric crises. He has been under observation eight years. Before suspension he was quite unable to walk except by holding on to a chair. Muscular power in both legs fairly good. Unable to tell what position his legs are in. Cannot stand erect without support. Sensation is blunted and retarded below the knees. Patellar reflex and ankle-clonus absent; plantar reflex diminished. Argyll-Robertson pupil. Retention of urine. Has lightning pains, and gastric crises well marked.

Suspended, July 27th, 50 secs.; 30th, 1 min. August 1st, 1 min. Patient wished not to continue the treatment, declaring that after suspension he felt nervous and had less confidence in himself than before. During suspension he complained of pain in the left flank.

Case V.—H. G., aged 52, painter, married. There is a strong family history of phthisis; has not had syphilis; temperate; has suffered from lead poisoning. Met with a serious accident in 1879, falling thirty feet; no bones were broken, but he was badly bruised about the hips. Present illness began four years after the accident with unsteadiness in walking, numbness of the soles of the feet, and great difficulty in turning quickly. Has been under observation six years. Condition before suspension: Quite unable to walk; there is some muscular wasting, especially in the right leg. Argyll-Robertson pupils; fundus normal. Patellar and plantar reflexes absent; no ankle-clonus. Anæsthesia in both feet and legs, more so in the right than left. Suffers from incontinence of urine, gastric crises, and lightning pains.

Suspended, July 23rd, 1 min.; 27th, 1 min.; 30th, 1 min. August 1st, 1 min.; 3rd, 1 min.; 8th, 1 min.; 10th, 1 min.; 13th, 1 min.; 15th, 1 min. During suspension the patient complained of a sharp dragging pain in the left side of the chest, and, after suspension, of a pain across the lumbar region lasting some three or

four hours. There was no improvement in the urinary trouble or in the muscular power. The lightning pains were not lessened.

CROYDON INFIRMARY.

ABSCESS OF LUNG: PARACENTESIS: RECOVERY.

(Under the care of PRIDEAUX SELBY, M.R.C.S.ENG., L.R.C.P.LOND.).

C. H., aged 26, a carpenter, was admitted on December 12th last year with pain in the right side of the chest. History of a blow a week before. Temperature on admission, 101° F. The pain was localised to a spot in the mid-axillary line over the fifth rib. Physical examination revealed nothing.

From December 12th to December 27th the temperature was of a hectic character, ranging from 103.2° to 98°. About December 20th a cough developed, with purulent, slightly fœtid expectoration, and on December 27th a small patch of dulness, with weak breath-sounds, was discovered three inches behind the point where the patient first complained of pain. This dull area gradually increased.

On January 1st, the temperature remaining hectic and the patient very rapidly losing strength and weight, an exploring needle was introduced in the mid-axillary line, with a negative result. This was repeated at a point three inches further back, with a like result. Feeling certain that pus was present, under ether an aspirating trocar was introduced to a depth of between two and three inches, and about 5 ounces of thick, intensely fœtid pus was drawn off.

Concluding that an empyema was present, on the following day, after consultation with Dr. Wilson, an inch and a half of the fifth rib was excised at the point where the pus had been drawn off. The pleural cavity was then opened, but no pus was found. The lung was fully expanded, but solid and hard; the surface was congested, and on introducing the finger, old adhesions of the pleura could be felt. It was, therefore, evident that the pus had come from the lung itself. The wound was sewn up, and healed by first intention.

For two days after the operation the temperature remained normal. The expectoration then became intensely fœtid; the temperature again became hectic, and well-marked bronchial breathing developed over the whole lower lobe of the right lung, the rest of both lungs being normal. On January 19th the expectoration began to diminish, and the temperature fell to normal. The patient rapidly gained flesh and strength, and was discharged well on March 22nd, no cough being present, and the rib entirely reformed.

STATION HOSPITAL, GIBRALTAR.

A CASE OF PRIMARY SARCOMA OF SUPRARENAL CAPSULES.

(By Surgeon ALLAN PERRY, Medical Staff.)

BY the courtesy of Brigade-Surgeon Warren, M.S., and Surgeon-Major Steele, M.S., I am enabled to publish the following.

C. M., aged 23, was admitted into the Station Hospital, Gibraltar, on June 4th, 1887; he had for some months previously complained of what he called "dyspepsia." His skin was muddy, although there was no distinct bronzing; he complained of great pain in the abdomen, which he referred to the region of the gall-bladder and to the pit of the stomach; there was distinct tenderness over the lower dorsal vertebræ; he had constant vomiting, occasional diarrhœa, and profuse perspiration; his temperature was slightly raised until the morning of the 14th, from which time until death it remained practically normal. He became worse after he had been in hospital a fortnight, and with the exception of sedatives, no treatment appeared to be of any use; he had attacks of extreme collapse, during which the pulse was very feeble and the skin clammy; all his symptoms were aggravated towards the end, and he died in a delirious condition on July 13th.

The above train of symptoms might very well have belonged to a case of Addison's disease and, but for the *post-mortem* examination, would most probably have been diagnosed as such. At the necropsy the only lesion found was enlargement of the suprarenal capsules, the right weighed a quarter of an ounce, and the left one ounce, the structure was firm; the cut surface presented a number of yellowish nodules, varying in size from a millet seed to a small nut. Those in the left suprarenal were largest, and in this there was a star-shaped opening on the anterior surface about the size of a sixpence, which appeared to be the result of the breaking down of one of those nodules.

The contiguous lymphatic glands were not enlarged, nor was there any deposit in lungs, liver, or other organs. Microscopic sections made through these nodules showed them to be made up of spindle-celled sarcoma.

Mr. C. Mansell-Moullin very kindly examined the sections for me, and considered there was no doubt as to their being sarcomatous; saying of the history of the case, that the disease "must have proved fatal not because of the sarcoma, but because of the place in which it occurred before it could effect any general change, which is very unusual."

REPORTS OF SOCIETIES.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF SURGERY.

FRIDAY, JUNE 7TH, 1889.

AUSTIN MELDON, M.K.Q.C.P.I., in the chair.

The Late Dr. Robert M'Donnell.—On the motion of Mr. H. G. CROLY, seconded by Mr. A. H. CORLEY, a resolution expressing sorrow for the death of Dr. Robert M'Donnell and condolence with his widow and family was passed.

Linear Proctotomy.—Dr. BALL defined the operation as the making an incision through the anus and rectum directly backwards to the coccyx and hollow of the sacrum. The following were the indications for its performance: (1) For the cure of non-malignant strictures of the rectum, in which gradual dilatation was impracticable or inefficient; (2) for the removal of growths situated high up in the bowel or in the hollow of the sacrum; (3) as a palliative measure instead of colotomy in advanced malignant disease; (4) as a preliminary step to amputation of the rectum. Dr. Ball brought forward cases illustrating the first two classes. Linear proctotomy could not be favourably compared with colotomy for the relief of obstruction due to malignant disease, but surgical opinion was in favour of adopting it as a preliminary to amputation of the rectum, and Dr. Ball had hitherto invariably practised it.—The PRESIDENT and Sir WILLIAM STOKES joined in the discussion.

Intestinal Obstruction.—Mr. W. THORNLEY STOKER read a paper in which he dealt chiefly with the treatment of those cases where the obstruction was owing to the paralysed condition of the bowel due to the accumulation of fæces or flatus. In this class of cases a lumbar operation was rarely indicated, and, owing to the extreme meteorism, laparotomy was usually a very fatal proceeding. He urged the adoption of other measures previous to any precipitate opening of the abdomen, advocating the employment of pressure and massage, and the judicious use of purgatives. Of these latter remedies he considered undue fear existed. Of belladonna, when pressed to its full effect, he spoke highly, and quoted cases in evidence. Local treatment by rubefacients he disapproved of, as he did also of opium, which he regarded as masking symptoms, and doing little or no good. Tapping the bowel with an aspirator needle or fine trochar he had found of great use where much tympanites existed. The "long tube" he considered a dangerous and useless engine.—The PRESIDENT, Dr. MYLES, Mr. CORLEY, Mr. FRANKS, Mr. WILLIAM STOKER, and Dr. DOYLE took part in the discussion, and Mr. W. T. STOKER replied.

SOUTHERN BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

THURSDAY, JUNE 27TH, 1889.

H. B. NORMAN, F.R.C.S., in the Chair.

Hot Air Inhalations in Pulmonary Tuberculosis.—Dr. ROBERTSON (Ventnor) gave his experience of this method of treatment, which he had been induced to try by a reference to it in the JOURNAL of March 30th. Four cases had been subjected to the treatment, but, from various causes, none of these had used the inhalations long enough to be conclusive on the merits of the method. In two cases the patients, after a few days, refused to continue the treatment, on account of the trouble, and because, as they said, they caught cold. For this latter complaint they had this justification that in each case some huskiness of voice showed itself at the commencement of treatment, but this passed off after a day or two, and was never of much importance. Another patient, suffering from basic phthisis and inter-arytenoid ulceration of the larynx, used the inhalations perseveringly for three weeks,

and had then reluctantly to desist, on account of aggravation of laryngeal discomfort. Neither cough, expectoration, nor pyrexia was markedly diminished during treatment. The bacilli appeared to be more numerous in the expectoration on the seventh and fourteenth days than at first, but the specimen examined on the twenty-first day of inhalation seemed in this respect to be much as before its commencement; they were still very numerous. Improvement in lung symptoms was noted as follows: *râles* were much less numerous, pleuritic pains had ceased to be urgent, and the percussion note over the base of the lung had become more resonant from the absorption of a little fluid in the pleural sac. There was rather less dyspnœa. After each inhalation the patient felt more comfortable—"lighter." There was, however, in the three weeks no gain in strength, and the anæmia seemed greater. In a fourth case the increase in the loss in pigment value of the blood examined in the early morning amounted to 5 per cent., by the Gowers method of estimation, after fifteen days' inhalation. This loss, however, was associated with slight increase in weight, and with amelioration in cough, and in pyrexia. The bacilli in this case, also, were as yet not less numerous. In no case was an increase in spirometric measurement noted. The duration of the inhalations varied from thirty to sixty-five minutes at a sitting. Inconclusive as these cases were as to the curative effects of this method of treatment, there appeared to be so far warrant for its extended trial, inasmuch as prolonged inhalation of air at a temperature of 250° C. was shown to be without any serious detriment and with some advantage in two cases of pyrexial disease.—Brigade-Surgeon GODWIN said that it was open to question whether a disappearance of the bacilli, if complete, would indicate more than the death of a particular crop of these organisms, which might be speedily replaced by development of the uninjured spores.

Cancer of Gall-Bladder.—Dr. HARMAN related a case. A woman, aged 38, came as an out-patient to the Royal Hants County Hospital on January 23rd, 1889, for pain in the epigastrium, of ten days' duration, with flatulence and diarrhœa. She had always had good health, but after some of her six confinements her legs had swelled. She next appeared on February 2nd, deeply jaundiced (which occurred suddenly five days previously), costive, and free from pain, though strong purgatives had been taken. She was admitted on February 6th, when the urine was found loaded with bile, stools light clay colour, and in the region of the gall-bladder was a small, tapering, very nodular, hard tumour, not very tender, moving with respiration, not distinct from the smooth liver, the nodules not intermovable, and causing no ascites or other pressure effects. It was elicited that for two or three years past she had occasionally been sick after meals, and for the last three months had a dull aching over the liver when she stooped down. She had never been conscious of passing a gall-stone. Dr. England performed abdominal section on February 22nd. The tumour proved to be scirrhus, springing from the portal fissure; no gall-bladder or gall-stones could be found, and only the duodenum seemed adherent. The wound, therefore, was closed. She rapidly recovered from the operation. On April 6th obstruction occurred, causing vomiting and vermicular movements of an immensely distended stomach; but, after rectal alimentation and treatment for a week, deglutitition returned. She gradually sank, and died on May 2nd. The necropsy showed that the cancer, now adherent to the abdominal walls, surrounded the gall-bladder; imbedded in several distinct cancerous cavities were twenty-three gall-stones, with cancer juice, not bile. The largest had a circumference of $6\frac{1}{2}$ centimètres, the next $3\frac{1}{2}$, and all had three well-marked facets, showing that they existed long prior to their being surrounded by carcinoma. No family history of malignant disease could be traced.

Gall-Stone.—Mr. WILKES exhibited a large gall-stone which had passed safely through the intestinal canal of a patient.

Radical Cure of Hernia.—Dr. ERNEST KINGSCOTE exhibited a patient upon whom he had performed the operation for radical cure of inguinal hernia. He thus described the steps of the operation which he recommended:—1. Make a very free incision in a horizontal direction above the hernia. 2. Then pull down the incised skin until the wound be immediately over the canal. (The wound's returning to its former position lessens the danger of infection.). 3. Dissect carefully down to the hernia, and detach chiefly with the fingers if matted together. 4. If omental, ligature and tie bit by bit (so as to avoid subsequent hæmorrhage), and amputate as you tie. 5. Put two strong ligatures through the transfixed stump of the sac, and thread them through the internal pillars. 6. Suture the internal ring with from three to four sutures of the strongest gut soaked in chromic acid to last a month. In some cases many stitches are necessary, as well as much force in the tying, so as to bring the internal pillars into close apposition. 7. Tie the stump to the internal aspect of the sewn-up internal ring. 8. Sew the whole mass up with many absorbable catgut stitches, and, having used plenty of solution and taken every antiseptic precaution, omit to put in a drainage tube. He also showed a second case, one of strangulated inguinal hernia, in which a similar process was adopted, with this exception, that the stump of the amputated sac was not attached to the wound, and consequently the result was not so favourable. However, he had been without a truss all the time, and was perfectly able to pursue his former occupation (blacksmith).

Antiseptic Artificial Drum.—Dr. WARD COUSINS exhibited a new antiseptic artificial drum. He stated that he had used it successfully in over 100 cases of middle ear disease. Each artificial membrane weighed less than a quarter of a grain. He described the process of manufacture (see JOURNAL, September 28th, p. 712).

Treatment of Varicose Veins by Injection of Carbolic Acid.—Brigade-Surgeon C. H. Y. GODWIN, Assistant-Professor of Military Surgery, Netley, read a paper on this subject. He said that for some years past he had treated varicose veins of the leg by the following method. The skin over the varix should be washed with a 1 in 20 carbolic solution, and the part covered up with lint wet with the solution for some hours before the operation. At the time of operation a hypodermic syringe should be selected, with a sharp and smooth-pointed needle; the syringe should be charged with pure carbolic acid, and all air bubbles excluded. The patient should stand up so as to bring the veins into strong relief, and whilst in that position an Esmarch's tube or bandage should be applied tightly round the thigh. The patient should then lie down, and the needle should be inserted into the vein, and half a minim of carbolic acid injected. This should be repeated in as many places as might seem requisite; ten or twelve might be safely made in a large varix. The tourniquet should be left on for ten minutes after the last injection; he usually allowed fifteen minutes. The only dressing required was a little pad of some antiseptic wool such as the sal alembroth, or salicylated wool applied quite lightly, and kept in place by a soft, light bandage. It was most easy to miss the vein, especially if the needle had a rough point. When the vein was missed, no blood followed the withdrawal of the needle, and a small suppuration in the connective tissue usually followed. On the other hand, when the vein was pierced, a spot of dark blood escaped when the needle was withdrawn. Coagulation seemed at once to commence; the vein could be seen becoming fuller, and soon it felt firmer to the touch, so that a clot could be distinctly felt before the operation was concluded. The patient should be kept in bed for a week or ten days. In choosing cases for this method of cure, he thought that a vein which had very decided clusters of varices was better suited than where the varicose vein consisted merely of a straight, long, dilated vessel. In such a condition the needle operation or excision was preferable. He had met with no accident or untoward circumstance in performing this operation; the results had in all cases been satisfactory. The procedure was comparatively simple, and no anæsthetic was required. Mr. Watson Cheyne, at page 119 of his work on *Antiseptic Surgery*, noticed this plan of treatment.

REVIEWS AND NOTICES.

TREATISE ON THE DISEASES OF WOMEN FOR THE USE OF STUDENTS AND PRACTITIONERS. By ALEXANDER J. C. SKENE, M.D., Professor of Gynæcology in the Long Island College Hospital, Brooklyn, New York, etc. H. K. Lewis. 1889.

IT is stated in the preface that "this book was written for the purpose of bringing together the fully matured and essential facts in the science and art of gynæcology, so arranged as to meet the requirements of the student of medicine, and be convenient to the practitioner for reference." As the work consists of fifty-one chapters, making 966 pages, we suppose Dr. SKENE does not intend his statement that "the discussion of all unsettled questions" has been omitted to be taken too literally.

In the first chapter, which deals with the methods of observation, we notice that the vaginal examination is described as pre-

ceding the examination of the abdomen, and apparently the author only considers the latter necessary when something abnormal has been detected by examination *per vaginam*, for we read "whenever the touch discovers anything abnormal, as a tumour, etc.....additional information can be obtained by abdominal palpation." On this point we think that, at all events in the case of students and those possessing little gynæcological experience, by far the safer plan is to make a careful examination of the abdomen before proceeding to the local examination. Observers who neglect to do so are pretty sure sooner or later to overlook conditions of importance, more especially pregnancy.

The author makes no mention of Fergusson's speculum, but relies solely on the instruments of Sims and Cusco. We cannot agree that "there are few who acquire the perfection of touch to guide the sound into the unseen uterus without using force," and we think in a work intended for the use of students, it would have been desirable to lay stress on the fact that if facility in the bimanual method of examination has been acquired, the cases are comparatively few in which the use of the sound adds much to the information already obtained. We are glad to see rapid dilatation of the cervix recommended in preference to dilatation by tents.

How far the author has omitted unsettled questions, and confined himself to the consideration of "fully matured and essential facts," may be gathered from the following extract from the chapter on Flexions of the Uterus, p. 58: "The effect of flexion on the uterine canal is to produce constriction or occlusion of the internal os.....The stricture thus formed gives rise to accumulations of the secretions of the uterine cavity and to partial retention of the menstrual products. The circulation in the uterus, as will be readily understood, is interfered with. The obstruction tends to keep up congestion, and this may eventually lead to œdema and a predisposition to endometritis and pelvic peritonitis." Every statement in the foregoing is a pure assumption, entirely unproved, and in the case of the supposed effects of flexion on the circulation of the uterus, what is stated has been abundantly disproved by anatomical researches. A little further on we read that "the subjects of flexion are very liable to pelvic peritonitis and diseases of the ovaries and Fallopian tubes, with all the suffering which these affections give rise to." This is comprehensive pathology with a vengeance.

In the chapter on the Anatomy of the External Organs the labia minora are described as being two small folds of mucous membrane, although it is generally recognised that they have the structure of skin. In a systematic treatise of this size we are surprised to find no account of lupus of the vulva.

The diagram on p. 115, intended to show the position of the uterus when the bladder is almost empty, is altogether misleading, as the uterus is represented as being separated by a wide interval from the bladder. In point of fact, as the bladder empties under ordinary conditions the anterior surface of the uterus descends more and more, keeping touch with the peritoneal aspect of the bladder. On p. 166 we read: "The patient was a married lady, who had anteflexion of the uterus, *which caused sterility*." The italics are ours. Dr. Skene here quietly takes for granted the causal relation between anteflexion and sterility, mentioning it incidentally as though it were a well-established thing about which there was universal agreement; whereas, in fact, no question has been more hotly disputed, and some of the best living authorities in this country hold views regarding it diametrically opposed to the author's.

There is a complete chapter on lacerations of the cervix and their treatment. We agree with the statement at the end of the chapter that "there are some points that remain to be settled by reliable observations regarding the results of the surgical treatment of these injuries," and we may add that the chief point to be settled is whether there is any sufficient justification for treating these "injuries" by operation at all. At present we are inclined to think trachelorrhaphy useless, and therefore unnecessary.

Speaking of electrolysis, the author says: "This method takes the highest rank among the means of treating fibroma of the uterus," and a detailed description is given of the Apostoli treatment. At present it is, we think, premature to give any decided opinion as to the real value of this mode of treatment. With reference to the physical signs of cancer of the cervix, we are surprised to find it stated that the offensive odour "is produced by nothing else but cancer." A gangrenous fibroid polypus certainly produces quite as offensive a discharge as any met with in cases of cancer. It is somewhat confusing to be told "that malignancy cannot be decided by the microscope," and then on the next page, in distinguishing between a benign papilloma and a cauliflower excrescence, to read that "at all events, the microscope will decide."

In the account given of ovariotomy, which occupies nearly fifty pages, though names are given, and the name of one great ovariotomist very frequently, we are surprised to find the name of Sir Spencer Wells is only once mentioned, and only then as holding an opinion from which the author differs.

Dr. Skene considers the expression "removal of the uterine appendages" most unsatisfactory, and proposes instead the term "tubo-ovariotomy." About one-third of the book is devoted to diseases of the urinary organs. Throughout we find numerous illustrative cases given, some of which are very interesting, notably one in which a pelvic abscess opened into a bronchial tube.

A TEXTBOOK OF MIDWIFERY. By the late OTTO SPIEGELBERG, Professor of Obstetric Medicine in the University of Breslau. Translated from the second German edition by J. B. HURRY, M.A., M.D.Cantab. Vol. ii. London: The New Sydenham Society.

THE issue of the second volume of SPIEGELBERG'S *Midwifery*, translated by Dr. HURRY, under the auspices of the New Sydenham Society, now places this valuable work, in a complete form, within the reach of the English reader who is not familiar with German.

The book is so well known that any detailed criticism on our part is unnecessary, but it may be useful to call attention to a few points, particularly those on which the author takes somewhat different views from what we are accustomed to in our ordinary English textbooks.

As an example of how scientific experts of equal eminence may hold diametrically opposite views about apparently simple things, we may take the influence of mental emotion on labour pains. The more general opinion is expressed in Playfair's *Midwifery* as follows: "The first effect of his (the practitioner's) presence is to arrest the pains that have been hitherto progressing rapidly, thereby affording a very conclusive proof of the influence of mental impressions on the progress of labour;" while Professor Spiegelberg writes: "I have never been able to discover the psychical influence on 'pains' which is so often spoken of in practice, but, on the contrary, have always been able to explain the influence referred to in other ways."

Speaking of pelvic deformities, the author says: "I do not exaggerate when I say that the study of pelvic contractions is at the present time the most important in, and constitutes a large part of, the science of midwifery. It is, however, mainly during the last generation that we have arrived at a due appreciation of this importance, and the credit rests almost entirely with German obstetricians," That this is so must be admitted; nor can it be denied that even in the popular English and French textbooks mentioned in the footnote pelvic deformities did not receive the attention they deserve, so much so, that too often it has been only on account of failure to effect delivery with the forceps that the attention of the medical attendant has been drawn to the existence of well-marked deformity. Things here have certainly improved since the appearance of Lusk's *Midwifery* (largely indebted, so far as relates to pelvic deformities, to German work), but much still remains to be done. Students should be taught the use of the pelvimeter in the gynæcological out-patient room; and, if attendance on midwifery cases is to have a scientific basis instead of being a mere waiting on events, callipers for taking the necessary measurements should be carried in the accoucheur's bag.

The article on "Puerperal Eclampsia" is singularly lucid. Conflicting theories as to pathology are considered, but without preventing our understanding what the author's own views are. The rules for treatment are plainly and concisely stated, and we observe that venesection is highly recommended in these cases. A very necessary warning is given regarding the use of pilocarpin in puerperal eclampsia, namely, as to the danger of the patient being suffocated by the accumulation of saliva and other secretions in the respiratory passages. We are acquainted with an instance in which a patient nearly died in this way; she was only saved by promptly turning her on her side with the mouth low so that the secretions could escape.

When it is necessary to apply perchloride of iron to the interior

of the uterus for *post-partum* hæmorrhage, the author recommends that only sufficient of the iron salt should be added to the water to give it a brownish-yellow colour, and condemns the use of the stronger solution advised by Barnes and others.

There is an admirable account of the measures to be adopted for the resuscitation of stillborn children, the methods of Schultze and Marshall Hall being preferred to that of Sylvester; and the advice given as to what *not* to do in these cases is especially valuable.

For prolapse of the cord the use of the hand is recommended in preference to any form of repositor, and it is pointed out that an attempt should be made to replace the *whole* of the prolapsed loop at once, instead of trying to push it up bit by bit, which so often leads to failure.

Part IV is taken up with the consideration of Obstetrical Operations. On page 527 there is a figure of a useful instrument for carrying a fillet round a leg in some cases of turning. We agree that "only very rarely will it be necessary, instead of turning, to remove the fœtus by embryotomy," though the contrary might be inferred from the frequency with which questions on decapitation, etc., appear at some of our pass examinations.

For the extraction of the aftercoming head the author rejects the Prague method, and approves that of Smellie and of Levret and Veit, while at the same time fully recognising that some of these cases require the forceps. As regards ordinary forceps operations, the opinion is given that "it is never advisable to remove the instrument before completing the extraction with a view to saving the perineum." We observe that the instrument usually known here as the cephalotribe is called the cephalothryptor on etymological grounds, for τρίβω means "I rub," and θρύπτω "I crush." The cranioclast, we notice, is defined as being "simply a traction instrument," unsuitable alike for breaking away the skull piecemeal, and for crushing it.

The account given of the Cæsarean section is, for obvious reasons, not quite up to date; but the reluctance evidently felt by the author to consent to the operation except as a matter of necessity may be usefully remembered at the present time, when there is in some quarters a tendency to err in the other direction.

It would be difficult to speak too highly of the book as a general textbook of midwifery; it is neither too long nor too difficult for the student, while the practitioner wishing to read up the authorities on some special point will find ample information of a practical kind. Dr. Hurry is to be congratulated on the way he has done his work. The book is commendably free from idiomatic indications of its foreign origin.

THE TREATMENT OF EPILEPSY. By WILLIAM ALEXANDER, M.D., F.R.C.S. London and Edinburgh: Young J. Pentland. 1889. Pp. 214.

THIS is an ambitious work, and characterised by the originality which stamps all Dr. ALEXANDER'S writings, but we venture to think that it will not greatly add to the author's high reputation. The scheme of the book consists in a preliminary sketch of the theoretical pathogeny of epilepsy, followed by a description of the attempts to prevent the occurrence of convulsions by removal of the superior cervical ganglion of the sympathetic; next, some chapters on the general treatment of the disease, and finally a chapter on its morbid anatomy.

Beginning with the last first, we fear that every one who has followed the progress of this subject in recent years will experience with us a sense of great disappointment in the records of the cases in which a *post-mortem* examination was obtained, for no attempt has been made to discriminate between the well-known and clearly-marked recognised types of epilepsy. The modes of examination of the nervous system seem also to have been very rough, and we consequently quite understand why the author says "that the morbid anatomy of epilepsy is by no means a constant quantity."

We fear the initial chapter in which the pathogeny of this trouble is discussed is scarcely of a higher quality. Theoretical views of old authors are mingled with records of old experimental observations, principally upon the physiology of the sympathetic nerve; and we are compelled unwillingly to disagree with the author when he states, on page 15, "that there is no lack of authority for my idea that the sympathetic nerve may have something to do with epilepsy, either as a cause or means of cure." Whatever may be the mode in which the general so-called idiopathic epileptic convulsion arises, each year brings more and more evidence against the old idea that it starts in the sympathetic nerve. However, we will turn to the principal point in the book, namely, the operation of removing the superior cervical ganglion. As might have been expected, nothing could be better than Dr. Alexander's description of his operation. It is evidently one that is easy, and consequently one which is quite justifiable to try widely, as will have to be done to completely test its value. Consideration of this fact naturally leads us to look for Dr. Alexander's summary of the results. These he states as follows: "Of 24 cases, 6 cured, 10 improved." Twenty-five per cent. certainly sounds very encouraging, and the more so if it is certain, as Dr. Alexander states, that only 7 per cent. are cured by drugs. We are glad to note that, in addition to the suggested operation, other treatment of a general kind is regarded as essential, such as careful dieting, douching, etc.

We cannot conclude this notice without expressing the hope that the serious blemishes which force themselves on the reader's notice will vanish in a second edition.

BURDETT'S HOSPITAL ANNUAL, 1889. Edited by HENRY C. BURDETT. London: *The Hospital* (Limited), Salisbury Court, Fleet Street.

MR. BURDETT has supplied us with a long-felt want by a publication which must prove a valuable acquisition to those engaged in hospital management as well as to the medical profession; for although there is much in the annual which may be found in the pages of the *Medical Directory*, it is here arranged in a handy form, supplemented by many useful details respecting auxiliary institutions. It is singular that up to the present no work dealing with the various curative charities of the United Kingdom has issued from the press, and we hail the appearance of this book with greater satisfaction, since it not only forms an excellent book of reference, but affords a ready guide to strangers who wish to be informed of the enormous development of our voluntary system of medical relief. The annual deals in succession with hospitals associated with medical schools in London and the provinces, with others not so incorporated, giving many useful details with regard to the accommodation and administration in each, and the work accomplished during the past year. It refers, likewise, to special hospitals, convalescent homes, nursing and other supplementary institutions, and supplies much useful information with respect to medical education in the universities and schools. It is not surprising that in a first issue of a manual of this kind there are omissions and trivial errors; but as far as we can judge these are remarkably few, and will no doubt be rectified in future editions. The bulk of the annual being of a statistical character, and derived from official and accredited sources, leaves little room for comment or analysis, but it is prefaced by forty pages of introduction, which will be considered by most people the most interesting part of the work, as it certainly is the most novel and suggestive. Here an attempt is made to analyse and compare the various sources of expenditure in the individual hospitals; to draw a line, if possible, between reasonable and unreasonable outlay; and to solve some knotty questions which have of late been exercising the minds of many in connection with hospital management. The subject may not prove attractive to many whose zeal in the cause of charity may have a tendency to outrun their judgment, but there can be little doubt of its practical utility. In a series of tables taken from the published reports and balance-sheets of 156 hospitals, one is able to form a pretty accurate notion of the cost of a bed in annual occupation in each establishment, together with the causes which lead to excess, or the reverse, in the various items of expenditure. From this analysis it would appear that hospitals in London are maintained at a greater cost than anywhere else, and that the expenditure diminishes in proportion to the distance of the hospital from the metropolis. We were prepared for this, especially in the case of such hospitals as are associated with medical schools, but we hardly expected to find such striking differences in the cost of maintenance in the leading London hospitals as is here represented. To remove the proverbial embarrassment caused by attempts to estimate the cost of out-patients, the analyst has adopted throughout a uniform rate of 1s. per head for expenses connected therewith, and has deducted the gross amount from the ordinary expenditure in each case. In most hospitals 1s. would probably cover the expenses of each out-patient, especially where what are known as casuals are reckoned in the number, but it would hardly be acceptable as a sufficient standard of comparison in those estab-

lishments where the out-patient staff is remunerated for its services. Calculated on the basis referred to, the highest average cost of an occupied bed in the London clinical hospitals was at King's College, where it amounted to £167, and the lowest at the Westminster, where it averaged £71. The accommodation provided at these hospitals is about the same in each, but it is only fair to mention that there was a very considerable outlay in the course of the year in both institutions in connection with repairs and structural alterations. In arriving at an estimate of cost, the compiler of the tables has adopted the fairest and safest method of calculation, which consists in the division of the total expenditure, minus that deducted for out-patients, by the average number of beds permanently occupied during the year, taking care to exclude all items of extraordinary expenditure such as are comprised under such headings as the transfer of money for investment or outlay for new buildings, but including current repairs and those internal alterations of structure which most hospitals indulge in, more or less, from year to year.

On the other hand, it is hardly fair to draw inferences from one year's experience, and it is invidious to institute comparisons of cost between one hospital and another without a full knowledge of all the circumstances relating to them; still, it cannot be otherwise than satisfactory to the contributors to charities to know in what direction their money is dispensed to the greatest advantage. If a similar abstract is kept up annually, as is proposed to be done, much light will be thrown on the causes which give rise to unreasonable expenditure, or, in other words, to wasteful extravagance.

Continuing our summary, we do not find that the fifteen provincial hospitals associated with medical schools show such marked differences in their cost of maintenance as those in London, the average expense of an occupied bed in the former amounting only to £52 per annum. In a list of 52 general hospitals in England and Wales, without schools of medicine, the cost is about the same. In nine in Scotland of a similar character it amounts to an average of £48, and in Ireland it is still lower, the average of five county hospitals not exceeding £34, an exception to this low estimate occurring in the case of the county of Limerick Infirmary, which reaches £100 a bed, very likely from the fact of its being only partially occupied during the year in question. London is well known to possess its legion of special hospitals, many of good reputation, others of questionable merit, and the desire to develop a similar class of institutions in other large towns has long since taken practical shape. Consumption and chest hospitals are more numerous in the metropolis than elsewhere, and although there may be branch establishments of a kindred character on the South Coast their headquarters are well known to be in London. These institutions are maintained at considerable cost, which ranges from a maximum of £118 a bed at the Royal Chest Hospital to a minimum of £60 at the Ventnor Consumption Hospital, the average of the six hospitals referred to amounting to £94 per occupied bed. Amazing differences exist with respect to the cost at which children's hospitals are maintained. As usual we find them reaching their higher rate in London (£95) and their lower at Derby (£20). Ophthalmic hospitals are among the cheapest we possess, although there are exceptions to the rule in the cases of the South and Central London, which, from some unexplained cause, are maintained at the cost of £100 and £82 per bed respectively. Under miscellaneous hospitals are classified ten establishments which present few features in common, either as regards the diseases or the cost at which they are maintained. These comprise orthopædic, lock, cancer, heart, epileptic and paralytic hospitals, and range in individual cost of maintenance from £31 a bed at the National Orthopædic to £124 at the Hospital for Epilepsy and Paralysis, the Cancer Hospital coming next on the list at the rate £108 per occupied bed. It will be seen that Mr. Burdett has produced a work of much labour and forethought, and one which cannot fail to be of great public utility.

Cremation and Urn Burial, or the Cemeteries of the Future. By W. Robinson. With Illustrations. Pp. 200. London: Cassell and Co. 1889.

Mr. Robinson is well known to the gardening world by his works on the English flower garden, the parks and gardens of Paris, the wild garden, hardy flowers, etc., and his last work is a very successful attempt to prove that if the practice of cremation and urn burial becomes general, or even only partially supersede the present method of burial of the unburnt putrefying body in the earth, the cemeteries of the future will become beautiful public gardens, permanent resting places for the dead, and safe repositories for memorial statuary, cemetery urns, and indelible inscriptions. The dangers to the public health from the present horrible system of burial in suburban cemeteries, and a short account of the revival of cremation in England, complete this work. There are several beautiful illustrations, and long extracts from Sir Spencer Wells's addresses at the Parkes Museum and at Sion College. Any of our readers who wish to make themselves acquainted with the present state of our knowledge of the best mode of disposal of the dead will do well to expend a shilling in the purchase of this remarkably cheap book.

Étude Critique du Traitement des Salpingites, et en Particulier du Curettage de l'Uterus dans la Salpingite Catarrhale. (A Critical Essay on the Treatment of Salpingitis, and especially on Scraping the Uterus in Catarrhal Salpingitis.) Par Alexandre Rizkallah, Docteur en Médecine de la Faculté de Paris, etc. Paris: H. Jouve.

Dr. Rizkallah has studied the course and treatment of a series of cases of salpingitis in Paris hospitals, and concludes, as the result of his observations, that the treatment of salpingitis must be varied according to the form which that disease may assume. Salpingectomy is not the sole resource, whatever certain surgeons may declare. It is the necessary treatment in confirmed pyosalpinx, in advanced hæmato-salpinx, and also in tubercular disease of the tube, even at the earliest stage, provided the latter affection can then be diagnosed. Drainage will be needed after the operation when hæmorrhage cannot be checked with certainty, or when diffusion of septic products into the peritoneum is feared. Removal of the Fallopian tube for catarrhal salpingitis is a useless mutilation. Such a proceeding should be scouted by every surgeon who has higher aims than long and showy tables of statistics. Scraping the uterine cavity, followed by injections of tincture of iodine, is effectual in catarrhal salpingitis, and in the earlier stages of pyosalpinx and hæmato-salpinx. Dr. Rizkallah admits that abdominal section is called for in cases of catarrhal salpingitis accompanied by intolerable pain, due to cystic degeneration of the ovaries or adhesion of those organs to the pelvic wall. In such cases, however, the removal of the ovaries is the agency which cures, salpingectomy being but incidental. The author has not overlooked the opinions and experience of British, American, and German authorities.

Club-Foot and its Effects upon other Parts of the Skeleton. (Der Klumpfuss und seine Folgen für das übrige Knochen-gerüst.) Dr. G. Hermann von Meyer. Jena: Gustav Fischer.

This small volume comes as a sequel to the author's previous work upon the mechanism of the foot. Club-foot and flat-foot are treated first, and great stress is laid upon the dynamical nature of the former and the statical nature of the latter. Next, the different kinds of club-foot and their mutual relations are enumerated and discussed, and primary and secondary contractions of muscles, and especially the relation of the tibialis posticus to the causation of club-foot. In these different chapters we do not discover anything which is not set forth in the works of well-known English authors, and no reference whatever is made to the writings of others, although the author frequently refers to his own. The last chapter, which comprises thirteen pages out of the seventy-two which the book contains, deals with the subject which is announced in the title. The effect of club-foot upon the rest of the skeleton had received little attention from pathologists, and the changes which Dr. Meyer describes are very interesting. A strong inward rotation of the whole leg is one of the chief of these, and it is accompanied by marked alterations in the shape of the articular facets. One of the most obvious of these changes is the formation of accessory facets upon the front of the head of the femur, and upon the front margin of the acetabulum—caused, of course, by their mutual pressure. Other alterations are described as taking place in the fibula, the pelvis, and the vertebral column; the last of these have long been recognised by surgeons, although the others, as we have said, are less appreciated. From the above brief account, it will be seen that the book is one which ought to be consulted by those who are working at the subject, and by those who are interested in compensatory skeleton changes.

SELECT EXTRATROPICAL PLANTS READILY ELIGIBLE FOR INDUSTRIAL CULTURE AND NATURALISATION, WITH INDICATIONS OF THEIR NATIVE COUNTRIES AND SOME OF THEIR USES. By Baron VON MUELLER, Government Botanist for Victoria. Seventh Edition. Revised and Enlarged. Melbourne, 1888. 8vo, pp. 517.

FROM a very moderate beginning, this work of the accomplished and ever-active Australian botanist has developed into a real treasury of economic botany, worthy of a place on the shelves of everyone the least interested in the products of the vegetable kingdom, or in the possibilities of extending the industries of extratropical countries by the introduction and cultivation of suitable plants. Primarily intended for the inhabitants of the colony of Victoria, this book has been so enlarged as to be of general utility, yet the original title "Select Extratropical Plants" has been retained. From the preface we learn that this title has already been criticised as inappropriate, though the author regards it as unassailable; "for although the number of recorded plants is large, they still remain quite 'select,' inasmuch as they form only a remarkably small percentage of the species which constitute the universal flora of the world."

While fully appreciating the value of the work, we are indisposed to agree with the author on this point—because, on the one hand, it does not adequately describe or indicate the contents; and, on the other hand, although there has undoubtedly been an exercise of selection, it has not been in the sense that would justify the title. Opening the book at random, we light upon the following record: "*Peziza macropus*, Persoon. Europe. Mentioned by Professor Goeppert among the edible mushrooms sold in Silesia along with P. repanda." Mention is made, too, of numerous plants, concerning which almost nothing is known, and it is only assumed that they might be useful. But it is not our intention to criticise the book any further on account of this evident inconsistency; the object being to point out that it is a store of facts and statistics rather than a guide for the practical cultivator. As such it is admirable, and Baron VON MUELLER follows the praiseworthy practice of citing the authorities for, and sources of, the vast amount of information he has brought together. The arrangement is alphabetical under the botanical names of the plants, and at the end there is a copious index to vernacular names.

Following the enumeration of "select plants" are tables of averages, and extremes of temperature and annual rainfall in Victoria, and a variety of special lists, synonyms, and a complete geographical index. Most important is a classified list of genera, based on their products, in which some of the genera occur under several heads. The first division consists of "Alimentary Plants," subdivided into those yielding culinary herbage, roots, grain, or edible fruits. Then there are "silk plants," "scent plants," "starch plants," "dye plants," "fibre plants," "medicinal plants," "timber trees," and the rest.

Altogether, we can confidently recommend this book as an epitome of trustworthy information.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS,
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

CATLEY ABBEY WATER.

THE best of Continental natural table waters have lately got a formidable rival in the Catley Abbey water, a natural seltzer water, obtained from a spring near Sleaford, Lincolnshire. The water closely resembles in composition and flavour the original Selters water. It is somewhat saline, highly sparkling with natural carbonic acid, clean to the palate, pure as to organic matters, and altogether a most valuable product. We have no doubt that if the yield of the spring is sufficiently large Catley Abbey water will make its way.

RHENS NATURAL MINERAL WATER.

THE general character of this water is that of a seltzer water; it is saline from the presence of chloride of sodium, and somewhat alkaline from the carbonates of sodium, calcium, and magnesium. Organically it is of great purity, and quite above suspicion. It is derived from a district in which mineral springs abound. It has long been favourably known, and as it keeps well in bottle and is undoubtedly an agreeable beverage, it will be readily received by the profession and the public. Messrs. Knighton, Hayman and Co., 139, Minories, E.C., are the English agents.

THE CROSSE SELF-ACTING VENTILATOR AND DISINFECTOR COMBINED.

THIS is an inlet ventilator, to be fixed in the wall of a room about 6 feet from the ground. The air enters horizontally, is then deflected vertically into a short tube, at the bottom of which is placed a well containing a disinfectant, and is finally admitted into the room in an upward direction. For ground-floor rooms it has an advantage over the Tobin tube, that the incoming air is not taken from low down near the surface of the ground; but it appears exceedingly doubtful if sufficient upward direction is imparted to the entering air in the Crosse ventilator to prevent it from spreading horizontally, and so creating a draught. In the Tobin tube the length of vertical pipe causes a strong upward current, so that the entering air ascends like a column and does not spread horizontally until near the ceiling. In the Crosse ventilator this strong upward current cannot be attained.

ARMOUR MEAT EXTRACT.

THIS extract is a fluid containing about 68 parts of water and 32 of meat constituents, 20 being nitrogenous extractives and 12 mineral matters, with 2.5 per cent. of phosphoric acid. The samples examined were in a good state of preservation, and of very excellent flavour. The article is, as the analysis shows and its consistency sufficiently proves, a good deal thinner than Liebig's extract, but it is convenient to use, as it mixes instantaneously with water.

CONCENTRATED BEEF TEA.

THIS preparation is a fluid extract of meat very similar to the meat extract noticed above. Its quality and freshness leave nothing to be desired. The beef tea keeps perfectly well, even after the bottle containing it has been opened some considerable length of time. Its main advantage consists in the circumstance that it mixes readily with hot or cold water, and at once furnishes an agreeable and stimulating beverage. It is prepared by the Dickson Concentrated Beef Tea Company, London.

PEPTONE DE VIANDE: PEPTONATE OF IRON (DENAEYER).

THE former of these preparations consists of a 20 per cent. solution of beef peptone. It is a perfectly transparent and clear solution, of an excellent beef tea odour, and free from the bitterness so commonly associated with peptones. It is a very good preparation.

The peptonate of iron, in addition to the 20 per cent. of peptone, contains 2 per cent. of ferric hydrate. The taste of the iron is almost imperceptible. No doubt the preparation will be found very useful in cases where ordinary tonics cannot be tolerated, and where, at the same time, assimilable nourishment is required.

DR. WARD COUSINS'S ARTIFICIAL TYMPANUM.

MR. ARTHUR F. WILSON (Highbury New Park, N.) writes: I read with much interest the paper of Dr. Ward Cousins in the JOURNAL of September 28th, and can speak personally of the benefit derived from his "antiseptic artificial membrana tympani" in cases of perforation and disease of the middle ear. About ten years ago I had a severe attack of diphtheria, and since that time have suffered from otorrhœa. At first the aural discharge was but slight, but it greatly increased, and I gradually lost my hearing until I became almost perfectly deaf with my left ear, owing partially to the tympanum being perforated. I tried various local antiseptic treatments, with but little effect. Becoming worse there was considerable suppuration in the mastoid region, and the bone became diseased, for which I had an opening made into the mastoid process. I found almost immediate relief from it, as prior to having the incision made I suffered most severe pain in my head and ear. I still continued syringing my ear with antiseptic lotions until the discharge was but very little; nevertheless, the loss of hearing was a great inconvenience to me, because I was obliged to be on the left side of anyone I might be conversing with. Dr. Cousins, knowing my case, I having been a student under him, advised me to try his artificial drums, and great is the benefit I have derived from them. I can now hear fairly well, and the source of annoyance of having to be on a particular side of anyone is entirely obviated. They also afford excellent protection to the middle ear from cold winds, which was often the cause of severe earache, which now is almost foreign to me. Another advantage, and one which enhances their value, is their ease of self-appli cation.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1889.

SUBSCRIPTIONS to the Association for 1889 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, OCTOBER 5TH, 1889.

THE INTRODUCTORY ADDRESSES.

THE address delivered by Professor Gairdner, of Glasgow, at the opening of the winter session of the Yorkshire College, Leeds, ought to be read by everybody who is interested in the present state of medical education in this country, whether as a teacher or a general practitioner of medicine. The task will not be a severe one, for Professor Gairdner has a happy power of treating a heavy subject with a light hand. The views advanced by Mr. Wheelhouse in his Presidential address at the annual meeting were supported by many striking facts and forcible arguments, but they invited criticism. They have been met by his predecessor in the Presidential chair with a temperate courtesy which augurs well. It would be undesirable in this place to attempt to enter into a discussion of the question whether it is possible to devise any scheme which will supply the medical student of the present day with the kind of knowledge which he gained under the old apprenticeship system. Professor Gairdner is, perhaps, contending with an imaginary opponent when he speaks of "the student or candidate for a diploma" being expected to "have seen and done personally almost everything;" this may be the logical result if the arguments used on the other side are pushed to an extreme; but the regulations which now govern medical education are all through based upon compromise.

"Thoroughness" is the title of Professor Gairdner's address, and in it he has reminded us once more of the truth that the aim of the medical education given in the schools is, or ought to be, to give the student the habit of thoroughness in his work. A few things thoroughly known, a few cases thoroughly studied in the wards, are a better training, a better foundation than a partial knowledge of many "tips." As to this there is probably no difference of opinion. The "automatic doctor," of which Professor Gairdner makes such excellent fun, is a *reductio ad absurdum* of the whole system of prescribing by dockets; but at the other extreme, the well-primed pathologist, who can accurately describe the lesion which will probably be found after death, but, while posing as a physician, is unable to suggest anything to mitigate suffering or prolong life, cuts a figure hardly less ridiculous. There is, however, more hope for the pathologist than the automaton, for the one, after a few experiments, may learn at least the rudiments of the art of prescribing, and with patience even acquire "a good bedside manner," whereas the other has not learnt how to begin to learn.

Thus we come back to the point which seems to be the unvarying goal of every effort to discuss the future of medical education, and that is, under some form or other, and in one direction or another, a lengthening of the medical curriculum. Here we may turn to the other address, which we publish in full to-day—an address not less worthy of perusal, not less agreeable to peruse than Professor Gairdner's—the liberal and thoughtful discourse which Dr. Clifford Allbutt delivered at St. George's Hospital. He feels no hesitation as to "the propriety of largely extending the curriculum, both in respect of preliminary and of special education, even at the cost of lessening our numbers. As it is," he says, "we make ourselves, by our very numbers, the prey of the hucksters who form the majorities of our local councils, and who are able to point triumphantly to piles of applications from highly qualified men who are driven by the increasing competition in the ranks of the profession to find rest in any quiet place outside it, however meagre the pay." He pleads eloquently for a wider training in general knowledge and the cultivation of a more philosophical habit of mind; but, while he criticises some parts of Mr. Wheelhouse's address, he speaks out boldly in favour of a prolongation of the *status pupillaris*, in order that time may be found for a period of apprenticeship after the faculties have been trained and strengthened in their main branches.

It is perhaps surprising that so little was said by the orators on Tuesday about the schemes which are afloat for the widening and elevation of University education in London. Dr. Allbutt, indeed, who takes a high view of the value of the education, moral and intellectual, which a university degree ought to connote, expressed a hope that, ere long, "the largest and the richest city in the world will do what Yorkshire and Lancashire have done in their degree—will establish the largest and richest university in the world."

Let us hope that Dr. Allbutt, accustomed to the vigorous municipal life of the great northern cities, may not take too sanguine a view. Sir Albert Rollit, speaking at King's College, though in a somewhat less sanguine spirit, yet felt himself justified in assuming that if the University of London should fail to meet the proper requirements of a teaching university, a new one would be founded; in agreement with the report of the Royal Commission, and with nearly every educational authority, he held that any such new university must be "a true university—a school of universal learning, not an institution bearing as its name any such contradiction in terms as the proposed medical or legal universities."

Mr. Godlee, at University College, had nothing to say on this head. He expressed himself as strongly opposed to a reintroduction of the apprenticeship system, but it is possible that he was disposed to underrate certain advantages which it presented. Those who deprecate apprenticeship before the student has studied anatomy may yet regret that he is now let loose on the world as a rule totally ignorant of what is meant by "practice," that is, the way to go about, to consider his patients' prejudices, not to overlook minor diseases, about which he probably understands less than about aneurysms and Addison's disease, and lastly, to charge according to a tariff just to himself and his patients. His hospital ex-

perience could afford him no education in these necessary matters.

Mr. Godlee, as well as Mr. Anderson at St. Thomas's and Mr. Atkin at Sheffield, had much to say about the history of medicine. Mr. Godlee compared Paré's with later systems, dwelt on the recent triumphs of surgery over germs, and hazarded predictions on the practice of the immediate future. Mr. Anderson's historical sketch was very complete. Mr. Atkin dwelt on literary evidence of the state of surgery in England in past centuries. Mr. Bland Sutton dwelt on the importance of observation—not mere observation of isolated cases, but observation combined with comparison and judgment. Dr. Robert Maguire followed a practice frequent in medical schools where introductory addresses are still delivered, his discourse being based on a scientific subject—protective inoculation—and the hortatory portions, designed for the new student, formed but a subsidiary feature in the address. Such lectures are really put together as a relief from the more usual and tedious variety. To the objection that scientific subjects are "over the heads" of the part of the audience for which the lecture is really designed, it is often justly urged that the kind of advice often given in the old-fashioned type is in reality just as far beyond the comprehension of youths inexperienced in professional study and strife. The subject of inoculation is certainly of importance, and Dr. Maguire was lucid in his demonstrations of the protective influences on which he spoke.

THE NEW LUNACY ACT.

THE enactments of the Lunacy Acts Amendment Act come into operation on the first day of next May, except when in the Act itself otherwise specially provided that it shall take effect from the time of the passing of the Act. Whilst the Bill was passing through the Houses of Parliament we published articles, memoranda, and reports of the proceedings of our Parliamentary Bills Committee on the subject, and its recommendations with relation to several proposed clauses. Therefore we now, and briefly, refer only to a few of the great salient features of the new Act.

Under it, the justices of every county and quarter sessions borough shall annually appoint, out of their own body, fit and proper persons to exercise, during the ensuing year, within the county and borough respectively, the powers conferred by the Act upon justices of the peace in relation to placing the non-pauper insane under care and control. These private insane patients are not to be placed under care, except under reception orders made by a judge of county courts, magistrate, or justice of the peace specially appointed under the Act, and for its purposes in each district. The clause does not apply to paupers, criminal lunatics, or lunatics so found by inquisition.

But in a case of urgency the alleged lunatic may be temporarily placed under care and control under an urgency order signed, if possible, by the husband or wife, or a relative of the alleged lunatic, and a medical certificate by one medical man, instead of two as usual. If further detention is needful, a reception order must be obtained in the usual way.

In relation to the above provisions, a subsequent clause permits the question of his insanity to be reopened in a way disturbing to the patient; for by it, if not already seen by a justice, etc., the lunatic has the right, unless he is baulked of it by certificate of the medical or other person in charge of him, to demand to be seen by a judge, magistrate, or justice other than the one who made the order. In consequence of the changes which may occur in a case in a few days, this provision places the medical certifier in an equivocal and vulnerable position, and fastens upon the medical or other person taking charge of the alleged lunatic the undesirable or even invidious task of deciding whether or not to permit him to exercise the privilege; the exercise of it, if sought and desired, being also a difficult thing to refuse, no matter what the effect upon the patient may be.

Under whichever of the above circumstances they are placed under control, provision is made for an early visit to private patients by Commissioners; or by medical visitors, with or without one or more of the other visitors of licensed houses in the provinces; or by some other competent person directed by the Commissioners—according to the legal status of the place where the patient is.

A good deal of extra work is thrown upon asylum medical superintendents and others by the requirement that an additional report as to the mental and bodily state of each private patient shall be made and sent a month after admission; and by the further proviso that an order for the reception of a patient, whether a pauper or not, into an asylum, lunatic hospital, or licensed house, or as a single patient, shall remain in force for one year only, and be renewed for two years, and thereafter successively for three years and five years; but only on condition that at the end of each period of one, two, three, and five years respectively, a special report of the medical superintendent of the asylum or hospital, or the medical proprietor or attendant of the licensed house, or of the medical attendant of the single patient, as to the mental and bodily condition of the patient, with a certificate under his hand certifying that the patient is still of unsound mind and a proper person to be detained under care and treatment, is sent to the Commissioners not more than one month, and not less than seven days, before the end of each such period. In any case, if not satisfied with this special report, the Commissioners, or committee of visitors of the asylum, as the case may be, shall investigate the matter, and, if dissatisfied with the result, may discharge the patient. By the Act, provision is made that no really new private asylum shall be established in the future; but it is enacted that the present private asylums, if well conducted, may be continued, and fresh buildings substituted for the existing ones, or that, under some circumstances, the licence may be subdivided, but not increased so as to apply to a larger number of patients. The public asylum authorities are also permitted and encouraged by the Act to provide accommodation for private paying patients, and for these purposes the local authorities may make provision for the reception of pauper and private patients together or in separate asylums; may provide separate asylums for idiots or patients suffering from any particular class of mental disorder; and may erect new asylums, or enlarge any existing asylums, or purchase any licensed or other houses and land suitable for the purpose.

The provisions discriminating against medical men in regard

to the reception of single patients was finally expunged from the Bill, and the new Act as passed goes to the other extreme, and tends to bear somewhat hardly upon medical men who are licensed to receive two or three patients in their private houses, inasmuch as, under some circumstances, other—and perhaps neighbouring—medical men, without a licence and without the trouble and expense of adaptations, etc., may be permitted to receive several patients.

The unnecessary and burdensome part of the provisions as to letters of private patients, originally in the Bill, was eventually excluded from it. The provisions as to the posting up of notices of the right of private patients to have any letters written by them forwarded, and of the right of private patients to demand a private and personal interview with a Visiting Commissioner or visitor at any visit made to the asylum, hospital, or house where such patients are, have been placed under the direction of the Commissioners in Lunacy.

A new provision is that allowing any person who is desirous of voluntarily submitting to treatment, or any relative or friend of a patient, to become a boarder in a private asylum; but the total number of patients and boarders in a hospital or private asylum shall not exceed the number of patients for which the hospital is certified or the asylum licensed. A boarder, under this clause, may leave the asylum at any time by giving the superintendent or proprietor twenty-four hours' notice in writing of his intention to do so.

Persons detained and treated as lunatics or alleged lunatics, without an order and certificates, by any person receiving no payment for the charge, or in any charitable, religious, or other establishment, may, under the Act, be visited by the Commissioners, who may also require medical reports (and periodically so, if necessary) relating to the persons so detained and treated, together with all such particulars as to them and their property as the Commissioners may think fit, and who may forward the reports received by them, or the results of any inquiries made by them to the Lord Chancellor, who may thereupon make an order for the discharge of the patient from the custody in which he is detained, or for his removal to a lunatic hospital, private asylum, or elsewhere.

After the commencement of the Act, no pauper shall be received as a lunatic under an order by a relieving officer and clergyman, thus repealing one of the existing methods in which pauper patients are received. And a justice of the peace shall not sign an order for the reception of any pauper as a lunatic unless he is satisfied that the alleged pauper is either in receipt of relief, or in such circumstances as to require relief for his proper care. A person visited by a medical officer of the union at the expense of the union is, for the purposes of this clause, to be deemed to be in the receipt of relief.

An alien, not being a criminal lunatic, who is detained as a lunatic, and whose family or friends desire that he should be removed to the country of which he is a subject, may, under the new Act, be permitted to be so removed by warrant of a Secretary of State who has been satisfied by a report from the Commissioners after their investigation into the circumstances of the case, or who has been otherwise satisfied, that the person is an alien and a lunatic, and that his removal is likely to be for his benefit, and that proper arrangements have been made for his removal and for his subsequent care and treatment.

The enactment is permissive only, but it raises the whole question of the disposal of persons becoming insane in countries of which they are not subjects. There is no doubt that the ratepayers of this country are unfairly affected by a lack of reciprocity in this matter. We do not think that abroad British subjects would become a local tax in the same way as foreign subjects sometimes do here; for example, a foreign subject resident here brought over from his own country, to work here as bootmakers, a man and his mother both so weak-minded and deranged as to be incapable of earning a living. Immediately they were sent to a workhouse and thence to asylums, and kept at the cost of metropolitan ratepayers. Even in some British colonies the strictest rules are in force against permitting any insane person to land, and any person found to be insane at or shortly after arrival in the colony is either kept under care, or sent back whence he came, and in either case at the expense of the owners of the ship by which he came. Whereas, if landing here from the same colonies, he would be maintained at the expense of the ratepayers of this country. As between this country and other countries and the colonies, equal mutual rights should be yielded and enjoyed in this matter.

At an early date, his original amendment as to mechanical restraint in the treatment of the insane was vastly modified and improved by the Lord Chancellor, who eventually devised provisions which, while opposing a resistance to any possibility of abuse, did not fetter overmuch the medical officers of asylums in the necessary dealing with desperate or urgent cases. The advocacy of the Parliamentary Bills Committee had much weight on this point.

Protection is afforded by the Act to certifying medical men, and to others, who in good faith and with reasonable care do anything in pursuance of the Act, and proceedings against them may be stayed; but the whole subject of the position and relations of medical practitioners, and their duties and responsibilities under the Act, may fitly find place in our columns in one form or another on a subsequent occasion.

THE ACIDS OF THE STOMACH.

THERE is no doubt that the chief acid found in the stomach during natural digestion is free hydrochloric acid. This has been abundantly proved by Bidder and Schmidt, and numerous observers succeeding them. The methods used are, however, too long and too complicated to employ in clinical work. The physician wishes to know what, in a particular case of disease, are the chemical changes going on in the stomach: whether, for example, hydrochloric acid is present as well as pepsin and organic acids. Now, in the examination of the contents of a diseased stomach three forms of acid may be present—hydrochloric acid, a mineral acid; organic acids, such as lactic acid, butyric, etc.; and thirdly, acid phosphates. It is chiefly of importance to determine the presence of hydrochloric acid and of organic acids. Many methods have been proposed for doing this; they consist mainly in testing the effect of the stomach contents on various coloured solutions. Thus a solution of methyl-violet is decolorised by hydrochloric acid, so that if

this reaction is obtained the free acid is present in the liquid tested. Lactic acid turns the violet a dirty yellow. Tropæolin also is turned deep reddish-brown by free hydrochloric acid. Unfortunately these tests, simple as they appear, are not accurate, since the reactions are interfered with by the presence of peptones and of some neutral salts, and, as these are usually present in the stomach contents, no reliable results can be obtained by using methyl-violet and tropæolin. They have been superseded by congo-red, which is turned blue by free hydrochloric acid, and by a solution of vanillin and phloroglucin in alcohol, which is turned a deep red by the same acid. These simple clinical tests are, however, rendered useless by the fact that they are interfered with by the presence of peptone, ammonium salts, chlorides, and phosphates.

In the present state of our knowledge, therefore, there is no reliable indicator for the presence of free hydrochloric acid in the stomach contents. Other methods which may be used are too complicated for clinical use. Thus ether has the property of dissolving organic acids from a liquid, leaving the mineral acids in solution. It may thus be used for separating the lactic, butyric, and other acids from the hydrochloric acid; and if in a liquid obtained from the stomach it is found that ether removes the whole of the acids present, it may be concluded that no free hydrochloric acid is present. In many cases this conclusion would be an important one as a clear indication for a line of treatment. Dr. Leo has lately[1] published a new method for the indication of free hydrochloric acid which may prove useful. Leo considers the case where it is only a question of the presence of free hydric chloride and of an acid phosphate. To a few drops of the stomach contents a pinch of carbonate of calcium is added; if the acidity, as tested by litmus paper, disappears, only a free acid is present, but if the liquid is still acid after the addition of the chalk, an acid salt is present. If, moreover, organic acids be present they must be first removed by shaking with ether before the chalk is added. It does not seem that Leo's method is one that can be applied at the bedside, because the detection of free hydrochloric acid is chiefly requisite in those cases in which organic acids are also present, as in cases of dilated stomach. At present, indeed, a ready method, suitable in clinical practice for the detection of free hydrochloric acid in organic liquids is a desideratum.

[1] *Centralblatt für die medicinishen Wissenschaften*, No. 26.

THE REPORT OF LORD CAMPERDOWN'S COMMITTEE.

IV.

Concerning service in India, the Committee recommend that no Royal Warrants, affecting officers paid by the Government of that country, should be drafted or issued without previous arrangement and concurrence between the Home and Indian Treasuries. It is surprising that a purely business matter of this kind should need recommendation at all; yet, that it is required is proved by Appendices 23 and 24 of the report. Therein it is shown that, while candidates are induced to enter the medical staff under specific provisions in Royal Warrants, they speedily find themselves under new masters in India, who put their own interpretation upon such provisions. The officers who chiefly suffer in India are the junior surgeons and the brigade-surgeons; the former, although ranking as captains, have to serve six years before they receive the full allowances of the rank; and the latter, having no increased military rank, are ignored altogether financially, although otherwise conveniently recognised when it suits the powers that be to heap work and responsibility upon them.

As nearly one-third of the surgeons and one-half of the brigade-surgeons constantly serve in India, the financial injustice above alluded to presses severely on a large number of officers, while the saving to the Government is comparatively trifling. The public may well feel surprised that such a state of things can exist, for they would naturally suppose that when Imperial officers are lent to the Indian Government, the home authorities would insist upon financial justice being done; but at all events, as far as the unfortunate medical department is concerned, that is not the case.

The manner in which the question of increased pay for brigade-surgeons was officially discussed was almost comic. The minutes on the subject were shuttlecocked between Home and Indian Secretaries and heads of Departments, who, while all individually admitting the justice of the case, never could agree collectively; after a time the whole correspondence was finally pigeon-holed by order, under the old but convenient official formula "that the question cannot be reopened"—as if, forsooth, it had ever been settled or closed! This is an excellent example of how the just claims of medical officers have too often been treated.

The question of admission into the service is next reported on. One would have supposed that it had been once for all finally settled when open competition was established; but the Secretary of State for War still possesses the power of nomination, and under it the Committee propose to reintroduce patronage to a limited extent. Much may be said in favour of an old system which placed many admirable selected officers in the department, men who often had hereditary connection with the service, and who were specially educated under promise of commissions. It is now suggested that a certain number of vacancies in the department might with advantage be filled by the medical schools being allowed to nominate medical men who had held the office of house surgeon or house-physician to a large hospital, and who would be accepted without examination.

We are far from pronouncing the scheme unworkable, but we see some obvious difficulties and drawbacks to its success. To what medical schools would this bit of patronage be extended? If to each and all of them in these kingdoms, then competition might as well be abolished altogether; if to a select few, would there not be ground for just and jealous complaint? But even if this difficulty were amicably surmounted, what number of high class hospital men would allow themselves to be nominated? We imagine very few; because the majority aim at civil practice through hospital connections; and for such men the Army Medical Department offers no prizes or attractions. Should they accept commissions, however, would they occupy a comfortable or enviable position among those who had entered by open competition? We fear not; they would probably be regarded as having come in by a back door, and any real or even supposed favour or consideration extended to them would

be bitterly resented. We believe, therefore, that competition and nomination for continuous service commissions could hardly be worked together harmoniously, especially in the medical department.

The Committee condemn the utterly indefensible system of dating commissions in the Medical Staff from the time of leaving instead of entrance into Netley; they recommend that henceforth the three medical services should be treated on a par in this respect.

The recommendations under the head of examinations for promotion seem eminently judicious. We have always advocated a mixed Board of Examiners, as likely to inspire confidence. It was a pity that the headquarter staff were ever mixed up with these examinations, especially that for the rank of brigade-surgeon, as it only engendered ill-feeling and probably groundless suspicion. It is, indeed, a matter for congratulation that the latter examination will henceforth be wholly dispensed with. It never was really necessary if the examination for the rank of surgeon-major had been amplified so as to include medical administration and military law, and latterly it was reduced to an utter absurdity by the civil fellowship of a college being accepted in lieu of it. The recommendation that medical officers should have inducements and opportunities afforded during their service for keeping up professional knowledge and for obtaining higher civil qualifications is entirely laudable, but it is bound up with the maintenance of sufficient establishments. If the latter are pared down to the quick for financial reasons, it is idle to speak of special leave for purposes of study which neither would nor could be given. As matters now stand, no inducements or prizes are held out for professional eminence in either the Army or Navy Medical Services; the tendency of the whole system is to keep men down at a common deal level.

The last army matter considered by the Committee is that of short service, which the majority condemn as tending to place the army in the hand of medical officers of the least experience, which is a very grave and weighty objection. An army medical officer's duties are by no means exclusively professional, but are in many ways bound up with general efficiency and discipline among the troops; every candid commanding officer will admit this, so that an experienced medical officer has always been considered the right hand of those in authority. But Lord Camperdown and Mr. Macnamara, in a valuable "dissent," try to show that there would be little objection to, and no small advantage in, having a limited proportion of short-service medical officers. While a short-service system has not worked badly among the men, strong objection has always been taken to applying it to officers. It has been argued that unless an officer accepts service as a life career and a profession, he will never have his heart in it or do good work; and we remember that was a strong point urged for the abolition of purchase.

It is unquestionably the case that the great majority of medical officers adopt the service as a life career, as was proved by the ill success and ultimate collapse of the late ten years' bonus system. But the two dissentients, while admitting the failure of the ten years' system, think there would be less objection to a shorter service of five or six years. We readily admit that this might be the case, and would advocate trial of it on public grounds. Supposing such limited service, which would practically mean foreign service for the entire period, were acceptable to medical candidates, there can be no doubt of its advantage to the State. Under the present system of continuous service, the non-effective charges must always be proportionately very heavy; but any plan which, without serious detriment to efficiency, would lessen the numbers steadily qualifying for pension, would, of course, be of advantage to the State; it would also tend to relieve continuous service officers from the anxieties accompanying periodical outcries against bloated pension lists. In these democratic days it is good policy to keep such lists within bounds. We therefore trust the dissent of the Chairman, and of Mr. Macnamara, who has made a good stand on behalf of his profession, will not be lost sight of. Perhaps limited nomination might be made to go hand in hand with limited service.

The recommendations on the Naval Medical Service are very short, and do not call for detailed criticism. But there are points in the appendices to the report which are well worth study and analysis.

THE Harveian Oration will be delivered by Dr. James E. Pollock, on Friday, October 18th, at 4 P.M.

DR. PROTHEROE SMITH died on Sunday last, aged 80. It will be remembered that he was the founder of the Hospital for Women, Soho Square. We hope to furnish an obituary next week.

AN examination in shorthand for students in medicine will be held in the Examination Hall, Thames Embankment, on Friday, October 11th, at 4 P.M., further particulars as to which will be found in our advertising columns.

THE Council of the Royal Medical Benevolent College will shortly elect an orphan daughter of a medical man to a scholarship giving free education and maintenance at the School of St. Anne's Society. Particulars will be found in our advertising columns.

THE first meeting of the Medical Society will be held on Monday, October 21st. The Lettsomian Lectures will be delivered during January by Mr. Edmund Owen on Subjects in connection with the Surgery of Infancy and Childhood. The annual oration will be given by Dr. A. E. Sansom on May 5th.

WE regret to have to announce the sudden death on Wednesday last of Mr. Richard Eaton Power, L.R.C.P.Lond., L.R.C.S.Edin., who for many years was the much-respected medical officer of H.M. Convict Prison at Portsmouth. Two months ago he was promoted to the Governorship of Woking Female Convict Prison. He had long been in delicate health.

THE SCARLET FEVER EPIDEMIC IN BIRMINGHAM.

THE scarlet fever epidemic has not extended during the past few days, but there are still about 320 patients in hospital; the Health Committee have almost completed the erection of temporary buildings to accommodate forty more patients.

THE FRENCH SURGICAL CONGRESS.

IT has been found necessary to revert to the date of October 7th for the opening of the French Surgical Congress. The inaugural address will be given by the President on Monday, October 7th, at

2 P.M., in the large amphitheatre of the Faculty of Medicine. The discussion on Local Tuberculous Affections will be taken on Tuesday, October 8th; that on Peritonitis on Thursday, October 10th; and that on Aneurysm of the Extremities on Saturday, October 12th. The mornings of Wednesday and Friday will be devoted to visits to the hospitals.

THE VICTORIA CROSS.

WE have been requested to add the name of Surgeon-Major Hartley, Cape Mounted Rifleman, and principal medical officer of the Cape Forces, to the number of medical officers who hold the Victoria Cross and are still serving on the active list.

THE MEDICAL OFFICERSHIP OF HEALTH FOR LEEDS.

THE applications for the post of Medical Officer of Health for Leeds numbered fifty-two, and from this long list a special committee selected the following three applicants: Dr. J. Spottiswoode Cameron, Mr. A. E. Harris, and Mr. R. D. R. Sweeting. The choice finally fell upon Dr. Spottiswoode Cameron, who has been for nearly twelve years medical officer of health for Huddersfield. Dr. Cameron's name is well known in connection with the progress of sanitary reform, and his efficient discharge of the duties of medical officer of health for an important borough is a sufficient proof that he possesses the administrative abilities which are so eminently required for the important office to which he has now been elected.

THE MANSION HOUSE PASTEUR FUND.

ON Wednesday last, three more patients, a man and two boys, who had been bitten by a rabid dog at Rugby, were sent to Paris to be treated at the Institut Pasteur, at the expense of the Lord Mayor's Fund. This makes a total of twenty-eight persons sent from that source during the last three months. Of these, eight were persons living in London, and the remainder in the provinces. The Mansion House Fund now amounts to over £2,000, some considerable donations having recently been received from Fellows of the Royal Society, among whom a collection is being made.

RECENT LUNACY LEGISLATION.

A PAPER on the relations of medical men with the public and the insane under the present and coming lunacy laws will be read by Dr. W. J. Mickle, Medical Superintendent of the Grove Hall Asylum, Bow, at the meeting of the East Surrey District of the South-Eastern Branch of the British Medical Association at Reigate, on Thursday, October 10th. The opinion of so competent an authority upon the new conditions which must govern the relations of the medical profession of all grades, and not least the officers of the Poor-law Medical Service, in dealing with insane patients will have great value.

INFANTS' FOOD.

AN oilman of Camberwell Road was fined 20s. and costs at Lambeth Police Court on October 1st for selling three tins of condensed milk, known as the "Standard" brand, from which, according to the certificate of Dr. Bernays, the analyst for Camberwell, 90 per cent. of the cream had been abstracted. The label on the tins stated that it was specially prepared from the richest cows' milk, from which a portion of the cream had been removed and nothing added but cane sugar. It was stated also on the label to be better and cheaper than milk for ordinary purposes, and the directions were "five parts of water to one of milk, and, for infants, eight to fifteen parts of water, according to age." The magistrate, while exonerating the defendant from all blame or any intention to defraud, considered the sale was one to the prejudice of the purchaser, and felt bound to convict. Notice of appeal was given.

THE PHARMACEUTICAL SOCIETY OF GREAT BRITAIN.

THE forty-eighth session of the School of Pharmacy of the Pharmaceutical Society of Great Britain was opened on October 2nd, when Professor John Marshall, who was to have distributed the prizes, was prevented through indisposition from being present. His address, which was read by Professor Attfield, expressed sincere admiration of the sagacity, prevision, and prudence exhibited by the founders of the Society. "Corporate interests, commercial advantages," he said, "they assuredly appreciated and sought after; but from the earliest period of their labours, to their credit and merit be it recorded, they recognised the grave public interests involved in their undertaking, and also the sacred trust that would be incidentally placed in their hands of promoting, advancing, and diffusing the special knowledges connected with their useful, necessary, and honourable calling." He congratulated the Society on the establishment of a research laboratory, and on the encouragement thus offered to the higher and more elaborate prosecution of inquiries in what is understood as pure science, undertaken for science's sake.

THE NEWCASTLE-ON-TYNE (UNIVERSITY OF DURHAM) COLLEGE OF MEDICINE.

THE new buildings of the College of Medicine at Newcastle were formally opened on Wednesday, October 2nd. Dr. Heath, the President of the College, presided at the public meeting, which was largely attended. In the course of a short address he referred to the great loss which the College had experienced by the death of Dr. Luke Armstrong. He described the circumstances which had led to the erection of the new building, and said, though it was now complete as a medical school, it did not yet represent the whole scheme which the Council hoped eventually to carry out. This comprehended a collegiate residence for students, a somewhat larger development of the scientific departments, a chair of comparative pathology, and, what was quite as important as these, an endowment for the institution. He made a strong appeal for public contributions to complete the desired additions, which would cost about £40,000, in addition to the £31,000 already expended. As a proof of his own feeling in the matter, he handed to the Treasurer a cheque for 1,000 guineas. The Mayor of Newcastle, in the unavoidable absence of the Dean of Durham owing to indisposition, formally declared the building open, and subsequently presented the prizes to the successful students. A vote of thanks to the Mayor was proposed by the Bishop of Newcastle and seconded by Dr. Gibson. A *conversazione*, which was largely attended, was given in the building in the evening.

THE CONTINENTAL ANGLO-AMERICAN MEDICAL SOCIETY.

THE first meeting of the newly formed Continental Anglo-American Medical Society was held at Paris, on September 30th, under the presidency of Sir Spencer Wells, one of the Honorary Presidents. Among those present were: the Hon. Alan Herbert, M.D.; Dr. Faure-Miller, Dr. Thomas Linn, and Dr. E. Warren-Bey, all of Paris; Dr. Sandwith, of Cairo; Dr. Stanley M. Rendall, of Aix-les-Bains; Dr. St. Clair Thomson, of Florence; Dr. C. E. Cormack, of Hyères; and many others. A dinner was given in the evening at the Grand Hotel; the invited guests including Dr. Worms, of the French Academy of Medicine; Dr. Schetelig, of Homburg; Dr. Madge, of London; and Dr. Dean, Dr. Loewenberg, and Dr. Landolt, of Paris; with Dr. Norris, of New York; and Dr. Rogers, of Illinois. After the usual loyal and patriotic toasts had been duly honoured, "Success to the New Society" was given, to which the Hon. Alan Herbert, M.D., responded. Hitherto he said he had often found it a matter of extreme diffi-

culty to meet physicians practising at the different health resorts, but the annual meeting of this Society would afford the desired opportunities. The health of the chairman, Sir Spencer Wells, was then proposed by Dr. Faure-Miller, and after a felicitous reply, Dr. Duprez gave the invited guests. In acknowledging the compliment, Dr. Worms remarked that the success of the Society was assured, as it was in the nature of things that his English and American colleagues should advance hand in hand along the broad road of science; but he could also say that in Paris no obstacle would ever be placed in the way of the English and American doctors practising, or intending to practise, not only among their own, but among the French people as well. For many of the members of the Society he had long entertained feelings of sincere friendship, and he would particularly mention Sir Spencer Wells, whom he had known for thirty years, and whose name was one of the most popular in France. His election to the French Academy of Medicine was a proof of this, and he might add that Sir Spencer Wells had rendered immense services to French surgery; services for which the deepest gratitude was felt. The final toast was that of "Dr. Thomas Linn, the Honorary Secretary," who had laboured so energetically for the formation of the Society. The Society already numbers about seventy-five members.

DEATH AT THE COMMENCEMENT OF CHLOROFORM INHALATION.

Our Birmingham Correspondent writes:—"A curious death occurred here recently during the administration of chloroform. A lady, about 25 years of age, of very nervous, excitable temperament, desired to have some teeth extracted, and insisted upon an anæsthetic. In the presence of her husband and the dentist, her medical attendant administered chloroform. The patient was seated in an easy chair, and, after inhaling a few breaths of chloroform, she slipped down in the chair, and her pulse and breathing were both found to have stopped. Artificial respiration was at once resorted to, but without success. It seems perfectly clear that the patient was not anæsthetised when she died, as she had only just commenced to inhale the chloroform, and, of course, no attempt had been made to extract her teeth. The coroner's jury returned a verdict that death was due to syncope, and that no blame whatever attached to the administrator."—Syncope, as has long been known, will result from any very violent emotion, and especially from the effects of fear. In a case recorded in Germany a few years back, a female patient visited a dentist, and requested him to extract some carious teeth, demanding, at the same time, that she should be chloroformed. The dentist, very properly, explained the risks of chloroform, and suggested nitrous oxide; but his patient persisted, and he consented to humour her. Having, however, a wholesome dread of chloroform, he substituted eau-de-Cologne, and bade her inhale the supposed anæsthetic from a folded towel. After two or three inspirations she suddenly fell from the chair, and died. That death occurs from fear in some cases during the earliest stage of chloroforming is unquestionable; and as it is predisposed to by the sitting posture, and by forcibly restraining the patient's voluntary movements, there can be very little doubt that in every case in which chloroform is to be administered, the recumbent posture should be insisted upon, and a loose dressing gown substituted for the usual workaday costume. There is another point of no small importance, which is that chloroform increases the liability to death from "reflex syncope." A person partly under chloroform is more prone to die from fright than one to whom chloroform has not been administered. Nor must it be forgotten that deaths occur when only one or two inspirations of chloroform have been taken; this is liable to take place when a too concentrated vapour (that is, one of greater strength than 4 per cent.) is employed. In the event of syncope occurring in one of the ways above indicated, the line of treatment which offers the greatest chance of success is total inversion of the patient, while care is taken that the rima glottidis is maintained patent for entrance of air. Dr. Chisholm, who has strongly supported this, Nélaton's original manœuvre, has recorded some highly instructive cases in which the method of inversion, being promptly performed, effected resuscitation, and so saved the patient's life. But here a caution must be given. Nélaton's method is valuable only in primary syncope, and is absolutely dangerous in cases of heart failure consecutive upon pulmonary engorgement and overfilling of the right heart; or, in short, when respiration stops before the heart ceases to beat. Cases belonging to this last category do not occur, as a rule, until the later stages of chloroformisation, and the respiratory failure is then due to overdosage with the anæsthetic.

THE ROYAL MEDICAL AND CHIRURGICAL SOCIETY'S HOUSE.

The apprehensions expressed in these columns a few weeks ago, that it would be found impossible to have the new house of the Royal Medical and Chirurgical Society at 20, Hanover Square, ready for use in the first week of October, as was at one time hoped and expected, have been justified. The strike of the London dock-labourers is mainly responsible for this delay, the alterations in progress having been entirely stopped or seriously retarded for five weeks, owing to the non-delivery of the necessary iron work, which was lying for the whole of this period in the docks awaiting removal. Strenuous efforts have however recently been put forth to make up the lost time, and though the meeting hall cannot be completed for some time yet, two spacious rooms will be almost immediately available, and in these the Society will meet on Tuesday, October 22nd, the date originally fixed for the first meeting. The first meetings of the Pathological Society and of the Clinical Society have however been postponed. The latter, we understand, will meet on Friday, October 25th, and the former on Tuesday, November 5th. The delay caused by the strike has had one other unfortunate consequence. Elaborate arrangements had been made for rapidly transferring the library from Berners Street to Hanover Square, and it was hoped that the time during which the books would have been unavailable would have been measured by hours rather than by days; but "the best laid schemes o' mice and men gang aft a-gley," and the librarian had, instead, the mortification of confiding his treasure to the care of a repository. It is to be feared that at least another month must elapse before the library will be ready for use, if indeed it can be got into working order so soon as that.

FLUSHING THE PERITONEUM.

This practice, so useful in abdominal surgery, has become widely spread over the Continent of Europe. M. Polaillon pointed out last year that the practice involves danger of shock, and described a fatal case, and two that nearly ended fatally. Some mention was made of M. Polaillon's experience in the Journal, a few months since, under the heading of the present paragraph. Dr. Pierre Delbet has published an interesting series of researches in the *Annales de Gynécologie* for September without, unfortunately, making the slightest mention of the surgeons who introduced the practice. From experiments on the dead subject and on dogs, he has come to several conclusions. The liquid employed for flushing is diffused over the whole of the peritoneal cavity. Foreign bodies cannot be entirely displaced by flushing; hence, although septic material may be dislodged till but little remains, that little may do harm; so on that account, in Dr. Delbet's opinion, it is best to flush with an antiseptic solution after plain water has been employed. After flushing, a considerable amount of liquid remains behind, occupying the pelvis, iliac

fossæ, and flanks. Dr. Delbet comes to a remarkable conclusion respecting the temperature of the water. The temperature, within the limits of 18° to 50°C. (64.4° to 122° F.), has no appreciable effect on the respiration or circulation, therefore, there is no danger that flushing can arrest the heart's action. Dr. Delbet admits, however, that flushing with water of low temperature chills the intestine, and, therefore, increases shock. The water should be heated to 38° to 39° C. (100.4° to 102.2° F.). Dr. Delbet does not entirely agree with M. Polaillon's explanation of the fatal case recorded by the latter observer. The carbolic acid or the anæsthetic may have had the principal share in the fatal result. The alleged hæmostatic action of flushing with very hot water appears doubtful to Dr. Delbet. During the first minutes of the flushing process a great quantity of the water is absorbed. When salt in the proportion of seven parts to one thousand of water is employed, the process becomes "a true indirect transfusion." The paper concludes with the discussion of an interesting fact in relation to absorption of poisons. After flushing the peritoneum for ten minutes with the saline solution, a fluid containing a poisonous element may be diffused over the peritoneum with impunity, provided that it be followed by a third flushing with the saline water. In his experiments Dr. Delbet used sulphate of strychnine, but these researches are meant to imply that washings with relatively strong solutions of sublimate and carbolic acid may be advantageously used in flushing during an abdominal section, provided that the indicated precaution be not overlooked.

SCIENCE IN POETRY.

In a recent number of *Poet-Lore*, an American monthly magazine, devoted, as its title informs us, "to Shake-speare, Browning, and the Comparative Study of Literature," Dr. Edward Berdoe, well known as one of the leading spirits of the Browning Society, discourses on the scientific element which forms so conspicuous, and, to the mere literary reader, so repellent, a feature in the writings of his favourite poet. Dr. Berdoe combats, very successfully as we think, the popular notion that science and poetry are antagonistic, or at any rate mutually exclusive. Horace tells us that the source of all good poetic writing is knowledge, and it is obvious that a poet who knows something of the mysteries of Nature has so much more material for his thought to work on. So strongly do we agree with Dr. Berdoe on this point that it has often been a cause of wonder to us that the medical profession has as yet produced no poet of the highest order. Keats, it is true, "walked the hospitals" for some time; but his scientific training, such as it was, had no part in his artistic development. The essential harmony between poetry and science finds its highest embodiment in Goethe, whose imagination illuminated for him the dark places of morphology, while his intimate contact with Nature gave substance to the creations of his fancy. Mr. Browning has never, so far as we are aware, been a practical worker in the field of science, but his poetry teems with proofs that he has closely followed every movement of scientific thought during the last half century. Abundant illustrations of this are given by Dr. Berdoe, who also cites a remarkable instance in which poetic insight actually anticipated scientific discovery. Five years before Herbert Spencer gave the first hint as to the origin of the nervous system in medusæ, Mr. Browning sang of "flesh refining to nerve beneath the spirit's play." Dr. Berdoe, who is, we believe, recognised by Mr. Browning himself as a faithful interpreter, says that the supposed obscurity of his poetic oracle is due to the ignorance of an unscientific generation. This may be true to a certain extent; but there can be no question that Mr. Browning's utterances are hard sayings to very many readers, simply because, among his really great qualities, he lacks the power of lucid expression. If his thought is often tortuous, his language is still more so; there may be the inspiration of the Sybil, but there is no doubt about the writhings. Dr. Berdoe finds not only matter for scientific edification, but a complete criticism of life, and even a gospel of practical religion, in Mr. Browning; in fact, he would no doubt say of him, as Steele said of his wife, that to know Browning is a liberal education. It is pleasant to find such appreciation of literature and such enthusiasm for high culture in the hard-worked medical officer of health of an East-end district.

JABORANDI AND THE COLOUR OF THE HAIR.

Dr. Prentiss, in the *Therapeutic Gazette* of this year (April), has related a remarkable occurrence following the use of jaborandi. The patient was a woman, aged 72, who had had snow-white hair for twenty years. For the symptoms of commencing uræmia, due to contracted kidney, twenty to thirty minims of extract of jaborandi was prescribed several times daily. The drug was taken from October, 1886, to February, 1888. During the autumn of 1887 the eyebrows were becoming darker, and the hair of the head became also darker in patches. This continued until the patches of hair were quite dark, contrasting with the natural patches of snow-white hair. The hair did not universally change before her death. In 1881 Dr. Prentiss had published another case of kidney disease, pyelo-nephritis, treated with pilocarpine. The hair of the patient, a lady, aged 25, changed from light blonde to black under the influence of the drug. The pilocarpine was administered hypodermically (one-sixth of a grain) twenty-two times in the course of two months; the dose was then increased. In one month after commencing the treatment the hair changed from a light blonde to a chestnut brown; four months later it was "almost a pure black." It is satisfactory to find that eight years afterwards the hair is again a dark brown. Dr. Prentiss ascribes the phenomenon to the jaborandi and its active principle pilocarpine. Cases where, as the result of the influence of the nervous system, in pain or fright, the hair has changed colour are pathological curiosities. So little is known, however, of the physiological influence of the nervous system over the growth and nutrition of hair, that it is at present quite impossible to understand how a drug administered internally can alter the colour of the hair. It would be interesting to learn from other practitioners who have used jaborandi or pilocarpine for an extended period, whether any change in the colour of hair has been noticed.

COMPULSORY FOOTBALL.

The great interest excited by the correspondence on compulsory games at public schools, which has recently occupied so large a space in the *Times*, is evidenced not only by the number of letters published, but also by the vigour of the language in which many of them are couched. The question involved is primarily one of school administration, upon which masters must be the chief, if not the ultimate, authority. It is happily not necessary in this country to insist upon the importance of the physical element in education; *mens sana in corpore sano* is an old and trite saying, the essential truth of which is keenly appreciated by every competent head master. School games always occupy a prominent, some parents may be inclined to think too prominent, position in school life. The average boy is the better physically and mentally for the exercise and training which games give better than any form of gymnastics. Unfortunately, it has been found necessary to legislate specially for the interests of certain exceptional boys; that "loafers" may cease to loaf, rules have been enacted which tend to transform a pleasant relaxation into a task more dreaded than those of the school house. It is not necessary to have any sympathy with the wild talk about "the new tyranny" and "virulent athletics," in order to see that in many schools the present indiscriminate system might be reformed with advantage to

all concerned. From the medical point of view. no letter yet published has hit the nail so cleanly on the head as one signed "A Small Boy," published on Tuesday. Little boys, the writer says, do not like "to be forced to football, because they always get much more kicked than the ball itself.....Why are little boys not allowed to play with each other instead of with boys twice their size?" Practically the objections made are against compulsory football; football is a rough game at best, and, when little boys are compelled to play with boys of twice their bigness and strength, there can be no doubt that they are liable to accident and overstrain.

SCOTLAND.

POST-GRADUATE COURSE AT EDINBURGH.

THE classes in connection with the post-graduate course at the Edinburgh Medical School are in progress. There is a good representation of graduates from all parts of the kingdom, and a fair sprinkling from abroad. The increased number of special classes has proved a success. The applications for places have been frequently in excess of the limitation which time or space required. Little doubt is felt that this is the wisest line on which to develop the system of post-graduate instruction.

THE UNIVERSITY GATHERING AT EDINBURGH.

COTEMPORANEOUSLY with the post-graduate classes, there has been inaugurated a movement of a somewhat similar nature in connection with the other departments of science and learning represented in the university. The meetings were commenced by a successful *conversazione*, and have been held daily in different university class rooms. Lectures have been delivered on special subjects by the professors, lecturers, and assistants of the university, and by extra-academic teachers. The meetings have been well attended.

INSPECTION OF THE EDINBURGH COW-HOUSES.

THE report of the Burgh Engineer anent the state of the Edinburgh cow-houses has been completed. Only 8 of the 220 city houses have been found to conform even "all but to the rules and regulations for cow-sheds, cow-houses, and byres." The report classifies the houses as follows: (1) 8, where the cubic capacity is sufficient, but with a number of more or less serious defects as regards structure, paving, drainage, etc.; (2) 62, where the cubic capacity is not sufficient, though the houses are otherwise in pretty good order; (3) 24, where the cubic capacity is under standard amount, more than two-thirds of these having more or less serious defects as regards structure, paving, drainage, and cleanliness; (4) 33, where the cubic capacity is less than two-thirds but more than one-half of the standard amount, with more or less serious defects as above; (5) 34, where the cubic capacity is less than a half of the standard amount, with other more or less serious defects as above; (6) 51, where entire reconstruction ought to be insisted on.

EXPERIMENTATION ON PLEURO-PNEUMONIA.

THE enormous sums which have fallen to be paid by the local authorities in various parts of the country as compensation for loss sustained by the compulsory slaughter of cattle affected with pleuro-pneumonia have roused afresh widespread interest in this cattle plague. Various suggestions have been made with a view to the prosecution of a thoroughgoing scientific inquiry into the matter. These suggestions have taken most practical shape in a letter addressed by Professor John Chiene, Edinburgh, to the Fifeshire Local Authority. Mr. Chiene holds that the organism has yet to be discovered, and he urges the Fifeshire Authority to utilise one of the islands of the Firth of Forth—perhaps Inchcolm—as an experimental station. If the local authority supplied animals Professor Chiene is willing that the work of examination and cultivation should be conducted in his laboratory by his assistant. He deprecates the present plan of slaughtering, and insists on the comparative success which has attended inoculation even in its present unscientific form. The local authority has received the communication with due appreciation, and has appointed a committee to confer with Professor Chiene.

INSPECTION OF DEAD MEAT IN GLASGOW.

THE Glasgow Corporation is going to apply to Parliament for increased powers in the inspection of dead meat. Meantime the authorities are exercising their present powers to the utmost in order to prevent the exposure for sale of unsound meat. Since Sheriff Berry's decision regarding the tuberculous cattle, a great impetus has been given to the work of meat inspection, and several prosecutions have been successfully carried out against cattle salesmen. The butchers have recognised the earnestness of the authorities in the matter, and have offered some valuable suggestions to the Health Committee as to the nature of the new powers to be sought and the new organisation to be set up for effectual inspection.

EXTENSION OF MARISCHAL COLLEGE, UNIVERSITY OF ABERDEEN.

WITH the view of extending the University buildings in New Aberdeen, the University authorities some time ago acquired several of the old houses adjoining the College. The new buildings, which are estimated to cost between £5,000 and £6,000, have been designed by the Government architect for Scotland, Mr. W. W. Robertson, Edinburgh, and are to be erected parallel to and between the south wing of Marischal College and Long Acre. The opportunities for practical study will be very greatly increased by the extensions. The new buildings will contain four storeys. The sub-basement will have two large animal observation rooms, and a cellar for the physiological department. The basement will contain natural history cellar and workshop, hygienic museum, combustion room, gas analysis room, physiological chemical laboratory, sterilisation room, bacteriological laboratory. On the ground floor, at the west end, there will be the new materia medica practical class room, materia medica museum, and professor's retiring room. At the east end there will be a new physiological practical class room, physiological private laboratory, and retiring room. The first floor will contain medical jurisprudence practical class room and private laboratory connected with the new museum. The eastermost half of this floor will contain new natural history practical class room and private laboratory; also an extension of the natural history museum. The existing south wing of the College is to be extensively altered. The sacrist's house at the west end is to be converted into a materia medica private laboratory. The whole of the ground floor of the existing south wing is to be occupied by the materia medica and physiological departments. The class rooms at present fronting the south side of the quadrangle are to be reconstructed into a materia medica lecture room at the west end and a physiological lecture room at the east end. The first floor of the old wing will be devoted entirely to the medical jurisprudence and natural history departments, the medical jurisprudence lecture room on the west side and the natural history lecture room on the east side. The alterations in the existing south wing have to be completed by the commencement of the winter session, and the new buildings will be ready for occupancy by March, 1891.

IRELAND.

THE LATE DR. ROBERT M'DONNELL, F.R.S.

A COMMITTEE has been formed for the purpose of raising funds to procure a bust and a portrait of the late Dr. Robert M'Donnell, to be placed in the Royal College of Surgeons of Ireland.

ST. VINCENT'S HOSPITAL.

IT is stated that Dr. McHugh, assistant-physician to this hospital, will succeed Dr. Quinlan as visiting physician; Dr. Glasgow Patteson will succeed Mr. Burke-Gaffney as assistant-surgeon. Dr. J. O'Carroll, physician to the House of Industry Hospitals, will be physician in charge of the out-patient department, and Dr. W. H. Thompson the house-physician. These appointments, according to rumour, have been recommended by the medical staff, but they must be confirmed by the Lady Superior of the Catholic Order who manage the hospital.

EPIDEMIC OF TYPHOID FEVER.

DR. SAMUEL BROWNE, J.P., Medical Superintendent Officer of Health for Belfast, states in his monthly report for September that, during the past four weeks, 156 cases of typhoid fever had occurred among dispensary patients, against 73 reported in the previous five weeks. The mortality from typhoid numbered 21 deaths; the disease, it appears, is not confined to any locality, but has appeared pretty generally in all the sub-districts. The executive sanitary officer has been directed by the Public Health Committee to have an analysis made of the water supplied to the inhabitants. In the discussion on the report which took place at the Town Council, Dr. Graham spoke strongly in reference to the purity of the water supply, while Dr. Stewart condemned the sanitary arrangements.

CHARGE AGAINST JERVIS STREET HOSPITAL.

AN inquest was held at the North Dublin Union on Monday into the death of James Maher, who died there of fracture of the skull. He had fallen from a van, and was taken to the hospital for treatment. It was alleged that he was not admitted; that he went to his home, and returned to hospital next day; that his daughter was then told his case was dangerous; and as there was no room he was sent to Steevens's Hospital, where he could not be admitted for the same reason; that he was then brought back to Jervis Street, where he got an order for admission to the Workhouse Hospital, and he died there on Monday. The jury returned a verdict of death from the cause stated, and added this rider: "We are of opinion that the deceased was treated with great inhumanity and ignorance by the medical officers who attended him at Jervis Street Hospital; the evidence being to the effect that, while suffering from fracture of the skull, he was three times sent out of that hospital, though admitted to be a dangerous case; and, having been also refused admission to Steevens's Hospital, had at last to be sent to the Workhouse Hospital on the third day." The statement of the hospital authorities, who were not examined at the inquest, is, that the man was seen by the visiting-surgeon, who wished him to occupy a room adjoining the dispensary; that he refused to remain; that next day the same offer was again made, and he again refused to accept it; that he was sent to Steevens's Hospital, where he could not be admitted; that he returned to Jervis Street, but refused to go into the room offered, and that he was then sent to the Workhouse. They complain that no notice was given of the intended inquest, and that they had no opportunity of defending themselves. On this case there appears to have been no justification whatever for the "rider."

THE OPENING OF THE MEDICAL SCHOOLS.

ST. BARTHOLOMEW'S HOSPITAL.

THE annual old students' dinner was held in the Great Hall of the hospital on Tuesday. Mr. John Langton, surgeon to the hospital, was in the chair. Mr. Butlin, assistant-surgeon, acted as Honorary Secretary. One hundred and twenty old students and visitors were present. Among the guests of distinction were Sir Frederick Abel, Professor Humphry, and Mr. Trimmer, Secretary to the Royal College of Surgeons.

ST. GEORGE'S HOSPITAL.

AFTER the Introductory Address by Dr. Clifford Allbutt, on October 1st, Sir Henry Pitman presided over the ceremony of the distribution of prizes, and, in the course of his remarks, urged upon the students the number and value of these prizes, hoping that the competition for them would be even more keen in the future than in the past. In the evening the annual dinner of the medical school took place at the Hôtel Métropole. Dr. A. T. H. Waters, of Liverpool, the chairman, in proposing the toast of the medical school, expressed a strong opinion as to the necessity of additional space, both for the school and the hospital, a suggestion which met with the hearty approval of all present.

KING'S COLLEGE.

ON Tuesday afternoon the prizes were distributed to the successful students by Sir Albert Rollit, LL.D., M.P., Fellow and member of the Council. In subsequently addressing the students, he said that education in London was in a period of transition. The great questions of metropolitan university, higher technical, and commercial education were either in the furnace or upon the anvil of public discussion. All were agreed that the present condition of university matters in the metropolis was unsatisfactory and inadequate, and it was certain that very soon either the University of London must meet the requirements of students and their teachers, or that a new teaching university would be founded, with King's and University as its chief colleges. Moreover, the London M.D. degree had been, from a professional point of view, almost unattainable, and hence an exodus of students took place from London towards other universities. This seemed, indeed, to be a practical and admitted evil, and it would be necessary to place within more reasonable reach a degree which it was now the custom to seek, and which should certainly not be severed from the professional advantages of the metropolis. It was to be hoped, however, that the present honour of the London M.D. and M.B. degrees would not be lost to the profession or their standard unduly lowered; and he suggested that the difficulty might be met by conferring the Doctorate of Medicine, as at Bonn and some other foreign universities, not only as a pass degree, but also as an index of higher qualifications, either *cum laude* or *cum multâ laude*, which was equivalent to honours. He deprecated the foundation of a professional university, which would, he thought, not only narrow the course of professional instruction, but introduce into this country the evils of educational competition based on lowered standards and requirements, and followed by diminished reputation—a danger not unlikely to arise from the multiplication of collegiate universities.

ST. MARY'S HOSPITAL.

THE annual dinner of past and present students of St. Mary's Hospital was held on October 2nd at the Holborn Restaurant, Dr.

Broadbent presiding. The chairman, in proposing the toast of "Prosperity to the Medical School," said that every effort had been made to provide the school with all appliances for modern work, and that it now rested with the staff and the students to make the best use of them. Sir J. Crichton Browne, in proposing the toast of "The Students," spoke of the tendency of students to imitate their seniors. This should always engage the attention of the staff, as their own peculiarities would be thus perpetuated. Whatever might be said in other conditions, in corporate bodies acquired habits were transmitted. The students were protoplasmic molecules which made up the living mass of the medical school. They stored up energy and afterwards gave it forth. Sir William Roberts and Professor Buchanan, of Glasgow, responded to the toast of "The Visitors."

MIDDLESEX HOSPITAL.

On Tuesday evening, October 1st, a good gathering of past and present students of this hospital dined at the Holborn Restaurant. Dr. R. Douglas Powell occupied the chair. The chief speakers, besides the chairman, were Mr. Bell Sedgwick, Dr. Cayley, Mr. J. W. Hulke, F.R.S., and the Mayor of Bath (Mr. Henry W. Freeman). The Dean (Mr. A. Pearce Gould) was able to give a thoroughly satisfactory report of the present condition of the School and its residential college. Several of the toasts were drunk with great enthusiasm, and some excellent singing enlivened the evening. Mr. Ganz, as usual, presided at the piano with his accustomed skill, and all present enjoyed themselves most thoroughly.

UNIVERSITY COLLEGE, LONDON.

On Tuesday evening the old students' dinner, which has now become an annual institution, was held under the presidency of Mr. Cadge, of Norwich. For the first time the dinner was held within the walls of the College, the library having been granted for this purpose. About 120 old students and members of the existing staff attended, and a most enjoyable evening was spent.

OWENS COLLEGE, MANCHESTER.

The Owens College Medical School was opened for the winter session on Tuesday. In the evening a *conversazione*, given by the President and Council of the College, was held in the Medical School; over 800 medical men and others attended, so that during the evening the various laboratories and lecture rooms were thronged with visitors anxious to see and hear the several parts of the attractive programme. The annual report was read by the Dean of the Medical School, and from it we learn that the number of students attending the Medical Department during 1888-89 was 381, being an increase of 48 over that for the previous year. The increase is the largest which has taken place since the Medical Department was instituted. It also appears that Owens College stands second on the list for England. The increase in the number of students has been so continuous and so steady, that the Council of the College have already purchased land and contemplate making at once a substantial addition to the Medical School buildings.

In the dissecting room were exhibited the recent additions to the Medical Museum of preparations—healthy and morbid, and also a series of new anatomical models. Under the direction of Professor Leech, new drugs and various preparations of foods were exhibited in the Pharmaceutical and Pharmacological Laboratories, while the Professor himself showed the action of various drugs on the vascular system. In the same department there was a large exhibit of the various kinds of physiological apparatus used for the study of the phenomena of the circulatory system.

Professor Dreschfeld gave an interesting address on "Leprosy, with special reference to its Pathology and Symptoms." The lecture was illustrated by a large number of photographs of leprous conditions, projected on the screen by the oxy-hydrogen light, and also by the exhibition of a magnificent series of casts of leprosy as it affects various parts of the body. There was also an exhibition of actual leprous conditions as shown by preserved specimens, whilst its pathological anatomy was illustrated by means of microscopic preparations. The bacillus lepræ as it is found in various organs—the skin, nerves, larynx, etc.—was also shown.

Professor Stirling gave a demonstration in the Physiological Lecture Room on "Some Simple Experiments on the Mechanism of the Heart." A large number of experiments were rapidly exhibited, bearing chiefly on the action of the valves of the heart. Professor Stirling also showed a stereoscopic view of the remarkable arrangement of the muscular fibres of the frog's heart, and also a series of instantaneous photographs of the beating heart of the pigeon, cat, and calf, taken by Professor W. Gilman Thompson, of New York.

In the Physiological Laboratory there was a large exhibit of physiological apparatus. We may mention the instantaneous photographs of hurdle jumping as shown by the zoetrope, optical illusions, Hering's method of mixing colour impressions, and various recording forms of apparatus.

In the Histological Laboratory Professor Stirling exhibited a series of microscopical specimens illustrating the process of division of cells or mitosis, the vascularity of various organs, Wiegert's method of preparing the nervous system, etc.

Altogether, the *conversazione* was a complete success, and the Council of the College are to be congratulated on the manner in which they succeeded in enlisting the sympathies and interest of the medical profession in and around Manchester on behalf of this flourishing medical school.

QUEEN'S COLLEGE, BIRMINGHAM.

The medical session opened on Tuesday. A *conversazione* was given in the evening at Queen's College, when the scholarships and prizes won during the last year were distributed. Several improvements in the buildings and arrangements have been made since the end of last session, and these were open for inspection, in addition to exhibition of scientific instruments and apparatus. The staff of the two hospitals have undergone some changes since this time last year; Dr. Foxwell and Dr. Crooke have been made respectively Physician and Assistant Physician, at the Queen's Hospital, both of them vacating posts at the General Hospital. At the General Hospital, special departments have been created for the skin, and for the ear and throat.

YORKSHIRE COLLEGE, LEEDS.

The session of the Yorkshire College opened on Tuesday last, when the prizes were distributed to the medical students, and the inaugural address (which will be found on page 751) was delivered by Dr. W. T. Gairdner, who also distributed the prizes to the successful students. Dr. Eddison presided. Mr. T. Pridgin Teale moved a vote of thanks to Professor Gairdner for his address, which was seconded by Professor Birch, and carried amid cheers.

SCHOLARSHIPS.

Guy's Hospital.—The Open Scholarships in Arts have this year been awarded to Mr. William S. Handley, Loughborough Grammar School, and Mr. John Robert Steinhaeuser, Sutton Valence School. The Open Scholarships in Science have been awarded to Mr. John A. Howard, King's College and Guy's Hospital, and to Mr. Arthur H. Leete, University College, Aberystwith.

St. Mary's Hospital.—The Open Scholarships in Natural Science have been awarded to H. J. K. Bamfield, A. W. Sanders, A. Stanley, and A. E. Wilson; and the two University Scholarships to A. Senior and A. E. Shaw, both of Cambridge.

St. Thomas's Hospital.—The first Open Scholarship in Natural Science, value 125 guineas, has been awarded to Mr. T. G. Nicholson, and second, value £60, to Mr. A. E. Russell.

ABSTRACTS OF INTRODUCTORY ADDRESSES DELIVERED AT THE MEDICAL SCHOOLS.

LONDON SCHOOL OF MEDICINE FOR WOMEN.

THE Opening Address was given by Dr. ELIZABETH BLACKWELL on October 1st. The lecturer dwelt upon the fact of the steady advance of women into the medical profession. She showed the way in which the movement might benefit the profession and prove of social advantage. Women, from the great spiritual fact of maternity, both by inherited and potential qualities, were the guardians of helplessness and ignorance, the defenders of the weak, the natural foes of cruelty or injustice, cherishing hope and foreseeing the adult in the infant. The helplessness of the sick, and the fact that the human constitution was soul as well as body, proved the value of the essential maternal qualities in the physician. It was shown how these qualities, if they were enlarged by legitimate intellectual training, would introduce new and valuable force into the noble art of healing. The lecturer laid down with great force the principle that morality, which influenced conduct, must be the guide of the intellectual faculties in their pioneer work for the advancement of human welfare. The necessity of careful and persistent drill in training the intellectual faculties of observation and judgment was dwelt on, and also the dangers that might be met with in medical study. The dangers particularly emphasised were—(1) a too blind adherence to authority, as the unavoidable uncertainty of medical science necessitated the adoption of a certain reserve in the acceptance of theories or supposed facts; (2) the danger of materialistic theories which, from their limited and imperfect basis, ignored the larger part of existence and crippled the usefulness of the physician. The lecturer proceeded to dwell upon the fundamental importance of midwifery and preventive medicine to the future work of women in the profession, showing that the care of family health and the education of a stronger race were their special vocation. These branches of medicine would ever constitute the chief and permanent departments of the profession.

ST. MARY'S HOSPITAL.

AN Introductory Address upon the History of Protective Inoculation was delivered at St. Mary's Hospital, October 1st, by Dr. ROBERT MAGUIRE, Physician to the Out-patients and Lecturer on Pathology to the Hospital. The *rationale* of protective inoculation, said the lecturer, had been worked out only during the last ten years. In 1700 inoculation for small-pox was practised in Constantinople. and was introduced into England by Lady Mary Wortley Montagu. In 1768 Jenner began his researches on the protection afforded by cow-pox against small-pox. Possibly this was an instance of attenuation of virus by passage through animals of a different species. The more exact investigation commenced with the work of Pasteur on chicken cholera. The germ of this disease had already been discovered, but its relation to the disorder had not been fully worked out. To prove such a relationship it was necessary to show the constant presence of the germ in the subjects of the disease, to isolate the germ from its surroundings by cultivation upon suitable nutrient media, and finally to reproduce the disease by inoculating with such cultivations. The latter proof was wanting in the case of many germs, because the lower animals were not always subject to the diseases of man, and the germ disease was too dangerous for an observer to submit himself to experiment. Pasteur applied all these methods to the germ of chicken cholera, and rendered certain its connection with the disease. Methods of disinfection were then successfully practised, but these did not suffice to prevent further outbreaks of the disease. We could rarely control the action of germs when they were once introduced into the body. The cells of the body might fight the germs and even their spores, the germs might use up all their food and die of starvation, or they might commit suicide by poisoning themselves with their own productions, but medicines were almost useless to further these results. If full protection were desired, the body itself must be rendered incapable of being attacked by the germs. A former attack of the disease, from which the animal had recovered, afforded, in many cases, the desired protection, and to attain this safely was the object of protective inoculation. Pasteur dwelt long upon Jenner's discovery of cow-pox vaccine, and at last found that when cultivations of the germ of chicken cholera were allowed to remain exposed to the air for some time, they became incapable of causing the death of a fowl when inoculated, but such a fowl was then proof against the action of a stronger cultivation of the germ. This, Pasteur believed, was due to the action of the oxygen of the air, and he used this theory as a working hypothesis for his experiments on other diseases. Applying himself next to the splenic disease of cattle, the life-history of whose germ had been worked out by Koch, Pasteur found that his method was rendered useless by the resistance of the spores of the parasite. These were not formed by the germ of chicken cholera. He observed, however, that at a temperature of 42° to 43° C., near the life-limit of the parasite, the spores were not formed, and then the rods of the germ, when exposed to the air, behaved like those of chicken cholera. Their virulence was diminished, but their vaccinating power remained. Experiments on a large scale were then conducted successfully at Melun in 1881. The researches of Pasteur were afterwards criticised. The vaccinating fluids were found to be not uniform in virulence, and, consequently, some animals were sacrificed by the process. The immunity was not everlasting, but this objection also applied to Jenner's vaccine. It was said that the immunity was only against the injected vaccine and not against the acquired disease; but the results of inoculating large numbers of animals proved the value of the process.

Other methods of attenuation were then discovered—namely, by heating the germ to 55° C. for ten minutes (Toussaint) by heating it to 47° C. for a longer time, and also by subjecting it to a pressure of eight atmospheres at a temperature of 38° to 39° C. (Chauveau), and by the action of antiseptics (Chamberland and Roux). Again, passage through various animals by inoculation was found to attenuate the virus of certain germs. The germs of chicken cholera and of swine plague were attenuated by passage through rabbits. The germ of sputum septicæmia could be attenuated by passage through guinea pigs, and later on it was found that the poison of hydrophobia was weakened by being passed through a series of monkeys. Yet in all these cases the attenuated virus rendered an animal proof against the stronger poison. The virulence of these attenuated poisons could afterwards be restored by inoculating first young animals, and afterwards older ones, showing that the nature of the disease was unchanged. Possibly, Pasteur suggested, the oxygen of the air caused epidemics of infectious diseases to subside, while frequent passage of poisons through the lower animals brought about fresh outbreaks or even produced new diseases.

Pasteur's theory of attenuation by the action of oxygen had been much opposed. Chauveau found that when germs were heated to 47° C., attenuation was more rapid when the air was exhausted. Apparently heat was the active agent. Pasteur had originally thought that he might have been dealing with two poisons, one weak, the other strong, the one counteracting the other. Other observers had found his inoculating fluids contaminated by foreign organisms, so this suggestion might really be true. In his later work on hydrophobia he again suggested that other influences might be active in producing the attenuation. Yet he still used his first theory as a working hypothesis, and applied it to the investigation of hydrophobia, of which the germ had not yet been discovered. By infecting rabbits he obtained a poison of uniform strength, situated principally in the nerves and spinal cord, and more powerful than that obtained directly from dogs. This could be attenuated by passage through monkeys, but the results were uncertain. By exposing the spinal cords of infected rabbits to dry sterilised air, an attenuated poison could be obtained capable of protecting even man from the disease without endangering his life. Moreover, the period of incubation of the weakened virus was sufficiently short to enable it to produce immunity before the poison of a bite previously inflicted could become active. The value of this method was conclusively shown by the statistics most recently published by Dr. Ruffer.

The lecturer pointed out to his student hearers as the moral of his address that they should not neglect the scientific aspects of their studies, since they led to great practical results, and that, following the examples of the two observers chiefly mentioned, Pasteur and Koch, they should not be discouraged by difficulties, but always be working with such resources as they possessed.

ST. THOMAS'S HOSPITAL.

THE Introductory Address was delivered by Mr. WM. ANDERSON, F.R.C.S., Assistant-Surgeon to the Hospital, on October 1st. The main subject of this address was an historical review of the growth of surgery in Europe from the beginning of the sixteenth century. After a brief reference to the rise of Greek surgery from the time of Hippocrates to the death of Paulus of Egina, and its transmission in a weakened form by the Arabs, a picture was drawn of a European surgical "master" of the close of the mediæval or conservative period. The chief items of his library and armamentarium were enumerated, and the nature, extent, and source of his professional lore explained. He was found greatly inferior in originality and practical attainments to his Greek predecessors, and, inheriting all the timidity of action of his Arab teachers, allowed the most important branches of his craft to fall into the clutches of a horde of quack bonesetters, stone and rupture cutters, cataract couchers, and the like, while the rivalry of a lower grade of surgeons in France, England, and Germany threatened his complete extinction. An account was then given of the origin and progress of the coming men, the barber-surgeons; and the endeavours on the part of their emancipated brethren in France and England, the war surgeons, to elevate their calling by the formation of associations, such as the College of St. Côme in Paris and the Fellowship of Surgeons in London.

A new era in surgery opened with the sixteenth century, owing partly to the renewal of anatomical study under Berengarius, Vesalius, and others, partly to the necessity for a fresh departure in connection with the rapidly prevailing use of firearms in warfare and the invasion of Europe by syphilis. The substitution of clinical observation and pathological research for the study of books of past ages was strongly advocated, and the genius of a few men, almost unaided by the schools, exercised a wide influence upon surgical aims and practice. The chief advances during the period were in the rational treatment of gunshot wounds, the power of controlling hæmorrhage in amputation, and in the relief of strangulated hernia; but beyond this, a novel and unconventional type of surgical literature in the vulgar tongue played an important part in diffusing knowledge and stimulating inquiry. The services rendered by Ambroise Paré, Pierre Franco, and other representative surgeons of the period were passed in review.

The seventeenth century, although illuminated by Harvey's discovery of the circulation of the blood, and the researches of Acelli and Pecquel on the lymphatic vessels, produced no surgeons of the first order. The treatment of gunshot wounds, however, made considerable progress under Wiseman and Magati, and a few other steps of advance were made. Surgical education remained in a low state, except in Italy, where a system of clinical instruction was established.

This long stagnation of surgical enterprise was succeeded in the eighteenth century by the manifestation of forces of a higher and more varied type. The scientific teaching of anatomy and surgery made great strides. Surgical pathology was created by the labours of Hunter, Petit, Pott, and others. Operative surgery attained a development that left nothing to be desired in the directions of boldness and manipulative skill. Important schools were founded in London, Paris, Berlin, Vienna, and Philadelphia; and the scientific and social position of the surgeon everywhere except in Italy, where it had always been high, underwent a great change for the better. The master spirit of the period was John Hunter, who first evolved the broad principles of surgery which were to direct all future research and practice.

The present century was referred to as one of phenomenal progress in scientific and practical surgery, especially during the last three decades. The vast extension of professional education, the great development of the medical press, the facilities provided for investigation, and the multiplication of scientific appliances for diagnosis and treatment were commented upon; and the far-reaching effects of the two great surgical discoveries of the age—the means of annulling pain during operations, and the relations of germ infection to the progress of wounds—were discussed in detail.

The address concluded with some remarks upon the lessons taught by the history of the evolution of surgery, and a few words of counsel to the portion of the audience just commencing their term of professional education.

UNIVERSITY COLLEGE.

THE Introductory Address was delivered by Mr. RICKMAN J. GODLEE, F.R.C.S., Surgeon to the Hospital, on October 1st. After a few preliminary remarks on the subject of such addresses in general, which, it was maintained, were a source of great labour and discomfort to the author, and of very small comparative value to the audience, and an expression of the hope that they might ultimately be abolished, Mr. Godlee introduced a chapter of what was called ancient history. During the siege of Turin in 1539, a common soldier was wounded in the arm, and was given over by his surgeons as desperate, but at last came under the care of Ambroise Paré, who had recently joined the army. Paré was in the act of introducing his first great innovation, namely, the abolition of the use of boiling oil to recent wounds made with weapons, but had not yet advanced his second great idea, the arrest of hæmorrhage in stumps by means of the ligature instead of by the actual cautery. The actual description of the case from Johnson's translation of Paré's works was given, and the crudities of belief and practice at the time were dwelt upon. Yet, at the end of his life, he wrote the following words:—"For God is my witness, and all good men know that I have now laboured fifty years with all pains in the illustration and amplification of chirurgery, and that I have so certainly touched the mark whereat I aimed, that antiquity may seem to have nothing wherein it may exceed us, besides the glory of invention; nor posterity anything left but a certain small hope to add some things, as it is easy to add to former inventions."

The lecturer then went on to describe a supposititious case of injury to the leg, such as might have been under treatment during his student days, nearly twenty years ago, and pointed out that while such a limb could now certainly have been saved, at that time it was considered right to amputate it, and this was fully justified by the prevalence of septic diseases at the time.

He then pointed out that while the details of the performance of the operation were then as good as at the present day, there were a number of apparently trivial details with regard to the individual actors in the scene, the modification of which had led to the vast strides which surgery had made during recent years, and it was shown that these modifications depended upon the acceptance of the doctrine of the importance of sepsis and antiseptics in surgery. The gradual development of this idea had made the last twenty years the most interesting during which a surgeon would live; and the advances that had been made were even greater than those which followed the introduction of anæsthetics, though these were very great, and had seemed to justify some words of Mr. Erichsen's which were written at the time, and which were quoted in the lecture, saying that it appeared as if finality had been almost reached in the mere manipulative part of the art of surgery.

The importance of modern improvements was then enforced by dwelling upon some of the directions in which the surgical field had been widened, and then a guess was made as to the sort of steps that might be anticipated during the next twenty years—such as more rigid and perhaps legally-enforced antisepticism on the part of surgeons, and the introduction of hypnotism for the production of anæsthesia; and it was added that, though the physicians grumbled that surgeons had poached on almost all their preserves, it was almost certain that many pretty stiff fences remained for the latter to scale.

Turning, then, to the student as he was and as he is, reference was made to the old method of apprenticeship, which taught the student chiefly two things which were not good for him: first, how to make up medicines before he knew anything of disease; and, secondly, a sort of confidence in treating diseases before he knew what was inside a patient's skin. The revival of this ancient custom was strongly deprecated. The life of a student in Ambroise Paré's time, and in the more modern days, was next glanced at; and some of the quite recent increase of possibilities, both for good and evil, were then pointed out. On the whole, the medical student had become more reputable, so that the term was no longer one of reproach. He was educated much more by demonstrations than formerly, and less chance was given for individual inquiry, which no doubt raised the average attainments, but levelled down as well as up, and made the licence to practise appear to be the *summum bonum*. Hints were then given as to the manner of setting to work and the best forms of amusement. Amongst the latter, those giving the maximum of exercise in the minimum of time were praised; while one particular form of sport, namely,

billiards in public rooms, was declared to be bad, as being too expensive both of time and money.

In conclusion, the moral that the labours of the past should not be despised, and that the present should not be thought to have marked the limit of perfection, was enforced by quoting some lines from Browning's *Paracelsus*. Paracelsus, who lived just before the time of Paré, and was considered at one time the greatest of physicians and at another time the most arrant of quacks, publicly burned the works of Galen and Avicenna, stating that the latchets of his shoes were more learned than these two physicians. Mr. Browning made him, when near his end, confess the folly of this proceeding in the following words:

> Not so, dear child
> Of after days, wilt thou reject the past,
> Big with deep warnings of the proper tenure
> By which thou hast the earth ; for thee the present
> Shall have distinct and trembling beauty, seen
> Beside that part's own shade when, in relief,
> Its brightness shall stand out. Nor yet on thee
> Shall burst the future, as successive zones
> Of several wonders open on some spirit
> Flying secure and glad from Heaven to Heaven.
> But thou shalt painfully attain to joy,
> While hope, and fear, and love shall keep thee man.

WESTMINSTER HOSPITAL.

THE Introductory Address was delivered on Wednesday, October 2nd, by Dr. PHINEAS S. ABRAHAM, Lecturer on Physiology to the School. The lecturer, in welcoming the new students, said that he considered they had done well in choosing the Westminster Hospital as their Alma Mater. Being a small school, there was no fear of their being lost in a crowd, but coming, as they would do, into close contact with all their teachers, they might command more personal assistance from them than would be possible, except for a favoured few, in the large schools. They would, moreover, reap the great advantage which the Westminster Hospital afforded of an abundance of clinical material in proportion to the number of students. He could say emphatically that there was no institution in which the general "form" of the students was better than it was at the present time at the Westminster, and he had heard it said that there was an atmosphere of work about the place which made it quite uncomfortable for the deliberate idler. It was, he believed, in a great measure owing to this that the Dean had been able to present such a favourable report of successes at the various examining boards. No London hospital could in this direction show better, or probably even so good, results. It appeared that nearly 80 per cent. of the Westminster men who had presented themselves at the public boards had passed their examinations. In physiology no less than 83 per cent. had been successful. Examinations, however, were not everything; the teacher had to remember that a medical man had to be always learning, observing, and judging. The student had to be equipped with methods of thought and research, as well as with principles and facts, which would be useful hereafter. The medical curriculum was in a great measure calculated to develop a man's faculties, and to train him accurately to see and interpret natural phenomena; but their system was not yet perfect. He considered that those who aspired to become members of a profession which should be pre-eminently scientific and second to none in the land should show evidence of a good general education—for example, by passing a preliminary examination of the standard of the London matriculation, with a substantial knowledge of chemistry and physics, the laws of which really governed all the phenomena of health and disease. The medical course should, in his opinion, be extended to at least five years; for, while the subjects of professional education had multiplied and their range enormously extended, the time allotted to their study alone had not been increased for many years. It might be objected that, if the conditions were made so much more serious, the supply of candidates for the profession would be materially diminished; but would that be an unmixed evil? It was becoming well known that there were already too many practitioners of medicine, and that it was impossible for them all to make an adequate livelihood. He quoted from some lately published statistics of the General Medical Council, which showed that, while the rate of increase of population in England in late years had been estimated at 1.4 per cent. per annum, the increase of registered practitioners during the same time had been at the rate of 2.42 per cent. It was stated that "the net increase of the profession in England during the quinquennium 1881-86 was no less than 826 beyond what was requisite to keep pace with the population." In London especially the plethora was extreme; in 1886 it contained 1,943 registered practitioners over and above its due share. But, if fully-fledged doctors were as thick as blackberries, the would-be Æsculapians were still more numerous, for during the last five years an average of 1,921 entering medical students had annually been registered.

The lecturer did not adduce these figures to discourage his hearers; but he thought that they forcibly indicated two things: (1) that if competition had been severe in the past it was certain to be still more so in the near future, and (2) that they would all have the greater need for steady work, and for making the most of their opportunities from the very start, if they were to succeed in the struggle. He enumerated a long list of qualities which various authorities, including Hippocrates, had laid down as essential to the success of a medical man, and from these they could judge what paragons of excellence they ought to be. It was true that occasionally some individual of imperfect education in his work, who had not demonstrated to his professional colleagues, at all events, many of these characteristics, attained by "push" and with adventitious aid to the position of a "fashionable physician," and acquired a certain amount of reputation among the uninstructed, who could not detect the fraud. But such instances were rare; considering, indeed, the "gullibility" of a large section of the public, as evidenced by its trust in everything which was sufficiently advertised, it was surprising that the humbug and charlatan were not more to the fore.

The fact that quacks, in this country at all events, had to hold their heads low spoke well for the growing enlightenment of public opinion, but we still found certain journals, often no doubt in all innocence, lending their aid in the sale of universal nostrums, etc. But, was it not astonishing to see one of our leading illustrated papers a year or two ago furthering the interests of a notorious quack by publishing his portrait with a laudatory biography, and giving the stamp of its authority to his unblushingly absurd allegations? All this might be beneath our notice, but the fact remained that while many a competent practitioner was struggling to make two ends meet, fees which legitimately should go to him found their way to the pockets of unscrupulous adventurers, who throve on the public credulity to the general detriment. Although the interests of the profession were supposed to be in the keeping of certain councils and corporations it seemed to be generally left to private members of the profession to show up such impostors. It was satisfactory and only fair, however, to say that the great organs of public opinion at the present day showed a due appreciation of the task of the profession, and were not sparing of their acknowledgments of what a London morning journal had recently called "the inestimable services rendered to mankind by physicians and surgeons," whom it described as "that true legion of honour, the members of which, officers and men alike, led noble lives." Such words were some encouragement in their efforts. The "barber-surgeons" were long since extinct, and the hybrid medical tradesman was becoming obsolete. The physician of to-day was no longer a mere "coprogogue," nor was the surgeon only worthy of the name of "sawbones;" and Voltaire's often quoted saying, that a medico was "a man who poured drugs, of which he knew little into a body of which he knew less," was not quite so true now as it was. They could look with pride to the enormous and steady improvement in the public health, wherever the modern doctor had had his say; they could point to the fact that London, that seething cauldron of human beings, was the healthiest city in the world, in spite of the profusion of doctors, as a concrete result of the attention paid to the advice of sanitarians. He had heard a place described as so salubrious that no one could die there; when the old people desired to depart this life they had to go into the next parish. But that was not a common experience; they had, indeed, a huge continent of unknown facts in the causation, prevention, and treatment of disease yet before them for exploration. The points of attack were obvious, and there were plenty of willing and able hands for the work; but the "sinews of war," which were as necessary in this campaign as in any other, might be wanting. It must be admitted that in recent years the State had more and more recognised its obligations to the public weal, and had done much for the science of health; but a great deal was still left to private effort and generosity. They had had to await the initiation, by H.R.H. the Prince of Wales, and his "Damien Committee," of a much needed crusade of investigation against one of the most terrible scourges of mankind, and they had had to leave

gaps in their knowledge of an important therapeutic agent, until an enlightened Indian Prince came forward and handsomely defrayed the cost of its re-examination. It was to be hoped that some Crœsuses nearer home might take a hint from his splendid example. The lecturer desired to enter a plea for a more thorough study of physiology on the part of medical students, who did not always grasp the fact that the subject did not merely consist of tables of constituents, series of functions, divergent theories, etc., to be learnt by heart. If they gave as much time to the things which were shown them in the lecture-room and laboratory as they did to the names which they laboured to commit to memory from their "crambooks," they would not find the subject dry. The processes of health and disease were not really different in kind; physiology and pathology were part and parcel of one science. There was no distinct line of demarcation between them; knowledge of the latter could be but little advanced, except through a knowledge and by the methods of the former. It would be to the well-trained physiological mind that the problems of disease would the easier yield. Dr. Abraham then offered some practical suggestions in reference to lectures, note-taking, etc., founded on his own experience. He strongly recommended students to use all their senses, and to satisfy themselves as far as possible that what they were told was correct. It was a mistake to depend upon books rather than upon practical work. After some further remarks on degrees, etc., he expressed the pleasure he felt in seeing in the chair his old teacher, Professor Macalister, the brilliant Professor of Anatomy in the University of Cambridge.

SHEFFIELD MEDICAL SCHOOL.

THE Introductory Address was delivered on October 1st by Mr. CHARLES ATKIN, F.R.C.S., Lecturer on Anatomy and Assistant Surgeon to the Infirmary.

After a few words of welcome to the students, the lecturer gave a brief epitome of the history of anatomy and its allied science, surgery, from the earliest times up to their establishment in Britain. The causes of the association of surgery and barbery were discussed up to their final dissolution of partnership in 1745. Note was made of the absence of allusions to anatomical knowledge in Holy Writ and the paucity to anything surgical, though sore eyes, roller bandages, and wine and oil dressing for wounds were mentioned. Very little of surgical interest was to be found in the writings of Chaucer or Sir Thomas More. Shakespeare's knowledge of surgery appears to have been limited to the primitive methods of stopping bleeding by cobwebs and flax with whites of eggs. Parmaceti is recommended for an inward bruise, as are plaintain leaves for broken shins. Wounds are described as being treated by balsam, tents, and caustic, and burns by applied heat. Broken bones when united are stated to be stronger than they were before. Mortification and gatherings also receive mention. The only allusions to a distinct operation on the living body besides leeching and lancing are in *Coriolanus*, where this warrior is compared to a disease which must be cut away, and in *King Richard II.*, where the Duke of York begs that the life of his son, Aumerle, may be cut off like a festered joint. Though Shakespeare spoke of the drowsy syrups of the world he does not show that he was aware that poppy and mandragora were used by surgeons to cast men into a deep sleep before performing operations. Massinger, however, writing his *Duke of Milan*, seven years after Shakespeare's death, mentioned a sleepy potion being given to lessen the torment of searching a dagger wound. Shakespeare evidently believed that the touch of the anointed hand of Royalty could cure scrofulous sores, and this superstition continued down to the time of George III. The "learned poet" Spenser was assumed to have as great a horror of being dissected as Shakespeare had of his skeleton gracing a surgeon's study. In the *Faerie Queen* is to be found "Ah, dearest God, me grant, I dead be not defoul'd," and the following words were written by Shakespeare himself, to be engraved on the stone which was to cover his remains: "Good friend! for Jesus' sake forbear To dig the dust enclosed here. Blest be the man that spares these stones, And curst be he that moves my bones." Shakespeare was certainly conversant with the anatomy of the brain, notwithstanding ecclesiastical denunciations against opening the head as the seat of the soul. Samuel Butler lived in the day of legalised anatomy, and the knowledge of the circulation of the blood, so *Hudibras* is replete with surgical allusions such as "Well! Sidrophel, though 'tis in vain To tamper with your crazy brain Without trepanning of your skull," etc., and "Anatomists dissect and mangle To cut themselves out work to wrangle;" and again, "Can no transfusion of the blood That makes fools cattle do you good?" This last referred to the craze which had seized the public mind, that rejuvenation—the true *elixir vitæ*—consisting in injecting fresh blood from animals into the veins.

Though the necessity of a knowledge of anatomy to the surgeon was insisted upon in the second century no further progress was made till the middle of the sixteenth. Galen likened a man working in or at a man's body without knowledge of anatomy to a blind man pruning a vine or carving an image, and to an architect building without order or plan. And yet now, seventeen hundred years after, bonesetters, who had never seen the interior of a joint, continued to flourish.

With regard to medical education, stress was laid on the value of preliminary training. Carpentering for ensuring accuracy and acquiring manual dexterity was recommended, as well as a good foundation in physics, chemistry, and biology. The lecturer expressed the opinion that a higher standard for the preliminary examination was desirable, so that ne'er-do-weels could be weeded out from the first, thus saving much time, trouble, expense, and disappointment. Though a great personal fondness for languages was expressed, the lecturer did not recommend them to be kept up except for the increasing of delights or for the chance of finishing medical education abroad, everything of value being immediately translated. The natural sciences, on the other hand, were strongly recommended.

It was shown that Erasmus, writing 400 years ago, not only condemned cramming and over-pressure, but insisted on relaxation. In his *Colloquies* we read: "There is nothing more pernicious than to be glutted with anything; and so likewise with learning, and therefore an immoderate pressing on to learning is sometimes to be relaxed, and divertissements are to be intermixed, but then they should be such as are becoming a gentleman and a student." Roger Ascham, writing in the middle of the sixteenth century, gave students advice which Mr. Atkin said they could most literally follow, and which he could most cordially endorse: "To play at tennis and all pastimes generally which be joyned with labor, used in open place and on the day light, conteining either some fitte exercise for warre, or some pleasant pastime for peace, be not onely comely and decent, but also very necessarie for a courtly gentleman to use." On the other hand, the students were warned against excessive indulgence in sports; and on this point Mr. Ruskin was quoted where he says: "Every duty which we omit obscures some truth we should have known."

With regard to examinations, the lecturer made a difference between essentials and fundamental facts on the one hand and recondite details on the other, and he gave his opinion that only the latter should be prepared for. Stress was laid on the necessity of students acquiring an all-round knowledge in the specialities, as many of them might wish to practise in the Colonies, where they would have occasionally to rely solely on their own resources.

The subject of "healthy homes" was discussed, and not only was disease stated to be often the result of environment, but also drunkenness, immorality, and crime.

With regard to hospitals, Mr. Atkin said there was no doubt but that more care might be displayed in checking the attendance of people who could well afford to pay a medical man a reasonable fee, though he considered the majority of hospitals would be acquitted of malversation.

After accounting for the differences of medical opinion, and explaining the significance of the emblems of Æsculapius, the lecturer expressed a hope that the gentlemen present would learn to love their work, and that they would all become ornaments to the profession.

GERMAN STUDENTS' DUELS.—Two students, one belonging to the medical and the other to the legal faculty of the University of Halle, have recently been condemned to three months' imprisonment in a fortress for fighting a duel with pistols, although neither was hurt. It appears from this that a paternal Government will only allow bellicose *Burschen* to avenge their honour by slashing each other's faces.

PROFESSOR VON NUSSBAUM, of Munich, celebrated his sixtieth birthday on September 2nd. His assistants presented him with laurel wreaths, and congratulatory letters and telegrams poured in from every part of the world. With the exception of an infirmity of the lower limbs, from which he has suffered since the Franco-Prussian war, the distinguished surgeon enjoys excellent health.

THE SANITARY CONGRESS.

Drainage and Sewage Disposal.—Women as Sanitary Reformers.—Co-operative Cooking.—Winds.—Public Analysis.—Popular Addresses.

THE sittings of the Congress at Worcester were resumed on Thursday, September 26th, and Mr. H. J. MARTIN, M.Inst., C.E., in an address given in Section 2, speaking of fen drainage and its sanitary influence, said there was no doubt that it had materially raised the sanitary status of the district, and had done much to minimise the physical disadvantages of fen life. His address chiefly dealt with a review of the improvements which had been effected during the past forty years in town, village, and house-drainage.—The PRESIDENT said what was wanting in sanitary matters was the extension of sanitary powers over large areas.—Sir D. GALTON expressed a hope that in large towns like London the erection of new buildings would be prohibited unless provision was made for the use in them of smokeless fuel.—Papers were also read by Professor H. ROBINSON, M.Inst.C.E., on Sewage Disposal; and by Mr. R. GODFREY, Assoc.M.Inst.C.E., on the Amines Process of Sewage Treatment. Professor Robinson's paper specially alluded to the completion of works on the Thames at Kingston-on-Thames, where the A B Company had undertaken the disposal of the sewage under circumstances which justified special reference. His feeling was that the A B system, as worked out, produced the best effluent of any chemical system which did not employ filtrates in aid of chemicals, but the cost was a question to be considered with the manurial value. He considered the time had arrived when an investigation by an impartial and qualified commission into the question of sewage disposal would lead to useful results.

In Section 1 Mrs. ERNEST DAY (the Mayoress), in a paper on Woman as a Helpmate in Sanitary Reform, spoke of the need of short, bright homely lectures on cooking, and the elementary rules of domestic hygiene at mothers' meetings and in the various clubs provided for the social recreation and instruction of girls, where some of the popularly written tracts on the subject, published by the Ladies' Sanitary Committee or the National Health Society, should be read aloud by someone practically acquainted with the subject. Too little importance was given to the nourishment contained in fish, milk, peas, beans, lentils, and other house plants.—Sir DOUGLAS GALTON called attention to the fact that the high schools now enabled girls to obtain a knowledge of chemistry, which was a step in the right direction.—The Rev. Canon CREIGHTON said sanitary economy was a branch of knowledge which ought to be extended to schools.

Dr. STRANGE read a paper on Co-operative Cooking, by a "Society for Supplying the Poor with Cheap and Wholesome Cooked Food." Dr. Strange explained that the object was to supply the working classes with a kind and quality of food with which they were to a great extent unacquainted, and which in most cases they were totally unable to provide for themselves. The food was paid for at a price which on a large scale was self-supporting and on a smaller scale at least paid the cost of materials and of cooking. The food was of the most nutritious quality which could be had, consisting chiefly of pea-soup (including some animal food), suet puddings, with treacle, jam, or raisins, Irish stew, and, where desirable, a lighter kind of soup for young children. Cooking for the sick might be added. Cooking centres were established in several densely populated parts of the town, where the food was sold at midday to all comers. Children's dinners were also provided and consumed on the cooking premises at ½d. and 1d. each. The only charitable portion of the plan was carried out by the sale of tickets, 1d. each, to be distributed among the very destitute in severe weather.

A paper on Winds was read by Dr. J. W. TRIPE. He commenced by describing the constituents of the atmosphere, which, he said, was composed chiefly of nitrogen and oxygen, in addition to which were varying proportions of aqueous vapour, carbonic acid, various products of imperfect combustion, dust, spores, bacilli, and other microscopic bodies. Giving a minute description of the atmosphere and its constituent parts, and showing how they were dominated and acted upon, and describing the cause and effect of its different changes in the ever-changing positions of the earth, he described the formation of cyclones, sea breezes, and land evening breezes. Winds occurring in the vicinity of large rivers partook of the good qualities of sea breezes, but did not contain so much ozone or saline matter. These breezes were said to be rarely higher than 400 feet above the surface. As a corroboration, he mentioned that on the second stage of the Eiffel Tower, about 450 feet high, there was a calm when the wind blew strongly on the earth, and on another occasion the contrary happened. These facts were within his own knowledge. The direction of the wind was next considered in relation to its effect on the general health. The results of the admixture of different winds varied considerably at different seasons. The most convenient arrangement for discussing winds was that proposed by Dove, namely, permanent, periodical, and variable, the last-named being winds of high latitudes. Permanent winds included the trades and anti-trades. The chief periodical winds were the north-east and south-west monsoons. At the time of the change of the monsoons violent storms of wind and rain frequently happened. Variable winds were those which occurred in this country, and all would admit that they well deserved their name. He went on to discuss papers by Mr. Glaisher and other tables published by the Astronomer Royal on the subject of winds, and described in succession local occasional winds: the simoom, described by Dr. Cooke as "sudden and singularly fatal in its effects, invisible, intangible, and mysterious;" the hot winds of Australia and New Zealand; the Föhn, a hot, dry wind, which blew in winter in the north-eastern valleys of Switzerland; and the sirocco, another hot wind, which was met with on the borders of the Mediterranean. Occasional cold winds were almost as numerous as hot winds, and, when accompanied by snow, were called "blizzards" in America, and were much more destructive than hot winds. In a blizzard the snow fell in the form of fine dry crystals of ice, which did not readily melt, thus rendering respiration difficult and sometimes impossible, eventually causing death by asphyxia. He described tornadoes, waterspouts, and the velocity and carrying power of winds. He accounted for certain outbreaks of infectious diseases by winds blowing in the direction affected. Some physicians, he said, doubted the possibility of small-pox infection being carried more than a few feet; but he could not understand how, if a disease were set up by a living organism falling on a soil in which it would develop, it should be able to infect a person at 20 feet distance and not at 100 feet, or even at half a mile. Surely a living organism could not be destroyed (oxidised) in its passage through the air for half a mile when the wind was travelling at the rate of only four miles an hour; and yet articles of infected clothing and scabs of small-pox they knew would retain infective power for months.

Mr. C. E. CASSAL, F.C.S., F.I.C., read a paper on The Extension of Public Analysis, in which he complained that the officials appointed to detect adulterations failed in their duty. He cited returns showing how few were the prosecutions in such cases.—Mr. WILLIS BUND, as an active Worcestershire magistrate, remarked that the power of carrying out the Adulterated Food Act was in the hands of the police, who did not act except upon the complaint of some person.

A paper was next read by Dr. FRANKLAND, supplying some recent results obtained in the practical treatment of sewage.

The paper by Mr. J. W. WILLIS BUND, F.Z.S., suggesting the establishment of a standard for effluents from sewage works led to a short discussion on the extent to which fish were poisoned in our streams by sewage.

Papers were also read by Dr. TICHBORNE on The Interception of Miasmatic Emanations from the Subsoil of Dwellings; and by Surgeon W. G. BLACK on the subject of Meteorology at the Seaside.

Popular addresses were given by Sir DOUGLAS GALTON, K.C.B., D.C.L., LL.D., F.R.S., on The Diseases Amenable to the Control of Preventive Measures; and Professor W. H. CORFIELD, M.A., M.D. Oxon., F.R.C.P., on The Mistakes made in Life, and their Remedies.

Mr. H. LAW, M.I.C.E., F.R.M.S., in the course of an address on Air, Water, and Sunshine as connected with Health, gave some practical advice to working people.

CONFERENCE OF MEDICAL OFFICERS OF HEALTH.

THE annual meeting of the Society of Medical Officers of Health was held at the Guild Hall, Worcester, on Saturday, September 28th, under the presidency of Professor W. H. CORFIELD. The meeting, which was of a formal character, was followed by a conference of medical officers.

Dr. H. SWETE read a paper on the Actual and Probable Effects of Recent and Prospective Legislation upon Medical Officers of

Health. The salaries of such officers, he stated, ranged from £1,000 to £3. He proposed to make the minimum £100 per annum, no private practice to be taken when a medical officer of health received a higher salary than £300.—Dr. TAYLOR (Liverpool) said that no medical officer should be appointed without the highest credentials. He placed no confidence in diplomas.—Mr. WILLIS BUND, vice-chairman of the Worcestershire County Council, said the question of appointing a medical officer for the county was now under consideration, but certain difficulties had arisen and certain returns were required. The medical officers to whom applications had been made had failed to answer the queries. It appeared that they had perfect discretion in the matter. If that was the law, it required to be amended.—Dr. STRANGE said the new law did not define very clearly what were the duties of a county medical officer of health, and they must wait for the formation of district councils for this to be cleared up.—Sir H. ACLAND, Dr. BOND, Dr. MITCHELL, and others, joined in the discussion.

Dr. WHITELEGGE, medical officer of health for the West Riding, read a paper on the Best Means of Carrying out the Notification of Infectious Diseases Act. Numerous speakers took part in the discussion.

MEDICAL CONGRESSES AT PARIS.

[FROM OUR PARIS CORRESPONDENT.]

WHATEVER may be the politics of medical men—and it is impossible but that in so large a body there are many partisans of every political creed—they have shown that science is their real chief, and under that banner they all rally in amity and good-fellowship. During "the congress fortnight" (*quinzaine de congrès*) there were congresses on Sanitation, Demography, Public Assistance, Alcoholism, Dermatology and Syphiligraphy, Mental Diseases, Therapeutics, Zoology, Psychology, Physiology, Criminal Anthropology, and Hypnotism. Also the French Society for the Advancement of Science and the Ophthalmological Society have held their annual meetings in Paris. The congresses and meetings were largely attended by French medical men. Other nations, with the exception of Germany, were likewise well represented. It is rumoured that this absence was not voluntary, but enforced either by a governmental nod or wink.

Hypnotism.—M. Dumontpallier presided at this congress. In his inaugural speech he stated that hypnotism had become for him a cherished study, evolved by Burq's researches in metallotherapy, which were investigated by a Commission named by the Biological Society, of which Charcot, Vulpian, and Claude Bernard were members. This Commission, M. Dumontpallier further stated, verified Burq's researches, and, in addition, discovered the transference of sensibility in hysterical patients (*le phénomène de transfert de la sensibilité chez les hystériques*). Since that time animal magnetism had gained ground as a therapeutic agent. The Nancy school, with Bernheim, Beaunis, and Forel, had come to the fore. These scientists attributed the appearance of all phenomena to suggestion. Nevertheless (interposed the President), the action of physical agents could not be denied. It was admitted by such eclectics as Ladame, A. Voisin, Delbœuf, Jung, Mesnet, and Azam. M. Ladame read a paper on the necessity of forbidding public hypnotism, in which he maintained that public authorities should forbid public hypnotising and magnetising on grounds of public health. After Donato, d'Onoproff, and others had made their *tournée* at Geneva, M. Ladame had a considerable increase of hysterical and neurotic patients, who had been among the audience of the above-named, come to him to be cured of the results of these hypnotic amusements. Another and more serious one M. Ladame enumerated accruing from these unhealthy exhibitions is the desire of people who have attended them to hypnotise their friends; this they indulge by mutual consent, and succeed so well they cannot awaken them. In colleges hypnotising becomes an epidemic; this was especially observed at Neufchâtel in 1880, after Donato's visit. M. Bourdon endorsed these statements; he had seen young men plunged into a state of profound somnolence after a hypnotic *séance*, and it was impossible to awake them. M. Ladame considers that the exercise of hypnotism as a therapeutic agent ought to be regulated by the same laws as those that govern medical practice. If hypnotism is dangerous practised by ignorant people, its use should be limited to those who have furnished the guarantee of ability the law demands. Hypnotism and its medical use should be included in clinical teaching, and candidates in medical examinations should be called upon to show they have sufficient knowledge concerning hypnotism as a therapeutic agent. These words of wisdom were approved by MM. Forel and Dekhteref. After a lengthy discussion, the Congress decided that it is desirable that hypnotism and its therapeutical use should be included in the medical curriculum.

Therapeutics.—In the Therapeutical Congress M. Calabb, of Bucharest, read a paper on di-iodo-salicylic acid. Administered in doses of 1½ to 4 grammes a day it is an analgesic and antithermic, and exercises an inhibitory action on the heart; it is also an excellent antiseptic. M. Bardet has with exalgine (methylacetanilide) obtained very good results in treating neuralgia and migraine. M. Ferrol's experience was exactly the opposite; the pain was not soothed, and cyanosis frequently resulted. M. Ferrol ceased using exalgine even in doses of 50 centigrammes. M. Desnos stated that using such small doses was the secret of his failure. M. Dujardin-Beaumetz remarked that exalgine, administered in large doses repeated for some time, is frequently of great service, but vertigo often results, and he considers exalgine inferior to antipyrin.

Dermatology and Syphiligraphy.—The Congress of Dermatology and Syphiligraphy lasted five days. Many important questions were discussed in it; the first day's proceedings were summarised as follows: MM. Brocq, Schwimmer, and Unna decided that Dühring was right in classifying separately bullous affections which present special characteristics. Kaposi maintained that all the forms of disease known as "Dühring's disease" can be included in one of the classes already defined. It was also decided that Dühring's classification requires revision. M. Kaposi stated that Dühring's classification would dwindle away by degrees; when diagnoses are skilfully made, each affection will be included in the nosological categories existing. The Congress unanimously admitted that syphilis, badly treated, frequently results in tertiary symptoms; 6 or 8 per cent. of syphilitic patients exhibiting tertiary symptoms. These symptoms appear much earlier in the course of the disease than is generally believed. Nervous disturbance is the most frequent, skin-diseases of syphilitic origin being considered separately. Dr. Semmola, of Naples, stated that it is often difficult to decide on the moment when mercurial treatment should cease; examining the blood to ascertain the number of globules, and the proportion of hæmoglobin they contain is the only method. When the trouble resulting from specific treatment ceases, a chromocytometric examination should be made every three or four days; if the proportion of hæmoglobin increases, mercury should be administered; if it decreases, the patient is cured, and mercury has a toxic effect. M. Quinquaud described a new cutaneous affection characterised by the appearance of tiny bumps, which develop very slowly, are very hard, and resemble xanthoma; their initial appearance is in the clavicular region; they spread slowly over the whole trunk and the limbs. M. Quinquaud believes them to be of epithelial origin; they are benign, and he designates them "epithelial eruptive cystic celluloma." They are quite different from epithelioma. Dr. Raymond read a paper on peptonuria, in which he stated that the presence of peptonuria had been ascertained in infectious diseases, and in all morbid conditions accompanied by an excess of cell-growth; Dr. Raymond therefore considered it probable that peptonuria would occur in syphilis, and sought to demonstrate its presence. In some instances he met with it, but these were rarer than he expected them to be. He observed peptonuria in serious forms of syphilis (phagedenism, tertiary).

Mental Disease.—Dr. Ladame, of Geneva, at the Congress of Psychological Medicine, read a paper on *érythropsie* (red sight) in general paralysis. Erythropsia is manifested at the onset of general paralysis, and lasts two months. The patient sees raised red spots on all the objects he looks at, even if these be black. Examination with the ophthalmoscope does not reveal any ocular lesion. M. Ladame believes that erythropsia is due to stimulation of the cortical nerve centres. Dr. Brunet believes in the specific character of general paralysis, which he designates as "*péricérébrite*," and observes that the lesions of general paralysis are of a definite character. M. Brunet believes that at the period of simple hyperæmia general paralysis may be cured, and prescribes for his patients as much as one gramme of tartar emetic (*tarte stibié*) and forty grammes of bromide of potassium. M. Ball endorses the opinion of M. Brunet concerning the specific character of the lesions of general paralysis, but considers the dose of bromide recommended by M. Brunet too large; it is admitted that bromine renders the blood fluid, and he considers it dangerous to give this drug in such large doses to patients whose arteries are already congested and friable. M. Ball would not adopt such treatment with his own patients.

Scientific Societies.—At the Congress of Scientific Societies, M. Motais spoke on hereditary myopia. After carefully examining 330 young people and their relations, M. Motais came to the following conclusions. It is beyond a doubt that myopia is hereditary in the proportion of 65 per cent. Hereditary myopia manifests itself at an earlier period than acquired; it increases more rapidly, and is of a more exaggerated form. In 79 cases out of 100, it is transmitted from father to daughter; in 85 out of 100, from mother to son.

SOCIETY FOR THE STUDY OF INEBRIETY.

A QUARTERLY meeting was held at 11, Chandos Street, on Tuesday, October 1st; the President, Dr. NORMAN KERR, in the chair.

A paper was read by Mr. H. C. TRESTRAIL on "Inebriety and Some of the Circumstances Favouring its Development." The circumstances of birth as exemplified in heredity, the use of alcohol during lactation, and defective education were dwelt on, and the necessity for the training of self-control was strongly urged. There should be education in all schools on the physiological action of narcotics of all kinds. Inebriety was a disease demanding sound scientific and judicious medical treatment.

The PRESIDENT, in a brief communication, answered the question, Is there an arsenic inebriety? in the negative, though he had known such substances as iodine and arsenic taken habitually to excess. A permanent impression could be made on the nerve-centres by almost any substance, but only narcotics and anæsthetics could give rise to a true narcomania.

A resolution was agreed to, memorialising the Home Secretary and Government to use their influence to promote the appointment of a Parliamentary Committee to inquire into the results of the working of the Inebriates Act.

Another resolution was passed, approving of the leading principles of Mr. Charles Morton's Restorative Homes (Scotland) Bill—namely: (1) voluntary reception and detention without appearance before a justice; (2) compulsory admission and detention of inebriates unable or unwilling to apply of their own accord; (3) provision at the public charge for the detention and treatment of impecunious inebriates.—Among those who took part in the discussion were Drs. H. W. WILLIAMS, JABEZ HOGG, GEORGE POOLE, LONGHURST, HAZELL, and PARAMORE.

ASSOCIATION INTELLIGENCE.

COUNCIL.

NOTICE OF MEETING.

A MEETING of the Council will be held in the Council Room of the Association, at No. 429, Strand (corner of Agar Street), London, on Wednesday, the 16th day of October next, at 2 o'clock in the afternoon.

FRANCIS FOWKE, *General Secretary.*

September 12th, 1889.

NOTICE OF QUARTERLY MEETINGS FOR 1889. ELECTION OF MEMBERS.

A MEETING of the Council will be held on October 16th, 1889. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting, namely, September 26th, 1889.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member *by the Council* or by any recognised *Branch Council.*

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No member can be elected by a Branch Council unless his name has been inserted in the circular summoning the meeting at which he seeks election.

FRANCIS FOWKE, *General Secretary.*

BRANCH MEETINGS TO BE HELD.

OXFORD AND DISTRICT BRANCH.—The next meeting of this Branch will be held at the Radcliffe Infirmary, at 3 P.M. on Friday, October 25th. Notice of papers to be read, etc., should be sent to the Honorary Secretary on or before Friday, October 11th.—W. LEWIS MORGAN, Honorary Secretary, 42, Broad Street, Oxford.

NORTH OF ENGLAND BRANCH.—The autumnal meeting will be held at the Royal Infirmary, Newcastle-upon-Tyne, on Wednesday, October 23rd, at 3 P.M. Agenda: Dr. Coley will exhibit some cases of interest. Dr. Murphy will read a paper on the Operative Treatment of Hæmorrhoids. Dr. Coley: On Effusion into the Cavity of the Pleura. Mr. Williamson: On a Case of Cerebral Abscess, Localised and Opened. Dr. Philipson will introduce the question of the Formation of a Division of the Medical Defence Union for Northumberland and Durham. Members wishing to read papers, etc., are requested to communicate with the Honorary Secretary at once. The dinner after the meeting will take place at the Douglas Hotel, at 5 P.M., 6s. 6d. each, exclusive of wine.—G. E. WILLIAMSON, F.R.C.S., Honorary Secretary, 22, Eldon Square, Newcastle-on-Tyne.

SOUTH EASTERN BRANCH: EAST SURREY DISTRICT.—The autumn meeting will be held at the White Hart Hotel, Reigate, on Thursday, October 10th, at 4 P.M., Frederick B. Hallowes, Esq., of Redhill, in the chair. Dinner at 6 P.M., charge 7s., exclusive of wine. The following papers, etc., will be read:—Dr. W. J. Mickle: On the Relations of Medical Men with the Public and the Insane under the Present and Coming Lunacy Laws. Mr. Pearce Gould: (1) On the Treatment of Strumous Glands; (2) Recent Surgical Cases. Mr. Herbert W. Page: On Acute Epiphysial Necrosis. Dr. John H. Galton: A Case of Mole Pregnancy in a Woman, aged 53. Dr. H. S. Stone: A Case of Gall-Stones passed through the Abdominal Wall. Members desirous of exhibiting or reading notes of cases will please communicate with P. T. Duncan, M.D., Honorary Secretary, Croydon.

ABERDEEN, BANFF, AND KINCARDINE BRANCH.—The annual meeting of this Branch will be held at 198, Union Street, Aberdeen, on Saturday, October 19th, at 1 P.M., the President, Dr. Stone, Montrose, in the chair. Business: (1) Minutes, etc.; (2) Council report; (3) Treasurer's balance-sheet; (4) election of President-elect for the ensuing year; (5) election of two honorary secretaries and honorary treasurer; (6) election of members of Council; (7) election of chairman of Parliamentary Bills Committee; (8) Selection of place of next June meeting.—ROBERT JOHN GARDEN and J. MACKENZIE BOOTH, Honorary Secretaries.

STIRLING, KINROSS, AND CLACKMANNAN BRANCH.—The autumn meeting of this Branch will be held in the Scottish National Institution for Imbecile Children, Larbert, on Friday, October 18th, at 4 P.M. Dr. Leslie will exhibit various cases, and read a paper on Certain Types of Imbecility. Members desirous of showing specimens, etc., are requested to communicate with the Honorary Secretaries. The Council will meet at 3.45 P.M.—C. J. LEWIS, Honorary Secretary.

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT.

A MEETING of the above district was held at Hastings on September 26th; Mr. ROUTH in the chair.

Strychnine Poisoning.—The CHAIRMAN described his personal experience of poisoning by the accidental administration of 70 minims of liq. strychniæ. Recovery followed treatment by chloral and chloroform inhalation. For six months subsequently he had no symptoms of migraine, from which he had suffered frequently.

The Hospital Question.—The remainder of the meeting was occupied by discussions on hospital out-patients, the proposed Public Medical Service, and the House of Lords inquiry, which are reported at page 797.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT.

THE last meeting of the above District was held at the Royal Sea Bathing Infirmary, Margate, on Thursday, September 12th, at 3 P.M., Mr. KNIGHT TREVES in the chair. Previous to the meeting the directors of the infirmary hospitably provided luncheon for members of the Association and their friends. Mr. C. H. SCHÖN, of Bridge, was elected chairman for the next meeting to be held at Canterbury in November.

Prescribing v. Dispensing.—The CHAIRMAN gave notes upon his experience of ten years' non-dispensing. The advantages and disadvantages of giving patients prescriptions were discussed by Dr. PITTOCK, Mr. GEORGE RIGDEN, Mr. PHILLIPPS, Mr. R. HICKS, and Dr. F. EASTES.

Communication.—Mr. W. L. CHUBB read Notes of a Case of Empyema. The empyema followed an attack of pneumonia in a man, aged 19. Aspiration was done with immediate relief to symptoms, but on the third and eleventh day after aspiration two and three pints of pus were expectorated respectively. An excellent recovery ensued. Some remarks were made on the difficulties met with in the diagnosis of pleuritic effusion, references being made to Dr. Hood's paper on Empyema following Pneumonia, and Dr. Goodhart's on Behaviour of Fluid in the Chest and Treatment of Empyema. Mr. R. HICKS, Dr. F. EASTES, and Mr. PHILLIPPS took part in the discussion.

Dinner.—The members afterwards dined together at the Nayland Rock Hotel.

EAST ANGLIAN BRANCH: ESSEX DISTRICT.

AN ordinary meeting of this District was held on September 24th at the Horn Hotel, Braintree; Dr. J. SINCLAIR HOLDEN, of Sud-

bury, President of the East Anglian Branch, in the chair. There were also present twenty members and one visitor.

Next Meeting.—This will be held at Haverhill in the spring.

Medical Defence Union.—Dr. MEAD (Newmarket) gave an account of the origin, development, and present condition of the Union. He explained its objects and the benefits conferred on its members. The Union was rapidly extending to all parts of Great Britain.—The following resolution was proposed by Mr. J. M. RYAN, M.B., Colchester, seconded by Mr. E. H. CARTER, and carried unanimously: "That this meeting considers the Medical Defence Union supplies the profession with a much needed organisation for protection from unjust charges, and approves of the steps which have been taken to organise it. The best thanks of the meeting are hereby tendered to Dr. Mead for his exertions in introducing the Union to East Anglia."

Hospital Out-patient Reform.—A discussion on this subject was opened by Mr. E. H. CARTER (see page 796).

The following papers were then read:

Dr. T. COLCOTT FOX (London): "New Methods of Treatment and New Applications in Skin Diseases."

A vote of thanks was unanimously accorded to Dr. T. Colcott Fox for his valuable and interesting paper.

Mr. T. SIMPSON (Coggeshall) showed a case of Scleroderma, and exhibited six drawings done by a camel's hair pencil held in the mouth.

Mr. C. E. ABBOTT (Braintree) read the notes and showed a case of Elephantiasis Arabum.

The members subsequently sat down to a cold collation at the hotel.

NEW SOUTH WALES BRANCH.

THE eighty-first general meeting of this Branch was held in the Royal Society's Room on Friday, June 7th. Present: Dr. FIASCHI (President, in the chair), Drs. Quaife, Cohen, Shand, Worrall, Wilkinson, Scot Skirving, Crago, Brady, Lyden, Fisher, Parker, Clubbe, E. F. Ross, Todd, Rennie, O'Reilly, Garrett, McCulloch, and the Hon. Dr. Creed, M.L.C. The minutes of the previous meeting were read and confirmed.

Death of Dr. Nott.—The PRESIDENT announced the death of Dr. Nott, of Woollahra.—Dr. SCOT SKIRVING proposed, and Dr. QUAIFE seconded, that a letter of condolence be forwarded to Mrs. Nott, sympathising with her in the loss she had sustained by her husband's death.

Representative at Annual Meeting.—The HONORARY SECRETARY (Dr. Scot Skirving) read a letter from the President-elect of the British Medical Association, asking that a representative from the New South Wales Branch be sent to the annual meeting, to be held in August of this year at Leeds, England.—The Hon. Dr. CREED proposed: "That the Hon. Dr. MacLaurin be appointed to represent the Branch at the annual meeting of the British Medical Association."—Carried.

New Members.—The PRESIDENT (Dr. Fiaschi) announced that Drs. Barcroft and Harold Brown had been elected members of the Branch and Association.

Communications.—The Hon. Dr. CREED, M.L.C., and Dr. SCOT SKIRVING read a paper on Two Cases of Acute Yellow Atrophy of the Liver (?), in which recovery took place.—Dr. WILKINSON exhibited a case of Diphtheritic Paralysis, and explained the case.—Dr. BRADY exhibited some long hair from a Dermoid Tumour of the Scalp behind the Ear.—Dr. WILKINSON read a paper on a Case of Heart Disease, with exhibit and microscopical sections.—Dr. SHAND, of Penrith, read a paper on a Case of Fibro-Cystic Tumour removed from the Body of the Uterus, and exhibited the specimen.

THE eighty-second general meeting of the Branch was held at Sydney on Friday, July 7th. Present: Drs. FIASCHI, *President;* Mr. G. T. Hankins, M.R.C.S., *Vice-President;* Drs. Marshall, Hodgson, Rennie, Todd, Colton de Englesqueville, Scot Skirving, Jarvie Hood, Brenemand, Fisher, Marano, Martin, Wright, Worrall, Roth, Quaife, Kendall, and Crago; *Visitor*, Dr. Burland.

The minutes of the previous meeting were read and confirmed.

Death of Dr. McDonagh.—The PRESIDENT announced the death of Dr. McDonagh. It was resolved: "That a letter of condolence be forwarded to the relatives of the deceased gentleman."

New Members.—Dr. Wright, of Glebe Point, and Dr. E. P. McDonnell were elected members of the Branch and Association.

Communications.—Dr. JARVIE HOOD, of Clarence River, read a paper on a case of Foreign Bodies in the Rectum, causing Scrotal Fistula.—Dr. MORGAN MARTIN, of Sydney, exhibited a patient supposed to be suffering from Thoracic Aneurysm.—Dr. TODD, of Sydney, read a paper on the Comparative Value of the Methods of Treating the Accidents of Artificial General Anæsthesia. A discussion ensued, in which Drs. HODGSON, FIASCHI, WRIGHT, and SCOT SKIRVING took part.—Dr. MARANO read "Notes on a Case of Lupus Vulgaris," and exhibited drawings showing the different stages of the disease.

THE eighty-third general meeting of the Branch was held in the Royal Society's Room, Sydney, on Friday, August 2nd, 1889. Present: Dr. FIASCHI (President), in the chair, Mr. G. T. Hankins (Vice-President), and twenty-two members.

The minutes of the previous meeting were read and confirmed.

Communications.—Dr. WILKINSON read some notes on a case of Heart Disease.—Dr. WORRALL exhibited an Apparatus for washing out the abdominal cavity, and explained its advantages. Drs. FIASCHI, HODGSON, HANKINS, CHISHOLM, QUAIFE, FOREMAN, and W. J. O'REILLY discussed the utility of the apparatus.—Dr. FIASCHI read a paper on Skin-grafting and its Recent Advances.—Dr. RENNIE read notes of a case of Diphtheritic Paralysis. The paper was discussed by Drs. CHISHOLM, CRAGO, and FIASCHI.

Friendly Societies.—Dr. CLUBBE, of Randwick, moved: "That, in the opinion of this Branch of the British Medical Association, when dealing with friendly societies, its members should use the agreement that was drawn up by a subcommittee appointed by this Branch some time ago."—Seconded by Dr. HODGSON.—Dr. WILKINSON proposed and Dr. COHEN seconded: "That the discussion be postponed until the agreement is printed and circulated among the members."

JAMAICA BRANCH.

A GENERAL meeting of this Branch was held on January 30th at the Public Library, Kingston, the PRESIDENT in the chair. Present: Messrs. F. H. Saunders, Strachan, Da Costa, Turton, Henderson, Plaxton, and James Neish. The minutes of the general meeting of November 28th, 1888, were read and confirmed, and signed by the President.

Abdominal Pregnancy.—The PRESIDENT read a paper, in which he related three cases of abdominal pregnancy. The first was that of a negress, aged 30, admitted to hospital on May 23rd, 1885, with symptoms of ascites, for which she was tapped twice with relief. At the second tapping a solid mass was diagnosed in the abdomen. On June 13th laparotomy was performed, when a fœtal head presented itself; the incision was enlarged, and a full-grown well-developed fœtus taken away; the placenta was found in the left iliac fossa, very much softened and friable superficially, but attached firmly at its deeper part; the cord was tied, the friable portions of placenta removed, the abdominal cavity thoroughly cleared of all fœtid fluid, and hæmorrhage stopped. No ligatures were used, the wound was sutured and two drain tubes left in. On the 16th, however, the discharge became offensive, diarrhœa set in, and on the 17th the patient died. At the necropsy no ovary or Fallopian tube could be found on the left side. The left side of the fundus of the uterus had sloughed away, and the whole organ was soft and friable.—In Case II the patient was admitted on June 7th, 1884, with a history of having been struck in the back by a hamper. She stated she was three months pregnant. There was no hæmorrhage, but a good deal of bearing down pain and some collapse. On the 13th sudden collapse came on and she died. The necropsy disclosed a ruptured tubal sac, the tiny fœtus, and hæmorrhage.—In Case III the patient was admitted on June 17th, 1884, with a history of abdominal pain having come on suddenly a few days before. Patient collapsed. Abdomen distended and very tender; slight vaginal hæmorrhage. Four hours after she died. At the necropsy there was found a ruptured sac in the right Fallopian tube, a small fœtus, and considerable hæmorrhage.

A GENERAL meeting was held on March 27th, at the Public Library, Kingston, the PRESIDENT in the chair. Present: Messrs. F. H. Saunders (President), Bronstorph, G. Cooke, Plaxton, James Neish, Henderson, Turton, Da Costa. The minutes of the general meeting of January 30th were read and confirmed, and signed by the President.

Death of Dr. Madden.—A letter of condolence from the meeting was ordered to be sent to the widow of Dr. T. P. Madden, who died on March 15th, 1889, of rupture of aortic aneurysm.

Representative on Council of Association.—Dr. G. C. Henderson

was nominated Representative of the Branch on the Council of the Association.

Differences between Yellow and Malarial Fevers.—Mr. STERN discussed this subject. He regarded yellow fever as specifically distinct from the bilious remittents of hot climates and from any form of malarial fever. The onset of yellow fever was sudden; the invasion of the malarial, even in aggravated forms, was slow. Convalescence once established in yellow fever, its progress was continuous and progressive; the reverse obtained in malarial fever. The one left evil traces behind. Weeks elapsed before the subject of malarial was safe. The duration of the one seldom or never exceeded nine days. The fatal issue almost always occurred between the third and fourth day, while the general range of temperature was not so high as in those cases of malignant remittents that approached it nearest. A second attack of yellow fever was so exceptional as to be phenomenal. The mortality was far in excess of that in malarial fever, and quinine exerted no influence over it. Then there was the infectious character of yellow fever. Habitual drunkards seemed somehow to enjoy immunity from yellow fever in a very noticeable proportion, while they but seldom escaped some form of malarial fever.

A GENERAL meeting was held on May 29th, 1889, at the Public Library, Kingston, the PRESIDENT in the chair. Present: Messrs. F. H. Saunders, Phillippo, Gerrard, Turton, Da Costa, Plaxton. The minutes of the general meeting of March 27th were read and confirmed, and signed by the President.

New Member.—Dr. L. M. Clark was admitted a member of the Branch.

Rabies or its "Double"?—Mr. PLAXTON read a paper with this title. He related two cases, of which the interest, according to him, was that, admitting them to be cases of rabies, no evil followed bites, or denying them to be rabies, they were cases of an acute and rapidly fatal maniacal affection in the dog.—Case I. One of his own dogs was excited, attacked all his other dogs without more than trifling cause, and bit and struggled when picked up from the ground. He bit five people, including his master. Muscular power gradually failed, the dog seemed to wish to vomit, lay much with closed eyes, whimpered occasionally; eyes clouded; not easily roused; once or twice in the day put his nose to a plate of milk, but did not drink, not seeming to understand it as food; took no note of water; was not snappish. The *post-mortem* disclosed that he had swallowed rubbish of all sorts during his illness.—Case II was also that of one of his own dogs, but not infected by the first. On Easter Sunday, 1884, during the night, she killed and ate part of one of her puppies. She was very furious, and attacked the other dogs, biting three certainly. She never attacked human beings. She tried to destroy a second puppy but was prevented. Water she lapped once or twice, but was not seen to drink any large quantity; milk and meat she treated in the same capricious manner. She was not noisy; never barked; was restless, jumping about the room as if eager to be out. Did not attack human beings. At the *post-mortem* nothing unusual was found; no peritonitis, nothing in the stomach or intestines, no foreign bodies, no rubbish of any kind. If these were not cases of rabies were they interesting cases of insanity in one of the lower animals? The first a case of insanity attacking the subject possibly at puberty, the second, perhaps, a case of puerperal mania. If they were rabies it was singular that all, man and beast, who were bitten escaped the disease.

SPECIAL CORRESPONDENCE.

PARIS.

[FROM OUR OWN CORRESPONDENT.]

Lactose as a Diuretic.—Cocaine in Operations on the Eye.—Health of the French Army.—Salicylate of Mercury.—Cancer in Rural Districts.—Injections of Camphorated Naphthol in Phthisis.—Chloroform Syncope.

M. GERMAIN SÉE, at a recent meeting of the Paris Medical Academy, stated that lactose as a diuretic is preferable to milk. Many cardiac patients are unable to swallow large quantities of milk, whereas *tisane lactée*, tisane mixed with lactose, is easily tolerated. One hundred grammes of lactose administered daily acts more powerfully as a diuretic than four or five litres of milk. Lactose is a valuable diuretic agent in dropsy, a frequent complication of certain forms of heart disease; for these cases, M. Germain Sée considers lactose superior to strophanthus or digitaline.

Dr. Adolphe Piéchaud constantly employs cocaine as a local anæsthetic in operations on the eye, and finds that in the preliminary manipulations and external operations it is of great service. But he considers its action as entirely superficial in cases where incisions are made in the connective tissue of the eye. It certainly has a powerful moral effect in these cases, however; for, after imbibing a few drops of cocaine, the most refractory patients will allow their eyes to be inspected. M. Piéchaud has employed it in ophthalmic migraine as an anti-spasmodic and an anti-nervous agent, but has only found it properly efficacious when combined with analgesine or caffeine. After various trials he has decided that the following mixture is the most effectual. It contains for a spoonful of 15 grammes: analgesine, 50 centigrammes; cocaine, 2 centigrammes; caffeine, 5 centigrammes; employed with ether. Dr. Piéchaud administered 15 grammes in one dose to 12 patients suffering from chronic headache, aggravated by inflammation of the eye. Relief was obtained almost immediately. Another patient, who for three weeks had suffered intense ciliary pain consecutive on conjunctivitis with œdema and benignant iritis, was completely freed from pain after taking two doses of 15 grammes of this mixture, which is called *cérébrine*. Dr. Piéchaud also cites the case of an old lady of 73, who, after being operated on for cataract, was attacked with violent frontal and facial neuralgia. A dose of 20 grammes of *cérébrine* caused all pain to disappear in ten minutes. The bandage was removed on the fourth day, and the eye was restored to its normal condition.

M. de Freycinet has sent in to the War Minister a report on army sanitation, in which he states that, in 1870, the mortality in the army in time of peace was 12 per 1,000; it is now 8 per 1,000, and it will be still lower. Typhoid fever is the cause of the greatest number of deaths. In thirteen years, from 1875 to 1887, there were 141,648 cases, resulting in 21,116 deaths; in the civil population the mortality from the same fever was seven times less, notwithstanding the bad sanitary conditions which surround a large section of the Paris civil population. M. de Freycinet, quoting from Dujardin-Beaumetz's report, concludes that the high rate of army mortality results from overcrowding and contaminated water. In thirty-nine towns spring water has been laid on. At the barracks of the Fire Brigade where typhoid fever raged, when spring water replaced river water this epidemic suddenly disappeared. During the last four years deaths from small-pox have fallen from 92 to 16, and these are believed to result from contamination brought by the "reservists;" in order to prevent this, all men called upon to serve temporarily as soldiers are obliged to be revaccinated. In future, barracks will be provided with isolated infirmaries, shower baths, both cold and tepid, in the infirmaries and hospitals, where the antiseptic method will be rigorously observed.

At the Paris Medical Academy M. Riche stated that there are four kinds of salicylate of mercury, and specially mentioned two, of which one contained 42 per cent. of mercury, and the other 59 per cent. These should not be prescribed indiscriminately, as their action varies, and he suggests that a committee should be formed to decide whether medical men ought not to be called upon clearly to indicate the salicylate they wish used.

MM. Arnaudet and Ozenne have recently published some interesting statistics concerning the frequent occurrence of cancer in country villages. At Saint Sylvestre Dr. Arnaudet finds 11 deaths from cancer during eight years, the total general mortality being 74—a proportion of 14 per cent. Dr. Ribulet (Bourghthéroude) finds 17 deaths from cancer in two years, the total mortality being similar to that recorded by Dr. Arnaudet. M. Le Gros, in his statistics published by M. Ozenne, records 80 deaths from cancer, spreading over a period of sixteen years. These statistics, compared with those of Paris drawn up by M. Bertillon, show that in these rural districts the mortality from cancer is twice that of Paris. M. Arnaudet, after a close study of the question, believes it probable that water served as a means of spreading the disease. Six inhabitants of Saint Sylvestre provided themselves with drinking water from the same spring. This they used for making cider and all their drinks. All six died from cancer. This fact is far from conclusive, but certainly suggestive.

M. Fernet has treated four patients with advanced pulmonary lesions by administering interstitial injections of camphorated naphthol at the seat of the lesion, each injection consisting of 45

centigrammes of camphorated naphthol containing 5 centigrammes of pure naphthol. The results were satisfactory. There was less expectoration; auscultation and percussion also showed an improved condition. The only inconvenience produced by the injection was a short intermittent cough, caused by the diffusion in the bronchial tube of the camphor vapour.

At a recent meeting of the Society of Biology M. Dastre read a paper on chloroform, in which he stated that anæsthesia produced by chloroform is accompanied by two orders of phenomena, one of which—cardiac syncope—can be prevented, while the other—respiratory syncope—cannot. MM. Dastre and Morat recommend hypodermic injections of atropine mixed with morphine, which counteract the action of the pneumogastric on the heart and remove the danger of cardiac syncope from over-stimulation of the vagus nerve.

SWITZERLAND.

[FROM OUR OWN CORRESPONDENT.]

Treatment of Locomotor Ataxy by Suspension.—"La Dame à Quatre Jambes."

ABOUT six years ago Dr. O. O. Motchütkovsky, of Odessa, published in the *Vratch*, Nos. 17 to 21, 1883, a remarkable paper on the results obtained by him from the treatment of locomotor ataxy by suspension of the patient's body. Notwithstanding some accounts on the paper in the *Physician and Surgeon*, No. 10, 1883, and the *Neurologisches Centralblatt*, 1883, p. 427, the matter was almost entirely ignored by the profession outside Russia—with the single exception of Mr. John Marshall in his lecture on Neurectasy—until, in 1889, Professor Charcot's familiar name became identified with the subject. Then, all of a sudden, "suspension" became a "topic of the day;" but it is interesting to note that, with very few exceptions, Motchütkovsky's name is somehow kept out of the discussion as something extraneous to it—possibly because of orthographic and orthoëpic difficulties. The first Swiss practitioner to join the ranks of the "suspensionists" was Dr. Ladame, of Geneva, who, after his visit to Professor Charcot's clinic in February, 1889, commenced to practice the new treatment in March. In the *Revue Médicale de la Suisse Romande*, June, 1889, p. 347, Dr. Ladame says that he has now made 282 suspensions in 16 cases of spinal disease, in 15 of tabes (12 men and 3 women), and in 1 of Friedreich's ataxy, the greatest number of sittings in individual cases varying between 29 and 35. The sittings were repeated every second day, their duration being two or three minutes in patients weighing from 80 to 100, and four minutes or even more in those weighing from 50 to 70 kilogrammes. In all the cases Dubois's apparatus (together with a weighing machine) was employed. Speaking generally, Dr. Ladame's observations fully confirm the results obtained by Dr. Motchütkovsky, Professor Charcot, and Dr. Julius Althaus, and others. In several of the patients distinct improvement ensued; the lightning pains subsided, the urinary troubles diminished, sleeplessness and (in two cases) Romberg's symptom disappeared, paræsthesiæ of the soles of the feet and sensations of cold about the lower limbs decreased. In other cases the results were *nil*. As a rule, after a rapid amelioration brought about by the few first sittings, a period of retrogression set in, followed by a slow but steady and apparently permanent secondary improvement. The latter became manifest usually somewhere between the twentieth and thirtieth sitting. Dr. Ladame never saw any actual or permanent aggravation of the patient's state attributable to the treatment, nor did he meet with any disagreeable accidents. Nevertheless, he says that the "*méthode Russe*," as he terms the procedure, requires the most careful watching.

In the same number of the *Revue* (p. 333), Dr. Edouard Bugnion, of Geneva, described a remarkable specimen of double monstrosity belonging to the type of the *Dipygus parasiticus*. The subject is the so-called "Dame à quatre jambes," Louise L., who was lately exhibited in several Swiss towns. This person, who is now 20 years of age, and who is otherwise well developed, bears in front an appendix (parasite), about 8 kilogrammes in weight, which is attached to the pubic region by means of a pedicle measuring 33 centimètres in circumference, and consisting of an incomplete pelvis with two extremely attenuated lower limbs, flexed at the knee joints, the right foot resting anteriorly on the middle of the autosite's left thigh, the left leg standing erect in front of the subject's abdomen, and reaching with its foot as far as the navel. The pedicle is continuous with the autosite's genital labia, the vulva being displaced far backwards close to the anus, so that the perineum is reduced to a mere thin septum. The base of the pedicle and the autosite's pubic region are covered with an abundant growth of hair. The right limb of the appendix is 60, the left 69 centimètres in length. The parasite presents a series of anomalies, such as absence of the sacral bone, ankylosis of the ankle-joints, irregular or rudimentary development of the metatarsal bones and toes, etc. The genital organs are entirely absent. The limbs do not possess any active movement, and seem to be almost completely destitute of muscles, and to consist only of bones covered with cellular tissue and skin. Passive movements, however, are possible. The parasite's circulation appears to be kept up through some communication with the autosite's hypogastric arteries, but no pulse can be felt anywhere. The skin is pale but otherwise normal, the temperature subnormal. The tactile sensibility of the parasite is normal, except over the feet. On pricking the latter with a pin the sensation cannot be localised with any precision, while the exact locality pricked can be indicated on experimenting upon all upper parts of the appendix. The motor nerves seem to be atrophied as completely as the muscles are. The subject was born in 1869, near Reims, in France, her parents being strong and healthy, and not consanguineous. She had three brothers and one sister, all of whom died at an early age. The sister and one of the brothers did not present any deformity, but one of the remaining two brothers had spina bifida, and the other some deformity about the lower limbs. She began to walk when seventeen months of age. The parasite grew in size gradually with the autosite's growth, though not in an exact proportion. At the age of 14¾ she married, and subsequently became mother of two well-developed girls, delivered (one in March, 1885, the other in December, 1888) without any obstetrical help. When first examined by Dr. Bugnion she was still suckling her last infant. She bears her parasite bravely, exhibiting herself from town to town, and sometimes doing her 24 kilomètres a day. When walking she keeps the parasite's right limb between her thighs and buttocks, and generally does not betray anything particular to a stranger's eye, except, perhaps, that she treads with slightly everted legs, while her petticoats are somewhat lifted up both anteriorly and posteriorly (in front by the left knee of the parasite, behind by its right foot). Dr. Ladame proposed to amputate the appendix; but both the possessor of the appendix and her *impresario* declined the operation, on the ground that it would deprive them of a valuable source of income.

MANCHESTER.

[FROM OUR OWN CORRESPONDENT.]

Pollution of the Irwell.—President of the Pathological Society.—Withdrawal by the Whitworth Legatees of the offer of a Hospital for Owens College.

A CONFERENCE of the urban and rural sanitary authorities in the watershed of the Irwell was held in Manchester on September 27th, for the purpose of considering the best means of remedying the present pollution of the Irwell and its tributary streams. A resolution was passed expressing the opinion that measures to secure this end must speedily be taken, but that the work cannot be economically or efficiently accomplished by the local authorities acting separately. Some comprehensive scheme dealing with the whole watershed will be required.

Dr. J. Dixon Mann has been elected President of the Manchester Pathological Society, *vice* Professor Young, whose term of office has expired.

About a year ago the legatees of the late Sir Joseph Whitworth offered to build, equip, and partially endow a small hospital for Owens College. Since then negotiations have been carried on between a Committee of the Managers of the Royal Infirmary and a Committee of the Council of Owens College, with the view of devising a scheme for the working of the two institutions jointly. At the last meeting of the Committees, the treasurer of the College announced that he had received a letter from the legatees, stating that they withdrew their proposal of August, 1888, and this they do absolutely.

A YOUNG man, named Hopton, died at Newport, Mon., on Sunday, from injuries received in a football match on Saturday.

THE RUSSIAN RED CROSS SOCIETY.—The funds of the Society amounted, on August 13th, 1889, to 2,762,642 roubles (about £276,264) (*Vratch*, 1889, No. 34, p. 760).

CORRESPONDENCE.

FALMOUTH AS A HEALTH RESORT.

SIR,—I have read with much interest the two letters on this subject by Sir Edward H. Sieveking, which you have published during the last month, and I am glad to know that the sentiments expressed in those letters fully accord with the views which were held by the late much lamented Dr. Wilson Fox, who when on a visit to this town stated to me that he would advise many of his patients (as I know he did some, to their benefit) to seek restoration to health by coming here if we had sufficient accommodation for invalids.

The beauties of Falmouth and its neighbourhood are known to comparatively few persons, for which lack of knowledge there may be many reasons, but the chief of them are probably because (*a*) the resident medical practitioners may have been averse to writing up the advantages of their own district, (*b*) partly because the railway authorities have been indifferent to the pressing claims of the travelling public (or they may have been more interested in the prosperity of some other health resort), and (*c*) perhaps not the least, because our consulting physicians and surgeons seem to have had the idea that when their patients required a change of climate the best thing to do was to send them to a foreign country. Now, it seems home has (if I may put it so) a claim upon home.

To the consumptive, or one threatened with consumption, it is doubtless often a very difficult question for the physician to decide whether to advise a change to be sought by a passage to New Zealand or Australia, a shorter trip to the Riviera or Davos Platz, or a still shorter one to one of the many health-giving districts in the British Isles. When there is no preponderance of evidence in favour of the benefit to be derived by a journey abroad, which must necessarily entail great expense of money, much fatigue of body, and for the most part the deprivation of many home comforts, I would venture to ask the consultant to remember Falmouth, with all its beautiful surroundings and its genial climate.

Falmouth, built for the most part on the side of a hill which forms the south boundary at the mouth of the river Fal, consists of the old and commercial town and many new terraces of various aspects and with altitudes ranging from 22 feet to 195 feet above the mean sea level. Some of these high terraces are facing south, others north, whilst some others have an easterly aspect, so that the consumptive or weak-chested who requires the mild genial climate of the first can take his daily exercise on a level walk, whereas those who require a more bracing atmosphere may avail themselves of situations more suited to their needs. Along the coast, still near to the terraces, are beaches open to the south, where the weakly child can disport himself with spade and barrow, and the adult invalid can bask in the sun, and, inhaling fresh breezes from the ocean, feel that he is steadily regaining his health and strength.

Pendennis, with its famous castle, abuts into the open bay, is 195 feet above the mean sea level, and is encircled by a carriage drive and a footpath for pedestrians, which give enjoyment such as is rarely experienced at much more frequented health resorts. Here the invalid, or the man of business wearied by the ever-pressing claims of his calling, may enjoy the bracing breezes from the north or from the east, or the more balmy and genial air from the south or the west.

Falmouth, possessing a magnificent harbour four miles long and one mile wide, offers to such as are fond of marine trips excursions which tend to relieve the monotony of the shore life, and which add so much to the pleasure of the holiday seeker, whilst they so frequently conduce to the rapid recovery of such as may be in search of health.

If, Sir, by your courtesy I may be permitted to do so, I will on a future occasion submit to the profession some facts as to the geological formation of the district, the rainfall, sunshine, etc., so that those who may be interested in the subject may have it in their power to judge whether "Falmouth as a Health Resort" has a claim for favourable consideration.—I am, etc.,

Falmouth, September 28th. ARTHUR B. HARRIS, M.D.

FLUSHING THE PERITONEUM.

SIR,—Until I read in a recent number of the JOURNAL an account of a case occurring in the practice of M. Polaillon, of Paris, in which the patient died after flushing of the peritoneal cavity, I was under the impression that the practice of cleansing by irrigation in the course of certain complicated abdominal operations had now become universal among surgeons and operative gynæcologists. The death in question was clearly due to carbolic acid poisoning; flushing carried out with proper precautions probably never does anything but good.

While Dr. J. S. Briscoe and other readers are proceeding to act upon Mr. Lawson Tait's suggestion, and putting themselves in the way of acquiring the newest and truest information in the British Gynæcological Society, will you permit me to offer an expression of opinion founded upon what may be called a fairly extensive experience of flushing after operation, that the use of a jug is an awkward and inefficient method of introducing the fluid? Nothing could justify it but the want of better appliances, as in emergency operations. The apparatus which I have used for several years is an ordinary irrigation vessel of large size, fitted with a long rubber tube, of which the lumen has a diameter of about one centimètre. The tube is fitted with a German tap, and ends in a Koeberlé's glass drainage tube of small calibre. The fluid is a boiled solution of common salt, strength about $\frac{1}{2}$ per cent., temperature 100° F. After a complicated operation for pyosalpinx, for example, the stream of fluid is carried, by inserting the glass tube, to the lowest part of the pelvic cavity, and directly blood, blood clots, shreds of lymph, pus, etc., according to the special features of the case, come welling up to the wound, and are carried away. Suspicious parts can be thoroughly washed, and the fluid left in the pelvic cavity is perfectly clean. It is exactly the sort of fluid that some surgeons have recently proposed to inject into the peritoneal cavity instead of resorting to transfusion in extreme cases of loss of blood. Why any operator should add poisonous substances to the water I cannot understand. Nothing has given me greater confidence in resorting to abdominal section in cases of old-standing inflammatory complications than the adoption of this method of irrigation.

For all that is essential in it, of course, Mr. Lawson Tait has, or ought to have, the entire credit. Careful flushing is probably the most life-saving detail that has been introduced into the practice of abdominal surgery.—I am, etc., W. JAPP SINCLAIR.

Manchester, September 30th.

SIR,—It is almost entirely a matter of personal opinion as to whether the syphon arrangement employed by Mr. Lawson Tait in washing the peritoneum, or the funnel and tube method used by Dr. Braithwaite, is the better. The latter apparatus is certainly simple and efficacious, and, I should think, more manageable than Mr. Tait's. The assistant, holding up the funnel in his left hand, compresses the broad india-rubber tube between his finger and palm, and thus controls or stops the flow at will, while with his right he attends to the filling of the funnel; the operator meanwhile moves about the tube and removes the clots as they are washed up. Either plan has obvious advantages over the former method of flushing by pouring water directly from a vessel upon the intestines.

With regard to the abdominal incision, there is an apparent discrepancy between Mr. Tait's statement in the JOURNAL of September 28th and the following from his book on *Diseases of the Ovaries*, 1883. In describing his usual mode of procedure in abdominal section, he says: "I begin the incision midway between the umbilicus and pubes and cut downward.....I then look for the white line and divide it to an equal extent, and after that I cautiously divide the fat and transversalis fascia until the peritoneum is exposed." This variation may, perhaps, be explained by a reference to anatomical details.

Mr. Treves says: "Below the navel the two recti muscles are almost in contact, and here the linea alba can scarcely be said to exist." More exactly, the linea alba from the region of Douglas's fold to the pubes is—except after prolonged distension—a mere septum.

In some cases the recti muscles are of considerable thickness, quite up to the septum; in others they thin off towards the middle line, so that there is little need to divide the muscular fibres. But in either case the sheath of one or other rectus is almost invariably divided in making the "median incision through the linea alba," and such seems to be Mr. Tait's practice. But the linea alba is a structure of considerable importance; it has several muscles inserted into it, and has for its special use the small pyramidal muscular buttresses.

It is, moreover, a clinical fact that median incisions are frequently followed by herniæ at the cicatrix, in spite of the use of

belts and supports. It was to remedy this weakness that Dr. Braithwaite devised the semilateral valvular incision, in which the rectus when exposed is retracted, and the posterior part of its sheath divided three-quarters of an inch from the middle line. So far the plan has met with complete success, and there is I think less hæmorrhage than in the direct incision, for the muscle is pulled aside, not divided. In stitching up, the peritoneum is—exceptionally in fat patients—sutured separately.—I am, etc.,

General Infirmary, Leeds. J. E. BRISCOE.

PUBLIC HEALTH DIPLOMAS.

SIR,—The value attaching to these diplomas in the eyes of the members of local boards is strikingly exemplified in the case of a recent appointment of medical officer of health for a town on the south coast, which is also a well-known watering-place. Out of seventeen candidates, three were selected by the sanitary committee. Of these three, one—who was not a local practitioner—held the Cambridge diploma in public health, another held the diploma of the Royal Colleges in London, whilst the third—who was ultimately elected to the post—possessed no such qualification. He was, however, medical superintendent of the Infectious Disease Hospital of the district, and parish medical officer. No doubt, these appointments had considerable influence upon the members of the board when voting in favour of the successful candidate; but the discouragement to those who have been at the pains of acquiring a public health diploma—very generally after settling down in practice—is very great; and it is certain that local boards are only justified in rejecting the proffered services of properly qualified men when the claims of the unqualified are of a very special or unusual character. The discussion of the respective merits of the selected candidates by the local press was not edifying; but it is amusing to learn from one journal that the diploma granted by the two Royal Colleges in London must, *ipso facto*, be of a higher standing than that granted by the one university at Cambridge.—I am, etc., D. P. H.

LICENSED TO SPREAD DISEASE.

SIR,—The notification of infectious diseases has brought prominently under our notice many facts of which we before had only virtual evidence. Here are some deplorable instances. Within the last fortnight I have had sent to me by three different registered practitioners certificates of convalescence from scarlatina, and requests for the disinfection of premises, signed within ten days of the date of the official notification certificate. I satisfied myself that the notifications were made very soon after the onset of the disease; and in each case when the inspector arrived to disinfect he found extensive desquamation still proceeding.

I shall feel grateful for suggestions as to my proper mode of action, both towards my local authority and to my grossly ignorant or culpably negligent brethren (hard words, but under a *nom de plume* one can sink etiquette).—I am, etc., P. B.

THE MEDICAL DEFENCE UNION.

SIR,—We observe with regret that Dr. W. H. Dawson, a practitioner resident in the fashionable health resort of Malvern, a town quite free from medical pirates, has felt it his duty to publicly censure the Medical Defence Union for using its energy in suppressing pestilential practice and yourself for congratulating the Union on its action. By so doing he has shown that his practical sympathy with his professional brethren whose lot it is to practise under less favourable circumstances is a *minus* quantity. Although we fear by answering such cavilling we may give it an importance it does not merit, we shall be glad if you will allow us to take advantage of this opportunity to set before our members and the profession generally what we take to be the policy of our council on the subject of irregular practice, and we can do this very well by criticising your correspondent's letter, the inaccuracies of which are the more regrettable since, at the time of writing his letter to you (September 17th), he was in possession of correct information from us.

On September 13th (four days before he addressed his letter to the JOURNAL) we wrote him pointing out that by Section 42 of the Medical Act penalties arising from conviction were paid to the Treasurer of the General Medical Council, and that the next section enacts that such and other sums shall be applied to defray the costs of the execution of the Act. Notwithstanding this knowledge he implies in his letter to you that the money of the Union was being used to prosecute quacks.

Dr. Dawson gives us what he "thought" was the object of the Medical Defence Union. His thoughts and our articles of association are entirely at variance, for the latter state in the 3rd section of the memorandum that one of its objects is "to suppress or prosecute unauthorised practitioners." His fear that the income of the Union will be injuriously affected by our action has not up to the present been realised; his resignation is the only one we have received on this account. We regret Dr. Dawson's resignation—for his own sake.

From the above you will see, Sir, that our view is that if quacks can be prosecuted and the costs paid out of penalties as prescribed by the Medical Act—in other words, if the quack pays for his own prosecution—the Medical Defence Union may, without injustice to its members, be the initiator of the prosecutions. With care in selection of cases an endless number of pests may be hounded out of existence without costing the Union a penny. The sense of the profession will deny that it is the *rôle* of a learned society, like the British Medical Association, to do this.—We are, etc.,

LESLIE PHILLIPS, M.D.,
GEORGE BATEMAN, M.B.,
Honorary Secretaries Medical Defence Union.

Birmingham, September 30th.

SIR,—In a letter in the JOURNAL of September 28th, Dr. Dawson announces his withdrawal from the Medical Defence Union, and gives reasons for so doing. It is not often that people complain because they get too much for their money, and yet this seems the substance of Dr. Dawson's complaint. I presume he does not object to the prosecution of quacks, those pernicious camp-followers of medicine. He objects to the Medical Defence Union undertaking it, because he thinks others are in duty bound to do this. This is much as though he rebuked a friend for seizing a thief or murderer, on the ground that he should have left it to the police. I quite agree that the Royal Colleges should perform this task, but they are themselves so much in need of reform that they hesitate to attack even the most glaring abuses. As to the British Medical Association taking up this work, it would not be inconsistent with its memorandum of association; but assuredly it is even less incumbent on that body to prosecute quacks than it is on the Medical Defence Union.

Just as this wise step of the Medical Defence Union induces the resignation of Dr. Dawson, so does any similar step in the direction of increased usefulness bring passing showers of resignations on the British Medical Association. Such steps, however, also bring in large accessions of new members.

If the Medical Defence Union were not continuing its old work of insuring its members against false charges, etc., then Dr. Dawson would have just cause for complaint. By his yearly subscription he is insured as much as ever against legal risks, but he also has lately been thereby benefiting society. If the Union is now able to increase its usefulness, surely Dr. Dawson should not complain. He ought to be pleased that our Society is setting so good an example to other older organisations.—I am, etc.,

Highgate, N. HUGH WOODS, M.D.

MEDICAL AID ASSOCIATIONS AND FRIENDLY SOCIETIES.

SIR,—An attempt having been made here to start a branch of the "National Medical Aid Company," and a medical aid fund for the families of a lodge of Oddfellows, a meeting of the medical men of this district was called to discuss the question; and, as a result, the following pledge has been signed by twenty-one out of twenty-three of those either in or retired from practice; one of the exceptions is a retired surgeon, the other a practitioner who has promised to sign it as soon as he is free from his medical refereeship, of which he has sent in his resignation to the National Medical Aid Company.

Such societies are so pernicious and have been so disastrous elsewhere to our profession, that we feel it necessary to make a stand against their establishment here, and a copy of the pledge is sent to you for publication with this, in order that our profession in other places may be strengthened against such combinations against its wellbeing.

"We, the undersigned members of the medical profession of Malvern and its neighbourhood, taking into consideration the fact that there are well-established provident dispensaries in our midst, pledge ourselves not to undertake the care of families of members of friendly societies at a contract rate of payment."—I am, etc., STANLEY HAYNES, M.D.

Malvern, September 30th, 1889.

THE DISCUSSION ON CATARACT.

SIR,—I note in your excellent report of the discussion on cataract the following remark by our esteemed President: "Those ophthalmic surgeons who adhere rigidly to the operation of extraction without iridectomy must often find themselves placed at a great disadvantage when they had to deal with a cataract which was much less ripe than they had anticipated. In such a case he personally would undoubtedly prefer a peripheral incision of the capsule, so that any lenticular fragments which might remain after operation should be safely enclosed in the membrane to which the lens was accustomed; but where no iridectomy was performed the operator had no alternative but a central capsular discission, with the very possible result that the soft lens substance might cause traumatic iritis and other kindred trouble."

I am sure, Sir, that Mr. Critchett will be glad to learn that this serious objection to extraction without iridectomy has practically no existence, as I am constantly in the habit of extracting without iridectomy, and almost invariably incise only the periphery of the capsule, leaving the face or anterior surface untouched, so that particles of lens matter which are occasionally and unavoidably left behind may be harmlessly dissolved in the membrane to which, as Mr. Critchett says, they have been accustomed. I demonstrated this operation in several cases to the members of the Medico-Chirurgical Society a few weeks ago, and I must say that, as a result of many years' experience of extraction for cataract, both with and without iridectomy, I have come to the conclusion that simple or normal extraction, as I have called it—that is, without iridectomy—is not only the best but also the safest method of removing the lens.—I am, etc.,

CHARLES BELL TAYLOR, M.D., F.R.C.S.E.,
Surgeon Nottingham and Midland Eye Infirmary.

NAVAL AND MILITARY MEDICAL SERVICES.

THE NAVY.

SURGEON MATTHEW DIGAN has been allowed to withdraw from the service, with a gratuity. His commission bears date August 25th, 1881. He was Surgeon of the *Invincible* at the bombardment of the Alexandrian forts, in July, 1882, and during the Egyptian war (medal with clasp, and Khedive's bronze star). During the Soudan campaign, in 1885, he was Surgeon of the *Sphinx*, and landed with the Naval Brigade at Suakin, and was present in the engagement at Tofrek (clasp).

Surgeon JOHN CASHIN, who entered the service August 28th, 1882, has been placed on the retired list.

The following appointments have been made at the Admiralty: J. J. A. COSTELLO, to be Surgeon and Agent at Carnsore and Rosslare, September 26th; THOMAS M. SIBBALD, Staff Surgeon, to the *Canada*, undated; GEORGE D. TWIGG, Staff Surgeon, to the *Royalist*, October 6th; ARCHIBALD M'KINLAY, Staff Surgeon, to the *Egeria*, October 6th; JOHN B. B. TRIGGS, M.B., Staff surgeon, to the *Pylades*, October 6th; GEORGE W. BELL, Staff Surgeon, to the *Tourmaline*, October 6th; HENRY J. MADDERS, M.D., Staff Surgeon, to the *Hecla*, October 6th; BOWEN S. MENDS, Surgeon, to the *Canada*, October 6th; GEORGE WILSON, M.B., Surgeon, to the *Pembroke*, September 27th; HAROLD F. D. STEPHENS, M.B., Surgeon, to the *Pembroke*, September 27th; J. D. MENZIES, Surgeon, to the *Magpie*, September 30th.

THE MEDICAL STAFF.

BRIGADE-SURGEON R. WATERS, M.D., who is serving in Bengal, is appointed officiating administrative medical officer of the Quetta district.

Surgeon-Major G. D. N. LEAKE, who is serving in the Bengal command, has passed the examination in Persian by the lower standard.

Surgeons J. STEVENSON, M.B.; M. W. RUSSELL, C. C. REILLY, A. P. H. GRIFFITHS, A. R. ALDRIDGE, M.B.; H. A. CUMMINS, M.D.; J. S. EDYE, T. WHAITE, M.B.; H. I. POCOCK, C. R. Elliot, M.D.; and J. W. BULLEN, M.D., all of whom are serving in the Bengal command, have passed the examination in Hindustani, by the lower standard.

Surgeon D. M. GREIG, M.B., has resigned his commission, which is dated July 28th, 1886.

ARMY MEDICAL RESERVE.

SURGEON CHARLES ARROL, M.D., 3rd Volunteer Brigade, Cinque Ports Division Royal Artillery (late the 1st Kent Artillery), to be Surgeon-Major, ranking as Major.

Surgeon RICHARD JOSEPH BRYDEN, also of the 3rd Brigade Cinque Ports Division, to be Surgeon, ranking as Captain.

INDIAN MEDICAL SERVICE.

THE services of Surgeon S. H. HENDERSON, M.B., Bengal Establishment, are placed temporarily at the disposal of the Chief Commissioner of Assam.

Surgeon D. G. CRAWFORD, M.B., Bengal Establishment, Civil Surgeon of Jessore, is appointed to act temporarily as Civil Surgeon of Backergunge.

Surgeon H. J. DYSON, Bengal Establishment, Officiating Civil Surgeon Umballa, is appointed to officiate as Superintendent of the Chenawan Central Gaol, *vice* Surgeon A. R. W. SEDGEFIELD, who has special leave on urgent private affairs for six months.

Brigade-Surgeon T. E. B. BROWN, M.D., Bengal Establishment, Principal of the Lahore Medical College, is appointed to officiate as Civil Surgeon of Lahore and Superintendent of the Lunatic Asylum at that place, in addition to his other duties, during the absence on leave of Brigade Surgeon W. Center, M.B.

Surgeon-Major A. E. R. STEPHENS, Bengal Establishment, on being relieved of the charge of the Benares Central Prison, is appointed to officiate as Civil Surgeon of Alighur, during the absence on privilege leave of Surgeon-Major M. D. Moriarty, M.B.

Surgeon R. J. BAKER, M.B., Bombay Establishment, is directed to act as Professor of Midwifery, Grant Medical College, during the absence of Surgeon-Major J. Arnott, M.D., C.M.Glas.

Surgeon-Major D. ELCUM, Madras Establishment, District-Surgeon and Superintendent of the Gaol at Berhampore, is appointed to act as Civil Surgeon of Cochin during the employment of Surgeon J. W. Evan on other duty.

Surgeon M. A. T. COLLIE, M.B., C.M., Bombay Establishment, is appointed to act as Professor of Materia Medica and Pharmacy, Grant Medical College, *vice* Surgeon R. J. Baker, pending further orders.

The services of Surgeon W. H. BURKE, M.B., Bombay Establishment, are placed at the disposal of Government for employment in the Civil Department.

Surgeon A. V. ANDERSON, Bombay Establishment, Medical Officer 3rd Battalion 4th Native Infantry, has been permitted to return to duty.

Surgeon-Major O. BAKER, Bengal Establishment, now at Moulmein, has been appointed joint Civil Surgeon of Simla, *vice* Surgeon-Major S. H. Browne, M.D.

Surgeon J. M. MACNAMARA, M.D., of the Bengal Establishment, has passed the examination in Persian by the lower standard.

Surgeons A. COLEMAN, W. H. GRAY, and W. B. LANE, all of the Bengal Establishment, have passed the examination in Hindustani by the lower standard.

THE VOLUNTEERS.

ACTING-SURGEON F. K. P. PIGOTT, 1st Volunteer Battalion Shropshire Light Infantry (late the 1st Shropshire), is promoted to be Surgeon.

Surgeon and Surgeon-Major S. M. HOPSON, 3rd Volunteer Battalion Norfolk Regiment (late the 3rd Norfolk), is appointed Brigade-Surgeon (ranking as Lieutenant-Colonel) to the Eastern Counties Brigade Infantry Volunteers.

PROFICIENCY EXAMINATION FOR VOLUNTEER MEDICAL OFFICERS.

THE following extract from District Orders has recently been issued from the Home District Office:—

Home District Office.

It is hereby notified, for the information of officers commanding volunteer corps, that the examination of volunteer medical officers for certificates of proficiency on Army Form E 564 will in future be held quarterly on the first Tuesday in each quarter, commencing October 1st, 1889. Names of medical officers desirous of attending these examinations should reach this office at least a week before the date of examination. By order,

L. CAMPBELL, Colonel, Assistant Adjutant-General.

To prepare medical officers for the examination to be held next January, a course of six lectures will be given by Surgeon Walter Pearce, M.D., B.Sc., 20th Middlesex (Artists') R.V., commencing at 4.30 P.M. on Thursday, November 7th, 1889, at the headquarters of the Queen's Westminster R.V., St. James's Park Station, S.W.

First lecture, November 7th, 1889: Constitution of the Army Medical Department—classification and organisation of army hospitals, the medical administration of an army corps, and the detail of hospital establishments in the field.

Second lecture, November 14th: The organisation and *personnel* of bearer companies and field hospitals, the formation and management of dressing stations.

Third lecture, November 21st: The application of the various articles composing the equipment of army hospitals in the field, and the authorised means for the transport of sick and wounded soldiers, and the proper means of employing them.

Fourth lecture, November 28th: General sanitary regulations and precautions to be taken for ventilation and water supply in barracks, hospitals, and camps.

Fifth lecture, December 5th: Diet and clothing of the soldier and personal hygiene of troops; medical regulations for the examination of recruits.

Sixth lecture, December 12th: Instructions regarding infectious diseases and cholera epidemics, injuries and diseases to which troops are liable in the field, with the duties of medical officers in camps, bivouacs, and during marches.

Medical officers who enter for this course will be instructed in bearer company ambulance wagon drill, and arrangements will be made to suit the convenience of officers residing at a distance from London.

Books required: *Army Medical Regulations*, Part I, 1889 (to be shortly published); *Army Medical Regulations*, Part II, 1889; and Parkes's *Hygiene*.

For further particulars, apply to R. R. SLEMAN, Honorary Secretary, 7, St. Bene't Place, Gracechurch Street, E.C.

LORD CAMPERDOWN'S COMMITTEE,

MEDICAL STAFF writes: We are stated not to require military rank because we belong to a profession of "dignity" and "eminence." But surely these high civil qualities ought to be the very reason for conferring an equally good status in the army. We cannot possess dignity and eminence and yet be unworthy. The truth is the talk of dignity in connection with the medical profession in this country is sheer humbug; else, how come it that none of its members are considered eligible for the peerage?

We cannot live on mere impressions and expressions of greatness; let us have something tangible after these lip compliments.

AMALGAMATION OF DEPUTIES AND BRIGADE-SURGEONS.

M.S. writes: I quite agree with your editorial "that there is a good deal to be said in favour of placing the deputies and brigade-surgeons in one list." Several of the latter officers have officiated, or are officiating, as deputy surgeons-general. They wear the same undress uniform, are of about the same age and experience, and it would, I think, be a mistake to lower their status, which has been gained as a prize. By a recent Royal Warrant colonels in the army are retired at 57. This age might be made the age for all surgeons.

colonel. If the surgeons-general are pushed forward to 62 to put them on a level with major-generals, the surgeons-colonel have the claim to serve three years longer than army colonels, thus blocking promotion. Suitable half-pay billets might be given them as a compensation and reward, in the same manner that brigade-depôt commands are reserved for old line colonels. There would be also a wider field of selection for staff employ proper. If we are to be a Royal Medical Staff, why not go back to our old uniform?

RANK OF BRIGADE-SURGEONS.

LEX writes: There are many reasons for giving Brigade-Surgeons a step in military rank; at present their badges are the same as Surgeons-Major, over twenty years; and they are indistinguishable, except when wearing the frock coat. He suggests the title of Surgeon Brigadier-General for Deputies.

*** Brigadier-General is merely a title for a sort of sham Major-General, and is only of local and temporary purport; we sincerely hope that nothing but *bonâ fide* military rank and titles will have any place in future compound titles, if such are to be.

ONE CORPS.

A. M. D. writes: I quite agree that it would be desirable to attach young medical officers to corps; it would imbue them with military, which are just as necessary for them as scientific ideas. But, if such is done, it will be all the more vitally necessary to fuse the medical and medical staff corps into one homogenous body. Otherwise, conflicting interests, such as existed between the old regimental and staff medical officers, would arise. Unity is essential for our progress and efficiency, which is the very reason, of course, our opponents would like to see us divided and broken up.

CIVIL PRACTICE BY ARMY MEDICAL OFFICERS.

M.D. remarks, in regard to the complaints of "Etiquette" of army medical officers on full pay trenching on the private practice of their civil brethren, that such must be very rare, and is altogether to be deprecated; but, how about civil practitioners who accept pauper "contract rates" for charge of troops to the detriment of the medical department? He further suggests the formation of a committee of retired officers to assist the Parliamentary Bills Committee in enlightening Parliament and the public on service matters, so that scheming wire-pullers may not have it all their own way.

UNIFORM OF "COMPOUNDERS."

AMBULANCE asks: What is the rank held and what the uniform and badge worn by "Compounders" of the regular and volunteer forces of England?

*** A Compounder may rank as Corporal, Sergeant, or Staff-Sergeant. There is no distinctive uniform.

MEDICO-LEGAL AND MEDICO-ETHICAL.

CONSULTATIONS.

DR. J. AND DR. W.—[Ere proceeding to record our opinion on the subject of dispute, which, as we think, has been unwisely allowed to survive two months after the informal consultation between the practitioners in question, we would solicit the special attention of our correspondents generally to the serious inconvenience to which we are often subjected in consequence of the illegibility of their writing, and which, in the present case, has necessitated a third laborious examination of a mass of correspondence extending over several months before the alleged facts could be clearly ascertained, thereby entailing a loss of much valuable time—a fact that must of necessity have more or less weight, and may, perhaps, impel us in the future to pass over like illegible communications.]

In the perusal of the case under review we noted with regret the heated language of Dr. W., and alike ungenerous imputations of Dr. J. There cannot, in our opinion, even under the special circumstances alluded to by the the former (Dr. W.), be any doubt that, in examining the lady patient on the evening of his arrival, and again on the following morning prior to the appointed hour (9 A.M.) for the consultation with the family doctor, who lived within a stone's throw, he committed a breach of professional etiquette. The plan of treatment, moreover, having been eventually discussed and verbally agreed upon, the subsequent formal delivery by a messenger, on the second morning after the reported consultation, of a letter containing prescriptions and suggestive instructions from Dr. W. for the guidance of Dr. J., the ordinary medical adviser and senior practitioner, was ill-judged, and more or less calculated to excite his distrust as to the object in view. At the same time, we are distinctly of opinion that, inasmuch as the suggested treatment was not objected to by Dr. J. at the consultation, it devolved upon him to carry it out, unless there were urgent reasons to the contrary.

We would further note in reference to two mooted points in the correspondence, that first it devolved on the *de facto* consultant (although the junior) to initiate, at the consultation before alluded to, the committal to writing, if deemed necessary, of the remedies and directions agreed upon; and secondly, that the attendance of a consultant is understood to cease after each consultation, unless otherwise arranged, and therefore that the presence of the previous consultant in the case was unnecessary at the consultation in question.

We regret to add that we cannot exonerate from blame in the matter the family of the patient, who appear to have sought the advice of Dr. W. without the knowledge of Dr. J.; this was a regrettable act of discourtesy to the old family medical attendant.

HYGIENE IN SPAIN.—The municipal authorities of Madrid have recently established laboratories for the analysis of food, etc. These laboratories will be under the direction of graduates in medicine, pharmacy, or physico-chemical sciences, who will be appointed after competitive examination. The Madrid Royal Academy of Medicine has organised a scheme of examination on a most comprehensive scale, including practical tests of a searching character.

HOSPITAL AND DISPENSARY MANAGEMENT.

ALLEGED ABUSE OF OUT-PATIENT DEPARTMENTS AND THE PROPOSED PUBLIC MEDICAL SERVICE.

AT the meeting of the East Anglian Branch (Essex District) of the British Medical Association, held at Braintree on September 24th, a discussion took place on a paper on "Hospital Out-Patient Reform" by Mr. E. H. CARTER (Chelmsford).

The HONORARY SECRETARY first read the correspondence and proposed resolutions on that subject by Dr. Rentoul, and this being done a discussion arose as to the advisability of adopting the said resolutions, but nothing was done in the matter.

Mr. Carter's paper at the outset dealt briefly with the origin and uses of hospitals. England, said Mr. Carter, was not the first country in Europe to make use of these institutions, but she had at the present time some of the best hospitals in the world, worked by most efficient staffs of medical men, who were greatly assisted by the excellent services of well-trained and qualified nurses. At these hospitals the best advice could be obtained, together with the most skilful treatment of disease and accident, and they were undoubtedly a great boon to the poor, for whom they were chiefly intended, and could be made of greater service still were abuses not so prevalent in the out-patient system. The greatest abuse in the present system, he considered, lay in the fact that many people sought and obtained the charity who were not entitled to receive it, and who it was well known were in a position to pay for medical aid and advice, and enter into some arrangement with their doctors. Even those who subscribed really made no adequate requital to the hospitals for the benefits they received therefrom. With regard to the waste of medicines at hospitals, to that question he attached no importance. That always did and always would exist. He thought it would be a good plan that every patient should contribute something towards the hospital. This would provide a large sum of money for the institutions, and it would also remove the stigma of pauperism resting upon the present system. He thought, too, that the donors should carefully inquire into the circumstances and position of every applicant for tickets of admission. He found that the charities were disinclined to interfere with the present system for fear of offending their patrons. This abuse of the medical charities by the well-to-do class was most keenly felt by medical practitioners in the country, and it was adding one more grievance on to that patient and self-denying body of men.

The subject was discussed with the idea of deciding upon what action should be taken with regard to the remedying of the abuse which all present seemed unanimous in agreeing did exist in a marked degree. The subjects of sick clubs and pauper treatment were introduced into the discussion.

Mr. KELLETT (Halstead) gave his experience as a medical officer to the Halstead Union with regard to pauper treatment, and, touching more closely upon the hospital question, said he believed that a great number of medical men attending the hospitals looked upon the well-to-do county patients as a means of extending their name and fame. He thought that the hospitals were intended for the indigent poor, and for the indigent poor alone. They were not intended for the well-to-do, and the well-to-do should have no part in them. He thought, if the abuse continued, the hospitals must lose the sympathy of general practitioners all over the country, and do themselves a vast amount of injury.

Professor LATHAM said he considered the resolutions of Dr. Rentoul quite impracticable. How were they to reform the out-patient department of the hospitals? Not by such resolutions as those, he thought. He had had something to do with the Cambridge Hospital, and, speaking from his own experience there, he did not see how they were to carry out the proposed resolutions if passed. They, perhaps, had a man come to be treated for a very serious disease, and he was admitted simply because it was a case that might be dealt with by the physicians or surgeons with advantage, and one that might prove of great interest and value to the students. Without any personal feeling, he would state that the suggestion that the physicians and surgeons of hospitals encouraged the abuse of the out-patient system in order to gain provincial fame and practice was neither true nor just. He thought the wage-limit which had been proposed by Dr. Rentoul would act very clumsily, and, in many cases, unfairly. How many patients would tell the truth as to their earnings? And

then what would become of a man whose earnings were, say 50s. per week when in full work, and who, perhaps, having a wife and large family, had only been able to save but very little? If he became ill and remained so for a long period his little savings would soon be spent, and, with no wages coming in, would not be able to pay a doctor if he called one in. This was a point to consider, because it would not only go hard with the patient, but the private practitioner who might be called upon to give his services. The working class, as a class, saved very little, and it was often the case that after attending a patient for a long time the medical man got no money and very little thanks. He did not agree at all with passing resolutions as to who should be admitted and who should not. His own idea was that there might be established provident dispensaries and provident hospitals managed by boards or committees formed of men the most qualified to undertake the work. He agreed that the abuse of the hospitals was simply frightful, but he did not believe they would remove existing abuses by passing resolutions. The provident dispensaries and hospitals, he suggested, should be under the control of the committee of medical men, who should have power to appeal against any case to a medical board. With regard to malingerers, or supposed malingerers, he thought some of those people were sometimes harshly treated. It was very difficult in some cases to give a diagnosis. When a case of malingering was proved to the satisfaction of the medical board, the malingerer should be turned out without ceremony. Patients, too, should have power to appeal to the board if they thought they were not justly treated by the medical men, and thus the doctors and patients would be protected against each other. The patients should pay something weekly according to their means, and the dispensaries and hospitals should be supported by general contributions by the public. He believed if something were done in this direction it would greatly lessen the existing abuses, and do away with a deal of friction and dissatisfaction. In conclusion, the Professor compared the present condition of things with that of thirty and forty years ago. At that time, he said, the hospitals were in a very different position to what they were now. Forty years ago the men who were in charge of hospitals were looked upon as standing out prominently above private practitioners. They were men who had a good deal of practice. At the present day they did not find hospital surgeons standing up so distinctly above their fellow surgeons outside in the matter of treating special cases and operations. The great majority of country surgeons were now quite capable of treating cases, the like of which were only dealt with formerly in the hospitals. He found the most able practitioners among those who had to rely entirely upon their own resources. Even in remote country districts he found the most qualified men in the country, men whom he would have no hesitation in placing himself under for an operation were it necessary. People were now far more independent of hospital surgeons than they used to be.

The PRESIDENT pointed out that, in the London Hospital, they had had for five or six years an inspector who investigated every case, inquiring into the circumstances of every applicant for out-door treatment, and, when not satisfied from other sources of information, he visited the applicants' employers. The consequence of this was that in the London Hospital there had been a reduction of 6,000 patients in the year. At St. Bartholomew's, where the same plan was adopted, there had also been a great reduction; he had forgotten the exact number. In such hospitals as adopted the Manchester system, the Charity Organisation Society received the charge of everybody that applied as an out-patient, and inquired into the status and surroundings of each patient.

Dr. MEAD, Dr. MCDERMOTT, Mr. T. TAYLOR, Mr. R. C. LYLE, and Mr. J. E. CRESSWELL also joined in the discussion.

It was ultimately agreed to pass no resolution on the subject at that meeting, but to adjourn the matter till the next half-yearly meeting.

AT a meeting of the East Kent District of the South-Eastern Branch, on September 12th, Dr. HENRY LEWIS proposed and Mr. GEORGE RIGDEN seconded a resolution that the disproportionate growth of the out-patient department in all hospitals demanded a general inquiry. Dr. Lewis argued that the financial difficulties in all hospitals and the undoubted abuses in the out-patient department demanded an inquiry with a view to reform. Both the financial position and abuses were illustrated by well known facts connected with metropolitan hospitals, and he contended that the same applied in a minor degree to provincial hospitals. The resolution was carried *nem. con.*

AT the meeting of the East Sussex District of the South-Eastern Branch, on September 26th, the following discussions took place:

Hospital Out-patients.—A discussion was introduced by the CHAIRMAN on the subject of hospital out-patient abuse, and the proposed Public Medical Service.

Dr. BAGSHAWE moved: "That medical practitioners, and the managers of our medical charities in the various towns and cities, meet together and decide who are eligible for out-patient medical aid. This meeting suggests that the following 'wage-limit' be adopted: When a man and wife make over 25s. per week, or a single person over 20s. per week, that these shall be ineligible for out-patient treatment at the medical charities, except in cases of accident; and that those earning a similar rate of wage be ineligible for 'home visits,' that is, visits paid by the staff of the medical charities to sick persons at the patient's home. Further, that either the Manchester system of checking abuse, or that used at the London and St. Bartholomew's Hospitals, be put in force, but that preference be given to the plan used at Manchester." He thought that at St. Leonard's the hospital did not now trespass on the general practitioner, and that of late years the abuse had much diminished, owing to the refusal to pay any home visits without a letter being previously obtained by the establishment of the provident dispensary, and by the keeping of a register at the hospital, in which were entered full particulars of the wages, families, etc., of patients, and by the exclusion of unfit cases.

Mr. ADKINS seconded the resolution; and Dr. TROLLOPE, Mr. GABB, and Mr. MANSELL supported the view that locally they were doing all that could be done to prevent abuses; the latter describing those attending at the dispensary as really very poor.

Mr. VERRALL doubted whether the mere entry in a book of facts stated by patients themselves was a sufficient check, and preferred the Manchester plan of inquiring at the homes of patients.

Dr. HOLLOWAY supported this view, and believed deception occurred.

Mr. RANKING congratulated St. Leonard's on the comparative excellence of their system, but thought other places could not show one so good. The true way to effect improvement was to educate subscribers as to whom they should select to receive out-patient letters.

The motion was carried *nem. con.*

Proposed Public Medical Service.—Mr. VERRALL read Dr. Rentoul's plan for the creation of a Public Medical Service in each town, and, in order to bring this matter under discussion, formally moved a resolution similar in terms to that introduced by Dr. Rentoul at the annual meeting.

Mr. MARSHALL seconded.

Dr. TROLLOPE thought there should be no limit to the number of medical men who might be on the staff for any district. Unless this were conceded, he thought many who had clubs, private or otherwise, would be greatly opposed to the scheme.

Dr. WILLS objected to the exclusion of doctors employing unqualified assistants, as he thought the only result of this would be to enable practitioners who were already anxious to undersell their brethren to do so more easily.

Dr. STARLING thought the provident dispensaries, or, at any rate, some extension of them, would fill the gap.

Mr. MANSELL moved an amendment: "That this meeting does not think it advisable to increase the pauperisation of the public by the proposed scheme." He thought the "wage-limit" for admission to the benefits of the scheme—namely, 45s.—too high.

Mr. GABB seconded. He considered the staff of the provident dispensaries should be open to any properly qualified practitioner.

Dr. BAGSHAWE moved another amendment: "That this meeting would not increase the number of existing organisations, such as provident dispensaries and clubs, for the relief of the poorer classes."

Dr. RANKING seconded.

This amendment was carried, 7 voting for it and 5 against, and also as a substantive resolution, 11 being in favour to 2 against.

House of Lords' Inquiry.—Mr. VERRALL moved: "That a resolution be passed praying the House of Lords to extend the scope of their inquiry, so as to include the provincial hospitals and dispensaries, and that a copy of the first resolution be forwarded to Lord Sandhurst."

Dr. HUMPHREYS seconded.

Mr. GABB, while agreeing with the principle of the inquiry, thought that he should not vote for such until the matter had

come before the various hospital committees. He felt moved to this course as a member of a hospital staff.

Dr. RANKING concurred.

The general feeling, however, was that no slight would be intended or inflicted by the proposed inquiry, and the resolution was carried unanimously.

THE PUBLIC MEDICAL SERVICE: THE PROPOSED SCALE OF FEES.

SIR,—The scale of fees proposed by Dr. Rentoul in the JOURNAL of September 28th seems to me very satisfactory. He evidently is anxious to fix the very lowest charges which are at all consistent with proper treatment, and in this I think he is right. The funds supplied by charity are limited in amount, and if used where they are not required, they fail to supply real wants. The greatest amount of charitable aid which can reasonably be expected barely suffices to meet the extreme necessities of the poor, and to waste charitable contribution is like snatching food from the starving. Dr. Rentoul's scheme, while wisely opposing this disastrous perversion of charity, aims at assisting the labouring and artisan classes in their struggle to supply their own wants while maintaining an honest independence.

When charitable people lend support to those who are able to work, they simply enable selfish employers to obtain the services of these industrial classes at an unfairly low rate. They are creating an artificial state of society, and are establishing a most dangerous dependence on an uncertain source of supply—I mean on charity.

As to the ill-devised methods of combining charity with self-support, which medical institutions have from time to time inaugurated, I have not heard of success attending any one of them. They always benefit the undeserving at the expense of the honest and industrious. I hope Dr. Rentoul will shortly publish a scale of charges for a suitable provident system.

It would be well if some country practitioners would give their views as to the applicability of the Public Medical Service, as sketched by Dr. Rentoul, and criticise any of its details. How would this system supply the wants of the agricultural labourers with wages from 10s. to 20s. a week? The present club system certainly does not work well, for the club members seem usually to send for the club doctor only when they are unable to get another medical man. I know that country practitioners find it hard to get time for writing and discussion, but they must make their wishes known, or their interests may be neglected, as usual.

Many eminent London consultants say that they sympathise with Dr. Rentoul's wishes, but as yet their sympathy has not taken the practical form of assisting in discussing and arranging the proposed scheme. However, I am in hopes that they will give us the benefit of their experience and advice when the discussion comes before the Metropolitan Branch and its Districts. A requisition asking for a special meeting of the whole Metropolitan Branch to discuss Dr. Rentoul's proposals is being prepared, and has now nearly the necessary number of signatures, so that we may hope to obtain the general opinion of this most important Branch, after its component Districts have had an opportunity of expressing their views, and making suggestions. The subject is one of importance to all medical men, and every member of the profession should have an opportunity of expressing his opinion.

—I am, etc., HUGH WOODS, M.D.

Highgate, N.

SIR,—The letter from Dr. Rentoul, which appeared in the JOURNAL of September 28th, is a strange commentary on the condition and prospects of the medical profession. It is astonishing to find it seriously proposed to perform tracheotomy for 12s. 6d., operation for fistula in perineo (what operation?) for 7s. 6d., operation for imperforate anus for 10s. 6d., stretching or stitching a nerve for the same sum, operation on strangulated hernia for £1, and so forth. For such fees as these the surgeon is to risk his reputation, to bring a knowledge of anatomy and physiology, skill in diagnosis, an adequate knowledge of morbid anatomy and pathology, skill in operating and readiness for emergencies, suitable instruments, prepared sponges, assistance and other things; perhaps the patients or their friends supply the nurse. It seem reasonable to ask how all this can be done at the price. The answer is that it cannot; and practitioners recognise this, and they themselves send such cases into hospital. Few would object to this in the case of people with small incomes (45s. per week) and large families, but about London practitioners send cases into hospital, because they are unable or unwilling to treat them, and often these are certainly able, and often willing, to pay a reasonable fee to a consultant to meet the practitioner. Practitioners have not recognised that, in these days of aseptic surgery and infrequent dressings, surgery is a different thing to what it used to be. Also, it would exercise an excellent effect upon all concerned if practitioners would visit the hospitals in their neighbourhood; nothing could be better calculated to prevent abuse in either the wards or out-patient department.

However, the profession is so disunited that one hopes but little from any action on their part. As the public become better educated they will refuse surgery which is cheap and not of the highest standard.—I am, etc., SURGEON.

OBITUARY.

THOMAS BLUNT, M.D., M.R.C.P.EDIN., L.R.C.P.LOND.

THE death of Dr. Thomas Blunt, of Leicester, at the comparatively early age of 48, has caused a feeling of deep regret amongst his many friends and colleagues. The deceased was the son of the late Dr. Blunt, of Wigstown, near Leicester, and graduated at the Edinburgh University, where he took his M.D. degree in 1865. After leaving the university he settled in Leicester, and entered into partnership, first with the late Dr. Bowmar, and subsequently with the late Mr. Sidley. He was one of the first honorary physicians attached to the infirmary, and a leading member of the medical staff of the dispensary, and, in 1870, surgeon to the Borough Fever Hospital. He was an advocate of hydropathy and cremation, and a member of the Church of England Temperance Society.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

DURING the week ending Saturday, September 28th, 5,501 births and 3,285 deaths were registered in twenty-eight of the largest English towns, including London, which have an estimated population of 9,555,406 persons. The annual rate of mortality in these towns, which had risen from 16.2 to 17.0 per 1,000 in the three preceding weeks, further increased to 17.9 during the week under notice. The rates in the several towns ranged from 7.9 in Huddersfield, 12 5 in Nottingham, 14.7 in Oldham, and 14.9 in Norwich to 27.6 in Sunderland, 28.0 in Blackburn, 31.0 in Preston, and 32.7 in Plymouth. The mean death-rate in the twenty-seven provincial towns was 19.3 per 1,000, and exceeded by 2.9 the rate recorded in London, which was 16.4 per 1,000. The 3,285 deaths registered during the week under notice in the twenty-eight towns included 529 which were referred to the principal zymotic diseases, against numbers increasing from 512 to 537 in the three preceding weeks; of these, 258 resulted from diarrhœa, 67 from scarlet fever, 63 from diphtheria, 60 from whooping-cough, 56 from "fever" (principally enteric), 28 from measles, and not one from small-pox. These 529 deaths were equal to an annual rate of 2.9 per 1,000; in London the zymotic death-rate was 2.4, while in the twenty-seven provincial towns it averaged 3.3 per 1,000, and ranged from 0.0 in Derby, 1.1 in Bristol, and 1.3 in Nottingham and in Halifax to 5.5 in Bolton, 6.0 in Blackburn and in Preston, and 12.7 in Plymouth. Measles caused the highest proportional fatality in Newcastle-upon-Tyne and Norwich; scarlet fever in Blackburn and Plymouth; whooping-cough in Plymouth and Wolverhampton; "fever" in Salford, Portsmouth, and Halifax; and diarrhœa in Newcastle-upon-Tyne, Bolton, Wolverhampton, and Preston. The 60 deaths from diphtheria in the twenty-eight towns during the week included 44 in London, 4 in Portsmouth, 3 in Manchester, 3 in Salford, and 2 in Plymouth. Small-pox caused no death in any of the twenty-eight towns, and no small-pox patients were under treatment in any of the Metropolitan Asylums Hospitals on Saturday, September 28th. These hospitals, however, contained 1,206 scarlet fever patients on the same date, against numbers increasing from 538 to 1,130 in the thirteen preceding weeks; 158 cases were admitted during the week, against 188 and 126 in the two previous weeks. The death-rate from diseases of the respiratory organs in London was equal to 2.3 per 1,000, and was slightly below the average.

HEALTH OF SCOTCH TOWNS.

IN the eight principal Scotch towns, 773 births and 481 deaths were registered during the week ending Saturday, September 28th. The annual rate of mortality in these towns, which had been 19.1 and 16.4 in the two preceding weeks, rose again to 18.8 during the week under notice, and exceeded by 0.9 per 1.000 the mean rate during the same period in the twenty-eight large English towns. Among these Scotch towns the lowest rates were recorded in Perth, Edinburgh, and Dundee, and the highest in Glasgow and Leith. The 481 deaths in these Scotch towns during the week under notice included 74 which were referred to the principal zymotic diseases, equal to an annual rate of 2.9 per 1,000, which corresponded with the mean zymotic death-rate during the same period in the twenty-eight English towns. The highest zymotic death-rates were recorded in Dundee and Leith. The 210 deaths registered in Glasgow included 13 from diarrhœa, 9 from whooping-cough, 6 from "fever,"

and 5 from measles. Three fatal cases of diphtheria were recorded in Leith and 2 in Dundee. The death-rate from diseases of the respiratory organs in these Scotch towns during the week under notice was equal to 3.5 per 1,000, against 2.3 in London.

HEALTH OF IRISH TOWNS.

During the week ending Saturday, September 28th, the deaths registered in the sixteen principal town districts of Ireland were equal to an annual rate of 26.3 per 1,000. The lowest rates were recorded in Lisburn and Kilkenny, and the highest in Belfast and Dublin. The death-rate from the principal zymotic diseases in these towns averaged 4 3 per 1,000. The 213 deaths registered in Dublin during the week under notice were equal to an annual rate of 31.5 per 1,000(against 24.5 and 28.5 in the two preceding weeks), the rate for the same period being only 16.4 in London and 16.6 in Edinburgh. The 213 deaths included 30 which resulted from the principal zymotic diseases (equal to an annual rate of 4.4 per 1,000), of which 23 were referred to diarrhœa, and 6 to "fever" (principally enteric).

REPORTS OF THE MEDICAL OFFICERS OF HEALTH.

Kendal (Population 14,000).—*Decreasing Death rate: Diphtheria Epidemic: Suspected Relations to Prevalence of Fog.*—Mr. C. E. Paget reports that during 1888, the total mortality from zymotic diseases was 18, giving a death-rate of 1·3 per 1000 of the population, a rate which, though higher than in either of the two preceding years, is 0·2 lower than the mean of the quinquennial period 1881-85, and lower still than any other similar period since the year 1840. This mortality included for the first time since the year 1860, no death from diarrhœa or dysentery; and, considering the extent to which scarlet-fever prevailed during the year, only a very small mortality from this disease. The increase in the zymotic deaths was due to a short, though rather fatal, outbreak of diphtheria in the first six weeks of the year. Mr. Paget describes this as being of a most peculiar nature, the disease making a sudden onset, and then as abrupt a cessation. He gives the following interesting account of the circumstances attending the outbreak: All the fatal cases, with one exception, were on the east side of the river and near to it or the canal, in the flattest and most low-lying parts of the town, over which a heavy fog had hung with great persistency. This fog was common to the whole town, to most parts of the low-lying surrounding district, and, according to reports, it was noticeable over most of the moorlands of Yorkshire at the same time. The date of the commencement of the fog in Kendal was January 8th, and it remained continuously until January 20th. Inquiry showed that during the period of fog there was an intensified prevalence of sore throats among children attending the public elementary schools of the town, which died out towards the end of February. The nature of the fog was such that it was probable that sewer vapours and emanations from decomposing matters were confined to a low atmospheric level in the district and could not be dispersed. Mr. Paget thought it also likely that with low forms of organic life present in an atmosphere which could not be properly freshened during a period of twelve days children would be peculiarly liable to throat affections which in some instances might be true diphtheria.

Bristol (Population, 226,510).—*Small-pox Epidemic: Insufficient Hospital Accommodation: Scarlet Fever Mortality; Prevalence of Measles.*—Dr. D. S. Davies writes at some length on the sanitary condition of his district, making an excellent report to his authority, and one which betokens an expenditure of much time and care in its preparation. It is supplemented with valuable tables of statistics, charts, etc. He gives the death-rate for the year as 16.9 per 1,000; but as 1888 was a year of low death-rates in most towns in England, climatic and other general causes must be credited with some share in the lowness of the Bristol rate. It is satisfactory to note that amongst the general lowering of the rate throughout England, Bristol has retained her comparative position amongst the healthiest towns, and only one town of over 200,000 inhabitants (Hull) shows a smaller general death-rate. Not only is the rate the lowest ever recorded in Bristol, but the actual number of deaths during the year (3,816) was less than during any of the previous eleven years, except 1883, when 3,795 deaths occurred in a smaller population, and gave a death-rate of 17.8. The small-pox epidemic, which began in the autumn of 1887, continued through the first two quarters of 1888, causing 26 deaths, and disappearing completely in July. The mortality from scarlet fever fell from 217 in 1887 to 45 in 1888. Dr. Davies draws attention to the need of infectious hospital provision for other than pauper patients, and to the unsuitability of the present hospital provision for the isolation of more than one disease at a time; consequently, for nine months these hospitals were closed against any but cases of small-pox. That scarlet fever is eminently a disease which can be dealt with and controlled by early and prompt isolation the experience of other towns is abundantly testifying; that it is a very fatal disease when uncontrolled the experience of Bristol itself can show. Thus, during the past ten years, from 1879 to 1888, scarlet fever has caused in this city 1,006 deaths, as compared with 58 deaths during the same period due to small-pox, and 20 to typhus. Dr. Davies expresses the opinion that a very large proportion of this mortality might have been prevented, as hitherto no attempt has been made to deal systematically with this disease, and the increased accommodation would also be a means of dealing with some other diseases occasionally requiring isolation, such as measles, diphtheria, erysipelas, etc., for all of which and for all classes provision should be made. A report for the first quarter of the current year shows that measles has been prevalent, and caused 121 deaths.

Preston (Population, 103,234).—*Small-pox Outbreak: Infection brought by Travelling Shows: Inadequate Hospital Accommodation for Non-paupers: Influence of Vaccination.*—The principal feature of Mr. Pilkington's report for the year 1888 is an interesting account of an epidemic of small-pox, which was remarkable by reason of the sudden and widespread nature of its attack. Mr. Pilkington, although unable to point out with absolute certainty the means by which the infection was first introduced into the town, has little doubt that it was sown broadcast through the medium of the travelling shows which visited the neighbourhood during the Whitsuntide holidays. The first three cases were notified on June 2nd, and by the end of the week some 178 cases were officially reported. This number being far in excess of the available accommodation, temporary provision had to be made, and after many difficulties and obstacles had been surmounted, a complete hospital was erected by the Ducker Portable House Company on an excellent site, entirely removed from houses, and at least a hundred yards from the public road. The disease was not entirely stamped out until the close of the year, though long before that time its virulence was exhausted. Of the 31 fatal cases, 12 died in hospital, and of these 4 were vaccinated, 1 unvaccinated, and 4 doubtful; the condition of the remaining 3 preventing the necessary examination. Mr. Pilkington only saw one instance of infection in a recently revaccinated person, and here the disease had evidently been contracted before the operation was performed, as the pustules and vaccine vesicles appeared together. The attack was an exceedingly mild one, and the eruption was confined to a few spots upon the forehead and face. An infant, aged a few months, was admitted with its mother, who was suffering from a modified attack. It had been twice unsuccessfully vaccinated, but the third time with good results, and, though nursed by and sleeping with its mother, it escaped without contracting the disease. Another curious case was that in which a young man had lately been suffering from disease of the hip-joint, and in which the affected part had been treated with iodine. The whole force of the eruption appeared to have expended itself upon the part so painted, and here a copious crop of pustules appeared, whilst on the rest of the body they were scattered and completely isolated. The deaths and sickness from other infectious diseases were, with the exception of diphtheria, below the average, and Mr. Pilkington was able to report a satisfactory reduction in the general mortality-rate, it being 22.53 per 1,000, as compared with 26.42 in the previous year.

MEDICAL NEWS.

Bequests.—The Stockport Infirmary largely benefits under the will of the late Mr. Tom Mason, of Portwood. The amount is currently stated to be £3,000.—By the will of Mr. D. Cullimore, barrister, late of Monkstown and Ballyganne Park, Co. Wexford, the County Infirmary, Wexford, has received a legacy of over £1,000, and the poor of the village Taghmon, Co. Wexford, £8,000.

Meath Hospital and County Dublin Infirmary.—The winter session of 1889-90 will be inaugurated on Monday next, October 7th, when an introductory address will be delivered in the Institution at 10 A.M by Sir George Porter, Bart, Senior Surgeon to the hospital. The same evening the annual old students

and governors' dinner will take place at the Shelbourne Hotel; Sir Howard Grubb, F.R.S., one of the governors, will preside. Application for dinner tickets must be made on or before Saturday, October 4th, to the Honorary Treasurer, Mr. L. H. Ormsby, 92, Merrion Square West, Dublin. One or two guests may be invited by each governor or old student. It is expected that this gathering will be largely attended.

DRINKING FACILITIES AT LEEDS.—A public-house map of the borough of Leeds has recently been issued. There are 355 fully licensed houses, 422 beer houses, and 362 off-licensed shops, making a total of 1,139 houses and shops in which intoxicants are sold. The population is 350,000, and it is calculated that Leeds expends on alcohol £1,213,000 per annum.

PRESENTATIONS.—At a meeting of the Board of Guardians held on Tuesday, September 24th, an illuminated address was presented to Dr. A. Downes, the late medical officer of health for the combined Rural Sanitary Authorities of Chelmsford and Maldon. Mr. Downes replied, and introduced Dr. Thresh, his successor, who has now taken charge of the combined districts.—At the Drill Hall, Nuneaton, on September 26th, Dr. Hammond was presented with a purse of nearly £100, and an illuminated address, expressive of the high regard in which he is held by the donors. A massive gold bracelet was presented by a deputation of ladies to Mrs. Hammond, with an expression of regret at the departure of Dr. and Mrs. Hammond.

MEDICAL VACANCIES.

The following Vacancies are announced:

BALLINROBE UNION.—Medical Officer. Salary, £100 per annum, with £33 6s. 8d. as Consulting Sanitary Officer. Applications to Mr. John Walsh, Clerk of Union. Election on October 19th.

CLAYTON HOSPITAL AND GENERAL DISPENSARY, Wakefield.—House-Surgeon. Salary, £120 per annum, with residence, coals, and gas. Applications by October 18th to the Honorary Secretary.

DORSET COUNTY ASYLUM.—Assistant Medical Officer. Salary, £120 per annum, with board and residence. Applications by October 19th to Dr. MacDonald, Medical Superintendent.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell, E.—House-Physician. Board and lodging. Applications by October 10th to the Secretary.

FLINTSHIRE DISPENSARY.—House-Surgeon. Salary, £100 per annum, with furnished house, etc. Applications by October 7th to the Secretary, Board Room, Bajillt Street, Holywell.

GATESHEAD DISPENSARY.—Resident House-Surgeon. Salary, £200 per annum, with furnished apartments, etc. Applications by October 8th to the Honorary Secretary.

GENERAL DISPENSARY AND INFIRMARY, Jersey.—Resident Medical Officer. Salary, £120 per annum, with furnished apartments, etc. Applications by October 19th to the Honorary Secretary.

HOSPITAL FOR CONSUMPTION, Brompton.—House-Physicians. Applications by October 19th to the Secretary.

JOINT COUNTIES ASYLUM, Carmarthen.—Junior Assistant Medical Officer. Salary, £100 per annum, with board, lodging, etc. Applications by October 10th, to the Medical Superintendent.

LANCASHIRE COUNTY ASYLUM, Rainhill, near Liverpool.—Assistant Medical Officer. Salary, £105 per annum, with board, lodging, and washing. Applications by October 18th to the Medical Superintendent.

LEICESTER INFIRMARY AND FEVER HOUSE.—House-Surgeon. Salary, £120 per annum, with board, lodging, etc. Applications by October 5th to the Secretary.

LONDON LOCK HOSPITAL AND ASYLUM, Harrow Road and Dean Street, W.—Physician. Applications by October 21st to the Secretary, Harrow Road.

LONDON LOCK HOSPITAL AND ASYLUM, Harrow Road and Dean Street, W.—Surgeon. Applications by October 21st to the Secretary, Harrow Road.

PLYMOUTH PUBLIC DISPENSARY.—Physician's Assistant. Salary, £60 per annum. Applications by October 8th to the Honorary Secretary.

PLYMOUTH PUBLIC DISPENSARY.—Second Medical Officer for Provident Department. Applications by October 8th to the Honorary Secretary, W. H. Prance, Esq., 7, Athenæum Terrace, Plymouth.

ROYAL PORTSMOUTH, PORTSEA, AND GOSPORT HOSPITAL.—House-Surgeon. Salary, £70 per annum, with board and residence. Applications by October 10th to the Chairman of the Committee at the Hospital, Portsmouth.

STOKESLEY UNION.—Medical Officer for Workhouse and Stokesley District. Salary, £54 per annum, with extras. Applications by October 19th to T. Sowerby, Esq., Clerk, Stokesley.

UNIVERSITY COLLEGE, Dundee.—Professor of Physiology. Salary, £350 per annum, with two-thirds of fees. Applications by October 15th to Messrs. Shiell and Small, 5, Bank Street, Dundee.

WESTERN GENERAL DISPENSARY, Marylebone Road, N.W.—Honorary Surgeon. Applications by October 7th to the Honorary Secretary.

WESTERN GENERAL DISPENSARY, Marylebone Road, N.W.—Honorary Dental Surgeon. Applications by October 7th to the Honorary Secretary.

MEDICAL APPOINTMENTS.

FRASER, D. A., M.D., M.R.C.S., L.S.A., appointed Medical Officer and Vaccinator to No. 4 District of the Totnes Union, *vice* Dr. Currie, resigned.

GARDNER, E. F., L.R.C.P., M.R.C.S., appointed House-Surgeon to the Evelina Hospital for Sick Children, *vice* G. H. Pennell, M.R.C.S., L.R.C.P., resigned.

GREER, J. S., M.R.C.S., L.R.C.P.Edin., appointed Medical Officer to the Cavan Union, Bellananagh Dispensary, *vice* G. Lyndon, L.K.Q.C.P.I., resigned.

HAINS, L., L.R.C.P. and S.Edin., appointed Medical Officer and Public Vaccinator to No. 3 District of the Totnes Union, *vice* Dr. Raby, resigned.

HOLDEN, G. H. R., M.A., M.B., B.C.Cantab., M.R.C.S.Eng., L.R.C.P.Lond., appointed House-Surgeon to St. Bartholomew's Hospital.

HOPKINS, Thomas, B.A., M.B.,, B.Ch.Univ.Dubl., appointed House-Surgeon to Chester General Infirmary, *vice* Mr. William Lees, resigned.

LOMAS, Ernest C., M.B., Ch.B.Vict., M R.C.S.Eng., appointed Senior House-Surgeon to the Royal Albert Edward Infirmary, Wigan, *vice* A. J. Barnard, M.R.C.S.Eng., L.R.C.P.Edin., resigned.

NUTTALL, A. E., M.A., M.B., B.C.Cantab., appointed Senior House-Surgeon to the Macclesfield General Infirmary, *vice* C. Averill, M.R.C.S.Eng., L.S.A,, resigned.

SHAW, Cecil E., M.A., M.D., M.Ch., of Belfast, appointed Honorary Consulting Oculist to the Alexandra Hospital, Ballymena.

DIARY FOR NEXT WEEK.

FRIDAY (October 4th).

WEST LONDON MEDICO-CHIRURGICAL SOCIETY, West London Hospital, 8 P.M.—Pathological Specimens: Mr. Keetley: 1. Loose Cartilages Removed from Two Knee-Joints. 2. A Portion of a Kidney Crushed off by a Waggon Wheel and Removed through a Lumbar Incision. Mr. Percy Dunn: Some recent Additions to the Museum of the West London Hospital. Dr. H. C. Pope (President): The Beginnings of Disease.

WEDNESDAY.

ROYAL MICROSCOPICAL SOCIETY, King's College, W.C., 8 P.M.

BRITISH GYNÆCOLOGICAL SOCIETY, 8.30 P.M.—Specimens will be shown by Mr. Lawson Tait, Dr. Bantock, Dr. Edis, Dr. R. T. Smith, and others. Adjourned discussion on Dr. Dolan's paper, Gynæcological Specialism and General Practice. Council meeting, 8 P.M.

HUNTERIAN SOCIETY, 8 P.M.—The President: A Short Address. Dr. Turner: Two Cases Treated by Forced Feeding.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the announcement. The first post on Thursday mornings is the latest by which advertisements can be received.

BIRTHS.

FRASER.—At Pomeroy House, Totnes, on September the 20th, the wife of Donald A. Fraser, M.D., of a daughter.

PARKHILL.—On September 28th, at Church Gresley, Burton-on-Trent, the wife of Saml. J. Parkhill, M.D., of a daughter.

MARRIAGES.

BAREFOOT—WALKER.—On the 2nd inst., at Christ Church, Southport, by the Ven. Archdeacon Clarke, John Richard Barefoot, surgeon Army Medical Staff, to Lilian Elizabeth Mary, daughter of Henry Walker, Esq., of Mosborough Hall, Derbyshire, and Southport.

HODSDON—RAFFIN.—At Donisla House, Mayfield Gardens, Edinburgh, on the 2nd inst., by the Rev. W. M. Falconer, M.A., and the Rev. George Davidson, M.A., James W. B. Hodsdon, M.D., F.R.C.S.Edin., to Joan, daughter of the late William Raffn.

MAYLARD—REDDIE.—On October 2nd, in St. Silas's English Episcopal Church, Glasgow, by the Rev. Sholto D. C. Douglas, M.A., incumbent, assisted by the Rev. T. M. Macdonald, Canon of Lincoln and rector of Kersal, Manchester, Alfred Ernest Maylard, to Jane, elder daughter of Charles Reddie, Glasgow, and granddaughter of Sir George Burns, Bart., Wemyss Bay, N.B.

MILWARD—PLUMRIDGE.—On September 26th, at Christ Church, Freemantle, Southampton, by the Rev. J. D'Arcy Preston, Surgeon E. O. Milward, Army Medical Staff, son of the late John Harnett Milward, Esq., Ennis, Ireland, to Enid, youngest daughter of the late Admiral Sir James Henry Plumridge, K.C.B.

MORRISON—TITTERTON.—On September 27th, at the Central Hall, Great Charles Street, Birmingham, by John Morrison, LL.B., brother of the bridegroom, James Thomas Jackman Morrison, M.A., B.C.Cantab., F.R.C.S.Eng., of Birmingham, to Edith Mary, eldest daughter of the late John Ward Titterton, of the Manor, Shifnal, Salop, and niece of Sir Charles B. H. Soame, Bart.

SMITHSON—REED.—On October 2nd, at St. Andrew's Church, Kirk Ella, by the Rev. James Foord, vicar, Arthur Ernest Smithson, B.A., B.M., B.C.Camb., 25, Bloomsbury Square, London, to Frances Scott, youngest daughter of Walter J. Reed, solicitor, Kirk Ella.

SYM—STOECKEL.—At the Roxburghe Hotel, Edinburgh, on the 26th September, by the Rev. Arthur Pollok Sym, B.D., Lilliesleaf, Allan Cuthbertson Sym, M.D., 144, Morningside Road, Edinburgh, to Emily Belinda, daughter of the late Frederick Charles Stoeckel.

DEATH.

HARDWICK.—On the 27th September, at Newquay, Cornwall, Arthur Roy Grahame, the only son of Arthur and Mary Hardwick, aged 11 months.

SMITH.—On Sunday, September 29th, at 42, Park Street, Grosvenor Square, Protheroe Smith, M.D., in his 80th year. Founder of the first Hospital for Women.

OPERATION DAYS AT THE LONDON HOSPITALS.

MONDAY.....10 A.M.: Royal London Ophthalmic.—10.30 A.M.: Royal Free (Ophthalmic Department).—1.30 P.M.: Guy's (Ophthalmic Department); Royal Westminster Ophthalmic.—2 P.M.: Central London Ophthalmic; Hospital for Women; Royal Orthopædic; St. Mark's; London.—2.30 P.M.: Chelsea Hospital for Women.

TUESDAY.....10 A.M.: Royal London Ophthalmic.—1.30 P.M.: Guy's; Royal Westminster Ophthalmic; St. Bartholomew's (Ophthalmic Department); St. Mary's.—2 P.M.: Cancer Hospital, Brompton; Central London Ophthalmic; London; Westminster.—2.30 P.M.: St. Mark's; West London.—4 P.M.: St. Thomas's (Ophthalmic Department).

WEDNESDAY....10 A.M.: National Orthopædic; Royal London Ophthalmic.—11 A.M.: St. Mary's (Orthopædic).—1 P.M.: Middlesex.—1.30 P.M.: Royal Westminster Ophthalmic; St. Bartholomew's; St. Thomas's.—2 P.M.: Central London Ophthalmic; Great Northern Central; London; Royal Free; University College; Westminster.—2.30 P.M.: St. Peter's; Samaritan Free Hospital for Women and Children.—3 to 4 P.M.: King's College.

THURSDAY.....10 A.M.: Royal London Ophthalmic.—1 P.M.: St. George's.—1.30 P.M.: St. Bartholomew's (Ophthalmic Department); Guy's (Ophthalmic Department); Royal Westminster Ophthalmic.—2 P.M.: Central London Ophthalmic; Charing Cross; Hospital for Diseases of the Throat; Hospital for Women; London; University.—2.30 P.M.: Chelsea Hospital for Women; North-West London.

FRIDAY.....9 A.M.: Metropolitan; St. Mary's (Ophthalmic Department).—10 A.M.: Royal London Ophthalmic.—10.30 A.M.: Royal Free (Ophthalmic Department).—1.15 P.M.: St. George's (Ophthalmic Department).—1.30 P.M.: Guy's; Royal Westminster Ophthalmic.—2 P.M.: Central London Ophthalmic; East London Hospital for Children; King's College; London; St. Thomas's (Ophthalmic Department).—2.30 P.M.: West London.

SATURDAY.....9 A.M.: Royal Free (Department for Diseases of Women).—10 A.M.: Royal London Ophthalmic.—1 P.M.: King's College.—1.30 P.M.: Royal Westminster Ophthalmic; St. Bartholomew's; St. Thomas's.—2 P.M.: Cancer Hospital, Brompton; Central London Ophthalmic; Charing Cross; London; Middlesex; Royal Free; University.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 1.30; Skin, M. 1.30; Dental, M. W. F., 9.

CHELSEA HOSPITAL FOR WOMEN.—M. Tu. W. and F., 1.30.

GREAT NORTHERN CENTRAL.—Medical and Surgical, M. Tu. Th. F., 2.30; Obstetric, W., 2.30; Eye, Tu. F., 10; Ear, M. F., 2.30; Diseases of the Skin, W., 2.30; Diseases of the Throat, Th., 2.30; Dental Cases, W., 2.

GUY'S.—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F. 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu. 1; Skin, Tu., 1; Dental, Tu. Th. F., 1.30.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th. S., 1.30; o.p., W. F., 1.30; Eye, M. Th., 1.30; Ophthalmic Department, W., 2; Ear, Th., 2; Skin, F., 1.30; Throat, F., 1.30; Dental, M. Th., 9.30.

LONDON.—Medical, daily, exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p. W. S., 1.30; Eye, Tu. S., 9; Ear, S., 9.30; Skin, Th., 9; Dental, Tu..9.

MIDDLESEX.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 9.30; o.p., W. 1.30; Eye, W. S., 9; Ear and Throat, Tu., 9; Skin, Tu., 4, Th. 9.30; Dental, M. W. F., 9.30.

NATIONAL ORTHOPÆDIC.—M. Tu. Th. F., 2.

NORTH-WEST LONDON.—Medical and Surgical, daily, 2; Obstetric, W., 2; Eye, W., 9; Skin, Tu., 2; Dental, F. 9.

ROYAL ORTHOPÆDIC.—Daily, 1.

ROYAL FREE.—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Dental, Th. 9.

ST. BARTHOLOMEW'S.—Medical and Surgical daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, W. Th. S., 2.30; Ear, Tu. F., 2; Skin, F., 1.30; Larynx, F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9.

ST. GEORGE'S.—Medical and Surgical, M. T. F. S., 12; Obstetric, Th. 2; o.p., Eye, W. S. 2; Ear, Tu., 2; Skin, W., 2; Throat, Th., 2; Orthopædic, W., 2; Dental, Tu., S., 9.

ST. MARK'S HOSPITAL.—Fistula and Diseases of Rectum, males, W., 8.45; females, Th., 8.45.

ST. MARY'S.—Medical and Surgical, daily, 1.45, o.p., 1.30; Obstetric, Tu. F., 1.45; Eye, Tu. F. S., 9; Ear, M. Th., 3; Orthopædic, W., 10; Throat, Tu. F., 1.30; Skin, M. Th., 9.30; Electro-therapeutics, Tu. F., 2; Dental, W. S., 9.30; Consultations, M., 2.30; Operations, Tu., 1.30; Ophthalmic Operations, F., 9.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, Tu. F., 2; o.p., W., 1.30; Eye, M. Tu. W. Th., F, 1.30; o.p., daily, except Sat., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Tu. F., 1.30; Children, S., 1.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1.30; Obstetrics, M. Th., 1.30; Tu., W. F., 2; Eye, Tu. F., 2; Ear, M. F., 9; Skin, W., 1.45, S., 9.15; Throat, Th., 1.30; Dental, W., 9.30.

WESTMINSTER.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1; Eye, M. Th., 2.30; Ear, M., 9; Skin, W., 1; Dental, W. S., 9.15.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the office of the JOURNAL, and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

ANSWERS.

VIVISECTION.—The necessary documents could probably be obtained from Dr. G. V. Poore, 30, Wimpole Street, Assistant Inspector of Vivisections.

Dr. MACDONALD, Brora.—Inquiry should be addressed to the Registrar of the Branch Council for Scotland, J. Robertson, Esq., 1, George Square, Edinburgh.

T. H. W.—Wrapping paper, machine cut, for the different sizes of bottles, can be obtained from Cooper, 9, Coleman Street, E.C.; Lockwood and Co., 168, St. John Street, E.C.; and probably also of Maw Son and Thompson, Silverlock, and others. It is difficult to give the exact sizes, as the paper is folded different ways by different people.

ST. MUNGO'S COLLEGE.

DR. STUART NAIRNE, DR. MIDDLETON, AND OTHERS.—We have endeavoured to place before our readers both sides of the question at issue as they have been represented to us by competent though antagonistic authorities. It appears inexpedient to pursue the matter further at present.

HERPES ZOSTER.

DR. HINGSTON FOX (23, Finsbury Square, E.C.) writes: Careful dressing with ung. zinci or calaminæ generally answers well in herpes zoster. In a severe case, a powder composed of zinci oxid. one part, creta præp. three parts, well dusted on at night, proved very comforting.

SURGEON DENHAM FRANKLIN, F.R.C.S.Edin., Medical Staff (Dover) writes: I would recommend "Shingles" to try the effect of a paste composed of zinc oxide and limewater. The part should then be covered over with cotton-wool, kept on by means of a flannel bandage, as recommended by Erasmus Wilson. Should much pain accompany the attack I have found that instantaneous relief is procured by the application of a 5 per cent. solution of cocaine. The effect is only temporary, but the application can be repeated.

E. M. SYMPSON, M.B. (Lincoln) writes: In answer to "Shingles," the best local application to the vesicles in herpes zoster is flexile collodion. This quickly shrivels them up, and I fancy prevents the appearance of any where it has been painted on. I feel sure he will not be disappointed with it.

DR. C. R. ILLINGWORTH (Accrington) writes: I have found the following ointment answer well in all herpetic eruptions: Zinc ointment, six drachms; glycerine of borax, two drachms; pure carbolic acid, half a drachm; mix, and apply frequently. In herpes labialis, due to catarrh and respiratory disorders, I omit the carbolic acid, and thus get a bland, enamel-like ointment, of great service in any inflammatory or ulcerative skin affection, eczema, pruritus ani, acne rosacea, etc.

HEREDITARY ALCOHOLISM.

IN reply to several correspondents we beg to state that M. Paul Sollier's Aubanel Prize Essay, entitled "The Rôle of Heredity in Alcoholism," which was referred to in a leading article in the JOURNAL of August 31st, is published by MM. Lecrosnier et Babé, Place de l'École de Médecine, Paris. It can also be obtained from the office of the *Progrès Médical*, 14, Rue des Carmes, Paris. The price is, we believe, three or four francs. So far as we are aware, the work has not been translated into English.

LIQUOR POTASSÆ IN THE TREATMENT OF GALL-STONES.

G.E.C.—At a meeting of the Cambridge Medical Society, a report of which appeared in the JOURNAL of May 11th, 1889, p. 1062, Mr. Treadgold related several cases of gall-stones in which he had used liquor potassæ with success.

PILOCARPINE IN THE TREATMENT OF DEAFNESS.

M.R.C.S.—Mr. Field's paper, giving details of eighteen cases of labyrinthine deafness treated with pilocarpine, was published in the JOURNAL of March 2nd, 1889, p. 471. Dr. Barr, of Glasgow, dealt with the same subject in the JOURNAL of June 13th, 1885, p. 1192.

QUININE IN PREGNANCY.

DR. LEONARD G. PETERS (Salford) writes: In reply to "A Member's" inquiry respecting the safety of continuing to use quinine in the case he mentions, I think the following case, together with my remarks last week, will help to relieve his anxiety:

E. P. had had four pregnancies previous to taking the quinine during preg

nancy; the first child was premature and delicate from birth, and only lived one month; the second and third only lived two days, also weakly from birth, and the other pregnancy ended in abortion. During the fifth and two subsequent pregnancies she took quinine more or less freely, chiefly for the vomiting, which it controlled satisfactorily, and each of the children born after taking quinine is still alive. She is now *enceinte* again, and has consulted me as to the advisability of taking quinine—although not this time needed for the vomiting—because she attributes the life of her three children to the circumstance of having taken quinine during those particular pregnancies.

I think "A Member" will find one-grain doses sufficient if his is a suitable case for the drug. I find it most beneficial in those cases which appear to be connected with neuralgic and other nervous conditions.

Duration of Constipation.

Dr. George Foy (Dublin) writes: A. M. R. will find some interesting cases of Constipation in Dr. James O'Beirne's book, *New Views of the Process of Defecation*, published in Dublin in 1833, by Hodges and Smith. Pages 74 to 87 are occupied with the history of the case of a girl, aged 19, who "had not had a stool of any kind, or passed even flatus *per anum*, since early in the preceding December, a period of nearly six months."

Books on Anatomy.

T.F.—For the London and Cambridge honours examinations it is usual to recommend Quain, supplemented by Gegenbaur's *Comparative Anatomy*, or the second volume of Balfour's *Embryology*. It is understood that in a few days Professor Macalister, of Cambridge, will have his book on anatomy out, and the work is, we believe, especially intended to meet the requirements of candidates for honours. A new edition of Quain has been talked of for some time.

NOTES, LETTERS, ETC.

Unqualified Assistants.

Another Sine Diploma writes: "A Member," who wrote to the Journal of September 14th, brings the most outrageous charges against the "unqualified assistant," namely, "drunkenness, dishonesty, incapacity for diagnosis, and incompetency for prescribing." If these charges were true the unqualified assistant could not exist, simply because no medical man would employ him. But the mere fact that the unqualified assistant does exist, and often is preferred to the "newly-fledged" man by medical men of standing, is a complete refutation of "A Member's" charges as applied to that class.

I am speaking for those who have gone through the curriculum and worked honestly, and not for those who stepped from behind a counter to the post of "unqualified assistant," and for those first who are *sans diplôme* through no real fault of their own. I think something should be done at least to raise their status; but possibly that something should take shape and form within their own ranks.

M.B. writes: "A Member," writing on this subject, is quite just and well within the mark in his condemnation of those who impose upon the "unthinking public" the service of unqualified assistants. I would go further, and ask how it is that an unqualified assistant can be *de facto* public vaccinator and poor-law officer, the legally appointed officer simply signing his name to the other's work? And in the particular instance of which I have knowledge the latter gentleman has been found (some years ago now) "professionally incapable" by a board of examiners.

COMMUNICATIONS, LETTERS, etc., have been received from:

Mr. G. Christopher, London; Messrs. Sampson Low and Co., London; Dr. More Madden, Dublin; Dr. J. M. Bruce, London; Mr. E. Whittingham, Bournemouth; Mr. Page, London; Dr. A. Hill, Birmingham; Mr. F. St. J. Bullen, Wakefield; Mr. S. Morton, Sheffield; Mr. W. Y. Veitch, Middlesbrough; Messrs. R. Sumner and Co., Liverpool; Mr. D. D. Day, Norwich; Brigade-Surgeon F. W. S. Hodder, Grouville, Jersey; Mr. A. W. Williams, Ravensthorpe; Messrs. R. Hogg and Son, London; Mr. H. K. Lewis, London; Mr. J. W. Hopkins, Snettisham Grange; Our Swiss Correspondent; Mr. W. B. Hemsley, London; Messrs. Maw, Son, and Thompson, London; Dr. W. Pearce, London; Dr. G. A. Stockwell, Detroit; Mr. R. N. Ingle, Cambridge; Mr. J. Furley, London; Mr. J. Falconer, Dublin; Dr. L. Cane, Peterborough; Mr. F. P. H. Hughes, Weston-super-Mare; Messrs. Williams and Norgate, London; Mr. G. H. Wilkins, London; Mr. F. J. Rebman, London; Mr. M. W. Kerin, Cork; Dr. D. A. Fraser, Totnes; Dr. Ilott, Bromley; Dr. Robert Maguire, London; Professor Gairdner, Glasgow; Mr. J. K. Frost, Looe R.S.O.; Mr. S. Geary, Dartford; Mr. W. B. Nisbet, Townsville, New Zealand; Dr. J. Reid, Melbourne; M.S.; Mr. D. Franklin, Dover; Mr. P. F. Moline, London; Dr. H. Smith, London; Mr. A. F. Wilson, London; Mr. T. H. Williams, Oswestry; G. H. R. Holden, M.B., London; Dr. J. A. da Gama, Bombay; Dr. P. T. Duncan, Croydon; Dr. C. E. Shaw, Belfast; Mr. Bland Sutton, London; Mr. T. H. Bartleet, Birmingham; Mr. A. S. Roe, Eccles; Our Egyptian Correspondent; Dr. A. B. Harris, Falmouth; Mr. J. Binks, Wakefield; Dr. D. N. Knox, Glasgow; Mr. J. Evans, Beaufort; Dr. MacGregor, Wellington, New Zealand; Mr. W. Towers-Smith, London; Mr. W. Deeble, Netley; Messrs. Corbyn, Stacey, and Co., London; Dr. R. H. Fox, London; Dr. J. Cargill, Kingstown, Jamaica; Dr. A. Foxwell, Birmingham; Dr. T. Fielding, Milton Abbas; Dr. J. W. Hayward, Liverpool; Mr. E. Duke, St. Leonard's-on-Sea; Dr. G. C. Kingsbury, Blackpool; Mr. J. A. Goodchild, London; The President of the Royal College of Physicians, London; Dr. Norman Kerr, London; Mr. J. J. Hicks, London; Mr. D. Grove, Berlin; Sir William Moore, London; Dr. A. MacDougall, Girvan; Mr. C. B. Lockwood, London; Dr. O. Wood, London; Dr. Rentoul, Liverpool; Jeyes' Sanitary Compounds Company, London; Dr. L. H. Ormsby, Dublin; Mr. F. W. Dingle, Bath; Messrs. C. Griffin and Co., London; Mr. G. S. Bigg, Dover; Dr. F. Barnes, London; Mr. W. L. Morgan, Oxford; Mr. E. Hartley, London; Mr. S. B. Nason, Pontypool; Sir W. B. Dalby, London; Mr. J. G. G. Corkhill, Southport; Dr. C. B. Taylor, Nottingham; Mr. W. M. Marsh, Bristol; Dr. J. M. Booth, Aberdeen; Mr. J. W. K. Goodall, Chelmsford; Mr. S. G. Denton, London; Dr. D. Buxton, London; Dr. S. Coupland, London; Mr. S. Haynes, Malvern; Dr. Norman Kerr, London; Dr. Lewers, London; Mr. R. W. Lloyd, London; Mr. J. G. Adami, Cambridge; Our Manchester Correspondent; Mr. A. H. Butcher, Birkenhead; Dr. B. Fenwick, London; Dr. C. E. Paget, Salford; Mr. W. W. Wagstaffe, Sevenoaks; Dr. A. Wylie, London; Mr. F. White, Coventry; Mr. T. Jenner Verrall, Brighton; Mr. C. E. Abbott, Braintree; Mr. J. MacLean, Ramsbottom; Dr. Sykes, Mexborough; Mr. A. D. Moffatt, Glasgow; Dr. Woodhead, Edinburgh; Mr. A. G. Bateman, London; Our Birmingham Correspondent; Dr. Macdonald, Brora; Dr. Cullimore, London; Dr. Kesteven, London; Mr. G. E. Coleman, Hemsworth; Dr. D. A. Fraser, Totnes; Mr. S. A. Bontor, Barnes; Mr. C. S. Redmond, Gateshead-on-Tyne; Mr. E. J. R. MacMahon, Cheltenham; Mr. J. M. Bryan, Northampton; Dr. G. Foy, Dublin; The Clerk of the County Asylum, Fareham; Mr. R. R. Sleman, London; Mr. J. West, London; Dr. E. Berdoe, London; Mr. L. G. Peters, Salford; F. C. Wallis, M.B., London; Mr. J. Brereton, Gildersome; Dr. J. Crabb, London; The Dean of the Medical Faculty of the University of Aberdeen; B.A., M.B.Cantab.; Mr. E. C. 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Balfe, Dundee; Mr. A. de C. Scanlan, Dover; Mr. Adams Frost, London; Mr. Lawson Tait, Birmingham; The Dean of St. George's Hospital Medical School, London; etc.

BOOKS, ETC., RECEIVED.

Lectures on Obstetric Nursing. By Theophilus Parvin, M.D. Philadelphia: P. Blakiston, Son, and Co. 1889.

The Animal Alkaloids. By A. M. Brown, M.D. Second Edition. London: Hirschfeld Bros. 1889.

Native Stories, Myths, and Phantasies. By Young Pan. London: Hamilton Adams and Co.

London Ancient and Modern. By G. V. Poore, M.D., L.R.C.P. London: Cassell and Co., Limited. 1889.

A Treatise on Gout. By Sir Dyce Duckworth, M.D.Edin. London: Charles Griffin and Co. 1889.

Watts's Dictionary of Chemistry. By M. M. Pattison Muir, M.A., and H. F. Morley, M.A., D.Sc. In four vols. Vol. II. London: Longmans, Green, and Co. 1889.

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A DISCUSSION
ON THE
TREATMENT OF CANCER OF THE RECTUM.

In the Section of Surgery at the Annual Meeting of the British Medical Association, held in Leeds, August, 1889.

I.—This discussion was opened by the President of the Section (Mr. T. R. JESSOP), who delivered the address published in the JOURNAL on August 24th, p. 405.

II.—F. MARSH, F.R.C.S.,
Surgeon, Queen's Hospital, Birmingham.

MR. MARSH advocated a preliminary colotomy or colectomy in all cases in which proctectomy was undertaken, and in support of this view he exhibited a patient upon whom he had performed colotomy, after Madelung's method, as a preliminary to complete excision of the lower four inches of the rectum. The patient, a man aged 29, was admitted into the Queen's Hospital, February 20th, 1889. Carcinoma of the rectum had been diagnosed seven months previously in Chicago, and for some months prior to this he had been treated for piles. On admission, a large excavated carcinoma, involving the lower three inches and a half of the rectum posteriorly, but a smaller extent of the anterior wall, was found on digital examination. The tip of the middle finger could just reach healthy bowel, and the growth itself was to some extent movable on surrounding parts. As the patient placed himself unreservedly in his hands, Mr. Marsh decided to perform Madelung's operation as a preliminary. This was done on March 1st, and an account of this appeared in the JOURNAL of April 20th, 1889, p. 893. The patient was up on the tenth day. On March 21st, proctectomy was performed. An oval incision was made round the anus, and deeply down to the coccyx; the rectum was rapidly detached with scissors; and a large cavity was left, bounded in front by the prostate and bladder, behind by the sacrum, and above by the peritoneum, which was not opened. The hæmorrhage was free, but entirely controlled by pressure, no vessel requiring ligature. In a week the cavity was lined with healthy granulations; it rapidly contracted, no complications occurred, and on May 20th the patient was discharged, a small sinus only remaining. At the time of speaking, the patient was perfectly well; the wound was almost absolutely closed; he had control over his motions, which were passed once a day. The artificial anus was no trouble to him. He had gained over 20 lbs. in weight, and hoped in a week or two to follow his occupation of cab driving.

III.—W. MITCHELL BANKS, F.R.C.S.
Surgeon, Liverpool Royal Infirmary.

I FEEL it a great privilege that chance has permitted me to speak thus early in this discussion, because I have thus the opportunity of thanking Mr. Jessop for his valuable contribution to surgical literature. In his paper he has shown us that he has a complete command over his mother tongue, that he is a surgical observer of long experience, and that he is an authority upon the subject of which he has treated. In the name of the meeting I beg to congratulate him upon the success which he has achieved. With regard to the relative advantages of inguinal and lumbar colotomy, I am not in a position to offer any good opinion, because I have only practised the latter operation. A rather strong point is made of the superior advantages of the groin as a site for an anus over the loin. I think these are rather imaginary, and that the patient can keep himself clean as easily with the lumbar as with the inguinal orifice. All the real miseries of the artificial anus are just as bad in one place as another. The real point lies in the difficulty of performance of the two operations. In some instances I have found some trouble in finding the colon; and in one, owing to an abnormal position of the gut, I was quite unable to find it. Great assistance can always be derived from inflating the bowel with air with an ordinary Higginson's syringe. The least little distension of the colon serves to indicate its position with certainty. A very great improvement over the usual plan of merely opening the colon laterally, and stitching the lateral orifice to the wound, consists in cutting the bowel clean across and fixing the upper end. The lower end, being tied across with catgut, is simply left in position. With the old proceeding fæces got down below the orifice, and so irritated the malignant disease, but with this they are all discharged. I did this operation first about fifteen months ago. The patient is still alive, and it is impossible to imagine a better anus without attempt at prolapse. I have also done it twice recently, but it is too soon yet to pronounce upon the cases. I cannot but think that the complete division of the bowel as a preliminary to proctectomy subsequently is a step in the right direction, and I have seen with great satisfaction the case exhibited by Mr. Marsh. Finally, I would venture to protest against the too indiscriminate use of colotomy. That it prolongs life and relieves suffering in some cases I admit, but there are others where the prolongation of life is but short, and where the patient continues to live on in a most miserable plight and in great suffering. Unless there are special circumstances to warrant it, I do not think we are doing the kindest thing to a patient to prolong for a short time a life of agony.

IV.—W. HARRISON CRIPPS, F.R.C.S.,
Assistant-Surgeon to St. Bartholomew's Hospital.

A RECORD OF SEVENTY CASES TREATED BY OPERATION.

EXCISION and colotomy cannot be regarded as in any way rival methods of treatment. In a large number of instances excision is quite impracticable, and it is in such cases that the question of colotomy arises. I therefore propose to discuss the two methods separately.

Treatment by Excision.—The following are the chief points which require consideration: 1, class of case suitable for operation; 2, the immediate risk to life involved; 3, the amount of benefit to be expected; 4, the best method of operating.

Selection of Cases.—It requires much care to select cases of malignant rectal disease in which benefit is likely to result from its removal. Unfortunately, suitable cases are remarkably rare, for the symptoms are often overlooked or neglected until the disease has assumed uncontrollable proportions, or it may be that even from the first it is situated too high to admit of effectual operative interference. I do not think that it will be found that it is in more than 15 or 20 per cent. of all cases of rectal cancer that excision is practicable.

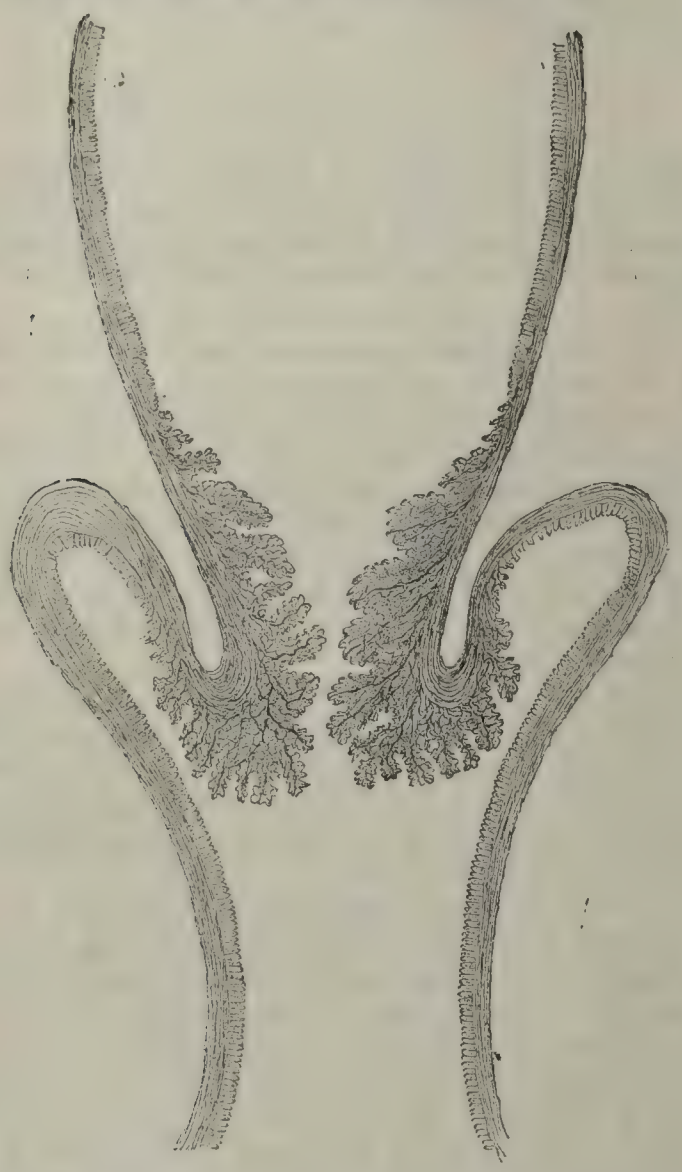
In selecting cases both constitutional and local conditions have to be considered. The age of the patient, the general strength, and the state of the urine materially influence the decision, for an operation, which in a middle-aged and comparatively healthy patient is one of small risk, becomes extremely hazardous in the aged and feeble. The abdomen, too, must be carefully examined to ascertain, if possible, that the abdominal viscera and lumbar glands are free from implication.

If the constitutional conditions appear favourable, the position and attachment of the growth itself next come under consideration. No operation should be undertaken unless there is a reasonable prospect of being able to make a thorough removal of the whole disease. Under ordinary circumstances the finger can explore to a distance of from four to five inches from the anus. If the finger can pass sufficiently beyond the disease to feel a healthy mucous membrane, so far as the height is concerned a satisfactory removal is possible. The next point to ascertain is whether the disease is still confined to the rectum or has passed beyond it into the surrounding tissues. If the ischio-rectal fossæ be invaded, or the lower part of the vaginal septum be implicated, an operation is not necessarily prevented, for in both these situations a thorough removal of the disease is practicable. If, however, the bladder, prostate, uterus, or upper part of the vaginal septum be involved, it is practically impossible to make an efficient removal, and no operation should be undertaken.

It will be not infrequently found that the vaginal septum is implicated, and it is a difficult question to decide the extent of implication which would forbid an operation. If it be the lower half only, the vaginal wall, together with the rectum, can be removed. Indeed, in one of my cases where this was necessary the woman did remarkably well, and at present there has been no recurrence (nearly two years). On the other hand, if the disease has spread into the upper part of the septum, the operation becomes very difficult and hazardous, for the peritoneal membrane of Douglas's pouch is nearly sure to be drawn down and involved in the disease.

It can be generally ascertained by digital examination whether the growth is still confined to the bowel, or whether it has invaded the surrounding parts. In the former case the bowel will still be fairly mobile, while in the latter it is rigidly fixed and cannot be moved by the finger.

I may here refer to a curious condition not infrequently met with. On a hasty examination it may appear as if the disease were confined to the anterior or posterior wall only, while in reality it surrounds the bowel. The mistake arises from the tendency for that portion of the bowel in which the disease is situated to become invaginated from constant straining, so that there is a deep *cul-de-sac* of healthy bowel all round the growth. The finger passed into this *cul-de-sac* feels the growth lying in front or behind, as the case may be. Of course, with a little further examination the condition of things can be ascertained, and the orifice of the intussuscepted bowel, with the disease surrounding it, can be felt not unlike an os uteri projecting downwards into the bowel cavity. (See accompanying figure.)



It must be borne in mind that in these cases of invagination the origin of the disease is much higher up the bowel than would be supposed from the examination, and it is not improbable that a considerable fold of peritoneum has been drawn down by the growth in its descent. Should there be any doubt as to the height to which the disease extends, a second examination under an anæsthetic is advisable before deciding absolutely the question of an operation.

Risk to Life involved in the Operation.—The difficulty of ascertaining the risk to life in operations of an exceptional nature is notorious—

> The evil that men do lives after them,
> The good is oft interred with their bones

but where, as in surgical cases, the operators are usually their own chroniclers success is apt to survive in history, failure to pass into oblivion with the bones it consigns to decay.

One of the largest tables of collected cases is that published by Kelsey,[1] of New York. Out of 140 cases there collected 22 died, as the direct result of the operation, giving a mortality of rather less than 16 per cent. This death-rate is undoubtedly high, the majority of deaths being due to peritonitis or cellulitis. In many of these cases the peritoneum or other important organs had been wounded, while in others the bowel had been drawn down and stitched to the skin. The danger of opening the peritoneum would of course be much reduced by a more careful selection of cases. It cannot, however, always be avoided, and I find that it occurred four times in my operations.

I consider that the risks of both peritonitis and cellulitis are greatly increased by the practice of drawing down and stitching the cut end of the bowel to the margin, for, owing to much bruised tissue, many ligatures, and the inevitable tension on the gut, primary union is most unlikely to occur. Until the stitches give way, matter and *débris* are pent up behind, and, decomposing, form a starting-point for cellulitis and peritonitis.

That a lower rate of mortality can be obtained by a more careful selection of cases, and greater care in the after-treatment, is certain.

My own operations for excision of the rectum are 30 in number, in patients varying from 27 to 76 years of age. Of these 28 recovered, 2 died, giving a mortality of rather less than 7 per cent. One of my patients, a woman aged 59, died of erysipelas on the twelfth day, the other, an old man of 76, died from exhaustion on the twenty-third day. The operation must of course always be one of some danger, but, by the careful selection of cases on the lines already laid down, this is not great, and, considering the nature of the disease and the inevitable death which must follow when left alone, the risk is well worth incurring.

Probable Amount of Life to be Gained by the Operation.—The accompanying table gives the subsequent history of my 28 cases which recovered:—

Subsequent History of Cases that Recovered.

6	No reliable subsequent history.
10	Recurrence took place within one year.
4	Recurrence took place between first and third year.
1	Died without recurrence a year after operation.
1	No recurrence after eighteen months; not seen since.
6	No recurrence up to present date (1 after three months; 2 after nearly two
—	years; 1 after three years; 1 after four years, probably eight years; 1
28	after nine years).

The results cannot be said to be brilliant, but when we consider the character of the disease, and know by experience that no other form of treatment hitherto adopted affords the slightest hope of cure, they are by no means discouraging. Taking my own experience, together with that recorded in the practice of others, I think we have good ground for believing that from 10 to 15 per cent. of cases operated upon for rectal cancer will be cured, a percentage which compares not unfavourably with the results obtained by operations for malignant disease in other parts of the body. Moreover, should the operation fail to cure it offers a chance of prolonging life, and, at least, for a while, in comparative comfort.

One of the most distressing symptoms of rectal cancer, especially when situated low down near the anus, is the pain it occasions. Complete freedom from pain is the first and most marked result of the operation, and the patient will often state on the following morning that a better night has been passed than for months previously.

If the disease returns there appears to be less local pain than that caused by the original growth, a fact probably accounted for by the destruction of the peripheral nerve filaments at the site of the operation.

The possibility of incontinence cannot be urged as a drawback to the operation, for, if the cancer be allowed to remain untouched, this is nearly sure to become a complication. Moreover, if care be taken to prevent contraction during the healing process the patient acquires nearly perfect control over the bowel, unless there be much diarrhœa or looseness.

The Best Method of Operating.—Time does not admit of going very fully into the plan employed, but the following description will serve to draw attention to the chief points of the operation and subsequent treatment:—

The patient is prepared by a table-spoonful of castor oil, administered not less than twenty-four hours previously, a hot bath the night before, and a warm water enema two hours before the operation. An anæsthetic being administered, the patient is arranged in the lithotomy position by Clover's crutch, the buttocks being well raised by means of a hard square pad beneath the sacrum. A strong sharp-pointed curved bistoury, guided by the finger or the speculum, is passed up the bowel, and then, by transfixion, is made to protrude through the skin on a level with the side of the coccyx, the whole of the intervening tissues, from

[1] *New York Medical Journal*, December, 1880.

this point to the anal margin, being cut through. If the incision be made with a clean sweep, and as near as possible in the middle line, the hæmorrhage will not be great, and can be restrained by the pressure of a sponge. A crescentic incision is now made, extending from the margin of the first cut to a point in the middle line in front. This cut should be made boldly, and of a sufficient depth to extend well into the fat of the ischio-rectal fossa. If the disease is not too low down it should be made through the mucous membrane, so as not to interfere with the skin of the anal margin.

The forefinger thrust into this incision will readily separate the bowel from the surrounding tissue, except at the insertion of the levator ani, which should be divided with scissors. A piece of sponge thrust firmly into this cut, and held by an assistant, restrains any bleeding, while the opposite side is treated in a similar manner. The bleeding vessels should now be clamped on both sides. The anterior wall next requires to be separated by a careful dissection—a process which is much facilitated in the male by a full-sized sound in the bladder. When the dissection has been carried to a sufficient distance beyond the disease, the bowel is drawn down with a moderate amount of force by vulsellum forceps.

In my earlier operations I used the wire *écraseur* for cutting off the partially detached bowel. This always took time, and not infrequently, owing to a slipping of the wire, the section was made too close to the disease for safety, nor did it always succeed in preventing troublesome hæmorrhage. I have now discarded the *écraseur*, cutting off the bowel with strong curved scissors, clamping all vessels as divided. I consider this a great improvement in the operation; it saves much time at a critical period, ensures the excision being sufficiently free of the disease, and allows the bleeding to be dealt with in detail.

At this period in the operation it is not always possible to avoid opening the peritoneum. This accident has occurred to me four times. In three I was enabled, after carefully washing out the blood-clot, to bring the cut edges of the membrane together by fine sutures; in the fourth case this was not practicable, but by careful and frequent cleansing of the wound no harm resulted.

Any attempt to draw down the cut edges of the bowel and stitch it to the anal margin, I believe, is a grave mistake; it prevents free discharge from the wound by forming spaces in which matter may collect and decompose. For the same reason I employ no plugs or internal dressing, except for the first thirty-six hours to restrain oozing. A piece of india-rubber tubing, five or six inches long, with a few holes at the end, is passed a little distance up the divided bowel. A square piece of lint, smeared with eucalyptus ointment, with a hole in the middle to let the tube through, is pressed gently well into the wound, and then the space between it and the tube is gently plugged round with iodoform wool, and the whole secured by a T bandage. The tube allows wind and blood to escape.

Thirty-six hours after the operation the cotton-wool plug is removed, leaving the lint still in contact with the wound. This is gently syringed with a little weak carbolic lotion. Twenty-four hours later the lint, which will be then found to be loosened, will come away with syringing. I generally put in no fresh dressing, but have the wound gently syringed every eight hours, then dried with absorbent wool, and powdered with iodoform.

As the wound heals, the most important thing to guard against its contraction. If neglected, this will lead to the most intractable stricture. If, at the time of the operation, it has been found possible to leave a strip of healthy mucous membrane extending down to the anus, the contraction will be far more manageable than if the whole circumference has been removed. I have hardly ever noticed the contraction commence before the third week, and often not till much later. When once started it is very rapid in its progress.

The wound should be examined every day after a fortnight, and at once, on contraction being noticed, a full-sized conical bougie should be passed daily, and left in some three or four hours. If this plan be adopted, it will be found that by the time the wound is completely healed there will be no undue stricture. As a precautionary measure, however, patients should for at least a twelvemonth pass a conical bougie for themselves on alternate evenings.

Treatment by Colotomy.—This is best considered under two headings: 1, the advantages of the operation; 2, the method of performing it.

In a large number of instances the excision of the cancerous bowel is quite impracticable, and it is in these cases that the question of colotomy arises. The advantages of the operation lie, partly in the relief it affords to symptoms and partly in its influence on the growth of the cancer. In a large majority of cases malignant disease sooner or later leads to stricture of the bowel. The symptoms thus produced are very characteristic, and often cause the greatest misery; they are at first those of constipation, but they soon pass into what the patient describes as diarrhœa. The sufferer is troubled with constant calls to the closet. What is passed at such times is not a true motion, but rather a grumous mucoid discharge stained with blood and fæcal colouring matter. The discharge arises from the accumulation of fæces in the dilated bowel above the stricture, and what comes away is chiefly the overflow from this mass, mixed with blood and mucus from the irritated bowel. As time advances the trouble increases, the anus becomes raw and excoriated, and the patient is tormented with tenesmus, the abdomen gradually becomes swollen and tympanitic, the signs of complete obstruction increase, and death may occur with fæcal vomiting, or not infrequently from acute peritonitis, the result of perforation of the intestine.

Colotomy completely relieves all symptoms arising from a contracted state of the bowel, while it serves as a permanent safety-valve against the risk of complete obstruction. With many opportunities of watching cases of malignant disease of the rectum, in some of which colotomy had been undertaken and in others where Nature had been allowed to run her course, I have no hesitation in saying that the relief obtained and the suffering avoided are unmistakable, and leave me in no doubt of the benefit of the operation.

The influence of colotomy in retarding the growth is a debateable question; my own impression, however, is that the progress of the growth becomes decidedly slower after the operation. This, too, is what might be expected, for, on the disuse of a part, the blood supply diminishes, and it is a matter of common observation that the more vascular an organ the more rapidly does malignant disease advance.

The selection of the time for performing colotomy is a matter of some importance, and I agree with Mr. Reeves that it should be performed without delay, at least, as soon as there are any symptoms of stricture. If deferred the patient not only loses the advantages of the operation, but it may eventually have to be performed under the most dangerous and unfavourable circumstances.

Colotomy, when performed before there are any signs of complete obstruction, is an operation of expediency rather than of necessity. The immediate risk to life involved therefore requires careful consideration. Amongst the most recent statistics of the operation are those by Erckelen and Mr. Bryant. The former records 110 cases of colotomy for cancer; 42 of these died, giving a mortality of about 38 per cent. Mr. Bryant records, in his valuable contribution on the subject, 60 cases in which he had operated with 26 deaths, a mortality of 43 per cent. From those tables the death-rate appears to be so high as scarcely to justify the operation. A further analysis of Mr. Bryant's cases throws much light on the cause of this terribly high death-rate, which he attributes, not so much to any inherent danger in the operation as to the delay in its performance. This explanation is undoubtedly, to a great extent, correct, and if the mortality mentioned really represented what might be expected from the operation when performed as a palliative treatment for rectal cancer it would be sufficient to condemn the operation save in exceptional circumstances.

Fortunately the operation, when conducted on the most recent principles and not deferred till the patient is nearly moribund, has no risk the least approaching to the above, and in confirmation of this statement I venture to give my own cases, which include every instance in which I have performed colotomy for malignant disease. The numbers are not large, for it is only during the last few years that I have realised the value of the operation, nevertheless they are sufficient to show how little danger it involves.

The number of my operations is 40, with a single death, a mortality of only $2\frac{1}{2}$ per cent.

Analysis of 40 Cases (Lumbar 14, Inguinal 26) of Colotomy for Cancer.[2]—Lumbar, 14 recovered, 0 died; inguinal, 25 recovered, 1 died—cause of death, bowel fell back into abdominal cavity; fæcal extravasation and peritonitis. Obstruction—partial, 37; complete, 3. Time of opening the bowel: Lumbar, at once, 14 cases; inguinal, at once, 2 cases; inguinal, second day, 5 cases; inguinal, third day, 4 cases; inguinal, fourth day, 4 cases; inguinal, fifth day, 3 cases; inguinal, sixth day, 8 cases. Ages of patients: Under 20 years, 2 cases; under 30 years, 0 cases; under 40 years, 7 cases;

[2] For full details of 36 of the above cases see JOURNAL, April 6th, 1889.

under 50 years, 6 cases; under 60 years, 18 cases; under 70 years, 6 cases; under 80 years, 1 case.

Method of Operating.—The operator has the choice of two methods, the one the extra-peritoneal or lumbar operation, the other the intra-peritoneal or inguinal operation. Of these, I consider the inguinal to be far the better of the two for the following reasons.

1. The room in front in which the operator has to work is practically unlimited, and he is not hampered by working in the narrow space between the last rib and the crest of the ilium, as in lumbar colotomy. The bowel can be exposed by a clean incision; the extensive bruising and laceration of the sub-peritoneal fat, often quite unavoidable when searching for the colon from behind, is thus prevented.

2. It is far easier absolutely to identify the bowel from in front, and it is scarcely possible to make the mistake of opening the small intestine, duodenum, or stomach, which not infrequently happens in the lumbar method.

3. In a fat or muscular patient the bowel can be fixed to the skin with much less tension, partly owing to the mobility of the sigmoid flexure, and partly to the ease with which the skin can be depressed.

4. If the bowel takes an abnormal course, it will scarcely affect the operation, while such a deviation in the lumbar region leads to complete failure.

The chief objection which can be urged against the inguinal operation is that it is unsuitable for urgent cases of complete obstruction, but even if this objection were a valid one it would not apply to the majority of cases, for the operation in rectal cancer is generally undertaken before complete obstruction occurs.

I do not, however, consider the objection is a valid one, for although it is probably safer to delay opening the bowel for a day or two, until adhesions have formed, there seems to be no special danger, if necessary, in opening it at once. In two of my cases, owing to the symptoms being urgent, I did this, and both patients made an excellent recovery. In these cases the bowel was very carefully stitched to the skin, but on being opened, the wound was immediately swamped by fæculent material. A constant stream of water was kept flowing over the wound, until the distended bowel completely discharged itself. The parts were then carefully washed, and the dressings applied. Further experience is still required as to the danger in inguinal colotomy of thus opening the bowel immediately, and it will be better to suspend definite judgment until further evidence is available for comparison.

Method of Performing Inguinal Colotomy.—I have so recently published a paper[3] on this subject, that I will not again enter into details as to the procedure, but will merely mention that I make my incision rather higher up the abdominal wall than most surgeons. The centre of the incision is a little above an imaginary line drawn from the anterior superior spine to the umbilicus; the incision crosses this line at right angles two inches from the anterior superior spine.

In order to prevent prolapse I draw out as much bowel as will come from the upper angle of the wound, passing it in again at the lower before fixing a portion to the skin.

After colotomy, the amount of discharge from the rectum immediately becomes diminished, and soon loses its fæculent character. If, however, the disease be far advanced, there will still be some purulent discharge from the anus which requires attention. As soon as the colotomy wound has consolidated, the rectum may be washed out once daily by Higginson's syringe with plenty of weak Condy followed by a few syringefuls of boracic acid lotion, ten grains to the ounce. This washing keeps the rectum clean, and gives much comfort. The local trouble which gives most annoyance after colotomy is the formation of an ischio-rectal abscess. This occurred within a few weeks in four of my cases. I doubt, however, whether the operation has anything to do with this formation, but rather attribute it to the local disease in the neighbourhood.

In concluding this communication on the treatment of rectal cancer, I am only too sensible of the difficulties that arise, and how deficient at present is our knowledge of the subject, but still I will venture to say that if surgeons were only allowed to see the cases at an earlier stage, I believe that the numbers cured by excision would be considerably increased, while in the instances in which colotomy is the only resort, to defer the operation until the patient is nearly moribund from exhaustion or complete obstruction is a means of throwing discredit on an otherwise valuable operation.

[3] JOURNAL, April 6th, 1889.

V.—HERBERT ALLINGHAM, F.R.C.S.

Surgeon to the Great Northern Hospital.

IN considering this question, I think it is most important for all practical purposes to divide malignant disease of the rectum into three states: 1, the small annular growth freely movable; 2, a large crater-like mass fixed, and into which the fæces pass, causing great pain and discomfort; 3, a rapidly spreading ulcerative form of cancer, quickly involving the surrounding parts. The first of these is the only condition in which excision ought to be thought of, and, moreover, only when it starts two inches up the rectum, and when the upper limit of the growth can be easily felt. To attempt to excise the rectum when the growth is four inches up the bowel is most unscientific and unsurgical, as it subjects the patient to great risk, and, moreover, it probably only partially removes the growth. If it is not completely removed, the growth is greatly increased in vitality, and returns in a very rapid way. The headings 2 and 3 are the conditions in which colotomy is indicated. For by colotomy the patient is saved great suffering from fæces passing over the growth, the diarrhœa is stopped, and in many cases the growth of the disease is held in restraint. The method in which I excise the rectum is as follows: The patient being in the lithotomy position, the left forefinger is passed into the rectum, and then a straight bistoury is introduced about half an inch behind the posterior part of the rectum, and passed up outside the rectum for about three inches, and then the cut is made down to the coccyx. Next, the rectum is divided in the whole of its circumference between the internal and external sphincters; then pass one blade of straight scissors into the posterior incision, and the other into the ischio-rectal fossa of the one side, and divide all the tissues. Then do the same on the other side. Now, with the first finger in the bowel and the thumb outside it, a careful separation of the anterior part of the rectum can be made without any fear of injuring the urethra. The diseased gut is then best cut away with scissors. The advantages of this mode of operating are that it is very rapidly done. No waiting is necessary to pick up vessels, as it all stops when the rectum is removed. Excision of the rectum is generally supposed to take three-quarters of an hour; but by this little modification of mine, the rectum can easily be removed in a quarter of an hour. With regard to colotomy, inguinal or lumbar are urgently needed in what I have spoken of as the 2 and 3 variety. Inguinal colotomy, in my opinion, is the better operation. But great care must be paid to making a good spur, so as to prevent fæces passing below the inguinal opening and irritating the growth.

VI.—J. WARD COUSINS, M.D., F.R.C.S.

Senior Surgeon, Royal Portsmouth Hospital.

DR. WARD COUSINS said that duration of life after colotomy must be very variable from the stage of the disease in which the operation is performed. Extension of life for twelve months in cancer of the rectum ought to be considered a success. In his experience the longest duration of life after colotomy from malignant disease had been two years. In another case, an old man—still alive—the operation was performed eighteen months ago. A case of syphilitic stricture—still alive five years after lumbar colotomy—informed him recently that she was very comfortable, although little motion now passed through the loin. She declined dilatation, as the opening acted as a safety-valve, and "let off the wind and a little fluid stool." He considered the inguinal an easy operation. The position of the patient was a great advantage, and the intestine could be fully and completely examined. In lumbar colotomy, the limited space and deep character of the wound render the recognition and examination difficult. Lumbar colotomy in fat persons was often a troublesome proceeding. In one case of this description five inches of fat had to be cut through, and the intestine could not be brought to the surface. He saturated the parts with lanoline, and opened the bowel on the third day. A little fæcal matter passed; but after that date the intestine retracted and could not be found. The patient was nevertheless relieved, and refused further treatment. After two months, obstruction returned, and Dr. Ward Cousins performed inguinal colotomy. She was then considerably relieved; but at the end of five months, the opening ceased to discharge the intestinal contents, and from the old lumbar opening suddenly a mass of fæces escaped. He considered the lumbar could be more safely practised in a case of stricture, and also in great tympanitic distension of the abdominal cavity. As a palliative proceeding in malignant disease, he thought that either inguinal or lumbar could be

selected, provided the disease was confined to the lower bowel. When contraction occurred after lumbar colotomy, he found dilatation by pneumatic pressure very valuable with the little instrument he had introduced for that purpose.

VII.—T. VINCENT JACKSON, F.R.C.S.Ed.,

Senior Surgeon, Wolverhampton and Staffordshire General Hospital.

Mr. Vincent Jackson objected to the use of the expression "inguinal colotomy" upon the ground that it was really a misnomer, as the Latin word "inguinalis" meant the groin; as this region was not invaded during the performance of the operation, it was more correct to speak of it as "iliac colotomy," borrowing the name of the region in which the artificial anus was seated. Reference was made to the distressing atresia ani which followed proctectomy, and which, in the opinion of the speaker, should almost invalidate the employment of this operation. Lumbar colotomy was indicated as the preferential operation in cases of acute obstruction, but for all other purposes, such as to relieve pain, and, might be, to retard the growth of the neoplasm by preventing the fæces from passing over the ulcerated surface, iliac colotomy was commended.

VIII.—BENNETT MAY, F.R.C.S.,

Surgeon to the Queen's Hospital, and Professor of Surgery in Queen's College, Birmingham.

My experience of colotomy is that, when the nature of the proposed operation is explained to patients—unless strongly influenced by the surgeon—they commonly either reject it altogether, or defer it till a late stage of the disease, when it is too late to obtain its full possible advantages. Hence a larger number of cases get but a few months of more or less bedridden existence, and the operation gets but scanty credit. This has been less the case, however, with me since I began to practise the inguinal operation in 1885, and since I have formed a higher opinion of the value of the operation as one of expediency as well as urgency; and I now recommend it as a general rule of practice when any notable difficulty exists. Consequently, my inguinal cases—thirteen in number, with one death—show somewhat more favourable results as regards subsequent duration of life than my lumbar operations, twenty-three in number, with five deaths.

My experience of the two operations, lumbar and inguinal, is that inguinal is more certain and easy of execution than lumbar, when the colon is empty and contracted, and the patient rather fat. This is its greatest advantage. On the other hand, moderate obstruction with distension facilitates the lumbar operation, so that I regard the two operations as in some respects complemental to one another; and whilst generally practising the inguinal for cases of expediency, I still prefer the lumbar for cases of moderate distension and meteorism.

In most other respects I think there is but little to choose between them, and I have not been able to form any decided predilection either way. But inguinal seems more liable to excessive contraction on the one hand, or prolapse on the other. I have encountered both conditions. A moderate, or even considerable, degree of prolapse is a decided advantage, however, by effectually acting as a spur, and preventing passage of contents beyond the opening. Whilst largely depending on the length of the mesentery, it is controlled in considerable degree by the size of the opening we make in the parietal peritoneum and the intestine. But I wish to-day to advocate the performance of the inguinal operation at one sitting, as I believe it is quite unnecessary and often most undesirable to postpone the opening of the bowel till a future day. I find that all the advantages, both as regards security from peritonitis and making a good working outlet, can be obtained by proceedings less elaborate than those advocated of late. Indeed, it is obvious, from the conflict of views and remoteness of finality, that they greatly fail of their ideal, which is only to be obtained by complete division of the bowel, as in Madelung's operation; and if a sufficiently satisfactory outlet were only to be obtained by postponement of the opening or by excision of large portions of intestine, I should certainly prefer Madelung's operation for a few selected cases, and return to the lumbar for the others.

In operating I stitch skin, parietal peritoneum, and gut all round in the usual way, and then open the intestine and cut away part (the intestine having been pulled nearly out of the wound), but not all the redundancy. I am at pains to make the opening of a proper size, say 2 inches in the parietal peritoneum and $1\frac{3}{4}$ in the gut. By operating in this way I have not failed of good result, though some of my cases have been full nearly to bursting.

Just a word about colectomy. I once performed this operation on a woman in whom an annular stricture of the descending colon was discovered on abdominal section for ovarian disease. I removed 3 inches of gut with a corresponding portion of mesentery, and closed the gut by about forty sutures, returning it into the belly. She died of peritonitis, and on *post-mortem* examination I found that all the sutures had given away. I think the intestine had been clamped too long and too tightly; and if I ever perform the operation again I should not clamp the bowel at all, or rather I should not attempt to restore the continuity of the gut, but complete by artificial opening. Early as it was, there were already some infected glands in the mesentery, and two considerable cancerous nodules in the liver.

I have reason to think that commonly, when cases of cancer of rectum or colon come under operation, there are already existing secondary deposits, and I think this, more than the surgical difficulties, limits our efforts in the direction of radical cure.

IX.—F. BOWREMAN JESSETT, F.R.C.S.,

Surgeon, Cancer Hospital, Brompton.

Mr. Jessett observed that, in his opinion, there were very few cases in which excision of the rectum was to be recommended. He would in all cases do the double operation, namely, first colotomy, and secondly, in suitable cases, excise the disease. He was very pleased to see inguinal colotomy was taking a firm hold on the profession, as he seven years ago strongly advocated this operation, for which he was freely criticised by some of the surgeons who now strongly advocated the operation. Mr. H. Allingham, however, had brought this matter more prominently before the profession by introducing the spur in the operation. Mr. Jessett had performed the operation in this manner, but was disappointed in the result, as there was considerable procidentia both from the upper and lower end. Mr. Jessett found, however, that by drawing the sigmoid flexure well out of the wound he avoided procidentia of the upper part, but the mucous membrane of the lower part still protruded. To avoid this Mr. Jessett had now, in conjunction with his colleagues, operated in five cases by drawing the sigmoid flexure well out of the wound, packing it round thoroughly with cotton-wool soaked in carbolised water, and applying a clamp about two inches above and below, and then dividing the gut, washing out the two ends, and then invaginating the lower end well into itself, and with a continuous Chinese silk suture stitching the serous membrane accurately together, and dropping it back into the pelvis; the proximal end was next sutured to the wound, and the parietal wound closed in the usual manner. All these cases were doing well, and had had no bad symptoms.

X.—RUSHTON PARKER, M.B., F.R.C.S.,

Professor of Surgery, University College, Liverpool.

Mr. Rushton Parker quite agreed that cases submitted to excision should be carefully selected, but the surgeon could not select them as he would like. Some that appeared most suited declined to submit, while others, that at first seemed unfitted, anxiously requested operation, and proved triumphant successes. These operations were at first experimental, and the prudent success attained by some was based upon the enterprise and imagination of their predecessors. For disease low down he had performed excision twice, in one of which the peritoneum was unintentionally but unavoidably opened. In both the cut bowel was left free and unstitched, the anal portion below the disease not having been removed. The wound was smeared with eucalyptus vaseline, over which the fæces passed harmlessly, and the buttocks were wrapped in a triangular folded drawsheet, like the napkin of an infant, enclosing sublimated sawdust in which to receive discharge. Both cases recovered quickly and well, and the subsequent contraction of bowel was relieved by forcible dilatation with the fingers under chloroform. Two years and a half after operation both cases continued well and at hard labouring work. He demurred, however, to the opinion that excision should be limited to cases where the disease was low down, having himself excised disease that reached, in its lowest part, three or four inches from the anus, and in its highest nine or ten. The bowel was divided about twelve inches above the anus. Access was obtained by incising backwards and upwards from the anus, removing the coccyx and lower vertebræ of the sacrum. This

operation, so far as Liverpool practice was concerned, was originated by Dr. Wm. Alexander, and had also been extensively performed in Germany. By opening into the peritoneum and severing the lateral attachments of the bowel, the latter could be drawn down extensively, permitting the easy removal of disease high up, if also confined to the bowel, and not implicating adjacent parts. He himself was disposed to view these procedures hopefully, his own few cases having taught him enough to encourage a further employment of these procedures. He was much impressed by Mr. Jessop's allusion to the rarity of obstruction in disease low down. This opened up the question how best to avoid the necessity of colotomy; this was often achieved by an intelligent dieting of the patient and attention to the state of the bowels by enemata, to which he would draw attention as a point of practical use.

XI.—J. INGLIS-PARSONS, M.D.,
Assistant Physician Chelsea Hospital for Women.

DR. INGLIS PARSONS asked some of those present to try his method of treating cancer with a powerful interrupted voltaic current. A year had now passed since the first case was operated upon, and the patient remained well. The diagnosis in this case was made by Mr. Bryant, Mr. Jacobson, and others. As a guarantee of his convictions he had offered to treat some test cases at the Middlesex Hospital and also at the Cancer Hospital, but permission was refused; both institutions, however, intended to try the treatment. The high mortality and unsatisfactory results of treatment by the knife gave very good grounds for trying electricity, especially in those cases where the disease grew towards the urethra or bladder. An electrode could be introduced into these cavities and a second into the rectum in contact with the growth, and the current passed between these two points. It was also far easier by this means to reach the outlying groups of cells, and there was thus a greater probability of arriving at a satisfactory result.

XII.—PROFESSOR TRENDELENBURG,
Bonn.

PROFESSOR TRENDELENBURG desired to state that he could not accept what Mr. Cripps had said about German surgery in general. He drew attention to the resection of the os coccygis and the lower part of the sacrum, as recommended by Kraske. It gave a very free access to the higher parts of the rectum, and if the cancer had not yet infiltrated the surrounding tissues it was easy to isolate it from the wound by the fingers, and to pull it down for a great extent. In some cases the lowest part of the rectum might be left quite untouched, and thus a kind of resection of the rectum might be accomplished.

XIII.—A. F. McGILL, F.R.C.S.,
Professor of Surgery in the Yorkshire College.

MR. MCGILL remarked that it was most desirable to prevent the passage of fæcal matter below an artificial anus. With this idea he had in three cases substituted colectomy for colotomy in the lumbar region. The first case was performed for prolapse of the mucous membrane several months after the primary operation. Four inches of colon were removed, the upper end of the lower portion of gut was closed by sutures, and the lower end of the upper portion attached to the skin; the result was in every way perfectly satisfactory. In two other cases where the operation was primary a fatal result occurred. The cause was the same in both cases. The fæcal material situated in the gut between the colotomy wound and the disease in the rectum, being unable to escape, had induced a semi-gangrenous condition of the upper end of the gut; fæcal extravasation had taken place, and general peritonitis was thus induced. Mr. McGill thought that it was unwise to repeat an operation of this description unless the upper end of the lower portion of the gut was left open.

XIV.—R. LAWFORD KNAGGS, M.B., F.R.C.S.,
Huddersfield.

MR. KNAGGS drew attention to a pathological condition which was sometimes present when there was obstruction in the upper portion of the large bowel. The distension having overcome the patency of the ileo-cæcal valve, there was a tendency for the adjoining portion of the ileum to run straight across to the left iliac region, the pressure of the distension causing the obliteration of all except the unavoidable angles, just as the fingers of a glove might be blown out straight. This was a point of importance in favour of the inguinal operation; for if the diagnosis as to the seat of the obstruction was wrong, and it was necessary to open the small intestine, the probability was that the small intestine would be opened within a few inches of the ileo-cæcal valve. He also drew attention to the probability that "short circuiting" the intestines, after the method of Professor Senn, would be applicable in certain cases of malignant disease of the large bowel, and that would do away with the discomforts of an artificial anus.

XV.—T. SYMPSON, F.R.C.S.,
Surgeon Lincoln County Hospital.

IN support of the idea that the progress of cancer of the rectum was favourably modified by diversion of the fæces from passing over the diseased surface, Mr. Sympson adduced the case of a woman who was under his care in the hospital; on admission she was in a wretched condition through extreme pain, profuse uterine hæmorrhage, diarrhœa, and passage of fæculent matter through the vagina. A year after the operation of lumbar colotomy she was found to be free from pain, free from hæmorrhage, and to have gained a large amount of flesh. She lived between two and three years after the operation, and died from a recurrence of hæmorrhage. In other cases, in order to obviate the chance of fæces entering the lower portion of the rectum, Mr. Sympson had divided the bowel, and stitched its edges together.

NOTES
ON
AN EPIZOÖTIC OF RABIES;
AND ON A
PERSONAL EXPERIENCE OF M. PASTEUR'S TREATMENT.

BY J. G. ADAMI, M.A., M.B.,
Demonstrator of Pathology in the University of Cambridge.
(From the Cambridge Pathological Laboratory.)

TOWARDS the end of July last I was consulted by Dr. C. Scott Kilner, the medical officer of health for the Bury St. Edmunds district, concerning a disease which was rapidly carrying off the fallow deer at Ickworth Park, the seat of the Marquis of Bristol. The disease was supposed to be anthrax, and, as at that time some fresh anthrax material was wanted for our laboratory work, I gladly availed myself of the opportunity to visit Ickworth along with Dr. Kilner, in order to make a *post-mortem* examination upon one of the dead deer, consent having previously been obtained from Lord Bristol's agent.

From the keepers and others at Ickworth I learned that it was only through the chance discovery of an unusual number of dead deer lying in the thick bracken that suspicions were aroused as to the presence of any disease. Living in a half wild condition, deer do not lend themselves readily to accurate and continuous observation. When any member of the herd is ailing it leaves or is driven away from the rest of its fellows, and, seeking some retired spot, dies in hiding. It is impossible, therefore, to state with any exactitude the time of onset of the outbreak.

From the beginning of July up to the 20th of the month twenty-three dead bodies were discovered; during the next seven days, with more careful search of the whole park, ninety-two were found and buried; and now for the first time symptoms of illness were observed each day in a certain number of the does and young bucks (prickets). The fact that during this first period of the epidemic only does and young bucks were affected is worthy of note, although capable of easy explanation. For the greater part of the year the adult bucks keep themselves in separate herds away from the does, often, indeed, occupying a different region of any park. Accompanying the does are the prickets, or young bucks, which have not completed their second year, and the haviours or castrated bucks. To this fact is probably largely due the difficulty of arriving immediately at a correct diagnosis of the true nature of the epidemic, or rather

epizoötic. The symptoms of the disease which I was able to gather on my first visit were of a very indecisive nature. All that could be learned was that, leaving the herd, the animal affected—a doe, or fawn, or young buck—appeared uneasy and distressed, wandered about aimlessly, at times essaying a run, and then suddenly stopping short. As the disease progressed the gait became staggering, the hind quarters appearing specially weak, and finally the animal dragged itself into the bracken to die. Death occurred, as a rule, within thirty hours after leaving the herd.

Upon making a necropsy the blood was found dark and almost black, remaining liquid; the liver and kidneys were congested; the lungs unaffected; the spleen somewhat larger than normal, dark, almost black in colour, and very pulpy. Decomposition apparently set in with great rapidity. Incomplete though the *post-mortem* examination was (being made in the open during a heavy shower), all these symptoms and appearances seemed not opposed to the idea that the disease was anthrax. I noticed at the time that the skin was not so congested as is usually the case in this disease, but considered that this symptom might be specially marked only in cattle suffering from anthrax.

Returning to Cambridge, in the full expectation of finding anthrax bacilli in the portions of spleen, liver, and kidney, that I had carried away with me, I was greatly surprised at being unable to discover in any part a single typical bacillus, notwithstanding the greatest care in the preparation of the specimens. Nor were the attempted cultivations any more successful. There were several growths of putrefactive micro-organisms, none of the anthrax bacillus. Soon after this I learned that having obtained evidence of the presence of characteristic bacilli, the Privy Council had recognised the disease as anthrax, and that the park had been officially declared an infected area under the Contagious Diseases (Animals) Act. This fact led me to conclude that I had perhaps been mistaken in my conclusions concerning the disease; I therefore thought it desirable to make further inquiries into the subject. In the meantime, in answer to certain questions addressed to Mr. Turner, Lord Bristol's agent, I obtained fuller information about the symptoms that had so far been noted. I learned, namely, that the keeper had observed the affected animals during the early stage of the disease to throw their heads back in a curious manner, to bite their shoulders, legs, and sides very frequently, at times inflicting severe wounds upon themselves; to jump up (rarely) and bite at the boughs of trees. Further, the gait might be described as becoming more and more "groggy," until at last the animal fell down—to rise again, proceed onwards and again fall—the hind limbs becoming increasingly paretic, until at last the animal died, death being very often preceded by convulsions. These symptoms are not those of anthrax. The possibility of the disease being hydrophobia having naturally occurred to me it appeared desirable to make further necropsies.

On August 8th, with the aid of Professor Roy and in the presence of Dr. Kilner and Messrs Johnson, senior and junior, the veterinary surgeons in charge of the diseased animals, I made two more *post-mortem* examinations at Ickworth upon a full-grown doe and a haviour respectively. Nothing very abnormal was found beyond what was seen in the first necropsy. We brought back to the laboratory sealed pipettes containing spleen juice and blood from the heart, which had been filled with the usual precautions, as well as gelatine test tubes inoculated upon the spot. We also preserved the brains and cords of the two animals.

On microscopic examination of the blood and spleen juice no bacilli were discoverable. No traces of the bacilli showed themselves in any of the gelatine tubes, nor again in the tissues could any typical anthrax appearances be made out. It may be mentioned in passing that during the course of the second of these two *post-mortem* examinations I gave myself a slight cut upon the right index finger with a knife which had been used to incise the brain and cord of the first animal. To this matter I shall shortly return.

To obtain proof positive of the nature of the disease, Professor Roy, to whom I have throughout been indebted for much kindly counsel and assistance, willingly made the necessary inoculations. His investigations, a report of which is appended[1], proved to us conclusively that the disease from which the animals died was not anthrax, but the paralytic form of rabies.

But if further evidence were wanting, we obtained it towards the middle of August. The epizoötic, now no longer confined to the does, haviours, and prickets, began to manifest itself among the adult bucks, and we received information that they had been observed attacking each other, and butting violently at trees. One animal was observed to chase a hare, another angrily snatching at and biting a large stone, while a third rushed upon one of the assistant keepers, who happily escaped. Again, it is to be noted that, although a large herd of sheep and numerous ponies had shared the deer park until as late as July 20th, and one of the animals had been observed licking a dead deer, up to the present moment no symptom of a similar disease has evidenced itself among them. Were we dealing with anthrax, this immunity would be fitted to cause surprise.

Rabies among deer had been almost wholly unknown until Mr. Cope published last year his excellent report upon the outbreak at Richmond Park. The manifestations at Ickworth agree in all important points with those described by him save that I have never been able to observe or obtain a description of the removal of the hair from the forehead, as a result of continued forcible rubbing of the head against trees and posts. Ascending paralysis would seem here to be more frequent and to be specially common among the does, while it would seem to be mainly in the adult bucks that what may be termed the typical symptoms of rabies, accompanied by great nervous excitation, make themselves evident. At Ickworth also the disease has spread to all the separate herds of deer, and we have the interesting though lamentable sight of rabies, not in a series of isolated cases, but as a well-marked epizoötic. Since the disease was first observed, less than three months ago, over 450 animals have died in a herd of between six and seven hundred animals—a terrible mortality, and one very much greater than obtained at Richmond.

So long ago as 1881 Galtier recorded some cases in which by the intravenous injection of the emulsified cord of a rabid animal he conferred immunity upon sheep and dogs. More recently Nocard and Roux[2] have confirmed Galtier's results, and have shown that it is possible, by a single injection of a fairly large quantity of a thick emulsion of "rabic" medulla, to render sheep and cattle immune. It would be useful, not to say interesting, to determine whether by following this method some portion at least of what remains of the herd at Ickworth could be saved. But, up to the present, I have not been able to obtain Lord Bristol's permission to attempt anything of this nature.

* * * * *

The cut upon the finger which I gave myself while making the *post-mortem* examination on August 8th was allowed to bleed freely, and then washed well for some minutes with carbolic acid solution (1 in 20). It healed slowly, but without any suppuration, and I was disposed to think very little about it, especially so long as there was uncertainty as to the diagnosis of the disease. There have been fairly numerous cases in which practitioners have wounded themselves in the course of necropsies upon those dead from rabies, and, almost without exception, no ill results have ensued. Here, for some time after the wound had been inflicted, there remained considerable doubt as to the nature of the disease. When, finally, the diagnosis of rabies seemed perfectly certain, medical friends insisted strongly upon the fact that the knife by which I had cut myself had been used previously to dissect the brain and spinal cord of a rabid animal. Hence, seventeen days after the event, as the result of earnest solicitations from Professor Roy and others, I found myself beginning the treatment at the Pasteur Institute. From M. Pasteur, Dr. Roux,

[1] NOTE BY PROFESSOR ROY.—The disease in question was officially declared to be anthrax, but in accordance with Mr. Adami's views on the subject it was decided that a rabbit should be inoculated from the brain of one of the deer at the same time that some of the blood of the dead fallow doe was introduced under the skin of one of the thighs. This was done by me on August 9th, 1889. A portion of the medulla having been rubbed up in a clean mortar with a small quantity of sterile decoction of meat, a small quantity of the mixture was introduced under the dura mater, which had been exposed by making a small trepan hole through the vertex of the cranium. The wounds healed by first intention. On August 27th this rabbit, which, till that date, had not shown any symptoms of disease, was found to be paretic, the weakness being recognisable chiefly in the hind limbs. It screamed for some time after being simply lifted on to a table, although this was done gently enough. On August 28th the paresis was much more evident. On August 29th, in the morning, the rabbit was, so far as could be seen, completely paralysed, with the exception of the respiratory muscles. It died on the afternoon of the same day. *Post-mortem* examination showed no noteworthy abnormality, although the brain and spinal cord were very carefully examined. On August 30th I inoculated two other rabbits subdurally from the medulla of the one which had died on the previous day. On September 15th one of these showed the characteristic paresis, and it died on September 16th with symptoms identical with those of the rabbit from which it was inoculated. The second of the two rabbits inoculated showed paresis on the 16th and died on the 17th September. The conclusion is, of course, that the deer from which these animals was inoculated died of rabies and not of anthrax.

[2] *Annales de l'Institut Pasteur*, 1888, p. 341.

and every member of the staff I received the greatest kindness, and I was freely permitted to examine into every detail of the method. Dr. Ruffer's address to the Association at Leeds was so full and convincing that little is left to be said with regard to M. Pasteur's method. I cannot refrain, however, from recording my testimony to the extreme care that is taken to ensure accuracy in the treatment and security to the patients from any untoward results, and my admiration for the wonderful precision that regulates each step in the preparation and inoculation of the virus. For the benefit of those who in the course of their practice are called upon to deal with cases of bites from animals supposed to be rabid, it is perhaps wise to emphasise the fact that, as Dr. Roux has shown, the freshly removed brain and cord of rabid animals may be preserved for long periods, without loss of virulence, in pure neutral, or rather non-acid, glycerine; and that, sending specimens so preserved to the Pasteur Institute, it can there with certainty be determined whether a given animal was or was not rabid.

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In concluding these notes it may be as well to mention a train of symptoms of a somewhat ambiguous nature experienced by me. I do this with no little diffidence; yet so few cases of like nature have been placed on record that I feel it wise not to pass the matter by unnoticed. Within a day or two after the cut I became aware of a sensation in the forearm of the injured extremity, by no means acute enough to be termed a pain, but rather akin to the feeling one obtains in a limb after excessive muscular exercise. In time the same sensation made itself evident along the inner side of the arm. Considering this due to the irritation of some small nerve at the seat of the wound, I paid very little attention to it. It persisted, however, for some weeks, in fact throughout the period of treatment at Paris. From about the twenty-sixth day I woke regularly in the early morning, to find the limb in a state of "pins and needles." The condition lasted for several minutes; then disappearing, it permitted me to fall asleep again. Rarely was one of the other extremities affected, and it was only after the phenomenon had occurred without fail for more than a week that I called to mind that it might be allied to the "tinglings" described as a premonitory symptom of rabies. From September 5th onwards —I had wounded myself on August 8th—I began to suffer from insomnia, not falling off to sleep until between 1 and 4 A.M., and from now I became more and more depressed. The depression was completely in spite of myself. I had no reason to doubt the efficacy of the treatment that I was undergoing, and looked upon it, not as necessary, but as precautionary, and as, on the whole, a pleasant experience. From September 8th this depression was constant; the dull heavy sensation in my arm became more marked, and soon I experienced great distaste for being alone for any length of time. On the 10th, while making my homeward journey, a tightening or constant slight constriction of the throat made itself felt. These symptoms became more and more strongly marked until the 14th, when for one short moment I found I could not swallow the saliva. That night, however, I fell asleep fairly soon; the next morning the depression had passed away, and although during the next few days I at times experienced some slight tightness of the throat, and awoke on some mornings to find my arm in the state of "pins and needles," I very soon felt myself in a state of good health, the last symptom to disappear being the heavy sensation in the arm. Taken altogether, the symptoms were at the worst not very prominent; they were, however, most decidedly uncomfortable.

What is the interpretation of these symptoms? On the whole I am inclined to believe them of nervous origin, pseudo-hydrophobic. In favour of this view it may be pointed out that certain signs of rabies which are generally well marked, such as for instance pain at the seat of the wound, were characteristically absent; other signs, for example, the tingling in the extremities were incomplete in their manifestations, and though present might be otherwise explained. But, on the other hand, not a little can be said against the purely nervous theory. I am of robust health, sound constitution, and in temperament should describe myself as the very reverse of nervous. My belief in the efficacy of the Pasteur treatment is and was throughout complete. I knew at the time that, having been inoculated, the chances were even more than ninety-nine to one that I should not be attacked. So slight did I consider my danger, that on August 22nd, but for the urgent entreaties of Professor Roy, I should have started for the Broads, instead of for Paris; and I fully acquiesced with the authorities at the Pasteur Institute, when upon the thirteenth day of treatment they informed me that they considered my case such that they did not think it necessary to keep me for the usual fifteen days of treatment.

If indeed I passed through a most mild abortive attack of rabies, then certainly that attack was due to the cut I gave myself, and not to the treatment I underwent. The time of the first appearance of the symptoms, namely, about the twenty-sixth day after the cut, would show this. The pain, if pain it may be called, in the injured extremity only, while the region of inoculation was completely painless, would evidence the same, while the fact that it was not until the seventeenth day after the infliction of the injury that I presented myself at the Rue Dutot would again add to the probability that symptoms should manifest themselves in spite of the treatment. It is impossible to avoid the feeling that, had I not gone to Paris, the symptoms, if only nervous in origin, would, in the want of that sense of security gained by undergoing the treatment, have developed themselves to a most painful extent; if of the nature of rabies, would, failing the treatment, have become lethal; and that I owe to M. Pasteur and those at the Rue Dutot my heartiest thanks, not only for the courteous way in which I was received and treated, but perchance also for the continuance of my days.

IMMUNITY PRODUCED BY AN ALBUMOSE ISOLATED FROM ANTHRAX CULTURES.

By E. H. HANKIN, B.A.,
Foundation Scholar of St. John's College, Cambridge.

THE following is a brief preliminary account of an investigation which I have recently been engaged upon under the guidance of Professor Koch at the Hygienic Institute of Berlin. The results appear to have an important bearing on the theory and practice of preventive inoculation.

It is now generally admitted that acquired immunity against a disease is in reality an acquired immunity against a poison. The phenomena of acquired tolerance of the effects of ordinary albumoses, and of snake poison which contains a poisonous albumose, show a closer resemblance to acquired immunity against a disease than is the case with any other poison. These and other facts led me to expect that if it were possible to isolate an albumose from anthrax cultures, such anthrax albumose would probably be capable of conferring immunity against the disease. Such an albumose I have now isolated from my culture fluids by ordinary chemical methods, and find that it gives the ordinary reactions for albumoses, and that it is capable of conferring immunity.

In the course of my process of preparation, it is precipitated from its solution by addition of a large bulk of absolute alcohol, and well washed in this liquid to free it from ptomaines, since it is known that all such substances are soluble in alcohol. After the addition of alcohol it is filtered off and dried, then it is redissolved, and filtered through a Chamberland's filter. A rough estimate of the percentage of albumose present in the clear solution thus obtained is made colorimetrically, by means of the biuret reaction and a peptone solution of known strength.

In one experiment four rabbits (Nos. 23 to 26) were inoculated subcutaneously with virulent anthrax spores. No. 26 served as "control," and died in about forty hours. The other three rabbits had the albumose solution injected into the ear-vein at the same time. Nos. 24 and 25 each had about the five-millionth of their bodyweight, while No. 23 had only the ten-millionth of its bodyweight of albumose. No. 25 died in less than forty-eight hours, but Nos. 23 and 24 survived. Ten days later Professor Koch kindly reinoculated these two rabbits for me with very virulent anthrax from an agar-agar culture. Their temperature has remained normal since then, and they are now alive and well a fortnight after this operation.

I have also succeeded in producing immunity in mice against attenuated anthrax. Dr. Fränkel kindly gave me an agar-agar culture of *deuxième vaccin*. From this I made bouillon cultures, and whenever I inoculated a rabbit from these it always died, unless it had at the same time been protected by a dose of the.

anthrax albumose. Unfortunately, when, a few days later, I was inoculating mice with these cultures after a dose of anthrax albumose, I omitted to inoculate a control rabbit, so that although the culture showed itself virulent for my control mice, I have no certainty that it was still virulent for rabbits. The following experiment shows its effects on mice after treatment with anthrax albumose. Seven mice had each the millionth part of its body weight of anthrax albumose injected hypodermically. Two others had each the five-hundred-thousandth of its body weight. A week later they were all inoculated with *deuxième vaccin*. Two control mice were also inoculated, and of these one died in about thirty-six hours; the other was exceptional, inasmuch as it died only after 108 hours. Only one of the three mice, which had the five-hundred-thousandth of its body-weight of albumose, survived. Of the seven mice which had been protected by the millionth of their body-weights of albumose four died. So that in this experiment, out of ten mice inoculated, only four showed immunity against anthrax.

In another experiment, ten mice were each inoculated with the millionth part of their body-weight of anthrax albumose and with *deuxième vaccin* at the same time. Of these, three died after 108 to 116 hours; the others survived. Three others had only the two-millionth of their body-weights of anthrax albumose and *deuxième vaccin*. Two of them are now living. Four control mice were inoculated, and all died.

In my earlier experiments I gave larger doses of anthrax albumose, and on inoculation with anthrax the animals died, often before the control animals. For instance, I have had several cases of mice dying twelve to sixteen hours after the inoculation with virulent anthrax. In the spleen pulp of rabbits and guinea pigs, however, I almost always found under these conditions numerous phagocytes. In these the bacilli sometimes showed signs of degeneration, but more often appeared to be alive and growing. Sometimes the long chains of bacilli, so characteristic of the growth of attenuated anthrax, appeared to be growing out of the cells. In one case (a rabbit which died only 150 hours after inoculation) the only bacilli that I could find in the spleen were contained in phagocytes. I have found these phagocytes in rabbits not only after inoculation with *deuxième vaccin*, but also after virulent anthrax. In mice I have never found phagocytes, but often after a large dose of albumose and attenuated anthrax the bacilli in the spleen appeared to be in longer chains than in the control mouse. The appearance of these phagocytes and chains of bacilli led me to try the effect of very minute doses of anthrax albumose with the favourable results described above, for the possibility suggested itself that these phenomena were indications of a commencing immunity. In several experiments the animal received the anthrax only several days after a large dose of albumose; but in these cases also death ensued in a longer or shorter time than usual, according to the quantity of anthrax albumose injected; while numbers of phagocytes were usually to be seen. Apparently the albumose had remained in the system, or at any rate only a small part of it had been excreted. Beyond this power of conferring immunity with a small dose, or of hastening the course of the disease with a slightly larger dose, this albumose does not show clearly any physiological action in the quantities employed. I often noticed, however, that for a couple of days after larger doses the mice appeared to be sleepier than the control mouse living in the same cage.

Although the following inferences seem capable of explaining the above results more simply than any other theory, I do not pretend that they are as yet satisfactorily proved. I only wish to assert that my results make it probable that:

1. The anthrax bacillus owes its power of living in the animal body to its power of producing a poisonous albumose.
2. That this poisonous albumose is capable of suppressing the "germicidal power" of the living animal.
3. That this albumose seems to be very slowly excreted.
4. That if a large dose of this albumose is injected into an animal, the entry of anthrax bacilli into the system is aided.
5. That if a very small dose of this substance is administered, tolerance is acquired against its poisonous properties. Consequently, when after a few hours or days the anthrax virus attempts to suppress the germicidal power of the animal by means of its albumose, it is unable to do so because the animal has already acquired tolerance of its poisonous quality.
6. With a dose of anthrax albumose intermediate between that employed in the above two cases, death ensues in the usual time or (in other cases) life is greatly prolonged. Apparently in this case complete tolerance of this comparatively large dose of albumose is unattained. Consequently the anthrax bacilli are able to live and produce more of their albumose, and at length by this means overcome the resisting power of the animal.

My observations have been made on over a hundred mice and about fifty rabbits. My best thanks are due to Professor Koch and to Drs. Fränkel and Weyl for their very kind advice and assistance.

RECENT EXPERIENCES IN THE SURGERY OF STONE IN THE BLADDER: 100 LITHOLAPAXIES AND 32 LITHOTOMIES.[1]

BY SURGEON-MAJOR P. J. FREYER, M.A., M.D.,
Bengal Medical Service.

IN the JOURNAL of December 24th, 1887, a paper of mine was published, entitled "A Recent Series of 100 Cases of Operation for Stone in the Bladder without a Death," which brought down the record of my operations for stone by all methods—421 in number—to August 8th, 1887. Between this latter date and the present time (April, 1889) I have operated on 132 cases of vesical calculus—100 by litholapaxy and 32 by lithotomy. I now propose giving some details of these operations, and transcribing from my notebook some observations of a practical character, jotted down from time to time whilst the occurrences or reflections to which they have reference were green in my memory. I must premise, however, by saying that I shall avoid going over ground already travelled in my published writings, except in so far as it may be necessary to modify or accentuate some previously recorded observations. It is necessary to mention this, lest to some of my readers this paper should appear more or less fragmentary.

In the table (No. 1) which follows will be seen at a glance the chief features of interest in the 100 cases of litholapaxy; whilst a second table (No. 2) is added, giving details of the 32 cases of lithotomy. I shall deal first with the litholapaxy cases, to which my remarks in this paper shall mainly be confined, devoting particular attention to the development of this operation in male children.

Amongst the 100 cases of litholapaxy there were 66 adults—64 males and 2 females—and the average age of these was 48 years nearly, ranging from 18 to 25. There were 34 children—33 boys and 1 girl—and the average age was $7\frac{3}{4}$ years approximately, varying from $1\frac{1}{2}$ to 14. I notice that Mr. Cadge, in his able article on "Lithotrity," in Heath's *Dictionary of Surgery*, in a very friendly notice of my work, in referring to my first series of 108 cases of litholapaxy in adults, in which the average age was 47, writes: "Thus there were more young and probably healthy persons than English lithotritists are accustomed to meet with." The actual average age of my litholapaxy cases is, undoubtedly, less than that recorded by some European surgeons; but, as I have never refused any patient suffering from stone the benefit of operation, this is due entirely to the fact that the normal span of life amongst natives of India is much less than that of Europeans. I do not know if there are any trustworthy statistics published on this point, but I fancy that, in round numbers, a native of India at the age of 50 is comparatively as old as a European of 60. Like the rank vegetation by which they are surrounded, the races of warm climes are reproduced more rapidly, spring up to maturity at a much earlier age, and decline and die at an earlier period than in the case of those born in cooler regions.

The average number of days spent in hospital, or, in the case of patients in private practice, under treatment, was $5\frac{1}{2}$ nearly, the average for children being practically the same as that for adults.

The average weight of calculus in the 100 cases of litholapaxy was 184 grains, the average for adults being 221 grains, and that for children 112 grains nearly.

In my paper published in the JOURNAL of December 24th, 1887, already referred to, I intimated that, influenced by the very excellent results obtained by Dr. Keegan from the practice of litholapaxy in male children, I had abandoned the position of opposition which I, in company with other surgeons generally, had

[1] This paper was written in April last, but its publication deferred, as I had at one time hoped to be able to be present at the annual meeting of the British Medical Association, and read a paper on the subject dealt with.

previously maintained in regard to litholapaxy in males below the age of puberty. I then gave details of 16 cases of stone in male children in which I had successfully performed litholapaxy. Since that time 64 male children suffering from stone have come under my treatment, and in 33 of these I have performed litholapaxy, in all with complete success. I attempted litholapaxy in all the cases, but in 29 I found it necessary to have recourse to lithotomy. The proportion in which litholapaxy was not feasible is large, but this is due to the length of time it takes to procure lithotrites of small size from the good instrument makers nowadays, so that the smallest lithotrite in my possession previous to September, 1888, was a No. 7. In that month I received a No. 5 lithotrite from Weiss, and since then, out of 13 cases of stone in children I have disposed of 12 of them by Bigelow's operation, only one case in which the urethra admitted only a No. 3 sound being relegated to lithotomy. I may say that lithotomy in the adult has now been practically blotted out of my practice, only 4 out of 131 cases of stone in the adult that have come under my care since January 1st, 1886, having been operated on by this method (3 suprapubic and 1 median), litholapaxy having been found feasible in all the other 127 instances; and, after having now performed 49 litholapaxies in male children and 3 in female children without a death, I have no hesitation in saying that I confidently look forward to lithotomy in children meeting with a similar fate. I will now give details of some interesting cases of litholapaxy in children.

Case XLVII.—H. U., a Mahomedan male child, aged 9, was admitted to the Moradabad Civil Hospital May 23rd, 1888, suffering from stone, the symptoms of which had existed four years. He was suffering from fever, and extremely emaciated. The urine was passed in drops every few minutes with great pain. The child danced with agony, rolled about on the floor, and screamed with pain when he attempted to micturate. The prepuce was inflamed and ulcerated, the result of the child constantly pulling at it. A large stone was detected on sounding.

On May 25th I performed litholapaxy. A No. 8 lithotrite was passed with ease, and the stone at once grasped; but as it was found to measure an inch and a half in diameter, the lithotrite would not lock on it. This diameter was then changed for a shorter, on which the lithotrite locked; but the stone was so hard that the lithotrite failed to crush it. I then grasped the stone by one end, and after some manipulation broke off a portion. This was then reduced to fine *débris*, and evacuated through a No. 10 cannula. The lithotrite was now again introduced, and another portion of the stone chipped off and treated in a similar manner. This process was continued, and varied from time to time by scraping the sides of the stone by the jaws of the lithotrite, till the whole stone was eventually disposed of, the operation lasting two hours and five minutes. The calculus was extremely hard and tough, composed of carbonate of lime, resembling white marble. The *débris* when dry weighed 765 grains. The lithotrite was fourteen times introduced, and the cannula some sixteen or eighteen times; yet there was scarcely a trace of blood during the whole operation.

When I commenced this operation I had no idea that the calculus was such a large and hard one, and I must confess that during the operation I had grave misgivings as to the advisability of continuing it; the child was so weak, the stone so large and hard, and the operation so prolonged. Still I persisted, till the whole stone was removed. The child was extremely exhausted after the operation, and did not regain consciousness for two or three hours. Considering that the temperature in the operating room was 95° F., I may regard this as one of the hardest day's work I have ever performed.

The child had slight fever in the evening, but none on the 26th. On the 27th I had the pleasure of showing the case to Surgeon-Major R. Drury, of the Medical Staff. The child was then sitting up in bed, quite well and happy. On June 6th the child was discharged cured, and was brought to hospital on the 12th in excellent health.

This is, I believe, the largest calculus that has ever been removed from a child by litholapaxy; and I must confess my astonishment at the wonderful working power of a No. 8 lithotrite, as manufactured by Weiss. The case generally illustrates the manner in which, by the process of chipping and scraping—if I may so call it—a small lithotrite may be made to do work for which it was never intended; so that comparatively large stones may be thus disposed of—a matter of great significance when we have to deal with the narrow urethræ of children. As I regard this process as of great practical importance, will venture to give another case in illustration of its working.

Case LXXXIII.—A male child, aged 10, admitted to hospital December 7th, 1888, with symptoms of stone of one year's duration. Health very bad. On the 8th I performed litholapaxy. The largest lithotrite that I could introduce was a No. 5. With this the stone was easily caught, but, owing to its size, the instrument could not lock. Time after time I grasped the sides of the calculus by the lithotrite, which was then screwed home, thus scraping off portions of the crust. In this way the main body of the calculus was reduced to such a size that the lithotrite eventually locked on it, when it was easily disposed of. The operation lasted sixty-five minutes, and the *débris* of the calculus, which was mainly uric acid, weighed 275 grains. The urethra, for a child of this age, was very narrow, only admitting a No. 6 cannula. The child was much exhausted after the operation, and passed no urine till evening, when, under the influence of hot fomentations to the perineum, a full flow of blood-stained urine came away. On the 10th the child was sitting up in bed, and was discharged cured on the 13th.

The process of scraping the surface of calculi here described is very tedious work, and demands much care, patience, and perseverance for its accomplishment. It will sometimes be facilitated by the fact that many calculi have alternate concentric layers of hard and soft matter. And here I may mention that my experience is that calculi in children are, as a rule, softer than in adults—a circumstance which, of course, much facilitates the crushing portion of the operation.

The current through a No. 6 cannula, even with the strongest aspirator, is very weak, and consequently it is necessary to crush the *débris* into very fine powder to facilitate its evacuation through a tube of this size. The shorter the course of the stream the greater its strength, so recently I have had very short cannulæ (only $7\frac{1}{2}$ inches in length) made for young children, and find that they work better than the longer ones.

From the list of litholapaxy operations, it will be observed that many very young children were thus operated on. The youngest child on whom I have performed litholapaxy was one 18 months old, the details of which are as follows:—

Case LXXII.—A male child, aged 18 months, suffering from symptoms of stone for two months, was admitted to the Moradabad Hospital November 2nd, 1888. On passing a sound a faint click was heard. Next day I performed litholapaxy, and had the honour of operating in presence of Surgeon-General W. R. Rice, Inspector-General of Civil Hospitals. A No. 5 lithotrite passed into the bladder with the greatest ease, and the tiny stone was soon caught and crushed. On withdrawing the lithotrite some difficulty was experienced in extracting it. This was due to congestion of the urethra and spasm. The operation lasted only eight minutes, and the *débris* when dry weighed only 3 grains. I saw the child in the evening, and he was then passing urine freely and without pain. Next day he was well in all respects. On the 5th—two days after the operation—the child was taken to the railway station in order that Dr. Rice, who was passing through, might see him, and he expressed much pleasure at the rapid and successful cure in a child of this tender age.

This is, as far as I am aware, the youngest child on whom litholapaxy has as yet been performed, and the facility with which a No. 5 lithotrite and a No. 6 cannula passed through the urethra convinces me that the modern operation for stone is practicable in even younger children. I have now performed 305 litholapaxies in patients varying in age from $1\frac{1}{2}$ to 96 years, so that practically no age can be said to be a bar to the performance of the operation.

Turning now to litholapaxy in the adult, there were amongst the 66 cases thus operated on many presenting complications, such as stricture of the urethra, enlargement of the prostate, etc. As, however, I have dealt pretty fully with these complications in former papers, and particularly in my work on litholapaxy,[2] my present remarks shall be confined mainly to two or three cases presenting complications not previously dealt with. I must, however, in the first place, give particulars of the case of death which occurred in connection with this operation.

Case XXIX.—A Mahomedan male, aged 60, was admitted to the Moradabad Civil Hospital, February 21st, 1888, suffering from symptoms of stone, which had existed four years. A large calculus was detected by the sound. The patient had been passing gravel for several years, accompanied from time to time by severe

[2] *The Modern Treatment of Stone by Litholapaxy.* London: J. and A. Churchill.

pain in the loins. He was suffering from fever, which had come on daily for weeks, so that the patient was in an extremely weak state of health. On February 25th I performed litholapaxy, Dr. W. R. Rice being present. A medium-sized lithotrite was first introduced, but failed to lock on the stone. My largest lithotrite was then passed readily, the stone caught and easily crushed, and the *débris* evacuated through a No. 18 cannula, three introductions of the instruments being necessary. There was no bleeding, and the operation presented no difficulties, the whole of the *débris* of a hard uric acid calculus, weighing 1 ounce 7 drachms, being removed in half an hour.

The patient did very well for the first two days, passing urine copiously, and suffering merely from slight fever every evening. On the 27th I found him sitting up in bed smoking the "hookah," and quite cheerful. Next morning he was found in bed insensible, and suffering from all the symptoms of uræmic poisoning. Later on he partially regained consciousness, and complained of pain in the back and pit of the stomach; but died in the afternoon.

At the necropsy there was nothing abnormal found in the condition of the bladder, save that the mucous membrane was chronically thickened, and slightly congested over a space the size of a sixpenny bit at the fundus. The left kidney was healthy. The right kidney was found enormously enlarged and inflamed, with pus flowing freely on section. Two large uric calculi, embedded in and connected by phosphatic matter, and weighing 2 drachms, were found filling the pelvis and calyces. Death was thus due to inflammation of the kidney, the result of kidney calculus. Whether, considering the fever from which the man had suffered before the operation, the inflammation had set in before his admission to hospital, or whether the operation acted as an exciting cause in producing the inflammation, it is impossible definitely to say; but I am inclined to regard the fever from which he had suffered before admission to hospital as symptomatic of kidney mischief. At any rate, the case must be accepted as one of death in connection with the operation.

Cases of stone complicated by stricture I almost invariably treat by performing internal urethrotomy, and at once proceeding to deal with the calculus by litholapaxy. The following case is interesting, illustrating as it does the fact that the existence of a bad double stricture is no bar to the performance of litholapaxy.

CASE LXXVI.—A Hindu male, aged 55, came to hospital November 7th, 1888, with symptoms of stone and stricture, from the latter of which he had suffered for several years. He was in extremely feeble health—a mere skeleton in fact—and so weak that he could not leave his bed. On examination, it was found that there were two strictures, one at the orifice of the urethra, extending 2 inches backwards, admitting a No. 5 catheter, and a second $4\frac{1}{2}$ inches from the orifice of the same calibre. A stone was detected by the metal catheter. The patient being put under preparatory treatment, on December 11th a soft No. 5 catheter was tied in. Next day both the strictures were divided fully by the urethrotome, and a No. 15 conical steel sound at once passed. By means of a No. 8 lithotrite the stone was then crushed, and evacuated through a No. 14 cannula. The calculus, which was phosphatic, weighed 122 grains. The patient made an uninterrupted recovery. On the 14th he was sitting up in bed, on the 16th a No. 14 steel sound was introduced, and on the 18th he was discharged cured.

It will be noticed from Table No. 1 that in many cases stones of considerable size were crushed and evacuated in a few minutes. The following may be taken as an instance of rapidity of execution:—

CASE XXXVII.—A male Hindu, aged 60, came to hospital April 17th, 1888, in very feeble health, suffering from stone, the symptoms of which he stated had only troubled him for six months A large calculus was detected on sounding. The patient was at once anæsthetised, and litholapaxy performed. My largest lithotrite was passed into the bladder with ease, and, on opening the blades, the stone was at once caught. Its length, however, being three inches, the instrument could not lock on it, so I caught the stone by a shorter axis. The calculus was then easily disposed of, not being very hard, as it was composed of a mixture of urates and phosphates. I crushed the stone completely before the lithotrite was withdrawn. The *débris* was washed out through a No. 18 cannula, and weighed 485 grains. The whole operation lasted only ten minutes. Next day I had the pleasure of showing this man to Dr. Richardson, Sanitary Commissioner. On the 20th he was quite well, and it was with difficulty I persuaded him to remain till the 22nd, when he was discharged.

I am now in the habit of crushing as much as possible of the stone at each introduction of the lithotrite before withdrawing the instrument, so that in most cases of stones of ordinary size one introduction only of the instrument is necessary. It will be observed that in 48 out of the 100 cases of litholapaxy here referred to the crushing was completed at one introduction of the lithotrite. The repeated introduction of instruments should, I think, be avoided as much as possible; and this is particularly necessary when the urethra is not capacious, or when some difficulty has been met with in introducing the instruments originally. I consider, further, that (all undue haste and roughness of manipulation being avoided) it is desirable to complete the operation as rapidly as possible. This is particularly the case when the patient is old and much worn out by the disease. Prolonged narcosis from chloroform or any other anæsthetic in such cases is not, in my opinion, as harmless as it is sometimes made out to be.

The following case illustrates a difficulty I had not previously met with, as also the manner in which this difficulty may be overcome:—

CASE LXX.—A Hindu male, aged 25, was admitted to the Colvin Hospital, Allahabad, on October 17th, 1888, with symptoms of stone, which had existed some three months. Five months previously he had had litholapaxy performed by another surgeon. In addition to the usual symptoms there was some dribbling of urine.

On October 18th I performed litholapaxy, Surgeons Emerson and Fisher, I.M.S., and Dr. G. Griffiths, E.I.R., being present. A No. 14 solid steel sound was first introduced and passed over a small stone at the neck of the bladder, grating against it. I then passed a medium-sized lithotrite and made many unsuccessful attempts to catch the stone. The lithotrite was then withdrawn, and three or four ounces of water injected into the bladder. The lithotrite was again introduced; but, though the stone grated against the instrument at the neck of the bladder, by no manœuvre could I catch it. I therefore endeavoured to dislodge the stone backwards by introducing a No. 16 cannula as far as the stone, and then injecting a strong stream of water from the aspirator, but with no success. I was then much exercised in mind as to what course to adopt, when I suddenly bethought me of introducing a small No. 5 child's lithotrite as far as the stone, which, after some manipulation, was caught in position and easily crushed there. The *débris* was washed out through a No. 16 cannula, and weighed 24 grains. The operation lasted twenty-three minutes, but most of the time was spent in endeavouring to catch the stone in the first instance. On the 20th the patient was all right, save that dribbling of urine still continued. Iron, belladonna, and nux vomica were prescribed. The patient left hospital on October 30th, the urine still continuing to dribble slightly.

In my previous writings I have dwelt on the comparatively trivial nature of Bigelow's operation when the stone is small. There are certain conditions, however, under which even in such cases the operation is not devoid of danger, as the following case exemplifies:—

CASE LXIX.—A Mahomedan, aged 32, came to the Colvin Hospital, Allahabad, October 4th, 1888, suffering from retention of urine, due to stone impacted in the prostatic urethra. The bladder was enormously distended and the man in fearful agony. The assistant-surgeon relieved him by the catheter, pushing the calculus backwards into the bladder.

Next day I performed litholapaxy, Surgeon J. W. Irwin, Medical Staff, being present. The calculus, which was a small one, weighing six grains only, was easily caught and crushed, and the *débris* removed through a No. 14 catheter, the operation lasting only five minutes. During the night after the operation the patient had high fever—temperature 106° F.—and was wildly delirious. On the 6th, the fever was less; but the pulse was extremely weak and rapid, with cold, clammy perspiration; so that we feared the man was dying. He was, however, passing urine freely and without pain. On the 7th the fever continued, but the patient was stronger. On the 8th the fever had almost disappeared; and by the 12th he was quite well.

I have recorded this case in detail, as bearing on a question of changing nomenclature recently proposed by Sir H. Thompson. It will be within the recollection of the readers of the JOURNAL that the publication of my paper in the JOURNAL of December 24th, 1887, already referred to, called down on my head the virtuous indignation of Sir Henry's pen—his contention being that twelve instances of small stone therein recorded ought not to be regarded

TABLE I.—*Showing particulars of 100 Litholapaxy Operations.*

Serial Number.	Date of Operation.	Age.	Sex.	Caste.	Number of Days in Hospital.	Number of Sittings.	Number of Times Lithotrite was Introduced.	Size of Cannula.	Weight of Calculus.			Variety of Calculus.	Time Occupied by Operation.	Duration of Disease.	Result.
		Yrs							Ozs.	Drs.	Grs.		Min.		
1	August 11, 1887	34	M.	H.	8	1	1	16		3	10	Oxalate of lime	11	8 years	Successful.
2	,, 13, ,,	20	F.	H.	2	1	3	18		1	20	Uric	12	4 ,,	,,
3	,, 13, ,,	6	F.	H.	2	1	5	12		1	56	Uric and phosphate	30	4 ,,	,,
4	,, 14, ,,	85	M.	H.	3	1	1	12			15	Uric	5	3 ,,	,,
5	September 9, ,,	60	M.	M.	3	1	1	16			40	,,	5	6 months	,,
6	,, 15, ,,	25	M.	H.	5	1	2	16		3	20	,,	15	4 years	,,
7	,, 21, ,,	50	M.	H.	4	1	1	16		1	10	Phosphate	6	2 months	,,
8	October 11, ,,	50	M.	H.	4	1	2	18		4	35	Uric	6	3 years	,,
9	,, 11, ,,	14	M.	H.	4	1	2	10		2	45	,,	20	4 ,,	,,
10	,, 25, ,,	30	M.	M.	5	1	1	16			5	,,	5	1 month	,,
11	,, 29, ,,	65	M.	M.	6	1	2	16		3	30	,,	12	7 years	,,
12	November 7, ,,	22	M.	H.	5	1	1	16		1	30	,,	10	1 ,,	,,
13	,, 9, ,,	12	M.	M.	8	1	3	11		3	50	,,	40	3 ,,	,,
14	,, 18, ,,	7	M.	H.	5	1	3	12		1	10	,,	15	1 ,,	,,
15	December 4, ,,	10	M.	H.	4	1	2	10		1	50	,,	15	3 ,,	,,
16	,, 10, ,,	20	M.	H.	5	1	1	16		5	50	,,	15	1 year 6 months	,,
17	,, 17, ,,	10	M.	H.	7	1	2	10		2	30	Uric and phosphate	9	1 year	,,
18	,, 17, ,,	3½	M.	M.	7	1	3	10		1	10	,,	15	1 year 6 months	,,
19	,, 18, ,,	65	M.	H.	5	1	1	16		2	0	Uric	10	2 years	,,
20	,, 20, ,,	13	M.	H.	4	1	2	12			25	Phosphate	10	1 ,,	,,
21	,, 20, ,,	45	M.	M.	2	1	0	16			4	Uric	5	2 months	,,
22	,, 29, ,,	10	M.	H.	4	1	2	10		3	10	Oxalate of lime	30	1 year 6 months	,,
23	January 11, 1888	14	M.	H.	5	1	1	10			20	Uric	10	6 months	,,
24	,, 16, ,,	50	M.	H.	4	1	1	14		2	0	Phosphate	8	1 year	,,
25	,, 19, ,,	12	M.	H.	4	1	1	10			15	,,	8	6 months	,,
26	,, 28, ,,	32	M.	H.	4	1	1	16			8	Uric	5	3 ,,	,,
27	February 21, ,,	55	M.	M.	6	1	3	16		4	25	,,	15	1 year	,,
28	,, 25, ,,	32	M.	H.	4	1	2	16		1	10	,,	8	1 year 6 months	,,
29	,, 25, ,,	60	M.	H.	—	1	3	18	1	7	0	,,	30	4 years	Died.
30	March 9, ,,	5	M.	H.	7	1	1	10			6	,,	8	2 ,,	Successful.
31	,, 10, ,,	45	M.	H.	6	1	1	16		2	0	Phosphate	8	2 ,,	,,
32	,, 11, ,,	75	M.	H.	16	2	1	16		1	3	Uric	10	1 ,,	,,
33	,, 15, ,,	8	M.	M.	11	1	2	10		2	41	,,	15	2 ,,	,,
34	,, 28, ,,	6½	M.	M.	6	1	1	10			45	,,	10	1 ,,	,,
35	April 15, ,,	11	M.	H.	5	1	6	10		2	37	Uric and phosphate	45	1 ,,	,,
36	,, 16, ,,	60	M.	H.	5	1	3	18	1	0	8	Uric	27	5 ,,	,,
37	,, 17, ,,	60	M.	H.	5	1	1	18	1	0	48	,,	10	6 months	,,
38	,, 20, ,,	5½	M.	M.	9	1	1	8		1	10	Phosphate	15	6 ,,	,,
39	,, 23, ,,	60	M.	H.	4	1	1	14		1	30	Uric	6	3 ,,	,,
40	,, 26, ,,	35	M.	M.	4	1	1	16			28	,,	5	1 year	,,
41	May 2, ,,	65	M.	H.	5	1	3	18	1	1	23	Uric and phosphate	30	2 ,,	,,
42	,, 4, ,,	40	M.	H.	3	1	1	18			12	Uric	4	6 months	,,
43	,, 10, ,,	50	M.	M.	12	1	5	16	1	1	0	,,	35	3 years	,,
44	,, 11, ,,	12	M.	M.	4	1	2	10		2	8	Uric and phosphate	11	6 months	,,
45	,, 14, ,,	10	M.	M.	5	1	2	10		1	15	Uric	20	2 years	,,
46	,, 24, ,,	44	M.	M.	5	1	2	18	2	1	51	,,	17	4 ,,	,,
47	,, 25, ,,	9	M.	M.	13	1	14	10	1	5	28	Carbonate of lime	125	4 ,,	,,
48	,, 28, ,,	40	M.	H.	3	1	0	18			6	Uric	2	1 month	,,
49	,, 31, ,,	60	M.	M.	9	1	1	14			52	Phosphate	5	3 ,,	,,
50	June 1, ,,	18	M.	H.	7	1	1	16		4	2	Oxalate	8	4 years	,,
51	,, 2, ,,	10	M.	H.	6	1	4	10		3	25	Uric	20	6 ,,	,,
52	,, 4, ,,	65	M.	M.	4	1	1	14			48	,,	5	6 months	,,
53	,, 8, ,,	80	M.	H.	8	1	2	16			32	,,	8	2 years	,,
54	,, 14, ,,	28	M.	M.	8	1	1	9			11	,,	10	2 months	,,
55	August 2, ,,	60	M.	H.	7	1	1	14			6	,,	4	1 year 6 months	,,
56	,, 2, ,,	25	M.	H.	4	1	2	16		5	0	Uric and phosphate	15	2 years	,,
57	,, 2, ,,	42	M.	M.	5	1	4	16		5	5	,,	2	2 ,,	,,
58	,, 3, ,,	45	M.	M.	4	1	1	14			35	Oxalate	10	2 ,,	,,
59	,, 4, ,,	65	M.	H.	7	1	3	16		3	19	Uric	20	2 ,,	,,
60	,, 4, ,,	50	M.	M.	5	1	3	16		6	0	,,	15	6 months	,,
61	,, 7, ,,	7	M.	M.	8	1	2	8			14	,,	15	5 ,,	,,
62	,, 7, ,,	70	M.	M.	11	1	1	18		2	22	Phosphate	10	6 ,,	,,
63	,, 13, ,,	63	M.	M.	6	1	1	16		2	50	Uric	9	6 ,,	,,
64	,, 15, ,,	58	M.	H.	6	1	1	16		1	30	Phosphate	15	10 ,,	,,
65	,, 17, ,,	65	M.	H.	6	1	1	16			35	Uric	4	4 ,,	,,
66	,, 28, ,,	5	M.	H.	5	1	1	9			19	,,	18	6 ,,	,,
67	September 12, ,,	19	M.	H.	4	1	2	16		5	10	,,	27	1 year	,,
68	,, 27, ,,	3½	M.	H.	3	1	1	6			31	,,	15	2 ,,	,,
69	October 5, ,,	32	M.	M.	7	1	1	14			6	,,	5	6 months	,,
70	,, 18, ,,	25	M.	H.	14	1	1	16			24	,,	23	3 ,,	,,
71	,, 26, ,,	55	M.	H.	3	1	1	16			8	,,	4	5 ,,	,,
72	November 3, ,,	1½	M.	M.	2	1	1	6			3	,,	8	2 ,,	,,
73	,, 5, ,,	85	M	H.	4	1	1	16			58	Phosphate	5	6 ,,	,,
74	,, 6, ,,	80	M.	M.	4	1	1	18			43	,,	5	6 ,,	,,
75	,, 8, ,,	18	M.	M.	7	1	3	11		6	10	,,	35	5 years	,,
76	,, 12, ,,	55	M.	H.	6	1	3	14		2	2	,,	16	2 ,,	,,
77	,, 20, ,,	38	M.	M.	9	1	3	16	1	2	30	Uric	40	3 ,,	,,
78	,, 21, ,,	45	F.	H.	6	1	2	18	1	2	0	,,	20	5 ,,	,,
79	,, 21, ,,	45	M.	H.	8	1	1	16			57	,,	10	2 months	,,
80	,, 22, ,,	28	M.	H.	4	1	2	16		2	50	Phosphate	25	2 years	,,
81	December 1, ,,	45	M.	H.	3	1	2	16		2	45	,,	15	1 ,,	,,
82	,, 8, ,,	55	M.	M.	5	1	2	16		6	2	Uric	15	3 ,,	,,
83	,, 8, ,,	10	M.	M.	4	1	6	6		4	35	,,	65	1 ,,	,,
84	,, 14, ,,	10	M.	M.	7	1	3	9		2	12	,,	20	1 ,,	,,
85	,, 16, ,,	60	M.	M.	5	1	4	10		4	30	,,	30	2 ,,	,,
86	,, 16, ,,	4	M.	M.	5	1	4	16		6	45	,,	35	2 ,,	,,
87	,, 21, ,,	25	M.	H.	6	1	4	18		2	36	,,	50	7 ,,	,,
88	,, 25, ,,	40	M	M.	5	1	1	16			20	,,	3	1 ,,	,,

TABLE I.—*(continued).*

Serial Number.	Date of Operation.	Age.	Sex.	Caste.	Number of Days in Hospital.	Number of Sittings.	Number of Times Lithotrite was Introduced.	Size of Cannula.	Weight of Calculus.			Variety of Calculus.	Time Occupied by Operation.	Duration of Disease.	Result.
		Yrs							Ozs.	Drs.	Grs.		Min.		
89	January 7, 1889	7	M.	H.	3	1	4	9		2	0	Uric	25	1 year	Successful.
90	,, 9, ,,	35	M.	H.	4	1	1	18		7	5	,,	10	2 ,,	,,
91	,, 25, ,,	3	M.	H.	4	1	1	7			10	,,	5	2 months	,,
92	February 1, ,,	12	M.	H.	4	1	1	8			6	,,	5	15 days	,,
93	,, 3, ,,	20	M.	M.	4	1	3	16		5	58	,,	21	3 years	,,
94	,, 9, ,,	2¼	M.	H.	5	1	1	6			7	,,	10	3 months	,,
95	,, 27, ,,	80	M.	M.	4	1	1	16		2	55	,,	8	1 year	,,
96	March 6, ,	2¾	M.	H.	5	1	3	7			55	,,	25	1 ,,	,,
97	,, 12, ,,	3	M.	H.	5	1	1	8			32	,,	10	6 months	,,
98	,, 25, ,,	55	M.	M.	6	1	5	16	3	0	23	,,	35	4 years	,,
99	April 5, ,,	4½	M.	H.	6	1	3	8		1	9	,,	25	1 ,,	,,
100	,, 17, ,,	70	M.	M.	5	1	3	16		5	15	,,	10	1 ,,	,,

TABLE II.—*Showing Particulars of 32 Lithotomy Operations.*

Serial Number.	Date of Operation.	Age.	Sex.	Caste.	Number of days in Hospital.	Weight of Calculus.			Variety of Calculus.	Duration of Disease.	Result.
		Years.				Ozs.	Drs.	Grs.			
1	August 5, 1887	4	M.	H.	11			6	Uric	1 year	Successful.
2	,, 8, ,,	4	M.	M.	13			20	,,	3 months	,,
3	September 15, ,,	6	M.	H.	10			10	,,	2 years	,,
4	,, 21, ,,	8	M.	H.	17		2	50	,,	3 ,,	,,
5	October 12, ,,	3	M.	H.	9			12	,,	3 months	,,
6	November 3, ,,	11	M.	M.	17			40	,,	1 year	,,
7	,, 9, ,,	5	M.	H.	13			30	Phosphate	1 ,,	,,
8	,, 16, ,,	3	M.	H.	11			?	?	4 months	,,
9	,, 21, ,,	2½	M.	H.	22			5	Uric	6 ,,	,,
10	December 3, ,,	2½	M.	H.	16		1	50	,,	2 years	,,
11	,, 14, ,,	3	M.	H.	12		1	40	,,	2 ,,	,,
12	,, 20, ,,	3	M.	M.	29			20	,,	1½ ,,	,,
13	,, 23, ,,	4	M.	H.	10		7	5	,,	2 ,,	,,
14	January 8, 1888	2½	M.	M.	10			58	Phosphate	1 ,,	,,
15	March 16, ,,	2½	M.	H.	17			4	Uric	6 months	,,
16	,, 18, ,,	3	M.	H.	23			4½	,,	2 ,,	,,
17	,, 22, ,,	12	M.	M.	20		1	55	,,	2 years	,,
18	,, 27, ,,	4½	M.	M.	17		6	40	Phosphate	8 months	,,
19	,, 28, ,,	5½	M.	H.	27		2	25	Uric and phosphate	6 ,,	,,
20	April 7, ,,	3	M.	M.	13			1½	Uric	16 days	,,
21	,, 8, ,,	2½	M.	H.	19			1½	,,	18 ,,	,,
22	,, 29, ,,	2½	M.	H.	16			3	,,	1 month	,,
23	May 2, ,,	5	M.	H.	11			12	Phosphate	4 ,,	,,
24	,, 11, ,,	4	M.	H.	21			52	Oxalate	1 year	,,
25	,, 24, ,,	7	M.	H.	15			6	Uric	3 months	,,
26	,, 24, ,,	3	M.	M.	16		1	30	Phosphate	6 ,,	,,
27*	,, 27, ,,	35	M.	H.	36	3	2	0	Oxalate of lime	10 years	,,
28	June 17, ,,	1½	M.	H.			1	0	Uric	1 ,,	Died.
29	,, 27, ,,	7½	M.	H.	7		3	5	Oxalate	2½ ,,	Successful.
30	October 23, ,,	2½	M.	M.	18		3	0	Uric	1½ ,,	,,
31*	March 29, 1889	30	M.	H.		3	4	0	Oxalate and phosphate	20 ,,	Died.
32	April 14, ,,	20	M.	H.	16		2	0	Phosphate	5 ,,	Successful.

* Suprapubic Cystotomy.

as "stone in the bladder" at all, on the somewhat novel ground that they were under twenty grains in weight, or had been removed by Bigelow's process entire through the urethra. As the question raised was one of considerable importance, involving, as it did, a proposal for a radical change in the nomenclature of calculous disease previously in vogue; and as Sir Henry's method of dealing with the statistics of my cases seemed to me somewhat objectionable, I thought it advisable to reply at some length—dealing with the question from many points of view—in the JOURNAL of July 7th, 1888. That paper still remains unanswered; for, in Sir Henry Thompson's rejoinder, published in the JOURNAL of July 21st, he does not attempt to grapple with any one of the arguments advanced by me in favour of the retention of the time-honoured definition of "stone in the bladder"—namely, any calculous formation, no matter of what size, which fails to pass out of the bladder spontaneously, and for the removal of which an operation is necessary. I have had the pleasure of receiving letters on this subject from many of the leading surgeons at home and abroad, and there seems to be a general consensus of opinion against the change in nomenclature proposed by Sir Henry Thompson. One of England's most distinguished surgeons, writing on this point, cynically inquires: If, in case of death occurring from the operation, the stone being below twenty grains in weight, we are to omit such a case from our list of operations for stone in the bladder? It is for the purpose of emphasising the possibility of such an occurrence that I have recorded Case LXIX in detail. I will venture to say that even Sir Henry Thompson himself would scarcely go so far as to reply in the affirmative to the above question. But if fatal cases of small stone are to be recorded, surely it would be both unscientific and absurd to omit recording successful cases.

There was one argument used by me against the proposed innovation, which is forcibly illustrated in the present paper. I refer to the impossibility of comparing the results obtained from lithotomy with those from litholapaxy, if calculi below a certain weight are to be omitted from the lists of the latter operation and retained in the lists of the former. It will be observed that amongst the 32 cases of lithotomy dealt with in this paper, there were no fewer than 11 instances of calculi under 20 grains in weight, or more than a third of the whole number; whilst amongst the 100 litholapaxy cases there were 18 such calculi below 20 grains in weight—a much smaller proportion. I must confess that I am unable to conceive any scientific principle under which the latter 20 instances could be excluded from the category of "stone in the bladder," and the former 11 instances retained. Or—to enter still further into detail—why should I exclude from my list of opera-

tions for stone in the bladder Case LXXII, already referred to, in which a calculus weighing 3 grains was removed by Bigelow's operation from a child only $1\frac{1}{2}$ year of age, and retain on my list Cases No. XX and XXI (List No. 2), in which calculi weighing $1\frac{1}{2}$ grain each were removed from boys aged 3 and $2\frac{1}{2}$ respectively by the cutting operation? The suggestion reduces the proposed innovation to an absurdity.

Having already trespassed on the space of the JOURNAL to a larger extent than I had intended, and, as I propose on a future occasion dealing comprehensively with some 250 cases of lithotomy performed by me up to date, my remarks on the 32 cases of lithotomy referred to in this paper shall be very brief.

It will be observed that amongst this number there were only three adults, the remaining being children on whom litholapaxy was contemplated, but found not to be feasible with the instruments at hand. In two of the adult cases litholapaxy was found impossible, owing to the large size and extreme hardness of the calculi. The suprapubic operation, by Petersen's method, was performed in both instances. In one, in which Surgeon-Major R. Drury was present, no difficulties presented themselves, and the patient made a rapid and complete recovery. In the other, at which Surgeon-Major I. Boulger was present, the operation was found extremely difficult, as, owing to the contracted and thickened state of the bladder, the organ failed to advance forwards and upwards when the rectal bag was inflated. The peritoneum was also bound down to the symphysis, and was opened in extracting the stone. Death resulted on the fourth day, the abdominal wound showing no signs of union, the ureters being found full of pus, and the kidneys highly inflamed. Anyone having experience of the former operation would say that Petersen's method was both simple and safe; anyone seeing the latter, that it was both difficult and dangerous. I mention my experience in view of the mischievous tendency there seems to be in certain quarters to extend this operation to instances of small and moderate sized calculi, which are, of course, best dealt with by litholapaxy; next to this by lateral lithotomy. In the third adult case median lithotomy was performed, as litholapaxy was found impossible, owing to the stone being impacted partly in the prostatic urethra.

There was one death amongst the lithotomy cases in children in a child $1\frac{1}{2}$ year old. This case was a source of great grief to me, as it was the first and only occasion on which I have lost a child from lithotomy, having previously performed lithotomy in 191 children, or lads below 16, without a death.

There were, then, three deaths amongst the 132 cases of stone in the bladder here referred to: one in connection with litholapaxy, one from suprapubic cystotomy, and one from perineal lithotomy. It will be remembered that amongst the 100 cases of stone operated on by me immediately preceding this series there was no death. So that amongst my last 232 operations (177 litholapaxies, 52 perineal and 3 suprapubic lithotomies) there was only a mortality of 1.30 per cent.—a result than which nothing better can be expected, and which is altogether attributable to the introduction of Bigelow's operation.

OBSTETRIC MEMORANDA.

PNEUMONIA COMPLICATING PREGNANCY.

ON the morning of June 14th I was requested to visit Mrs. T. I found my patient had taken to bed on the 13th, but had felt unwell for a few days previously, with feelings of chilliness and languor, but no recollection of a distinct rigor. I found her in the dorsal decubitus, complaining of much pain over the left mammary region, frontal headache, and a sensation of great prostration. Temperature 104.2° F.; pulse 125 to the minute. Marked dyspnœa, with shallow and frequent respirations, 40 per minute. Typical pneumonic cough, with scanty, dark-purple-coloured expectoration. Physical examination revealed slight enlargement of the affected side, resisting dulness over the lower two-thirds of the lung, increase of vocal fremitus, together with dry tubular breath sounds and crepitant rhonchus.

She was 33 years of age, with an excellent previous history, never having required medical attendance except at her confinements, of which she had had two. She was now between the seventh and eighth month of pregnancy, the movements of the child *in utero* being plainly discernible. A simple diaphoretic mixture was prescribed, together with hot poultices to the side and back.

June 15th. Condition much the same. Bowels relieved by simple aperient.

June 16th. Temperature 105°; pulse 130; respirations 50. Active delirium and insomnia. Expectoration very viscid and dark. A draught containing 10 grains of chloral hydrate, 20 grains of ammon. bromide, and 10 minims of "nepenthe," made up to an ounce with syrup of oranges, was ordered to be given for the insomnia, and to be repeated, if required, at two hours' interval.

June 17th. Condition the same as previous day, with the exception of some hours' sleep during the night, which, however, was not procured until a second draught had been administered.

June 18th. Patient had been very restless during the night, two sedative draughts being again required to induce sleep. Prostration very great; tongue dry and brown; abundant crop of herpes on lips. States she has not felt the child's movements since morning. Ordered brandy every three hours, and carbonate of ammonia mixture.

June 19th. Summoned at 6.30 A.M. by a messenger who stated the child was born and dead. Patient had had slight wandering pains in abdomen during night, together with diarrhœa, to which the pains were attributed, and about 6 A.M. was seized with one strong bearing-down pain, when the child, showing signs of commencing decomposition, was precipitately born. On my arrival I found my patient extremely prostrate, but buoyed up by a conviction that the birth of the child had removed "the inflammation." The respirations were over 60 to the minute; temperature 105.2° F.; pulse 140, weak and compressible. The colour of cheeks and lips showing marked want of proper arterial oxygenation. The uterus under friction contracted well, there being no difficulty in completing the third stage of labour by compression. Hæmorrhage trivial. The diarrhœa was kept in cautious subjection by a catechu and chalk mixture.

June 20th. Pneumonia symptoms much the same as yesterday; lochia scanty, and darker than usual; complains of pain over left iliac region increased by pressure. Diarrhœa moderated. Breasts tense, nodular, and sensitive. Ordered belladonna plaster to mammæ, and warm fomentations to lower part of abdomen and vulva.

June 21st. Crisis during early morning. Temperature 99°; pulse 120; respirations 40. Lochia plentiful. Since then my patient (with the exception of a slight acceleration of pulse and elevation of temperature on the seventh puerperal day) has steadily though slowly progressed towards convalescence, being for the last week able to sit up for a few hours each day, although unable to undergo any exertion without feeling much fatigue.

As points of interest in the above case I would specify:

1. The severe onset and large extent of lung tissue primarily involved, which Wernich states is usual when this complication supervenes during the later stages of utero-gestation.

2. The marked increase in the number of respirations after the emptying of the uterus, which would seem to confirm the opinions of Gusserow and Wernich that the intra-thoracic space is actually increased during pregnancy, and that the retention of the fœtus *in utero* is of itself on this account an element of safety to the mother, rather than of danger, as was formerly supposed from the belief that the encroachments of the gravid uterus upon the intra-thoracic space lessened the expansile capabilities of the unaffected portions of lung tissue.

3. I should have expected that the high temperature would have been adverse to such an early and abundant mammary secretion.

4. As to treatment: Had I again such another case, I should avoid the employment of chloral hydrate, or of any agent possessing powers of producing uterine contraction, the act of parturition, according to Fasbender, whether naturally or artificially produced, being a serious additional peril to the mother's life; but whether in the present case the drug could be held in any way responsible is extremely doubtful, as the probable fœtal death caused by placental anæmia, the high temperature, and advanced stage of pregnancy, would render the continuance of gestation extremely doubtful.

5. The probability of the child having died *in utero* would lead one to consider the advisability of effecting its early delivery; perhaps some of your readers of more experience than myself would give their opinion as to the safest methods to be employed under such circumstances.

6. From the high pulse rate after the birth of the placenta, I

was pleasantly disappointed at the small amount of hæmorrhage.

7. The early appearance of herpes in an attack of uncomplicated pneumonia I have always regarded as of favourable import; I have never seen this symptom thus mentioned in any of the ordinary textbooks. My attention was first directed to it by an old and observant practitioner, and I have had ample opportunities of verifying it since.

Gosberton. J. G. M. G. STACK, L.R.C.P.ED., L.R.C.S.I.

MISCARRIAGE OF TRIPLETS OF DIFFERENT DEGREES OF DEVELOPMENT.

THE following case was suggested to me by the one recorded in the JOURNAL of September 28th by Mr. Bothwell:—

In September, 1886, I was summoned to M. P., who was about six months advanced in her eighth pregnancy. She informed me that she had an offensive vaginal discharge for ten days past, and now had distinct bearing-down pains. On examination I found a small oval body hanging from the cervix, which, on being drawn down, turned out to be a fœtus of about three months, brown and withered, and decomposing. A few hours later, regular pains having set in, I delivered her of a well-formed child of between five and six months, and almost immediately after, to my surprise, a third fœtus was expelled of not more than two months. Sharpish hæmorrhage taking place, I extracted the first placenta easily enough, but the second was firmly adherent to the uterine wall, and, being exceedingly soft and friable, had to be removed piecemeal; from it proceeded the cords connected with the blighted fœtuses.

The patient, though showing at first some septic symptoms, did well, her temperature being normal in a week. This case seems worth recording, owing to the presence of three fœtuses of different degrees of development, which I believe to be rare, and to the toleration shown by the uterus in retaining its contents for some two months after the death of two of them. In conclusion, the second placenta showed distinct signs of fatty degeneration, and my patient had a very clear history of syphilis.

Solihull. A. VAUGHAN BERNAYS, B.A., M.B.Cantab.

THERAPEUTIC MEMORANDA.

SULPHONAL.

I WAS pleased to read Dr. Gilbert Richardson's note on sulphonal in the JOURNAL of September 21st, pointing out the advantage of this drug in the treatment of mania.

I can confirm all that he says, and would further call attention to one special virtue of sulphonal, which is, that it can easily be administered without the knowledge of the patient, which cannot be said of opium, bromides, hyoscyamine, etc. Recently I was able to keep a violent lunatic in a perfectly tranquil condition for three days by the simple addition of pretty large doses of sulphonal to the patient's tea, morning and afternoon, and coffee at bedtime, and without the slightest suspicion on the part of the invalid.

In the insomnia of locomotor ataxy I have also had good results from sulphonal. One point to bear in mind in prescribing sulphonal is that, if too small a dose is given, it frequently produces a restlessness which is quite as dreadful as that of the morphinomaniac who is deprived of his morphine.

Blackpool. GEO. C. KINGSBURY, M.A., M.D.

IN my hands sulphonal has proved useless as a sedative when employed even to the extent of full doses (25 grains) in gastric ulcer. In similar quantities it is just as unserviceable in fibrous or acute rheumatism, pleurisy, or painful menstruation. In most if not in all diseases in which pain is present, its administration does not lead to sleep. In no sense therefore can it be regarded as a "pain killer." Fifteen grains, however, combined with eight grains of antipyrin, will generally ensure a quiet night for the subjects of fibrous rheumatism. Its insolubility is somewhat of a drawback, and this objection is more or less overcome by mixing it in a wineglassful of equal parts of warm milk and water. Such an arrangement dissolves some, and helps to suspend the undissolved portions of the drug, and also favours its speedy absorption.

In the wakeful patient who seems to suffer from nothing else but wakefulness it certainly is successful, as it induces refreshing sleep and does not leave behind any symptoms of cerebral congestion which so often follow the exhibition of opium or its salts. I have lately witnessed the benefits derivable from its employment in the case of an otherwise healthy young man who was the subject of simple mania. The patient had slept very little for weeks, not probably more than an hour or two a night; a dose of fifteen grains was followed by a restful night, which seemed to bring back the sleeping habit, for the sufferer has rested fairly well since the prescribing of one such dose. A fortnight has now elapsed, and he puts in a good night's rest, meantime his mental condition has undergone a perceptible improvement. The foregoing amelioration with such a dose was not so manifest in an instance of mania of the talkative variety occurring in a woman at her "turn of life" who was robust, and who, with the exception of her mental trouble and functional irregularity, was otherwise in good health. Her delusion turned on her husband, whom she accused of all forms of inconstancy. Fifteen grains used with her had little if any effect, and the amount had to be increased to twenty-five grains, when the necessary amount of tranquil sleep was ushered in; since then it has been found necessary to give a like quantity every second night. A combination of chloral, bromide of sodium, and morphine had previously been given at bedtime to this woman, and had to be abandoned, as the compound only served to excite her, and doubtless aggravated her delusion or placed it in a more vivid light by the cerebral excitement which followed. The tablets of the sulphonal prepared by Messrs. Burroughs, Wellcome and Co. I have found very reliable; each contains five grains of the medicine, and people who object to take a draught take them very readily.

Administered as an enema, sulphonal is by no means so efficacious as when swallowed. For obvious reasons it is never likely to come into general use by the hypodermic method.

CHARLES MACDOWELL, M.D.T.C.D.,
Surgeon, Carlow Union Infirmary; Visiting Physician, Carlow and Kildare Asylum.

PATHOLOGICAL MEMORANDA.

FIBROID THICKENING OF THE SPLENIC CAPSULE.

THIS pathological condition of the spleen is one which, although recognised and described a good many years ago, seems to have quite escaped the observation of later morbid anatomists. This is the more surprising in that the appearance of the organ when thus affected is most striking. I shall briefly report a case of my own, refer to a similar case lately recorded in this JOURNAL, and then give the original description of the disease.

S. D., male, aged 66, died in St. Bartholomew's Hospital on August 14th, 1888. When making an examination of the body on the following day I found the pancreas infiltrated with hard glandular-celled carcinoma. There were secondary deposits on both lungs, none elsewhere. The pressure exerted by the slightly enlarged head of the pancreas had been the cause of considerable bile-engorgement of the liver, with attendant jaundice and some ascites. The only other morbid change in the body, besides a general wasting, was found in the spleen. There was nothing remarkable about the size of the organ, but on its convex surface it presented a hard dense coating of a yellowish tinge. This coating was thickest in its middle part—here about the thickness of a half-crown—and smooth; towards its periphery it thinned off somewhat, and presented a rather irregular surface. It covered the entire convex surface of the organ, but did not pass over on to the concave. The coating separated readily from the splenic pulp, which itself was of natural appearance and consistence. The bulk of the thickening consisted of regular layers of bands of white fibrous tissue, lying longitudinally as regards the surface of the viscus. Neighbouring bands passed into each other in a manner recalling the minute arrangement of the musculature of the heart, that is to say, individual bands bifurcated, and the two portions passed into other bands lying either immediately above or below. Between the bands were a number of fine longitudinal slits, certainly lymph spaces, which probably had a distinct lining membrane, and in which small round cells were occasionally to be seen. A number of similar cells were seen scattered here and there over the surface of the section. There were no cartilage cells, and it was scarcely necessary to say that the coating was not carcinomatous in its nature. Below this there was a shallower layer of more condensed tissue, the exact details of which were not readily to be made out, and which probably represented the normal splenic

capsule. Then came the splenic pulp, which appeared quite natural.

Dr. David Hamilton[1] has recently described a like case. The patient, a male lunatic, had died with chronic heart and kidney disease. The spleen is described thus: "The diaphragmatic or convex surface white, hard, and glazed, presenting, in fact, a cartilaginous appearance, which extended round to the internal surface.....Under the microscope it (the capsule) presented all the appearance of white fibro-cartilage." Dr. Hamilton's case and my own, then, except for some slight difference in the microscopic appearance, correspond closely.

The following, the only other description of the condition which I know of, is quoted at length from that most excellent book on morbid anatomy by Dr. Matthew Baillie.[2] "*Coats of the Spleen Cartilaginous.*—The cartilage is generally to be found on the convex surface of the spleen, and extends over more or less of it, in different cases. It is much thicker in one case than another; in some being no thicker than a shilling, in others being four times as thick. It is generally formed in a smooth layer, but occasionally it is somewhat irregular. [I have also seen, in some instances, small spots of cartilage over the whole surface of the spleen.][3] It would appear that ossifications are sometimes to be found in this cartilage, but in the cases which have come under my own examination bony matter was not to be observed. The cartilage into which the coats of the spleen are changed does not resemble the cartilage at the extremities of the bones, but more that of the nose and ears, although it is generally of a whiter colour. This diseased process, it is natural to think, is slow in its progress, can hardly produce any impediment to the functions of the spleen, and is probably not marked by any peculiar feelings to the patient."

To this but little may be added, save in the way of speculation as to the exact cause of the thickening. It might be due to a chronic capsulitis, but then there is no reason why it should be limited to the convex surface. Again, it might be the result of the organisation of lymph deposited from ascitic fluid; to this, however, the same objection is applicable. Moreover, a similar condition ought to be found at the same time on other viscera, on the capsule of the liver, for instance. It seems to me that, on the whole, the most probable way of explanation is to say that it is due to the intermittent friction of the convex surface of the spleen against the under surface of the diaphragm, that it is in some measure analogous with the "milk spots" occasionally seen on the anterior surface of the heart.

ALEX. G. R. FOULERTON, M.R.C.S., L.R.C.P.Lond., Resident Assistant-Surgeon to St. Bartholomew's Hospital, Chatham.

CLINICAL MEMORANDA.

SUSPENSION FOR LOCOMOTOR ATAXY.

I HAVE ordered suspension in only two cases of locomotor ataxy.

CASE I.—A. M., aged 51, admitted into the Leeds Infirmary on February 18th, 1889. Usual symptoms and signs in legs; incoordination of hands; difficulty in making fingers meet, picking up pin, etc. No sensory disorders except slight tactile impairment in feet and legs; has smoked much. Three years ago first found legs unsteady; unable to work for six months. Suspension ordered, but the apparatus was out of repair. While it was being mended patient improved so much that it was not used. On March 23rd, he went out greatly improved, not having undergone suspension at all.

CASE II.—T. O., aged 39, was admitted on April 17th, 1889. Gait very unsteady; when feet are placed side by side he sways much; if eyes are then closed he falls; co-ordination impaired in hands and arms; pupils react to accommodation but very slightly to light; syphilis 20 years ago, married 14 years; three children alive and well; wife had two miscarriages; seventeen months ago felt want of power in right arm and leg; thenceforward ordinary history.

May 22nd. Suspension for five minutes, toes just touching the ground; felt no discomfort. The suspension was continued daily until June 3rd, when it is noted that there was not the smallest improvement in any way; indeed, he was worse. On June 10th he was made out-patient, "decidedly more ataxic than on admission."

As there seemed to be no reason why suspension should be expected to do good in such cases, I have not again subjected any similar case to the treatment. Dr. Saundby's cases (and we are much indebted to him for publishing them) strengthen my own impression that the method will be found useless.

The suspension treatment came to us from France. The French seem to be more impressionable than some other people, and to have symptoms, due in some of them to functional (and, therefore, more readily reversible and recoverable) disorders, such as in most English people only appear as the result of downright organic change. This amenability to molecular or functional disorder is a concomitant and "penalty" of that fine genius and high susceptibility which make the Gallic life, in a certain sense, more pleasurable, but probably more variable, and at times more acutely painful than that of some of their neighbours. This may account for the occasional failure in the hands of myself and others of plans of treatment which seem to be very successful when employed by French physicians.

T. CHURTON, M.D.,
Physician to the Leeds General Infirmary.

AGORAPHOBIA.

MY first notes of this case are dated December, 1888. E. A. V., aged 38, male, married, of very excitable temper. Is myopic — 3D. At present suffering from well marked hysteria with "globus." In July, 1882, had an attack of "brain fever," was much reduced in health; during convalescence, went to Gisburn, and after being there three weeks, went out on the moors and got a start from one of his companions. This happened on Tuesday; on the following Saturday he walked to Barnoldswick, about two miles, and when returning through the fields was overtaken by a sudden fog. Immediately he was seized with "deadly terror, palpitation and profuse sweating." These symptoms, the patient informs me, recur when he finds himself in any large open space away from human companionship.

I ordered bromide of potassium, which was followed in a few days by valerianate of zinc and iron. I then lost sight of him till May, 1889; he then stated that after his recovery from the December attack he found his dread of open spaces had vanished, and that he can now follow his employment, as insurance agent, with comfort and move freely about the country alone.

It appears to me as if in this case the sudden fear that he was lost and dying were produced in a man already below par, by the fog and the myopia together, and that the recurrence of the former symptoms of fear, etc., were produced by the suggestion of similar surroundings to a myopic and hysterical subject.

Burnley. ROBT. RUTTLE, L. M. and S.Dub.

GASTRIC DISTURBANCE SIMULATING ALCOHOLIC POISONING.

A FORTNIGHT ago I was called to attend a lad, aged 12, to all appearance suffering from acute alcoholism. He staggered in at the door, with a vacant look, and answered questions incoherently. He then threw himself down on the hearthrug, and rambled in his speech; at times writhing with pain, which he referred to the epigastrium. His pupils were widely dilated; pulse quick, weak and irregular; face alternately flushed and pale; his breathing was quick, but there was no smell of alcohol. I ordered an emetic, but before it was given he was violently sick, bringing up a quantity of undigested green apples, after which he fell off to sleep. On seeing him later he was himself again, and told me he had eaten over a dozen hard green apples, but had not had anything to drink. All that had occurred after the eating of the apples he was unconscious of.

REMARKS.—The interest in the case lies in the close resemblance of the symptoms to those of alcoholic poisoning, so much so that at first I was unable to give a positive diagnosis; and his parents were in great trouble, as they had made up their minds, from his manner, that he had been drinking.

Tiverton, Devon. C. E. LIESCHING, M.R.C.S., L.R.C.P.

UNUSUAL EFFECTS OF ANTIPYRIN.

SOME two years ago, whilst residing in the south of France, a patient of mine—a martyr to neuralgia—was recommended antipyrin in doses of 20 grains, to be repeated in three hours if required, and has used it constantly, if not recklessly, ever since. No doubt it acts like a charm on the neuralgia, but it also produces a condition of the mucous membrane of the lips, tongue, and mouth which reduces the cure to the level of the disease.

[1] JOURNAL, September 14th, 1889.

[2] *The Morbid Anatomy of the Human Body*, by Matthew Baillie, M.D., F.R.S., etc. Third edition. 1807.

[3] Some different condition of the spleen is probably referred to here.

About half an hour after the administration of the drug a slight itching of the lips and tongue is observed, accompanied by an increased flow of saliva. The lips assume a dark purple colour, with a sharply-defined edge where the mucous membrane runs into the true skin, exactly like the painted lips of actors when closely seen. This is followed by considerable swelling of the tongue and small white patches on the surface of the labial, buccal, and sublingual mucous membrane, which extends to the fauces when the dose has to be repeated. At this period the pain and irritation are considerable, mastication is impossible, and even the swallowing of fluids causes no little difficulty. In the course of twenty-four hours small shallow ulcers take the place of the white patches, and subsequently heal readily enough. I may add that from first to last there is no constitutional disturbance.

I have neither seen this effect alluded to in books, nor have I met anyone who has observed it; hence this note.

D. C. G. Bourns, F.F.P.& S.G., Surgeon-Major M.S.

Shoeburyness.

OBSTRUCTION OF WHARTON'S DUCT.

Never having met before with the following little accident, during an extensive house-surgeoncy and dispensary experience, it occurs to me that it may possibly be rare enough to merit mention in your columns,

Two or three days ago a drapery salesman called, in great distress, complaining of pain and swelling in the neck. The evening before he noticed some discomfort under the jaw; in the morning it was somewhat worse, but during his mid-day dinner it rapidly became more swollen and painful. I found a large tender swelling in the submaxillary triangle on the left side, evidently the greatly distended submaxillary gland. The history pointed distinctly to obstruction of Wharton's duct, and, on his opening his mouth, I found a thick, short fishbone, with its thicker end at least one-eighth of an inch in the left duct. He was unconscious of its presence, and was inclined to ridicule the removal being all that was necessary. However, by night the gland had returned to its normal size and condition.

Liverpool. John D. Hayward. M.D.Lond.

MUMPS: ORCHITIS: MENINGITIS.

In the following case, symptoms of meningitis complicated an attack of mumps. The patient, a male, aged 27, had swelling of both parotid glands on May 18th; on May 20th the swelling of the parotids had disappeared, but the left testicle was swollen and very tender; the temperature was normal and the pulse quiet; on May 22nd the testicle was much smaller and less tender, but severe headache and photophobia developed, with slight delirium; the temperature ran up to 104.2° F., and the pulse to 128. Four days later, the temperature had gone down to 97.8° F., and the pulse to 68; the patient making a good recovery. Dr. Muirhead, in Quain's *Dictionary*, says: "Inflammation of the coverings of the brain is to be feared on sudden subsidence of the inflammation of the parotid, if no orchitis follows the disappearance of the original affection;" but, in the above case, both complications were present.

Aylesbury. T. G. Parrott, L.R.C.P., M.R.C.S.

EXTRUSION OF GALL-STONES BY DIGITAL MANIPULATION.

It may prove useful to some of the members who have not tried extrusion of gall-stones by digital manipulation, if I simply describe the history of a case of gall-stone impacted in the common bile duct for over five months.

Mrs. S., aged 45, of a healthy family (says that her mother suffered from gall-stones for fifteen years), had always good health till one night, about 12 o'clock, she was seized with a violent pain in the region of the gall-bladder, which lasted till nearly the morning, felt sick and vomited; a day or two after this she noticed that her urine was a porter colour and that her motions were pale. She suffered from a dull, aching pain in the epigastrium, with tenderness on pressure over the gall-bladder, and had deep jaundiced skin and eyes, with violent itching of the skin. In this state she remained over five months, gradually losing flesh and strength during that time. I tried almost every medicine that is recommended without the slightest result. She began to think that she would never get well, and asked me to allow her to go into a hospital, in order to have an operation performed. Before consenting, I tried digital manipulation with the best result. I commenced by giving a dose of tincture of belladonna, and, after a few hours, I dipped the fingers of my left hand deep into the abdomen below the liver, and with the right pressed gently on the fundus of the gall-bladder. By this means I could feel that I pressed out the contents, and within twenty-four hours I found a stone, about the size of a hazel-nut, in the motions. I continued the pressure over the liver and gall-bladder for ten or fifteen minutes at a time for the next four days. After this the jaundice disappeared, the urine lost its dark colour, the motions regained their proper appearance, the patient got better rapidly, and in two months' time was quite well. Since then, I have had another patient suffering in the same way for over four months. I pursued the same treatment with complete success.

Clapham Road, S.W. A. Wylie, M.D.

TOXICOLOGICAL MEMORANDA.

POISONING BY HELLEBORE.

Late one evening a young man, driver of a milk-cart, was brought to me suffering from violent and incessant vomiting and retching, the matter ejected consisting of frothy mucus. He was collapsed, with slow pulse, 48, dilated pupils, and dazed expression; complaining of burning pain at the epigastrium and sense of constriction in the throat; the fauces were swollen and reddened. I elicited the following history: He had recently contracted gonorrhœa, and hearing from an acquaintance, another young man, that hellebore, or, as he pronounced it "elleboroo," was the finest thing in the world for the complaint, sent to a homœopathic chemist and was supplied with a large packet of the drug, in fine powder, labelled "Poison," the quantity supplied being about four ounces, the chemist being informed that it was required for flea powder. He then called for a glass of water, and jerking some of the powder, thought to be quite two teaspoonfuls, into the water, he stirred it up, and drank it off, with the remark "Here goes kill or cure." He was soon seized with violent cramping pain, giddiness, dimness of vision, inability to stand, and violent vomiting. The people of the house where he lodged, alarmed at his condition and not knowing what he had taken, put him into a vehicle and drove him to my house, a distance of two miles. On reaching home after his visit to me his pulse had fallen to 40. I had him placed in bed, and applied mustard to the epigastrium and administered brandy as an opiate, with demulcent drinks, having previously assisted the vomiting by draughts of warm water. The vomiting ceased soon after his return home, and next morning he was quite recovered, but feeling sore all over.

I have never met with an instance of poisoning by this drug, and should think that instances must be of rare occurrence. Christison says the hellebores are narcotico-acrid poisons, and mentions a case where a tablespoonful of the powder of the root of helleborus niger caused very similar symptoms to those I have narrated, and recovery ensued. He also instances others which were followed by a speedily fatal result, with signs of inflammation in the digestive tracts and engorgements of the lungs.

Bromley, Kent. Herbert J. Ilott, M.D.

SURGICAL MEMORANDA.

LONGITUDINAL OBLIQUE FRACTURE OF THE RADIUS.

On June 27th, 1889, Miss M., in walking along a corridor, slipped off a mat and fell forwards on the palm of her right hand, with the arm well in front. On getting up, she felt considerable pain in the neighbourhood of the right elbow-joint. She, however, continued her employment until the evening, when, the pain having much increased, she called on me for advice. On examination I found considerable swelling over the head of the radius, and any attempt to rotate the forearm caused great pain. The head of the radius rotated with the shaft, showing that it was not separated. From the top of the radius, for an inch a half along the shaft, osseous crepitation was distinct. The diagnosis was longitudinal oblique fracture of the head and shaft of the radius. Knowing this fracture to be of extreme rarity, I asked Mr. Henry E. Clarke, of the Royal Infirmary, to see the case, which he did and fully concurred in the diagnosis.

I put the arm up in a rectangular splint, with a piece of light tow over the external surface of the elbow-joint, and kept it up for five weeks. Recovery is complete, although it was a consider-

able time before the special movements of the radius could be accomplished without pain. The points of interest in the case are (1) the extreme rarity of the fracture; (2) the cause, a fall on the palm of the hand, which usually produces a fracture in the neighbourhood of the wrist-joint. I shall be pleased to hear if any of your readers have seen a similar injury from a like cause.

Glasgow. A. DRYDEN MOFFAT, L.R.C.P., L.R.C.S.Edin.

REPORTS

ON

MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

COUNTY INFIRMARY, LONDONDERRY.

CASE OF HYDROPHOBIA.

(Under the care of Sir WM. MILLER.)

[Reported by J. G. COOKE, M.B.Dub., House-Surgeon.]

H. Q., aged 25, a labourer, was bitten by his own dog on the left hand on February 12th, 1889. He had the wounds, which were not severe, cauterised at the infirmary some hours afterwards. No history of the dog, which was shot, could be obtained. Though the patient appeared to have been for some weeks in fear of hydrophobia to some extent, he continued in good health till March 29th, when he found some difficulty in swallowing. This, as well as weakness, increased till April 4th, when he came to the infirmary, having walked a quarter of a mile to meet a conveyance.

On admission, he stated that he had a bad cold, especially in the throat, which affected his swallowing; that he left home owing to the "dust," and that his left arm was "dead" from his having slept on it. Expression of face somewhat anxious; pupils normal; tongue white, furred. On offering him a drink a marked laryngeal spasm comes on, usually ending with a deep sigh or gasp. Heart and lungs normal; pulse 100, respiration 20, temperature 100°. Urine, acid; specific gravity 1030, albumen a trace, no sugar, chlorides and phosphates abundant, urates on cooling; no photophobia; does not mind liquids poured out in room; right arm powerful; left arm powerless, unable to raise it or move fingers; asked as to sensation states that it is "dead"; impatient at being questioned. 7 P.M. Slept for some time to-day. Took egg and bread soaked in beef-tea without much difficulty. Temperature 99.5°, pulse 110, respiration 24, irregular.

April 5th. Had a very restless night, shouting, and imagining that there was water in the room. Spasm more severe; takes food with greater difficulty; can only take warmed fluids in teaspoonfuls, ejecting much from his mouth. Pulse 140, temperature 100°, respiration very irregular. 7 P.M. Hyperæsthesia has been very marked all day. Breath on the face causes spasm; calls out that he is in a "draught"; photophobia extreme; imagines that he is swallowing the fire; every noise annoys him; very impatient; can only take fluids when brought to his mouth from behind him; making constant attempts to get out of bed, but the paralysis prevents him. Pulse 130, very small; temperature 100°; passing urine from time to time.

April 6th. Had a very restless night; shouting and calling the attendants by strange names; has long intervals of apnœa, respiration ceasing suddenly even in the middle of a conversation, and not recommencing for a quarter to half a minute, his face becoming quite livid; very weak, and cannot raise himself in bed at all; spasms very severe. Pulse 140, very small; temperature 99.5°; urine, specific gravity 1035, albumen, urates, no sugar. 7 P.M. Has been dull and drowsy all day; weakness extreme; takes very little nourishment.

April 7th. Had a restless night; constantly trying to get out of bed, and shouting for help; mouth and fauces clogged with sticky mucus; can take no food; passes urine from time to time, always asking for the vessel. Pulse too fast to count; temperature 100°. 3 P.M. Very dull; recognised his brother, but apnœa came on while talking to him, and he did not recognise him again; pupils widely dilated. 6 P.M. For last three hours quite unconscious; pupils dilated and insensible; vomits from time to time quantities of thick mucus; clutches at left arm with right hand from time to time; some twitching of muscles of expression. Died at 8 P.M.; respiration going on after heart had ceased to beat; rigor mortis well marked; no *post-mortem* was possible.

REMARKS.—The spasms, restlessness, and impatience with all about him, for which he apologised by saying he was "nervous to day," the strange ideas that filled his thoughts, that he was in a ditch, or deserted in a large field, and such like, were all characteristic of hydrophobia. On the other hand, the remarkable features of the case, which were of the "dumb" form of rabies, more common in lower animals than in man, were, 1, the duration (nine days from onset of symptoms); 2, absence of mania at any time; 3, the hemiplegia, the left arm completely paralysed, the left leg much less so, but still paralysed to a marked degree; 4, the slight amount of expectoration, much saliva evidently being swallowed; 5, absence of priapism; 6, the cicatrix was at no time affected.

REPORTS OF SOCIETIES.

OBSTETRICAL SOCIETY OF LONDON.

WEDNESDAY, OCTOBER 2ND, 1889.

A. L. GALABIN, M.D., President, in the Chair.

Report.—A report was read on Mr. Stewart Pollock's specimen of Dermoid Ovarian Tumour from a mare, exhibited before the Society in July.

Specimens.—Dr. WILLIAM DUNCAN exhibited (1) a Dermoid Ovarian Tumour; (2) an Ovarian Cyst; (3) Pyometra and Pyosalpinx, with Suppurating Kidney and Thrombosis of the Renal Artery, from a patient subject to syphilitic disease of the rectum.—Dr. J. PHILLIPS showed some Blue Urine from a case of cyanuria.—Dr. CULLINGWORTH exhibited a Hæmatosalpinx from rupture of a varicose vein in the Fallopian tube.—Mr. WOODLEY SLYMAN brought forward an Acardiac Fœtus with Rudimentary Heart.—Dr. J. SHAW, a Uterine Douche.

A Contribution to the Anatomy of the Pelvic Floor.—In this paper, by Dr. G. ERNEST HERMAN, Obstetric Physician to the London Hospital, measurements were detailed which showed the great normal variations in the conformation of the parts which formed the floor of the pelvis. It was shown that the projection of the pelvic floor varied from none at all to as much as 2 inches, and that in healthy nulliparæ the distance between the coccyx and anus, the length of the perineum, the distance between the fourchette and the symphysis pubis, and the length of the vagina were subject to wide variations. It was pointed out that since these variations existed in healthy nulliparæ peculiarities observed in parous women should not be assumed to be changes due to childbearing, unless it had been ascertained that they were not present previous to pregnancy. The clinical importance of these anatomical variations, in their bearing on the liability to rupture of the perineum and to prolapse, the adjustment of pessaries, and some forms of dyspareunia and sterility was pointed out.

On the Changes of the Pelvic Floor which Accompany the Slighter Degrees of Prolapse.—The author, Dr. HERMAN, described the descent of the pelvic floor which took place during effort in health, and was morbidly increased in prolapse. Measurements were given which showed that this descent in health probably did not exceed three-quarters of an inch. This descent took place partly by stretching of the sacral segment of the pelvic floor in an antero-posterior direction, and partly by its recession downwards and backwards from the symphysis pubis, a movement which implied transverse stretching. In the antero-posterior stretching the perineum and the part posterior to the anus took part to about the same proportionate extent. The normal descent of the pelvic floor was accompanied with descent of the uterus into the vagina to the extent of about five-eighths of an inch. These changes might be morbidly increased, and their relative extent morbidly altered. The descent of the pelvic floor might exceed two inches. This morbid increase of descent of the pelvic floor might be present without increased descent of the uterus into the vagina. In other cases it might be accompanied with descent and protrusion of the anterior segment of the pelvic floor, with or without the uterus. In such cases, when a protrusion at the vaginal orifice had taken place, further effort increased this protrusion, but did not increase the descent of the sacral segment of the pelvic floor. Backward displacement of the uterus was often present without more descent of the uterus or of the pelvic floor than was present in most healthy women; but in most cases of backward displacement of the uterus the descent of the uterus and pelvic floor was increased. Backward displacement of the uterus was not associated with

shortness of the vagina. Although the symptoms of descent were usually relieved by suitable mechanical support, yet the amount of descent of the uterus or of the pelvic floor was not the measure of the severity of the symptoms. There might be symptoms with slight descent in some patients, much descent without symptoms in others, and in the same patient the symptoms might be present at one time and absent in another, although the amount of descent had not varied, showing that the symptoms were conditioned more by the state of the nervous system than by the local mechanical changes.—Dr. GRAILY HEWITT considered that Dr. Herman deserved much credit for his analysis of the phenomena observed in cases of slighter degrees of prolapsus. The subject was of vast importance; for the effects of so-called minor displacements, though not dangerous to life, destroyed all enjoyment of it. The patient's sufferings often became intensified, so that in later years serious impairment of the uterine functions often followed neglect of the symptoms of minor displacements in their earlier stages. Dr. Hewitt was glad to find himself in agreement with Dr. Herman on many points in reference to descent of the uterus and its effects in producing suffering. He believed, however, that in these cases the principal cause of the suffering was the exaggeration and intensification of the version or flexion of the uterus more frequently associated with descent of that organ. Descent of the uterus, pure and simple, was rare, but descent accompanied with flexion or version was very common. In estimating the effects of the displacement it would be necessary to find out how much of the suffering was due to the mere descent, and how much to the increased flexion or version. So far as backward displacement was concerned, Dr. Herman noted that descent was thereby increased. Nothing had been said about anteflexion. Dr. Hewitt believed that anteflexion not yet rigidly set in that shape, the uterus being still fairly movable, might be regarded as not abnormal. The case was quite different when the organ was sharply bent forward, the fundus low down and the uterus firmly resisting alteration of shape and position. Dr. Herman noted several cases of cystocele. In these cases the anteflexion was probably an important causative element. Descent of the pelvic floor was chiefly important because it brought about increase of flexion, and consequent increase of discomfort.—Dr. HERMAN regarded anteflexion as one of the natural shapes which the uterus might assume. He had investigated the frequency of anteflexion in the healthy uterus, and laid the results before the Society, *Transactions*, vol. xxiii. Vedeler had made a similar research, with substantially the same result, namely, that acute anteflexion was very common in health. No one else had investigated the question. Backward displacements caused symptoms in but a small minority of cases; not by any effect of the bending of the uterus, but by the torsion, and pressure on the broad ligaments which returned the blood from the uterus. In a case described that evening, a patient was kept for two months in hospital, and all her symptoms went away, yet the retroflexion remained exactly as it was on admission, showing that it was not an important feature of the case.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

FRIDAY, OCTOBER 4TH, 1889.

H. CAMPBELL POPE, M.D.Lond., F.R.C.S., President, in the Chair.

THIS was the opening meeting of the eighth session of this Society.

Specimens.—Mr. KEETLEY showed some loose cartilages removed from two knee-joints; also a portion of a kidney crushed off by a waggon-wheel, and removed through a lumbar incision.—Mr. PERCY DUNN showed some recent additions to the museum of the West London Hospital.

President's Address.—The PRESIDENT then delivered an address on the Beginnings of Disease. He said the beginning of disease in any individual might be from the moment when the male and female elements of which he was composed had united together to commence the developmental process. Structure was due to the operation of heredity and environment; given healthy structure, evil could only come through environment. Environment was potent in modifying structure in proportion as it acted early in the life of the individual. The influence of environment was discussed at great length. It was suggested that the Society should appoint a committee to draw up a card, so arranged that it would show at a glance the structure and previous environment of the patient. The card should be in the patient's possession, a corresponding card or counterfoil being kept by his medical attendant. Those counterfoils would soon, if used by a large number of practitioners, represent an amount of experience which was now almost lost, in that it died with its possessors. It might be worth the while of Government, when it had a Ministry of Public Health, to devote an office to the collation and classification of those facts, and the issue of such cards to the army and navy medical departments could not fail to bring much valuable information to light. Illustrations of the value of change of environment by foreign travel were given, and the possibility of making the environment at home less prejudicial by improved sanitation was dwelt on in some detail.

REVIEWS AND NOTICES.

A TEXTBOOK OF PHYSIOLOGY. Parts I and II, comprising Books 1 and 2. By M. FOSTER, M.A., M.D., F.R.S., Professor of Physiology in the University of Cambridge, etc. Fifth Edition. London: Macmillan and Co. 1889.

FOSTER'S *Textbook of Physiology*, when first published in 1876, filled a gap which had existed for some time. It was practically the first work in English which dealt with what might be called modern physiology, a science which has made gigantic strides during the last thirty years. Physiology is one of the most difficult of sciences to express clearly. Histology is cut and dried to a great extent, but where the function of tissues has to be explained, exposition becomes extremely difficult owing to the great complexity and multitude of the facts dealt with, and to the contradictions (apparent or real) of the experimental observations of different workers. In a textbook the writer might readily fall into the error of bringing before the student too many of these contradictions and controversies, and thus confusing his mind at the outset, prevent his appreciation of the fundamental facts of physiology. Dr. Michael Foster, by his clear exposition and the expunging of controversial discussion, has done a great deal in his textbook towards making physiology more real and apparent to the student. There is, in fact, a charm in the exposition of the subject, such as is rarely met with in works on pure science. The grace of language does not, however, lead to the exclusion of facts, and the student will find all the main facts of the science in the work.

The present edition has been enlarged. Part I treats of "Blood," the "Tissues of Movement," and the "Vascular Mechanism." The increase in bulk is partly explained by the introduction of histological data concerning the various tissues and organs treated of. The descriptions of microscopic structure add, in our opinion, to the value of the book, and, with these fresh in his mind, the student will be able to grasp better the physiological problems brought before him. These descriptions are written in the same interesting and lucid manner which are characteristic of the whole work.

If the student, however, expects in this book to find details concerning the most recent discoveries, or a multitude of facts bearing on any particular point, he will be disappointed. From this aspect the book will not be so valuable to intending candidates for certain higher examinations as might be desired. Professor Foster has had a higher ideal before him than that of a mere cram-book, a mere accumulation of multitudinous facts to be committed to memory and forgotten when the examination day is over. His aim has rather been to teach the students the general underlying principles of physiology, the significance of great biological laws, and also the methods of examining and weighing evidence in disputed points.

The great body of the work remains the same, but some subjects have been extended in order to make the meaning more clear. Thus, under the heading of the "General Features of the Nervous Tissues," a more systematic description is given of the connection of the fibres in a mixed spinal nerve; and this is the more important because the medical student does not, as a rule, appreciate the value of accurate knowledge on this point until he comes to the study of nervous disease.

The large amount of work done during the last few years (chiefly in Dr. Foster's own laboratory) on the influence of the vagus on the cardiac beat has necessitated an expansion of the subject in the present volume. The diagrams representing the course of the augmentor fibres of the vagus in the frog, and of both augmentor and inhibitory fibres in the dog, are excellent.

The second volume appears opportunely with the commencement of the new winter session, and students will thus now have an authoritative exposition of some of the most important portions of physiological study. In it the author deals with the tissues of chemical action and their respective mechanisms—that is, digestion, absorption, respiration, excretion, metabolism, and nutrition.

Professor Foster has kept up in this edition the same general plan upon which the previous edition of the book was constructed, that is to say, the portions which were in earlier issues printed in small type, giving details of methods and results, have been either omitted or, where deemed necessary, incorporated with the general text. Any reference to authorities or names of investigators is also studiously avoided. In the present volume the names of even the most notable physiologists are never mentioned. As instances of this we notice that the classical experiment of Fick and Wislicenus, in ascending the Faulhorn, is described as the ascent of a mountain by two observers; and the history of glycogen contains no reference to Bernard.

There is no doubt a great deal to be said for this plan; it enables an author to write more continuously and present a more readable book than he would be able to do if the text were burdened with references and footnotes; it enables the reader to get more easily a grasp of the fundamental truths of the science; it relieves the student from attempting to remember a host of names which are of no interest to him; it relieves the examiner from discovering that the student has not succeeded in this effort, but quotes his authorities with a hopeless disregard of accuracy. We are of opinion that general textbooks for medical students should contain a minimum of references to names of scientists, and certainly regard it as a less fault that they should contain none at all than too many. We are, however, inclined to think that the exclusion of references may be carried too far, because the mention of a few fundamental and historical experiments lends a personal interest to the subjects under discussion, and, besides enabling the student, if he is energetic, to consult the original memoirs, form landmarks which tend to fix them on his mind. We also think that the historical portions of so changing a science as physiology at times teach lessons as valuable as the science itself.

The second volume is somewhat larger than the first, reaching to nearly 500 pages, so that in spite of the excision of details this part alone is about the same size as the whole textbook was at the time when the first edition was published.

In addition to fluency of style, the great distinguishing tone of the book is the judicial and impartial statement of evidence concerning such disputed points. The reader will no doubt be struck by the large number of cases in which the author leaves the matter open for final decision at some future time when our knowledge is deeper. Professor Foster is far too clear-headed and logical to pronounce final decisions where the evidence is insufficient or contradictory.

The reader will find as he goes through the book abundant examples to illustrate all the various excellences of Professor Foster's style to which we have alluded. Take, for instance, the origin of lymph; the long discussion of the question as to whether lymph arises by means of filtration or diffusion is an admirable lesson in the art of weighing evidence, and the outcome of it all is not to pronounce a positive opinion one way or the other, or to give the student in a few sentences something he may write in an examination paper. It seems to us that the object of the section in which this discussion occurs is really to make the student realise one of the fundamental facts that a living cell is a very different structure from the filters and dialysers of the laboratory, that it is not a constant unchanging thing, but is continually undergoing a building up and a breaking down, and the seat of different and sometimes opposite phenomena.

Some will perhaps turn to the sections relating to the spleen and other so-called ductless glands to discover the latest views with regard to their function. They will find the question approached in a very different manner from that in which it was treated by the older physiologists. Professor Foster shows that these organs cannot be considered separately or apart from the rest of the body; that we have to deal with a series of changes called collectively metabolism, and that the various masses of cells we call organs are not working separately, but as part of a great scheme, in harmony, and in relation the one to the other. It is impossible, for instance, to consider the functions of the spleen apart from those of the liver and the portal system to which it is connected. This merely illustrates the breadth of view and comprehensive principles of the book as distinguished from mere pettifogging details and narrow dogmatic assertion.

With regard to new discoveries, however, Professor Foster exhibits great caution. The following judicial utterances regarding the functions of the thyroid body and its relation to myxœdema and cretinism will serve as an illustration of the author's style in pronouncing upon doubtful or new doctrines. "We know so little about mucin and its allies, about their real relations to more ordinary proteid substances, and about the part which they play in physiological processes, that any views as to the exact connection between the presence of mucin in the tissues at large and changes taking place in the thyroid must be at present to a large extent speculation. The very discordance of the experimental results points the physiological moral that the phenomena which we are as yet able to observe form as it were a mere surface, covering intricate processes at present wholly or nearly wholly hidden from us."

Touching upon recent observations on the part played by leucocytes in absorption, Professor Foster's opinion is that it is exceedingly improbable that the cells have the important *rôle* that has been assigned to them. Researches which deal with mere elaboration of detail are treated with scant courtesy. The laborious work recently done with regard to the products of gastric digestion is evidently looked upon as being merely burdensome to the student; the products of digestion are therefore spoken of simply as albumose and peptone, their varieties and subvarieties being left altogether unmentioned.

It has apparently been Professor Foster's object, wherever it has been possible to do so, to let the older theories stand in spite of attacks. In the case of respiration, for instance, he still believes that the activity of the respiratory centre being influenced by the blood passing through it is the best explanation yet offered of the phenomena of ordinary respirations and asphyxia. With regard to the precursors of urea, he still looks upon the creatin of muscle as among the most important.

The section which deals with secretion is very full and interesting; it is not difficult here in many passages to recognise the hand of Mr. Langley. The last chapters dealing with metabolism afford an illustration of the immense help rendered by the introduction of a few happily conceived new words; the use of the words anabolism and katabolism, originally introduced by Dr. Gaskell, render easy the explanation of phenomena which before were shrouded by circumlocutory phases. The help given by the two gentlemen just mentioned, together with Dr. Sheridan and Messrs. Shore and Wingfield, is freely acknowledged by Professor Foster in his preface.

As the general appearance and get up of the book are so well known, we need say no more than that the reputation of the Cambridge University Press and of the publishers is fully sustained. The book is singularly free from clerical errors, and we have noticed but one mistake, and that of little importance: on page 560 of vol. ii the hæmoglobin crystals of the guinea-pig are described as octahedral; this should of course be tetrahedral. We have no doubt that this new edition will be as successful as its predecessors, and that students will anxiously await the appearance of the third volume, which is to complete the book.

The utility of publishing a textbook in parts may, however, be doubted, especially if there is any length of time between the publication of the parts.

Beiträge zur pathologischen Anatomie und zur Allgemeinen Pathologie (Contributions to Pathological Anatomy and General Pathology). Edited by E. Ziegler and C. Nauwerck. Vol. iii, Parts 2 to 5.

We have already noticed the previous instalments of this publication, and these additional contributions maintain a high standard. They comprise essays on Asiatic cholera by Guido Tizzoni and Giuseppina Cattani, written in French; upon the cicatrisation of wounds of the stomach under the influence of different kinds of sutures, by Alphonse Poggi, also written in French; histological researches into the organisation of arterial ligation clots, by Carl Appolonio; contributions to the pathological anatomy of the ureters, by Neelsen; a case of intra-tracheal struma, by Radestock; twenty-nine cases of urogenital tuberculosis, together with a case of tuberculosis of both ovaries, by C. von Krzywicki, who also writes upon the photographic representation of microscopical sections; upon abscesses caused by staphylococcus invasion, by Hohnfeldt; upon the immunity of frogs

from anthrax, by Johannes Petruschky; hereditary syphilis of the nervous system, by Max Bierfreund; a further contribution to the history of phagocytes, by Paul Wolfheim; tubercular lymphoma, by Askanazy; and the reproduction of the mucous membrane of the stomach, by Griffini and Vassale. Although they are somewhat prolix, these numerous contributions attain a high standard and will repay perusal. M. Poggi performed his suture experiments upon the stomachs of dogs, and forty experiments of varying severity were performed without an unfortunate result. In closing the wound three methods were used: the cut edges were united; the serous membrane was inverted, or the mucous membrane was everted and brought together. Contrary to what we might expect, both the first and the last of these methods gave good results, and in all of them the mucous membrane was, after a sufficient lapse of time, restored. After all his experiments, M. Poggi seems still uncertain whether silk or prepared catgut is the best material for sutures, but only a long experience of operations on the human subject is likely to settle this point, for the latter react to operations in a way comparatively unknown in the case of dogs. In Professor Neilsen's papers interesting facts with regard to cases of double ureters are mentioned. In conclusion, we may say that the papers are all instructive and worthy of perusal.

A SURGICAL HANDBOOK; for the use of Students, Practitioners House-Surgeons and Dressers. By FRANCIS M. CAIRD, M.B. and C. W. CATHCART, M.B. London: Charles Griffin. 1889.

THIS is a small handy book, on many important practical subjects, and will no doubt become popular. There have been some good works of this kind published, and we cannot say they are likely to be surpassed by this in anything but convenient size and moderate cost. That it is a useful work we do not doubt, and that it contains many practical remarks clearly put, and is correct in its instructions cannot be questioned after a careful perusal, but all this can be said of other works we already possess. The authors, however, have done their work generally with satisfaction to the reader, and have produced a useful pocket book. There are 187 illustrations, and these could with advantage be extended.

The first chapter is rightly devoted to case-taking, and then follow others on the treatment of patients before and after operation, anæsthetics, antiseptics, and wound treatment, arrest of hæmorrhage, shock, and wound fever, emergency cases, tracheotomy, and minor surgical operations, bandaging, fractures, dislocations, and sprains, extempore appliances, and civil ambulance work, massage, surgical applications of electricity, joint fixation, the urine, the syphon and its uses, trusses and artificial limbs, plaster casting, and *post-mortem* examination. In an appendix are contained notes on the microscopical examination of secretions and discharges, lists of the instruments required for various operations, a few practical hints and a few formulæ. The subjects are clearly though shortly treated, and we feel that in pointing out some of the omissions or failings, the general excellence of the work will not be misunderstood. But brevity may be carried too far, and the usefulness of such a practical work as this may be hampered. Moreover, when the authors attempt to instruct the reader how and when to use special instruments and appliances, we may fairly complain of the absence of reference to instruments, etc., which are used in other medical schools besides Edinburgh. General principles in surgical treatment deserve much more attention than is given by authors of the majority of textbooks.

In the first chapter we cannot help noticing that the scheme for case-taking would not enable the student to include a case of fracture or joint disease, and we should have been glad to see more stress laid upon outline sketching. Examples of outline diagrams might with advantage appear in such a work. In the chapter on the treatment of patients, before and after operation, the authors give more attention to general principles than in other parts of the work. It is difficult, however, to understand why the instructions about local treatment are limited to a few classes of cases. Others are not noticed which are quite as important. And the advice to give "fish" to patients after operation is not very descriptive of the kind of fish most to be recommended.

The various modes of administering chloroform are not adequately discussed. The authors recommend the use of the towel, and do not refer to Clover's or any other apparatus. Nor are the remarks about ether consistent with our present practice in England, whatever may be the case in the Scotch schools. The account of the use of anæsthetics in Pye's *Surgical Handicraft* will be found more useful to the house-surgeon or practitioner. The chapters on antiseptics and wound treatment are excellent, but we may call attention to a misprint of *stirgil* for strigil on page 20. We are glad to see attention drawn to Sir Joseph Lister's method of emptying a limb of blood by elevation and manual pressure, as it has always recommended itself to us as preferable to Esmarch's, which, there is reason to believe, may be attended with troublesome, if not serious, effects, however convenient it may be. This chapter contains many good diagrams and remarks upon ligatures, but we have always preferred Mr. Heath's account of how to tie a ligature without letting go of either end—a very important point in practical work.

A very useful chapter is given upon emergency cases, and these are made to include many not usually found in papers and books on the subject. In fact, they would hardly be looked for here; unless the book had been carefully read, or its index consulted, the house-surgeon or practitioner would not look here for strangulated hernia, possible rupture of the bladder, injury to intestine, retention of urine, injuries to the eye, etc. It is difficult to say what injuries might not have been included in this chapter. One portion considers poisons of the commoner forms.

In the chapter on tracheotomy we miss any reference to the rubber tube which was and is popular with some surgeons, and should, we think, be mentioned, but the description and directions are otherwise excellent. We must, however, notice the omission of any reference to the existence of the thymus in infants.

The chapters on bandaging are good and well illustrated, and the same may be said with regard to those on fractures. The commoner fractures which come constantly under the notice of a house-surgeon would, however, bear a further notice than the authors have given them. In fracture of the patella we are surprised to find Malgaigne's hooks approved of, and no mention made of recent proposals for extra-articular suture. Fracture of the fibula alone does not appear to have been thought worthy of notice.

A very useful chapter is given on extemporary appliances, and a short syllabus of ambulance lectures, which will be acceptable to country practitioners who may want to instruct their neighbourhood; the different ambulance associations are mentioned to which to apply for fuller instructions how to form and teach a class. The short chapter on massage also is excellent, and we are glad to see the authors use the English rather than the French terms. Joint fixation and fracture apparatus occupy three chapters, and are well given. Then follows a very thorough and fairly well illustrated account of urine testing; then trusses, and finally plaster casting are described. The appendix contains some notes on staining for microscopical examination, a list of instruments wanted for certain operations, which a house-surgeon ought to have in readiness for his surgeon, and some very practical hints on tooth extracting, hypodermic injection, the use of an enema, how to make a poultice, and how to cleanse and purify sponges. The book finishes with a few blank leaves for memoranda, and this is a very practical finish to a very practical work.

We should have expected to find some remarks on how to use a catheter and other instruments commonly employed; how to measure carefully in injuries to limbs; the use of the thermometer, etc.; but we have said enough to show that the work is a credit to the authors, and will prove of real service to the practitioner who wants a useful *vade mecum*, and its handy pocket size adds very much to the probability of its becoming a very popular work.

SCIENTIFIC MEMOIRS. By Medical Officers of the Army of India. Part IV.

THIS part contains four papers. In the first Surgeon-Major D. D. Cunningham discusses the important question, "Are choleraic comma-bacilli, even granting that they are the proximate cause of choleraic symptoms, really efficient in determining the epidemic diffusion of cholera?" This important investigation was conducted in the laboratory in Calcutta, with all the care and ingenuity to be expected from one who throughout his career has been one of the most patient labourers in the investigation of cholera, and whose name will always be associated with that of the lamented Lewis in connection with this deeply interesting inquiry. In this paper Dr. Cunningham details the results of the behaviour of choleraic comma-bacilli when introduced into water and soils, and then con-

siders how far they are capable of supplying an answer to the question contained in the title. The experiments, which appear to us to have been conducted with care and an anxious endeavour to exclude fallacies, indicate that comma-bacilli, when introduced into soil and water of very different qualities, so long as they retain their natural condition, tend to disappear very rapidly. Assuming, as a matter of hypothesis, "that those observers are in the right who maintain that comma-bacilli do give rise to choleraic symptoms, the question arises. What evidence is there in regard to the part which they play in determining epidemic diffusion of the disease?..... According to Koch's experiments, the introduction of commas into the digestive canal of animals is, under normal conditions, followed by no result, because, from their extreme susceptibility to the action of acids, they are killed by the gastric juice, and do not, therefore, reach their normal site of development in the small intestine in a state to do any mischief. Adjuvant means have therefore to be employed, consisting in establishing temporary alkalinity in the stomach, and injecting opium and alcohol into the peritoneal cavity; and only when this has been done is the access of the parasite to the digestive tract by the normal path followed by morbid effects." Dr. Cunningham adds: "From this it would appear that, in the presence of normal healthy conditions on the part of the recipient organisms, the comma-bacilli are incapable of doing any harm, and that it is only with the concurrent presence of abnormal ones—of conditions arising in the case of the experiments as the result of special preparatory measures, and in that of the disease when originating naturally as the result of a dyspeptic condition—that they are able to do so. Cases of cholera must, then, depend on the presence of such a condition antecedent to the access of the bacilli." According to this view, without the occurrence of epidemic diffusion of this dyspeptic condition, the mere diffusion of the bacilli, in however great amount, would be incapable of determining the epidemic occurrence of the disease. Bacilli, if this be the true state of the case, must be regarded as only playing a secondary part, and the presence of the dyspeptic condition "is the really important factor." Dr. Cunningham regards this to be quite in accordance with the teaching of Pettenkofer and others, who hold that epidemics of cholera in localities do not necessarily run parallel with the facilities for the introduction of materials from previously infected ones—in other words, the theory becomes "a localistic one." Dr. Cunningham adds: "If pushed to its logical conclusion, it must come to regard the local conditions determining the presence of the necessary antecedent state in the recipient organs as the really important factor, and to conclude that, in order to secure the absence of epidemics, it is the development of these conditions, and not mere access of the bacilli, which must be prevented. In other words, it is to sanitation we have to look to banish this terrible disease from India and the rest of the world."

The part of the *Scientific Memoirs* before us contains a highly technical paper on the Life and History of Ravenelia Sessilis, B. and Ravenelia Stictica, B. and Br., by Dr. Cunningham; and another, on the Life History of a New Cæoma, on Smilax Aspera, Linn., by Surgeon Barclay, A.M., of the Bengal Army. Both papers are of much interest to botanists.

Surgeon L. A. Waddell, M.B., Deputy Sanitary Commissioner of Bengal, contributes "An Inquiry into the Effect of Serpent Venom upon the Serpents Themselves." By a number of carefully conducted experiments he has established the fact that the cobra is not susceptible to the poisonous action of its own venom. Dr. Waddell's experiments show that cobra venom is rapidly fatal to two species of the green-tree viper. The experiments of cobra venom on innocent serpents proved to be more or less fatal.

MEMOIR ON THE ANATOMY OF THE HUMPBACK WHALE (*Megaptera longimana*). Pp. 183. By JOHN STRUTHERS, M.D. Edinburgh: Maclachlan and Stewart. 1889.

PROBABLY no order of mammals below primates offers to the anatomist so many examples of vestigial and apparently useless parts, as that which contains the whales. It is surprising, notwithstanding the extraordinary difficulties which beset the proper dissection of these enormous mammals, that our knowledge of the structure of whales has, during the last thirty or forty years, become so extended as to raise "cetology" into an anatomical speciality. It is very gratifying to note that Great Britain contains three of the leading living cetologists—Professors Flower, Turner, and Struthers. Living in Aberdeen, Professor STRUTHERS has had admirable opportunities of dissecting whales which rarely frequent our coasts, and it is a matter for congratulation that he has been willing to submit to the fatigue, trouble, and discomfort which dissecting a whale entail, exposed on a beach in bitter cold weather, or when its huge carcass, measuring fifty, sixty, or more feet, is in a very advanced stage of decomposition. Some of these difficulties may be faintly grasped by a study of this book, which represents Professor Struthers's latest contribution to cetology. The monograph is a model of careful, reliable, and painstaking work, illustrated by some admirable lithographs, furnishing not only anatomical details, but good notions of the external configuration of this whale. Such a work is useful not only to professed comparative anatomists, but to those interested mainly in human anatomy, if only to study the rudimentary parts, here so well described and delineated.

Although Professor Struthers has since the publication of this research on *Megaptera* vacated the professorial chair at Aberdeen, it is sincerely to be hoped that his keen interest in whales will remain unabated, that his well earned leisure may be occasionally disturbed by some rare species of whales stranded on our coast, and that he will still continue to enrich cetology by some further contributions as solid and valuable as this one on the humpback whale.

CERCLE CHROMATIQUE. De M. CHARLES HENRY; présentant tous les Compléments et toutes les Harmonies de Couleurs. Paris: Charles Verdin. 1888.

RAPPORTEUR ESTHÉTIQUE. De M. CHARLES HENRY; permettant l'Étude et la Rectification Esthétique de toute forme. Paris: G. Séguin. 1888.

M. CHARLES HENRY, the learned librarian of the Sorbonne, has published an important work on the chromatic circle, with an introduction on the subject of contrast, rhythm, and measure. His aim, it appears, is to enable us to determine the normal laws of complements, mixtures, and harmonies of lights and pigments. He presents the æsthetic problem in a new form: "Our sensations and ideas," says M. Henry, "offering no basis of calculation, it is important to connect them with phenomena susceptible of measurement. Now, if there is any one fact well established by psychological observation, it is that no sensation or idea is possible without movement. If the movement of the organs of sense are obstructed, the sensations corresponding to the cognisance of such movements are likewise obstructed. To impose upon a subject a certain attitude is to suggest to him the correlative idea. It may therefore be affirmed that the psychical functions are the virtual movements of the living being." The living being is only able to describe cycles (circles described in a single direction) of a definite radius expressing its diverse excitations by varying directions, virtual or real, of its force, the sense of their directions, above or below, to the left or to the right, marking the agreeable or disagreeable nature of such excitations, direction, according to the author, being the representative elements common to all sensation. When the directions differ, their function is that of contrast if they differ at the maximum or the minimum, successively or simultaneously. Differing in certain angles realised continuously, there is rhythm. When they belong to cycles whose radius is too large to be described continuously and under certain conditions, there is measure. The author claims that his work is the first step of calculation in the world of life, and that he has been able to determine the normal by direct deductions from a fundamental fact of organisation. He has aimed at showing the correlation between electricity and heat, between the continuous and discontinuous virtual motions of the living being, and between the subjective sensations of pleasure and pain.

Why is it that we are pleased with a certain form, while another, though differing from it but slightly, is displeasing? This is the problem which M. Henry has undertaken to solve with his new protractor the "Rapporteur Esthétique." He maintains that the study of his theory is of the utmost importance in clinical medicine. To be working rhythmically is a sign of bodily health, not to work rhythmically is significant of a tendency to disease. He says, "I reproduce in the article on the æsthetic protractor some engravings from studies of clinical medicine made with the assistance of the graphic method and registering apparatus by P. Lorain. They indicate the state of the arterial tension in a case of endopericarditis. I select on each of these drawings the most characteristic phase between two kinds of ascensions. I prolong their directions. We are struck by the unequal æ

value of the designs, if we analyse the measures and the rhythms and if we compare the final differences we can follow mathematically the progressive return of the disorder to the normal condition." How far M. Henry's profound and deeply interesting theories may be applicable to the study of disease we cannot in this place discuss, but one thing is certain, that the future of medicine is the more hopeful in proportion to the willingness of its disciples to accept the assistance of scientists of all classes who are able and willing to aid in its advancement. The works of M. Henry, from this point of view, are full of interest to medical men.

NOTES ON BOOKS.

The Etiology of Typhoid Fever. Read at a meeting of the Intercolonial Medical Congress on January 11th, 1889, by J. G. CARSTAIRS, M.D.Edin., of Geelong, Victoria.—In Australia and America, as in this country, typhoid fever has a special seasonal prevalence—it is a late autumnal disease. From a table given by Dr. Carstairs, it appears that in Melbourne the mortality is least in November; it rises in December, to attain a maximum in March, falls very slowly in April and May, and has a sudden decline in June. The hottest month in Melbourne is January, when the mean temperature of the air averages 66.2° F., so that, as with us, the maximum mortality from typhoid obtains about two months after the hottest season of the year is passed. In Melbourne, too, an excess of summer heat is followed by excessive prevalence of the fever, but Dr. Carstairs shows that the amount of summer rainfall is not a factor which exercises any influence either way, and that years of drought are not necessarily years of exceptional typhoid mortality. No observations appear to have been made in Australia on the temperatures of the earth at a varying distance below the surface of the soil—records of the highest importance in the light of recent researches on diarrhœa causation. The temperature of the surface soil follows closely upon that of the air, and appears to be much higher in Melbourne than the mean air temperature during the hot season; but at a distance of four or five feet from the surface the highest temperature is not attained until a considerable period after the highest air temperature is reached, and this maximum may very possibly be found to correspond with that period when the largest number of cases receive the specific infection. Dr. Carstairs is a strong believer in the bacillary origin of typhoid, and holds that its virulence is greatly dependent upon its capacity for spore formation outside the body—a method of reproduction which is carried on at its greatest activity when the temperature ranges between 86° and 104.° He is also of opinion that the regular annual return of typhoid, in Melbourne or elsewhere, precludes the possibility of the disease being due to an equally regular pollution of food and drink, and believing in the virus being largely given off from the surface of the body as well as in the excreta, he is inclined to think that the natural mode of infection is by means of the air passages, and that personal contact and family intercourse have a large share in propagating the disease in those cases which are not traceable to a common source originating an epidemic outburst.

Maladies de la Langue. Par le Dr. HENRY T. BUTLIN. Traduit de l'Anglais par le Dr. DOUGLAS AIGRE, Médecin adjoint et chef de la clinique laryngologique de l'Hôpital Saint Louis (Boulogne-sur-Mer). (Paris: Aux bureaux du *Progrès Médical.*) [Diseases of the Tongue. By HENRY T. BUTLIN, F.R.C.S.]—It is satisfactory to find that the merits of a truly standard English work are appreciated in France. Translation is the sincerest form of flattery in literature. Dr. Aigre has done his task well, and avoided that mania for footnotes to which translators and editors of books are so subject. The only note of dissent relates to a passage which concerns the risk of revealing "specificity." The translation of the text is accurate, and the language elegant and readable, but the French tongue lends itself to the easy expression of scientific ideas. This foreign issue of *Diseases of the Tongue* suffers from the absence of the fine coloured plates which adorn the original. As usual in French translations, the British proper names are very ill-used. Like Trissotin and Vadius, Dr. Aigre should make *amende honorable à Parnasse* for writing "Mumeley de Leeds," "M. Godlec," "Wickam Legg," "Fairbarn," and "Morrant Barker." The latter error is serious, as at p. 253 the christian name is omitted, so that the reader may confuse two well-known surgeons at present holding appointments in London hospitals who have, moreover, written on diseases of the tongue. The great institution to which the author is attached is sometimes written in its English form and sometimes rendered "Bhartholomew" or "Bartholomée," intermediate types possibly of interest to the philologist. Either "Bartholomew" or "Barthélemy" throughout would have been preferable, both being found in general literature.

Some Features of the Local Incidence of Typhoid Fever. By E. W. HOPE, M.D., D.Sc., Assistant Medical Officer of Health for Liverpool.—Typhoid fever has not declined in Liverpool in recent years in anything like the same degree that most of the other zymotic diseases have done. During the last ten years the deaths from this cause have averaged 129, fluctuating within comparatively narrow limits. Dr. Hope is of opinion that water and milk pollution have never played any very active part in the dissemination of the disease in Liverpool, but that the chief cause of such cases as arise is the still existing defective sanitary arrangements in many houses, which permit escapes of drain and sewer air into living and sleeping rooms. In corroboration of this view he furnishes several striking examples. He has observed, however, numerous cases where sanitary defects in houses could not be discovered, and where direct personal infection was apparently the only method by which the contagion could be propagated. These cases do not lend any support to the view of contagion being given off from the body-surface of the patient, as in typhus or small-pox, but rather tend to emphasise the fact that it is only by the strictest attention to cleanliness on the part of those in attendance that the virus in the excretions of the sick can be prevented from passing into the bodies of the healthy.

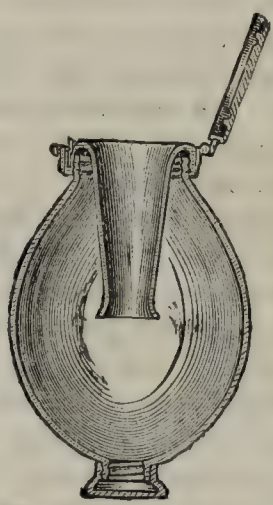
REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS,
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

DR. DETTWEILER'S POCKET FLASK FOR THE DISPOSAL OF THE SPUTA IN PHTHISIS.

THE accompanying illustrations represent a small flask devised by Dr. Dettweiler, of Frankenstein, which he suggests every consumptive person should carry and always expectorate into, instead of depositing the sputa into handkerchiefs or on the pavement of the streets, on the floor of rooms, railway carriages, etc. It is thus hoped the great danger of infection arising from dried sputa when inhaled as dust will be minimised.



Flask closed.


Section of same, open.

The small apparatus is constructed on the principle of the safe inkbottle, and is furnished with a closely-fitting spring lid at one end, and a screw-off mount for emptying at the other. Its contents may be disinfected by a solution of perchloride of mercury (1 to 200). The flask can be conveniently carried by male patients in the breast pockets of their coats, but is too large for females unless kept in a hand-bag or basket. A larger lower aperture would be an improvement, but, on the whole, it is an ingenious and handy contrivance to meet a great want.

Messrs. Krohne and Sesemann, of 8, Duke Street, Manchester Square, London, are the agents.

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members, in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the office.

The British Medical Journal.

SATURDAY, OCTOBER 12TH, 1889.

AN OUTBREAK OF RABIES AMONG DEER.

MR. J. G. ADAMI, demonstrator of pathology in the University of Cambridge, has contributed a valuable paper on rabies, which will be found in another column. This able investigator, having been consulted by Dr. Kilner concerning a disease which was rapidly carrying off the deer at Ickworth Park, went to investigate it on the spot. It is noticeable that the Privy Council had recognised the disease as anthrax, having found the characteristic bacilli, and that the park had been officially declared an infected area under the Contagious Diseases (Animals) Act. It is difficult to imagine how such a mistake could have been made, for if bacilli were present, it is to be hoped that inoculations were performed in order to prove that the disease was anthrax. If no inoculations were made, it is probable that the officers of the Privy Council mistook ordinary putrefactive organisms for anthrax bacilli. That a mistake had occurred was only too plain, for, on examining the blood, organs, etc., for anthrax bacilli by means of microscopic preparations and cultivations, Mr. Adami soon came to the conclusion that the disease he had to deal with was not anthrax; and, after careful inquiries, he found that the symptoms pointed to its being rabies. We are glad to add that Mr. Adami was not satisfied with presumptions, but made use of the only scientific test, namely, inoculation.

An interesting fact has been further elucidated by Mr. Adami's observations. Whereas in this epidemic paralysis was common among the does, the typical symptoms of rabies, accompanied by great nervous excitement, occurred chiefly among the bucks. This illustrates the fact long maintained by Pasteur, that the same virus may produce paralysis or furious rabies, according to the animals inoculated with it. Thus, whereas the virus of the *rage des rues* inoculated under the dura mater of a rabbit generally produces paralytic rabies, it nevertheless occasionally gives rise to the furious form, even in that animal. On the other hand, the introduction of the same virus under the dura mater of a dog is generally followed by furious rabies, though not infrequently by the paralytic form of the disease. The same rule holds good in man. Gamaleïa has recorded cases of men who, after having been bitten by wolves suffering from furious rabies, died of the paralytic form of the disease. Dr. Armand Ruffer has pointed out that these cases of paralytic rabies occurring in human subjects who had undergone no preventive treatment show the fallacy of some of the accusations brought against M. Pasteur, who has been accused of having actually produced by his inoculations a new disease in man, namely, paralytic rabies. Again, in the Ickworth epidemic, the same virus gave rise sometimes to the paralytic, at other times to the furious form of the disease.

Mr. Adami refers to Professor Galtier's mode of preventive inoculation against rabies. Professor Galtier's work has been eclipsed by the later researches of Pasteur, but it must not be forgotten that he was the first who succeeded in rendering animals proof against the inoculation of the virus of rabies. His statements have since been confirmed by many observers, and he must therefore be mentioned first, when the history of preventive inoculation against rabies comes to be written. It is to be hoped that Mr. Adami will be able to apply this method, due precautions being of course taken against the possibility of the disease being propagated by his experiments.

It does not appear whether the other animals in the Marquis of Bristol's Park have been destroyed, or placed in close confinement; if not, a more culpable piece of negligence could hardly be imagined than allowing a herd of animals, some of which are suffering from acute rabies, to be at large, even in a private property.

Mr. Adami was unfortunate enough to cut his finger whilst performing a *post-mortem* examination on a deer dead of rabies. He proceeded to Paris and underwent the preventive treatment in M. Pasteur's Institute. About the twenty-sixth day after inflicting the wound on his finger, and on the ninth day of treatment, he suffered from some obscure nervous symptoms, which vaguely resembled a mild attack of rabies. As Mr. Adami himself points out, the symptoms, if they were due to rabies at all, must be attributed to the inoculation through the cut, and not to M. Pasteur's treatment. The inoculations were begun on the seventeenth day after the cut, and therefore the first spinal cord which could possibly have produced rabies—namely, the spinal cord dried eleven days—was inoculated on the eighteenth day. As the symptoms were most marked on the thirty-third day after the cut, and were already present on the twenty-sixth day, the mild attack of rabies, if due to the rabbit's virus, must have followed eight days after the inoculation of the rabbit's spinal cord. We know, however, that the virus contained in a rabid animal's spinal cord which has been dried during eleven days does not produce rabies till thirty days after its inoculation, even when introduced directly under the dura mater.

In conclusion, we must congratulate Mr. Adami on the careful and scientific manner in which he has investigated this epidemic, and on his escape from the dangers of rabies.

IMMUNITY AGAINST ANTHRAX.

THE question of immunity against infectious diseases is the question of the day. In many bacteriological laboratories experimenters are working at that subject with varying success. Since Pasteur's first publications on preventive inoculations against cholera of fowl, *rouget*, anthrax, and rabies, numerous experimenters have confirmed his statements, and the practical value of such preventive inoculations has now been abundantly proved.

The whole subject, however, is still in its infancy, for the way in which immunity is produced—the mechanism of immunity, to borrow Professor Bouchard's happy expression—is by no means clear. M. Pasteur, two years ago, in a letter to M. Duclaux, suggested that immunity against rabies in patients who had undergone his preventive treatment might be due to a chemical vaccinating substance secreted by the micro-organism of rabies. There are many facts in favour of this theory, though unfortunately its truth has never been conclusively demonstrated.

In 1887, Messrs. Salmon and Smith showed that if a culture of the bacillus of hog-cholera, after being sterilised by heat (58° C.), was injected into an animal, the latter acquired an artificial immunity against the bacillus of hog-cholera, so that when the living micro-organisms were injected they produced no symptoms. The demonstration of chemical vaccinating substances was not altogether satisfactory until Charrin, in the same year, proved that the introduction of a heated and filtered culture of the bacillus pyocyaneus protected rabbits against the inoculation of the living bacillus pyocyaneus. Roux and Chamberland shortly afterwards proved this to be true for malignant œdema, whilst Chantemesse and Vidal were able, by using a similar method, to protect mice against the evil effects of the typhoid bacillus. The experiments of the lamented Dr. Wooldridge on anthrax are also of the greatest importance, as showing the protective power of chemical substances.

The latest contribution to our knowledge of immunity is the paper by Mr. E. H. Hankin, in this week's number of the JOURNAL. Mr. Hankin claims to have prepared from the cultures of anthrax an albumose which, when injected into mice or rabbits, protects these animals against the action of the anthrax bacillus. Mr. Hankin's experiments were made under the guidance of Professor Koch, at Berlin, and, as far as they go, appear to warrant us in thinking that he has discovered an improved method of vaccinating against anthrax. We must wait for a full account of all his experiments, to enable us to form an opinion as to the practical value of his work, but its scientific interest will be at once evident.

Mr. Hankin concludes his paper by a series of conclusions which are rather suggested than proved by the facts he has published up to the present date. As his paper is only a preliminary account of his investigations, we must reserve further remarks until we are in possession of all the data on which his conclusions are based.

THE PLAGUE OF MARSEILLES.[1]

IT was fifty-two years since the plague had appeared in France, when, in the beginning of May, 1720, information reached Marseilles that the disease had been present since March in the trading ports of Syria and Palestine. On May 25th, a ship arrived in harbour which had left that part of Asia in January; and, although the vessel came from a then infected port and six of the crew had died during the voyage from a malignant fever, yet, since it had sailed two months before the plague was believed to have made its appearance, and since the captain produced a certificate from certain physicians of Leghorn, stating that his men had died from ordinary fever and not from plague, no more than the usual quarantine was exacted.

On May 27th a sailor, on June 12th the sanitary officer in charge of the ship, on June 24th a cabin-boy, and on June 26th one of the servants employed to disinfect the cargo, died after a few hours' illness. Meanwhile, two small ships arrived on May 31st from Sidon, where the plague undoubtedly was at the date of their departure, and on June 12th another ship from the same district entered harbour. On June 23rd a servant employed to air and fumigate some of the goods brought by the last arrived vessel fell sick, as did another man similarly employed on the contents of the first vessel, both dying in one or two days. All these six persons were inspected by M. Guerard, Chief Surgeon of Health, and by him pronounced "free from any mark of contagion." In consequence of this opinion in regard to the first man infected, all the passengers by the original vessel had been permitted to enter the town without let or hindrance as early as June 14th. It was not until July 7th, when two more men, occupied with the disinfection of the cargo of the first ship, fell ill, having undoubted glandular enlargements, that the surgeon admitted a doubt; and even here he finally decided that the cases were not ones of plague. On the next day, however, another servant falling ill, he began to show alarm, and asked for a consultation. The medical men present arrived at the diagnosis of true plague; and tardy precautions were taken, but all too late, as the seeds of the disease had already been conveyed into the city, where isolated cases began to appear. After a deceitful lull from July 12th to the 26th, during which time no suspicious illness was reported, fifteen cases occurred at once in one of the old streets of the town. Even here the physicians employed were ignorant of the true nature of the epidemic, and denied that it was the plague. It was not until August 18th, by which time the disease had made further progress, that it was officially decided, by a joint body of Marseilles and Montpellier physicians (the latter sent by the Regent), that the outbreak was undoubtedly one of true plague; but, for the encouragement of the people, a notice to the contrary effect was publicly posted.

It may perhaps astonish us that such uncertainty and failure in diagnosis should have occurred, but we must remember that no epidemic of plague had appeared in France since 1668, and that it is, therefore, probable that none of the physicians employed had any previous practical acquaintance with that disease. They seem, too, to have looked on the plague-spot or bubo as a necessary symptom of the complaint, while, as we know, in the explosive form of plague it is frequently absent. At any rate, M. Guerard, the original blunderer, paid for his error with his life, as both he and part of his family died early in the epidemic. Up to the second week of August the efforts of the authorities at once to deal with and conceal the pestilence were fairly successful. Two of the sheriffs made nocturnal visitations to all infected and suspected houses, which they closed and sealed after removing both the living and dead occupants. The former were conveyed to infirmaries, the latter to deep graves filled with quicklime, where the former soon joined them, as the infec-

[1] *A Journal of the Great Plague of Marseilles in 1720.* Republished with an Introduction by Edward Evan Meeres, M.D.Lond. Simpkin, Marshall and Co. 1889. Pp. 79.

tion was virulent and death certain. By August 10th, however, the pestilence began to master these efforts. The available staff of men was numerically inadequate to remove even the dead, and fresh helpers in such a loathsome and dangerous work could not be procured either by money or force. To get quit of the putrefying bodies, the survivors began to drag them into the streets by night and leave them there; while so cruel was the panic that the sick were also thrust out of doors, to reach the pesthouse if they could; if not, to lie down and die in the streets.

We are told that by August 29th "the Ring and all public walks, squares, market-places, and the key of the port are spread with dead bodies, some lying in heaps.....Under every tree in the Ring and walks, under every penthouse of the shops in the streets, and on the port one saw among the dead a prodigious number of poor sick, and even whole families lying on a little straw or on ragged mattresses. Some are in a languishing condition, to be relieved only by death; others are light-headed by the force of the venom which rages in them..... An intolerable stink exhales from among them. They not only endure the effects of the distemper, but suffer equally by the public want of food and common necessaries. They die under the rags that cover them, and every moment adds to the number of the dead that lie about them. ....If any space be yet left in the streets it is filled with infected household goods and clothes, which are thrown out of the windows everywhere, so that one cannot find a void place to set one's foot in. All the dogs and cats that are killed lie putrefying everywhere among the dead bodies, the sick, and the infected clothes; all the port is filled with those thrown into it; and while they float they add their stench to the general infection, which has spread all over the town, and preys upon the vitals, the senses, and the mind." "Those one meets in the streets are generally livid and drooping, as if their souls had begun to part from their bodies, or whom the violence of the distemper has made delirious, who, wandering about they know not whither, as long as they can keep on their legs, soon drop through weakness, and, unable to get up again, expire on the spot; some writhed into strange postures, denoting the torturing venom, which struck them to the heart; others are agitated by such disorders of mind that they cut their own throats or leap into the sea, or throw themselves out of the windows to put an end to their misery, and prevent the death which was not far off. Nothing is to be heard or seen on all sides but distress, lamentation, tears, sighs, groans, affright, despair."

During the height of the pestilence over a thousand persons were swept off each day, and owing to the universal fear and desolation it was not until the second week of September that any headway in clearing the streets and open places of the dead and cleansing them could be made, nor was it until a month later that much decrease in the virulence of the epidemic was noticed. By October 11th, however, there began to be recorded instances of recovery at all the hospitals, and by the end of December the disease had almost spent itself, in Marseilles at least. Want of space compels us to pass by with slight notice the conduct of the medical men, who, with few exceptions, deserted their posts in the most cowardly manner. Two of them, MM. Sicard, father and son, first proposed to cure the plague by lighting great fires all along the walls and streets, and then when their suggestions were accepted and practically tested showed their faith in their own remedy by incontinently fleeing from the city and its doomed inhabitants. The name of the author of the *Journal* does not appear, but we think we are not mistaken in giving the credit of authorship to M. Carpus, the Keeper o the City Records, on the following grounds:—(1) That it had an official origin, being dated from the Marseilles Town Hall: (2) that the writer occupied a high official position, as is shown by the frequent mention of ordinances and Acts published at his suggestion; (3) that he was present during the entire epidemic; (4) that it fell to his lot to draw up a certain Act, which he cites (p. 48), which was ordered to be entered in the Register of the Town Hall, a duty naturally devolving on the registrar; (5) that he incidentally mentions certain information regarding the new Commander-in-Chief, which he obtained from the latter's commission when sent to be registered at the Town Hall. On the other hand, the writer speaks of himself as having been present at a meeting of the officials, together with M. Carpus; but this we take to be only a slight mystification, in order to enable him to praise himself with greater ease. He elsewhere says of M. Carpus that "by his ability, probity, and application he had become the pilot as it were of the whole community;" and he says of his eldest son "that he was distinguished by his merit and his virtues; and had, from the beginning of the contagion, assisted his father to go through the multiplicity of business in his offices."

If there were any doubt that the journalist was a member of the Corporation, it would be set at rest by the essentially parochial view which he takes of the cause and conduct of the epidemic. The pestilence was caused by the wickedness of the people and the indignation of Providence; it was cured by the intelligence and activity of the local officials.

There were first the sheriffs, "than whom the Roman consuls, so full of the love of their country, did certainly never carry their zeal to so high a pitch;" then there was M. Lebret, the first President of the Parliament, who exerted himself (*in absentiâ*) "with such goodness and condescension;" the officers in command of the galleys, "not one of whom to save the city would not have hazarded his own life," but who satisfied themselves more cheaply, by sacrificing over 250 of the galley-slaves, who were drafted into the infected city and forced to bury the dead, a service which proved fatal to the most of them. The Bishop is praised; Marshal de Villars, the governor of the province, is praised, though he was unfortunately unable to "get the consent of His Royal Highness" to visit the plague-stricken city personally. The Regent is praised—indeed, every official receives a portion of adulation, which advances in an ascending scale until it culminates in the concluding sentence, where the author sounds the praises of the governor, whose glorious name and those of the sheriffs he blesses, bestowing a title upon them which, he declares, they most justly merit—namely, that of "Fathers of their Country."

Of the galley-slaves, whose lives were sacrificed in cleansing the filthy streets and removing the loathsome corpses, he reluctantly writes, "that it cannot be denied that the city was

in some measure saved by their help;" but, he adds, "that such buriers of the dead greatly added to the burden of the sheriffs."

To the peasants and labourers who were driven to the same dreadful work of interment, no praise is given. They are "beggarly wretches" who "must be hunted for and driven by force" to the loathsome occupation. "Those dastardly peasants" must be pricked on by the soldiers of the galleys to the deadly work of the plague-pits until they all either hide or die. It is not curious that, with such a paternal aristocracy and excellent Corporation, even the "dastard peasants" learn bravery in time; and that when, in after years, they visit the Court and aristocracy of France, it is in the guise of "six hundred Marseillese who know how to die!"

Dr. Meeres deserves thanks for this interesting reprint.

RECENT EXPERIENCE OF ELECTROLYSIS IN UTERINE FIBROIDS.

An interesting discussion on the treatment of fibroid tumours took place at the American Gynæcological Society last month.[1] Dr. P. F. Mundé said that he had found that the cessation of growth produced by Apostoli's method was not permanent. In his opinion, the best treatment for the subperitoneal variety, in cases in which treatment of a surgical character was required, was removal of the uterus with the tumour, or removal of the ovaries alone. In the interstitial variety, the tumour could often be removed without removing the uterus; in the submucous variety, the tumour alone would require removal. He reported three cases in which he had performed oöphorectomy for the relief of uterine tumours; the results had been satisfactory. In six cases in which subperitoneal tumours had been removed through the abdomen recovery had taken place in four; in all cases the pedicle had been treated by the extra-peritoneal method. He considered that laparotomy should not be performed if a tumour was causing no serious trouble, and no operation was indicated in most cases in which the menopause was imminent.

Dr. W. Gill Wylie, on the other hand, held that if there were pain and failing health about the time of the menopause, it was usually an indication that degeneration was taking place, and hysterectomy would probably be indicated. Fibroid tumours, he thought, were like all organic matter, and had their periods of growth and decay; he believed that the life of a tumour was from two to eight years. The use of a curette sometimes controlled hæmorrhage, but if it failed he preferred to remove the tubes and ovaries. He spoke hopefully of hysterectomy, having had a death-rate of only 10 per cent., and being persuaded that he could attain still better results in the future. He spoke with some reservation of electrolysis, as his experience had only extended over two years, but he expressed his belief that its value had been overestimated. If it did no harm, it would at least cause delay, and thus might remove a patient's only chance for relief by operation; though electricity would doubtless stop bleeding from fungous growths of the uterus, it might also cause damage, and was, in his experience, no safer than the curette.

A more favourable opinion of electrolysis was expressed by Dr. Reamy, who said that he had met with cases in which oöphorectomy would not always stop the hæmorrhage caused by uterine tumours, and Dr. G. J. Engelmann, of St. Louis, while admitting that his results in the treatment of uterine fibroids by electricity had not come up to his expectations, said that the effect had been excellent in cases in which the uterus was surrounded by hard masses of exudate. The same was true in the treatment of both profuse and scanty menstruation. In most cases in which electricity had been used by him the patients had become more comfortable. In poor working women this was, he considered, of great consequence.

Dr. J. R. Chadwick, on the other hand, spoke very strongly against electrolysis. He said that he had followed Apostoli's directions carefully in twenty-four cases, and had seen improvement in but one. In that case the hæmorrhage was checked for three years. In none of them had the tumours been reduced in size. In two cases death had resulted, and two others had been nearly fatal.

Two other speakers, however, Dr. Van de Warker and Dr. Mann, mentioned cases in which the treatment had been used with success, and Dr. Mundé stated that he had seen three tumours disappear after galvano-puncture.

It will thus be seen that very considerable difference of opinion continues to exist among gynæcologists in America who have given electrolysis a more or less extended trial.

[1] *New York Medical Journal*, September 28th, 1889.

The family of the late Sir W. Tindal Robertson, in deference to the expressed wishes of the deceased, decided to have his remains cremated at Woking.

The Royal Commission on Vaccination has resumed its sittings, and Surgeon-General J. Pinkerton and Dr. Arthur F. Hopkirk have been examined.

At the opening of the winter session of the Manchester Medical Society, Dr. Hughlings Jackson delivered an address on "Respiratory, Toxic, and Traumatic Convulsions," on October 2nd, in Owens College.

Sir Henry Roscoe, in an address delivered in the Town Hall, Birmingham, on Monday, October 7th, at a meeting of the Birmingham and Midland Institute, gave a very clear exposition of the history of M. Pasteur's researches, with the character and results of which our readers are familiar.

The first meeting of the Committee of the Senate of the University of London after the long vacation was held on October 9th. A decision will soon have to be come to by the Senate as to the resolutions passed by the General Medical Council at its last session with reference to the degree in sanitary science. This will have been the chief topic discussed at the meeting.

EPIDEMIC OF MEASLES.

The epidemic of measles at Rugeley, which is of a mild type, still continues. Dr. Freer, the medical officer for the district, informs us that in a few instances it is complicated with whooping-cough, and in others with bronchitis or pneumonia, these latter generally from want of care on the part of the patients. For some weeks it was confined almost exclusively to the children of the working classes, but latterly it has found its way into larger houses. No deaths have occurred. It is impossible to give more than a very rough estimation of the actual number of cases which have occurred, as notification (as far as measles is concerned) is quite ig-

nored in the district, but the medical officer believes that fully 50 per cent. of children under 10 years of age have been down with it, and at present the number of cases show no signs of decreasing, and the public schools have been closed.

ASSOCIATION OF CERTIFYING FACTORY SURGEONS.

A REPRESENTATIVE general meeting of this Association was held at Manchester on October 2nd, under the presidency of Mr. Walmsley (Salford), who was supported by Dr. Arlidge (Stoke-upon-Trent), vice-president. The president and treasurer submitted reports which showed that the association was in a flourishing condition, both numerically and financially, and well able to carry out any measures necessary for the furtherance of its objects. Several resolutions relating to the sanitary condition of factories were discussed and adopted.

THE SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

MR. SIMEON SNELL, the President of the Yorkshire Branch, who recently resigned the office of Honorary Secretary of the Sheffield Medico-Chirurgical Society, was entertained at a complimentary dinner on October 4th, given by some thirty members of the profession in Sheffield. Mr. Wm. F. Favell, Senior Surgeon to the Sheffield General Infirmary, in a few suitable words, presented Mr. Snell with a very handsome silver tray and an illuminated address. The occasion of this testimonial is tersely expressed in the following inscription engraved upon the tray: "Presented to Simeon Snell, Esq., by the members of the Sheffield Medico-Chirurgical Society upon the occasion of his resigning the Honorary Secretaryship after having held office for thirteen years, as a mark of their high esteem, and in grateful recognition of the invaluable services rendered by him to the interests of the Society during that period. October 4th, 1889." The compliment was appropriately acknowledged by Mr. Snell.

SIR EDWIN CHADWICK ON SANITARY REFORM.

THE winter session of the Sanitary Institute of Great Britain was well inaugurated on Tuesday, October 8th, by an address by Sir Edwin Chadwick, C.B., Vice-President, on The General History and Principles of Sanitation. Having traced the progress of sanitary science from its earliest infancy, and dwelt especially upon the sound sanitary principles that were to be found in many of the Mosaic ordinances and laws, he spoke of the many diseases of a serious character which in the present day were to be attributed to the dampness of our walls, the common bricks of which would absorb as much as a pint or pound of water. The beginning of the sanitary advance was by land drainage; and it was proved that where the subsoil drainage of the sites of towns had been effected phthisis was reduced by one-half, and there was a corresponding reduction in the diseases of animals. Speaking of sanitary administration, he recalled how much had been done in that way in times of great peril from epidemic diseases. The children of the artisan class might all be protected, as they were now protected in the district half-time schools, from small-pox, measles, typhus, and diphtheria, and might enjoy a life-rate threefold greater than they now obtained.

UNIVERSITY COLLEGE OF SOUTH WALES.

IN furtherance of a scheme to establish, in various local centres, funds for the establishment of working men's scholarships in connection with the University College of South Wales, a meeting of colliery workmen was held at Merthyrvale on Monday, October 7th. Professor Powell, who attended as one of a deputation from the College, said that the number of students had increased to 165. The College obtained the funds for its support from two sources: it received £4,000 per annum from the Government, and the private subscriptions amounted to about £35,000 or £36,000, contributed chiefly by Cardiff people. In speaking of the educational facilities which the College could offer, he referred to the proposed medical school in connection with the College, and to the suitability of Cardiff as a training centre. The matter will be further considered at another meeting of the colliers; but the very fact of such a proposal being made is a proof of the great reliance which is placed on the intelligence and public spirit of the South Wales colliery workmen.

THE MEDICAL SOCIETY OF LONDON.

SIR ANDREW CLARK will read a paper at the first meeting of the Medical Society of London on October 21st "On the Non-tubercular Hæmoptysis of Elderly Life." The reading of this paper will be preceded by a short address by the President, Dr. C. Theodore Williams. At the next following meeting, on October 28th, Dr. W. M. Ord will read a paper on "Some interesting Points concerning Glycosuria," and on November 4th an address will be given by Sir Joseph Lister on a surgical subject.

THE EFFECTS OF THE PROLONGED USE OF ARSENIC.

THE effects of the continued use of arsenic have been the subject of so much discussion of late in connection with the Maybrick case, and so many statements have been made by those whom we are unable to recognise as able to speak with authority, that the following expression of opinion from Mr. Jonathan Hutchinson, which we take from the second instalment of his *Archives of Surgery*, will be read by all with interest. He writes:—"My experience in its medicinal use has been very considerable, and my impressions as regards its effects when long continued are certainly very different from what we have recently seen so freely expressed. I never knew a patient become fond of arsenic, or experience agreeable effects from its long continuance. On the contrary, nothing but anxiety to be rid of a loathsome skin disease will induce the majority of those for whom it is prescribed to continue taking it. Its general effect if pushed is not to give vigour, but to diminish it, and make the patient feel apathetic and uncomfortable."

LICENSED TO SPREAD DISEASE.

A CORRESPONDENT, who is a medical officer of health, last week drew attention to a serious public danger which has come under his notice. He states that within the past fortnight he has had sent to him, by three different registered practitioners, certificates of convalescence from scarlatina, and requests for the disinfection of premises, signed within ten days from the date of the certificate notifying the existence of the cases. In each case, however, when the inspector arrived to disinfect, he found extensive desquamation still proceeding. Assuming that the facts are precisely as stated by our correspondent, we must admit that the health officer has been placed in a somewhat delicate position. It would almost seem as if there has been some misunderstanding or mistake, seeing that desquamation is well known to be an especially infectious stage of scarlatina, and a person recovering from scarlatina should not be allowed to associate with other persons susceptible to the disease whilst any roughness of the skin remains. Doubtless a private communication to the practitioners referred to by our correspondent would effect the desired object; but, if that should fail, the medical officer of health's duty to the community at large would justify further notice being taken of the circumstance. The infectious persons should be warned that they are still in an infectious condition, and that under Section 126 of the Public Health Act, 1875, "any person who while suffering from any dangerous infectious disorder wilfully exposes himself without proper precautions against spreading the said

disorder in any street, public place, shop, inn, or public conveyance, or enters any public conveyance without previously notify- to the owner, conductor, or driver," etc., "shall be liable to a penalty not exceeding five pounds." It might be desirable also to advise the sanitary authority to issue a placard or memorandum calling the attention of the public to the danger of persons who are recovering from scarlatina exposing themselves during the "peeling" stage, and to the penalties to which any such exposure would render them liable.

THE DISADVANTAGES OF UNORGANISED PLAY.

THE boy who plays by himself no doubt exercises his spontaneity, but he generally repeats the same action over and over again; at cricket or football the individual boy has to fulfil the part assigned to him by the captain, and his action is thus controlled by that of his companions and the rules of the game. This more varied action, induced by that of other boys playing in harmony, causes a greater variation than when he plays alone, and gives a kind of mental training, bringing his brain more under the control of circumstances, and more in touch with his playmates. The lonely walk or play gives free scope to his spontaneous individual thought and action; the social game dissipates much of his spontaneity, and harmonises him with his comparisons. The dreamy but thoughtful boy may enjoy an opportunity of getting away from uncongenial companions; such a boy is said to be unsocial, and compulsory play in games may help to remove a bad predisposition, though the compulsion be irksome to him. There are other differences between the effects of unsocial play and unorganised games; the latter produce more exercise of the muscles and develop the physique better; a run under compulsion is a stronger muscular exercise than a lonely saunter. School is a preparation for active life; sociability is as well cultivated by organised games as by any other corporate action. There are, however, exceptional boys who cannot play games with credit, but who still need them. A wise despotism is necessary in the case of boys, whether in the home or school. Experience shows that the boy's likings do not necessarily indicate what is good for him; this is also one of the points that the schools cannot afford always to let the parent decide, and it is much to be desired that organised play and compulsory games were instituted for the Board schools.

THE ROYAL HOSPITAL FOR DISEASES OF THE CHEST.

THE dispute which has recently taken place at this institution is in no way based on any misunderstanding between the staff and the Council or Governors, but arose through the Council being dissatisfied with the Secretary, Mr. Austin. That functionary incurred their displeasure by circulating rumours detrimental to the welfare of the hospital, implying that many fit and deserving cases were refused admission, whilst only such cases were specially treated as were likely to prove of scientific value to the medical staff. Two cases especially liable to misapprehension were discussed by the Secretary in a manner apparently indiscreet. In the first, tracheotomy was performed on a child, who afterwards died of bronchitis. In the second, it was said that a man was subjected to an "experiment" where thirty-two feet of steel wire were introduced into his body. This assertion is a perfect sample of a misleading report. Our readers no doubt recognise therein Dr. W. H. White and Mr. Pearce Gould's "Case of Sacculated Aortic Aneurysm treated by the Introduction into the Sac of Thirty-Two Feet of Steel Wire," published in the seventeenth volume of the *Medico-Chirurgical Transactions*, 1887, a particularly candid clinical report, as the paragraphs in page 286 amply prove. The medical staff, hearing of the Secretary's injudicious statements, addressed a letter to the Chairman of the Council, asking for an investigation, and tendering their resignation. Dr. Hensley also addressed a letter to the Chairman, explaining the true character of the above-mentioned cases, and defending his own action. The Council investigated the matter, concluded that the charges brought by Mr. Austin against the staff were unfounded, and called upon him to resign his office, allowing him, however, three months' grace. Mr. Austin naturally made the most of his time, and enlisted much sympathy, so that on Monday last a meeting of the Governors of the hospital was held, Lord Charles Bruce presiding. The proceedings were somewhat unruly and Mr. Austin quoted an adverse criticism on the aneurysm case from an anonymous publication. The Chairman justly remarked that if the Secretary had been aware of "experiments" and other bad practices by the staff, he ought to have duly reported every abuse of the kind instead of spreading gossip. The alleged abuses had been going on, it was said, for three years; Mr. Austin might at least have called attention to them at the last annual meeting. A motion was placed before the meeting calling upon the Council to reconsider the resignation of the Secretary, the Governors being of opinion that he had acted in good faith. On a show of hands, 57 voted for and 22 against the resolution. The Council held a meeting on the same evening, and resolved that no grounds existed for altering their decision respecting the dismissal of the Secretary.

MOORE'S TREATMENT OF ANEURYSM.

THE case to which reference was made at the meeting of Governors of the Royal Hospital for Diseases of the Chest, on Monday, was read by Dr. W. H. White and Mr. Pearce Gould, at a meeting of the Royal Medical and Chirurgical Society, on April 12th, 1887. The patient, aged 48, had noticed a swelling of the front of his right chest for five months before he came under Dr. White's care. Two months later, dyspnœa on exertion and cough supervened. On his admission to the hospital, November 20th, 1886, a prominent swelling was found in the position of the right mamma, extending from the second to the fifth rib, and from the edge of the sternum to the axilla. It was the seat of a forcible expansile pulsation, and over it was heard a harsh systolic murmur. Till the middle of January the patient was kept in bed on restricted diet, taking fifteen grains of iodide of potassium three times daily. Suddenly he became much excited, and the swelling increased rapidly in size and became very prominent. On January 11th, Mr. Pearce Gould passed thirty-two feet of steel wire into the aneurysm through a Southey's cannula, introduced in the third intercostal space. Much blood was lost during the operation but the hæmorrhage was stopped by a pad of lint. The tumour became harder and the pulsation more heavy in character, and from one of the two punctures made at the operation serum drained in considerable quantities for several days. On January 17th the pad of lint was fastened on more firmly. Next day there was observed great swelling of the subcutaneous tissue over the aneurysm. On January 19th the skin was found to be gangrenous, and the patient died. The first part of the arch of the aorta was greatly dilated, and a sacculated aneurysm sprang from its upper part. The intrathoracic part of the tumour had a distinct though thin sac, but that portion which protruded from the chest was destitute of a definable sac, and was limited by infiltrated muscle. The wire, mixed with loose fibrinous clot, proved a very dense mass nearly filling the sac, to which, however, it did not adhere. The fatal result appeared largely due to the absence of a distinct sac to the outer part of the aneurysm, and to the effects of the formation of a hard, solid mass in the aneurysm, combined with rather firm external pressure applied for the arrest of the serous oozing. Dr. White and Mr. Gould believed that Moore's treatment was worthy of further careful trial in properly selected cases. The operation should be performed before there is reason to suspect rupture of the sac; only a small quantity of wire should

be introduced at any one time, and no firm pressure should be made over the aneurysm afterwards. Mr. Moore's original case occurred in 1864. Only two "Moore's operations" have been followed by complete recovery. In one (Van der Meulen) the brachial artery was the seat of aneurysm; in the second (Loreta) the abdominal aorta was diseased. The instructive discussion which followed the reading of Dr. White's and Mr. Gould's paper, and another contribution by Dr. Pringle and Mr. Henry Morris on abdominal section and Moore's operation for a case of aneurysm of the abdominal aorta, was published in the JOURNAL, vol. i, 1887, page 829.

THE FRENCH SURGICAL CONGRESS.

THE fourth French Surgical Congress was opened on October 7th in the grand amphitheatre of the Faculty of Medicine of Paris, under the presidency of M. Larrey, who succeeded M. Verneuil. About one hundred surgeons, members of the Congress, were present. The President delivered a short address, after which the Secretary-general, Dr. Pozzi, read a list of the names of the officers of the Congress. Among the names of the Honorary Presidents occurs that of Sir Thomas Longmore, of Netley. Several papers were subsequently read. On Tuesday the time of the Congress was chiefly occupied by a well-sustained discussion on the immediate and remote results of operations performed for local tuberculous affections. During the sitting on this day, a fire broke out in the great amphitheatre, and the members had to make a speedy exit. The pictures, tapestries, and hangings, as well as the seats and tables, were burned, and the amphitheatre had a narrow escape from destruction. The fire is said to have been due to the overheating of the *calorifère*. Some of the paintings destroyed represented episodes in the history of medical science, and were very valuable. The damage is estimated at 30,000 francs.

ENTERIC FEVER IN LONDON.

DR. BARRY'S report upon his recent investigation into the circumstances of the outbreak of typhoid fever in the parish of St. George Hanover Square is in the hands of the Local Government Board. It confirms the reports of Dr. Corfield as to the complaints of smells from the sewer ventilators and road gullies in the early weeks of July. He notes that for six weeks prior to July 8th there had been practically no rain in London, and there is little doubt that the traps of many of the road gullies dried up and allowed the exit of sewer gas close to the pavements. Systematic flushing of the main sewers was, no doubt, carried out to some extent, but not to the extent necessary in a season of continued drought. Dr. Barry's report also deals with sewer gas complaints in Grosvenor Square, Bruton Street, Eaton Place, and Cadogan Place. From a personal inspection of some of the mews, he was convinced that there were good grounds for the complaints that had been made as to the accumulation of stable manure. Dr. Corfield reported that during the month ended September 28th, the mortality of the parish was the lowest on record, namely, 9.5 per 1,000.

STEAMSHIP SANITATION.

AMONG the subjects to be discussed at the meeting of the American Public Health Association at Brooklyn this month (October 22nd to 25th) is "Steamship Sanitation." The matter is one of considerable importance to the Eastern States, and through them to the whole Union. Owing to the supineness of the Board of Trade, and the shortsighted selfishness of the steamship owners, there is a continual danger that whole shipfuls of passengers may be landed at New York, Boston, or any other eastern port, bearing with them the germs of infection contracted during the Atlantic voyage. The inspection of emigrants at British ports, though carried out, we believe, as a rule, by the medical officers with the most conscientious care which the circumstances permit, is little better than a farce. The emigrants are gathered upon the wharf, and at a signal admitted on to a narrow gangway, along which they struggle with their bedding and all the small impedimenta for the voyage. As they issue from the gangway they are hastily inspected, and any case presenting obvious or suspicious symptoms is made to stand aside for more careful examination. Even this rough inspection is better than nothing, and a practised eye will no doubt weed out most of the dangerous cases; if the surgeon of the ship could always ensure the isolation of the suspected cases, a very great step would be taken towards the attainment of the desired end. Unfortunately, this is by no means always the case; if the ship is full, the space set apart for the hospital is very apt to be used by the agents for berthing ordinary passengers. If the surgeon protests, he is snubbed, and if he records the fact in his report, which ought, according to regulations, to be forwarded to the Board of Trade when the vessel returns, he is very likely to have the document returned to him by the agents with the intimation that the matter is one which does not come within his province. It is within the powers of the Board of Trade to compel the steamship companies to obey the law as to the reservation of the ships' hospitals for the use of the sick alone; and it is not easy to understand why frequent and repeated breaches of the law are winked at by the officials.

THE CONSTITUTION OF MAN.

THE President of the Bewdley and Wribbenhall (Worcestershire) Mutual Help Society recently took advantage of the circumstance that Sir Andrew Clark was staying near there with his family during the autumn holiday to invite the indefatigable President of the Royal College of Physicians to deliver a lecture before the members of the Society. The announcement that Sir Andrew Clark had complied with the request sufficed to draw together a crowded audience. The fact that the lecture was delivered without notes —although it lasted upwards of an hour and a quarter—is especially dwelt upon in the reports of the meeting which we have perused. The learned lecturer chose as his subject, The Constitution of Man, with a Glance at its Relations to Health, Knowledge, and Religion. He first dwelt on man's environment, the varied face of the earth, the sky, and the starry hosts of heaven, and considered that there is nothing in all nature so suggestive of the Divine Ruler of the whole as the man who is gazing at this world and these stars. Then, asking, What is the constitution of man? he referred to his triune nature, man's body, mind, and spirit, and remarked that he possesses a spirit in common only with God. Body and mind are subject to the ordinary unalterable and inviolable physical laws of Nature; but in regard to the spiritual part of man these laws cease to act; and for the physical law there is substituted a moral law, alterable and violable by the will of man, and implying that man has free will. But this freedom implies responsibility. Right and wrong are distinguishable by conscience, which itself is illuminated by the Divine light. Man also has causal power, which, by taking the laws of Nature, can combine them so as to produce results exactly the same as if he were causing them from the laws themselves. The possession of this causal power makes man at his highest and best a model in miniature of the Eternal God Himself. In the highest development of the bodily life is health, in that of the mind knowledge, and in that of the spirit holiness. Sir Andrew Clark remarked that the laws of health are very simple: three meals a day, as little alcohol as possible, daily labour, warm clothing, sufficient sleep, sun, and air. It is hard for doctors to think that they live by the sins, the ignorance, and follies of mankind; for with Nature there is no forgiveness of sins; the time of payment might be deferred, but it is nevertheless certainly exacted. Moreover, labour is health, the highest life of

any organ lying in the fullest discharge of the functions which belong to it. As to knowledge, he doubted if this was a great age of education; it was undoubtedly an age of cramming, of merely storing the mind with facts. But true education consists in the development of the faculties in fit relation to each other. As to holiness, it is the sustained effort to die to one's self that one may live to God. Finally, the lecturer spoke at length of the materialistic and spiritual views of life, and advised all to choose the latter; but said that it entailed a perpetual self-sacrifice, the denying themselves every hour of the day, and every day of their lives. As to difficulties, without those of the body where would man's strength be? Without intellectual difficulties, where knowledge? Without spiritual difficulties, difficulties of faith, where would faith be? Worthless. He rejoiced that no man of competent powers of observation at the present day was an Atheist. A very hearty vote of thanks to the lecturer closed the oration, which seems to have riveted the attention, and frequently elicited the applause of a densely packed audience.

THE NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.

OUR Newcastle correspondent writes: The annual meeting of the Northumberland and Durham Medical Society was held on October 5th, in the Great Hall of the new College, the use of which was kindly granted by the College authorities. After the reading of the Committee's report, the business of the session was inaugurated by an address on Ectopic Gestation by Mr. Lawson Tait. The address was illustrated by diagrams and pathological specimens. It was listened to with close attention by an audience of upwards of 200 of the medical practitioners of the neighbourhood. Subsequently, about 140 members of the Society and others dined at the Assembly Rooms, under the presidency of Dr. Murphy. The banquet was one of the most successful medical gatherings ever held in the North of England, a result due for the most part to the very lavish generosity of the President and his enthusiasm in promoting the gathering. In replying to the toast of "The Orator," and in proposing that of "The College of Medicine," Professor Tait broached the subject of an affiliation scheme between the Medical School in Birmingham and the University of Durham. The affiliation scheme is one which will require very careful consideration; and Dr. Heath, in reply, abstained from committing himself, though it was evident that when the scheme is submitted to the proper authorities, it will receive very careful attention. On the following afternoon, Mr. Tait performed abdominal section for pyosalpinx, and repaired two perineums, before a gathering of the local profession in the Sunderland Infirmary. In the evening Dr. Murphy entertained a large party at dinner at the Sunderland Club to meet Mr. Tait, amongst others present being Drs. Philipson, Drummond, Lemont, Oliver, Gowans, Adamson, Black, and Williamson. The first business meeting of the Society takes place on Thursday, when, amongst other cases shown, will be a patient upon whom the operation of trephining has been done for cerebral growth with removal and relief of symptoms. The case was sent into the hospital by Mr. Black for operation. The motor area was mapped out by Dr. Lemont, and Mr. Page trephined.

HYDROPHOBIA AND MUZZLING.

A SHORT correspondence on the above subject has lately appeared in the *Times*. Dr. James Turle strongly urges the necessity of dogs being muzzled in an efficient manner. To show how inefficient many of the present muzzles act, he mentions the case of a boy in his neighbourhood who was bitten by a strange dog, "the biting occurring notwithstanding the fact of the dog having one of the usual strap muzzles round its jaws." We can fully endorse Dr. Turle's statement as to the inefficiency of these strap muzzles. A case heard at Barnet Petty Sessions this week is an instance in point. A collie dog wearing a strap muzzle bit a boy. The owner pleaded that the muzzle had not been objected to by the police during a previous epidemic, but this excuse was very properly rejected by the Bench. Dr. Turle further states that rabies might be efficiently stamped out if all dogs were muzzled for a sufficiently long period. Mr. Vesey, the Secretary of the Dog Owners' Protection Association, does not think that compulsory muzzling would stamp out the disease, because, according to him, it could not be enforced throughout the country for any length of time. Mr. Vesey evidently forgets that French and English statistics show that even "local" muzzling diminishes the number of deaths from hydrophobia in a most striking manner. In his reply to Mr. Vesey, Mr. Kerslake, Secretary to the Society for the Prevention of Hydrophobia, points out that compulsory muzzling has been enforced in other countries for a period extending over several years, with the result of stamping out rabies in such countries. There is no reason why such a law should not be successful in England also, nor why the English people, as soon as they understand the utility of muzzling, should not help the police in their difficult task. Mr. Kerslake will, on October 24th, read a paper on hydrophobia at St. James's Hall, and we hope that many medical men will attend to support him. Tickets of admission may be obtained by application by letter to Mr. Frank Kerslake, 12, St. George's Square, Primrose Hill, N.W. The Board of Agriculture has issued an order giving power to any local authority to make regulations "providing for the disposal, including slaughter, of stray dogs, or of dogs not muzzled or under control." The order states that any dogs which have been, or may hereafter be, seized and detained under the authority of any regulations made by a local authority, and which have not been claimed by their owners within three days after such seizure or detention, may be slaughtered or otherwise disposed of by the local authority or by the police.

THE SLUMS OF CLERKENWELL.

DR. J. W. GRIFFITHS, medical officer of health for Clerkenwell, has reported to the London County Council fourteen courts and alleys in his parish, the houses of which are so dilapidated or so wanting in light and ventilation as to require total demolition. Dr. Griffiths is not prepared with statistics to prove any "tremendous mortality" amongst the occupants of these condemned courts, and in some of them the mortality has not been excessive, although the baneful conditions of overcrowding on space mentioned in Cross's Act (1875) exist in a marked degree. But he rightly remarks that the occupants of these courts have such migratory habits that little dependence can be placed upon ordinary statistics of mortality derived from them. He further adds: "It is not a mere question of disease or mortality, as the courts I have condemned are morally and socially defective. The inhabitants are mostly very dirty, and there is much drinking and rowdyism amongst them. The places being blind alleys, there is, of course, no thoroughfare, and the inhabitants and their tenements are beyond the public gaze." This is the right spirit in which to approach the question of the housing of the poor. The necessity for improving their dwellings is not a mere matter of death-rates; the raising of the very poor from the moral and social degradation to which they have sunk in the slums of London is intimately bound up with it. We also agree with Dr. Griffiths that the cleared areas should be maintained as open spaces; or, if houses are re-erected, that the existing faulty Building Acts should be so amended as to secure proper air-spaces around the new buildings. The Clerkenwell Vestry plead that Clerkenwell is too poor to acquire and demolish this insanitary property out of its local rates, and urge with much reason that the cost of clearing away slums should be defrayed out of the general rates of the metropolis. It is certain that but little pro-

gress can be made until the general rates can be applied for such purposes, and it cannot be denied that these local improvements taken in the aggregate will prove of immense benefit to the metropolis as a whole.

ARMY MEDICAL DEPARTMENTS: AN IMPORTANT ADVANCE.

An important lesson may be drawn by the authorities of our army—more especially in relation to the points discussed by Lord Camperdown's recent Committee—from the valuable reforms just instituted in the administration of the medical department of the French army. That department has recently by legislative enactment been placed in the position to which it has long aspired, with the full assent not only of the Chamber of Deputies and the Senate, but of the War Department. Formerly in complete subordination to the Intendance, bound hand and foot, it had no freedom of action, and was hampered in the discharge of its duties by the rigid control to which it was subjected; its position contrasted unfavourably even with that of the same department in the British army. Now all is changed, and after a long struggle common sense has prevailed, old prejudices have had to give way, and the medical officers of the French army cannot now be said to have a grievance. The full particulars of the important changes in the organisation of the department are given in detail in the *Bulletin du Service de Santé Militaire*, No. 370, March-April, 1889, p. 2041. The most important features in the new law appear to be: 1. Complete financial control is granted to the Medical Department of the army, as in the case of the Artillery and Engineers; the War Minister now hands over to the Department the credit voted by the Chamber for its supplies, which they now use on their own responsibility. 2. The medical officers, in everything connected with the working of the department, have authority over the *personnel*, military and civil, attached permanently or temporarily to their service. They command the apothecaries, the administrative officers, the hospital orderlies, and men belonging to the ambulance service, and the men of the train, and all soldiers temporarily attached to carry on the medical service. 3. The Officiers d'Administration des Hôpitaux, who formerly constituted a section of the Intendance, are now organised as a distinct corps under the orders of the Medical Department. 4. The sections of hospital orderlies are for the future under the supreme authority of the medical Chef de Service. It is needless to add that this new system has given complete satisfaction to the department, and closes a long period of chronic and too well founded discontent with the service regulations under which they worked.

THE PROPOSED LONDON IMPROVEMENTS.

Under the scheme for the construction of a new street between Holborn and the Strand, which was submitted to the London County Council on Tuesday last by their Improvements Committee, the obliteration of one of the worst slums which dim the splendour of this great metropolis is suggested, and, although the scheme has many stages yet to pass through, it is satisfactory, from a sanitary point of view, to be able to feel that no serious opposition will be raised to it. The new street would run from the southern end of Southampton Row, Holborn, in almost a direct line to Catherine Street and the Strand, thus cutting through and destroying a considerable area of poor and dilapidated property which, although somewhat improved in late years by the strenuous efforts of the sanitary officials, has long enjoyed an unenviable notoriety as one of the most unwholesome districts of London. But the poor who will be displaced by these new improvements must be properly provided for, and it is satisfactory to know that their wants will be duly watched by the Housing of the Working Classes Committee of the Council, who have already pointed out that gradual provision must be made for the rehousing of the working classes in anticipation of the clearance of each section as the improvement progresses. The utilisation of the powers given by Cross's Artisans' Dwellings Acts is also urged. The Council will have a splendid opportunity of erecting dwellings for the poor and providing baths and washhouses in this hitherto unsavoury locality, and it is sincerely to be hoped that they will avail themselves of the opportunity.

SCOTLAND.

It is understood that a sum of £2,000 has been presented to the University of St. Andrews, for the purpose of erecting buildings and equipping a chemical laboratory in connection with the chemical chair in the United College of St. Andrews.

The winter session in the faculty of medicine at Edinburgh University and at the Edinburgh School of Medicine commences on Tuesday, October 15th. Already the practical rooms are in working condition, with their usual complement of early students.

EDINBURGH UNIVERSITY UNION.

The Edinburgh University Union will be thrown open to students at the beginning of the winter session. The building includes an excellent hall for debates, dining, smoking, news and billiard rooms, a library, gymnasium, bath rooms, and committee rooms. The furnishings are comfortable and the general arrangements good. The close proximity of the Union to the new university buildings and most of the medical class rooms makes the institutions of extreme value to the medical student, who has to be "about" all day long. There is still a comparatively small debt on the buildings, which, it is hoped, will be paid off shortly by life subscription. The Union will be open to all matriculated students and to graduates of the University. Terms of admission and copies of the laws may be obtained from the honorary secretaries of the Union. Life membership is constituted by a single contribution of ten guineas.

EDINBURGH ASSOCIATION FOR THE MEDICAL EDUCATION OF WOMEN.

An Association has been started in Edinburgh for the promotion of the medical education of women. For some time back there has been a growing feeling among the profession that the Edinburgh School of Medicine for Women, whose origin and development were due to the untiring energy and devotion of Dr. Jex-Blake, has been conducted on too narrow lines. The legal action at present pending, to which reference has already been made in the Journal, is felt to have been a natural outcome of the system. The idea of forming an Association has received hearty support in influential quarters, and a Provisional Committee has been elected to make suggestions and arrangements for the elaboration of the scheme. The object of the Association will be to assist in every way ladies desirous of prosecuting medical studies in Edinburgh, and to extend the possibilities for their thorough education. The classes will be conducted by qualified lecturers of the Edinburgh School of Medicine, and will be open to ladies who desire a complete course of medical study, or who may only desire particular classes for special purposes.

FIFESHIRE MEDICAL ASSOCIATION.

A meeting of the Fifeshire Medical Association was held at Dunfermline on September 27th. Dr. Morris delivered the presidential address on "The Use of Chloroform and Forceps in Mid-

wifery." In it he traced the history of the introduction of chloroform, which he considered the best and safest anæsthetic. *Post-partum* hæmorrhage was rather more likely to occur under its use, but could be checked by ergotin. He considered that the use of chloroform hastened labours, especially in nervous women. Dr. Morris illustrated his views by citing cases. He advocated the frequent use of forceps, although admitting that they might be used too hastily, and might cause rupture of the perineum. Taking the average of the last seven years, he applied forceps once in 8.5 cases. Dr. Morris then gave his experience in twin and triplet births, premature labours, etc. The following gentlemen were elected office-bearers: *President:* Dr. Constable, Leuchars; *Vice-President:* Dr. Spence, Burntisland; *Council:* Drs. Turnbull and Sneddon, Cupar, and Dr. Mackay, Falkland; *Honorary Treasurer:* Dr. A. G. Macdonald, Cupar; *Honorary Secretary:* Dr. Douglas, Cupar.

DEATH IN A DENTIST'S CHAMBERS.

A PECULIARLY painful death occurred in a dentist's house in Edinburgh last week. Lady Milne, of Inveresk Lodge, an old lady of over 75, visited a dentist for the purpose of having a tooth removed for disease of the antrum. The operation was successfully conducted with the aid of nitrous oxide, but, while the cavity was being treated, the patient was observed to lapse into a state of unconsciousness. All efforts at resuscitation proved ineffectual and, before further medical advice could be obtained, death had resulted. It appears that Lady Milne had suffered previously from weak cardiac action.

THE POPULATION OF GLASGOW.

DR. RUSSELL, the Medical Officer of Health for Glasgow, has made his annual estimate of the population as at June 1st. He finds an increase on last year of 6,169 souls and 1,360 inhabited houses, the total population within the municipal boundaries being 551,478 persons. The estimate is based on the number of inhabited houses, which is 116,223; and this number is multiplied by 4.745, the average number of inhabitants per house according to the census of 1881. To the total thus obtained are added 6,126, the number of inmates of institutions as ascertained by special census. The increase is at the rate of 1.12 per cent., three times that allowed by the Registrar-General, but is rather less than that for the previous year, which was 1.37. In two of the nine districts into which the city is divided for statistical purposes, a decrease has occurred. Happily, these are two of the most crowded districts, one being the worst in the city, the decrease being due to interference by the sanitary authorities, and being calculated to improve the health of the districts.

GLASGOW FACULTY OF PHYSICIANS AND SURGEONS.

AT the annual meeting of the faculty for the election of office-bearers, Dr. Perry was elected President, Dr. Yellowlees, Vice-President, and Dr. Finlayson was appointed representative to the Glasgow Royal Infirmary. Dr. Samuel Sloan was reappointed Examiner in Midwifery.

GLASGOW UNIVERSITY EXTENSION BOARD.

ARRANGEMENTS are in progress for continuing this winter the courses of lectures delivered in towns in the neighbourhood of Glasgow by members of the University of Glasgow. At Stirling, Greenock, Paisley, and Pollokshields courses are already begun. At the two latter places Professor McKendrick, M.D., lectures on physiology. In connection with all the courses, tutorial classes will be conducted and examinations for the Board's certificates will be held. Last year the work of the Extension Board was not so large as had been expected, and it does not yet appear that greater success is about to attend it this year.

WEST OF SCOTLAND CONVALESCENT SEASIDE HOMES.

THE total number of persons who have passed through these homes during the past year was close upon 3,500, of whom 2,947 were restored to health, and only 4 died. This is an institution which is making steady progress in its capacity for aiding and seconding the work of the infirmaries among the poor. Last year 173 more than the year before were benefited, and before another year has passed some increased accommodation will be available. The total income was £5,513, and the expenditure was less by nearly £250. Larger and fuller contributions now reach the institution from factories and workshops, showing an increasing confidence in the institution by the working classes.

IRELAND.

THE muzzling of dogs is now being pretty thoroughly carried out in various parts of Ireland.

MEATH HOSPITAL.

SIR GEORGE PORTER delivered the introductory lecture in this hospital on Monday, October 7th, when the chair was taken by Sir George Owens. There was a large attendance. The address mainly dealt with the importance of the various subjects included in the medical curriculum, and concluded with some admirable advice to the students. In the evening the annual dinner was held, when Sir Howard Grubb, F.R.S., one of the governors, presided. The usual toasts were proposed, and the proceedings passed off with very great success.

EPIDEMIC DISEASE IN BELFAST.

AT a meeting of the Belfast Dispensary Committee on October 7th, the reports from the various medical officers showed the existence of a large amount of typhoid and typhus fevers in the city. The outbreak of typhoid was attributed to the heat and drought of the early summer, succeeded by the wet weather of August. There is reason for thinking that a conjunction of circumstances of this kind does tend to have this effect. Happily, the epidemic is not of a severe type, and the mortality has been very moderate. Dr. Woodhouse, Local Government Board Inspector, stated his opinion that 10 per cent. of the death-rate was due to diarrhœa in infants, of which the causes were mainly two—wrong feeding and imperfect sanitation.

THE AMALGAMATED SCHOOLS.

THE amalgamation of the College of Surgeons and the Ledwich and the Carmichael Schools is an accomplished fact, His Excellency the Lord Lieutenant having signed the new by-laws under which the new professorships are to be filled up. The elections will take place on Wednesday, October 23rd, at 4 o'clock. The Council of the College will then appoint two professors of surgery, one of anatomy, one of midwifery, one of medical jurisprudence, one of medicine, one of chemistry, one of materia medica, one of zoology, one of pharmacy, and one of ophthalmology.

AT the recent examination in Arts at the Society of Apothecaries there were 155 candidates. Of this number only 21 passed the whole examination, but 114 others passed in some but not in all subjects. The next examination will begin on December 6th.

THE OPENING OF THE MEDICAL SCHOOLS.

GUY'S HOSPITAL.

THE winter session at Guy's Hospital opened with the first meeting of the Physical Society, which was held in the Anatomical Theatre on the evening of October 1st. Dr. Samuel Wilks occupied the chair, and there was a very large attendance of the medical staff and lecturers, past and present Guy's men, and new students of the hospital. Dr. Wilks, who has been for many years the President of the Physical Society, opened the meeting with a short address, in which he conveyed a kindly welcome to those who were beginning their medical career, and referred in terms of the deepest regret to the loss which the hospital had sustained by the death of Dr. Leonard Charles Wooldridge. A very able paper by Dr. Barrs, of Leeds, on the subject of "Medical Education" was then read; and after a hearty vote of thanks to the Chairman, the meeting adjourned.

Refreshments were provided in the dining room of the Students' Club, and in the adjoining rooms there was a large exhibition of pathological drawings and photographs, microscopic sections, and bacteriological cultures. Messrs. Down Brothers also showed a very complete collection of surgical instruments.

The entry of students this year is larger than in 1888, but further information upon this point will be given when the returns have been received.

LONDON HOSPITAL OLD STUDENTS' DINNER.

THE session opened at the London Hospital with an "old students' dinner." About 200 former students and members of the staff sat down in the Library of the College, under the chairmanship of Dr. Langdon Down. Among the visitors present were Mr. F. C. Carr-Gomm, Chairman of the House-Committee; Mr. H. J. Thompson, jun., former Chairman; and Mr. J. Buxton, Chairman of the College Board.

After the usual loyal toasts, Dr. Langdon Down said that it was by a curious coincidence that day, a quarter of a century ago, he had the honour of delivering in the neighbouring theatre the introductory address. Since that time, however, the introductory address had fallen into partial desuetude, and he was not without some feeling of regret that the annual stimulus for the commencing student had been omitted. He could not help imagining that his own conduct had contributed to the result; for in an editorial leader of one of the medical journals it was suggested that the cause of their omission in many of our medical schools was that the addresses were too enthusiastic. On meeting with this suggestion, he had searched for a copy of his address of twenty-five years ago, and he had come to the conclusion, on re-reading it, that it was faulty in that particular; especially was it unsuited for a time when it is thought the correct thing to be unmoved by all emotional influence, and to affect indifference. He felt bound, however, having regard to the large number of past and present students who had been drawn around the festive board that night, to say that in all probability the governing body had acted with wisdom, and that an introductory banquet was more popular than an introductory address. He felt very sensible that evening, however, that the emotional element had not been sacrificed, and he had been conscious how touching had been some of the meetings of long severed friends, and what kindly words of recognition and warm signs of greeting there had been between those whose mutual tie was the student life within the walls of that building years since. He remembered that this was nominally an "old students' dinner," and he had a right to claim to be a very old student. About three-and-forty years ago he first entered the hospital, in company with his old master—a name ever to be revered in that College—Jonathan Pereira. He remembered very vividly what the condition of things was at that time, and how great had been the change. Faraday was delivering those remarkable Friday evening lectures, and evolving that phase of electrical action which bore his name. Elliotson was sinking into obscurity, injured by his alliance with hypnotism under another name. Pereira was delivering his lectures on "Polarisation of Light," and teaching its use for clinical work. Simon had not yet written his classical papers on "Sanitation," which helped to create the new science of hygiene. Jenner had not differentiated the continued fevers. A London Hospital student had not written the remarkable paper "On a Luminous Appearance of the Human Eye, and its Application to the Detection of Disease of the Retina and Posterior Part of the Eye," which gave birth, in the hands of Helmholtz, to the ophthalmoscope. The clinical thermometer had not been invented, nor had a London Hospital student at that time brought back from Hungary the instrument of Czermak, and taught its use in the wards of their hospital with adroitness and precision. They were not unmindful that they enjoyed the unique advantage of having on their consulting staff the representative physician and the representative surgeon of the day, as personated by the Presidents of the College of Physicians of London and of the College of Surgeons of England, both of whom were clinical professors in their departments. He might point out how closely allied was ophthalmic surgery with the practice and traditions of their hospital, when they remembered the names of John Scott, George Critchett, Wordsworth, and James Adams, of the past, and how many of the present staff had shown strong affinity to this department of practice. He could not but feel that in the localisation of diseases of the brain, they had on their staff one whose modesty was only equalled by his great ability, and who in that department was without a rival and without an enemy. If time permitted, he might traverse the various departments of medical science, and indicate how fully they were abreast of the requirements of their advanced and advancing arts. He knew that he was addressing a sympathetic audience, and that he would have the warmest response to the toast which he had the honour to propose, "The London Hospital College, root and branch, may it flourish for ever." He coupled with the toast the name of Mr. Walter Rivington, Senior Surgeon of the hospital, who made a suitable reply.

Mr. Jonathan Hutchinson, F.R.S., in proposing the health of the chairman, referred with regret to the unavoidable absence of Sir Andrew Clark, to whom the toast had in the first instance been entrusted. He also thanked Mr. Rivington for his kindly expressions as regards the election of his (the speaker's) son, and the assembly for the manner in which those remarks had been received. He could speak, he said, of Dr. Down as a lifelong friend, and one whose friendship and counsel he had always most highly valued. They had, he said, worked together in the formation of the New Sydenham Society, now thirty-three years ago, and Dr. Down was still one of the foremost members of the Society's council, and one whose judgment was most valued. All the world knew what Dr. Down had done in connection with his own special branch of practice, but it was possibly not so widely known that throughout a long hospital career, Dr. Down had been in all respects a model to his colleagues of punctuality and care in the discharge of clinical duties. As a teacher of medicine he had quietly exercised a very large influence, not only on the prosperity of the London Hospital and its school, but upon the advancement of medical science in most of its very varied departments, as a man of foremost ability and sterling worth. He called upon the assemblage to drink the health of Dr. Langdon Down, and to wish for him a warm and sunny autumn to a well spent life.

Mr. F. Treves referred to the extension of the hospital, which will shortly be effected for the purpose of providing a better entrance to the building, more convenient receiving rooms, a clinical and an operating theatre, besides the necessary accommodation for the officers of the institution.

MIDDLESEX HOSPITAL.

AN introductory address on Intellectual Blindness was delivered at the Middlesex Hospital at the opening of the session, October 1st, by Mr. J. Bland Sutton, F.R.C.S., Assistant-Surgeon to the hospital. He limited his attention to blindness in observation and blindness in interpretation. Very few attempts had been made to introduce the deductive method into the province of biology, but of late years the inductive method had yielded brilliant results. As instances of blindness of observation, he said:—There is every reason to believe that one man and woman in every ten has three nipples. On one occasion a man came into the out-patient room with a well-marked extra nipple. I set my class, consisting of eighteen students, to explore the man and to make a report. Three students actually touched the nipple, and one, after eyeing it critically, suggested that it was "a very curious pimple," but no one identified it as a supernumerary nipple. I was induced to test the observing faculty of my class in this manner because I had previously practised the same thing on the excellent assistant in the prosector's room at the Zoological Gardens in the following manner. As supernumerary mammæ and nipples are so frequent in mankind, they ought, theoretically, to be com-

mon in quadrumana. At this time about one thousand dead monkeys of divers species had passed under my immediate notice, but I could not remember to have seen a monkey with more than two nipples. On making inquiries of those likely to be acquainted with specimens I could not get any satisfactory information. The assistant was then directed to examine carefully all dead monkeys for this purpose. About a month afterwards, on making my usual visit, a dead monkey was upon the table, and I at once asked the assistant to examine it. He failed to detect anything abnormal. You may imagine his surprise when a large mamma and nipple was pointed out to him. Since then I have detected the occurrence of supernumerary nipples or mammæ in male and female monkeys, and feel satisfied that many such specimens have passed under my eyes previously, but that I was so blind as not to see them until a special interest in the question attracted my attention to the matter.

To illustrate still more forcibly the need for training and care in observation, the speaker referred to the subject of sporadic cretinism. Until the late Dr. Hilton Fagge published an admirable paper in 1871, it was known that cretins existed in Great Britain, and museum specimens clearly attested its existence in England certainly one hundred years ago. Dr. Parrot, of Paris, suggested that the ancient Egyptians were acquainted with cretinism, and even had a cretinous god (Ptah) who was particularly venerated at Memphis. An examination of the models of this god preserved in the Egyptian galleries of the British Museum showed that in some Ptah was represented as a big bellied, squat divinity, with short limbs, not unlike a cretin; in others he was represented as of noble figure, the type of majesty and lordly bearing. The value of accurate observation was well illustrated by the advance made in recent years in the treatment of a peculiar affection of the naso-pharynx. In 1868, the eminent anatomist of Tübingen, Luschka, drew attention, in an elaborate and painstaking monograph, to the existence on the posterior wall of the pharynx, at the angle where it joins the roof, of a body which he named the pharyngeal tonsil. Meyer, of Copenhagen, published in the *Medico-Chirurgical Transactions* an admirable paper, and showed most conclusively that certain troubles were often due to what he called "adenoid vegetations of the naso-pharynx," or what might in simpler terms be described as enlargement of the pharyngeal tonsil. Mr. Bland Sutton then referred to the necessity for correct interpretation to follow on correct observation.

BROMPTON HOSPITAL FOR CONSUMPTION.

On Thursday evening, October 3rd, the *conversazione* which has now become an annual event was given by the medical staff of the Hospital for Consumption, Brompton. Many old resident officers and clinical assistants were present, and the guests altogether numbered about 150.

ASSOCIATION INTELLIGENCE.

COUNCIL.

NOTICE OF MEETING.

A MEETING of the Council will be held in the Council Room of the Association, at No. 429, Strand (corner of Agar Street), London, on Wednesday, the 16th day of October next, at 2 o'clock in the afternoon.

September 12th, 1889. FRANCIS FOWKE, *General Secretary.*

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1889.

SUBSCRIPTIONS to the Association for 1889 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the West Central District Office, High Holborn.

BRANCH MEETINGS TO BE HELD.

OXFORD AND DISTRICT BRANCH.—The next meeting of this Branch will be held at the Radcliffe Infirmary, at 3 P.M. on Friday, October 25th. Notice of papers to be read, etc., should be sent to the Honorary Secretary on or before Friday, October 11th.—W. LEWIS MORGAN, Honorary Secretary, 42, Broad Street, Oxford.

THAMES VALLEY BRANCH.—The next meeting will be held on Wednesday, November 6th. The Honorary Secretary will be glad to hear from members who are willing to read papers.—CHARLES C. SCOTT, M.B., Honorary Secretary and Treasurer, St. Margaret's, Twickenham.

NORTH OF ENGLAND BRANCH.—The autumnal meeting will be held at the Royal Infirmary, Newcastle-upon-Tyne, on Wednesday, October 23rd, at 3 P.M. Agenda: Dr. Coley will exhibit some cases of interest. Dr. Murphy will read a paper on the Operative Treatment of Hæmorrhoids. Dr. Coley: On Effusion into the Cavity of the Pleura. Mr. Williamson: On a Case of Cerebral Abscess, Localised and Opened. Dr. Philipson will introduce the question of the Formation of a Division of the Medical Defence Union for Northumberland and Durham. Members wishing to read papers, etc., are requested to communicate with the Honorary Secretary at once. The dinner after the meeting will take place at the Douglas Hotel, at 5 P.M., 6s. 6d. each, exclusive of wine.—G. E. WILLIAMSON, F.R.C.S., Honorary Secretary, 22, Eldon Square, Newcastle-on-Tyne.

ABERDEEN, BANFF, AND KINCARDINE BRANCH.—The annual meeting of this Branch will be held at 198, Union Street, Aberdeen, on Saturday, October 19th, at 1 P.M., the President, Dr. Stone, Montrose, in the chair. Business: (1) Minutes, etc.; (2) Council report; (3) Treasurer's balance-sheet; (4) election of President-elect for the ensuing year; (5) election of two honorary secretaries and honorary treasurer; (6) election of members of Council; (7) election of chairman of Parliamentary Bills Committee; (8) selection of place of next June meeting; (9) Motion by Dr. Cran, Banchory: That the day of the ordinary meetings of the Branch shall be fixed for Saturday instead of Wednesday, in order to allow of the attendance of country members.—ROBERT JOHN GARDEN and J. MACKENZIE BOOTH, Honorary Secretaries.

STIRLING, KINROSS, AND CLACKMANNAN BRANCH.—The autumn meeting of this Branch will be held in the Scottish National Institution for Imbecile Children, Larbert, on Friday, October 18th, at 4 P.M. Dr. Leslie will exhibit various cases, and read a paper on Certain Types of Imbecility. Members desirous of showing specimens, etc., are requested to communicate with the Honorary Secretaries. The Council will meet at 3.45 P.M.—C. J. LEWIS, Honorary Secretary.

NORTH OF IRELAND BRANCH.—A general meeting of the North of Ireland Branch will be held in the Royal Hospital, Belfast, on Thursday, October 31st, at 4 P.M. Gentlemen wishing to bring any communication before the meeting will kindly communicate with the Secretary, JOHN W. BYERS, M.D., Lower Crescent, Belfast.

METROPOLITAN COUNTIES BRANCH: SOUTH LONDON DISTRICT.—A meeting of the above District will be held in the Court Room, Guy's Hospital (by kind permission of the Treasurer), on Wednesday, October 16th, 1889, at 8.30 P.M., Dr. Frederick Taylor, Vice-President of the District, in the chair. A paper will be read by Dr. Washbourn on Disinfection especially as applied to Fever. Clinical cases from the hospital will be shown. All practitioners will be welcomed.—Dr. R. PERCY SMITH, Honorary Secretary, Bethlem Royal Hospital, S.E.

METROPOLITAN COUNTIES BRANCH: EAST LONDON AND SOUTH ESSEX DISTRICT.—The inaugural meeting of the session will be held on Thursday, October 24th, at the Hackney Town Hall, at 8.30 P.M. The chair will be taken by Dr. W. M. Ord, President of the Branch. A paper on Certain Forms of Hepatic Cirrhosis will be read by Sir Dyce Duckworth, M.D. Visitors will be welcome. —J. W. HUNT, Honorary Secretary, 101, Queen's Road. Dalston.

LANCASHIRE AND CHESHIRE BRANCH.—The autumn meeting will be held in the Town Hall, Blackburn, on November 6th. Gentlemen wishing to read papers or show specimens are requested to communicate at once with the Honorary Secretary, so that the titles of their communications may appear on the circulars convening the meeting.—CHARLES EDWARD GLASCOTT, M.D., Honorary Secretary, 23, St. John Street, Manchester.

SOUTH-EASTERN BRANCH: WEST SURREY DISTRICT.—The next meeting of this District will be held on Thursday, October 31st, at 4 P.M., at the King's Head, Epsom, Dr. W. C. Daniel in the chair. Gentlemen wishing to bring forward communications, etc., should communicate with the Honorary Secretary, J. P. A. GABB, M.D.

BOMBAY BRANCH.

A GENERAL meeting of this Branch was held on June 24th. Present: Drs. Banks, Maconachie, Parakh, Hatch, Ferguson, Baker, Meyer, and Collie. Dr. BANKS occupied the chair.

Papers.—1. A case of Aneurysm of the Right External Carotid Artery, involving the common carotid at its bifurcation, was read by Surgeon W. H. QUICKE. The patient was a native, aged 40. The tumour first appeared two months and a half previously as a small lump a little below the angle of the jaw; the increase in size was gradual at first, but rapid during the past twenty days. There was throbbing pain, difficulty of swallowing, and loss of voice. The tongue was paralysed and turned to the right side. The tumour occupied the greater portion of the right side of the neck, measuring $6\frac{1}{4}$ inches broad by $4\frac{3}{4}$ inches long. The carotid was tied below the omohyoid. The ligature came away on July 15th the tumour was then $4\frac{1}{2}$ inches broad by $3\frac{1}{4}$ inches long. On July 18th the patient was discharged at his own request. On

August 7th the tumour measured 3½ by 2½ inches, quite hard and painless; eyesight good and no cerebral symptoms. The point of interest in the case was the extremely favourable course after the operation, notwithstanding the wretched scorbutic condition of the patient.—Drs. BANKS, HATCH, MEYER, PARAKH, and MACONACHIE made remarks on the case.

2. Dr. BAKER related two cases of Volvulus, and showed the specimens. In one case, the neck of the volvulus was found at a point where the portions of the jejunum had contracted adhesions to the surface of the ileum, just above the ileo-cæcal valve and exactly corresponding with the most marked of a series of cicatrised ulcers (Peyerian), resulting from an attack of enteric fever, from which, as the history showed, the patient had suffered about two months and a half previously; the neck of the volvulus was twisted from left to right, and the distended loop had formed a large prominence in the umbilical and epigastric regions.—In the other case, there was a perforating duodenal ulcer situated in the anterior wall of the first portion of the duodenum, 1¼ inch beyond the pylorus. The patient, a healthy man, aged 35, had exhibited symptoms which were regarded as due to intestinal obstruction, without any marked signs of peritonitis. There was no history of burn or scald. It was a good example in every way of the form of lesion which affected, as a rule, men and women in the prime of life (30 to 40 years), and was said to be unknown in children. Its causation was precisely similar to that of perforating gastric ulcer. It would be interesting to know whether the area in which these ulcers were found was limited by the point at which the alkaline pancreatic secretion was poured into the intestine.

SOUTH MIDLAND BRANCH.

THE autumnal meeting was held at Higham Ferrers on October 3rd, 1889, under the presidency of Mr. JOHN CREW. Sixteen members were present, and were hospitably entertained at luncheon by the President prior to the meeting.

New Members.—Mr. F. J. Lorimer Hart (Wansford) and Mr. W. Moyle O'Connor (Stony Stratford) were elected new members of the Association and Branch.

Infectious Diseases Notification Act.—Dr. BUSZARD invited an expression of opinion on this Act. He himself believed it would be advantageous, and thought that all sanitary authorities should be advised to adopt it. He believed the Northampton authority would do so.—The PRESIDENT and Mr. HEMMING expressed favourable opinions on it; but Mr. PERCIVAL thought the Act would not work, and would probably soon prove a dead letter.—The following resolution was carried: "That in the opinion of this Branch it is desirable that the sanitary authorities be advised to adopt this Act."

Division of the Isthmus in Goître.—Mr. MILLIGAN related two cases of goître treated by division of the isthmus.—Exophthalmic goître was alluded to by some of the speakers; others considered that medical treatment was very useful in chronic cases. Allusion was also made to the dangers often experienced in operating in such cases, and attention was drawn to the results which sometimes followed operation.

Lunacy Acts Amendment Act.—Dr. BOWER read a paper on the Provisions of the Lunacy Acts Amendment Act, 1889. He summarised the subject, arranging the provisions in groups, and pointed out where the present Act differed from previous ones.—Much interest was shown in the subject, and Dr. Bower was specially thanked for the information he had given to the meeting.

Naso-pharyngeal Growths.—Mr. SKELDING read a paper on Naso-pharyngeal Growths and their Relation to Health in Children. He considered those cases were much more common than was generally supposed by medical men, and were almost totally ignored by the lay public. He illustrated his paper by several cases, specially alluding to the influence of these diseases on the mental and physical development of the children who were the subjects of them.

Votes of Thanks.—The meeting terminated with the usual votes of thanks.

A YOUNG lady, Señorita Manuela Solís, has lately graduated in medicine at the University of Valencia.

MUNICIPAL LIBERALITY.—The Court of Common Council voted at its last meeting £210 to the Royal Albert Orphan Asylum, £210 to the Charing Cross Hospital, and £210 to the City of London Hospital for Diseases of the Chest.

SPECIAL CORRESPONDENCE.

PARIS.

[FROM OUR OWN CORRESPONDENT.]

Sulphonal.—The Galvano-cautery in Uterine Disease.—Epileptic Fits Treated by the Actual Cautery.—A New Bread for Diabetic Patients.—Antipyrin for Enuresis.

M. RAYMOND has recently tested, at the St. Antoine Hospital, the value of sulphonal as a narcotic. Though far from being an ideal narcotic, it proved useful in many cases. It had scarcely any action on the respiratory system; on the circulatory system it had the same influence as sleep when this was natural; the temperature was slightly lowered. The secretion of urine was increased; that of the sweat glands diminished. The tongue and mouth were sometimes dry; occasionally, though rarely, the patient vomited. M. Raymond found that sulphonal was not an anæsthetic; it had sometimes a hyperæsthetic action. Small doses had no influence on muscular contractility; doses of 6 grammes were followed by ataxic movements of the limbs. Doses of 1 or 2 grammes were safe; women were more easily affected by sulphonal than men. Progressively increasing doses were unnecessary. After a certain time it could be discontinued; sulphonal was superior to morphine in this respect. It was especially useful in insomnia resulting from general debility, neurasthenia, and cerebral disturbance; where there was actual cerebral lesion, the action of sulphonal was more intense, and in such cases it had to be administered with great care. Sleeplessness from abuse of morphine was relieved by sulphonal; it was also useful in phthisical patients who were rendered sleepless by coughing. It was inert when sleeplessness resulted from rheumatic pains, sciatica, cardiac troubles, also in Bright's disease and intense dyspnœa. Sleep produced by sulphonal was calm, lasted from six to eight hours, and came on about half an hour or one hour after administration. The disadvantages attending the use of sulphonal were fatigue, giddiness, and sometimes positive vertigo.

Dr. Baraduc treats metritis and endometritis with chemical galvano-caustic, which he carefully applies to the uterine mucous membrane. For interstitial fibroma Dr. Baraduc uses a "capsulotome," which opens the capsule enveloping the tumour by the force of the chemico-caustic agent.

M. Féré treated two epileptic patients with the actual cautery applied to the scalp. One of these patients, who has been under treatment since December 10th, 1887, had twenty-one fits in 1886, and only seven the year following; in 1888 one, and this year none. The other patient had sixty-three fits in 1886, forty-five in 1887. The treatment was commenced in April, 1887. In 1888 he had four attacks. Dr. Féré has observed transient improvement in a large number of patients treated by actual cautery; in one, convulsions have ceased, and are replaced by attacks of cutaneous hyperæsthesia.

M. G. Pouchet, Professor at the Museum, describes in the science column of the *Siècle* a new food stuff for diabetic patients, containing an abundance of nitrogenous substances, and entirely free from starch. All gluten bread contains a certain proportion of starch. The bread in question is made from the embryos of corn. M. Danysz, the discoverer of this new bread, has succeeded in isolating the embryo from its farinaceous endosperm, and has also been able to remove from the embryo all oily or other substance calculated to injure its flavour. After long research M. Danysz has obtained a large quantity of corn embryos; from these flour has been made which is extremely nutritious. Bread made with it is easily digested, and is said to be agreeable to the palate. In many of the Paris hospitals this bread is now used for diabetic patients.

M. Perret, who uses antipyrin in treating enuresis, recommends giving to children from 5 to 8 years of age 1 to 2 grammes every evening, divided into two equal doses, one of which should be taken at 7, the other at 9 o'clock. This treatment should be continued during eight days, then a week should be allowed to elapse, when the drug should be again administered. Generally, after two weeks of treatment the enuresis disappears.

DR. DAVID HADDEN has been elected surgeon to the Wexford County Infirmary. His predecessor was Dr. Harvey Boxwell, who held the post for upwards of half a century.

EGYPT.

[FROM OUR OWN CORRESPONDENT.]

The Sanitary Budget.—Porro's Operation in Egypt.—Surgery at Kasr-el-Aini.—Slavery.—Use of Mosques during Epidemics.—The Cairo Season.

THE budgetary estimates for 1890 are now being prepared by the various administrations, and in nearly every case an increased credit is demanded. That of the Sanitary Department has just been submitted, the sum total asked for amounting to £104,500. In 1888 the amount originally granted was £100,000, but during the year a commission of economy cut it down to £93,000, which was also the sum fixed for the current year. Unfortunately, it has been found quite impossible to keep down expenditure within these narrow limits, and already the credit under certain heads is exhausted, and the Finance Department has declined to pay sundry demands, chiefly for cost of food in hospitals and ambulances. Formerly, patients had to be dragged to hospital in chains, but now they flock for treatment in such numbers that the accommodation no longer suffices, and it has been found necessary to issue a circular strictly forbidding medical officers to admit any but the most urgent cases. Dieting of sick in temporary hospitals is also a serious item. During the period from January 1st to the middle of September, upwards of 100 ambulances were established in various places for the treatment of contagious diseases, chiefly small-pox, measles, and typhoid fever; the number of patients admitted amounting to 2,212, and the total deaths to 461. There is no doubt whatever that the system of stamping out disease inaugurated of late years has been most efficacious, and that it would indeed be poor economy to restrict expenditure under this head. It is worthy of note that, from 1881 to 1884 inclusive, supplementary credits amounting to £11,002, £20,771, £64,031, and £5,964 respectively had to be voted to meet expenses caused by epidemics during those years; 1883 was the cholera year, but no special outbreaks have been recorded for the other three years. In 1885 and following years, under pressure from the Finance Department, the greatest efforts were made to keep down expenditure, and owing to a fortunate absence of any serious epidemic, the ordinary budget was happily made to suffice without any great danger to the public health. This year, however, for the reasons indicated above, it has been found impossible to make both ends meet, and it remains to be seen whether the reasonable demands of the Sanitary Department will be accorded.

Porro's operation has been twice performed within the last month in Egypt: at Kasr-el-Aini by Dr. Milton, and at Port Said by Dr. Robertson. The infants in each case were saved, but the mothers succumbed.

Dr. Milton has lately had a successful case of ovariotomy, the operation lasting about fifteen minutes, and the woman being practically well on the seventh day. He has also performed what promises to be a very successful operation for ectopia vesicæ in a male adult. If all goes well, the patient should shortly be able to micturate through the natural channel, and possibly may have control to a certain extent over his new bladder.

Slavery, though nominally abolished in Egypt, really still continues to exist, as is proved by a case now being tried in the law courts. It seems a certain Moustapha Pasha, at one time Minister of Finance, lately died, leaving behind him an immense property, which is now the subject of litigation. A highly placed personage claims this property because the late Pasha was still a slave at the time of his death, never having received his freedom from the personage's father, whose bondsman he had originally been. It appears that, although the secular law has abolished slavery, it is still sanctioned by the law of religion, and that the latter overrides the former. Great efforts are made to suppress slavery in the Soudan, but in Circassia the unholy traffic still flourishes unrestricted. The late Moustapha Pasha was a Circassian.

In the late epidemic of measles, 744 cases in all were treated by the agents of the sanitary department; of these, 110 were accommodated in a mosque at Menouf, and amongst them no fewer than 65 died, being at the rate of 59 per cent. In the remaining 634 cases the death-rate was 12.7 per cent. only. The other conditions being equal, this excessive mortality at Menouf can only be attributed to the deleterious influence of the building which, as usual in such cases, was also used in ordinary times as a public latrine. The native inspector who selected this mosque has not only received a reprimand from the Minister of the Interior for desecrating a sacred institution, but has also been severely taken to task by his chief for his negligence of ordinary hygienic principles. In order to prevent a similar occurrence in future, a general order has been issued that on no account are mosques ever to be used for the accommodation of sick during epidemics.

The general health throughout the country is now excellent, and the birth-rate is once again firmly established in front of the death-rate. The weather is delightful, and everything points to a successful winter season. An Opera Company has been engaged, under Government patronage, and visitors to Cairo this year may expect not only a perfect climate, but also the means of passing their holiday in a most agreeable manner.

BIRMINGHAM.

[FROM OUR OWN CORRESPONDENT.]

Enlargement of the Queen's Hospital.—Presentation to Sir James Sawyer.

AN influential meeting was held on Monday last to view some extensive improvements which have just been effected at the Queen's Hospital. Two years ago an appeal was made for £10,000, to be expended partly in alterations and partly as working capital. Of this sum £7,650 has actually been received, of which about two-thirds have been expended in improvements. Two wings have been extended; the offices have been removed from the centre of the wards to the exterior; accommodation has been provided for thirty additional beds; and a home has been provided for the nurses, besides other minor changes. The hospital is now in a most efficient sanitary condition.

At the same time a special meeting of the governors was held for the purpose of presenting to Sir James Sawyer an illuminated address on the occasion of his resigning the post of Physician to the hospital, and of electing him Consulting Physician. The address was very eloquently worded, and alluded to the long service of Sir James Sawyer at the Queen's Hospital, first as House-Physician and subsequently, for eighteen years, as Honorary Physician. During the course of the speeches allusion was made to the fact that Sir James Sawyer had received the whole of his medical training in Birmingham, commencing as a student at Queen's College. When thanking the governors for their presentation, Sir James Sawyer explained the reason of his early retirement from the active service of the hospital, and expressed a hope that he might still occasionally come in touch with his colleagues and the Committee in the management of the hospital, and with the students in their clinical teaching.

LIVERPOOL.

[FROM OUR OWN CORRESPONDENT.]

Farewell Dinner to Mr. Reginald Harrison.

ON Saturday evening, October 5th, Mr. Reginald Harrison, F.R.C.S., late Senior Honorary Surgeon to the Liverpool Royal Infirmary, was entertained at dinner by his professional brethren at the Adelphi Hotel, Liverpool. The occasion of the dinner was to bid Mr. Harrison farewell on his leaving Liverpool to transfer his professional field of work to London, and to make him a presentation subscribed for by his friends in the profession. The dinner also combined those held annually by the School of Medicine and the Medical Institution. There were about 140 covers laid, Mr. Mitchell Banks, now Senior Surgeon to the Infirmary, presiding, and among those present were the Dean of Norwich (Dr. Lefroy), Mr. Hamilton B. Gilmour (Chairman of the Royal Infirmary), Principal Rendall (University College), Dr. Carter, Dr. Davidson, Dr. Glynn, Dr. Barron, Dr. Dickinson, Dr. Grossmann, Dr. Fred. Roberts (London), and Mr. T. Pagan Lowe (Bath).

After the usual loyal toasts the Chairman proposed the toast of the evening, "Our Guest," and in doing so he gave a brief and interesting sketch of Mr. Harrison's professional career in Liverpool, to which city he came in 1859 as house-surgeon at the Northern Hospital. Very shortly after that he was elected resident surgeon to the Royal Infirmary, and subsequently he became honorary surgeon to the Northern Hospital. After having fulfilled the duties of that appointment for a period he was, nearly twenty years ago, selected as honorary surgeon to the Royal Infirmary, in which capacity he had since laboured, gaining the esteem of many friends, both private and professional. About the year 1865 the Liverpool School of Medicine, to which Mr. Harrison had then been appointed Lecturer on Anatomy and Surgery, was in a very

depressed condition, and many of the lecturers thought the institution would have to be closed. Mr. Harrison, however, perseveringly fanned the flickering embers and was instrumental in bringing the school once more to a prosperous state. It was the existence of the Medical School in a flourishing condition a few years ago which made the establishment of University College a possibility. Without the Medical School, of which Mr. Harrison became president, University College would have been still in the future. They might therefore look upon Mr. Harrison in a sense as the resuscitator of the School of Medicine and the father of University College.

Mr. Banks then feelingly alluded to the friendship of more than twenty years' standing between Mr. Harrison and himself, and, with a few well chosen words, formally presented to Mr. Harrison a handsome silver bowl, with a border in *repoussé* work, the design being copied from the Elgin marbles, a pair of goblets to match, and an illuminated address signed by 150 subscribers.

Mr. Harrison, in responding, cordially thanked the company for the great kindness they had shown him, not only on the present occasion, but also during the whole thirty years of his connection with Liverpool. Although it grieved him greatly partially to sever his professional connection with so many old friends, yet he felt that the separation would be in many respects more apparent than real. It had been a great satisfaction to him to hear, only the previous day, that the governors of St. Peter's Hospital, Covent Garden, had elected him to the post rendered vacant by the death of Mr. Walter Coulson, that of Honorary Surgeon to the hospital. He must again express his thanks for the handsome and valuable testimony of their friendship and esteem, and he need hardly say that he was deeply pleased to find so many of his friends appreciated the fact that he had ever striven, to the best of his ability, to maintain the dignity of his profession, and to promote unanimity among its members.

The Dean of Norwich then proposed "The Liverpool Medical Institution," coupling the toast with the name of Dr. William Carter, the president. The Dean alluded to the self-denial which, he said, was so unstintingly practised by members of the medical profession towards the general public, and more especially towards the poorer of the people. He had known Dr. Carter for more than twenty years, and he was certain the institution had done well in giving him the highest honour it could bestow.

Dr. William Carter, in replying, said he and his medical brethren would go home after hearing the Dean's speech, feeling that they were very much better than they ever thought they were. The members of the Medical Institution never interfered with public affairs except when the health of the community made it incumbent on them to do so, as in the recent opposition to the proposed extension of the abattoirs.

Various other toasts were proposed and responded to. A musical programme was executed by the guests, and a highly enjoyable evening was spent.

CORRESPONDENCE.

THE PRACTICAL ELEMENT IN MEDICAL EDUCATION.

SIR,—I am glad to see that the seed I cast upon the soil in my address on Medical Education to the members of the British Medical Association is not unlikely to be fruitful; and that in, at any rate, two very highly cultured fields it has taken root, and is already well above the ground.

I allude to the addresses delivered at the opening of the medical session at the Yorkshire College, in Leeds, by Professor Gairdner, of Glasgow, and at St. George's Hospital Medical School, in London, by Dr. T. Clifford Allbutt respectively.

I desire nothing more in the interest of medical education than that the subject should be thus freely discussed, that the voice of the profession at large should be heard upon it, and that professional opinion concerning it should, as far as possible, be fully elicited.

The ground I took in my address is that, as matters stand at present, the student at the close of his curriculum is not as well prepared as he ought to be, and might be, to cope with the responsibilities of general practice, and that he needs something for which that curriculum has not provided, namely, a knowledge of the more common forms of ordinary illness. He may be, no doubt he is, well versed in the general principles of his profession. He may possess, he unquestionably does possess in the aggregate, a vastly greater amount of medical and surgical knowledge than the recently-equipped practitioner of a former age; and yet for a time, at any rate, he is not his equal, inasmuch as he lacks the groundwork and the foundation upon which all his work should rest.

My argument is this: that in former times, when the old-fashioned system of apprenticeship was in vogue, the student had the opportunity, greater or less, as the case might be, to see the daily routine of medical practice, of making himself acquainted with ailments and illnesses of which he can see nothing in his hospital experience, and of picking up a vast fund of knowledge whose utility would be of inexpressible value to him to the last day of his career; that, in altogether abolishing apprenticeship, a false step has been taken, and that medical education has been to some extent impoverished. And this, notwithstanding all that may be said by ultra-educationists and by those who place theoretical knowledge so far in advance of practical experience, is, I believe, the opinion honestly entertained by a very great majority of thoughtful medical men of our time.

No one values a university education more highly than I do, no one longs more earnestly and profoundly than I that every medical student could enjoy so incalculable a privilege; but, what cannot be, cannot be, and for those to whom the university is an impossibility, I hold that the best attainable means should be provided.

You will now, I am sure, permit me a few words in reply to Professor Gairdner and to Dr. Clifford Allbutt respectively, especially as those words are clearly needed to prevent misunderstanding.

The words in my address to which, in each instance apparently, objection has been taken are as follows:

"MEDICAL EDUCATION IN THE PRESENT.

"Year by year and little by little we have been accumulating a burden which, if not absolutely more than the shoulders of the student can bear, is yet heavier than he can possibly carry with credit; and, instead of increasing his opportunities to acquire the strength necessary to bear it, we have curtailed his time, have deprived him of material advantages, and, in accordance with the hurry of the age, have demanded results well-nigh impossible of attainment.

"The five years of apprenticeship have been swept away, and with them the opportunity to master the groundwork of medical education and to acquire a sound knowledge of the more common forms of ordinary illness has gone also; and in four years, instead of eight, we permit the whole work to be completed.

"We have determined to ignore the utility of that homely but infinitely useful form of preparation for the higher parts of medical education which apprenticeship or pupilage was pre-eminently calculated to afford; we have determined that from the day on which a boy has been able to pass a very ordinary and limited educational examination he shall be permitted to take his place in a medical school, and we have arranged a curriculum which, if by dint of a slavish toil he can master, shall enable him, at the early age of 21, to enter upon the full responsibilities and duties of practice."

Dr. Gairdner's objection comes practically to this, that this familiarity with the conditions which will form the actual environment of the medical man, not only in his earlier years but all through his life, is not necessary, that his general education in the principles of his profession will secure him from disaster, and that experience will come with time; and he goes on to reason that if it is necessary for him to have seen and done all the lesser, he ought, by parity of reasoning, to have also seen and done all the great things also. Here are his words:

"Now, it is at this point that I find it needful to have a very few words with my friend, Mr. Wheelhouse, not, I trust, inappropriate to the present occasion, concerning some of the remarks which he made here a few weeks ago in that most admirable address of his as President of the British Medical Association. I do not suppose at all that we differ greatly in essentials, or perhaps even in details; certain I am that we have both one object at heart, the advancement of our profession, alike in its essential usefulness, and in the good opinion generally entertained of it, which, indeed, forms a part, and a large part, of its usefulness to the public. But some of the remarks in that address appear to me to be open to an interpretation which possibly is not the one intended, but which, at all events, I desire not to allow to pass current without a *caveat*.

"It seems to be assumed or suggested that, in order to keep a

medical education upon what are supposed to be practical lines, it is necessary that every student before getting his name on the *Medical Register* shall have had opportunities of seeing, handling, and, in a certain sense, treating almost every kind of common disease and every ordinary type of infectious fever. By parity of reasoning it would equally be necessary, as a security to the public, that every man admitted to the *Register* should have done every minor, or even possibly every ordinary major, operation, so that nothing should come to him hereafter so as to find him quite devoid of previous experience.

"Now, while I am as anxious as Mr. Wheelhouse or anyone else can be, to improve, in every reasonable sense, the practical side of a medical education, I venture to say that what I have now put into words of my own as being suggested by the address referred to is not, to my mind, even a good practical ideal. Moreover, if any such ideal is to be carried out or attempted, it will be absolutely necessary for the General Medical Council to go back on their late resolutions with respect to the 'covering' of unqualified medical assistants; for, without some sort of 'covering,' lawfully or unlawfully, how is this extent and variety of practical experience, which is regarded as essential, ever to be attained by the majority of students or of undergratuates? It will be conceded that in order to make an experienced as well as a properly instructed practitioner, it would be requisite that he should have had opportunities of setting fractures and reducing dislocations; of performing venesection; of passing the catheter, not only in the normal subject but through strictures and other difficulties; of treating and of observing throughout, with a certain amount of responsibility, cases of measles, pneumonia, typhus and typhoid fevers, phthisis, small-pox, rheumatism with and without cardiac complications. Why not also of performing operations in strangulated hernia, tracheotomy, ligaturing of arteries and veins, and other cases of emergency, which, according to the programme just referred to, ought, if possible, to form a part of the training necessary to fit a man completely for all the necessities of general practice?

"I apprehend that it is only necessary to put the case in this form in order to show that there is a fallacy somewhere, I do not say in Mr. Wheelhouse's argument, but in the conclusions to which I suppose his argument will, if carried out logically, apparently lead. I will, therefore, here affirm that my own view of what is essential to a practical medical education differs in some respects from that which I have presented above, using (it may be erroneously) the name of Mr. Wheelhouse. Speaking from my own experience as a teacher, I hold that the hitherto unsolved problem of a perfect medical education is to be sought in a direction nearly the opposite, or converse, of that just indicated—namely, not that the student or candidate for a diploma should have seen and done personally almost everything, or even many things, but that he should have seen and done comparatively a few things in such a way as to give a proper foundation, or leverage, as it were, for attempting successfully others which have necessarily lain outside the possibilities of a young man's experience; and accordingly I have come to regard it as of far greater importance that every case observed or dealt with in any way by the student, or in his presence, should be thoroughly observed, and its treatment thoroughly understood, than that a much greater number and variety of cases should be so observed and so treated as to beget habits of imperfect observation and loose thinking—in short, the habits which, in their developed form, give origin to the 'automatic doctor' aforesaid."

My answer is: By all means let him have seen, done, handled, and operated on everything that is possible; at least, let him have seen them done by competent hands. Let him, under skilled guidance, have himself performed all the minor operations, the operations he may be called upon to undertake the day he enters upon practice; and for the major ones, let him so practise them on the dead subject, and so use his eyes and his head when he sees them done on the living one by his teachers, that when the day of responsible surgical emergency comes upon him he may feel that he is honestly prepared to meet it. The hospital, or school, or university in which all this cannot be provided must be a poor one indeed, and the "authority" which is satisfied with less falls short of the calls of duty.

With the wish so earnestly and eloquently expressed by Dr. Gairdner that "a few things should be learned thoroughly and well," I am entirely in accord; but can Dr. Gairdner be in earnest in believing that half a dozen cases of pneumonia, or of Bright's or any other diseases, studied ever so deeply, will stand in the stead of the practical ability to relieve a distended bladder or to reduce a dislocated joint? Can he mean that because a man has with ever so great earnestness studied "a few cases" to the utmost bounds concerning them, it is therefore not necessary that he should know measles from scarlet fever, nor be able to recognise small-pox, typhus, or typhoid fevers when he sees them? I cannot credit so great a man with a fallacy so awful, even though his own hand wrote it. And, where, except in the homes of the people, is the student to become conversant with these things? Not in the general hospitals attached to our schools and universities, for from them they are rigidly and righteously excluded, but only in the homes of the people, and to these he has no access except through the general practitioner or some of the many public charities, other than hospitals, with which our happy land is so freely studded.

For this state of things I propose a remedy, and the remedy itself is one which, I venture to think, meets with very widespread approval, the difficulty being, not the remedy, but the time at which it may most advantageously be taken. On this subject, again, my words are these:

"THE MOST ADVANTAGEOUS TIME FOR PUPILAGE.

"I hold that the time to acquire simple information is when the mind is eager, inquiring, impressionable, and plastic; when mistakes and failures are of comparatively little moment; when a little wholesome ridicule may be borne with equanimity, and when lessons which are the outcome of inexperience leave well defined impressions on the mind which serve as warnings and landmarks at a future and more important age without any bitterness or sting in their remembrance. In later life, especially at that particular time of life when a young man is, perhaps pardonably and not unreasonably, a little elated and puffed up by having passed all his examinations, such failures, and the rebuffs they bring in their train, are neither so well borne nor so productive of advantage, and they constitute an evil which may be avoided. In our large county hospitals, workhouse infirmaries, and public dispensaries which, up to the present time, have been but very slightly utilised, we have a splendid field in which a vast fund of information of this kind which now runs to waste might be gleaned, and of these I would make much greater use than has hitherto been the practice.

"In pupilage, in one or other of these, in my humble judgment, a year, or even two, at the commencement of professional study would prove the very best beginning; and in following the practice to be there seen under the direct guidance and supervision of those who administer them, a youth would see work which in after life would be of incalculable value to him, and would obtain opportunities for a groundwork which, under the present method of education, are wholly thrown away."

I think Dr. Clifford Allbutt can hardly have read my address, for I do not think he would wilfully misrepresent me on so very grave a subject, and yet in his address to the students at St. George's Hospital these are the words he uses:

"Mr. Wheelhouse proposes to make this state of things ten times worse than before. By submitting youths to a five years' apprenticeship to working doctors at a time when their minds are expanding and impressionable, at a time when an ardent love for higher study and a yearning for ideas spring up in the heart, he would send them not where they can feel the influence of great men present and past, not where learning is seen in all her variety and in all her provinces, not where he may associate with men of his own age whose minds are occupied with other forms of culture and in training for other callings, but he is to be confined to one mind, however able; to one profession, however honourable; to one set of ideas, however fruitful. And as a matter of fact, we know that the ruling mind will often be something less than great, the set of notions too often commonplace, and the teaching at best a teaching, and not a cultivation.

"Gentlemen, this is but to perpetuate the common-mindedness which I suggest is already our danger—a fault due in part to our defective education, in part to our lack of leisure. I say we are already too narrow and channelled in our thought, and too shoppy; and we are to improve our education by intensifying this very habit of mind! We are to make our education more comprehensive by shutting up our students with individuals; we are to strengthen their reasoning powers by therapeutical drill; we are to substitute the ideas of the middle-class parlour for the traditions of a university!

"But, says Mr. Wheelhouse, your university student comes into practice so confoundedly ignorant; my purpose is, above all

things, to make him an efficient practitioner, to teach him how to manage patients and how to recognise German measles. If, Mr. Wheelhouse would say, after doing this he can chatter about Shelley and Herbert Spencer, he is welcome to his accomplishments; but the bread studies must be complete. Certainly; with this I wholly and ardently consent. No one can be more opposed than I am to superficial *Schöngeisterei*—to literary fribbling and dilettantism—in the place of solid attainments and practical skill. But, one may get roast pig without burning down one's house, and I contend—with an exception to be hereafter discussed—that a man whose mind has been enlarged and strengthened by a university course will, after a briefer drill, make a more skilful practitioner than one whose technical craft is gained by routine and is not vitalised by a comprehension of principles. It is no truism, gentlemen, to repeat in this place that knowledge is one and indivisible, and that he who is content to pick up isolated chapters of learning has no living knowledge at all."

Now all this as mere declamation is of course superb, and if it were an accurate version of the matter in question I would not utter a word; I would sit silent, abashed, and crushed; but as it is exactly the reverse of anything I have ever said, or thought, or written, I cannot permit it to pass without observation and correction. I would rather go on as we are, greatly as I consider that our plan might be improved, than that we should go back to the old system of a five years' apprenticeship to one man or to one institution. I hold, and I have ever taught, that to go back to that system would be to waste, hopelessly and absolutely, three years of the very best part of every educational life.

My words are clear and explicit, and are not open to the construction put upon them by Dr. Allbutt: "That one, or even two years, devoted at the commencement of the professional study to the acquirement of a knowledge of the groundwork and often observable phenomena of our science, under the supervision of competent teachers, in some of the institutions whose infinitely valuable opportunities are, under the present order of things, entirely wasted, would be of incalculable value." And with this opinion Dr. Allbutt after all does not appear to disagree, for a little further on in his address we find him actually advocating such a measure: "Nevertheless, I agree with Mr. Wheelhouse that an apprenticeship to the domestic side of your work, a familiarity with its lesser marks and byways, is necessary. These we cannot teach here. After your faculties are trained and strengthened in their main branches, your lesser shoots shall be duly laid in. But with capacities thus enlarged, one year's apprenticeship would do the work of five in earlier age; and an obligation upon young men thus to apprentice themselves before the completion of their studies would have my approbation and active support." Wherein, then, lies the great difference between us? Simply as to the time (the old, old question) at which pupilage may be most advantageously taken.

I think that rudimentary knowledge should be sought in the earlier years of studentship. Dr. Allbutt, in common with many others, would place it later on; and, when a man's mind has been expanded by converse with his fellows, and by the scientific observation of the phenomena of disease, and is truly and rightly aflame after higher knowledge, higher reasoning, and higher aspirations, he would put him back to the bare study of the *Pharmacopœia* and to the acquirement of those rudiments of medical education which can only then be a weariness to his soul and degradation to his energies.

The difference between us—infinitely great as it is—is not one of "principle" after all, but only a question as to the choice of time, and is hardly such as to call for the old story of the Chinaman who was so devoted to roast pig that he was ready at any time to burn the house down that he might revel in his favourite dish.—I am, etc.,

C. G. WHEELHOUSE.

Leeds.

THE DEAF AND DUMB.

SIR,—Among those medical men who are directly interested in the deaf and dumb in this country, the report recently issued by the Royal Commission on the Deaf and Dumb and Blind, and the article referring to it, which was published in the JOURNAL of September 28th, cannot but give rise to some controversy.

It is not my purpose in any way to criticise the report of the Royal Commission, but I think it only right to indicate many of the recommendations and statements with which it is not possible for all of those who are brought into intimate relationship with the deaf and dumb, and who know the merits of their various methods of education, to agree.

There is much to be said in favour of the pure oral system, partly on account of the good influence which it produces upon the vocal and respiratory functions of the child, and partly because it to some extent renders the individual somewhat more able to mix in general society, but it has never yet proved itself thoroughly satisfactory, even among those who have had the advantages of private tuition. There are individual cases, especially among the deaf who have once heard, or who are susceptible to loud sounds, where the pure oral system has in a large measure succeeded, but even they are seldom able to carry on a conversation with a stranger, and most certainly cannot read the lips of anybody who speaks with average speed. Their speaking vocabulary too, whatever their reading and writing capabilities may be, is usually very limited, and altogether they are devoid of eloquence.

Doubtless at first sight the pure oral system will commend itself, but contrast the monotony and paucity of expression in one so taught with the real and natural eloquence of those educated on the combined system, and I think few will agree that it is proper to deprive the masses of the deaf of the use of their natural signs.

Signing is the natural language of the deaf-mute, articulate speech is foreign to him. Place several deaf children together, without teaching them any signs, and observe how rapidly they will acquire the language of signs among themselves.

I do not in any way wish to depreciate the oral system of teaching, as I believe that every child whose intelligence will allow of it ought to receive the advantages afforded by oral teaching, but most emphatically do I advocate (and especially in those cases where the deafness is complete, or has existed since infancy) that the combined method is the most advantageous and the most humane.

Children taught on the combined system obtain a better and sounder education in the time they are at school than those taught on the pure oral system, and they are consequently likely to become more useful members of society.

The statement made in the report that interpretation can be made to them by silent word of mouth must be admitted to be impossible, because they invariably require repetition; and, moreover, while the interpreter is explaining one sentence the following one must of necessity be lost, and so the train of ideas becomes broken.

Altogether, after duly considering the *pros* and *cons* of this matter, and after carefully reading the report of the Commission, I feel quite unable to accede to the hope that the superiority of speech (pure and simple) over signs will become universally recognised.

Regarding the results of allowing the deaf-mutes to intermarry, in my opinion the idea that it will give rise to a deaf variety of the human race is rather absurd; as well might the intermarriage of the blind tend to the production of a blind race. As a matter of fact, during the past ten years, in not one of the numerous instances in which such intermarriages have taken place in this city have the children of these people been deaf; and furthermore, the statement that chilblains are more prevalent among the deaf and dumb than among speaking children (deaf and otherwise) must also be denied. In our schools, at all events, they do not occur more frequently than among the children in the orphan asylums and other such charities.

Deaf children make ample use of their lungs when playing their games of cricket and football, and shouting is by no means unknown among them.—I am, etc.,

CHARLES MACALISTER, M.B.,
Honorary Medical Officer to the Liverpool School for the Deaf and Dumb; Honorary Pathologist to the Royal Southern Hospital, etc.

THE ST. JOHN AMBULANCE ASSOCIATION.

SIR,—Enclosed is a copy of a circular letter received from the St. John Ambulance Association, and of my reply, to which no rejoinder has yet been received. I ask your kindness to insert this correspondence in the JOURNAL, for the reasons stated in my reply.—I am, etc.,

STANLEY HAYNES, M.D.

Malvern.

[Copy.]

"St. John's Gate, Clerkenwell, London, E.C., September 12th, 1889. DEAR SIR,—You are, perhaps, aware that an ambulance

brigade is being established in connection with the St. John Ambulance Association, and many corps have already been formed in different parts of the country. The first object is naturally to give assistance in the daily accidents of civil life; and, secondly, we are anxious to enrol a body of surgeons, bearers, and nurses (male and female), who could be relied on as an important supplement to the Army Medical Department in case of war in which Great Britain might be involved. In the latter event it is hardly necessary to add that all expenses would be defrayed, as well as a certain fixed rate of pay. As a preliminary step, will you kindly inform me whether you will allow your name to be placed on our register in one of the undermentioned categories: (*a*) for service within the metropolis and immediate neighbourhood; (*b*) within the United Kingdom, locally or generally; (*c*) abroad? I shall feel obliged if you will be so good as to let me have an early reply, in order that the proposed organisation may be submitted without delay to the military authorities.—Believe me, yours very faithfully, JOHN FURLEY, Director of the Ambulance Department of the Order of St. John of Jerusalem in England."

[Copy.]

"Malvern, September 16th, 1889. DEAR SIR,—In answer to your inquiry of the 12th, I am sorry I do not authorise you to put my name on your register in any one of the categories mentioned. First, you mention enrolment for the giving of assistance in the daily accidents of civil life. Willing as I am to give my share of gratuitous work—already too large—I am not disposed to undertake to attend every case of accident to which I might be summoned without any remuneration, and I hope you will not think me deficient in courtesy when I consider your Association is unreasonable in asking for so great a sacrifice from surgeons; we give too much of our services to the public now, and your Association would aggravate this demoralisation of our people, many of whom seem to forget that we wish to pay our way as well as to earn our living. Secondly, should there be any wounded troops or civilians within my reach during war here, of course I would do my best for all, of whatever country, who might need my attention. I resigned my commission in the artillery volunteers because I could not attend gun drill at distant stations; much less could I leave my home when the country would be swarming with camp followers. In another way I object to this proposed register. The Horse Guards Office has acted badly towards the Army Medical Department, and tried to get civilian medici to undertake home station duties—in some cases successfully—thereby enabling them (that is, that office) to keep the department undermanned, preventing military surgeons from being appointed to those home stations, enabling the Government to keep them abroad for unduly long service and with deficient leave. The proposed action of your Association would help the authorities to inflict a greater wrong on a hardly-used staff of meritorious officers; it was for this reason that I did not join the Army Medical Reserve. If I misunderstand the effects of your scheme I am sorry. The Association has done so much good work that I should be grieved to find its popularity wane by trying to get too much from the medical profession, without which its ambulance organisation would be crippled. So far as I am concerned, I have been glad to teach classes for it, and I hope to instruct a volunteer artillery one this winter.—Yours very faithfully, STANLEY HAYNES, M.D. J. Furley, Esq., St. John Ambulance Association."

ENGLISH PRACTITIONERS IN SWITZERLAND.

SIR,—I am greatly in doubt whether "Health Resort" writes in fun or in earnest. At the risk of appearing unable to see a joke, I will suppose it to have been written in earnest.

Three "serious mistakes" are laid to my charge. The first "serious mistake" is that I say: "What is demanded is that the right to practise in England should carry with it the right to practise in Switzerland." "Health Resort" replies: "That is not what is demanded by English practitioners; they simply ask to be allowed to practise in health-resorts among their own country people." I accept the correction, and would alter my original statement as follows: "What is demanded is that the right to practise in England should carry with it the right to practise only in the best places and in the best *clientèle* in Switzerland."

My second "serious mistake" is in saying: "If a Swiss medical man wishes to practise in England, he must pass an examination in order to be a recognised member of the profession there." "Health Resort" replies: "Nothing of the kind. He may practise to any extent he pleases, provided that he does not pretend to practise under an English qualification." Again I accept "Health Resort's" statement, but it does not clash with mine. The small proviso that the Swiss practitioner "does not pretend to practise under an English qualification" reduces him to the same conditions of practice as a herbalist. Between such a man and a recognised member of the profession lies a great gulf.

My third "serious mistake" is in saying: "Anyone who thinks it worth his while to practise there might surely also think it worth his while to undergo the necessary examination." "Health Resort" thinks "it should surely be unnecessary" for one who has "qualifications which would enable him to practise throughout the British dominions, over the extent of which, as it is said, the sun never sets," "to go through a series of examinations to obtain a qualification to practise in the small Republic of Switzerland." In this also I agree with "Health Resort." I think a single examination should be enough, and the whole gist of my previous letter was directed towards obtaining a modification in this direction of existing laws.

"Health Resort" says: "If the Swiss medical authorities thought proper, they could have their qualified practitioners placed on the list of foreign graduates, which would give them all the rights and privileges of English registered practitioners." As a matter of fact, one chief reason why they do not accept reciprocity is that in their case the rights and privileges in question would include only the United Kingdom, not the other portions of the British Empire.—I am, etc., WILLIAM R. HUGGARD.

Davos Platz, Switzerland, October 6th.

NAVAL AND MILITARY MEDICAL SERVICES.

EMPLOYMENT OF RETIRED OFFICERS IN THE COLONIES.

RETIRED BRIGADE-SURGEON writes that he was disappointed we had not noticed this matter in our leading articles on the recommendations of the Committee; there would be distinct advantages in the employment of retired officers in the Colonies, both to individuals and the active list at large, by increasing the periods of home service. Many retired medical officers are willing to accept Colonial, on the same terms as home, appointments.

*** The matter referred to has not been lost sight of; there is much to be said in its favour. One retired medical officer is at present employed in Nova Scotia, and we do not see any good reason against the employment of others in suitable localities.

THE NAVY.

THE following Surgeons, who entered the service September 29th, 1877, have been promoted to be Staff-Surgeons:—JAMES PORTER, M.A., M.B.; CHARLES JAMES; THOMAS LOANE, M.D.; JOHN B. B. TRIGGS, M.B.; GEORGE R. D. CHARLTON; GEORGE WARNER BELL, and FRANCIS AUSTEN JEANS. From the *Royal Navy List* we learn that Staff-Surgeon Porter was Surgeon of *Orontes* during Egyptian war, 1882 (Egyptian medal, Khedive's bronze star); served on shore with the Royal Marine Battalion defending Suakin, from May, 1884, till the battalion was recalled in May, 1885, except from June till September, 1884, when he organised and was Medical Officer in charge of the Royal Victoria Hospital, Suez, then occupied as base hospital for seamen and troops of Red Sea Littoral, and was engaged in the operations in the Eastern Soudan, 1884-85; present at the actions at Hasheen, March 20th, 1885; attack on Sir J. McNeil's zareba, Tulufik, March 22nd; the attack on the square of Guards and Marines, March 24th, and at the taking and burning of Tamaai, April 3rd (clasps for Suakin, 1885, and Tofrek). Staff-Surgeon James was Surgeon of *Tenedos* during the Zulu war, 1879 (Zulu medal); received the expression of their Lordships' great satisfaction at the display of zeal and devotion to duty manifested during the epidemic of yellow fever at Jamaica, when attached to the hospital, 1882. Staff-Surgeon Triggs served in medical charge of *Active* during the Zulu war, 1879 (Zulu medal). Staff-Surgeon Bell was Surgeon of the *Helicon* at the bombardment of Alexandria, July 11th, 1882, and during Egyptian war (Egyptian medal, Alexandria clasp, Khedive's bronze star); served with the Naval Brigade landed for service in the Soudan, with the Nile expedition for the relief of General Gordon at Khartoum, 1884-85 (clasp for Nile, 1884-85).

The following appointments have been made at the Admiralty:—MICHAEL J. M'CARTHY, M.D., Staff-Surgeon to the *Cruiser*, October 3rd; JAMES PORTER, M.A., M.B., Staff-Surgeon to the *Scout*, October 3rd; CHARLES W. SHARPLES, Surgeon to the *Melita*, October 3rd; OCTAVIUS W. ANDREWS, M.B., Surgeon to the *Duke of Wellington*, October 3rd; FRANCIS M. PUDDICOMBE, Surgeon to the *Royal Adelaide*, October 3rd; HORATIO S. R. SPARROW, Surgeon to the Royal Marine Artillery at Eastney, October 6th; GEORGE R. D. CHARLTON, Surgeon to the *Emerald*, reappointed on promotion, September 29th.

THE MEDICAL STAFF.

SURGEON-MAJOR S. K. RAY is promoted to be Brigade-Surgeon, ranking as Lieutenant-Colonel, *vice* W. Folliott, F.R.C.S.Ireland, granted retired pay. Surgeon-Major Ray entered the service as Assistant-Surgeon, April 20th, 1859; became Surgeon, March 1st, 1873; and Surgeon-Major, July 30th, 1874. He was in the Egyptian war of 1882, and was at the battle of Tel-el-Kebir (medal with clasp and Khedive's bronze star).

Surgeon-Major P. M. ELLIS, on general duty in the Poona District, Bombay, is appointed to the medical charge of the Station Hospital at Kamptee.

The name of Surgeon J. M. REID, M.D., who is serving in the Bombay com

mand, is struck off the list of tour-expired officers of the Medical Staff selected for relief during the trooping season of 1889-90.

ARMY MEDICAL RESERVE.

Surgeon William John Naismith, M.D., F.R.C.S.Eng., who was appointed to the Reserve May 5th, 1888, is now promoted to be Surgeon-Major, ranking as Major. Dr. Naismith is Medical Officer to the Ayrshire Yeomanry.

INDIAN MEDICAL SERVICE.

Brigade-Surgeon T. E. B. Brown, M.D., Bengal Establishment, has retired from the service, with effect from the date on which Surgeon-Major S. H. Browne, M D., Joint Medical Officer of Simla, is appointed to be Principal of the Lahore Medical College. Dr. Brown entered as Assistant-Surgeon July 23rd, 1858, and rose to be Brigade-Surgeon September 1st, 1885. The *Army Lists* do not assign him any war service.

Surgeon-Major O. Baker, Bengal Establishment, civil surgeon of Moulmein, is appointed to be Joint Medical Officer of Simla, in succession to Surgeon-Major S. H. Browne, M.D.

Surgeon-Major T. Hume, M.B., Madras Establishment, is appointed Officiating Medical Officer, 2nd Infantry Hyderabad Contingent, *vice* Surgeon-Major C. L. Swaine, M.B., on furlough.

Deputy Surgeon-General G. Farrell, C.B., Bengal Establishment, has been awarded a good service pension. He was engaged in the Afghan war in 1878-80, was present at the action at Sapri Pass, and was twice mentioned in despatches. The *Army List* does not credit him with the Afghan medal, but this is doubtless an omission. He was also in the Burmese campaign in 1886-88 as Principal Medical Officer, was mentioned in despatches, received the thanks of the Government of India, and is entitled to the medal with clasp. He was nominated a C.B. in 1886.

The appointment of Surgeon A. R. Edwards, of the Bengal Establishment, to the officiating medical charge of the 19th Punjab Infantry is cancelled.

Surgeon P. C. H. Strickland, Bengal Establishment, is appointed to the civil medical charge of the Bhamo District and its Police, *vice* Surgeon N. P. Sinha.

Surgeon W. A. Corkery, Bombay Establishment, is appointed to be Civil Surgeon of Sukkur, *vice* Surgeon H. P. Dimmock, transferred.

The services of Surgeon-Major J. S. Wilkins and Surgeon B. B. Grayfoot, both of the Bombay Establishment, are placed at the disposal of Government for employment in the Civil Department.

Major-General Sir George White's despatch respecting the operations in Burmah has been published. Among the officers mentioned for their services are: Surgeon I. P. Doyle, Madras Establishment; Surgeon-Major A. B. Strahan, 44th Goorkha Light Infantry; Surgeon Rogers, 44th Goorkha Regiment (*sic*, but presumably Surgeon F. A. Rogers, 42nd Goorkha Light Infantry); Surgeon Robinson, Indian Medical Service (? Surgeon W. H. B. Robinson, Bengal Establishment); and Surgeon C. S. Cronin, of the Medical Staff.

THE VOLUNTEERS.

Surgeon J. C. Woodburn, M.D., is promoted to be Staff-Surgeon to the Clyde Brigade of the Royal Naval Artillery Volunteers.

Acting-Surgeon M. L. Brown, M.D., of the 1st Devon and Somerset Engineers, Fortress and Railway Forces, has resigned his appointment, dated April 16th, 1884.

MEDICO-LEGAL AND MEDICO-ETHICAL.

M.D.BRUSSELS.

M.D. writes: A reply to "Physician and Surgeon," in your issue of August 17th, surprised me, and as I think it is liable to mislead the readers of the Journal with regard to the objects and meaning of the Medical Act, I ask permission to offer the few following remarks. The reply was as follows: "The degree of M.D.Brussels having been obtained since 1886, the words M.D. simply *cannot be used*" (the italics are mine) "in this country. There would be no objection to the use of M.D.Brussels on door-plate or card." Now, assuming that "Physician and Surgeon" possesses British qualifications, there is no part of the Medical Act which precludes him from using his M.D.Brussels; being properly qualified in all branches of the profession, he is perfectly justified in using it, but whilst putting M.D. on his door-plate or card he would be making himself very conspicuous and be adopting an unusual course were he to attach the additional word "Brussels." The usual custom is to put Dr. ——. The writer has evidently been confusing the word "using" with "registration." Foreign degrees obtained before June, 1886, were permitted by the Act of that year to be registered, but those (with one or two exceptions) obtained after that date may not be so registered. The object of the Medical Act is not, as some appear to think, that no degree shall be used in this country unless it is registered, or that every practitioner must register. The Act is intended to protect the public against unqualified men, and has no more to do with any additional degrees or titles that an otherwise fully qualified man may think proper to take than it has to do with the man in the moon. Registration grants certain privileges. It enables to recover fees in courts of law (excepting Fellows of Colleges of Physicians), to hold certain public appointments, and to sign certain certificates required by Act of Parliament, such as death and lunacy certificates. But registration is not compulsory, and an unregistered person possessing a British qualification may practise according to such qualification, and be perfectly within the law, but he participates in none of the advantages mentioned above unless he register.

For further information upon the subject I beg to refer "Physician and Surgeon" to page 15 of the Abstract of Laws, etc., in the *Medical Directory*, 1889.

*** There is no legal objection to the use of the title of "Dr." by any person possessing British qualifications, whether he holds a foreign degree of M.D. or not; and we do not go so far as to say that the holder of a foreign unregisterable degree of M.D.Brussels would be subject to the penalty imposed by Section 40 of the Medical Act, 1858, but we certainly think the inference would be that he held a registerable qualification of M.D. It must be borne in mind that there are large numbers of foreign M.D. degrees which stand on a totally different footing to the degree of M.D.Brussels with regard to the conditions of obtaining it.

CLAIMS AGAINST BANKRUPT ESTATES.

εὐήθης.—The proper proof for medical fees in bankruptcy is for "professional services rendered," with or without "medicine supplied," as the case may be. Certain debts due to clerks and servants, labourers and workmen, are payable in full under the Bankruptcy Act, but medical men do not fall within these provisions.

THE SCALE OF FEES.

Fair Play.—In charging for professional services there are so many points outside the assumed income of a patient to be considered, that it is impracticable to lay down a hard and fast line for any particular class of patients. We may, however, venture to recommend "Fairplay" to consult the *Medico-Chirurgical Tariffs* published by H. K. Lewis, 136, Gower Street, W.C., price (post free for postal order), 2s.; or the *Manchester Medical Tariffs*, published by Cornish Brothers, price 6d., in which he will find the necessary information to guide him in making a fair and reasonable charge for his attendance on the family and servants.

TWO FAMILY MEDICAL ATTENDANTS.

X. Y. Z. writes: A. attends Mr. B. as his medical man; C. attended Mrs. B. at her confinements only. Mrs. B.'s baby, aged 4½ months, being brought up by hand, is taken ill, neither A. nor C. being in attendance at the house at the time. Does etiquette to the profession require notice to be given by the parents to A. if C. is called in, or to C. if A. is called in to attend baby B., or are the parents at liberty to call in A. or C., or anyone else, without any such notice being given?

*** Although, under the circumstances specified, the parents of baby B. would, medico-ethically speaking, be at liberty to call in A. or C., or any other medical man, without notification to either, their position, nevertheless, in relation to the practitioners in question, could not fail to be a delicate one, unless, on entering into the obstetrical engagement with C., it was clearly understood that his professional attendance was limited to the accouchement.

SUPPLANTING.

Trifolium writes: D. leaves town and asks M. to do work for him; one of the cases wishes that M. should continue to attend him in future, which M. first refuses, but on being asked once more on his next visit, M. told patient that if he wrote to D. and said he wished M. to attend, and that he did not require D.'s services again, M. would attend him. On D.'s return M. wrote him the facts, saying he would have far preferred if this patient had acted as the others. D. has not replied, but went to patient, and said (so patient informs M.) that his giving him up was an insult to him (D.). M. has attended the case since. The reason the patient gave for wishing that M. should attend is, to use his own words, "I have derived far greater benefit from your treatment," which he told D. on his calling.

1. Has M. acted properly? 2. What of D.'s action in the matter? I have by me the *Code of Medical Ethics*, and notice in paragraph 9, in Section 2, the right of the patient; also paragraph 9, Section 5, which I read as giving me a right to attend this patient; but I ask the question on account of how D. has acted, for whom I saw the patients gratis, which is not the usual thing in this town.

*** Our correspondent has not only misinterpreted the spirit and intent of the ethical rules referred to, but will, we fear, thereby entail upon himself a loss of the friendship of the practitioner in question, at whose silence on the subject of the note addressed to him by "Trifolium" we are not surprised. The conduct of the latter in the case should, in our opinion, have been strictly governed by the principle laid down in Rules 3 and 5, Chapter II, Section 5, and he should have courteously but firmly declined attendance, except in consultation.

A NEGLECTED GENIUS.

Balham.—In response to our correspondent's communication relative to a semi-medical article in a Beith paper by "M.B., C.M.," we would merely remark that the observations of the writer "on the origin of his brilliant discoveries on the nature and scientific cure of consumption, fevers, etc.," in which it is moreover alleged that hitherto "the treatment, so far as doctoring is concerned, has been all humbug and quackery, directed by rule of thumb and culpably gross ignorance," together with his supreme self-laudation as a distinguished university student, and of his philosophic studies and inventions, *usque ad nauseam*, render editorial comment unnecessary.

HOME FOR CONFINEMENTS.

In reply to "R. C. B.," we may observe that while there would be nothing "professionally improper in taking ladies into his house for their accouchement," it would, from an ethical point of view, be regarded as derogatory to the faculty to seek for such practice by "advertising in any papers he may desire to do," which we assume to mean the lay press.

REGISTRATION OF DEATHS IN HOSPITALS.

Alpha writes: I shall be much obliged if you will inform me whether it is my duty as house-surgeon to register all deaths occurring in the infirmary, whether I am present at the death or not. The registrar of deaths here says that, according to a new Act, I am bound to register them. He declines to accept the signature of a relative present at death, or that of a nurse.

*** On the assumption that the house-surgeon is the "chief resident officer" of the hospital in question, it may be pointed out that Section 48 of the Births and Deaths Registration Act, 1874, specially enacts that the "chief resident officer of every public institution" is to be deemed the occupier for the purposes of the Act; and in another section it is provided that the occupier of any dwelling in which a person dies is bound (with other persons

enumerated in the Act) "to give, to the best of his knowledge and belief, to the registrar" the necessary information concerning the death. The Act is therefore clear that the chief resident officer is bound to act as informant of the death equally with other better qualified informants. It should be pointed out, however, that registrars are specially instructed that, "in the case of a death in a public institution, he should, whenever practicable, obtain the information from a relative of the deceased."

THE RIGHT OF PROPERTY IN PRESCRIPTIONS.

DR. R. R. RENTOUL writes: In the JOURNAL of September 14th, p. 622, a case is described where a doctor writes several prescriptions during the illness of an old lady residing at a "health" resort. Before leaving the doctor calls and asks for the prescriptions, and then tears them up. You are asked to say whether he did rightly or wrongly in tearing them up, and you say he did wrongly. In the JOURNAL of September 28th, p. 741, you are asked to reconsider, and again you reply he did wrongly.

Now, in the JOURNAL of June 8th, p. 1324, in answer to a correspondent, you say: "The common assumption that a physician or other practitioner in writing a prescription loses all right of property therein, and the chemist who compounds and copies it acquires a title to use it as he pleases, the patient the right of perpetually disposing of it, is one so wrong in principle that it demands from the profession greater attention than it hitherto has received," etc.

Now, how and why do the above two statements clash? Has the same man answered all these letters? Is it a man who gets two guineas for his advice, or one who gets five shillings who supplies the answer? I think it would be well if a grave question like this were referred to a committee of doctors and leading chemists.

If a prescription were the absolute property of the patient, then the patient might patent the prescription and have an order made against the doctor ever using it again. The general body of the profession—not the "select leaders" please—I think hold that a doctor does not sell his prescription; he sells his advice, this "advice" including the statement that the patient is to take such and such doses of medicine, not such and such medicine. Again, the prescription is a written order to the chemist to make up so and so, and to place such and such orders on the label, so that the patient may read the orders; in fact, arranging it that the patient has not to read the directions from the prescription. The very fact that the directions are generally written in Latin bears my last remark out.

I think the patient has no more right to the prescription than a client has to the brief, or a copy of the brief, sent by the solicitor to the barrister. A man, listening to a clergyman preach, has no right to go up to the parson and say, "I pay so much to this church. I get your sermons for that, but I want a copy of your sermons." Such a man would be looked on as a born idiot for making such a request. A medical student has no right to demand a copy of the lectures from the lecturer, or even his manuscript.

If we look into this question of the ownership of prescriptions, we find the patients' right to them is not granted. I believe at first, many years ago, a doctor had not the right to charge for "advice," but only for "medicines;" hence the much dosing by bolus, large doses, etc., so as to swell up the bill. Next, the custom or law was that a doctor charged for a "prescription," and not for "advice." Consequently, when the doctor found there was no genuine necessity for a prescription, and fearing to lose his fee if he did not give one, he presented his "aqua col.," or *placebo* prescription. All these remnants of a barbaric and ignorant age have, I think and hope, left us. I trust the JOURNAL will not perpetuate them.

I may say that I have an arrangement with six chemists for them to return to me all my prescriptions monthly; this they have done for six months, and only one lady has grumbled. I found she had lent a prescription of mine to eight friends. I do not know if she charged them the use of it, but I rather think she did. Let other doctors do the same, and we shall see who owns. Why the fact that a doctor can arrange a series of prescriptions, and call them "mist." so-and-so, or No. 2 or 5, and write this name or number on a prescription, shows his right to the prescription.

I further hold that the chemist has no right to give even a copy of my prescription to a patient. If the patient wants a copy let him go back to the doctor who wrote the prescription, and pay for it. If I get a suit of clothes, and want the pattern from the tailor for a friend, or even for myself, is it likely the tailor would give it me? Is it to be supposed I would have the unutterable meanness to ask it for this friend? For pity's sake, and in the hope we may prove to ourselves that we, as a profession, still retain a modicum of common sense, do let us try to be practical. This is not a question of charity, the theory being that the patient pays for all he receives.

I see a correspondent is referred to a pamphlet termed the *Code of Medical Ethics*. I have never seen this work, nor do I think doctors are likely to be guided by any "unauthorised programme." If we are to have a code, such as the College of Physicians make, seemingly to have the pleasure of breaking, it might be well to have it discussed first.

UNIVERSITY INTELLIGENCE.

VICTORIA.

ENTRANCE EXAMINATION IN ARTS (FACULTY OF MEDICINE):—

First Division.—H. E. Annett, W. W. Clemesha, F. W. Hartley, W. F. Jackson, and J. S. Taggart.

Second Division.—T. P. Andrew, G. H. Bishop, H. A. Bold, H. W. Booth, C. Coventry, J. W. M. Dart, J. H. Davies, W. Dyson, A. Holden, R. T. Hughes, E. W. A. Jeffery, W. A. Kidd, J. A. M'Ghee, D. W. Main, G. Y. Myrtle, P. Nelson, C. J. L. Palmer, W. J. Simpkin, W. C. G. Simpson, S. Thorp, and D. O. Williams.

PRELIMINARY EXAMINATION IN SCIENCE (FACULTY OF MEDICINE):—

First Division.—W. W. Stoney, Yorkshire College.

Second Division.—J. H. Ashworth, Owens College; B. N. Kellett, Owens College; T. Morris, University College; W. Thompson, Owens College; S. W. Thomson, Owens College; W. B. Williams, University College.

IN connection with the medical degrees granted by Victoria University, a very important change in the statute regarding these examinations will come into operation after October 1st, 1889. The subjects of examinations are: (1) Surgery (Systematic, Clinical, and Practical); (2) Medicine (Systematic and Clinical), including Mental Diseases and Diseases of Children; (3) Forensic Medicine and Toxicology, and Public Health; (4) Pharmacology and Therapeutics; (5) Obstetrics and Diseases of Women; (6) General Anatomy and Morbid Anatomy. A candidate may take all the six subjects at once, or he may pass the examination in two parts, the first part consisting of two or three of the six subjects, the second part of the remaining subjects. Candidates may select as a first part any two or three of the subjects, and they must have completed the fourth winter of medical study.

ABERDEEN.

AT a meeting held on Friday, October 4th, the University Court of the University of Aberdeen appointed the following gentlemen to be extra-professorial examiners for degrees in Medicine for one year, from October 1st, 1889: Dr. A. D. Keith, Aboyne; Dr. J. L. Kerr, Crawshawbooth, Manchester; Dr. William Milligan, Manchester; Dr. T. W. Shore, London; Dr. P. Blaikie Smith, Aberdeen; and Dr. F. Buchanan White, Perth.

HOSPITAL AND DISPENSARY MANAGEMENT.

ALLEGED ABUSE OF OUT-PATIENT DEPARTMENTS AND THE PROPOSED PUBLIC MEDICAL SERVICE.

AT a meeting of the South Midland Branch, on October 5th, under the presidency of Mr. JOHN CREW, a communication was read from a combined meeting of the Worcestershire and Herefordshire and Gloucestershire Branches on the subject of hospital and dispensary reform; but as this subject was embraced in Dr. Rentoul's propositions an independent discussion was not considered necessary. These propositions, advocating the formation of a "Public Medical Service," were read *in extenso*, and a prolonged discussion ensued thereon.—The PRESIDENT considered that, though the subject was too extensive and complicated to enter upon in detail at this meeting, the members should give a warm reception to Dr. Rentoul's general scheme.—Dr. BUZZARD expressed the opinion that they must first convince the public of the desirability of the change and of reform in this matter, otherwise it was hopeless for the profession to stir in it. The idea was somewhat Utopian, and it was useless to discuss details.—Mr. J. H. HEMMING offered some remarks much to the same purpose.—Mr. TERRY supported the proposed scheme, more particularly as regards provident and other dispensaries, which he considered to be greater offenders than the general hospitals.—The PRESIDENT thought the proposals were more applicable to the larger towns; but that changes in the relations of clubs to their medical officers were very desirable.—Mr. WATKINS and other members also joined in the discussion; and ultimately the following resolution was unanimously carried, namely: "That this Branch is of opinion that an inquiry into the conduct of hospitals and dispensaries might be advantageous, but believes that the time has not come when any general Public Medical Service could be established. This Branch deprecates any State interference with the work of the medical profession."

ON the motion of Dr. SHEEN, the following resolution was unanimously passed at the South Wales and Monmouthshire Branch on October 4th: "That the disproportionate growth of the out-patient department in all hospitals demands a general inquiry, as well as the subject of provident dispensaries, medical aid associations, and sick clubs."

SIR,—In drawing up a table of payment for the benefit members I would suggest that an "age table" be used as in other insurances. I would charge every member 6d. per month, and place the different rate of payment on the "entrance fee;" for, though the entrance fee would be paid yearly, each member would require to be examined by one of the medical staff before admission, and for this he would be paid 2s. out of the Hon. Members' Fund.

The scale of yearly entrance fees would be—

			s.	d.
From the age of	0 to 8 years	... ...	2	0
,, ,,	8 to 16 ,,	... ...	1	3
,, ,,	16 to 40 ,,	... ...	0	6
,, ,,	40 to 55 ,,	... ...	0	9
,, ,,	55 to 70 ,,	... ...	1	0
,, ,,	80 and upwards	... ...	2	6

When the entrance fee exceeds 1s. the balance to be paid from "Hon. Members' Fund." One penny would be charged for each separate prescription. A levy of 1d. per month would be placed on each benefit member, so as to help in defraying management. The fees for vaccination, surgical or obstetric operations, and confinements would be the same as those of the Public Medical Service (see JOURNAL, September 28th, 1889). The sum subscribed by honorary members would be one-third the amount paid by benefit members. I would fine any doctor or dispenser 5s. who supplied any benefit member with treatment or medicines who was in arrear with payments. Members would enter into benefits two months after joining. In case of confined illness, or infirmity of old age, a yearly entrance fee of 5s. would be charged, plus the 6d. monthly and levy.

I think the above plan of placing the different scale of payments on an annual entrance fee is better than making different monthly payments for each member. It will be less cumbersome, and will induce members to stay. If the hospitals turn away at least 42.32 per cent. of their present out-patients the provident system would soon be a success. London—to begin with—would have a total of 700,000 benefit members in the first year.

Supposing we had a provident society of 1,000 benefit members the following would give a fair idea of the expenditure :—

	£	s.	d.
Rent and taxes	36	0	0
Coal and gas	3	0	0
Printing, postage, and stationery	12	0	0
Drugs, bottles, bandages, instruments, etc. ...	25	0	0
Examination fees to medical staff	100	0	0
Cleaning of Branch	5	0	0
Dispenser, including residence at Branch	65	0	0
Commission on collection of members' payments, 5 per cent.	15	0	0
Part payment of entrance fees	12	10	0
Furnishing Branch	15	0	0
Salaries to medical staff	350	0	0
	637	10	0

The income of such a Branch would be :—

	£	s.	d.
Sale of members' books. 2d. each...	8	6	8
Fines	1	0	0
Sale of drugs	20	6	8
Levy on benefit members	50	0	0
Entrance fees at 1s. 3d. each (average)	50	0	0
Monthly payments from Branch members... ...	300	0	0
Subscriptions from honorary members	214	16	8
Total income	644	10	0

thus leaving a balance of £7.

The above sample balance sheet shows that with 1,000 members we should require an income of £637, and to meet this there would be a payment of £429 13s. 4d. from benefit members. A third of the latter sum must, therefore, come from honorary subscribers, that is, £214 16s. 8d.

As regards the amount this would give to the medical staff of, say, four doctors, we should have from

	£	s.	d.
Examination fees from honorary subscribers ...	100	0	0
Part entrance fees	12	10	0
Entrance fees from benefit members	50	0	0
Monthly payments	300	0	0
	462	10	0

This would give on an average £115 12s. 6d. to each doctor, and, giving five visits to each member, this would make a fee up to 1s. 10d.

The average yearly payment by each benefit member would be :—

	s.	d.
Average yearly entrance fee	1	0
Member's book	0	2
Twelve monthly subscriptions	6	0
Levy	1	0
Five prescriptions per annum	0	5
	8	7

This is about 8d. per month: 2d. per week, or 1 farthing per diem. each benefit member would cost the society 12s. 10d. per annum, and would pay 8s. 7d. of this himself.

Some, especially employers of labour, will no doubt object to pay part, but such must be let know that medical men have gone as far as they can in supplying medical aid on a charitable basis. The limit of unpaid medical service has been reached. I do not think 1s. 10d. is too high a fee for a night visit. As at present conducted, the vast majority of provident dispensaries are supplying medical aid to very well-to-do people for a very few coppers a month. It is not too much to hope that as wages have gone up so much during the last few years, the industrial classes will see their way to cease asking for more medical charity. True charity begins at home, and, for my part, I cannot see why one deserving class of society should starve themselves, their wives, and children, and should leave them depending on one or two benevolent medical institutions so that well-to-do people may have more money to spend on luxuries. I am not now speaking of hospitals, where true charity should always reign, but of a class of the community who would be insulted if they were told they were, in a medical sense, paupers, and depending on the benevolent actions of others. I am speaking of a provident plan which should be as little depending on charity as are our Oddfellows' and Foresters' societies, or the German working classes, under their compulsory plan of insurance against sickness.—I am, etc.,

Liverpool. ROBERT REID RENTOUL.

SIR,—Dr. Rentoul's scheme is ably conceived, and his scale of charges is drawn up with admirable discretion, and Dr. Woods makes most useful suggestions. But of what value is all this? These articles are read and thrown aside, and the majority of general practitioners go on grumbling, but neither suggest nor help in any way. The matter is unquestionably within their grasp if they will but exert themselves. To become united and independent are synonymous terms. One thing, I think, should be determined on. Since the hospital staffs have maintained a perfect indifference to our reasonable complaints, we, on our side, should be quite independent of the hospitals. Select consultants by all means, but let them be practitioners entirely apart from hospital appointments—men who will devote their time and experience to the interests of their brother practitioners. There are scores of able men in London who would be glad of this opportunity, and a list of such might be easily registered.

I see "Surgeon" in the JOURNAL of October 5th, as usual, commences to throw cold water upon Dr. Rentoul's scheme. Now, to a man who loves his profession, an operation has a real pleasure far beyond its intrinsic value. I have done tracheotomy for 2s. 6d. and less, and frequently dilate the anus and operate for piles, and remove tonsils for the same sum, and am pleased to do it, when people cannot afford to pay larger fees. We can now call to our aid those admirable nurses from Bloomsbury and Holloway, of whom one cannot speak too highly, and who are delighted to come, and if necessary attend twice a day—taking temperatures, dressing a wound, or applying poultices, as the case may require; and with such help, which is far more than any country practitioner can look for, a man in London should be quite independent and self-reliant.

It is the apathy of London men of this character that tends to encourage this hospital abuse. Having had twelve years' country experience and a considerable amount of surgery, I can assert that Dr. Rentoul's fees are most suitable, and such as are usually charged by country practitioners.

But these are all minor details. The first thing is to unite and see if we cannot more than hold our own, and compel the public to recognise the value of medical aid in sickness—not received as paupers, but as patients worthy of all respect, and paying according to their means.—I am, etc.,

Gray's Inn Road. COTTENHAM FARMER.

SIR,—"Surgeon" writes ridiculing the fees suggested by Dr. Rentoul for operations on poor persons. He thinks they cannot be done at the price. That, however, is not the case, any more than if he had said that eminent surgeons will not do the same operations for nothing at the hospitals. I am not ashamed to say that Dr. Rentoul's scale of charges is very closely in accordance with what I am accustomed to charge poor people such as those for whom Dr. Rentoul intends it. The surgery of the hospital out-patient departments is certainly very cheap, and it is very often not of a high standard. No doubt, as "Surgeon" prophesies, the public, when they become better educated, will refuse such surgery. I hope that the Public Medical Service will supply surgery of a high standard at very moderate charges to the poor.

"Surgeon" speaks of London practitioners sending cases into hospital for treatment. Now I hear from many doctors that giving a note recommending a patient for admission to hospital

usually lessens his chance of admission, and often draws forth a remark uncomplimentary to the writer, when presented. Will "Surgeon" tell me what I ought to do in the following case? A young servant girl falls into ill health, and becomes unfit for work. Her mistress is poor, and cannot afford to keep an invalid servant during the period which will elapse before her health can be restored. The girl has no relatives or friends to take charge of her. The mistress has been to several hospitals, and has failed to obtain admission for her servant. She comes to me asking for a note recommending the girl for admission to hospital. I see the girl, and think her case a very suitable one for hospital treatment. Will my recommendation carry any weight with it, supposing that I have no personal influence at the hospital? Is it best to send the girl at once to a workhouse infirmary? If the hospitals would refuse well-to-do patients, whether recommended or not, they would have beds and funds for the benefit of the poor and destitute.—I am, etc.,

HUGH WOODS, M.D.

Highgate, N.

SIR,—You publish in the JOURNAL of October 6th an appeal to country practitioners from Dr. Hugh Woods, and that body of the profession are assured that they must now speak or for ever after hold their peace upon the proposed Public Medical Service. The inadequate fees paid by members of friendly societies constitute to many a sure source of a certain amount of income, and if the profession could or rather would refuse to attend any society for any fee below a certain standard, or if those fees were fixed by law, all might be well; but the former is not possible, and the latter not probable. With regard to out-patients, the evil is terrible; but it must be diagnosed before it is treated. The community, so far as the profession is concerned, is divided into three great categories, namely (1) those who can pay or ought to pay—private patients; (2) those who belong to some form of friendly society—club patients; (3) those who are attended under the regulations of the Poor-law system. The profession should keep the community in these categories, but the out-patient system upsets the whole arrangement, and should be entirely abolished. Hospitals should exist for cases which can only be suitably treated therein, and the questionable educational advantages of the out-patient department met by sending the student, at the end of his hospital course, for one year to certain practitioners specially certificated by the Medical Council for that work. Those attending out-patients represent a direct loss in pocket and in experience to practitioners, and the existence of the system encourages all in the above categories to obtain gratuitous medical relief. Certain out-patients might be sent to be seen as out-patients in certain special cases, but only if sent by the ordinary practitioners for that purpose. The proposed Medical Service appears to me, with all deference to others, to create another severe evil without dealing with present ones; and also would be, I believe, absolutely rejected by those for whose benefit it is devised.—I am, etc.,

GEORGE H. DE'ATH, L.R.C.P.Lond., M.R.C.S.Eng.

Buckingham.

A GENERAL PRACTITIONER writes: Allow me to point out one form of this abuse very largely prevalent in most of the hospitals—I mean giving the out-patients a certificate of illness on a sick club. I do not see how one can avoid construing it as an abuse of charity when the patient in many cases can pay a fee of 6d. or 1s. to the general practitioner, especially when it is known that the Hearts of Oak pays 18s. a week for sick benefit, and only demands such a certificate every fortnight. I have often refused such a certificate when a house-surgeon, or acting for another surgeon in a hospital, and have done so at the risk of displeasure of the patient, and of being brought up before a committee for such "unreasonable conduct." I do not deny there are cases where it is only a spurious or very small sick benefit society, where they make a small allowance only, and the patient is unable to pay a fee for such a certificate; but a great many certificates are not for these, but for Hearts of Oak, Foresters, Oddfellows, and other well-known societies.

A GENERAL PRACTITIONER writes: What a striking confession is that of "G," your correspondent of September 28th. Speaking of the dispensary system, himself one of the doctors of the Manchester and Salford Dispensary, "G." says: "We become responsible for acts from which we shrink in our private capacity."

I hope that the attention of all who take an interest in the future of the profession may be drawn to this acknowledgment of responsibility. Of course dispensary doctors must be held responsible for such abuses as "G." refers to, but it is the first time that one of their number has confessed as much. The question may now be asked, How long are these men to enjoy a special indulgence with regard to offences against medical etiquette?

What private medical man can advertise himself in the public journals, and go about touting for patients, without bringing on himself the deserved contempt of his professional brethren? Yet such is the practice of many dispensaries, and for which the dispensary doctors are surely responsible.

A cry for reform is now being raised, and some praiseworthy efforts are being made to discover the relations which should exist between the profession and certain classes of the public. But the existing dispensaries have a long start of Dr. Rentoul's Public Medical Service, and enjoying, as they do now, a monopoly of advertisement, it is difficult to see how they are going to be beaten.

The practice of advertising is only one of the abuses connected with the dispensary system, and that not the most dangerous, but it is one that is destructive of the best traditions of the profession, and cannot for a moment be defended by anyone who professes to be bound by the simple rules of medical etiquette.

GLASGOW EAST PARK HOME FOR INFIRM CHILDREN.

DURING the past year a total of 110 children have been admitted to this home, of whom 72 still remain. The home provides accommodation for 80 children, but the directors are unable to admit the full number—though the number of those needing admission is great—because they are unwilling to contract debt. The extension of the buildings made this year has rendered the institution entirely well equipped for dealing with the poor and infirm children for whose benefit it was established, but the income has not yet increased sufficiently to meet all the requirements of the institution fully occupied. It is hoped that the needed increase will be soon obtained and the institution be put in a position to do the fullest amount of benefit.

GREENOCK FERGUSON EYE BEQUEST.

THE trustees of the Greenock Eye Bequest Fund have unanimously raised the salary of the surgeon, Dr. Cluckie, from £150 to £200. The occasion was the annual meeting of trustees. Since the beginning of the work of the surgeon in 1880, 23,927 patients have been treated. During last year the number was 2,430, 50 in excess of the year before, the average attendance being 51 daily. Of the whole number, 1,428 were cured by medical, and 612 by surgical treatment; 381 were improved, and only 9 were incurable. The indoor patients numbered 119. The prevalence of eye accidents in shipyards is so great that the report strongly recommended the use by the men of gauze goggles. The income of the bequest for this year was £562 11s. 9d., and the expenditure £21 less; while the capital fund stands at £6,913 11s. 5d.

THE CITY OF LONDON LUNATIC ASYLUM.

DURING the year ending December 31st, 1888, 50 male and 34 female patients were admitted, and there remained on the books on January 1st last 201 males and 233 females, making a total of 434, and being 10 less than at the end of the previous year. The discharges numbered 66, and 41 of these were recovered, namely, 27 males and 14 females, giving the high rate of recovery of 51.25 per cent. The death-rate was low, being 6.22 per cent. of the average daily number resident. No fewer than 8 of the 15 male patients who died succumbed to general paralysis of the insane. The question of the enlargement of the asylum had again occupied the attention of the Committee, but owing to the refusal of the Commissioners in Lunacy to approve of any plans for enlargement unless additional land were purchased, the matter was allowed to remain in abeyance. The Committee, however, in the meantime have been fortunate enough to secure upwards of 100 acres of land adjoining the asylum ground, which is most conveniently situated for the purposes of the asylum, and, what is most important, it is admirably suited for the disposal of the sewage of the institution by gravitation. Under the present arrangement, there is a large cesspool connected with the drainage system, and the sewage has to be pumped out of this by means of steam power. The fact that an outbreak of enteric fever had occurred during the year makes a complete revision of the present sewage arrangements imperative, and we are glad to find that this will be one of the first matters taken in hand. Under the provisions of the Local Government Act, 1888, the management of the asylum has become vested in the Court of Common Council.

The cost per head for the maintenance of the patients has been reduced from 12s. 3d. to 11s. 8d. per week.

An incident which we believe to be unique in the annals of lunatic asylums occurred, a former patient having "burglariously" entered the building during the night and attacked the night nurses. This patient had been discharged from another asylum as "recovered" only three days before.

The Commissioners in their report speak in high terms of the efficiency of the management of the asylum, and note many improvements in the decoration of the wards and the ornamentation of the grounds. A large percentage of the patients are usefully employed, and the various means of amusement and recreation are carried on with much vigour. A large number of necessary structural and other alterations are contemplated, which will be

calculated to bring the institution fully abreast with times; and we are glad the Committee pay a tribute to the ability and thoroughness with which Dr. White is conducting the asylum.

OBITUARY.

SIR WILLIAM TINDAL ROBERTSON, M.D., F.R.C.P., M.P., J.P

Sir Tindal Robertson was the eldest son of the late Frederick Fowler Robertson, of Bath, and Anne Tindal, his wife. Educated at King Edward VI's Grammar School, Grantham, he entered the medical profession as house-pupil to Dr. H. P. Robarts, F.R.C.P., Great Coram Street, London; studied at University College Hospital; and matriculated in the first class at the University of London in July, 1846. He became L.A.C. in 1848, M.R.C.S. in 1850, and was Junior Resident Medical Officer at the Middlesex Hospital in 1848-49, and Resident Surgeon at the Royal Free Hospital from 1850 to 1851. He subsequently studied at Paris and Edinburgh, taking his Doctor's degree at the latter University in 1853. In 1854 he commenced practice in Nottingham, where he held appointments on the medical staff of all the leading charities, being for nearly twenty years Physician to the Nottingham General Hospital. In 1874 he was elected a Fellow of the Royal College of Physicians.

In 1857, when the British Medical Association held its congress at Nottingham, Dr. Tindal Robertson was elected to deliver the address in Medicine, taking as his subject at the meeting The Rise and Progress of Sanitary Science. At the meeting of the British Medical Association in 1865 he also introduced the question, Why are not Sanitary Measures always followed by a Reduction of Mortality? He also initiated in Nottingham, with the help of many of his medical friends, a system of voluntary notification of diseases. Through his initiative the Oxford local examination system was established in Nottingham; and, in conjunction with Mr. Mundella, M.P., he promoted the formation of the corps of Robin Hood Rifles, as medical officer of which he was presented to the Queen.

He was instrumental in establishing the Nottingham Literary and Philosophical Society. He was one of the local secretaries for the visit to Nottingham of the British Association for the Advancement of Science, and subsequently published the record of the transactions on that occasion. He was also a member of the Nottingham Town Council. He contributed to Mr. Churchill's *Photographs of Eminent Medical Men*, the brief analytical notices of their works, besides many articles in reviews, etc.

In 1873 his eyesight began to fail, and he retired from practice and went to reside at Brighton. In 1880 he became Chairman of the Brighton Conservative Association, and in 1886 he was returned unopposed to Parliament for Brighton, in the place of Mr. David Smith, deceased. He was a member of the recent Royal Commission on the Blind, Deaf, and Dumb, etc., of which he acted as vice-chairman. At the time of his death he was a member of the Brighton Town Council and Vice-Chairman of the Home Counties Conservative Union, a member of the Grand Council of the Primrose League and of the Council of the National Union of the Conservative Associations, a J.P. for Brighton and Sussex, and M.P. for Brighton. He was knighted in 1888. He married in 1855 Elizabeth Anne, daughter of Mr. John Leavers, of Nottingham, by whom he has four sons surviving.

For the following particulars of the sad termination of this life of usefulness we are indebted to the courtesy of Dr. J. M. Elborough Scatliff, who was Sir Tindal Robertson's medical attendant.

"In May last Sir Tindal sprained his ankle as he was leaving the House of Commons, and in consequence of this accident he was a good deal confined to his room, and gave up his usual outdoor exercise. He had for some time been troubled with weak digestion, and with loss of exercise his dyspeptic symptoms became greatly aggravated, and he soon gave up his solid food, and took his fluid nourishment mixed with artificial digestives. Then he rapidly became hypochondriacal and despondent, so that he began to fear (in consequence of his continued abdominal discomfort) that he had some structural mischief (malignant or otherwise) producing a partial stricture of the bowel, first at one spot and then at another. On the most careful examination no abdominal tumour could be detected, nor was there ever any evidence of obstruction. Still his mind clung tenaciously to this impression, notwithstanding that Dr. Brown-Séquard (who was at the time staying at Brighton) very kindly saw him with me on more than one occasion, and fully concurred in the opinion that I had given. Sir Tindal Robertson had been blind for some years from glaucoma, and had undergone several operations at the hands of Dr. Bell Taylor, Sir W. Bowman, and Mr. Bader. Besides this there was evidence (such as very feeble patellar tendon reflex, slight dragging of the left leg, etc.) that the spinal cord was not in a normal state. Notwithstanding all that was done for his relief, Sir Tindal's dyspeptic trouble and depression of spirits continued, and only last Monday week Dr. Russell Reynolds kindly came down from town on purpose to see him in consultation with myself. He also carefully examined the abdomen, and corroborated the opinion given.

"On Saturday last Sir Tindal went to bed at the usual time, apparently in slightly better spirits than of late, perhaps due to a conversation we had had together in the morning. The rest of the tragic story is already well known, so it need not be repeated.

"At the necropsy, about forty-eight hours after death (the abdominal organs only being examined) nothing abnormal was found in the intestine or abdominal cavity, but the walls of the bowel were very thin, and the ascending colon slightly dilated."

Dr. JULIUS JACOBSON, Professor of Ophthalmology, Königsberg.

Dr. Julius Jacobson, Professor of Ophthalmology at the University of Königsberg, whose death at the age of 61 has just occurred, was perhaps less known in this country than many of his contemporaries. This is due in part to the fact that he appears to have travelled little and seldom to have attended congresses, and in part to the fact that his writings exhibit in a very marked degree those characteristics which render the rapid construing of German so difficult to English readers. Yet his practice and writings have had a great influence on the progress of ophthalmology, and there can be little doubt that to him we owe, in a great measure, the improvement that has taken place in the operation of cataract extraction.

From 1854 to 1857, Jacobson worked with Graefe at Berlin, nominally as his assistant, but the two men were of the same age and standing, and it is evident from Graefe's letters that the relationship was that rather of a friend and colleague. In 1857 he became a *Privat-Docent* at Königsberg; but before settling there he spent a short time with Arlt. In 1872 he was appointed Professor, an appointment which he held till his death.

When Jacobson went to Königsberg, Daviel's extraction, with large corneal flap, was the operation most practised, but he speaks of having seen the elder Burow perform couching, and states that with Jünken in Berlin it was still the favourite treatment.

Daviel's flap extraction was probably at this time more successful than it had ever been previously, yet no less than 10 per cent. of cases operated on were lost from suppuration alone. Jacobson immediately determined that the first object of his work should be to decrease the loss from this cause. It was the custom after extraction to keep the patient in profound darkness, and not to look at the eyes for some time after the operation; this first inspection must have been an anxious moment, for, if suppuration had taken place, the eye would have passed into a hopeless condition days before. Jacobson determined to break through this tradition, and for the first five years of his appointment at Königsberg he examined every case of cataract daily by artificial light and focal illumination. The result was that he proved that the suppuration commenced in the cornea, and he believed that it was due partly to the imperfect coaptation of the edges of the wound, and partly to the interlamellar spaces of the cornea being opened. He accordingly shifted his incision into the sclero-corneal junction. The danger of prolapse of the iris was thus increased, and this he obviated by performing an iridectomy, after the extraction of the lens. The situation of the incision and risk of escape of vitreous led him to insist on general anæsthesia, then an entirely new departure in ophthalmic surgery. He described this operation at the Heidelberg Congress in 1864, when he had been performing it for five years, with a loss of only 2 per cent. from suppuration—a result so unusual that it appears to have been received at the meeting with a surprise that bordered on incredulity. Graefe, who took part in the discussion that followed, expressed the opinion that, on the whole, iridectomy was disadvantageous. It is evident that Graefe was much impressed by Jacobson's results, and was becoming less satisfied than formerly with Daviel's operation; and at the end of the year he was studying in London, following the practice of Bowman and the elder Critchett, who were then doing a modification of Waldau's opera-

tion, consisting of a lance-cut in the cornea and extraction with Critchett's scoop. We have digressed thus far into a biography of Graefe in order to show the influence of Jacobson on his practice, for the modified linear operation of Graefe, which has become till lately almost universal, is evidently the natural outcome of Jacobson's and Waldau's operations.

Jacobson had none of that false pride which would have led a man of smaller mind to adhere to his own operation; he at once saw the immense advantage of the new proceeding and adopted it. Not only so, but he loyally adhered to it while it was gradually so modified that it is not unlikely that Graefe himself would fail to acknowledge it.

His best known writings are those on cataract, glaucoma, and the connection between affections of the visual organs and general diseases. So recently as last year he published his *Beiträge zur Pathologie des Auges*, and still more recently a paper in Graefe's *Archiv*, giving his experience of cataract extraction during thirty years—a fitting epilogue for an actor who has so nobly borne his part! As the curtain falls, the chief features in the three acts stand out boldly: from 1854 to 1861, 400 Daviel's extractions; from 1851 to 1868, 800 by his own method; from 1868 to 1888, more than 2,500 by Graefe's!

PROTHEROE SMITH, M.D., M.R.C.P.

We regret to record the death of Dr. Protheroe Smith, at the ripe age of 80 years. The deceased was born in November, 1809, and educated at Bideford, in Devonshire, where he was apprenticed to his father, Dr. William Smith, a well-known and successful practitioner in that town. In the year 1830 he came up to London, and entered himself as a student at St. Bartholomew's Hospital. During his period of medical study he became the private pupil of Mr. Kiernan, in whose house he had the privilege of residing. Having completed his medical studies, and taken his degree in medicine in the University of Aberdeen, he entered into practice, and was soon appointed surgeon to the Farringdon Dispensary, with which institution he was connected as consulting physician at the time of his death. Later on he became associated with the well-known Dr. Rigby as co-lecturer on Midwifery and Diseases of Women at St. Bartholomew's Hospital. From this time forwards he resided in Park Street, where he continued to practise until his death.

In the year 1842 he founded and successfully started the Hospital for Women in Red Lion Square. This, as is well known, was the first hospital of its kind in this country. The old building gradually became inadequate for the demands upon its space, and a new building was erected, the present one, in Soho Square.

As a gynæcologist Dr. Protheroe Smith was one of the early pioneers in this country, along with Dr. Robert Ferguson and Dr. Henry Bennet.

We believe that he was the first accoucheur in London who resorted to the use of anæsthetics in midwifery in the year 1847. He also was one of the first English ovariotomists, having removed an ovarian tumour in 1842 without anæsthetics. For some time he was a valued contributor of reviews and other articles to *The Lancet*. He was the author of *Scriptural Authority for the Use of Chloroform and other Anæsthetics in Midwifery; On Flexions of the Uterus; Ovarian Dropsy, its Pathology and Treatment*, and other works.

Among the various inventions which he contributed to the gynæcological armamentarium we may mention the pelvic belt, which was designed to rectify distortions of the lumbo-sacral curve. Protheroe Smith was well known as a most careful and successful operator. He enjoyed for many years a large and lucrative practice, in which he made numerous friends who will miss his kindly care and presence.

THOMAS BOYLE GRIERSON, L.R.C.S.Edin., L.M.

By the death of Mr. Grierson, of Thornhill, which occurred on September 26th, Dumfriesshire has lost one of its best known and most highly respected of medical practitioners. The deceased gentleman was born in 1818, and received his medical education at Edinburgh, one of his teachers having been Sir Charles Bell. Having obtained his degrees of L.R.C.S. and L.M.Edin., he took up his residence in the vicinity of Elvanfoot. In 1842 he removed to Thornhill, where he remained, with one short intermission, during his whole life, and acquired an extensive practice. It was, however, as a naturalist, antiquarian, and collector that Mr. Grierson was best known. He had early in life exhibited a keen taste for natural history and antiquarian pursuits, and was well versed in the geology and natural history of his district, and in the intervals of his professional labours he found ample opportunities for gratifying his taste for natural history and archæological research. The museum which he founded, and with which his name will be inseparably connected, was opened to the public in July, 1872. He was a firm believer in the educational influence of museums, and advocated their establishment in every district, both at the meetings of the British Association and at the Social Science Congress at Glasgow. His own museum, which grew up from small beginnings, is now an object of considerable interest, and has been visited by over 15,000 persons. This, as well as his well-stocked library, was always placed at the command of any of the studious youths in the district, and Mr. Joseph Thomson, F.R.G.S., the African traveller, has, it is stated, expressed his indebtedness to the opportunities so offered. For a number of years Mr. Grierson had virtually retired from practice, and for a long period before his death suffered from Bright's disease and disease of the heart. Not entirely absorbed in his scientific and antiquarian pursuits, he took a lively interest in local matters. He was a Fellow of the Botanical and Member of the Royal Physical Societies of Edinburgh, a corresponding member of the Society of Antiquarians of Scotland, Natural History Society, and Geological Society of Glasgow, and other kindred bodies.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

ASSOCIATION OF PUBLIC SANITARY INSPECTORS.

The sixth annual general meeting of this Association was held on Saturday, October 5th, at the Westminster Town Hall, under the presidency of Mr. Hugh Alexander. The report stated that the Council had memorialised the Local Government Board in favour of the Compulsory Notification of Infectious Diseases Bill, and expressed disappointment that the compulsory operations of the Act were limited to the metropolis. Recognising the great necessity which existed for the proper examination of sanitary inspectors, the Council had been in communication with the Council of the Sanitary Institute on the subject. They had added to their roll during the past year between sixty and seventy new members. Mr. Alexander was re-elected chairman of the Council, Mr. Legg as secretary, Mr. Raymond as hon. treasurer, and the Council were also re-elected. It was decided to accept the invitation to hold the next annual provincial meeting at Leamington.

DIPHTHERIA AT UXBRIDGE.

There is still a prevalence of diphtheria at Uxbridge, the cause of which up to the present remains undetermined. The disease first showed itself in October and November, 1888. Sore throats prevailed during the early part of the year, and diphtheria became much more active in July, August, and September; and, up to the present time, there had been over 45 cases with 10 deaths. The town is said by its medical officer (Dr. W. Rayner) to be well drained, and the water supply (from deep wells in the chalk) good.

SCARLET FEVER IN THE METROPOLIS.

In view of the increased demands for beds in the fever hospitals of the Metropolitan Asylums Board, it was decided on Saturday, October 5th, to throw open the South Western Hospital at Stockwell. The vast majority of cases admitted are those of children suffering from scarlet fever, and come from all districts of London.

CONVICTION FOR EXPOSING UNSOUND MEAT FOR SALE.

A butcher at Bacup was lately summoned for exposing unsound meat for sale. The evidence of the sanitary officials was to the effect that the carcass was that of an animal which had died or been slaughtered whilst suffering from a wasting disease. The defendant pleaded that the animal (a heifer) was in good health until it obtained access to the corn chest, when, after over-eating, it had drank copiously of water, and had to be killed. He was fined £5 and costs or a month's imprisonment.

PUBLIC SLAUGHTER-HOUSES FOR THE METROPOLIS.

On the motion of Dr. Longstaff, at the meeting of the London County Council, held on October 1st, it was agreed: "That it be an instruction to the Sanitary and Special Purposes Committee to report to the Council as to the desirability of establishing public slaughter-houses throughout London, and as to the facilities which such a system would afford for the better inspection of the meat supply."

OVERCROWDING IN A HOSPITAL FOR INFECTIOUS DISEASES.

At a recent meeting of the Salford Town Council, attention was called to the prevalence of diphtheria in Salford, and the overcrowding of Wilton Hospital. It appears that there is great overcrowding of infectious cases, there being 110 cases in a hospital designed to hold 61.

THE QUALIFICATIONS OF MEDICAL OFFICERS OF HEALTH.

Tensor.—Public health diplomas will only be required of medical officers of health elected to a town or district containing a population of 50,000 or over. This section takes effect in 1892. Medical officers who have, prior to 1892, had charge of a district of 50,000 population for three consecutive years, will not be required to hold or obtain a public health diploma.

DANGEROUS PAUPER LUNATICS.

B. P. B. writes: Three years ago I sent a man to an asylum suffering from acute melancholia. He was admitted as a pauper lunatic, and discharged at the end of six months. Three days ago, in another fit of melancholia, he cut his throat—seriously but not fatally. I was called in, and requested the police who were present to prevent him from repeating the act. After watching him for one night, the police left him in charge of his friends, saying that the superintendent considered him a lunatic; that they were to hand him over to his relatives, who were responsible for his safety; and that they were to have nothing more to do with the case.

Will you please tell me whether, as the man had committed a felony, the police were acting rightly in washing their hands of the case? Also whether he will be admitted into an asylum as a pauper lunatic without a magistrate's order given at a Court of Sessions?

*** The patient is a lunatic or not. If not, the police should take him in charge. If a lunatic and pauper, he should promptly have been placed under proper care, and, if it was necessary to send him to an asylum, have been (or be) sent there precisely as any other pauper lunatic, according to the special circumstances of each case, as usual.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns, including London, which have an estimated population of 9,555,406 persons, 5,541 births and 3,219 deaths were registered during the week ending Saturday, October 5th. The annual rate of mortality in these towns, which had increased from 16.2 to 17.9 per 1,000 in the four preceding weeks, declined again to 17.6 during the week under notice. The rates in the several towns ranged from 10.1 in Derby, 10.7 in Leicester, 11.1 in Cardiff, and 13.2 in Birmingham to 24.0 in Wolverhampton, 25.3 in Newcastle-on-Tyne, 25.7 in Sunderland, and 25.8 in Manchester. In the twenty-seven provincial towns the mean death-rate was 18.4 per 1,000, and exceeded by 1.8 the rate recorded in London, which was 16.6 per 1,000. The 3,219 deaths registered during the week under notice in the twenty-eight towns included 147 which were referred to diarrhœa, 63 to diphtheria, 62 to "fever" (principally enteric), 52 to scarlet fever, 45 to whooping-cough, 34 to measles, and not one to small-pox; in all, 403 deaths resulted from these principal zymotic diseases, against 525 and 529 in the two preceding weeks. These 403 deaths were equal to an annual rate of 2.2 per 1,000; in London the zymotic death-rate was equal to 1.9, while it averaged 2.4 per 1,000 in the twenty-seven provincial towns, and ranged from 0.0 in Halifax and in Derby, and 0.4 in Blackburn to 4.4 in Bradford, 4.7 in Salford, 6.3 in Wolverhampton, and 6.7 in Plymouth. Measles caused the highest proportional fatality in Bradford, Sunderland, and Preston; scarlet fever in Bolton and Plymouth; whooping-cough in Preston and Bristol; "fever" in Manchester, Birkenhead, Leeds, and Salford; and diarrhœa in Brighton, Salford, Bradford, and Wolverhampton. Of the 63 deaths from diphtheria recorded during the week under notice in the twenty-eight towns, 45 occurred in London, 7 in Manchester, 5 in Salford, and 2 in Liverpool. No fatal case of small-pox was registered, either in London or in any of the provincial towns; and no small-pox patients were under treatment in any of the Metropolitan Asylum Hospitals on Saturday, October 5th. These hospitals contained, however, 1,247 scarlet fever patients on the same date, against numbers steadily increasing from 538 to 1,206 in the fourteen preceding weeks; 135 cases were admitted during the week, against 126 and 158 in the two previous weeks. The death-rate from diseases of the respiratory organs in London was equal to 2.7 per 1,000, and was slightly below the average.

HEALTH OF SCOTCH TOWNS.

During the week ending Saturday, October 5th, 790 births and 476 deaths were registered in the eight principal Scotch towns. The annual rate of mortality in these towns, which had been 16.4 and 18.8 per 1,000 in the two preceding weeks, declined again to 18.6 during the week under notice, but exceeded by 1.0 per 1,000 the mean rate during the same period in the twenty-eight large English towns. The lowest rates were recorded in Paisley and Greenock, and the highest in Glasgow, Leith, and Perth. The 476 deaths registered in these towns during the week included 69 which were referred to the principal zymotic diseases, equal to an annual rate of 2.7 per 1,000, which exceeded by 0.5 the mean zymotic death-rate during the same period in the large English towns. The highest zymotic rates were recorded in Paisley and Leith. The 208 deaths registered in Glasgow during the week under notice included 11 from whooping-cough, 7 from diarrhœa, 6 from "fever," 3 from diphtheria, 3 from measles, and 3 from scarlet fever. Three fatal cases of diphtheria occurred in Edinburgh, 4 in Leith, and 2 in Dundee. The death-rate from diseases of the respiratory organs in these towns was equal to 3.9 per 1,000, against 2.7 in London.

HEALTH OF IRISH TOWNS.

In the sixteen principal town districts of Ireland the deaths registered during the week ending Saturday, October 5th were equal to an annual rate of 22.4 per 1,000. The lowest rates were recorded in Drogheda and Dundalk, and the highest in Lisburn and Londonderry. The death-rate from the principal zymotic diseases averaged 3.8 per 1,000. The 177 deaths registered in Dublin during the week under notice were equal to an annual rate of 26.2 per 1,000 (against 28.5 and 31.5 in the two preceding weeks), the rate for the same period being only 16.6 in London and 17.8 in Edinburgh. These 177 deaths included 22 which resulted from the principal zymotic diseases (equal to an annual rate of 3.4 per 1,000), of which 12 were referred to diarrhœa, 7 to "fever," 3 to whooping-cough, and 1 to measles.

REPORTS OF THE MEDICAL OFFICERS OF HEALTH.

Cardiff Rural (Population, 17,888).—The vital statistics of 1888 call for no special comment, beyond that of having been calculated on a diminished population caused by the withdrawal of certain parishes for the formation of a new district. In the district as now constituted, Dr. Prichard records 263 deaths, of which 22.80 per cent. were of children under one year. Ninety-three deaths, equal to 35.36 per cent. of the whole, were of persons over 60 years of age, 37 were over 70, 12 over 80, and 5 over 90 years. Twenty-nine deaths were due to accidents, 11 of which occurred in the Barry and Cadoxton District. Thirty-seven inquests were held. Sixteen deaths were uncertified, 9 being in Pentyrch Parish. The mortality from the intectious diseases amounted to 10, or a rate of 0.5 per 1,000. An outbreak of measles was the most serious incident of the year, but it was of mild type, and though widespread was not very fatal. No deaths were recorded from scarlet fever. The death-rate amounted to 14.7 per 1,000.

Glanford Brigg Rural (Population, 30,967).—*Improved Condition of Ironstone Villages: Decrease of Consumption related to Sanitary Improvement.*—Mr. J. B. Moxon's report for 1888 shows that the death-rate has slightly increased from the low point to which it had fallen in 1887, namely, from 14.4 to 14.9 per 1,000. The deaths from infectious diseases were few in number, but the occurrence of diseases in several villages has called for visits of inspection and advice. There was no death from small-pox, although a well-marked case was imported into Kirton, and a very mild case occurred afterwards in the same village. Scarlet fever prevailed in the early part of the year, and whooping cough was generally prevalent. These constituted the greater portion of the zymotic deaths. There were no deaths from measles, and only 1 death was recorded from diphtheria. Mr. Moxon reports that this is a disease seldom met with in the district, nor is it a common disease in private practice. Forty persons died from consumption. This does not, however, represent an increase; there is, in fact, a tendency to decrease. This, Mr. Moxon considers, may be taken as a result of the gradual improvement in the ironstone villages generally, they having been satisfactorily drained, and otherwise placed in better sanitary condition.

Barnstaple Rural (Population, 18,436).—A perusal of Mr. Harper's report for 1888 affords some idea of the health of the district by the number of instances of longevity recorded. Of 290 deaths, 134 were of persons over 60 years of age; these, again subdivided, give 67 over 70, 27 over 80, and 9 over 90 years of age. The death-rate for the year was 15.73 per 1,000. Zymotic outbreaks, never very serious, caused 26 deaths, or a rate of 1.41 per 1,000. The deaths from phthisis are the lowest recorded since 1881. Twelve deaths were registered from cancer, 4 females and 8 males.

MEDICAL NEWS.

Leprosy is said to be very prevalent in Zululand.

Dr. Arlidge, of Stoke-upon-Trent, recently gave an address on "Manufacturing Processes in Relation to Health," to a joint meeting of the Manchester Geographical and Statistical Societies.

Professor Leidesdorf, the eminent Austrian alienist, who was consulted when it became a question of deposing Sultan Murad V, died suddenly on October 9th at the age of 72.

HOSPITAL SUNDAY FUND.—The Hospital Sunday Fund has now reached £41,600, and is just £1,000 in excess of the collections made in any previous year. The fund for 1889 closes on October 31st.

COTTAGE HOSPITAL FOR MEXBOROUGH.—Mr. Montagu, of Wetherby, has presented the town of Mexborough with a building for the purpose of a cottage hospital, and has offered to bear the cost of the necessary alterations.

THE BACTERIOLOGY OF RHINOSCLEROMA.—Nikiforow has succeeded in cultivating artificially the bacilli of rhinoscleroma. He treated a case by injections of 1 per cent. carbolic acid, but, after sixty-three injections, no improvement took place.

AN epidemic of dengue fever is prevalent at Smyrna, between six and seven thousand persons having been attacked. The disease has spread to Constantinople. It is believed that the outbreak is connected with that which occurred at Cyprus last year.

THE managers of the Central London School District have been authorised by the Local Government Board to borrow £24,000 to enable them to erect a new ophthalmic hospital at Hanwell.

CHOLERA.—According to official statements from Vienna, there have been 5,983 cases of cholera in Mesopotamia during the past few months. There is said to have been of late a daily average of 200 fatal cases.

PRESENTATION.—Dr. W. H. Dawson, consulting physician to the Malvern Rural Hospital, has been presented by his patients and friends with a purse containing £102, a clock, and two bronze statuettes, together with an illuminated address containing the names of some 170 subscribers.

CHARING CROSS HOSPITAL MEDICAL SCHOOL.—Mr. Thomas Sandells has obtained the first entrance scholarship of one hundred guineas, and Mr. Frederick A. L. Hammond the second of fifty guineas. Mr. A. G. Harvey, of St. John's College, Cambridge, has been awarded the Universities Scholarship of fifty guineas.—The annual dinner of past and present students will take place at the Holborn Restaurant on Friday, October 18th, at 6.30 for 7, Surgeon Whitehead, F.R.C.S., in the chair. Tickets can be obtained by applying to Mr. A. H. Walker at the hospital.

VICTORIA INFIRMARY, GLASGOW.—Dr. Donald J. Mackintosh, one of the medical staff of Belvidere Fever Hospital, has been appointed Medical Superintendent to the new south-side hospital of Glasgow. Although the salary offered was only £150, the number of candidates was very large.

THE Zenana Medical College in St. George's Road, S.W., where ladies are trained for medical missionary work in China and India was reopened for the session 1889-90, on Saturday, October 5th, when the opening address was delivered by the Rev. Dr. Hiles Hitchens.

THE Hospitals Association enters upon its seventh session on October 16th, when Dr. Bristowe, LL.D., F.R.S., will deliver the inaugural address on The Work of the Association. The meeting will be held in the Board Room of Charing Cross Hospital, at 8 P.M. All interested in the work of the hospital are invited to attend. Tickets of admission may be obtained on application to the Secretary at Norfolk House, Norfolk Street, Strand.

A UNIVERSAL GENIUS.—According to the *Vratch*, No. 35, 1889, p. 780, a certain Riza-Bey-Mustapha-Bey-Ogly, residing at Vladivostok (Caucasian Russia), advertises, with the permission of the local authorities, that he, "without employing any medical means, perfectly cures all people suffering from severe diseases," a long list of which is given; and also that he "makes out the cause of the patient's illness, and, in cases of theft, divines the thief."

A COURSE OF BACTERIOLOGY FOR PRACTITIONERS.—Mr. A. E. Maylard will give a course of four demonstrations on bacteriology to practitioners in the Pathological Theatre of the Glasgow Western Infirmary on Tuesdays and Fridays, commencing on Friday, October 18th, at 2 o'clock. They will be free to all practitioners on intimating to the superintendent of the infirmary their desire to attend.

THAMES VALLEY BRANCH.—Office-bearers for 1889-90:—*President*, Dr. Sealy; *Vice-Presidents*, Dr. Wyman, Dr. Fenn; *Council*, Dr. Günther, Dr. Wadd, Dr. Langdon Down, Dr. Atkinson, Dr. Crichton, Dr. Kane; *Honorary Secretary and Treasurer*, Charles C. Scott, M.B., St. Margarets, Twickenham. The next meeting will be held on Wednesday, November 6th. The honorary secretary will be glad to hear from members who are willing to read papers.

WE regret to record the sudden death of Mr. Thomas Gillham Hewlett, M.R.C.S., C.I.E., late Deputy Surgeon-General I.M.S. The deceased gentleman expired suddenly whilst waiting for a train at Finchley Road Station, on Tuesday night. Death is said to have been due to gouty affection of the heart. He served in the Indian mutiny campaign, and was Sanitary Commissioner for the Bombay presidency until his retirement last year. He was 57 years of age.

THE GENEVA CONVENTION.—On August 22nd the Geneva Convention entered on the twenty-sixth year of its existence. On August 22nd, 1864, the Convention was signed by the representatives of twelve Governments (Baden, Hesse-Darmstadt, Würtemberg, Belgium, Denmark, Spain, France, Italy, the Netherlands, Portugal, Prussia, and Switzerland) at Geneva. Soon afterwards all the other European and several non-European States joined the Convention. In all the great wars which have occurred since that time much admirable work has been done under the Red Flag.

INTRODUCTORY ADDRESSES IN SPAIN.—If the introductory address is dying out here it still flourishes vigorously in Spain. The winter session was opened in all the universities of the peninsula with much ceremony on October 1st. In the Central University (Madrid) Dr. Marcelino Menéndez Pelayo delivered an address before a numerous audience, including the Minister of the Interior, who congratulatulated the orator in very flattering terms. In the Universities of Valencia, Valladolid, Salamanca, and Santiago addresses were delivered by Drs. Magraner, N. de la Fuente Arrimadas, G. López, and Talegón.

SANITARY PLUMBING.—A requisition from Cardiff, influentially signed, to the Plumbers' Company, to be constituted a centre for the examination and registration of plumbers in accordance with the company's general system, has been complied with. At the last quarterly court of the company, it was reported that communications had been received from 55 boards of guardians and sanitary authorities expressing approval of the registration system, and stating that in accordance with the suggestion of the President of the Local Government Board, they had resolved in future to employ registered plumbers.

WEST KENT MEDICO-CHIRURGICAL SOCIETY.—The first meeting of the thirty-fourth session, 1889-90, of this society, was held at the Royal Kent Dispensary on October 4th, when the following were elected office-bearers:—*President:* Thomas Moore, F.R.C.S. *Vice-Presidents:* J. Poland, F.R.C.S.; John McGavin, L.R.C.P. Ed. *Council:* A. Stewart Brown, F.R.C.S.; Ernest Clarke, M.D.; Peter Cooper, M.R.C.S.; A. Lloyd Jones, M.R.C.S.; W. Nicholson, M.D.; Charles Parkes, M.R.C.S.; George Newton Pitt, M.D. *Treasurer:* Prior Purvis, M.D. *Secretary:* H. W. Roberts, M.R.C.S. *Librarian:* Ernest Clarke, M.D.

LUPUS AND PHTHISIS.—At a meeting of a medical society at Steiermark, in Styria, Professor Lipp described a case of lupus of the face in a boy otherwise perfectly healthy, in which the disease was supposed to have been communicated by the mother, who was consumptive, and who was in the habit of kissing the child's face, on which there were rhagades. He also showed a woman with lupus in the face, in whom the disease first manifested itself in the 42nd year of her age. He showed the latter patient in connection with the well-known theory of Hebra, that lupus always develops before the age of puberty.

ACCORDING to a computation made by Dr. Ernst Engel, the cost in human life of the different wars that have taken place during the last thirty-four years is 2,253,000 souls. The Crimean war cost 750,000 men, the Italian war (1859) 45,000, the Danish war (1864) 3,000, the American civil war: the Northern States, 280,000; the Southern States, 520,000; the Austro-Prussian war, 45,000; the Franco-German war: France, 155,000; Germany, 60,000; the Turco-Russian war, 250,000; the South African wars, 30,000; the Afghan War, 25,000; the Mexican and Cochin-Chinese expeditions, 65,000; and the Bulgaro-Servian insurrection, 25,000. This list does not include mortality from sickness.

BEQUESTS.—The late Alderman George, of Leeds, has left £20,000 to be equally divided between the General Infirmary and the Yorkshire College.—The Queen has given a donation of £50 to King's College Hospital.—Mr. W. Billings, solicitor, of Leicester, leaves by his will £100 each to the Leicester Infirmary and Blind Institution.—The late Mr. J. R. Berwick, of Bandon, has bequeathed the following: Home for Protestant Incurables, Cork, £300; Cork South Charitable Infirmary, £300; Stewart Institution for Idiots and Imbeciles, £300; Cork Lying-in Hospital, £200; Cork Asylum for the Blind, £200.—The committee of the City Orthopædic Hospital, Hatton Garden, has received a cheque for £200 in aid of the extension fund, from the trustees of Mrs. Low French.

MEDICO-CHIRURGICAL SOCIETY OF GLASGOW.—At the first meeting of the session, held on the evening of 4th instant, the following gentlemen were elected office-bearers for session 1889-90: President, Dr. William Macewen. Section of Medicine: Vice-president, Dr. J. Wallace Anderson; Council, Dr. Hugh Thomson and Dr. W. G. Dun; Secretary, Dr. George S. Middleton. Section of Surgery: Vice-president, Dr. David N. Knox; Council, Dr. W. J. Fleming and Dr. J. C. Renton; Secretary, Dr. John Barlow. Section of Pathology: Vice-president, Dr. W. T. Gairdner; Council, Dr. H. Rutherford and Dr. Joseph Coats; Secretary, Dr. T. Kennedy Dalziel. Section of Obstetrics: Vice-president, Dr. W. L. Reid; Council, Dr. M. Cameron and Dr. Samuel Sloan; Secretary, Dr. Lawrence Oliphant. Treasurer, Dr. Henry E. Clark; General Secretary, Dr. Walker Downie.

AN AMBULANCE REVIEW.—An ambulance review of an imposing character took place at Barnsley on Saturday, September 28th, at the suggestion of Surgeon-Major Hutton. Nearly 400 pupils of the local centre of the St. John Ambulance Association, presented themselves for inspection and marched in procession through the principal streets, followed by the ambulance corps of the police, fire brigade, and the various collieries with ambulance stretchers, etc., Colonel Stanhope, C.B., president of the centre, Surgeon-Major Blackburn, Knight Associate of the Order of St. John of Jerusalem, Dr. Knowles and Dr. Millar (instructors of classes) being among those present. Surgeon-Major Hutton, after presenting the medals, delivered an address in which he urged the importance of ambulance work on railways, and expressed the hope that the Government would introduce a clause in the Regulation Act making it compulsory to keep stretchers at every station.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen passed the Second Examination of the Board at a meeting of the Board of Examiners on October 7th, namely:—

G. B. Hillman, H. A. Phillips, J. E. Gains, and E. S. Perkins, of Yorkshire College, Leeds; P. Withers and J. Green, of Owens College, Manchester; H. W. S. Williams, of University College, Liverpool; W. M. Smith, of Cambridge; G. Grace and H. B. Wilson, of Bristol School of Medicine; J. G. Warren, of Trinity School of Physics, Dublin; E. McN. Woods, of Queen's College, Belfast; C. M. Mac Knight, of Melbourne University; J. H. Day, of Charing Cross Hospital.

Passed in Anatomy only.

A. A. Smith, of Yorkshire College, Leeds; E. Woodridge, of Queen's College, Birmingham; F. Spurr, of Sheffield; H. F. Cook, of University College, Liverpool; G. A. Peake, of Bristol School of Medicine; M. P. A. Lesur, of St. Bartholomew's Hospital; G. H. Jones, of Middlesex Hospital.

Passed in Physiology only.

J. G. Rowell and J. H. Staniland, of Yorkshire College, Leeds; L. F. Houghton, of St. Mary's, and Sheffield; H. M. Joynson and E. Smallwood, of University College, Liverpool; L. Kilroy and E. Johnstone, of Owens College, Manchester; P. H. Edwards and J. B. Garman, of Queen's College, Birmingham; C. E. Oakeley, of St. George's Hospital; C. G. Matthews, of St. Bartholomew's Hospital; and E. C. Hope, of Melbourne, and Mr. Cooke's School of Anatomy and Physiology.

Passed in Anatomy and Physiology on October 8th.

J. S. E. Selby, of St. Bartholomew's Hospital; A. J. Harrington, of Toronto Medical School; E. M. Iliewiez, of St. Mary's Hospital.

Passed in Anatomy only.

H. C. W. Clarke, of Owens College, Manchester; J. E. Ransford, of Bristol School of Medicine; T. W. Hall, of Carmichael College, Dublin; J. S. Tabb, of Charing Cross Hospital; C. M. Fleury, W. T. B. Donnelly, and S. Croneen, of Guy's Hospital; F. W. Lewis, of St. Mary's Hospital; G. W. Robertson, of London and Edinburgh; H. C. Barnes and J. H. Bicket, of London Hospital; C. K. Moseley, G. A. T. Fox and F. Clarke, of St. Bartholomew's Hospital; N. E. E. McTaggart, of St. Bartholomew's, and Mr. Cooke's School of Anatomy and Physiology; R. D. Waghorn, of Westminster Hospital; A. D. Bensusan, of St. Thomas's Hospital; E. J. T. Jones and J. H. F. Way, of St. Thomas's, and Mr. Cooke's School of Anatomy and Physiology; W. S. Langworthy, C. H. Chapman, and F. L. Underwood, of University College.

Passed in Physiology only.

R. W. Brinacombe, of Queen's College, Birmingham; L. J. G. Carré and J. T. R. Wylie, of St. George's Hospital; G. H. Norris, H. Arathoon, F. Scorer, T. Shütte, and C. S. Palmer, of St. Bartholomew's Hospital; J. P. Jones, of London Hospital; T. Ager, of London, and Mr. Cook's School of Anatomy and Physiology; P. W. Campbell, E. H. Willock, Arthur Haines, and F. Pershouse, of St. Thomas's Hospital; E. E. B. Landon, of Guy's Hospital; T. H. E. Meggs, of Westminster Hospital; G. W. B. Waters, of University College; H. A. Kynsey, of University, and Mr. Cooke's School of Anatomy and Physiology; A. W. C. Herbert and S. W. Sweetnam, of St. Mary's Hospital.

Passed in Anatomy and Physiology on October 9th.

J. Miller, W. J. Ansorge, and E. J. Hawkins, of St. Bartholomew's Hospital; J. Griffith, of St. Bartholomew's, and Edinburgh University; F. C. Stearn, of Guy's Hospitel; G. F. Morley, of St. George's Hospital; E. B. Pickthorn, of St. George's, and Mr. Cooke's School of Anatomy and Physiology; J. F. Stockwell, of St. Mary's Hospital; C. E. Reinhardt, of London Hospital; Albert Paling and David Phillips, of Middlesex Hospital; P. W. H. McKeown and J. T. Campbell, of the University of Toronto.

Passed in Anatomy only.

S. B. Axford, of Charing Cross Hospital; E. E. W. Roe, of Guy's Hospital; G. L. Hanwell, of St. Thomas's, and Mr. Cooke's School of Anatomy and Physiology; V. B. Jepson and J. H. P. Vivian, of St. Thomas's Hospital; C. A. N. Knox, of Dublin and St. Thomas's Hospital.

Passed in Physiology only.

J. P. Grieves, of St. Mary's Hospital; L. P. Tomlinson, of St. George's Hospital; J. D. Hessey, of Middlesex Hospital; J. D. Rawlings and T. St. Stephens, of St. Bartholomew's Hospital.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—Surgeon-Major A. H. C. Dane, having passed the necessary examination, has been granted the diploma in Public Health of the College.

SOCIETY OF APOTHECARIES OF LONDON.—The following candidates, having passed the Qualifying Examination in Medicine, Surgery, and Midwifery, have received Certificates entitling them to practise in the same, and have been admitted as Licentiates of the Society in September, 1889:

On the 12th:

Slater, Howard, University College.

On the 18th:

Dalton, James Henry Chesshyre, Cambridge University.
Stone, Emma Constance, Women's Medical College, Toronto.
Molson, James Elsdale, Middlesex Hospital.
Smyth, John, Queen's College, Belfast.
Fowler, Frank, St. Thomas's Hospital.

On the 19th:

Crompton, Alfred, St. Bartholomew's Hospital.
Hicks, John Abernethy, Westminster Hospital.
Kempthorne, Albert Edward, London Hospital.
Mitchell, Walter, Sheffield Infirmary.
Rouse, Eusebius Rouse, St. Bartholomew's Hospital.

MEDICAL VACANCIES.

The following Vacancies are announced:

BALLINROBE UNION.—Medical Officer. Salary, £100 per annum, with £33 6s. 8d. as Consulting Sanitary Officer. Applications to Mr. John Walsh, Clerk of Union. Election on October 19th.

BRADFORD INFIRMARY AND DISPENSARY.—House-Physician. Salary, £100 per annum, with board. Applications by October 22nd to W. Maw, Secretary.

BURTON-ON-TRENT INFIRMARY.—House-Surgeon. Salary, £130 per annum, with apartments, coal, and gas. Applications by October 23rd to J. C. Grinling, Esq., Honorary Secretary, the Infirmary, Burton-on-Trent.

CLAYTON HOSPITAL AND GENERAL DISPENSARY, Wakefield.—House-Surgeon. Salary, £120 per annum, with residence, coals, and gas. Applications by October 18th to the Honorary Secretary.

COUNTIES ASYLUM, Carlisle.—Junior Assistant Medical Officer. Salary, £8 per annum, with board. Apply to Dr. Campbell, Garlands, Carlisle.

DORSET COUNTY ASYLUM.—Assistant Medical Officer. Salary, £120 per annum, with board and residence. Applications by October 19th to Dr. MacDonald, Medical Superintendent.

GENERAL DISPENSARY AND INFIRMARY, Jersey.—Resident Medical Officer. Salary, £120 per annum, with furnished apartments, etc. Applications by October 19th to the Honorary Secretary.

GENERAL INFIRMARY, Leeds.—Resident Obstetric Officer. Board, lodging, and washing. Applications by October 14th to Mr. W. H. Brown, Secretary to the Faculty, 19, Queen Street, Leeds.

GENERAL INFIRMARY, Leeds.—House-Physician. Board, lodging, and washing. Applications by October 14th to Mr. W. H. Brown, Secretary to the Faculty, 19, Queen Street, Leeds.

GENERAL INFIRMARY, Leeds.—Two House-Surgeons. Board, lodging, and washing. Applications by October 14th to Mr. W. H. Brown, Secretary to the Faculty, 19, Queen Street, Leeds.

HANTS COUNTY ASYLUM.—Junior Assistant Medical Officer. Salary, £100 per annum, with furnished apartments, etc. Applications by October 17th to the Committee of Visitors, Knowle, Fareham.

HOSPITAL FOR CONSUMPTION, Brompton.—House-Physicians. Applications by October 19th to the Secretary.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—House-Surgeon. Salary, £50 per annum, with board, etc. Applications by October 28th to the Secretary.

LANCASHIRE COUNTY ASYLUM, Rainhill, near Liverpool.—Assistant Medical Officer. Salary, £105 per annum, with board, lodging, and washing. Applications by October 18th to the Medical Superintendent.

LIVERPOOL DISPENSARIES.—Two Assistant-Surgeons. Salary, £80 per annum each, with board, lodging, and attendance. Applications by October 28th to the Secretary.

LIVERPOOL INFIRMARY FOR CHILDREN, Myrtle Street.—House-Surgeon. Salary, £85 per annum, with board and lodging. Applications by October 21st to C. W. Carver, Esq.

LIVERPOOL ROYAL INFIRMARY.—Honorary Surgeons. Applications by November 1st to the Chairman, H. B. Gilmour, Esq.

LONDON LOCK HOSPITAL AND ASYLUM, Harrow Road and Dean Street, W.—Physician. Applications by October 21st to the Secretary, Harrow Road.

LONDON LOCK HOSPITAL AND ASYLUM, Harrow Road and Dean Street, W.—Surgeon. Applications by October 21st to the Secretary, Harrow Road.

NORTH-WESTERN LONDON HOSPITAL, Kentish Town Road.—Senior Resident Medical Officer. Applications by October 21st to the Secretary.

PADDINGTON GREEN CHILDREN'S HOSPITAL, W.—House-Surgeon. Salary, £50 per annum, with board and lodging. Applications by October 21st to the Secretary.

ST. MARY'S HOSPITAL, Quay Street, Manchester.—House-Surgeon and Resident Obstetric Assistant Surgeon. Salary, £120 per annum, with board and residence. Applications by October 19th to the Secretary.

SHEFFIELD GENERAL INFIRMARY.—House-Surgeon. Salary, £120 per annum, with board, lodging, and washing. Applications by November 2nd to the Medical Staff of the Sheffield General Infirmary to the care of the Secretary.

SHEFFIELD GENERAL INFIRMARY.—Assistant House-Surgeon. Salary, £80 per annum, with board, lodging, and washing. Applications by November 2nd to the Medical Staff of the Sheffield General Infirmary to the care of the Secretary.

STOKESLEY UNION.—Medical Officer for Workhouse and Stokesley District. Salary, £54 per annum, with extras. Applications by October 19th to T. Sowerby, Esq., Clerk, Stokesley.

UNIVERSITY COLLEGE, Dundee.—Professor of Physiology. Salary, £350 per annum, with two-thirds of fees. Applications by October 15th to Messrs. Shiell and Small, 5, Bank Street, Dundee.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL, Wolverhampton.—House-Surgeon (will also be required to act as Surgical Registrar). Salary, £100, with board, lodging, and washing. Applications by October 28th to the Chairman of the Medical Committee.

MEDICAL APPOINTMENTS.

BRACKENBURY, H. R., L.R.C.P.Lond., M.R.C.S.Eng., appointed Resident Medical Officer to the Hospital for Diseases of the Throat, Golden Square, *vice* F. G. Harvey, F.R.C.S.Edin., L.R.C.P.Edin.

CAMERON, J. S., M.D., M.B., M.R.C.S.Eng., appointed Medical Officer of Health to the Borough of Leeds, *vice* G. Goldie, L.R.C.P.Edin., M.R.C.S. Eng., resigned.

CAMERON, R. W., M.R.C.S., L.R.C.P.Lond., appointed House-Physician to the City of London Hospital for Diseases of the Chest.

CHAMBERS, James, M.A., M.D., appointed Senior Assistant Medical Officer to the Montrose Royal Lunatic Asylum.

CONNELLAN, T. A., L.R.C.S.I., L.M.and M.K.Q.C.P.I., appointed Medical Officer to the Boyle Union, Ballyfarnon Dispensary, Roscommon, *vice* C. D. Barrett, L.K.Q.C.P.I., deceased.

D'ARCY, Samuel Algernon, L.K.Q.C.P.I., L.R.C.S.I., L.M.R., etc., appointed Assistant Master of the National Lying-in Hospital, Dublin.

DARWIN, G. H., M.D., F.R.C.P.Edin., etc., appointed Police-Surgeon to the Lancashire County Constabulary for the three districts, Longsight, Withington, and Heaton Mersey.

DUTT, A. C., B.A., M.B., appointed House-Surgeon to the Scarborough Hospital and Dispensary, *vice* W. B. Russell, B.A., M.B., LL.B., resigned.

FARRINGTON, J., M.R.C.S., L.R.C.P., appointed House-Surgeon to the Pendleton Branch Dispensary of the Salford Hospital, *vice* A. C. Dutt, M.B., resigned.

FINLAY, David W., M.D., F.R.C.P., appointed Consulting Physician to the Royal Caledonian Asylum, *vice* G. Owen Rees, M.D., deceased.

HARTRIDGE, G., F.R.C.S.Eng., L.R.C.P.Lond., L.S.A., appointed Surgeon to the Royal Westminster Ophthalmic Hospital, King William Street, *vice* H. Power, M.B.Lond., F.R.C.S.Eng., resigned.

HENESSY, W., B.A., L.R.C.S.I., appointed Medical Officer to the Mitchelstown Union, Galbally Dispensary, *vice* R. E. Donavon, M.D., deceased.

HUTCHINSON, J., jun., F.R.C.S., appointed Assistant-Surgeon to the London Hospital.

JONES, Hugh E., M.R.C.S., L.R.C.P. (late House-Surgeon), appointed Honorary Assistant-Surgeon to the Liverpool Eye and Ear Infirmary, *vice* J. Rose, L.R.C.P., M.R.C.S., resigned.

JOYNT, H. N. H., M.B., B.Ch., B.A.O., Dipl. State Medicine, Dublin, appointed Assistant Resident Medical Officer, City Fever Hospital, Birmingham (temporary).

LOCK, J. Griffith, M.A.Cantab., L.R.C.P., M.R.C.S., L.S.A., appointed Medical Officer to the Tenby Members of the Hearts of Oak Benefit Society.

MACKINTOSH, J. D., M.B., C.M., appointed First Superintendent and Resident Medical Officer to the Victoria Infirmary, Glasgow.

MILLIGAN, Wm., M.B., C.M., appointed Examiner of Anatomy in the University of Aberdeen.

ORTON, C., M.D.Dub., F.R.C.P.Edin., appointed Consulting Physician to the North Staffordshire Infirmary.

PARKER, G., M.R.C.S., L.R.C.P., appointed Junior House-Surgeon to the Metropolitan Hospital, *vice* H. Williams, M.B.Lond., resigned.

SANTI, P. R. W., F.R.C.S.Eng., L.R.C.P., L.S.A., appointed House-Surgeon to the Great Northern Central Hospital, *vice* C. Mortlock, M.R.C.S., L.R.C.P.

SYFRET, S. B., B.A., M.B., B.C.Cantab, appointed House-Surgeon to the West London Hospital, Hammersmith Road, W., *vice* W. F. Brook, F.R.C.S.Eng.

WHITE, C. P., M.A., M.R.C.S., appointed Resident Medical Officer to the Queen Charlotte's Lying-in Hospital, *vice* C. Daniels, M.B., resigned.

WICKHAM, Harry Townshend, M.B., C.M., appointed Visiting-Surgeon to Chester General Infirmary, *vice* Alfred Mann, M.B., resigned.

WILSON, A. C., M.D., L.R.C.S.Edin., appointed Assistant House-Surgeon to the Liverpool Infirmary for Children, *vice* L. W. Keiffenheim, M.B.

WILSON, J. S., M.R.C.S.Eng., L.R.C.P.Edin., Coroner for New South Wales, appointed one of the Medical Officers to the Berrima District Cottage Hospital, Bowral, New South Wales, Australia.

DIARY FOR NEXT WEEK.

THURSDAY.

HARVEIAN SOCIETY OF LONDON, 8.30 P.M.—Dr. A. de Watteville: The Treatment of Tabes Dorsalis by Suspension. Dr. D. B. Lees: The Treatment of Pneumonia by the Ice-Bag.

OPHTHALMOLOGICAL SOCIETY, 8.30 P.M.—Address by the President, Dr. J. Hughlings Jackson, F.R.S. Mr. Robert Doyne: Case of Recovery from Hemianopsia, and Subsequent Necropsy. Mr. W. E. Cant: Case of Keratitis from Paralysis of Fifth Nerve after Injury. Dr. Reid: On Trachoma, its Pathology and Relations. Living Specimens, at 8 P.M.:—Mr. Lang: Two Cases of Congenital Coloboma of the Iris. Mr. Poulett Wells: Peculiar Retinal Detachment. Mr. Silcock: (1) Exostosis of Frontal Sinus; (2) Double Proptosis; Modified Graves's Disease.

FRIDAY.

ROYAL COLLEGE OF PHYSICIANS OF LONDON, 4 P.M.—Dr. James E. Pollock: The Harveian Oration.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the announcement. The first post on Thursday mornings is the latest by which advertisements can be received.

BIRTHS.

MCCONNELL.—At 4, Wood Street, Calcutta, on September 13th, 1889, the wife of Surgeon-Major J. F. P. McConnell, M.D., F.R.C.P., of a daughter.

WARD.—At Quetta, Beloochistan, on September 3rd, the wife of Surgeon-Major L. B. Ward, M.S., of a daughter.

MARRIAGES.

BENCRAFT—PERKINS.—October 8th, at Highfield Church, Southampton, by the Rev. Edgar Silver, M.A., incumbent, assisted by the Rev. B. G. Hoskyns, M.A., Henry William Russell Bencraft, M.R.C.S., of 6, Anglesea Place, Southampton, to Kate Margaret, second daughter of Walter Perkins, of Portswood House, Southampton.

FERGUSON—WATSON.—At 16, Charlotte Square, on October 9th, by the Rev. Charles Watson, D.D, Free Church, Largs, uncle of the bride, James Haig Ferguson, Esq., M.B., C.M., F.R.C.P., of 25, Rutland Street, Edinburgh, to Penelope Gordon, elder daughter of Patrick Heron Watson, LL.D., M.D., F.R.C.S.E.and I., Surgeon in Ordinary to the Queen in Scotland.

LE MOTTÉE—DE LISLE.—On October 3rd, at the Parish Church, St. Peter Port, Guernsey, Surgeon-Major G. H. Le Mottée, M.D., Medical Staff, to Josephine Clara, daughter of R. V. De Lisle, Esq., Vauvert, Guernsey.

LENDON—RYMILL.—August 26th, at St. Paul's Church, Adelaide, S.A., by the Rev. J. W. Owen, B.A., Incumbent, Alfred Austin Lendon, M.D.Lond., of North Terrace, fifth son of Edwin Lendon, formerly of Maidstone, to Lucy Isabel, younger daughter of Henry Rymill, J.P., of The Firs, East Terrace, Adelaide.

RICHARDSON—MORETON.—On October 9th, at the Parish Church, Tarvin, Chester, by the Rev. Canon Upperton, Vicar, assisted by Rev. Prebendary Macdonald, Vicar of St. Paul's, Kersal, Manchester, and Rev. W. H. Shuter, Curate of Tarvin, Rev. Edward Shaw Richardson, Curate of St. Paul's, Kersal, to Agnes Marion (Tottie), daughter of James Earl Moreton, F.R.C.S., Tarvin.

WATSON—HOLDEN.—October 8th, at St. Mary's Church, South Luffenham, Rutland, by the Rev. P. G. Dennis, B.D., Rector of North Luffenham, and the Rev. C. O. Watson, M.A., Rector of Morcott, brother of the bridegroom, Deputy Surgeon-General George Alder Watson, Bengal Army, retired, to Beatrice Blandina, daughter of the Rev. Henry Holden, D.D., Rector of South Luffenham, Hon. Canon Durham Cathedral.

DEATH.

CHIAPPINI.—At his late residence, Manor House, Mowbray, Cape Town, Cape of Good Hope, on September 10th, Peter James Chiappini, M.D., aged 79, dearly beloved and deeply regretted.

EVANS.—On October 4th, at Matlock House, Bakewell, Derbyshire, Harriett, widow of the late Charles Evans, F.R.C.S.Eng., aged 66 years.

LAND.—October 3rd, at the Old House, Bordyke, Tunbridge, in his 45th year, William John Land, M.R.C.S., formerly of Exmouth, Devon.

STEWART.—On Monday, September 16th, at Tarbert, Harris, Inverness-shire, Elizabeth Cameron, the beloved wife of James Stewart, J.P., L.R.C.P., L.R.C.S.E., aged 40 years.

VASSIE.—At Crofton Hill, Lanark, on September 25th, Richard Vassie, M.D. Edin., M.R.C.S. (late of Kirkcaldy), aged 27, fourth son of John Vassie, of Crofton Hill.

VOGAN.—On October 5th, James Norman Vogan, F.R.C.S.Eng., at his residence, Ipswich, in his 37th year. Friends will please accept this the only intimation.

OPERATION DAYS AT THE LONDON HOSPITALS.

MONDAY.....10 A.M.: Royal London Ophthalmic.—10.30 A.M.: Royal Free (Ophthalmic Department).—1.30 P.M.: Guy's (Ophthalmic Department); Royal Westminster Ophthalmic.—2 P.M.: Central London Ophthalmic; Hospital for Women; Royal Orthopædic; St. Mark's; London.—2.30 P.M.: Chelsea Hospital for Women.

TUESDAY.....10 A.M.: Royal London Ophthalmic.—1.30 P.M.: Guy's; Royal Westminster Ophthalmic; St. Bartholomew's (Ophthalmic Department); St. Mary's.—2 P.M.: Cancer Hospital, Brompton; Central London Ophthalmic; London; Westminster.—2.30 P.M.: St. Mark's; West London.—4 P.M.: St. Thomas's (Ophthalmic Department).

WEDNESDAY....10 A.M.: National Orthopædic; Royal London Ophthalmic.—11 A.M.: St. Mary's (Orthopædic).—1 P.M.: Middlesex.—1.30 P.M.: Royal Westminster Ophthalmic; St. Bartholomew's; St. Thomas's.—2 P.M.: Central London Ophthalmic; Great Northern Central; London; Royal Free; University College; Westminster.—2.30 P.M.: St. Peter's; Samaritan Free Hospital for Women and Children.—3 to 4 P.M.: King's College.

THURSDAY.....10 A.M.: Royal London Ophthalmic.—1 P.M.: St. George's.—1.30 P.M.: St. Bartholomew's (Ophthalmic Department); Guy's (Ophthalmic Department); Royal Westminster Ophthalmic.—2 P.M.: Central London Ophthalmic; Charing Cross; Hospital for Diseases of the Throat; Hospital for Women; London; University.—2.30 P.M.: Chelsea Hospital for Women; North-West London.

FRIDAY .....9 A.M.: Metropolitan; St. Mary's (Ophthalmic Department).—10 A.M.: Royal London Ophthalmic.—10.30 A.M.: Royal Free (Ophthalmic Department).—1.15 P.M.: St. George's (Ophthalmic Department).—1.30 P.M.: Guy's; Royal Westminster Ophthalmic.—2 P.M.: Central London Ophthalmic; East London Hospital for Children; King's College; London; St. Thomas's (Ophthalmic Department).—2.30 P.M.: West London.

SATURDAY.....9 A.M.: Royal Free (Department for Diseases of Women).—10 A.M.: Royal London Ophthalmic.—1 P.M.: King's College.—1.30 P.M.: Royal Westminster Ophthalmic; St. Bartholomew's; St. Thomas's.—2 P.M.: Cancer Hospital, Brompton; Central London Ophthalmic; Charing Cross; London; Middlesex; Royal Free; University.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 1.30; Skin, M. 1.30; Dental, M. W. F., 9.

CHELSEA HOSPITAL FOR WOMEN.—M. Tu. W. and F., 1.30.

GREAT NORTHERN CENTRAL.—Medical and Surgical, M. Tu. Th. F., 2.30; Obstetric, W., 2.30; Eye, Tu. F., 10; Ear, M. F., 2.30; Diseases of the Skin, W., 2.30; Diseases of the Throat, Th., 2.30; Dental Cases, W., 2.

GUY'S.—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F. 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu. 1; Skin, Tu., 1; Dental, Tu. Th. F., 1.30.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th. S., 1.30; o.p., W. F., 1.30; Eye, M. Th., 1.30; Ophthalmic Department, W., 2; Ear, Th., 2; Skin, F., 1.30; Throat, F., 1.30; Dental, M. Th., 9.30.

LONDON.—Medical, daily, exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p. W. S., 1.30; Eye, Tu. S., 9; Ear, S., 9.30; Skin, Th., 9; Dental, Tu..9.

MIDDLESEX.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 9.30; o.p., W. 1.30; Eye, W. S., 9; Ear and Throat, Tu., 9; Skin, Tu., 4, Th. 9.30; Dental, M. W. F., 9.30.

NATIONAL ORTHOPÆDIC.—M. Tu. Th. F., 2.

NORTH-WEST LONDON.—Medical and Surgical, daily, 2; Obstetric, W., 2; Eye, W., 9; Skin, Tu., 2; Dental, F. 9.

ROYAL ORTHOPÆDIC.—Daily, 1.

ROYAL FREE.—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Dental, Th. 9.

ST. BARTHOLOMEW'S.—Medical and Surgical daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, W. Th. S., 2.30; Ear, Tu. F., 2; Skin, F., 1.30; Larynx, F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9.

ST. GEORGE'S.—Medical and Surgical, M. T. F. S., 12; Obstetric, Th. 2; o.p., Eye, W. S. 2; Ear, Tu., 2; Skin, W., 2; Throat, Th., 2; Orthopædic, W., 2; Dental, Tu., S., 9.

ST. MARK'S HOSPITAL.—Fistula and Diseases of Rectum, males, W., 8.45; females, Th., 8.45.

ST. MARY'S.—Medical and Surgical, daily, 1.45, o.p., 1.30; Obstetric, Tu. F., 1.45; Eye, Tu. F. S., 9; Ear, M. Th., 3; Orthopædic, W., 10; Throat, Tu. F., 1.30; Skin, M. Th., 9.30; Electro-therapeutics, Tu. F., 2; Dental, W. S., 9.30; Consultations, M., 2.30; Operations, Tu., 1.30; Ophthalmic Operations, F., 9.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, Tu. F., 2; o.p., W., 1.30; Eye, M. Tu. W. Th., F, 1.30; o.p., daily, except Sat., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Tu. F., 1.30; Children, S., 1.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1.30; Obstetrics, M. Th., 1.30; Tu., W. F., 2; Eye, Tu. F., 2; Ear, M. F., 9; Skin, W., 1.45, S., 9.15; Throat, Th., 1.30; Dental, W., 9.30.

WESTMINSTER.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1; Eye, M. Th., 2.30; Ear, M., 9; Skin, W., 1; Dental, W. S., 9.15.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the office of the JOURNAL, and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429 Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

QUERIES.

JUNIOR PRACTITIONER writes: Will one of your readers who has recently obtained the M.R.C.P.Edin. please inform me the best books to read for it?

SANITAS asks to be recommended a small book or notes suitable for getting up lectures on cottage hygiene and nursing for a class of poor mothers.

LOSS OF SMELL AND TASTE.

A MEMBER would feel obliged for any suggestion regarding the treatment of loss of smell and taste of six weeks' duration, the results of a cold in the head, which is persistent. The subject is 68 years of age, and otherwise in good health.

JABORANDI IN BALDNESS.

O. B. asks for a formula for the local application of jaborandi in a case of baldness.

ANSWERS.

A MEMBER asks what would be a fair fee to charge for examination and certification in a private lunacy case. The patient is in a good position (probable income £800, no family), and living in a house rented at about £70.

*** About two guineas; more under some circumstances.

NIBS.D.Sc.—The expression "he took out the eye on to the cheek" is sometimes heard from a patient, and is generally, we believe, understood to refer to inversion of the upper eyelid, a simple manœuvre practised by surgeons in searching for a foreign body and many other purposes. It gives the face a peculiarly repulsive appearance, which is perhaps the reason why a boy who has learnt the trick is an object of so much admiration to his schoolfellows. The eyeball cannot be moved forward to any appreciable extent by any operation.

TONSILLITIS.

L.S.Sc.—We should recommend the following publications as containing "the best account of tonsillitis and the allied affections:" *Tonsillitis*, by Dr. C. Haig-Brown (London: Baillière, Tindall, and Cox. 1886); Indications for, and Methods of, Removal of the Tonsils, by Dr. Felix Semon, *St. Thomas's Hospital Reports*, 1883; the Chapters in the textbooks of Sir Morell Mackenzie; *Diseases of the Throat and Nose*, vol. i. (J. and A. Churchill, London, 1880); Mr. Lennox Browne, *The Throat and its Diseases* (Baillière, Tindall, and Cox, 2nd edition, London, 1887); Dr. J. Solis Cohen (Philadelphia); and Dr. Schech (translated by Dr. Blaikie. Edinburgh: Young J. Pentland. 1886).

THE NEW ANATOMY.

F.R.C.S. writes: I confess that the review of Professor Cleland's *Dissection of the Human Body*, in the JOURNAL of September 21st, has caused me a rude awakening from a dream of security; I believed that I knew my anatomy, but I have been living in a fool's paradise. Your reviewer tells us that a man may know his "Quain and Ellis from cover to cover," and yet fail at the London University; indeed, he doubts whether even the phraseology in which the questions are couched would be understood, so much "is the spirit of anatomy altered" since the last edition of Quain. Where is the heart now, and where is the liver? Who is the Sganarelle who has changed all this? Ere it is too late, can you direct me to where I am to find the new anatomy? If dissection, even when practised under such masters as Cleland, can teach little, and if a thorough knowledge of the standard textbooks of the day fails to enable a candidate even to understand the phraseology of the questions at the examinations of the London University, would it not be better to leave that august body to "the transcendentalists and modern morphologists" to whom the reviewer refers, and provide a teaching university more in touch with anatomy as it is taught, and where that large majority of students who only aim at being the physicians and surgeons of hospitals in a workaday world might at least have some chance of understanding and of being understood?

*** At the last examination in Anatomy at the London University the candidates were asked the morphology of the ligaments between the head and the spine. Neither of the works referred to mentions the morphology of any of the ligaments; and other questions of an almost similar nature have been asked at Cambridge and at the Royal College of Surgeons (First Fellow-

ship). The matter was referred to because it seems time that something should be done to define the scope of anatomy examinations, or, if this cannot be done, to place the subject matter within reach of candidates. Of course, the above are all honours examinations, and what has been said is not intended to refer to pass examinations, for which the admirable works of Ellis, Quain, and Cleland are more than sufficient.

NOTES, LETTERS, ETC.

MR. WILLIAM JONES, L.R.C.P., etc., returns many thanks to those gentlemen who subscribed towards his indemnity fund, and also to Dr. Hunt for the trouble he has taken and the sympathy he expressed.

POPULAR HYPNOTISM.

DR. CHARLES LLOYD TUCKEY (Green Street) writes: I have recently received, in common probably with many other members of the profession, the prospectus of a newly formed hypnotic society, and as I take great interest in the scientific development of medical hypnotism, and am, to a certain extent, identified with the subject, perhaps you will allow me to say a few words about it.

The existing medical societies and journals afford full opportunities for its discussion, and experiments outside the profession with such a double-edged instrument as hypnotism are as useless as they are objectionable. I imagine but few English medical men will be tempted to join such a society, and its foreign members are probably ignorant of the state of professional feeling in this country.

MALCOLM MORRIS INDEMNITY FUND.

(Final List.)

	£	s.	d.
Amount previously acknowledged ...	466	8	0
Henry C. Burdett, Esq. ...	5	5	0
Dr. Brodie	3	3	0
Dr. Wharton Hood ...	3	3	0
Dr. Champneys	2	2	0
Dr. Robert Liveing ...	1	1	0
Dr. Goodhart	1	1	0
Dr. E. J. Nix	1	1	0
Colonel Stanley Bird ...	1	1	0
Surgeon C. C. Manifold ...	1	1	0
Dr. Marcus Allen (Brighton)	1	1	0
F. O. Lovell, Esq.	1	1	0
D. B. Balding, Esq. (Royston)	0	10	6
Total ...	487	18	6

Gentlemen who have promised subscriptions but have not yet sent them are requested to forward them to Mr. G. P. Field, 34, Wimpole Street, or to Dr. Sidney Phillips, 21, Upper Berkeley Street, W.

SCIENCE IN POETRY.

MR. D. GAIR BRAIDWOOD, M.B. (Bonnyrigg) writes: Many I daresay, like myself, would read your short article on "Science in Poetry" in the JOURNAL of October 5th with much interest and pleasure. There seems to be a feeling current in the public mind that medical men should not meddle with literature other than professional. We are expected to become slaves instead of masters of our profession. I have heard it frequently contended, by men whose education should have taught them different, that the public do not pay for us becoming literary, but for our knowledge of medicine. Again, medical men as a class, so far as I have been able to judge, seem to be too much engrossed in medical things to be able to find any time for the cultivation of the other side of their nature by art and literature. Perhaps this may arise from an exaggerated sense of their duty. Anyhow, it seems to me to be wrong. What we, as a profession, have ever to try and keep clear of is one-sidedness; and how we shall best attain this is by widening our intellectual outlook by calling to our aid every help which art and literature can give.

PRACTITIONERS AND HOTEL-KEEPERS.

DR. J. A. GOODCHILD (Thurlow Road) writes: As a practitioner on the Continent, though not in Switzerland, I think I can entirely endorse the letter of "Health Resort" in the JOURNAL of October 5th; but there is one point which may be urged in favour of his contention for the right of the English medical man to prescribe for his fellow-countryman in Switzerland, which it may be advantageous, not merely for English travellers, but for Swiss hotel-keepers to consider. I speak not from any desire to depreciate Swiss medicine at large, but from a considerable experience, when I say that the English invalid in that country falls for the most part into the hands of men whom our Association would deem unworthy of its membership. In most of the large hotels one or other of the local medical men have agreements with the hotel-keepers, giving attendance and often division of fees.

Just one instance. Staying at the largest hotel in a traveller's town, I inquire the address of the only English medical man practising there; not one of the four clerks in the bureau has ever heard the name; and I have a Dr. Müller's card thrust upon me by each of them as soon as the word "doctor" escapes my lips. Just then the English doctor enters, and is greeted by all these individuals, ignorant of his name. He gives me his address himself, and later in the day I call at his own hotel. There the porter has never heard his name until I point it out to him upon the hotel list, where it has stood for three years. This porter also kindly gives me the card of Dr. Müller, No. 2. Interested by this experience, I make the inquiry elsewhere, and add to my store of Swiss professional cards, whilst finding total ignorance of the fact that an English practitioner is daily visiting the hotels.

Serious as this is, it is by no means so serious as the subjection of an invalid to a practitioner unacquainted with English methods of life and habits of diet, and possessing but an imperfect medium of verbal communication with his patient; but the most serious thing of all is that, in too many cases, the patient is regarded as of far less account than his purse. I am sorry to say that I could verify this last charge from very numerous instances, and Dr. Huggard would hardly dispute me here after some years' experience in a spot which was long notorious amongst English practitioners upon the Continent, though he could hardly be called upon to confirm my statement upon this head.

"WHITEWASHING WAR, PESTILENCE, AND FAMINE."

IN some "Reminiscences of the Herschells," published by Miss Maria Mitchell, the astronomer, in the *Century Magazine* for October, occurs the following account of a conversation which gives the calculation to which reference has often been made, in a more striking form than we can remember to have seen it before.

Sir John Herschell asked: "If, at the time of Cheops, or three thousand years ago, one pair of human beings had lived, and war, pestilence, and famine had not existed, and only natural death came to man, and this pair had doubled once in thirty years, and their children had doubled and so on, how large would the population of the world be at this time—could they stand upon the earth as a plane?" We thought they could not. "But if they stood closely, and others stood on their shoulders—man, woman, and child—how many layers would there be?" I said, "Perhaps three." "How many feet of men?" he asked. "Possibly thirty," I said. "Oh, more!" "Well, we'll say a hundred." "Oh, more!" Miss Herschell said, "Enough to reach the moon—to the sun." "More, more!" cried Sir John, exulting in our astonishment; "bid higher.....take a hundred times the distance to Neptune and it is very near. That is my way," said he, "of whitewashing war, pestilence, and famine."

INSURANCE POLICIES.

MR. COLIN G. CAMPBELL (Saddleworth) writes: A leader in the *Morning Post* recently called the attention of holders of accident insurance policies to two recent decisions in the law courts of great interest to them. The *Post* observes: "The average accident policy, while calculated to deceive persons of ordinary intelligence, is drawn in such terms that it would not insure in almost any kind of accident."

I have examined my policy in accordance with the advice given, and am horrified to find amongst the "conditions" that "this policy does not insure against.....injuries inflicted by another person,.....nor any disability arising accidentally from anything taken or administered, or act performed for the treatment of disease, whether surgical or medical." Many other conditions are curious, and in view of the opinions of the Master of the Rolls, deserve the careful examination of medical men who believe they are insured against accidents.

ANENCEPHALOUS FŒTUS.

MR. FRANK LANG (Sunderland) writes: On October 2nd I was called to attend Mrs. B., aged 27, who was expecting her second child. On arrival I found the membranes protruding and greatly distended. Almost immediately the membranes ruptured and an immense quantity of fluid was discharged. On examination I found a fleshy substance, which I at first thought was the breech, but, proceeding further, I felt the nose and then diagnosed a monstrosity. The child, a female, was born very soon, seemed at full time and well formed, except the head. The face was perfect, but terminated just above the eyes, no vestige of bones of the skull or of brain being to be found, but only a small fleshy lump about the size of an egg where the head should have been. The only history I could get of the case was that the mother had had a fall some time ago and struck her head.

LEPROSY IN INDIA.

BRIGADE-SURGEON P. CULLEN, M.D., I.M.S., writes: The Indian Government has issued instructions to district officers to try and provide asylums for lepers, and for this purpose they may use funds given for the support of dispensaries and other charitable purposes; but this kind of action will have little effect in isolating the affected or in arresting the progress of the disease, for the Government will not interfere with the liberty of the subject so far as to compel these persons to reside in certain places, nor even, I fear, retain them there longer than they choose to stay; but it will have the effect of throwing the support of many lepers, now in district gaols, on the municipalities.

The Asiatic does not like the lepers any more than do Europeans, but the disease being much more prevalent among them they have learnt to bear with them, and it is only when the disease reaches its ulcerative stage that they try to isolate the afflicted; and it is no uncommon practice, when an affected person becomes unable to support himself, for him to commit a petty theft and get confined to gaol, where he knows he will be cared for until he succumbs to his malady; such deaths some years added considerably to the mortality of Indian gaols, but if proper provision existed for such persons there would be less temptation for them to seek relief in this way.

Much has been written about this disease, and writers, according to their opportunities of observation, have ascribed it to various causes, and especially to the use of putrid and unwholesome fish; Mr. J. Hutchinson, in his able and learned lectures, seems inclined to this theory, but in India there are hundred of lepers who have never tasted fish, but are vegetarians, the only animal products they consume being milk and *ghee* (clarified butter). Although the disease is most seen among the low castes, as Chumars, who skin dead animals, cure hides, and handle putrid carcasses, and also among Chils and Kurkus, who will eat any kind of diseased or putrid meat, yet it is not uncommon among Deswallis, Kunbis, and Gowlies, castes who never touch animal food except milk and *ghee*; but these castes have much to do with cattle, often keep large numbers and attend them when epidemics of infectious disease such as foot-and-mouth disease, pleuro-pneumonia, anthrax, etc., break out among them; the carcasses of these, with other putrefying offal, are always lying about the villages and contaminating the air, and their virus is received into the soil, and may remain active for long periods. From the inability of accounting for the disease in these persons it has struck me that there may be some possible connection between leprosy and animal diseases, and although leprosy has not been seen in animals, yet we should not be content to think there is no possible connection between them.

The discovery of the bacillus is leading to the belief that all the different forms under which leprosy is seen are but stages of one disease, but if this be the case the virus is something able to exist, either in its mature or spore state under all varieties of climate, the extreme cold of Norway and the intense heat of the tropics being alike favourable to its development, and all conditions of domestic surroundings, those in affluent circumstance, possessed of every comfort, and those in poverty, badly nourished and naked, being both attacked, although in varying degree, just as they would be subject to any other ailment, as cholera or typhoid fever, though those living in poverty and squalor in each case are the greatest sufferers. This germ is transmissible, and being introduced into the embryo can lie dormant until the active processes of growth are over, and then become active as puberty is acquired; or being received from outside, becomes localised for awhile in some parts of the system, as shown in the anæsthetic spots, and may proceed no further, or the system being unfavourable to its development, it may be expelled, recovery taking place, or, under some peculiar stimulus, is liberated and migrates through the body, and shows its chief force in parts most distant from the centre of circulation, as in the extremities.

Granting that the bacillus is the specific cause of the disease, future inves-

tigations should be directed to ascertain in what shape it exists outside the human body, and how it gains access to the system. It is most probably by the food or through the respiratory organs. It is the firm belief of Asiatics—professional and lay—that the disease is chiefly propagated by the food, and they do not consider it contagious until the ulcerative stage, and even then isolate the person more because he is repulsive to society and unclean from a caste point of view, rather than from any fear he will communicate the disease by direct contact. A leprous man may be the head of a large family, and will be duly honoured, but he is not allowed to touch the family food, but has his share given to him, and sits and eats it apart; and a leprous wife may not prepare the family meal; and in gaols the prisoners will not object to sleep in the same ward with a leper unless the disease has reached the ulcerative stage, but then they will protest against his presence. Further, as regards the contagion, I may add that for the fourteen years I have had charge of the Nueiar district the gaol has seldom been without a leper in the worst stage of the disease, and there have been two and three at a time. The cases have been treated at the hospital, and ulcers dressed by prisoners and attendants in close approximation to other surgical cases, but I have never been able to trace, or even to suspect, that contagion ever occurred.

At the present time I know of families who never partake of animal food, where the father is leprous but has not communicated the disease to his wife; and the children (several grown up) are quite healthy. But I have met with one case where two persons—brother and sister, both adults—stated their father was a leper, and the disease developed in them at adolescence.

The Asiatic believes the disease is hereditary, and by the Hindu law leprosy in one of the parties to a marriage, if not consummated, is good ground for breaking the contract, Last year a lad was brought to me for examination. He had been married to a girl in infancy, and when about 12 years of age some patches of discoloration appeared on his legs and back, and the girl's parents insisted on annulling the marriage contract, on the ground that he was leprous. Hence an important medico-legal question may arise any day—not merely, Is such a discoloration leprosy? but—A child's parents having been a leper should he be allowed to marry, there being no signs of the disease at the time?

Further inquiries, I think, would be more profitable in results if carried out in the interior of India, away from the sea coast. We have the scientific works of Dr. Lewis, of Calcutta, and of Vandyke Carter, of Bombay, but they both incline to the fish theory as the cause of the disease, and their researches do not include the vegetarians of the interior, for if the germ be acquired through food or by respiration it is something that is not confined to fish or flesh, but is found in vegetable products; or it may be the spores exist in the foul atmosphere in and around the villages, and are inhaled. Therefore future work should be undertaken without any bias to theories or existent opinions.

Gurjun Oil in Leprosy.

Brigade-Surgeon J. W. S. Hodder, M.B. (Grouville, Jersey) writes: As the subject of leprosy is at present attracting so much attention, I should like to call attention to the treatment by gurjun oil, which I had an opportunity of seeing carried out in a proper way at the Andaman Islands some years ago, by Surgeon-Major Dougall, I.M.S., who was the first to suggest and devise a proper line of treatment by that means. As this officer is now dead, his name should not be forgotten.

In the Army Medical Department Report for 1875, in a medico-topographical report by myself published therein, I have given a sketch of how the treatment is to be carried out. I saw photographs of patients taken before treatment and the patients themselves during and after treatment, and can bear testimony as to their great improvement, notwithstanding a bad diet. The patients were convicts sent to the Andamans to undergo penal servitude.

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BOOKS, ETC., RECEIVED.

Introduction to the Treatment of Disease by Galvanism. By Skene Keith, M.B., F.R.C.S.Edin. London: Truslove and Shirley.

Foods for the Fat. By Nathaniel Edward Davies. London: Chatto and Windus. 1889.

A Textbook of Physiology. By John Gray McKendrick, M.D., LLD., F.R.S., including Histology by Philipp Stöhr, M.D. Two volumes; Vol. ii, Special Physiology. Glasgow: James Maclehose and Sons. 1889.

Lectures on Masssage and Electricity in the Treatment of Disease. By Thomas Stretch Dowse, M.D. Bristol: J. Wright and Co.

Lectures on Bright's Disease. By Robert Saundby, M.D.Edin., with 50 illustrations. Bristol: J. Wright and Co. 1889.

The Clinical Use of Prisms and the Decentering of Lenses. By Ernest C. Caddox, M.B. Bristol: J. Wright and Co.

A Handbook for the Nursing of Sick Children. By Catherine Jane Wood. London: Cassell and Co. 1889.

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A DISCUSSION
ON AN ESTIMATE OF THE VALUE OF ELECTRICITY IN GYNÆCOLOGY.

In the Section of Obstetric Medicine and Gynæcology at the Annual Meeting of the British Medical Association, held in Leeds, August, 1889.

I.—W. S. PLAYFAIR, M.D., LL.D., F.R.C.P.,

Professor of Obstetric Medicine in King's College, and Physician for the Diseases of Women and Children to King's College Hospital.

I AM desirous in these notes to record, very briefly, the conclusions I have arrived at, after two years' pretty assiduous work at the subject, as to the value of electricity in gynæcology.

There are few suggested improvements in practice which have had a more curious history. On the one hand, we have had the most enthusiastic praise of this remedial agent, which has been claimed as a sort of universal panacea for all the ills which female flesh is heir to, the natural result being that it has been looked upon with doubt and suspicion; while, on the other hand, we have had the most bitter and acrimonious condemnation of it, not based on actual trial and investigation, but on mere theory and prejudice, and this view has been supported by second-hand and hearsay gossip, which would not be listened to for a moment as evidence in any court of law. The latter way of dealing with this matter we may unhesitatingly condemn as utterly valueless, and quite unworthy of serious consideration.

If merely theoretical objections could prove that a really good thing was useless, we should at this moment be without railways or telegraphs, or, to take examples from medicine only, without ovariotomy or anæsthesia; for were not all of these condemned as impracticable, or so dangerous as to render their use inadmissible?

It is also much to be regretted that many of those who have tried this treatment have done so (as could readily be proved by reference to published cases) in a most imperfect way. The necessary plant is costly and not readily procured, and conclusions have been arrived at from the use of very imperfect apparatus. I am anxious to keep Dr. Apostoli out of this communication altogether, and to judge the question from my own experience only. It is, however, impossible not to acknowledge that the attention which it has received of late is entirely owing to his example, and it is only fair to him to insist that the procedure should be carried out rigidly on the lines he has laid down. Here, again, the mistake has often been made of neglecting the precautions he deems essential, of using an intensity of current he never employs, and, in various ways, of modifying the process so as to vitiate the results, or to lead to evils that, with greater care, might have been avoided. I have no wish to minimise the possible dangers of this treatment. It is undoubtedly a very powerful agent, and, like all agents powerful for good, it is also powerful for harm. Hence, if it is rashly and indiscriminately used by those who have taken no trouble to master the *technique* of the procedure, who have not thought it worth while to procure thoroughly good and reliable apparatus, and who have not the necessary experience to guide them in selecting suitable cases for applying it to, then, beyond doubt, grave and even disastrous results will follow. This is the abuse of a thing, not its use; and it is no proof of its being without value under better conditions.

I think it is a pity also that the attention of the profession has been, to a great extent, limited to the effects claimed for negative electro-puncture in promoting the absorption of large fibro-myomata, to the exclusion of what seems to me far more useful applications of the treatment. I believe there is sufficient evidence to prove that the negative current has some influence in this direction; but I am satisfied that it will never come nearly up to the expectations that have been formed of it. Moreover, it has not been sufficiently realised that the number of non-hæmorrhagic fibroids that require interference is very small indeed. It is only when they are so situated as to produce injurious pressure symptoms, as, for example, when they are impacted in the pelvic cavity, or when they interfere with micturition or defæcation or the like, that we are justified in using a remedy which has been clearly proved in some cases, which may be exceptional but still exist, to be not in itself devoid of danger. Indeed, this is the only application of electricity which, so far as I have been able to learn, has any serious risk connected with it. There can be no question that several cases of sloughing and suppuration have followed its use, which, though often ending in cure, have endangered the life of the patient. If electro-negative puncture is used as an alternative for hysterectomy, or in the hope of avoiding that operation, then it is clearly admissible, for the risk of the two procedures cannot be for a moment compared.

Holding these views as to the application of the remedy, my experience of it in promoting the absorption of non-hæmorrhagic fibroids is comparatively small; for I have only used it in a few cases in which the urgency of the symptoms seemed to me to justify interference. I have elsewhere published one case in which a few applications of the negative current by electro-puncture reduced in size a mass of fibroid which was impacted so firmly in the pelvic cavity as to have rendered micturition impossible, and made the use of the catheter necessary for upwards of a year. After five applications of the current, at a strength of 100 milliampères, the tumour was so reduced in size that all pressure symptoms disappeared, and it has given rise to no trouble since, although more than a year has elapsed.

Now, soon after this case was treated, Dr. Matthews Duncan and Mr. Meredith read papers on impacted fibroid of this type at the Obstetrical Society. Neither of these gentlemen even alluded to the possibility of diminishing the impacted mass by electricity. My friend Mr. Meredith actually performed hysterectomy in his case, with great difficulty and great risk to the patient, as it is hardly necessary to point out. Now, anyone who will take the trouble to read my case and Mr. Meredith's cannot fail to see that they were as nearly identical as any two cases can be, and also that a few simple punctures, followed by no discomfort, have permanently relieved the one, while the other has been subjected to all the risks of one of the gravest and most severe of surgical operations. Had I been present at that meeting I should have then said, as I say now, that hysterectomy is not a legitimate operation in such cases until the simple procedure of electro-negative puncture has been tried and failed. Nor is the diminution in size of a fibroid a thing unreasonable to expect, or contrary to experience. There is no fact more clearly proved in gynæcology than that even very large masses of fibro-myomata occasionally spontaneously absorb and practically disappear. Several remarkable examples of this will be found in a former paper of my own, "On the Spontaneous Absorption of Fibroid Tumours," published in the tenth volume of the *Obstetrical Transactions* written long before the question of electricity had ever been heard of. This is the only class of tumour subject to these variations in size, and we are entirely ignorant of the conditions which originate these remarkable changes, except that oftentimes they seem to be connected with the effects of parturition. Is it very unreasonable to hope that we may succeed in starting by art what Nature often does spontaneously? And is it not likely enough that a powerful agent such as electricity may be able to inaugurate changes of the nature of which we are ignorant?

As a matter of fact, I think it must be conceded, from the large number of cases now published, that the use of the electrical current has at times such an influence, but I repeat that the cases justifying its use seem to me to be very few, the risk not to be inconsiderable, and, moreover, that we are as yet without any reliable facts as to the permanency of the results obtained. If, however, this procedure is now and again able to save the patient from such an operation as hysterectomy, then clearly a very considerable advance in practical therapeutics has been made.

A far safer and more generally applicable use of the remedy is that of the positive current to the uterine cavity as a hæmostatic in cases of hæmorrhagic fibroid. I have now treated a large number of cases of this kind, most (if not all) of which had already been treated by all the more ordinary methods in vain. I am as satisfied as I can be of anything medical that in this method we have a very valuable addition to our means of dealing with what is often a very intractable mischief.

I am particularly anxious to avoid making any exaggerated statements. I am justified, however, in saying that in several of my cases the treatment has saved the patient from the serious operation of removal of the uterine appendages or hysterectomy, and restored her to a measure of health and well-being quite com-

patible with carrying on the ordinary duties of life, which were previously impossible to her. I do not wish to burden this paper with cases, but I have elsewhere published several remarkable examples of this type. It is futile to say that in them other hæmostatics would have done as well, since, as a matter of fact, they had all been tried in vain. I am not prepared to go as far as Dr. Keith and say that the man who performs hysterectomy or oöphorectomy for a hæmorrhagic fibroid, before the hæmostatic effect of electricity has been fairly tried, is guilty of a criminal offence; but I certainly am prepared to say that I should deem him to be fairly chargeable with gross malpractice and great injustice to his patient. I should consider this equivalent to the action of a surgeon who amputated the thigh for disease of the knee before satisfying himself that the disease was curable by simpler means. Of course, the remedy is neither uniform in its action nor invariable in its results. In some cases it palliates only slightly, in others much more. I have already published one case in which it seemed to me to do no good; and have since had another, in which eventually I removed the uterine appendages. The latter exception only went to prove the rule, for the tumour projected in such a way that I was practically unable to introduce the intra-uterine electrode.

Hæmorrhages occur chiefly in interstitial and submucous fibroids, projecting more or less into the uterine cavity, and they doubtless arise from lacerations of enlarged vessels in the endometrium, certainly not from the tumour itself. The hæmostatic effect of the intra-uterine electrode is apparently due to its caustic action, and to its causing the mucous membrane to become dense and resistant, and, so far as I have been able to judge, it answers best when the intra-uterine electrode comes accurately into contact with every part of the endometrium. The cases in which its results are not so good are those in which either the uterine cavity is so dilated, or irregular from projection of the tumour, that the platinum sound generally used does not uniformly act upon it. To obviate this defect, carbon electrodes of various sizes have been manufactured, which I am now trying. It is reasonable to suppose that the effects of a remedy of this kind will oftentimes be only temporary—that is precisely what I should anticipate; but controlling or arresting the profuse losses, even for a time, is of itself a great gain, and by a repetition of the application the hæmorrhage may be again checked. This is, however, a matter to be tested by experience. In some of my cases, nearly two years have elapsed since they came under treatment, and I have not yet heard of any recurrence.

Beyond all question this treatment is very troublesome, and it involves a strain on the patience both of the practitioner and the patient. A considerable number of sittings is required. I believe that Dr. Keith estimates the average number as from twenty to thirty, but I myself have rarely used or required to use half that number. This is not a brilliant procedure; it cannot compare for a moment in this respect with the large surgical operations it is intended to obviate, but it is strictly conservative; and, if it be a recognised axiom that the highest aim of the surgeon should be to prevent mutilative operations wherever it is in his power, then this method may fairly claim to have a considerable future before it, even though it be admitted that it is neither invariably efficient nor necessarily permanent in its effects.

In the treatment of certain morbid conditions of the endometrium, especially chronic endometritis, uterine catarrh, and membraneous dysmenorrhœa, I have found the application of the negative current through the insulated intra-uterine sound produce far more uniformly good effects than any other form of intra-uterine medication with which I am acquainted. I am quite satisfied that there is nothing to compare with this in these very troublesome cases, many of which had lasted for years, and resisted every kind of treatment previously used. I have now notes of several cases of membranous dysmenorrhœa either completely cured or very greatly benefited by four or five intra-uterine applications of this kind, and quite a number of cases of obstinate chronic uterine catarrh of long standing, in which the same can be said. I do not think that I have ever made more than five or six applications. Now, I will confidently appeal to any gynæcologist of experience to state if he is cognisant of any method of dealing with such cases, the obstinacy of which is proverbial, in which similar results have followed so brief a treatment. For neatness, simplicity, and effect I believe it surpasses all other methods of dealing with these conditions of the endometrium, nor have I come across the slightest subsequent inconvenience.

I have little experience of the application of the negative current as a means of promoting the absorption of chronic inflammatory exudations in the pelvis, although it is very highly praised by Engelmann and others; I have used it in one or two cases without any very marked effects, and I was led to be sceptical of it having any influence. I have recently, however, had a remarkable case, in which a very considerable exudation, completely fixing the uterus, disappeared so rapidly under its use that I am convinced of its occasional marked influence in this way. This case is in many ways so curious that I am tempted to relate it. Lest I should be supposed to exaggerate the facts, I shall do so chiefly in the words of the lady's medical attendant:

"Last spring, March 25th, 1888, was attacked with violent pain on the left side of the abdomen. Examination revealed a tender swelling over the sigmoid flexure, accompanied by a tendency to obstruction of the bowels, requiring breaking up of fæcal masses. This went on for some weeks, during which the temperature was continuously febrile, and the patient sank into a condition of anorexia and extreme debility. She was seen by Dr. ——, who recognised with me the existence of pelvic peritonitis, but felt inclined to believe that there had been a partial intestinal obstruction, and even spoke of an exploratory operation. At the end of two months, the pain being less, the bowels a little more amenable, and the pyrexia gone, it was then ascertained that she had lost the use of her limbs, and was quite helpless."

After this, the patient came to the neighbourhood of London, in a condition of total inability to stand or move, and was seen by various consultants. An eminent neurologist, amongst others, saw her and reported the absence of organic spinal disease, and obtained the opinion of an equally eminent surgeon, skilled in gynæcology, who proposed resection of the ovaries and their inflamed attachments. "Dr. —— believed that this would be reasonable, as removing a source of disturbance which was operating to the disadvantage of general remedial measures." A second opinion being desired, before the proposed operation was resolved upon, I was asked to see the patient. I found the uterus fixed in a mass of hard exudation, evidently the result of the antecedent acute disease, which had commenced six months before. The total loss of power, the emaciation, and anorexia, I concluded, were connected with extreme neurotic paresis. I felt it impossible to agree to the serious operation proposed, since the absorption of a deposit of so recent a date seemed to me not hopeless, and even if the operation was performed, it gave no guarantee of the cure of the general neurasthenia. The latter was of a type I was very familiar with, and which I felt hopeful might be cured by a course of systematic treatment. I gave it, therefore, as my opinion that this should be tried in the first instance.

The friends thinking, perhaps erroneously, that in the multitude of counsellors there is wisdom, now sought the advice of a well-known obstetrician. The result the husband reports as follows:—

"On the occasion of my visit to you, in the course of conversation you spoke of Dr. —— in such terms that I decided at once on obtaining his advice. He confirmed your opinion that an operation was not admissible, and prescribed an absorbent (iodide of potassium), and a tonic (tinct. calumbæ), which has since been followed regularly without benefit. He also advocated plenty of good and simple food. In this respect his advice has not been followed, as the patient cannot be induced to eat at all. His opinion is that the treatment you recommended by rest, massage, and feeding will do her harm."

Some weeks having been given to the attempt at following this advice, the patient ultimately came under my care. I need not report her steady improvement so far as her neurotic condition was concerned, except to say that the treatment certainly did not do harm, as in a month she could move freely, had gained over 20 lbs. in weight, and was in perfect physical health. All this time no change had taken place in the pelvic exudation, which remained as dense as before, the uterus being immovably fixed. I now determined to try the negative electric current, and for this purpose introduced a vaginal ball electrode covered with cotton, and passed a current of 100 milliampères every third day. The effects were instantaneous and most remarkable, the pelvic pains immediately lessened, and the deposit almost melted away. In three weeks there was nothing to be felt; the uterus was freely movable in every direction, and the examination showed a perfectly normal state of the pelvic organs. At the end of two months from coming under my care this lady was walking and driving about in perfect health, having gained 32 lbs. in weight. Now about this case there can be no doubt. Sufficient time had been given to see if improved general health would do anything to-

wards bettering the local mischief, but no benefit followed; the instant the negative current was used an immediate cure was effected. That it was a *propter hoc*, and not merely a *post hoc*, is a conclusion no reasonable man can question. It is a fair argument, moreover, to point out that the use of electricity actually saved this lady from having her ovaries removed by an eminent surgeon who has publicly declared his disbelief in its efficacy. At the same time I cannot consider it an agent to be recklessly or generally used in inflammatory exudations. Unless they are of long standing and thoroughly chronic, nothing is more likely than that it would light up the embers of the inflammation and lead to a relapse.

I have here said nothing as to the use of the faradic current, the applications of which are much less important, and at the same time less open to controversy.

The conclusions, I think, may be fairly summed up as follows:

1. The continuous current is capable of effecting much good in certain selected cases, otherwise little amenable to treatment; and its introduction is, therefore, a distinct gain to gynæcology.

2. It is an agent of considerable power, and therefore, if rashly and injudiciously used, it is also capable of doing much harm.

3. It involves the use of a costly plant, and it is troublesome and tedious to work.

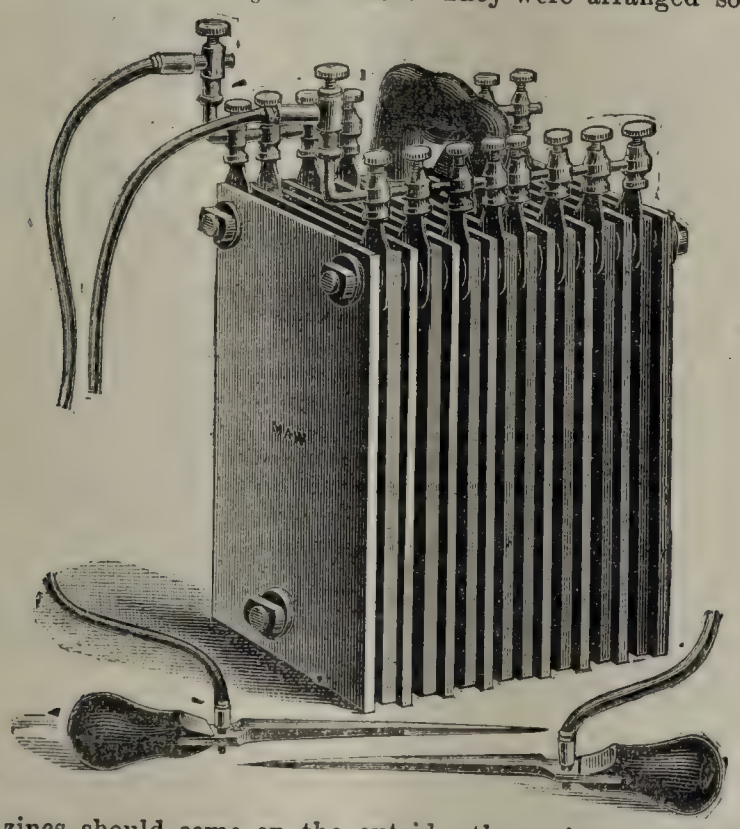
4. Since the proper selection of cases requires, moreover, much special knowledge and great care in the application of the remedy, it is never likely to come into very general use.

II.—EPHRAIM CUTTER, M.D.,

New York.

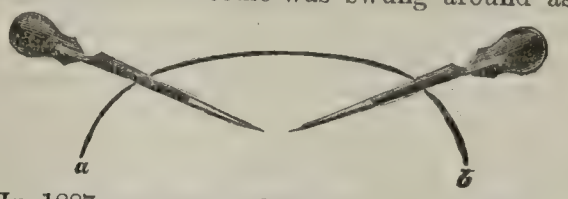
DR. EPHRAIM CUTTER gave a summary of eighteen years work in the treatment of uterine fibroids by galvanism, and demonstrated the method of operating. He presented a table of fifty cases. The operators were himself and Dr. Gilman Kimball. The following is a summary of the results:—Series I: non-arrests, 7 cases; series II: fatal, 4 cases; series III: arrests, 25 cases; series IV, relieved, 3 cases; series V: cured, 11 cases; series VI non-arrests, 7 cases.

Apparatus. — The apparatus employed was a battery of Stöhrer's pattern, with eight plates of carbon, 9 by 6 inches; eight plates of zinc, 9 by 6 inches. The carbons were $\frac{1}{4}$ inch thick; the zincs were $\frac{1}{8}$ inch thick. They were arranged so that



the zincs should come on the outside, thus: zinc, carbon, zinc, carbon, zinc, carbon, zinc, carbon, carbon, zinc, carbon, zinc, carbon, zinc, carbon, zinc. The carbons were connected on one side and the zincs on the other.

About 1874, Mr. Moses G. Farmer, of Boston, the most noted mechanical electrician of his day, tested the battery, and found it exceeded all his measuring instruments in power. Later, Dr. A. C. Garratt, of Boston, a noted electrician, and but lately passed away from a most honourable career as a practitioner of medicine, spent 1,000 dollars in getting up a voltameter to measure this battery; this he did, intercalating the instrument during an operation, and the astatic needle was swung around as far as it



could go. In 1887, my son and I, while operating, intercalated an ampermeter of thorough French make, and found that half an ampère (or 500 milliampères of current), was passing through the tumour—a large abdominal; the battery usually measures 26 ampères direct current.

Solution.—Potassic bichromate dissolved in cold water to saturation. Add to 1 gallon of this saturated solution 8 ounces of commercial sulphuric acid.

The Conductors were connected with the battery by binding screws on the ends of the rods of copper. He preferred those made of pure silver, and had usually employed them as giving less ohmage.

The Electrodes Used.—An ordinary surgeon's director was taken, its point and edges were sharpened, an ebony handle was fitted to the flattened end, and 2 inches of the larger end were japanned for insulation. The dimensions were as follows length of instrument over all, $8\frac{1}{2}$ inches; of blade, $4\frac{7}{8}$ inches width of blade at widest part, $\frac{3}{8}$ of an inch. The foramina in the metallic portion of the handle were sufficiently enlarged to take in the ends of the conductors. The angle made by the two wings of the blade might be represented in section by the letter V; the point of the angle was made dull. The effect of this arrangement was to draw the tissues over the sharp edges represented by the free ends of the letter V, and cause a ready section of the tissues penetrated. It was evident also that the union of the two blades at this angle offered a great resistance to bending in any direction, as seen in the firm union of the nasal bones of the face or in the corrugation of metallic lifeboats. It had been found that these electrodes became granular and dull by use, rendering it advisable to have them sharpened often. It had also been found that the introduction was facilitated by making punctures through the skin with a lancet. Why was this kind of a battery used? Why were not small cells employed? It was not his present purpose to discuss, but rather to report; still, a few words might be given in reply to these questions.

In the case of such dense structures they did not expect to burn or chemically decompose them, but they tried to impress them in such a manner that the processes of nutrition should be so changed by this action that the normal balance might be restored. They thought only of arresting the growths; they were impressed with the idea that quantity, and not intensity, was what was wanted; that to have the experiments successful, it should be a large current, thoroughly applied; and that the way to secure quantity was by having large surfaces of metal. They were, however, willing to allow that their battery was not the best whenever anyone would produce the favourable results they were happy to record by any other battery. They had looked in vain for such a series.

Applications of the Electrodes.—The patient was anæsthetised, and the electrodes were introduced deeply into the substance of the growth so that they did not approach each other within half an inch.

Where?—This usually depended upon the circumstances of the growth. If unilobar and in the cavity of the abdomen, one electrode was passed through the skin on one side of the tumour, and the other on the other side of the tumour; or, if the lobe or tumour were small, one electrode might be passed under the other at a distance of half an inch. If the tumour occupied the cavity of the pelvis and had several lobes in the abdomen, one electrode might be pushed in from the rectum or from the vagina, and the other electrode might be passed in through the abdominal walls. If the fibroid were confined to the pelvis, both electrodes were to be introduced through the rectum or vagina. Care should be taken to avoid any strongly pulsating blood-vessel. It had been found immaterial which electrode was passed in or placed first.

How long did the Applications last?—They varied from three to fifteen minutes in duration; the latter time was too long. Their best result was accomplished with only three minutes' continuance

of the current. The length of time was judged from the systemic symptoms. If the pulse became accelerated, the respiration hurried, the face pinched, the countenance Hippocratic, and the skin sweaty and cold, it was thought time to stop. Etherisation masked these symptoms somewhat, and should be allowed for; the time should not be pushed too far. The first operation should be short, and if well borne the time might be increased in future operations.

How often might Applications be made?—This depended upon the case. It had been done every day for a week; usually once a week or fortnight. If the systemic and local effects were not severe, the operation was renewed oftener than when the effects were profound.

Treatment of Patients.—They were usually put to bed, and arrangements effected whereby they might lie quiet for a few days. If, on the next day, they had no pain, felt well, had a good pulse, normal skin, good appetite and *morale*, they had been allowed to move about at will. If they had had severe pain, morphine subcutaneously and hot alcohol and water (equal parts) to the abdomen were resorted to. If there was prostration, stimulants were used. It was a severe operation, and should be so regarded by the patient in order to ensure proper care and nursing. It was astonishing how well some bore the operation.

III.—LAWSON TAIT, F.R.C.S., M.D., LL.D.,

Professor of Gynæcology, Queen's College, Birmingham.

In opening the discussion upon Dr. Playfair's paper and that of Dr. Cutter I have to say, in the first place, that the title of Dr. Playfair's communication has been completely misleading, for it forms in no sense an estimate of the value of electricity in gynæcology. Dr. Playfair has placed on record a number of impressions which he has acquired, which may be more or less accurate, but it is perfectly clear that he has not sifted his evidence as it ought to have been done. The only case which he gives in detail—a case of effusion alleged to have been resolved by the use of the electrical current—is clearly recorded under a misapprehension of its true nature. The leading feature, that of distress and obstruction of the rectum, clearly shows that the effusion was that of blood into the cavity of the left broad ligament, which, if left alone, would have disappeared either with or without the use of the electrical current. In recording the results of my surgical work for the treatment of uterine myoma I have now placed upon record 262 consecutive cases, with a mortality of 1.23 per cent.; and these are cases taken as they came, without any kind of selection, and they constitute within the period concerned the whole of my experience. This kind of record is an accurate estimate of the value of the surgical treatment of myoma. Let Dr. Playfair and the electricians place their cases on record with the same rigorous exactitude, and, if their mortality proves less than this, we may begin to have some kind of hope that it will do good; at least we may begin seriously to discuss it, but it is impossible to pay serious attention to any mere statements of opinions and impressions such as those of Dr. Playfair.

Let me point out that in the mortality of operations there are two conditions to be taken into account. These I have separated into what I may term the intrinsic factors of mortality and the extrinsic factors. The former are such as come under the control of the surgeon, being such influences as a mistake in operating and other matters of some other kind. The extrinsic factors of the mortality are such as the surgeon has no control over. With the mortality of 1.23 per cent. in such an operation as that is, it must be evident enough that the intrinsic factors of mortality have practically disappeared. My opinion is that the extrinsic factors, as modified by the introduction of electrolysis, will influence the mortality to make it jump up to a very much higher point, by reason of the delay which is induced by the attempts to deal with these cases by the electrical current.

I entirely failed to hear any part of Dr. Cutter's paper, by reason of the fault in the acoustic properties of this room, except the statement of the figures, and he is the first of the electrolysians who has been courageous enough to state exactly what the facts are, and he places his own mortality in these cases at 8 per cent. This is pretty much the mortality of hysterectomy; and then he only claims a cure in 22 per cent., whereas even in hysterectomy all those who survive the operation are cured promptly, speedily, and completely. We have no midway list between fatalities and successes, whilst it is perfectly clear from all the evidence that we can gather that this list in the treatment by electrolysis constitutes the great bulk of the cases. All I can say is that, if the figures remain as Dr. Cutter has shown them to be, the electrical treatment of uterine tumours is already doomed, for a mortality of 8 per cent., a success of only 22 per cent., and a want of success in 70 per cent. of the cases is tantamount to egregious failure.

IV.—JOHN INGLIS PARSONS, M.D.,

Assistant Physician, Chelsea Hospital for Women.

Dr. Cutter should have stated the strength of the current, the time during which it was applied in his cases, as no scientific results could be obtained unless we knew what dose was applied. The trocar used by Dr. Cutter appeared to him far too large; he had himself used a fine insulated needle, so that the puncture closed in twenty-four hours. There was very little risk of septicæmia, as the operation became a subcutaneous one. He had treated twenty cases in the Chelsea Hospital for Women, and intended to publish them after three years. He had not lost any cases, so that his mortality was better than Mr. Lawson Tait's by operation. On this point he would remind those present that surgery had taken nearly half a century to arrive at such a result, whereas, with electrolysis, they were beginning, and he had no doubt that the mortality of other operators would improve with time and further knowledge. With regard to his twenty cases he could say this, that with two-thirds of them the symptoms disappeared; in the other third the hæmorrhage ceased in some if one application was made once a week; but in other cases it had no effect on the hæmorrhage. With regard to these cases he believed that it would be found that the electrode did not come in contact with the tumour. The electrical resistance of a hard fibroid was from 50 to 150 ohms higher than the surrounding tissues: as a consequence of this the current did not pass through the tumour, and very little if any caustic action was produced on the surrounding circle of vessels. With regard to the reduction in size of these tumours he found that only in some cases did it occur, and then only to a slight extent. The soft myoma, with a short history, appeared to shrink a little, while the hard tumours remained unaffected.

V.—R. BELL, M.D., F.F.P.S., Glasgow,

Physician, Glasgow Hospital for Diseases Peculiar to Women.

Mr. Tait has thrown doubts upon Dr. Playfair's diagnosis, which he had made after a careful examination, and also upon the *modus operandi* of the cure which resulted. Mr. Tait had made the assertion that the case was not pelvic cellulitis at all, but was neither more nor less than a hæmatoma, which would have got well of itself had it been left alone, so that in reality the well thought-out treatment which Dr. Playfair applied "was productive of no good." Now, Sir, one feels crippled by Mr. Tait's absence, and it is quite out of the question for one to speak so freely on his remarks and statistics under the circumstances of his absence. I now come to speak on the subject at issue; and what I would wish first to inquire is, In what manner does electricity operate? Does it operate directly on the tumour and induce its absorption, or does it only act indirectly upon the tumour by stimulating muscular action in the uterine walls, and thus causing anæmia and consequent atrophy of the tumour? My opinion is that it does, and what is of equal importance, I believe, equally good results can be obtained by another and simpler method which I have employed for some time, though I am not quite in a position to publish my results. I hope, however, to be able to do so at no distant date. I cannot sit down without expressing my regret that Dr. Playfair is not present to receive the congratulations of the members present for the very able paper which he has so carefully compiled.

VI.—GRAILY HEWITT, M.D., F.R.C.P.,

Emeritus Professor of Obstetric Medicine, University College, London.

Dr. Graily Hewitt thought facts were required to determine the value of electrolysis in cases of fibroid tumour. His experience was not extensive, but he wished to mention particulars of one case. In the others no bad symptom followed, but one case had a fatal termination and conveyed some important lessons. Patient was single, aged 32; tumour size of fist; second tumour recently discovered growing. Electrolysis employed on two occasions, interval of a week. Second application (on Apostoli's plan), continuous current 80 to 100 milliampères, followed in three days

by peritonitic symptoms, partially relieved by treatment in two days. Menstruation appeared also prematurely. There occurred increase of peritonitis, sudden pain, etc., on defæcation. and death two days after. *Post-mortem* examination showed two fibroid tumours, one size of fist, subperitoneal; second more recent, parietal, close to internal os; also double ovarian cystic disease, one size of orange, one smaller. One Fallopian tube dilated, apparently occluded at uterine end, containing blood, and a part of this tube apparently ruptured near the fimbriated end. Fluid in peritoneum; blood mixed with other fluid and peritonitic exudation, especially in pelvis. The ovarian disease was not detected during life. A practical point suggested was the desirability of applying a hot external electrode in all cases, which by use of the plaster electrode it was difficult to accomplish. He thought a comparatively cold electrode, by possibly inducing shock, might be objectionable.

VII.—JAMES BRAITHWAITE, M.D.,

Obstetric Physician Leeds General Infirmary.

Dr. Braithwaite considered that electrolysis was inapplicable to fibroids when they were in the posterior wall, or on or near fundus, and when they were multiple and in various situations on the uterine wall. It was applicable and successful when the tumour was in the anterior wall. On the other hand, removal of the appendages was applicable in those cases in which electrolysis was not; consequently, each should be used in proper and suitable cases.

VIII.—C. H. F. ROUTH, M.D., M.R.C.P.

Consulting Physician, Samaritan Hospital.

Dr. Routh, after eulogising the scientific character of Drs. Playfair and Cutter's papers, said he wished to point out some important points in regard to electrolysis which had not been specially insisted upon. First as regards needles. He had already insisted, in a published paper, that no needles should be used which were not gold or platinum, because if iron they would be sure to corrode. In cases of perforation, if made through rectum or vagina it should be made first with the positive pole. This he had learnt from Apostoli. It led to local adhesive inflammation, so that peritoneal infection did not occur. The hole so made, if kept clean by antiseptics, did not close, but remained patent, surrounded by adhesive inflammation, leaving a channel through which the negative could be subsequently safely applied.

Secondly, much depended on the duration of the current and its power. If too long or too powerful it might produce inflammation, high temperature, etc., and this might do harm. In these cases where such inflammation was great the patient ran the jeopardy of life, though the tumour diminished the more rapidly. For safety five to ten minutes was the outside period of duration.

Thirdly, no operation, whether for cutting away the tubes or electricity, should be attempted except the diagnosis were certain. He knew of one case where the tubes were cut away to cure metrorrhagia, and in which the bleeding did not cease, and in which it was afterwards found that it was due to a polypus in the fundus; another where death was produced by operation on a strangulated extra-uterine fibroid.

Fourthly, Mr. Tait had shown them his mortality from cutting away the tubes was only 1.23 per cent. But Mr. Tait had not told them whether all these cases were operated on because of myoma, nor how many were cured. He (Dr. Routh) believed that Mr. Tait was about A 1 as an operator, but he had honestly stated elsewhere that cutting the tubes was not sufficient; and, indeed, if cut close to the uterus, as he once believed, seeing that even large portions of uterus were also cut away, it sometimes failed. But though the mortality was only 1.23 per cent., what was the percentage of cure? Mr. Tait had not stated it.

Fifthly, Dr. Graily Hewitt had spoken against the use of a cold pad on the abdomen as a cause of the fatal peritonitis; but once the electricity was applied the pad became hot. However he, Dr. Routh, always used it warm.

Sixthly, the question had been asked, Did the existence of these tumours when treated with electrolysis allow these women to become mothers. Now he (Dr. Routh) had seen women with fibrous tumours yet pregnant, and delivered them safely of a living child, although the difficulty of the labour was marked. It was then mishaps sometimes occurred.

IX.—T. MORE MADDEN, M.K.Q.C.P.I.,

Obstetric Physician Mater Misericordiæ Hospital, Dublin.

Dr. More Madden, having on two former occasions taken part in discussions on this question, regarded the present debate as most valuable, from the fact of the presence there, on the one hand, of Dr. Cutter, to whom the merit of introducing the electrolysis treatment of uterine fibromata was due, and on the other of Mr. Tait, who had done so much for the alternative or surgical treatment of the cases. Dr. More Madden having now tried both methods pretty extensively himself, decidedly preferred the former, by which he had repeatedly relieved all the pressing and urgent symptoms, namely, the hæmorrhage, pain, and pressure generally present in such cases. In several instances the size of the tumours thus treated had become notably diminished by the use of electricity; but in none, thus far at least, had he seen the tumour entirely removed by that method of treatment. It should be always borne in mind that in a certain proportion of these cases no active treatment, whether by surgical or electrolytical methods, was either necessary or justifiable. Whenever either method was necessary, the electrical method should always be fairly tried before resorting to the other. Dr. More Madden, in conclusion, said that the present discussion had strongly confirmed him in the opinion he had expressed in his address last year at Glasgow, namely, that in the safe and effective treatment of a very troublesome class of cases, there was a very brilliant future in store for the electrical treatment of uterine fibromata. Finally, in many instances the less treatment the patient received the better would it be for her welfare.

X.—FRANCIS IMLACH, M.D.

Dr. Imlach denied that any bitter and acrimonious attack had been made by the surgeons upon the electrolytic method, and that against it there was only gossip. The electrolytic method was welcomed by all those whose aim was to advance neither electricity nor surgery but the healing art. This was the third year in which Apostoli's method had come before the Section, yet they had hardly any cases, and little else than theory and modified methods. The method did not seem to be favourably received by the French medical profession. The results at St. Bartholomew's were almost entirely negative, and in sad contrast with the good and permanent cures which were so frequently attained by surgery. Then the immediate mortality under electricity was for the moment at least too heavy. Only the previous day a case was related of instantaneous collapse. He was personally acquainted with five deaths which had occurred in Liverpool. Not infrequently when he had submitted patients to abdominal section for inflammatory disease of the uterine appendages, who had previously been subjected elsewhere to the electrolytic treatment, he had found recent peritonitis with sanguineous effusion. This ought, if possible, to be avoided, for it greatly increased the gravity of the symptoms.

XI.—PETER HORROCKS, M.D., M.R.C.P.,

Obstetric Assistant Physician, and Demonstrator of Practical Obstetrics, Guy's Hospital.

Dr. Horrocks regretted that the discussion had extended into a comparison between the treatment of fibro-myomata by electricity and oöphorectomy, because the former was a method of treatment now on its trial, and until further results and experience had been obtained it was unfair to compare it with the latter, which had had a much longer trial, and in which the very best results which it was possible to hope for had been already attained. If a comparison of different modes of treatment were allowed he ventured to say that he had statistics that excelled those of Mr. Tait. In more than 262 cases of fibro-myomata that he had treated without either surgical or electrical procedure he had an immediate mortality of *nil*. That could not be beaten. But, of course, if these cases were to be compared with Mr. Tait's they must know in how many the symptoms had been relieved, how many were still alive, how many insane, and how many were dead. It must ever be remembered that these patients rarely died if left alone. Mr. Tait's observations on the electrical treatment of this disease were absolutely valueless, because he admitted that he had never tried it. *A priori* objections of this kind had been made to every new method of treatment that had been tried or suggested, but until experiment by trial, and fair trial, had been made it was impossible to know whether those objections were

of weight or not. Dr. Horrocks was surprised that Mr. Tait should refuse to try the method, because it was quite certain that if it could be shown to be equally efficacious in the cure of the disease, or in the relief of the symptoms, with the treatment by removal of the appendages it would be chosen in preference to this treatment, which, after all, was a mutilation. Whilst, however, he treated cases—some by drugs, some by oöphorectomy, and some by hysterectomy, according to the nature of the case, and taking all circumstances into careful consideration, he had loyally tried the treatment by electricity, and so far his results had been unsatisfactory. The tumours had not decreased in size; there had been no permanent relief of symptoms. Moreover, it had been a painful treatment which had in some instances caused the patient to refuse further applications. At the same time, he was not prepared to say, in the face of the facts published by Dr. Playfair and Dr. Keith and others, that electricity was of no service in these cases; but, from an intimate and prolonged experience of electricity in all its forms in the treatment of disease, he did feel very strongly that there was no magic, nothing mysterious or supernatural about electricity. He believed that the strong galvanic currents which were employed in these cases acted at the end of the poles as a caustic of varying degrees of intensity, according to the strength used, and that, if any other form of caustic of equal strength were used to the same part, its effects would be just as good. Indeed, so far as puncture was concerned, he thought that puncture by a needle of the same size as the one used would be followed by just as good results, whether the current was passed or not, so long as something was applied to effect as strong a change chemically at the end of the needle. He could give a case of pelvic inflammation, very much like Dr. Playfair's case, where he had used the needle of an aspirator in order to discover whether there was any pus. No pus was found, and only a few drops of pure blood were withdrawn, and yet from that moment the effusion began to dissolve, and was quite gone in a few weeks. Again, he quoted a case of a large fibro-myoma of the uterus in a lady brought to him by the late Dr. Earle, of Brentwood. This lady had been advised by an eminent obstetrician to have the electrical treatment; but he (Dr. Horrocks) suggested using Hegar's dilators every month for six months, without any electrical current whatever. This plan had been adopted, and, although there was no appreciable diminution in the size of the tumour, her symptoms had disappeared to so large an extent that, had the treatment been by electricity instead, the case would have been published as a successful one. Finally, he ventured to think that the treatment would fall into oblivion for various reasons, and that one obstacle to its fair trial was due to the fact that the instruments were complicated and cumbersome and expensive, and always getting out of order. Still, if it could be established that in suitable cases electricity was the best mode of treatment, he had no doubt that the instrument makers would rise to the occasion, and construct simpler, more reliable, and less expensive apparatus.

XII.—M. HANDFIELD-JONES, M.D., M.R.C.P.,

Physician-Accoucheur to Out-Patients and Joint Lecturer on Midwifery and Diseases of Women, St. Mary's Hospital.

DR. M. HANDFIELD-JONES remarked that the use of a discussion on these papers was to enable members to select cases suitable for surgical operation, and to decide what patients might reasonably be reserved for electrical treatment. He quoted two cases recently under his care; in the first one, the tumour, which was impacted in the pelvis and was causing pressure on the rectum and bladder, was shrunk down to a third of its size; in the other case, the tumour, which had reached to within a finger's breadth of the umbilicus, had now almost entirely disappeared. In the last case the uterine sound, which had entered $4\frac{1}{2}$ inches, would now only pass for $2\frac{3}{4}$ inches. It was not to be supposed for one moment that every case of fibroid tumour either needed or was suitable for Apostoli's treatment; but, as far as present experience went, cases of impacted and cases of bleeding fibroids were the varieties most likely to yield good results with the electric current.

XIII.—J. W. BYERS, M.D.,

Physician for Diseases of Women, Belfast Royal Hospital.

DR. BYERS said he thought they were not yet in a position to dogmatise as to the treatment of fibroids. There were different varieties of fibroids, and no single line of treatment would do for all cases. Mr. Tait had given them to-day his statistics, and he thought when those who advocated other methods placed before them their results they would be better able to come to a conclusion on the whole question. When this was done they might find that the different forms of treatment would suit different cases, and then every case would be treated on its merits.

XIV.—W. ROSS JORDAN, M.R.C.S.,

Consulting Surgeon, Birmingham and Midland Hospital for Women.

MR. ROSS JORDAN wished to protest against the use of the term "mutilation" when speaking of these cases. From his own experience, and from what he knew generally, the women were sterile at the time they came before them. For them to object to the removal of the appendages for fear of causing that condition was childish. To do anything to encourage any woman to become pregnant who had a fibroid in her uterus was extremely dangerous. A woman might be safely delivered, but she would certainly be an object for their deepest sympathy.

XV.—MURDOCH CAMERON, M.D.,

Obstetric Physician, Glasgow Maternity Hospital.

I WOULD like to ask Dr. Cutter to explain why he punctures to the depth of from $2\frac{1}{2}$ to 4 inches, as Apostoli recommended me on a visit recently not to puncture deeper than $\frac{1}{4}$ of an inch. As regards results, I have seen very marked changes in tumours upon which no operation had been performed, some increasing or diminishing, and some remaining unchanged during long periods. In one very marked case, that of a young woman aged about 20, all methods of treatment failed, and the patient on several occasions was given up as being near her end. About a year afterwards I met her in the street, comparatively well, although she had in the interval had no treatment whatever. If she had been subjected to any special treatment I should very willingly have accorded full praise to such treatment.

XVI.—JOHN A. ROBERTSON, M.B., C.M.

So far as uterine fibroids are concerned, my experience extends to one case only. The result after two months' trial was negative. The battery used was a forty-cell Leclanché, Steavenson's uterine electrode, and Schall's carbon abdominal electrode. I experienced difficulty in obtaining a current of more than 60 milliampères. I believe many of the failures to be due to weakness of current, and that to obtain good results currents of not less than 200 milliampères should be used. From the statements of such men as the senior and junior Keith, Sir Spencer Wells, Playfair, etc., I am much inclined to regard electrolysis as a therapeutic agent of more than ordinary power in the treatment of certain forms of uterine fibroids.

XVII.—SYDNEY RUMBOLL, L.R.C.P. AND S.EDIN.

MR. RUMBOLL said that with a very small experience he had had no difficulty in getting sufficient current, as much as 350 milliampères. He used forty-pint Leclanché cells. As far as results went he found in four instances that hæmorrhage had been considerably diminished, the hæmorrhage in these cases being the symptom calling for urgent treatment.

XVIII.—C. J. CULLINGWORTH, M.D.,

Obstetric Physician to St. Thomas's Hospital.

THE President (Dr. CULLINGWORTH) said that the time had not yet come for pronouncing a final judgment on the relative merits of electrolysis and removal of the uterine appendages in the treatment of treatment-requiring fibroids. More facts were needed as to the results of each method; not opinions, or impressions, or records of single successful cases or even groups of such cases, but carefully-recorded notes of every case treated, whether successful or unsuccessful. It was no use scoffing at the electrolytic treatment on the ground that its precise *modus operandi* was not as yet understood. Electrolysis had accomplished so much in the dispersion of tumours other than uterine—as, for instance, in the case of large bronchoceles—that there was no support for the assertion that it could only act as a caustic. At the same time it must be admitted that much of the evidence hitherto brought forward by the advocates of its employment in uterine disease had not been of a sufficiently exact kind to satisfy scientific requirements. On the other hand, many of the objections brought

against the removal of the tubes and ovaries in advanced fibroid disease were absurd; such, for example, as the prevention of future pregnancy. It was eminently undesirable that pregnancy should occur in such cases. With regard to the loss of sexual appetite said to be sometimes brought about by the operation, the instances must be exceedingly rare where this effect was produced; and it should be remembered that in the cases in which alone the operation was justifiable the medical attendant was face to face with a grave emergency, in which he must be content to run some risk of causing the patient future inconvenience in order to avert the immediate danger to life. The risk, of course, should be plainly stated. His own belief was that both methods were valuable and would survive, and that, when they were in possession of a sufficient number of accurately-observed facts as to the results of each, it would be found that electrolysis was best adapted for certain cases and the removal of the tubes and ovaries for others. In the meantime nothing was to be gained by strong statements either of advocacy or denunciation. What was at present wanted was a patient accumulation of facts and an open mind.

Dr. CUTTER, in reply, said: Mr. Chairman, you say you want facts; I say ditto. I can only give facts, and not opinions. So in regard to depth of puncture, it is from 2 to 4 inches according to the case. I think no one has a right to dictate how deep the puncture should be made. This varies with the case. The principle is to apply the galvanic current to the interstitial substance of the fibroid and to nothing else, as far as it can be done. I beg to refer the gentlemen to the full published cases. We must take principles, and vary them on their application to the idiosyncrasie of the different cases. I wish to express my gratification with my critics. The idea is to try and cure these cases; the individuals are nothing. I welcome cordially the efflux of all in this difficult department. If it were possible to open the abdomen of every patient that came, we could make an absolutely correct diagnosis; but, as this is impossible, we must do the best we can. In one case where I was requested to operate on a fibroid, and the diagnosis was confirmed by the examination of the patient by a large number of surgeons present, it proved to be both ovarian and fibroid together.

A DISCUSSION
ON THE
TREATMENT OF RETENTION OF URINE FROM PROSTATIC ENLARGEMENT.

In the Section of Surgery at the Annual Meeting of the British Medical Association, held in Leeds, August, 1889.

I.—A. F. McGILL, F.R.C.S.,
Professor of Surgery in the Yorkshire College; Fellow of King's College, London; and Surgeon to the General Infirmary at Leeds.

THE treatment of retention of urine from prostatic enlargement is a somewhat large subject, and as the time allowed for this paper is strictly limited, it is necessary for me to make some selection in introducing this discussion. I purpose, therefore, to exclude all reference to the acute form of retention, and to confine my remarks to that chronic condition which prevents the bladder from thoroughly evacuating its contents, and thus eventuates in chronic retention. I am the more willing to adopt this course, as I know of nothing new to say about the treatment of acute cases. So far as my own experience goes, a catheter can always be passed into the bladder, and the patient temporarily relieved. If the relief is only temporary, the case falls into the class of which I am about to speak.

It will, I think, be convenient to lay before you certain propositions, to discuss them *seriatim*, to state my own opinions, and to leave you to object, to criticise, and to amend. My propositions are:—

I. *That Prostatic Enlargements which give rise to Urinary Symptoms are Intravesical, and not Rectal.*—It has been long recognised that the severity of the symptoms in a case of hypertrophy of the prostate bears little or no relation to its apparent size as felt through the rectum, and it is also well known that a considerable number of men, aged 55 and upwards, have prostates of an abnormally large size, though of these only a certain proportion—say 50 per cent.—suffer from urinary symptoms. This strange difference depends on the position at which the organ is enlarged. Prostates of immense size which project towards the rectum and perineum cause no urinary trouble, while severe symptoms may supervene when the prostate on rectal examination is apparently of normal dimensions. The following case, which was in the Leeds Infirmary under the care of my friend, Mr. W. H. Brown, illustrates and proves the first statement. A man, aged 61, was admitted in May last suffering from symptoms of intestinal obstruction; he had suffered from chronic constipation for several months; for a month he had passed only small flattened fæces. For a week the obstruction had been complete, except that he had passed a little flatus. The abdomen was distended, and there was occasional vomiting. On rectal examination, a large prostate almost closing the lower aperture of the pelvis was felt, the obvious cause of the obstruction. Nevertheless, he had no trouble with his urine, and no symptoms pointing to enlarged prostate. On the other hand, the contrary condition existed in Case 6 of the table you have before you. No enlargement of prostate could be felt on rectal examination, and yet, on opening the bladder, a pedunculated middle lobe was found which prevented the outflow of urine, and gave rise to the severe symptoms which characterised the case. In several other cases the prostate is described as slightly enlarged, the rectal examination giving no clue to the extent of the intravesical growth. In the twenty-four tabulated cases, there was one characteristic common to all—the enlarged prostate projected into the bladder. There are many varieties of the intravesical growth. We find (1) a projecting middle lobe—pedunculated or sessile; (2) a middle lobe with lateral lobes forming three distinct projections; (3) the lateral lobes alone; (4) a pedunculated growth springing from a lateral lobe; and (5) "a uniform circular projection surrounding the internal orifice of the urethra." This last variety, described by Brodie, has in recent years escaped notice; it is better seen *in situ* than in museum specimens, and is of not infrequent occurrence. It surrounds the urethra like a collar, and projects for a variable distance into the bladder.

II. *That Retention is caused by a Valve-like Action of the Intravesical Prostate, the Urethral Orifice being Closed more or less completely by the Contraction of the Bladder on its Contents.*—When the bladder contracts on its contents, the contained fluid is forced on to the projecting prostate, and the urethral orifice is closed. The mechanism is the same—with one exception—whatever may be the variety of the enlargement. Whether there is a middle lobe or lateral lobes, or a collar, the same valve-action occurs; and the more violent the contraction the more complete is the action of the valve. A patient, finding that he is unable to relieve himself, soon ceases his violent efforts, the pressure on the valve is then lessened, the urethral orifice is released, and the urine flows away in a feeble stream. If he attempt to expel it more quickly, the outflow again stops, and it is only after several attempts that he is able to obtain an incomplete relief. A time comes when, though the bladder still contains urine, no more can be forced from it. This residual urine varies much in quantity in different cases, sometimes amounting to a pint or more. Its presence, and the consequent frequency of micturition, is accounted for by the fact that a more violent contraction of the wall is required to completely than to partially empty the bladder, and that its muscular coat acts to greater advantage, and consequently with greater force in its partially contracted than in its distended condition. This greater force, pressing on the outside of the valve, more completely closes the urethra, and the urine that remains is unable to escape. An exception to the general rule is found in cases with a small sessile middle lobe, situated partly in the bladder, and partly occluding the prostatic urethra. When this is the case, the passage is blocked by the projection, and no valve action occurs. The urine is expelled by a violent contraction, and the bladder wall is much hypertrophied and its cavity contracted. Nos. 10 and 12 are instances of this condition. The explanation I have given of the mechanism of the residual urine is not that generally received, but want of time prevents me from discussing the various hypotheses that have been advanced.

III. *That in many cases Self-catheterism is the only Treatment required.*—This proposition does not require discussion. We have all seen patients who with little discomfort have, by the passage of a catheter, kept themselves in good health, sometimes for years.

TABLE OF SUPRAPUBIC PROSTATECTOMIES PERFORMED IN THE LEEDS GENERAL INFIRMARY, TO JULY, 1889.

N.B.—In cases 1, 6, 11, 13, 18, 19, and 23, Lithotomy was combined with Prostatectomy.

No.	Surgeon.	Name & Age.	Previous History.	Present Condition.	Date and Nature of Operation.	Subsequent History.	Final Result.
*1	Mr. McGill	E. W., æt. 53	Symptoms five years. Hæmaturia; Incontinence, necessitating the wearing of a urinal. For seven months has not micturated without the aid of a catheter, and has had to pass a catheter every two hours, day and night.	General condition bad; calculus detected in bladder; urine, sp. gr. 1014, acid, much mucus, trace of albumen; prostate through rectum appears slightly enlarged.	1887, Mar. 24.—Six calculi, weighing 174 grains, removed. Prostate surrounding the urethra like a collar, the size of a large walnut, removed.	Some urine passed by urethra on eighteenth day. Discharged thirty-sixth day, passing urine naturally.	Continued well until the middle of 1888, when symptoms recommenced. In November the suprapubic wound opened during an attack of retention. On Dec. 17 the wound was reopened, and a phosphatic concretion removed. The prostate had no intravesical enlargement. Made a speedy recovery and is now quite well.
*2	,,	T. T., æt. 65	Urinary symptoms for two years. No treatment till a fortnight ago, when the urine became offensive and retention almost complete.	General condition bad. Urine sp. gr. 1016, thick, ammoniacal, tinged with blood, a copious deposit of pus, and a little albumen. Prostate through rectum slightly enlarged.	1887, April 25.—Middle lobe of prostate, not pedunculated, the size of a bean, removed.	Urine passed by urethra on fourteenth day. Wound healed and natural micturition on 27th day.	Mr. Hebblethwaite, of Burley-in-Wharfedale, writes that T. is now a "hale and hearty man." He has no difficulty with his urine unless he drinks to excess. At Christmas, 1888, he had an attack of retention due to a drinking bout; since then has had several like attacks. He is easily relieved by the passage of a catheter.
*3	,,	J. D., æt. 61	Symptoms six years. Three years ago complete retention. For some months urine has been putrid, and micturition or catheterism very frequent.	Is in a uræmic condition, with constant vomiting and diarrhœa. Urine strongly ammoniacal and putrid; sp. gr. 1020, small quantity of albumen; deposits one-third of its bulk of pus. Prostate through rectum much enlarged.	1887, July 29.—Collar enlargement of prostate, the size of a walnut, removed in small fragments Ureters dilated, admitting the finger-tip (the vesical mucous membrane being no doubt pushed before the finger).	Urine passed by urethra on 9th day. Sept. 10, left the hospital with wound closed and natural micturition.	Is now in very good health and has not required a catheter since the operation. Till four months ago micturition was normal, and urine clear; since then some turbidity of urine and increased frequency of micturition.
4	Mr. Atkinson	T. R., æt. 66	For five years has had repeated attacks of retention, relieved by catheter. Catheterism always followed by bleeding.	Bladder distended above the umbilicus. Catheter, passed with difficulty. Urine acid, a dark chocolate colour, contains blood clots. Right side of prostate feels large on rectal examination. For eight days catheterism every four hours without benefit.	1887, Oct. 28.—Growth the size of a cricket ball attached to right lobe enucleated in seven pieces: the largest piece an inch in diameter, the smallest the size of a bean.	Convalescence tedious, owing to emphysema and bronchitis. Left the hospital passing urine naturally on Jan. 14.	The patient writes, "I am glad to inform you that I have never felt anything of my old complaint since I was in Leeds, and have enjoyed good health, and to all appearance they have cured me."
5	,,	J. H., æt. 71	Symptoms for years; complete retention four days ago; catheter passed; urine clear. Since then attempts at catheterism have failed.	Bladder distended to umbilicus. Bloody urine removed by catheter. Prostate greatly enlarged on rectal examination. Hæmorrhage did not stop under treatment.	1887, Dec. 15.—Lateral lobes enlarged so as to measure two inches in their vertical diameter. From the left lobe a pedunculated nodule, the size of a marble, projected over the urethra. This was removed with scissors and the lateral masses were then enucleated with the finger. The portions removed weighed half-an-ounce.	On Jan. 14, the wound was entirely healed. He was getting up and passing urine naturally.	Death from pneumonia on Jan. 30. *Post mortem* notes state: "The site of the operation (in the bladder) presented a perfectly normal appearance. There was nothing to suggest that any breach of surface had been made: no unhealed surface, no cicatricial contraction.
6	Mr. Mayo Robson	B. H., æt. 67	Urinary symptoms for many years; symptoms of stone for four years. Hæmaturia.	General condition bad. Is passing urine every half-hour during the day and night. Urine normal. No enlarged prostate to be felt per rectum.	1887, December 15.—Uric acid calculus weighing 322 grains removed. A projecting middle lobe of prostate removed by scissors and forceps.	First urine per urethram on 9th day. Wound entirely healed on Jan. 31st, when he was discharged well.	Not traced.
7	Mr. McGill	J. D., æt. 62	Urinary symptoms and auto-catheterism for seven years. Acute cystitis and retention for three weeks.	Complete retention, relieved by a catheter. Urine ammoniacal, with copious purulent deposit.	1887, December 19.—Collar enlargement of prostate the size of a walnut removed. Subsequently a middle lobe which projected into the floor of the urethra, the size of a pea, removed.	Passed first urine per urethram and got up on 10th day. Discharged with wound healed and natural micturition on Jan. 10.	Dr. Buck, of Settle, writes: "He has never used the catheter since the operation; he can empty his bladder perfectly, has no pain, and can sleep all night. Urine healthy, quite free from mucus. Passes water three or four times daily, and would not know from his present symptoms that he ails anything."
8	,,	J. L., æt. 67	Urinary symptoms four years. Auto-catheterism 3½ years. Vesical irritablity, gradually increased till present time.	General condition fairly good. Has to pass a catheter ten times in twenty-four hours. Urine acid. Prostate through rectum slightly enlarged.	1888, Jan. 16.—Middle lobe size of a filbert removed. The bladder was much thickened and its cavity much contracted and non distensible.	Much suppuration about wound, no healing, persistent hiccough. Feb. 9, abscess in front of left thigh opened. Feb. 11, died.	Death. *Post mortem*, granular kidneys, large abcess in retropubic space. The bladder wall much thickened, and the prostatic wound perfectly healed.

No.	Surgeon.	Name & Age	Previous History.	Present Condition.	Date and Nature of Operation.	Subsequent History.	Final Result.
9	Mr. McGill	M. P., æt.73	Complete retention five years ago. Frequent attacks since in spite of auto-catheterism.	Admitted Feb. 9, with complete retention. Is a very feeble old man. Coudé catheter passed with difficulty and required every three or four hours. Considerable hæmorrhage. Urine slightly albuminous. By rectal examination prostate much enlarged.	1888, Feb. 14.—Both lateral lobes, much enlarged, were removed in seven pieces, weighing altogether 2oz. 30grs., the largest piece was an elongated portion measuring two inches.	On 8th day passed urine per urethram and got up. On 17th day all the wound was healed, and all urine passed naturally, and on March 6th he went home.	Death in the workhouse on Jan. 1, 1889. Had symptoms of cystitis for three or four months before his death. Became insane and tried to commit suicide.
10	,,	T. M., æt.69	Urinary symptoms for thirty years.	General condition good, Is passing urine 15—20 during twenty-four hours. Is troubled by libidinous feelings and is anxious to be operated on.	1888, May 14.—Prostate generally enlarged and very hard. A projecting middle lobe blocks up the urethra like a bar. A small piece the size of a pea removed with difficulty.	On 8th day got up; on 22nd day some urine passed per urethram. Discharged on June 28 with wound almost healed, but passing urine three times during the night.	Not traced.
11	Mr. Mayo Robson	J. B., æt. 63	Symptoms for eight years. Several attacks of complete retention, much hæmaturia.	Admitted with retention. Urine, sp. gr. 1011, alkaline, no albumen. Calculi detected on sounding.	1888, June 7.—Fifty small calculi removed. A piece out of each lateral lobe removed by scissors and forceps.	Some cystitis after operation; irrigated with quinine and boracic acid lotion. Urine per urethram on July 6. August 6, wound healed. September 1, wound reopened. October 6, discharged quite well.	The patient writes, "I am very well at present."
12	Mr. McGill	W. S., æt. 72	Symptoms—increased frequency of micturition—for two years.	General condition bad; is passing urine thirty or forty times during the day, and ten or twelve times during the night.	1888, June 11.—Prostate very hard, with projecting middle lobe of small size; a piece size of small pea removed with difficuity.	January 12, passed some blood from rectum. January 16, passed large quantity of blood from rectum, which did not recur after plugging. July 11, wound closed but symptoms not relieved. The wound was consequently reopened and a permanent fistula made. He left relieved on October 13.	Is at present confined to his bed. He is provided with a suprapubic urinal of Mr. Buckston Browne's pattern, but the "urine is so very thick that it will hardly pass the pipe." N.B.—The exceptional hardness of the prostatic tissue prevented the proper removal of the projecting portion of prostate. It is doubtful whether this case should be included in a table of prostatectomies.
13	Mr. Jessop	J. F., æt. 63	Symptoms of calculus for twelve months.	Usual symptoms of calculus with much hæmaturia. Enlarged prostate felt through rectum.	1888, July 23.—Thirteen stones removed, each the size of a marble. An enlarged portion of the middle lobe of prostate removed piecemeal in small portions.	Urine passed per urethram on 14th day. Got up next day, and sent home well on September 11.	Dr. Proud writes that he continued well for three months, and that another calculus has now formed in the bladder.
14	Mr. Mayo Robson	C. D., æt. 62	Eight years ago an injury to the perineum, since when increased frequency of micturition. Three years ago had to pass water twenty times during the night. The end of a catheter was broken into the bladder and removed by median perineal incision. Relieved for a time. Recurrence of symptoms.	Admitted with complete retention and a greatly distended bladder.	1888, September 6.—Middle lobe the size of a walnut; lateral lobes also enlarged. Removed in six portions weighing more than half an ounce. Considerable hæmorrhage.	Intermittent hæmorrhage continued till September 25, wound healed on October 19. Some cystitis continued, causing increased frequency of micturition when he left the hospital on November 2.	Mr. Robson says that the condition continued to improve after he went home, that he has not required a catheter, but that he still suffers slightly from vesical catarrh.
15	Mr. McGill	W. B., æt. 64	Symptoms fourteen years; for last three years urgency of symptoms much increased; micturition seven or eight times during night. Complete retention relieved by catheter one year ago. No other treatment.	Admitted October 15, with retention and several false passages. Catheter passed with much difficulty, urine fœtid. Retention continuing, the catheter was passed several times daily; no improvement, the general condition continuing very bad, dry tongue high temperature, etc. Emphysema and bronchitis, with much cough and expectoration.	1888, October 22.—Three portions of prostate removed, each the size of a bean, from lateral and middle lobes. Hæmorrhage considerable.	Died next day.	Death. At the *post-mortem* the kidneys were healthy. The bladder much hypertrophied, contained 2 or 3 ozs. of blood clot.
16	,,	T. B., æt. 62	Symptoms four years. Autocatheterism fifteen months. For last three weeks extreme vesical irritability necessitating frequent introduction of catheter.	Hale, healthy man—9 oz. residual urine, sp. gr. 1020, acid, no albumen. Enlarged prostate felt through rectum.	1888, Nov. 13.—Enlarged middle lobe removed with scissors; size of filbert.	Bleeding from the bladder for four days, clots removed by irrigation. Urine per urethram on the 14th day. Wound healed and natural micturition on December 22.	Dr. Roberts, Keighley, writes that he was attending T. B. for a small, painful abscess in the seat of the wound, which formed in May, 1889, and which is now almost healed. The urinary symptoms are entirely relieved.

TABLE OF SUPRAPUBIC PROSTATECTOMIES PERFORMED IN THE LEEDS GENERAL INFIRMARY TO JULY, 1889.—*(Continued.)*

No.	Surgeon.	Name & Age	Previous History.	Present Condition.	Date and Nature of Operation.	Subsequent History.	Final Result.
17	Mr. Teale	J. S., æt. 54	Symptoms four years; passed blood three months ago; complete retention four days ago, which has persisted.	Admitted Nov. 22. General condition fairly good. Requires catheterism. The urine is intimately mixed with blood. General and local condition rapidly deteriorating.	1888, Nov. 22.—Two pieces of prostate, each the size of filbert, removed from lateral lobes by scissors and forceps. Considerable hæmorrhage.	Hæmorrhage continued till death, 18 hours after operation.	
18	Mr. McGill	J. H., æt. 73	Symptoms ten years; worse for last nine months, during which time he has urinated every hour, day and night, and has had complete retention relieved by a catheter several times.	Admitted Dec. 8 with retention. The urine is so thick and bloody that it will hardly pass through the catheter. No stone detected with the catheter. General condition very bad.	1888, Dec. 17.—Patient obviously dying if left alone. Bladder opened, two stones weighing 115 and 80 grains removed. Portion of prostate weighing 2 oz. 40 grs., which surrounded the urethra laterally and below was enucleated in one piece. Hæmorrhage trifling.	Died thirty hours after operation.	At the *post-mortem* examination, the left kidney was normal; in the right kidney there were many spots of commencing suppurative nephritis. The bladder walls were much thickened (specimen shown). There was considerable ecchymosis and abrasion of the mucous membrane of the rectum.
19	Mr. Jessop	J. R., æt. 73	Symptoms for seven years; worse for three years; often micturating two or three times in an hour.	Is passing urine five and six times in the hour day and night. Stone felt in bladder. No enlargement of prostate discovered on rectal examination. Urine, acid, sp. gr. 1013; pus and a little albumen.	1888, December 17.—Uric acid stone the size of a walnut removed. The middle lobe which projected over the urethral orifice about the size of a nut was removed with forceps. The bladder was coated with phosphates.	The wound suppurated freely and became coated with phosphates. It was healed on March 2, when urine was passed naturally, though there was considerable vesical irritability.	No improvement since the operation.
20	,,	E. H., æt. 68	Symptoms six years; much worse for last year. Cannot hold his urine more than one hour and a half.	Catheter passed with difficulty and causes much pain. Under catheter treatment and getting rapidly weaker. Urine sp. gr. 1016, acid, a little albumen.	1888, December 26.—Middle lobe first removed with forceps, and the lateral lobes were enucleated with the finger.	Passed urine by urethra on 9th day. On January 26th wound healed and natural micturition.	Has continued quite well since the operation.
21	Mr. Atkinson	J. V., æt. 68	Has lately micturated twenty or thirty times during the night, and oftener during the day.	Admitted with complete retention; four pints of urine drawn off.	1889, Jan. 10.—Enlarged prostate removed with scissors.	Urine all passed by urethra on 19th day. On February 1, discharged, passing urine naturally.	Much relieved since operation; passes urine eight or nine times in 24 hours. There has been some inflammation round the wound, and at present there is a very small sinus leading down to the bladder.
22	Mr. McGill	S. K., æt. 75	Ordinary prostatic symptoms for five years; incontinence of urine for some months.	Admitted June 24 with retention. Is a very feeble old man. Catheter passed with difficulty. Urine contains a trace of albumen.	1889, June 26.—Two enlarged lateral lobes removed by enucleation. Each portion the size of a small walnut. Three sutures were inserted, fastening the bladder wall laterally and below to the abdominal wall.	Got up for two hours on the fourth day. Is progressing favourably.	
23	M. Atkinson	— æt. 70	Five years ago eleven stones removed by Mr. Atkinson from the bladder by lateral lithotomy. For last year a recurrence of symptoms of stone and frequent nocturnal micturition.	General condition good. Calculus felt with sound. Urine, acid, sp. gr. 1015; a little pus and a trace of albumen.	1889, July 4.—Two uric acid calculi, weighing 12 drachms each, and two pieces of prostate weighing 2 drachms removed. The prostatic enlargement was collar-like in shape and position.	Passed urine per urethram on ninth day. Doing well.	
24	,,	J. C., æt. 55	Lithotrity performed in October, 1888. Cystitis supervened, and the bladder was opened through the perineum. In April, 1889, readmitted with alkaline, offensive urine, and on April 11th suprapubic lithotomy (five stones) was performed. A small portion of prostrate was removed at the same time.	He micturates fifteen times nightly. The urine strongly alkaline and loaded with pus and phosphates.	1889, July 11.—The bladder opened and a collar enlargement of the prostate removed entire.	Is progressing favourably.	

* Read before the Clinical Society, November, 1889. † Published in the *Lancet*, June 16, 1888. ‡ Read at the Annual Meeting of the British Medical Association, at Glasgow, 1888.

We would none of us think, under these circumstances, of advising a patient to submit to a radical operation.

IV. *That when the Catheter Treatment Fails, or is Unavailable, more Radical Measures are necessary.*—I am unable to prove the assertion, but my belief is that a large proportion of the cases treated by the catheter sooner or later break down—in other words, that eventually the prostatic enlargement is the cause of death. The breakdown may come soon, or it may come late, but in many cases it ultimately supervenes. The urine becomes thick and ammoniacal, the desire to micturate is continuous, the passage of a catheter relieves but for a few minutes, the suffering and discomfort is constant—day and night—life becomes a burden, and death a happy release. The greatest care cannot prevent this result, and the grossest carelessness does not always induce it. I have seen a patient who daily for years passed a gum-elastic catheter, which he carried in his hat, and which he never washed; the urine was acid, and he was in robust health. I have also seen many in the last stage of prostatic cystitis who had previously taken every care. Not only does catheter treatment fail, but it is not infrequently—especially in hospital patients—unavailable. The patient has suffered from frequency of micturition and general discomfort for some years; he has probably consumed large quantities of herbs to cure a supposed attack of "the gravel," and has not sought surgical assistance till from some cause or other complete retention has occurred. The surgeon passes a catheter with difficulty, there is much hæmorrhage, the bladder is full of blood, and the patient's life is in jeopardy. If he gets over the acute attack, it is found that he cannot learn to catheterise himself. The constant attendance of a surgeon is impossible, and the catheter treatment cannot consequently be tried. Even in cases where there is apparently no difficulty, it is sometimes impossible to teach a patient to pass a catheter for himself. In these various cases—cases of frequent occurrence—it is plain that a radical operation is required. It is, indeed, absolutely necessary.

V. *That this Treatment, to be effectual, should (1) for a time thoroughly Drain the Bladder, and (2) permanently Remove the Cause of the Obstruction.*—It is now some ten or twelve years since perineal drainage was introduced for the relief of cystitis in patients suffering from prostatic breakdown. The relief obtained in this way has been most marked, and the practice is well recognised and established. As soon as efficient drainage is effected the bladder ceases to be a receptacle, urine sweet from the kidneys flows through it, putrefactive changes are prevented, and acute symptoms cease. The relief is, however, only temporary. Either the patient must submit to the discomfort of permanently wearing a urinal, or the artificial fistula must be allowed to close, with the probable result of a recurrence of the symptoms. It is necessary, if we desire permanent relief, that our measures should be more radical. We have seen that the cause of the mischief is the intravesical prostatic outgrowth, and this outgrowth must consequently be removed. This can only be done by leaving a raw surface in the prostatic region of the bladder, and as mischief would undoubtedly result from stagnant urine accumulating in this position, another and not less important reason for efficient drainage presents itself.

VI. *That these two Indications are best fulfilled by a Suprapubic rather than by a Urethral or Perineal Operation.*—There are three ways in which it is possible to perform a radical operation for the removal of prostatic obstruction—the urethral, the perineal, and the suprapubic. Of these the urethral appears to be in every way unsatisfactory. It is founded on faulty anatomy; it is supposed that the cause of the retention of urine is a bar at the neck of the bladder, and that the division of this bar will effect relief. The table shows that out of twenty-four cases only five presented anything resembling a bar, and it is doubtful whether in any case either Mercier's or Bottini's operation could have been practised with a successful result. There are few, if any, cases recorded in which the operation has proved satisfactory; it fulfils neither of the indications which I have stated above to be necessary, and it is, in my opinion, unworthy of further trial.

We must next compare the perineal with the suprapubic operation. I prefer the latter for the following reasons:—

1. It is more generally applicable. Dr. Watson, of Boston, United States, whose valuable monograph on the subject I have had the advantage of reading, has expressed his opinion that the perineal route is to be preferred. He believes it to be clinically safer, and his extensive *post-mortem* researches make him believe that two-thirds of all cases "could be successfully reached and incised, or partially or wholly removed by anyone possessing an index finger which has a working length of three inches or more." Taking his own figures, it is unwise to commence an operation with the probability of failing in 30 per cent. of the cases. In the other cases mere incision and partial removal of the intravesical growth will, in my opinion, as a general rule, give a very unsatisfactory result. It is, moreover, not advisable to limit the ability to perform an operation to gentlemen with preternaturally long fingers. That the operation is sometimes practicable is shown by a case published by Mr. Reginald Harrison; that it is not usually applicable is shown by my own cases. In only three of the twelve cases on which I have operated, namely, cases Nos. 2, 8, and 12—would it have been possible satisfactorily to remove the projecting portions of the prostate by the perineal route.

2. It can be performed with greater precision, and completed with greater certainty. It is, I believe, impossible to diagnose the nature of the intravesical growth till the finger is in the bladder; we may suspect an enlarged middle lobe, but we cannot be sure that it exists alone. In no way can a bladder be explored with the same completeness as through a suprapubic wound. All projecting portions can be felt with ease, but often are removed with difficulty, a difficulty that has made me certain that attempts at removal through the perineum must often of necessity fail.

3. It ensures complete and most efficient drainage. It may possibly be argued by some that the position of the suprapubic wound will prevent drainage, and that the urine will naturally escape more readily through a dependent perineal wound than through one above the pubes. Experience shows that this is not so. Drainage takes place more easily through the soft abdominal than through the hard perineal tissues. This was shown in a case already published. In a patient with fractured pelvis and ruptured urethra, I opened the bladder above the pubes, and also cut into the infiltrated tissues in the perineum. A tube was passed through the bladder from above and brought out below. On its removal all the urine escaped above, and continued to do so as long as the wound remained unhealed.

4. It is equally safe. While making this assertion it is right to draw attention to the fact that it is merely an opinion and does not rest on a statistical foundation; there being no statistics available for the purpose. If however we examine our table, we shall find that the mortality of the suprapubic operation has been lower than might reasonably be expected. All the patients were old men, with three exceptions above 60, while seven were upwards of 70. Almost all were in a bad state of general health, and many were obviously within a few days or weeks of death, unless speedily relieved. Of my own cases, Nos. 2, 3, 7, 9, 12, 15, 18, and 22, would, I believe, undoubtedly if left alone have died in a short time. Among the twenty-four cases there have been four deaths (16.6 per cent). Of these deaths one, No. 18, was due to shock; two, Nos. 15 and 17, to shock and hæmorrhage; and one, No. 8, to retropubic suppuration. This last case is the only one in which the fatal result can be fairly attributed to the suprapubic incision. The presence or absence of a stone in the bladder, as well as the enlarged prostate, does not—as far as these statistics go—influence mortality. There were among the lithotomy cases one death in seven, and among the pure prostatectomies three deaths in seventeen.

It is unnecessary to describe fully the operation of suprapubic prostatectomy, but a few special points about its *technique*, founded on an experience of thirty-seven suprapubic cystotomies of various kinds, may not be out of place.

1. The quantity of water injected into the rectal bag, especially in cases where the prostate is abnormally hard, should be smaller than is usually recommended. In Case 12 there was profuse rectal hæmorrhage, only stopped with considerable difficulty. In Case 18, there was considerable ecchymosis and abrasion of the mucous membrane of the rectum, and in another case of lithotomy hæmorrhage occurred. Each case must be decided on its merits, but six or ten ounces is usually sufficient.

2. The bladder should be irrigated till the antiseptic solution used is perfctly clear. The quantity left in the bladder varies much, from ten to twenty or more ounces. The hand placed on the hypogastrium will show when the distension is sufficient.

3. In cases where the bladder is contracted with thick non-distensible walls, it will usually be inadvisable to perform this operation.

4. It is better to leave a catheter in the bladder till its cavity is opened, as it is a guide that expedites the operation. Care must be taken not to hook the peritoneal fold (superior false ligament) into the wound with the point of the instrument.

5. The linea alba is best divided by incising it immediately above the symphysis, and then dividing upwards on a director.

6. Care must be taken to secure the bladder before proceeding to remove the prostate. This is best done by inserting two sutures through each lip of the wound, and fastening it securely to the deeper part of the abdominal wall. When the operation is completed, a third suture passed through the lower angle of the wound is an additional security against urinary extravasation into the retropubic space.

7. The prostate should be removed as far as possible by enucleation with the finger, and not by cutting. The mucous membrane over the projecting portion having been snipped through, the rest of the operation is completed with finger and forceps. In this way excessive hæmorrhage is prevented. A pedunculated middle lobe can, however, be removed by cutting through its base. Hæmorrhage is best arrested by irrigation with water so hot as to make it unpleasant for the hand.

8. A large tube should be inserted into the bladder, and the wound united above the tube by a deep and superficial row of sutures. The tube is to be removed in forty-eight hours.

9. The after-treatment consists in keeping the parts clean, and washing the bladder and the wound, in exceptional cases, with a boracic solution.

Final Results.—In ascertaining the final results in the patients operated on, it is right to exclude all the cases of lithotomy, as it might fairly be urged that any success that ensued was due to the removal of calculi, and not to removal of prostate. Our numbers are consequently considerably reduced. From the twenty-four cases tabulated we must deduct seven cases of lithotomy; four deaths, three directly due to the operation, and one (Case v) to pneumonia when the patient was convalescent; two cases who are still under treatment; and one who cannot be traced. This makes a total of fourteen cases, leaving ten for whom we must account. Of these ten, eight have continued well, only one of them (No. 2) having required the passage of a catheter, and that only after excessive drinking. In one case (No. 12) the operation was, owing to the extreme hardness of the prostate, most unsatisfactorily completed; suprapubic drainage was accordingly adopted, but with little, if any, relief. In another case (No. 9) death occurred ten months after operation. He was relieved for a time, and then apparently relapsed. He was a patient whose general condition was extremely bad; after returning home his surroundings were of the worst possible description, and he became insane. I particularly draw attention to Cases 3, 4, 7, 16, 20, and, 21, in all of whom the prostatic retention was of long standing, and in all of whom the bladder has, since the operation, been able to expel its contents. Sir Henry Thompson, who apparently has not performed—and, at any rate, has not published a case of—suprapubic prostatectomy, says, in his last edition of his *Diseases of the Urinary Organs;* "When it has been necessary to practise habitual catheterism for retention from enlarged prostate for two or more years, the coats of the bladder lose their power, and are incapable, I believe, of regaining it in any case after that lapse of time, and would fail to expel their contents, even supposing the obstruction to be entirely removed. There is good ground for concluding that no operation would restore a *status quo* on account of our inability to restore the expelling function of a bladder which has long ceased to exercise it. It has been recently proposed to open the bladder above the pubes for the purpose of removing salient portions of the prostate in some cases, and what I have just said in reference to advanced cases holds equally good in relation to this procedure. No benefit can result to such." In all the cases enumerated above marked prostatic symptoms had existed for years, and in one case (No. 7) self-catheterism had been practised several times daily for seven years. About this last case Dr. Buck writes: "He has never used a catheter since the operation (twenty months ago); he can empty his bladder perfectly, has no pain, and can sleep all night."[1] If the dictum quoted above were true, it would effectually stop all attempts at a radical cure of prostatic hypertrophy; it is, therefore, satisfactory to be able to demonstrate that it is a fallacy founded on a false hypothesis.

There are two other points which I wish to mention. It is usually stated that prostatic hypertrophy does not occur before the age of 54. The table disproves this statement. In two cases (Nos. 1 and 17) the operation was done at the ages of 53 and 54 respectively, and in the last case, where no source of fallacy existed, the enlargement must have existed at or before the age of 50.

One patient (Case 8) died of suppuration in the retropubic space, the so-called cavum Retzii. He lived for nearly a month, and for the whole time was troubled with constant distressing hiccough. I have seen two other cases with suppuration in the same position following suprapubic cystotomy in which this symptom was present. I cannot explain the symptom, but think it probable that the suppuration and the symptom stand to one another in the relation of cause and effect. In a recent case, after the removal of a large villous growth, persistent hiccough supervened. I passed my finger into the wound behind the symphysis pubis, and found a large cavity coated with phosphates and full of stinking pus. Free irrigation with a very dilute solution of nitric acid soon cleaned the cavity, and as soon as this was done the hiccough stopped and the patient recovered.

Before I conclude, it is right that I should state that Dr. Belfield, of Chicago, is, so far as I know, the surgeon who first performed the operation which I have been discussing. He successfully removed a middle lobe of the prostate by the suprapubic method in October, 1886. It was only when looking up material for this paper that I learnt the fact, or I should have given him credit for it in my former papers on the subject.

My cordial thanks are due to my colleagues on the staff of the Leeds Infirmary for placing their cases and their specimens at my disposal, and to Mr. Littlewood, our resident surgical officer, for his assistance in preparing the table with which I have illustrated my remarks.

[1] Since this was written I have examined case No. 3, and find he has no residual urine. His prostate symptoms had existed for at least six years.

II.—EDWARD ATKINSON, M.R.C.S.,

Surgeon to the Leeds General Infirmary.

IN his former papers on the subject Mr. McGill made known to us the steps by which he was led to practise suprapubic prostatectomy, the way in which he performed the operation, the kind of cases he selected for this treatment, and the grounds upon which he justified it.

To-day, in the full if not exhaustive, and admirably concise, paper to which we have just listened, he has done more. By a well-arranged argument, accentuated by six definite propositions, supported by a conspicuously honest table of twenty-four cases, he has been able to show that the experience of the Leeds Infirmary fully bears out what he has claimed for his proceeding; and has, I venture to believe, gone a long way towards establishing its position as one worthy of a place among recognised operations. Since it fell to my lot to be the first to follow Mr. McGill's lead in performing this operation, and having now done so in five cases, I may perhaps claim your attention to a few remarks upon my own experience.

In my first case (No. 4 in the table) I had the advantage of my colleague Mr. McGill's assistance. It was one of those cases in which considerable enlargement of the prostate could be felt on rectal examination, especially on the right side; but there was also complete retention, and the difficulty of introducing a prostatic silver catheter, together with the constant hæmorrhage (intravesical) which followed the use of the instrument, pointed to their being some growth just within the vesical orifice. Microscopical research for evidence of cancer in the urine was negative. On opening the bladder above the pubes a large growth was found, of firm consistence and smooth surface, broadly attached, and chiefly on the right side. The catheter, which was left in until the finger had entered the bladder, was found to have been forced through the substance of the tumour. I soon found the mass was too sessile to be removed by scissors, but, having snipped through the capsule, I was enabled, though with much difficulty, to enucleate it piecemeal in seven portions with the finger-point. There was free hæmorrhage and much laceration of the mucous membrane. But, having got it away, I could feel that the urethral orifice was clear. This case had a rather long convalescence, but the patient, after a severe intercurrent attack of bronchitis, did well; and on Wednesday last he came here to show himself after twenty-two months had elapsed since the operation, perfectly well, and having complete control over his bladder. He is 68 years old, and now says he is better and happier than he has been for the last five or six years.

In my second case (No. 5 in the table) both lateral lobes of the prostate were greatly enlarged internally; a pedicled valve-like

piece projected over the urethral orifice. This I removed with scissors. But, as in the first case, I found the lateral masses could only be dealt with by enucleation, and they turned out like adenomata. This patient, who was 71, made a good recovery from the operation, and was exhibited to our local society, but unfortunately, a week later, he took cold, and developed pneumonia, of which he died. He had quite recovered his power of micturition, and at the *post-mortem* examination of the bladder there was, in the words of our pathologist, "nothing to suggest that any breach of surface had been made."

My last case, operated upon just six weeks ago, was remarkable for its presenting an example of a collar enlargement completely encircling the urethral orifice; this also was removed by enucleation, and could not be got at by any other method.

Out of the five cases upon which I have done this operation, four were in evidence on Wednesday among our series of cases exhibited to this meeting, the only missing one being No. 2, whom I just now accounted for.

They were all able to tell you that they (1) could not only retain, but also expel their urine; (2) that the number of times they required now to relieve themselves in twenty-four hours varied from six to ten instead of twenty to forty; (3) that their lives are now not only tolerable, but comfortable.

On looking back at my experience of the miserable termination of cases of prostatic retention during the last thirty years, and the frequency in long-neglected cases with which the point of time at which constant catheterism became necessary was the beginning of the end, I feel that had I known then what I know now, I might have saved not a few lives, and at least rendered more comfortable their remaining years.

III.—REGINALD HARRISON, F.R.C.S.,

Surgeon to the Liverpool Royal Infirmary.

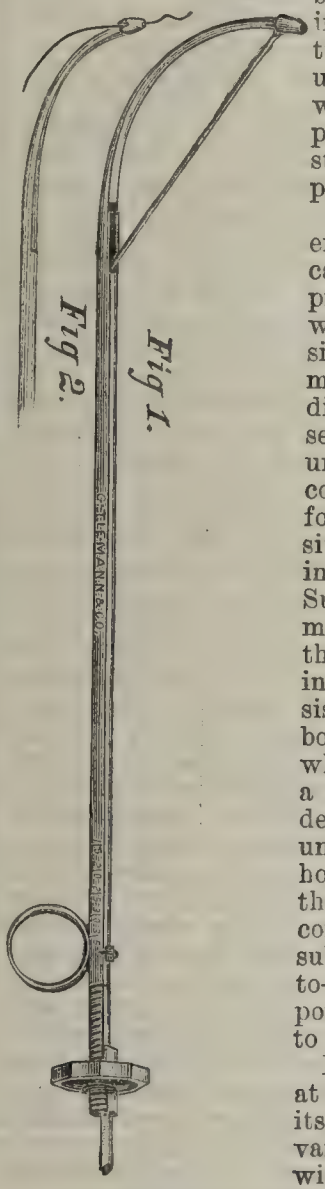
I WOULD, in the first place, avail myself of the opportunity of congratulating Mr. McGill on the admirable paper he has favoured us with. It appears to me that the suprapubic operation of partial prostatectomy will occupy a permanent place in the operative surgery of this organ, and thus another Leeds operation will be added to the recognised surgical procedures in connection with diseases of the urinary tract, and I venture to make this prediction because it seems to me Mr. McGill's operation is based upon a due appreciation of the circumstances attending that particular condition of the enlarged prostate to which it is more especially, if not solely, applicable. I refer to those instances where not only does the enlarged prostate continuously and progressively obstruct micturition, but where, in addition, by its outgrowths, it encroaches upon the interior of the bladder, and creates an irritation often much in excess of what is caused by the presence either of a stone or a tumour. This is a condition which up to recent years surgery has done but little to permanently alleviate, and offers a limited field for such a proceeding as that which Mr. McGill has demonstrated to us to-day.

It appears to me, from some attention paid to this subject, that between the failure of auto-catheterism to afford adequate relief to persons suffering from prostatic retention and a resort to suprapubic or perineal prostatectomy, there are other methods of mechanical treatment to which prominence should be given in a discussion of this kind as tending to promote urine drainage and the removal of the obstruction.

As directly bearing upon this subject, I should like to point to the necessity for the early treatment of prostatic retention. By this I mean the due recognition and correction of the first symptoms, indicating that by reason of an enlargement of the prostate, the bladder is commencing to fail in expelling its contents. It is now some years since I drew attention to the subject,[2] and advocated the use of bougies as prostatic dilators at a far earlier period in the history of chronic retention than had hitherto been adopted. For this purpose I employed in some instances a particular form of prostatic dilator by means of which dilatation could be efficiently and easily carried out. Abundant testimony has been afforded that the practice I then advocated has been the means of preventing many bladders becoming hopelessly atonic by reason of prostatic hypertrophy.

[2] *The Prevention of Stricture and of Prostatic Obstruction.* London: Churchill. 1881.

In the course, however, of my practice in cases of this kind instances have not infrequently occurred where dilatation by the simple means I have just advocated proved insufficient, and it became necessary to adopt other means for securing the same end. A very cursory examination of the earliest forms of prostatic enlargement shows considerable variations in the precise mode by which the bladder is prevented emptying itself. Hence it sometimes happens that other contrivances are required to bring about the complete and spontaneous emptying of the bladder when the prostate is large and obstructing. The first instrument I will show you is a new dilator, which has been made for me by Messrs. Tiemann, of New York. I am not quite sure who is really responsible for the production of this instrument. I almost think it is the result of suggestions emanating from Mr. Stohlman and others, whilst we were, a few months ago, discussing some new surgical productions in Messrs. Tiemann's establishment in New York. At all events, I have found it well adapted for some of those cases where the complete emptying of the bladder is impeded by a hypertrophy which consists almost entirely of an elevation and projection towards the bladder cavity of the floor of the prostatic urethra. This condition not only impedes the escape of urine from the bladder, but often proves a serious obstacle to the entrance of the catheter when this becomes a necessity. It is in cases of this kind that the prostatic dilator I am showing you is of much service. By means of a screw at the handle direct gradual pressure can be exercised on any part of the prostatic circumference that may be required. The instrument is enclosed in a soft rubber hood, which protects the tissues from any damage. I have now used it on several occasions where there was residual urine when I desired to apply pressure on some part of the enlarged prostate with great and I believe also with permanent benefit.



The next instrument I have to show you effects something more than dilatation. In cases of chronic retention of urine with prostatic enlargement, where dilatation was found to be insufficient, I have occasionally employed Mercier's method, as modified by Gouley, of New York, of dividing the prostatic bar, or whatever seemed to obstruct within the prostatic urethra. It occurred to me that a more convenient instrument might be devised for this purpose, though in many respects similar to Watson's urethrotome for the internal division of urethral strictures. Such an instrument has been made for me by Messrs. Krohne and Sesemann, and, though I have only yet used it in one instance, it answered admirably. It consists of an angular metallic prostatic bougie containing a concealed knife, which is capable of being protruded by a screw movement at the handle, the degree of protrusion being completely under command and recognition. I shall hope to refer on some future occasion to the use of this instrument and the details connected with its application; but as the subject to which it relates was before us to-day, I thought I would take the opportunity of making this brief reference to it.

I hope I may be pardoned for looking at the subject of prostatic retention from its earlier rather than from its more advanced form. I feel, however, that I am within the limits of the proposed discussion, inasmuch as I have endeavoured to show the importance of securing (1) the thorough drainage of the bladder and the prevention of atony, and (2) the removal of the obstruction caused by the enlarging prostate. I have laid stress on these points, feeling that the sooner we recognise and treat on rational principles the earlier forms of prostatic obstruction the less shall we see of those varieties of the disorder to which our attention to-day has been more immediately directed.

IV.—T. R. JESSOP, F.R.C.S.,
Surgeon to the Leeds Infirmary.

MR. JESSOP congratulated Mr. McGill upon having contributed a most valuable paper. It was fitting that so important a communication should come as a climax to the work in the Surgical Section. He could endorse from his own experience and from the practice of his colleagues all that Mr. McGill had said in favour of his operation. It was a distinct and unequivocal advance, for by its means the surgeon was enabled not only to afford relief, but, in many instances, to effect a cure in a class of cases which had hitherto, at the best, admitted only of temporary and partial amelioration. In cases of prostatic retention where regular catheterism could be practised by the patient himself, or by an attendant without difficulty or hæmorrhage or inflammatory consequences, there was no need for operative interference of any kind; but when inordinate impediment to the introduction of a catheter was met with, when the patient, after frequent trial, continued to exhibit a hypersensitiveness of urethra or hæmorrhagic tendency, or again, when, in spite of antiseptic washings and other preventives, cystitis could not be averted, suprapubic prostatectomy would, he believed, be found to offer a means of escape from impending death superior to any other with which he was acquainted.

V.—W. BRUCE CLARKE, F.R.C.S.,
Assistant-Surgeon, St. Bartholomew's Hospital.

MR. BRUCE CLARKE began his remarks by stating that it was generally assumed the diagnosis of this condition was an extremely easy one. Undoubtedly it was so in the majority of instances, but by no means always, and he ventured to think it was rarely, if ever, possible to ascertain the extent of the enlargement until the interior of the bladder had been examined, either with the finger or with the eye. An examination by the rectum might reveal an enlargement of the prostate, but was no evidence of prostatic obstruction and no indication of its extent. He felt that it was most necessary to be clear on this point, before one considered the question of treatment at all. One of the causes in great prostatic suffering was the fact that any operative interference was almost invariably delayed until it was too late and it was indeed, only to be expected, considering it was only quite recently that Mr. McGill had shown that it was possible to remove by the suprapubic operation a portion of prostatic tissue, and enable a patient to regain the natural power of urination. He had followed most closely the work of Mr. McGill upon the subject, but for himself he felt that his great difficulty was in knowing when the operation should be performed. The rule of his practice had been somewhat as follows. First, to relieve prostatic trouble by daily use of the catheter, and when great irritability of the bladder supervened upon this, if it could not be subdued by any other means, to place the patient in bed, introduce a staff into the bladder and make a small incision in the perineum, with the view of examining with the finger what the actual condition of the prostate was. If the slightest difficulty was experienced in introducing the finger through the prostatic urethra, he thought it was far better slightly to incise the prostate in the middle line, which usually permitted readily the introduction of the finger, and enabled the surgeon to ascertain exactly the condition with which he had to deal. If this were not done and the finger were forced through into the bladder, the prostate was almost certain to be torn, and far more damage would be done to the patient than by a slight incision on the floor of the prostatic urethra. If the prostate was not very much enlarged, the retention of a tube in the bladder for ten days or a fortnight, with or without the aid of an incision, was often quite sufficient to restore to the patient for some time the power of urinating naturally, and at the same time it was quite possible for a pedunculated portion of the prostate to be removed through the perineal opening. Where, however, he found that the prostate was considerably enlarged and its base much thickened, he always advised that the suprapubic operation should be at once performed.

He had operated in all on eleven cases suffering from prostatic obstruction, in all of which success had been complete, with the exception of two, both of whom were practically moribund before they sought advice; but in only two cases had he found it necessary to remove a portion of prostatic tissue by the suprapubic operation.

One of the most lively recollections which he should retain of the Leeds meeting was the fact that he had seen some half-a-dozen men at the Leeds Infirmary, seated with their prostates in bottles on their knees, instead of in the interior of their bladders.

VI.—J. WARD COUSINS, M.D.,
Senior Surgeon, Royal Portsmouth Hospital.

DR. WARD COUSINS said he had operated twice for tumours of the bladder by the suprapubic method. Both patients were very old men with severe prostatic symptoms and very large calculi. Unfortunately both cases terminated from exhaustion in a few weeks, and after death the necks of the bladders were both found to be the seat of cancer. Enucleation of the projecting masses had been practised. No extravasation of the urine occurred in either case. He had often done median cystotomy for enlarged prostate with very great relief. One old man of 80 years was still passing his urine through his perineum. Drainage in this way was often felt to be of very little inconvenience by the patient. He referred to a case of a young man, aged 34, who had been under two perineal operations by other surgeons for severe urethral stricture and fistulæ. External urethrotomy had been performed to relieve cystitis and chronic retention. Vomiting and fever followed the operation, and the man refused any further assistance. He was still comfortably discharging his urine through the perineal wound, and for this purpose he used a short tube. In prostatic trouble the cause of chronic retention was not mechanical obstruction only, but also progressive atony of the organ. In cases of chronic retention, in which catheterism was impossible from pain and difficulty, operation must be resorted to, and Mr. McGill's method would be very generally practised in the future as the best procedure. But he believed that the timely use of the catheter would, in many cases, remove the necessity for surgical interference altogether and ward off the advanced stages of the disease. Catheter treatment protected against chronic cystitis and decomposition of the urine, and many labouring under these dangerous conditions would have been, by early assistance, saved from the knife. He thought catheter treatment was often too long deferred. When should it be commenced? As soon as chronic retention was evident. Patients ought to be taught how to pass an instrument; what catheter to use; how often to use it; and how to keep it clean. The catheter must be smooth and soft, and the urethra should be well distended with oil. The use of the instrument must depend always upon the amount of chronic retention and the condition of the urine. If the quantity was under two or three ounces, it could be employed night and morning. If more than three ounces it must be used four times daily. Acute retention was always a sequel of the chronic form. Catheter treatment ought always to be commenced before the commencement of cystitis, otherwise catheter fever was sure to follow the operation. In cases of this class gentle irrigation of the bladder was often serviceable with two or or three ounces of warm lotion. If the catheter caused pain he recommended the use of warm oil and cocaine, and in this way he had overcome great difficulties, even in cases in which operation before appeared necesssary.

VII.—JORDAN LLOYD, F.R.C.S.,
Surgeon to the Queen's Hospital, Birmingham.

MR. JORDAN LLOYD referred to three cases in which he had successfully performed this operation: the first in a man 66 years of age, who had suffered from prostatic symptoms for several years. The tumour was the size of a pigeon's egg, and situated to the left. His symptoms were quite relieved. The second, aged 65 was done during an attack of acute retention which had lasted thirty hours. Catheterisation had been tried ineffectually, and large false passage made. The bladder was contracted, and did not rise above the pubes. A growth the size of a Tangerine orange was removed, and the patient made a good recovery. Hiccough set in on the fourth day and nearly proved fatal. The third case, aged 70, was associated with calculus. The growth consisted of a lobular swelling of the size of the end of the thumb, and also of collar enlargement. The swelling was removed, and the collar cut through freely. Relief to all symptoms followed, but five months afterwards an opening still remained. Mr. Lloyd expressed his general approval of the operation, and should feel encouraged, after seeing Mr. McGill's specimens, to remove more freely than he had previously done.

VIII.—BENNETT MAY, F.R.C.S.,

Professor of Surgery, Queen's College, Birmingham; Surgeon to Queen's Hospital.

WHEN treatment by catheter breaks down, either by excessive frequency, painfulness, or difficulty, or the development of cystitis in a severe degree, above all, when complicated by phosphatic deposit or calculus, I believe that operation by the suprapubic route is the only way by which we can hope to afford permanent radical relief. I have done the operation four times, and I think I shall best add my mite to this discussion by recording briefly one of the cases, which has extended over the past four years, and which has been the subject of three consecutive operations at my hands.

In 1884, a robust and healthy gentleman, then aged 64 years, began to suffer from symptoms of enlarged prostate, for which he entered on catheter life. In spite of careful treatment, phosphatic cystitis developed, and in about two years he was passing all urine by catheter at hourly intervals. Symptoms of stone supervening, he came under my care. I found on rectal examination a very large prostate; the urine was highly ammoniacal, phosphatic, and offensive; and I detected two or three small calculi in a pouch behind the prostate.

November, 1887.—I proceeded to operate by single-sitting crushing. I do not defend the practice under such circumstances, but there was high authority for it at the time. But as a fragment evaded the lithotrite I completed the operation by median perineal cystotomy, removing the stone and thoroughly irrigating the bladder. I also incised the floor of the prostatic urethra, not so freely, it is true, as has been recently advised by Mr. Reginald Harrison, but enough to admit a large tube into the bladder, with a view to thorough drainage and rest. The tube was retained for two weeks—a period of comfort. By this time the urine had become nearly clear and slightly acid. The wound soon healed, but as it did so he had to resume the catheter. Still, as he could now go three or four hours and it was not very painful, he did not mind it. He had scarcely got about when the same vicious circle recommenced, the urine getting foul and ammoniacal, and catheterism very frequent, so that in eight months I had him in hand again for another stone. On this occasion (June, 1888) I performed the suprapubic operation, intending, after removal of the stone, to retain a tube (suprapubic) for permanent micturition, of which I then entertained great hopes. The vesical prostate formed a complete collar of large dimensions, and it is a matter of regret that I did not then and there remove some of it. Suffice it to say that after the first three or four weeks spent in bed he found wearing a tube an intolerable discomfort; we tried a great variety of tubes, but never got one comfortable. I may say that I have never succeeded in making a patient with any notable enlargement of prostate decently comfortable while wearing the suprapubic tube, having tried it in two other cases; and I have now abandoned this treatment as a failure. He continued to pass urine wholly through this wound, wearing the tube as well as he could, down to but not in the bladder, and washing out most assiduously, but the urine got excessively foul, and it soon became evident that fresh stone would form, and we should have to go through it all again. This did happen, and he came up for operation in March of this year in a most wretched condition.

March, 1889.—On this occasion I had to enlarge the existing sinus downwards and laterally, and was at some disadvantage for room, but managed to get fair access to the interior of the bladder, I removed two stones of the same kind (phosphatic), and found that the intravesical prostate had altered considerably. It was a larger mass, but less of a collar, and had no very salient part for removal. I did the best I could with these scissors, cutting freely, but getting away only a few shreds for some time. But in front of and behind the urethral orifice I made a deep indentation in the collar, by pulling it up with these pile forceps. There was free bleeding, which continued more or less for two days. During the ensuing three weeks, large quantities of sloughing shreds of tissue and phosphatic matter appeared in the urine. As ordinary washing did not remove these, I cleaned the bladder of a large amount by a lithotrity evacuator, after which the urine soon became clear and acid.

He voided urine spontaneously per urethram on the twenty-second day, the first time for upwards of two years; the quantity, at first small, gradually increasing as the wound healed. He returned home in another fortnight, and last week wrote the following report of his present state.

"I am in remarkably good health, and can drive about as well as ever I did, and never have any pain. I pass all my water the right way, except that occasionally a little comes through the wound about once in two or three days. I can go six or seven hours at night, and generally three or four during the day. Lately scarcely any comes through the wound, and it is no inconvenience to me. My water is quite clear and bright, and free from smell."

I have had three other cases. One performed a fortnight ago promises well; this patient, aged 66, passed nearly all his urine spontaneously; there was only a small residuum. The prominent symptom was extreme irritability of bladder, not relieved by catheter. I removed this pedunculated median lobe; there was nothing of a collar. Another was a very feeble old man, aged 73, with symptoms of stone complicating enlarged prostate. I removed this small stone and large peduncular lobe. He died in ten days of exhaustion and heart failure. He was the subject of bronchitis and weak heart, and I operated with great reluctance, fearing he was quite unfit for any severe measure.

I wish to add the following observations and conclusions:—

1. I have not found removal at all an easy matter, owing to the nature of the material to be removed, the want of specially-constructed instruments, and the limitation of the space by the collapsed bladder.

In my experience the tissue has to be cut away nearly to the last shred, and does not readily enucleate or tear.

2. Hæmorrhage (considerable) may be serious in an old or feeble patient, but may be minimised by removing only a portion of the collar, as in my case.

To the propositions advanced by Mr. McGill I, in the main, accord my support.

To Nos. 1 and 2. So far, that it is the intravesical portion which causes the obstruction and retention; further, when retention is complete (permanent) I should infer a collar enlargement; with partial retention but great irritability, a peduncular middle lobe or large intra-vesical mass.

To 3 and 4. Obvious.

To 5. I believe that for drainage the suprapubic is far inferior to perineal cystotomy, but that, unless the obstruction is removed, relief from drainage is only temporary.

To 6. I regard formal removal of any portion of the prostate by perineal route as an impracticable proceeding in most cases. In any notable enlargement it is usually impossible to enter the bladder with the finger. Though large masses have been brought away, this occurs as a lucky accident only.

On the other hand, suprapubic cystotomy is itself an extremely easy and safe proceeding, and permits ready inspection of the prostate. By this route it is possible, in a large majority, to remove the obstruction. But this removal adds appreciably though not greatly to the danger of cystotomy, principally by the loss of blood and extra time occupied. Consequently it should be done before the patient is much exhausted or enfeebled. In such patients drainage by median perineal incision may be the more prudent course.

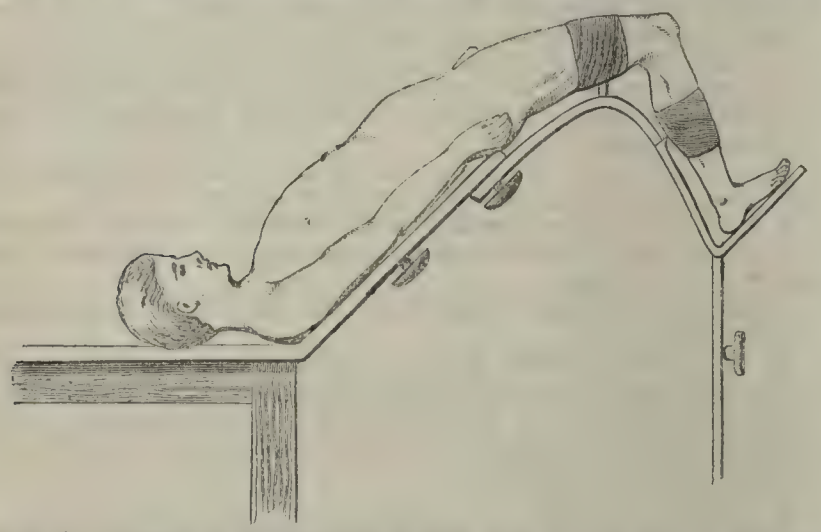
Lastly, good results may be anticipated even in advanced states of bladder disease.

IX.—PROFESSOR TRENDELENBURG, M.D.,

Bonn.

IF you will kindly listen to me a few minutes I will make some short remarks on the most interesting and important paper, for which we all are very much indebted to Mr. McGill. I think it may be of some interest for you to take notice of the method of procedure I adopt in hypogastric section, and which I believe to be advantageous, especially if any further operation in the interior of the bladder is required. The difference in my way of operating from the usual one is in the position of the patient on the operating table. The patient is turned round so that his head is put where his feet used to be. After this he is pulled up by his legs until the nates are situated where the head would be if the patient were in a sitting position, and the legs are held in this position on the shoulders of an attendant, or are fastened to an apparatus applied for the purpose at the upper end of the table. The intestines then by their own weight will fall down towards the diaphragm, and in slender persons a deep groove will be seen in the hypogastric region, produced by the pressure of atmospheric air. As soon as the recti muscles and the deep fascia have been divided by transverse section close to the upper margin of the symphysis, air will rush into the so-called cavum Retzii, the whole space will be opened at once quite freely, and you can easily recognise the

anterior wall of the bladder and the fold of the peritoneum, so you are able to open the bladder quite safely below the fold of the peritoneum. It is quite unnecessary to dilate the rectum by Petersen's bag, and filling the bladder with water is also not of very great importance. I have performed the operation in this way several times, the bladder being quite empty. If it is required to take a tumour out of the bladder, or to do prostatectomy or any other operation in the interior of its cavity, the bladder may be opened in a transverse line, and the edges of the wound of the bladder temporarily fixed to the edges of the wound of the skin by several sutures. Then specula constructed of soft copper are put into the bladder, which have been brought into a convenient shape by pressure of the hand, and the light of the opposite window shining freely into the distended bladder you may inspect without difficulty the whole interior of it. If more light is wanted a reflecting mirror or a small electric lamp attached to the speculum may be of use. I have here a photograph which will show you



how the interior of the bladder is laid open to the eye. It is taken from a body in which I had opened the bladder in the way described. You will easily recognise the point of the catheter projecting from the internal orifice of the urethra, and also the probes passed into both ureters; in fact, it is possible, and even quite convenient, to operate in this way on vesico-vaginal fistula from the interior of the bladder. I did so with good success in a case of vesico-vaginal uterine fistula, lying close to the right ureter. It was hardly possible to get at it in a proper way from the vagina, and it would have been dangerous to tie the ureter, which was easily avoided in operating in the interior of the bladder.

The same position of the patient is useful in all cases of laparotomy when you have to deal with operations in the cavity of the pelvis, as in ovariotomy, hysterectomy for fibroid growths, resection of bowel for intestinal fistula, being the result of incarcerated hernia, and so on. The peritoneal cavity being opened, and the tumour of uterus, for instance, having been taken out, you will have a free sight of the whole pelvic cavity; you will easily recognise the ureters; you will see the iliac and hypogastric arteries pulsating below the peritoneum, and so on. If the patient does not vomit, the bowels will never come out through the wound. In taking out the uterine or any large tumour the described position of the patient will be of use, as it is far easier now to get to the pedicle than used to be the case in the common way of operating.

X.—JOHN HERN, M.D.,
Surgeon, Darlington Hospltal.

DR. HERN spoke of the advisability of draining the bladder by the urethra, and getting, if possible, union of the suprapubic wound by first intention. He had always adopted this method, with excellent results, in suprapubic cystotomy. Hiccough had been noticed by him in two cases of acute retention. Both eventually recovered, and could not be referred to any suppuration behind the symphysis.

XI.—WILLIAM MACEWEN, M.D., F.F.P.S.GLAS.,
Surgeon, Glasgow Royal Infirmary.

DR. MACEWEN said that he had listened with great pleasure to Mr. McGill's paper on prostatic enlargement, and was much interested in suprapubic prostatectomy which had been advanced by Mr. McGill and improved by Mr. Atkinson, of Leeds. No doubt a large number of cases of enlarged prostate could be suitably treated by self catheterisation, but there were others where this treatment failed, and more radical measures were necessary. For such, perineal drainage afforded great relief, though this was often only temporary, and the patient was subject to recurrence unless he submitted to the establishment of a permanent urinary fistula with all its attending discomforts. Perineal prostatectomy had had in his hands fair results, though it left much to be desired. Looking at Mr. McGill's operation from an *a priori* point of view, it promised to be much better, as it attacked and completely removed the pathological cause of the disturbance, thereby producing a radical cure. The patients seen at the demonstration in the Infirmary were proofs of the success of the operation. Judging from his own experience of suprapubic operations for stone and tumours of the bladder, he was convinced that suprapubic prostatectomy was a practical operation, and one which he was inclined to practise. Professor Trendelenberg's posture for suprapubic operations would facilitate the procedure, as in the removal of pelvic tumours he (Dr. Macewen) had experienced the good effects of a somewhat similar posture in withdrawing upwards the abdominal contents and so leaving the pelvis free. Extra care was necessary in administering chloroform while the patient was in this position, especially in the aged.

CLINICAL MEMORANDA.

SUSPENSION FOR LOCOMOTOR ATAXY.

DR. CHURTON has, on the strength of a single case of tabes in which he used suspension, and apparently also on that of a second case in which he did not use it, come to the conclusion that this treatment is useless, and sees no reason why it should be expected to do good. This is surely a somewhat cavalier way of treating such a question. It seems, moreover, hardly accurate to state that the suspension treatment comes from France, as it originated in Russia; while the remarks on the fine genius, etc., of the French, which is said to render them more liable to be improved by suspension than other people, seem to show that Dr. Churton is unacquainted with the results which have been obtained with the same treatment in the United States, Switzerland, Germany, Holland, and Italy.

Everything, however, here as elsewhere, depends upon the mode of doing it. To commence treatment by suspension, as Dr. Churton has done, with five minutes, seems to me highly imprudent and injudicious. I consider this an overdose, even if no immediate discomfort should be experienced by the patient. If Dr. Churton had commenced with a much shorter time and gradually worked up his way to a longer period he might have had a different tale to tell. I soon found, when beginning to practise this treatment, that the best results are obtained with short suspensions frequently repeated. I rarely give more than three-quarters of a minute to begin with, and gradually increase the time to two minutes, after which I allow a short interval of rest, and then give another two minutes. I also consider it bad practice to suspend a patient simply by the occiput and chin, as is frequently done, as this causes far too great a strain on the structures which we intend to act upon; and I therefore take care that the patient is well supported in the armpits. To attend to such and other minutiæ, and to watch the patient carefully during the proceeding and for some little time afterwards, is quite indispensable if one wishes to be successful.

I have hitherto refrained from publishing my experience in this matter, which is now considerable, as I prefer waiting and observing my cases longer than just a few weeks, in order to ascertain their further progress, and to see whether the benefit which has been derived in many of them will be durable. I can, however, cap Dr. Churton's unsuccessful case with one which, although most unpromising at first sight, shows unmistakably how much good may be done with suspension.

This was the case of a gentleman, aged 56, who has been under the joint care of Dr. Thorowgood and myself since November, 1885. He had had no syphilis, but had, two years before I first saw him, been thrown out of a dogcart and pitched on his back, which had given him a great shock, and disabled him from walking for about three months. He then got better, and continued apparently well until the beginning of 1885, when symptoms of locomotor ataxy gradually became developed. At my first examination of him I found Romberg's and Westphal's symptoms, numbness in the feet and legs, with attacks of pain, loss of power

in the bladder and the sexual sphere, impaired walking power, and characteristic gait. In spite of treatment, which was sedulously followed by the patient, who lived in the most favourable circumstances and had the keenest desire to get well, he steadily became worse; and his condition was further deteriorated by an insidious attack of pericarditis, which caused great difficulty in breathing and anasarca. The spinal disease gradually extended further upwards, and the arms and hands became almost as useless as the legs. There was a "woolly" feeling in the fingers, with ataxy of movement, and some degree of muscular atrophy. The dynamometer, which, when I first saw him, showed 90° in the right, and 75° in the left hand, after a time registered only 10° and 6° respectively. The patient was unable to dress himself, more especially to button on his clothes, to write a letter, or to carve a joint. The pain in the legs got worse, and frequently prevented sleep. Intercurrent attacks of English cholera and pulmonary hæmorrhage did not mend matters, and the patient appeared to be fast breaking up when I advised treatment by suspension in the commencement of March last.

The first time I had him suspended for half a minute, the second time for a minute, and the third time for a minute and a half. After the third suspension improvement set in, more especially in walking; and from that time the patient made rapid strides towards recovery. He was suspended by me altogether thirty-three times, and he then felt so well that he could discontinue his visits. The knee-jerk, which had been absent certainly since November, 1885, and possibly longer, reappeared in June last, this being, as far as I am aware, the first, and also as yet the only, case in which such a result has occurred after suspension. The walking power and the use of the hands gradually returned; the dynamometer showed 95° and 70° respectively; and all the other symptoms of tabes gradually vanished. I saw the patient again on September 26th last, when I found him in good working condition, the only symptom which remained being some degree of anasarca.

Of course I am not prepared to say that this patient is permanently cured of the spinal disease, but he has certainly been restored to comparative health and comfort. The case is interesting more especially because the patient had been nearly four years under my observation before treatment by suspension was commenced, and because during that time everything that could possibly be thought of with regard to therapeutic measures had been done and had egregiously failed, while, after a few suspensions, the case at once assumed a different complexion.

It appears to me most unlikely that a remedial measure which can produce such results should ever go out of use, unless, indeed, something better should be discovered.

Harley Street. JULIUS ALTHAUS, M.D.

PATHOLOGICAL MEMORANDA.

FIBROID THICKENING OF THE SPLENIC CAPSULE.

IN the JOURNAL for October 12th a case of this kind is reported, another recently mentioned is referred to; the only other description known to the writer of the memorandum in the JOURNAL being that by Baillie in 1807; and it is stated that "this pathological condition of the spleen is one which, although recognised and described a good many years ago, seems to have quite escaped the observation of later morbid anatomists."

It is only in consequence of this last statement that I write, for I have published a number of cases, reported for other reasons entirely, in which this splenic capsular change is incidentally mentioned; a change hitherto made known to me, not by medical articles, books, or lectures, but by necropsies solely. I must have seen at least a dozen well-marked cases, probably more; besides a number of cases in which the change was comparatively less marked. Cursorily examining some, only, of the necropsies I have put on public record with any fulness, it appears that I have published at least the following examples:

General Paralysis of the Insane, second edition. Case No. 60, p. 432. Spleen, 6¼ ounces; a large cartilaginoid thick patch on the capsule.

Ibid. Case No. 67, p. 451; more fully described in first edition, 1880, p. 233, as: "Spleen, 6¾ ounces; a thick, irregular patch on the anterior and upper surface of the capsule, about 2 inches square, and of fibro-cartilaginous density."

Alienist and Neurologist, January, 1883. Spleen, 10½ ounces; firm, of flesh colour; cartilaginoid local thickening of capsule, with a few old adhesions; splenic capsule elsewhere pigmented, brown and yellow.

Journal of Mental Science, January, 1884, p. 496. Spleen 12¼ ounces, thick, shapeless, boggy; a large cartilaginoid plate of capsular thickening on external surface of spleen.

Ibid. July 1883, p. 228. Spleen, 7¾ ounces; capsular thickening; but in this case complicated with adhesions to surrounding parts, and not of quite the same character as the preceding.

A complete examination of all my necropsies, published, might reveal more examples; and an examination of the records of all necropsies made by me here would bring out all (or most of) the cases, but I have neither the time nor inclination for this. I look upon the condition as neither rare nor very important, although should the organ, with this state of capsule, become the seat of marked fluctuations or changes in size, whether of accommodative or of pathological character, the impairment of the capsular elasticity and extensibility produced by this change might well be prejudicial.

In my first half-dozen cases or more I found this splenic capsule change in soldiers, most of whom, stationed in India or other tropical parts, had been subject, or liable, to malarious influences, and splenic changes or disease, and I attributed it to the pressure of military accoutrements, belts, etc.—especially under the older rigid system of dress and drill—acting in association with, and aggravated by, and in its turn aggravating, the effects of the influences and splenic states just described. A number of those in whom the change was found were syphilitic, but it is at least not usually connected with the ordinary syphilitic splenic gumma, or perisplenitis or capsulitis.

Nevertheless, it occurs in other persons than soldiers, at all events among the insane, I believe; but that my patients were all insane is not a fact that I, as yet, specially conjoin with the splenic capsular change. In all, the firm, whitish, enamel-like patch, chiefly or solely affected the external or convex surface of the spleen, and was, in area, from one inch square to two inches square, or covered the whole external surface; or even thinly invaded the internal also; and was either gradually bevelled off at the edges, or else, as in some cases, shelved very rapidly and steeply to the surrounding ordinary usual capsule surface.

Whether the foundations of it have always been laid during turgescence of the organ, is an unproved point. It is, I think, partly so, although not histologically so, in one sense at least, a splenic corn.

Grove Hall Asylum. W. JULIUS MICKLE, M.D., F.R.C.P.

YOUR correspondent, Mr. Alex. G. R. Foulerton, has called attention to a case in which he discovered "fibroid thickening of the splenic capsule;" and he remarks that this pathological condition seems to have quite escaped the observation of morbid anatomists later than Dr. Matthew Baillie, whose most excellent book on *Morbid Anatomy* was published in 1797, or thereabouts. May I call his attention to the following passage, to be found on page 349 of Dr. Wilks's *Lectures on Pathological Anatomy*, a book published in 1859? "Inflammation of the capsule of the spleen is often seen, by which adhesions have formed between it and the abdominal wall; but this is only one form of the very common peritoneal adhesions. Besides these, the capsule is often found much thickened, or become cartilaginous, as it is said. I have already told you that this condition is really fibrous, and only cartilage-like. It is mostly met with in old people, where the spleen is inclined to be small or atrophied; and it is on the outer side that this thick tough substance is met with." He will find this statement repeated with amplification on page 504 of the new edition of Wilks and Moxon's *Pathological Anatomy*, published in the present year. E. C. PERRY.

St. Thomas's Chambers, S.E.

*** In Dr. MacAlister's edition of *Ziegler's Pathological Anatomy*, vol. ii, art. 321 (1884), Mr. Foulerton will find a more modern reference to fibroid thickening of the capsule of the spleen. In speaking of chronic inflammatory changes in the organ, it is said that "diffused or circumscribed thickenings appear on the capsule, and may take the form of flattened lenticular nodules, or large, dense, cartilaginous patches. Occasionally the entire capsule is transferred into a coarse, scar-like, fibrous mass (Billroth, *Virch. Arch.*, vol. xxiii; Wilks, *Trans. Path. Soc.*, 1864.)"

TOXICOLOGICAL MEMORANDA.

A CASE OF PHOSPHORUS POISONING.

On Wednesday, August 4th, 1889, a servant girl, aged 19, was brought into the workhouse, Devizes, in a semiconscious state, after having been dragged out of the canal, into which she had thrown herself in an attempt to commit suicide by drowning. She recovered consciousness after artificial respiration had been resorted to, but was in a very weak condition. On the following day she was a good deal better, and on Friday there seemed no reason why she should not recover. On Saturday nothing particular was noticed about her except her complaining of slight pain in the epigastrium. On Sunday, the fifth day after having been brought in, I found her with very marked jaundice, and she complained of slight pain in the epigastrium and intense thirst. There had been no vomiting and no diarrhœa. There was no evidence nor history of her having taken any poison. On Sunday night she was worse and in a state of collapse, and on Monday morning she died, after suddenly vomiting a quantity of blood. This occurred on the seventh day after taking phosphorus, as it was afterwards discovered. This sudden vomiting of blood was the first and only time vomiting had occurred during the illness.

On Tuesday a *post-mortem* examination was made, with the following result:—The whole body was marked by jaundice, and the finger-nails very blue. The heart was of a yellowish colour, and the chambers were empty. The aortic valves and internal coat of the aorta were of a dark, uniformly pink colour, which extended halfway down the abdominal aorta. The discoloration was very noticeable, showing how rapidly decomposition takes place in phosphorus poisoning. In the substance of the lungs were small hæmorrhages, as also on the surface of the pleura. The stomach was distended with dark coffee-coloured blood; the lower part of the internal surface was plum-coloured, this discoloration fading off towards the duodenal end, where the colour was normal. The first three feet of the small intestine also presented a deep plum-colour on its inner surface, getting paler below. The œsophageal end of the stomach and the œsophagus were normal. The mucous membrane of the stomach was soft and giving way under the finger. There was no perforation. The liver had hæmorrhagic spots on the surface, and was very pale on section, soft and fatty. The gall-bladder was empty. The kidneys were bile-stained, and there were small clots of blood in the pelves.

There was no reason to suspect her having taken poison during life; this fact was only brought to light by the *post-mortem* examination, and eventually proved by a packet of phosphorus paste three parts empty being found in her box.

This is another of those cases of phosphorus poisoning in which the symptoms do not show themselves till at least a week after taking the poison, and then set in rapidly. She evidently threw herself into the canal when she found the poison was not taking effect.

Percy V. Dodd, M.R.C.S., L.R.C.P.

SURGICAL MEMORANDA.

A CASE OF SEPTICÆMIA.

M. A. D., aged 8 years, a strong and healthy child, cut her thumb with a bread knife on Monday afternoon, August 12th. The cut was of the most trifling and superficial character, and consequently received no attention from the parents, as it did not seem to call for treatment.

The following day she returned from school at noon complaining of headache, feverishness, and *malaise*. I saw her that evening; she was then in bed, delirious, with a temperature of 105° F., her face flushed, and her skin hot; respirations 38, rapid and shallow, pulse 140. The forearm was slightly swollen on the flexor surface, and was marked with the red lines of lymphangitis, which extended all the way up to the axilla; the gland above the internal condyle and those of the axilla were tender and enlarged. Lead lotion was ordered to be constantly applied to the arm, and quinine and aconite prescribed.

The next day (Wednesday) there was no improvement in the symptoms; the child was distinctly weaker; there was occasional vomiting; temperature, pulse, and respirations as before.

On Thursday diarrhœa set in, and the child was steadily getting worse; the tongue was brown and dry, with sordes on the teeth and lips; the heart's action was feeble.

On Friday the prostration was very marked; the child was perfectly apathetic, and there was low muttering delirium and carphology, with signs of pneumonia of the bases.

On Saturday convulsions set in, and death occurred in the afternoon. This was the fifth day of the disease. The cut never healed.

The knife with which the wound was inflicted was a perfectly clean one, and had been used for cutting bread previous to the reception of the injury, and had not been in contact with any meat or other animal substance. But it seems that directly after the little accident the child went with some other children to play, and dabbled her hands in the water of a small open drain at the back of their street. Now this drain was the receptacle of various kinds of refuse; there was some decaying vegetable matter in it, and it also contained the decomposing remains of a couple of cats, so that the water might practically be regarded as a strong solution of putrefying matter. Here then was material in abundance which, given entrance into the lymphatics and absorption, would produce septic infection, and the recent open wound, although insignificant and superficial, was an easy spot for the poison to enter the system.

Every surgeon knows that any wound, however trivial, exposes the recipient to the possible dangers of blood-poisoning, and my sole reason for reporting this case is to illustrate the truth of that statement; at the same time, the history of this particular case is unusual and peculiar.

J. Arnallt Jones, L.R.C.P.Lond., M.R.C.S.Eng., etc.
Aberavon, Glamorgan.

INJURY TO ELBOW, WITH PARALYSIS OF ULNAR NERVE.

A Sepoy was admitted into hospital on May 30th with an injury to the left elbow. He stated that "he had been wrestling and had had a fall, and the elbow was dislocated, and was reduced by some of his comrades." Whether it was really dislocated is somewhat doubtful.

On examination, there was found to be extensive swelling of the joint, but passive movement was fairly easily performed, but owing to the swelling it could not be ascertained whether any slight fracture existed. He was quite unable to use his arm. He was ordered to keep his arm in a sling, and lead lotion was applied. He improved for a time, but then began to lose power in his forearm and hand, and his general health deteriorated. Nothing further, however, could be ascertained as to the exact nature of the injury. He was then sent on a month's leave with a view to improving his general health. On his return from leave he again came to hospital. He now presented the typical appearance of paralysis of the ulnar nerve. The hand had a claw-like appearance, the little and ring fingers being flexed, all power of extension being lost, and sensation along the course of the ulnar nerve being almost completely abolished, he being only just conscious of a prick from a pin. There was some thickening about the internal condyle, and the nerve was apparently compressed about its passage through the groove in the condyle—whether by callus or inflammatory adhesions it could not be ascertained. It was then decided to cut down on the nerve and examine it. This was accordingly done, chloroform being administered, on August 22nd. The nerve was exposed and examined; no bony compression was discovered; there was, however, slight inflammatory thickening round it. It was accordingly dissected out for about an inch, a blunt hook passed under it, and it was then well stretched. The wound was then closed and dressed in the usual way and healed very quickly. A magneto-electric battery was then procured, and the nerve was subjected to stimulation every day, friction and douching also being employed. It gradually began to recover its functions, sensation returned, and the muscles gradually regained their power.

He has now perfect movement in the arm, sensation and power of the muscles being almost completely restored, and there is only slight flexion of the little finger. The arm is now practically as good as ever, and he has been discharged to his duty.

Geo. F. Mould,
Fyzabad, Bengal. Surgeon, Indian Medical Service.

OBSTETRIC MEMORANDA.

PREMATURE TWIN LABOUR, BOTH FŒTUSES DEAD: MUMMIFICATION OR MACERATION?

S.F., married, aged 22, weaver, was confined for the second time September 12th, 1889. She had been previously confined on June

7th, 1888, of a full-grown male child, stillborn; a midwife was in attendance, but on account of flooding I was sent for, and found on examination adherent placenta, the cord having given way on traction by the midwife.

The patient last menstruated on February 28th, 1889, and had engaged my services for the end of November. On September 12th, 1889, she had been mangling some clothes, when she felt something drop down "into her bowels," and she was taken with severe pains; she went to bed about 4 P.M., and the pains becoming more severe and frequent my services were requested. I arrived there about 5.30 P.M., and found her in labour; pains very strong, and occurring every five minutes. On examination I found the os fully dilated, and bag of membranes protruding, and a strange feeling of numerous pieces of small bones or phalanges.

In the course of half an hour the ovum was expelled intact along with the placenta, which was very small and bloodless, the funis being very much twisted, very thin, and of a reddish-brown colour. On rupture of the membranes there was a fœtus (female) between 4 and 5 months, very much emaciated, but not decomposed.

The womb remaining enlarged, and the pains still continuing, I again examined her and found a second fœtus, shoulder presenting. I turned and delivered her of a fœtus, 6 to 7 months, well nourished and healthy. After waiting for nearly one hour for expulsion of placenta, I inserted my hand, and gradually peeled the placenta away, it being adherent as in the previous confinement. There was considerable hæmorrhage. With the exception of severe lactation in both cases she made rapid progress.

I consider the case interesting after reading a somewhat similar one in the JOURNAL of September 29th, 1889. In this case there were two chorions, two amnions, and two placentas, and I wondered whether there were two conceptions at different periods, or twin pregnancy with mummification or maceration.

Both parents are perfectly healthy, with history of twin pregnancy on both sides.

W. MORRIS, L.R.C.P.Edin.
Brentwood, Bolton.

REPORTS

ON

MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

ROYAL INFIRMARY, EDINBURGH.

CASE OF EXTENSIVE BURN OF THIGHS AND ABDOMEN. PROBABLE ULCERATION OF INTESTINE. RECOVERY.

(Under the care of Professor ANNANDALE.)

[Reported by J. CHRISTIAN SIMPSON, M.B., late Senior House-Surgeon, Clinical Surgical Wards.]

I AM induced to record this case, with the kind permission of Professor Annandale, on account of the few clinical cases reported of the above condition, and also on account of the symptoms which were present being somewhat more definite than those usually described. The occurrence of duodenal ulcer, during the early progress of burns of more or less extent and severity, has been known since Curling first pointed out the coincidence. This observation was confirmed by Dupuytren, and also by Mr. Lang, in 1840, in the *London Gazette*.

As a rule, the history of these cases is taken from a *post-mortem* account, and the symptoms either had not time to develop, as death is often sudden, or were too indefinite to serve as any guide to the seat of pathological lesion. Thus, it is stated that there are "no unmistakable symptoms of its accession," that they "may be latent," or "dyspeptic," or at least "seldom marked;" but that pain, diarrhœa, vomiting may occur, individually or collectively, before the actual perforation or hæmorrhage which usually preceeds a rapidly fatal termination.

All seem to be agreed that the second and third stage or period of the case, but specially the second, is that most frequently attended by the risk of intestinal ulceration. Thus the day of sudden death, presumably or actually due to such a complication, varies in recorded cases from the fourth to the seventy-fifth day after the accident. That this is not a necessarily fatal occurrence in itself is evident from the fact that cicatrised or healing ulcers have been found in cases that have died from some other cause; and it is probable that many cases are never thought or known to be the subject of such ulceration, on account of the usual indefiniteness of gastric or abdominal symptoms. The causation of this ulceration is still a moot point, the chief balance being in favour of capillary embolism in the mucous membrane bringing about a lowered vitality, making it the more readily acted on by the acid intestinal juices—in fact, allowing of *ante-mortem* digestion. Leube's theory of the inhibition of the intestinal circulation, and Nothnagel's and Parenski's view of embolism or thrombosis in the duodenal artery itself, would lead ultimately to the same result. These methods of causation are more probable than any affection of Brunner's glands, as one would naturally think of something of the nature of a specific inflammation, as in typhoid, tubercular, or dysenteric ulceration; but these ulcers are, as a rule, indolent, non-indurated, and punched out.

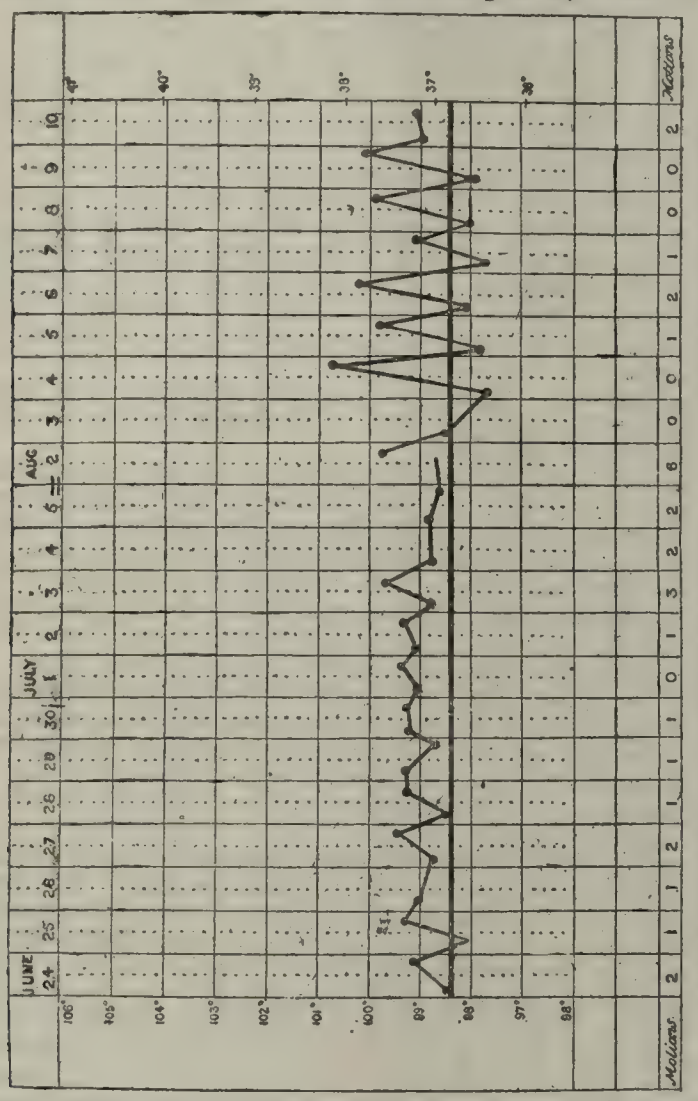
Upon the whole, the etiology of this form of intestinal ulcer is about as complete as it was ten or twenty years ago, as it is difficult to understand why the shock, suppuration, destruction of sweat glands, septic absorption, etc., from a burn, any more than from any other extensive cutaneous wound or skin disease, such as lupus, eczema, etc., should occasionally have in its train such a peculiar, interesting, and obscure lesion. The symptoms, as before stated, are usually of a meagre and indefinite description, and I would specially refer to the part the temperature, which in textbooks and treatises is never recorded or mentioned, played, and its aid in the diagnosis, prognosis, and treatment of this case, which I shall now briefly record.

A. W., aged 20, a domestic servant, was admitted into Ward 8, Royal Infirmary, under the care of Professor Annandale, on the forenoon of April 16th, 1888.

Family and previous history is unimportant, except that she is the subject of hysterical left brachial contracture. On the morning of admission her clothes caught fire, and she was in a condition of considerable collapse when brought to the infirmary, having sustained an extensive and severe burn of the first, second, and third degrees in various parts, involving the whole of the right thigh and right side of the anterior abdominal wall up to the level of the umbilicus, and almost the whole of the left thigh and vulva. The ordinary treatment, local and constitutional, was adopted, and after some pulmonary and renal congestion, with temporary albuminuria, she was in a very satisfactory condition though there was free suppuration and sloughing, with a corresponding irregular temperature. This temperature, however, gradually became normal, and continued so for some weeks. Early in August, she complained of rather severe abdominal pain, increased on pressure in the right hypochondriac and epigastric regions. The bowels were alternately obstinately constipated and relaxed at times, and the temperature now began to rise at night, somewhat irregularly. This condition was treated with Dover's powder and as carefully regulated diet as possible. The constipation was most marked and difficult to treat, ordinary doses of cascara, colocynth, saline, or glycerine, and other forms of enemata being futile, and very large ones became necessary when required. There was no vomiting. In September the temperature became more irregular and febrile, sometimes a morning, sometimes a nocturnal remission, but usually above 100° F., and ranging up to 104° F. The tongue was fairly clean and moist, there being none of the raw redness nor dryness which might have been expected. She remained in a similar condition, being bright and cheerful between times, and taking a lively interest in her wounds, which were decreasing with the aid of skin grafting, till November 15th, 1888, when her temperature suddenly became normal and remained so. On one or two occasions there had been a drop to normal, but a rise was immediate, whereas after this day the temperature never rose again. The bowels, previously so irregular, moved normally, sometimes slight diarrhœa, and the abdominal pain gradually disappeared. The burn of the left thigh was almost healed, as also that over the lower part of the abdomen, but there was still an extensive sore on the right thigh. Subsequently the patient improved so much, that she was able to get up, and was sent to the convalescent home on February 12th, 1889.

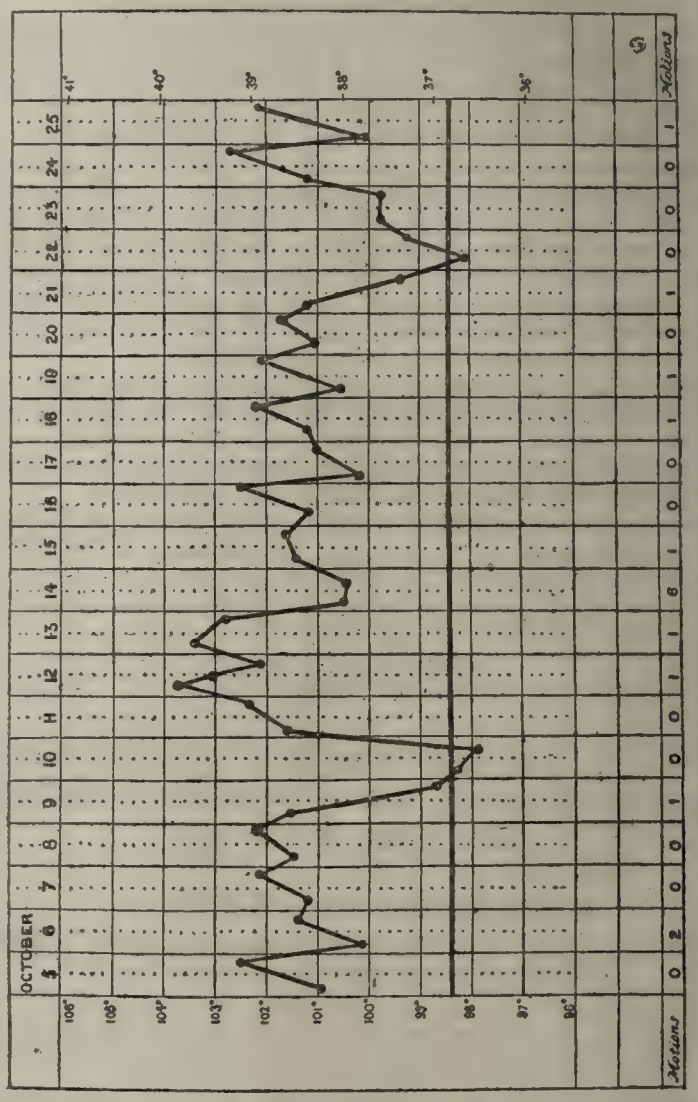
REMARKS.—That this case is one in which there existed intestinal ulceration, I think there is little doubt. But there are some features in its progress which are of special interest, as they are more marked and definite than usual, and one of them, namely, the febrile temperature, has not been observed or commented on. During the second stage of burns it has been said that, although congestion and inflammation of the gastro-intestinal tract is of frequent occurrence, the other abdominal viscera are usually un-

affected, except on the supervention of pyæmia. In this case there was, during the reactionary period, marked congestion of the kidneys, which, however, was transient. This temporary albuminuria was not, in all probability, due to pyæmia, as none of the other symptoms pointing to that condition were present, and as the further progress of the case shows. But when we consider the position of the burns, and trace the nervous supply, it is evident that the renal circulation could be readily influenced and disturbed. Thus the right side of the abdominal wall, where the burn was, is supplied by the lateral cutaneous branches of the tenth, eleventh, and twelfth dorsal nerves, and also partly by the ilio-hypogastric and ilio-inguinal from the first lumbar nerve. The renal nervous supply is from the renal plexus, which receives



filaments from the smallest or renal splanchnic nerve, which in turn arises from the last dorsal sympathetic ganglion. The lesser splanchnic also sends filaments to the renal plexus, and, as it is formed by filaments from the tenth and eleventh dorsal ganglia, which in turn are in connection with the corresponding spinal nerves, the chain from the burnt surface on the abdominal wall to the renal capillary circulation may be said to be complete. In this case, presumably only the right kidney would be affected. In this way the severe shock arising from burns over the cavities and proximal parts of the extremities may be explained, and also the various congestions, active and passive, which so frequently occur in the viscera, which, however, need not be absolutely situated in the cavity whose parietes are affected, because of the innumerable ramifications and connections of one set of sympathetic ganglia with another, and with the corresponding spinal and certain cranial nerves.

The occurrence of any abdominal symptoms was also remarkably delayed, it being over 100 days after the accident until anything occurred to arouse suspicion. These symptoms, however, definitely pointed to some intestinal or abdominal affection. There was throughout this period the occurrence of obstinate constipation, alternating with slight diarrhœa. The motions which were obtained were not so offensive as is usually the case in the diarrhœa of intestinal ulceration, and there was only once or twice doubtful melæna—doubtful on account of the administration of Dover and bismuth, and their not having been seen personally. The constipation, it should be mentioned, was present when the above powders were not being administered. As regards the diarrhœa, it must remain a question whether it was a symptom of the constipation or of the intestinal condition. It is curious, also, that in the earlier history of the case, when there were no other abdominal symptoms, the bowels were more inclined to be loose, and this might be accounted for on the reflex theory, seeing that the intestinal nerve supply is derived from the superior mesenteric plexus, through its intestinal and colic branches. This plexus is formed from the lesser splanchnic and part of the solar plexus, and it has already been shown how the former nerve is in connection with the cutaneous lesion. The transverse colon down to the rectum is supplied from the inferior mesenteric and inferior hæ-

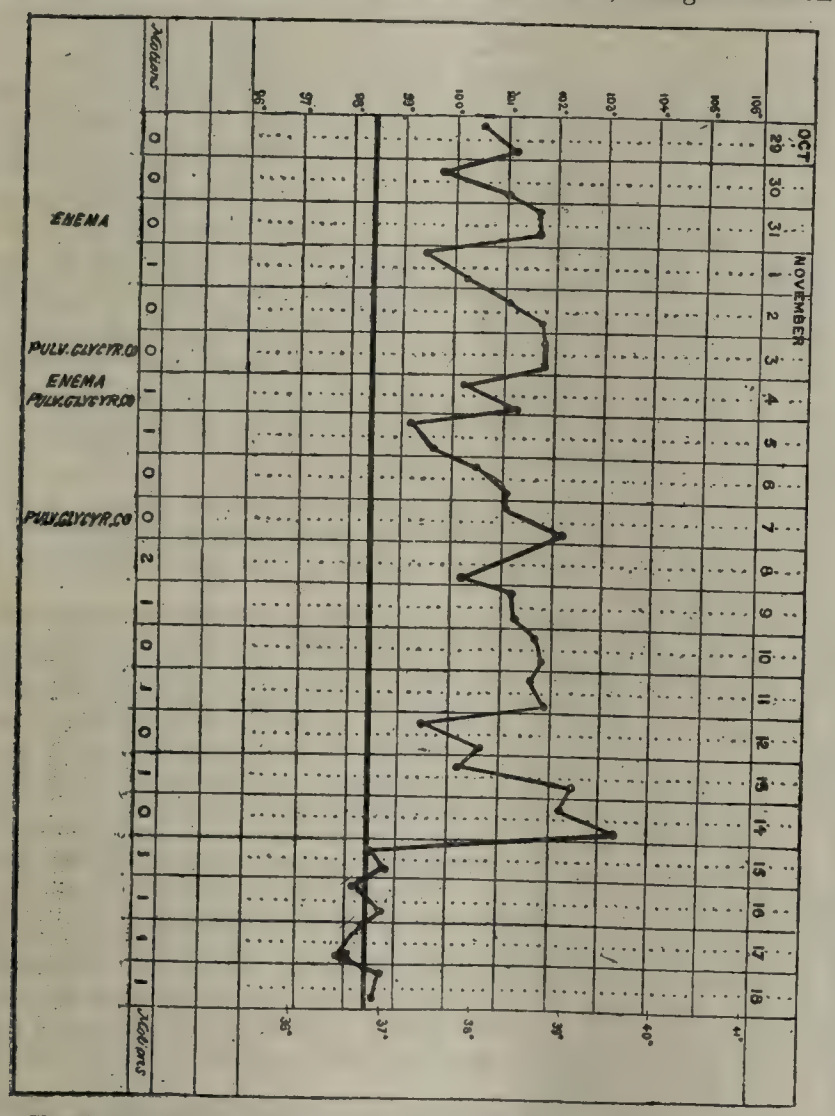


morrhoidal plexuses, the former being formed from the aortic plexus, which in turn is derived from the renal plexus and lumbar ganglia, and the latter from the sacral ganglia. And we also find that branches from the lumbar and sacral spinal nerves, namely, the hypogastric and the inguinal external cutaneous and internal and middle cutaneous of the anterior crural and the small sciatic, are among those supplying the burnt surface on both thighs.

Now whether the diarrhœa was at first due to a vasomotor dilatation in the whole intestinal tract, which took longer to recover itself than the renal condition, or to early ulceration, may be doubtful, though I incline to the former; and I shall make a suggestion as regards the occurrence of the constipation and occasional diarrhœa later on in the case, when the site of ulceration is considered.

Ulcer of the duodenum is by far the most frequent in recorded *post-mortem* accounts. In this case the pain was referred to the epigastric and right hypochondriacal regions, which certainly include the duodenum; but the almost complete absence of immediate gastric symptoms along with the constipation and the pain in these regions make it probable that the ulceration affected the large intestine. It is well known that there may be extensive ulceration of the large intestine, especially about the cæcum and colon, and no diarrhœa of a constant nature; and it is also a well-known fact that diarrhœa is sometimes a prominent symptom of constipation. So, given that the large intestine was ulcerated,

constipation and also diarrhœa, which were present, can be explained; but if the duodenum was affected, why the constipation, and diarrhœa, and absence of gastric symptoms? The cause of the ulceration, whenever it happens, is most probably capillary embolism due to septic absorption; and the temperature of the case may in part be due to the want of free evacuation of the contents of the bowels, which might become partly reabsorbed. At first, when presumably only a few ulcers were present, the temperature was irregular and mildly febrile; but later on, when more extensive sloughing and ulceration took place, there was far more thermic disturbance. The various attempted crises or falls in temperature were due, I should think, to sloughs separating, and the immediate rise showed that the process was not yet completed. In a number of instances, though not invariably, a movement of the bowels was accompanied by a decrease in the temperature. This may or may not be a coincidence. If it be more than a mere coincidence, it might serve to explain some of the temperature changes; but when there was the crisis and no further rise for several days, this, accompanied by a more normal action of the bowels and decrease in the amount of pain, sufficed to give grounds for a favourable prognosis as regards the completion of the separation of sloughs, and the cicatrisation of the ulcers, and the cessation of further septic absorption. This temperature is the more interesting when compared with that of enteric fever. In the latter, the nocturnal rise, though occasion-



Showing final crisis and normal temperature, though still suppuration.

ally there is a morning rise, is characteristic, and the whole chart of an uncomplicated typhoid case can be at once recognised as being different from one such as this. Here we had as a prime feature irregularity, sometimes a morning, sometimes a nocturnal, remission, but of no type whatever. It was also different from the ordinary hectic type, with daily crises and sweatings.

On the occasions on which the temperature did come down to normal there was no evidence of perforation, nor hæmorrhage, and when the final crisis occurred it was only the continued normal temperature after it that constituted an element for a favourable prognosis. That the general suppuration of the cutaneous ulcers had no effect on this abdominal temperature is evident, as this of course was present when the temperature was normal before the intestinal symptoms, and it was not for several weeks after the crisis that the cicatrisation was nearly completed in the right thigh.

The salient features in this case seem to be (1) the renal affection in the reactionary period, though pyæmia was absent; (2) the absence of acute abdominal symptoms, except some diarrhœa, which, like the first, may have had a vasomotor origin during the period in which they are most frequent; (3) normal temperature with profuse suppuration in June and July; (4) acute abdominal symptoms after the hundredth day, accompanied by irregular febrile temperature, constipation, and diarrhœa; (5) the crisis and subsequent normal temperature, though suppuration was still present, and the gradual return to a more normal condition of the bowels; (6) the usefulness of the temperature as an aid to diagnosis, prognosis, and dietetic treatment; (7) the probable advantages which would have accrued if continuous small doses of belladonna and codeine had been administered, on the grounds that the constipation was due to spasm of the colon, and that movement of the bowels was observed to be frequently accompanied by a temporary decrease in the temperature.

REPORTS OF SOCIETIES.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

THURSDAY, OCTOBER 10TH, 1889.

C. N. GWYNNE, M.D., President, in the Chair.

The Diseases of the Children of the Poor.—The PRESIDENT, Dr. Gwynne, gave the opening address upon the subject of The Children of the Poor and their Diseases. He pointed out that the diseases generally observed among hospital patients can be in the main referred to either the scrofulous, the tuberculous, or the rachitic diatheses, and maintained that these various types of disease had their origin in the unhealthy conditions under which children are reared, especially in cities. He sketched out in the case of these three main types the relationship that subsisted between the causes that produced them and the effects produced. He maintained that, as society did not discountenance, but rather encouraged, immature and reckless marriages, the children of such marriages had a substantial claim to look to society for their protection. He deprecated the illogical expenditure of money by charitable organisations in rescuing individual victims and the utter neglect of the causes that produced such lamentable results. He showed how inadequate medical art was to deal with the enormous mortality among children, and the vast amount of disease that resulted from causes that were in the main preventable. He pointed out the want of systematic instruction in the diseases of children at the medical schools, and recommended that attendance on a course of lectures on this subject and at bedside instruction in the children's wards should be made compulsory on all candidates for medical degrees. To check the reckless procreation of children among the pauper classes he recommended the raising of the legal marriage age and the imposing of other restraints that might be deemed advisable. To relieve the congestion of the population in towns he recommended emigration and a systematic method of colonisation in such countries as Western Australia, and the establishment of industrial schools in connection with such colonies, where children could be trained to trades and employments most suitable to the country. He predicted that the gradual massing of the population in large cities, and the resulting moral and physical evils, would in the future compel the consideration of such social questions, and that the sooner remedial measures were adopted the better.

Vote of Thanks.—A vote of thanks for the address was passed, on the motion of Mr. FAVELL, seconded by Mr. GARRARD.

PATHOLOGICAL SOCIETY OF MANCHESTER.

ANNUAL MEETING.

WEDNESDAY, OCTOBER 9TH, 1889.

A. H. YOUNG, M.B., President, in the Chair.

Reports.—The reports of the Committee and Honorary Treasurer were received.

Election of Office-Bearers.—The following officers were elected for the ensuing year: *President:* J. Dixon Mann, M.D., M.R.C.P. *Vice-Presidents:* G. A. Wright, M.B., F.R.C.S.; C. E. Richmond,

F.R.C.S. *Treasurer:* H. R. Hutton, M.B. *Secretary:* Thomas Harris, M.D., M.R.C.P. *Committee:* J. Collier, M.B., F.R.C.S.; A. Donald, M.D.; E. S. Reynolds, M.D., M.R.C.P.; A. Robinson, M.B.; W. Thorburn, M.D., F.R.C.S.; R. B. Wild, M.D. *Auditors:* J. Hervey Jones, M.D.; P. Yates, M.D.

Multiple Exostosis.—Mr. A. H. YOUNG showed preparations from a case of multiple exostosis; and Dr. THOMAS HARRIS showed a patient suffering from the same disease.

Calcified Enchondroma.—Dr. HUTTON showed a specimen of partially calcified enchondroma from the leg of a dog.

Sarcoma of Scapula.—Mr. SOUTHAM showed two specimens of periosteal (round-celled) sarcoma of the scapula. In one case, a male, aged 14 years, when the tumour was confined to the subspinous fossa, excision of the scapula was performed. The patient made a good recovery from the operation, but afterwards succumbed to a recurrence of the disease; secondary deposits occurred in the lungs, liver, and bodies of several of the dorsal vertebræ, death being due to compression of the spinal cord. In the other case, a girl aged 11 years, the growth involved the whole of the scapula, and also encroached upon the axilla. The scapula, together with the arm and outer half of the clavicle, was successfully removed, and the patient was alive and well two months subsequently.

Angina Pectoris.—Dr. OWEN showed sections from the left ventricle and aorta of a case of angina pectoris. The muscular fibres, especially those of the musculi papillares, were in a state of marked fatty degeneration. The aorta, for an inch from the base, and in its whole circumference, was roughened internally by atheroma, which rendered the wall rather more than double its normal thickness at this part. The sinuses of Valsalva were similarly involved, and the orifices of the coronary arteries, especially that of the left, to some extent occluded. Isolated patches of atheroma occurred also on the ascending arch. The right posterior valve was roughened with deposit, but the free edge was intact. The patient, a woman, aged 29 years, had presented well-marked symptoms of angina, and died rather suddenly. There was no evidence of Bright's disease or of syphilis; but for some months previous to the occurrence of symptoms the patient had been subjected to rather severe strain.

REVIEWS AND NOTICES.

MAYNE'S MEDICAL VOCABULARY. Sixth edition; revised and enlarged by W. W. WAGSTAFFE, B.A., F.R.C.S. 1889. London: J. and A. Churchill.

HOBLYN'S DICTIONARY OF MEDICAL TERMS. Eleventh edition. Edited by JNO. A. P. PRICE, B.A., M.D.Oxon. London: Whittaker and Co., and George Bell and Sons.

FREQUENT editions of standard scientific works, except under most judicious editorial supervision, are dangerous. As times change and knowledge grows much of this information becomes antiquated and erroneous. This is easily perceived by their editor, who excises portions he deems useless and adds facts he thinks contemporary. But too often the matter retained and the matter added have no kind of homogeneity of either style, spirit, or construction; while in the endeavour to retain as much of the original work as is possible, the revolutions made by modern discovery in the groundwork of many sciences are ignored, and a book results which, though it may appear to its editor an improvement on the first edition, is in reality a retrogression, since the original was in accord with the spirit and knowledge of the age in which it was written, while its successor falls behind both.

It is true that since Latin is no longer used in clinical lectures, in university theses, or in scientific works, the Latin translations of English words, the gender of Latin substantives, the termination of adjectives which formed a great part of the former editions of *Mayne's Medical Vocabulary* are no longer of urgent necessity in a work which claims to be "a dictionary of medical and scientific terms." But the science of philology and the art of lexicography have made enormous advances in the past few years, and the alteration in medical usage, which makes the Latin grammatical information of earlier editions obsolete, has been accompanied by a progress in this direction which renders the philological portion of the *Vocabulary* obsolete, and by such revolution in medical science as makes its definitions exceedingly faulty in many directions.

Turn for instance to "chin-cough," a common English synonym for whooping-cough. Mayne gives as its derivation—"Belgic, *kinkhoeff*." Now, this is in the manner of ancient lexicographers. Wherever they found a foreign word with the same sound and meaning as the English one they were dealing with they at once placed it as the derivation of the latter. In this case the error is a double one. Belgium as a country only came into existence during the first half of the present century, and therefore Belgic could hardly be the origin of so old a word as chin-cough; *Flemish* might have been, but was not. *Kinkhoeff*, and the Dutch *kinkhoest*, the Swedish *kik-hosta*, and the Scottish *kink-cough* or *kinkhost* are all cognate forms of one original, derived, according to Skeat, from the base *kik*, to gasp. The English *chin-cough* is another form; the prefix *chin* is merely *chink* with its "k" lost in the hard sound of the succeeding "c" of *cough*, and means a catch in the breath. One can still hear old country-women say: "The child fairly coughed till it chinked again." In *Hoblyn's Dictionary* the derivation from *chine-cough* is equally faulty, and belongs to that species of guess-philology once so common, now rapidly becoming obsolete. The Scotch *kink*, given as meaning "cough," does not, as above shown, mean anything of the kind.

Another fault of the elder philologers was the invention or adoption of untested fables and stories to account for the form of words they did not understand. The knighting of the "sirloin" by King Charles II. is an excellent example of this kind of invention, and another one is found in Mayne under the head "Abram-man." This, we are informed, "was a term current some two or three centuries ago; applied to anyone really, or pretending to be, bodily or mentally afflicted, especially the latter. There was *then* an 'Abram'-ward in Bedlam, the inmates of which were permitted to wander *out*, fantastically decked with coloured paper, ribbons, caps, etc., to beg alms. They had wit enough to practise pilfering." This story has evidently been extracted from Dr. Brewer's *Dictionary of Phrase and Fable*, where the same information is given in almost exactly the same language, on the authority of *The Canting Academy;* but there are no historical grounds for the explanation. Dr. Murray, in his, New or Oxford, *English Dictionary*, quoting Nares, says that "Abraham-man, or Abram-man" was one of a set of vagabonds who wandered about the country soon after the dissolution of the religious houses, the provision of the poor in those places being cut off and no other substituted;" and he also quotes an author who wrote as early as 1561, and defines an Abraham-man to be "one that walketh bare-armed and bare-legged and fayneth himself mad." He supplies a possible, and certainly more probable, derivation for the title, namely. that it may allude to the beggar, Lazarus, in Abraham's bosom.

Under the word *calomel* another instance of the same weakness occurs, though here apparently given with the editor's knowledge of the nature of the explanatory story. The Greek words from which calomel is undoubtedly derived are *καλός*, fair, or excellent or beautiful, and *μέλας*, black. Mayne says: "A singular origin has existed for the term calomel; to the effect that the foregoing two Greek words mean "a beautiful negro;" the mercurial alluded to having been prepared by *a handsome black slave*, and hence the name!" The writer, however, offers another explanation of the word, to the full as untenable. He says: "Allowing the preposition *κατά* to be herein *understood*, the meaning of the above term seems to be *valuable towards the dark complaint*, *i.e.*, bilious disease." *Hoblyn's Dictionary* carries us no further, since the Greek derivation is simply given, followed by the words "beautiful black." It is only on consulting Professor Skeat's work that we perceive the meaning of the Greek. He says that the word was coined to express a *white* product from a *black* substance (*καλός*, fair, and *μέλας*, black).

There are very many instances in *Mayne's Vocabulary* of a fault already noticed—namely, the mistaking of cognate forms for primitive or earlier ones. For instance, the word "cancer" is given as derived from the Greek *καρκίνος*, a crab, instead of, as Hoblyn correctly states, the Latin *cancer*, a crab. There is no doubt that both the Latin and Greek words for "crab" are cognate and derived from a common root, as is also the Sanscrit *karkata*, a crab. In this connection the Sanscrit *karkara*, hard, is of interest. Both Mayne and Hoblyn explain the pathological application of the word "cancer" from the turgid veins radiating like a crab's claw, but, we think, without sufficient evidence. *Choke-damp* is given in Mayne as derived from the Saxon *aceocian*, to stifle, and the German *dampf*, a vapour. Why the editor or author should drag from the modern German a word which is, at latest, discoverable

in middle English, and forcibly join it to a Saxon prefix, is a mystery. He complains that many of the terms in medicine are offensively hybrid; but, if his etymology be correct, nothing more offensively hybrid than this Germano-Saxon word exists in all medical nomenclature. Fortunately, it is not so derived.

"Adult" is, in Mayne, derived from the Latin *ad altum*, and not (correctly) from the verb *adolescere*, to grow up, of which *adultus* is the past participle. Hoblyn gives the correct derivation. Another faulty derivation in Mayne is *port-caustic* from the Latin, instead of from the French *porte-caustique*. On the other hand, *garrot* is derived from the French, instead of from the Spanish, as is really the case. Both works give castor (oil) as from *agnus castus*, but on what evidence? So far from having an originally high character (as stated in Hoblyn) for its "supposed efficacy in assuaging the natural heat of the body and soothing the passions," Trousseau and Pidoux, in their treatise on *Therapeutics*, 9th edit., American trans., ii, 143, tell us that, though the purgative effects of the castor bean were known centuries ago, it was thought poisonous, and physicians never used it. The first recommendation of the oil to European practitioners was made in 1767 by an English surgeon, Cauvane, whose *Dissertation on the Oleum Palmæ Christi, seu Oleum Ricini, or, as it is commonly called, Castor Oil, its Uses, etc.*, was, so far as we can ascertain, the original mention of the drug in European literature. We hazard the conjecture that the word *castor* is simply a corruption of *Christi*, part of the name Cauvane gives the plant.

The Saxon *wicga* which Mayne gives (*sub voce ear-wig*) is incorrectly translated "grub." *Wicga* was in Saxon a horse or a runner, and, because the ear-wig was supposed to creep into the ear, it was called an "ear-horse" or "ear-runner." Mayne's other derivation, *ear-wing*, is entirely unauthentic.

We are curious to know in what work such a faulty word as *aborticide* is to be found, and sincerely hope that it will reappear in no modern "system of midwifery." The sooner it is forgotten the better for the reputation of our profession in scholarship.

The definitions of many words and terms given in *Mayne's Vocabulary* are as obsolete and faulty as much of the philology of the work. Under the heading *idiot* we have, "one who is silly or without understanding—a fool;" a definition which would, if accepted, greatly enlarge the borders of idiocy. For *phlegmasia dolens* we have, "a disease occurring sometimes in women soon after delivery, characterised by pain, increasing to an excruciating degree, along the thigh and leg to the foot; these gradually become much swelled and very tense—*white leg*." Hoping to get a better definition of the disease under *white leg*, we turn thereto, but find merely a reference back to *phlegmasia dolens*. Compare this inadequate description with the far terser definition of Sir Wm. Aitken in his *Practice of Medicine*, vol. ii, p. 656, 6th edition: "*Phlegmasia dolens*—obstruction to the veins and lymphatics, causing a painful, non-œdematous, but brawny swelling of one or both lower extremities, and attended with great prostration." Eczema is given by Mayne as "a smarting eruption of small vesicles, generally crowded together, without fever, and not contagious"—a definition which would certainly include many cases of herpes in its range. Nor do we think that of Hoblyn a perfect one: "a non-contagious, cutaneous, vesicular disease, called 'humid scall.'"

The student who consulted Mayne for the meaning of *autopsy* would be little enlightened to find that it is "evidence actually present to the eye," without any hint that it is confined to *post-mortem* evidence exclusively. Reading about "adynamic fever," and anxious to discover its significance, he would not be much edified to find that "*adynamic*" is "pertaining to *adynamia*," and that the latter is "loss or natural deficiency of vital power." If he had much grammatical knowledge, he would be astonished to find the adjective *autophthalmoscopic* defined to be "the examination of one's own eye by the ophthalmoscope." In pathology, *Mayne's Dictionary* is sadly behind the age in many instances. Under the heading "cancer," for example, we get the obsolete division into *epithelial, scirrhous, encephaloid*, and *colloid*; and in connection with this subject we have an illustration of the danger of re-editing antiquated scientific works without great care. Since the former editions of *Mayne's Dictionary* the meaning of *sarcoma* has considerably altered. Of this the editor was, of course, aware, and has, therefore, added to the original definition the correct information that it is a "term now applied to connective-tissue growths which may be either *round-celled, spindle-celled, myeloid, fibroid*, or *cystic*. But neither under *cancer, encephaloid*, or *sarcoma* do we get any shadow of a hint that *encephaloid cancer* and *sarcoma* may be synonymous terms. In Hoblyn we get the same out-of-date division of cancer, and no cross reference to *sarcoma* either under this head or under *encephaloid*. Under *sarcoma*, however, we do find the required information. *Zymosis* and *zymotic* are not satisfactorily treated in either Mayne or Hoblyn.

We may be thought hypercritical in these strictures, but we are not so. The medical profession has a right to demand that works offered for its acceptance should be fully up to the standard of knowledge of the time, both in information strictly professional and in that derived from collateral sciences. Of the two dictionaries before us, Hoblyn's is the better, but we consider both behind the information of the age—that is, if they are intended for the use of members of a highly-educated and increasingly-intelligent profession. If, however, they appeal to that hypochondriac public which revels in medical treatises dealing with its own real or supposed ailments, but to which the technology of medicine is, without help, an insuperable difficulty, then perhaps the information they supply is sufficiently profound and accurate for its needs.

MEDICAL HANDBOOK OF LIFE ASSURANCE; for the Use of Medical and other Officers of Companies. By JAMES EDWARD POLLOCK, M.D., F.R.C.P., Physician to the Imperial Life Office, etc., and JAMES CHISHOLM, Manager and Actuary of the Imperial Life Insurance Company, etc. Pp. 216. London: Cassell and Co. 1889.

IN the preface the authors very truly state that some of the treatises on life assurance are "as elaborate as dictionaries of medicine." The only way in which to avoid this fault is rigidly to exclude all subjects not immediately connected with life assurance. In a book written for the use of men holding the important position of medical adviser to a life assurance office we think that dissertations on elementary medicine are quite out of place. Surely men who have been selected to examine lives for assurance do not require to be reminded, as they are in this *Handbook*, about the position of the heart, the causes of its displacement or enlargement; but the medical author of this *Handbook* goes even farther, and describes the sounds of the heart in health, with which the tiro in physiology is supposed to be familiar. Throughout the book, especially under the heads of Heart and Examination of the Chest, much space is devoted to what we have designated as elementary medicine; for instance, three pages are taken up with the examination of the heart and a description of cardiac murmurs, a page with the physical signs of aneurysm, nearly three pages with the physical signs of phthisis, and an account of the different forms of kidney disease occupies little short of a page. If the medical officer has not mastered these in his student days, it is extremely unlikely that their mere enumeration will assist him when he comes to examine an applicant for assurance. Then, again, though we think it might be desirable for the author to indicate the tests he employs for the detection of albumen and sugar in the urine, it ought not to be necessary for the various tests to be described.

Notwithstanding that so much space is taken up with subjects with a knowledge of which the examiner should reasonably be credited, points on which he would naturally expect to receive advice are passed over in silence. Take, for example, ear affections; not a word is said on the importance of otorrhœa from a life assurance point of view, and yet, in our opinion, aural discharge, if complicated by diseased bone, necessitates rejection. Affections of the eye are also neglected, though blindness would certainly require the addition of an extra.

We will now proceed to examine more closely a few of the points in which we differ from the medical author of the book, as we assume that Dr. POLLOCK is responsible for all the medical details. In discussing the time element, the author says he "can draw on his hospital experience for facts illustrating the duration of various affections of the chronic class." But it must be remembered that in hospital practice one sees merely fragments of medical history, and we may recall the saying of Sir Andrew Clark that young physicians with only hospital experience to assist them are not good guides as to prognosis.

The ideal of a medical examiner is the man who can supplement his knowledge of disease as it runs its course among the well-to-do—who are the chief applicants for assurance—with the experience derived from the hospital ward and *post-mortem* room. Again, it is useless to appeal, as the author does, to the record of general hospital practice to prove the rarity of angina pectoris, as it is well known that this disease is much

more common among the upper classes than among the humbler ranks of society. This is also Dr. Walshe's view, whose experience has scarcely supplied him with more than a solitary well-defined example of true angina in hospital practice.

The view that all cases of aortic murmurs are entirely uninsurable must be questioned. There is an aortic systolic murmur, probably due to a roughening of the valve, and unaccompanied with any sign of hypertrophy of the heart or interference with the circulation. A case of this kind may often be taken with an extra provided the applicant is not engaged in a laborious occupation, and that he is otherwise a good life.

Our appreciation of the murmur of mitral stenosis differs considerably from that of the author; he says that it is generally less rasping than the regurgitant murmur, that it is conducted into the axilla, and if pronounced it is heard also in the left scapular region. The current teaching is that the presystolic mitral murmur is harsher than the systolic murmur, that it is heard over a very limited area, and is only exceptionally audible in the axilla. Dr. Pollock apparently lays greater stress on the undesirability of obesity, from an assurance point of view, than leanness. We doubt whether this opinion is in accord with recent experience. Many diseases, notably phthisis, lead to, or are associated with, leanness, but it cannot be said that obesity is caused by any particular disease. The statistics of the United States Life Insurance Company are very instructive on this point; they show that, whereas the death-rate of those who were 15 per cent. and more over weight was only 7.6 in excess of the expected mortality, the death-rate among those who were 15 per cent. and more under weight was 61.2 in excess of the expected mortality. If Dr. Pollock insists on the strictest inquiry being made in all cases in which the weight comes up to the maximum excess of 20 per cent., still more strongly would we urge the necessity of submitting all applicants, who are under weight to a similar extent, to a most rigorous examination, both as regards a family history of phthisis and also as regards the condition of the chest.

We notice many marks of haste, which will probably be corrected in a second edition. Take, for example, "the notched teeth of old syphilis." We suppose that the author means *inherited* syphilis. "Young men should be plainly asked about syphilis." In our opinion it is quite as important to ask middle-aged men this question. "Finds himself *ennuyée*;" the final *e* is superfluous. "Hæmophyllia;" this hardly seems accidental as the word is spelt three times in the same way, yet we fail to see any justification for departing from the accepted orthography. On page 103 the author states that hepatic colic, if known to have existed in the proposer, should be disqualifying; whereas, lower down on the same page, he says a former attack of biliary colic (gall-stones) with subsequent years of good health, and without biliary disturbance, need not imply rejection. In paragraph 315 there is evidently a *lapsus calami*. When writing of lead-poisoning the author speaks of "the liability to diabetes in this class;" he should have said—albuminuria. It is hardly fair to contrast the measurement of the chest given by Walshe, namely, 33 inches, with the 38 inches given by Sieveking without mentioning the fact that the former takes the measurement at the sixth cartilage while the latter takes it above the nipples; this will partly account for the discrepancy.

In stating that "the average duration of life among women is longer than men," we are astonished that the authors (for here we have to deal with an actuarial quite as much as a medical question) do not draw attention to the remarkable fact that as regards the assured the reverse is the case; the female lives turn out worse than the male lives.

We have glanced through the index and failed to find any mention of ague, fistula in ano, malformation, loss of limb, skin diseases, all of which occasionally crop up in life assurance, and the way of dealing with which requires definite instruction. As instances of carelessness in the index, we may point out that words beginning with Hæ are placed after Hi, and Dr. Johnson has allotted to him the Christian name of Charles instead of George. Some of the author's remarks are out of place in a scientific work addressed to practical men; take, for example, the two following sentences: "he discovers that his love of ease has made him sacrifice the high enjoyment of work and the thrilling pleasure of success for a heartless living of life for the sake of its surroundings;" and again, in speaking of clergymen, he says: "Nor are their daughters supposed to enter upon the rivalry of costly dress; and if they live even half way up to the doctrines they preach, they have the blessed satisfaction of doing good, and being trusted and respected accordingly."

After having criticised very freely, but, we hope, not unkindly, the faults of the book, it is a pleasure to turn to the other side of the question, and to state our appreciation of most of the work. The chapter devoted to the Duties of the Medical Examiner is clearly and concisely written, and we especially point out for praise the emphasis which the author lays on the necessity of examining next the skin. If medical men would only bear this in mind many a doubtful life would be rejected. When, however, he recommends that the abdomen should be examined in every case without the dress, many will differ from him as to the practicability of carrying out this recommendation. In few if any of the London offices is there any convenience for making an abdominal examination; nor do we think that it is generally necessary. If there be any disease of the abdomen capable of detection on making a physical examination, there would almost certainly be other symptoms to awaken suspicion in the mind of the observant examiner.

The tables showing relative height and weight, and the circumference of the chest, the influence of age and occupation on weight, and the table of the expectation of life add to the value of the book, as the medical examiner must often have occasion to refer to them. In suggesting a maximum and minimum weight we should ourselves have preferred placing it at 15 per cent. above and below, and to indicate that any departure from these limits would require the most rigorous scrutiny. The chapters on the varieties of life assurance and extra charges are excellent, and contain advice of much value to a physician in the position of chief medical adviser to a company.

We highly approve of the form of medical report, and have but one suggestion to make, namely, that it is desirable not only to know the present weight of the applicant, but also whether he is gaining or losing weight; and unless this question is printed it is not likely that any attention will be paid to it. We consider that it is a mistake to have two forms of medical report; the shorter form suggested for the use of the chief medical officer does not contain sufficient details to be of use in after years in the event of the reports being collated.

The idea of inserting typical cases illustrating instances in which an extra has been imposed is a very good one. To attempt any analysis of these cases is quite out of question in the space allotted to a review.

In spite of the omissions and faults, and the inclusion of uncalled for matter to which we have already directed attention, the book will be found a useful and safe guide to examination for life assurance. With a judicious amount of pruning, and the addition of several important subjects which have been omitted, the *Handbook* would come much nearer the ideal we have pictured to ourselves than any existing treatise on life assurance.

THE STUDENT'S TEXTBOOK OF THE PRACTICE OF MEDICINE. By ANGEL MONEY, M.D.Lond., Assistant Physician to University College Hospital, etc. London: H. K. Lewis. 1889.

A COMPEND OF THE PRACTICE OF MEDICINE. By DAN'L E. HUGHES, M.D., late Demonstrator of Clinical Medicine in the Jefferson Medical College of Philadelphia. Third edition. Edinburgh and London: Young J. Pentland.

THE multiplication of small books on great subjects is one of the most striking characteristics of the book market of to-day. It is a phenomenon by no means confined to medical literature. Art, sciences, letters, and perhaps most of all history and biography, we now get in series of small volumes, each supposed to contain the pith of many big volumes. A great many people find it as difficult to extract their mental pabulum from books of this class as to satisfy their appetite by lunching on a meat lozenge; but the steadiness with which this tide of book continues to flow appears to prove that they do supply a very large number of modern readers with what they want.

Accepting, therefore, the *multum in parvo* as the inevitable must always be accepted, we have simply to inquire, in the case of such books as those now before us, whether the author has attained the requisite standard of fulness and accuracy. On these grounds Dr. MONEY's book may be on the whole very highly praised. The articles are not all, of course, of equal merit. Those on nervous disease appear to be considerably the best, a rather uncom-

mon excellence in books of this class. The course of the candidate for examinations is further smoothed by an appendix containing directions for writing prescriptions "in Latin without abbreviations," extracted from the works of Drs. Tanner and Handsel Griffiths. There is also a short therapeutic index which contains some useful hints. Altogether, as a "crambook" it is good.

The *Compend* compiled by Dr. HUGHES has the best of all recommendations, in that it has passed into a third edition. Great use is made of headlines in heavy type, italic catch-words and other printer's devices to arrest attention, but the general result is rather confusing to the eye. The matter appears to have been carefully prepared and corrected.

HANDBOOK OF PRACTICAL BOTANY FOR THE BOTANICAL LABORATORY AND PRIVATE STUDENT. By E. STRASBURGER, Professor of Botany in the University of Bonn. Edited from the German by W. HILLHOUSE, Professor of Botany and Vegetable Physiology, Mason Science College, Birmingham. Second edition revised and enlarged, with 116 original and 33 additional Illustrations. 8vo., pp. 425. London: Swan Sonnenschein and Co. 1889.

THERE is now such a variety of botanical textbooks, especially translations from the German, that private students must find it very difficult to make a choice. Not that we are overdone with good treatises on the practical study of vegetable anatomy, for, with the exception of Bower and Vine's *Practical Botany* and the present work, there is little else in the English language of exactly the same kind, and these two books are so different from each other, that both may be consulted with advantage.

Professor STRASBURGER'S reputation as a teacher and as an author of writings on microscopical investigations in the vegetable kingdom is so high and so universal, that there could be no question as to the desirability of an English edition of his admirable *Botanisches Practicum*. There are two German editions of this work, differing very considerably in extent, and Mr. HILLHOUSE, aided by the author, gives an English version of the smaller one, supplemented by numerous notes by the author and translator, and a number of additional figures possessing little claim to originality.

The first English edition appeared in 1887, and was not only wanting in literary merit, but was unintelligible, and even inaccurate in many passages, betraying an inadequate knowledge of German on the part of the translator. It is true that Mr. Hillhouse acknowledged the existence of "many and serious defects," in extenuation whereof he pleaded that the translation had been done during a period of great pressure. A kindly disposed reviewer wrote at the time that it would be unfair, in consequence, to enter into any detailed criticism, though in the next sentence he mildly condemns the translation, adding that there was much need for revision in a future edition.

In our opinion fairness in criticism demands in the first place a consideration of the interests of those persons likely to use the book, rather than indulgence towards an overworked author, and we have for that reason tested a few of the faulty passages in the first edition with the present "revised edition." It is true the translator states that "anything like a complete revision of the text has been impracticable," presumably because the work was stereotyped; therefore, we were prepared to find comparatively little alteration, and the objection that the translation was bad still remains.

The following sentence ("eine Spur von demselben Bohnenmehl legen wir, bei sonst gleichem Verfahren, in einen Tropfen Glycerin, statt in Wasser. Die Stärkekörner erscheinen in dieser Flüssigkeit durchschnittlich kleiner; von Schichtung lassen sich nur Spuren erkennen") is thus translated in the first edition:—"We lay a trace of this bean meal, in similar manner, in a drop of glycerine instead of in water. In this fluid the starch grains appear sectionally smaller; of lamination not a trace can be recognised." In the second edition this is so far corrected that "appear sectionally" is replaced by "seem on the average"; but the inaccuracy of the second clause relating to lamination remains. Take one more example from the next page:—"Die Stärkekörner des Hafers (Avena sativa) gewinnen wir am besten indem wir ein Haferkorn halbiren und ein wenig von dem Inhalt desselben unter Wasser zur Beobachtung bringen." The English of this in both editions is:—"The starch grains of the oat (Avena sativa) we take as the best, inasmuch as we halve an oat-grain, and take a little for observation under water." Now, even supposing that the translator's knowledge of his subject has saved him from making any more serious blunders than those indicated, and we cannot feel confident that it has, such mistakes, and such clumsy English as run all through the book, are a serious drawback to its usefulness. That there is some good in the book nobody will deny, but it is discreditable alike to translator and publisher to have issued a second edition with nearly all the blemishes of the first.

A TEXTBOOK OF HUMAN PHYSIOLOGY, etc. By Dr. L. LANDOIS, Professor of Physiology in the University of Greifswald, etc. Translated from the sixth German edition; with additions by WILLIAM STIRLING, M.D., Sc.D., Brackenbury Professor of Physiology and Histology in the Owens College, Manchester, etc. Third Edition. London: Charles Griffin and Co. 1888.

THE great feature of LANDOIS and STIRLING'S *Physiology* is that, while being a complete textbook of physiology (and also of histology), it has taken into account the "requirements of practical medicine." The fact that the work has now reached its third English edition demonstrates that it has been found of great utility and help by the medical profession.

The generality of medical students have been accustomed, it is feared, to look upon physiology as a subject to be "got up" for examination, and then forgotten; and this, perhaps, is not to be wondered at, since physiology is a subject which requires for its thorough appreciation a sound basis of knowledge in the elements of physics and chemistry. The old order of things is now happily passing away, and the student, better educated as he is at the commencement of his career, is beginning to appreciate the advantage of the study of physiology as a groundwork of practical medicine, and he is greatly aided by the great advances made in the teaching of the subject.

Landois and Stirling's *Physiology* has supplied a great need in medical science by emphasising in separate paragraphs the connections between physiology and medicine. While, therefore, the beginner will find in this work a complete textbook of physiology, the advanced student and the busy practitioner can readily obtain accurate information on scientific problems occurring in practical medicine.

The present edition is in one volume, which is a distinct improvement on the two bulky volumes of the second edition. Numerous additions have been made both to the text and to the illustrations, and the work is quite up to date. It is so well known now to the profession that praise of Dr. Stirling's translation (by which he has made almost a new book) seems superfluous.

BEITRÄGE ZUR PATHOLOGISCHEN ANATOMIE UND ZUR ALLGEMEINEN PATHOLOGIE, redigirt von Dr. E. ZIEGLER. Vierter Band, Fünfter Band, Erstes Heft. Jena: 1888-9.

THE first number of the fourth volume of this work is entirely occupied by a long paper by Dr. Felix Marchand on the Inflammatory New Growth produced by Foreign Bodies in Animal Tissues. His main conclusion is that exudation and diapedesis of leucocytes are transitory processes, and that inflammatory new growth results entirely from the proliferation of the fixed tissue elements, which is a later process.

In the second number is an interesting paper on "Short-tailed Dogs, considered in Relation to the Inheritance of Acquired Peculiarities," by R. Bonnet. Two young dogs, belonging to a breed of dogs in which short-tailed individuals were of common occurrence, were dissected, and the number of caudal vertebræ found to be much diminished in number. The author regards such cases as extreme instances of a gradual regressive or atrophic process in a particular part of the body, fixed by inheritance, and not to an injury inflicted on the parent or ancestor. Thus they lend no support to some recent views on the inheritance of injuries. In another number Ziegler gives a valuable summary of recent researches on inheritance and the theory of descent in reference to pathology.

The remaining papers are more of the ordinary pathological type on experimental inflammations, on bacteria, on rare cases, and so on. Among the more notable are Weichselbaum's elaborate memoir on the etiology of endocarditis; Mircoli on an epidemic

mycotic inflammation of the kidneys in children; Löwit on the theory of icterus; Golgi on the supposed bacillus malariæ of Klebs (thrice slaying the slain); Rogowitsch on changes in the hypophysis cerebri of rabbits after removal of the thyroid (referring to myxœdema, etc.). In a paper by Welti on the cause of death after burns, it is notable that the author refers to the duodenal ulcers described many years ago by Curling as having been first observed by Klebs in 1869. The author produced gastric hyperæmia and ulceration by burns inflicted on the ears of rabbits. Obituary notices of Professor Rudolf Maier, of Freiburg, and Professor Salvioli, of Genoa, are also included in this volume.

In the fifth volume, perhaps, the most important paper is one by Nauwerck and Barth on Landry's paralysis. In a typical case of this disease, complicated with early tuberculosis of the lung, they found the spinal cord normal, but well-marked interstitial neuritis, with extensive destruction of nerve fibres, in the nerves of the cauda equina, in the sciatic nerves, and in both posterior and anterior roots of the spinal nerves in the lumbar region. There was also neuritis, though less marked, of the nerve roots in the dorsal and cervical regions. These conditions, the authors think, explain most, though not all, of the symptoms of the case; and they regard the disease as a multiple peripheral neuritis, probably due to the action of some chemical poison, which might be produced by bacteria, though no micro-organisms were found in the tissues. If so, Landry's paralysis would have to be considered as a specific infective disease.

Other papers worth mentioning are one by Fischer on spina bifida, and one by Kirchberg and Marchand on the so-called "fœtal rickets," which they regard, like most pathologists in this country, as quite distinct from rickets, but also refuse to identify with cretinism. They propose the name "mikromelia chondromalacia."

A memoir by Caporaso on the regeneration of the spinal cord in newts is in Italian, with an abstract in German. The main conclusion arrived at is that when a portion of the spinal cord is removed it is reproduced by a growth from the epithelial lining of the central canal—new-formed epithelial cells gradually becoming differentiated into ganglion cells. The process thus corresponds with that of embryonic formation of the nervous system, which originates in the epithelium of the outer (or upper) layer of the blastoderm; and, as far as the spinal cord is concerned, the phases of development are similar to those here described.

A Manual of Home Nursing. By Louisa Emily Dobrée. London; Swan Sonnenschein and Co.

This book is ostensibly intended for household purposes, but we fail to discover much in it which has not already appeared in the numerous manuals that have issued from the press during the last twenty years, and which have been written for the guidance of nurses in general. It is prefaced by a recommendatory introduction from Mary Scharlieb, M.D., on the moral aspects of nursing, to which no one can object; and Miss Dobrée devotes the greater part of her first chapter to a portrayal of those natural gifts which contribute to form the perfect nurse, but which would be equally appreciated in man or woman in every condition of life. It is a question whether we have not gone a little too far in symbolising the numerous virtues we expect to find concentrated in a nurse, and of thereby running a risk of overlooking the main object which induces thousands of young women to take to the work as a means of livelihood.

In spite of some blemishes, there is a great deal of useful matter in the book, combined with an earnest desire on the part of the author to diffuse an intelligent knowledge of the domestic requirements of the sick in quarters where it is probably most wanted. Some excellent remarks are made on the management of the sick-room, on the situation and aspect of the dwelling house, on cleanliness, disinfection, and fevers; while several chapters are devoted to the more common class of accidents, including burns and scalds, hæmorrhage, poisons, and fractures. Home nursing, however, hardly calls for the description and subdivision of fractures into six classes, nor is there any reason why the term impacted in its relation to fractures should be spelt "impackded;" and surely some better substitute for a splint for a fracture could be improvised than a stick, an umbrella, or a folded newspaper. In the chapter headed Burns and Scalds, we have observations on baths, bandages, poultices, fomentations, leeches, and medicated drinks—all very good in their way, but sadly deficient in systematic classification. The book concludes with an ill-assorted chapter combining conditions of unconsciousness with invalid cookery, in which the usual attempt is made to differentiate between the symptoms of apoplexy, epilepsy, and drunkenness; but there is no allusion to hysteria, which requires more moral and domestic management than any class of nervous affections. Some useful remarks follow with regard to food and its administration in disease, supplemented by cookery receipts from Dr. Ringer's *Dietary for Invalids*, which cannot fail to be of service to the amateur nurse.

We are far from condemning the manual, but we would advise Miss Dobrée, if she ventures again in the literature of home nursing, to submit her manuscript to some medical friend competent to advise her on numerous points, mainly of a technical character, in which her training and experience are manifestly deficient.

NOTES ON BOOKS.

Report upon a Chemical Examination of the Excreta of Diarrhœa Cases. By Dr. Theodore Cash. (From Dr. Ballard's Report on the Causation of Diarrhœa.)—This report, to which we briefly referred at the time of the publication of Dr. Ballard's report, deals with the excretions in three cases of infantile diarrhœa. The age of the patients (4 to 15 months) rendered the collection of the discharges very difficult, the chief source of error being the admixture of urine with the fæces, In one case, however—that of a boy—the contamination was very successfully prevented by a special arrangement kept constantly in position for the collection of urine. The examination relates chiefly to the nitrogenous constituents, the estimation of total nitrogen being made by the methods either of Dumas or Will-Varrentrapp. As is most important in all cases where the products of nitrogenous metabolism are under investigation, the nitrogenous intake in the food was also estimated. The following is the summary of the results obtained by Dr. Cash:—1. That the composition of the fæces shows a great increase of fluid and a diminution of the solid residue, as contrasted with normal fæces of infants of the same age. 2. The water excreted by the kidneys is markedly diminished, and in some cases there is diminution of the urea also. 3. That the total nitrogen passing away by the fæces is considerably increased; this arises from unabsorbed ingesta, such as casein, from excreted albumin, and probably also small quantities of urea. The evidence of the presence of ptomaines is very doubtful. 4. The total nitrogenous excretion is relatively increased to the total nitrogenous ingestion, there being actual loss of weight during the periods of purging. 5. In all cases the urine contained abundance of albumen. The report is very full, and illustrates the various points enumerated above by tables of analyses. The investigation, which was carried out some years ago in the chemical laboratory of St. Bartholomew's Hospital, evinces throughout the painstaking and scrupulous care which are characteristic of its author.

Dermoids, or Tumours containing Skin, Hair, Teeth, etc. By J. Bland Sutton, F.R.C.S., Hunterian Professor, Royal College of Surgeons, England; Assistant Surgeon, Middlesex Hospital. (London: Baillière, Tindall and Cox. 1889.)—Mr. Sutton's opinions on dermoids were made public last spring in his Hunterian Lectures delivered at the College of Surgeons. The substance of the lectures constitutes the book now under consideration. Mr. Sutton furnishes his readers with a fine series of woodcuts, which greatly facilitates the demonstrations in the text. The chapter on Branchial Cyst deserves the special attention of surgeons and practitioners, the subject being elsewhere interred in the archives of societies only familiar to enthusiastic pathologists and registrars. The chapter on Ovarian Dermoids is particularly satisfactory, tumours of this class being invested with a halo of mystery, owing to the remarkable production of perfect epidermic structures, often in abundance. Substantially, Mr. Sutton agrees with Poupinel. The theory of the author, which demands the most patient and repeated investigation, is that which maintains the mammary rather than sebaceous character of certain bodies found in dermoid cysts. Dr. Velits has published the best physiological and histological evidence on mammiferous dermoids, whilst Mr. Sutton has detected the most perfect examples of mammary glands with nipples in dermoid cysts. The relation of mammæ to sebaceous glands is recognised by the author in this phase of the

question we are reminded of Dr. Champneys's researches on the development of mammary functions by the skin of lying-in women. Pathologists must, however, differ as to the line of demarcation between a pathological, or rather, teratological, sebaceous gland and a similar mammary gland. Analysis of the secretion can alone afford anything like proof.

Yearbook of the Scientific and Learned Societies of Great Britain and Ireland. (London: Charles Griffin and Co. 1889.)—This is a useful book of reference, containing within portable limits a fairly complete list of scientific and learned societies of Great Britain and Ireland, ranged under sixteen sections, giving in each case the date of foundation, list of officers, dates of meetings, list of papers read, and an account of the scientific work done during the year. The information has, we are told, in most cases been furnished by the societies themselves, and may be held to be, so far as it goes, both accurate and complete. This is the sixth year of publication of the volume, which undoubtedly supplies a great want in giving in one volume a list of both metropolitan and provincial societies, with particulars of their objects and organisation.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS,
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

SCOTCH BISCUITS.

We have on several previous occasions noticed the biscuits made by the well-known Scotch firm, Messrs. R. Middlemass and Sons. An addition of four excellent biscuits has lately been made by that house to their lengthy catalogue of biscuits—namely, "Wheaten Rusks," "Oaten Wafers," "Wheaten Wafers," and "Oatine." They are baked to a nicety, crisp, palatable, and nourishing and excellent in every respect.

KOLA NUT BREAD.

A very good loaf of bread, containing, besides wheaten flour, a considerable quantity of ground kola nut, has been submitted to us by Mr. Mitchelhill, of 75, Clerk Street, Edinburgh. The flavour of the bread is hardly distinguishable from that of ordinary bread, but the active principle of kola nut—namely, caffeine—can readily be extracted and identified. The idea of incorporating caffeine with bread, and thus preparing an article of food which shall be at once nourishing and a stimulant, is a good one.

ANTISEPTIC ARTIFICIAL TYMPANIC MEMBRANE.

Dr. J. Ward Cousins (Southsea) writes: Will you kindly allow me to correct an omission in my paper which appeared in the Journal of September 28th? In the list showing the various kinds of artificial drumheads which have been introduced I ought to have mentioned, disc of stout linen with a cotton thread, soaked in vaseline and glycerine—Dr. F. M. Pierce.

"THE DERMIC PUNCTATOR."

Dr. C. Stennett Redmond (Gateshead-on-Tyne) writes: Allow me to point out that the above-named instrument, described and figured under heading of "New Inventions" in the Journal of September 28th, is by no means new, though I have no doubt the idea is original as far as Dr. Smart is concerned.

A relative of mine has in his possession an exactly similar "machine," purchased in America some twenty-five years ago, and supposed to be a certain cure for rheumatic pains, neuralgia, lumbago, and similar ailments. A little bottle was sold with it at a pretty high figure, containing what I thought to be an ethereal solution of cantharides, and was to be applied in a similar manner to that described in Dr. Smart's note.

Mr. J. Benson Cooke, L.R.C.P. (Portland), writes: In reference to Dr. Andrew Smart's description of his "Dermic Punctator" in the Journal of September 28th, it would be interesting to know whether he has seen the so-called "Lebenswecker" (life-quickener), an instrument devised by a German mechanic named Karl Baunscheidt in 1848. He obtained a great reputation for successful treatment of a wide range of diseases by his method of needling the skin over a large surface of the body and limbs, followed by the application of an irritant, pustule-producing oil, the composition of which he kept secret.

Among my notes on the subject I have before me a recent letter from a gentleman in Kensington, expressing his grateful remembrance of Baunscheidt, who, he says, "cured me of paralysis more than thirty years ago." In the "Lebenswecker" the essential part consists of a metal disc, in which are embedded thirty fine needles. This disc fits into an ebony cup or tube, ending in a long hollow handle, which contains a strong spiral spring, which is attached to the disc. When the instrument is used the cup is firmly pressed down on the skin, the needles having previously been drawn upwards into the cup by means of the spring. On releasing the spring the needles dart downwards and simultaneously wound the skin, but only in a very mild degree. The operation is almost painless, while its efficiency as a means of producing counter-irritant effects is very marked, especially when combined with the application of some suitable irritating agent, a pustular eruption of any extent being rapidly produced. I have a sample of the oil used by Baunscheidt for this purpose, but I have not obtained an analysis of it. It appears, however, to be similar in composition to the agents used by Dr. Smart. A full description of Baunscheidt's "Lebenswecker," and the different methods of using it for the alleviation of disease, is to be found in a German work entitled *Die exanthematische Heilmethode, von Dr. Med. C. Hermann Schauenburg*, published in Leipzig by Bruno Zechell, 1876. The instruments also can be obtained of this publisher. In the few cases in which I have used the contrivance for the purpose of counter-irritation it has produced the desired result as efficiently, painlessly, and speedily as any instrument that could be devised—one almost painless blow producing no fewer than thirty minute punctures. A former patient of my own, of the neurasthenic type, gave me a written account of an extensive "needling" over the whole of the back and calves of the legs that he underwent at the hands of an irregular practitioner in Liverpool. He was said to be suffering from "suppressed gout," and he expressed himself as being greatly benefited by the operation.

ROYAL COLLEGE OF SURGEONS.

A quarterly Council was held at the College on Thursday, October 17th, when the minutes of the last ordinary Council were read and confirmed.

The reports from the Museum and Library Committees were received and adopted.

The following notice has been issued by the Council in accordance with the recommendation of the Library Committee:

"The Council having determined to open the Library in the evening as an experiment, notice is hereby given that the Library will be open on each weekday from the 21st instant to the 31st of December next between the hours of 11 A.M. and 9 P.M., except on Saturdays, when it will close as usual at 1 P.M."

The Council further approved the recommendation from the same committee that Professor Muybridge's work on *Animal Locomotion* be purchased for the sum of £105, this sum to include the cost of mounting and binding. This work includes a number of admirable reproductions from Professor Muybridge's well-known photographs.

A report was received from the Committee on the Extension of the College Premises, stating that, on the advice of Mr. Brace Hall, of the London Salvage Corps, and Mr. Salter, the Architect, they recommended the expenditure of about £500 in the purchase of additional fire-apparatus required throughout the College buildings and the two new museums, according to estimates supplied. This report was approved and adopted.

The President was re-elected a member of the Committee of Management, and Drs. T. Stevenson, E. Ballard, Thorne Thorne, and W. H. Corfield, were re-elected Examiners for the Diploma in Public Health for the ensuing year.

The Council heartily approved the recommendation of the Committee of Management, that the period of professional study should be extended from four to five years, and referred it to the Committee to consider and report to the two Colleges on the best mode of giving effect to this recommendation.

Messrs. Langton and Morton Smale were elected members of the Board of Examiners in Dental Surgery.

Mr. J. Hutchinson, jun., received the permission of the Council to publish his Jacksonian Prize Essay.

The Council granted permission to Messrs. Trübner to have a cast taken of the bust of Sir Charles Bell, for the University of Sydney. It was stated that it would not be necessary to remove the bust for this purpose.

Mr. Heath moved "that it be referred to the Nomination Committee to consider and report to the Council on all vacancies occurring from time to time in the Court of Examiners," which was carried.

Bequests.—Of the sum of £2,000 bequeathed by the late Misses Eliza and Jessie Lochore, of Lenzie, to charitable institutions, the following sums have been left to medical institutions: Glasgow Royal Infirmary, £300; Glasgow Western Infirmary, £300; Glasgow Royal Sick Children's Hospital, £200.

In the second medical examination the Bombay list of sixty-two successful candidates in open competition is headed by a girl, she alone passing in the first class.

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members, in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the office.

The British Medical Journal.

SATURDAY, OCTOBER 19TH, 1889.

THE LABOUR QUESTION AND HOURS OF WORK.

IN determining the average hours to which a working day should be limited there are many factors to be considered. Of course the nature of the work must be taken into account in each case. This very general and rather gross way of looking at the labour question is, however, simply a consideration of average physical endurance, and some careful inquiry might well be conducted as to what hours of labour are desirable, on the grounds of health, physical and mental, as well as in accord with the dictates of economic experience. Long hours of monotonous, uniform work may be endured by men and women without direct physical harm, but at the same time they may render the man unimpressionable to other influences, with incapacity for mental life, all active thought being crushed down to the dull level of a monotonous existence. The purpose of public education is to wake up intelligence in the child at school; it is equally to the public advantage to preserve and cultivate mental activity in the adult labourer. The omnibus driver, with sixteen hours of work a day, not only endures prolonged physical strain on the body, the muscles, the heart, and the spine, but he travels the same streets with the same uniform series of objects seen each day, till they cease to produce any mental impression upon him; there is but little variety in his life of work, and no time for other recreation than eating and sleeping. Uniform dulness in a life, without any actual overstrains upon the body destroying its power, may lead to mental vacuity, with no other variation of intelligent action than "passing chaff," or the interchange of a sporting "tip." The daily capacity for labour is limited in each individual man, woman, and child. The true economy of labour for the individual is to make some variation of work. Here we have a direct conflict between that which is good for the man's mental and physical health, and that which suits his instincts or necessities as a money earner; the more varied labour may be best for him, but under many conditions it cannot pay. There are a few happy examples where prolonged labour may be healthily sustained beyond the hours fitted for more monotonous labour. The railway signalman who spends eight hours a day in his box may spend another five or six hours in his garden with advantage to his labour and to his family. It is, however, unfortunately true that the maximum of produce in modern manufacture and trade, especially as conducted on the factory system, is obtained by keeping one worker at one kind of work during the whole period of his physical endurance. Only in a few cases can two occupations in a day's labour be fulfilled with advantage.

The best example is perhaps the allotment ground of the small town or suburb; this is of course impossible in the centre of a city. In some districts a large staff of letter-carriers work half time as tailors, bootmakers, or compositors. In such cases a longer total of labour may probably be sustained without mental or physical harm and with profit to the worker. For shop *employés*, and in other trades, the work may not be very heavy, but still for efficiency may require some continuous display of mental activity and quickness of perception. The mental state of the workers must then be a matter of commercial concern to the employers. Many large retail tradesmen have taken much trouble and incurred heavy expense in making good provision for mental changes—the amusement and culture of their *employés* after work hours—thus recognising not only a moral and social duty, but also the true teaching of economic mental laws. The mental effect of modes of labour is not simply a question of purely intellectual life, but is also a factor of economic value. The mental condition, and the physical state induced by certain forms of labour, is a consideration worthy of notice in getting the greatest amount of work from the individual with the least amount of difficulty or chance of harm on either side.

The willing worker, the mechanic interested in completing a job or in his share of the profits, or better still interested in the work itself, would do more work and keep longer at it without exhaustion than the man without an intelligent interest. A little wholesome competition is enlivening, and acts as a stimulus to work. A promised reward, or fear of general failure in a trade, may stimulate individual energy during the hours of toil, if there be intelligence and a proper feeling of corporate interest and responsibility. For these and other reasons it is probable that it is the interest of the employer, as well as his duty, to consider both the physical and mental well-being of the workpeople. It is a pity that in this and cognate social questions, while so much is said and written, so little pains are taken by those who have opportunity to observe the proportion of cases of ill-health and fatigue among groups of the population. The labour question does not concern men only; large groups of women and girls now undertake labour away from their homes, the numbers thus engaged increasing with the extension of the factory system and the use of machinery in manufacture. Long continued work for women which keeps them standing for many hours is not only fatiguing but is also likely to lead to uterine disorders, anæmia, and chronic exhaustion of the nerve-system. The important condition in the regulation of labour is that rhythm of work and rest, eating and sleeping, recreation and mental stimulus so balanced as to avoid exhaustion, while encouraging full display of each form of activity and repose. There is a hopeful element in the tendency to revert to cottage industries, and to restore to agricultural populations some of the elements of well-being by occupations supplemental to agriculture. If the strong point of factory products is their

cheapness, their weakness is their monotony, and the constant tendency to debase material and design. The prosperity of the manufactures of Germany and France is largely due to the success with which the element of variety and artistic quality has been kept alive by the encouragement of hand industries and the development of artistic faculty in the worker. This is itself a refreshment to the mind, and a source of physical and mental health. The example of the Langdale cottage industries, of those fostered by the Donegal Industrial Fund in Ireland, and of the whole tendency of the exhibits at the "arts and crafts" galleries in London gives some hope that the lesson thus taught may be of large benefit to our British workers.

ANCIENT SURGERY IN GERMANY.

Ambroise Paré, who became a master barber-surgeon in 1536, and died in 1590, has been called the reformer of surgery, and the French claim in particular that their illustrious countryman was the first to apply the ligature to arteries. Professor Edmund Rose, in an address delivered before the "Freien Vereinigung Berliner Chirurgen" May 13th of this year,[1] laid before the meeting a copy of a work dated 1497, by Jeronymus Brunschwyg, a Strasburg surgeon. On page 19 of this work is a coloured woodcut of an operation room, with a description of various instruments then in use—the amputating knife and saw, various probes, needles in handles, small hooks for taking up arteries ("damit aufzuheben die Adern"), small and large spatulæ, bent to assist in drawing out the ligature ("die do Haar uss ziehen)", etc. Further on the whole *armamentarium* for the extraction of shots or pellets is given. It must be remembered that the arquebuss, the first form of gun fired by a trigger, first came into use about the middle of the fifteenth century. On page 51 are represented six simple trephining instruments.

Professor Rose is troubled because even in the latest edition of a well-read German surgical work Paré is still called "the reformer of surgery," whereas his surgery was still "barbaric" when other surgeons had made advances. His oxen with human heads are exactly the same as in Licetus. He was not the first to abandon the old way of treating gunshot wounds (namely, by pouring boiling oil into them), nor did he discover the ligature of arteries, or bring it into general use. Petit, himself a Frenchman, protested against this prevalent idea in the eighteenth century, and at the close of that century Mursinna, in Berlin, commended his way of controlling hæmorrhage after removal of the mammary gland. A plug with a complicated dressing was fastened over each separate artery. Jeronymus Brunschwyg's own words run thus;—

"Das ist, so du siehest ein Ader fast pluten, als an dem Hals die Giessader (carotid) oder ein verwundete Pulsader, dass du die Ader herauziehest mit der Nadel und dadurch stichest, und inter Nadeln die Ader verknüpfest mit dem Faden, der do in der Nadeln ist, und dann der Nadeln durchziehest. Und ein Stücklein Fadens an der Ader bleibt hengen, über etlich Tag verfuelet das ober Theil des Adern, und geht der Faden heraus." [That is, that when you see an artery bleeding fast, such as the carotid in the neck, or a wounded "pulse-artery," you draw out the artery with the needle, and thereby penetrate, and tie the artery behind the needle with the thread which is in the needle, and then draw out the needle. And a small piece of thread is left hanging from the artery. After some days the upper end of the artery mortifies (decomposes), and the thread is detached.] These words are plain enough; the man who uses them had evidently ligatured arteries himself.

As regards gunshot wounds, old Jeronymus Brunschwyg acted on the sound principle of extreme cleanliness. He spoke of poisoned arrows, etc., just as we, a few years ago, talked of "infected" wounds without any clear idea of wound diseases. He cleansed the wound with violet or linseed oil (occasionally camphorated), and expressly says "ein wenig gewärmt" (a little warmed). Thus, he did not advocate the use of boiling oil in such cases. Long afterwards Ambroise Paré omitted the use of this latter means of treating gunshot wounds on one occasion, and tells us that he could not sleep that night from anxiety for his patient's welfare. As to washing with goat's milk, this had already been recommended by Henrich von Pfolsprundt in his *Buch der Bündth-Ertznei*, published in 1460. The above fluids were evidently found to be antiseptic, or rather free from nocuous germs of their own, hence their proved utility on many a battle ground.

The unguentum elemi has been called the balsam of Arcæus. We find the same balsam in Brunschwyg's work. Here it is spoken of as "that best of all balsams for recent wounds that can be had, and its like can hardly be found." And, again, "it almost makes flesh grow." But, in another place, he inveighs against the indiscriminate use of "that Strassburg balsam, discovered about the year 1460, and now spread abroad throughout all Germany."

Refracture after faulty union of fractured ends of bones has been attributed to a Swabian surgeon of the name of Bosch, who lived in the middle of the last century. This also is bosh. Brunschwyg did the same thing; he either broke the bone across his knee or laid the limb, enveloped in a cloth, across two supports, and trod on it with the naked foot. Extension was effected gradually by screws, that is in recent cases,—old ones were let alone, on the principle, as we are told, that it is "better to be alive and limp, than to die even with a straight limb."

"Window" bandages were recommended for compound fractures and wounds. A "doltdrank" was given sometimes to overpower a patient with sleep, so that incisions might be made and a fragment of an arrow, etc., removed without pain. The chief ingredient was opium. Ancient surgery in Germany, to judge of this work, had evidently arrived at a high pitch before Ambroise Paré was born.

[1] *Berliner klin. Wochenschrift*, July 1st, 1889.

CRIMINAL RESPONSIBILITY IN DELIRIUM TREMENS.

It is somewhat remarkable that a recent decision of Lord Young on a charge of child murder by neglect and starvation —a decision unique in the annals of criminal jurisprudence— should have escaped public attention. In the past there have been a few acquittals and many convictions on similar pleadings; but Lord Young has created a new legal precedent by peremptorily refusing to allow the case to go to the jury.

At the last circuit of the High Court held at Glasgow, Elizabeth Short, wife of a sergeant in the Highland Light Infantry, was charged with culpable homicide. The indictment ran that, between July 6th and 11th, 1889, in the residence of her husband at Hamilton Barracks, she neglected to provide with necessary food, clothing, and nursing her infant son, in consequence of which he died on July 11th, and was thus killed by her. Mrs. Bisset, wife of a colour-sergeant in the same regiment, deposed that the prisoner was delivered of the deceased baby at the barracks on June 2nd. On the 6th witness found the child small but healthy. On that day the accused was the worse for drink, and was so also frequently. At three weeks old the baby appeared to be falling back. One day, when the mother was very drunk, the baby was in a bad state and the house was very dirty. Though the child often cried, witness never saw the accused illtreating her baby. Mrs. McFarlane, wife of another sergeant, said that the prisoner's husband left barracks for the camp at Lanark; prisoner was drunk every day. When witness took charge of the child, it was in a filthy condition and ravenously hungry. Dr. Beith, military surgeon, testified that the child was small but healthy. On July 6th the mother was suffering from alcoholism, and on July 8th from delirium tremens. The house was very dirty. He had the child taken away, but it was afterwards returned to the mother. A *post-mortem* examination showed that the child died from debility and ulceration of the bowels caused by starvation and neglect.

After the Crown counsel had contended that the charge of culpable homicide had been established, Lord Young, without calling on the counsel for the accused, said that no evidence had been adduced which would legally justify a verdict of culpable homicide. If a woman designedly withheld food and care, without which the child would not thrive, in order to injure the child, that would be a crime. But he denied that it was murder, culpable homicide, or any crime punishable by law in that court, for either a woman or a man to drink too much whisky, or get an attack of delirium tremens, which was insanity. The mother's conduct was most reprehensible, and so was her husband's, who persisted in procreating children by a dipsomaniac, and leaving her to attend to them, though she was really incapable of such a trust. This was a case for moral reprehension only. Resolute efforts, not yet completely successful, were being made to induce the Government to provide for the compulsory treatment of such cases in suitable homes. In this case there was no intention to injure, and he must rule that there was no proof of any crime. The jury, therefore, returned a formal verdict of "Not guilty," and, at their request, the judge severely reprimanded both husband and wife.

This is the most radical action which has been taken by any judge in dealing with a charge of an alleged criminal offence complicated with delirium tremens, and it is a further development of a series of recent remarkable deliverances by our administrators of criminal law. Mr. Justice Day ruled "that whatever the cause of the unconsciousness, a person not knowing the nature and quality of his acts is not responsible for them" (Reg. *v.* Baines, 1886). Chief Baron Palles ruled that if any one, from long watching, want of sleep, or depravation of blood, was reduced to such a condition that a smaller quantity of stimulant would make him drunk than would do so if he were in health, then neither law nor common sense could hold him responsible for his acts. (Reg. *v.* Mary R., 1887). Baron Pollock ruled that if at the time an alleged murder was committed (though the prisoner had been a drunkard and had had delirium tremens) he had taken only such a quantity of intoxicating liquor as an ordinary man could take without upsetting his reason, an insane predisposition being the main factor, although the drinking of a small quantity of alcohol was the contributory cause, the plea of irresponsibility was good. (Reg. *v.* Mountain, 1888). These judicial utterances, capped by Lord Young's declining to send the case of Elizabeth Short to the jury, really portend a revolution in our criminal jurisprudence.

THE Senate of the University of London will meet for the first time since the long vacation on October 23rd.

THE annual meeting of Fellows and Members of the Royal College of Surgeons of England, to receive the annual report of the Council, is announced to be held on November 7th, at 3 P.M.

THE Royal Victoria Hospital, Bournemouth, erected in commemoration of the Queen's Jubilee, will be opened by His Royal Highness the Prince of Wales on January 16th next.

THE German Imperial Ministry of the Interior has made a grant of 80,000 marks (£4,000) towards the expenses of the International Medical Congress, to be held at Berlin in 1890.

SURGEON-GENERAL SIR THOMAS LONGMORE, C.B., Professor of Military Surgery Army Medical Staff, who has been sent over to the Congress of Surgery at Paris as a representative by the Secretary of State for War, and who was elected by the Congress as one of its *Presidents d'honneur*, was very warmly received by the President, Baron Larrey, who eulogised him in his opening address.

MR. OLIVER PEMBERTON, Professor of Surgery in Queen's College, Birmingham, delivered the introductory address in the theatre of St. Bartholomew's Hospital, on the occasion of the opening night of the session of the Abernethian Society. There was a large assembly of the staff, students, and nurses, the subject being on "The Progress of Surgery—a retrospect of forty years, and as to the measure of aid the School of St. Bartholomew's afforded both previously and during that period."

HOSPITALS ASSOCIATION.

THE first general meeting of the seventh session of this Association took place in the Board Room of the Charing Cross Hospital, on October 16th. The President, Dr. Bristowe, gave an address on the work of the Association since its inauguration at a meeting of the Social Science Congress in 1883.

THE ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

THE first meeting of the Royal Medical and Chirurgical Society for the session, will be held on October 22nd at the Society's new house, 20, Hanover Square. A portion of the library has been temporarily adapted for the purpose of the meeting. An address wil be delivered by the President (Sir Edward Sieveking). Two papers are set down for discussion—by Dr. G. T. Oliver on Acute Lead Poisoning, and by Mr. Bland Sutton on Ruptured Tubal Pregnancy.

A PAUPER DISPENSER.

THE practice of leaving a pauper in charge of a workhouse dispensary is one which it is startling to find still in existence in any part of the kingdom. According to the *Birmingham Daily Gazette*, three women were last week rendered seriously ill by the unfortunate mistake of a pauper left in charge of the Birmingham Workhouse Dispensary putting up for an aperient mixture of two drachms of Epsom salts and peppermint water the same quantity of sulphate of zinc and alum, which was kept in a tub similar to that containing the salts. The dispenser, who during his dinner hour was in the habit of leaving the pauper in charge of the dispensary, is said to be an unqualified dispenser.

THE LATE DR. JOULE.

DR. JAMES PRESCOTT JOULE, who died at Sale on October 9th, in the 71st year of his age, was one of the most distinguished men of science which this country has ever produced, and is entitled to be reckoned one of the greatest of original workers in pure science. His great achievement was his determination of the mechanical equivalent of heat. The consequences flowing from the working out of this problem, which was achieved by Dr. Joule with the most consummate skill and admirable completeness, are to be noted in almost every department of science; upon his demonstrations the whole theory of the correlation of forces is mainly based. The most important practical applications have been in the mechanical arts, but even physiology is his debtor.

THE ROYAL HOSPITAL FOR DISEASES OF THE CHEST.

WE regret to learn that the dispute between the Council and Governors of the Royal Hospital for Diseases of the Chest, City Road, continues. After the Council had met and refused to alter their decision respecting the dismissal of the Secretary, a large meeting of the Governors was held, Mr. George Berry occupying the chair. After some discussion it was moved by Mr. J. D. Spires, seconded by Mr. J. A. Chapman, and carried unanimously: "That a requisition be signed by twenty governors calling upon the Council to summon a meeting immediately to take such steps as shall ensure the peaceable working of the hospital in the future." That such an aim may not be missed is, no doubt, the sincere desire of all parties, including two other important bodies in relation to the City Road Hospital beside the Council and Governors, that is to say, the patients and the medical staff. No doubt it is difficult to determine the limits between irresponsible and mischievous gossip on the part of a hospital official, and natural, or even legitimate and necessary, discussion by that official of any subject in relation to other persons concerned in the same institution.

TREATMENT OF PAUPER INEBRIATES.

A THIRD circular has just been issued to about 700 boards of guardians on the treatment of pauper inebriates, by the Inebriates Legislation Committee. After calling attention to the difficulty experienced by many boards in dealing with the intemperate "ins and outs," who enter the workhouse for the purpose of recovering from the effects of their potations and of recovering the capacity to drink to excess anew, the circular states that many of these habitual inmates are the victims of a diseased condition which sets up an overmastering impulse or crave for intoxication. For such the only chance of cure is seclusion from intoxicants under proper medical treatment, securing freedom from temptation, with the adoption of every means helpful in the restoration of the lost will power. The Committee state their belief that it would be true economy to deal with such diseased paupers under compulsory reception and detention clauses to be added to the Inebriates Acts. The Committee ask boards of guardians for an opinion as to their investment with the power (if they choose to exercise it) of paying for the treatment of inebriate inmates, either in the workhouse or in some special institution. The second circular had considerably more favourable replies than the first, and a still more affirmative response is hoped for now.

NUISANCE, OR INJURIOUS TO HEALTH?

THE view is gaining ground amongst the magistracy that it is not necessary under the Public Health Act or Nuisances Removal Act to prove injury to health in order to constitute a nuisance. This view—or rather the opinion that a nuisance is that which may be injurious to health, and not necessarily that which has been—was taken by the Court of Appeal in the Bishop Auckland case. In the case of Banbury *v.* Page, too, the offence of keeping swine, so as to be a nuisance under Section 47 of the Public Health Act, was held to be complete without any evidence of there being injury to health caused thereby. In a recent case at the Marylebone Court, Mr. Cooke made an order for the abatement of nuisance from brick-burning in a northern suburb, and at the same time expressed the opinion that it was not necessary to prove that the nuisance was injurious to health. On the other hand, the Birmingham magistrates last year refused to make orders for the closure of polluted wells on the ground that it had not been shown that the water was the cause of injury to health, and that, therefore, it was not proved, in the words of Section 70, that the water was "so polluted as to be injurious to health." Some uniformity in the magisterial decisions of these "nuisance" cases is urgently needed. The weight of authority is in favour of those who do not insist on the injury to health, and this view is certainly most in consonance with the spirit of the Sanitary Acts. Its more general recognition by the courts would prove of immense benefit to local authorities in their endeavours to suppress nuisances of all kinds.

NATIONAL PENSION FUND FOR NURSES.

AT the ordinary general meeting of this fund, held on October 15th, it was reported that the results had, up to the present time, far exceeded the expectations of the Council. In the first year they had been enabled to pay all their expenses, to enrol over 1,000 nurses, and to invest for their benefit about £40,000, including the annuity and general accounts. It was strongly recommended that an appeal should be made to the general public to assist so good a work. It would be a great stimulus to nurses to join in large numbers. The donations could take the form either of a lump sum paid to the bonus fund, or of an annual subscription. If anyone desired to benefit a particular nurse to whom he might feel indebted, the Council would open a special account for the sum given, and apply it especially to the nurse mentioned. It was stated that Lord Rothschild and the other gentlemen who had respectively advanced the sums of £5,000 each, for the purposes of the fund, had each converted them into gifts to the Society; and Mr. Morgan had presented a second donation of £5,000 to the bonus fund.

THE STERILISATION OF FÆCES.

DR. CHARLES J. FOOTE, of New Haven, Connecticut, has published in the *American Journal of the Medical Sciences* a series of experiments performed in the laboratories of the Yale Medical School. He sought to determine whether corrosive sublimate were a good disinfectant for fæces, and, if not, whether this were due to the formation of inert, insoluble compounds of mercury with the fæces. Dr. Foote further endeavoured to discover the relative value of certain other disinfectants used for this purpose. He insisted that the only sure method to determine the value of

corrosive sublimate for disinfecting fæces was to mix that chemical compound with fæcal matter, and inoculate some culture medium from the mixture after a certain number of hours, so as to detect whether it were sterile. The experiments lead him to distinct conclusions. The best disinfectants to use were the bichloride with hydrochloric acid, the bichloride with potassium permanganate and the chloride of lime. Five per cent. solutions of carbolic acid and two-tenths per cent. solutions of the bichloride were unreliable, even when used in the proportion of one pint to every 100 cubic centimètres of dejection. Emphasis must be laid on the necessity for thorough disintegration of the fæcal matter by stirring with the disinfectant, and on the necessity of allowing the mixture to stand four hours at least before emptying. For continued use, the bichloride solutions would injure lead pipe, while, if used for a few days only, no injury would be likely to result. For long continued use, where the dejections were thrown into a water-closet, chloride of lime was undoubtedly the most available disinfectant. Solutions of chloride of lime should be kept tightly corked, and should not be used after they are one week old.

THE COUNTY COUNCILS AND SANITARY ADMINISTRATION.

THOSE who looked forward to the new County Councils taking an active interest in sanitary progress, and supplying a stimulus where that was needed, have some reason for disappointment. The new bodies have not, it is true, any direct responsibilities for the administration of the Public Health Acts, but indirectly they have the power, if they choose to exercise it, of exerting a strong influence upon sanitary affairs. Under the Local Government Act, 1888, they have the power to appoint a medical officer of health, but, with the exception of London and the West Riding of York, the question of appointing such an officer has either been ignored or postponed till a more convenient season. This is to be regretted, as there is ample work of great public utility for capable county health officers, and we trust that gradually this truth will be realised by the county authorities, after the finances and other specially pressing questions have been satisfactorily settled. There is also the question of dealing with the pollution of our rivers. Much reform is needed in this direction, and it was hoped that the special powers with which the County Councils were invested by the Local Government Act would enable a new departure to be taken for purifying our streams. But there has been very little indication of such action up to the present time, and we fear not much prospect of it in the near future.

METHYL CHLORIDE AS A LOCAL ANÆSTHETIC.

DR. ERNST FEIBES, in a recent number of the *Berliner klinische Wochenschrift*, draws attention to the extensive and successful use in the Paris hospitals of methyl chloride as a local anæsthetic. Methyl chloride (CH_3 Cl) is a colourless, easily liquefied gas, with an odour resembling that of ether and chloroform. The readiness with which the gas liquefies adapts it for convenient use, as it can be stored in a siphon, or in a bottle of any size specially constructed to conduct heat badly. It may be applied to any surface directly from the siphon, or as a spray, but this method is objectionable, owing to the anæsthetised area not being in most cases sufficiently circumscribed. Bailly uses the following method, which he calls "stypage": Tampons composed of cotton-wool, surrounded by a layer of flock-silk and then covered with thin silk, are saturated with methyl chloride, and applied to the part by means of wooden or vulcanite holders. After contact for some seconds the part gets pale and anæmic, and diminishes in sensitiveness. If the tampon be then removed there is marked reaction, shown by congestion and slight itching; but if the application be continued for a short time longer (a few seconds) the skin assumes a white, dried, parchment-like appearance. This is the time to operate. If you proceed further superficial necrosis may result. The application is sometimes succeeded by itching and an urticaria-like eruption. It is employed in all kinds of small operations—circumcision, opening abscesses, and in neuralgia, lumbago, muscular pains, gout, etc. In scraping lupus it is best applied by means of a camel-hair brush, as special parts can then be anæsthetised with perfect precision.

FATALITY UNDER NITROUS OXIDE GAS.

OUR Edinburgh Correspondent last week drew attention to a death which took place in the operating room of a dentist after the administration of nitrous oxide. The occurrence is fortunately very rare but it seems advisable to ask whether this anæsthetic is as safe as it is usually considered to be. The patient, Lady Milne, was a woman aged 71, of stout build, and under treatment for fatty degeneration of the heart. She had been referred to the dentist by her medical man, in order to have two teeth removed and an opening made into the antrum. It appears that Lady Milne very much dreaded the operation, and was heard to remark she feared she would not survive it. At 9 A.M. she breakfasted, but it seems her food remained wholly undigested, for during the performance of artificial respiration, undertaken when breathing ceased, it was ejected unchanged. The operation took place at noon. The dentist noticed whilst he gave the gas that Lady Milne breathed very shallowly, and he begged her to inspire more forcibly, but this she failed to do, for, as was afterwards discovered, her corsets and clothing were so tightly bound round her that normal breathing was simply impossible. As soon as consciousness had gone the teeth were extracted and the antrum perforated. It was then observed by the dentist and his assistant that Lady Milne had become livid, had ceased to breathe, and her heart had stopped beating. Although artificial respiration was resorted to, the tongue being drawn forward, while the stays were with difficulty slit up with a knife, and nitrite of amyl exhibited, she never showed signs of life. Medical aid was promptly summoned, but in vain. That nitrous oxide will be blamed is certain, but a dispassionate consideration of the circumstances seems to point rather to the neglect of precaution on the part of the patient than to any particular danger from the anæsthetic. It is clear Lady Milne died from mechanical rather than from poisonous agency. Persons, even with fatty heart, although of course they are the least adapted for any kind of anæsthetic, take nitrous oxide with impunity; but the recumbent posture, with absolutely loose clothing and a stomach not distended with gases and undigested food, are conditions which can hardly be omitted without grave risk. The dentist who gave Lady Milne gas seems to have regarded her statement about her weak heart as merely the expression of a highly nervous woman, but we cannot but think it is wise in all such cases to give the patient the benefit of the doubt, and adopt the precautions to which we have above alluded.

THE DIGESTIBILITY OF BOILED MILK.

IT is now very regularly recognised, both by medical men and by the more highly educated section of the community, that it is a wise precaution to boil both water and milk before using them as beverages, and the practice is becoming very common. The growth of pathogenic organisms in these fluids, especially in milk, is often very rapid, and thus diseases may be transmitted from one place to another. The temperature of boiling water puts an end to the life of the microbes, and also to the danger of infection. Another reason why boiled milk is so much used, especially in infant feeding, is that it is supposed to be more easily digestible than fresh milk. If, however, we can draw correct deductions from dogs to babies, it would now appear that this

belief in the superior digestibility of boiled milk is founded on error. Dr. Randnitz, of Prague, has recently published, in Hoppe-Seyler's *Zeitschrift für physiologische Chemie*, certain very striking experiments on this subject. He admits what anyone may confirm for himself, that milk that has been boiled does not on cooling and the subsequent addition of rennet, form a large coherent clot as does fresh milk; but a flocculent precipitate of casein is produced instead. He shows, however, by analysis of the milk itself, and of the urine and fæces, that much less nitrogenous material is absorbed from milk that has been boiled than from the same milk when fresh. The digestibility of fat is apparently unaltered by boiling; the following figures, however, illustrate the fact just alluded to as to the difference of digestibility of the proteid materials; in three days, 15.6 grammes of nitrogen were given in the form of fresh milk; of this quantity, 13.3 per cent. was found in the fæces; the nitrogen of the urine accounted for 77.3 per cent., so that 9.4 per cent. was retained in store by the growing animal. The animal was next fed on boiled milk; and 10.4 grammes of nitrogen was given in that form in two days; 18.6 per cent. of this was found in the fæces, 75.7 in the urine; so that only 5.7 per cent. was assimilated. The belief in the superior digestibility of boiled milk is, however, so widespread, that we should like to hear of the confirmation of the above remarkable results before we recommend mothers to leave off what is, from other points of view, the very praiseworthy custom of boiling the milk they give to their children.

INFECTIOUS DISEASES (NOTIFICATION) ACT.

It may not be amiss to remind our readers, particularly those who reside in the metropolis, that this Act will take effect on and after October 30th in London. The Local Government Board issued, along with the circular (published on September 21st, p. 685) to the various local sanitary authorities, a form of certificate to be supplied gratuitously by each local authority to the registered medical practitioners resident within its area. The form of the certificate is the following:

——(District of the Local Authority)——. To the Medical Officer of Health. I hereby certify and declare that in my opinion (name of person suffering from the disease), an inmate of (name of number and street, etc.), is suffering from (name of disease). Dated the —— day of ———, 18—. Signed ————, Medical Practitioner.

The certificate must (under a penalty not exceeding 40s.) be sent to the medical officer of health forthwith on the medical practitioner attending on, or being called in to visit, the patient, becoming aware that the patient is suffering from an infectious disease to which the Act applies—namely, any of the following diseases: small-pox, cholera, diphtheria, membranous croup, erysipelas, the disease known as scarlatina or scarlet fever, and the fevers known by any of the following names: typhus, typhoid, enteric, relapsing, continued or puerperal, and also any infectious disease to which the Act has been applied by the local authority in manner provided by the Act. It will be noted that measles, rötheln, and whooping-cough are not included amongst the diseases to which the Act applies, and that the age of the patient is not mentioned. The certificate, in fact, is simple to a degree. The local authority is authorised to pay for every certificate sent by a medical practioner in accordance with the requirements of the Act a fee of 2s. 6d. if the case occurs in the course of his private practice, or a fee of 1s. if the certificate is given in respect of a case occurring in his practice as medical officer of any public body or institution. A certificate may be sent to a medical officer of health by being delivered to the officer, or being left at his office or residence, or may be sent by post addressed to him at his office or residence.

ATRESIA VAGINÆ AND HÆMATOSALPINX.

Atresia of the lower part of the genital tract, with retention of menstrual fluid, is a well-known pathological condition. The vagina rather than the hymen is at fault. Dr. Fuld, of Heidelberg, describes in the *Archiv für Gynäkologie* a case where a girl, aged 15, suffered from duplicity of the genital canal, with unilateral atresia vaginæ, hæmatocolpos, hæmatometra, and hæmatosalpinx. The blood was evacuated from the vagina by means of a trocar and the knife, then the abdominal cavity was examined, and the hæmatosalpinx punctured, the affected tube being removed when empty. The walls of the uterus were much hypertrophied. The late Professor Breisky found not only the uterus, but also the vagina, hypertrophied in a case of atresia, the vaginal walls contracting powerfully one week after operation. In Dr. Fuld's case recovery was retarded by premature closure of the opening made in the vagina at the end of the seventh week. A cystic tumour formed, which proved to be an abscess, bursting into the lower part of the vagina in the tenth week. The uterine orifice of the distended tube was wide, hence Dr. Fuld thought that in this case, at least, hæmatosalpinx was due to reflux of blood from the uterus, and not, as some believe, to hæmorrhage from the tubal mucous membrane. Dr. Fuld has collected 65 cases of atresia with hæmatosalpinx. In 48 death occurred from the malformation, including 39 cases where the patient underwent operation. In cases not subjected to operation death is usually caused by bursting or suppuration of the tube. Dr. Fuld recommends the double operation, which he performed, as above described, and considers that this proceeding is especially necessary when the tube has burst. He considers that a circular piece of the vaginal wall should be cut away around the seat of puncture of the hæmatocolpos.

THE CONDITIONS OF INTRA-UTERINE INFECTION.

Infection of the fœtus before birth is a recognised fact, but it is, perhaps, too readily assumed that infective material may pass from the maternal into the fœtal blood by the normal channels of embryonic nutrition. Dr. Romeo Mangeri, of Catania, believes this to be impossible. As the result of wide study of the literature of the subject and of original experiments, he has come to the conclusion that no formed elements naturally pass out of the mother's blood into the fœtal circulation. Cinnabar, Indian ink carmine, and other materials were injected into the jugular veins of animals advanced in pregnancy, but in no case could any trace of the substance employed for experiment be found in the fœtus. Passage of formed elements can only occur when the maternal placenta becomes diseased by inflammation, hæmorrhages, etc.; so that the walls of the villi are destroyed. Only under these conditions can septic or specific organisms pass from the mother into the blood of the fœtus.

LANDMARKS FOR CEREBRAL TOPOGRAPHY.

The great advance in cerebral physiology of late years has been attended with corresponding advances in cerebral surgery, and we have an important contribution to the external landmarks for the topography of the brain by Mr. Anderson and Mr. Makins, in the *Journal of Anatomy*. The methods of previous English and foreign writers have been somewhat unsatisfactory, as is evident by contrasting the rather contradictory indications for finding the important points of the brain which are likely to be the seat of disease, and we have in this paper what appear to be very practical lines upon which surgeons may look in their rather difficult explorations. Certain guiding lines are devised between points which are distinguishable through the scalp. The "sagittal' extending from the glabella to the external occipital protuberance, the frontal running parallel with the face from the mid-sagittal point to the front of the tragus, and the "oblique" running from

the external angular process of the orbit through the junction of the middle and lower thirds of the frontal line, and prolonged about an inch and a half beyond this. Taking these as the guiding lines, the localities of certain brain areas are indicated in fractions of the lengths of these lines rather than in inches, and thus the measurements are made to be applicable to any shape or size of head. There is no doubt that the lines chosen here and the principle of proportionate distance are advances upon the methods adopted by previous observers, whether foreign (as Lucas-Championnière, Féré, Merkel, Hefftler, etc.), or English (Hare, Reid, Horsley, Thane, and Godlee, etc.); and it is probable that the figures given by Messrs. Anderson and Makins will prove of great service to operating surgeons. The frequent variations in cerebral topography are recognised in this paper, and the axial points of a number of observations are selected.

WHITECHAPEL: THE TRAINING OF THE CHILDREN.

THE facts of the recent great strike, a letter from the Bishop of St. Albans, and other warnings from those who are well acquainted with the poor of East London, have drawn attention to the probability of social trouble among the labourers, which may be expected to become more pressing during the approaching winter. The mere fact of the advancement of wages now promised to the dock labourers is an indication that many competitors for a living will be drawn into London, the largest proportion of whom will, it is to be feared, find themselves without the means of living when the nip of starvation and cold is most pressing. In the current number of the *New Review* the Rev. Samuel A. Barnett contributes an article on Whitechapel, drawing attention to the "residuum of humanity" accumulated in that district; too often those who fail elsewhere come to London, where, among the conditions of over-crowding and high rents, they increase the surplus population, and augment its attendant moral and social evils. What to do with a non-efficient portion of an adult population who are unfitted by physical weakness and untrained brain-power to earn a respectable subsistence is a great and pressing question, and to deal with it passes the power of the philanthropist and the statesman. The abolition of outdoor parochial relief in Whitechapel has proved to be a move on right lines by discouraging the immigration of paupers to London; but this has by no means settled the question. The child is father to the man, and the child who presents signs of low development and feeble brain-power is more likely to fail in the competition of the world than the strong and well-developed child, unless means are taken to train him for some special duty in life. If any special and carefully planned means are to be used for training these weak, poorly-developed, weak-brained children, it is necessary that they should be known to the teachers and the school authorities. In the report on the condition of school children, published by Dr. Francis Warner, in connection with a committee of the British Medical Association, it is shown that 399 children (boys 274, girls 125) out of a total 5,344 seen presented some visible signs of defects in development. The larger part of the lower class children were seen in two certified industrial schools and a large pauper school. The aggregate of experience shows that such children tend—unless the tendency is counteracted—to failure, low living, and degradation. It seems, then, that one means of lessening large masses of helpless people to which attention may be directed would be to take special educational care of those children who show some tendency to failure. Many of these feeble children are now absent from the school, which they dislike, and which is unsuited to many of them. The report of the Royal Commission on Blind and Exceptional Children shows that "there is an intermediate class of backward and feeble-minded children, who are at present simply excused from school attendance." The feeble children are present in large numbers among the out-patients of our hospitals; no due provision is made for their education; if they are unable to follow the work of the ordinary classes they grow up unnurtured, and many of them add largely to the "residuum of humanity" in all our large cities. The days of early youth afford the best chance of benefiting those whose inheritance is defective; scientific study has shown how children may be classified, and further study would probably demonstrate the best means of influencing them. Mr. Barnett speaks strongly of the evils that result from congregating masses of degraded humanity in confined areas, where those who would do well under better surroundings become degenerate through imitation. To try and reform those who do no good is a very hopeless task; to select the children specially tending to failure, to provide good and suitable educational influences and teach them to work even if they continue to live at home, seems a more hopeful mode of attaining the end desired.

SCOTLAND.

EDINBURGH UNIVERSITY UNION.

THE most important addition to the Edinburgh University life for the coming session is the Students' Union, which closely abuts on the medical class-rooms. This week the building has been visited by an extraordinary number of undergraduates. There seems every reason to expect a career of the utmost prosperity. The Union will be formally opened to-day (Saturday) by the Lord Justice-General, the Chancellor of the University.

MEDICAL EDUCATION OF WOMEN.

THE Association for the Medical Education of Women in Edinburgh has made good headway, and is receiving influential support, both lay and professional. The subject was discussed in most friendly fashion by one of the members of the Medical Faculty of the University in his opening lecture. Classes have been begun this winter, and a good start has been made with students. Dr. Hunter lectures on Physiology; Dr. R. W. Philip on Practice of Physic; and Dr. Scott Lang on Practical Surgery. Arrangements are also in progress for Practical Anatomy.

OPENING OF THE WINTER CLASSES AT EDINBURGH.

THE winter session of the medical classes in connection with Edinburgh University and the Edinburgh School of Medicine was commenced on Tuesday. On all sides there is evidence of the continued success of the school. Many of the classes are reported as fuller than ever. The University classes of Chemistry, Anatomy, and Materia Medica were opened without formal introduction. In the department of Practice of Physic Professor Grainger Stewart gave an outline view of the scope of modern medicine, grouping the diseases broadly as they were induced by faults of the chemical processes, by faulty action of the nervous system, or by deficient vitality of the tissues. Professor Chiene congratulated the school on the improved regulations relating to the first professional examination, and indicated that, so far as his department was concerned, the change had been fraught with the best results. In enjoining on his students the necessity for courtesy and gentleness in their relations with patients, especially the poor, he deprecated the commonly used expression "medical etiquette." The expression had done much harm, inasmuch as the lay public had come to suppose that there were special rules of conduct connected with the relationship of patients and doctors, and doctors and doctors. Medical etiquette simply meant doing as they would be done by. Professor Simpson discussed the question of the medical education of women, and spoke strongly in favour of all possible advantages being brought within their reach, more espe-

cially in view of the big field which lay, in a peculiar sense, ready for them in China and India. If provision could be made for the graduation and instruction of such women in their city, it would be matter for congratulation. Professor Rutherford discussed the sense of sight; and Professor Greenfield the recent advances in the understanding of pathology. In connection with the Edinburgh School of Medicine several new lecturers are announced: Dr. Ralph Stockman on Materia Medica, in succession to Dr. Craig, who continues to lecture on the same subject at Surgeons' Hall; Dr. Geo. H. Gibson and Dr. R. W. Philip on Practice of Physic; and Dr. Mathieson on Midwifery.

GLASGOW ROYAL INFIRMARY.

Dr. J. Lindsay Steven has been appointed Pathologist and Curator of the Museum of the Glasgow Royal Infirmary. This appointment carries with it that of Lecturer on Pathology to the St. Mungo's College. Dr. George S. Middleton has resigned his appointment as Dispensary Physician to the Infirmary.

GLASGOW MEDICAL SOCIETIES.

The annual business meeting of the Glasgow Southern Medical Society was held last week, when the following office-bearers were appointed:—*President:* Robert Pollock, M.B. *Vice-President:* James Erskine, M.A., M.B. *Treasurer:* James Hamilton, M.B. *Secretary:* Alex. Miller, L.R.C.P.E. *Editorial Secretary:* John Brown, M.D. *Seal-Keeper:* R. A. D. Robb, M.B. *Court Medical:* Drs. Glaister, Morton, Macmillan, Gilmour, and Rankin. *Members to complete Council:* Drs. Tindal, Barras, and McPherson. The Glasgow Pathological and Clinical Society held their first meeting on Monday last, when a specimen of a multilocular cystic tumour of the lower jaw, associated with an encysted tooth, was shown by Dr. Henry Rutherfurd; cases of paralysis of the vocal cords were brought forward by Dr. David Newman; and Dr. Lindsay Steven showed water-colour drawings of a case of skin disease presenting the characters of dermatitis herpetiformis.

IRELAND.

DEATH FROM CHLOROFORM.

A death from the inhalation of chloroform occurred at the Richmond Hospital on Saturday last. The patient was a woman who was about to undergo amputation of the thumb. She had taken a very few inspirations when her face was observed to become deeply congested. The administration of the anæsthetic was at once stopped, artificial respiration was set up, and the external jugular vein was opened, but she never rallied. At the *post-mortem* examination the heart was found to be infiltrated with fat and the brain to be congested. The coroner's jury found that the anæsthetic was skilfully administered.

BANQUET TO SIR JOHN BANKS, K.C.B.

Sir John Banks, K.C.B., Senior Physician to the Richmond, Whitworth, and Hardwicke Hospitals, is to be entertained at a banquet by the old pupils on Wednesday, the 30th. Already a very large number have intimated their desire to share in this expression of the high regard in which he, their old teacher, is held. Dr. Nugent, 4, Upper Mount Street, Dublin, is the Secretary.

ROYAL COLLEGE OF SURGEONS.

Dr. Kidd, not having been able to take the declaration within the prescribed time on his election to the Council, has resigned, and offers himself for re-election. Dr. A. H. Corley has resigned in order to become a candidate for one of the professorships of surgery created by the amalgamation scheme. Messrs. F. Swanzy, W. Frazer, and Lentaigne are candidates for the vacant seat. Dr. C. B. Ball and Mr. Wm. Stoker are also candidates for the chairs of surgery; Dr. Duke and Dr. Neason for the chair of midwifery; Mr. Falkiner, Dr. Tichborne, Mr. Foy, and Dr. Montgomery for the chair of pharmacy; and Dr. R. Glasgow Patteson, Mr. Alex. McKee, Dr. T. Myles, and Dr. Graves for the chair of pathology.

ST. VINCENT'S HOSPITAL.

The appointments to the staff of the hospital which we stated a fortnight ago had been recommended to the Lady Superior have been confirmed. Dr. O'Carroll, who thereupon resigned his position as physician to the Richmond, Whitworth, and Hardwicke Hospitals, has since withdrawn his resignation, and will not go to St. Vincent's.

THE DEATH AT THE WHITWORTH HOSPITAL.

We have now the result of the third investigation into the circumstances of the death of Ellen Norris at this hospital, about which such grossly untrue charges have been made. The report is issued by the official "Board of Superintendence," and states that the Board "is happy to be able to report in favour of the general efficiency of the House of Industry Hospitals. The governors take an active interest in its management, and the medical officers are gentlemen of high eminence in the respective branches of the profession. The nurses are all competent, kind, and attentive to the patients; they are under the control of two highly-trained lady superintendents and a matron of long experience. Having carefully considered the evidence, the Board of Superintendence is of opinion that Ellen Norris was skilfully, kindly, and carefully treated in hospi al."

GALWAY INFIRMARY.

An inquiry is being held into the condition and resources of the Galway County Infirmary with a view to its being opened as a public hospital for county and city. The immediate cause of the inquiry appears to be the dispute which has arisen regarding the appointment of a surgeon. The details have already been published.

SOCIETY OF APOTHECARIES OF LONDON.

The Medical Act of 1886 and the Title of L.S.A.

We are requested by the Clerk of the Society of Apothecaries to publish the substance of a statement which has been issued on behalf of the Society, with the object of removing a misunderstanding which appears to prevail on the part of persons passing the qualifying examination held by the Society of Apothecaries of London, that they are entitled to ask the Medical Council to register them under the title which does not exist, namely, that of Licentiate in Medicine, Surgery, and Midwifery, and so avoid further trouble to the Medical Council, the Society, and the Licentiates themselves.

It is pointed out that if the Licentiates would read the Medical Acts they could never fall into the error which it is the object of the statement to correct, and it may be observed that, in the first place, no Medical Act has ever sought to define what was the meaning of the titles conferred by the various licensing bodies.

The Medical Act of 1858 merely enacted that a person must be registered under one of the titles scheduled to that Act, and that he must only practise what that title allowed of his doing. But the Act of 1858 did not, for example, define what rights the titles M.R.C.P., M.R.C.S., or L.S.A., respectively conferred. That could only be ascertained by reference to the Charters or Acts under which the various licensing bodies existed. Only those who were familiar with those Charters or Acts could say whether a Member of the College of Physicians could legally practise both medicine

and surgery, or whether a Licentiate of the Society of Apothecaries could only practise medicine. Without this knowledge no one by mere intuition could say whether L.R.C.P. could practise Surgery, or L.S.A. could not, neither title using words to imply whether the power to practise surgery was conferred or not, and the title L.S.A. on the face of it not even implying the power of practising medicine.

The Act of 1858 unintentionally originated or perpetuated an abuse in the fact that a qualified or registered medical man frequently ignored the limitation imposed on him by his licensing body and by the registrar, and practised one or other of the subjects for which he had no registrable qualification.

The Act of 1886 (so far as its provisions in the above respect are under discussion) put an end to this state of things. Like its predecessor of 1858, it did not interfere with or alter the titles which the various bodies had power to confer, but it effectually stopped any medical title being obtained except on conditions which conclusively established that the holder had proved his proficiency in medicine, surgery, and midwifery.

To illustrate this, it may be stated that since the passing of the Act of 1886 it is not of necessity, but by choice, that a person passing the examination of the Conjoint Board of the Royal Colleges has himself registered under the diplomas of both Colleges. Provided he has passed the Conjoint Examination, he may, if he please, get on the *Register* either as L.R.C.P. or M.R.C.S.

Although the whole point under discussion might be said to be one of interest only to the medical profession (the public never, or practically never, consulting the *Medical Register* either before or since the Medical Act of 1886, or inquiring what titles a medical man possesses, or what functions they empower him to discharge), it is important to observe that it is only because medical men before 1886 knew that L.S.A. could only practise medicine that they have imported into the title words which are not to be found in it. It cannot be expected that in the space of three years everyone should know that that title, if obtained after 1886, implies a great deal more than it did formerly, but in time this will have become as thoroughly known as gradually after 1815 it became known that L.S.A. meant a licentiate in medicine.

The reason why it was gradually known after 1815 that the title L.S.A. entitled the holder to practise medicine was because it was so expressed in the diploma then granted by the Society, and the contents of such diploma became generally known. But in the same manner, now that the Society's diploma expresses on the face of it that the holder can legally practise medicine, surgery, and midwifery, this fact will in time be equally well known, and, indeed, far more rapidly and completely, because, if the present diploma did not show on the face of it that the conditions of the Act of 1886 had been fulfilled, it could not be put on the *Register* at all, and this must soon become a matter of general notoriety.

Enough has been said fully to justify the Society remaining passive, even if it had not attempted to get the title of its Licentiates altered when the Act of 1886 was being passed. But it is a matter known to all who had to do with that Act before it passed (and the Society was allowed as much indulgence as any other medical body in approaching the Government during the progress of the Bill), that the Vice-President of the Privy Council absolutely, and no doubt wisely, declined to allow the principle of the Act of 1858, as above explained, to be interfered with.

The Society, nevertheless, during the present year, submitted through its representative, Mr. Brudenell Carter, to the Medical Council the draft of a Bill to be laid before Parliament, for, among other things, altering the title of its Licentiates obtained after 1886.

The Medical Council declined to countenance such a proposal, and the Society therefore abandoned it; and unless any general scheme should be formulated, either by Government or by the Medical Council, for dealing with the question of medical titles, the Society will not of its own accord take any further step in this direction.

Public bodies who have appointments to confer are fully aware of the qualifications conferred by the title of L.S.A. granted since the Act of 1886, the Society having never lost an opportunity of satisfying them on the subject.

Since the statement under this heading was issued, the Society finds that a memorial is about to be presented to the Medical Council by many gentlemen who have obtained its licence under the provisions of the Act of 1886, asking the Council to deal with the question under discussion. The Society, it is needless to say, has no wish to discourage such a memorial, and would point out that in the last paragraph but one of the statement it only explains that, after what has already taken place, it could not, as one of the representative bodies on the Council, again initiate such a movement.

The decision of the Medical Council at its last session rested on a basis which, however unacceptable to those who differ from it, is intelligible, namely, that while for example the titles of the diplomas of the Colleges of Physicians and Surgeons identify the holder with the licensing boby which granted them, the new title suggested for the Licentiates of the Society of Apothecaries would be entirely disconnected, or be liable to be disconnected from the Society, and might therefore even imply that it was a title granted by some other body.

THE ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION IN 1890.

At a meeting of the Birmingham and Midland Counties Branch of the British Medical Association held on October 10th at the Medical Institute, Mr. Lloyd Owen (President) in the chair. The President said that before proceeding to the ordinary business of the meeting, he had to bring before them a resolution passed at a recent special meeting of the Council of the Branch, at which it had been unanimously resolved to recommend the Branch to invite the British Medical Association to hold its annual meeting for 1890 in that city during the week beginning July 28th. He moved the following resolution:

"That this meeting of the Birmingham and Midland Counties Branch cordially invites the British Medical Association to hold its annual meeting for 1890 in this city during the week beginning Monday, July 28th."

This resolution was seconded by Dr. Wade, and carried unanimously.

Sir Walter Foster, M.P., then moved:

"That this Branch would respectfully suggest to the Council of the Association the name of Dr. Willoughby F. Wade as President for the year 1890-91."

He eulogised Dr. Wade's services to the Association and to the profession of which he was so distinguished a member.

Mr. Bartleet seconded the motion, remarking on the fact that at the previous meeting the President had been a surgeon, and therefore the surgeons would cordially recognise the propriety of a physician occupying that post on the present occasion.

Some formal committees were appointed to carry out the above resolutions, and the meeting then proceeded to its ordinary business.

A deputation from the profession at Birmingham attended the meeting of the Council of the British Medical Association on Wednesday, October 16th, consisting of Dr. Wade, Sir Walter Foster, Mr. Lawson Tait, Dr. Robert Saundby, Mr. Hugh Ker, and Mr. Vincent Jackson, and presented a warm invitation, in the name of the Birmingham and Midland Counties Branch, asking the Association to hold its next annual meeting in Birmingham, whereupon the following resolution was unanimously passed by the Council: "That the invitation to hold the annual meeting at Birmingham in the year 1890 be cordially accepted, and that Dr. Wade be appointed President-elect."

PROFESSOR MICHAEL FOSTER ON PHYSIOLOGY FOR MEDICAL STUDENTS.

The annual public meeting of the University College Medical Society took place on Thursday evening, October 10th. This Society is the oldest and most prosperous of the many societies associated with the student life of University College; but, although it is now sixty years old, it shows no sign of fading vitality, if we are to judge by the attendance at the meeting on Thursday last. Ten years ago, the Committee of the Society instituted the custom of inviting some eminent man to open the session by delivering an address, and Professor Michael Foster was the scientist then selected; his address is still well remembered by most University College men of that standing. This year Professor Foster has again earned a deep debt of gratitude from all University students by again accepting the duty of opening the session of their Society. The chair was taken by Dr. C. W. Jecks. Prof. Michael Foster, F.R.S., delivered an address entitled "Why Medical

Students should Study Physiology." Dr. Foster was in his happiest vein, and gave the students a good deal of sound advice and practical common-sense in a form in which it was most acceptable; he said that the students whom he was addressing had, no doubt, chosen the medical profession because they thought it suited them, or because they thought they were suited to the profession. He took it that their object was to gain a livelihood, and that they understood that the amount of their income would depend upon their ability to relieve the sick. That, of course, was entirely a practical matter, and it might be asked what they had to do with an abstract science such as physiology. There was one answer which he felt sure they would be ready to give, and that was that they studied physiology because it was one of the subjects in the examination. But he might point out that the power of relieving the sick depended to a very large extent upon a knowledge of the nature of disease, and it was obvious that nobody was fit to be let loose upon the community to attempt to cure their ills who had not learnt certain fundamental facts concerning the nature of disease. Such fundamental facts could only be understood by those who had acquired some information concerning the structure and working of the human body, because disease was merely a term for particular changes which took place within the body. That information could only be obtained by a study of physiology. Glancing for a moment at a side issue, he said that it was far more important that a medical man should be a gentleman than that he should be a scholar in the ordinary acceptation of the term. The power of relieving the sick depended not only upon a knowledge of anatomy, physiology, medicine, or surgery, but also upon the way they went into and how they left the sick-room. Those were matters which could not well be taught. Even Professor Turveydrop, who held a chair at the College of Deportment, could not teach all he knew, could not convey his inimitable style. In these special matters the students must depend upon themselves. They might not want a very extensive knowledge of physiology in order to understand the principles of medicine and the nature of disease, but what they did know they ought to know thoroughly. But those who had at heart their noble profession would not rest satisfied with such a mere knowledge of physiology as would satisfy their examiners, but would aim at something more. The real use of physiology was to help in the investigation of the nature of disease, and one of the greatest advantages which its study conferred upon medical students was to enable them to select in after life, with tolerable readiness, those theories which were valuable and those which were worthless.

In responding to the vote of thanks which was cordially passed at the conclusion of the address, Dr. Foster alluded to the fact that he was the middle term of three generations of Michael Fosters educated at University College.

The address was followed by an interesting histological and pharmacological demonstration, held in the mathematical theatre. The secretaries and other officers of the Society are to be congratulated on a very interesting evening, which we hope augurs well for the remainder of the session.

ASSOCIATION INTELLIGENCE.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1889.

SUBSCRIPTIONS to the Association for 1889 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the West Central District Office, High Holborn.

BRANCH MEETINGS TO BE HELD.

OXFORD AND DISTRICT BRANCH.—The next meeting of this Branch will be held at the Radcliffe Infirmary, at 3 P.M. on Friday, October 25th. Notice of papers to be read, etc., should be sent to the Honorary Secretary on or before Friday, October 11th —W. LEWIS MORGAN, Honorary Secretary, 42, Broad Street, Oxford.

THAMES VALLEY BRANCH.—The next meeting will be held on Wednesday, November 6th. The Honorary Secretary will be glad to hear from members who are willing to read papers.—CHARLES C. SCOTT, M.B., Honorary Secretary and Treasurer, St. Margaret's, Twickenham.

NORTH OF ENGLAND BRANCH.—The autumnal meeting will be held at the Royal Infirmary, Newcastle-upon-Tyne, on Wednesday, October 23rd, at 3 P.M. Agenda: Dr. Coley will exhibit some cases of interest. Dr. Murphy will read a paper on the Operative Treatment of Hæmorrhoids. Dr. Coley: On Effusion into the Cavity of the Pleura. Mr. Williamson: On a Case of Cerebral Abscess, Localised and Opened. Dr. Philipson will introduce the question of the Formation of a Division of the Medical Defence Union for Northumberland and Durham. Members wishing to read papers, etc., are requested to communicate with the Honorary Secretary at once. The dinner after the meeting will take place at the Douglas Hotel, at 5 P.M., 6s. 6d. each, exclusive of wine.—G. E. WILLIAMSON, F.R.C.S., Honorary Secretary, 22, Eldon Square, Newcastle-on-Tyne.

NORTH OF IRELAND BRANCH.—A general meeting of the North of Ireland Branch will be held in the Royal Hospital, Belfast, on Thursday, October 31st, at 4 P.M. Gentlemen wishing to bring any communication before the meeting will kindly communicate with the Secretary, JOHN W. BYERS, M.D., Lower Crescent, Belfast.

METROPOLITAN COUNTIES BRANCH: EAST LONDON AND SOUTH ESSEX DISTRICT.—The inaugural meeting of the session will be held on Thursday, October 24th, at the Hackney Town Hall, at 8.30 P.M. The chair will be taken by Dr. W. M. Ord, President of the Branch. A paper on Certain Forms of Hepatic Cirrhosis will be read by Sir Dyce Duckworth, M.D. Visitors will be welcome. —J. W. HUNT, Honorary Secretary, 101, Queen's Road. Dalston.

METROPOLITAN COUNTIES BRANCH: NORTH LONDON DISTRICT.—The inaugural meeting of this session will be held on Thursday, October 31st, at the Athenæum, Camden Road, N., at 8 P.M.; Dr. Bridgwater, J.P., Vice-President of the District, in the chair. Dr. Hugh Woods will read a paper on Dr. Rentoul's scheme for forming a Public Medical Service, on which a general discussion will ensue. All registered medical men are invited to attend. The Committee will meet at 7.30 P.M.—GEORGE HENTY, M.D., Honorary Secretary, 302, Camden Road, N.

DORSET AND WEST HANTS BRANCH.—The next meeting will be held at Weymouth, on Wednesday, October 23rd. The business meeting will be held at the Royal Hotel at 2 o'clock. Agenda:—Dr. Simpson will move an amendment to By-law 5. Mr. Decimus Curme will move to substitute a new by-law. Mr. Parkinson will move "A vote of sympathy with Dr. Eadie, of West Coker, Somerset, and congratulations on his vindicating his character from unfounded charges." Dr. Lush will move "That a donation of two guineas be granted to the British Medical Benevolent Fund." Election of Officers for 1889. Discussion: Some Medical and Surgical Emergencies. Communications:—Dr. Lawrie: Remarks on some of the symptoms of Locomotor Ataxy from cases. Dr. MacDonald: Notes on a case of Tumour of the Cerebellum, with an absence of all symptoms. Specimen to be shown. Dr. Childs: Astigmatism as a common cause of Headache. Dr. McLean: A few remarks on 150 cases of Enteric Fever occurring in four months. Dr. Moorhead: Case of Malformation of Genito-Urinary Organs. Patient to be shown. Mr. Decimus Curme: Case of complete Calcification of the Aortic Valves, with Hypertrophy of Heart. Specimen to be shown. Dr. Lawrie: To show a set of Apostoli's Instruments for the Electrical Treatment of Uterine Tumours. Dinner at 5 P.M.; charge 6s. each, without wine.—WILLIAM VAWDREY LUSH, M.D., Weymouth, C. H. WATTS PARKINSON, Wimborne, Honorary Secretaries.

LANCASHIRE AND CHESHIRE BRANCH.—The autumn meeting will be held in the Town Hall, Blackburn, on November 6th. Gentlemen wishing to read papers or show specimens are requested to communicate at once with the Honorary Secretary, so that the titles of their communications may appear on the circulars convening the meeting.—CHARLES EDWARD GLASCOTT, M.D., Honorary Secretary, 23, St. John Street, Manchester.

SOUTH-EASTERN BRANCH: WEST SURREY DISTRICT.—The next meeting of this District will be held on Thursday, October 31st, at 4 P.M., at the King's Head, Epsom, Dr. W. C. Daniel in the chair. Gentlemen wishing to bring forward communications, etc., should communicate with the Honorary Secretary, J. P. A. GABB, M.D.

SOUTHERN BRANCH: ISLE OF WIGHT DISTRICT.—The quarterly meeting of this Branch will be held at Sandown Hotel, Sandown, on Thursday, October 24th, at 3 45 P.M.; the President, J. M. Pletts, M.D., in the chair. Dinner at 6 o'clock; charge 6s., exclusive of wine. Gentlemen who are desirous of introducing patients, exhibiting pathological specimens, or making communications are requested to signify their intention at once to ROBERT ROBERTSON, Honorary Secretary.

WEST SOMERSET BRANCH.—The autumnal meeting of this Branch will be held at the Railway Hotel, Taunton, on Thursday, November 7th, at 5 o'clock. Dinner at half-past five. The subject for discussion after dinner will be Proposed Legislation for amending the constitution of the Royal College of Surgeons of England. Mr. Rigden will open the discussion. Members having any communication to bring before the meeting are requested to send early notice of its title to W. M. KELLY, M.D., Honorary Secretary, Taunton.

SOUTH-EASTERN BRANCH: WEST KENT DISTRICT.—The next meeting of the above District will take place on Thursday, November 21st, at Maidstone, Dr. White in the chair. Gentlemen desirous of reading papers or exhibiting specimens are requested to inform the Honorary Secretary of the District, A. W. NANKIVELL, F.R.C.S., St. Bartholomew's Hospital, Chatham, not later than October 31st. Further particulars will be duly announced.

STAFFORDSHIRE BRANCH.—The sixteenth annual general meeting of this Branch will be held at the Bell Medical Library, Cleveland Road, Wolverhampton, on Thursday, October 31st, at 3 P.M. An address will be delivered by the President, Mr. T. Vincent Jackson, Wolverhampton.—GEO. REID, Stafford, Honorary Secretary.

BATH AND BRISTOL BRANCH.—The first ordinary meeting of the session will be held at the Grand Pump Room Hotel, Bath, on Thursday evening, October 31st, at half-past seven o'clock; W. J. Fyffe, M.D., President. The following communications are expected:—Suspension in Locomotor Ataxy: J. Michell Clarke, M.B. Osteo-arthritis as an immediate sequel of Rheumatic Pyrexia: J. Kent Spender, M.D. "The Boracic Acid" Massage Treatment of Diseases of the Palpebral Conjunctiva: W. M. Beaumont, M.R.C.S.Eng. Operations for Removal of Vesical Calculus, with Seventeen Cases: Nelson Dobson, F.R.C.S.Eng.—R. J. H. SCOTT, E. MARKHAM SKERRITT, Honorary Secretaries.

MIDLAND BRANCH: LEICESTERSHIRE DISTRICT.—A meeting will be held at the Bell Hotel, Melton Mowbray, on Thursday, October 24th, at 3.30 P.M.; G. T. Willan, Esq., President of the Branch, in the chair. The following papers will be read and discussed:—The President: Notes on a recent Case. Dr. F. W. Bennett: Post-nasal Growths. Dr. R. Pratt: The Treatment of Vomiting of Pregnancy. Dr. H. Handford: Typhoid Pneumonia. Mr. R. C. Stewart: Errors in Lunacy Certificates. Gentlemen desirous of reading papers are requested to send early notice with the title of communication to the Honorary Secretary, F. M. POPE, M.B., Campbell House, Leicester. The members will dine together at 6.30 P.M., at the same place; price 5s., exclusive of wine. All members of the Association are cordially invited.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.

THE autumn meeting of this Branch was held at Newport on October 4th; Mr. J. FARRANT FRY, President, was in the chair, and about forty members and visitors were present.

New Members.—Messrs. J. N. Lewis, Maindee; J. G. Thomas, M.B., Hirwain; D. J. Jones, Hirwain; and J. Arthur, Llandaff, were elected members of the Association and Branch.

Communications.—Mr. W. H. A. JACOBSON, Assistant-Surgeon, Guy's Hospital, gave an address on the Diagnosis of Renal Calculus and the Chief Conditions which Simulate it, for which a cordial vote of thanks was passed to him.—Papers and cases by Mr. E. S. Wood and Mr. O. E. B. Marsh were unavoidably postponed.—Dr. A. G. THOMAS (Newport) showed a case of Empyema in an Adult Female, successfully treated by operation.—Mr. A. W. LOVERIDGE (Newport) read notes of a Peculiar Case of Albuminuria; and showed a patient suffering from what appeared to be Epithelioma of the Lip, but some doubt was expressed as to this.—Dr. J. T. THOMPSON (Cardiff) showed a Boy suffering from Congenital Displacement of the Crystalline Lens. When first seen, the patient had diplopia in both eyes. The lenses showed a faint general haziness. Treatment by absorption of the lens substance by repeated discission was being carried out in the right eye with good results.

Dinner.—The members and visitors subsequently dined together at the Westgate Hotel.

BORDER COUNTIES BRANCH.

THE autumn meeting of this Branch was held at Windermere on September 27th, 1889, Dr. PARKER, of Kendal, in the chair.

Papers.—The following papers were read and discussed:—Dr. THOMSON: On Empyema. Dr. COCKILL: On Traumatic Tetanus. Dr. PARKER: On a Rare Form of Blood Poisoning. Dr. TAYLOR: On a Case of Excessive and Obstinate Vomiting.

Dinner.—The members subsequently dined together at Rigg's Hotel.

SPECIAL CORRESPONDENCE.

PARIS.

Paris Surgical Congress: Discussion on the Immediate and Remote Results of Operations on Phthisical Patients.—Hymen and Æsculapius.

THIS discussion was one of the most interesting that has occupied the time of the Surgical Congress. M. Houzel (Boulogne) recommends treating localised tubercular lesions by speedy and thorough removal; lesions thus disappear in a few days which would probably resist other treatment or persist for years without being cured. Antiseptic measures remove all fear of danger from the after-effects of operations. M. Bousquet (Clermont-Ferrand) supported the views of M. Houzel, and added that he had operated in cases where pulmonary tuberculosis was decidedly manifest; the results were most satisfactory, and the general condition of the patients was improved. He also stated that, excepting in those cases where there is advanced pulmonary disease, all tubercular lesions of cellular tissue, bone, and joints should be surgically treated. Amputation he believes to be the only treatment for tubercular disease of a limb when it is diffused, but should only be adopted when all other means have failed. M. Daniel Mollière (Lyons) considers operation for tubercular disease to be dangerous for one reason only, namely, that it necessitates keeping the patients in bed, which favours a feverish condition. Abundant facts prove that phthisical patients bear operations as well as others, provided that they are protected against traumatic fever. Reunion by first intention is as frequent in phthisical patients as in others. Thanks to antiseptic methods, this can be done. Anæsthetics M. Mollière believes to have an unfavourable influence on tubercular disease; they should therefore be administered only for a short time. Suppuration in such cases may be inimical to good immediate results. If the suppuration be arrested, and there is a clean surface, the chance of tuberculosis becoming diffused is probably prevented. In tuberculosis of bones conservative surgery may give permanently good results when the upper limbs are concerned, but for the lower limbs the cure is not permanent, though it may perhaps last two or three years. Amputation is often followed by radical cure of tuberculosis; in other instances, if it be not radical, it is always lengthy. M. Mollière said his conclusions were applicable only to adults. M. Ollier (of Lyons) advises amputation in localised tubercular disease when the patient is over 30 or 40 years of age, but admits that this is a rule with a great many exceptions. For special reasons he excised the bones of the foot in a patient over 40, and obtained excellent results. He has removed the astragalus thirty-two times, in some instances the calcaneum with it, and death was not an immediate result in any one case. M. Ollier considers the well-known success of excision of the elbow-joint to be due to the fact that patients leave the hospital soon afterwards, whereas excision of the bones of the foot compels a longer stay, and the patients continue to breathe bad air impregnated with bacilli. M. Demosthenes (Bucharest) said that in his hospital practice he found localised tuberculosis in 15.4 per cent. of the whole number of patients in his wards. He has performed 281 operations, many of which were very important; the rate of mortality was 4.2 per cent. The immediate results were very satisfactory, but the subsequent condition could not be ascertained in all instances; some of the patients operated on were free from tuberculosis; in others, extirpation of tuberculous glands was followed by relapse. Excision in disease of bone M. Demosthenes found to be frequently followed by relapse; tuberculous abscesses reappear quickly after radical treatment. M. Boeckel (Strassburg) furnished statistics of 204 cases of local tuberculosis treated by excision and amputation, excisions of the hip-joint being excluded. The mortality resulting from excisions is half that resulting from amputation. M. Boeckel considers excision in treating long tuberculous lesions less dangerous than amputation. M. Schwartz performed twenty operations without any immediate bad result.

Medical Paris has been interested during the week by the marriage of Dr. Bertillon, the distinguished head of the Department of Medical Statistics for the Department of the Seine, with Mademoiselle Schultz, a lady who passed recently a brilliant examination for the diploma of Doctor of the Paris Faculty of Medicine. Among the witnesses were Professor Brouardel, Dean of the Faculty of Medicine, Professor Reclus, and Dr. Levasseur, of the Institute. It is understood that Madame Bertillon will practise her profession, and will act as an associate of her husband in his medical and scientific labours. Another eminent professor, Professor Déjerine, has also married a lady doctor, Mademoiselle Klumpke, who recently graduated with distinction at Paris, and is a person of great scientific accomplishments. The Paris Faculty was one of the earliest to open its doors to ladies as medical students, and has long had a considerable proportion of lady students attending the classes of the Faculty, many of whom have graduated brilliantly. French ladies, however, were slow to follow the many foreign lady students who flocked to Paris. It must, however, be acknowledged that the few French ladies who have graduated have greatly distinguished themselves in their examinations, and it appears there is a great disposition among the Faculty to absorb them in the ranks of the profession by marriage as well as by diploma.

LONDON HOSPITAL.—At the recent examination for Entrance Scholarships in the medical school, the first Science Scholarship (£60) was awarded to C. P. Harris, and the second (£40) to G. H. Cowen. The first Buxton Scholarship (£30) was awarded to O. O. Williams, and the second (£20) to C. E. G. Tucker.

SWITZERLAND.

Antifebrin in Sore Throat.—Ether as a General Anæsthetic.—Inoculation of Carcinoma.—Methyl-mercaptan.—How to fix Martin's Elastic Bandages.

Dr. W. Sahli, of Langenthal, highly recommends the internal use of antifebrin, in the dose of from 0.25 to 0.5 gramme three times a day, in diphtheria and in scarlatinal and other forms of sore throat. The drug has not any marked influence on the course of the disease, but it rapidly (in about a quarter of an hour) and completely removes such subjective symptoms as painful swallowing and mastication, faucial soreness, headache, etc. It may be given either in powder or in a mixture with alcohol and syrup. The latter form is especially useful in children. No disagreeable accessory symptoms were ever observed.

Drs. Fueter and Dumont, of Berne, speak highly of ether as a general anæsthetic, basing their recommendation on about 300 cases of major and minor operations in patients aged from 4 months to 80½ years. One of the patients (an extremely feeble man of 49, with a perforating abscess of the gall-bladder, secondary general peritonitis, and ileus of four days' standing) died during the operation (laparotomy), but the fatal issue was undoubtedly caused by prostration and shock, and not by ether. In one case (that of a woman, aged 60, with pulmonary emphysema, bronchial catarrh, and strangulated femoral hernia) collapse with arrest of breathing occurred, but she quickly recovered under artificial respiration. In another case (resection of hip in a phthisical girl) weakness of the pulse was observed after etherisation for an hour and a half. In sixteen patients sickness came on during narcosis, while in about a third of the whole number "mucoid" vomiting occurred after the operation. In 186 cases, however (including 53 in children), no complications whatever occurred. The same may be said in regard to a series of 48 dental operations performed by Dr. Fueter under ether. The essential conditions for obtaining a good narcosis are said to be (1) the administration of an initial dose, amounting to 50 cubic centimètres (from 20 to 25 in children and weak adults), which brings about complete anæsthesia on an average in two minutes (sometimes even in half a minute, very frequently between one and two minutes), and either prevents altogether, or at least considerably shortens, the excitement; (2) leaving the mask (Juillard's pattern) undisturbed as long as possible, which secures a steady anæsthesia and makes the initial dose wholly sufficient for about forty minutes. In habitual drunkards excitement may be easily prevented by the administration of some alcoholic drink shortly before the etherisation.

At a meeting of the Gesellschaft der Aerzte in Zürich, Dr. Hanau stated that he had succeeded in inoculating carcinoma from rat to rat. On November 28th, 1888, he excised two pieces of a carcinomatous lymphatic gland from a female rat with malignant disease of the vulva, and transplanted these into the right half of the scrotum in two old male rats. One of the latter died on January 14th, 1889. The necropsy revealed a generalised "carcinosis" of the peritoneum (including the great and small omentum). In the other, which was killed on January 25th, there were found two typical cancroid nodules (one 2.5 millimètres in diameter, the other the size of a pea) on the gubernaculum testis and the cauda of the epididymis. The transplanted malignant growths proved to have precisely the same structure as those which had spontaneously originated in the first animal. According to Dr. Hanau's theory, the cancroid infection should be attributed to the agency of live epithelial cells, and not to any pathogenic microbes. Another series of the author's experiments on the artificial production of cancer in rats by means of a prolonged local use of such irritant substances as tar, etc., gave negative results. The application caused an eczematous rash, with some infiltration of the corium, but no malignant disease.

At a recent meeting of the Medicinisch-pharmaceutischer Bezirksverein von Bern, Professor Marceli Nencki made a communication on the fermentation of proteids in the absence of air, induced by anaërobic microbes. According to his researches, one of the products of the fermentation is methyl-mercaptan, a gaseous body with the formula CH_3SH, and having a disgusting odour. As Dr. Leon Nencki (the professor's brother), of Warsaw, subsequently found,[1] methyl-mercaptan seems to be a constant ingredient of the gaseous contents of the human large intestine. Since the substance, like skatol and indol, appears to possess some toxic properties, it might be worth while to undertake experiments to elucidate its physiological action on the animal system, as well as to institute a clinical inquiry concerning its occurrence and behaviour in gastro-intestinal catarrh and various infectious diseases.

Drs. Koeckert and Zellweger, of Geneva, suggest a simple and effective way of fixing Martin's elastic bandage in cases of ulcers of the leg, thrombosis, etc. The useless terminal non-elastic tapes should be cut off, and the bandage wound round the leg in the usual manner until there remains a piece about 20 centimètres long. The latter should be thoroughly moistened with water, and then carefully adjusted under the two uppermost turns. The moisture is said to secure such intimate contact between the turns that the bandage remains in position all day as if glued on. On the other hand, the plan prevents the feeling of weight and œdematous swelling which are often caused by fixing the bandage in the ordinary way.

[1] *Gazeta Lekarska*, No. 35, 1889, p. 691.

LIVERPOOL.

The Abattoir Question.—Medical Institution: President's Address.—University College.—Medical Faculty.

An influential deputation, representing University College, the Medical Institution, and the Royal Infirmary, recently waited on the Finance and Estate Committee of the Liverpool Corporation to represent the undesirability of renewing the lease of the Abattoir Company for their premises in Andrew Street, Brontë Street, and Trowbridge Street. The deputation included Dr. William Carter (President Medical Institution), Drs. Waters, Cameron, Glynn, and Caton; Messrs. R. Harrison, Mitchell Banks, and Kellett Smith; Principal Rendall, Messrs. H. B. Gilmour (Chairman Royal Infirmary), and R. Brocklebank, jun. (Treasurer). For the better understanding of the question at issue, a question which concerns the health and well-being of this great city for generations to come, it will be well to review briefly the way in which the slaughterhouses came to be in their present position, and how, having been originally designed as an improvement on a former state of things, they have come to be a menace to the health and morality of the people. In the year 1785 the Corporation of Liverpool obtained an Act of Parliament which empowered them to purchase land in the borough for the erection of slaughterhouses, and which directed that after the erection of such slaughterhouses no animals should be killed or dressed elsewhere within the city. The Corporation, however, did not for many years attempt to carry out the provisions of this Act, and private slaughterhouses continued to exist in Castle Street, Harrington Street, and other valuable properties in the borough until 1835, in which year the Corporation granted to a Mr. Etches a plot of ground in Andrew Street, on lease for seventy-five years, to erect a suitable building for an abbatoir, with the stipulation that they might assume possession of the ground and buildings at any time on making compensation according to a scale agreed on. Mr. Etches, soon after the completion of the building, transferred his rights in the lease to a company, which afterwards developed into the present Abattoir Company. The premises have been enlarged from time to time to meet the wants of the increasing population, and still further extension is necessary. The company, however, before making any further outlay, desire that their lease of the ground, which has only twenty-one years to run, should be extended for a further period of seventy years. Even at the time the site for the abattoir was granted it could not have been a very happily chosen one. It was close to the Royal Infirmary, which had just been completed. At present the site is about the most objectionable that could be conceived; it is in the very heart of the city, surrounded by a dense population whose dwellings almost abut on its walls, and the new Royal Infirmary, the buildings of University College, the Brownlow Hill Workhouse with its hospital of some thousand beds, and the Lying-in Hospital, are all within a short distance from it. The offensive effluvia, inseparable from slaughter-houses and places where the accessory trades of gut scraping, hide dressing, etc., are carried on, pervade the surrounding streets, where the men employed generally live in order to be near their work. These streets are well known as the haunts of drunkenness, vice, and squalor. The danger to the health of the city arising from the presence of the abattoir has been pointed out by successive medical officers of health during the last forty years, though

until recently the clause in the covenant, securing the right to the Corporation of terminating the lease before the expiration of the term of seventy-five years, seems to have been overlooked by them. Dr. Duncan, medical officer of health, wrote strongly in 1851, in his report to the Health Committee. Dr. Trench, who succeeded Dr. Duncan, in the report made in 1865, also condemned, in no measured terms, the existence of the abattoir. In 1884, in consequence of a memorial from the members of the medical profession relative to the abattoir lease, the medical officer of health, Dr. Stopford Taylor, was requested by the City Council to prepare a return of the death-rate from all causes within a radius of 500 yards of the abattoir for ten years past, for comparison with the death-rate in other parts of the city. The broad results set forth in this return were that the average yearly death-rate of the district reported on during the ten years was 34 per 1,000. During the same period the mortality for the whole city was 27.6 per 1,000, while that of the two wards in which the district inquired into was included was only 21.7 per 1,000. It thus appears that the mortality in the neighbourhood of the slaughter-houses exceeded that of the whole city by 29.5 per cent., while it exceeded that of the whole wards in which it lay by no less than 56.6 per cent. Those who advocate retaining the abattoir in its present position do so on the ground that vested interests ought to be respected, and that a central position is convenient for the rapid and cheap delivery of the meat. They also maintain that every possible precaution is taken to have the slaughtering and the accessory businesses carried on with due regard to decency, cleanliness, and health. The last assertion is not disputed, and its admission is one of the strongest arguments for their entire removal. In spite of all the precautions, the stench from the hides and the entrails is overpowering. Vested interests must certainly be respected and compensation will have to be made; but the ratepayers will no doubt be satisfied to pay for this as for other sanitary improvements. The central position in these days of multiplied means of transit cannot be a matter of any great importance. In seeking for a new situation for an abattoir there are certain requirements it ought to fulfil. It should be within easy access of the city, at a reasonable distance from dwelling houses, and with enough ground adjoining to prevent the possibility of its ever being built in, and so situated that animals arriving by rail or steamer could reach it without passing through the streets. All these indications are met by the scheme proposed by Mr. Mitchell Banks at the deputation to the City Council. He suggests that the Corporation should acquire a tract of forty acres of land forming part of the Parkhill Estate. It touches the Mersey westward, and eastward is marked off by the Cheshire Lines Railway. A light pier could be run out into the river, where the cattle boats could discharge their cargoes; while a siding from the Cheshire Lines could be provided to deliver the cattle arriving by rail, and to remove the carcasses for distribution. Whether this plan be found to be practicable or not, the health and well-being of the city imperatively demand that the Corporation should take up the lease so soon as a convenient site for carrying on the abattoir business can be found; and that, without waiting for the twenty-one remaining years of the lease to run. The slaughtering of animals and all the offensive trades connected therewith should be carried on in a situation where they cannot pollute the human habitations

The first meeting of the Medical Institution was held on October 10th, when Dr. Wm. Carter, the President, delivered his inaugural address, the subject being "Illustrations of the Operation of Ferments in Disease." Having pointed out that the next advances that would be made in pathology would almost certainly be in the domain of animal chemistry, Dr. Carter dealt with the causes of intoxication from the alimentary canal, and showed that the absorption of poisons from the rectum was equivalent to their injection into the general circulation, inasmuch as they escaped the modifying influence of the liver. Intestinal antisepsis could not yet be accurately made, but the attempt to produce it sometimes led to good results, as in the case quoted of a child, who, in the course of typhoid fever, fell into a state of extreme stupor, which disappeared on the administration of small doses of naphthalin. The presence of ferments was universal; they took part in many healthy, as well as morbid, processes in the animal economy, and many obscure illnesses might be traced to their action. In this connection a case was quoted in which the patient, a clergyman, while visiting a poor parishioner, inhaled an overpowering stench from a horse-midden, and a few days afterwards was seized with the symptoms of typhus fever. On the appearance of the rash, which was very characteristic of typhus, the fever rapidly subsided, and the patient made a speedy recovery. The termination of the fever in this way made the diagnosis of typhus more than doubtful, and he inclined to the belief that the case was due to infection by some pathogenic microbes in the emanations from the horse-midden. In contrast with this case one was related in which illness followed the absorption of a chemical, not living, poison of animal origin. A healthy lad, while emptying a bucket of stinking liquefied fish, was overpowered by the smell. There was no incubation period; he vomited at once, and remained ill until his death, which was ushered in with signs of pernicious anæmia. With regard to the action of microbes in normal physiological processes, Dr. Carter showed that the action of pepsine, as exemplified in artificial digestion, was quite inadequate to account for the processes of digestion in the stomach. Gastric juice, although antiseptic to a certain degree, did not destroy all microbes, some of which took part in digestion, especially in the intestines. These microbes had been shown by Abélous to have a proteolytic and amylolytic action on foods, with the disengagement of a quantity of gas; their action only being arrested by the accumulation of acid by-products. The addition of an alkali caused the process to be resumed, and Dr. Carter pointed out the suggestiveness of these experiments as offering a possible explanation of the beneficial effects derived from the administration of acids and alkalis in different cases. Abélous had pointed out that some of the bacilli found in the alimentary canal were anaërobic, and Dr. Carter thought it probable that these might be influenced by antiseptics different from those that influenced the aërobic class. While naphthalin acted on the latter, he thought it was powerless against the former, which, however, were readily affected by calomel. Calomel gave remarkable relief in three cases quoted of severe dyspepsia, in one of which the patient seemed to be sinking, with symptoms like narcotic poisoning. In this connection it was pointed out that dyspeptics sometimes suffered from the too frequent administration of lime-water and alkalies with their food, regardless of the well-established fact that gastric digestion only takes place in an acid medium. Calomel in one-tenth of a grain doses also controlled fermentative diarrhœa in children, and the diarrhœa of acute rickets. A satisfactory antiseptic for the blood was still a desideratum; it should be a substance which could be readily absorbed in sufficient amount to exercise its germicidal properties; should not form inert compounds with the constituents of the blood; and should not lower the nutritive value of the latter. Quinine, salicine, and the sulpho-carbolates fulfilled these indications to some extent, and a case was related in which a medical man, just convalescent from typhoid, was attacked with all the signs of ulcerative endocarditis. He was treated with large doses of quinine and sulpho-carbolate of soda, and made a complete recovery. Dr. Carter hoped that the dictum of Stokes, that fever cannot be cured, might yet be falsified by the discovery of antidotes to the poisons that give rise to it. Each kind of bacillus probably gave rise to a special chemical poison, and we might by-and-by be able to determine what poison was present in any given case, either by finding it in the urine, or otherwise. At present we could recognise that a poison was present by the symptoms it produced, and could administer an antidote in the form of a drug known to have opposite effects—a physiological antidote. Thus a boy on the tenth day of scarlatina was seized with suppression of urine, violent, incontrollable vomiting, pallor, severe headache, confused vision, quickly recurring convulsions, dilated pupils, confined bowels, and subnormal temperature. The little urine passed was bloody. Morphine was given hypodermically, and in half-an-hour an enema of sulphate of magnesia. The result was that three minutes after the morphine was given the pupils were normal, in an hour the skin was perspiring, five hours later there was a copious motion. After the morphine there were no more urgent symptoms, and the boy speedily got well. Dr. Carter concluded his address in these words:—"If we saw a patient suffering from headache, widely dilated pupils, disturbed vision, and dry skin, and were told that an hour before he had taken an overdose of atropine, we should never hesitate to give a physiological antagonist to atropine such as morphine. And why do we hesitate when an unknown poison having so many of the characters of atropine is threatening to kill the patient? Simply because we sometimes let names and axioms usurp the place of common-sense." Dr. A. T. H. Waters, in moving a vote of thanks for the President's able and interesting

address, spoke of the value of calomel, the usefulness of which he had long been familiar with in the class of case to which Dr. Carter had referred.

The formal opening of the winter session of University College will not take place until November 2nd, in consequence of the new engineering laboratory not being quite completed. The lectures and demonstrations of the medical and other faculties are, however, carried on as usual. There is a good entry of medical students, and the names on the roll for the junior subjects is up to a hundred. Dr. Gee has resigned the lectureship on children's diseases which he has held for many years. Mr. Ross, F.R.C.S., has resigned the post of demonstrator of anatomy, and has been appointed Surgical Tutor to the infirmary, being succeeded in the former post by Mr. Thelwell Thomas, F.R.C.S., a former pupil of the School of Medicine. Mr. F. C. Larkin is appointed Assistant Lecturer on Physiology, and Mr. Randal Lee, B.Sc., Demonstrator. Both of these gentlemen are former students at the school. The election of an Honorary Surgeon to the Royal Infirmary, to succeed Mr. Reginald Harrison, is fixed to take place on November 11th. It is generally understood that Mr. F. T. Paul, F.R.C.S., Surgeon to the Royal Southern Hospital, and Professor of Medical Jurisprudence, is at present the only candidate in the field.

MANCHESTER.

Royal Salford Hospital.—Pendlebury Hospital.—Owens College Medical Dinner.—New Entries at Owens College.—Combe Lectures.

THE annual meeting of the subscribers to the Salford Royal Hospital was held last week. From the sixty-second annual report it appears that the hospital in-patients have increased from 617 in 1887, to 1,083 in 1889. The expenditure exceeded the income by £1,129.

At the recent quarterly meeting of the Sick Children's Hospital, Pendlebury, it was stated that the number of new patients admitted during the last quarter was 299, 300 were dismissed cured or relieved, and 22 had died.

The fifth annual dinner in connection with the medical department of Owens College, was held on Friday, October 11th, Dr. David Little in the chair.

The number of students attending the medical department of Owens College is greater during the present than in any other session in the history of the College.

Under the auspices of the Combe Trustees, Professor Stirling is, before Christmas, to give a course of evening lectures in the Owens College on "The Physiology of the Senses."

SHEFFIELD.

Tuberculous Meat.—Mexborough Cottage Hospital.—Smoke Abatement.—Housing of the Poor.—Medical School.

THE Sheffield butchers are greatly exercised at the present method of inspecting and condemning meat. Some recent cases in which the Meat Inspector and the Medical Officer of Health condemned beasts on the ground that they were suffering from tuberculosis have been the immediate cause of their taking action. Recently they held a meeting, attended by between 300 and 400 butchers, at which they adopted various resolutions. They pointed out the difficulty in recognising the disease during the life of the animal when it did not affect the carcass. A butchers' jury, they thought, to be recognised by the Medical Officer of Health and the Meat Inspector, should be called in to express an opinion in every case of proposed condemnation, and, in the event of disagreement, to call in medical and veterinary advice. A more rigorous inspection of foreign meat was also insisted upon. A deputation appointed at this meeting has since waited upon the Health Committee to lay before them the resolutions adopted, and to point out that compensation should be given for carcasses condemned for tuberculosis, and to call attention to the divergence of opinion existing as to whether or not the whole carcass is rendered unfit for food by the presence of tuberculosis in the lungs or other organs.

The cottage hospital scheme at Mexborough seems to be working well. Mr. Montagu has presented a building—formerly used as a chapel or school—a gift, with the necessary alterations, worth at least £1,000. It is to be called the Montagu Cottage Hospital. The medical staff is to consist of all such duly qualified practitioners residing within a radius of three miles as shall, upon invitation of the Committee, allow their names to be printed in the rules of the institution. The medical men in the district appear to have cordially responded to the invitation.

A war is being made against the smoke nuisance, and a memorial, very extensively and influentially signed, has been presented, praying the Town Council to take action in the matter. Between forty and fifty names of medical men are appended, as well as those of many magistrates, clergy, lawyers, bank managers, and all classes. Much of the smoke, it seems, which defiles a town, so favoured by Nature in its situation, is preventable, and should be prevented. The Town Council referred the matter to the Health Committee.

Another matter engrossing public attention just now is that of the housing of the poor. The smoke nuisance bears a close relation to the subject. An association has been formed for promoting sanitary reform and for the better housing of the poor. It appears to be well supplied, and is fortunate in securing the aid of the editors of the daily papers. On October 8th, the Association had a successful public meeting with Sir W. C. Leng in the chair.

There is a goodly entry of students at the medical school.

CORRESPONDENCE.

THE PRACTICAL ELEMENT IN MEDICAL EDUCATION.

SIR,—A very few words from me will suffice to close, I trust, the controversy with my friend Mr. Wheelhouse, and will at the same time make it apparent that (as I assumed in my Leeds Address) "we do not differ greatly in essentials." Certainly I could not possibly claim from anyone, thinking as he does, a more handsome concession than this:—"I would rather go on as we are, greatly as I consider that our plan might be improved, than that we should go back to the old system of a five years' apprenticeship to one man or to one institution. I hold, and I have ever taught, that to go back to that system would be to waste, hopelessly and absolutely, three years of the very best part of every educational life."

On the other hand, I am fully disposed, from my point of view, to concede that "the present system" is very far from being perfect; and if the Medical Council can devise a plan, consistent in any degree with what I have called "thoroughness," for grafting upon it a larger amount of such practical experience as can be obtained only, or best, in the homes of the sick, it will be a decided gain. My object was, and is, to maintain that "thoroughness" in the method of instruction is of more importance than extent in the range, as regards the number of cases seen; because clinical instruction, so-called, which is not thorough, is even worse than useless, in respect that it inevitably begets, and perpetuates, bad habits, both of diagnosis and of treatment. Hence I argued that it was much better to learn, clinically, a few things about disease well, than a great many things badly; and that in any case the much more thorough investigation which is, at least, possible in the clinique of a well-managed hospital, forms a better foundation for practice than almost any amount of so-called experience, attained under less favourable conditions. But I am very far from adopting the paradox attributed to me by Mr. Wheelhouse, that "half a dozen cases of pneumonia, or of Bright's or any other diseases, studied ever so deeply, will stand instead of the practical ability to relieve a distended bladder, or to reduce a dislocated joint." On the contrary, I hold that these very surgical procedures eminently and peculiarly demand thoroughness in teaching certainly not less than the leading facts of medical experience, and the only question about them is, or ought to be, how in the case of the general practitioners of the future, this thoroughness can best be secured. I do not think that in these particular instances it can best be secured, or indeed be secured at all, "at the commencement of professional study."

All this, however, is matter for the General Medical Council, and I am very well content to leave it to them to arrange when, how, and by whom this kind of instruction is to be conveyed. I will only give, in conclusion, a small contribution out of my own personal experience, just in order to show that in this matter I am not speaking at random, nor yet uttering "mere declamation." Although I never, even in the student days of long ago, was conscious of aiming specially at surgical practice, I had, in the third year of medical study, personally extracted more teeth and performed more venesections than I have ever even thought of doing

since; and in the latter case far more numerically than all my pupils together have had a chance of doing for the last thirty years. But I have often since then been led to reflect, Who was the better for that? Was the mechanical skill supposed to be attained in this rough and ready practice an adequate compensation for its roughness? During the same third year, or rather summer and autumn, I attended some scores or (I believe) hundreds of cases in their own homes in almost every close and wynd in my native Edinburgh, from Holyrood to the West Port, and certainly managed to see (in a kind of way) almost all the common diseases (epidemic and other) under the nominal "covering" of a chief, but really almost uncontrolled. I am far from undervaluing this experience; but I have no doubt now that I made many mistakes, and might have adopted very "automatic" ways of dealing with disease, but for the invaluable and long course of hospital experience which followed, and is not even yet completed. And for the great majority, who cannot in the course of events be expected to undergo a similar training after they go into practice, I hold that the hospital training of the student should above all things be thorough—*non multa sed multum*. But in nearly 100 separate and carefully managed clinical conferences, which go to make up our winter course, and half that number in summer, we do, I trust, in the Western Infirmary here, get over a good deal more ground, even in respect of common diseases, than Mr. Wheelhouse, with his allusion to "half-a-dozen cases, etc.," accredits us with doing. At all events, we do our best. It is for the Medical Council to say what more can be done or attempted in future; and, so it be consistent with "thoroughness" of method, it will not only have no opposition from me, but the contrary.—I am, etc.,

W. T. GAIRDNER.

Glasgow, October 14th, 1889.

SIR,—My own wide experience of men, as well as of matters medical, leads me to support most emphatically the views so ably developed by your correspondent, Mr. C. G. Wheelhouse; and I cannot but feel almost indignant at the flippant attempts of Dr. Clifford Allbutt to laugh him down. Medicine, to be of any good to mankind, must be essentially practical; and what a sick man needs is a man of ready experience and practicability, who can cure his complaint or, at all events, assuage his sufferings, not a learned theorist, who will simply go home to his desk and microscope and write an admirable paper on the case while his hapless patient is expiring. The great defects of the age are hurry, cram, and a preference for theory to practice. The scientist overshadows the practitioner, and many an admirable theorist whose knowledge of chemistry and microscopical physiology, and whose professional powers are of awful profundity, proves but a sorry friend in need to the sufferer from disease or injury compared with an obscure country apothecary with thirty or forty years' experience at the ends of his nimble fingers. I have actually been summoned by a young M.D. and L.M. to remove a loose placenta from the vagina in a case of perfectly natural labour; while I have also seen an unqualified third year's man display the utmost readiness of tact and judgment in a sudden emergency, before which another young M.D. stood aghast! And how was this? Why, simply because this young man of expedients had been apprenticed to a good busy practitioner, had enjoyed the daily benefit of his instructions and example for years, and was consequently far more practical than either of the two M.D.'s aforesaid, neither of whom could, like him, tap a hydrocele, or reduce a rupture, or prolapsus ani. They had not been apprenticed like him, but were admirable theorists, duly "crammed up" in true modern style, which compresses into four years what eight are none too many for if you wish to have practical men. Medicine must be taught from man to man, and the "middle-class parlour" instruction which affords such merriment to Dr. Clifford Allbutt is far more beneficial to suffering humanity at large than walking an hour or two daily in a mob of fifty or so after some great luminary through his hospital wards, the crowd necessarily collected round each bed obviously shutting out the majority from the least chance of hearing a single word the great man says, if, indeed, in most cases he does say anything beyond, "Ah! well, yes; you may repeat that, Mr. So-and-so." Besides, the majority of patients do not want the elaborate scientists into which the modern ultra-educational mania seeks to convert the whole profession. Obviously it is for the benefit of science, the profession, and mankind generally that there should be a higher order of medical men, luminaries to guide the others; but most patients neither desire the attendance of Oxford and Cambridge M.D.'s, nor to pay the fees adequate to such advice. Would anyone advocate converting all clergymen into bishops, all officers into generals, all barristers into judges? The first and last care of medicine is to heal disease and relieve pain; while ten elaborate theorists who can only write or lecture upon the same are not worth one country apothecary who can act, and not talk or write, well.—I am, etc.,

Jamaica Road, S.E. J. BRINDLEY JAMES.

THE INFECTIOUS DISEASES (NOTIFICATION) ACT, 1889.

SIR,—The Legislature having made us responsible, under a penalty, for the correct diagnosis and notification of infectious diseases, it should follow as an act of common justice that it should provide facilities for medical students and junior practitioners to become acquainted with the scheduled diseases in all their stages. How few of us in our student days see anything of these complaints, and how unfitted, in consequence, are our younger members for making the early diagnosis of infectious disease, which renders compulsory notification the great good it undoubtedly is; and I would point out that young medical men, practising, as so many of them have to do, amongst the poor during the earlier years of their professional career, are peculiarly liable to come across cases of infectious disease, which, if not early recognised and isolated, may form the nucleus of a serious outbreak.

Sanitary legislation is a little inconsistent in this matter of compulsory notification; with one hand it imposes a penalty for non-compliance with the law as to infectious disease, and with the other it deprives medical students of opportunities for making themselves acquainted with such disease. I believe some examining boards, such as for instance the King and Queen's College of Physicians of Ireland, require a certificate of attendance upon and study of a certain number of cases of fever, just as all require attendance upon a certain number of cases of midwifery; the majority, however, do not make this compulsory.

Until facilities for the clinical study of infectious disease are granted to students, and until examining bodies insist that their candidates shall show evidence of attendance upon cases of fever, I fear we shall not derive the full benefit from the compulsory notification of infectious diseases.

It is not for me to point out how these facilities ought to be granted, and how they ought to be safeguarded; that, I am sure, can very well be left in the hands of the able medical staff of the Local Government Board, the medical superintendents of fever hospitals, and the medical officers of health.—I am, etc.,

Balham, S.W. J. A. MACKENZIE, M.B.

MOORE'S TREATMENT OF ANEURYSM.

SIR,—In addition to the support which you gave Moore's treatment in your article on the City Chest Hospital, there is a case by Morse.[1] A traumatic aneurysm of the abdominal aorta was exposed by laparotomy. One yard and a half of silver-plated copper wire was passed into the sac. On the tenth day there was temporary occlusion of the left femoral only; on the fifty-first day the patient was discharged well.—I am, etc.,

Wimpole Street, October 12th. WALTER G. SPENCER.

THE GRANT TO UNIVERSITY COLLEGES IN GREAT BRITAIN AND THE MEDICAL PROFESSION.

SIR,—The sum of £15,000 was this year granted by Parliament for the extension of university education. I have before me a copy of the Treasury Minute on the subject, signed by Lord Cranbrook and the Chancellor of the Exchequer. The following is the concluding paragraph of the Minute:

"An important point to be considered by the Committee is whether, in calculating the number of students on the income of any college, the medical faculty and the fees paid by medical students should be taken account of. It will probably be desirable to exclude them, and to have regard only to the arts and science branch of the work of the colleges."

On this pretty plain hint the Committee charged with the distribution of the grant cheerfully acted. They say: "The Minute also suggested that it would probably be desirable to exclude from consideration the medical branch, and to have regard only

[1] *Pacific Record*, 1887. *Amer. Univ. Med. Sc.*, 1888, vol. ii, p. 252. Rep. Rackam.

to the arts and science branch of the work of the colleges, and your Committee have acted on this suggestion."

My readers will be disposed to ask, if medicine is neither an "art" nor a "science," what is it? This liberal-minded Committee consisted of John Lubbock, H. E. Roscoe, J. Percival, G. F. Brown, R. G. C. Mowbray.

Surely the Chancellor of the Exchequer and Sir John Lubbock may reasonably be asked in Parliament for some explanation of their action in this matter.—I am, etc., A TEACHER.

NAVAL AND MILITARY MEDICAL SERVICES.

CHANGES OF STATION.

THE following changes of station among the officers of the Medical Staff of the Army have been officially notified as having taken place during the past month:—

	From	To
Dep. Surg.-Gen. S. A. Lithgow, M.D., C.B., D.S.O....	Dover ...	... Bengal.
Brig.-Surgeon W. A. Catherwood, M.D.	Netley ...	... C. of Good Hope
Surgeon-Major S. K. Ray	Malta ...	... Limerick.
,, W. D. Wilson, M.B. ...	Woolwich...	... Bombay.
,, H. T. Brown, M.D. ...	Limerick ...	... Bengal.
,, A. L. Browne, M.D. ...	Egypt ...	... Bombay.
,, G. B. Hickson... ...	York ...	... Leeds.
,, J. F. Williamson, M.B.	Egypt ...	... Bengal.
,, T. Boyd	Aldershot...	... Malta.
,, W. T. Johnston, M.D....	Egypt ...	... Madras.
,, J. F. Brodie, M.D. ...	Bombay ...	... Dublin.
Surgeon W. Keays	Dublin ...	... Bengal.
,, E. R. Power, M.B.	Egypt ...	... Dublin.
,, J. Tidbury, M.D.	Trowbridge	... Devonport.
,, W. P. Feltham	Half Pay ...	... Woolwich.
,, E. F. Smith	Tipperary...	... Cork.
,, J. M'M. Bolster	Cork ...	... Limerick.
,, J. M. Jones	Carlisle ...	... Seaforth.
,, D. L. Irvine...	Whitby ...	... Newcastle-on-Tyne.
,, J. R. Dodd, M.B.	Canterbury	... Bengal.
,, W. G. A. Bedford, M.B. ...	Gibraltar ...	... Aldershot.
,, W. Rowney, M.D.	Egypt ...	... ,,
,, J. C. Culling	Woolwich...	... Bombay.
,, F. H. Treherne	Aldershot...	... Bengal.
,, F. H. M. Burton, M.B. ...	Chester ...	... Birmingham.
,, H. E. Deane...	— ...	... Dover.
,, B. W. C. Deeble	Nova Scotia	... Netley.
,, A. E. C. Spence, M.B. ...	Egypt ...	... Portsmouth.
,, C. J. Holmes, M.D.	Cork ...	... Tipperary.
,, B. A. Maturin	Home District	... Gibraltar.
,, C. H. Hale	Ayr ...	... Stirling.
,, G. F. Alexander, M.B. ...	Lanarkmuir	... Glencorse.
,, C. W. Reilly...	Warrington	... Salford.
,, H. C. Gordon, M.B.	— ...	... Sierra Leone.
Quartermaster J. Thomson ...	York ...	... Chester.
,, G. Merritt ...	Home District	... Aldershot.

THE NAVY.

THE following appointments have been made at the Admiralty:—FREDERICK D. LAWSON, to be Surgeon and Agent at Bridlington, October 9th; F. J. LILLY, Surgeon to Plymouth Hospital, October 15th.

THE MEDICAL STAFF.

SURGEON-GENERAL JEFFERY ALLEN MARSTON, M.D., C.B., F.R.C.S.Eng., is granted retired pay. He was born December 2nd, 1831; entered the service as Assistant-Surgeon November 10th, 1854; became Surgeon June 8th, 1867; Surgeon-Major, March 1st, 1873; Brigade-Surgeon, November 27th, 1879; Deputy Surgeon-General, November 18th, 1882; and Surgeon-General, May 7th, 1889. He served in the Egyptian war of 1882 as Sanitary Officer, and was at the battle of Tel-el-Kebir; he was mentioned in despatches for his services, promoted to be Deputy Surgeon-General, and was awarded the medal with clasp, the 3rd Class of the Order of the Osmanieh, and the Khedive's bronze star. He was nominated a Companion of the Bath, June 21st, 1887.

Surgeon-Major CHARLES HEALY is granted retired pay. His commissions are dated: Assistant-Surgeon, September 30th, 1864; Surgeon, March 1st, 1873; and Surgeon-Major, September 30th, 1876.

Brigade-Surgeon R. WATERS, M.D., who is serving in the Bengal Establishment, is brought on the administrative medical staff of the Bengal Army.

Surgeon-Major G. B. MOUAT, M.D., who is serving in the Madras command, has been appointed Principal Medical Officer to the Chin Column of the Lushai Expeditionary Force.

ARMY MEDICAL RESERVE.

WE are asked to say that the qualifications given after the name of Surgeon W. J. NAISMITH in the JOURNAL of October 12th, and which was copied from the *London Gazette*, should have been F.R.C.S.Edin., not F.R.C.S.Eng.

INDIAN MEDICAL SERVICE.

THE undermentioned Surgeons, all of the Bengal Establishment, are appointed to the officiating medical charge of the regiments specified:—W. B. LANE, 11th Bengal Lancers, *vice* Surgeon J. J. Pratt, transferred temporarily to civil employment; D. M. MOIR, 13th Bengal Lancers, *vice* Surgeon J. Murray, transferred temporarily to civil employment; H. E. DRAKE-BROCKMAN, 19th Punjab Infantry, *vice* Surgeon J. F. Evans, appointed to the 18th Bengal Infantry; P J. LUMSDEN, 21st Punjab Infantry, *vice* Surgeon H. M. Morris, transferred temporarily to civil employment.

Surgeon-Major F. W. WRIGHT, M.B., D.S.O., Bengal Establishment, from the permanent medical charge of the 43rd Goorkha Light Infantry, is appointed to the officiating medical charge of the 35th Sikhs, *vice* Surgeon C. R. M. Green, transferred to the Erinpura Irregular Force; Surgeon-Major Wright will retain a lien on his permanent appointment in the 43rd Goorkha Light Infantry.

Deputy Surgeon-General THOMAS GILLHAM HEWLETT, C.I.E., late of the Bombay Establishment, and late Sanitary Commissioner Bombay Presidency, died on October 8th, aged 57. He entered the service as Assistant-Surgeon January 20th, 1854, and rose to be Deputy Surgeon-General November 1st, 1879. He retired May 13th, 1888, on a pension of £950 per annum. He served in the Indian Mutiny Campaign in 1858-59, and was present at the capture of Rewa, the destruction of Awah, and the pursuit of the Gwalior rebels. He was granted the medal with clasp, and in 1878 was nominated a Companion of the Indian Empire.

Surgeon-Major W. R. MURPHY, Bengal Establishment, has been appointed Principal Medical Officer to the Lushai Column, Dr. Seaman having declined the appointment.

An Army Circular notifies as follows: "Under instructions from the Secretary of State for India, the grant of the four extra pensions of £100 per annum each to senior officers of the Indian Medical Service, sanctioned in Clause 91 India Army Circulars, 1886, will be discontinued as regards all officers who may be appointed to the service after the examination held in August, 1889."

The *Daily Telegraph* reports that Surgeon H. K. FULLER, of the Madras Establishment, threw himself in front of the up Salisbury train as it was approaching Wimborne Station on October 14th. The front guard of the engine struck him, and the blow broke his neck. The deceased gentleman was 32 years of age. He was under treatment for mental infirmity.

THE VOLUNTEERS.

SURGEON A. C. E. HARRIS, F.R.C.S., of the Liverpool Brigade Royal Naval Artillery, is promoted to be Staff-Surgeon.

Surgeon HENRY BRIGGS, M.B., F.R.C.S., of the same Brigade, is appointed Honorary Staff-Surgeon.

WILLIAM HENRY MILLER, M.D., is appointed Acting Surgeon to the Queen's Rifle Volunteer Brigade (late the 1st Edinburgh).

Acting Surgeon W. J. PICKUP, M.B., 2nd Volunteer Battalion Warwickshire Regiment (late the 2nd Warwickshire), is promoted to be Surgeon to the same corps.

GEORGE HERBERT POLLARD, M.B., C.M., is appointed Surgeon to the Liverpool Brigade of the Royal Naval Artillery.

THE RANK AND TITLES QUESTION.

PILGRIM writes that some eighteen months ago he advocated in the JOURNAL, on reasons of experience and sound policy, that medical officers should have pure military rank and titles in a "Corps of Royal Physicians." Every medical officer is a physician and hygienist as well as a surgeon, and his duties, in fact, are more connected with the former than the latter. He considers all compound titles outlandish; but, if such are to be, why not major-general-physician down to lieutenant-physician? The latter titles would be both accurate and expressive, and more acceptable to those chiefly concerned; at least, so he gathers in correspondence with some distinguished old medical officers, who approve of his suggestions. Sooner or later the authorities will be compelled to concede purely military rank and titles, and he hopes any present concessions may therefore be made with a good grace.

*** The French have hitherto used the term "médecin" in army medical titles, but somehow it does not commend itself to English ears. As that nation, however, have now given their army medical officers pure military rank and titles, with complete departmental autonomy, let it be hoped we in this country may soon follow their example. But we fear the compulsion our correspondent speaks of will be applied later rather than sooner, for it is certain that any and all concessions to our Army Medical Service will be most desperately resisted in certain quarters.

EMPLOYMENT OF RETIRED OFFICERS.

F.R.C.S.I. writes: The recommendations of the Committee against the employment of retired reserve medical officers, but in favour of civil practitioners (at "contract rates," of course), are not merely contradictory, but very ill advised. Such recommendations could not have been made in the best interests of the service, but on purely financial considerations. That is the key; cheap services are desired, and medical officers must be deterred from retiring; no inducements must be held out to them to do so. But is the policy sound? His Royal Highness the Commander-in-Chief lately pleaded very eloquently for employment to retired and reserve soldiers. Why not to officers also? If recruiting will be stimulated by holding out prospects of employment to soldiers on discharge, will medical candidates be encouraged to come forward if told they have no prospects whatever after retirement? Let the Committee explain. Surely the trained services with troops of retired medical officers, who can give both time and experience to their duties, are of more value, even if dearer, than those of civil practitioners who can only spare a small portion of their daily time to any military duty they can undertake?

MR. BARTLEY'S DISSENT.

RESERVE LIST writes that he regrets to observe Mr. Bartley sticking to the error, freely exposed in these columns, of ignoring the reserve of retired medical officers, and by implication representing every one of them as if wholly non-effective. Is his object to give the easily misled taxpayer a "fright?" The public must be cautioned again and again against the misrepresentation of pseudo-economists. Is Mr. Bartley ignorant of the existence of some 170 retired reserve medical officers, who, although nominally on the non-effective list, are still "liable to be recalled to service" in national emergency? or, if he knows of them, where is his candour in ignoring them?

*** We cannot find in Mr. Bartley's dissent any reference to retired medical officers "liable to be recalled to service;" he freely rings the changes on the

terms "retired" and "non-effective," but carefully avoids that of "reserved." To talk of a reserve would, indeed, weaken or destroy his argument against voluntary retirement after twenty years' service, by which alone any effective reserve can be created. We agree with our correspondent that there is danger of the ill-informed public being misled by an unfair outcry over the retired vote, but not so Mr. Stanhope and those responsible for the efficiency of the army.

LORD CAMPERDOWN'S COMMITTEE.

EVIDENCE urges that Mr. Macnamara and Surgeon-General Balfour should publish from their notes and memory a summary of the evidence given before the Committee, especially that of the principal military witnesses. He makes the suggestion under the impression that no principle of honour would thereby be involved. The public and the profession have a right to know the evidence upon which the department has been judged, and the grounds upon which decisions have been arrived at.

*** The action of Committees in publishing evidence must be collective, and under the sanction of the Minister to whom they make their report; individual members can only record dissents officially, not in a private capacity. At the same time, the evidence in question would undoubtedly have been interesting, perhaps even amusing.

MEDICO-LEGAL AND MEDICO-ETHICAL.

ADVICE FREE.

"CLAPHAM DISPENSARY, for Women and Children (worked under a Committee by Women Physicians), 2, Stockwell Road, Clapham Road, after June 21st, 1889. Monday, Wednesday, and Friday, 2.30 to 4 P.M. Medical Advice Free. Medicine, 2d. per bottle. Patients to bring bottles, jars, etc. Maternity Branch, 131, Clapham Road, S.W. Women desiring to be attended in their confinement at their own homes may apply daily at any hour. Patients must live within one mile of 131, Clapham Road, or of 74, Jeffreys Road. Confinement Fee, 5s., to be paid on the registration of names, when a maternity ticket is given. Bags are lent to necessitous cases (deposit, 2s. 6d.). Patients taken in for their confinements at 74, Jeffreys Road, Clapham Road."

*** With regard to the above "handbill," to which, in compliance with the wishes of various local practitioners, we give insertion, much interest is felt as to what course is likely to be pursued by the Irish College of Physicians (of which the lady-doctor in question is a licentiate) in answer to the memorial signed by the (nigh) forty medical men alluded to by our correspondent.

DEATH CERTIFICATES SIGNED BY UNQUALIFIED ASSISTANTS.

MEDICUS writes: If a patient dies who is attended by an unqualified assistant before his principal, who is registered, sees him, what is best to be done about the death certificate? Would the unqualified assistant be acting illegally if he gave a certificate signed in his own name, in the usual form supplied by the registrar to his principal, of course not putting any letters after his name, and crossing out the words registered qualifications altogether? If that should be illegal for him to do, might he give a certificate stating disease, etc., of which patient died, written on plain paper? and could an unqualified man holding the L.M. of Coombe Hospital, Dublin, put L.M. after his name on certificate written on plain paper? Can a registrar accept such certificate if he pleases, or will he be compelled to consult the coroner?

*** The forms for medical certificates of the cause of death, supplied by the Registrar-General through the local registrars of births and deaths, should not be issued to any but registered medical practitioners, who alone are authorised to use the forms or to give a legal medical certificate for registration purposes. It would not, however, be illegal, in the case of the death of a patient who had been attended only by an unregistered or unqualified practitioner, for such an unregistered practitioner to give, on plain paper, a written statement of the cause of the death. Such statement, however, must be entered in the death register as an uncertified cause of death. Although registrars are not definitely instructed to refer all cases of uncertified deaths to the coroner, a very large proportion of such cases are so referred, and it is unavoidable to leave to the discretion of the registrar the interpretation of his instruction to refer all cases to the coroner in which there is the slightest suspicion of neglect or foul play in the circumstances attending the death.

ADVERTISING EXTRAORDINARY.

TOWNSVILLE, AUSTRALIA.—Professionally indefensible as is the pretentious circular issued by "Dr. H. F., M.D., the only registered Doctor of Medicine practising in Townsville, and the only one, consequently, who is either legally or morally authorised to use the title of Doctor," and who, moreover, "during an experience of nearly thirty years, has never had a mother die in any accouchement he has attended in his own practice," we would, in reply to our correspondent's note, suggest, as the most effective mode of dealing with it, that he should, in conjunction with two or three local medical men, address a brief memorial on the subject to the authorities of the University and of the Faculty of Physicians and Surgeons of Glasgow, of which the practitioner in question is a graduate and licentiate, and enclose therewith a copy of the printed circular.

"VOTE FOR DR. ——, THE GENUINE WORKING MAN'S FRIEND."

SUCH is the sympathetic heading of one of a series of handbills (forming a batch of literary curiosities) issued by certain candidates for the appointment of club doctor or medical officer of a limited company; while another sets forth as an inducement to support his candidature the fact that he had five surgeries in the district, and was willing to open another wherever the men might wish, adding, moreover, that he "did his work driving," and paid personal attention to his patients. But enough! That four out of eight candidates, admitted members of a learned and justly honoured profession, should not hesitate to resort to such expedients is deeply to be regretted, and tends to more or less justify the question asked as to whether practitioners so inclined have not mistaken their true vocation. Be that as it may, we would, in response to our correspondent's communication, remark that the only effective remedy for such discreditable deviations from the time-honoured traditions of the faculty will, in our opinion, be found in a thorough and persistent utilisation of the disciplinary laws of the respective licensing bodies, to whom we venture to relegate the question.

HOSPITAL AND DISPENSARY MANAGEMENT.

ALLEGED ABUSE OF OUT-PATIENT DEPARTMENTS AND THE PROPOSED PUBLIC MEDICAL SERVICE.

SIR,—I quite agree with Dr. Rentoul that the employers of labour ought to pay a part of what is requisite to ensure their *employés* against sickness. Unless, however, the State makes this compulsory, it will have to be done by an honorary subscription list, that is, by charitable contributions; for it would be impracticable to make any rule requiring payments by the employers of members. As to charity-fed organisations, however, the wastefulness and inefficiency of those already existing in pernicious profusion has made them to stink in the nostrils of the profession. It seems to me, moreover, that if each member were to pay 2d. a week on an average, working expenses being diminished by simply having a secretary to attend for payments, etc., at given times, and by letting the doctors see patients and supply medicines as they do in the case of their private patients, the system could be well worked, without any external aid or interference. Again, if every doctor of respectability can get his name entered on the staff, no existing interests need be injured. When a club wishes to provide treatment for its members it could make application to the Public Medical Service, and select its own medical man just as much as ever, but the service could see that fair play was given on both sides. The Public Medical Service ought to be a system for directing and supervising the provision of medical aid for the poor, rather than independent system in rivalry with the rest.

It is no use for doctors to complain that unfair competition compels them to work at less than the wages of errand boys, while they decline to submit to any rules for establishing proper relations between doctors and patients. It is no use for club patients to complain that they get coloured water as medicine, while they are trying to make themselves a burden on the doctor's charity. If it were not that the State has been so unfair in its dealings with the medical profession, we might appeal to it to establish an authoritative system; but experience makes medical men deprecate State interference. Let medical men consider, however, that, while they are doubting whether it is any use doing anything, the State may possibly step in, and settle matters with that disregard of medical interests which the self-engrossed spirit of medical men only too well justifies.

There seems to be an overwhelming agreement that gross abuses exist, and Dr. Rentoul proposes a remedy. If his remedy is not a suitable one, let a better by all means be suggested. But surely the Branches of the Association can do something better than merely resolving that there is need of inquiry. I had hoped we were past the stage of awaking to the fact that something ought to be done.

Any Commission will want to know what medical men think desirable in order to set matters right. What if the Commission decides "that the time has not come" for doing anything? This is just what the enemies of reform would like. Surely the British Medical Association can do something to solve the difficult problem. The annual meeting of the Association at Leeds decided that something shall be done by the Association, and it is certainly to be hoped that members will make up their minds what they wish to be done, before a general meeting has to pronounce definitely on the subject.

Surely the *laissez faire* policy, the policy of hopeless acquiescence in evil, has long enough disgraced our profession. Those who weakly allow evil, which they have the power to remove, are but little better than the authors of it. The attempt to reform the medical profession is Utopian and hopeless, only so far as it is an empty dream to expect medical men to consider not their own interests only, but also the interests of others.—I am, etc.,

Highgate, N. HUGH WOODS, M.D.

SIR,—I think the whole profession is much indebted to your correspondent, "General Practitioner," for his able and welcome

letter on the flagrant and glaring abuses of the provident dispensary system as at present carried out, for without doubt the medical staff of these institutions do become "responsible for acts from which they would shrink in their private capacity," and thus destroy all the dignity and the long cherished traditions of the profession, which ultimately means ruin to the younger practitioners, and the consequent resort to all the base and discreditable means employed in the present day to secure any kind of low-class work to drive starvation from their doors.

In provident dispensaries "touting for patients" in the midst of other medical men's practices, both by volunteer and paid agents, is of hourly occurrence. Quacklike bills and advertisements in the local papers are as common as daylight. In many instances sick patients are at once transferred from the lists of the neighbouring practitioners to those attached to the local dispensary. Numbers of well-to-do mechanics' wives, who have gladly paid a guinea confinement fee for many years past to their own private advisers, are now attended by those charitable practitioners for 15s. or less, and thus money is lost to the profession, while their new attendants congratulate themselves upon their own philanthropy, and on teaching "the people" the advantages of "thrift and self-reliance." The old-fashioned apothecary, with his chemist's shop, was bad enough, but the so-called provident and the sham sixpenny dispensaries have already eaten up the heart of the profession, ruined the prospects of the younger dignified practitioners, and are fast converting the profession of medicine into a bad form of retail trade. "General Practitioner" may well ask, "How long are these men to enjoy a special indulgence with regard to offences against medical etiquette?"

Trusting some remedy may soon be found for these terrible abuses,—I am, etc.,

A LOVER OF THE PROFESSION.

SIR,—May I, in response to Dr. Woods's suggestion, give expression to my views of the proposed Public Medical Service? Almost all practitioners have abundant experience of the abuse of hospitals, and all must give credit to Dr. Rentoul for the energetic way in which he has emphasised and drawn attention to the facts of the case; but the cure for the evil is not, in my opinion, to be found in the proposed Public Medical Service. Indeed, the scale of fees suggested is no less than that in force in general practice in many parts of the country, and, in some instances, the fees proposed are much higher than those frequently accepted, as, for example, the obstetric fees.

I think everyone will admit that the supply of resident doctors is quite ample for the needs of most localities: and if these are content to work at the rate of pay suggested by the author of the proposed service—or even for much lower fees, as, for example, the "6d. doctors," as they are called by the public—I fail to see the need for the introduction of yet another scheme for supplying medical aid to the working classes, who, I venture to predict, will not patronise the new service while they can get similar attendance at lower rates.

Then, I would ask, is there much hope of obtaining the co-operation of hospital physicians and surgeons in sweeping away the abuses of these institutions which we all, as general practitioners, deplore? I fear the expressions attributed to Sir Andrew Clark, in his Mansion House speech, very truthfully represent the feelings of his class. So long as the greatest ambition of hospital managers is to record vast arrays of figures, showing number of in-patients, number of out-patients, number of operations, and even number of dressings per week or month, so long will hospital abuse continue, provided that the charitable public come forward with the necessary funds; nor can we, I think, blame those who take advantage of the freely opened doors of our hospitals, into which they are often forced by the pressure of influential friends or employers, and even by ourselves, when they could be equally well treated in their own homes.

The subscribing public should be awakened to the enormous abuse of charity at our hospitals, and should insist upon a more careful selection of the cases admitted, which cannot, I think, be based upon any arbitrary wage limit, but upon the general suitability of the case. A great safeguard would, I believe, be that, in all cases except accidents, patients should be recommended by private practitioners, who are well qualified to judge of the fitness of each case on its merits, and subscribers' recommendation notes should be abolished.

I cannot agree with Dr. Woods that the club system does not work well, and, in my limited experience, I do not find that such patients are at all reluctant to consult their appointed surgeon. The doctor's pay is truly small, but there is no hope of any increase while competition is so keen for these appointments. The provident principle of such associations is excellent, and their steady growth is an indication that they supply a want to the working classes, who often make no other provision for sickness and death.

Trusting that I have not trespassed at too great length on your space,—I am, etc.,

COUNTRY DOCTOR.

PROVIDENT MEDICAL CLUBS.

AT the North-Western Poor Law Conference, which was recently held at the Guildhall, Preston, under the presidency of the Right Hon. J. T. Hibbert, which was attended by a number of representatives from the boards of guardians in the various Poor-law unions, Mr. O'Hanlon (Manchester) contributed a paper on Provident Medical Clubs.

He gave some information as to the working of these institutions and the benefit they confer on the labouring class, both members and non-members—on the former by encouraging among them habits of thrift, and on the latter "by moderating the fees" charged by medical men practising among the poor.—In the course of a discussion which followed, Mr. Cropper, Chairman of the Westmorland County Council, gave some details as to a provident dispensary at Kendal. Membership was based on a double principle, involving monthly contributions and a payment of 6d. for each visit by the doctor. They had four doctors associated with it, and members could choose any one of them. So well had it answered for the medical attendance that other doctors had applied to be placed on their staff—in fact, he might say that one doctor received from it last year about £160. While the doctors were perfectly satisfied with the system, the people appreciated it so highly that about one-seventh of the whole population in Kendal were associated with it.—In the subsequent discussion, a guardian from Liverpool advocated a system of compulsory national insurance.—Mr. Hibbert, in closing the discussion, said, with respect to an observation which had been made as to the poor pay which doctors got from such institutions as those proposed, that no club of the kind could live long if it was doing an injury to the doctors, therefore things might well be left to right themselves. In Germany they had a compulsory system of insurance. They in England had learned the compulsory system of education, and perhaps in course of time they would adopt Germany's compulsory system of insurance.

UNIVERSITY INTELLIGENCE.

OXFORD.

ROLLESTON MEMORIAL PRIZE.—The Rolleston Memorial Prize will be awarded in Hilary Term, 1890, for an essay embodying original research in animal and vegetable morphology, physiology and pathology, or anthropology. The prize is open to members of the Universities of Oxford and Cambridge of not more than ten years' standing from matriculation.

CAMBRIDGE.

EXAMINERS.—Dr. W. M. Ord, of St. Thomas's Hospital, has been appointed an Examiner in Medicine for the M.B. degree, in the room of Dr. Broadbent. Dr. Norman Moore, of St. Catharine's College, Warden of St. Bartholomew's, has been reappointed Assessor to the Regius Professor of Physic with reference to the exercises required for the M.D. degree. Dr. Alfred Carpenter and Dr. Turner, Lecturer on Hygiene at Guy's Hospital, have been appointed additional Examiners in Sanitary Science; owing to the large number of candidates (some forty-five in all) for the Cambridge diploma in Public Health, the four examiners already appointed applied for extra assistance.

THE ACADEMICAL STANDING OF BACHELORS OF MEDICINE AND SURGERY.—The Council of the Senate report that there is some uncertainty as to the proper gown and hood to be worn by Bachelors of Medicine. Of late they have worn the ordinary M.A. dress, but the Council think it desirable to introduce some distinction, and recommend that M.B.'s shall in future wear a black gown of the same shape as the M.D. scarlet gown, and a hood of the M.A. shape, but lined with the pink silk of the M.D. scarlet hood instead of the white silk of the M.A.'s. This handsome academic dress will serve to emphasise the fact that M.B.'s are not deemed to be *in statu pupillari*, and settles a somewhat vexed question in a satisfactory manner. The Council further propose a new statute defining the *status pupillaris*, from which it appears that Bachelors of Surgery, who by the existing statutes have the privileges of Bachelors of Arts, are to be deemed *in statu pupillari*; while Bachelors of Medicine, who have to write an original thesis and keep a public "Act," are with "Inceptors in Arts, Law, and Surgery, and Doctors designate in Music," declared to have passed out of the *status pupillaris*.

THE COUNCIL OF THE BOROUGH OF CAMBRIDGE.—Another report before the Senate deals with the mode of election of the six new University Councillors, who are, with thirty town councillors and certain aldermen, to constitute the new Council of the Borough of Cambridge. The Improvement Commissioners and the old Town Council will cease to exist on November 1st, the new body taking over the functions of both the others. As between them these latter have managed to postpone again and again the much-needed drainage reform in the town, it is to be hoped that a better *régime* will begin under their successor, strengthened as it is by the addition of University aldermen and councillors.

ADDENBROOKE'S HOSPITAL.—The Quarterly Court of Addenbrooke's Hospital has decided to spend some £550 in erecting a ward for sick nurses and probationers. About £250 of this comes from a fund raised in part to commemorate the great services to the nursing department of the hospital rendered by the late matron, Miss Alice Fisher, who died recently in Philadelphia. The success of the nursing school founded by her has been of the most gratifying kind; the Treasurer lately announced that in the present year nearly £1,200 had been received in fees from nursing

pupils and probationers. Mr. Laurence Humphry, M.B., Assistant-Physician to the Hospital, and Lecturer to the Probationers, has nearly ready for issue a textbook for nurses embodying his course of instruction.

ROYAL UNIVERSITY OF IRELAND.

THE autumnal examinations in the Faculty of Medicine have so far resulted as follows:—

First Examination in Medicine: The Examiners have recommended that the following should be adjudged to have passed this Examination.

Upper Pass Division.—C. L. Birmingham, University College, Dublin; J. D. Boyd, Queen's College, Belfast; J. A. Burns, Queen's College, Cork; W. Chancellor, B.A., Queen's College, Belfast; E. J. Kelleher, Queen's College, Cork; P. N. O'G. Lalor, University College, Dublin; W. McMath, Queen's College, Cork, and Belfast; D. J. O'Connor, Queen's College, Cork; M. V. O'Reilly, University College, Dublin and Catholic University School of Medicine; J. J. Wallace, Queen's College, Belfast.

All the above candidates may present themselves for the Further Examination for Honours.

Passed.—P. Brady, University College, Dublin, and Catholic University School of Medicine; J. K. Brownlees, Queen's College, Belfast; W. Canning, Queen's College, Belfast; T. F. Chambers, Queen's College, Cork; J. Dunne, University College, Dublin; T. J. Fennelly, Carmichael College of Medicine; J. W. Furey, Queen's College, Belfast; G. W. Griffiths, Carmichael College and Royal College of Science; Amelia G. Grogan, Royal College of Science; J. R. Lawther, Queen's College, Belfast; J. M. Longford, University College, Dublin; Florence F. MacCarthy, University College, Dublin; P. McCarthy, Queen's College, Galway; D. J. Magee, University College, Dublin; S. M. Magowan, Queen's College, Belfast; J. Mortell, Catholic University School of Medicine; J. Patrick, Queen's College, Belfast; J. H. Thompson, Queen's College, Belfast; F. Whitaker, University College, Dublin.

Second Examination in Medicine: The Examiners have recommended that the following should be adjudged to have passed this Examination.

Upper Pass Division.—*A. J. M. Blaney, B.A., Catholic University School of Medicine; *R. Campbell, B.A., Queen's College, Belfast; *T. Howard, Catholic University School of Medicine and Queen's College, Galway; J. Lynass, Queen's College, Belfast; *D. O'Callaghan, B.A., Queen's College, Cork; D. O'Driscoll, Queen's College, Cork; P. T. O'Sullivan, Queen's College, Cork; R. H. W. S. Torney, Carmichael College and Ledwich School.

Those marked with an asterisk may present themselves for the Further Examination for Honours.

Passed.—J. Anglim, Catholic University School of Medicine; T. W. Atkinson, B.A., Queen's College, Belfast; R. M. Beatty, B.A., Queen's College, Belfast; P. Bennett, Catholic University School of Medicine; M. Boyle, Queen's College, Cork; R. P. Crosbie, M.A., Queen's College, Cork; C. H. Foley, Queen's College, Galway; W. Gordon, Queen's College, Belfast; J. Graham, Queen's College, Belfast; W. Hamilton, Queen's College, Belfast; B. B. Hosford, Queen's College, Cork; P. McGann, Catholic University School of Medicine; A. Moss, Queen's College, Belfast; T. Murphy, Queen's College, Cork; P. J. O'Brien, Queen's College, Cork; M. O'Sullivan, Catholic University School of Medicine; D. J. Ryan, Catholic University School of Medicine; J. A. Scott, Queen's College, Belfast; T. H. Scott, Queen's College, Belfast.

Third Examination in Medicine: The Examiners have recommended that the following candidates should be allowed to pass this Examination:—

Upper Pass Division.—J. A. Adams, B.A., Queen's College, Galway; G. H. Frost, Catholic University School of Medicine; A. Fullerton, Queen's College, Belfast; T. W. A. Fullerton, Carmichael College of Medicine; Katherine M. N. Maguire, Royal College of Surgeons and Carmichael College; J. B. Moore, Queen's College, Cork; H. Morton, M.A., Queen's College, Belfast.

All the above candidates may present themselves for the Further Examination for Honours.

Passed.—J. H. Anderson, Queen's College, Belfast; D. J. F. Bennett, Catholic University School of Medicine; C. L. W. Bunton, Queen's College, Galway; J. F. Carroll, B.A., Queen's College, Cork; Anna L. Church, Royal College of Surgeons and Carmichael College; M. Coughlan, Queen's College, Cork, and Catholic University School of Medicine; F. A. Craig, Queen's College, Belfast; R. Creighton, Royal College of Surgeons; P. Crowley, Queen's College, Galway; W. W. Duff, Queen's College, Belfast; M. Fitzgerald, Queen's College, Cork; R. Fraser, Queen's College, Belfast, P. Goold, Queen's College, Cork; R. J. Gordon, M.A., Queen's College, Belfast; E. F. Hanrahan, Ledwich School of Medicine; H. Harley, Queen's College, Cork; H. T. Heron, B.A., Queen's College, Belfast; D. P. S. Hill, Queen's College, Belfast; T. Jackson, Queen's College, Belfast; J. Jamison, Queen's College, Belfast; P. P. Jennings, Queen's College, Cork; J. M. Keegan, M.A., Queen's College, Galway, and Glasgow Royal Infirmary; J. F. Kelly, Catholic University School of Medicine; R. Lyons, Queen's College, Belfast; M. McCann, Queen's College, Belfast; R. McDowell, Queen's College, Belfast; J. McGennis, Queen's College, Galway, and Catholic University School of Medicine; J. B. McLaren, M.A., Queen's College, Belfast; W. Moody, Queen's Colleges, Galway and Belfast; H. J. Moore, Catholic University School of Medicine and School of Physic, Trinity College, Dublin; J. Morrow, B.A., Queen's College, Belfast; T. J. Murphy, Queen's College, Cork; W. O'Gorman, Catholic University School of Medicine; H. W. H. O'Reilly, Queen's College, Galway; J. A. O'Sullivan, Queen's College, Cork; A. G. Robb, Queen's College, Belfast; W. L. Storey, Queen's College, Belfast; H. Stranaghan, Queen's College, Belfast; J. J. Thompson, Carmichael School of Medicine; J. R. Thomson, Queen's College, Belfast; A. J. Tonkin, Queen's College, Belfast; R. B. Wagner, Queen's College, Cork; G. S. Walker, Queen's College, Cork; J. T. Wallace, B.A., School of Physic, Trinity College, Dublin; T. B. P. Wilkinson, School of Physic, Trinity College, Dublin, Catholic University School of Medicine, and Ledwich School of Medicine.

Medical Degrees Examination: The Examiners have recommended that the following be adjudged to have passed this Examination.

Upper Pass Division.—I. Banks, Queen's College, Cork; J. B. Coleman, Catholic University School of Medicine and Carmichael College; J. Eldon, Queen's College, Galway, and Carmichael College; J. M. Fagan, Catholic University School of Medicine and Carmichael College; *J. M. Hall, Queen's College, Belfast; T. McDermott, B.A., Catholic University School of Medicine; F. McKee, Queen's College, Belfast; *J. W. Wolfe, Queen's College, Cork.

Those marked with an asterisk may present themselves for Further Examination for Honours.

Passed.—J. Adrain, Queen's College, Belfast; J. P. Clarke, B.A., Catholic University School of Medicine; R. R. Davidson, B.A., Queen's College, Cork; C. Donovan, B.A., School of Physic, Trinity College, Dublin; J. E. Dunlop, B.A., Queen's College, Belfast; W. Ekin, Queen's College, Belfast; A. M. Erskine, Queen's College, Belfast; J. Fulton, Queen's College, Belfast; H. T. Gill, Queen's College, Belfast; W. J. Gregory, Queen's College, Galway; J. Hamilton, Queen's College, Galway; J. Harley, Queen's College, Cork; W. Healy, Carmichael College; P. P. Jennings, Queen's College, Cork; J. J. Loftus, Queen's College, Galway, and Carmichael College; A. W. S. McComiskey, Carmichael College; H. T. N. Merrick, School of Physic, Trinity College, Dublin; A. T. Morrison, Queen's College, Belfast; R. J. Munn, Queen's College, Belfast; W. J. O'Donnell, B.A., Queen's College, Cork; M. J. O'Regan, Queen's College, Cork; H. K. Smyth, Queen's College, Cork; J. Smyth, Queen's College, Belfast; W. L. Storey, Queen's College, Belfast; J. Taylor, Queen's College, Belfast; S. H. Withers, Queen's College, Belfast.

OBITUARY.

PROFESSOR MAX LEIDESDORF, M.D., VIENNA.

PROFESSOR MAX LEIDESDORF, who died on October 9th from disease of the heart, was born at Vienna in 1819, and took his M.D. degree in the university of that city in 1845. He then visited the principal schools of Germany, England, and France, and soon afterwards he was appointed director of a large lunatic asylum at St. Petersburg. After a short sojourn in the Russian capital, he returned to Vienna, where he became *Privat-Docent* of Psychical Diseases in 1856. In 1866, he was named Extraordinary Professor; in 1872, he became chief physician in the clinic for mental diseases of the General Hospital; and in 1875, he was appointed Director of the Vienna "Landes Irrenanstalt" (the General Lunatic Asylum for Lower Austria).

Professor Leidesdorf's scientific works are very numerous. The most important of his publications are: *Contributions to the Diagnosis and Treatment of the Primary Forms of Mania; Textbook of Mental Diseases; Clinical Psychiatric Studies, etc.* It was through his efforts that a clinic for mental diseases was established in the Vienna University in 1870. Up to that time there had been no systematic instruction in that branch of medicine at Vienna.

Leidesdorf had a great reputation as a consultant. Patients from the most distant countries sought his advice, and he was very frequently called upon to give his "super-arbitrium" in difficult cases.

In 1886, he was named a Member of the Oberster Sanitätsrath (Upper Sanitary Council), where he earnestly advocated the establishment of asylums for drunkards. In the medical profession Leidesdorf's influence was very great; he was an intimate friend of Skoda, Oppolzer, Hebra, Arlt, etc. It was only last year that Leidesdorf resigned his chair, owing to his having reached the limit of age (70) at which, according to Austrian law, all university professors have to retire.

HENRY LOWNDES, M.K.Q.C.P.IREL., M.R.C.S.ENG., L.S.A.

WE regret to have to announce the death, on October 14th, of Mr. Henry Lowndes, at his residence, Catherine Street, Liverpool. The deceased, the fourth and last surviving son of the late William Lowndes, for many years a County Court judge, was born in 1827. He was educated at the Royal Institution of Liverpool, and subsequently became resident pupil at the Royal Infirmary, where he remained five years. Having completed his medical education in Edinburgh and obtained his diplomas, he returned to the Royal Infirmary as its resident medical officer, or, as it was then termed, house apothecary.

In 1860 he removed to the residence which he occupied at the

time of his death. He was for some years honorary surgeon to the South Dispensary.

In 1861 he was elected junior surgeon to the Northern Hospital, and in 1866 he was appointed surgeon to that institution. He retired from that office in 1881, but was appointed consulting surgeon, and held that position till his death. He was for a long period an active member of the Medical Institution, and for three years its secretary. He was the author of numerous contributions to medical journals, and of a popular work on the *Maintenance of Health*. He was an occasional writer on our editorial staff, especially on subjects connected with the prevention of infanticide, registration of stillbirth, and the limitation of enthetic disease.

Mr. Lowndes was well read, an accomplished linguist, and a graceful writer of verse, and as a versifier he was a frequent contributor to the local press. It appears that some weeks previous to his death a painful affection of the right leg, with which he had been long more or less affected, became much aggravated, and though advised to rest, he persisted in attending to his patients, till latterly he found himself absolutely compelled to take to his bed. During his illness he received the most unremitting care and attention from Dr. Glynn and Mr. George Hamilton, friends and former colleagues, who did everything that medical skill could suggest to relieve his sufferings, though, unhappily, without avail.

His many amiable qualities and cultured mind endeared him to a wide circle of friends, who mourn his loss.

THOMAS FARIS, M.B.T.C.D.,

Surgeon-Major Army Medical Staff.

It is with great regret we announce the death of Surgeon-Major Thomas Faris, of the Army Medical Staff, which took place in Dublin on October 1st, after a painful illness of some months' duration.

The deceased officer, who was born on December 18th, 1845, was the only son of the late Rev. Francis Faris, Vicar of Donard, county Wicklow, and belonged to a family which has given many officers to the army. Surgeon-Major Faris was educated at Trinity College, Dublin, where he graduated M.B. in 1867. He entered the army as assistant-surgeon on October 1st, 1868, was appointed surgeon on March 1st, 1873, and on October 1st, 1880, was promoted to the rank he held at the time of his death. He is best known to his department as having for some years held the appointment of Instructor at the Training School of the Army Hospital Corps, which his friend Sandford Moore then commanded. He has left his mark as a teacher there, and to his inventive genius is due the present pattern of army stretcher which is known by his name, and is immensely superior for field work to any other which has been devised. Not content with working hard at his own profession, his marvellous industry prompted him to study law also, and we find him called to the Bar (Inner Temple) in June, 1884.

He served in the Ashantee war in 1873-74, and received the medal with clasp for that campaign. In 1881, when hostilities were being carried on against the Transvaal Boers, he went to Natal as second in command of the Bearer Company which was sent thither under command of Surgeon-Major Johnston. At the time of his death he held the post of Staff Officer of the Medical Staff Corps, the best interests of which he ever strove to promote. Surgeon-Major Faris was a warm friend, and his loss will be sincerely regretted by many to whom his good qualities had endeared him.

SURGEON H. E. B. FLANAGAN, M.S.

We have been favoured with the following information concerning the death of this promising young medical officer, who died at Bangalore of enteric fever on August 8th, 1889, at the early age of 31 years. The deceased officer was the son of Lieutenant-Colonel John B. Flanagan (retired), of Woolwich, entered the service on March 6th, 1880, and served abroad both in the East and West Indies. Beginning with a distinguished collegiate career (being a gold medallist and prizeman at Guy's), he was noted during his service as a zealous, painstaking, and conscientious medical officer, unwearying in his attention to all ranks of the army with whom he was brought into professional contact. To his medical skill he added very high linguistic attainments, having successfully passed the examinations for the higher standard in Hindustani, high proficiency in Urdu, and higher standard in Persian. Very shortly before his last illness he was about to proceed to Madras for the purpose of passing the test in Persian High Proficiency; but the onset of the fever, which ultimately proved fatal, prevented his doing so.

Surgeon Flanagan's funeral was attended by a very large number of officers of all ranks and corps serving in the Bangalore garrison, headed by the Brigadier-General commanding the district and his staff.

BENJAMIN HENRY SPEDDING, L.R.C.P.Edin., L.R.C.S.Edin., and L.M.

The death of Mr. Spedding occurred at his residence, Antrim House, Belfast, on October 8th. The deceased, whose demise will be much regretted by a wide circle of friends, was a son of the late Rev. William Spedding, M.A.T.C.D., rector of Killencoole, Co. Louth, and had for many years been established as a medical practitioner in the city. He was a member of the Council of the Ulster Medical Society, a fellow of the British Gynæcological Society, and a lecturer on Diseases of Women at the Ulster Hospital. He was medical officer of the Belfast No. 3 City Dispensary District, and held other public appointments. He had for some time been in failing health.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

MEDICAL OFFICER OF HEALTH FOR WOOLWICH.

Woolwich has (a correspondent writes to us) hitherto enjoyed the unenviable notoriety of having no medical officer of health, an omission which is about to be supplied. Fifteen of the local practitioners have addressed a memorial to the local board of health pointing out the great importance of electing to the "newly-formed post of medical officer of health a gentleman not in practice in the locality, yet one acquainted with the conditions under which general practice is carried on." He should, they observe, have the confidence not only of the public, but, to prevent friction, that of the medical practitioners also; and should be of a position and standing to be independent of all attempts to bias him in the discharge of his duties. The memorialists close by suggesting that all the above qualities are united in the person of Dr. W. C. Wise, medical officer of Plumstead.

HEALTH OF ENGLISH TOWNS.

During the week ending Saturday, October 12th, 5,642 births and 3,201 deaths were registered in twenty-eight of the largest English towns, including London, which have an estimated aggregate population of 9,555,406 persons. The annual rate of mortality in these towns, which had been 17.9 and 17.6 per 1,000 in the two preceding weeks, further declined to 17.5 during the week under notice. The rates in the several towns ranged from 9.3 in Cardiff, 12.3 in Bristol, 13.8 in Derby, and 14.3 in Nottingham to 25.6 in Newcastle-upon-Tyne, 27.6 in Sunderland, 28.0 in Preston, and 32.7 in Plymouth. The mean death-rate in the twenty-seven provincial towns was 18.8 per 1,000, and exceeded by as much as 3.0 the rate recorded in London, which was only 15.8 per 1,000. The 3,201 deaths registered during the week under notice in the twenty-eight towns included 352 which were referred to the principal zymotic diseases, against 529 and 403 in the two preceding weeks; of these, 116 resulted from diarrhœa, 65 from scarlet fever, 55 from diphtheria, 43 from "fever" (principally enteric), 41 from whooping-cough, 32 from measles, and not one from small-pox. These 352 deaths were equal to an annual rate of 1.9 per 1,000; in London the zymotic death-rate was 1.5, while it averaged 2.3 per 1,000 in the twenty-seven provincial towns, and ranged from 0.0 in Huddersfield, 0.4 in Portsmouth, and 0.5 in Cardiff to 3.9 in Leeds, 4.0 in Preston, 4.3 in Sunderland, and 8.0 in Plymouth. Measles caused the highest proportional fatality in Preston and Sunderland; scarlet fever in Salford, Leeds, and Plymouth; whooping-cough in Oldham; "fever" in Birkenhead; and diarrhœa in Preston, Newcastle-upon-Tyne, and Wolverhampton. The 55 deaths from diphtheria recorded in the twenty-eight towns during the week under notice included 35 in London, 4 in Manchester, 3 in Salford, 3 in Liverpool, and 2 in Sheffield. No fatal case of small-pox was registered, either in London or in any of the provincial towns, and no small-pox patients were under treatment in any of the Metropolitan Asylums Hospitals on Saturday, October 12th. These hospitals contained, however, 1,286 scarlet fever patients on the same date, against numbers increasing from 538 to 1,247 in the fifteen preceding weeks; 168 cases were admitted during the week, against 158 and 135 in the two previous weeks. The death-rate from diseases of the respiratory organs in London was equal to 3.2 per 1,000, and was slightly below the average.

HEALTH OF SCOTCH TOWNS.

In the eight principal Scotch towns, 828 births and 469 deaths were registered during the week ending Saturday, October 12th. The annual rate of mortality in these towns, which had been 18.8 and 18.6 per 1,000 in the two preceding weeks, further declined to 18.3 during the week under notice, but exceeded by 0.8 per 1,000 the mean rate during the same period in the twenty-eight large

English towns. Among the Scotch towns the lowest rates were recorded in Greenock and Dundee, and the highest in Glasgow and Paisley. The 469 deaths in these towns during the week under notice included 64 which were referred to the principal zymotic diseases, equal to an annual rate of 2.5 per 1,000, which was 0.6 above the mean zymotic death-rate during the same period in the large English towns. The highest zymotic death-rates were recorded in Glasgow, Perth, and Paisley. The 219 deaths registered during the week in Glasgow included 9 from whooping-cough, 8 from diarrhœa, 6 from diphtheria, 4 from "fever," 3 from measles, and 2 from scarlet fever. Six fatal cases of diphtheria and 4 of "fever" were recorded in Edinburgh. Two deaths from scarlet fever occurred in Perth. The death-rate from diseases of the respiratory organs in these towns was equal to 3.0 per 1,000, against 3.2 in London.

HEALTH OF IRISH TOWNS.

During the week ending Saturday, October 12th, the deaths registered in the sixteen principal town districts of Ireland were equal to an annual rate of 21.7 per 1,000. The lowest rates were recorded in Dundalk and Kilkenny, and the highest in Cork and Wexford. The death-rate from the principal zymotic diseases in these towns averaged 2.6 per 1,000. The 157 deaths registered in Dublin during the week under notice were equal to an annual rate of 23.2 per 1,000 (against 31.5 and 26.2 in the two preceding weeks), the rate for the same period being only 15.8 in London and 16.0 in Edinburgh. These 157 deaths included 23 which resulted from the principal zymotic diseases (equal to an annual rate of 3.4 per 1,000), of which 14 were referred to diarrhœa, 7 to "fever," and 2 to measles.

THE QUALIFICATIONS OF MEDICAL OFFICERS OF HEALTH.

Erratum.—In last week's number of the Journal, p. 850, under the above heading, it is stated: "Medical officers who have, prior to 1892, had charge of a district of 50,000 population for three consecutive years will not be required to hold or obtain a public health diploma." For 50,000 read 20,000.

COMPULSORY NOTIFICATION.

Messrs. John Holden and J. J. Byrne, Honorary Secretaries of the Preston Medico-Ethical Society, write: We are directed to apply to you on behalf of this Society for information as to the numbers and names of large towns in which there is compulsory notification of disease, but in which the notification of measles is not required.

*** In the following towns the notification of infectious disease (but not measles) is compulsory, but it is impossible at the present moment to give a complete list of such towns, as a large number of local authorities are taking the necessary steps for bringing the Infectious Diseases (Notification) Act of last session into force in their districts (for example, Sheffield, Middlesbrough, West Hartlepool, Truro, Tunbridge Wells, etc.). In most of these latter cases measles will not, at all events at first, be a notifiable disease:—Accrington, Ashton-under-Lyne, Barrow-in-Furness, Blackburn, Bolton, Bradford (Yorks), Burnley, Burton-on-Trent, Bury, Chadderton, Chester, Croydon, Darwen, Derby, Dewsbury, Guildford, Halifax, Heywood, Huddersfield, Kingston-on-Thames, Lancaster, Leicester, Llandudno, Llanelly, Macclesfield, Manchester, Nelson, Newcastle-on-Tyne, Norwich, Nottingham, Oldham, Portsmouth, Ripon, Salford, Stafford, Stalybridge, Sunderland, Torquay, Wakefield, West Ham, Wigan, Willesden, York.

HOURS OF ATTENDANCE OF MEDICAL OFFICERS.

Mr. H. N. O. asks whether the guardians of the union in which he has recently been appointed district medical officer can, by resolution passed after his appointment has been confirmed by the Local Government Board, compel him to be at home for consultation for three hours daily.

*** We are not aware of any power possessed by the guardians which will enable them to make such a stringent regulation as this in reference to a medical officer's duties after his appointment has been confirmed by the Local Government Board.

MEDICAL NEWS.

The foundation stone of the Victoria Jubilee Hospital at Folkestone was laid on Saturday, October 12th.

Medical Magistrate.—Dr. Macpherson Lawrie, of Greenhill, Weymouth, has been appointed a Magistrate for the County of Dorset by the Lord-Lieutenant.

Instruction in Vaccination.—Mr. E. Climson Greenwood has been appointed teacher of vaccination at the Vaccination Stations at 77, Welbeck Street, and Omega Place, St. John's Wood, in succession to the late Mr. W. A. Sumner.

It is stated that severe measures are about to be taken at Rome against *clairvoyantes* and quacks generally. The prefects of the chief cities throughout the Kingdom of Italy will be invited to take similar steps.

Medical Photographs.—Messrs. Done and Ball, of 12, Baker Street, Portman Square, W., send a few specimens of the latest additions to their medical series. The series now numbers nearly 100 names. The photographs sent are those of Dr. Edis, Mr. Treves, Mr. Durham, and Dr. Priestley. They are excellent specimens of portraiture and photography.

The erection of another large pavilion at the Birmingham Fever Hospital has now been completed. The ward measures 150 feet by 25 feet, and, with the building opened about a week ago, it is estimated that additional accommodation is afforded for about eighty patients.

The Greek Minister for Foreign Affairs contradicts the reports as to an outbreak of epidemic fever at the Piræus. Never, he says, has the sanitary condition of Athens and the Piræus been better, and he adds that the report of the Superior Medical Council give no confirmation to the rumours of an epidemic.

Donations.—Dr. Robertson has received from an anonymous donor an Irish bank note for £50 for the Devonshire Hospital and Buxton Bath Charity.—An anonymous lady donor has given £3,000 to the North-East Lancashire Deaf and Dumb Society.—Mr. Hamilton Hoare has given a donation of £50 to the Royal Hospital for Diseases of the Chest in the City Road.

Cremation in Paris.—The Paris Municipality has just fixed the rates for cremation in Père Lachaise. There is a charge of 50 francs for each body, with leave to the family to use for five years a compartment in the chamber for the preservation of the ashes. For the ceremonial accessories the rate ranges between 12 francs and 200 francs. The Mayors may allow gratuitous cremation to the poor.

Ophthalmic Demonstrations at the Royal Westminster Ophthalmic Hospital.—On Tuesday evening, October 15th, at 8.30 p.m., Mr. Adams Frost commenced a series of demonstrations at the above hospital on the Physiological and Pathological Appearances of the Fundus Oculi, illustrated by lantern projections of ophthalmoscopic paintings. The demonstrations will be continued on succeeding Tuesday evenings.

Presentation.—A very handsome silver tea and coffee service has been presented to Dr. Robert Rooke Prance, of Hampstead, on his retirement from practice, by his patients and friends, as a memorial of their esteem and regard, with the wish that he may for many years be spared to use it. Other presents were also given. On resigning the appointment of honorary surgeon to the Sailors' Orphan School and Home, after thirty-three years, Dr. Prance was accorded a cordial vote of thanks by the committee of management, of which he remains a member.

Proposed Medical Congress in Spain.—A meeting was recently held in the rooms of the Spanish Medico-Chirurgical Society at Madrid with the view of arranging an international medical congress to be held at Madrid in 1890. Though the proposal received influential support, the general feeling was that it would not be desirable to organise a gathering which should in any way clash with the congress at Berlin. The suggestion was thrown out that an attempt should be made to have the eleventh International Medical Congress held at Madrid in 1893.

The Late Dr. Guthrie, of Esher.—That the memory, at least, of the good done by medical men is not always interred with their bones has recently been proved in a very touching way at Esher. The friends and former patients of the late Dr. James Guthrie, who died about a year ago, have erected over his grave a handsome marble cross, the work of Mr. F. J. Williamson, the distinguished sculptor who designed the statue of Her Majesty which adorns the Medical Examination Hall on the Embankment. The list of subscribers (132 in number) includes most of the principal residents of Esher and the neighbourhood. The balance of the sum collected will be applied for the benefit of Dr. Guthrie's children.

Society for the Relief of Widows and Orphans of Medical Men.—The quarterly court of the Directors of this Society was held on October 9th, at the house of the president, Sir James Paget, the necessary alterations in the new premises of the Royal Medical and Chirurgical Society, in Hanover Square, not being sufficiently advanced to allow of a meeting there. Eight new members were elected, the deaths of three announced, and the resignation of one reported. Applications for grants were read from sixty-one widows, fourteen orphans, and three orphans on the Copeland Fund; and it was resolved that £1,360 should be distributed among them at the next court. The expenses for the quarter were £59 18s. 6d.

Medico-Psychological Association.—An examination for the certificate in psychological medicine, given by the Medico-Psychological Association, will be held in December. Candidates intending to present themselves for examination should apply for

particulars and give fourteen days' notice in writing (unless unavoidably prevented) to either the General Secretary of the Association, Dr. Fletcher Beach, Darenth Asylum, Dartford; the Secretary for Scotland, Dr. Urquhart, Murray's Asylum, Perth; or the Secretary for Ireland, Dr. Conolly Norman, Richmond Asylum, Dublin, according as they desire to be examined in London, Edinburgh, or Dublin. The exact date of the examination and further particulars will be advertised in this JOURNAL.

IPSWICH CLINICAL SOCIETY.—The first meeting of this Society for the winter session was held in the Board Room of the East Suffolk Hospital on October 9th. Dr. Casley showed (1) a case of strumous disease of knee in which arthrectomy had been performed, and (2) a case of hydro-pneumothorax in which the patient's condition had been much benefited by aspiration performed twice. Mr. Myddleton-Gavey read notes on a case of alcoholic paralysis. Mr. Juler, F.R.C.S., read a paper on "The Value of Ophthalmoscopy in Medical and Surgical Diseases," and specially dwelt on the importance of headache as a symptom of ametropia. He also demonstrated the methods of correcting errors of refraction by retinoscopy.

THE NEW YORK ACADEMY OF MEDICINE.—The foundation stone of the new building of the New York Academy of Medicine was laid on October 2nd, with some ceremony. Dr. A. Jacobi, the chairman of the Committee which is to superintend the erection of the new building, delivered a very straightforward, simple address, in which he briefly sketched the growth of the Academy during the forty-three years of its existence, and pointed to the considerable public services which it had rendered directly and indirectly to the general public. Mr. Grover Cleveland, ex-President of the United States, also spoke, and the foundation stone was then laid by Dr. Alfred L. Loomis, the President of the Academy. The site is in Forty-third Street, and close to Fifth Avenue.

MORTALITY IN MINES.—A Blue Book just issued summarising the statistical information furnished in the reports of Her Majesty's Inspectors of Mines for 1888, gives the number of persons employed in the mines of the United Kingdom as 5,292,656, of whom 5,680 are women above ground. The number of fatal accidents was 885, and the total number of deaths occasioned thereby 960, being an increase of four in the number of fatal accidents, and a decrease of 91 in the number of lives lost, compared with the preceding year. The death-rate is more favourable than in any preceding year. In coal mines the ratios are more favourable than in any preceding year. There was one fatal accident for every 652 persons employed, and one death for every 602 persons employed.

LICHEN PLANUS A TROPHONEUROSIS.—Dr. Russell, of Utica, New York, has described a case in which lichen planus followed amputation of the four fingers of the right hand. A month after the operation the disease manifested itself on the flexor surface of the right wrist, the one corresponding to the injury. The disease extended to the arm and forearm and wrist of the left side. At the end of the first year papules appeared on the lower dorsal and lumbar regions, and scattered papules developed on the thigh, abdomen, chest, and shoulders. The patient described the papules as being of the size of a pin's head when first observed, gradually enlarging till they became the size of a split pea. As they became larger they assumed a deeper tint, became flattened, and assumed an angular outline. For three days and a half no new territory had been invaded. There had never been marked pruritus. The interest of the case is in the suggestion that the injury to trunk nerves may have been followed by trophoneurotic changes in the integumental area supplied by the injured nerve as the starting point of the disease.

BURIAL REFORM.—A conference, covened by the Church of England Burial, Funeral, and Mourning Reform Association, was held on October 10th in the Church House, Westminster, under the presidency of the Bishop of Bedford. The first resolution was moved by General Lowry. Miss Davenport Hill suggested that pressure should be put upon the Government to adopt the system of compulsory burial within three days of death, which had been found to work advantageously in Switzerland and other countries. Sir Spencer Wells said it would be impossible for the advocates of cremation to agree with the proposition that the burying of decomposed putrefying bodies in the earth could be better without a coffin than with it. They believed that the storing up of the bodies of those who had died from contagious diseases was a most dangerous thing to the living, and they were not at all sure whether burial without a coffin was not more dangerous than burial with one. He believed such a course would conduce to the more rapid dissemination of infectious germs in the earth. The best reform they could suggest was that overcrowded cemeteries should be closed, and that no new cemeteries should be opened except under stringent conditions.

HAMPSTEAD MORTUARY.—Dr. Danford Thomas, at an inquest at Hampstead on October 14th, had his attention called to the wretched mortuary accommodation provided for the parish, the place being without ventilation, small, and so inconvenient that it was impossible to make a minute *post-mortem* examination. Dr. Thomas said that the state of this mortuary had been brought before him time after time by juries, and recommendations had been sent to the Hampstead vestry respecting it. The vestry, he understood, was willing to erect a proper mortuary; the difficulty they experienced was as to the site. In Marylebone, Islington, St. Pancras, and Hornsey, proper mortuary accommodation was provided, to which the public could have no objection to send their dead; and there was at each a mortuary set apart for the reception of bodies of persons who had died from infectious disease, which was a great boon to the poorer classes, who rented one or two rooms, whereas they had considerable objection to such places as that at Hampstead, which was under the care of one of the workhouse inmates. A juror remarked that the matter had been under discussion for over fourteen years, and nothing had been done. The jury added to their verdict a rider calling the attention of the Hampstead vestry to the present mortuary, and expressing their opinion that more suitable mortuary accommodation be provided similar to that which obtained in adjoining parishes.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen passed the Second Examination of the Board in Anatomy and Physiology at a meeting of the Examiners on October 10th, namely:

W. A. Perry, student of University College; H. N. C. Atkinson, E. C. Adams, and J. L. A. Hope, of St. Bartholomew's Hospital; W. E. de Korte, of Guy's Hospital; J. B. H. Davson, of St. Mary's Hospital; W. B. Stanford, of Middlesex Hospital; and W. H. A. Tebbs, of Westminster Hospital.

Passed in Anatomy only.

E. H. Smith, J. Kyffins, and C. E. Dawes, of London Hospital; J. R. Richmond, of King's College and Mr. Cooke's School of Anatomy and Physiology; J. H. Crawshaw, W. H. J. Huthwaite, of University College; W. P. Q. Daly, L. W. Bathurst, of St. Bartholomew's Hospital; and R. S. Whitford, of Charing Cross and Mr. Cooke's School of Anatomy and Physiology.

Passed in Physiology only.

T. Stevens, H. D. Senior, H. Gardner, and J. H. Whitehead, of Charing Cross Hospital; D. L. Thomas, F. G. Scott, F. W. Walters, W. R. Mathews, F. J. A. Baldwin, and G. A. Simpson, of London Hospital; R. J. Rastrick, C. H. Willis, of St. Bartholomew's Hospital; T. W. Smith, J. B. O. Richards, of King's College; W. J. Covey, of University College; H. W. Ramsay, of St. Mary's Hospital and Mr. Cooke's School of Anatomy and Physiology; and W. A. Hayes, of Trinity College, Dublin, and University College.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having passed the necessary examinations, were, at the quarterly meeting of the Council, admitted Members of the College, namely:

Birkenhead, Harold, L.R.C.P.Lond., Witherby Rectory, Atherstone.
Borrett, George Goss, L.R.C.P.Lond., 63, Philpot Street, E.
Jamieson, Sydney, L.R.C.P.Lond., 11, Melbourne Place, Edinburgh.
Kempthorne, Albert Edward, L.S.A., Oakley, Neath, Glamorgan.
Lewers, Alexander, L.R.C.P.Lond., 2, Delamere Crescent, W.
McGowan, James Sinclair, M.B.Vic.Univ., King Street, Oldham.

The following Members having previously passed the necessary examinations, and having attained the legal age (25 years), were, at the same meeting, admitted Fellows of the College, namely:

Dean, Henry Percy, L.S.A., University College Hospital, Diploma of Member dated June 9th, 1887.
Ward, Arthur Henry, L.R.C.P.Lond., St. George's Hospital, November 10th, 1887.

MEDICAL VACANCIES.

The following Vacancies are announced:

BALLINROBE UNION.—Medical Officer. Salary, £100 per annum, with £33 6s. 8d. as Consulting Sanitary Officer. Applications to Mr. John Walsh, Clerk of Union. Election on October 19th.

BRADFORD INFIRMARY AND DISPENSARY.—House-Physician. Salary, £100 per annum, with board. Applications by October 22nd to W. Maw, Secretary.

BURTON-ON-TRENT INFIRMARY.—House-Surgeon. Salary, £130 per annum, with apartments, coal, and gas. Applications by October 23rd to J. C. Grinling, Esq., Honorary Secretary, the Infirmary, Burton-on-Trent.

COUNTIES ASYLUM, Carlisle.—Junior Assistant Medical Officer. Salary, £80 per annum, with board. Apply to Dr. Campbell, Garlands, Carlisle.

DORSET COUNTY ASYLUM.—Assistant Medical Officer. Salary, £120 per annum, with board and residence. Applications by October 19th to Dr. MacDonald, Medical Superintendent.

FLINTSHIRE DISPENSARY.—House-Surgeon. Salary, £100 per annum, and furnished house, etc. Applications by November 11th to the Secretary, Board Room, Bagillt Street Holywell.

GENERAL DISPENSARY AND INFIRMARY, Jersey.—Resident Medical Officer. Salary, £120 per annum, with furnished apartments, etc. Applications by October 19th to the Honorary Secretary.

HOSPITAL FOR CONSUMPTION, Brompton.—House-Physicians. Applications by October 19th to the Secretary.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—House-Surgeon. Salary, £50 per annum, with board etc. Applications by October 28th to the Secretary.

LIVERPOOL DISPENSARIES.—Two Assistant-Surgeons. Salary, £80 per annum each, with board, lodging, and attendance. Applications by October 28th to the Secretary.

LIVERPOOL EYE AND EAR INFIRMARY.—House-Surgeon. Salary, £80, with board and lodging. Applications by November 4th to Reginald Haigh, Honorary Secretary, Grosvenor Buildings, Liverpool.

LIVERPOOL INFIRMARY FOR CHILDREN, Myrtle Street.—House-Surgeon. Salary, £85 per annum, with board and lodging. Applications by October 21st to C. W. Carver, Esq.

LIVERPOOL ROYAL INFIRMARY.—Honorary Surgeons. Applications by November 1st to the Chairman, H. B. Gilmour, Esq.

LONDON LOCK HOSPITAL AND ASYLUM, Harrow Road and Dean Street, W.—Physician. Applications by October 21st to the Secretary, Harrow Road.

LONDON LOCK HOSPITAL AND ASYLUM, Harrow Road and Dean Street, W.—Surgeon. Applications by October 21st to the Secretary, Harrow Road.

MEDICAL AID ASSOCIATION OF BIRSAY, HARRAY, AND SANDWICK, Mainland of Orkney.—Medical Officer. House and garden, fees and emoluments, etc. Applications by October 31st to the Rev. J. A. Selbie, Birsay, Stromness.

NORTH RIDING INFIRMARY, Middlesbrough-on-Tees.—House-Surgeon. Applications by October 31st to the Secretary.

NORTH-WESTERN LONDON HOSPITAL, Kentish Town Road.—Senior Resident Medical Officer. Applications by October 21st to the Secretary.

PADDINGTON GREEN CHILDREN'S HOSPITAL, W.—House-Surgeon. Salary, £50 per annum, with board and lodging. Applications by October 21st to the Secretary.

PARISH OF THE UNITED PARISHES OF WHITTLESY.—District Medical Officer and Public Vaccinator. Salary, £70 per annum and fees. Applications by October 28th to John Peed, Esq., Clerk.

PUBLIC DISPENSARY, 59, Stanhope Street, Clare Market.—Resident Medical Officer. Salary, £105 per annum, with furnished apartments, etc. Applications on or before November 6th to the Secretary.

ST. MARY'S HOSPITAL, Quay Street, Manchester.—House-Surgeon and Resident Obstetric Assistant Surgeon. Salary, £120 per annum, with board and residence. Applications by October 19th to the Secretary.

SALOP INFIRMARY, Shrewsbury.—House-Surgeon. Salary, £100 per annum, with board and residence. Applications by November 2nd to the Board of Directors.

SHEFFIELD GENERAL INFIRMARY.—House-Surgeon. Salary, £120 per annum, with board, lodging, and washing. Applications by November 2nd to the Medical Staff of the Sheffield General Infirmary to the care of the Secretary.

SHEFFIELD GENERAL INFIRMARY.—Assistant House-Surgeon. Salary, £80 per annum, with board, lodging, and washing. Applications by November 2nd to the Medical Staff of the Sheffield General Infirmary to the care of the Secretary.

STOKESLEY UNION.—Medical Officer for Workhouse and Stokesley District. Salary, £54 per annum, with extras. Applications by October 19th to T. Sowerby, Esq., Clerk, Stokesley.

VICTORIA HOSPITAL FOR SICK CHILDREN, Queen's Road, Chelsea.—Ophthalmic Surgeon. Applications by November 18th to the Secretary.

WESTON-SUPER-MARE HOSPITAL.—House-Surgeon. Salary, £50 per annum, with board and residence. Applications by October 28th to the Honorary Secretary.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL, Wolverhampton.—House-Surgeon (will also be required to act as Surgical Registrar). Salary, £100, with board, lodging, and washing. Applications by October 28th to the Chairman of the Medical Committee.

MEDICAL APPOINTMENTS.

ALDOUS, G. F., L.R.C.P., M.R.C.S., appointed Second Medical Officer to the Provident Department of the Plymouth Public Dispensary, *vice* E. B. Thomson, M.D., M.B., resigned.

ALTHORP, C. F. M., L.R.C.P.Lond., M.R.C.S.Eng., appointed House-Surgeon, *vice* W. Horrocks, M.B.Lond., F.R.C.S.Eng., resigned.

COSTELLOE, J. J. A., L.K.Q.C.P., appointed Surgeon to the Coastguards at Rosslaire, Co. Wexford.

CRUMP, Thomas Greenwood, B.A.Cantab., M.R.C.S., L.R.C.P., appointed Assistant House-Surgeon to the General Hospital, Birmingham, *vice* J. S. A. Walker, M.B., resigned.

GUNN, D., F.R.C.S., appointed Junior House-Surgeon to the Royal London Ophthalmic Hospital, *vice* C. H. Walker, M.R.C.S., resigned.

HADDEN, D., F.R.C.S., appointed Surgeon to the County Wexford Infirmary, *vice* H. H. Boxwell, M.D., F.R.C.S., deceased.

ISAAC, G. Washington, M.B., C.M., appointed Medical Officer to the Home and Colonial School Society's Training College.

KENNY, J. M. S., appointed Medical Officer to the Granard Union, *vice* P. J. Slevin, L.K.Q.C.P.I., L.R.C.S., resigned.

MACEVOY, H. J., M.B., appointed Assistant Resident Medical Officer to the London Fever Hospital, *vice* E. W. Goodall, M.D., M.B., resigned.

MILLIGAN, Wm., M.B., C.M., appointed Assistant-Surgeon to the Manchester Ear Institution.

MOORE, S., appointed House-Surgeon to the St. Vincent's Hospital, Dublin.

RAWLINGS, H. E., L.K.Q.C.P.I., M.R.C.S., appointed Resident Medical Officer to the Swansea Hospital, *vice* J. Kerr, M.A., M.B.Cantab., resigned.

REES, A. N., L.R.C.P., M.R.C.S., appointed Physician's Assistant to the Plymouth Public Dispensary, *vice* P. Jackson, L.R.C.P., L.R.C.S., deceased.

ROLL, G. W., B.A., M.B., appointed House-Surgeon to the Leicester Infirmary and Fever House, *vice* J. B. O'Kell, M.R.C.S., L.R.C.P., resigned.

STEVEN, J. L., M.D., appointed Curator of the Museum and Pathologist to the Glasgow Royal Infirmary, *vice* D. Newman, M.D., resigned.

TEW, J. S., M.B., B.S.Durham, D.P.H.Camb., appointed Medical Officer of Health to the Basford Union Rural Sanitary District, *vice* P. Boobbyer, appointed to Nottingham.

THOMPSON, W. J., appointed House-Physician to the St. Vincent's Hospital, Dublin.

THORBURN, William, B.S.Lond., F.R.C.S., appointed Honorary Assistant-Surgeon to the Manchester Royal Infirmary, *vice* F. A. Southam, F.R.C.S., appointed Honorary Surgeon.

TORRENS, James, M.D., appointed Assistant Physician to the Jervis Street Hospital, Dublin.

WALLIS, Fred. Charles, B.A., M.B.Cantab., B.S., M.R.C.S., appointed Demonstrator of Anatomy at Charing Cross Hospital.

WEARY, G. E., M.R.C.S.Eng., L.R.C.P.Lond., appointed Resident Medical Officer to the Boscombe Hospital and Provident Dispensary, *vice* H. Cockerton, L.R.C.P.Lond., M.R.C.S.Eng., resigned.

DIARY FOR NEXT WEEK.

MONDAY.

MEDICAL SOCIETY OF LONDON, 8.30 P.M.—The President's Opening Address. Paper by Sir Andrew Clark, Bart., F.R.S.: On the Non-Tubercular Hæmoptysis of Elderly Life.

TUESDAY.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY, 20, Hanover Square, 8.30 P.M.—1. Address by the President, Sir Edward Sieveking, M.D. 2. Dr. Thomas Oliver, M.A., M.R.C.P. (Newcastle-on-Tyne): The Analytical and Clinical Examination of Lead Poisoning in its Acute Manifestations. 3. Mr. J. Bland Sutton, F.R.C.S.: A Case of Ruptured Tubal Pregnancy, with Remarks on the Cause of Early Rupture.

WEDNESDAY.

HUNTERIAN SOCIETY, 8 P.M.—Mr. F. R. Humphreys: On the Clinical Estimation of the Colouring Matter of the Urine.

FRIDAY.

CLINICAL SOCIETY, 20, Hanover Square, 8.30 P.M.—Mr. Mayo Robson: Cases of Cholecystotomy. Mr. W. Rivington: Case of Pott's Fracture, with fracture and displacement of the astragalus followed by symptoms of tetanus, which subsided after removal of the displaced fragment. Mr. W. G. Spencer: Case of Recent Dislocation Backwards at the Elbow of both Bones of the Forearm, irreducible from the lower end of the humerus being held like a button by a rent in the anterior ligament.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the announcement. The first post on Thursday mornings is the latest by which advertisements can be received.

MARRIAGES.

COLLINS—POTTS.—On the 16th instant, at the Parish Church, Broseley, by Philip Cornish Pratt, B.A., Chaplain R.N., assisted by Rev. George Fleming Lamb, M.A., Rector of the Parish, George Duppa Collins, M.R.C.S., L.S.A., to Selina, youngest daughter of the late George Potts, Esq., Solicitor, Broseley.

DAVIES—LEYSHON.—On Tuesday, October 8th, at Llantwit Fardre Church, by the Rev. John Jenkins (Vicar), assisted by the Rev. M. J. Powell, M.A., Senior Curate of Tredegar (both cousins of the bridegroom), and the Rev. S. R. Jones, Vicar of Glyntaff, Dr. R. T. E. Davies, of New Tredegar, only son of Mr. B. Davies, Wellfield, Aberavon, to Annie, eldest daughter of Mr. D. Leyshon, Graig Villa, Pontypridd.

GAINER—SINCLAIR.—On 8th October, at St. John's Episcopal Church, Edinburgh, by the Rev. G. J. Cowley-Brown, M.A.Oxon., Incumbent, Joseph William Gainer, M.B. & C.M.Ed., of Thrapston, Northamptonshire, only son of Joseph Gainer, Esq., of Stonehouse, Gloucestershire, to Margaret, elder daughter of the late P. Sinclair, Edinburgh.

PEARCE—ARNST.—On October 15th, at St. Matthew's, Bayswater, by the Rev. Filmer Sulivan, Vicar, assisted by the Rev. O'Brien Hodge, Vicar of St. Peter's, Paddington, Walter Pearce, M.D.Lond., B.S., M.R.C.P., of 63, Montagu Square, eldest son of J. D. M. Pearce, M.A., J.P., Maidenhead, to Christine, eldest daughter of A. Arnst.

PERKS—TREGASKIS.—On October 15th, at Cardiff, Robert Howell Perks, M.D., F.R.C.S., Medical Superintendent of the Adelaide Hospital, Adelaide, South Australia, eldest son of the late Henry Perks, Esq., of Monkton Combe, Somerset, to Frances Mary, eldest daughter of the late Henry Tregaskis, of Cardiff.

DEATH.

ROBERTS.—October 14th, at Alfreton, Derbyshire, Theo. L. Roberts, M.R.C.S., L.R.C.P., aged 40 years.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the office of the JOURNAL, and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429 Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

QUERIES.

A CORRESPONDENT asks to be recommended some book giving the methods of staining and mounting botanical preparations.

PRACTICE IN SOUTH AFRICA.

M.D. writes: Is there any chance for a doubly qualified man of making a practice in Cape Town, South Africa? If not, are there any openings up country? Is the climate healthy? What is the average temperature in winter (their summer)? Could one obtain a *locum tenens* or assistantship whilst looking out for a practice? What is the scale of pay for same there? Would being married be an objection?

ANSWERS.

M.B., BAC. CH.—The matter has already been referred to some time ago in the JOURNAL.

M.R.C.S.—The Secretary of the Brussels Medical Graduates' Association is Dr. Warwick C. Steele, 1, Florence Terrace, Ealing. Information with regard to the M.D. degree of the Brussels University can be obtained from him.

A MEMBER writes: A family, widow and three children, with an income all told of £150, are desirous, partly for economy's sake and partly for educational purposes, to live in quiet retirement in some Swiss or German or French provincial town. If you could name one likely to suit I should be greatly obliged.

*** Dinan or Avranches, in France; Malines or Bruges, in Belgium; Eisenach, Gotha, or Weimar, in Germany, might answer; but £150 per annum is a very small sum to come and go on.

LOSS OF SMELL AND TASTE.

DR. FITZJAMES MOLONY (Porlock, Somerset) writes: I would recommend "A Member" to try iodide of potassium in two-grain doses, with nux vomica, for a considerable period. If iodism is produced, the drug should be lessened in quantity, but not omitted. The loss of smell is evidently due to a thickened condition of the mucous membrane, which occludes the sensitive ends of the olfactory nerves. The continued use of iodide of potassium is nearly always successful in these cases, as it removes the cause. If the condition should be due to some centric irritation, the mixture just mentioned would be useful with the addition of a little bromide.

TREATMENT OF DANDRUFF.

DR. W. R. D. BLACKWOOD (Philadelphia, Pa.) writes: Dandruff will give way almost certainly to ℞ Chloral hydrate 3vj; aquæ ℥xvj. M. Liq. Rub well into the scalp every second or third day. Dry, and dress the hair with a mixture of quinine and glycerine, with a little tr. cantharid. as ordinarily sold.

DIPHTHERIA IN SCHOOLS.

E. D.—From the facts laid before us we are inclined to believe that E. H. was recovering from an attack of diphtheritic sore throat when she returned home, and that her sisters N. H. and K. H. received the infection from her. As regards N. H., the incubation period of nine to twelve days is one usually recognised by competent authorities as a possible, if not a usual, one. K. H. being in the same house with E. H. from July 16th to August 6th, when she was taken ill, the question of incubation period in this case does not arise, for the duration of infectiveness in diphtheria is generally six weeks from the date of attack, and often longer; and E. H. was not taken ill until July 3rd. Considering that there had been two undoubted cases of diphtheria in the school, followed by several sore throats of admittedly diphtheritic nature, we are of opinion that the school authorities should have communicated to E. H.'s parents the fact that she had been suffering from an illness of a possibly infectious character, and that it would be desirable for her to be isolated from other children until completely restored to health. It should now be generally recognised by medical men that sore throats of apparently simple character taking place in a school where diphtheria has recently occurred are exceedingly likely to transmit the true diphtheritic contagion to susceptible persons. The question of *de novo* origin is not one to be entertained, except in the complete absence of all evidence pointing to infection from a pre-existing case.

SUDDEN WHITENING OF THE HAIR.

IGNORAMUS desires to be informed whether there is any foundation for the popular belief that the hair may turn white in a single night. He knows of a case in which, after a severe fall on the back, the whisker on one side of the face became white within a very short time, and afterwards returned to the same colour as before. In this and similar cases does the hair change, or is the alteration effected by new grey or white hairs replacing the old ones? If the hair changes, how is the change explained?

*** There is no satisfactory evidence to support the popular belief that the hair may turn grey in a single night. In cases in which the hair turns rapidly white, the change of colour is caused by defective nutrition of the hair papilla, and this, of course, may begin before the hair falls out. The change will be nearly coincident with the cause that produced the defective nutrition.

THE PRACTICE OF HYPNOTISM.

H. M. R. writes: Can you tell me of a good book upon hypnotism containing information sufficient to enable to learn the science practically?

*** A good textbook of hypnotism in English is much wanted just at present, now that a little attention is being directed to the subject from various quarters in England. The English translation of Binet and Féré's book on *Animal Magnetism* (1887) gives an interesting but incomplete account of both theory and practice from a Parisian standpoint; Dr. C. Lloyd Tuckey, in *Psycho-Therapeutics* (1888) furnishes a good sketch, with some English illustrations, of the practice and results of the school of Nancy, which is thoroughly explained in clinical detail by Professor Bernheim, in his book *De la Suggestion, et de ses Applications à la Thérapeutique* (1886). The widest and most unprejudiced summary of present knowledge has been compiled by Dr. Albert Moll, of Berlin, in *Der Hypnotismus* (1889), which supplies an easy guide to the more elaborate essays to be found in the *Proceedings of the Society for Psychical Research*, *Bulletins de la Société de Psychologie Physiologique*, and elsewhere.

BRITISH PRACTITIONERS ABROAD.

F.R.C.S,ED.—1. Practitioners holding British qualifications cannot *as such* be admitted to practise either in Italy, Germany, or France. 2. In Italy British medical men can, as a rule, practise among their own countrymen without let or hindrance, but if they wish to practise generally they must graduate in an Italian Faculty. In Germany the *Staats-Examen* must be passed, except under very exceptional conditions. In France the Doctorate of one of the medical faculties (Paris, Montpellier, Bordeaux, Lyons, Lille, Nancy), or the lower grade of "Officier de Santé," must be obtained. 3. Dr. H. J. Hardwicke's *Guide to European Universities* (1878) and *Medical Education and Practice throughout the World* (1880) contain much information on the subject. The educational (September) number of the *London Medical Recorder* also gives details as to medical graduation in foreign countries.

NOTES, LETTERS, ETC.

CHLOROFORM OR ETHER?

DR. Q. CINCINNATUS SMITH (Austin, Texas) writes: I notice in Holmes's late edition of *Surgery*, and in the English medical journals for some time past, that when the subject of the relative safety of chloroform and ether as anæsthetics is mentioned, English medical writers say that "the great majority of American surgeons prefer ether," and consider it a safer anæsthetic than chloroform.

Now, I have given the subject of anæsthetics special attention for many years, and my opportunities have made me quite familiar with the practice of surgeons in all parts of the United States. And while I am well aware that ether is more used now as an anæsthetic in north-eastern United States than it was a few years ago, yet I feel sure that I am safe in saying that at least two-thirds of the surgeons and physicians of the United States now prefer and use chloroform as an anæsthetic for all purposes rather than ether.

COLLATERAL HEREDITY.

A SURGEON OF 25 (+2½) YEARS' STANDING writes: About two years and a half ago—that is, on May 21st, 1887—you were kind enough to publish a letter of mine on "The Physiological Aspect of certain Marriages of Affinity." I am glad to say that the following members of the profession have fully endorsed (by request) the statements of that letter: Sir Risdon Bennett, Mr. Savory, Mr. Le Gros Clark, Dr. George Harley, Dr. Hack Tuke, Dr. Langdon Down, Dr. G. A. Heron, Mr. Erichsen, Dr. Heywood Smith, Dr. S. Wilks, Dr. Beddoe, Dr. Birch, Dr. Septimus Gibbon, Dr. George B. Mead, Dr. E. Symes Thompson (who has just lectured on Heredity, at Gresham House), etc.; and, so far as the physiology is concerned, Sir James Paget, Mr. Marshall, Sir George Birdwood, and the late Dr. C. B. Radcliffe. But the most remarkable confirmation of my views came unasked from Professor Sir William Turner, who, as President of the Anthropological Section of the British Association, recently delivered at Newcastle-on-Tyne his splendid address on heredity.

"In connection with the tendency to the transmissibility of either congenital malformations or diseases, consanguinity in the parents, although by no means a constant occurrence, is a factor which in many cases must be taken into consideration. If we could conceive both parents to be physiologically perfect, then it may be presumed that the offspring would be so also; but if there be a departure in one parent from the plane of physiological perfection, then it may safely be assumed that either the immediate offspring

or a succeeding generation will display a corresponding departure in a greater or less degree. Should both parents be physiologically imperfect, we may expect the imperfections, if they are of a like nature, to be intensified in the children. It is in this respect, therefore, that the risk of consanguineous marriages arises, for no family can lay claim to physiological perfection.

"When we speak of tendencies, susceptibilities, proclivities, or predisposition to the transmission of characters, whether they be normal or pathological, we employ terms which undoubtedly have a certain vagueness. We are as yet quite unable to recognise, by observation alone, in the germ-plasm any structural change which would enable us to say that a particular tendency or susceptibility will be manifested in an organism derived from it. We can only determine this by following out the life-history of the individual. Still, it is not the less true that these terms express a something of the importance of which we are all conscious. So far as man is concerned, the evidence in favour of a tendency to the transmission of both structural and functional modifications, which are either of dis-service, or positively injurious, or both, is quite as capable of proof as that for the transmission of characters which are likely to be of service. Hence, useless as well as useful characters may be selected and transmitted hereditarily."

He related the well-known case of Lord Morton's (?) Arabian mare, which "produced a hybrid the sire of which was a quagga, and the young one was marked by zebra-like stripes. But the same Arabian had subsequently two foals, the sire of which was an Arab horse, and these also showed some zebra-like markings. How, then, did these markings, characteristic of a very different animal, arise in these foals, both parents of which were Arabians? I can imagine it being said that this was a case of reversion to a very remote striped ancestor, common alike to the horse and the quagga. But, to my mind, no such far-fetched and hypothetical explanation is necessary. The cause of the appearance of the stripes seems to me to be much nearer and more obvious. I believe that the mother had acquired during her prolonged gestation with the hybrid, the power of transmitting the quagga-like characters from it, owing to the interchange of material which had taken place between them in connection with the nutrition of the young one. For it must be kept in mind that in placental mammals an interchange of material takes place in opposite directions, from the young to the mother as well as from the mother to the young. In this way the germ-plasm of the mother, belonging to ova which had not yet matured, had become modified whilst still lodged in the ovary. This acquired modification had influenced her future offspring, derived from that germ-plasm, so that they in their turn, though in a more diluted form, exhibited zebra-like markings. If this explanation be correct, then we have an illustration of the germ-plasm having been directly influenced by the soma, and of somatogenic acquired characters having been transmitted."

This is the more valuable inasmuch as it is the result of independent thought and investigation, Sir W. Turner having assured me that he had not read my letter in the JOURNAL, with which, however, he is now pleased to say that he agrees, by making the following statement: "In my judgment there is, as you have put, a physiological difference between the marriages with a deceased wife's sister and a deceased husband's brother."

THE MEAD TESTIMONIAL FUND.
(Final List.)

THE Honorary Treasurers (Dr. F. M. BECKETT, Ely, and Dr. E. G. BARNES, Eye) acknowledge with thanks the following additional contributions to the above fund:

	£	s.	d.
Amount previously acknowledged	156	11	0
Clarke, Andrew, Esq., F.R.C.S., 71, Harley Street ...	1	1	0
Groom, W. Wollaston, Esq., M.B., Stowmarket ...	0	10	6
May, G. Parker, Esq., M.D., Maldon	0	10	6
Pearse, Arthur, Esq., M.D., Botesdale, Diss ...	0	2	6
Total	158	15	6

The above amount has been paid over to Dr. Mead towards defraying the expenses entailed by his successful defence of the action brought against him, which amounted to £195.

COMMUNICATIONS, LETTERS, etc., have been received from:
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BOOKS, ETC., RECEIVED.

Applied Anatomy: Surgical, Medical, and Operative. By John McLachlan, M.D., B.Sc., M.R.C.S. Vols. i and ii. Edinburgh: E. and S. Livingstone. 1889.

Suggestions to Mothers. By a Mother. Second Edition. London: J. and A. Churchill. 1889.

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REMARKS
ON
THE NON-TUBERCULAR AND NON-CARDIAC HÆMOPTYSES OF ELDERLY PERSONS.

Read before the Medical Society of London.

By Sir ANDREW CLARK, Bart., M.D., F.R.S.,
President of the Royal College of Physicians; Consulting Physician, and One of the Lecturers on Clinical Medicine to the London Hospital.

Many years ago, when examining the evidences of the arrestment of phthisis and endeavouring to determine the conditions in which it occurred, I was struck with the large number of cases of hæmoptysis occurring in elderly persons who were at the time, and remained afterwards, free from signs either of pulmonary tuberculosis or of structural disease of the heart.

Being in those days completely influenced in my views of hæmoptysis by the teaching of Dr. Walshe, I ascribed every case of pulmonary hæmorrhage in which there was no heart disease or aneurysm, or malignant growth to tubercular disease of the lung. Perhaps I carried to an extreme issue the opinions of this distinguished master; at any rate, I must confess that the consequences were not satisfactory to the patients or to me.

At last, however, there occurred in the wards of the London Hospital a case of fatal hæmoptysis, which not only made plain the error of my views, but revealed a cause, hitherto, I believe, unnoticed, of pulmonary hæmorrhage. The patient, a man between 50 and 60 years of age, was admitted for an attack of subacute bronchitis. He had been for many years the subject of a moderate progressive osteo-arthritis; and during the last four or five winters had suffered from severe bronchial catarrh. The attack from which the patient suffered on admission was of the ordinary character; there were signs of some congestion at the posterior bases, and of emphysema of the front parts of both lungs, but nothing was found to suggest the existence of tubercular disease. The heart and blood vessels were sound, there was only moderate fever, the patient was not seriously ill, and, beyond the osteo-arthritis, some gastro-enteric catarrh, and a few scattered patches of eczema, there was nothing to attract special attention to the case. The patient was placed upon a light diet, and treated with alkalies, alterative aperients, and counter-irritants to the chest.

About a fortnight after admission the patient began to cough up blood in small quantities at short intervals; and, in spite of all that could be done according to the approved therapeutical teaching of the time—in spite of absolute rest, the strict regulation of supplies, the application of ice to the chest, and the liberal use of various astringents, the bleeding persisted, and within a week the patient died.

The *post-mortem* examination revealed to the naked eye little that was unusual, and nothing that was expected. The heart, the larger vessels, and the arterial valves were free from obvious structural change. The bronchial mucous membrane almost everywhere was swollen, congested, violet-coloured, and coated with a muco-purulent secretion. The anterior parts of both lungs were pale, dry, and emphysematous; and curious isolated patches of emphysema, surrounded by hæmorrhagic extravasations, were noticed in the back and lower part of both lungs, which were loaded with blood. Nowhere could there be discovered the smallest evidence of tubercular disease, of any malignant growth, or of any sort of coarse structural change which could account for the fatal hæmorrhage.

A more minute examination carried out with the aid of the microscope brought plainly to light two important facts. The first was that the seat of the hæmorrhage was in the immediate neighbourhood of the emphysematous patches; and the second was that the minute vessels—the terminal arteries for the most part—were in those localities always diseased. And, finally, it appeared in the highest degree probable that there existed a direct causal relationship between the condition of the blood vessels, the emphysema, and the hæmorrhage. For wherever there was an emphysematous patch there was a diseased artery; wherever the artery was much diseased the capillaries and venous radicles were also affected; and generally, although not always, where the terminal artery was obstructed and degenerating there was adjacent hæmorrhage. Through the observation of these facts and their relations I was led to conclude that the order of events issuing in the hæmorrhage arose and proceeded in the following way: I inferred that the initial visible movement in the malady had been some minute structural change in a terminal branch of the pulmonary or of the bronchial artery; that in consequence of this there had been brought about a more or less complete obstruction of the supply of blood throughout the territory involved; that following this there arose degeneration of the capillaries and venous radicles, determining a true atrophic emphysema; and that the integrity of the vessels being thus impaired the formation of thrombi or recurrent conditions of pressure had brought about the hæmorrhage, which ended in death.

And now arose the cardinal question presented by this case, and necessary to be answered if any fresh knowledge were to be derived from it: What was the intimate nature of the structural vascular changes to which I have adverted? There were two ways of replying to the question; each was distinct in itself and the one which was the most regarded was of the least importance. The small question was: "What were the visible characters of the structural alterations in the blood vessels?" The large and crucial question was: "What was the nature of those primitive dynamic changes which preceded and determined the structural changes, and which alone gave them form and meaning?" In them, and not in the vascular changes, lay the importance of this case.

The structural changes discovered in the affected blood vessels were limited to nuclear proliferation in the middle coat and an amorphous and hyaline infiltration of it and of the intima. When I endeavoured to determine the significance of these changes, and for this purpose studied the life history of the case; when I saw that the patient had been for years an arthritic; that he had suffered on occasions from many of the constitutional manifestations of this diathesis; and that the structural changes in the pulmonary blood vessels were akin in character to those which are found in the diseased articulations, I permitted myself to conclude that the malady was of an arthritic nature, and that I had seen and dealt with a case of what might be called without serious scientific impropriety "arthritic hæmoptysis."

About fifteen years ago, in conjunction with Dr. Wall, I had the opportunity of closely studying throughout its course another case of fatal hæmoptysis, which in all essential points resembled the case which I have just related. The patient was a stout, fair, florid, healthy-looking man of about 50 years of age. He consulted me for a troublesome bronchial catarrh, and told me that he was "rheumatic," and that of late he had been getting fat, short-breathed, eczematous, and indolent. The digestive organs were in fair order; the urine was habitually about 1012, but free from albumen and casts; the heart and systemic vessels were free from obvious change, and there were no signs of objective disease in the nervous system.

In the lungs there were evidences of general bronchial catarrh, of congestion at both bases, and of emphysema along their anterior margins.

The finger-joints were rimmed or nodulated; a few minute subcutaneous nodules were found in both arms; and eczematous patches existed in various parts of the body and limbs. The treatment consisted of diet and exercise, of occupation and early hours, of alkalies and alterative aperients.

The patient became much better, and I saw nothing more of him till twelve months afterwards, when I was summoned to visit him in consultation with Dr. Wall. From him I learned that the patient had relapsed into a careless mode of life; that he had recently caught a severe cold, and that the day before he had been seized with a moderate hæmoptysis, which recurred every three or four hours.

Such an examination of the patient as was at the time justifiable brought little to light. There existed a catarrhal state of the digestive organs; the urine was still low in density, limpid, and free from albumen; there was no cardiac murmur, and the pulse, of fair volume and strength, was about 80; the cervical veins were a little full; and the patient complained of cough, of frequent frothy sanguinolent expectoration, and of considerable

oppression of chest. Over the upper portions of both lungs were heard medium-sized, moist mucous *râles;* over both posterior bases coarse crepitations and increased resonance.

The patient was treated in the usual manner by absolute rest, careful feeding, ice to the chest, aperients, and the strongest astringents in large doses at short intervals. But nothing proved of the smallest avail, and on the fifth day the patient became suddenly exhausted and died.

A carefully conducted necropsy revealed the usual appearances of bronchitis, emphysema, pulmonary congestion, and scattered small hæmorrhagic extravasations. And here, again, as in the case first related, were found in significant conjunction the emphysematous patches, the diseased blood vessels, and the extravasated blood, Except that the kidneys were rather small and hard nothing of moment was found elsewhere. Plainly enough, the source of the fatal hæmorrhage lay in the diseased blood vessels; probably enough, the disease was of an arthritic nature; and pardonably enough one might venture to say again, here is another case of arthritic hæmoptysis.

Since 1875 I have seen in persons over 50 some twenty cases of hæmoptysis of the kind which I have now described; and, as in the ordinary annals of medical literature I have been unable to find any clear account of such a variety of pulmonary hæmorrhage, and as the treatment pursued in ordinary forms of hæmoptysis is not successful in this form, I have thought it right, in the hope of further knowledge, to bring the subject to the notice of the profession.

It is not my intention, upon this occasion, to enter into any systematic account of this variety of pulmonary hæmorrhage, this arthritic hæmoptysis, as I have ventured to call it. But, as the cases related have led me to discontinue the ordinary method of treatment by astringents, and to try another method which seems to be more rational and, hitherto at least, has proved more successful, I propose to relate two other illustrative cases seen in consultation with other practitioners.

Some seven years ago Sir William Jenner, Dr. Wilson Fox, and I, were summoned together to consult about a patient suffering from an incoercible hæmoptysis. She was a Jewish lady, over 60 years of age, very stout, very "rheumatic," and always ailing. She had nodular finger-joints, frequently recurring bronchitic asthma, and occasional outbreaks of either eczema or of urticaria. Ten days before our visit, when suffering from an ordinary catarrh without accompanying fever, the patient began to cough up blood, and had continued to do so in small quantities at intervals of three or four hours ever since.

The patient had a somewhat large heart, but there was no murmur, and there was no evidence of systemic arterial disease. Within the previous two days the pulse had become quick and frequent, and the temperature had risen to close upon a hundred. In the lungs there were signs of generalised bronchial catarrh, of emphysema, and of basic congestion. The patient complained of frequent cough, of great oppression of chest, and of growing difficulty in expectorating. She had furthermore a loaded tongue, thirst, loss of appetite, a swollen liver, and all the signs of a gastro-enteric catarrh.

The patient had been carefully treated by absolute rest, fluid food, ice to the chest, and in succession by lead, gallic acid, and the hypodermic injection of ergotin.

After full discussion it was agreed that another method of treatment should be tried. The patient was ordered to have a light and rather dry diet; to be sparing in the use of liquids; to discontinue the ice; to have a calomel pill at night, followed by a saline cathartic on the succeeding morning; and to take an alkaline mixture with ammonia between meals twice in the day. Within thirty-six hours the bleeding ceased, and the patient made a speedy and complete recovery.

About a year and a half ago the patient consulted me at my house for subacute rheumatic arthritis. She told me that since I saw her first she had had one attack of bleeding, and that it was quickly cured by her calomel and salines.

About six years ago I was summoned to meet Mr. MacLaren in consultation about the case of a solicitor who had been suffering from an obstinately recurring hæmoptysis of small amount. The patient was over sixty years of age, had been always delicate, and often suffered from incomplete attacks of what was considered to be rheumatic gout. He had rimmed finger-joints, patches of dry eczema, and occasional nervous headache. A few weeks before our consultation he had contracted a feverish bronchial catarrh, and was confined to the house. After a fortnight's cold he began to have some oppression of chest, and to be short-breathed. This was followed by a small hæmoptysis, which gave relief; but the hæmoptysis recurred, and at our consultation there were no signs of its cessation. The patient had no fever, and only a slight hurry of circulation. There was a general bronchial catarrh; the fore parts of the lung were emphysematous; and there was some basic congestion, greater on the right side than the left; the tongue was furred; there was anorexia, with some thirst; the bowels were inadequately relieved; and the urine was pale, and of low density, but free from albumen. The patient was directed to rest and keep warm; to live upon a slight, semi-solid diet; to be sparing in the use of liquids; to be freely counter-irritated over the chest; to have a succession of small doses of calomel at bedtime, supplemented by saline aperients in the morning; and to take between meals, twice or thrice in the day, a mixture containing iodide of potassium, bicarbonate of potassium, and ammonia.

This treatment was not particularly agreeable to the patient, who had medical views of his own. Nevertheless it was adopted, and appeared so far successful that within four days of its adoption the hæmorrhage had ceased. I heard of this patient from a relative some months ago, and I was told that, although he led a a too sedentary life, he was well and at work.

Many additional illustrations of this variety of hæmoptysis could be given; but as in each case there is a close resemblance to every other, and as in all the cases the interpretation of the pathological conditions accompanying the hæmorrhage and the treatment employed for its relief were substantially the same, it would be unpardonable to occupy the time of the Society with the reproduction of details which could prove neither interesting nor instructive to the Fellows.

I content myself with having brought to the notice of the Society this curious form of pulmonary hæmorrhage; and, believing that a critical discussion of the subject will lead to broader and juster views concerning it, I conclude with a statement of the propositions which I have framed out of the results of my own inquiries. These propositions are as follows:

1. That there occurs in elderly persons free from ordinary diseases of the heart and lungs a form of hæmoptysis arising out of minute structural alterations in the terminal blood-vessels of the lung.

2. That these vascular alterations occur in persons of the arthritic diathesis, resemble the vascular alterations found in osteo-arthritic articulations, and are themselves of an arthritic nature.

3. That although sometimes leading to a fatal issue, this variety of hæmoptysis usually subsides without the supervention of any coarse anatomical lesion of the heart or of the lungs.

4. That when present this variety of hæmorrhage is aggravated or maintained by the frequent administration of large doses of strong astringents, by the application of icebags to the chest, and by an unrestricted indulgence in liquids to allay the thirst which the astringents create.

5. That the treatment which appears at present to be the most successful in this variety of hæmoptysis consists in diet and quiet, in the restricted use of liquids, and the stilling of cough; in calomel and salines; in the use of alkalies with iodide of potassium; and in frequently renewed counter-irritation.

SPILSBY RURAL (Population, 25,816).—*Small-pox and Scarlet Fever Outbreaks: Good Results of Isolation.*—Dr. Francis J. Walker describes the year 1888 as one of considerable anxiety, both from the presence of small-pox in the district and the prevalence of scarlet fever. By dint of great exertions the outbreak of small-pox was kept within the bounds of the town of Alford, where the initial case occurred. A temporary hospital was put into requisition, disinfection freely resorted to, and, as an additional measure of precaution, re-vaccination was strongly recommended to the inhabitants, and was eagerly resorted to by them. The usual precautions were taken in all cases of scarlet fever. A rather serious outbreak of typhoid fever occurred in the town of Spilsby. Facts pointed to the milk supply as in some way connected with the origin and spread of the disease, but Dr. Walker failed to trace the exact source of contamination. Altogether, the year cannot be looked upon as a healthy one, although there was no increase in the actual number of deaths from preventable diseases. The total death-rate (16.6 per 1,000) was somewhat higher, while at the same time the birth-rate (25.19 per 1,000) was considerably lower than the average of the past fourteen years.

PRESIDENTIAL ADDRESS
ON
OPHTHALMOLOGY & GENERAL MEDICINE.

Delivered before the Ophthalmological Society of the United Kingdom.

By J. HUGHLINGS JACKSON, M.D., F.R.C.P., LL.D., F.R.S.,
Physician to the London Hospital, and the National Hospital for the Paralysed and the Epileptic.

No professional honour could be more pleasant to me than is the Presidency of the Ophthalmological Society. I thank you for it with all the greater heartiness because I am already very much in your debt for your selection of me to deliver the Bowman Lecture of 1885,[1] and to open a discussion on that most important neurologico-ophthalmological subject optic neuritis.[2] There is no department of medicine which has greater attractions for me than ophthalmology has. It was the first subject I specially worked at after my student life, and I still think what I said when giving the annual address, 1877,[3] before the Medical Society, that it was "the luckiest thing in my medical life that I began the scientific study of my profession at an ophthalmic hospital." Many years ago I had the good fortune to be Mr. Hutchinson's clinical assistant at Moorfields. I suppose it is to his example and teaching that I owe the beginning of the little scientific development I may have. At an ophthalmic hospital one has the opportunity of being well disciplined in exact observation. When a physician sees how carefully and precisely ophthalmic surgeons investigate the simplest case of ocular paralysis, he is getting a lesson in exactness, and will be less likely in his own department of practice to deal in such generalities as that a patient's seizure "had all the characters of an ordinary epileptic fit," and more likely to take pains to describe the convulsion, the place of onset, the march and the range of the spasm. I suppose I must have felt myself under the kind of discipline mentioned when I wrote about twenty-three years ago:[4] "Until physicians work at the muscular disorders of various convulsive seizures as carefully as ophthalmic surgeons do at paralysis of the ocular muscles, our knowledge of convulsions will not advance in an orderly way." One meaning of science is exactness, or, as Dr. Buzzard put it in suggesting a name for a celebrated painting, "science is measurement." The ophthalmic surgeon measures the swelling of the discs in optic neuritis, the degree of error of refraction in hypermetropia, astigmatism, etc., and makes exact charts of the field of vision.

Although I do not congratulate you on your present choice, I think it a good thing that the President of this Society should sometimes be a physician. It will encourage physicians, especially young physicians, to work earnestly at the ophthalmological aspect of cases of patients under their care. By doing so they may repay part of the great debt to ophthalmology which general medicine, and especially neurology, is under. Part of this debt has been paid by Charcot, Westphal, Weir Mitchell, Gowers, Clifford Allbutt, Ferrier, Seguin, Stephen Mackenzie, Bristowe, Wilks, Sharkey, Edmunds, Herbert Habershon, Samuel West, James Anderson, and many other physicians. I would particularly mention Gowers's magnificent work *Medical Ophthalmoscopy*, a work esteemed by neurologists throughout the world. The recent researches of Beevor and Horsley on localisation of ocular movements in a particular region of the cerebral cortex of monkeys is an important contribution to ophthalmology as well as to general medicine and surgery.

Since six cranial nerves and the sympathetic nerve supply the eyeball and its apparatus, it is evident that, without a good knowledge of eye diseases, the thorough investigation of very many morbid affections of the nervous system is not to be methodically carried out. It is easy to show that this statement is by no means a mere truism. Unless the physician uses the ophthalmoscope by routine, he will often enough overlook the best evidence—and I am convinced in some cases the only decisive evidence—of gross organic disease of the brain there is to be had; and if, as is most often the case in a physician's practice, sight be good, he will not surmise that there is anything wrong with his patient's optic nerves, and will very likely be incredulous when someone who has looked at them tells him that there is swelling of the discs. It is not very many years since the ophthalmoscope was rarely used except by ophthalmic surgeons. Dr. John W. Ogle was the first physician in this country who used this instrument in the investigation of medical cases. I think it very unlikely that there is to-day a single patient in the National Hospital for the Epileptic and Paralysed whose eyes have not been examined by this instrument.

I was very much struck by the frequency with which Dr. Macewen, of Glasgow, mentioned optic neuritis in his paper, "The Diagnosis, with especial reference to Localisation of Intracranial Lesions, the Result of Aural Disease," read at the Leeds meeting of the British Medical Association last August. This paper is a most valuable contribution to ophthalmology, otology, and surgery. I urge young physicians to study eye diseases at an ophthalmic hospital or at an ophthalmic department of a general hospital; this nowadays needs no urging on physicians especially interested in neurology. A superficial knowledge will not suffice. Without special knowledge of ophthalmology a medical man may overlook paralysis of a superior oblique muscle altogether—may not know that there is any eye trouble at all; if so he will misinterpret the vertigo for which his patient consults him. The physician's ophthalmological knowledge should be wide. A neurologist who thought only of those ocular symptoms which pertain to the nerves of the eye and their centres would be thinking too narrowly for practical purposes. Unless more widely trained in ophthalmology, he would overlook hypermetropia as a cause of headache and other nervous symptoms, and might thus treat by drugs a condition only needing spectacles for its cure. Again, the physician may, if he does use the ophthalmoscope, misinterpret what he sees if he does not know the morbid results of strain of hypermetropic eyes on the optic discs; he may erroneously consider swelling of the discs due to hypermetropia as a neuritis signifying serious brain disease, and treat the patient on that hypothesis. I infer that there is some excuse for this mistake when made by a physician, and I confess that I have made it, as I have known more than one highly accomplished ophthalmic surgeon to be, for a time at least, in doubt in such a case.

I hope I shall be pardoned for making one more quotation from the address delivered before the Medical Society; I repeat emphatically that "without a good knowledge of ophthalmology a methodical investigation of diseases of the nervous system is not merely difficult, but impossible."[5] Indeed, no physician will, I submit, doubt this who reads Mr. Swanzy's Bowman Lecture, printed in our forthcoming volume of *Transactions*, a most able and very valuable contribution to both neurology and ophthalmology.

I speak again of optic neuritis with gross organic brain disease. I suggest that cases of uniocular neuritis with tumour of one cerebral hemisphere (I have only seen three cases with necropsies) are the cases which, after microscopical examination of the parts concerned, will throw most light on the process by which optic neuritis results from disease of various parts of the encephalon. These cases are most likely to come under the care of physicians. The discovery of this process will be a great gain, not only to ophthalmology but to neurology also. For, presumably, the process by which the pathological condition for some other symptoms, occurring in cases of gross organic brain disease, is produced is similar. At present there are only hypotheses as to this process. I find that I am sometimes quoted as having concluded that optic neuritis results by vasomotor action, whereas I have only said, what I still think, that that hypothesis seems to me to be the most plausible of the three hypotheses I spoke of.[6] I would remark that an adequate hypothesis has to explain not the neuritis only, but some other pathological conditions, also produced by intracranial tumours. We may put for answer the more general question, How does a tumour, say of the cerebral hemisphere, produce symptoms not explainable by its destructive action? It is well known that some patients, subjects of optic neuritis, and who for most of their time see well, have frequent temporary losses of sight. It is very remarkable to observe a patient stagger into one's room quite blind and then to find him next minute seeing quite well, although with double optic neuritis. Dr. Samuel West has recorded in our *Transactions*, vol. iii, p. 136, a valuable case of the kind. So striking and so very defi-

[1] *Trans. Ophth. Soc.*, vol. vi.
[2] *Op. cit.*, vol. i.
[3] Ophthalmology in its Relation to General Medicine. JOURNAL, May 12th, 1877, *et seq.*
[4] *Roy. Lond. Ophth. Hosp. Rep.*, vol. v, Part 4, p. 268.
[5] JOURNAL, May 12th, 1877, p. 575.
[6] *Trans. Ophth. Soc.*, vol. i, p. 90.

nite a symptom demands explanation as much as do epileptiform seizures, which often result from the same tumour of the mid-cortex which produces double optic neuritis. Neither of these paroxysmal symptoms can be put down to the destructive action of the tumour. I submit that they depend on diametrically opposite changes; that there is exalted instability of cortical grey matter—a condition induced by the tumour, probably by a local encephalitis, a condition permitting occasional sudden excessive nervous discharges. An acceptable hypothesis has to account for these two symptoms as well as for optic neuritis. It has still more to account for.

There are other symptoms sometimes occurring along with optic neuritis from intracranial tumour which require explanation; and this I hope physicians will endeavour to give. Dr. Buzzard[7] made the following remarks: "Was it possible.....that the vomiting and the slowing of the pulse might represent an affection of the pneumogastric brought about by the same cause as that which produced optic neuritis, and that the sudden or rapid death which Dr. Hughlings Jackson had mentioned as one of the possible contingencies of optic neuritis from intracranial disease, might also be explained by a more severe influence exerted upon the same nerve?" It is very remarkable that many patients with optic neuritis die suddenly or rapidly, and when seemingly in fair general health, sometimes at work, certainly most unexpectedly. I have often urged this on the attention of physicians. In some cases of cerebral tumour the patient may be acutely ill; he may have an illness very like tubercular meningitis in many of its symptoms; there may be slow and unrhythmical pulse and irregular respiration; there are retracted belly, constipation, and vomiting. I suppose that when a patient who has post-neuritic atrophy tells us that his sight failed after "bilious" or "gastric" fever, he has had such an acute illness. Dealing with certain cases of optic neuritis in children, Hutchinson wrote:[8] "Nearly always there is a history of a severe illness, which was supposed to be fever, and was marked by delirium and other head symptoms."

The organic, or, as one may call them, the "vital" symptoms I have mentioned, are of great importance to the physician. Speaking figuratively, a cerebral tumour in producing optic neuritis is trying to make the patient blind; in producing the other pathological conditions, those of the "vital" symptoms, it is trying to kill him. Following up Dr. Buzzard's very luminous suggestion, I advise that when a patient with optic neuritis dies suddenly or rapidly or dies in an illness with the "vital" symptoms mentioned the medulla oblongata as well as the optic nerves and tracts should be searched microscopically. There is, however, something to be said against the location of the changes under remark in the medulla. It is perfectly certain that the organic parts, although represented directly in the medulla oblongata, are indirectly represented (represented over again or re-represented) in the mid-cortex of the brain; hence it may be thought the "vital" symptoms spoken of are owing, not to morbid changes induced in the medulla, but to such changes provoked by the tumour in the cortex in its neighbourhood, especially as it is unquestionable that the tumour does produce the changes round about itself on which epileptiform seizures depend. This I think unlikely, especially when the tumour is in one half of the brain. I now wish particularly to mention that, as Fagge[9] pointed out, some patients die of cerebral tumour by rapid respiratory failure. In one case under my care artificial respiration was tried, so respiratory, so to speak, was the condition. I cannot but think that in death by failure of respiration in cases of intracranial tumour there have been morbid changes akin to optic neuritis induced in the respiratory centres of the medulla oblongata. It must be borne well in mind that, strictly speaking, optic neuritis is not a symptom, although it is the custom to call it one, but a pathological condition; often enough it exists without any symptom (defect of sight) attending it. Hence it compares, not with convulsion and the "vital" symptoms, but with the pathological conditions of the cortex or medulla on which they depend.

I would submit to ophthalmic surgeons the importance of minutely investigating not only well-marked epileptic and epileptiform seizures, but also any slight transitory symptoms, with or without loss of consciousness, which patients with optic neuritis may have, especially when there are with them "subjective" sensations of smell or taste. These transitory and quasi-trifling symptoms may be slight epileptic paroxysms of a very important variety; their study when optic neuritis exists is important with regard to localisation of changes productive of epileptic paroxysms of different kinds. In the vast majority of cases of epilepsy proper we discover no morbid changes *post mortem*: when there is optic neuritis with epileptic seizures, we mostly find a very obvious change, often tumour of the brain; we can then infer the situation of the secondary changes in grey matter productive of epileptic fits of different varieties. It is quite certain that our present definite clinical knowledge of epileptiform seizures in man comes from the study of those of these cases which are complicated by optic neuritis; and I have no doubt whatever that it will be so in cases of epilepsy proper. By such work as I have indicated, we shall break up epilepsy proper into its varieties as we have done epileptiform seizures. No case of epilepsy, certainly no case of epileptiform seizure, is properly investigated unless the ophthalmoscope be used.

Dr. James Anderson has recorded[10] a case of tumour of the left temporo-sphenoidal lobe. In this case there was atrophy of both discs, but some weeks before death neuritis of one of them. There were also slight epileptic seizures, with "subjective" sensations of taste along with what is commonly called an "intellectual aura," but which I prefer to name "dreamy state." Such cases are of very great medical interest, and are of vastly more scientific value than scores of cases of epilepsy in which no organic disease of the brain is discovered *post mortem*. I have published a case of optic neuritis in which there were slight seizures with "subjective" sensations of smell along with the "dreamy state."[11] The patient died rapidly, as is so common in cases of optic neuritis, but no necropsy was obtained. In that number of *Brain* I have dealt with this variety of epilepsy, (the one with the "dreamy state,") and refer briefly to a case under the care of Dr. Beevor and myself in which there were optic neuritis and hemiplegia, and also paroxysms with "subjective" smells and the "dreamy state." In this case also there was a tumour in the temporo-sphenoidal lobe. This case and Dr. James Anderson's patient's case are important as bearing on and confirming Dr. Ferrier's cortical localisation of smell and taste. These are the only cases I know of, and one was uncompleted by necropsy, in which the variety of epilepsy I have spoken of has been found with optic neuritis. Such paroxysms being very slight, and not always attended by unconsciousness, might be easily ignored in cases of severe brain disease. I very much hope that ophthalmic surgeons will observe minutely, and with their customary precision, slight temporary "sensations," "queer feelings," etc., which patients with optic neuritis may complain of.

There is no end to speaking of the integration of ophthalmological and neurological knowledge. The ophthalmic surgeon studying nystagmus is helping towards the elucidation of the nature of tremor, in which the neurologist is greatly interested. Great attention should be paid, both by ophthalmic surgeons and physicians, to the tremor (Marie) in cases of Graves's disease—one of the four varieties of "vibratile tremor" of Charcot.[12] Work done on miners' nystagmus is valuable to the general body of scientific medical workers, as helping to complete the homologous series of professional spasms, of which writers' cramp is the commonest example. The work the ophthalmic surgeon has done on the symptomatology of cases of paralysis of ocular muscles gives the clue, as Wundt long ago suggested, to the interpretation of incoordinations experimentally produced by destructive lesions of nervous centres in animals. I think it gives the clue also to the interpretation of all disorders of co-ordination in man, including writers' cramp and other occupation spasms, from negative lesions. It explains the squinting resulting from hypermetropia; I think, too, that it explains the seeming alterations in the size of objects after instillation of atropine and eserine, a thing of importance, since these alterations occur at the onset of some epileptic fits.

In the field of the eye we are most likely to be able to trace the ascending complexity, speciality, etc., in the evolution of movements from the ocular muscles to their representation in most complex movements in the highest motor centres, that is, in the physical bases of visual ideas. Whilst a man is looking at anything, there is at that time engagement of all orders of centres from highest to lowest, and thence on to ocular muscles.

Much valuable material has been accumulated for the study of the evolution of ocular movements by Graefe, Hutchinson,

[7] *Trans. Ophth. Soc.*, vol. i, 1881, p. 98.
[8] *Roy. Lond. Ophth. Hosp. Rep.*, vol. v, 1866, p. 307.
[9] *Prin. and Prac. of Medicine*, vol. i, p. 10; 2nd ed.
[10] *Brain*, October, 1886.
[11] *Brain*, July, 1888, p. 179.
[12] *Diseases of the Nervous System*, vol. iii, *Syd. Soc.*, p. 186.

Priestley Smith, Vulpian, Prevost, Ferrier, Horsley, Beevor, and others. We have clinical observations on ocular paralyses from disease of (1) nerve trunks, of paralyses from disease of (2) lowest motor ocular centres (ophthalmoplegia externa), of ocular paralyses (as in lateral deviations of the eyes) from lesions of (3) still higher centres ("motor region" of the cerebral cortex, or, as I call them, middle motor centres), and I hope we shall have such observations of ocular paralyses from lesions of (4) motor centres still higher—the highest motor centres, the physical basis of visual and of other mental states. I have considered this subject in the Bowman Lecture (1885).

There is no task I would rather accomplish than this, for by doing it we should do very much towards showing that the organ of mind is sensori-motor, as is the rest of the nervous system. We should thus place the study of epilepsy proper and insanity on a realistic basis. I have long urged a study of the evolution of movements, and first of all in ophthalmic journals. "If such an expression be permitted, there is a gradual increase in intelligence in movements from the lowest nerve trunks to the highest nervous entres." This, written in 1866[13] expresses crudely what I think can be scientifically stated as a basis for investigation.

Alienist physicians, being more than any other physicians directly interested in the anatomy and physiology of the nervous system as they correspond to psychology, are of necessity interested in ophthalmology, and are in great debt to it. I hope they will be interested in the scheme of work suggested on evolution of ocular movements; but I now speak of something more definite. I do not see how any question can be more important or more fundamental in nervous physiology, as it expressly corresponds to psychology, than whether mental states do or do not occur with the "out-going" current as well as with the "in-going" current.

Now the battlefield of this question is the case of paralyses of ocular muscles when the full symptomatology of those cases, particularly "erroneous projection," is considered. There are reasons more on the surface why alienist physicians should co-operate with ophthalmologists. Much has been done in the study of ocular symptoms of cases of insanity (Westphal, Allbutt, Wiglesworth), but much remains to be done in this direction. Great good would come from investigation of such an insanity as general paralysis by skilled ophthalmic surgeous conjointly with experienced alienist physicians and other neurolcgists. I very much wish this joint investigation could be made.

Physicians should try to help ophthalmology by bringing forward cases little likely to come under the notice of ophthalmic surgeons. Cases of spasmus nutans with nystagmus (a variety, I think, of spinal, or rather, spinal-system chorea, a symptomatic condition akin to canine chorea) would, as "living specimens," interest all our members. I wish surgeons who see cases of so-called traumatic tetanus would settle whether the muscles of the eyeballs do or do not suffer spasm in the exacerbations of this disease. If the ocular muscles are not involved their escape is a matter of great importance and significance, especially to neurologists. Physicians and ophthalmic surgeons ought to note the motor condition of the eyes in the tetanus-like seizures sometimes occurring in cases of tumour of the middle lobe of the cerebellum. Very much more could be done by physicians in the observation of the development and the order of development of ocular movements in cases of epileptiform seizures from mid-cortical disease. I hope that Horsley's promised demonstration before the Society of the representation of ocular movements in certain parts of the monkey's cortex cerebri will be a stimulus to our medical members to note very carefully the behaviour of the eyes in the "cortical fits" of man.

I think aural surgeons could bring before us cases of great ophthalmological interest. I have published the case of a man who had ocular movements during a paroxysm of auditory vertigo,[14] and that of a woman[15] in whom lateral movements of the eyes were producible by pressure on a diseased ear. Mr. Laidlaw Purves gave me most important help in the investigation of the woman's case, as did also Mr. Couper. If such cases are met with by Mr. Purves, I hope he will let us see them, especially as he, having great ophthalmological knowledge, would investigate the ocular as well as the aural side of the cases thoroughly. Dr. Kipp, of Newark, New Jersey,[16] has recorded several very important cases of abnormal ocular movements in cases of ear disease. He refers to cases recorded by Bürkner, Urbantschitsch, Jacobson, Gruber, and Moos, as well as to the two I have reported. I think all ophthalmic surgeons will be interested in Dr. Kipp's researches.

Speaking of otology, I admit that a knowledge of this department of medicine as well as of ophthalmology is of vast importance to the neurologist. I regret very much that I did not years ago pay as close an attention to otology as I did to ophthalmology, especially as the cases just referred to show that the two are related. Let young neurologists take warning so that they may not afterwards have like regrets.

I have illustrated the relation of ophthalmology to general medicine by its bearing on neurology; it has, of course, much wider relations. I can best conclude this address by adopting the words with which Dr. James Anderson ends a paper:[17] "It seems to me the best and most hopeful feature of ophthalmology that it has relations closer or more remote with every branch of medicine and surgery—indeed, with almost every branch of science."

[13] *Roy. Lond. Ophth. Hosp. Rep.*, vol. v, part 4, p. 290.
[14] *Brain*, April, 1879.
[15] *Trans. Ophthal. Soc.*, vol. iii, 1883, p. 261.
[16] *Trans. American Otological Society.*

[17] "Some Ocular and Nervous Affections in Diabetes and Allied Conditions," *Ophth. Review*, February to April, 1889.

EXTRACTS FROM

THE HARVEIAN ORATION

ON THE

PROGRESS OF MEDICINE AND SANITATION.

Delivered before the Royal College of Physicians.

By JAMES EDWARD POLLOCK, M.D., F.R.C.P.,
Consulting Physician to the Hospital for Consumption, Brompton.

[Dr. Pollock having quoted Harvey's two directions—"Remember your benefactors—search out Nature by experiment," observed that by benefactors were to be understood not only those who had made donations to the College, but those who had contributed to the knowledge and so added to the greatness of the profession, and then proceeded shortly to consider the state of Europe at the period when Harvey, who was teaching in London in 1619, and published his discovery in 1628, was at work. He next proceeded to review the state of knowledge as to the circulation when Harvey commenced his career.]

The structural arrangement of the heart and vessels was known both by Harvey and his predecessors. Two sets of chambers and their alternate contraction had been observed with care, the valves which separate them, and the vicinity of the lungs, each provided with a much larger vessel than was required for their nutrition. The arrival of a current of blood at one side of the heart and the means of its exit at the other were recognised, yet how the circuit was completed remained a problem. The alternate contraction of the auricles and ventricles was witnessed by Harvey, but Galen, Aretæus, and the whole Alexandrian school saw it in their vivisections, as did Silvanus in the early part of the sixteenth century, and many others to the time of Servetus, who immediately preceded Harvey; and many of these teachers had opened the living bodies of animals and seen the cardiac movements.

A remarkable investigator of Nature—the monk Sarpi, who was imprisoned for his liberal views of religion, and is well known as the historian of the Council of Trent—must here be mentioned. It has been claimed for him that he discovered the circulation before Harvey. He was, like him, a student at Padua under Fabricius; but I cannot, after a study of the most ancient record in Italian, satisfy myself that he knew the motor power of the heart, although he was aware of the valves in the veins and believed in a circular movement of the blood.

Further, we are now aware, and Harvey came to know, that the great veins did not start from the liver, although returning the used blood from that organ.

The mode by which the different arteries terminate and the whole venous system of return currents begins was not known to Harvey with distinctness, for I cannot find it in any of his statements. The vessels which we now call capillaries, and which intervene between the terminal arteries and the originating veins, were not demonstrated till some thirty years later, when Malpighi, aided by microscopic power, revealed their existence. That

the blood did pass, and that the onward current through the arteries filled the veins, was known to Harvey without doubt, for without this his "circle" on which the blood moved was not complete; but of the capillaries themselves we have no description.

Silvius, about the end of the fifteenth century, had inspected the arteries and noticed the valves in the veins.

Vesalius was aware of the way in which the valves of the heart and great vessels opened and shut, and he pointed out that the septum ventriculorum was absolutely impermeable.

Servetus argued that the pulmonary artery was too large for the nutrition of the lung, and that, therefore, it had another office. He also noticed that in the fœtus no blood passed into the lungs, and that in the adult the pulmonary blood was crimson. In fact he may be said to have discovered the pulmonary or lesser circulation. He had his difficulties about the capillaries, but so had Harvey; and, although he spoke of a backward and forward motion of the blood, it appears to me, from a study of his statement, that he knew that the arterial system terminated in the venous.

The discoveries of Harvey were the result of a careful study of the opinions and labour of his predecessors, followed by minute experiment of his own and a determination to take nothing for granted, but to submit everything to experimental proof which is susceptible of such a mode of investigation.

If we were asked, after a careful study of his treatises and methods, which seemed to be the starting-point of his convictions, we should say that, before vital phenomena were weighed and examined, the structure of the heart and vessels furnished his first awakenings to the truth. "I see this mechanism repeated again and again in all individuals. I see a similar but single machine of like kind in certain lower animals. I remark that certain doors or valves open only in one direction. I notice in life a contractile motion alternating with another as regularly as the pendulum vibrates from side to side; and I argue that this organ so provided with motor power, and involuntary perpetual action, and guarded mechanism, is a propelling centre of motion, and is, indeed, the mechanical recipient of one current and the origin and outgiver of another."

We must here pause to notice how impossible would have been his task if he had not had recourse to numerous observations of the living body. There were few animals which he did not examine by vivisection, and it is only the truth to assert that without such method he could not have attained to certainty, nor could we have reaped the important fruits of his discovery. Our latest and perhaps our greatest pathological achievements would not have been attained without vivisection, of which Harvey was the greatest exemplar, if he were not its originator.

I will not detain you by stating the arguments in favour of this mode of investigation, without which the most brilliant and at the same time the most practical additions to our knowledge would have remained impenetrable secrets. In illustration, I would just recal to your memory the remarkable identification of certain tracts of the brain with the governing power of localised movements and sensations, and how, guided by this knowledge, our surgeons have been enabled to localise and remove morbid growths or collections of matter in the cerebral structure, and thus to save lives which must otherwise have perished from our ignorance. This knowledge—still imperfect—is, however, rapidly progressive. As regards the pitiful opposition of those who oppose vivisection, and who even charge with cruelty those who practise it, let me quote the words of Pasteur, in which he signalises the errors which, under a show of compassion, can only hinder the progress of science and compromise even the most legitimate interests of humanity. He protests against false sentimentality: "Certain credulous souls—by I know not what tales—imagine that our laboratories are chambers of torture. They ignore the fact that the rabbit or the guinea-pig is rendered insensible by chloroform before it is subjected to the most insignificant operation. As for me personally the suffering of an animal affects me so much that I would never shoot a bird, and the cry of a wounded skylark pierces me to the heart; but if the investigation of the mysteries of Nature and the acquisition of new truths be at stake, the sovereignty of the object justifies all."

Regarding the circulation and the structure of heart and vessels as a whole, it will be noticed that the discovery is that of mechanism and a power adapted to work it. As we have just seen, the vital results of blood circulation were as little known as its chemical composition; nor, indeed, could they have been known, owing to the deficiency of other knowledge.

Let us take examples from certain diseased actions as we now know them, and it will be seen how far a correct knowledge of the mechanism of the circulation is capable of explaining them, and, more important still, gives a key for their treatment and relief. Let us take the mechanical results of obstruction in the mitral valve. The vital phenomena at first are few or none, for individuals who are the subjects of this affection are pursuing the ordinary avocations of life daily. For a length of time the power of the ventricle remains sufficient to overcome the obstruction before it, and by a gradually increasing hypertrophy the balance of the circulation is maintained. But the time comes when the walls of the heart yield, and dilatation of the right chambers, which is among the first signs of weakness, occurs; a contractile cavity is over-distended, and its walls lose power to propel the contents. The result is a gradually increasing stagnation. The result of such stagnation at the centre is overflow in the periphery of the circulation; so hæmorrhage occurs in the lungs, effusions into serous cavities, and effusions into the subcutaneous tissues. The results are altogether mechanical. Vital injuries only follow in a secondary way, and indeed the case is one of mechanical obstruction and injury up to the last hour. We cannot doubt that, if we could safely repair or replace the valve, every symptom would cease, for the system is quite able to take up effusions when the pressure on venous trunks has been removed.

And how do we remedy such? No doubt by mechanically lessening the quantity of blood—as our predecessors did more frequently than we do—the pressure may be relieved for the time. Or we can deplete the blood vessels into the intestines by purgatives, or drain off fluid by punctures, or induce increased action of kidneys; or, by another mechanical mode, give digitalis to strengthen ventricular power, and so help the dilated and failing walls of the heart. I use this illustration to show how our knowledge of the mechanism of the heart leads us to adopt mechanical methods of relief.

Again, there is no doubt that the phenomena and dangers of aortic regurgitation are entirely mechanical. For a time the left ventricle, by increasing its power, often resulting in enormous thickening of its structure, is able to maintain the outward current of blood, which is ever falling back at every stroke of the pump, till at last, owing to failure of power, often sudden, the systemic and especially the cerebral vessels remain unfilled, the nutrient vessels of the heart are themselves unsupplied, and nature succumbs for want of quantity of blood. Our knowledge of the mechanism of the circulation indicates the reason.

Again, another class of cardiac ailments is caused by failure of heart power, due to degeneration of the muscular fibres. I need not describe the symptoms, but the remedies are addressed to strengthening the mechanical force of the contraction. And we have most valuable agents for our use in digitalis and caffeine, which strengthen the ventricular power and lessen the number of beats.

There are also conditions of a mechanical nature in which agents producing dilatation of the arterioles may support a failing heart power. Such conditions occur when the vascular tension is high and the ventricular power weak, as in Bright's disease. In such cases dilatation of the peripheral circulation would relieve the labouring heart, and this result may be obtained by the nitrites.

The phenomena resulting from embolism, or the carriage of a clot of blood in the arterial current cannot fail to strike us as being entirely unintelligible without a knowledge of the circulation and its results. They are so essentially mechanical that, as in the discoveries of Harvey himself, we can only wonder that it is in comparatively very modern times that they have been understood. A clot of blood dislodged from a thickened valve and deposited in the lung or brain has given rise to all the symptoms of apoplexy or lung disease which were formerly attributed to quite other causes.

Again, a consideration of the circulation in the brain will recall to our minds how alterations cutting off small tracts of cerebral structure from a supply of blood will give rise to phenomena of paralysis, as aphasia, which is often of a temporary nature, or to more serious lesions, as multiple aneurysms, or to rupture of vessels with effusions, which were formerly supposed to be the sole sources of apoplexy. Indeed, all visceral disease is only intelligible when we consider its blood supply and the phenomena dependent on it.

The whole pathology of aneurysm, from that of the smallest size in a branch of the pulmonary artery or in a cerebral vessel to the largest in the aorta, can only be appreciated from considerations

of the mechanical powers of the circulation. As an illustration of the practical uses of our knowledge, we can point to the modern use of medicines introduced into the blood by the hypodermic method, and the possibility by transfusion of replacing the volume of the circulating fluid which may have been lost by hæmorrhages or diseases of exhaustion. Some late studies of the process have revealed to us the peculiar vitality and offices of the different blood constituents, and demonstrated how only certain results can be obtained by thus replacing blood which has been lost or impoverished.

The enumeration of the results to medical science which have been gained by our knowledge of the lesser or pulmonary circulation would in itself occupy the time of many lectures, and such details would be unfitted to our present occasion. But I may be permitted to point out a few of the more obvious.

All the phenomena of respiration, oxygenation of the blood, the sources of animal heat, and every disease affecting the pulmonary structures, would be unintelligible were we ignorant of the nature and results of the contact of air with the blood in the lungs.

The discoveries of Laennec and those who have developed his system of auscultation in this country, by which every structural alteration has been rendered evident to the senses; the advances made by Stokes, Corrigan, by Latham and Williams, would have been impossible, and accuracy of diagnosis, which has now attained to such great precision, could not have been effected. To these great names I would attach that of a most careful experimenter after the Harveian method. I allude to Hutchinson, who has perfected our knowledge, and been almost single in the study of the vital capacity of the lungs.

Now, Sir, it has been asked, and it is a question which we should put to ourselves, What effect have all our discoveries and improvements in medical science had on the general health of the country? Are we a healthier nation? Is there a diminution of disease? And do fewer die? Above all, do more individuals survive through the working and useful periods of life? for, if so, this is a national gain of power. And here I venture to detain you for a few moments over the replies which have been given to these questions by those whose profession it is to study as actuaries the varying duration of life at different periods, and I am about to quote from Mr. Noel Humphreys's calculation figures.

The Registrar-General's mortality statistics prove beyond doubt that a marked decline has occurred in the national death-rate in recent years. They embrace the forty-five years, 1838-82, and constitute the only trustworthy basis for calculations as to the duration of life in England.

Early in the most recent decade, 1871-80, the Public Health Act of 1872 became law. This marked an eventful epoch in the history of sanitary progress in England, and it appears impossible to doubt that the operation of these Acts, themselves due to the awakening of national interest in health matters, has proved a powerful factor in the recent marked decline in the English death-rate. The method is, as you are aware, to determine the number of annual deaths at each age which take place among a given number of the living at the same age.

The death-rate between the years 1838 and 1870 may be said to have averaged 22.5. In the first five years of the Act it fell to 22, and in the following five to 20.8; while in the two following years, 1881 and 1882, it only reached 18.9 and 19.6.

Thus the mean death-rate in the two first years of the current decade implied that more than 150,000 persons survived those two years whose deaths would have been recorded had the mean rate of mortality that prevailed in the thirty years, 1841-70, been maintained. It is worthy of notice that the decline in the death-rate of males was 4.7 per cent., while in females it was equal to a decline of 9.7 per cent.

Among males under 5 years the decline was 7 per cent.

„	„	from 5-10	„	„	30	„
„	„	„ 10-15	„	„	32	„
„	„	„ 15-20	„	„	30	„
„	„	„ 20-25	„	„	28	„

But an actual increase of the death-rate occurred at the more advanced ages, thus:

From	35-45	years	of	age	an increase of	5 per cent.
„	45-55	„	„	„	4	„
„	55 65	„	„	„	9	„
„	65-75	„	„	„	1	„

The great decrease in mortality was, therefore, between 5 and 35 years of age, while an increase was noted in more advanced life. On the whole, however, the expectation at birth of males is greater now by rather two years than it was in 1838-54, and in females there is a gain of nearly three and a half years to the life-time.

Now a writer in the *Spectator* some time ago, under the heading "Improvement of Human Health," asked, with reference to the decline in the death-rate, "What is the kind of life which is increasing? Is it young life, or mature life, or aged life which is being enlarged? Are we young longer? or mature longer? or old longer? or, in fuller words, do we gain from all our costly and troublesome hygienic devices a longer period during which we retain the full energy of youth, or a longer duration of the period of wisdom (such as wisdom is), or a greater stretch of old age? Do we live longer, in fact, or are we only a little slower in dying?"

Now the answer to these pungent questions is, of course, to be found by considering the increase in the number of survivors at different ages due to the recent decline in the death-rate. Of each 1,000 males born, 44 more attain the age of 35 according to the life-table of 1876-80 than by the previous life-table of 1838-54.

Now, notwithstanding the slight increase of mortality among males at 35 and upwards, a large proportion of these additional 44 survivors live to the higher ages. Of the 1,000 born, the additional number of survivors is 35 at age 45, 26 at age 55, 9 at age 65, 3 at age 75, 1 at age 85. This clearly proves that the gain to human life is not confined to childhood and youth. Although males over 35 years die at a somewhat higher rate than formerly, the marked decline in the death-rates up to that age causes such an addition to the number of survivors above that age as materially to increase the number of years lived at all the subsequent ages.

The *Spectator* asked, "Are we young longer, or mature longer, or old longer?" In order to find an answer we need to know at what periods of life these additional years are lived. On the whole, we shall not be far wrong in classing the 40 years from 20 to 60 as the useful period of man's life. It has been shown that out of the 2.0009 years added to the lives of 1,000 males by reduction of the death-rate of 1876-80, no less than 1,407, or 70 per cent., are lived at the useful ages between 20 and 60. Of the remainder of the increase 445, or 22 per cent., are lived under 20 years, and 157, or 8 per cent., above 60 years. Thus, of the total increase 70 per cent. is added to the useful, and 30 per cent. to what may called the dependent age-periods. It is thus shown that by far the largest proportions of the years added to human life in England, both of male and female, are lived at those ages when the value of life to the community is greatest, and it thus becomes possible to realise how vast will be the national effects of this reduction of the death-rate, which has added an average of two years to the life of each male born in England and Wales, and nearly three years and a half to the lifetime of every female born. Through the kindness of Dr. William Ogle I am also enabled to state that in the decennial period not yet completed, but just approaching completion, there is a marked diminution in the death-rate of aged lives. The diminution in the mortality of infants and young people has more than counterbalanced the increase in adult life.

Mr. Noel Humphreys, from whom I have borrowed much of this statement, is well justified in saying that it may be hoped that these conclusions will tend to the formation of a sounder and fuller appreciation of the national value of the recent decline of the death-rate, and, by showing the effect of recent sanitary progress, serve to strengthen the hands of sanitary authorities and of medical officers of health against the vast amount of apathy still existing in health matters.

In the face of these remarkable facts it is, I hope, legitimate to occupy a few minutes of your time by an inquiry into the causes of this steadily diminishing mortality of the whole population, and in this place it is fair to claim for ourselves that it is due to increased medical knowledge, and to the greater recognition of natural laws of health and disease which have been taught by our teaching and enforced with such authority as we possess. But although the principles of hygiene are now taught in our schools, and enter into our examinations, it is obvious that the great sanitary measures which have been, and are, adopted throughout the country, have their origin in the increased and improved education of the people.

There is still much ignorance of the structure and functions of the human body, but natural laws, with their chemical, mechanical, and vital import, are more and more understood, and as such knowledge advances we shall have less disease, fewer hot-

beds out of which germs may be grown, and a still further lessened mortality of the population.

Sydenham has said that "chronic diseases arise from our own errors;" and we know that zymotic affections are the natural fruit of seed sowing in a soil suitable for their reproduction.

We have seen the important decrease in the mortality of early life, and it seems to me that it may be attributed to a lessened amount of zymotic diseases, caused by our improved method of dealing with such; the more perfect ventilation of our dwellings, greater personal cleanliness, isolation of infectious cases, the improved drainage of the subsoil, the removal and disinfection of excreta, and the increased purity of water and milk. We have but to add to these the recently established compulsory notification of every case of infectious disorder to the sanitary authority, and we shall soon see a further diminution.

But, sir, I must, however briefly, remark on the greatly lessened mortality from phthisis since the passing of the Health Acts. I quote from the Government returns made by Dr. Buchanan that this has amounted in different towns and districts to a percentage varying from 15 to 43. Further, this has occurred in places most widely differing from each other, as Bristol and Rugby for example. Dr. Buchanan notes that this diminution of mortality is referable to subsoil drainage rather than to the larger system of general drainage. In fact, he found that where the dwelling was placed on a damp subsoil, polluted by accumulated organic impurities in a moist state, there was found the home of consumption, and the soil by which its germs were multiplied and disseminated. As we know that phthisis is most prevalent in the earlier periods of life, say from 15 to 25, it is plain that the lessened mortality we are considering has been largely due to a removal of these causes of disease. I would also state as a matter of my own experience, which is somewhat large, that the duration of life in those suffering from phthisis has become distinctly prolonged, which is probably due to our improved methods of treating the consumptive by more exposure to fresh air, and the invigorating influences of a change of climate, while medicinal remedies have been more of the nutritive and sustaining class than in former times.

Shall we not say a word or two on the increase in mortality at the more mature and advanced periods of life? It is true that this is small, and that it is becoming less, and it is true that it is counteracted by the increasing number of the younger who now arrive at adult life. It is recruited as it were, but there is still a balance against us. How is this? Are the cares and worries of a higher civilisation; the struggles to obtain wealth, position, fame; the sacrifice of the night's rest, the abandonment of the necessary repose, the devotion of all powers to the ignoble present as compared with the infinite future—to continue to shorten life? to cut off the noblest in their prime? to dash from the lip the highly treasured cup of success just as the prize had seemed achieved?

I need not say to such an audience as this that work—the due exercise of every function given to us—kills no man, and shortens no life. The causes are to be found in what is called our extended civilisation. We are no longer traders to one country, nor for one or two commodities, but the telegraph has introduced us into a widened sphere; and our merchants have investments in every climate, and enter on risks of a kind so varied, that the knowledge of no one man is sufficient to grasp it. Hence there are the anxieties of extended speculation, and a necessary want of the perfect understanding of each. The knowledge of one kind of trade was formerly "power," and led to prosperity; now we are playing games with all the world. Those who are present know well what part of the organism it is which generally fails under such pressure. The public say it is brain, but we know that it is heart—the motor power which Harvey studied—although, perhaps, he did not foresee to what pressure a modern civilisation and struggle would subject it.

I have spoken but of the trading class and the speculative class, but all classes of society should learn to counteract in themselves the depressing agents of excessive worry, and to beware of the race which, once entered on, may exceed the best of our powers and ruin the machine.

THE latest project before the charitable in the metropolis is the proposition by an alienist physician to establish a British Hospital for Mental Disorders, for the treatment of out-patients. The hospital is established with a view to help all mentally afflicted who choose to apply (!), and the indigent poor especially.

THE POSITION AND RELATIONS OF PRIVATE MEDICAL PRACTITIONERS UNDER THE PRESENT AND COMING LUNACY LAWS.[1]

BY W. JULIUS MICKLE, M.D., F.R.C.P.LOND.,
Medical Superintendent, Grove Hall Asylum, London.

HITHERTO medical men in England have been unfairly placed in respect to lunatics certified by them. The facility with which the latter have been enabled to bring actions at law, and to frustrate the statutory limitations of time during which such actions may be brought, the delays, quibbles, false issues raised, insistance upon irrelevant points, the absurd popular notion of insanity, and the difficulty, often impossibility, in persuading judge and jury to accept clear evidence of insanity as being such, the support some ill-founded cases have received in the witness-box and elsewhere from other medical men whose boldness of assertion has been more conspicuous than their knowledge, all together have formed grave difficulties for some of our medical brethren, defendants in actions of the kind.

The persons most likely to bring actions on account of alleged illegality in reference to their being placed under care and control are examples of paranoia or monomania, or of others of the often, and inappropriately, so-called partial insanities, all being members of the hereditary mental degenerative group. Those are they who are most apt to leave no means untried to obtain a trial of their suit, and to secure a favourable verdict; and these are the forms of insanity with respect to which medical men should be more than usually circumspect, fortified, and prepared as concerns litigation.

Moreover, there is a variety of paranoia, or sometimes a form intermediate between either it or simple hereditary and moral insanity, in which the egotistic and delusive way in which the subjects of it view themselves, and others in relation to themselves, leads them to believe that they are unjustly dealt with, conspired against, and illegally treated by those who in any way curtail their liberty or thwart their wishes; and these morbid ideas seek satisfaction and obtain expression in litigation. To this variety even a special name has been applied by the Germans—litigation insanity, or monomania (*Querulanten-Wahnsinn*). Such persons are one of the pests of modern society; what they cannot do, in carrying out their lawsuits, by the assistance of speculative lawyers, they do in person, devoting their whole time to a study of the statutes and to a pertinacious pursuit of the litigation, in which they appear as their own advocates; and, whilst they may lose case after case, no one can recover from them his costs, nor can he recover from them any compensation for his loss of time and of peace of mind.

Although we have a new Lunacy Act, yet legislation will not alter the tendencies and disposition of those who will be, or who have been, or who have been alleged to be, insane; and I will briefly touch upon a few instances of comparatively recent litigation as examples of the attacks medical men have hitherto been compelled or liable to meet, and in a less degree will be so in the future.

In one case, after being in an institution for the insane, the patient brought actions at law against the medical men who signed the certificates of insanity under which he was admitted, against the medical officers of the institution, and against everyone in any way connected with his being placed under care and control. Defeated on one ground, he sought to bring actions on other grounds, and a series of lawsuits placed the medical men on their defence over and over again.

Another plaintiff, who had been on and off in asylums for many years, brought an action against a medical man who had certified that she was insane on the last occasion of her reception into an asylum a number of years previously, where, within a few days, she had been seen by visiting Commissioners, who had made an entry that she was then, in their opinion, of unsound mind. In defence, the Statute of Limitations was pleaded in vain. Falsely, maliciously, and negligently, so it was asserted, had the medical certificate been signed; and its contents were alleged to be a libel. Notwithstanding strong evidence as to the mental state of the plaintiff at the time of certification, as to extreme suspicion,

[1] Read before the East Surrey District of the South-Eastern Branch.

ideas of being poisoned, and so on, the jury disagreed. The judge eventually found for the medical defendant.

Another patient, sent to a county asylum under a magisterial order as a pauper case, unsuccessfully brought actions against the medical men and against others concerned in her being so placed under care. The plaintiff's screaming, rushing about the house, or into the street, in a state of nudity or nearly so, were some of the statements in evidence. It was also in evidence that she had the distressing notion that slime or dirt was on her.

Speaking irrespectively of the preceding, there is a condition, termed mysophobia, in which a morbid fear of dirt, of defilement, fills the mind, unfits the sufferers for any duty in life, agitates, distresses them, drives them to wash and rewash a thousand times, absorbed as they are in the incessant attempts to purify themselves. What at first are obsessions—besieging feelings and thoughts—finally may come to possess these sufferers as delusions and illusory sensory perversions. The thoughts and acts have an impulsive impress; and the condition belongs to the hereditary mental degenerative series. A man sent as a pauper patient to a county asylum brought an action, about six years afterwards, against the medical man who had signed the certificate. The evidence as to the mental state was clear. I mention the case because of the long interval between the signing of the certificate and the attempted action at law; and because a witness appeared in support of the complainant, although he had not examined him until more than two years after he had left the asylum, and nearly six years after the date of the impugned medical certificate.

The last case I shall mention was one of the most striking. A young lady, it is in evidence, becomes suspicious, thinks people have turned against her, takes hallucinations so it is alleged, refuses food, avoids her friends, and those in care of her fear her suicide. Two medical men, called in, sign certificates of insanity, without fee or reward; she is sent to an asylum, and thence transferred to another asylum, and, in turn, from the latter to a third one; is visited frequently by visiting committees, and less often by Commissioners, is removed from asylum care after upwards of two years: brings a lawsuit against the original medical certifiers and others a year still later; and her statement of case at first alleges, not merely negligence, but also malice and conspiracy on the part of the two medical defendants; although eventually the last two items are dropped. The verdict is for the medical defendants.

These cases exemplify the risks which medical men hitherto have been compelled to accept in relation to some of those whom they certified to be of unsound mind. Many medical men ceased to certify; and few would have certified had they been fully aware of their real position under the Lunacy Laws. This state of affairs is greatly improved by the Lunacy Act recently passed, the fifth Bill of a series, of which the preceding ones annually perished by the way. Under this Act the relations to the public and the position of certifying medical men are greatly meliorated; whereas those of private or public asylum medical officers are made worse in some respects. For much of the improvement in the provisions of the Act passed, as compared with the provisions originally proposed, our profession is indebted to the Parliamentary Bills Committee of our Association, and to those members of Parliament who supported that Committee's recommendations.

Save as in the Act otherwise expressly provided, May 1st, 1890, is the commencement of the Act, the day when it comes into operation. The more important of the two great protective clauses to certifying medical men came into force from the time of the passing of the Act, as expressly provided therein; medical men at the present moment, therefore, enjoy whatever protection that clause affords. Briefly expressed, it is to the effect (*inter alia*) that a person who signs a certificate or report under this Act, or does anything in pursuance of this Act, shall not be liable to any civil or criminal proceedings, whether on the ground of want of jurisdiction or on any other ground, if such person has acted in good faith and with reasonable care. If any proceedings are taken against any person for signing such certificate or report, such proceedings may, upon summary application to the High Court of Justice or a judge thereof, be stayed upon such terms as to costs and otherwise as the Court or judge may think fit, if the Court or judge is satisfied that there is no reasonable ground for alleging want of good faith or reasonable care.

The other protective clause to certifying medical men in the new Lunacy Act does not come into force until the "commencement of the Act," May 1st, 1890. It is that any person who makes a wilful misstatement of any material fact in any medical or other certificate under the Lunacy Acts shall be guilty of a misdemeanour; but that no prosecution for a misdemeanour under this clause shall take place except by order of the Commissioners, or by the direction of the Attorney-General, or the Director of Public Prosecutions.

Subject to the exceptions mentioned in it, the Act further provides that a private (that is, non-pauper) patient shall not be received and detained as a lunatic in any asylum, public or private, or under single care, unless under a reception order by a judge of county courts, magistrate, or specially appointed justice of the peace; but the person making such reception order shall not be a relative of the person applying for the order, nor a relative of the lunatic, nor of the lunatic's wife or husband, as the case may be.

Save in urgency cases (to be mentioned presently), the order shall be obtained upon a private application by petition, accompanied by a statement of particulars, and by two medical certificates on separate sheets of paper, under the hands of two medical practitioners; all these documents being made in the particular forms prescribed by the Act. The petition shall, if possible, be presented by the husband or wife, or by a relative of the alleged lunatic; or, if presented by anyone else, must contain full particulars why this is the case.

One of the medical certificates, accompanying the petition for an order for reception of the alleged lunatic into an asylum, etc., shall, whenever practicable, be by the alleged lunatic's usual medical attendant; and if it is not by him the reason must be stated in the petition, and form part of it.

The two certifying medical men must examine the alleged lunatic separately; and for their certificates to be valid this examination, on which their certificates are based, must take place not more than seven clear days prior to the presentation of the petition.

On presentation of the petition, the judge, magistrate, or justice may make a reception order forthwith, or may delay consideration of the petition for seven days or any less space of time; whereupon he may adjourn further consideration of it for any period not exceeding fourteen days; and, if not satisfied with the evidence of lunacy in the medical certificates, may visit the alleged lunatic. The petition shall be considered in private, and among the few persons who will have a right to be present (irrespective of the discretion of the justice, etc.) will be the medical men who signed the certificates accompanying the petition. There is a provision as to secrecy imposed, concerning these proceedings (Section 4, Subsection 6), but it is useless, as it does not apply to the alleged lunatic, or to the person whom he or she can appoint to be present at the consideration of the petition.

In non-pauper cases of urgency, where it is expedient for the alleged lunatic's welfare, or for the public safety, that he or she shall be forthwith placed under care and treatment in an asylum, etc., he or she may be so placed and kept by authority of an urgency order, signed, if possible, by his or her wife or husband or by a relative, accompanied by a medical certificate of lunacy by one medical man, who must have examined such alleged lunatic not more than two clear days previously to the reception of the alleged lunatic under such care and treatment; and such certificate shall state, with reasons, that it is expedient for the alleged lunatic's welfare, or for the public safety, that he should be placed under care forthwith.

If the urgency order be not signed by the alleged lunatic's husband or wife, or by a relative, the order must fully explain why this is so.

The urgency order holds good for seven days after its date. Further detention of the lunatic can only be carried out under a reception order, obtained by petition in the manner already described.

A medical certificate accompanying a petition for a reception order, or accompanying an urgency order, shall not be signed by the petitioner or person signing the urgency order, or by the husband or wife, father or father-in-law, mother or mother-in-law, son or son-in-law, daughter or daughter-in-law, brother or brother-in-law, sister or sister-in-law, partner or assistant of such petitioner or person. Half of these relationships, therefore, refer to medical women signing certificates.

When a non-pauper lunatic has been received under care and control, who has not been personally seen by the justice making the order for his reception, he shall have the right to be seen by another justice, unless the medical or other person in charge of him certifies to the Commissioners, within twenty-four hours, that

this course would be prejudicial to the patient. Otherwise the patient can, within seven days, exercise this right; and the fresh justice is to see the patient and report to the Commissioners, thus reopening the whole question of his insanity, disturbingly, in the mind of the lunatic, and placing the certifying medical men in a position liable to misunderstanding and unduly vulnerable.

A constable, relieving officer, or overseer of a parish, knowing of a non-pauper and non-wandering alleged lunatic, but one who is not under proper care and control, or who is cruelly treated or neglected by those in charge of him, shall, on oath, inform the justice specially appointed under the new Act, who may visit the alleged lunatic if he thinks well to do so, and, whether he visit him or not, shall direct two medical men to visit him and certify their opinion as to his mental state; and the justice, if satisfied that the alleged lunatic is a proper person to be placed under care, may order his removal to an asylum, etc., or may detain him and suspend execution of the order of removal for fourteen days, or may allow a friend to take care of him. But the removal cannot take place in opposition to a medical certificate of unfitness of the alleged lunatic for removal. The reception order holds good for fourteen days, or, if its execution is suspended by a medical certificate, as just stated, it becomes renewed in effect for three days after a reversing medical certificate of fitness for removal has been obtained.

The certificates accompanying the reception order under which patients are to be received under care are not to be signed by persons in any way interested in the payment to be made for these patients, or by the near relatives of such persons.

Neither of the persons signing the medical certificates in support of a petition for a reception order shall be the father or father-in-law, mother or mother-in-law, son or son-in-law, daughter or daughter-in-law, brother or brother-in-law, sister or sister-in-law, or the partner or assistant, of the other of them.

Every medical certificate shall be evidence of the facts therein appearing, and of the judgment therein stated to have been formed by the certifying medical men on such facts, as if the matters therein appearing had been verified on oath.

Hitherto medical men have had the right, under definite statutory regulations, to receive one insane patient ("single patient") into their private houses without obtaining a licence for the reception of lunatics. It is now enacted that the Commissioners may, under some circumstances, allow this number to be increased; this, however, if carried into effect, may bear unfairly on medical men who have gone to the trouble and expense of obtaining a licence for the reception of two or three lunatics into their private houses, and probably of altering those houses as required by the licensing authority.

After May 1st next, no pauper can be sent to an asylum, etc., under order of a clergyman and relieving officer, a method which has hitherto been in use.

Where a pauper lunatic is taken charge of by relatives, with an allowance for his maintenance, the district medical officer shall visit and report on him, quarterly, at a fee of 2s. 6d., in addition to the fees now paid under 16 and 17 Vict., c. 97, s. 66.

A medical visitor of private asylums shall receive such remuneration as the justices for the county or borough for which he is a visitor may approve.

Under the new Act the duties of medical officers of workhouses will be somewhat complicated, and no doubt a full code of instructions will be issued for their use before next May. There is not time to state the provisions of the Act on these points here. They are given at p. 745 of the JOURNAL of September 28th.

EBBW VALE (Population, 17,000).—*Epidemic of Measles: High Infant Mortality: Ambulance and Disinfector Needed.*—A severe epidemic of measles during the whole of 1888 had the effect of raising the excessive zymotic rate of the previous year from 5.23 to 6.7 per 1,000. The epidemics of scarlatina and diphtheria, which were the chief causes of zymotic mortality in 1887, died out in the early part of 1888, and the cases which followed were sporadic in charater and the mortality comparatively small. There was, however, an abnormal mortality among children under 5 years of age, no less than 180 deaths out of a total of 365 being of such children. Mr. John W. Davies describes this state of things as deplorable, when it is considered that, with ordinary care and suitable food, the mortality might be considerably reduced. With the exception of the preventable diseases, there was a record of fewer deaths in other classes, and the general death-rate was 21.46 per 1,000. An ambulance waggon and a steam disinfecting apparatus are much needed in the district.

A SUCCESSFUL CASE OF TREPHINING FOR EPILEPSY, WITH SUBSEQUENT RESECTION OF TREPHINE OPENING.

BY DR. WILLIAMSON,
Physician to Latchford Hospital;
AND
ROBERT JONES, M.R.C.S.,
Honorary Surgeon to Liverpool Stanley Hospital.

THE patient was a young man engaged as a striker at one of the forges on the Manchester Ship Canal Works. Two years ago, while under the influence of alcohol, he fell against the corner of a brick wall and cut his head over the left Rolandic area. The bleeding was profuse, and he was insensible for a short time. He rested for a week, when, feeling better, he went out with some friends, drank, and in consequence got an attack of erysipelas. His head was very much swollen, and he had his first epileptiform seizure. Sixteen fits occurred the same day. He remained unconscious for a few days, and his right leg and arm were paralysed for three weeks. He spoke slowly, and at first incoherently, but this defect wore off in a week. The paralysis of limb disappeared, commencing in the leg. He was treated as an out-patient at one of our large hospitals, but trephining was not suggested to any of the family. The wound in the head soon healed, but has on more than one occasion discharged a little pus. The last occasion was February, 1888. The patient returned to his work in twenty-one days.

Family History.—Both father and mother alive and heavy drinkers. Patient is the eldest of a family of four children, all living. His eldest sister, now 20 years of age, is an epileptic, her fits dating from her first dentition. She is now a helpless imbecile, and averages five fits a week, and is worst at full moon.

Present Condition, two Years after Primary Injury.—Patient considers that stooping may have induced present attack. There is no history of an injury. Has had a bronchial attack for some days past. There is a small triangular depression over the Rolandic area on the left side, marking the position of the old injury. On the night of October 31st, 1888, he was seized with two epileptic attacks, and on Thursday came for treatment to Dr. Williamson. Aperient pills were prescribed, and no fits occurred until November 2nd. On November 3rd he went to bed at 1.30, and was seized with a fit, which constantly recurred, and from which the patient did not recover consciousness until after operation. The fits were short in duration, but recurred every ten minutes. Dr. Eugene Byrne, the resident physician at Latchford Hospital, who had an opportunity of noting the succession of symptoms, describes them in the following words: "They began with groaning and slight movements of right limbs; then tremors of right limbs; then tetanic rigidity of right limbs, accompanied by jerking of the head round to right side, the mouth being also drawn to the right. So soon as the rigidity of the limbs and jerking of the head subsided, the right eye commenced to blink violently. In the afternoon the blinking was followed by rapid nystagmus; but in the evening, when seen before the operation, no nystagmus was noticed between the blinking and relapse into coma." Mr. Robert Jones was sent for in the evening. On arrival he found the patient very low; pulse 95; breathing shallow and accompanied by *râles*, 25 in the minute; extremities cold and bluish; fits recurring every ten minutes, unconsciousness having lasted eighteen hours. Mr. Jones determined to trephine without delay.

The Operation.—This was performed in a little room in Warrington. The operator was assisted by Dr. Byrne and later by Dr. Williamson. The head around the scar was shaved and washed with terebinth, and a subcutaneous injection of morphine and ether administered. A semicircular incision was made down to the periosteum over the scar, the convexity of the curve being upwards. A flap of periosteum was then shaped, and the whole mass reflected, exposing the old depression. A $\frac{3}{4}$ inch trephine was then placed below the site of the cicatrix; the circle of bone so removed had attached to its internal surface a triangular piece of bone diving into the brain at right angles to the cranium to a length of $\frac{3}{4}$ inch. This is shown in Figures 1, 2, 3. The trephine was introduced at the junction of the middle with the lower third of the Rolandic fissure, the largest diameter being opposite the ascending frontal convolution. The widest diameter of the bone lay horizontal to the cortex it pierced. The measurements were

conducted after the method of Thane and Hare. A probe with a bent point was then placed into the trephine space and a little anterior to it; the inner plate felt bare. In consequence, another trephine hole was made $\frac{1}{4}$ inch anterior to the first, and the intervening ridge of bone removed by saw and forceps. This procedure yielded a small piece of necrosed bone. The wound was treated during operation with perchloride of mercury; all bleeding vessels were tied; the cut surfaces dusted with equal parts of iodoform and boric acid; a catgut drain introduced, and the whole covered with antiseptic wool dressings. Owing to the adherent condition of the dura mater to the skull, it was thought more prudent not to attempt any bone grafts. During the operation, previous to the removal of the first round of trephine, the patient had two fits. After its removal there were no more fits, their place being taken by attacks of restlessness.



Fig. 1.



Fig. 2.



Fig. 3.

After-Treatment.—About an hour after the operation the patient was removed in a wheeled litter to the Latchford Hospital, a distance of about a mile, on a boisterous, wet, and cold night. The removal was inevitable. Before starting, he received *per rectum* pot. bromid. grs. 40; hydrat. chloral grs. 30; aq. ℥ iij. For two hours after his arrival in hospital he was hovering between life and death. His pulse was so frequent, weak, and irregular, as to render counting impossible; his breathing rapid, shallow, and oppressed with *râles;* his temperature, taken after arrival, 102.6°. For a minute or two after each attack of restlessness (which usurped the fits), he was so weak that the epiglottis had to be raised by lifting the angles of the lower jaw. A rectal injection was administered of tinct. digital. ♏ 20. An hour after this he was sufficiently improved in strength to be able to cough up the phlegm which produced the *râles*, and his pulse became stronger and less frequent, though still irregular. During one of his restless phases the dressings were all pulled off his head, and had to be replaced in the best available way. The notes of the next few days are sufficiently interesting to be appended in Dr. Byrne's own words.

November 6th. Sleeping quietly; has shown signs of consciousness. When given a drink, tilted up bottom of feeding cup into his hand. Put out his tongue when requested by Mr. Jones. Urinates incontinently. Lies in a darkened ward.

November 7th. Pulse frequent, regular, soft, slightly bounding. Has asked for a drink and answered a question in a low whisper, but generally signifies by a shake of his head. All day, up to 8 P.M., has lain supine, without a motion of arm or leg, but is very watchful of every movement in the room. At 8 P.M. four of us went into the ward together. He became very excited. His breathing became very shallow, irregular, and obstructed by epiglottis. Pupils all day widely dilated. Micturated into urinal.

November 8th. No sleep last night. Became restless at 6 A.M. this morning and delirious at 11 A.M. Shouts for his father. All his words are distinctly and unhesitatingly pronounced. Fancies he sees things on the ceiling. Micturated in bed last night. To-day, at 1 P.M., after a little persuasion, took dose of pot. bromid. and chloral, 15 grains each. Drank it without seeming to taste it. Quieted him very slightly. Noise seemed to affect him. Mr. Jones dressed wound and opened flap. Calomel, 10 grains. Passed water in urinal at 8.45 P.M., and slept for a few minutes. At 12 midnight requested to be taken out of bed to night-stool. Micturated copiously, but bowels not moved. Slept one hour forty-five minutes in snatches; then became very restless, sometimes violent, requiring to be held in bed.

November 9th. Made several attempts to defæcate; at last a copious enema produced a copious stool. Slept an hour and a half. Restless, but at times rational. This morning asked, "What's the matter with me? How long have I been bad?" In reply to a question, he said, "I feel burning all over." Mr. Jones got him to extend his knees. He groaned as if the voluntary effort was a great exertion. When he tossed them about in his restlessness, however, he complained of no pain. When lifting him out to the commode he tried to help, but grunted as if the slightest effort at rational movement cost a lot. Once when lifting him from the high bed, he wildly threw his arm behind him as if he were falling down a precipice.

November 10th. Slept quietly for seven hours last night. Quite sensible this morning.

Without going into any further details, it may be mentioned that he continued without any relapse, until his discharge, January 15th. The intervening period, however, was taken up in treating a hernia cerebri, which commenced to trouble him. The treatment consisted of moderate pressure by salicylic wool and bandage. There was a slight degree of headache on the first application of pressure, but this did not continue long. The pressure gave rise to no variation in the character or rapidity of pulse. The eyesight every now and again was obscured, but beyond trivial headaches and a small sinus leading to the trephine hole he gave us no anxiety. The accompanying diagram illustrates the patient's appearance on leaving hospital and the position of wound, while the site of trephine wound is represented by the dotted circle.

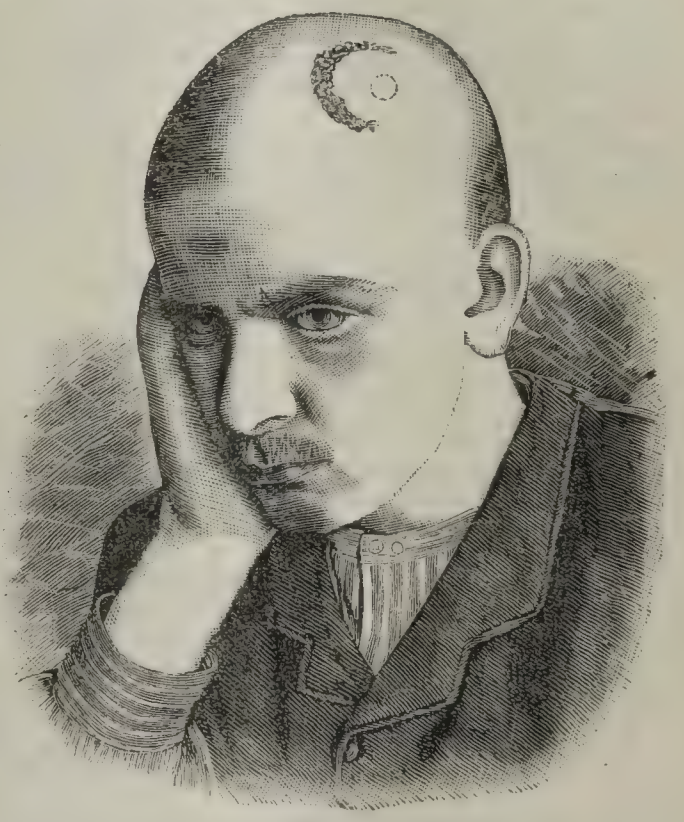


Fig. 4.

From the date of his departure from hospital, January 15th, until April 28th, the patient had no fit, but during the whole period there was a little discharge, off and on, from the sinus. On Sunday evening, April 28th, he went to a wake, and drank port wine, but came home perfectly sober and went to bed at 10. At midnight he had a fit, which came on during sleep. During the fit his nose bled, and the original wound where the depressed fracture occurred opened and bled.

Monday, April 29th. On admission, face very red, dark rings around eyes; conjunctiva diffused; wound from which blood came covered with a dry scab; the opening of sinus very much in same condition.

May 1st. Had two epileptic fits during the night, one at 10.30 the other at 11.15. Both came on during sleep; not ushered in with cry; convulsed all over, both sides equally. Not conscious between fits and until two hours after. To-day another fit; convulsions universal. Sedatives prescribed. Complained of a little pain in head.

May 4th. A little pus evacuated from vicinity of sinus.

May 6th. *Resection Operation.*—After hypodermic of morphine, ether was administered. Mr. Jones made a semilunar incision across the anterior limb of the former site, and scraped a

couple of sinuses. Having dissected the flap, the sinus was widened and some of the fibrous filling of the trephine wound removed. At the bottom of the sinus, projecting brainwards, was a small spicule of necrosed bone, which is illustrated by Fig. 5. There was considerable hæmorrhage from the fibrous bridge, which made the operation very troublesome. The subsequent history was satisfactory. There was for some days troublesome ptosis of the left lid, and for a couple of days some difficulty in emptying the bladder. He left the hospital in July perfectly well; has been at work for several weeks, and has suffered no return of brain trouble up to the present, October 17th.



Fig. 5.

Apart from the abatement of the fits, which immediately followed the operation, the case is interesting from other points of view. It denotes a practical recovery of brain function from the fracture of the cranial vault, although the blade of the inner table remained imbedded in an important motor area of the cerebrum. It is also significant that two years later there was no remnant of blood-clot, despite the lacerating of dura and cortex. The blade of bone had united, as shown in the diagrams, to the cranium by firm osseous medium. The probable cause of relapse was, as the patient suggested, excessive stooping, or the coughing induced by a bronchial catarrh. He was placed under the worst possible surroundings for operative purposes—a small room and candle-light, with no opportunity for sufficiently cleansing the scalp. He was removed a mile in a hand-ambulance immediately after operation, and tore his dressings off in hospital. He had an extensive hernia cerebri and a discharging sinus, which a few months later involved a second operation.

These are the main difficulties with which the patient had to contend, and the result has been very satisfactory. We are much indebted to Dr. Byrne for his care and observation of the patient.

CLINICAL MEMORANDA.

SUSPENSION FOR LOCOMOTOR ATAXY.

In the JOURNAL of September 14th, 1889, p. 602, Dr. Saundby gave details of six cases of locomotor ataxy treated by suspension, not one of which cases could, he said, be definitely stated to have derived benefit from the treatment. In the JOURNAL of October 5th, 1889, five cases of locomotor ataxy, similarly treated, are reported by Mr. J. R. Lunn and Mr. Lewis Hickey; in only one case were any favourable results obtained, and in that case the patient during the whole time was taking 15 grains of potassium iodide daily. In an article upon this subject in the JOURNAL of February 23rd, 1889, Dr. Althaus informs the writer of this article "that he has found suspension beneficial in two cases of tabes; lightning pains in one case, and in the other gastric crises have ceased. In a case of severe paralysis agitans the tremor ceased for thirty-six hours after the first suspension." Notwithstanding this early promise of success, Dr. Althaus was silent when the adverse reports appeared.

The Paris Correspondent in the JOURNAL of October 8th, 1887, p. 798, related two remarkable cases of spontaneous recovery from tabes dorsalis, after many years' continuance of pronounced symptoms. I have myself seen two cases almost completely recover; both were middle-aged men. A young man whose case is known to many recovered absolutely; and the brother of a medical man near Leeds is now improving greatly. None of these patients were suspended. Many patients, however, do not improve either with or without special treatment, and if a new method gives hope and courage to such patients it is a sorry task to decry it. But suspension is no ordinary method; it is troublesome, expensive, perhaps rather dangerous, and in addition, according to the majority of published cases, so far not very successful in England.

Two cases occurred at the Leeds Infirmary in the early part of this year, one of which illustrated the possibility of sudden or rapid improvement in tabes after the symptoms had lasted three years; the other showed no improvement after several suspensions. These cases were therefore published with some remarks, among others that "Dr. Saundby's cases strengthen my own impression that the method of suspension will be found useless." Dr. Althaus having only one case to contend against, instead of eleven cases which he passes by, makes an attack in force: "Dr Churton has, on the strength of a single case of tabes, in which he used suspension, and apparently also on that of a second case, in which he did not use it, come to the conclusion that this treatment is useless, and sees no reason why it should be expected to do good."

The contemplation of this opening sentence produced in me a strange sensation of upside-downness. Need I, after what has been said above, stay to set it right? There is, *en revanche*, no want of distinctness in the views and the expressions of Dr. Althaus concerning the importance and injudiciousness of continuing suspension, albeit, with the toes on the ground, for five minutes at the first trial. The patient, however, had entire control over the time; the men of this county are tough and enduring; moreover, we merely followed what was understood to be the plan of the authorities who at that time held the field. I should entirely regret to think that I had given, or had tried to give, the slightest assistance in damaging a really useful method of cure or of alleviation. It is, of course, not to be denied that in therapeutics we must often be content to discover facts first and reasons afterwards; but if a method of treatment certainly fails far more often than it even apparently succeeds, and at the same time has no reasonable theory to support it, the end of that treatment is not far off. And this, so far as I can learn, seems to be the present state of suspension for tabes dorsalis in this country.

T. CHURTON, M.D.

Leeds.

THE NORMAL THORACIC RESONANCE IN LEFT-HANDED PERSONS.

It is a well-known fact in clinical medicine that the normal percussion resonance of the thorax is higher pitched on the right side than on the left; but, so far as I have been able to ascertain, no mention has hitherto been made of an important exception to this rule which exists in the case of left-handed persons. In all the cases of this kind which I have up to the present time been able to collect the difference between the thoracic percussion resonance observed in them and in ordinary right-handed patients has been both uniform and decided. As, however, I do not propose in this short preliminary notice to exhibit a detailed list of cases, I may just sum up the results obtained on thoracic examination as follows: 1. The percussion resonance is higher pitched on the left side of the chest than on the right, this higher pitch affecting all regions of the thorax. 2. The vocal fremitus is greater on the right side than on the left, agreeing in this respect with the normal right-handed thorax. The first of these points has a certain degree of theoretical interest, inasmuch as it confirms the generally-accepted explanation of the higher pitch usually observed on the right side, namely, that it is due to excess of muscular development on that side. It has also an obvious bearing on the diagnosis of an early stage of phthisis affecting the left lung, the points of distinction being: first, that the higher pitch in left-handed patients affects the entire left side of the chest instead of being confined to a particular region; secondly, that the vocal fremitus in the former case is greater on the right or lower pitched side.

I may mention, in conclusion, that I am still collecting cases, and hope shortly to publish a list with further particulars than I am now able to enter into.

W. H. BRAZIL, M.R.C.S., L.S.A.

Bolton-le-Moors.

OBSTETRIC MEMORANDA.

CARBOLIC ACID IN PUERPERAL RIGOR.

On May 29th, 1888, I induced premature labour in Mrs. T., a strong healthy woman with a large family, under the following circumstances.

In July, 1887 she was delivered at full term of a dead fœtus, which was accounted for by a fright she had had six or eight weeks previously. I was not present at the labour, but saw her some three or four weeks after. She had made a bad recovery, and though I did not obtain the facts from my predecessor who attended her, I have no doubt had had puerperal fever, as antiseptic douches had been used, which was not his practice in ordinary cases, nor is it mine, this being a country district, in which in nine cases out of ten it would be impossible; besides, puerperal fever is almost unknown.

When I began to attend her she was suffering from pneumonia, but ultimately recovered. In April, 1888, she informed me she was again *enceinte*. About May 22nd she sent for me and said

she was sure the child was dead. She had had a start from a kettle falling suddenly. I could not make out fœtal heart or uterine *souffle*, and in a few days satisfied myself that the tumour was becoming smaller and milk appearing in the breasts, so I judged it wise to induce artificial labour rather than let it go on to full term, after the experience of the previous confinement. I introduced a previously unused gum elastic catheter into the uterus about 10 A.M., saw her two or three times during the day, and about 12 P.M. removed a dead fœtus between the sixth and seventh month, apparently not decomposed.

Next morning she seemed pretty well, the temperature was normal. But on the following morning the nurse informed me she had had a rigor about 6 A.M., and that the lochia had almost stopped. The temperature was 101° F., and she looked flushed and restless, and had some tenderness on pressure over the uterus. I ordered hot vaginal douches of weak permanganate of potash, and the following mixture: ℞ Acid. carbol. ʒiss; glycerini ʒj; aquam ad ʒvi. Sig. ʒij every two hours. I told the nurse to give this regularly till the urine became distinctly dark coloured. On calling, about 8 P.M., I found her looking and feeling much better; the temperature was 98.4° F., the urine had become quite smoky and dark. I ordered the medicine to be stopped until the urine became of normal colour, and then to be repeated until it again became slightly smoky; this was done. About 4 A.M. the nurse began again the administration of the medicine, but finding after two doses that the urine was again smoky, she stopped it. At my visit in the morning I found Mrs. T. very comfortable and with a good appetite, and she made a rapid and good recovery without any further treatment. IAN D. MACKAY, B.A., M.B., C.M.

Hornby.

CURE OF AMENORRHŒA BY SHOCK.

THE case of Dr. Inglott, related in the JOURNAL of September 28th, was cured by physical shock. The following is one completely relieved by purely mental shock.

M. M., single, aged 35, strong, healthy, and robust girl, suddenly ceased to menstruate two and a half years ago without apparent cause. No suspicion or indication of pregnancy was present, afterwards verified by time. She did not complain of any subjective symptoms except monthly, when slight headache, backache, and *malaise* were felt for a few days. Her medicinal treatment was varied from time to time without any favourable result. Last June, returning in the evening from a country walk, she was suddenly alarmed by a tramp on the roadside, and was very frightened. Her catamenia commenced that evening, and she has had three regular periods since, perfectly normal.

Uxbridge Road, W. E. T. COLLINS.

TWIN LABOUR AT TERM: ONE CHILD LIVING, THE OTHER DEAD AT FIFTH OR SIXTH MONTH.

As the following case resembles in many points the one reported by Dr. Bothwell in the JOURNAL for September 28th, I venture to give the notes of it.

Mrs. E. P., aged 30, primipara, was seized with slight pains at midnight on April 6th, 1889, which, occurring at irregular intervals, diminished in intensity and frequency. On examination the os uteri was about the size of a florin, and the head presenting. At 6.30 A.M. of the 8th the pains were irregular and slight, os fully dilated, membranes ruptured, but with very little descent of head, patient with small and feeble pulse, and anxious. I then delivered with forceps a full term, living, though emaciated child. The uterus was still very large, and *per vaginam* another bag of membranes was felt protruding, and the finger came upon what, aptly described by Dr. Bothwell, was like a "bag of shells," which I found after birth was the fœtal head. I ruptured the membranes, and finding a foot, seized it with the other hand, and delivered a second fœtus. This, together with its cord and placenta, were very much of the same colour, a dirty brown. The cord about 2 feet long, without knot; the fœtus about 10 inches long, shrivelled, without offensive odour, and had not been compressed by the living child. The placenta came away easily on expression, the two being united, though the line of division was well marked by the colour and thinned tissues. That to which the cord of the living child was attached was of ordinary appearance and size: the other was about the size of palm of hand.

Patient was fairly nourished but anæmic. No history of syphilis. The only assignable cause was excessive work as a washerwoman, with a good deal of lifting, during the latter months of pregnancy. No emotional or other cause could be ascertained. The patient made a good recovery, and the living child has grown strong and healthy.

W. BURWELL DARROLL, L.R.C.P.Lond., M.R.C.S.Eng.

Wickham Market.

THERAPEUTIC MEMORANDA.

EUCALYPTUS IN SCARLET FEVER.

THE profession were greatly in need of a safe and not disagreeable antiseptic for use in cases of infectious disease and offensive cancerous ulcers—one readily tolerated by the patient. Carbolic acid and iodoform are both offensive and poisonous, but the oil of eucalyptus, which is a strong antiseptic, can be used freely without danger to the patient. I have used it lately in the treatment of scarlet fever with complete success. Of four cases, each was in a family where there were other children who had not had the disease. These cases lost the fever in a few days, and at the end of a week or ten days joined the rest of the family without communicating the disease to any of them. There was no general desquamation; it occurred only on those parts where the rash was thickest.

To destroy the septic poison of scarlet fever, the course is to saturate the patient with the antiseptic as quickly as possible. I administer the oil internally in from one to four drop doses every four hours in an emulsion, as then it is more equally diffused through the menstruum, and is better borne by the stomach. I direct the mother or nurse to use with a spray diffuser Tucker's eucalyptus disinfectant over and around the bed at frequent intervals, sprinkling the same on the floor of the room or evaporating it on a hot fire-shovel. This disinfectant contains, besides the oil of eucalyptus, some other strong but innocuous antiseptics. I also direct the patient to be rubbed all over the body with the same fluid, not allowing any portion of the skin to escape. This is to be done night and morning for the first few days, then each night until the end of ten days. The head and hair are also subjected to the same treatment every three days. At the end of a week the bath with the use of the eucalyptus soap is used every night, the eucalyptus fluid being rubbed over the skin afterwards. The free use of this antiseptic was not attended by any ill-effects whatever, either to the patients or to those in attendance, and I firmly believe that it has the power of destroying other septic poisons than that of scarlet fever.

Bayswater. J. BRENDON CURGENVEN, M.R.C.S.

TOXICOLOGICAL MEMORANDA.

TOXIC EFFECTS OF ATROPINE DROPS.

A GIRL, aged 7, suffering with hypermetropia and internal squint, had two or three drops of an atropine solution (four grains to the ounce) put into each eye at 9.30 A.M. and again at 3 P.M. After the last application the child became giddy, and could scarcely walk home (a distance of two hundred yards) at night. She became quite incoherent, laughed and talked alternately, and seeing all kinds of things; she remembered nothing, and did not know her mother. The above condition remained until about 2 P.M. the next day, when the symptoms gradually passed off.

I have seen erysipelatous skin affections of the face follow the local application of atropine to the eyes, but not toxic effects. Dr. Bowles some years ago recorded two cases, in a woman and a boy, with alarming symptoms after the application of a few drops into the eye for ophthalmoscopic purposes.

I think the above must be most exceptional cases. The rarity of such symptoms, as well as the recovery from them, would not lead us to associate the application of atropine drops in young people with anything serious, although the knowledge of such a possible result as the above recorded is useful. We should expect, from our knowledge of the action of belladonna, to meet the toxic effects of atropine drops more often in adults than in children, but my experience is too limited to answer whether this is so or not. W. J. TYSON, M.D.

Folkestone.

MEDICAL MAGISTRATE.—The name of Dr. Edwards, Mynydd Gof, Bodedern, appears amongst the list of new magistrates appointed at the recent Anglesey Quarter Sessions.

REPORTS

ON

MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

KING'S COLLEGE HOSPITAL.

CASE OF INFILTRATING GLIOMA OF BRAIN.

(Under the care of Dr. FERRIER.)

[Reported by C. H. EAST, M.B., Medical Registrar.]

H. J. K., aged 21, admitted into the Craven Ward on November 15th, 1888, complaining of loss of power of the whole of his left side, more especially of his left arm and leg.

Patient's History.—Has been a sailor in the Royal Navy, but was invalided from the service in May, 1888. Has been a moderate drinker until two months ago, when he became a total abstainer. General health has always been good. No specific history, but has had three attacks of gonorrhœa, the last attack six weeks ago. When young, had an abscess of the neck. Never had acute rheumatism nor scarlet fever.

Family History is unimportant.

History of Present Attack.—About eleven months ago he fell from a loft, a distance of fifty feet, was unconscious when picked up, and his right os calcis was dislocated. He had two other falls previously, four years and six months ago respectively, but suffered no injury. For the last three months he has found his left limbs getting weaker, and about a month ago, when trying to open a bottle, he found he could not grasp it, and since then his left arm has got gradually weaker, and he has noticed it wasting; at the same time he found he could not use his leg so well as he did formerly. About two months ago he was laid up with pains in his head (occipital region chiefly) and with sickness, but both passed away in a week. About a week ago he had a fit, no particulars of which could be obtained.

Present Condition.—The patient is a healthy-looking young man. Temperature normal. Tongue furred; appetite bad; does not complain of sickness. Bowels constipated. Urine, high colour, cloudy, acid; specific gravity 1024; no sugar and no albumen. The patient has to get up frequently at night to pass his water, and has slight pain during micturition.

Circulatory System.—Heart-sounds normal; pulse 65, regular and of good quality.

Respiratory System.—Lung-sounds normal.

There is slight pain on pressure of head, one inch to the right of the middle line and six inches behind glabella. The muscles of the left side do not act so strongly as on the right side, and this side of the face looks somewhat flattened. Ocular movements are normal. The tongue deviates slightly to the left. The left arm is weak, the hand especially; he can extend the fingers slightly, but cannot abduct or adduct them. Dorsal flexion of right foot stronger than of left. The left leg is dragged and circumducted in walking. Patellar reflexes present on both sides, but the left is more active than the right. The superficial reflexes are more active on the right side than on the left, the plantar reflex especially so. No ankle-clonus. Measurements: right calf, twelve inches and a half; left calf, eleven inches and a half. No anæsthesia and no analgesia. Localises touch accurately, and the muscular sense is normal. Hearing normal on both sides. Memory good. Ophthalmoscopic examination, verified by Professor McHardy on November 19th, showed the left disc and its vessels quite sharp and regular in their course; the right disc very congested, margins blurred, and its vessels arched forward.

On December 3rd he had less power in his left arm, and was quite unable to raise his elbow from the bed, and the index finger seemed to be the only one he could move voluntarily. On December 9th the patient complained of frontal headache, and vomited three times; temperature 100.8°. December 10th. The headache became worse; now complained of sore throat; temperature 101°. By December 13th the headache became easier, and the throat much less sore. The patient now walks with much difficulty. December 20th. He is quite unable to extend his fingers, and the weakness of the left side of the face is very pronounced. He can dorsally flex left foot slightly, but can barely invert or evert it. The tactile sensibility is still unimpaired on the left side, and the muscular sense remains normal. The ophthalmoscope shows slight congestion of the left disc.

January 8th. Tactile sensibility is greatly impaired over the whole of left side. No hemiopia. Paralysis of left side of face well marked. Cannot dorsally flex left foot; slight ankle-clonus present. By the ophthalmoscope, right disc congested, the margins indistinct; left disc, rather vascular and the apparent lower margin is not so distinct as before. January 9th. The patient complained of severe headache in the frontal region mainly, and vomited several times. January 14th. Professor McHardy reported well-marked optic neuritis on the right side, with marked tortuosity of the vessels and moderate effusion. The left optic disc exhibits evidence of commencing neuritis, namely, effusion at and about the real upper half of disc margin, with tortuosity of some of the vessels over and just beyond the disc edge.

February 3rd. Has complained of headache for the past two days. No tenderness on pressure over any particular spot of head. No hemiopia, and the optic discs show no alteration. No difference in sensibility of corneæ. Hearing lost on the left side. Tactile sensibility diminished in left nostril, but smell is unimpaired. Tactile sensibility and taste diminished left side of tongue. February 11th. Has complained of frontal headache for the past few days, and has had several attacks of vomiting. February 21st. The ophthalmoscope showed acute optic neuritis on both sides; the right disc edge is indistinguishable; numerous small radiating hæmorrhages, with effusion in parts burying the retinal vessels, which are very much bowed forwards in parts, to take as much as +4 dioptres. The left disc margin lost in effusion, more white effusion, and some but fewer hæmorrhages around this disc region than in fellow. February 27th. Complains of dimness of vision and some diplopia.

March 25th. Since last note the patient's condition has gradually got worse. Urine passed unconsciously. Left hemiopia has gradually developed and apparently become complete.

April 28th. Convulsion at 10 A.M., lasted one minute, affecting the right side of face; foamed at mouth, tongue not bitten. The patient was unconscious for fully an hour afterwards. April 30th. Slept badly, no convulsions, very apathetic.

May 1st, Convulsion at 12.30 A.M.; right side affected, began in arm and then face and leg, lasted one minute. At 1 20 A.M. the right side of face and arm convulsed, leg not affected, lasted one minute and a half. 3.45 A.M., convulsion lasting one minute and a half, began right arm, then leg; another convulsion at 4, at 4.30, at 6.15, and at 6.30, in this the face only was affected; at 9, arm and face only. There was no rise of temperature during the convulsions, but breathing was very laboured, foaming at the mouth, constant ocular movements, and occasionally convergent strabismus. At 9 P.M. a convulsion similar to the above; at 9.30 another, lasting one minute and a half, both arms affected, legs drawn up, and strongly convulsed; at 11.30 another, beginning on right side of face, lasted one minute. May 2nd., 2 A.M., convulsion lasting one minute; temperature 101.4; the left side twitched some time after the convulsion, and the patient was very blue and sweated freely. May 3rd, at 6 A.M., convulsed for one minute, began in right arm. Convulsions at 7.15, 8, 9, 10, 12, and at 2.30 P.M.; again from 3.40 to 5 three convulsions took place; more at 7, 8.15, and at 8.30. The fits varied in duration, but resembled those above described. The patient quite unable to swallow, and in consequence was fed through nose by a tube; temperature at 11 P.M. 103°. May 4th. Slight discharge of frothy mucus from right nostril; temperature at 1 A.M., 103.2°; at 6, 103.4°; at 9, 104.2°; at 10, 104.4°; at 11, 105.2°; 12, 106°; at 1 P.M., 105.2°; and at 2, shortly before death took place, it was 106.2°. Free perspiration, stertorous and very rapid breathing, and the patient quite unconscious and perfectly comatose. No convulsions since May 3rd. Persistent movements of the eyes. During the later convulsions the left arm was drawn up to the shoulder.

Post-mortem Report.—The thoracic and abdominal viscera normal, except in middle of the lower lobe of the left lung, where was a large triangular patch of recent pneumonic consolidation, bright red in colour, swollen, and soft. Head: skull cap normal, dura mater normal, no adhesions. The convolutions of the right hemispheres appeared somewhat flattened and appressed. Both sides hyperæmic. On division of the corpus callosum it was seen to be soft and of a pinkish colour, especially at the genu and splenium, due to gliomatous infiltration. In the medullary substance of the right frontal lobe, anterior to and above the corpus striatum, there was an ill-defined gliomatous mass, surrounded by an area of softening, and the whole medullary substance of the hemisphere had

a pinkish tint due to gliomatous infiltration, the margins of which could not be determined. This infiltration extended across the corpus callosum into the left hemisphere, which exhibited in the frontal region a mass similar to that on the other side. The pinkish tint was also exhibited in this hemisphere, but to a less extent than in the right. A similar tint was also to a slight degree perceptible throughout the pons.

REMARKS BY DR. FERRIER.—The history of this case and the symptoms exhibited by the patient at the time of his admission indicated the existence of a gradually developing cerebral tumour, the nature and exact origin of which were not at first clear. There was no distinct indication that it had commenced in any particular motor centre, inasmuch as the weakness of the left side appeared to have attacked face, arm, and leg simultaneously; and also, against its being of cortical origin was the fact that the patient did not at first complain of pain in the head, either spontaneously or by percussion. That it was not of a specific nature was proved by the steady increase of the symptoms, notwithstanding the administration of active antispecific remedies. The non-cortical nature of the tumour became clearly evident by the development of hemianæsthesia, in addition to paralysis of motion on the left side—a combination which is not found in purely cortical disease. The indications were not considered by Dr. Ferrier such as would justify operative interference, a conclusion which was fully justified by the results of the *post-mortem* examination. There is no doubt that the hemiplegia and hemianæsthesia, and at a later date the hemiopia, were due to a progressive implication of the whole of the motor and sensory tracts of the right hemisphere; and the symptoms that occurred before death, namely, the convulsions which affected the right side more than the left, were fully explained by the extension of the gliomatous infiltration into the left hemisphere. A special point of interest in this case was the gradual development of optic neuritis, first in the right disc, and at a later date in the left. This, Dr. Ferrier remarks, is frequently to be seen in cases of cerebral tumour, and he has found, in opposition to commonly received views, that the optic neuritis, if not bilateral from the first, commences, as a rule, in the eye on the same side as the disease. In this case the optic neuritis in the right eye was already well advanced before any appreciable deviation from the normal was discoverable in the left disc.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, OCTOBER 22ND, 1889.

Sir E. H. SIEVEKING, M.D., President, in the chair.

President's Address.—Sir EDWARD H. SIEVEKING, President, congratulated the Society on holding its first meeting for the session 1889-90 in the new premises, 20, Hanover Square. He stated that there was no history of the Society available, and then briefly sketched the growth of the Society from the inaugural meeting on May 22nd, 1805, at Freemasons' Hall, under the presidency of Dr. Sanders, F.R.S. Regulations were then drawn up, and these had never been altered, excepting that the office of Foreign Secretary had been abolished. The first ordinary meeting was held in December, 1805, at 1, Verulam Buildings, Gray's Inn; and in 1809 the first volume of the *Transactions* was published. The founders of the Society might be said to have been Dr. William Sanders, F.R.S., President; John Abernethy and William Babington, Vice-Presidents; Astley Cooper, Treasurer; Matthew Baillie and Alexander Marcet. In 1810 the home of the Society was at 10, Lincoln's Inn Fields, and in 1821 it was moved to 27, Lincoln's Inn Fields where it remained till 1835, when it moved to 53, Berners Street. There for fifty-four years it remained, adding to its library till it became so large and valuable that it became necessary to find a more commodious residence. The President thanked the Building Committee for its labours, which were approaching an end, and especially mentioned the valuable services of Mr. MacAlister, the resident librarian, without whose untiring zeal the difficulties of moving would have been almost insurmountable.—A vote of thanks was proposed by Dr. BARNES, and seconded by Sir SPENCER WELLS, and a request was made that the interesting historic address be published in the *Transactions*.

The Analytical and Clinical Examination of Lead-poisoning in its Acute Manifestations.—Dr. THOMAS OLIVER read this paper, and showed the prevalence of poisoning by lead at Newcastle-on-Tyne, the home of the lead trade. It was more common in women than in men. Of 135 cases admitted into the Newcastle Infirmary, 8 died of acute manifestations; of these, 5 were females. A rapidly increasing anæmia was one of the earliest symptoms, and it was followed by colic, headache, vomiting, and diplopia or defective vision. In a few days the patient might become convulsed, comatose, and might die. The illness might be so rapid that no alterations of the viscera could be found after death other than a hydræmic condition of the brain. The author discussed the cause of the anæmia in lead-poisoning, of the defective vision, and of the brain symptoms; and gave the results of analysis of the urine. Though the kidneys were contracted in nearly all chronic cases, gout was practically unknown among the lead workers in Newcastle-on-Tyne.—Dr. STEPHEN MACKENZIE considered that the experience of most London physicians coincided with that of Dr. Oliver. In the East London Works women were more frequently affected than men. What, however, was the ratio of women affected to those employed? Mr. Corner, the Medical Officer of Health for Poplar, read a valuable paper on lead-poisoning, in which he stated that fatal cases were more frequent in winter than in summer, and that acute toxæmic results were generally met with in persons recently employed. The symptoms at times closely resembled those of alcohol poisoning; convulsions were met with, often followed by coma terminating fatally. There might be no albuminuria, and no gross *post-mortem* signs. Dr. Tidy, however, had frequently analysed the brains of these patients, and had always found distinct traces of lead present, though only in minute quantities. He agreed that anæmia was the first symptom, and thought that the second was vomiting. Optic neuritis, not necessarily associated with blindness, was met with, and sometimes neuro-retinitis. How long could the lead line last? Gowers had stated that he had never seen it disappear in less than twelve months. He should be glad to hear Dr. Oliver's opinion as to this point, as it had already been raised in a medico-legal inquiry.—Dr. MONEY called attention to the great difficulty there was in treating children with inherited syphilis who were also contaminated by lead-poisoning. His researches led him to believe in a close relation between congenital syphilis, phthisis, and lead-poisoning.—Dr. BUZZARD asked for information respecting the action of lead on the brain. He had seen paralysis of part of the oculo-motor centre, but had never met with one in which, in a case of lead-poisoning, the whole third nerve was paralysed.—Sir JOSEPH FAYRER called attention to the extreme difficulty which often existed in tracing the source of the lead, and referred to a case which for long baffled the most careful inquiries till it was found that the patient took large amounts of snuff which contained lead.—Dr. BARNES alluded to the fact that abortion often attacked leadworkers, and asserted that a similar condition was met in those who, though not working in lead, were contaminated by the lead dust infiltrating their husbands' clothes. The affection arose in families. He insisted on the necessity of the Legislature carrying out prophylactic measures.—Dr. OLIVER, in reply, stated that in Newcastle the attacks were not more frequent in the winter. Many women were employed thirty to forty years, and had only in that period two or three illnesses of a few days' duration. He thought that the blue line often disappeared in two or three months. He had never seen paresis of any cranial nerve in these cases, though temporary diplopia was often present. At the necropsies on patients dying from lead-poisoning so little lead was found that it was doubtful whether lead was the cause of death. The number of women who suffered had been greatly diminished by the practice of giving them free breakfasts before they commenced work. Lead was eliminated from the system by the kidneys, and there often seemed to be "explosions" of lead, large amounts being passed off without any apparent cause. During these "explosions" he had noticed a fall in the amount of urea excreted.

MEDICAL SOCIETY OF LONDON.

MONDAY, OCTOBER 21ST, 1889.

C. THEODORE WILLIAMS, M.D., President, in the Chair.

President's Address.—The opening address was delivered by the PRESIDENT, who, after a warm welcome to the Fellows, presented them with the twelfth volume of *Proceedings*, remarking that in size and contents it compared very favourably with the first volume, which he himself had edited fourteen years ago. He drew special attention to the many valuable papers it contained, and congratulated the Society on the increasing number of its

Fellows and the state of its finances, but urged the desirability of making an effort towards the extinction of the debt, a third of which had already been paid. After a complimentary allusion to the efforts of their honorary librarian (Dr. Allchin), he spoke of the losses the Society had sustained by death, and finally appealed to the Fellows, and especially to the junior Fellows, to do their best for the future of the Society. He drew a picture of the probable progress they would see in sanitary legislation, and of the great benefit to the profession and the public which these measures would confer, and he predicted that some future set of Fellows of that Society would meet together to discuss, in the light of ancient history, typhoid fever, scarlet fever, small-pox, and hydrophobia, just as at present Fellows might talk over the plague, the black death, and the sweating sickness.

The Hæmoptyses of Elderly Life.—Sir ANDREW CLARK read a paper on "The Non-tubercular and Non-cardiac Hæmoptyses of Elderly Life," which we publish at p. 909.—Dr. MONEY asked whether these cases differed in any way from the cases in which one found arterial degeneration associated with absence of elastic tissue in the lungs; in fact, were they other than cases of emphysema with arterial degeneration? He asked whether they were to understand that a process of arterio-capillary sclerosis was going on in the lungs, and in the lungs only. Did the arthritic poison spend itself on the terminal branches of the pulmonary artery, to the exclusion of the others?—Dr. PERCY KIDD said he had seen cases of that kind during the last ten years which he had been puzzled to explain. He suggested that one explanation of the hæmorrhage was to be sought in the increased blood pressure in the pulmonary vessels, which might be brought about by slight increase of pressure in the systemic vessels.—Dr. QUAIN said he was familiar with these cases, which he had always associated with a diseased condition of the vessels, be it atheroma or sclerosis. He had found those cases to do well under the treatment advocated by the author of the paper, and especially by the use of calomel to relieve the visceral congestion. He deprecated the application of ice to the chest in hæmoptysis from any cause, and said that he had never seen it do anything but harm.—Dr. GILBART SMITH said that, although he had had a large experience in connection with chest affections, he could not remember to have met with any to point to any relation between emphysema and pulmonary hæmorrhage.—A FELLOW mentioned a case in which he had found numerous hæmorrhages in the lungs in a man aged 60, the nature of which had now been made clear to him.—Dr. ALLCHIN expressed his surprise that hæmorrhage shown to be dependent upon arterial degeneration should have proved to be so amenable to control.—Dr. EWART suggested that the disease was probably a functional one, and occurred in fits and starts, as was sometimes the case with piles. He observed that this kind of hæmorrhage evidently belonged to the plethoric variety of emphysema, and to that only.—The PRESIDENT alluded to the vista opened up by the paper, and asked whether any of these cases might not be referred to hæmophilia.—Sir ANDREW CLARK, in reply, declined to admit that they were cases of arterio-capillary sclerosis, for that was a continuous change, whereas the alterations spoken of by him were essentially discontinuous. He did not think either that it was the form of degeneration common to emphysema, for, while the latter was common, the hæmorrhage was exceedingly rare. He maintained, moreover, that the arterial degeneration preceded the emphysema. He warned them against losing their clinical individualities in the endeavour to make their pathological observations coincident with their clinical investigations. He urged that the discovery of a form of hæmoptysis which was not amenable to the classic treatment was well worthy of their careful consideration. In reply to Dr. Allchin, he observed that very often he had no opportunity of following up the cases, so that he could not possibly assert that the control had been lasting as it was apparent. At the same time the effect upon the patient was often to frighten him into ways of pathological righteousness. In reply to Dr. Kidd, he asserted that the pulmonary vessels seldom or never yielded to mere pressure, though that might be an adjuvant. He did not believe that any of the cases could be classed as due to hæmophilia, but he admitted that there was a curious tendency in arthritic subjects to the escape of blood. It was, he admitted, difficult to show how the changes he had described differed from sclerosis—at any rate by description; but that such a difference existed he did not for a moment doubt. Even if the lesions were the same, he contended that experience showed that the same pathological lesions were often associated with very different clinical phenomena.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

THURSDAY, OCTOBER 17TH, 1889.

J. HUGHLINGS JACKSON, M.D., F.R.S., President, in the Chair.

THE introductory address by the President will be found at page 911 of this JOURNAL.

On the Pathology of Trachoma and the Relation of this Condition to the other Forms of Conjunctival Inflammation.—This paper by Dr. THOMAS REID, of Glasgow, was presented by Mr. BRAILEY. The author regarded the occurrence of groups of lymphoid cells at varying depths in the sub-epithelial layer as the essential part of trachoma. These may be ill defined (lymph heaps) or more distinctly bounded (lymph follicles), though never possessing a perfectly defined limiting capsule. Their lymphoid elements are pervaded and supported by a very delicate stroma. Generally there is some infiltration of lymphoid cells around them which may even extend from one group to the next, and so on. Their origin is not a matter of absolute certainty, but the author is inclined with Michel to regard them as the dilated ends of the lymphatics of the conjunctiva. These lymphoid groups lead to changes in the epithelial layer, the deeper stratum of which may become vacuolated by œdema, so that the individual cells are often extended into a stellate form. Later, many of the cells may become distended and their nuclei pressed to one side, so that the characteristic appearance of goblet cells is presented. These may discharge their contents, leaving their walls standing and their nuclei attached to their floor, so that, after the throwing off of the condensed superficial epithelial layer, a matter of not uncommon occurrence, the remains of the goblet cells constitute a series of irregular papilliform elevations characteristic of true forms of dry catarrh. Another important change, the development of mucous follicles, may take place in connection with the goblet cells. When the lymphoid groups, instead of being absorbed, have increased considerably in size, each one, with its covering of altered epithelium, or a small group of them, is apt to constitute a marked elevation of the conjunctiva, separated on each side from its neighbours by a deep depression. The layer of goblet cells occupying these depressions is frequently folded in so as to form a small pouch which may be much enlarged, so as to constitute a rounded mucous follicle which communicates by a short duct with the conjunctival surface. As above described, these mucous follicles are usually developed between the lymph follicles; but occasionally one and even several small mucous follicles can be seen occupying the centre of a single lymph follicle. Though usually flask-like, they are sometimes more tubular in form, presumably before the discharge of their individual cells, and the consequent accumulation of their contents. Though the lymph heaps or follicles may disappear by absorption, presumably by escape into the lymphatics, they perhaps more often discharge themselves externally by thinning and destruction of the overlying epithelium. There is always to be noted a tendency to softening and degeneration of their central part, as indicated by less definite structure and more feeble capacity for staining. Finally they may, instead of disappearing, become invaded by blood vessels, and gradually converted into a dense connective tissue, which, situated in the ridge-like or papilliform elevations above alluded to, forms the grey gristly granulations characteristic of the advanced stages of severe trachoma. Careful examinations for bacilli have led to negative results, though the author is disposed to regard the implication of the cornea as a secondary infective process. In follicular conjunctivitis the author finds similar lymphoid groups and mucous follicles; also he has determined, by microscopical examinations, that the stage of grey gristly granulations may be eventually reached; consequently, he regards the two affections as essentially one, though he recognises that the vast majority of cases of so-called follicular conjunctivitis may be distinguished clinically from trachoma in that they do not tend to the development of the grey gristly cicatricial tissue. In some advanced cases of purulent ophthalmia he has found lymph follicles, and also in some cases of apparently simple long-standing conjunctival hyperæmia. The essence of purulent and catarrhal conjunctivitis, and also of conjunctival hyperæmia, appears to be a vascular congestion which may lead to a secondary lymphatic congestion, and the consequent formation of lymph heaps and follicles, whereas trachoma and follicular conjunctivitis are from the outset essentially affections of the lymph follicles. This will account for the occurrence of mixed forms, as in Egyptian ophthalmia, and for the occasional

occurrence of one-sided trachoma as a sequence to long-standing conjunctivitis of other forms. In conclusion, the author does not connect the lymph follicles or mucous glands with any of those glandular structures which are rarely found in the normal conjunctiva.—The paper was illustrated by microscopic preparations in the forms of photographs and magic lantern slides.

Keratitis from Paralysis of Fifth Nerve.—Notes of this case by Mr. W. E. CANT were read by the SECRETARY. The patient, a lad, aged 16, attended at the British Ophthalmic Hospital, Jerusalem, on July 17th, 1888, with complete paralysis of the left fifth nerve. The left eye showed some general injection, and the cornea was diffusely hazy. A history was obtained of an injury by a reaping hook two or three weeks previously, and a doctor who saw the lad two days after the blow had been inflicted, found him in a semi-conscious state. There was a small penetrating wound of the squamous portion of the left temporal bone, about an inch above the insertion of the auricle; into this wound a probe could be passed to a depth of rather more than one inch. When seen again on July 22nd, the left cornea was quite opaque, of a milky white colour; there was much general congestion of the eye. He was admitted to the hospital. During the next three weeks the condition of the left cornea became rather worse, and marginal ulceration occurred. The paralysis of the fifth nerve remained complete. The patient then left the hospital, and was not seen again for four months. When he returned the left cornea had partially recovered, but was still generally hazy. The function of the fifth nerve, both muscular and sensory branches, had been regained, but to only a limited degree. Mr. Cant thought the case had been one of direct injury to the whole fifth nerve within the skull, between the brain and the Gasserian ganglion, or at the latter.

Specimens.—The following living and card specimens were exhibited:—Mr. LANG: (1) Congenital Coloboma of Iris, with Notch in Lens; (2) Two Cases of Congenital Coloboma of Iris and Choroid; (3) Cystic Formation in Coloboma of Iris.—Mr. QUARRY SILCOCK: (1) Exostosis of Frontal Sinus; (2) Double Proptosis (?) modified Graves's Disease; (3) Probable Sarcomatous Infiltration of Tenon's Capsule.—Dr. ABERCROMBIE and Mr. MARCUS GUNN: A Case of Exophthalmos in a Child with Audible Intracranial *Bruit*.

HARVEIAN SOCIETY OF LONDON.

THURSDAY, OCTOBER 17TH, 1889.

THOMAS BUZZARD, M.D., F.R.C.P., President, in the Chair.

Treatment of Pneumonia by the Icebag.—Dr. LEES read a paper on this subject. Four years ago he published[1] an account of "Two Cases of Broncho-pneumonia treated with Bleeding and Ice," and since that time he had tested the use of the icebag in pneumonia as opportunities occurred. He had found so great benefit from its use, that he had mentioned the matter two years ago to some of his friends, who had large opportunities of clinical observation in hospitals and elsewhere, and had asked them to give the icebag a fair trial. He believed that they would be able to confirm the results at which he had arrived. It was necessary to be cautious in drawing conclusions about the effect of remedies in pneumonia, because of the "crisis" which usually occurred as a part of the natural history of the disease on any day from the third to the tenth. The use of cold compresses to the chest in pneumonia was advocated twenty years ago by Niemeyer. Dr. Lees claimed that the icebag produced a much more powerful local impression. Niemeyer confessed that some patients found the compresses so disagreeable, that he had been obliged to give them up, but Dr. Lees had found that the patients usually liked the icebag. He then related the main facts of eighteen cases under his own care in which this treatment had been tried, grouping them according to the effect apparently produced. 1. Cases in which immediate final arrest of the pyrexial process followed the application of the icebag. Three cases were included under this head; all were mild. 2. Cases in which immediate arrest of the pyrexial process followed the application of the icebag, and a relapse followed its removal. Two cases were related under this head. 3. Cases in which immediate arrest of the pyrexia followed the use of the icebag; a relapse followed its removal, and a second fall occurred when the ice was reapplied. This included three cases. 4. Cases in which rapid fall of temperature followed the application of ice, but relapses (apparently due to implication of fresh portions of lung) occurred while the ice was being continuously applied. This comprised two cases. 5. Cases in which no immediate arrest of the pneumonia followed the application of the ice, but obvious relief to symptoms resulted. This comprised four cases. 6. Cases in which no very obvious benefit resulted from the use of the icebag. This comprised two cases. In reviewing these cases, it was pointed out that none of them died, though two at least would certainly have died without the icebag, and two others would almost certainly have done so. In the great majority remarkable improvement followed the use of the icebag. The reduction of temperature, which usually occurred at once, was often very striking. Instead of the "entire degree" claimed by Niemeyer as the result of the use of cold compresses, it frequently amounted to 3° or 4°, or even more. If a subsequent rise occurred it was usually to a decidedly lower level when the ice had been permanently applied, and though when the ice had been removed the subsequent rise often passed the original height, it was rapidly again reduced by a second application. These results were specially observed in children, perhaps partly because their temperature was more easily affected than that of adults, and partly because the icebag covered a larger proportion of their smaller chest-wall. But the improvement was not confined to a mere reduction of temperature. In many cases there was a striking arrest in the development of the physical signs and also of the general symptoms, and it was particularly to be observed that in some instances this improvement began an entire day or more before the crisis, and was far advanced when that event occurred. Occasionally, in slight cases, the application of the ice had been followed by the immediate complete termination of the disease, but no stress was laid upon this because of the possible fallacy of synchronism with the crisis. But in the two cases of broncho-pneumonia seen in young children in their very earliest stage, it certainly seemed that the disease was promptly cut short. Dr. Lees had never seen any harm done by the icebag in pneumonia, though in one case of typhoid he had seen shivering and some lividity produced by it; this, however, was easily remedied by warmth and brandy. Similar symptoms might no doubt be produced by the incautious use of ice in pneumonia; they were the more likely to happen the younger the patient, and especially in feeble and rickety children. They might almost always be prevented by a sufficiently careful observation of the temperature. It was a good rule to ascertain this hourly, and to remove the ice when it fell to 100°, replacing the ice if a rise to 102° followed. In some cases it was wise to apply warmth to the feet, or even to the abdomen, at the same time that the icebag was applied over the inflamed lung. It was well, also, to keep the ice away from the præcordial region, to prevent any depressing action on the heart, similar to that demonstrated by Dr. Brunton on the excised heart of the frog. Dr. Lees did not advocate the use of the icebag in pneumonia occurring in very feeble children, or in aged persons, or in adynamic conditions generally. But, with these exceptions, he thought there was reason to conclude that its employment had a distinctly curative influence, that it did not simply reduce temperature, but directly tended to repress the inflammatory process in the lung, with more or less success, according to the severity of the case. He concluded with a reference to a note published by Dr. Angel Money some months ago, and to the results obtained by the icebag treatment in pneumonia by Dr. Fieandt, a Finnish physician.—Dr. GOODHART had for eighteen months used no other application than the icebag in cases of acute pneumonia, and he gave an account of eighteen cases thus treated. A good result was obtained in eight cases, the temperature falling promptly, and convalescence being rapidly established. In seven cases it was doubtful if the treatment had had any effect whatever, while in three cases symptoms of collapse were produced of a very temporary nature, for it subsided as soon as the icebags were removed. It was difficult to eliminate the question of the natural crisis of a pneumonia having coincided merely with the application of the ice, but it was also possible to underrate the value of any treatment because of the presence of pleurisy, which interfered with the beneficial results of the remedy. Dr. Goodhart, however, concluded that there was no danger in applying this treatment, such collapse as might occur being easily detected and remedied by brandy and warmth to the feet, and by avoiding its use in patients under 2 years of age. He himself did not think that collapse was increased by the application of cold over the cardiac region. Moreover, he believed that warm applications were greatly over-

[1] JOURNAL, July 11th, 1885.

done, and the icebag treatment was a useful alternative.—Dr. STURGES had had but little experience of this mode of treatment; nevertheless, his conclusions were rather those of Dr. Goodhart than of Dr. Lees. All the cases that Dr. Lees had described were of young persons, and the mortality in these was always very small. In children it was especially difficult to decide between croupous and broncho-pneumonia. Broncho-pneumonia was dangerous, but croupous pneumonia in children was very rarely fatal. Three cases described by Dr. Lees were of broncho-pneumonia, and in these ice and bleeding had been very efficient in relieving the patient. These were the most important cases described, and Dr. Sturges thought the treatment most likely to be of use in broncho-pneumonia. In a case of lobar pneumonia in the Westminster Hospital under Dr. Donkin, the temperature rose to over 106°, and there was great prostration. The icepack was applied, and a recovery ensued. Dr. Sturges expressed the view that lobar pneumonia, by its nature, was such that it was impossible to say that any remedies were successful in curing the disease. The late Dr. Hughes Bennett had reported over 100 cases of pneumonia, some in elderly people, with a mortality of only 5 per cent. Pneumonia and typhus, in regard to the influence of remedies, were much alike. The temperature, delirium, and headache were much relieved by drugs, and the patient made comfortable. In this way ice was certainly of use, as Dr. Sturges had himself observed, but he doubted if the evidence was yet sufficient for them to say that ice arrested pneumonia. He doubted also if it was, as a rule, a great good to shorten the pneumonia. In the pneumonia of drunkards, however, the inflammation was very destructive, but this was a very different disease, and it was especially doubtful here if ice would be of any use.—Dr. COUPLAND had tried the ice in a few cases in young people. He was satisfied with the treatment on the whole, and had had no ill results. He also doubted if the treatment had shortened the cases, but it had certainly relieved the symptoms.—Dr. ANGEL MONEY made a sharp distinction between two forms of pneumonia. He would not, for instance, use the icebag in what he called epileptic pneumonia, styled by the French "herpetic pneumonia." Here the onset was so sudden, the course so definite, and the sudden termination so certain, that the disease resembled an epileptic fit. In other cases, however, the icebag was of great value, thongh he did not say it curtailed pneumonia. It relieved the patient, and it was safe in application. He had had a very extensive experience of the icebag treatment, and he would mention one case in particular of alcoholic pneumonia, where he had made use of ice and the wet pack with great relief to the symptoms, but without saving the patient's life.—Dr. SIDNEY PHILLIPS had used the icebag himself, and seen it used much by Dr. Wilson Fox. The temperature was undoubtedly lowered by the icebag, but it might for this purpose be applied to any part of the body. An objection to the icebag was that on its removal the temperature again rose, and sometimes to a higher degree than before. This was the case with all antipyretics, and it was doubtful whether it was desirable to attempt a lowering of temperature by such means, unless it had attained a very high degree. The icebag scarcely shortened the disease.—Dr. TIRARD had tried the icebag treatment in the Evelina Hospital. Of six cases thus treated, three were benefited, in the other three alarming collapse resulted. In six other cases not treated by the icebag, and also without poultices, the course of the cases was always good. Dr. Tirard hesitated to accept all the good promised from the icebag; comfort was increased, but the disease not shortened.—Dr. LEES, in reply, said it was certainly difficult to arrive at the true conclusion as to a particular remedy. Dr. Lees thought it very desirable to cut short the disease if possible. Lobar pneumonia in young children nearly always got well, but some cases did not, and the two cases of undoubted lobar pneumonia which he had mentioned were specially dangerous, and he believed would not have recovered if left to themselves. He hoped that now it had been shown that no danger resulted from adopting this treatment other observers would be induced to give it a trial and record their experience.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

THURSDAY, OCTOBER 18TH, 1889.

D. C. LLOYD-OWEN, F.R.C.S.I., President, in the Chair.

New Member.—The following member of the Association was elected a member of the Branch: Mr. A. Max Sully.

Multiple Exostoses.—Mr. HASLAM showed a man, aged 20, who was the subject of multiple exostoses. Ten years ago a large one had been removed from the left infraspinous fossa, and later on another from the front of the right tibia. There were several others situated on his forearms, arms, and legs. There was also an arrest in the development of the lower end of the left ulna and the two inner fingers; the radius was much thickened and curved, the forearm being considerably shorter than its fellow.

Foreign Body in Lens.—Mr. EALES showed a man, aged 28, who had a piece of brass, measuring apparently 3 millimètres by 1 millimètre, embedded in the lens of the right eye, its long axis being directed upwards and backwards. Its anterior extremity projected for about half an inch into the anterior chamber at a point just 1 millimètre outside the centre of the pupil. The iris was intact, and the lens showed no opacity, though nine days had elapsed since the injury. Under atropine, V=$\frac{5}{5}$ with +5.5 D to correct H. The corneal wound was a linear horizontal one of $2\frac{1}{2}$ millimètres in length, situated just opposite the lower border of the undilated pupil.

Abdominal Section.—Mr. JOHN M. TAYLOR read a review of 84 cases of abdominal section on women. Eight of these were fatal, giving a mortality of 9.5 per cent. No fewer, however, than five of these were operations undertaken during conditions essentially fatal. All these cases were described in some detail. Mr. Taylor referred to the conditions necessary for success in operative work, and to the special mechanics of the abdomen. Cases were cited illustrative of (1) the cure of sterility by removal of tumour of ovary, (2) of intraperitoneal hæmatocele, and (3) of immediate hæmorrhage. The paper closed with a short consideration of the causes and prevention of stitch-abscesses.

BRIGHTON AND SUSSEX MEDICO-CHIRURGICAL SOCIETY

THURSDAY, SEPTEMBER 5TH, 1889.

E. CRESSWELL BABER, M.B., President, in the Chair.

Cases.—Dr. BLACK showed a girl, domestic servant, aged 25, with a deep Ulcer, size of a florin, beneath the left eyelid, and a second occupying almost the whole of the lower lip; both ulcers had spread rapidly in a phagedenic manner. The diagnosis, when the case was first seen, was very difficult, but on careful inquiry it appeared that a girl suffering from venereal disease (nature unknown) had scratched her face, and the ulcer started two days after; the lip being cracked became soon afterwards infected; the glands in the neck were swollen, hard, and tender. There was never any induration about the sores. Under treatment with powdered iodoform and black wash they were assuming a healthy appearance.—Dr. Black showed an old woman as a contrast to the former case with Rodent Ulcer of the Cheek in the same position, but of ten years' standing.—Dr. Black also showed an Ulcer on the Dorsum of the Finger of four years' duration attributed to a cut with coloured cotton; it was probably malignant.—Dr. MACKEY showed a child, 2 years old, suffering from Urticaria Pigmentosa (Sangster). The rash was red at first, but of a coppery hue before fading; successive crops appeared and produced much irritation, although the child continued in good health; the rash had persisted from the age of 5 weeks, and began a week after vaccination. No evidence of syphilis was obtainable. It was treated with sulpho-carbolate of sodium.—Dr. Mackey showed a case of Ulcer of the Lower Lip in a man; it was of fifteen to twenty years' duration, and almost healed under resorcin.—Dr. Mackey also brought forward two cases of Lupus to illustrate the value of resorcin and scraping in such cases.

President's Address.—The PRESIDENT then delivered his address. He gave a short history of the Society, which was founded in 1847, and had, therefore, now entered on its forty-third session. Amongst those who took a prominent part in its foundation were Dr. William King, Messrs. Cordy· Burrows, Hingeston, George Lewdell, James Oldham, G. E. Pocock, and B. T. Seabrook. Dr. King acted as the first President; the first Secretaries were Messrs. Lewdell and Oldham. The original members numbered 35, only one of whom, Mr. Edmund Joseph Furner, still remained on the list. In 1848 the numbers had risen to 49. In 1858, 1868, 1878, and 1888, the numbers were respectively 63, 84, 80, and 88. The greatest numerical strength was reached in 1886, when the Society numbered 95 ordinary members. Previous to the existence of the present Society there had been a "Brighton Medico-Chirurgical Society," which was established in 1838. Mr. B. T. Seabrook was the President, Mr. W. Verrall the Treasurer

and Secretary, and ordinary meetings were held every alternate Wednesday throughout the year. The Society's library, which had commenced with a nucleus of 43 volumes, kept at Mr. George Lewdell's house in Cannon Place, had now grown to a collection of over 3,000 volumes. The last printed catalogue was that prepared by Drs. Ormerod and Beard, which bore date 1864 and included the library of the Sussex County Hospital, as well as that of the Society. Since then it had been customary to print, at the end of each annual report, a list of the books added during the year, the whole catalogue being kept in manuscript. The meetings were at first held at the Town Hall, but in 1850 a portion of the Dispensary was offered for the use of the Society. Amongst the public questions which had been brought before the Society from time to time for its opinion were the following: The propriety of a coroner being of the medical profession; the question of medical reform, which was before Parliament in 1858; the drainage of Brighton and Hove; and within recent years the compulsory notification of infectious diseases, and the provision of accommodation for private cases of the same character. The President then gave a sketch of the original rules of the Society and the various alterations which had from time to time been made in them. Among the original rules there was a somewhat quaint one that any member having promised to furnish a communication, and without a satisfactory reason failing to do so, should be fined half a guinea. This rule was abrogated in 1854. After giving a sketch of the progress of medicine and surgery during the forty-two years of the Society's existence, the President went on to say that in his opinion the functions of such a Society were twofold: first, the advancement of medical science among the medical practitioners of the town and neighbourhood; and, secondly, the promotion of a spirit of friendly intercourse among the members. The main portion of their work ought to be devoted to the reading of short practical papers, and to the description and exhibition of cases and specimens, in which every member could and should take part.

Resorcin in Skin Diseases.—Dr. MACKEY read a paper on the effects of resorcin in certain skin diseases, with an analysis of twenty cases of various kinds. The best results were obtained in parasitic forms and in cases of new growth, such as lupus, but it was necessary that the remedy should come in actual contact with the cell growth, and its combination with scraping was generally necessary.—Mr. BABER mentioned a case of lupus nasi in which he had used resorcin with advantage.—Mr. VERRALL confirmed Dr. Mackey's view, that the drug was of little value applied to unbroken skin.—Dr. BLACK related cases of lupus cured rapidly under the use of resorcin in the form of an ointment of from 10 to 40 per cent. strength.—Dr. UHTHOFF drew attention to the resemblance of resorcin to carbolic acid, and asked Dr. Mackey in what its advantages over carbolic acid consisted.—Dr. MACKEY replied that for internal use it was less irritating than carbolic acid; also that it rather relieved pain, both internally in gastric ulcer and externally, whereas pure carbolic acid was a painful application. He considered resorcin as applicable to those cases in which either sulphur or carbolic acid was useful.

THURSDAY, OCTOBER 3RD, 1889.

E. CRESSWELL BABER, M.B., President, in the Chair.

Cases.—Dr. BLACK showed a child, 12 months old, suffering from Favus of three months' duration.—Mr. LEIGH showed a child, 4 years of age, with Congenital Absence of Arms and Short Abnormal Lower Extremities.—Mr. W. FURNER showed a case in which the Patella had been removed, and union by first intention had taken place.

Peripheral Neuritis.—Dr. HOLLIS read notes of this case. The patient, a man aged 38, lost power in the hands six weeks previously, first in the right, then in the left hand. Three weeks later he began to feel weakness in the legs. He had worked in red lead, but not lately; there was no blue line. There was wrist-drop, dragging of feet, and wasting of peronei and calf muscles; reaction of degeneration. The symptoms were thought to be due to lead-poisoning.

Lymphadenoma.—Dr. PALEY showed a boy with enlarged cervical glands and adenoid growths in the pharynx. There were no changes in the blood, and it was a question whether the case was one of lymphadenoma, or whether the enlarged glands were dependent upon the condition of the pharynx.—Dr. WHITTLE adopted the latter view, and advocated removal by operation.—Mr. W. FURNER regarded the case as one of lymphadenoma.—Mr. BABER advocated a primary treatment of the pharynx.

Enlarged Bursæ about Elbow-joint.—Dr. PALEY showed this case for Mr. BLAKER. The patient, a girl about 18, presented several large fluctuating swellings about the right elbow-joint; and over the head of the radius there was crepitation, apparently due to the presence of melon-seed bodies. The movements of the joint were much impaired; counter-irritation produced no improvement.

Operative Proceedings in Cases of Gall-stone.—Dr. BLACK read a paper in which he pointed out that gall-stones were specially apt to occur in women and in persons over 40 years of age, and were often associated with signs of degeneration, such as general obesity and fatty heart, atheroma of arteries, and very frequently mitral incompetence. They were often also associated with cancer of the liver. Dr. Black drew attention to the great variety in the severity and general character of the symptoms; and pointed out how little Nature could be trusted to effect a cure. Dr. Black briefly discussed the following operative measures: 1. Exploratory puncture of gall-bladder, which he strongly condemned. 2. Opening the abdomen, and crushing stones with fingers or padded forceps through the walls of the duct or bladder, without opening the biliary system at all. 3. Removal of stones by incision of bladder after aspiration, and draining the gall-bladder by securing the edges of the incision in it to the parietal wound, the usual operation known as cholecystotomy. 4. Forming after removal of calculi a fistulous communication between the gall-bladder and the duodenum or colon, an operation known as cholecyst-enterostomy. 5. Complete removal of gall-bladder after aspiration of its fluid contents. The last operation, although probably the most difficult of execution, was considered by Dr. Black to be the most complete and satisfactory.—Mr. W. FURNER described symptoms which would, in his opinion, justify operation; and expressed a preference for the usual operation.—Dr. WHITTLE thought there were not many cases in which operation should be attempted; and thought a large majority terminated satisfactorily when left to Nature.—Dr. H. Ross showed two interesting specimens of gall-stones, one of very large size, which had probably remained in the bowel for eight years, and was finally removed by copious injections after symptoms of intestinal obstruction lasting a week.—Dr. HOLLIS related a case in which a large stone was passed; and asked Dr. Black whether caustics had been employed to open the gall-bladder, as was sometimes done in cases of abscess of liver.—Dr. RICHARDSON alluded to a case of very deep jaundice under his care in the hospital.—Mr. WINCKWORTH related a case of complete recovery after numerous attacks of biliary colic of exceptional severity.—Dr. BLACK replied.

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.

ANNUAL MEETING.

FRIDAY, OCTOBER 4TH, 1889.

J. MURPHY, M.D., President, in the Chair.

General Business.—The HONORARY SECRETARY (Dr. Oliver) read the financial report for the year, in which it was shown that there was a balance of £33 0s. 10d. in hand, and that nineteen members had been added to the Society during the session. The Society now had 175 members.—Certain resolutions from a special meeting of members were read and adopted.

Election of Officers.—The officers were re-elected. *President;* Dr. Murphy. *Vice-Presidents;* Drs. Anderson, Hume, Professor Philipson, and Mr. Morgan. *Honorary Secretaries:* Drs. Oliver and Limont. *Committee:* Drs. Arnison, Drummond, J. Drummond, Gowans, Mantle, Mears, and Messrs. Black, Page, and Williamson.

Ectopic Gestation.—Professor LAWSON TAIT delivered an address upon Ectopic Gestation, dwelling at considerable length upon the pathological conditions favouring its occurrence. He showed how ciliary action in the Fallopian tubes tended to prevent impregnation of the ovum in the tube. It was his firm conviction that in every instance of tubal pregnancy there had been a history of sterility or of salpingitis, which had destroyed the ciliated epithelium of the tubes. He preferred the term "ectopic gestation" to "extra-uterine pregnancy." The symptoms of the various forms of this accident and the operative measures to be adopted were described in detail.—On the motion of Dr. ARNISON, seconded by Professor PHILIPSON, a hearty vote of thanks was by acclamation awarded to Professor Tait for his address.—Mr. TAIT replied.

THURSDAY, OCTOBER 10TH, 1889.

J. MURPHY, M.D., President, in the Chair.

Cancer of Larynx.—Dr. ROBERTSON exhibited a man suffering from cancer of the larynx, upon whom he had performed tracheotomy in February, 1889. He had replaced the silver tube by one made of india-rubber. The cancer was detected in 1886, but it was only a year ago that it reached the fungating stage. Above the tracheotomy wound were sinuses leading down to dead cartilage; the glands were affected, and the larynx was much increased in breadth. The epiglottis remained free.

Diabetes Insipidus.—Dr. DRUMMOND showed a man, aged 42, suffering from diabetes insipidus. The illness had begun six months previously, when he was throttled by a fellow-workman, who handled his neck very roughly. The patient was not only frightened, but suffered afterwards from bleeding at the mouth and from epistaxis, which lasted several days. Seven weeks previously essential symptoms of diabetes insipidus had appeared; emaciation had been rapid. He was passing seventeen pints of urine in the twenty-four hours; specific gravity 1003, no albumen, no sugar. The points insisted upon by Dr. Drummond were the rarity of the disease, and that injury to vagus combined with the fright had in this case caused it. The patient's pulse varied from 60 to 64.—Dr. GIBSON asked whether the polyuria might not be due to interstitial nephritis.—Dr. OLIVER said he had had three cases under his care, one that of a man who fell from a ship and was rendered insensible for ten or twelve days. On recovering consciousness he drank greedily of water; from that moment polydipsia and polyuria coexisted. The patient passed about twenty pints of a clear limpid urine daily, with a specific gravity of 1001 to 1003. He had double optic atrophy. He recovered under very large doses of valerianate of zinc (fifteen grains thrice daily), and at the present time remained quite well.—Dr. MANTLE dwelt upon the relationship of diabetes insipidus and injury, and then raised the question how far the insipidus and mellitus forms of diabetes were related to each other.—Dr. REDMOND suggested the probability of the case being one of aggravated hysteria in the male attended by polyuria.—Dr. DRUMMOND replied.

Cases of Aneurysm.—A man suffering from abdominal aneurysm was exhibited by Dr. LIMONT. The symptoms at first were pain in the back and vomiting. The patient had been a soldier, and there was a history of syphilis and ague. At first he was much reduced by the continued vomiting, but latterly had much improved. There was a very distinct *bruit*.—Dr. LIMONT also exhibited a man with aneurysm of the right carotid artery. The innominate was also dilated but not the aorta. This patient, too, had been a soldier, and there was a history of syphilis, and it was asked if this was a suitable case for operation.—Dr. MORISON had lately seen two similar cases. In the one emaciation was quickly progressive at first, owing to pressure upon the thoracic duct; this had diminished. The other case died suddenly from rupture.—Dr. DRUMMOND alluded to a case of abdominal aneurysm where the patient lived for eight weeks after rupture of the sac.—Dr. MURPHY recommended operation.

Trephining for Cerebral Tumour.—A woman, aged 32, who had been trephined for cerebral tumour, was exhibited by Dr. LIMONT. She had been confined of her fourth child fourteen days when she became unconscious. On recovery from this she had numerous convulsions, which always began in the right arm; speech, too, became affected. The case was diagnosed as one of cerebral tumour or abscess; and Dr. Limont, having mapped out the motor centres of the brain by Thane's method, Mr. Page trephined, removing a large part of a tumour which Dr. Limont regarded as a glioma. For some time the patient did well, and recovered the use of the arm and speech, but latterly the growth had increased, and was now a pulsating mass of considerable size.—Dr. GOWANS congratulated Dr. Limont and Mr. Page.—Mr. BLACK, having first seen the case outside, gave a detailed history of the illness.—Dr. DRUMMOND did not regard the case as one of glioma, and thought it better not to dogmatise at present upon the pathology of the case.

Birth-palsy.—A boy suffering from birth-palsy was exhibited by Dr. OLIVER. The boy was now 11 years of age. Forceps had been employed at his birth, and a deeply-indented mark could still be seen on the forehead, which might or might not have been caused by the blade of the forceps. Immediately after birth convulsions set in, and soon afterwards it was noticed that the left arm and leg were powerless. There was now left hemiplegia, which was not complete, with rigidity, spontaneous movements, increased knee-jerk, talipes equinus, and slight left facial hemiatrophy. Dr. Oliver discussed the pathology of the disease, particularly in its relationship to cerebral hæmorrhage under the dura mater, and alluded to *post-mortem* examinations he had made in children who had died soon after birth, and where there had been considerable effusion of blood under the membranes.—Dr. REDMOND, who said he had had considerable experience of instrumental delivery, did not think Dr. Oliver was justified in regarding this case as one where injury had been done by the forceps. He suggested a diseased condition of cerebral blood vessels.—Dr. GIBSON could not regard the disease as of cerebral origin, or in any way related to the period of parturition. He thought the boy was suffering from anterior polio-myelitis.—Mr. GALLOWAY thought the pathology of the disease given by Dr. Oliver was quite correct, and it threw a good deal of light upon a case which he himself had had, where after the use of the long forceps the child had at first facial paralysis, followed by paralysis of arm and leg, which had persisted, although not now so marked as formerly.—Dr. GOWANS had seen similar cases, and had recognised their relationship to the period of parturition and cerebral hæmorrhage.—Dr. DRUMMOND alluded to the lesion being situated in the grey matter on the surface of the brain.—Remarks were also made by Drs. MURPHY, MANTLE, and MORISON.

Specimen.—Dr. LIMONT showed the Lungs from a case of Coal-miners' Phthisis. No family predisposition to phthisis had existed; there was a history of pneumonia twelve years previously.

Paper.—Dr. BENINGTON read a paper on Gynæcological Work, and emphasised the necessity of careful physical examination in all cases with pelvic symptoms.

REVIEWS AND NOTICES.

LECTURES ON GENERAL PATHOLOGY. By JULIUS COHNHEIM. Translated from the Second German Edition by ALEXANDER B. MCKEE, M.B., with Memoir by the Translator. Section I: The Pathology of the Circulation. London: The New Sydenham Society. 1889.

THE New Sydenham Society has done a good work in making COHNHEIM'S famous lectures accessible to the English reader; but we must be permitted a little preliminary grumble at the unfortunate delay which has taken place in bringing out the translation. The first volume appeared in 1877, the scond in 1880. Had a translation been published soon after, or concurrently with the second German edition in 1882, it would have had an immediate success, and would have greatly influenced the study of pathology in the English-speaking countries.

No doubt the work has exercised considerable influence as it is, since English pathologists generally read German; the facts and reasonings contained in it have permeated into our ordinary text-books, and a great part of Cohnheim's work has already become the common property of medical science; but this very fact deprives the present publication of some of its freshness. In these days it seems well-nigh impossible for even the most original work to become a medical classic, and the actual working life of a standard textbook seldom extends over many years. In pathology, at all events, progress has been so rapid that some portions of Cohnheim's lectures are even now falling behind the present state of science, and there are many which the author himself would doubtless have modified had he been spared to revise his own work. This alas! is impossible, and the book has assumed its permanent form, that of an important historical memorial of its author's genius, not losing its value for special students, but becoming every year a less complete exposition of pathology as a whole.

The present volume, on the pathology of the circulation, covers about two thirds of the first volume of the original, including such topics as inflammation, thrombosis, embolism, dropsy, etc., and thus gives us much of the author's most brilliant and original work. Cohnheim's name is chiefly known in this country by his rediscovery of the diapedesis of the blood-corpuscles in inflammation; but we are disposed to think that his most important service

to science was the impulse which he gave to the study of pathological physiology as a branch of the experimental pathology which originated with John Hunter. Following in the steps of Virchow, and not less in those of Traube, who profoundly influenced his work, and to whose memory he dedicated his first volume, he clearly defined this province of research, and distinguished it from the mere application of physiological laws to the explanation of disease, a method which has been followed by pathologists in all ages, using what physiology they had at command.

Pathological physiology, as now understood, is essentially experimental; and it was thus that Cohnheim regarded and practised it. He was by no means blind, however, to the limits of experiment in medicine. There will always remain, as he admitted, a large part of pathology unapproachable by this method. Hence the inexhaustible value of clinical observation, a source of knowledge the possession of which gives morbid physiology a great advantage over normal. But even in its application to clinical medicine the experimental way of looking at things is of service, showing that morbid conditions are experiments performed by Nature; often performed, too, as in the case of nervous diseases, with a precision and neatness beyond what our present experimental methods admit of, and as relating to our own frame more directly significant than experiments on animals.

We may remark in passing that it is no small advantage on the physiological side of pathology that it bears this close relation to clinical medicine. It gives a new interest to hospital work, and ought to correct the erroneous impression too prevalent among students that the study of pathology does not begin till the patient is dead. Cohnheim's work should thus possess a great interest for the practitioner, as well as for the professed pathologist, and cannot be too strongly recommended to all who desire to gain an insight into the true nature of disease. Beyond all similar writers Cohnheim is distinguished by his brilliant and masterly exposition of each subject as a whole as well as in its details. There are other textbooks containing larger masses of facts than his; but these erudite productions of our German brethren do not always exhibit the particular excellence we have mentioned. In this respect Cohnheim may fairly be placed by the side of Virchow. His book is not one to be referred to for details. It should be read through; or, if referred to, at least the whole of a chapter should be read in order to do it justice.

It is impossible to refer in detail to the numerous important topics treated of in this volume. In many cases the value of Cohnheim's researches remains unaltered since their promulgation. In others his views have been corrected by the progress of investigation. The main foundations of his theory of inflammation are still in our judgment unshaken. But with regard to the physics or mechanics of cell migration, the researches of Hamilton, Landerer, and others have no doubt introduced important modifications; and in the vexed question of the relation of leucocytes to tissue-formation the balance of evidence seems to be weighing against Cohnheim's doctrines. His explanation of embolism, again, has been much shaken by the experiments of Litten. The section on dropsy would have, if it were written again, to be somewhat differently stated. There are many new things to be said on these and on other subjects, but it is noteworthy that some of the most important innovations are the work of Cohnheim's own pupils or followers.

Dr. McKee is to be congratulated on the manner in which he has executed the translation. His style is clear, readable, and, what is not always the case with translations, it is grammatical English; while a comparison of some sections with the original has convinced us of his general accuracy. If he uses the word "intoxication," for poisoning, and "resorption," for absorption, he is only following a common, though, we venture to think, not a laudable custom. Let us hope that it will be possible to bring out the remaining volumes without too much delay; so that the great German pathologist in his English dress may not appear old fashioned or out of date.

MODERN CREMATION. By Dr. P. DE PIETRA SANTA. Paris. 1889. 8vo., pp. 28.

THIS pamphlet is one of the publications of the French Society of Hygiene, of which society Dr. de PIETRA SANTA is the general secretary. We observe with interest that among the various forms of furnace described is one by M. Pierre Guichard, a member of the Municipal Council of Paris. Where ordinary coal gas is used as the combustible, the process of cremation is hastened not by an admixture of air, as in the apparatus of Polli and Clericetti, nor of oxygen, as in Marini's system, but of compressed air. Thirty-five minutes is said to be long enough to convert a body into ashes by this method at a cost of thirty francs, fifteen for the gas and fifteen for the compressed air. This is fully three times the cost of fuel in the crematorium at Woking, but there fully an hour and a half is at present required to complete the cremation of an adult human body.

As cremation in England is becoming more general, the Marquis of Ely, Lady Bramwell, Colonel Tomline, Sir Tindal Robertson, and some twenty-five less known men and women having been cremated at Woking since the beginning of 1889, it is evident that some official regulations must soon be considered to prevent abuse of the revived custom. And we are glad to note that in the pamphlet before us the author has reprinted the decree dated November 15th, 1887, of the President of the Republic and the Minister of the Interior, adopted by the *Conseil d'Etat*, on the different modes of sepulture. The sixteenth article decrees that "No crematory apparatus shall be used without the authorisation of the Prefect accorded after approval by the Council of Hygiene." The seventeenth, that "Every incineration shall be performed under supervision by the municipal authority, and it must be preliminarily authorised by the civil officer of the place of death."

These are the main points. There are several other matters of detail as to medical certificates of the cause of death resembling those adopted by the Cremation Society of England, all designed with the object of removing the only reasonable objection to cremation, namely, the possibility, if proper precautions are not strictly observed, of burning a body which it might, perhaps, be desired to exhume some considerable time after burial.

TRANSACTIONS OF THE AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS. Vol. I. For the Year 1888. Philadelphia: William J. Dornan, Printer. 1888.

NOTHING more clearly indicates the close relation existing between abdominal surgery and obstetrics and gynæcology than that an Association should be formed whose object is stated to be "the cultivation and promotion of knowledge in whatever relates to abdominal surgery, obstetrics, and gynæcology." (P. XVII, Constitution Article II). There are many important advantages to be gained by studying these subjects together, and it is well that an Association should formally recognise their essential connection. The practical convenience of such an arrangement is shown by the fact that at the present time the obstetric physicians at the following London medical schools perform their own abdominal sections: Guy's, King's College, London Hospital, Middlesex, St. George's, St. Mary's, St. Thomas's, and University College. It is most desirable that cases of the kind referred to should be considered first of all from a physician's point of view. The healthy influence of the public opinion existing at a large general hospital with a medical school attached may be relied on to restrain any tendency to individual eccentricities, or the performance of unjustifiable operations, abdominal or other.

The volume before us contains many papers of a high degree of interest; among them we may especially mention Drainage in Abdominal Surgery, by Dr. Joseph Price, who concludes his paper by saying: "The use of the drainage tube may be stated as a surgical procedure, which, without danger, eliminates to a great extent the danger of abominal surgery, infection through the peritoneum." We may also mention a Contribution to the Study of Pelvic Abscess, by Dr. Clinton Cushing; the Treatment of Suppurative Peritonitis, by Dr. Myers; Laparotomy in Peritonitis, by Dr. Montgomery, which well repay perusal. Dr. W. W. Potter records an interesting case of Double Ovariotomy at the fourth month of pregnancy; the woman made a good recovery, and was confined five months later quite naturally.

Dr. William H. Wathen contributes a paper on Hysterectomy for Malignant Diseases of the Uterus. He says: "In a collection of 311 cases operated on by Fritsch, Leopold, Alshausen, Schroeder, Staude, and Martin, the mortality is only 15.1 per cent." This refers, of course, to vaginal hysterectomy. Dr. Wathen believes that the subsequent results as to recurrence are better after total extirpation than after supra-vaginal amputation of the cervix. In estimating the mortality of total extirpation, it is important to separate cases where the body of the uterus is the primary seat of the disease from cases where the operation is done for cancer of

the cervix. In the latter, the body of the uterus not being enlarged, the operation is not, comparatively speaking, such a very difficult one; it is where the body of the uterus is as large as, say the fist, that the most formidable difficulties are met with. Dr. Wathen advises the use of pressure forceps to secure the broad ligaments, in preference to ligatures; and claims that the operation may in that way be completed in less than half the time taken by operating according to Schroeder's or Martin's method. He adds, however, the significant warning, with which those who have done the operation will agree: "But no one should attempt this operation until he is prepared and equipped to meet any emergency that may arise."

Dr. Burns, though aware, as he says, "that the fiend with a new perineal operation and he with a new pessary are equally contemned by the profession," nevertheless has the courage to contribute a paper entitled a New Operation for Lacerated Perineum, which, we think, justifies its existence. The description given of the operation is exceptional in that it is quite intelligible to those who have not actually seen the operation done.

An Elementary Treatise on Human Anatomy. By Joseph Leidy, M.D., LL.D. Second Edition. Rewritten. Pp. 950. Figures 495. London: Smith, Elder, and Co.

Professor Leidy is modest in calling this work an elementary treatise on human anatomy. In size, in fulness of contents, and in illustration, it equals, if it does not surpass, more pretentious volumes. It consists of an introduction, an account of the general anatomy of the skeleton, the special anatomy of the skeleton, the connective tissues, the muscular system, the various membranes, the neck, thorax, and abdomen, the alimentary apparatus, vascular system, and the various organs, taken each in their turn. Thus the subject is treated in much the same order as in other works of the same kind, except that the ligaments are given immediately after the description of the portions of the skeleton to which they especially belong; as, for instance, the ligaments of the spine and ribs after the description of the spine and ribs. We see no particular objection to this arrangement, and it does not seem to make the work of reference any harder. All the descriptions are clear and concise, and there is no redundancy of expression; the language is simple and unambiguous. The various structures are called by their English names, and the Latin equivalents are given below as footnotes. The names of individuals are seldom or never applied to apertures, ligaments, muscles, etc., and even Eustachius is spelt with a small "e." The custom of calling things by the name of their discoverer adds much to the difficulty of anatomy, and sometimes students think that in learning names they are acquiring all that is wanted. By adopting these and other slight alterations in the usual nomenclature, the descriptions, especially those of the bones, is made much clearer, and, we should think, easier to understand. Not only are the bones themselves well and fully treated, but admirable representations of their fœtal condition are given, together with a brief account of their development, ossification, and growth. The muscles, too, are very clearly and correctly described, and quite as fully as could be expected in a work which is called elementary. We are glad to note that some of the usual ambiguities are avoided. For instance, a popular work describes the levator anguli scapulæ as arising from the upper three or four cervical vertebræ. In consequence, students are never sure whether it is attached to the atlas or not. It is obvious that the expression upper three or four implies the omission of either the atlas or of the fourth. The arteries are also clearly described, although their surface marking is not always given with such exactness as is necessary for surgical purposes. This is to be regretted, for knowledge of that kind is of particular importance, and not many lines need have been added to give the exact marking of each important vessel and, we might add, of each important nerve. The absence of adequate allusion to surface markings detracts from the value of an otherwise excellent work. The remaining parts are, like the foregoing, clear and correct, and free from superfluous verbiage. In the endeavour to attain brevity and clearness, the ordinary nomenclature has sometimes been departed from, and we find the author speaking of the "ectocornea, mesocornea, and entocornea," and in other places a similar terminology is used. However, the usual equivalents are always given, and in some cases they mount up in a remarkable way, and there are few who could repeat the ten synonyms of the entocornea, or posterior elastic lamina. With regard to the illustrations of this work, we note that they are either original or have been judiciously chosen from well-known sources. They are with few exceptions quite clear, and adequately reproduced, and as excellent paper has been used, some of those which have been copied from Sappey's beautiful plates have come out well, although of course far from equalling the originals. The author's own figures are also well done, and his representation of the otic ganglion is particularly good (Fig. 403).

From the above it will be gathered that we consider Professor Leidy's book a very satisfactory and useful work; but its usefulness is somewhat impaired by the index. This has been compiled in such a way as to detract seriously from its utility. Who would think of looking for the levator anguli scapulæ under the name of "scapular elevator;" or, for the rectus capitis anticus major under the name of "prerectus?" An author who adopts a nomenclature different from that which is in every day use ought to have made his index as exhaustive as possible, and to have included in it not only the terms for which he himself has a predilection, but also those which are familiar to others. In this particular case this would have been very easy, because, as we have already said, the various synonyms are fully given.

Buxton, its Baths, and Climate, etc. By S. Hyde, L.R.C.P Crown 8vo, pp. 131. Manchester: Heywood. 1889.

This new guide to Buxton, which is from the pen of the physician to the Peak Hydrothermal Establishment, is very superior in type and paper to the ordinary shabby guide books to Buxton. It gives an excellent account of the place and its history, of its waters and their use, and of all the excursions to be made from it. The novelties of the book are a proposed modification of the ordinary treatment, and the recommendation of Buxton as a winter resort for pulmonary invalids. It used to be the established doctrine that mineral waters were absorbed by the cutaneous system during immersion in them; but the more modern view is adopted by Dr. Hyde—that, under ordinary circumstances, the skin does not absorb, but may possibly do so to some extent when its pores are open, and when fatty secretions have been removed from the surface. Acting on this principle Dr. Hyde first subjects the patient to a sweating bath, and then has him well rubbed down and sprinkled with spirit so as to remove fatty secretions. After this the mineral water is applied to the body by a species of irrigation. This treatment has been found very successful, and no doubt it is more energetic than simple immersion in the ordinary bath. But whether these good results are in any degree occasioned by absorption is very doubtful. If there were such a thing as absorption, it would occur more probably from a bath, after the than from this superficial irrigation. Seeing how deficient the Buxton waters are in mineral contents, and how inert a gas the nitrogen which they contain is, we cannot for the present suppose that absorption has much to say to their effects.

Dr. Hyde also proposes that, on the analogy of Davos, Buxton, being, perhaps, the most elevated town in England, should be resorted to by phthisical patients in winter; but we have never heard that Buxton has the still weather, or the cold and rarefied air, or the bright sunshine to which the virtues of Davos are ascribed. We see no resemblance to it in the windy, changeable climate with which Buxton is credited in winter.

NOTES ON BOOKS.

Health Troubles of City Life. By George Herschell, M.D.Lond. (John Wright and Co., Bristol, 1889.)—Dr. Herschell attributes the ill-health which so frequently overtakes the modern man of business to one or more of the following causes: Overwork, worry, alcohol, railway travelling, irregular meals, want of exercise and recreation. These he discusses seriatim, setting forth in popular language the precise effects of each upon the bodily functions, and how these ill-effects may be best counteracted by attention to hygienic rules and precepts. It is to be feared, however, that the warnings sounded by medical men from time to time have but little effect in impressing upon the minds of commercial men the retribution that must inevitably follow upon the modern method of living at high pressure, which is the result of the feverish competition now prevailing in commercial life. Business men can truly say that the conditions are not of their choosing, that they must struggle with the rest or else go

to the wall; still, in many minor matters, they are able to follow the advice contained in such writings as that of Dr. Herschell, without hazarding the welfare of their business; and attention to these little details would go far to preserve the physical frame and the nervous organisation in that condition of well-being which is the truest antidote to nervous worry and exhaustion.

Watts's Dictionary of Chemistry. By M. M. PATTISON MUIR, M.A., and H. FORSTER MORLEY, M.A., D.Sc. In four Volumes. Vol. II. (London: Longmans, Green, and Co. 1889.)—The second volume of *Watts's Dictionary of Chemistry*, revised and entirely rewritten by Messrs. Pattison Muir, M.A., and H. Forster Morley, M.A., has recently been issued. The special contributors include most eminent names in modern science, and in subjects especially interesting to students of medical chemistry. It will be sufficient to mention that Miss Ida Freund, Lecturer in Chemistry at Newnham College, contributes the article on Relative Densities; Mr. David Howard the article on Cinchona Bark; Dr. Halliburton the article on Hæmoglobin; Dr. McGowan the article on Cholesterin; Dr. Samuel Rideal, Lecturer on Chemistry at St. George's Hospital Medical School, the article on Fermentation; Dr. O'Sullivan, F.R.S, the article on Dextrin; Dr. Edward Shunck, F.R.S., the article on Chlorophyll. Great praise is due to the publishers and the editors for the admirable way in which they are carrying out the republication, re-editing, and revision of this classic and invaluable work.

What to do in Cases of Poisoning. By WILLIAM MURRELL, M.D., F.R.C.P. Sixth Edition. (London: H. K. Lewis. 1889.)—The call for another edition of this useful little volume is the best evidence that it is appreciated. To add to its value, the present edition has been carefully revised, and details of some recent cases of poisoning have been incorporated.

A Guide to the Use of the Buxton Mineral Waters. By W. H. ROBERTSON, M.D. Twenty-third edition. (Buxton, 1889.)—*Medical Guide to the Mineral Waters of Royat.* By Dr. C. A. PETIT. 12mo., pp. 101. (London: H. Renshaw. 1890.)—There is nothing to be said about these new editions of guide books. Both of them contain much useful matter, but nothing requiring any special notice.

Emergency Notes. By GLENTWORTH R. BALTER, A.M., M.D.—This book is well adapted to be a textbook for ambulance classes, and for the use of schools where this branch of knowledge forms a part of the education. The information is given concisely in plain language, and the instructions do not go beyond what any intelligent person can apply with advantage. The illustrations are excellent and original. It is to be hoped that these notes will have a wide circulation.

Die Nordsee Insel Helgoland. Von Dr. E. LINDEMANN. (8vo., pp. 116. Berlin: A. Hirschwald. 1889.)—It is surprising what an interest inland Germans take in their little seaside resorts, usually simple villages set down among sandy dunes. They take a special one in Heligoland, because there they have not only dunes but rocks, and there is a good deal in the town and in the ways of its inhabitants to attract a stranger, besides the variety of crossing over for bathing to the dunes, which in 1720 became separated from the rock by the agency of a violent storm from the north-west. The literature descriptive of the island is quite extensive, and two years ago an Englishman contributed a work to it. Dr. Lindemann's book is exhaustive, and supplies all information that can be possibly wished for. It treats of its history, its dialect, its folklore, its occupations, its sanitary condition, and its climate, which is equable and much milder than that of the neighbouring parts of the Continent in winter. Heligoland has eight or ten thousand visitors in summer. It has belonged since 1807 to the English, who took it from the Danes.

A Guide to the Alterations in the British Pharmacopœia (1885). By PROSSER JAMES, M.D. Third Edition. (London: J. and A. Churchill. 1889.)—It is now four years since the last edition of the *Pharmacopœia* was published, and it seems curious that a guide to the alterations contained in it should still be in demand. That such is the case, however, is evidenced by the publication of a third edition of Dr. James's book. The additions and alterations are described with clearness and accuracy, while a short practical account of the therapeutical applications of each new drug is given. Some of these might, for the sake of brevity, have been omitted, as in the case of such well-known remedies as cocaine and the salicylates. The book may be strongly recommended to those who wish such a "guide."

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

PATENT SEWER AND DRAIN VENTILATOR.

WORTHINGTON'S ventilator is an arrangement for extracting foul air from town sewers by means of shafts leading from the crown of the sewer to the side of the road, where they are carried up vertically in columns like lamp-posts. A disinfecting chamber containing chemical solutions is placed at the foot of the column, and the escaping air is finally passed over or through gas jets before its exit at the top of the column. The temperature of the air when issuing from the apparatus is said to be not less than 600° F. When the gas jets are not burning the deodorisation of the sewer air in the disinfecting chamber is relied upon.

Worthington's ventilator adds another to the steadily-growing list of patented arrangements for the extraction and cremation of sewer air. The desirability of the general adoption of any such system in a town is a question on which opinions may differ. For our part, we believe that if the sewers of any district are so generally offensive as to require to be fitted with sewer-air cremators, it will prove less expensive in the long run, and far more beneficial to the public health, to reconstruct the sewers on modern principles, rather than to inaugurate a system of concealing the effects without attacking the cause. But in all large towns certain spots exist where sewer air is generally found escaping, and where nuisance often results. To such strictly localised use sewer-air cremation is well adapted, and Worthington's ventilator will probably be found to give good results.

PATENT ODOURLESS COMMODE.

TYERMAN'S commode is provided with a screen of "woodite," which can be slid along the top of the pan after use, and thus prevents foul odours escaping into the air of the sickroom. The woodite material is said to be impermeable to gases, and the screen can be made to seal the pan over hermetically, whilst after use it can be readily detached and the pan cleansed in the usual way. The apparatus is certainly ingenious, and is likely to prove convenient in use, but it is desirable that the wearing capacities of the woodite material should be thoroughly tested, as materials of such composition are sometimes affected and rendered ultimately useless by the action of foul gases and liquids. Where nurses are in attendance upon a patient, such an apparatus is of course unnecessary, as the excreta should be at once removed from the sick-room, but in the case of invalids without nursing attendance the odourless commode is likely to prove of benefit.

DR. A. SMART'S DERMIC PUNCTATOR.

DR. ANDREW SMART, F.R.C.P.E. (Senior Assistant-Physician to the Royal Infirmary, Edinburgh) writes: In reply to your correspondents in the JOURNAL of October 19th, will you allow me to state that I am quite unaware of the existence of any instrument, American or otherwise, bearing any resemblance to my dermic punctator, and devised for a like purpose; and Dr. Redmond does not say where the instrument he refers to may be obtained or inspected. Baumscheidt's "Lebenswecker"—the instrument referred to by Mr. J. B. Cooke, of Portland—a crude and clumsy machine, about a foot in length and badly suited for the purpose, purchased in London, was lately shown to me by a medical man, who at the time was attending my out-patient clinic at the Royal Infirmary here, and was particularly interested in my instrument and methods of applying it.

The dermic punctator designed and described by me in the JOURNAL of September 28th, with the therapeutic reagents employed and their modes of application, originated with me and are wholly mine, and of course I must regard them in that light. I am glad, however, to have a further opportunity of calling the attention of my professional brethren to a most valuable method of counter-irritation which, by means of my own instrument and reagents, has in my hands proved vastly useful.

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members, in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the office.

The British Medical Journal.

SATURDAY, OCTOBER 26TH, 1889.

PTOMAINES.

AMONG the recent advances in chemistry, none has been more full of interest to the pathologist than the strides made in our knowledge of the ptomaines and allied alkaloidal bodies. Numerous workers in this country and on the Continent are continually publishing fresh researches on the subject, and there is every indication that new and important discoveries may be expected in the future. The word ptomaine has, however, been used in different senses. Selmi applied it to those products of putrefaction which give the reactions of plant alkaloids, and have more or less of a poisonous action. Brieger, who was the first to obtain pure crystalline products from the syrupy extracts of previous investigators, found that the bases isolated from putrefactive mixtures are less poisonous than those produced by pathogenic bacteria; he therefore termed these latter poisons "toxines," restricting the term "ptomaines" to the alkaloidal products of ordinary putrefaction. The toxines include those powerful poisons which he has named "tetanine" and "typhotoxine."

Further investigation showed that the products of metabolism of the higher organisms were not in general different from those of bacteria, and that poisonous alkaloids occur during life in the most highly-organised animals; choline and neurine had thus to be included among the ptomaines, and, later still, secondary toxic products of a simpler chemical constitution, such as methylamine, dimethylamine, etc., came under the same heading. The term "leucomaine," introduced by Gautier, is now very generally applied to the class of poisonous bases which is produced in the tissues of living animals by metabolic processes.

An important class of ptomaines are those which are termed "diamines," according to their chemical constitution. They are probably formed by oxidative processes from the monamines, and are found in small quantities in substances which have undergone very prolonged ordinary putrefactive decomposition; but what lends especial interest and importance to them from the pathologist's point of view is the fact that in cultivations of the cholera bacillus and of the Finkler-Prior vibrio they are readily formed in large quantities. It is exceedingly probable that in these substances Brieger is on the track of the true poison produced by bacterial energy in cholera. He has at present particularly studied two diamines, to which he has given the names "putrescine" and "cadaverine." Putrescine, to give it its chemical name, is tetramethylene diamine ($C_4H_{12}N_2$), while cadaverine is pentamethylene-diamine ($C_5H_{14}N_2$). This latter substance has a strong and characteristic odour; it is, in fact, the odour of cholera stools. When the diamines are injected into the circulation they produce symptoms (hæmorrhages and ulcerations) similar to those that occur in cholera; the muscular cramps and other prominent symptoms of that disease are doubtless produced by other toxines which have not yet been separated.

The investigation of diamines has been by no means exclusively carried on by Brieger, and among others the researches of von Udránszky and Baumann demand special mention. They have recently published their results in a highly interesting and suggestive article in Hoppe-Seyler's *Zeitschrift für physiologische Chemie.*[1]

In a case of cystinuria which was under their observation for more than a year after the removal of the calculus, the patient continued to void cystin crystals throughout the whole period. But the remarkable feature of the case was that during this time also the urine contained abundance of diamines; both cadaverine and putrescine were separated by chemical methods in a crystalline form, and the penta-compound (cadaverine) was always the more abundant.

Dupré and Bence Jones were the first to separate an alkaloidal substance from urine. Since then the question has been often discussed whether the ptomaines formed by putrefaction in the alimentary canal are partly reabsorbed and excreted in the urine. Leaving out of account creatinine, there has been, however, up till now, no satisfactory evidence that poisonous alkaloids occur in normal or pathological urine. In spite of this failure to isolate such toxic agents from the urine, many authors have not hesitated to assume that they occur, but have hitherto eluded detection. This assumption is, however, no longer necessary, for in a masterly research Stadthagen[2] has settled the question by showing that the poisonous substances in urine are inorganic potassium salts.

Diamines, certainly, are absent in normal urine; they are also absent in cases of acute and chronic cystitis, and in the urine of patients suffering from scarlatina, diphtheria, typhoid, pneumonic phthisis, and other suppurative processes. The urine and the blood of dogs and other lower animals are also free from diamines.

The case of cystinuria recorded by von Udránszky and Baumann does not stand alone, for in two other cases Stadthagen and Brieger[3] have found diamines in the urine.

Cholera and cystinuria have thus one circumstance in common, the formation of diamines, and in both diseases von Udránszky and Baumann consider there is but little doubt that they are formed by the agency of microbes. The fæces of their patient were examined, and though cystin was absent, about half a gramme *per diem* of the two diamines was obtained; here, however, the tetra-compound (putrescine) was by far the more abundant; that is the opposite to what was found in the urine. This result, however, was not wholly un-

[1] Vol. xiii, p. 562.

[2] *Zeit. klin. Med.*, xv, Parts 5 and 6.

[3] *Archiv path. Anat.*, cxv, Part 3.

expected, and is certainly a strong confirmation of the view that the poisons are produced by bacterial agency; for Brieger showed that when diamines are produced, first pentamethylene-diamine, and in the later stages of decomposition tetra-methylene-diamine are formed. The penta-compound is here no doubt produced in the small intestine, absorbed in great measure, and then excreted in the urine; the tetra-compound is not formed until the large intestine is reached, and so is found in greater abundance in the fæces.

Diamines are absent in normal fæces, and in the stools of patients suffering from intestinal obstruction, typhoid fever, tuberculous ulceration of the intestines, and a large number of other diseases. Brieger and Stadthagen found them, however, in their two cases of cystinuria. So that, both with regard to urine and fæces, the three cases are identical.

The question will, however, inevitably arise, How is it that these diamines give no characteristic odour to the intestinal contents, and produce no local action on the intestinal wall? This difficulty von Udránszky and Baumann do not at present feel able to answer fully; more information is still wanting as to the quantity of diamines present in cholera, and researches on the effect of feeding animals on diamines are in progress. It is, however, probable that the bases are more greatly diluted by the urine and fæces in cystinuria than in cholera, and also that the bases are not present in the free condition but in combination. This latter view of the case is supported by the fact that both urine and fæces have an acid reaction.

Estimation of the amount of ethereal hydrogen sulphates in the urine of the same patient showed that their amount and relation to total sulphates were approximately normal. The amount of the ethereal sulphates in the urine is the best criterion we possess of the amount of putrefactive change occurring in the body. Thus, though there are no direct bacteriological observations, the conclusions which von Udránszky and Baumann draw from purely chemical experiment appear incontrovertible. These conclusions are, first, that the diamines are produced by bacteria, and, secondly, that the bacteria which produce the diamines are not those which cause the usual putrefactive changes in the alimentary canal.

Certain other deductions, however, made by these two observers we are not at present prepared to accept so fully. They say that if the formation of diamines in the alimentary canal of patients suffering from cystinuria is found to be constant it may ultimately turn out that cystinuria or diaminuria is like cholera, though to a less degree, an infectious disease. Although this suggestion is full of interest and likely to stimulate further investigation it must, we think, be patent to all that the evidence in its favour is as yet inconclusive, and the verdict must remain for the present "not proven."

THE INDIAN MEDICAL SERVICE.

SEVERAL communications have lately reached us revealing an unsatisfactory state of things in the Indian Medical Service, which, although chiefly relating to Bengal, are doubtless applicable to all of the three Presidencies. The administrative organisation of the service into civil and military, under the Governor-General's Orders in Council of January, 1880, and 1881, is not working smoothly. This particularly comes out in a recent promotion to the highest grade in Bengal, where the fourth Deputy Surgeon-General on the list, who had been many years in civil employ, was selected over the heads of three Deputies who had stuck to military work and done good service in the field. The one Surgeon-Generalship in Bengal has thus been conferred on a member of the civil branch; and it looks as if, once more, arms, in a sense, had given way before the gown, and the black had superseded the red coat. We are far from desiring to draw invidious comparisons, or of canvassing the merits of this selection, as the gentlemen concerned are quite able to fight their own battles; but we quote the incident as showing how the dual system of civil and military employ tends to introduce discord into the medical service. The promotion in question is held to indicate that in future civil and not military employment will be the passport to the highest medical position in Bengal. Yet, why should this be; the medical always has been, and is now, a military and not a civil department? In the Orders in Council alluded to it is expressly stated that: "Although the administration of the Medical Department is divided into two branches, civil and military, the medical officers will remain as now military officers, those in civil employ being only lent to the Civil Department, and liable to be recalled to military duty in the event of their services being required."

In India it has always been held that military officers in civil employ are but lent; that they remain soldiers, and are liable at any time to be called upon to take up arms in defence of an empire held by the sword. But while, in the circumstances of the case, this theory was and is clearly correct, it has sometimes in practice worked badly, and may do so again.

How, for instance, can a colonel, who may have been a civil magistrate for many years, be suddenly expected to assume successfully a military command? In a similar way is a medical officer, who for the greater part of his executive career may have been a college professor or a gaol superintendent, likely to suddenly develop, on promotion, into a competent administrator of military hospitals in peace and war? It can hardly be expected. Experience goes to show that for successful administration a previous thorough executive training is essential. On such grounds we are led to think the present dual civil and military administration will not last. The mere exigencies of the military situation will compel complete separation of the two branches.

It was in view of this contingency speedily arising that we lately expressed regret that the Indian Medical Service had not been brought within the purview of Lord Camperdown's Committee. Consolidation in the hospital administration of the European and Native armies is already, on field service, a pressing military necessity, and to prepare it for war it must be inaugurated in peace. This will involve a reconstruction of the medical services, in which the civil and military employ branches will probably be more sharply and permanently divided. The scheme, whatever it may be, will require careful elaboration by those thoroughly conversant with details; we sincerely trust the grand old Indian service, whose memories and traditions are precious to the profession, will not be touched by unskilful hands.

Reconstruction will almost certainly develop an organic union between the Medical Staff and the Indian Services, which it would probably be well to cultivate from the beginning, by instituting a one-portal system of entrance into a "Royal Medical Corps" for the whole of the Imperial armies.

THE MODERN FRANKENSTEIN.[1]

THE theory that crime and mental disease are simply the effects of criminal or cerebral atypism and brain disease, and therefore anatomically necessitated, has been very vigorously attacked in a brightly written paper which Dr. George Gould recently read before the Medical Jurisprudence Society of Philadelphia. He maintained not only that this theory is not proved, but that it is disproved by unanswerable facts and arguments, and that modern civilisation is bringing about its own ruin by worshipping the hideous creation of its own fancies. If we look for atypism, it may be that we would find it both in criminals and the insane. Why? Because we cannot find a perfectly symmetrical skull or a perfectly typical brain in the world. Are there no sane folks with atypical skulls?

"If the brains and crania," says Dr. Gould, "of the ten last dead from the State Prison, the Insane Asylum, and yesterday's railway disaster were gathered, there is no expert or set of cerebrologists in the world could either put the thirty brains back in their proper cases, or designate with any certainty to which class of the three any one belonged." If a man lies or murders his sweetheart because of cerebral asymmetry, then mere fatalism is true, and if so, the universe is a stupendous and horrifying failure.

Dr. Gould fiercely attacks a theory which would lead us to such a dreary conclusion, but he has the gravest misgivings as to whether or no we are cultivating crime and insanity; and he quotes Dr. Farr and Professor Graham Bell to show how we are contributing to race deterioration in permitting the imbecile, idle, criminal, and defective classes to breed *ad libitum*.

All lunacy and all crime have resulted, so our author maintains, from slight repetitive but always conscious departures from right living and thinking, and sound medicine has to check the departures. "The lie is not in the brain; it is in the liar. Evolution is dead against the modern Frankenstein; but Society says of its pet criminal, 'Poor fellow, he was crazy; let's build him a nice big asylum, and feed him, and hire attendants and doctors to wait on him.'" The Chinese regard insanity not as an extenuating, but as an aggravating, circumstance in connection with crime. Dr. Gould does not go quite so far as that, but he advocates the euthanasia of idiots and the asexualisation of the law-breaker and the mentally unsound. For the past five years the district medical officer of a London parish duly reported in his return to the Lunacy Commissioners every quarter the case of a pauper idiotic young woman; to his great surprise, she called upon him recently for medical treatment for her infant, and he discovered that she had been duly married, and had a fairly decent home of her own. She bids fair to increase the length of the lunatic return of that district. Yet there is no effective means of preventing this terrible evil.

Dr. Gould's paper is full of vigour and common sense, and though it contains suggestions and proposals of perhaps calculated exaggeration, we are compelled to admit that society, for its own safety, will have to deal with insanity and crime from the therapeutic standpoint as well as the punitive and deterrent.

Society must look for instructors and administrators mainly to members of our profession who have exceptional opportunities for forming just views as to the origin and transmission of insane and criminal tendencies. The best hope lies in prevention, and the rough-and-ready methods half jestingly suggested by Dr. Gould are, so long at least as society occupies its present standpoint, inapplicable. It is, on the whole, far more logical to lock up an insane murderer for life, and so prevent him from reproducing his like, than to hang him for committing a crime against the state of society of which he is one of the products. This, however, affords but a partial and imperfect remedy. The criminal class exists, and it is an evil that it is permitted to multiply itself by reproduction, but the greater evil is that it is being continually recruited from above; by the operation of disease—of alcoholism, and syphilis especially—and of unhealthy surroundings, using that phrase in its widest sense, a process of degeneration is continually at work side by side with that process of elevation which society fondly believes is the main effect of civilisation.

[1] *The Modern Frankenstein*, by George M. Gould, M.D. Chicago: The Open Court Publishing Company.

DR. PETER HORROCKS performed Cæsarean section by Sänger's method on Monday, October 21st, at Guy's Hospital. Both mother and child are progressing favourably.

AT the meeting of the Medical Society of London on Monday, November 4th, Sir Joseph Lister will give an address "On a New Antiseptic Dressing."

THE GUILD OF ST. LUKE.

THE Guild of St. Luke, a guild entirely composed of medical men, founded for evangelistic work among their patients, held this week its annual festival at St. Paul's Cathedral. The seats beneath the famous dome were fully occupied by a crowd of some two or three thousand persons interested in the work of the guild. A choir of some four hundred men and boys, contributed by the Gregorian Association, sang a fully choral service of the plain song type, in which the congregation appeared to join with hearty zest. Minor Canon Kelly conducted the service; and the sermon, on works of mercy being more a duty than the practice of self-denial, was preached by the Rev. Dr. Dover, of Kennington.

"RED-TAPE" AND POOR-LAW ADMINISTRATION.

AN application which was made some days ago to the magistrate at the Dalston police court illustrates very forcibly to what an extent poor-law officers will sometimes allow their respect for "red-tape" to obscure their better judgment. In the case to which we refer a poor woman applied for an order for the admission of her husband to the Hackney Infirmary, but in spite of the fact that the medical officer had ordered the removal of the man to the infirmary, and that he lived within the Hackney Union, the Poor-law officials continued to refuse to take him on the ground that the family really belonged to Bethnal Green. This system of battledore and shuttlecock is sufficiently unsatisfactory when the applicants for relief are in good health, but in the present instance

the man was considered by the medical attendant to be in a dying condition. He was a bootmaker, and had, it is stated, been working at his trade until his strength failed him. He managed to do the finer parts of the work, but his wife had to do the rough work. "In his last attempt to work he fell fainting from his stool." "The wife, with only five shillings a week, derived from a club, had to provide nourishment for her dying husband and procure food for herself and children." "In my opinion," adds the medical attendant in a letter which he has addressed to a contemporary, "it is a matter of the utmost importance that the man should at once be placed where he can have proper treatment and nourishing food, and it is rather hard that the patient's life should be endangered while the parish authorities are squabbling over a question of red-tape." It is to be hoped that the Local Government Board will investigate the matter, and see that the spirit rather than the letter of the Poor Law is carried out.

THE ST. MORITZ AID FUND.

MRS. MAIN, in a letter to the *Times*, draws attention to a fund, raised principally among those who have profited by residence at St. Moritz and other Alpine sanitaria, to assist invalids of insufficient means who are recommended by their medical advisers to winter at St. Moritz. We understand the fund has been at work for two years, and has given excellent results, and therefore commend it heartily to our readers. The administrators of the fund aim more especially at restoring health to the bread-winners of families, and hence give preference to male applicants; but ladies are also assisted. Patients who are likely to be eligible must apply, through their medical advisers, to one of the following physicians—namely, Dr. Symes Thompson, 33, Cavendish Square, W., Dr. Theodore Williams, 2, Upper Brook Street, W., or Dr. William Ewart, 33, Curzon Street, W., who will examine cases and pronounce on their suitability on medical grounds, and put the applicants in the way to satisfy the committee in London of the real necessity for assistance, which being done, grants will be made to the extent of the funds available.

INFECTIOUS DISEASES IN THE THAMES.

DR. W. COLLINGRIDGE, Medical Officer of Health for the Port of London, in his half-yearly report strongly recommends the erection of a small isolated building at the Port Sanitary Hospital for the accommodation of small-pox patients, who are at present treated in the same building as those suffering from other diseases. Referring to the dangerous position of training ships, which are without means of isolating infectious diseases in cases of outbreak, he recommends the establishment of a small isolated hospital for each ship. Reference was made to an outbreak of chicken-pox among the crew of a vessel after her arrival in London, three weeks after the first patient had apparently recovered, in consequence of which application was made to the Local Government Board to add chicken-pox to the list of disorders regarding which the Port Sanitary Committee have power to make regulations.

THE INFANT LIFE PROTECTION ACT AND THE ADOPTED CHILD.

MR. PLOWDEN, the magistrate of the West London Police Court, appears to have taken a most extraordinary view of the provisions of this Act as regards an "adopted" child. It appears from the evidence given in a case recently before him, that Laura E. Towne, a young woman residing at Hammersmith, having already two infants in her charge, received a third from an unknown woman at Victoria Station, in answer to an advertisement, being paid £20, with a promise of a further sum of £10. She had been warned by the inspector of the County Council that she was not allowed to keep "two or more infants" without being registered under the Act. She received the child to adopt, and then passed one of the others on to a friend. The committee of the Council declined to register her, as they considered her means were insufficient to nourish and keep the children properly. She stated that she could not find the parents of the child that she had on weekly payment, and a summons was taken out against her, Mr. Plowden, after hearing the case, said the defendant was allowed to keep one child, and he thought with regard to the other that she stood in the place of a parent. He dismissed the summons, remarking that the defendant was deserving pity. We are greatly surprised at the short-sighted view of the magistrate, and at his inability to appreciate the meaning of the Act. It is expressly stated that "it shall not be lawful for any person to retain or receive for hire or reward in that behalf more than one infant, and in case of twins more than two infants, under the age of 1 year, for the purpose of nursing or maintaining such infants apart from their parents." We have repeatedly shown that the adoption of infants for "reward"—for a money payment in one sum—is the most criminal form of baby-farming, one for which legislation is urgently called for, and we hope that the County Council will shortly move in this matter, as they have all the information necessary in their possession.

THE NEW LUNACY PRACTICE.

THE useful paper, which we publish on page 916, by Dr. Mickle, read before the South Eastern Branch, at Reigate, on the provisions of the Lunacy Act, is the work of a physician thoroughly acquainted with the genesis and working of the provisions of that Act, and will be found extremely valuable to practitioners. Dr. Mickle lays stress on all those details of the Bill which introduce modifications into the existing practice, and the hints which he gives, as well as the information he conveys, are stated in such condensed detail, that the paper deserves and will repay careful study by every practitioner. It will indeed probably be found useful to retain it for some months to come as a guide in everyday practice and for the contingencies which are likely to arise in dealing with lunatic patients under the emended state of the law. It will be seen that in many respects the position of the medical practitioner is greatly improved as compared with that which previously existed; but, nevertheless, certain precautions will have to be taken, and great attention should be paid to all the instructions laid down as to the giving of certificates, the filling-in of schedules and other matters of everyday work. A very interesting discussion took place at the Branch, which showed that medical men are, very justly, chary of taking any action whatever under the Lunacy Acts, and although their risks are far less now than they have previously been, nevertheless strict caution will be well repaid by a feeling of relative security.

A NEW SOURCE OF MORPHINE.

IT was announced a few months ago that MM. Adrian and Bardet had found in *Eschscholtzia Californica*, a plant indigenous in California, an alkaloid which they believe to be identical with morphine. Dr. W. P. Gibbons, of Alameda, California, has contributed a note (to the *Occidental Medical Times*) in which he states that it was described by Chamisso in 1820, and has since been found over most of the Pacific Coast, Idaho, and other localities west of the Sierras. "It is," he writes, "among the first of our native plants to respond to the stimulus of spring, and the last to succumb to winter's breath. Its rich flowers are so dense in some localities as to appear like a sheet of burnished gold. It is a low succulent plant, from six inches to a foot high, branching, the flowers being from one to three inches in diameter." It belongs to the natural order *Papaveraceæ*; and Dr. Gibbons quotes Professor E. C. Green as the authority for his statement that there are five dis-

tinct species. Waltz obtained two alkaloids from the entire plant, one of which was a bitter alkaloid, the other an acrid one; he also found a small quantity of chelerythrin, the chemical composition of which is $C_{39}H_{17}No_8$. Dr. Gibbons, who experimented some years ago with the plant without any definite results, questions the statement that the alkaloid which it contains is identical in its physiological action with morphine.

NOSTRUMS FOR INEBRIETY.

THOUGH the failure of all alleged "specifics" in the treatment of inebriety has been shown to have been as marked as in the case of most other diseases, some of these wonderful panaceas seem to bear a charmed life, and keep every now and again cropping up in a fresh place. Not one of these nostrums has attained a greater celebrity than "the bark cure." All over the world the marvellous "cures" by red cinchona were blazoned forth in astonishing profusion. Even now, in generally well-informed and philanthropic circles the presumed virtues of this "unfailing cure for drunkenness" are loudly proclaimed. Dr. Earle, of Chicago, who has had a large experience of inebriates, has never seen a cure from the use of this vaunted remedy, and not once has he found that it disgusted the patient with the taste of alcohol. *Per contra*, he has seen this "infallible specific," which is a strongly spirituous preparation, containing at times as much as 48 per cent. of proof spirit, directly cause the relapse of a considerable number of reformed inebriates.

THE FIRE DURING THE SURGICAL CONGRESS.

THE alarming interruption of the Surgical Congress caused by fire breaking out in the amphitheatre of the Medical School, mentioned in a former number of the JOURNAL, was, according to the *Bulletin Médical*, rather the result of carelessness than accident. That journal states that the architect of the Medical Faculty had been warned that the heating apparatus was out of order, and had been authorised to make all necessary repairs. On the day of the accident the stove was lighted for the third time only, when it became overheated; a curtain near it caught fire; the flames spread, resulting in the destruction of valuable property. Two years ago a similar accident occurred from the same cause. M. Le Dentu, who was reading a paper before the Congress when the cry of fire was raised, resumed it two days subsequently.

CUTTING OFF WATER.

A SOMEWHAT curious case was recently heard at the Westminster Police Court. It appears that three houses in the Chelsea Water Company's district were supplied with water through one communication-pipe. At one time all the rates were paid by one man in one interest, but for a considerable period separate ratings had been made for each house. As the rates of one of the houses had been in arrear for some time the company cut off the supply, but allege that in doing so they were not aware that the other two houses not in arrear were supplied from the same service-pipe. The occupant of one of these houses applied to Mr. Sheil for process against the company, and pointed out that the provisions of Mr. Forrest Fulton's Act (Water Companies (Regulation of Powers) Act of 1887) limiting the powers of water companies to cut off the tenant's water supply where the rate is paid by the landlord, were applicable to his case. It does not appear whether the water-rate of the house which was in arrear was payable by the landlord or not; but, presuming it to be so, the water company undoubtedly rendered itself liable to a fine of £5 for every day on which the water remained cut off. With regard to the other two houses, although they were clearly entitled to their water, it is doubtful if Mr. Fulton's Act gives them any remedy. The company has power, under the regulations of the Metropolis Water Act, to compel owners to provide separate services for each house, and it is only right that these powers should be enforced so as to protect the unoffending occupiers of houses for which the rates are paid from the grievous penalty of having their water cut off for their neighbours' faults.

VERMIN KILLERS.

THE recent murder by a father of his daughter in Derbyshire by means of strychnine suggested to Mr. Alfred H. Allen the desirability of investigating the preparations sold as vermin killers. It will be remembered that the man gave his little daughter some blue liquid to drink, and that shortly afterwards she died with all the symptoms of poisoning by strychnine. Mr. Allen found that in addition to some ten well-known vermin killers, there were some half dozen others made up by the various dealers which were sold largely, and all of which contained strychnine. With three exceptions, they were coloured blue, generally by ultramarine, but sometimes by Prussian blue; of the exceptions, one was white, one flesh coloured, and one was mixed with soot. He strongly recommends chrome green (oxide of chromium) as the most suitable pigment for colouring vermin killers, the points in its favour being that it is a bright green pigment, quite insoluble in water and in dilute acid and alkaline liquids, and it is wholly permanent under all imaginable conditions. It would remain unabsorbed if taken internally; hence, if it were added to preparations of strychnine, etc., in a definite and invariable proportion, an estimate of the minimum amount of the poison taken by the deceased person could be arrived at by determining the quantity of chromium contained in the alimentary canal, even though the poison itself had been wholly absorbed or decomposed, and this could be effected with equal ease and certainty after prolonged inhumation, or even after cremation of the body.

MARGATE SEWERAGE.

ALL Londoners will be pleased to realise the fact that the sewerage question at Margate has been at last settled, and that the town which, amongst sanitarians, has for many years past occupied an unenviable notoriety, will in all probability soon be restored to its legitimate position as a well-known health resort. Our readers will remember that Mr. Baldwin Latham's scheme to carry the sewage out to sea, and to discharge it at Foreness Point, two miles east of Margate, was carried in preference to Mr. Bailey Denton's scheme of intermittent filtration on the chalk hills near at hand. We do not propose now to enter into the merits of these two rival schemes, the question having been finally settled. All we will do is to express the earnest hope that the anticipations of the first named engineer will be verified, and that the sewage will never be washed back on to the shore to the injury of the sea bathing, for which Margate is so famous. Under any circumstances the British public may rest assured that all the skill which modern science can bring to bear in the sanitary arrangements of the town itself will be applied by Mr. Baldwin Latham, and that visitors will be able to resort there after this winter in perfect security; that they will not again be poisoned by the exhalations of unventilated cesspools and general want of draining. We shall be better able to form an opinion upon the efficacy of Mr. Latham's method of disposal after a summer's trial.

AN UNNECESSARY INQUEST.

AN altercation between coroner and the medical witness is always unseemly, but it is especially regrettable when the coroner is a medical man and of long experience, but is nevertheless at fault; such misunderstandings not only cast discredit on the medical profession, but they tend to bring the coroner's court into contempt, and we think it is most desirable that coroners, and especially medical ones, should be exceedingly careful not to hold

unnecessary inquests. An instance in point is reported as having occurred at the Radcliffe Infirmary, Oxford, where a young woman, aged 18, was admitted with cerebral symptoms after an illness of two days or less, and died some sixteen hours after her admission. The friends granted a *post-mortem* examination, which showed death to have been due to cerebral embolism, consequent upon old mitral disease. The coroner for the borough, acting, we must suppose, on some very imperfect and incorrect information, decided upon holding an inquest, which, of course, the evidence showed to have been wholly unnecessary, for it surely cannot be pretended that every case of rapid illness proving fatal is of necessity to be investigated at an inquest. In this instance it is quite clear that by no possibility could any blame be attached to the hospital authorities; the diagnosis was as clear as it could possibly be, the friends consented to a *post-mortem* examination, and even had they not consented the resident medical officer would not have been justified in refusing to give a certificate of the cause of death in so straightforward a case of cerebral disease.

FLUSHING THE SEWERS.

WHETHER the outbreak of typhoid fever in the St. George's Hanover Square District was attributable to foul emanations from the sewers or not, there can be but little doubt that the metropolitan sewers are very insufficiently flushed during periods of dry weather. No one who is acquainted with the sewers will deny that in many cases they are not self-cleansing, and become, therefore, when rainfall is absent, to a considerable extent silted up with foul deposits, which putrefy and give rise to an escape of offensive gases through the street ventilators and untrapped gulley holes. That these escapes of sewer gas are at times actually provocative of disease to susceptible persons, as well as an offensive nuisance to those who are insusceptible, is no very difficult matter of belief, judging from past experiences in disease causation. There is, indeed, no reason why the sewers of London should not be as well flushed as those of Liverpool, for instance. In Liverpool, according to a report of Dr. Hope, the assistant medical officer of health, all main sewers that are not self-cleansing are periodically flushed by large movable tanks placed over a manhole on the sewer. These tanks contain 1,800 gallons of water, and discharge their contents into the sewer through a valve at the bottom of the tank in twenty-eight seconds. All passage sewers —that is, sewers in the rear of premises receiving the drains of those premises (an arrangement which obtains in all but the centre of the old parish of Liverpool)—are flushed four times annually, by hose or otherwise, and all private drains are flushed twice annually free of cost to the occupiers, and oftener if required, on payment of a small fee. In this way 107,000 houses, exclusive of offices, stores, etc., are visited twice annually. Such work could be undertaken as well in London as in Liverpool, but, owing to the parsimonious spirit with which sanitary work is still regarded in London, the staffs of the parish officials are utterly inadequate to deal with it.

ELECTRIC SHOCK.

IT is not very often that a man who accidentally places himself in the circuit of a powerful electric current survives to relate his sensations. Mr. William Sharpe, the manager of an Electric Light and Motor Company at Oakland, California, however, recently escaped owing to a combination of happy accidents, and his experiences will be read with interest.[1] He was engaged in measuring the resistance of the electric light circuits. All the terminals were secured to binding posts on a switch-board, on which the electric motor circuit was also connected. The latter was fed by two Weisse dynamos, coupled in series, the maximum voltage of each being 750 volts. At the time of the accident these were supplying about 40-horse power, representing a current of 20 ampères. Thinking that the contacts at the binding posts were not perfect Mr. Sharpe looked round for something more suitable, and selected a switch line that was hanging up. One end of this was, without his knowledge, connected to the end of a wire forming a loop running a 12-horse power motor, while the other end was fastened in a binding post on the switch-board. Being unaware that this motor was switched into the regular motor circuit, he proceeded to slack up the set screw, holding the wires together, with a screwdriver. As the wires did not separate, he took hold of one in each hand and pulled them apart, thus placing himself directly in the circuit through which the whole force of the current had to pass. He at once realised that he had made a terrible mistake, and graphically describes his feelings:—"My hands were paralysed, my arms were as stiff as bars of iron, and the cords stood out in large bunches. My head was turned round in the direction of the current, (towards the right shoulder, the current entering by the left hand and passing out through the right), my eyes bulged out with burning pressure and glazed over; then I lost my senses and fell to the floor." The fall happily pulled one of the wires out of his hand, and so broke the circuit. He at once recovered so far that he began to attempt to recouple the wires, but was stopped. He was, however, sufficiently collected to give the necessary directions for opening the circuit. The time of contact was not less than five nor more than eight seconds. There was no pain to speak of, not more than would be felt from a strong galvanic battery. His hands and fingers were burnt, but, owing to the fact that they were moist, and that he had a firm hold on the wires, the burns were slight. The shock to the nervous system was very severe, and two months later the effects were still evident. The voltage in the circuit, measured the day of the accident, and again the following day at the same time, was between 1,400 and 1,440 volts. Owing to the increased resistance of the interposed body, it is thought that the voltage of the dynamos was probably raised to their utmost, or 1,600 volts. It seems a marvel that he was not instantly killed. The explanation offered is that the current from the Weisse dynamo is practically continuous, and there is a complete absence of the "kick" or alternation that makes a "death current." In the Weisse dynamo there are eighty sections in the armature, in the Brush eight sections, and in the Thomson-Houston only three. All these currents are interrupted, but in the Weisse the breaks follow each other so closely (say 80 × 1,200 a minute), that they are not felt in the current.

[1] *Occidental Medical Times*, October, 1889.

A RAILWAY HOSPITAL.

THE first hospital established by a railway company for the benefit of its *employés* is said to be the "Central Pacific Hospital" at Sacramento. It was built in 1868 by the Southern Pacific Railway Company, at a cost of 64,000 dollars.[1] It is a four-storeyed building, with a wide verandah, and contains six wards and eight private rooms, in all, accommodation for 125 patients. The six wards are each 44 feet in length, by 23 feet in breadth. Those on the first floor are 14 feet in height, on the second floor 12 feet, and on the third floor 12 feet 6 inches. It is well appointed and liberally maintained. Any *employé* who is attacked by illness or suffers from injury while engaged on the company's service is entitled to medical treatment or admission for a period not exceeding the length of time he may have been in the employment of the railroad company. None are entitled to medical treatment for the results of enthetic infection, intemperance, bad habits, vicious act, hereditary, constitutional, or previous infirmity. These rules, however, have always been most liberally construed. In 1888 the daily average number of beds occupied was sixty-three, at a cost of 1.30 dol. for each bed, the total cost of maintenance per diem

[1] *Occidental Medical Times*, October, 1889.

being 76.37 dollars. In order to meet the expenses in connection with the institution, 50 cents monthly is deducted from the pay of every *employé* except steamboat hands and Chinamen. The staff of the hospital consists of a surgeon, two consulting surgeons, a resident assistant (who must be a qualified practitioner), a dispenser (who is also steward), and a clerk. Out-patients are attended at the hospital, and those preferring to remain at home are visited at their houses. In 1869 the number of cases treated at the hospital was 306, the number of patients visited at their houses being 779. In 1888 the figures were 1,184 and 3,342 respectively.

SICK OR CRIMINAL?

PUBLIC attention ought to be forcibly directed to the report of the Commissioners of Prisons, which has lately been issued, in which the medical officer draws attention to the unpleasant fact that persons are constantly sentenced to imprisonment in a diseased and even dying condition, and are unfit for penal treatment or any punishment whatever. Many instances from the provinces are given in proof. We, however, hear on good authority that in the Metropolitan Police district the precautions that were formerly taken to obviate this, namely, by calling in medical aid to all insane, sick, or infirm prisoners, have, since the reign of Sir Charles Warren, been relaxed or curtailed. During his short, but eventful, career at Scotland Yard a veritable reign of martial law prevailed, and, whether or not any steps have been taken by his successor to change this state of things, it is a fact that the spirit of Sir Charles Warren survives. Where police surgeons formerly received ten calls to persons detained at police stations, requiring medical aid, some of them now receive about one. It will scarcely be credited that in cases of persons found wandering, being lunatics or of unsound mind, the police inspectors no longer call in medical aid. Therefore it may happen that a person escaping from his room in a state of acute mania from typhus fever, or a person with sunstroke or delirium tremens, may be bundled off to the magistrate and summarily committed without having been seen by a medical man. This is no fancy picture; such cases have occurred and, no doubt, will occur again. The rigorous red-tapeism in regard to medical aid, initiated in the time of Sir Charles Warren, still prevails, and it should be brought to the notice of the present more enlightened and less arbitrary Commissioner. Many of the instances given in the report of the Commissioners of Prisons have occurred in country districts; so it is clear that gross carelessness or ignorant red-tapeism is not confined to the London police area.

SUSPENSION IN LOCOMOTOR ATAXY.

AT the thirteenth Congress of the Italian Medical Association, held at Padua from the 22nd to the 27th September, Dr. G. Bianchetti related his experience of the suspension treatment in tabes dorsalis and other nervous diseases. Eight ataxic patients, of whom six were men and two women, were treated by suspension alone. In three of these cases the treatment had to be discontinued, owing to the fact that it produced amaurosis, in two of them after five, and in the other after seven, suspensions, none of which exceeded two minutes. Visual power was distinctly impaired after each suspension. In four of the remaining five cases, on the other hand, "marvellous results" were obtained. The number of suspensions varied from twenty to fifty-two. Lightning pains, gastric and vesical crises, motor incoordination, and impotence all disappeared, and the patients gained in weight from three to eight pounds. The vertebral column was carefully measured during suspension, and was found to be lengthened from two and a half to four centimètres. Dr. Bianchetti also tried suspension in some cases of spastic paralysis, paralysis agitans, impotence caused by masturbation, and incipient progressive paralysis, but without any effect. Dr. Marina gave the results of his experience in twenty-one cases of tabes, besides a few of paralysis agitans, etc. In one-half of the ataxic cases, suspension was followed by marked relief of the symptoms, but in the remainder the pains were made worse. He confirmed Dr. Bianchetti's observation as to the bad effect produced by suspension on the optic nerve. On the other hand, in one of his cases it seemed to have a good effect on the auditory nerve. Dr. Marina noticed that better effects were produced by suspension in persons of small stature and light weight. In connection with Dr. Althaus's recent statement as to the restoration of the patellar reflex (JOURNAL, October 19th, p. 872), it is interesting to note that in one of Dr. Marina's cases, after fifty suspensions, the knee-jerk could, after five or six taps, be induced more violently than in the normal state, although before the treatment it was quite inert. In the non-tabic cases, suspension had no effect whatever. It may be added that a case of locomotor ataxy in which death was caused by suspension was not long ago reported in an Italian medical journal.[1]

THE BACILLUS OF HERNIAL INFECTION.

M. CLADO, inspired by the theories of M. Verneuil, read a paper on the bacillus of hernial infection. Professor Verneuil, in 1861, stated that in the fluids contained in the hernial sac irritating substance could be detected. Quite recently M. Clado examined the contents of a hernial sac during operation, and detected the presence of numerous bacilli. The patient died one hour after the operation, and the same bacilli were found in the blood, in the serous fluid of the peritoneum, in the viscera and especially in the spleen. The portion of the intestine which was strangulated was examined, and the same microbe was detected in masses in the glands, blood and lymphatic vessels. The cultivations made with this bacillus furnished one of a special kind, which cultivated at 28° C. (82.4° F.) was innocuous, but cultivated at 37.40° C. (98 7° F.) caused death in a few hours. Inoculations made with the blood of the patient also produced the same result. Inoculations were made with the blood and serum of the animals which had been inoculated from the patient; guinea-pigs and rabbits succumbed; dogs vomited and were ill, but recovered. Microscopic examination of the blood and serum of the animals gave the same results as that of the serum and blood taken from the patient. M. Clado concludes that death in cases of hernia results from invasion of the animal economy by a microbe which properly belongs to the surface of the intestine.

DOES SALTING MEAT DESTROY BACTERIA?

PROFESSOR J. FORSTER, of Amsterdam, has published[2] an account of some investigations made in his laboratory by himself and Heer de Freytag, having for their object the determination of the effect of the common process of salting or pickling meat on various forms of bacteria. It was found that cholera bacilli were soon destroyed under the influence of abundance of salt, usually in a few hours; but that typhoid bacilli, pyogenic staphylococci, the streptococci of erysipelas, and the bacilli of porcine infectious diseases frequently retained their vitality for several weeks, or even months, in spite of the presence of abundance of salt. The same was also true of the bacilli of tubercle. In some cases these bacilli were found alive after being two months in pickle, their vitality being proved by their capacity for infecting new cultures. Portions of the viscera of a tuberculous animal, preserved for a considerable time in salt, were found capable of causing tuberculosis in a healthy animal when introduced into its peritoneal cavity. Experiments on the spleen of an animal which had died of malignant anthrax showed that salt possessed the

[1] *Riforma Medica.*
[2] *Weekblad van het Nederlandsch Tijdschrift voor Geneeskunde.*

power of destroying the bacilli of this disease in about eighteen hours. These, as well as cholera bacilli, were found to require 7½ per cent. of salt to destroy them. From these facts it would appear that salting or pickling has but little destructive effect on many of the more common forms of bacilli liable to be found in diseased meat.

DEATH OF M. RICORD.

THE death is announced of Dr. Philippe Ricord, of Paris, in his eighty-ninth year. Few men have enjoyed a more world-wide reputation for a longer period of years, and undoubtedly, when in the zenith of his fame, he contributed largely to the reputation of the Paris School of Medicine, and drew great numbers of students to attend his teaching. Philippe Ricord, although essentially a Frenchman in reputation, in sentiment, and in wit, was born in Baltimore of French parents, and was educated there, chiefly by an elder brother. He did not reach Paris until the year 1820, when he was already twenty years old. His first intention was to study law, but after attending one of Dupuytren's lectures, he resolved to choose medicine. During the five years he was studying medicine, he maintained himself by teaching English, and for six years afterwards he practised near Orleans as a village doctor. It was in 1831 that he obtained by competition the post of Surgeon to the Hôpital du Midi, and commenced his brilliant career as an expounder of new doctrines in the classification of enthetic disease and of its sequelæ. Of commanding stature, eloquent, witty, laborious in research and original in thought, he became the chief of a most famous school. Although his doctrines have since been greatly shaken, they marked a new and fruitful departure in his own department of science. Gay, mundane, luxurious, fond of magnificence, and careless in the administration of his affairs he fell repeatedly into money difficulties, notwithstanding his immense practice and great income. From these, however, he was relieved, when he handed over to his friends the management of his affairs, During the siege of Paris he served as an ambulance surgeon, taking an active part in the control of the ambulance of Paris. For this he was made Grand Officer of the Legion of Honour. After the raising of the siege of Paris he, together with Dr. Demarquay, came to London to bring the tokens of thanks and expressions of gratitude and fraternity for the sympathy and assistance given by the profession in England on that occasion, and for their marks of affectionate kindness to their profession in France. His last public appearance in this country was probably at the great banquet at which he was entertained along with Dr. Demarquay. Up to the last he retained, at a most advanced age, singular vivacity, and ever among many infirmities showed a marked degree of youthful vigour of mind and body. Mr. Ernest Hart writes: "During each of my last visits to Paris I made a point of calling upon my old friend Professor Ricord, with whom many of my happiest recollections of professional life and friendship in Paris were connected for twenty years. He was full of wit, brimming over with kindness, eager to hear all the news of his old friends in London, and thoroughly *au fait* with the doings, scientific and personal, of the leading men in the profession. I spent some delightful hours with him on each occasion, and bore from him many messages and warm greetings to his English friends. Amongst the last acts of his life was the ascent of the Eiffel Tower, and his death was hastened by his coming from Versailles to Paris to vote for the Republic in very inclement weather. Having to wait on the platform, he contracted a severe cold, and was attacked with double pneumonia. Only a few days before his death, one of his friends, on seeing him, said to him: '*Mais, mon maître, vous avez bonne mine.*' His characteristic answer was: '*Mon ami, je ne vous conseille pas de prendre des actions dans cette mine là.*' A charming *calembour*, which showed that to the last he retained all the brightness of his inimitable wit and gaiety of spirit. His kindness to young men, his generosity to the poor, his hearty welcome and unbounded liberality to foreigners, and his cordial hospitality to all English visitors did much during all his life to render him and his profession popular with all visitors."

PAYMENTS BY COUNTY COUNCILS IN LIEU OF DISCONTINUED GRANTS.

FOR some months past there has been a growing anxiety amongst public vaccinators owing to the non-payment of the awards which they had reason to believe had been made to them for successful vaccination after inspection by the inspectors of the Local Government Board. Up to March last these awards were paid from time to time direct from the Imperial Exchequer, but as the result of the Local Government Act, 1888, the grant in aid for this purpose has been discontinued, and in future the awards to public vaccinators are to be paid on the certificate of the Local Government Board by the County Councils out of the new Exchequer Contribution Accounts, to which the sums received by the Councils in respect of the duties on Local Taxation Licences and the Probate Duty Grant are under Section 23 of the Act to be carried. From the circular which was issued by the Local Government Board on October 16th to County Councils respecting the discontinued grants, the reason for the delay to which we have referred is not apparent, unless it be the difficulties which have necessarily arisen in apportioning the payments to be made by the different counties in those cases in which unions extend into more than one county. But we infer from that circular that such delay as has recently occurred in this matter will probably not take place in the future. Another point interesting to medical men, and dealt with in the circular to which we have referred, is the payment in respect of the salaries of medical officers of health Section 24 (2 c.) of the Local Government Act provides that the C uncil of each county" shall pay to every local authority, for any area wholly or partly in the county, by whom a medical officer of health or inspector of nuisances is paid, one-half of the salary of such officer where his qualification, appointment, salary, and tenure of office are in accordance with the Public Health Act, 1875, or any Act repealed by that Act; but if the Local Government Board certify to the Council that such medical officer has failed to send to the Local Government Board such report and returns as are for the time being required by the regulations respecting the duties of such officer made by order of the Board under any of the said Acts, a sum equal to one-half of the salary shall be forfeited to the Crown, and the Council shall pay the same into Her Majesty's Exchequer, and not to the said local authority." The Board have decided that, as the payments to be made by the Councils on account of these salaries will be in respect of the twelve months ending September 29th in each year, the Board will inform each County Council prior to the end of October in each year of the cases, if any, in which they propose to certify as to default on the part of any medical officer of health. There ought, however, to be very seldom any occasion for this extreme step to be taken, as a medical officer of health ought to have no difficulty in making before the end of September the annual report which is due from him at the beginning of the year.

A CASE OF LEPROSY IN ESSEX.

THE following particulars of what is regarded as an undoubted case of leprosy has been furnished us by Mr. A. W. Wallis, M.R.C.S., L.S.A., of Brentwood, under whose care the patient is:—H. O., aged 51, a sea captain, is married, and has two children, aged 7 and 3 years, both fine healthy boys. He states that he fol-

lowed a seafaring life from the age of 15 up to the year 1878. He resided at Cape Town seven years from 1857 to 1864; during that time he was engaged in the coasting trade. He visited Robben Island, but never landed there, and does not remember ever coming in contact with any lèprous cases. After leaving Cape Town he traded between the Indian, Chinese, and Australian ports up to 1878, when he came to England, and shortly afterwards commenced business as a publican in Essex. He subsequently went to London, and took a dairy business. About five years ago he began to suffer acute shooting pains in his feet, which in time commenced to swell and to lose some of their sensibility. These symptoms continued for several months, and about three years ago he was admitted into the German Hospital for six months; during that period several pieces of bone were removed from his toes. In March last his left great toe was amputated. Two years since pains similar to those he experienced in his feet commenced to be felt in his hands, followed by numbness of the fingers, so that several times he burnt them without being conscious of pain. About this time, also, his eyes began to fail him, and he went to Moorfields Hospital. The sight of the left eye is now completely lost, but with the right he can distinguish the shadowy outline of objects close to him. His face presents a swollen, congested, and brawny appearance. The skin across the forehead and eyebrows more especially is thickened, and distinctly elevated. The trunk and upper arms are dotted here and there with bronze-coloured elevated patches of skin, more or less anæsthetic. The hands present a very distorted appearance, the fingers being stiff and contracted; the phalanges of several of them have disappeared, either by absorption or ulceration. The nails remain intact. The feet also are very unsightly. The first and second toes of the right foot, he says, were removed in the hospital, the remaining ones are mere rudiments, with the nails intact; the left foot bears similar characteristics, but in a less advanced degree. The poor man appears cheerful under his affliction, and at present suffers no pain. He eats and sleeps well. He says he always lived well as a sailor, was temperate, and never partook unduly of either fish or salt meat. His parents (Germans) were very healthy and lived to a good old age.

SCOTLAND.

EDINBURGH SCHOOL OF MEDICINE FOR WOMEN.

THE winter session of this School was opened on October 16th by an inaugural lecture delivered by Dr. A. W. Hughes, Lecturer on Anatomy. The Chairman of the School, Dr. G. W. Balfour, F.R.C.P., presided. Twenty-two students are at present in attendance.

OPENING OF THE EDINBURGH UNIVERSITY UNION.

THE Edinburgh University Union has at last been thrown open to the students. In the presence of a numerous and fashionable company the buildings were formally inaugurated by the Chancellor of the University, Lord President Inglis. The Marquis of Lothian, Her Majesty's Secretary of State for Scotland, in his capacity of Lord Rector, received the institution on behalf of the students. The Lord Chancellor, in congratulating the students on the happy culmination of the hopes of generations of students, urged strongly the desirability of the freest and most perfect intercourse amongst all classes of students, and expressed the opinion that all obstacles which might seem to prevent the possibility of the younger or poorer students joining the Union should, as much as possible, be removed.

CHANGES IN THE EDINBURGH MEDICAL SCHOOL.

DR. ALEXANDER KEILLER has, after long years of untiring work in the service of the Edinburgh Maternity Hospital, tendered his resignation of the post of obstetric physician. The managers, while accepting the resignation, have appointed Dr. Keiller consulting physician to the institution. The vacancy thus made has been filled by the election of Dr. Berry Hart, who has for years fulfilled most efficiently the duties of assistant-physician. The managers of the Royal Infirmary having resolved that it was desirable to appoint an additional assistant-surgeon to the infirmary, their choice has fallen on Mr. J. Shaw M'Laren, M.B. The changes and additions on the surgical side of the house have thus brought the Royal Infirmary fairly in touch with the younger members of the profession in the city, Mr. M'Laren, the youngest of six assistant surgeons, having graduated in 1883. The other candidates for the office were graduates of later date still. On the medical side of the house the order of affairs presents a remarkable contrast. The youngest assistant-physician graduated in 1869, while the senior assistant obtained his Doctorate of Medicine in 1862. Apart from the gynæcological department, which is perhaps more closely allied to the surgical than the medical side, there are only three assistant-physicians, whose duties are largely limited to the out-patient department. There can be little doubt that, in the interests of the patients and, more especially, in the interests of the institution from the teaching point of view, great advantage would be obtained by a remodelling of the system, whereby the abundant medical material of the hospital might be rendered available, without detriment to the patients, to the smaller sections of the overgrown cliniques into which the medical half of the infirmary is now divided.

THE SALE OF UNSOUND MEAT.

A DECISION important to sanitary authorities has just been given by Lord McLaren in a case appealed from the Glasgow stipendiary magistrate. A cattle salesman was fined for having in his possession, with a view to sale, four carcasses which were unfit for human food. The salesman pleaded that he did not intend to sell the carcasses for food, but the magistrate held that the statute struck at the sale of such carcasses for any purpose whatever. Lord McLaren holds that the statute clearly limits the jurisdiction, founded on seizure, to articles intended for human food, and therefore that the defence was a good one. He therefore suspended the conviction, and ordered the fine that had been incurred to be repaid.

OPENING OF THE MEDICAL CLASSES AT ABERDEEN.

THE medical classes of the University of Aberdeen were opened on October 18th. The actual number of those beginning the medical curriculum for the first time this session is not yet with accuracy known. But there is evidence that the popularity of the school is still on the increase.

THE PRACTICAL ELEMENT IN MEDICAL EDUCATION.

PROFESSOR SMITH-SHAND, of Aberdeen, in addressing his class at the opening of the session, discussed the return to the old apprenticeship system advocated by Mr. Wheelhouse, and held that such a step would be a backward one. He stated that he had a strong inclination in favour of a curriculum which would embrace five years of professional study, and advocated a sound and liberal preliminary education as a powerful help to lighten the weary course of some towards the graduation goal.

ENLARGEMENT OF UNIVERSITY BUILDINGS AT ABERDEEN.

PROFESSOR STEPHENSON, in his address to the Aberdeen students, dwelt, amongst other things, on the need of further university extension, especially in laboratory accommodation, expressing his opinion that the generosity of the public, when once it was educated as to the needs of the university, was likely to be of more

value to it than the niggardly donations unwillingly and tardily given by any Government. He pointed to the highly honourable position held by the Aberdeen medical graduates in the Netley medical school, and stated that 34 per cent. of the names first on the list were those of Aberdeen men—a larger proportion than that claimed by any other school. Professor Cash pointed out that if any redistribution of subjects were made in the future a certain part of pure materia medica should be relegated to the departments of chemistry and botany, in order to leave time for the remaining part of materia medica, as well as therapeutics and pharmacology, including toxicology, to be exhaustively dealt with by a professor of materia medica. He also drew attention to the alterations and extensions taking place at present in his own department and in others. These alterations and extensions are rapidly being pushed forward, and it is expected that the professors of physiology and zoology will occupy their commodious rooms in a few weeks. When completed the University will be possessed of a new suite of apartments, including lecture-rooms, private laboratories, practical class-rooms, and museums; and also, in addition, bacteriological laboratories, animal observation and sterilising rooms, as complete and perfect as any in the kingdom; and we may confidently look for renewed activity and original work from those who direct the various departures.

COMPARATIVE PATHOLOGY IN ABERDEEN.

Professor Hamilton devoted the first lecture of the present session to the suggestive subject of the "Diseases common to Man and the Lower Animals," and referred more particularly (as he did last year) to the infectious pleuro-pneumonia of cattle. The question is a burning one in the county in which he spoke, and he was able to show that the rough-and-ready remedy of compulsory slaughter has not been uniformly successful, and never can be so as long as infection is allowed to creep in from outside. Aberdeenshire has been a heavy sufferer from these epidemics as well as from the means adopted for their extinction, and the vigorous action of its local authority has too often been checkmated by the loose enforcement of regulations in adjoining counties. Dr. Hamilton showed with convincing force how many points of scientific importance still remain to be cleared up in this mysterious disease, and how hopeless stamping out must be until the drastic use of the poleaxe is replaced by prophylactic measures. It is plain, however, that before this can be realised, we require much more exact knowledge of the nature of the morbid process, of its period of inoculation, and the exact influence of inoculation over the infective germ. Dr. Hamilton pleads vigorously for the establishment of experimental studies, and volunteers to place himself and his laboratory at the disposal of the local authority, and Professor Chiene, of Edinburgh, has made a similar offer. A practical attempt has already been made in Fifeshire to start work. Funds were collected, and the use of Inchcolm was begged as a suitable centre for experimental work; and although the hopes of obtaining the use of this practically desert island have not been realised, it is possible that Mr. Chaplin may signalise his accession to office by carrying out the recommendation of the Departmental Committee, and encouraging research to some moderate amount on the lines indicated by Professor Hamilton. That the question of inoculation is beginning to emerge from the simple and ready *régime* of rule-of-thumb practice is shown by recent researches carried on in Queensland with complete success, and with the result that a very large saving to the cattle owners of Australia has already resulted from the effects of the operation with attenuated virus as practised by them.

WANTED, A PROFESSOR.

Aberdeen University was treated last week to a little taste of the peculiar way in which Government departments sometimes do their work. When the anatomy class met for its opening day no professor was forthcoming, and had it not been for the patriotic help of the late incumbent chaos must have reigned supreme and all hope of a successful session been destroyed. When Dr. Struthers appeared once more at the familiar table he was most cordially received, and the enthusiasm of his audience was redoubled when he announced that, in spite of weakness and fatigue, he would fill the gap until the successor appeared. Since the formal announcement of his retirement some time ago, Dr. Struthers has been labouring hard to leave everything behind him in the highest state of efficiency, and a large party of invited guests accompanied him over his museum the other day, and admired the admirable results of the unremitting labour of twenty-five years.

UNIVERSITY COLLEGE, DUNDEE.

The annual meeting of the governors of University College, Dundee, was held on October 16th, Lord Camperdown presiding. The report of the Council which was submitted stated that £9,000 had been promised for the endowment and equipment of a chair of physiology; and although other £6,000 was required to properly endow the chair, yet, looking to the importance of the medical school being equipped as speedily as possible, the Council had resolved to proceed with the appointment of a professor. The financial statement showed that the current revenue last year was £4,974 9s. 7d., and that the debt of the College had been increased from £5,000 to £6,500. A sum of £500 for one year had been received from the Government, and the Council appealed for donations to wipe off the balance outstanding against the College. The report was adopted.

IRELAND.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

At a meeting of the College held on Wednesday, October 23rd, the following gentlemen were elected Professors in the College: Surgery, Anthony H. Corley and William Stokes; Anatomy, Frederick Alcock Nixon; Midwifery, Samuel Roberts Mason; Medical Jurisprudence, Hugh A. Auchinleck; Medicine, John W. Moore; Chemistry, Edwin Lapper; Materia Medica, George F. Duffey; Zoology and Botany, Ephraim MacDowel Cosgrave; Pharmacy, George F. Duffey; Ophthalmology, Charles E. Fitzgerald. At a meeting of the College on Tuesday, October 22nd, Dr. G. H. Kidd and Mr. H. R. Swanzy were elected members of the Council.

DUBLIN HOSPITALS COMMISSION.

Archbishop Walsh presented the prizes at the opening of the winter session of the Mater Misericordiæ Hospital, Dublin, on October 23rd. In his address, which followed the distribution, he referred to State endowments of hospitals in the city. A commission appointed by Lord Spencer in 1885 had reported in favour of an equitable distribution of the grants to all hospitals on the principle of payment by results. As the Government had taken up the matter, he hoped that next session they would deal with it more practically than they had last session. One blot in the Government Bill was the provision to reduce the grant to £11,500 from £16,000. Another blot on the Bill was that it was proposed to provide for the compensation of the officials of the House of Industry Hospitals out of the grants; it was taken for granted that these hospitals would cease to exist.

To prevent the issue of meat to the troops that has once been condemned as unfit by the Garrison Board, Major-General H. J. Buchanan, C.B., at Colchester has issued orders for the field officer of the day to detail a member of the Board to remain and personally superintend the issue of the rations.

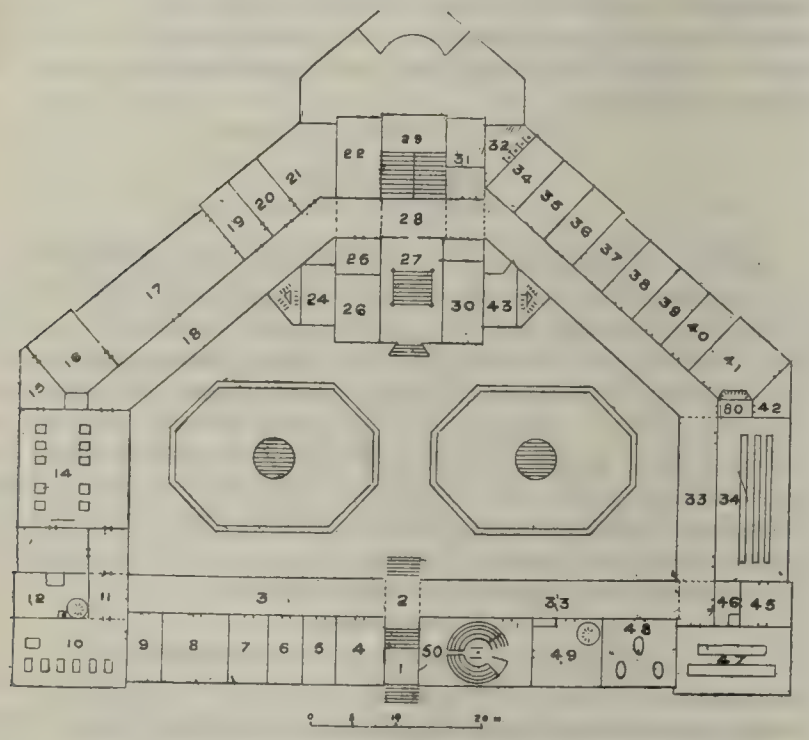
NOTES
ON
SOME GERMAN UNIVERSITIES.

By WALTER K. SIBLEY, M.B.Camb.

I.—THE UNIVERSITY OF STRASSBURG.

Strassburg; Laboratories; Library; Pathological Department; The Building; Necropsies; Demonstrations; Histological Course; the Professor of Pathology; Museum.

This picturesque old city has passed through many phases of change during the last few centuries. At one time under French, at other times under German rule, it has survived the conflict of many antagonistic principles. But in its present period of peaceful progress it opens the doors of its University to all who wish to study any of the branches of learning. The University buildings are the finest in Germany. The present University was founded by the late Emperor Wilhelm I, in 1872, the laboratories being constructed with all the most modern improvements. The Town Hospital is, however, a very old one, and one of the most picturesque buildings in Strassburg. The chief buildings are situated on the east side of the town, and consist of a magnificent central block, the Collegienhaus, with its halls, large public rooms, and sculpture gallery, together with a large, well-fitted reading-room, containing papers and periodicals of all nations, including all our own magazines of any standing, whether literary or scientific.



Ground Floor.

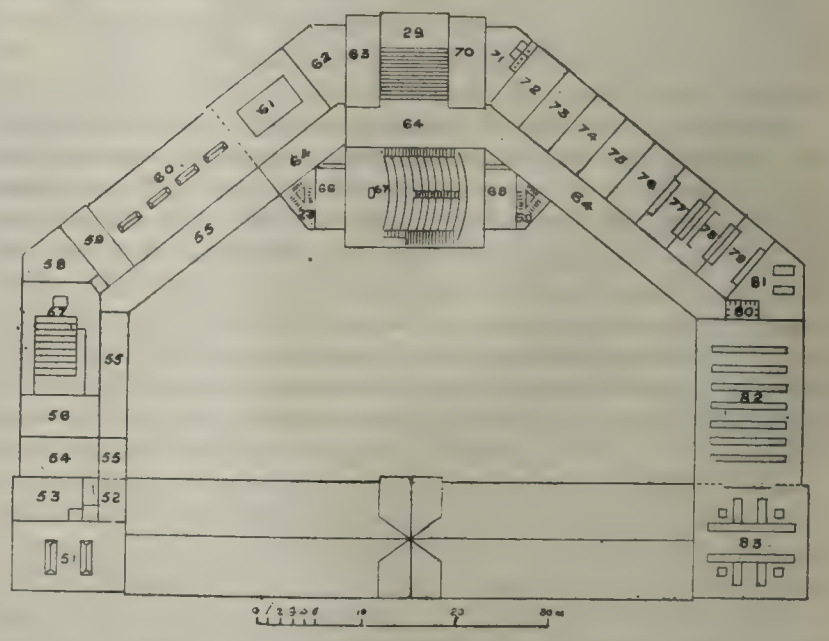
1. Entrance
2. ,,
3. Corridor
4. ,,
5. Reading room
6. ,,
7. Work room
8. Prosector
9. ,,
10. Smaller dissecting room
11. Entrance
12. Corpse cupboard
13. Director
14. Larger dissecting room
15. Anatomy attendant
16. First assistant
17. Microscopical room
18. Corridor
19. Laboratory
20. Work room
21. Repetition museum
22. Prosector
23. Stairs
24. Clerk
25. Glass chamber
26. Work room
27. Entrance
28. Main staircase
29. ,,
30. Sitting room
31. Work room
32. Urinal
33. Corridor
34. Workroom
35. Library
36. Director
37. ,,
38. Second assistant
39. Work room
40. First assistant
41. Spirit preparations
42. Instruments
43. Breeding room
44. Lecture room
45. Laboratory
46. Instruments
47. Laboratory
48. *Post-mortem* room
49. Body room
50. Clinical *post-mortem* theatre

Adjoining this block are the laboratories for chemistry, physics, and botany, each in a building of its own; behind the latter are the Botanical Gardens, and near this, again, is the observatory. In this district also is the Institute for Zoology, Mineralogy, and Geology.

In the centre of the town, opposite the cathedral, is the extensive Town and University Library, containing German and many foreign books, which can be taken out and kept for a month under comparatively easy conditions; attached to this library is also a reading-room.

The Medical Department is some twelve minutes' walk from the University Buildings above described, and lies on the south side of the town. It is in the immediate vicinity of the old Town Hospital (*Bürger Spital*), and is made up of various subdivisions. A short description of the chief points of interest in the working of some of these will be given in this paper.

The laboratories form a group of buildings situated immediately within the line of fortifications, and close to the various "polikliniks." They include institutes set apart for physiology, pharmacology, anatomy, pathology, and physiological and pathological chemistry. The centre of this group is formed by the large two-storeyed building devoted to anatomy and pathology. The chief feature of the pathological department, as Professor von Recklinghausen is always careful to point out, is that all the rooms are on one floor—lecture rooms, theatres, *post-mortem* room, research laboratories, students' laboratory, laboratory for bacteriology, the private rooms of the professor and of the assistants in the department, etc.—all opening to the right of one long corridor, the left side of which looks on a central inner quadrangle. The advantages of this arrangement in a pathological department are obvious, as constant cross ventilation is thus provided for.



First Floor.

51. Anatomical collection
52. Entrance
53. Director
54. ,,
55. Corridor
56. Library
57. Smaller lecture theatre
58. Preparation room
59. ,, ,,
60. Anatomical collection
61. ,, ,,
62. Second anatomy attendant
63. Second assistant
64. Corridor
65. ,,
66. Preparation room
67. Greater lecture theatre
68. Preparation room
69. Stairs
70. Work room
71. Urinal
72. Work room
73. Glass chamber
74. Work rooms
75. ,,
76. ,,
77. Reserve collection
78. ,, ,,
79. Preparation room
80. Stairs
81. } Pathological Collection
82. } Museum.
83. }

Starting with the pathological department we ascend the steps at the entrance of the building, and turning along the corridor to the right, the first door leads into the clinical *post-mortem* theatre, where the necropsies are made of those cases which have proved of special clinical interest, and are therefore usually attended by the whole clinique (Professor Naunyn's). By the side of this is a second room for the reception of the bodies; this again communicates with a spacious *post-mortem* room with three tables, where the professor and his assistants perform necropsies, the work here

often lasting the whole morning. To these daily *post-mortem* examinations the students, as a rule, do not come. Adjoining this, in the north-western corner of the building, is the main laboratory, which is open from 8 A.M. to 8 P.M. Here the students work when they like. Close to it is the class-room where the demonstrations on morbid anatomy, and also the courses in morbid histology, are held. By the side of this class-room are the private rooms of the director and the two assistants, together with the library and bacteriological laboratory, and small laboratories for those engaged in special work. All these are heated by hot air. On the first floor is the pathological museum together with several small special rooms.

The various courses are presided over and almost completely worked by the indefatigable Professor von Recklinghausen. The *post-mortem* course is held once or twice a week, the students doing the necropsies under the eye and direct guidance of the professor, who asks questions and demonstrates the morbid appearances, while two or more students are engaged in doing the dissecting. This course lasts from two to three hours.

The demonstration course of morbid anatomy, both macroscopic and microscopic, is held held twice a week, and also lasts about two hours. The material for this is all fresh, all parts of interest being saved from each *post-mortem* examination and kept in cold chambers till required. The amount of material for these courses is very great, some 650 to 750 *post-mortem* examinations being performed yearly. Here the pathologist does not have to consider the sentiments of friends before a *post-mortem* examination is made, for the body of every patient dying in any of the hospitals is examined. Not only the organs, but all fluids from the pleura, peritoneum, and the various hollow viscera, are systematically placed in glasses, and bones and even limbs are kept for use in the course. Thus, in especially interesting cases, we wondered what had been buried, as not only all the viscera, but often skulls and limbs, and in cases of babies, the entire body would be passed round the class. In addition to the material from the *post-mortem* examinations, all parts removed by operation in the surgical and maternity hospitals are sent for examination to the professor of pathology, so that all tumours removed from the living subject are also seen. From time to time, as material comes to hand, the diseases of lower animals are demonstrated. All the organs and glasses containing fluids are arranged on zinc trays of various sizes, the professcr taking each tray in turn, discussing and demonstrating the appearances for a few minutes, and illustrating his remarks by drawings on the black board, etc. Then each dish, with a label giving the important points for observation attached to it, is passed from student to student, and this is followed by the demonstration of sections under the microscope if they are of importance. In this way each student has the opportunity of seeing and handling every preparation according to the methods given by the professor.

The histological course is entirely given by the professor, who goes round from student to student and demonstrates to each individually. The professor generally remains throughout this course, which nominally extends over two hours, but often lasts for three; in fact, continues as long as any students remain to require help. The sections in this are nearly all cut by hand with a razor, many of them from the fresh tissue before it has been hardened or stained. The tissue being firmly held with the fingers against a piece of cork, or sometimes embedded in a piece of tough liver hardened in alcohol (amyloid liver being especially serviceable), is cut with a hand razor. Sections of fresh lung are sometimes cut with sharp scissors, when, on account of the elasticity of the tissue, it could not possibly be cut with a razor. The lung being held in the hand, and the area required rendered tense by placing the finger under it, a series of rapid sections are cut with the scissors from the tense surface. These methods, although it is exceedingly hard to cut thin, even sections, have many advantages over those in which a tissue is examined after it has become more or less changed by the action of hardening reagents, and then frozen before it is cut. With regard to the sections, the point most frequently urged by the professor, in opposition to what we are generally taught in England, is that we should not cut the sections too thin, as we must accustom ourselves to observe and examine tissues in more than one plane under the microscope. Of course, this only applies to fairly low powers, and could not be practised with high ones. In this way our mental image of the structure of a tissue is much more accurate in detail than when we conceive of it in one plane only. Moreover, in this course a great number of fluids and tissues from different regions of the body are examined microscopically for diagnostic purposes, not only those taken from the *post-mortem* room, but also large quantities from operation and other cases occurring in the hospitals. Thus the student becomes acquainted with the characters and appearances of cells and other organic bodies under every possible condition, normal and pathological.

The regular lectures on pathology are given three days a week, in the afternoon, and special lectures, such as those on infectious diseases, and courses on bacteriology, are from time to time given by the first assistant, Dr. Stilling. In addition to these, on most evenings, the professor spends some two hours in the laboratory demonstrating to any students who happen to be working there. Microscopical work by artificial light is rendered comparatively untrying to the eye by the use of a blue glass placed over the ocular of the microscope.

The qualities of Professor von Recklinghausen as an original worker are sufficiently borne witness to by the innumerable references to his name that occur in pathological and medical literature. As a teacher his keenness of observation, together with his power of imparting knowledge, inspires the student with an enthusiasm for the science to which he devotes his life. His minute attention to detail, and patience in demonstrating to students of pathology, even the beginners, involve an expenditure of time and labour which but few in such a position would be found willing to give. Of a professoriate including such men as Goltz, Hoppe-Seyler, Schmiedeberg, Naunyn, and Lücke he is acknowledged to be one of the ablest and most indefatigable members.

The pathological museum here, as in most of the German universities, practically does not exist for the student, as it is always kept locked up. It is open, however, to the public for a few hours on Sundays. This strikes us as strange, for at home the students spend many hours in the museum, examining and reading up the specimens which they hope to recognise when they see them again in the examination-room; perhaps by the shape of the bottle or the arrangement of the glass rods in it, or by some other equally absurd sign. In Strassburg this time is no doubt more profitably spent in seeing fresh material than in puzzling over the probable original appearances or connections of prize specimens, faded by time and attempts at preservation.

SEWERAGE OF CHICHESTER.

THE inhabitants of Chichester are at the present moment greatly interested in the drainage of their city, and appear to be at last alive to the necessity of providing sewerage and disposing of their sewage.

There is no doubt that the sanitary condition of Chichester is inferior to most other English county towns, and that this unsatisfactory state of things, though recognised, has for many years been tacitly allowed.

As far back as 1867 Mr. Arnold Taylor, of the Local Government Board, pointed out to the then Home Secretary that "the whole site of the town was honeycombed with cesspools, and that the gravel bed beneath was charged with cesspool matter." Mr. Hawksley, too, in the same year, stated that "the city would continue to be open to mistrust until some system of internal drainage was adopted." Again, in the year 1879, Dr. Airey, one of the medical officers of the Local Government Board, reported "in respect of drainage there is apparent community of unwholesome conditions. I have seen places where milk cans were being washed with water drawn from a well which could not be free from pollution, seeing that there was a privy pit only eight yards off in one direction and a cesspool only seven yards off in another." Dr. Airey added, "the nature of the soil, which is gravel overlying the London clay, gives facilities for cesspools."

The result of this neglect to comply with the ordinary rules of sanitation is that the mortality of Chichester has been for many years higher than it should be. Statistics prove that the average death-rate from all causes for seven years (1881 to 1887) was 17.22, while from phthisis alone it was 2.3, and from enteric fever 0.394. This, of course, is needlessly excessive, and is 2.5 above the average death-rate of adjacent sanitary districts of West Sussex, containing a population of 97,000 persons. The mortality from phthisis exceeds that of the whole of England by 0.53 per 1,000, and is far in excess of the surrounding neighbourhood, whilst the mortality from typhoid fever is nearly double that of England and more than four times and a half greater than the average sanitary districts above referred to. These facts speak for themselves.

From the papers now before us it would appear that the City

Council have at last taken the matter in hand, and placed it in charge of a committee of the Council, who have visited numerous places and issued a preliminary report. It is no duty of ours to criticise this report in detail, but the general principles involved by it are so important that we feel it obligatory to draw public attention to them.

As to the sewerage of the city, there does not appear to be much difference of opinion. It is with regard to the disposal question that we especially have to speak. The report of the Drainage Committee shows that they have come to the conclusion that the system recently adopted at Southampton is that which is most applicable to Chichester. We somewhat demur to this conclusion, for in no conditions are the attendant circumstances the same in both towns. Southampton has a population of over 60,000, as against 8,000 odd at Chichester. It is situated on a fine and wide arm of the sea—the Southampton Water—whilst Chichester is on the banks of an open ditch—the Lavant—with only a small quantity of fresh water running down it, and with a run of two miles below to Chichester Harbour, where there is a tidal flap which keeps the water penned up behind for many hours during the day and night. In the former instance, clarification only is aimed at and achieved. In the latter, absolute purification, which is a very different thing, and which the Local Government Board will demand, is a necessity.

It is possible that the best method of purification, owing to the special local circumstances, may be by means of chemical treatment, but we would remind the Council that in the opinion of all recognised sanitarians, and also of the Local Government Board, who have to sanction every scheme which is carried out with borrowed capital, that except where the effluent is discharged into tidal water, as is the case at Southampton, chemical precipitation must be followed by subsequent filtration either through natural soil by means of what is technically known as intermittent filtration, or, where land is not obtainable, through artificial filter beds; for example, such as are now known to the public as "polarite beds."

This fact has apparently escaped the notice of the Town Council. At Chichester, probably, subsequent filtration — if such a mild reagent as porous carbon is adopted—cannot be shirked; for it should be remembered that the effluent must inevitably be stored in the Lavant Ditch, and backed up for many hours close to the town, when tidal conditions will not allow of its discharge into the harbour. If this subsequent filtration is avoided, the remedy will probably prove as bad as the disease.

We in no way advocate any special system of filtration. We merely state these facts for the public good, in order that the vital difference between the cases of Southampton and Chichester may be realised, and that no scheme may be finally adopted which would produce an imperfect result.

In further support of these remarks, we would quote the opinion recently expressed by the last Royal Commission on Metropolitan Sewage Discharge upon chemical treatment when unaided by subsequent filtration. They say: "No one denies that by chemical precipitation the suspended matters may be almost entirely removed, or, in other words, that the sewage may be practically clarified; and it is also admitted that the suspended matters are the worst cause of pollution and nuisance. And it is also the general opinion that chemical processes in their best form have some effect in removing noxious matters in solution, but the amount removed cannot be very large—all agree that a certain amount of polluting matter must be left in the effluent."

With regard to the method of dealing with the sludge and dry refuse, there is something to be said. It must be borne in mind that the case of Southampton, which is brought forward as an example, is not on all fours with that of Chichester; the people of Southampton have only the sludge resulting from about a quarter of the sewage of the town to deal with, which they mix with the dry refuse of the whole of the town; and this unequal proportion naturally renders the incorporation of the semi-liquid sludge with the dry material an easy matter. It by no means follows that where the proportions are equal the result would be satisfactory.

It is evident that Chichester must be sewered, and we wish in no way to magnify the attendant difficulties; but the Town Council of such a beautiful rural city should, in our opinion, not hastily pledge themselves to any method of dealing with this difficult subject without the benefit of the advice of an experienced sanitarian not personally interested in any special invention or fad.

MEDICAL SICKNESS, ANNUITY, AND LIFE ASSURANCE SOCIETY.

At the last meeting of the Medical Sickness, Annuity, and Life Assurance Society, at which there were present: Mr. Ernest Hart, in the chair; Drs. J. B. James, R. Lord, F. Wallace, F. J. Edwards, J. W. Hunt, G. E. Herman, A. S. Gubb, J. Pickett (London), W. A. Elliston (Ipswich), G. W. Crowe (Worcester), W. Thomas (Birmingham), payments were ordered for fourteen sick members, suffering respectively from locomotor ataxy, chronic myelitis, hepatic dropsy, consolidation of the lung, albuminuria with cerebral complications, concussion of the brain from carriage accident, phthisis, gall-stones, erysipelas, injury to spine and back, result of horse accident, gastric disease, intestinal colic, operation for fissure, renal disease, and treatment at the Pasteur Institute for the bite of a rabid dog. The weekly payments in respect to these cases amounted to about 60 guineas. The death was announced of a member who was insured to the amount of £200, and prompt payment was ordered.

A further investment in municipal loans of £2,400 at 3½ per cent. was ordered. There had been eleven new admissions into the Society during the month; three applications were specially referred for consideration with the medical reports attached thereto; one was admitted, one declined, and one postponed for further inquiry.

It was announced that the new by-laws granting additional privileges, agreed to at the last annual meeting, were in process of registration, and would shortly come into operation. Arrangements had been made to forward to each member a complete copy of the rules, with the alterations incorporated, in November.

The quarterly report was presented, which showed a most satisfactory state of the finances, the total investments amounting to £34,431, accumulated in five years and a half, and an annual premium income amounting to £11,000. Numerous instances were brought under the notice of the Committee of the widespread benefits which the fund was conferring and of the great advantage which its operations furnish to medical men in active practice, both in respect to the resources supplied during periods of illness and to the effective operation of the fund in allowing members threatened with serious breakdown to take preventive measures, thus averting prolonged illnesses, which in more than one case appeared to be impending. The large proportion of disabling accidents incurred by medical men in the course of their practice was again noticeable in the reports of the quarter.

Copies of the last annual report and of the quinquennial valuation by Mr. Neison, together with his report thereon, and forms of proposal, may be had of Mr. C. J. Radley, 26, Wynne Road, Brixton, S.W.

THE TITLE OF L.S.A.

Mr. R. Reginald Sleman, L.S.A.Lond., B.A.Cantab. (7, St. Bene't Place, Gracechurch Street, E.C.), has forwarded a circular letter, in which he relates that at the meeting of the General Medical Council of Great Britain, held in London last April, Mr. Brudenell Carter, F.R.C.S.Eng., the representative of the Society of Apothecaries of London, brought forward a motion to the effect that the new Licentiates of the said Society who have passed the complete final examination since July 1st, 1887, in accordance with the Medical Act Amendment Act, should be given such distinguishing title or titles as would enable them to show that they have passed a qualifiying examination in medicine, midwifery, and surgery. The motion was seconded, and received some support. After a short discussion, Mr. Carter decided to confer with the legal advisers of the Society which he represented, and at the next meeting of the General Medical Council, to be held in November, he intends to bring the matter forward. "I have had some correspondence," Mr. Sleaman adds, "with Mr. Carter on the above subject, and I find that he agrees with me, that it is for the men themselves, who are at present labouring under the disadvantage of being known as 'only L.S.A.,' to take steps in the matter. Accordingly, I have sent the enclosed memorial (to the General Medical Council) for your perusal, and I hope you will be able to see your way clear to sign it and return same to me immediately. November will soon be here, and Mr. Carter will lay the memorial before the Council which meets in that month. In conclusion, I beg to state that the expense of sending out this communication has been considerable, and to meet the out-of-pocket expenses of my friend, Mr. Arthur de Butts, L.S.A., of Folkestone, and of

myself, who have undertaken the work at our own cost, I shall be glad to receive subscriptions towards that object, the same not to exceed 5s. If there is a balance in hand after payment of all expenses I propose to hand the same over to the Secretary of that excellent institution, the Medical Defence Union."

To the General Medical Council of Education and Registration.

Gentlemen,—We, the undersigned Licentiates of the Society of Apothecaries of London, who have passed a qualifying examination in medicine, midwifery, and surgery since July 1st, 1887, such examination having been conducted in accordance with the recent Medical Acts, humbly pray the General Medical Council to give us such title or titles as will convey to every one the increased scientific status which such further study must necessarily confer. At the present time, although trebly qualified, our only title is L.S.A.; this being the same as that which was granted to those who passed the final examination of the Society of Apothecaries of London when there was no examination in surgery and when the regulations of the Medical Amendments Act were not in force. —Hoping that in all fairness our humble request may be granted, we are gentlemen, your humble servants.

(Name.) (Qualifications.) (Address.)

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.

At the annual stated meeting of the College, held on St. Luke's Day, Friday, October 23rd, 1889, the following officers were elected for the ensuing year:—

President—Lombe Atthill, M.D. *Vice-President*—George F. Duffey, M.D. *Censors*—George F. Duffey, M.D.; Joseph M. Redmond, F.K.Q.C.P.; Andrew J. Horne, F.K.Q.C.P.; Wallace Beatty, M.D. *Additional Examiners*—Medicine: J. Hawtrey Benson, M.D. Medical Jurisprudence and Hygiene: E. MacDowel Cosgrave, M.D. Midwifery: W. J. Smyly, M.D. *Examiners for the Licence to Practise Midwifery*—Arthur V. Macan, M.B.; William J. Smyly, M.D. *College of Physicians' Examiners under the Conjoint Examination Scheme with the Royal College of Surgeons in Ireland*—Chemistry and Physics: I. Ashe, M.D.; H. T. Bewdley, M.D. *Materia Medica and Pharmacy*—E. MacDowel Cosgrave, M.D.; and F. J. B. Quinlan, M.D. Physiology: J. M. Purser, M.D. Medicine: Geo. F. Duffey, M.D.; A. W. Foot, M.D.; C. J. Nixon, M.D.; Wallace Beatty, M.D. Hygiene and Forensic Medicine—John Molony, F.K.Q.C.P.; Joseph M. Redmond, F.K.Q.C.P. Midwifery: Andrew J. Horne, F.K.Q.C.P. *Preliminary Examination in Arts*—Science: Isaac Ashe, M.D. Languages: H. T. Bewley, M.D. *Examiners for the Membership*—Clinical Medicine: George F. Duffey, M.D.; J. Hawtrey Benson, M.D. Pathology: Henry T. Bewley, M.D.; John M. Purser, M.D. Practice of Medicine and Public Health: Wallace Beatty, M.D.; E. MacDowel Cosgrave, M.D. *Examiners for the Diploma in State Medicine*—Engineering and Architecture: Albert E. Murray, C.E. Law: George R. Price, Q.C. Chemistry: Walter G. Smith, M.D. Climatology, Meteorology, and the Geographical Distribution of Disease: John William Moore, M.D. Vital Statistics: Stephen M. MacSwiney, M.D. Hygiene: C. J. Nixon, M.D. Medical Jurisprudence and Pathological Anatomy in relation thereto: George F. Duffey, M.D. *Representative of the College on the Committee of Managemeut under the Conjoint Scheme*—Thomas W. Grimshaw, M.D.; J. W. Moore, M.D.; Walter G. Smith, M.D. *Representative on General Medical Council*—Lombe Atthill, M.D. *Treasurer*—Aquilla Smith, M.D. *Registrar*—John William Moore, M.D. *Librarian*—Samuel W. Wilson. *Agent to Sir P. Dun's Estates*—Charles U. Townshend. *Law Agents*—Stephen Gordon and Son. *Election to Fellowship*—Henry Colpoys Tweedy, M.D.

The undermentioned Licentiate in Medicine of the College, having complied with the by-laws relating to Membership, pursuant to the provisions of the Supplemental Charter of Victoria, December 12th, 1878, has been duly admitted a Member of the College: Edward Young, *Lic. Med.*, 1844, Hounslow, Middlesex.

CHARING CROSS HOSPITAL.—The annual dinner of the past and present students of Charing Cross Hospital was held at the Holborn Restaurant on Friday, October 18th. Surgeon H. R. Whitehead, F.R.C.S., Army Medical Department, occupied the chair. The dinner was well attended, and included among the company were Sir Guyer Hunter, M.P., Sir John Puleston, Sir Joseph Fayrer, and most of the staff of the hospital. After the usual loyal toasts, the principal toast of the evening, "The Past and Present Students," was proposed by Sir J. Fayrer, and was cordially responded to by Sir John Puleston and Mr. Thompson. This was followed by a vote of thanks to the chairman, after which the company dispersed, having spent a most enjoyable evening.

THE OPENING OF THE MEDICAL SCHOOLS.

GLASGOW UNIVERSITY.

THE Introductory Address was delivered on October 22nd, by Professor McCall Anderson, Professor of Clinical Medicine to the University.

The lecturer, in welcoming his audience to the University, noted the changes which had taken place since he delivered the inaugural address thirteen years ago. Thanks to the generosity of the Marquis of Bute, the lecture was now held in a building suitable for public gatherings, and not, as in the former occasion, in the lower hall of the museum. The late Sir William Pearce had provided the University with a lasting memorial of the old college, and Dr. McIntyre had established the "Student's Union" buildings for the utilisation of which the Union Bazaar scheme had been started. The prosperity of the medical school had greatly increased as in other Scotch universities; not only on account of the increasing desire for a university degree, but also owing to the excellence of the teaching both of the professors and of the extra-academical lecturers. This excellence was due to the system which prevailed in Scotland. At a London hospital school the teacher did not confine himself to one subject; he began by being, perhaps, registrar, then he might lecture for a few years on medical jurisprudence, then possibly on the practice of medicine. Sooner or later he became a hospital physician. Ultimately, if successful, he devoted himself to practice, ceasing to teach altogether. In Scotland it was otherwise; the teacher devoted himself early in life to one branch of learning and, no matter how successful in practice, continued to teach throughout his career. In respect to graduation in arts, the lecturer felt inclined almost to reverse the order which obtained in connection with the Arts degree, as far as medicine was concerned, making French and German compulsory, and Latin and Greek optional or, at all events, subordinate subjects. Professor Anderson spoke approvingly of the practical instruction afforded by the laboratories, and deprecated the sacrifice of true medical instruction to examination. Teachers were in a much better position to gauge the acquirements of their students by watching their progress during their student life, than by merely subjecting them to a final examination at the end of their course of instruction. For that reason, if for no other, the system which prevailed in the University of London of dissociating teaching from examination, seemed to the lecturer to be about the very worst that could be devised.

Professor Anderson devoted the greater part of his address to illustrations of recent progress in practical medicine. He noted how in 1883, Dr. Motchükowsky had a patient suffering from spinal curvature, who happened also to be labouring under locomotor ataxy. For the former ailment he was treated by suspension with the aid of Sayre's plaster-of-paris jacket, with remarkable amelioration of the symptoms of the latter disease. Charcot and de Watteville had taken the subject up, with most encouraging results. The most probable theory explaining the success of the new treatment was that of Dr. Althaus, who believed that suspension broke down the adhesions consequent on the accompanying chronic meningitis, and broke up the overgrown neuroglia, which compressed and injured the nerve tubes. Professor Anderson then dwelt upon resection of the pylorus, and Dr. Loreta's dilatation of non-malignant contraction of the pylorus with the index finger introduced through an incision in the stomach. In conclusion, the lecturer spoke of the important discovery of the existence of cortical centres for the movements of various portions of the face and limbs. He selected the first case on record in which advantage was taken of the information thus obtained. It occurred in the practice of a distinguished Glasgow surgeon, Dr. W. Macewen. Certain motor phenomena, appearing in a boy six days after injury to the head, indicated a lesion on the right side of the brain, so correctly localised that after operation the paralytic and convulsive symptoms which had occurred were completely cured and never returned. Dr. Anderson felt no doubt that the progress of the future would be as rapid as, if it did not excel, that of the past, and sincerely trusted that it might be the lot of many of the audience who were now entering upon the study of medicine to contribute something towards the alleviation of human suffering and the prevention and cure of disease.

ANDERSON'S COLLEGE, GLASGOW.

THE new session of this school was opened in the new buildings of the College, on October 22nd, by the President, Mr. T. A. Mathieson. The medical school, which was formerly part of the Andersonian College, which is now, except the medical portion, incorporated with the Glasgow and West of Scotland Technical College, meets for the first time in buildings of its own, and begins a new chapter in its history. The buildings are at the foot of the University Hill, the Gilmorehill, and in the immediate neighbourhood of the Western Infirmary. Although they are not yet quite finished, and although work will be begun under some difficulties, they appear to be entirely suitable for the work of a prosperous school. Perhaps, on the whole, Anderson's College Medical School was never in a better position to make a fair show of competition with the University than it now is. The College having thus been removed from the centre of the town to the west end, the dispensary hitherto carried on in connection with it is now to be conducted independently as the Glasgow Central Dispensary.

ST. MUNGO'S COLLEGE, GLASGOW.

THE newly-constituted College of St. Mungo was opened on October 23rd, when Dr. Blackie, Principal of the College and one of the Scottish University Commissioners, delivered an address.

Referring first to the name which had been chosen for the College, he briefly sketched the character of Kentigern, first Bishop of Glasgow, who was better known to his contemporaries as Mungo, meaning "dear friend." It would have been hard, he said, to conceive how a more appropriate name could have been devised for the new College than that of the Christian minister the memory of whose virtues had been thus enduringly handed down, and who, carrying on his earnest and self-sacrificing work, demonstrated in his whole life the truth enshrined in the adage which forms the motto of the College: *Labor omnia vincit.*

He then briefly sketched the history of the foundation of the Scottish universities. The earliest was the University of St. Andrews, which was founded in 1410, and formally incorporated in 1413; the University of Glasgow was founded in 1450, and that of Aberdeen in 1494 by Bishop William Elphinston, who had been at one time Rector of Glasgow University. The University of Edinburgh, the youngest in Scotland, was founded as late as 1682.

The proposal to form St. Mungo's College, he said, "originated with the managers of the Glasgow Royal Infirmary. They were impelled thereto by the desire to maintain the noble hospital under their charge in the highest state of efficiency, and the conviction that, in consequence of university arrangements, it was only by means of such an institution their laudable and philanthropic desire could be adequately attained. As might be expected in such circumstances, the Charter of Incorporation of the College provides, as one of its prime objects, for the absorption and continuance of the Medical School of the Royal Infirmary. It may with confidence be predicted that in due time affiliation to the University will take place, and thus access to the degrees it confers will be opened up to all well-qualified young men who have taken their whole course of professional education at St. Mungo's College. Immediately after their installation in office, and having arranged some needful details, the governors took into consideration the section of the charter of the College which defines the limits of its teaching powers. That section declares: 'the objects for which the Association is established' to be 'the institution and maintenance in Glasgow of classes for higher education; the absorption and continuance as part of St. Mungo's College of the Glasgow Royal Infirmary Medical School; the teaching and instruction of students in science, literature, art, law and divinity, and learning of every description by lectures or otherwise; the establishment and maintenance of laboratories, museums, and libraries; and the advancement and encouragement of these objects, or some of them, by giving prizes, and the creation of exhibitions, scholarships, and fellowships.' Their attention was naturally in the first place directed to the Medical School, now to be formed into a Faculty co-ordinate with other Faculties to be established in the College; and they resolved to place its curriculum of study as far as possible on a footing of equality with that of the foremost teaching institutions in the country. A glance at the pages of the calendar of the College will show how far the governors have succeeded in carrying this resolution into effect. It will be observed that the course of instruction therein presented is wider in area than any medical course hitherto provided in Scotland. Having thus arranged in a liberal manner for the medical course of study, the governors might have felt warranted in being content for a season without attempting anything further; but having learned that a course of study in law could also with advantage and facility be established, they turned their attention to that subject. A glance at the pages of the calendar will in this case also show that a curriculum has been presented much wider and more varied than any hitherto attempted in Scotland, and one which has been hailed with great satisfaction by the legal profession generally. That the young college should thus start with two fully-equipped faculties out of the four which are usually comprised in Scottish universities must form a subject of pleasant reflection to all the numerous friends of the Glasgow Royal Infirmary."

Having stated that the council awaited the decision of the Universities Commission on the subject of tests before establishing a theological faculty, he proceeded to sketch a most ambitious scheme by which the College might in time give professional instruction, not only in medicine, law, and divinity, but also in commerce, statesmanship, and pedagogy. The governors were disposed to be sanguine that their wishes would be realised. In the United States, in Australia, and in England large sums had been assigned by private benevolence for the furtherance of higher education; and they hoped that liberal-minded persons might be found within the sound of St. Mungo's bell, or beyond the circle of its resonance, to imitate the good example thus set before them, and thereby not only place the College on a sound footing that shall greatly benefit the rising generation, but at the same time raise an enduring monument to themselves.

THE ENTRIES AT THE MEDICAL SCHOOLS.

BY the courtesy of the officials of the medical schools in London and the provinces we are enabled to publish the following list of recent entries of medical students:

	A.	B.	C.	D.	E.
St. Bartholomew's Hospital	108	37	0	*	145
Charing Cross Hospital	32	5	23	0	60
St. George's Hospital	31	2	0	0	33
Guy's Hospital	85	32	6	21	123
King's College	37	41	0	12	78
London Hospital	75	41	0	7	116
St. Mary's Hospital	56	6	0	3	62
Middlesex Hospital	43	57	11	—	100
St. Thomas's Hospital	71	24	—	17	95
University College	61	17	—	76	78
Westminster Hospital	21	15	2	2	38
London School of Medicine for Women	25	5	—	—	30
Cambridge University	117	—	—	—	117
Oxford University†					
University of Durham College of Medicine					
Bristol Medical School	25	1	—	—	26
Owens College, Manchester	75	32	11	51	118
University College, Liverpool	46	13	—	—	59
Yorkshire College, Leeds	33	5	—	9	38
Queen's College, Birmingham	39	31	8	15	78
London School for Dental Surgery	—	—	27	—	27

A. Number of students who have entered for full curriculum.
B. Number of students who have joined for special courses.
C. Number of dental students.
D. Number of students who have joined classes for preliminary scientific instruction.
E. Total, excluding students attending classes for preliminary scientific instruction.
* In compliance with the regulations of the University of London, students attending these classes are not counted as medical students.
† No return made.

The total number of students who have entered for the full curriculum in the metropolitan medical schools, excluding the London School of Medicine for Women, as shown by these returns, is 620, the lowest number thus returned since 1884, and practically the same as that recorded three years ago. The following totals, extracted from the lists published in the JOURNAL in previous years, though they cannot be supposed to give the precise number of students in London, yet without doubt indicate the general character of the fluctuations:

1884 ... 587	1886 ... 623	1888 ... 688
1885 ... 647	1887 ... 683	1889 ... 620

ASSOCIATION INTELLIGENCE.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1889.

SUBSCRIPTIONS to the Association for 1889 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the West Central District Office, High Holborn.

NOTICES OF BRANCH MEETINGS intended for insertion in the JOURNAL of the current week should be forwarded, addressed to the Editor, so as to reach the office not later than mid-day Wednesday of that week.

BRANCH MEETINGS TO BE HELD.

THAMES VALLEY BRANCH.—The next meeting will be held on Wednesday, November 6th. The Honorary Secretary will be glad to hear from members who are willing to read papers.—CHARLES C. SCOTT, M.B., Honorary Secretary and Treasurer, St. Margaret's, Twickenham.

NORTH OF IRELAND BRANCH.—A general meeting of the North of Ireland Branch will be held in the Royal Hospital, Belfast, on Thursday, October 31st, at 4 P.M. Gentlemen wishing to bring any communication before the meeting will kindly communicate with the Secretary, JOHN W. BYERS, M.D., Lower Crescent, Belfast.

METROPOLITAN COUNTIES BRANCH: NORTH LONDON DISTRICT.—The inaugural meeting of this session will be held on Thursday, October 31st, at the Athenæum, Camden Road, N., at 8 P.M.; Dr. Bridgwater, J.P., Vice-President of the District, in the chair. Dr. Hugh Woods will read a paper on Dr. Rentoul's scheme for forming a Public Medical Service, on which a general discussion will ensue. All registered medical men are invited to attend. The Committee will meet at 7.30 P.M.—GEORGE HENTY, M.D., Honorary Secretary, 302, Camden Road, N.

LANCASHIRE AND CHESHIRE BRANCH.—The autumn meeting will be held in the Town Hall, Blackburn, on November 6th. Gentlemen wishing to read papers or show specimens are requested to communicate at once with the Honorary Secretary, so that the titles of their communications may appear on the circulars convening the meeting.—CHARLES EDWARD GLASCOTT, M.D., Honorary Secretary, 23, St. John Street, Manchester.

SOUTH-EASTERN BRANCH: WEST SURREY DISTRICT.—The next meeting of this District will be held on Thursday, October 31st, at 4 P.M., at the King's Head, Epsom, Dr. W. C. Daniel in the chair. Gentlemen wishing to bring forward communications, etc., should communicate with the Honorary Secretary, J. P. A. GABB, M.D.

WEST SOMERSET BRANCH.—The autumnal meeting of this Branch will be held at the Railway Hotel, Taunton, on Thursday, November 7th, at 5 o'clock. Dinner at half-past five. The subject for discussion after dinner will be Proposed Legislation for amending the constitution of the Royal College of Surgeons of England. Mr. Rigden will open the discussion. Members having any communication to bring before the meeting are requested to send early notice of its title to W. M. KELLY, M.D., Honorary Secretary, Taunton.

SOUTH-EASTERN BRANCH: WEST KENT DISTRICT.—The next meeting of the above District will take place on Thursday, November 21st, at Maidstone, Dr. White in the chair. Gentlemen desirous of reading papers or exhibiting specimens are requested to inform the Honorary Secretary of the District, A. W. NANKIVELL, F.R.C.S., St. Bartholomew's Hospital, Chatham, not later than October 31st. Further particulars will be duly announced.

STAFFORDSHIRE BRANCH.—The sixteenth annual general meeting of this Branch will be held at the Bell Medical Library, Cleveland Road, Wolverhampton, on Thursday, October 31st, at 3 P.M. An address will be delivered by the President, Mr. T. Vincent Jackson, Wolverhampton.—GEO. REID, Stafford, Honorary Secretary.

BATH AND BRISTOL BRANCH.—The first ordinary meeting of the session will be held at the Grand Pump Room Hotel, Bath, on Thursday evening, October 31st, at half-past seven o'clock; W. J. Fyffe, M.D., President. The following communications are expected:—Suspension in Locomotor Ataxy: J. Michell Clarke, M.B. Osteo-arthritis as an immediate sequel of Rheumatic Pyrexia: J. Kent Spender, M.D. "The Boracic Acid" Massage Treatment of Diseases of the Palpebral Conjunctiva: W. M. Beaumont, M.R.C.S.Eng. Operations for Removal of Vesical Calculus, with Seventeen Cases: Nelson Dobson, F.R.C.S.Eng.—R. J. H. SCOTT, E. MARKHAM SKERRITT, Honorary Secretaries.

NEW SOUTH WALES BRANCH.

THE eighty-fourth general meeting of the Branch was held in the Royal Society's Room, Sydney, on Friday, September 6th, at 8 o'clock, Dr. FIASCHI, President, in the chair. There were twenty-one members present. The minutes of the previous meeting were read and confirmed.

Communications.—Dr. R. SCOT SKIRVING, of Sydney, read some notes on a case of Basal Lesion. The patient was exhibited, and carefully examined by the members. A discussion on the case took place, in which Drs. KNAGGS, WORRALL, RENNIE, and CHAMBERS took part.—Dr. CHAMBERS read a paper on a case of Inverted Uterus, and exhibited the specimen. The case was discussed by Drs. SHAND, of Penrith, WORRALL, W. J. O'REILLY, and HODGSON.

A Medico-Ethical Question.—Dr. DE LAMBERT, of Waverley, asked the opinion of the Branch regarding a question of medical etiquette, as to the consultant in a case taking the case out of the hands of the practitioner who first had charge of the case. Drs. KNAGGS, SCOT SKIRVING, FOREMAN, and HODGSON expressed the opinion that no medical man should make a second visit except at the desire of the practitioner in charge of the case.

New Members.—The following new members were elected: Dr. R. B. Warren, of Camden, and Dr. J. McDonagh.

SOUTH-EASTERN BRANCH: EAST SURREY DISTRICT.

THE autumn meeting of this District was held at the White Hart Hotel, Reigate, on Thursday, October 10th, Mr. FREDERICK B. HALLOWES, of Redhill, in the chair.

There were over forty members present, and a very interesting series of papers was brought before the meeting.

Communications.—Dr. W. J. MICKLE read a paper on the Relations of Medical Men with the Public and the Insane under the present and coming Lunacy Laws, which is published at p. 916.—Mr. PEARCE GOULD described the treatment of Strumous Glands, advocating the early use of a small incision and scraping out of the diseased gland through it with a blunt spoon. Mr. HERBERT PAGE read a paper on Epiphysial Necrosis and other forms of Osteomyelitis.—Dr. JOHN H. GALTON described a case of Mole Pregnancy in a woman aged 53, and Dr. H. S. STONE a case of Gall-Stones passed through the Abdominal Wall.

Voting by Proxy.—The HONORARY SECRETARY read a communication relative to altering the rules as to voting by proxy. The members unanimously decided that the subject was not one calling for discussion.

After the meeting, twenty-six members and visitors dined together, including the Treasurer of the Association (Dr. Holman), the editor of the JOURNAL (Mr. Ernest Hart), and Dr. Hayman, President of the Branch.

METROPOLITAN COUNTIES BRANCH: SOUTH LONDON DISTRICT.

A MEETING was held at Guy's Hospital on October 16th, at 8.30 P.M., Dr. F. TAYLOR, Vice-President of the District, in the chair. The minutes of the previous meeting were read and confirmed. The CHAIRMAN announced that a special meeting of the District would be held at Bethlem Hospital on November 13th, at 8.30 P.M., to discuss Dr. Rentoul's proposals as to a Public Medical Service.

Cases.—The following cases from the hospital were shown by Mr. P. N. RANDALL:—(1) Pancreatic Cyst after Operation; (2) Lupus Vulgaris; (3) Two Cases of Tabes Dorsalis treated by Suspension, the treatment being discussed by Dr. F. TAYLOR, Mr. J. B. JAMES, Mr. W. COOK, Mr. STURGE, and Mr. FOWLER.—Mr. Moss: (1) Eczema (2) Insular Sclerosis.—Mr. G. B. SMITH: (1) Congenital Deformity of Feet and Hands; (2) Sarcoma of Neck; (3) Thyroid Cyst.

Paper.—A paper was read by Dr. WASHBOURN on Disinfection, with special reference to Fevers, reviewing the different methods and their application. A discussion took place, in which the following took part—Dr. FOWLER, Mr. J. B. JAMES, Dr. F. TAYLOR, Mr. T. A. J. HOWELL, Mr. BULSTRODE, Dr. MCCOMBIE, Mr. WIGHTWICK, Mr. W. COCK, and Mr. STURGE.

Votes of Thanks.—A vote of thanks to Dr. Washbourn was carried unanimously, and the meeting closed with a vote of thanks to the Treasurer of Guy's Hospital for the use of the room.

THE CAUSE OF FATHER DAMIEN'S DEATH.—It is positively stated that the immediate cause of Father Damien's death was an attack of pernicious malarial fever, which his constitution, undermined by leprosy, was unable to resist, and for which he could not be induced to take any remedy. Father Gregory, one of his fellow workers, died at the hospital of Kakaako, a confirmed leper, last January.

SPECIAL CORRESPONDENCE.

EGYPT.

Financial Cheeseparing.—The New Director of the Medical School.—Dr. Issa Pasha Hamdy.

THE finance authorities have absolutely refused to accept the proposed Budget of the Sanitary Department for 1890, and have ordered its immediate reduction by no less a sum than £11,000. It is a pity this cheeseparing economy should be insisted on, for it means the discontinuance of the lately established organisation for stamping out epidemics of infectious disease, which has this year done such good service. The financial magnates are of opinion that when an epidemic appears it is time enough to ask for a supplementary credit to cover the expenses involved in its suppression; and they calmly ignore the necessity of having skilled labour ready at a moment's notice, so as to choke the outbreak in its initial stages. This is nothing less than suicidal policy, and should cholera or any other pestilence break out in Egypt next year the consequences may be disastrous.

The appointment of Dr. Hassan Pasha Mahmoud as Director of the School of Medicine is announced, and has not unnaturally given rise to much criticism. It was to be desired that someone possessing special knowledge should have been placed at the head of the only medical school in the country, but, as usual, personal considerations have prevailed over public utility. It will be remembered that Dr. Hassan Pasha was Director of the Sanitary Department at one time, and that he resigned his post some years back for reasons that have never been properly explained.

Dr. Issa Pasha Hamdy, who resigns the direction of the School of Medicine, is, I regret to hear, obliged to do so partly in consequence of his health, which no longer permits him to devote sufficient attention to scholastic duties in addition to his palace appointment. During his term of office considerable improvements were made to the school, which is now as well housed as many in Europe. The quality of the teaching, however, still leaves much to be desired, and it is to be hoped the new director will institute reforms in that direction.

MANCHESTER.

Overcrowding in an Infectious Hospital.—Amalgamation of Out-Townships with Manchester.—Combe Lectures.

THE Hospital for Infectious Diseases in Salford is greatly overcrowded, and proposals have been made by a special committee of the Salford Corporation to the Board of Management of the Manchester Royal Infirmary, asking that Salford should share equally with Manchester in the benefits of the Mursall Hospital. The Board resolved not to increase their great liabilities by consenting to provide for and undertake the treatment of all the cases of infectious diseases arising in Salford.

The question of the amalgamation of certain out-townships with the city of Manchester has long been under discussion. In view of the early formation of the new County Council, under the Local Government Act, 1888, the City Council intend shortly to present to the Local Government Board an application for extension of the boundaries of the city. Several townships have signified their willingness to accede to the proposal, but there are one or two districts where the ratepayers have not fallen in with the proposal.

On Tuesday, October 15th, Professor Stirling delivered the first of a course of eight evening lectures—Talk to all Students of the College. These lectures are under the auspices of the Combe Trustees. The first lecture dealt with the general characters of sense-organs.

BIRMINGHAM.

The University Question.

THE annual meeting of the Governors of Queen's College, held last Thursday, was significant from the remarks made by Mr. Lawson Tait and the Home Secretary. Mr. Tait, speaking as one of the managing body of both Mason and Queen's Colleges, deprecated the idea of a Midland University, on the ground that a similar institution recently founded elsewhere was not a success, and that the formation of a university in Birmingham would be the signal for a number of creations in other large towns. He had recently opened up negotiations with the University of Durham, in the hope that Queen's College might be affiliated with that university. The difficulties were few and would be easily surmounted. In conclusion he appealed to the members of Her Majesty's Government to help them in the difficulties which now hampered the College.

The Right Hon. Henry Matthews congratulated the College on its very satisfactory report, as well as on the large entry of students for this year, the number—seventy-six—being in excess of any entry since the College was founded. Referring to the report of the London University Commission, he considered that the movement for securing a degree in medicine for all practitioners had a certain unreality about it. It originated in a sort of grievance, felt both by teachers in the metropolis and in the provinces, that the examinations at London University were too severe for well-qualified and well-instructed pupils. Mr. Matthews, holding the degrees of the London University in very high esteem, would be very loth to see any change in that university which would lower the quality of her degrees; and he thought that the indiscriminate multiplying of degree-giving places would be detrimental to the interests of higher education in this country. In conclusion, he promised his careful consideration to the matter in any future dealings he might have with it. Mr. Matthews was subsequently re-elected a member of the Council.

CORRESPONDENCE.

THE PRACTICAL ELEMENT IN MEDICAL EDUCATION.

SIR,—On my return from a holiday in a distant part of Scotland my attention has been drawn to a letter from Mr. Wheelhouse in the JOURNAL of October 12th, which letter calls for an explanation and apology from me.

Early last summer, in the midst of our preparations to receive the British Medical Association, my departure from Leeds came suddenly about. To my great regret I was unable to be present at the meeting, and with the change in my calling and the removal of my home to London came much pressure on my time and thoughts, and much confusion of books and papers. My keen interest in the success of the meeting was satisfied by the daily journals, and in these I read some abstracts of the addresses. My journals, however, lay in a growing heap, unopened for many weeks. Such a phenomenon has been visible to me beforetime in the houses of friends who had less excuse than I. My address at St. George's therefore, which appeared to be a counterblast to Mr. Wheelhouse's address at Leeds, was in reality written independently of it. Had I read this address in full my own would have been greatly modified in its reference to the President.

I much regret the consequent misunderstanding, and make at once the large withdrawals which the President has shown to be imperative. The fact is, I spoke upon the common and well-worn rumour that Mr. Wheelhouse was working for the restoration of the apprenticeship system. The belief that he advocated a return to the old form of it was common among his friends but is now corrected. I sincerely apologise for any share in the propagation of this error. Whether Mr. Wheelhouse did never intend to recall the old system, or whether he did and now does not, I will not wait to inquire. I am only too thankful to hear what his opinion actually is. Even in this of course I think he is wrong, as I have tried to show, and as I venture to think Professor Gairdner has shown. Enough, however, of argument for the present.

On October 19th, besides Professor Gairdner's letter, there appeared a letter from a second correspondent, which would have needed no notice from me—not even, perhaps, to indicate it as a curiously apt instance of the very habit of thought I am anxious to see reformed—had not the writer spoken of me as one who tried to laugh Mr. Wheelhouse down. This cannot pass unnoticed. However fit a weapon ridicule might be for this correspondent it shocks me to think that even one person should have supposed me to treat Mr. Wheelhouse's opinions with derision. It was, indeed, the very ascendency of my old friend—his personal power and merit, and the advantage of his place—which filled me with no laughter but with real alarm. I feared so much that I spoke out with all if such little force and acuteness as I might possess to avert what I regarded as instant peril. I spoke in no mood of laughter. Your printer would tell you, sir, that both from manu-

script and proof I erased words of regard and respect for Mr. Wheelhouse, fearing that, not to him who knows our friendship of more than twenty-five years too well, but to others my words might have savoured of adulation. My hope now is that we shall have Mr. Wheelhouse on our own side ere long.—I am, etc.,

Athenæum Club, October 22nd. T. CLIFFORD ALLBUTT.

SIR,—In the JOURNAL of October 12th the letters from Dr. Gairdner and Mr. J. Brindley James may be said to comprehend the subject of practical medical education at the two extremes—the one for thoroughness and genuine work; the other for apparent knowledge, superficial skill, fragmentary facts. I agree with Dr. Gairdner that a few cases well learned is of infinitely more value than ability in relieving pain, daring that arises from ignorance and routine in any emergency, an indifference of causes, conditions, or possibilities that engenders a confidence in ability, or recklessness in method, which few men with thoroughness in training would dare to presume.

The contrast between the admirable theorist and the nimble fingered apothecary proves nothing; there is no reason why the theorist may not be nimble fingered; that is merely a matter of individual capacity. To treat symptoms is easy, to find and treat the cause of these symptoms more difficult. The public may be easily deluded by the nimble fingered who treats the prominent symptoms, who makes an apparent cure; but is he doing justice to his patient? To remove a detached placenta from the vagina, to extract a tooth, to draw off urine, can be done by any man of average intelligence; but to be treating a case of phthisis as "stomach cough," or hip-joint disease as "growing pains," is, I am afraid, too often the result of nimbleness without the thoroughness. A good clinical training will enable a man to diagnose a disease he perhaps has never seen before, while the other would be groping with one or other element of the disease, disregarding the others and failing to recognise their real meaning. I have known your practical man, the unqualified man, with little hospital experience or clinical work, and who knew better than Dr. So-and-so at the hospital, treat a case of scurvy, not recognising it, with tincture of myrrh to the gums.

Let the student first become acquainted with the methods of diagnosis, let him become familiar with the art of detecting disease with scientific precision, and then a year or so of experience in the duties of the practitioner will be of real value to him. No one will dispute the advantage of practical experience in the every-day duties of the practitioner; and the eager student need not be ignorant of the class of cases or emergencies he may have to undertake in after-life, if he attend faithfully to what he sees and hears at the hospital dispensary and elsewhere.

My experience has been that to replace good clinical work with the practical—so-called—as acquired in the apprenticeship style, leads the mind to receive the fundamental principles of medical education with bias and preconceived notions, acquired in the hasty diagnosis and superficial work of a busy practice, and very often of a routine practice.

These facts apply not only to the training of the medical student, but to learners in other professions and trades. Most of us are familiar with the divinity student who has had a large experience in city mission work, to which he has devoted more time and perhaps inclination than his studies. He grows up an ascetic, illogical, bigoted minister, his contact with crime so influencing his teaching that he is always discoursing on the one subject and its punishment; this affects all his utterances. Whereas the other, who perhaps has never attempted to speak or preach in public till he is an advanced student, will show by his manner and discourse that, no matter what his individual ability, he has acquired fundamental and recognised ideas of his work and calling—thoroughness in training and versatility of ideas. These are the broad distinguishing features of the practical without the thoroughness, and the thoroughness with little of the practical.

Speaking from experience, I would recommend that at the end of the third year of study every student should have at least one year devoted to practice, either with the nimble fingered country apothecary or the fashionable west-end doctor; and then we shall hear less of the smart young man without the degree, and more of him with it.—I am, etc., JOHN M. MILLER, M.B.

Largs, N.B.

SIR,—The very excellent address given by Dr. Allbutt at St. George's Hospital, and published by you, calls attention to the all-important matter of the curriculum. I take it that every successful man thinks that his own education had great merits, and it is only graceful humility on his part to acknowledge how much he owes to his teachers, but what of those men who have failed in various ways? Are these faults in the course of learning prescribed by the Medical Council? I think that they are best able to answer these questions who employ qualified assistants, and are thus in daily contact with men who have lately passed their final examinations.

From my observation of the younger members of the profession, and from my own experience, I am convinced that the practical training must take the first place. Let me explain. The best lectures are those which are accompanied by a demonstration of some kind; for example, clinical lectures are much more valuable to the student than systematic lectures on the practice of medicine, because, in the first case, the student has had the actual facts and conditions brought to his eyes as well as his ears, because he had seen in the concrete that which the systematic lecture has only shown in the abstract. Demonstrations of anatomy, chemical and other lectures at which the subjects of the address are made visible are, generally speaking, those which I would retain, and I would curtail the total number of lectures by taking out those which are only theoretical. By this means the student would get more time for other work and for reading.

I remember hearing an Oxford man (one who worked well and paid his way by his own efforts) say that he considered his lectures a great waste of time, because he could read as much in ten minutes as he could learn in an hour's lecture, to say nothing of the loss of time in going to and returning from his tutor's rooms. The best teaching, then, is demonstration; the best clinical lectures are those which are strictly clinical, by or near the bedside. Now the state of pupilage, private pupilage, ought to be most favourable to this clinical teaching. Hospitals are the best places for seeing rare diseases, but ordinary cases are best seen in general practice. There is nothing in the curriculum as it stands at present to guarantee to the student opportunities for seeing the often quoted "case of measles," nor to ensure his familiarity with the use of splints and bandages.

I find that the best assistants are those who have been articled or apprenticed as well as hospitalled. I do not think that sufficient stress is laid on the fact that the length of the period spent in medical study has actually lessened of late years. Forty or fifty years ago the usual term was seven years, five as an apprentice and two as a hospital student. Thirty years ago three years were commonly spent in a hospital or private practice, and four in the medical school. At present only four years are required, and I suspect that, in a large majority of cases, only four years are spent in getting up the knowledge required to pass examinations which are more difficult than they were thirty years ago.

I do not deny that a lazy young man might find great facilities for wasting three or four years under the nominal tuition of a general practitioner, but I hope that such principals are growing rare as lazy students are growing fewer. *Mr. Punch*, two years since, gave a sketch of the student of fifty years ago, with his pipes, his dog, and other festive surroundings, and a sketch of the state of things in these working days, in which our friend is immersed in a book, his bones and microscope making up his present environment.

Two years under the personal teaching of a medical man who has practice enough would be good preparation for hospital studies, and would surely be more suitable for a lad of 16 or 17, fresh from school, than being set adrift in London or any large town. The number of lectures might well be reduced, for much more time is needed for work in the out-patient departments, and in special hospitals.

In various ways I have learnt that the views I have now given are those held by many of my brothers in the profession, and I shall feel obliged if you will allow them to appear.—I am, etc.,

M.D.LOND.

P.S.—Since writing the above I have read Mr. Wheelhouse's letter in the JOURNAL, from which it appears that he is in favour of pupilage before the hospital period.

SIR,—A number of your correspondents are endeavouring to support the system of pupilage by the rather specious argument of quoting examples of mistakes made by newly qualified men. Now, of course, everyone is liable to error, but are errors always confined to M.D.s of our universities, and to those who have never

been pupils. I can recollect a variety of errors in diagnosis I have met with in practitioners of long standing, and who also had, previous to entering a medical school, been pupils, such as mistaking well-marked pleurisy with effusion for pneumonia; the same trouble with the placenta that Mr. James met with in two young M.D.s; mistaking an antiflexed uterus for a tumour of the bladder or somewhere. I have seen glaucoma mistaken for cataract with disastrous results. I have seen a practical man, who despised the laryngoscope, apply nitrate of silver to the root of the tongue on the supposition it was going into the larynx, a rough-and-ready and extremely practical (careless) method, worthy of a man who had seen the same thing done during his apprentice days. The case came under my care, when I easily removed a small tumour from the vocal cord, but then I had never been a pupil, and had only received a scientific medical training, and was not long qualified. On another occasion I went down into the country to operate on an infant, and I had the family practical man to give chloroform for me, but found I had to give it myself, or the child would never have got under the influence. But why continue such sad experiences?

As to the habit of writing prescriptions, treating ordinary cases without hesitation, tapping hydroceles, all this can and should be learned at the out-patient departments.

I have also found that men who have been pupils find, as a rule, a greater difficulty in getting qualified; they become too practical to study the scientific basis on which their practice should rest. Here is a practical prescription I lately saw; it was written by an upholder of the pupil system: ℞ Acet. ipecac., ℥ii; sod. bic., ℥ii; pot. brom., ℥ii; sp. chlorof., ℥vi; tr. valer. am., ℥vi; aq. chlorof. ad ℥viii. Now if this man's pupil should, in after years, present such a prescription at one of his examinations, it might prejudice the result. There is a tendency in the pupil system to narrow the mind and to lead into a groove of practice, what Dr. Gairdner terms "automatic."

As to unqualified assistants, they are, as a rule, a fraud on the public, and I think their masters deserve to be prosecuted for obtaining money under false pretences. But what think you of a set of unqualified men I remember once hearing examined for an L.M.? One gave the normal temperature of the body as 60° F., another tried 70°, and a third 150°. Yet these were practical men; two had been for years assistants, and one had a large practice of his own. Even the most junior probationer nurse was much more accurately informed, and could take the temperature herself.—I am, etc., AN M.D., ALSO AN L.M.

THE DEAF AND DUMB.

SIR,—The letter on this subject from Dr. C. Macalister, of the Liverpool School for the Deaf, calls for a reply. The object of his letter is to show that when taught by signs the deaf are better off than when taught by the "pure oral system," and that a system which combines the advantages of both must be better than either.

In a letter published in the medical journals nineteen years ago, I made the same statement, but have since found that it is fallacious. I am certain that men of clear perception and free from bias, if they took the trouble to see the pure oral schools of Norway and Italy, as I have done, to say nothing of the German schools, would be convinced that there is really no comparison between the results of the conflicting systems, and it is needless to go further than the Training College for Teachers of the Deaf, at Ealing; to the Fitzroy Square School, or the Jews' School at Notting Hill, to be assured of this. Signs enable the deaf speedily to communicate with each other, and when a method of communication is established, then speech may be taught too. But the point upon which Dr. Macalister, and others who think with him, need to be convinced is, that when deaf children have learned to communicate by signs, they will not give that individual attention to lip-reading speech which is essential for complete success. By these means alone can the deaf be taught to communicate with and diffuse themselves amongst the general population, whilst signing makes them clannish, and intimate association naturally leads to intermarriage.

It is sad to see in the London Asylum the children of deaf and dumb former pupils now in the school. No one asserts that all the children of congenital deaf persons, when two such persons marry, are all deaf, but it is a fact beyond all dispute that the percentage of born deaf children of such unions is much greater and increasingly greater if parents and grandparents are congenitally deaf than when one only is deaf or both parents are hearing; except perhaps in certain cases of consanguineous marriages or marriage of persons with congenital defects.

The intermarriage of the blind has been shown by Dr. Armitage to produce an abnormal proportion of blind descendants, but fewer children are born blind than deaf. Interpretation by silent word of mouth often proves of real value where the deaf person is unable to see the lips of a preacher or lecturer.—I am, etc.,

E. SYMES THOMPSON, M.D., Chairman of the Training College for Teachers of the Deaf and Diffusion of the Pure Oral System.

LICENTIATES OF THE APOTHECARIES' SOCIETY OF LONDON.

SIR,—Having read the statement of the Apothecaries' Society in the JOURNAL of October 19th, I should esteem it a favour if you would allow me to make a few remarks on the subject of the old and the new licentiates of the Society.

1. The old qualification granted by the Society was called a "Certificate of qualification to practise as an Apothecary," in the examination regulations of 1880.

2. The new qualification is called a "Diploma in Medicine, Surgery, and Midwifery," in the present regulations.

3. The practice of an apothecary has been defined: "In attending and advising patients afflicted with diseases requiring medical (as distinguished from surgical) treatment, prescribing, compounding, and supplying medicines for their cure or relief."

4. The old L.S.A. was a Licentiate Apothecary, and was correctly, and sufficiently, described by that title.

5. The new L.S.A. is Licentiate Apothecary, and something more; he is certified by his diploma to be competent to practise, not medicine only (as an apothecary), but surgery and midwifery also, and he certainly is not sufficiently described by the title L.S.A.

The new licentiates must take the question of their title into their own hands. After passing a qualifying examination, held in accordance with Medical Act, 1886, they receive a diploma in medicine, surgery, and midwifery, and are admitted licentiates of the Society. Their lawful title is, therefore, "Dipl. in Med. Chir. et Obstet., L.S.A.;" and this is the description which I should advise every new licentiate to adopt.

Every registered practitioner is lawfully entitled to use such description of his qualification as the nature of his diploma or diplomas warrants, and, as every person registered under the Medical Act, 1886, is required to produce a diploma or diplomas in medicine, surgery, and midwifery, therefore every person so registered is entitled to record the fact, if he pleases, quite apart from any traditional title which the body conferring his qualification also bestows upon him.

I shall be pleased to sign the memorial to the Medical Council, which Mr. Upton mentions, if the promoters of it will make known through the press where it is to be found, although, after the action of the Council on this subject last session, I should not expect that they will take any step in the matter, which, after all, is one in which the licentiates have full power to help themselves; for, if the description which I have suggested were generally adopted, it would very soon become recognised; and should any new Medical Bill be introduced into Parliament, measures might then be taken to add this title to those which are mentioned in the Act of 1858. —I am, etc., A. R. W.

October 21st.

THE ST. JOHN AMBULANCE ASSOCIATION.

SIR,—In the JOURNAL of October 12th you published a correspondence between Mr. John Furley and Dr. Stanley Haynes, of Malvern, which has interested me a good deal. I think that Dr. Haynes's answer merited publication from the clear and just standpoint which it shows him to have taken up.

Might I be allowed to suggest to Mr. Furley, as one who has thought much in this direction, that the army has its medical organisation which covers the very ground he would deal with, and that development is far more needed in connection with the volunteer force pure and simple?

We have now a very considerable volunteer home army, the various branches of which have been steadily undergoing evolution as the necessity of the times dictates. There is a Volunteer Medical Staff Corps but barely, at its present strength, able to provide medical aid in the first line should the volunteer force be called out. The scheme so far is well enough carried out as

things go, but it suffers from isolation, there is nothing behind it.

Imagine the case of the Volunteers being mobilised to garrison and defend, say half-a-dozen such centres as London, Portsmouth, Liverpool, Glasgow, Edinburgh, and Hull, the Volunteer Medical Staff Corps would be completely absorbed, and over, in providing attendance for the sick consequent upon large concentrations of men, and more especially at first, until the men had become hardened to the new mode of life.

Should an action take place, and there might be more than one in the "fortnight," where are the wounded to go, and who is to look after them? Might not the civilian element be brought in here, and a home organisation for purely home purposes be established, by means of which the front might always be kept cleared of sick and wounded, by sending them through lines of communication to hospitals existing or extemporised, out of the way of active operations; the *personnel* to be provided for these by the St. John Ambulance Association, which for the purpose would assume the functions of a nursing organisation, with medical and nursing staff.

The distinct aim of such a scheme would enlist the sympathies of all, it would be clearly understood, and would not suffer from the shyness with which proposals are regarded, the aims of which are not sufficiently direct in the estimation of the medical profession at any rate.

There is no need to start a new organisation for the regular forces. The volunteer home defence army wants all the help of well-wishing civilians in order to perfect its organisation, and to bring it more completely into touch with possible requirements.

DE BURGH BIRCH, M.D.,
Leeds. Surgeon Volunteer Medical Staff Corps.

THE DANGER OF CHLOROFORM AND THE SAFETY OF ETHER AS AN ANÆSTHETIC.

SIR,—Allow me once more to bring before the notice of the profession, and in particular the surgical branch of it, the danger of chloroform and the comparative safety of ether as an anæsthetic. I do so because of the unhappily familiar newspaper heading of alarming frequency, "Another Death from Chloroform." Surely surgeons have had warning enough. Anæsthetists of eminence, whose opinions are authoritative, have testified again and again in the strongest possible manner as to the safety of ether and the danger of chloroform, while carefully compiled statistics have established that chloroform is at least eight times more dangerous to life than ether. It seems, therefore, nothing short of downright blind obstinacy or recklessness to adopt the most dangerous anæsthetic known in the performance of surgical operations. I am aware that in the early stages of labour in midwifery practice a few drops of chloroform are placed on a handkerchief for the patient to inhale its soothing influence. In this mode of administration plenty of fresh air is inspired at the same time, which may account for the few accidents following its use administered in this way. Moreover, complete anæsthesia is seldom produced. But during the last twenty years I have witnessed several very painful scenes at the operating table. I have seen the patient under the influence of chloroform suddenly cease to breathe. Then moments of intense anxiety were experienced by all around till the cheering signs of animation were restored after resorting to almost every means recommended for such a condition, such as inversion, artificial respiration, stimulation of the nerve centres with electricity, hypodermic injections of ether, strong solution of ammonia to nostrils, the tongue at the same time drawn out to its fullest extent. Such hairbreadth escapes, and the painful suspense and mental misgivings following such a mishap, should tend to make surgeons careful to select an anæsthetic which is the safest known, no matter what the issues may be. I do not say that deaths have not occurred occasionally during the administration of ether; for you can, in my opinion, court a fatal issue with any anæsthetic if, through ignorance or foolhardiness, you choose to push the administration to its utmost limits. But, if deaths have occurred from ether, it is because the patient was suddenly asphyxiated by an ignorant or inattentive administrator, who probably did not know what he was doing during the administration, and was watching the operator or the operation instead of minding the pulse and respiration of the patient.

Some ridiculous objections have been urged against the use of ether, as that, for example, in operations about the throat you are told you cannot give ether well. Now, after a very extensive experience, I cannot recall one single instance, with my inhaler, where I was not able safely and rapidly and with perfect satisfaction to place the patient under the influence of ether in operations connected with the throat and palate.

But then it is said, "Oh! ether has such a choking effect, and frightens a nervous patient." Well, this objection can be easily removed by warming the inhaler before using it, and thereby heating the ether vapour, so that it does not irritate in the slightest degree the throat and air passages. Again, with my ether inhaler the patient breathing and rebreathing the same ether-charged air economises the quantity of ether used, and is not likely to produce the kidney trouble alleged to be produced by its effects. Another objector says, "Oh! ether excites patients so much." Well, I must fall back on my experience and say I have seen far more excitement follow the inhalation of chloroform than I have ever seen in the case of that of ether. I asked a surgeon recently why he used chloroform, being so much more dangerous, in preference to ether. His reply was, "Why do the world not travel in stage-coaches instead of railway trains, as the former were far safer?" The reply may have pleased the surgeon, but it did not answer my question, or yet remove his responsibility in the matter.

Some years ago an action was brought against a surgeon for having, it was alleged, negligently and unskilfully permitted the use of chloroform, thereby causing the death of a patient during the performance of an operation. Fortunately for the surgeon, the jury disagreed, and the action was allowed to drop. The public are now taking an interest in medical subjects, and I doubt whether in future every surgeon who, knowing the dangers of chloroform, wilfully runs the risk, may, in the event of a criminal prosecution, be so fortunate as to get a jury who will disagree upon the question of his culpability.

I consider that a surgeon, I care not who he is, incurs a grave responsibility if he permits, without very good reason, a fellow-creature to be suddenly precipitated into the mysterious sleep of insensibility, never to wake again, by means of an agent which has been proved beyond doubt to be eight times more dangerous than ether. He certainly cannot be said to have given his patient the best chance, and the public will very probably view the matter accordingly.—I am, etc.,

LAMBERT HEPENSTAL ORMSBY, M.D., F.R.C.S.,
Surgeon to the Meath Hospital and Co. Dublin Infirmary,
Dublin, October 19th.

WHAT IS VACCINIA?

SIR,—In the October number of the *Archives of Surgery* Mr. Jonathan Hutchinson describes and analyses in a masterly manner "three latent cases of gangrenous ulceration of the arm after vaccination." So closely did the symptoms simulate some of the manifestations of syphilis that several well-informed medical men held that they were cases of true syphilis. However, all must bow to the opinion expressed by Mr. Hutchinson that they were probably cases of vaccinia. They thus strongly support the view ably maintained by Dr. Creighton that cow-pox is closely allied to the great pox. It should be clearly understood that Dr. Creighton never suggested their identity, but only their similarity. He says:[1] "A careful and unbiassed survey of the facts has convinced me that cow-pox sores must be credited with a power of producing secondary symptoms (I say nothing of tertiary), not because they have the contamination of venereal pox in them, but because their nature is the same, or parallel with, that of the venereal pox itself."

The important question arises, What is vaccinia? Is it cow-pox, or horse-pox, or horse-grease cow-pox, or horse-pox cow-pox, or small-pox cow-pox? Jenner, in his "masterpiece of medical induction," asserted it to be that form of udder disease inoculated from the greasy heels of a horse through the medium of the milker's hands. Sir John Simon maintains that it is small-pox cow-pox. Mr. Hutchinson holds this view.[2] We read: "If we suppose that cow-pox was a disease communicated to the cow by the hands of a milker suffering from variola," etc. It is quite necessary to suppose this, as there is not a single authentic case on record in which a milker with variolous pustules on his hands has been known to infect a cow.

On November 17th, 1881, an outbreak of cow-pox was reported at La Forêt in Eysines. It was a so-called "spontaneous" attack, and not small-pox cow-pox. The Medical Officer to the Local Government Board solicited and obtained some of the lymph, and started the Vaccine Establishment at Lamb's Conduit Street.

[1] *Natural History of Cow-pox and Vaccinal Syphilis*, p. 156.
[2] *Archives of Surgery*, vol. i, p. 83.

So Dr. Buchanan believes vaccinia to be the dairyman's cow-pox, or pap-pox. It comes to this, then, that we have at least three varieties of lymph circulating in this country, each believed to be the "life-preserving fluid" by eminent authorities—namely, horse-grease cow-pox (Jenner), small-pox cow-pox (Simon and Hutchinson), cow-pox or pap-pox (Buchanan).

One problem the Royal Commission on Vaccination has to solve is, What is vaccinia? If they settle this one point only, their time will not be altogether wasted.—I am, etc.,

H. H. TAYLOR, F.R.C.S.

Hospital for Consumption and Diseases of the Chest, Brompton, October 20th.

NAVAL AND MILITARY MEDICAL SERVICES.

ORIGIN OF THE RANK AGITATION.

MEDICAL STAFF writes: The origin of the agitation attributed by Lord Camperdown's Committee to the abolition of the regimental system is manifestly absurd. It did not even arise from the mere abolition of relative rank, although concurrently with that came other changes which roused the medical officers. The following is the true origin, and also gives the clue to the real remedy.

When the commissariat, ordnance, pay, etc., departments had relative rank, it was accepted by the medical department as sufficient; but on the abolition of relative rank these purely non-combatant departments were suddenly endowed with substantive or honorary rank and titles; the medical officers as commanding men and sharing the actual dangers of the battle-field, which the others do not, felt they could not for a moment submit to be placed on a lower level than clerical paymasters; they demand at least to be levelled up to these departments, and mean to continue their protest and agitation till they are. The agitation and its remedy are here in a nutshell. The recommendations of Lord Camperdown's Committee will not be accepted as final by 80 per cent. of the medical staff. They insist on a *bonâ fide* corps of "Royal" surgeons, of which they shall be the substantive officers.

MEDICAL OFFICERS' UNIFORM.

A CORRESPONDENT in India thanks us for past "benefits on poor exiled *confrères* in the army and Indian services," and continued "exertions on their behalf," and sends "congratulations on the results of Lord Camperdown's Commission," as summarised in the JOURNAL of August 31st. From that report he takes as a text the "dissent" that medical officers should wear a professional badge to distinguish them, and founds thereon a long indictment against their present uniform.

He says medical officers have from time to time been made to resemble engineer, staff, and artillery officers; he even cites a case where an artillery major mistook a surgeon for the captain of his battery, whom he chanced to personally resemble! Combatant officers write satirical letters to the Indian papers on such incongruities. He suggests for army medical officers a distinct plain blue uniform, such as is worn in the navy, which would be at once more comfortable and appropriate for medical duties; the coat, waistcoat, and trousers to be of blue cloth, with gold buttons, but without facings and braid; rank to be shown by gold lace rings on cuffs of sleeves, and above these a gold Geneva cross; no mess jacket to be worn, "but a decent coat like that of a court costume;" with a light rapier instead of the present heavy sword to mark status as a commissioned officer; no shoulder belts, which are a nuisance; all present garments are absurdly tight, and give rise, especially in stout gentlemen, to a feeling of suffocation. Medical officers in Continental armies are more sensibly dressed than in ours.

*** We fear our correspondent, in urging us to support his proposals, has under-estimated the tremendous opposition they would meet with. We gather from many letters that there is a very strong feeling among medical officers against the recommendation of "ticketing" them by badges; they suspect, not without reason, that the real object of the proposal is to further accentuate their position as belonging to a caste outside the army; they know well enough that for all practical purposes wearing the Geneva badge in the field only is all that is required. They have the rooted English antipathy to being made conspicuous in dress, whether plain clothes or uniform. Our army uniforms may be absurd, both ornamentally and practically, but they are the outcome of a long process of sartorial evolution in certain marked directions. Naval rank badges proceed in entirely distinct lines from the military, and the two cannot be mixed up without confusion. We believe the blue tunics are by no means universally popular in the medical department, many preferring the old red as more characteristic of the British army.

THE NAVY.

THE following appointments have been made at the Admiralty:—HUBERT HOLYOAKE, Surgeon, to the *Anson*, November 1st; WILLIAM B. FLETCHER, Fleet-Surgeon, to the *Collingwood*, November 7th; JAMES W. H. HAWTON, Staff-Surgeon, to the *Victor Emanuel*, October 19th; H. A. W. RICHARDSON, Staff-Surgeon, to the *Valorous*, October 19th; GEORGE J. FRASER, to the *Asia*, additional, for Reserve, October 19th; WILLIAM TAIT, Surgeon, to Bermuda Hospital, October 19th; EDWARD R. D. FASKEN, Surgeon, to the *Collingwood*, November 7th.

INDIAN MEDICAL SERVICE.

THE services of Surgeon C. N. BENSLEY, Bengal Establishment, are placed temporarily at the disposal of the Chief Commissioner of Burmah.

Surgeon B. B. GRAYFOOT, Bombay Establishment, is appointed to act as Secretary to the Surgeon-General with the Government of Bombay.

Surgeon T. H. GRIFFITH, Bombay Establishment, officiating in medical charge of the 3rd Battalion 4th Bombay Infantry, is appointed to officiate in medical charge of the 19th Bombay Infantry, during the absence of Surgeon A. S. Faulkner.

Surgeon F. C. REEVES, Madras Establishment, Acting Resident Surgeon, Madras General Hospital, is directed to act as Secretary to the Surgeon General with the Government of Madras, during the employment of Surgeon C. M. Thompson, M.B., on other duty.

Surgeon J. S. WILKINS, Bombay Establishment, has been appointed Superintendent of Matheran.

Surgeon-Major L. CAMERON, M.D., Bengal Establishment, has leave of absence for two years on private affairs.

Deputy Inspector-General ROBERT HALKERSTON DAVIDSON, M.D., late of the Bombay Establishment, died on the 17th instant at Culross, Perthshire.

THE MILITIA AND VOLUNTEERS.

SURGEON-MAJOR R. H. ROGERS, of the Waterford Artillery, Southern Division Royal Artillery (formerly known as the Waterford Artillery Militia), has retired from the service with permission to retain his rank and wear the prescribed uniform.

Surgeon-Major F. G. BENNETT, of the 1st London (City of London) Artillery Volunteers, has resigned his commission, that of Surgeon being dated June 19th, 1867, and that of Surgeon-Major February 1st, 1889.

Acting-Surgeon C. H. WADE, 5th (Hay Tor) Volunteer Battalion Devonshire Regiment (late the 5th Devonshire), has resigned his appointment, which was dated October 17th, 1888.

Mr. WILLIAM BROOME GILES is appointed Acting-Surgeon to the 1st Herefordshire.

Surgeon T. TRENT, of the 2nd (South) Middlesex, is promoted to be Surgeon-Major, ranking as Major.

Surgeon-Major (ranking as Major) T. JOHNSTON, of the 1st Volunteer Battalion Highland Light Infantry (late the 5th Lanarkshire) has resigned his commission, with permission to retain his rank and uniform. He ranked as Surgeon from February 24th, 1874; as Surgeon-Major from February 1st, 1889.

MEDICO-LEGAL AND MEDICO-ETHICAL.

CONSULTANT'S FEES.

JUNIOR R.—1. Our correspondent, who describes himself as a junior consultant in London, would be ill-advised habitually to accept fees at a lower rate than those which have been settled by long-established usage, namely, for country journeys, two-thirds of a guinea a mile one way. It would, of course, be open to him to consider each case on its merits, and his standing as a junior would no doubt dispose him to accept a reduced fee, when such a reduction was requested or approved by the local practitioner whom he meets in consultation.

2. In Dr. Styrap's *Medico-Chirurgical Tariffs* (London: H. K. Lewis, 1838) the fee for the operation for the radical cure of hydrocele is stated to vary from a minimum of one guinea to a maximum of five guineas. This may guide our correspondent in fixing his fee for the radical cure of varicocele.

THE RIGHT OF PROPERTY IN PRESCRIPTIONS.

MR. ALLEN MCCULLOCH, M.B. (Tarporley) writes: I have carefully read and followed Dr. Rentoul in his advocacy for a Public Medical Service, and have consequently no little regard for his ability. But in the JOURNAL of October 12th I notice a letter from him on the above subject, on which I venture to think he holds erroneous views and has drawn erroneous conclusions from the examples he there instances. With your indulgence, I should like to point out what appear to me to be some of these fallacies.

Dr. Rentoul says: "If the prescription were the absolute property of the patient, then the patient might patent the prescription and have an order made against the doctor ever using it again." I am no advocate for the righteousness of the Patents Law; but surely Dr. Rentoul will not deny that such a thing as he suggests is quite possible. If I go to a doctor, he prescribes, say, some pills, which I believe to possess some wonderful health-giving properties. What is there to hinder my setting up a pill manufactory, turning out *my* wonderful pills by the million, and, having obtained a patent (an easy matter), wrap them up in plenty of handbills setting forth their power to cure or relieve every disease in the nosological table of the College of Physicians, label with a Government stamp, and dispose of them through every "respectable chemist" as my property and preparation? I could make no order to prevent my doctor from prescribing the same pill to his other patients; but I could if he ordered them as "my wonderful health-giving pills," the title under which my patent was granted.

Again, Dr. Rentoul says: "I think the patient has no more right to the prescription than a client has to the brief or copy of the brief sent by the solicitor to the barrister." He also instances a clergyman and one of the congregation. The same fallacy appears in both; but let me argue the client example. To begin with, I should say the brief is not analogous to the prescription. But suppose a client asks counsel's opinion on a point of law, would not the written opinion of counsel become the property of the client? And let us suppose this client some days after meets a friend, who says he is in trouble about a question of law, and, on hearing what it is, our client concludes it is a similar case to his own, does anyone deny that he has the right to advise his friend on the lines of counsel's opinion obtained for his own case? Of course it may not represent what counsel's opinion would be in this case—there may be some differences which do not appear to these two untrained in law—but they believe it does, and have the right to act on it if they like. A patient complains of pain and loss of appetite; he consults his doctor, and is advised some dilute acids and gentian; this braces up his liver and he is soon all right. Soon after he meets a friend who complains of pain and loss of appetite, and immediately he diagnoses a similarity of diseases from similarity of symptoms; he tells him his doctor gave him a prescription not long ago for the same thing and it soon cured him; he offers the same to his friend and it is accepted. Had he no right to do that? I say yes, although I regret to say his friend's case was one of ulcer in the stomach wall.

One other example. Dr. Rentoul says: "If I get a suit of clothes, and

want the pattern from the tailor for a friend, or even for myself, is it likely the tailor would give it me?" etc. Now, surely to be analogous the case ought to be thus: Dr. R. goes to a man who measures him and cuts out a pattern for his suit; this he is directed to have made up by some tailor. Would the pattern be kept by the tailor, would it be the property of Dr. R., or would it revert to the cutter? I should say, after having paid the cutter, it was the property of the doctor; and if a friend of his wished for a similar suit, and he and Dr. R. agree amongst them that the measurements, etc., would answer equally well in his case, I can see no reason why the friend should not have the benefit of the doctor's shape and style.

In a former JOURNAL, Dr. Rentoul, writing on this subject, referring to a patient whose husband was a carpenter, says: "You have no more right to the prescription than I would have to your husband's tools after I paid him for a piece of work." Now, surely the fallacy here is obvious. The doctor pays only for the work of the carpenter, not for the tools, so they do not belong to him. The patient pays the doctor for the work (advice), but has also to pay for the tools (prescription), and they must be his property. I must demur to his assertion that the prescription is not paid for by the patient. He says the patient only pays for advice. Just so; but the prescription is part of the advice. The advice is: "You must do so-and so and take so much of so-and-so, and, lest you should forget the names of the ingredients, I will write them down for you." This recipe is given to the patient to make use of or not, just as he or she is inclined. If inclined, he goes to a chemist—for no other reason than that there is more chance of obtaining all the ingredients in such a shop than in the shop of some other merchant—and there has it compounded. Surely in all this there is no difference than in a recipe for a sauce or a jam or other preserve which one's friend may write out for them any day. If a friend gives me a good recipe for, say, ketchup, can I not oblige another friend of mine by giving him the recipe? Common sense seems to me to argue I can.

This whole question of proprietary right in prescriptions is to me far deeper than appears on first sight. There may be nothing more than the conviction that the prescription is his right urging Dr. Rentoul to give his chemists orders to retain and return his prescriptions; but the effect of such conduct, if it becomes general among practitioners, will be to drive patients back to the antiquated and bad belief in the empirics. To them doctors will become mere machines, like the automatic doctor referred to by Professor Gairdner the other day—machines full of prescriptions for diseases not patients, and with capacious pockets for the fees. Many people still have the belief that Dr. So-and-So has the best cure for jaundice, while Dr. Some-one-else has the "boss" recipe for consumption of the lung. Is it well to foster such beliefs? and will not the cavilling for our recipes back again, as if we only possessed the one special for that occasion, do this?

Dr. Rentoul, in winding up, says: "For pity's sake, and in the hope we may prove to ourselves that we as a profession still retain a modicum of common sense, do let us try to be practical." To this I would add: and for the sake of ourselves and the honour of our profession let us strive every day to attain nearer and nearer to the perfect physician, whose daily work is the care (old *cura*) of our patients, that is, the cure of ailments, the relief of pain, and sympathy with suffering, and whose very last care is the monetary value of this work done for the honour of his grand profession and the glory of Almighty God.

CONSULTATIONS.

DR. W. and DR. J.—The frank and courteous acceptance by Dr. W. of the personally adverse decision of the medico ethical "tribunal to which he appealed," in the matter of his late dispute with Dr. J. (as recorded in the JOURNAL of October 5th), taken together with his subsequent letter of apology to the latter, must, in our opinion, be deemed fully to atone for the professional errors into which he had been unwittingly betrayed in the consultation case alluded to, and which apologetic note, we fain would hope, has ere this been alike courteously acknowledged by Dr. J., with an equally frank expression of regret for his own regrettable share in the unpleasant incident in question.

WEST HARTLEPOOL.—In now replying to the question (thus long unintentionally passed over) submitted by "W. P. D.," we would note that the principle by which B. should be governed in the case in question will be found in the following rule (5) extracted from the *Code of Medical Ethics*, chapter ii, section 5:

"When a patient is consulted by a patient (or other member of the family) whom he has previously attended as the officiating friend or *locum tenens* of another during sickness or absence from home, he should act in strict accord with the principle laid down in Rule 9, and decline attendance except in consultation."

SUPPLANTING.

MR. E. J. R. MCM.—Having, after a careful and unbiassed consideration of the case submitted by "Trifolium," recorded our conscientious opinion in the JOURNAL of October 12th, page 844, to which we deliberately adhere—his own and dissenting friend's opinion to the contrary notwithstanding—we must decline to enter into any discussion thereon or, as urged, to "describe our process of reasoning," and "how we formed our opinion," and would simply refer him to the principle inculcated in the concluding lines on page 92 of the work to which he alludes: "Whatsoever ye would that men should do unto you, even so do ye also unto them."

CARELESS PATIENTS.

J. M. writes: I was called to see a person in the morning; saw her, and promised to call again in the afternoon. I was then told that another medical man had been called in before me, but, being out at the time, did not see the patient until after I did in the morning; he had promised to call in the afternoon. On consideration, I wrote to the patient's husband, telling him I did not like such treatment, and giving up the case. I also wrote to the other medical man, stating briefly the facts, that I was unaware of his priority in the case, and apologising for such conduct, which, I added, I tried my utmost to avoid. I would ask, did I behave with proper courtesy? I have received no answer from the other medical man; it is now four days since.

*** The incident specified by our correspondent is one of the many annoyances to which medical practitioners are unfortunately but too often subjected by unthinking people. Under the circumstances, we are of opinion that he would have acted wisely if, on resigning the case, he had—unless the practitioner first sent for was the family doctor, in which case the visits should have been made on his behalf—demanded his customary fee for the morning and afternoon visits, and so taught a useful lesson by an appeal to the pocket. We need scarcely add that his note of explanation to the practitioner in question should have elicited a like courteous acknowledgment.

CHANGE OF ADDRESS.

H. S. writes: I have been in the habit of taking difficult cases to a consultant, who a short time ago moved his residence, and several of my patients have received a card notifying the consultant's new address. I shall be glad to know: (1) if this is in accordance with medical etiquette; (2) if I am justified in refusing to meet the consultant at any future time. I may mention that I am not the only general practitioner whose patients have received the notification, as several of my friends have complained of the consultant's action.

*** (1) If the facts be as represented, the course pursued by the consultant in question would, in our opinion, justly subject him to criticism.

(2) Although "H. S." would, if no explanation be forthcoming, be justified in declining to meet him again in consultation, we would, in the interest of the profession, suggest that he ("H. S.") should, through the medium of a cautiously-worded note, apprise the gentleman in question that he and other practitioners were cognisant of the fact that the consultant's notification of his change of residence had been received by several of their respective patients, and, according to the nature of the reply thereto, be guided in his future relations with him.

VISITING CARDS.

NEMO asks how the visiting card of an L.R.C.P. and M.R.C.S. should be printed—whether "Mr. So-and-So, Surgeon," or only "Mr. So-and-So," or should the L.R.C.P. and M.R.C.S. be added?

*** Although the question submitted by "Nemo" is one rather for his own consideration, we willingly express the opinion that "Mr. So-and-So, Surgeon," will be found to answer every useful purpose, and that he will be well advised in omitting the suffixes L.R.C.P. and M.R.C.S.

NOTIFICATION OF INFECTIOUS DISEASES.

DISTRICT MEDICAL OFFICER writes: By the new Notification Act, medical officers in connection with any public body are entitled to 1s. for each case. But at present the custom obtains of the relieving officer giving information to the medical officer of health. May the guardians continue this custom and thus the medical officer be done out of his shillings? or will the fee be payable by the guardians on account of the medical officer having informed the relieving officer?

*** The recent Act provides (Section 3) that "every medical practitioner attending on or called in to visit the patients shall forthwith, on becoming aware that the patient is suffering from an infectious disease to which the Act applies, send to the medical officer of health for the district a certificate stating the name of the patient, the situation of the building, and the infectious disease from which, in the opinion of such medical practitioner, the patient is suffering." It also provides (Section 4) that the "local authority"—that is to say, the sanitary authority—"shall pay to every medical practitioner for each certificate duly sent by him in accordance with the Act a fee of.....one shilling, if the case occurs in his practice as medical officer of any public body or institution." There is, however, no definition of a "public body or institution," and it is not at all clear that the sanitary authority would not be liable to pay the prescribed fee to a district medical officer for notifying in the prescribed form cases amongst his pauper patients. But it should not be forgotten that already, under the general order issued by the Local Government Board on February 12th, 1879, "It is incumbent upon every district and workhouse medical officer appointed since February 28th, 1879, immediately upon the occurrence of any dangerous infectious disease amongst the pauper patients under his care, to give notice thereof to the clerk to the sanitary authority or the medical officer of health," and also to "furnish from time to time to the medical officer of health of such sanitary authority such information with respect to the cases of sickness and the deaths amongst the pauper patients under his care as the Local Government Board may direct." A similar obligation has been imposed by the Board's order of June 14th, 1879, upon medical officers of district schools appointed after June 24th, 1879. It would be well if the Local Government Board determined at once the points raised by our correspondent—that is, if they have power to do so—and also the question whether the obligation imposed on district medical officers by the orders to which we have referred is affected by the recent Act. In no case, however, are the guardians liable for fees payable under the Act, except in their capacity of rural sanitary authority. Any claim for payment should be made to the sanitary authority of the district in which the notified case resides.

L.A.H.DUB.

JUSTITIA asks if a Licentiate of the Apothecaries' Hall of Dublin (L.A.H.) has the right to prefix "Dr." to his name or to place "Surgeon" after it on his door-plate, etc.

*** We do not think a Licentiate of the Apothecaries' Hall of Dublin could legally be prevented from putting "Physician" on his door-plate.

P. SHORE.—There is no legal reason to prevent an M.R.C.S.E. and L.K.Q.C.P.I. calling himself "Dr. ——, Physician."

DUBITANS writes: A medical man has a branch surgery in another part of the town, at which an unqualified assistant lives and does the work. The principal does not attend there, but the branch is connected by telephone with his residence. I may say the assistant sees the principal every day. Is this legal? If not, what is the penalty?

*** Without saying whether, upon the facts, an offence is committed against the Apothecaries Act, 1815, it is evidently not a case in which the Society would institute proceedings to recover the penalty of £20.

UNIVERSITY INTELLIGENCE.

CAMBRIDGE.

EXAMINERS FOR MEDICAL AND SURGICAL DEGREES.—The following have been appointed examiners for the current academical year in the subjects of the First and Second M.B. Examinations. Physics: S. L. Hart, M.A., St. John's College, and H. F. Newall, M.A., Trinity College. Chemistry: F. H. Neville, M.A., Sidney Sussex College, and S. Ruhemann, M.A., Gonville and Caius College. Elementary Biology: H. M. Ward, M.A., F.R.S., of Christ's College, and F. S. Harmer, M.A., King's College. Anatomy: Dr. Hill, Master of Downing College, and Professor B. C. Windle, M.A., M.D., of Queen's College, Birmingham. Physiology: Professor W. Stirling, M.D., of the Victoria University, and C. S. Sherrington, M.A., M.B., of Gonville and Caius College. Pharmaceutical Chemistry: M. M. Pattison Muir, M.A., of Gonville and Caius College, and H. Robinson, M.A., of Downing College.

EXAMINATION IN SANITARY SCIENCE.—The following list of gentlemen approved for the Diploma in Public Health has just been issued. The delay in its formal publication is understood to be due to the necessity for appointing, by grace of the Senate, the additional examiners referred to last week.

F. E. Adams, M.D, Wellingborough; A. Ambrose, M.D., Buckhurst Hill; A. R. S. Anderson, M.B., St. Mary's Hospital; C. J. Ayres, M.D., Westminster; G. R. Beardmore, M.R.C.S., Islington; J. T. Calvert, M.B., St. Thomas's Hospital; J. W. Campbell, M.B., Cambridge; A. K. Chalmers, M.D., Mossend, Lanark; E. H. Colbeck, M.B., Cambridge; H. D. S. Compigné, M.D., Surgeon-Major; W. Cotton, M.B., Bristol; A. M. Davies, M.R.C.S., Surgeon, Medical Staff; U. K. Dutt, M.R.C.S., Cambridge; J. H. Garrett, M.D., Bow Road, E.; H. C. M. Gibson, M.R.C.S., University College; J. Glaister, M.D., Glasgow; J. E. Gould, M.B., Victoria Park Hospital; W. Gruggen, L.K.Q.C.P.I., Harlow; W. Jackson, M.D., Colne, Lancashire; J. R. Kaye, M.B., Birmingham; C. S. Kilner, M.B., Bury St. Edmunds; R. Laing, M.R.C.S., Blyth; J. Loane, M.R.C.P.E., St. John's S.E.; C. R. Macdonald, M.D., Beith; W. A. Macnaughton, M.D., Walker-on-Tyne; R. McNeill, M.D., Skye; J. Nall, M.R.C.S., Stockport; R. L. Roberts, M.D., Ruabon; D. Roxburgh, M.B., Glasgow; A. F. Street, M.D., Westgate-on-Sea; J. Taylor, M.D., Chester-le-Street; G. T. Thomas, M.R.C.S., Surgeon-Major; G. M. Thompson, M.D., Bellaghy; C. B. Voisey, M.D., Chatham; G. H. Weston, M.B., Tamworth.

At the Congregation on Thursday, October 17th, the following degrees were conferred: Ernest John Parke Olive, B.A., St. John's College, M.B. and B.C. (thesis: Hay-Fever); Ernest Henry Lipscomb, B.A., Gonville and Caius College, M.B. and B.C. (thesis: The Relation of Chorea to Rheumatism); Albert Charles Elsmore, M.A., Christ's College, M.B. and B.C. (thesis: Vaccination); Arthur Court, B.A., Cavendish College, M.B. and B.C. (thesis: Herpes Labialis in relation to various forms of Fever); Edward Henry Douty, M.A., King's College, B.C. (thesis: On the Etiology and Pathology of General Paralysis of the Insane).

GLASGOW.

THE following gentlemen have passed the First Professional Examination for the degrees of M.B. and C.M.

J. A. Aitken, R. H. Allen, T. Barrowman, J. J. Boyd, W. B. Brodie, W. M. Brown, W. I. Buchanan, A. P. Campbell, J. Carslaw, M.A., D. Charters, C. E. Cochrane, J. Cochrane, H. A. Cohrs, A. D. Cuthbert, H. Davies, D. A. Dewar, A. S. Dick, J. Donald, A. Edwards, A. R. Ferguson, A. Findlay, A. Forrest, J. J. Fraser, W. Fulton, W. S. A. Galt, T. A. S. Gibb, C. L. S. Gibson, G. W. Girvan, D. M'I. Glen, R. Guy, W. B. Hastings, E. D. S. Heyliger, C. Highet, J. Hogg, J. L. Howie, J. Jack, J. Kennedy, G. L. Kerr, H. Kerr, M.A., T. Kirkwood, M.A., T. D. Laird, D. Lewis, J. Lindsay, W. Lowe, J. Marr, R. McF. Marshall, D. R. Miller, J. Moffat, J. D. R. Monro, J. Morton, W. M'N. Muat, A. C. M'Arthur, C. C. M'Call, A. W. M'Clelland, A. H. M'Cracken, D. M'Donald, J. M'Donald, M.A., M. Macnicol, M.A., A. S. M'Pherson, P. C. M'Robert, W. M'Walter, R. E. Newton, J. Paterson, M.A., J. Paxton, J. Pettigrew, W. J. Richard, M.A., J. J. Robb, J. B. Robertson, L. A. Rowden, T. L. Shields, F. Small, G. Smith, M.A., J. Smyth, J. B. Stevens, N. Stevenson, M.A., C. Stewart, W. Stiell, D. R. T. Strong, R. Taylor, J. H. Teacher, M.A., D. Wallace, A. Wauchope, H. Wellis, C. Wilson, J. Wilson, A. A. Young, M.A., J. M. Young, J. C. Young, W. S. Young.

The following gentlemen have passed the Second Professional Examination.

W. H. M. Alexander, W. C. Allardice, W. Anderson, R. Bishop, P. O. W. Browne, A. G. Burrell, D. B. Campbell, N. Campbell, A. Cluckie, C. E. Cochrane, R. Cochrane, A. B. Craig, J. A. Creighton, H. C. Donald, J. G. Duncanson, A. E. Evans, J. Falconer, W. B. O. Ferguson, D. Frame, M.A., T. J. Freeman, H. Galt, E. A. Gibson, J. Green, D. Harries, W. S. Harrison, R. H. Henderson, W. M. Holmes, R. K. Howat, W. Jackson, R. James, D. C. Laird, P. A. Laird, D. Lamb, J. W. Logie, R. A. E. Lowry, S. T. M'C. Lowry, R. M. Malcolm, J. Miller, R. Moir, P. H. Murray, W. Murray, R. M'Ghie, J. M'Gregor, C. H. M'Ilraith, M.A., A. L. M'Leod, M.A., R. W. Nairn, J. H. Naismith, G. Park, R. Ramsey, A. G. Saunders, D. Smith, M. T. Stack, G. C. Stewart, G. M. Sydenham, D. M. Taylor, M.A., W. R. Thomson, M.A., J. Todd, E. Turner, W. Watson, H. Wellis, J. Whitehouse, W. Young, J. Yuill.

The following gentlemen have passed the Third Professional Examination including, in the cases marked with asterisks, the subject of pathology.

P. H. Abercrombie, J. Adam, J. W. Adam, *A. P. Agnew, *J. Alexander, *T. P. Anderson, J. Barr, R. Burns, W. Butler, *M. Cameron, J. H. Campbell, *J. M. Campbell, A. Chalmers, M.A., *J. Chalmers, J. E. Chalmers, J. Cochrane, S. Cockburn, J. Cordiner, M.A., W. Craik, W. Crichton, P. Drummond, M.A., *G. H. Edington, *D. H. Fotheringham, M.A., *J. F. Frew, R. Girdwood, A. Goldie, *C. H. Hall, *J. Hill, A. Inglis, G. S. Jackson, *G. P. Johnson, J. Kirkwood, *J. Lithgow, M. Lochhead, *J. R. Logan, *G. A. Main, W. Mason, J. W. Mathie, *A. G. Mowat, M.A., *J. Muir, *D. M'Donald, *W. D. Macfarlane, D. O. M'Gregor, H. Macintyre, N. Macintyre, *D. M'Kenzie, J. N. MacLeod, M.A., *J. G. M'Naught, M.A., J. Niven, W. Park (Beith), *W. Park (Kilmarnock), *P. Paterson, E. L. Paton, M.A., *J. Pollock, B. Riddell, W. Roberton, A. M. Roy, C. F. Scott, *A. Shaw, *W. M'G. Smith, R. T. Sutherland, L. D. Temple, *J. M'D. Vallance, *J. S. Wallace, B.Sc., W. T. M. Wallace, A. Watson, J. Watt, *A. D. Wilson, J. A. Wilson, *A. Wylie, H. C. T. Young, J. Zuill, M.A.

THE Glasgow University General Council meets, by appointment of the University Commission, on November 27th for the nomination of assessors to the new University Court. As neither the principal nor any of the professors is entitled to take part in that election, the Chancellor's assessor will preside, and act as returning officer. The General Committee of the Council Association have already nominated for the three assessorships Richard Varly Campbell, LL.B., advocate, Sheriff-substitute Guthrie, and Dr. D. C. McVail, while a strong committee has been formed to promote the return of Dr. Hector C. Cameron, Sir John N. Cuthbertson, chairman of the Glasgow School Board, and David Hannay, late clerk to the Council. A keen struggle is looked forward to. Both parties profess alike to have the cause of university reform and the best interests of the University at heart.

The results of the recent professional examinations for degrees in medicine held in the University have this week been published. Of 184 candidates for the first professional examination, 88 have succeeded in passing; of 107 candidates for the second examination, 63 have passed; and of 117 candidates for the third, 72 have passed.

HOSPITAL AND DISPENSARY MANAGEMENT.

ALLEGED ABUSE OF OUT-PATIENT DEPARTMENTS AND THE PROPOSED PUBLIC MEDICAL SERVICE.

SIR,—Now that the Council have officially requested the Branches to discuss and report on the resolutions, as published in the JOURNAL of July 27th, 1889, p. 219, it is to be earnestly hoped that members will see it their duty to take this important subject up. It is not too much to say that if the members do not report favourably the Council cannot go on trying to mend matters. It is more than forty years since the question of hospital reform was brought to the front, and yet to-day it remains unsettled. Might I impress upon members the duty of being present at the Branch meetings to give their votes? They need not speak if they do not wish to do so. Why I mention this is because at a Branch meeting lately held only fifteen doctors were present, there being a membership of 280. Now, if members in truth wish the Association to try and improve our social and financial position, surely each might give, say, six hours to a discussion of an important subject.

The two chief points to be kept before our minds are, I think: First, that there must of sheer necessity be a reform in the administration of the out-patient departments of our hospitals and of dispensaries; and, secondly, that we must make some general provision as a profession for the wage-earning classes of this country, so that they may be able to provide for themselves efficient medical, surgical, obstetric, and dental treatment and medicines. I have suggested that wage-earners, making up to

25s. per week, should be given the right to claim treatment at the medical charities. I think this large margin leans almost to the side of spoiling the working classes. However, let us err on the safe side. As regards the power of the industrial classes to provide for themselves, I have suggested that we have a Public Medical Service of England, and that all wage-earners making up to 45s. per week should be eligible for treatment. Their payments might be in the way of small immediate fees, or they might insure under the provident plan.

In the JOURNAL of July 6th I have described how doctors holding hospital appointments may help each other and us all. In the JOURNAL of September 28th there is a list of suggested fees, and in that of October 12th there is a proposal regarding the better management of provident medical societies.

The issues therefore, I think, lie plainly before us. If we do not succeed it will be our own faults, for I feel that the public do not wish to sponge upon us any longer. The question now seems more to be, Can we, as a profession, lay aside bickerings, petty spites, and jealousies, and show the public we are able and willing to legislate for our own wants, and for those of the industrial classes? Medical men holding hospital, dispensary, friendly societies, sick clubs, provident dispensary, industrial, insurance, and private hospital appointments, and those acting under the Factory and Workshop Act, Local Government Board, and sanitary authorities are nearly all pulling against each other. There seems to be no harmony of co-operation, and with this painful result, that we are a poverty-stricken profession, and one which is not holding its own in public estimation. All this can be remedied if we only will take a leaf out of the book of the London dock labourer, and learn that the first step on the road to success, in its best meaning, is co-operation. I do not exaggerate when I say that the income of each doctor practising in England could be easily raised by £150 a year if we would only sink differences and co-operate. At the same time the industrial and middle classes would be taught not to sponge on the medical profession, and to depend less on the charity of others.

One point more I wish to say. It is not immediately connected with the resolutions, but it is this. If we grant that a certain portion of the community are to have the right to go to the medical charities, just as the poor have the legal right to plead destitution and claim relief from the poor-law guardians, then the medical staffs of the hospitals, and more especially of the out-patient departments, are as deserving of a salary as are the Poor-law Medical Staff.—I am, etc.,

ROBERT REID RENTOUL.

Liverpool.

P.S.—I shall be glad to answer any correspondents.

SIR,—I was an advocate for the larger part of Dr. Rentoul's scheme; but the expression of other opinions has brought me into doubt. I have considered, first, would the members pay, and pay regularly? From ten years' experience amongst the working classes I do not think they would exert themselves. I have found, as a very general rule, that when arrangements are made by which they can pay easily, a little at a time, they immediately evince a strong tendency to make that little less, and discharge the most modest debts in such an altogether dilatory manner that one's patience is constantly put to very severe tests. Working men, in fact, are undeniably selfish, and as a class would not repay us for the amount of trouble spent upon them in the formation of a Public Medical Service.

In common with many other general practitioners, I send out collectors of debts, who receive sixpence and a shilling a week in payments on account, and I find that not one quarter of the debtors pay one shilling a week. Out of accounts which should upon this system yield £30 a week, I get £5, and this from families who are in receipt of regular wages, and well able to pay more than a shilling every week for attendance and medicine; many of them to settle accounts without collectors at all. I argue therefore that if this state of matters can exist when there is supposed to be a modicum of gratitude for restoration to health and for kind attention, very little more than "book it" may be expected when payment in advance is requested.

Secondly, the system of bondage or dependence spoken of by "G," in your issue of September 28th, deserves our careful attention. We are bound too much already by the humane exercise of our profession to the deceitful and undeserving abounding in our midst, to relish further ties.

Thirdly, as regards sick clubs and their fees, I think that the charge of six shillings should include everything that the members require from a surgeon. If the other extra fees named by Dr. Rentoul were demanded, they would resolve to have no doctor at all by an overwhelming majority.

Finally, before plunging into a new system altogether, such as proposed by Dr. Rentoul, I think we should rectify hospital abuses. We should also be united, and especially in each township so as to be able to blackball bad payers and refuse them attendance till they mended their ways. If, in addition, we encouraged the chief bread-winners to join sick clubs, I consider we should be doing quite enough contract work.—I am, etc.,

CLUB SURGEON.

SIR,—In reply to "Country Doctor" I would point out that Dr. Rentoul has no wish to advocate the lowering of medical charges. He wishes to ensure honest dealing between doctors and patients. We all know that, at present, doctors are being forced to work for very inadequate payment, and we also know that a great many doctors take care to give no more than value for the money they receive.

Dr. Rentoul has suggested a scale of charges which is, on the whole, very reasonable; but, no doubt, further discussion may suggest improvement. I agree with "Country Doctor" that he has fixed the obstetric fees too high. I am sure that Dr. Rentoul does not contemplate a system which would thrust new doctors on any district. I think, however, that a powerful combination could do much to improve medical practice among the poor, both as regards patients and doctors, without at all interfering with existing interests.

With regard to admission to hospitals, I consider that a hard-and-fast wage-limit is the only effective remedy for hospital abuse. Even now, some private practitioners are in the habit of using the hospitals as a convenience in their own interests, sending patients to have some new treatment tried on them, humouring fanciful patients, and getting rid of troublesome ones. I do not approve of recommendation notes either from subscribers or from doctors. Is it not best to make strict rules for the guidance of the staff in this matter, and then to leave entirely to them the selection of patients subject to such rules?

I thoroughly approve of club or provident systems if rightly managed; but I certainly think that, in these days, they require to be supervised. How can such supervision best be carried out—by a Public Medical Service or by the State?—I am, etc.,

Highgate, N. HUGH WOODS, M.D.

SIR,—A medical service for the working classes, not paupers, who are unable to pay proper medical charges, has long engaged the attention of professional men and others, without any satisfactory plan having been as yet adopted or devised.

The self-supporting dispensary; the mercenary speculating venture, or sick assurance, as it is called, either by itself or in connection with other assurance business; and the medical club of the private practitioner in his own immediate neighbourhood are the three modes with which I am acquainted. The first is very good, but it does not seem to take. The second cannot be too strongly condemned, and is only kept going by vacuous, needy, and unscrupulous practitioners. The third, if put into proper working order, and if properly managed, would, I think, best succeed, and would seem to be the right course to follow. The proposed Medical Service is a want undoubtedly, but it is a necessity.

My much esteemed friend, the late Mr. J. Bull, of Lindfield, thirty years since, gave me this simple, good advice: "Always go when sent for, even if you do not continue to attend. Never dismiss any applicants unattended to; it is not charity. They will give you a bad name; and serve you right." Such was his own practice for fifty years, and this practice I myself have followed, now also for thirty years; and until I resigned my Poor-law appointments, no one thought of anything else. But my successor in those appointments acted very differently, and introduced "a something" to supply the necessities of the local working classes in one of the aforesaid speculating sick clubs, which soon developed itself, the required medical assistance being at hand, and it became established.

These speculating sick clubs appear to be large concerns, extending over counties. They require offices, clerks, collectors, agents, medical officers, and, without doubt, some profit for the company; the actual gist of the concern, therefore, being the charge upon the members' subscriptions, out of which, also, must come all the rest. The members themselves, of course, cannot

clearly or rightly understand the matter; and they do not think of these things, or they would hardly support these clubs; but the convenience of the collector calling at their houses for their subscriptions, with his persuasive tact, and the support given by a medical man with whom they are acquainted prevail, and they are led to join the clubs, thus unknowingly and unthinkingly paying actually and really the above whole five other charges besides out of their contributions, instead of their own legitimate one charge.

When I heard that this speculating club had been set on foot, I then evolved my own, on, I think, sounder principles, a prospectus of which I now enclose; but, unfortunately, the other had the lead, which it still maintains; mine, however, got a hold, and is on the increase, though I have neither agents, collectors, nor medical impresarios to help me. Nevertheless, though it is at present a considerable pecuniary loss, I hope in time to establish it upon its own sound and economic basis, and to make it eventually an established fact of a good local or general medical service, such as is really required, and which would be of real advantage to those concerned. I propose to conduct it myself until well established and in thorough working order, and then I hope to pass on the management into the hands of a committee, and to get out a scale of charges to be, I should hope, accepted by every medical practitioner; so that, without now going into detail, the members of such club or medical service would be able to go for advice and treatment to any medical man they pleased.

Dr. Rentoul has, at the cost of much labour, given us a list of items and charges, but it is difficult to foresee how they would really work. I think a time payment for everything except dispensing medicines would simplify things very much. Say 1s. for every quarter of an hour up to £1; but the work must be shown in a book given to each member for that purpose; and dispensary expenses 2d. per dose for all medicines up to six doses, 1d. per dose up to twelve, dates being given and proper supervision made to prevent waste, which would be deducted, etc.

I am quite prepared to go into detail if required, but my present intention is, in giving a glance at the past, to show how we managed and may manage if we please; and to prove also, to the followers of the mercenary speculating sick assurance system, how radically wrong it is, how extravagantly conducted, and how unbecoming and really suicidal in its medical supporters.

But, with all our endeavours to assist and to ameliorate this state of things, we must always recollect that there are large numbers of the working classes, not paupers, who have no idea of the real state of being ill and its consequent duties and requirements, who have no capability or intention of paying a medical man for services when overtaken with sickness, and who, on the next occasion, will go to another practitioner, vilifying the last, and get their immediate medical necessities supplied—and they must be supplied, public opinion and innate, charitable, conscientious feeling making the demand imperative—whilst all the labour and its return is completely one-sided, and all our efforts to serve them, otherwise than gratuitously, are consequently fruitless to ourselves.—I am, etc.,

Lindfield, Sussex, October 16th. WM. ELLIOTT PORTER.

G. P. writes: I have read with care all that has been written by your several correspondents on the above subject, but so far no one has in my opinion proposed a practical *via media*.

Dr. Rentoul's proposals are very good, but not practicable, for supplying medical aid to the great bulk of the working classes, for the very simple reason that you could not get them to pay even one-half the fees suggested, nor do I think that any of the various provident schemes which have been suggested would meet the difficulty, because, if it is left to the working classes to provide medical aid for their wives and families, the greater part of them would fail to do so.

I have studied the habits of these classes in all grades, and I am certain that at least three fourths spend at least from 6s. to 8s. per week, and many three and four times as much, in public houses, and I want to know why the medical profession should be called upon to attend the wives and families of all these free, as is the case in the various free dispensaries and out-patient departments of the hospitals, when even 6d. per week of this ill-spent money would be sufficient to supply good medical aid to a whole family.

The provident dispensaries are a sham and a degradation to the profession, for it is well known, as a lover of the profession says, that they employ volunteer and paid touts to make house-to-house canvass, and rob all the practitioners in their neighbourhood, not on their staff, of patients who have for years paid £2 or £3 a year for their medical attendance; and they do not stop there, but press all the shopkeepers they can, who are able to pay £5 or more, to join their dispensary, and I am sorry to say that the staff have not the moral courage to refuse to attend such for the paltry fees paid to the institution.

I think, Sir, that the only way out of the difficulty would be by obtaining an Act of Parliament to compel all employers of labour to deduct, say, 6d. per week from the wages of all earning less than £2 per week, and 1s. from those earning over that amount but less than £3, for these should provide for themselves. Apprentices should be paid for by their employers at 6d. each per week. Employers of casual labour should deduct 1d. per day. Household servants earning from £12 to £25 per annum should have 6d. per week deducted, and those earning more 1s.; those earning less should be paid for at the lower rate by their employers. Any family to choose its medical adviser from the staff. Clubs to be allowed, on application, to choose their own medical adviser, who should attend the wives and families as well as the members. In the case of a man falling ill, if he belongs to a club, the club should pay the fees from his sick pay; but should he not belong to a club, he should still be entitled to medical attendance for himself, wife, and family during his illness, although he would not be subscribing towards it. The fees should be paid into a fund, which might be called The Parish of ——— Medical Aid Fund, which should be managed by representatives of the parish. The medical staff should be composed of any registered medical practitioner who likes to make application. The pay of the medical staff should be according to the amount of work done, and on a scale which shall be determined. One guinea should be paid out of the funds for each confinement.

If this scheme should be adopted, the working classes would be well provided with medical aid, and the dignity of the profession would be enhanced, as it would at once shut up all the sixpenny dispensaries and the so-called provident dispensaries, and once more bring our noble profession into its former high rank, from which it has fallen during the last thirty years.

DR. COTTENHAM FARMER (201, Gray's Inn Road) writes: I am sure this subject cannot be too well sifted. Medical men are for the most part men of the world. Let us, then, quietly consider our own interests. Let hospital men, if they will, but for a moment consider upon what happy terms they might be with their ordinary brother practitioners. The hospitals are a means to an end undoubtedly, but let that end be to form a nucleus of good feeling with the practitioners in their adjacent neighbourhoods. Conceive such an end accomplished. Hospitals would be our *rendezvous*. We should improve our education by associating there on a common footing. Respecting the staff, and cultivating a knowledge and intimacy with the students, many of whom would naturally become our assistants, and subsequently our successors, we should mutually resent treating gratuitously patients whom we knew to be capable of paying fees.

What a pleasure it is for a practitioner to call in his friend as a consultant whom he looks upon with respect, and the consultation as a mutual happiness; you as considering his interests, and he your own. Is all this delightful and practicable reciprocity to be lost, on account of an ungrateful and improvident public, who care for nothing but their own selfish ends? Think of the fees which would be gratefully paid to the individual consultant, and which are now spent in the public house.

Give your talents to the indigent poor, by all means; but consult your brother as to whom this class represents; and rather than deprive a poor practitioner of his just fee, and you of your consultation, pitch the lay committees and their pseudo-philanthropy to the winds.

Our grades as consultants, general practitioners, and assistants are well defined, and it appears to me to clash upon such a subject as mutually suicidal, and beneath our dignity.

THE SUFFOLK GENERAL HOSPITAL.

THE unfortunate controversy with regard to the proposed appointment of assistant-surgeons to the Suffolk General Hospital at Bury St. Edmunds continues, and has led to the three honorary medical officers taking the extreme step of resigning their connection with the hospital. As to the necessity for the appointment of assistant-surgeons there seems to be room for some difference of opinion, and the course which the honorary medical officers have taken would appear to be intended as a protest against the manner in which the proposal was made and has been pushed forward, rather than as indicating uncompromising opposition. A special general meeting of the governors, presided over by the Marquis of Bristol, was held on October 15th, when the whole question was discussed amid some excitement. The speakers on both sides agreed in wishing to retain the services of the honorary medical officers, and it seems to have been made clear that the proposal was not intended to reflect in any way upon the mode in which these gentlemen have discharged their duties. Finally, the following resolution, proposed by the Rev. Prebendary Harry Jones, was carried by thirty-one votes to nine: "That the resignation of the medical officers be not accepted, on the ground that the proceedings at the meeting on September 17th, which have caused them to tender their resignation, were inconsistent with the unanimous decision of the general board on June 18th."

JAMES MURRAY'S ROYAL ASYLUM, PERTH.

THE annual report of this prosperous institution for the year ending May 31st, 1889, shows that the total number of patients under treatment was 140, and that the daily average number resident was 104. There were 38 admissions during the year; of these 21 were males and 17 females, and there remained on the book at the end of the year 53 males and 51 males; total, 104. Two males and 3 females reside voluntarily in the institution.

Dr. Urquhart, the medical superintendent, in his admirable report, draws attention to the fact that the great majority of the patients admitted were in a state of physical ill-health, more or less severe, as well as suffering from mental unsoundness. He points

out how much this goes to prove that lunacy is an affair of medicine, and that "the intervention of a complicated legal ceremonial between obvious disease and rational treatment is not the least of the misfortunes attending on insanity." While congratulating Scotsmen upon the wisdom of the Scottish law, and its discerning interpretation by a sufficient Board of Lunacy, he goes on to remark that on the other side of the Tweed "the air is heavy with the groans of an overweighted profession, threats of penal restrictions, and the ill-judged interposition of the magistrate 'trying the lunatic;'" and yet we were told that the recent legislation on the subject was to amend the lunacy laws on the lines of the Scotch laws.

Referring to the causes producing insanity in those admitted, we observe that in 14 of the 38 cases there was hereditary predisposition, and 12 had had previous attacks; in 3 alcoholism was the sole cause, and other 3 had taken narcotics to excess; in the remainder worry, mental strain, and old age were the causes. In 3 cases the cause could not be discovered. The case of one young man is interesting; he was admitted in a state of violent but transient acute mania. "His sister had been seized with puerperal mania, the mental malady had been communicated to her mother, who, in turn, communicated it to her son." All of them recovered. The recovery rate for the year was 34.21 per cent. During the last nine years no less than 34 patients have been prematurely removed from the institution by their friends "against advice," 18 of whom thereby suffered serious harm. In discharging patients Dr. Urquhart usually does so in the first instance "on pass," that is, on twenty-eight days' probation. In Scotland the medical superintendents can do this on their own responsibility, but in England even the amended lunacy law will only allow the patient to be absent for forty-eight hours without the sanction of the Commissioners or justices.

No patient effected his escape from the asylum during the year, and this result was achieved without increasing the number of "locked doors." With regard to the latter, Dr. Urquhart very sensibly remarks, "Of course there is, and always will be, a residuum for whom the intervention of a locked door or an attendant on guard is necessary."

The new hospital wings are nearly completed, and will form another step in advancing the treatment of the patients upon sound and rational principles. The register of restraint and seclusion shows no entry for the past year. Many improvements and attractions have been made in addition to the recent reconstruction of the sanitary arrangements.

The cost for maintenance was £1 10s. 11d. per patient per week; 22 patients paid £60 a year and under (two of them only paid £30 a year). With an excess of £600 of revenue over expenditure, we should have been glad if the Board of Directors could have seen their way to have extended the benefits of this excellent institution to one or two more patients of the poorer class unable to pay more than £25 a year as suggested by the Commissioners in their annual report. Probably this is what the directors intend to do when the new hospital wings are opened. This is the only Royal Asylum in Scotland which contains no pauper patients.

PROPOSED NEW INFIRMARY FOR STAFFORD.

At an influential meeting, held in the Guildhall, Stafford, on October 17th, presided over by Lord Harrowby, the question of erecting a new hospital in place of the old one was discussed. The deficiency on the present building was said to be something like £300 or £400 per annum, £2,000 being required to pay off the debt and replace capital. The committee appointed to investigate the matter recommended the erection of a new hospital, and considered by doing so there would be a saving of between £400 and £500 per year. It was proposed that the new hospital should contain 80 beds—40 males', 30 women's, and 10 children's. His lordship said that if they could succeed in obtaining £5,000, they would be justified in commencing the work at once. Captain Salt, M.P., moved: "That it is expedient that a new hospital be erected, in place of the old one, on a new site." The resolution was seconded by Canon Acton, and carried unanimously.

The statement that no physician in the Hawaian Islands has ever suffered from leprosy is contradicted by the *Occidental Medical Times*, which states that Dr. E. Hoffman died of leprosy on the Island of Oahu in the autumn of 1887. The disease was well marked, and the diagnosis was confirmed by Dr. Trousseau and other physicians.

OBITUARY.

CHARLES ROYSTON, M.D.

We regret to announce the death of Dr. Royston, which occurred at his residence, Westbourne Park, Bayswater, on the morning of Tuesday, October 15th. The details of the sad event were related at an inquest held by Dr. Danford Thomas on Friday last. Dr. Royston had a few years since suffered severely from gout, and had lately had sleepless nights, and appeared worried and anxious. Mr. A. J. Pepper had made a *post-mortem* examination, and found prussic acid in the stomach, to which he attributed the cause of death. There was also an abscess in the gall-bladder, which had been of long standing, and which by itself would probably have caused death in a few days' time.

Charles Royston was the son of Mr. James C. Royston, of Codnor Park, Derby. He was born in 1828, and was consequently 61 years old at the time of his death. He was educated at Derby Grammar School, and, on leaving, was articled to his uncle, Mr. Christopher Royston, of Redditch. He thence proceeded to St. George's Hospital, where he distinguished himself as a hard-working, untiring student. After becoming M.R.C.S. and L.S.A. in 1852, he was elected House-Surgeon at the Southern Hospital, Liverpool, and remained there from 1853 to 1856. In the latter year he moved to Bayswater, where he commenced private practice, and where he remained in active work until his death. He passed the examination for the L.R.C.P.Edin. in 1859, and obtained the degree of M.D. St. Andrews in 1860, in which year he also took the L.M. diploma of the Royal College of Surgeons of England. He was a member of several medical societies; and when at Liverpool had contributed reports of several surgical cases to the *Medical Times and Gazette*. Dr. Royston's geniality and kindness of manner had endeared him to a wide circle of friends, both amongst his professional brethren and all classes of residents in and around Bayswater; and a large number of patients will miss his sympathising assistance. The large concourse of persons who assembled at his funeral was witness to the high esteem in which he was held. Dr. Royston had been a widower several years; and the sadness of his death is enhanced by the fact that he was, in the course of a few weeks, about to be married a second time.

JOHN MACKIE, Sen., L.R.C.S.

We have to record the death of Mr. John Mackie, sen., who died at his residence at Brechin on October 11th, in the 81st year of his age. After serving an apprenticeship with the late Dr. Sharpe, Brechin, he proceeded to the Edinburgh University, where he graduated with honours. At the close of his college curriculum he returned to Fettercairn, where he practised for a short time, and subsequently removed to Brechin in 1830, where he ultimately acquired, by dint of great perseverence and admitted skill, an extensive practice. On the death of Mr. Mathers Mr. Mackie was appointed medical officer to the parochial board, and was a medical inspector under the Factories Act.

Some eight or nine years ago, owing to advancing years, Mr. Mackie retired from the active exercise of his profession. On the ocsasion of his jubilee, in January, 1881, he was entertained at a banquet by his professional brethren and other friends throughout the county, and was then presented with a piece of silver plate and a purse of sovereigns. He is described as being, in private life, most genial and pleasant. He leaves a widow, one daughter, and five sons, one of whom, Dr. J. Mackie, succeeded him in practice.

Presentation.—On Friday last, October 18th, an interesting ceremony took place at the College of Physicians, Dublin, when Dr. Aquilla Smith was presented with a portrait of himself. The presentation was made by the Fellows, in recognition of the services which Dr. Smith has rendered the College, especially as representative on the General Medical Council, and Dr. Walter G. Smith, as representing the family, suitably acknowledged it. The meeting was presided over by Dr. L. Atthill, President of the College. The portrait is by Mr. Catterson Smith.

Brighton and Sussex Medico-Chirurgical Society.—A discussion on Perityphlitis will take place at the ordinary meeting of this Society on Thursday evening, December 5th. The subject will be introduced by Mr. Willoughby Furner. Mr. Frederick Treves will take part in the discussion, to which visitors are admitted on the introduction of a member.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

ENGLISH URBAN MORTALITY IN THE THIRD QUARTER OF 1889.

THE vital and mortal statistics of the twenty-eight great English towns dealt with by the Registrar-General in his weekly returns are summarised in the accompanying table. During the three months ending September last 71,606 births were registered in these twenty-eight large towns, equal to an annual rate of 30.1 per 1,000 of their aggregate population, estimated at upwards of nine and a half millions of persons. In the corresponding periods of the three preceding years the birth-rate in these towns was 32.8, 31.9, and 30.4 per 1,000 respectively. In London the birth-rate last quarter was equal to 29.2 per 1,000, while it averaged 30.8 in the twenty-seven provincial towns, and ranged from 24.0 in Brighton, 24.2 in Huddersfield, and 25.4 in Bradford to 35.9 in Sunderland, 37.0 in Cardiff, 37.5 in Preston, and 39.0 in Newcastle-upon-Tyne.

The 44,273 deaths registered in the twenty-eight towns during the third quarter of this year were equal to an annual rate of 18.6 per 1,000, against an average rate of 20.0 in the corresponding quarters of the seven preceding years, 1882-88. With the single exception of the third quarter of last year, when the rate was only 16.9 per 1,000, the death-rate in these large towns was lower than in any September quarter on record. In London the rate of mortality was only 16.5 per 1,000, while it averaged 20.4 in the twenty-seven provincial towns. The lowest rates in these provincial towns were 14.2 in Derby, 14.4 in Brighton, 15.6 in Huddersfield, and 16.2 in Nottingham; the highest were 24.4 in Manchester, 25.9 in Sunderland, 26.6 in Plymouth, 27.6 in Newcastle-upon-Tyne, and 33.0 in Preston.

During the quarter under notice 9,422 deaths were referred to the principal zymotic diseases in the twenty-eight towns, equal to an annual rate of 3.96 per 1,000. In the third quarter of the seven preceding years, 1882-88, the zymotic death-rate in these towns averaged 4.40 per 1,000. The lowest zymotic death-rates in the twenty-eight towns last quarter were 2.13 in Bristol, 2.28 in Halifax, 2.40 in Oldham, and 2.64 in Huddersfield; while they ranged upwards in the other towns to 6.48 in Salford, 6.94 in Sunderland, 9.95 in Plymouth, and 12.75 in Preston. The 9,422 deaths referred to the principal zymotic diseases included 5,835 which resulted from diarrhœa, 834 from whooping-cough, 814 from measles, 734 from scarlet fever, 673 from diphtheria, 531 from "fever" (principally enteric), and 1 from small-pox. The 5,838 fatal cases of diarrhœa recorded in the twenty-eight towns during the third quarter of this year were equal to an annual rate of 2.46 per 1,000, which, although it considerably exceeded the very low rate recorded in the third quarter of last year, was slightly below the mean rate in the corresponding periods of the seven preceding years, 1882-88. In London the diarrhœa death-rate last quarter did not exceed 1.80 per 1,000, while in the twenty-seven provincial towns it averaged 2.98, and ranged from 0.49 in Halifax, 1.11 in Oldham, and 1.34 in Bristol to 4.20 in Salford, 4.63 in Sunderland, 4.94 in Leicester, and 7.36 in Preston. The 834 deaths referred to whooping-cough were equal to an annual rate of 0.35 per 1,000, which was 0.09 below the mean rate in the corresponding periods of the seven preceding years; the rate of mortality from this disease in London was 0.28 per 1,000, while it averaged 0.41 in the twenty-seven provincial towns, among which this disease showed the highest proportional fatality in Portsmouth, Birkenhead, Bradford, and Sunderland. The 814 fatal cases of measles were equal to an annual rate of 0.34 per 1,000, which showed a marked further decline from the high rates in the first two quarters of the year, and was 0.09 below the mean rate in the corresponding periods of the seven preceding years, 1882-88. In London the measles death-rate was only 0.20 per 1,000, while it averaged 0.46 in the twenty-seven provincial towns, and was highest in Hull, Leeds, Halifax, and Preston. The 734 deaths referred to scarlet fever were equal to an annual rate of 0.31 per 1,000, which was 0.06 below the average rate in the corresponding periods of the seven preceding years; the rate of mortality from this disease in London last quarter did not exceed 0.18 per 1,000, while it averaged 0.42 in the twenty-seven provincial towns, among which scarlet fever was proportionally most fatal in Blackburn, Huddersfield, Bolton, Salford, and Plymouth. The number of scarlet fever patients in the Metropolitan Asylums Hospitals, which had been 541 and 547 at the end of the first two quarters of the year, rapidly increased throughout the three months under notice, and was 1,449 at the

Public Health Statistics relating to Twenty-eight Large English Towns, for the Third Quarter of 1889.

Towns.	Estimated Population middle of 1889.	Births.	Deaths.	Annual Rate per 1,000 Living. Births.	Deaths.	Principal Zymotic Diseases.	Deaths from Principal Zymotic Diseases.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Fever.	Diarrhœa.	Rate per cent. of Uncertified Deaths.	Deaths of Children under one year of age to 1,000 Births.
28 Towns	9,555,406	71,606	44,273	30.1	18.6	4.0	9,422	1	814	734	673	834	531	5,835	2.1	210
27 Provincial Towns	5,203,668	39,978	26,392	30.8	20.4	4.7	6,121	1	596	543	206	534	371	3,870	2.9	231
London	4,351,738	31,628	17,881	29.2	16.5	3.0	3,301	—	218	191	467	300	160	1,965	1.0	183
Brighton	121,807	727	436	24.0	14.4	2.7	83	—	13	6	3	4	8	49	2.8	161
Portsmouth	141,253	1,184	669	33.6	19.0	3.9	137	—	—	5	7	25	11	89	0.6	207
Norwich	94,510	736	424	31.3	18.0	3.6	85	—	6	—	5	1	6	67	0.5	227
Plymouth	78,225	629	519	32.3	26.6	10.0	194	—	7	116	18	11	6	36	1.9	207
Bristol	229,361	1,636	939	28.6	16.4	2.1	122	—	11	7	3	18	7	76	2.8	174
Wolverhampton	82,544	637	403	31.0	19.6	3.8	78	—	11	1	2	6	5	53	1.2	215
Birmingham	454,835	3,417	2,112	30.2	18.6	4.8	546	—	53	43	22	33	13	382	2.4	225
Leicester	150,520	1,083	698	28.9	18.6	5.5	208	—	8	2	1	5	7	185	1.9	326
Nottingham	237,812	1,603	958	27.1	16.2	3.5	206	—	6	7	1	10	24	158	2.2	215
Derby	98,529	685	349	27.9	14.2	2.9	70	—	2	6	5	1	2	54	1.7	150
Birkenhead	102,541	781	487	30.6	19.1	3.8	97	—	3	2	2	25	10	55	1.6	225
Liverpool	606,562	4,323	3,173	28.6	21.0	4.4	667	—	23	81	13	59	50	441	6.6	260
Bolton	114,670	933	576	32.7	20.2	5.0	142	—	14	19	7	16	10	76	1.7	191
Manchester	378,800	3,252	2,299	34.5	24.4	4.9	466	—	54	45	33	39	27	268	2.2	218
Salford	234,283	1,667	1,203	28.6	20.6	6.5	378	—	12	45	31	15	30	245	3.2	269
Oldham	142,405	976	573	27.5	16.1	2.4	85	—	4	15	1	25	1	39	2.8	167
Blackburn	121,275	1,028	650	34.0	21.5	4.2	126	—	3	19	4	5	7	88	2.9	213
Preston	104,194	973	857	37.5	33.0	12.8	331	—	83	5	9	18	25	191	1.8	371
Huddersfield	92,825	560	360	24.2	15.6	2.6	61	—	10	15	3	7	3	23	3.9	150
Halifax	81,080	555	390	27.5	19.3	2.3	46	—	28	2	2	1	3	10	6.4	209
Bradford	235,056	1,490	1,068	25.4	18.2	4.9	287	—	40	19	5	58	20	145	1.5	219
Leeds	357,449	2,893	1,934	32.5	21.7	5.7	511	1	78	31	2	11	52	336	1.8	242
Sheffield	327,227	2,697	1,669	33.1	20.5	4.8	388	—	16	38	11	36	12	275	4.4	230
Hull	208,017	1,709	1,110	33.0	21.4	5.5	285	—	45	2	2	32	12	192	2.5	256
Sunderland	134,193	1,201	867	35.9	25.9	6.9	232	—	28	5	4	33	7	155	1.6	279
Newcastle-on-Tyne	160,983	1,564	1,108	39.0	27.6	5.3	213	—	34	6	8	25	6	134	2.2	236
Cardiff	112,712	1,039	561	37.0	20.0	2.7	77	—	4	1	2	15	7	48	2.0	201

end of September; the admissions, which had been 614 and 625 in the two preceding quarters, further rose to 1,449 during the three months ending September last. The 673 fatal cases of diphtheria were equal to an annual rate of 0.28 per 1,000, which considerably exceeded that recorded in the third quarter of any year on record, and was nearly double the average rate in the corresponding periods of the preceding years, 1882-88. The diphtheria death-rate in London last quarter was equal to 0.43 per 1,000, while it averaged only 0.16 in the twenty-seven provincial towns, among which, however, this disease was fatally prevalent in Manchester, Preston, Salford, and Plymouth. The 531 deaths referred to different forms of "fever" (including typhus, enteric, and simple and ill-defined forms of continued fever) were equal to an annual rate of 0.22 per 1,000, which, with the single exception of the third quarter of last year, when the rate was only 0.17, was below that in the corresponding period of any year on record. The rate of mortality from "fever" in London during last quarter was only 0.15 per 1,000, while in the twenty-seven provincial towns it averaged 0.29, and was highest in Nottingham, Salford, Leeds, and Preston. The fatal case of small-pox occurred in Leeds, and was the only death from this disease registered during the quarter under notice in the twenty-eight towns. Since the beginning of the current year only 5 fatal cases of small-pox have been recorded in the twenty-eight towns. No small-pox patients were under treatment at any time during the quarter in the Metropolitan Asylums Hospitals.

The rate of infant mortality in the twenty-eight towns, measured by the proportion of deaths of children under one year of age to registered births, was equal to 210 per 1,000 during last quarter, which slightly exceeded the average rate in the September quarters of the seven preceding years, 1882-88. In London the rate of infant mortality did not exceed 183 per 1,000, while it averaged 231 in the twenty-seven provincial towns, among which it ranged from 150 in Derby and in Huddersfield, and 161 in Brighton, to 269 in Salford, 279 in Sunderland, 326 in Leicester, and 371 in Preston.

The causes of 940, or 2.1 per cent., of the 44,273 deaths registered in the twenty-eight towns during the third quarter of this year were not certified, either by registered medical practitioners or by coroners. The proportion of uncertified deaths in London did not exceed 1.0 per cent., while it averaged 2.9 in the twenty-seven provincial towns, among which it ranged from 0.5 in Norwich and 0.6 in Plymouth, to 3.9 in Huddersfield, 4.4 in Sheffield, 6.4 in Halifax, and 6.6 in Liverpool.

PORCINE PNEUMO-ENTERITIS AND HUMAN ENTERIC FEVER.

AN instructive example of the way in which the virus of typhoid fever may be distributed by milk is afforded by a recent limited epidemic of the disease at Hendon. A farmer, R. G., his wife, daughter, four sons, and one other person—seven in all—resided in a small cottage at the outskirts of Hendon. Upon the farm were kept thirteen cows and about one hundred pigs. The milk from these cows was mainly disposed of directly to customers in Hendon, being delivered to them by Mrs. G. and one of the sons. Part of it was also sold in a shop in Hendon. The cottage consisted of a small kitchen, two bedrooms, and a dairy, all opening off each other on the same floor. The dairy, which could be entered from the bedroom, had also a separate entrance from outside. The rooms were ill-ventilated, and, considering the number of occupants, very small. The cows were kept in a stable about one hundred feet from the cottage, and after every milking the milk was taken to the dairy and measured before being sent out, any that was left over being stored in the dairy. In addition, the milk of one or two cows milked later in the day was set for cream in the dairy, and the skim milk sold next morning. The first case of typhoid fever occurred in one of the sons, a boy aged 9, who was taken ill on August 5th; he was nursed at home by his mother. The next case was an older son, who slept with the boy; this young man took to his bed on August 26th; the farmer himself and another son took to their beds on September 4th, the mother on September 9th, and the daughter, who had been nursing the other patients, on September 17th. Eleven cases occurred among consumers of the milk in Hendon between September 17th and 24th; one case had commenced a week or ten days earlier. Between September 26th and September 30th six other cases occurred among the customers of the dairy. As the distribution of the milk was stopped on September 12th, and as no cases beyond those enumerated above are known to have occurred, it may be reasonably hoped that the epidemic is now at an end The evidence as to how the milk became contaminated is not perfectly clear. There was a surface well undoubtedly liable to pollution, but it was most positively stated that no water was used from it after August 1st, a stand pipe on the West Middlesex Water Mains having been erected for the use of the farm, and water drawn from it after that date. Dr. J. Cameron, the medical officer of health from whose report we draw these particulars, is able to state that no case of typhoid fever had occurred on this farm for many years previously. The family could not have been infected by sewer gas from drains, because no drains existed on the premises. The first case, the boy, aged 9, sickened on August 5th, and must, therefore, have been infected about the third week in July, but there is no evidence that the well water could possibly have become infected by the specific poison of typhoid fever from any human source either then or earlier. Dr. Cameron's attention was, therefore, directed to the animals on the farm; careful inspection of the cows showed that they were all in good health, but it was ascertained that upwards of eighty pigs had suffered from swine fever for about a month or six weeks, the last of them having been killed and buried on August 8th. The boy who first contracted the disease was constantly with his father amongst the pigs which were ill, watching the treatment, and assisting to bury the animals which died. So far as his movements could be traced, the only persons with whom he had come into contact beyond those living on the farm were some boys who lived in a gipsy van, and it seems to be certain that none of the inmates of the van had been ill during the summer. The farmer's family had consumed some pork of an apparently healthy animal during the prevalence of the swine fever. It would be rash to attempt to draw any definite conclusions at present from the facts of this epidemic, but the suspicion that swine fever or contagious pneumo-enteritis may be identical with human enteric fever is not entirely novel. Dr. Cameron, we understand, is pursuing his investigations, and the final results of his inquiries will be awaited with interest.

CLUB AND POOR-LAW PATIENTS.

K. DURHAM asks whether he, as district medical officer, can claim the usual fee for attending a case of fractured leg if the patient was a contributor to his club at the time of the accident, but ceased to be so a fortnight later, when, owing to his inability to continue his club payments and to support his family, an order for medical attendance on him was given by the relieving officer.

*** We consider a district medical officer can, in such a case, claim the fee for fracture which is allowed for "attendance on the case," not for the "setting" (so-called) of the fracture.

DEPORTATION OF LUNATICS.

PAROCHIAL writes: I am the parochial medical officer for the parish of West Calder, and to-day, driving in from Addiewell, a village about a mile and a half from here, I met the inspector of poor just as I arrived at West Calder. He stopped me and informed me that there was a woman at Addiewell who had become insane, that he was then going there, and asked me to follow him. This was at 12.30. I turned and went after the inspector—who, by the way, was also driving. I would get to the house of the alleged lunatic at a quarter to one. After I had been in the house for about ten minutes the inspector came in and asked me if I was ready to fill up the certificate. I said "No," and he went out, only to return in five minutes and ask the same question.

I told him I could not fill up the certificate in such a hurry; that it was too serious a matter to settle in such an off-hand way. With that he coolly got the patient into his machine, and drove her to Addiewell station to catch the train for Edinburgh due at Addiewell at 1 P.M. He could have got a train two hours later which would have served his purpose equally well—and, indeed, the husband of the patient told me afterwards that he understood that was the arrangement. One certificate and the emergency certificate were signed by the doctor who had attended the patient before she was removed. During the time I was in the house the woman was as sane as you could wish.

Can you tell me if the inspector did not exceed his duty in thus acting? Should not the inspector, when he received information of the case—between 11 and 12 this forenoon—have taken his directions from me in the matter? Is a parochial doctor or not the adviser (medical) of the Parochial Board?

*** If the case (as it appears to be) was a pauper one, the replies would depend partly upon the contract or agreement made by "Parochial" with his board, and partly upon the provisions of the Lunacy Acts for Scotland. Certainly "Parochial" was absolutely right in refusing to certify to insanity unless and until he was satisfied as to its existence.

DUNELM asks whether his appointment as medical officer of health would be endangered if he became a magistrate of the county in which his district is.

*** We believe his appointment would be in no way affected unless he were to attend the meetings of the sanitary authority as an *ex-officio* member; and this we recommend him not to do.

MEDICAL NEWS.

DR. MEYMOTT TIDY has, it is announced, been called to the Bar as a member of Lincoln's Inn.

MEDICAL MAGISTRATE.—Dr. Edward Lawford, of Oriel House, Leighton Buzzard, has been appointed a magistrate for the county of Bedford by the Lord Lieutenant.

THE annual dinner of the Bristol Medical School will take place at the Montague Hotel, on Tuesday, October 29th, F. P. Lansdown, Esq., in the chair.

WESTMINSTER HOSPITAL MEDICAL SCHOOL.—Entrance scholarships have been awarded to Mr. E. G. Richards (£60), Mr. A. E. Jerman (£60), Mr. M. Farrant (£20).

A GAMEKEEPER residing near Chelmsford, bitten by a rabid dog, has been sent to Paris by the London Pasteur Institute Fund.

THE new water-supply for Mullingar Lunatic Asylum is now completed, and an abundant supply of water for all purposes is now obtainable.

KING'S COLLEGE, LONDON.—The Science Exhibitions of £100 and £50 given annually by the Clothworkers' Company have been awarded to S. H. Ellis and F. C. Sprawson, and the Sambrooke Exhibitions of £60 and £40 to A. Bousfield and W. R. Bryett.

NOTIFICATION OF INFECTIOUS DISEASES.—The Cambridge urban authority, the Wolverhampton Town Council, and the county borough of Swansea have decided to put into force the provisions of the Infectious Diseases (Notification) Act.

MISS HAMILTON, the senior nursing sister of the Greek Hospital at Alexandria, and who belongs to Cove, Loch Long, has been decorated by His Highness the Khedive with the Khedivial Bronze Star, in recognition of the valuable services rendered by her to the hospital since 1883.

CHOLERA IN MESOPOTAMIA.—According to official reports received by the Foreign Office in St. Petersburg, the cholera, which broke out in the valleys of the Tigris and Euphrates more than three months ago, is still raging. The number of victims hitherto is estimated at not less than seven thousand. The epidemic is not yet beginning to die out, except in Bagdad and down the Tigris.

VILLAGE TYPHOID.—An outbreak of typhoid fever has recently occurred at Sutton, near Hull. The shallow wells in the village have been found to be highly polluted, and some of them have been compulsorily closed. Much of the sewage passes into agricultural drains and open ditches, and some of it enters a stream which flows through a densely populated part of Hull. The whole system is very defective, and the rural sanitary authority contemplates the adoption of proper sewerage works.

PARIS INSTITUTION FOR ENGLISH HOSPITAL TRAINED NURSES.—It may be serviceable to many to know that an institution has been opened in Paris under the patronage of the Countess of Lytton, wife of the English Ambassador, for English hospital-trained nurses at 34, Rue de Prouy, Parc Monceau, Paris, which includes medical and surgical nurses who have been trained in the English hospitals, and who are prepared to undertake nursing. A limited number of patients are received in the home. The lady principal is Mrs. Levick.

THE SUPPLY OF ANATOMICAL SUBJECTS.—The Dean of the Medical Department, Yorkshire College (Mr. Thomas Scattergood), has addressed to the Chairman of the Hunslet Board of Guardians a request "that they will direct, as they are empowered by the law to do, that the unclaimed bodies of persons dying in the Hunslet Workhouse shall in future be handed over to that medical school for the purpose of dissection." The latter, which was read at a recent meeting of the guardians, was discussed, and the Dean was requested to meet a full meeting of the Board.

SANITARY PLUMBING.—Certificates of proficiency were presented to 74 master plumbers and 85 operatives at a largely attended meeting at Leeds on October 21st. Mr. Pridgin Teale moved a resolution heartily welcoming the formation, in Leeds, of a district council in connection with the movement of the Worshipful Company of Plumbers for the national registration of plumbers. Dr. Churton, in supporting the resolution, referred to the cases of lead poisoning at Keighley, and suggested whether an alloy might not be found which, mixed with lead, would not be soluble by water. Sir James Kitson thought it would be quite possible to make steel alloyed with nickel which would meet all requirements.

OPHTHALMOSCOPIC DEMONSTRATIONS AT THE ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—On Tuesday evening, October 22nd, Mr. Frost gave the second demonstration in his course at the above Hospital. The lantern images were again mainly confined to the different variations of the normal fundus, especially in the region of the optic disc. Paintings were shown on the screen of discs with a fibrillar margin giving a steel-grey halo. Specimens showing irregularities in the course of the retinal vessels were also projected on to the screen. One painting showed a retinal vein after its formation bifurcating on the optic disc before it passed out through the lamina cribrosa—a thing very rarely observed.

THE VICTORIA HOSPITAL, FOLKESTONE.—The foundation stone of this hospital was laid on October 12th by Alderman Sherwood, in the presence of a large concourse of people, amongst whom were Drs. Bowles, Bateman, Tyson, T. Eastes, and F. Eastes. It is only proposed at present to build the centre block of the design approved by the committee, leaving the wings to be added by-and-by, when occasion may require and the funds allow. The central part, however, when built, will not be a partial and unfinished building, but complete in itself. It is erected by public subscriptions in commemoration of the Queen's Jubilee. It will hold twenty beds, ten for each sex, and two or three private wards. Each bed will have 1,500 cubic feet of air space. The estimated cost of the whole building is £7,300. The committee have paid £1,500 for the site, which is quite on the outskirts of the town, and the amount now in the hands of the trustees is nearly £9,000. It is hoped to secure sufficient funds to constitute an endowment to assist in keeping the institution going.

THE HEALTH OF BATTERSEA.—During the last thirty years the population of Battersea has enormously increased. Whereas in 1851 the parish contained 10,560 inhabitants, or less than five to the acre, in 1881 the population had reached 107,000, or 49 persons to the acre, and it is now estimated at 150,000. The rateable value has also gradually increased from £85,000 in 1851, to £675,864 at the present time. In view of this enormous growth, the "parish of St. Mary, Battersea, excluding Penge," was, by the Metropolis Management (Battersea and Westminster) Act, 1887, separated from the Wandsworth District, and its vestry constituted a separate body corporate from March 26th, 1888. The first report of the new body has just been issued, and it shows that much good work in the interests of public health is being carried on in the parish with good results. In their interesting reports on the health of the parish, Drs. Kempster and Oakham, the medical officers of health, comment on the energetic sanitary measures that have been taken, and refer with satisfaction to the lowness of the death-rate for the past year. From 1874 to 1880 the corrected death-rate was 20.324 per 1,000. This fell during the next six years to 18.5, and last year the rate of mortality was only 15.83 per 1,000. The birth-rate was 33.75 per 1,000, as compared with 30.7 in London generally. The mortality from infectious diseases was at the rate of 2.4 per 1,000. The London County Council are urged to ventilate their main sewers in this locality, so as to lessen the accumulation of sewer-air; and when it is considered that there are fifty-one miles of streets in the parish, the importance of this matter becomes obvious.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS, EDINBURGH, AND FACULTY OF PHYSICIANS AND SURGEONS, GLASGOW.—The quarterly examinations for the Triple Qualification took place in October, with the following results:

First Examination.—Of 65 candidates, the following 34 passed: J. Whyte, Easdale, Oban; H Chestnut, Tralee; T. F. Devane, Cork; A. Renny, Arbroath; W. M Arthur, Galway; D. J. MacCarthy, Riverstown, Cork; C. H. Hibbert, Marple Bridge; J. F. Downey, Capetown; O. S. Maunsell, Tramore; Margaret Agnes Booth, Northamptonshire; P. Mohan, Aclint, Louth; J. Ryan, Limerick; G. B. Jacobi, Gothenburg; J. J. Cooper, Elmes, Limerick; R. H. Darwent, Barnard Castle, County Durham; H. R. Irvine, County Down; H. D. Lauchlan, Bombay; J. A. Hislop, Birkenhead; J. N. Banerjee, Bengal; J. C. Hamilton, Ireland; F. H. Rae, Aberdeenshire; N. G. Douglas, Crewe; A. W. S. Smythe, Drogheda; A. M'Afee, Ballymoney; C. S. Buck, London; G. D. Robertson, Greenock; A. Young, Edinburgh; C. T. Bowen, Swansea; E. Towler, Yorkshire; I. H. Ross, Demerara; T. L. Davies, Carmarthenshire; T. B. Green, Normanton-le-Heath; Elizabeth Adelaide Baker, South Africa; and J. S. Bruggman, Australia.

Second Examination.—Of 76 candidates, the following 33 passed: T. W. Fisher, Belfast; W. L. Hawthorne, County Down; D. F. Todd, Belfast; A. Renny, Arbroath; G. C. H. Norman, Essex; T. Hamilton, Belfast; A. H. Atkin, Birmingham; G. Crawford, County Antrim; H. J. Palmer,

London; A. P. Brown, Salop; R. P. Cooke, County Roscommon; B. Keane, Sheerness; W. P. Hilliam, Spalding; J. C. Mockler, County Armagh; D. S. Browne, County Armagh; D. L. Lindsay, Middlesex; H. Meggit, Barton-on-Humber; T. W. Clay, Holyhead; A. B. Francis, County Donegal; F. P. Hill, Callicut; H. L'Estrange, India; T. Marshall, South Shields; W. A. M'Cutchan, India; J. Heddle, Adelaide; J. Whyte, Easdale, Oban; R. A. Shepherd, Barbadoes; G. S. MacLean, Kirriemuir; H. Chestnut, Tralee; F. E. Rainsford; Ballinasloe; W. G. Scarth, Leeds; T. J. Hall, London; H. Lees, Edinburgh; and T. L. Pennington, Liverpool.

Final Examination.—Of 101 candidates, the following 46 passed, and were admitted L.R.C.P. and S.E. and L.F.P. and S.G.: Mary Anne Smith, Bacup; C. W. P. Orr, Colombo; W. J. Leitch, County Tyrone; D. R. Johnston, County Tyrone; Evelme Ada Cargill, London; Eleanor Sophia Warner, Winchester; Agnes Elizabeth Henderson, Aberdeen; O. R. M. Wood, Blackheath; R. Drinkwater, Llangollen; E. Gray, Kirkcaldy; W. Lawton, Yorkshire; A. B. Santiagopulle, Ceylon; Margaret Mary Sharpe, Cumberland; H. H. H. Addenbrooke, Smethwick; H. R. Bellamy, Cheshire; P. J. Byrne, County Cork; M. Wiseman, County Cork; H. F. Knyvett, Windsor; R. J. Stirling, Peebles; G. W. W. de C. Baldwin, Tipperary; R. Love, County Antrim; H. R. W. Strange, Madras; T. S. P. Sparrow, Southsea; A. R. Douglas, Newcastle-on-Tyne; J. F. Roden, Edinburgh; J. P. Kelly, Melbourne; A. L. Paliologus, Calcutta; J. C. Byrne, County Cork; H. F. T. Chambers, New South Wales; S. A. Ewing, Melbourne; J. W. Corns, Manchester; R. K. Bird, Melbourne; H. M'Ewen, Beckwith; J. S. Steele, County Antrim: H. E. Wells, Maulmain, Burma; C. G. Godfrey, Melbourne; A. E. Hilker, Port Elgin, Ontario; A. Beecroft, Hyde, Cheshire; D. H. M'Closky, Penang; T. W. Fisher, Belfast; J. Stewart, County Tyrone; J. C. H. Beaumont, India; H. G. Tillman, Worcestershire; D. Kerr, Largs; W. M. Joyce, Ashby-de-la-Zouch; and J. E. Leach, Rochdale.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—At the Preliminary Examinations held on Wednesday, October 16th, the following candidates were awarded certificates:

C. H. Beasley, T. E. Beckett, S. O. Browne, J. Campbell, L. F. Corbet, J. J. Costello, R. J. Cronin, J. Crowley, J. Fitzgerald, T. A. Greene, J. F. Hayes, A. F. Hartley, W. J. Hartnett, A. J. Johnson, D. E. Kelly, D. Kennedy, B. Kiernan, H. M'Avoy, E. R. A. MacDonnell, J. J. M'Hugh, M. J. M'Kenna, S. A. Metge, G. Moore, J. R. O'Brien, M. J. O'Brien, R. O'Flaherty, W. H. Odlum, R. K. Pentland, T. Power, L. J. Quigley, T. J. Rea, W. J. Read, H. S. Roberts, W. F. Roe, C. Russell, A. Seale, M. J. Smyth, R. Somerville, S. Stewart, W. Taylor, H. G. Thompson, W. P. Timmons, B. B. Tuke, P. Twomey, J. C. Tynan, J. Wallace, R. G. S. Whitla, R. E. Willis, W. R. Wilson, and F. D. Yourell.

The following candidates were granted certificates in Physics:

J. Behane, S. O. Browne, J. J. Costello, W. S. Crosthwait, J. Crowley, S. M. Dooley, S. C. Elger, J. Graham, T. A. Greene, F. Hamilton, R. Hassard, J. F. Hayes, A. F. Hartley, A. J. Johnson, C. Kapp, A. J. Kearney, B. Kiernan, T. Lauder, J. C. Lloyd, P. F. Lyons, E. R. A. MacDonnell, D. Molyneux, G. Moore, W. H. Odlum, F. J. W. T. O'Rorke, M. P. O'Shaughnessy, A. H. Pim, R. H. Pentland, T. Power, W. J. Read, H. S. Roberts, W. F. Roe, T. F. Smith, M. J. Smyth, R. Somerville, J. F. Sugrue, H. R. Sweeny, W. Taylor, Elizabeth Alyria Tennant, H. G. Thompson, B. B. Tuke, J. C. Tynan, R. G. S. Whitla, and W. R. Wilson.

SOCIETY OF APOTHECARIES OF LONDON.—The following candidates, having passed the Qualifying Examination in Medicine, Surgery, and Midwifery, have received Certificates entitling them to practise in the same, and have been admitted as Licentiates of the Society in October, 1889:

On the 10th:

Collett, Henry George Outram, King's College.

On the 16th:

Bristow, George Hamilton, St. Thomas's Hospital.
Cornilliac, Joseph, King's College.
Dawber, John Henry, B.A.Oxon., Middlesex Hospital.
Lory, Arthur George Bateman, London Hospital.
McInerny, John, College of Physicians and Surgeons, New York.
Neville, Evan James, King's College.
Pritchard, Edward Josiah, Westminster Hospital.
Wilson, Helen Mary, Royal Free Hospital.

On the 17th:

West, William Frederick, St. Bartholomew's Hospital.

MEDICAL VACANCIES.

The following Vacancies are announced:

BOROUGH OF HUDDERSFIELD.—Medical Officer of Health. Salary, £400 per annum. Applications by November 12th to G. B. Nalder, Esq., Town Clerk.

CENTRAL LONDON SICK ASYLUM.—Assistant Medical Officer and Dispenser. Salary, £100 per annum, with board and residence. Applications by November 9th to William Appleton, Clerk's Office, Cleveland Street, W.

CHARING CROSS HOSPITAL.—Surgeon-Registrar. Salary, £40 per annum. Applications by November 4th to the Chairman of the Medical Committee.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—House-Physician. Board and residence. Applications by November 15th to the Secretary at the office, 24, Finsbury Circus, E.C.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—Resident Medical Officer. Salary, £100 per annum, with board, etc. Applications by November 15th to the Secretary at the office, 24, Finsbury Circus, E.C.

FLINTSHIRE DISPENSARY.—House-Surgeon. Salary, £100 per annum, and furnished house, etc. Applications by November 11th to the Secretary, Board Room, Bagillt Street Holywell.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—House-Surgeon. Salary, £50 per annum, with board etc. Applications by October 28th to the Secretary.

LIVERPOOL DISPENSARIES.—Two Assistant-Surgeons. Salary, £80 per annum each, with board, lodging, and attendance. Applications by October 28th to the Secretary.

LIVERPOOL EYE AND EAR INFIRMARY.—House-Surgeon. Salary, £80, with board and lodging. Applications by November 4th to Reginald Haigh, Honorary Secretary, Grosvenor Buildings, Liverpool.

LIVERPOOL ROYAL INFIRMARY.—Honorary Surgeons. Applications by November 1st to the Chairman, H. B. Gilmour, Esq.

MEDICAL AID ASSOCIATION OF BIRSAY, HARRAY, AND SANDWICK, Mainland of Orkney.—Medical Officer. House and garden, fees and emoluments, etc. Applications by October 31st to the Rev. J. A. Selbie, Birsay, Stromness.

NORTH RIDING INFIRMARY, Middlesbrough-on-Tees.—House-Surgeon. Salary, £100 per annum, with board and residence, and £5 in lieu of beer. Applications by October 31st to the Secretary.

PARISH OF THE UNITED PARISHES OF WHITTLESY.—District Medical Officer and Public Vaccinator. Salary, £70 per annum and fees. Applications by October 28th to John Peed, Esq., Clerk.

PUBLIC DISPENSARY, 59, Stanhope Street, Clare Market.—Resident Medical Officer. Salary, £105 per annum, with furnished apartments, etc. Applications on or before November 6th to the Secretary.

SALOP INFIRMARY, Shrewsbury.—House-Surgeon. Salary, £100 per annum, with board and residence. Applications by November 2nd to the Board of Directors.

SHEFFIELD GENERAL INFIRMARY.—House-Surgeon. Salary, £120 per annum, with board, lodging, and washing. Applications by November 2nd to the Medical Staff of the Sheffield General Infirmary to the care of the Secretary.

SHEFFIELD GENERAL INFIRMARY.—Assistant House-Surgeon. Salary, £80 per annum, with board, lodging, and washing. Applications by November 2nd to the Medical Staff of the Sheffield General Infirmary to the care of the Secretary.

VICTORIA HOSPITAL FOR SICK CHILDREN, Queen's Road, Chelsea.—Ophthalmic Surgeon. Applications by November 18th to the Secretary.

WEST BROMWICH DISTRICT HOSPITAL.—Assistant House-Surgeon. Board, residence, and washing. Applications by November 1st to W. H. Laban, Board Room.

WEST BROMWICH DISTRICT HOSPITAL.—Surgeon. Salary, £80 per annum, with board, residence, etc. Applications by November 1st to William Bache, Esq., Churchill House, West Bromwich.

WESTON-SUPER-MARE HOSPITAL.—House-Surgeon. Salary, £50 per annum, with board and residence. Applications by October 28th to the Honorary Secretary.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL, Wolverhampton.—House-Surgeon (will also be required to act as Surgical Registrar). Salary, £100, with board, lodging, and washing. Applications by October 28th to the Chairman of the Medical Committee.

MEDICAL APPOINTMENTS.

BRODIE, C. G., F.R.C.S., appointed Honorary Surgeon to the Western General Dispensary, Marylebone Road, N.W.

CADDY, Arnold, L.R.C.P.Lond., appointed House-Surgeon to the Leeds General Infirmary.

CAHILL, John, F.R.C.S., appointed Surgeon to St. John's and St. Elizabeth's Hospital, Great Ormond Street.

CAMERON, R. W., M.R.C.S., L.R.C.P., appointed House-Physician to the City of London Hospital, Victoria Park.

CRUMP, T. G., appointed Assistant House-Surgeon to the General Hospital, Birmingham.

DANIEL, W. P., L.S.A., appointed Assistant House-Surgeon to the Female Lock Hospital, Harrow Road, *vice* H. J. L. Bullen, resigned.

EDWARDS, F. Swinford, F.R.C.S., appointed Surgeon to St. Peter's Hospital, Henrietta Street, Covent Garden, W.C.

ESLER, R., M.D., M.Ch., L.M.R.U.I., appointed Divisional Surgeon to the P Division of the Metropolitan Police, *vice* P. G. Philps, M.R.C.S., resigned.

FENWICK, E. Hurry, F.R.C.S., appointed Surgeon to St. Peter's Hospital, Henrietta Street, Covent Garden, W.C.

FRASER, Donald A., M.D., M.R.C.S., L.S.A., appointed Medical Officer of Health to the Totnes Urban District.

HARRISON, Reginald, F.R.C.S., appointed Surgeon to St. Peter's Hospital, Henrietta Street, Covent Garden, W.C.

HUTTON, James Alfred, M.R.C.S., L.R.C.P.Lond., appointed Assistant Demonstrator of Anatomy at the University of Durham College of Medicine, Newcastle-on-Tyne.

MCHUGH, M., M.B., L.R.C.S., appointed Visiting Physician to the St. Vincent's Hospital, Dublin.

O'CARROLL, J. F., M.B, M.Ch., appointed Physician to the St. Vincent's Hospital, Dublin.

ORD, William Theophilus, M.R.C.S.Eng., L.R.C.P.Lond., appointed Medical Officer and Public Vaccinator to the Halesowen District of the Stourbridge Union, *vice* Thomas McLauchlan, M.B., resigned.

PATTERSON, R. G., M.B., B.S., appointed Surgeon to the St. Vincent's Hospital, Dublin.

PHILLIPS, John, M.B., C.M., L.R.C.P.E., L.R.C.S.E., L.F.P.S.G., appointed Resident Physician to the North London Hospital for Consumption, Hampstead, *vice* R. A. Bindley, M.R.C.S., L.S.A., resigned.

PRAGER, J. F., L.D.S., appointed Dental Surgeon to the Western General Dispensary, Marylebone Road, N.W.

RATCLIFFE, J. R., M.B., C.M., appointed Resident Registrar and Pathologist to the General Hospital, Birmingham.

RAWES, William, M.B., F.R.C.S., appointed Assistant in the Physiological Laboratory of the London Hospital Medical College, *vice* E. Hurry Fenwick, F.R.C.S., resigned.

DIARY FOR NEXT WEEK.

MONDAY.

MEDICAL SOCIETY OF LONDON, 8.30 P.M.—Dr. Ord: Some Interesting Points in Connection with Glycosuria. Mr. Marmaduke Sheild: Cerebral Abscess Due to Ear Disease, Evacuated by the Trephine.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E., 4.30 P.M.—Sir Risdon Bennett, M.D., F.R.S.: Introductory Address.

FRIDAY.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY, West London Hospital, 8 P.M. —Pathological Specimens: Mr. R. F. Benham: An Umbilical Cord Knotted Ante Partum. Mr. Keetley: Specimen showing Three Incomplete (Richter's) Strangulated Herniæ in the same subject (a man aged 76). Mr. R. Lake: A Hypertrophied Tonsil. —Cases: Dr. Abraham: An Unusual Case of Psoriasis. Mr. Keetley: A girl, aged 15, with a congenital Lateral Curvature of the Spine, and a Double or Bifid Row of Spinous Processes in the Mid-dorsal Region.—Microscopical Specimens: A Series Illustrative of Phthisical conditions of the Lungs, lent by Mr. Arthur Townsend, of Birmingham. Dr. Abraham: Sections of Psoriasis.—Papers: Dr. Thudichum: A New Mode of Operating on Naso-pharyngeal Tumours (so-called relapsing). Dr. Reginald Dudfield: The Sanitary Acts of last Session, especially the Infectious Diseases (Notification) Act, 1889.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the announcement. The first post on Thursday mornings is the latest by which advertisements can be received.

BIRTHS.

BAKER.—On October 13th, at Waterloo-ville, Cosham, the wife of T. Baker, M.R.C.S., L.S.A., of a son.

EDMUNDS.—On October 20th, at Pontnewydd, Mon., the wife of R. Edmunds, M.R.C.S., of a son.

KENDALL.—On October 22nd, at St. Mary Bourne, Hants, the wife of Francis E. Kendall, M.B., of a daughter.

MARRIAGES.

TULLIS—HANCOCKS.—On October 8th, at St. Nicholas Church, Hereford, by the Rev. C. G. Ledger, assisted by the Rev. F. Millington, George A. Tullis, M.D., of Southsea, son of the late John Edie Tullis, M.D., of Jamaica, to Mildred Augusta Hancocks, second daughter of A. A. Hancocks, Esq., of Hereford.

DEMETRIADI—PARKE.—On October 23rd, at the Parish Church, Tideswell, Derbyshire, by the Rev. Canon Andrew, Rector, assisted by the Rev. G. A. Dawson, Curate of Tideswell, Louis Demetriadi, F.R.C.S.Edin., Huddersfield, to Alice, third daughter of John Latimer Parke, M.R.C.S., L.S.A., Surgeon, Foxlowe House, Tideswell.

DEATHS.

BROWN.—On October 22nd, at 19, Dodington, Whitchurch, Salop, Barbara Hair, the beloved wife of John Brown, Surgeon.

CALLENDER.—At Haydon Lodge, Haydon-Bridge-on-Tyne, on October 14th, Catherine Frances, the much beloved wife of R. J. Callender, M.R.C.S., L.R.C.P. and L.M., and fifth daughter of the late Lewis Nauncy, Esq., J.P., Hall Meadows, Haltwhistle, Northumberland. R.I.P.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the office of the JOURNAL, and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429 Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

QUERIES.

RAESON asks for any information regarding the climate and health of Johannisberg and surrounding region, Transvaal, Africa, and whether British qualifications are sufficient for practising there.

Re THE SANITARY ADVANTAGES OF GOODGE STREET, W.C.

F.R.C.S. writes: Is it not possible for the authorities who have so improved *Punch's* immortal "Mud-Salad Market" to improve this thoroughfare, where still a cabbage market is nightly held, to the danger of not only those who drive but pedestrians. Last night, with my carriage full, on pleasure intent, bound for a hospital dinner, we came to utter grief. That a party of distinguished representatives of an alien hospital were not warded in the Middlesex is a mercy and a mystery.

MATERNITY HOSPITAL.

MATER writes: In a town of 40,000 we are wanting to establish a maternity. Would anyone who has experience in this matter furnish us with some hints or directions?

HYGIENE AND PHYSIOLOGY IN ELEMENTARY SCHOOLS.

SCRUTATOR asks to be referred to any textbook dealing with diseases caused through ignorance, and suggesting that the ignorance might be remedied by teaching elementary hygiene and physiology in elementary schools.

SCHOOL FOR TROUBLESOME BOY.

MORSHEAD writes: I want to find a school to which I can send the son of a well-to-do patient, he being a little deficient in mental capacity, unable to talk very clearly, and liable to sudden impulse of mischief, during which he seems to have no moral appreciation—that is, as to danger to others or ruin to valuable furniture; has a passion for playing with fire, but can be ruled by kindness, and is very tender-hearted after his impulses have passed. Is there such a department associated with Earlswood?

ANSWERS.

MEDICUS.—Mr. Bryant's "Clinical Surgery" was originally published in the *Guy's Hospital Reports* for the years 1859 and 1866. The subjects treated were the following: (1) Injuries and Diseases of the Nervous System; (2) of the Respiratory and Circulatory Systems; (3) of the Mouth, Tongue, Abdomen, and Rectum, with Hernia; (4) of the Urinary Organs; (5) Tumours, and Tumours of the Breast; (6) Diseases of the Testicle; (7) Ovariotomy. Churchill was the publisher.

BIERS.

DR. C. H. HILL DRURY writes: At the last meeting of the Cemetery Committee of the Darlington Town Council I suggested the use of a bier instead of carrying the coffin on the shoulders of men whose faces are covered with the pall. I want to show the committee a light iron or wood bier which two men could carry a considerable distance without much fatigue, and to which wheels could be attached if necessary. Can you tell me the makers of such an article, or where I am likely to get one or the plan of one?

*** There is the wheeled car with grave-barrier bier, invented by Mr. Stretton, M.R.C.S., of Kidderminster (recently much improved), which passes easily and noiselessly into the church, the bier, which can be borne by friends, being removed afterwards and placed over the grave, while the coffin is lowered without further handling. It is supplied by E. Stretton and Co., Kidderminster, and Bath Road, Cheltenham. There are also the wheeled biers invented by Mr. Vigers, of 162, Buckingham Palace Road, London, and by Mr. Kinder, of Leicester.

M.B.'S AND THE TITLE OF "DR."

M.A., M.B., B.CH.OXON. writes: The courtesy title of "Doctor" is usually conceded by the profession to those holding the M.B. degree of Oxford or Cambridge. To what extent are the holders of these degrees justified in assuming the title themselves? Is it permissible to describe oneself as "Dr. ——" on a brass plate or professional card? This is frequently done, but there are many like myself whose minds are uneasy upon this subject, and who would be glad of an authoritative answer to my question.

*** We have consulted a distinguished professor at one of the two older universities, and a Bachelor of Medicine of the other, who has held high office in the Royal College of Physicians, and gather that, though for centuries the courtesy of the profession and the public (outside the university precincts) has accorded the title of "Doctor" to M.B.'s, it is considered in better taste that the holder of that degree should not so describe himself on his visiting card or door-plate; "—— ——, M.B." would be a suitable inscription, if it is desired that the degree should appear at all. The Senate of the University of London have been in the habit of declaring that "Bachelors of Medicine of the University of London have no right, as such, to assume the title of Doctor of Medicine."

NOTES, LETTERS, ETC.

LUMBAR COLOTOMY.

MR. G. GORE GILLON, M.B. (Wellington, New Zealand) writes: I beg to report the death of J. S., whose case of rectal epithelioma I reported in the JOURNAL of June 8th, 1889. He died on May 12th, 1889, from cancer of rectum, having lost weight greatly the last two months. He thus lived over eleven months from the date of the colotomy.

THE DIGESTIBILITY OF BOILED MILK.

F.R.C.P. writes: The article in the JOURNAL of October 19th is of great practical importance. I believe that Raudnitz, of Prague, is quite right. There are some babies, in my experience, who cannot thrive on boiled milk. To alarm oneself about the loss of the anti-scorbutic element is, perhaps, not necessary. But, in two words—as I know you object to prolixity—let me say

that I have sometimes found it necessary to give extra nitrogen in the shape of raw meat juice, and extra freshness in the form of orange or lemon juice, to infants being brought up by hand on boiled cow's milk, and this when the digestion of the boiled cow's milk is satisfactory but the baby does not gain in flesh.

A Medical Degree for London Students.

Dr. Robert Reid Rentoul (Liverpool) writes: May I suggest that the Council of the British Medical Association apply for power to grant the degree of Doctor of Medicine? A number of examiners would be appointed by the Council, a number by the State, and a number by the Medical Council. If we look into the management of the Incorporated Law Society, which controls and guides solicitors and attorneys, we find that it has not only the power of examination but of granting qualifications. It is to be hoped that the Council of our Association will ever keep in view its proud position, and will take this opportunity of once more showing that it has not only the interests of the public but of the medical profession at heart.

"Telegram—Immediate—No Charge for Delivery."

"Craven, Surgeon, Kendal," writes: Everybody's name and address in the *Medical Directory* should be followed by his telegraphic address, thus: "T. A. Liston, Surgeon, Ainsdale," or "T. A. Abernethy, Physician, Elter Water." Such telegraphic address need not be a registered telegraphic address (for which the Post Office requires a guinea a year), but simply an abbreviated address which each man knows by experience is sufficient to ensure the prompt and correct delivery of his telegrams. When we telegraph to our London friends we spend nearly 6d. in name and address before we come to the words of the communication. All unregistered telegraphic addresses in London, Dublin, etc., should conclude with the name of the "delivering office," as the Post Office calls it; and this can be ascertained by inquiry at the nearest post office to your residence. The editors of the *Medical Directory* must have information supplied before November 1st, or it will be too late for the directory for 1890.

Insurance Policies.

Asylum Superintendent writes: In reference to Mr. Colin Campbell's letter on above subject, in which he states that his policy does not insure against "injuries inflicted by another person," I wish to say that, having lately made a proposal for insurance against accidents, I specially stated such should cover any injury inflicted on me by a lunatic in discharge of my duties as medical officer in an asylum. The company replied that personal violence could not be considered as an accident. I then wrote withdrawing my proposal, and received a reply that a mistake was made in last letter, and that "I would be covered from an attack by one of the patients, as that would be considered as coming under the risk of my profession."

Dr. George C. Kingsbury (Blackpool) writes: Mr. Colin G. Campbell's letter in the Journal of October 12th will make many medical men examine their accident policies more closely than they have hitherto done, and I fancy a good many will be, like him, horrified.

I have looked mine up, and though there are many "conditions," I must say I think they are only fair, and that the policy seems to cover all legitimate accidents. It is issued by "The Sickness and Accident Assurance Association," of St. Andrew Square, Edinburgh, and though I have not had the misfortune to meet with any accident since I insured, I have every reason to believe the Association would treat me liberally if I had to make a claim, judging from my experience in their "Sickness" Assurance Department. I insured against sickness in 1886, paying £8 6s. 8d. a year, to insure £5 a week during illness. In 1887, within a year of my taking the policy, I was ill for four weeks, having got some scarlatinal symptoms from a child I was attending. The Association promptly sent me £20. Again in 1888 I had a diphtheritic throat. The Association sent me £15 the moment they heard I was ill, but it was too much, for I was able to resume work in the third week and refund them £2 10s.

Obstruction of Wharton's Duct.

Dr. Fitz James Molony (Porlock, Somerset) writes: I am much interested in Dr. Hayward's case reported in the Journal of October 12th, as I had a nearly similar case myself some months ago. The cause of obstruction in my patient was a fine salivary calculus, forming a cast of Wharton's duct. It caused a great deal of irritation, and after some days worked its way out. It closely resembled a thick fish bone, but on analysis proved to be a salivary calculus.

Epilepsy after Vaccination.

Mr. E. Climson Greenwood, Public Vaccinator for Marylebone, writes: Taking into consideration that vaccination is on its trial at the present moment before the Royal Commission, accusations against it, especially by medical men, should, I venture to think, be made with the greatest caution, and only after the most exhaustive inquiries. Dr. Althaus, in his case reported in the Journal, September 28th, by attributing undue importance to some points and not alluding to others, has, I think, furnished those who, either through ignorance or malice, are apt to attribute to vaccination most if not all the ills which the human frame is heir to, with a fresh source of attack, of which, aided by his name, they will be only too ready to avail themselves.

Having taken some considerable trouble to ferret out the details of the case, I will first give them, showing afterwards how they differ from Dr. Althaus's, and leave it to your readers to judge whether this case of epilepsy should be attributed to vaccination or not. I must first, however, call attention to the statement of Dr. Althaus that epilepsy "does not commonly arise at the age of 19 years." The chief authorities agree that it is between the ages of 11 years and 20 years that epilepsy does most frequently originate. Thus Dr. Fagge states: "The time of life at which epilepsy is most apt to begin is between the tenth and twentieth years."[1] Dr. Bristowe states: "but it occurs far more frequently between the ages of 10 and 20;"[2] and Dr. Reynolds found that in 106 out of 172 cases the first fit occurred between these limits of age.

With regard to Dr. Althaus's statement that "the blood poisoning may have arisen through some slight admixture of blood with the vaccine matter," surely blood poisoning could not arise through inoculation with bloody lymph unless the child from whom the lymph was taken had been in such a condition as would in itself have prevented a medical man from vaccinating from it.

K. H., a lad aged 19, employed in the General Post Office, was vaccinated on the left arm in the latter part of the month of April, in three places. The vaccination took well, and the lad continued his duties, consisting of stamping letters (which necessitates actively using the left hand), of delivering letters, and of wheeling a truck from Twickenham to Hampton and back, a distance of about six miles. About the seventh day the areola of inflammation set in, and continued to spread extensively down to the elbow, and slightly to the hand; the glands in the axilla were swollen. At or about the tenth day the knee and ankle joints of the same side were swollen; there were no glandular swellings except those mentioned above. The lad remained in bed one day, but got up in the evening, and did his round of delivering letters. The swellings and inflammation all disappeared at or about the 14th day. The first fit occurred in the last week of June.

Family History.—Father attending at Brompton Hospital for Diseases of the Chest at the present time; had two sisters who died of phthisis. Mother fairly healthy; has had fifteen children, and two miscarriages ten years ago, at which time had ulcerated sore throat; no other signs of syphilis.

Brothers and sisters: fourteen. First three children born dead; fifth child died of "gastric fever;" eleventh child died of convulsions during whooping-cough. The rest alive, and, excepting patient in question, healthy, though of "a highly nervous temperament" (mother's statement).

Personal History.—Patient has had whooping-cough as well as measles when a child; has had a cough for last four years, especially in winter. Suffers from nocturnal emissions; admits having on more than one occasion taken too much to drink, and also of having had sexual intercourse (Dr. Althaus describes him of "habits always steady"), most of his back teeth are decayed, and several are mere stumps; has suffered three years ago from ulcerated sore throat.

Dr. Althaus's Account of the Case.	*Account as obtained by myself from Mother and Patient.*
"Comes from healthy family."	Father consumptive; two sisters died of phthisis; mother has had two miscarriages, and three children born dead.
"One of ten living children."	One of fifteen children, five of whom are dead.
None of children show a neurotic tendency.	The younger children are "of a highly nervous temperament."
Measles his only ailment.	Measles, whooping-cough, ulcerated sore throat, winter cough.
Habits steady.	Admits taking too much to drink.
Began duties after illness consequent upon vaccination.	Was at his duties before, during, and after vaccination.
Was vaccinated in June.	Was vaccinated in April.

The conclusions I have drawn from the history that I have obtained are briefly these:

1. That the vaccination ran a normal course, but inflammation was set up by the patient using the arm during the time.

2. That there is no evidence of blood-poisoning in the sense in which this term is made use of by medical men.

3. That while there is no denying that the epileptic fits first appeared *post*, it is by no means proven that they were *propter*, vaccination. There are several points connected with the lad's history which should not be lost sight of, that is, carious teeth, sexual matters, etc.

P.S.—Since writing the above I have been informed, through the kindness of Dr. Marston Clark, who vaccinated K. H., that the lymph used was obtained from C. Renner, of Marylebone Road, and was calf lymph; also that Dr. Clark vaccinated a child at the same time from lymph obtained from the same source, which child is at the present time and has been since perfectly well.

Leprosy and Food.

Surgeon-Major T. Murtagh, R.P., writes: In "Notes on Leprosy as Observed in Antigua, etc.," in your issue of the 5th instant, the writer appears to think that the spread of the disease must depend upon some very special kind of poison taken in connection with food, and he suggests that the "food may be some fish which has now entirely disappeared from British waters." In India, good Brahmins eat neither fish, flesh, nor fowl, and take no animal food (not even eggs), except milk, and they are, I believe, as much subject to the disease as any of their neighbours. Therefore I think the question of animal food may be eliminated from the inquiry. Not so however the question of contact.

The bacillus lepræ is located in the skin, and is probably conveyed from the ulcerated surface of the diseased to the healthy skin of the sound by actual rubbing together, as in acquired syphilis. In civilised countries the habit of wearing nightdresses should tend to prevent the spread of the disease by limiting actual contact; but the natives of hot and semi-civilised places sleep without nightdresses, and under conditions favourable to the spread of the disease by contact. I have seen natives in India huddled together asleep on the ground, and with their naked bodies in close contact. People in this country do not now, as a rule, sleep without nightdresses, but some do, and I believe that in olden times it was far from uncommon to do so. I have been informed by a medical man that he himself has never worn a nightdress.

Granting that when people sleep together, or associate, actual contact between the diseased and healthy surfaces takes place, perhaps the spread of leprosy may be accounted for without any consideration of the food.

The Possibility of the Spread of Leprosy by Contagion.

From the *Annales de Dermatologie et de Syphiligraphie*, vol. x, No. 7, we extract the following statement by Zuriaga: In the *Annales* for 1888 there was published an account of cases of leprosy at Parcent which indicated the possibility of the disease having been communicated. To this article, written by myself and translated by my colleague and friend Dr. Paul Raymond, must be added the following facts observed by me at the village of Limat de Valldigna (Valencia, Spain), which prove once more the possibility of the contagion of leprosy, and which are, according to our views, contrary to the doctrine of hereditary transmission of leprosy. These are the facts: Liberato Buignes was a leper, born of a leprous family. Several of his progenitors were victims of the disease. Liberato, who was the eldest of the family, began to suffer when quite a young man. His brothers avoided contact with him when they saw that he

[1] Fagge's *Principles and Practice of Medicine*, vol. i, p. 690.
[2] *Theory and Practice of Medicine*, p. 1060.

was leprous, and when they left their native country never to return they were all in perfect health. There was no symptom of any hereditary influence. Liberato, who lives in a country where lepers are found, is leprous. His brothers who left the country are not so. Liberato married and had several children. The eldest is 10 years old. None of them are lepers. The mother takes care that the children live separately from their father with the consent of the latter. The father complains of not finding shelter from contagion for his children.

Rafael Flores, an inhabitant of the same village, a friend and companion, but no relative of Liberato's, whose calling he followed, travelled along the roads and to the inns as a muleteer with Liberato for several years, eating and sleeping together (both were muleteers) after the latter had become a leper. Rafael Flores acquired leprosy from Liberato at the end of a few years. He has no leprous parents. Rafael has a younger unmarried sister who lives with him, and who is already a leper. Her name is Angela Flores, and she became a leper at the age of 26. Some years after having become a leper her brother married, and now has children. They have been removed from their father, and up to the present are not lepers. From these facts may be deduced: 1. That transmission of leprosy took place when there was intimacy, etc., between the contaminated subject and the subject contaminated. 2. That this transmission did not take place between relatives (fathers and sons) when there was no intimacy between them. N.B. Taken from MSS. upon leprosy as observed at the village of Limat de Valldigna (Valencia, Spain).

Varnish for Sphygmographic Tracings.

Mr. Leonard G. Peters (Salford) writes: I see a formula for the above on page 748 of the Journal. Having used the sphymograph extensively, I have found the following modification of the usual methods convenient, and I think by their means a better black tracing paper is produced, and the varnish dries in a few seconds sufficiently for the tracings to be carried home without risk of spoiling them. The special features of my method are as follows:

1. I use the smoky flame of an ordinary paraffin lamp (without its glass chimney) instead of camphor, etc., to black my tracing papers; this gives a very good black.

2. I varnish with a solution of mastic and methylated flexile collodion in methylated ether (0.720); this dries very rapidly if not too thick. (A second coating or a stronger solution gives a more shiny coating if desired).

3. I carry a tin of varnish just large enough to insert the tracings and varnish the tracings at the bedside as soon as taken, and so avoid risk of spoiling them in transit. Dipping the tracings in a tin of convenient size and shape is more cleanly and economical than pouring the varnish over the tracing.

Care must be taken to have a well-fitting cork to the tin, which should be carried upright, otherwise the clothes may suffer.

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BOOKS, etc., RECEIVED.

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A Handbook of Surgical Pathology. By W. J. Walsham, M.B., F.R.C.S.Eng. Assisted by D'Arcy Power, M.B.Oxon., F.R.C.S.Eng. London: Baillière, Tindall and Cox.

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The Electric Illumination of the Bladder and Urethra. By E. Hurry Fenwick, F.R.C.S.Eng. Second Edition. London: J. and A. Churchill. 1889.

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REMARKS
ON
SOME POINTS OF INTEREST IN REGARD TO THE PRESENCE OF SUGAR IN THE URINE.

Read before the Medical Society of London.

By WILLIAM M. ORD., M.D., F.R.C.P.,
Physician to and Lecturer on Medicine at St. Thomas's Hospital.

A few years ago I published in the *St. Thomas's Hospital Reports*, vol. xii, some notes on glycosuria, chiefly as observed in persons who had passed the middle age of life. The observations then recorded have been followed up and added to, and I now venture to set before you some statements and remarks in the way of supplement and illustration. These statements and remarks must not be taken to represent final decision in any one direction. They are, on the contrary, presented as matters to be thought about, matters which, being amplified by further note and thought, may help us to understand more of what indications in the way of diagnosis and treatment may be drawn from the occurrence, in one case or another, of glycosuria.

I trust that I shall not weary you if I review, in the outset, the conditions which may, so far as our knowledge goes, determine the presence of sugar in the urine in pathological quantity. Summarised as briefly as possible the conditions are: 1, excessive afflux of arterial blood to the liver, and probably to other glycogenic organs; 2, defective assimilation of glucose; 3, defective formation of glycogen; 4, instability of glycogen, namely, the formation of glycogen which is too easily transformed; 5, excessive ingestion of glucose or glucose-yielding substances.

Under the first head may be gathered several kinds of cause; for example, 1, vasomotor paralysis, determined by disease or injury of the medullary centre or of the nerves connecting the centre with the arteries of the liver; 2, dilatation of the hepatic artery, not determined by disease of nerve centre or nerves, but by irritation in the liver, or by reflex action at the instigation of other organs, such as the stomach, or by general disorder of the circulation, functional, a result of nerve strain or excitement, functional and probably also dyscrasic, as in gout; 3, possibly also compensatory hyperæmia, balancing obstruction of the arterial circulation in other parts and systems of the body. So far as I know, this possibility has not been hitherto discussed. But the converse of it appears to be pretty clearly established by actual experiment. Dr. Lauder Brunton, in the *Handbook for the Physiological Laboratory*, gives an admirable summary of the various ways in which nerve sections and nerve irritations may produce glycosuria. After showing that division of the fibres passing from the vasomotor centre in the medulla oblongata down the cervical part of the spinal cord, and thence along the vertebral arteries to the last cervical ganglion is followed by diabetes, he states that it is of great importance to notice that section of the sympathetic cord or splanchnic nerves does not produce diabetes, although the vasomotor nerves of the liver are thus divided. To quote Dr. Brunton textually: "The reason of this probably is that the vasomotor nerves of the intestine being divided at the same time, so much blood goes to the intestinal vessels that the circulation in the liver is not increased."

If this plausible explanation be admitted, it seems to me reasonable to argue that an undue contraction of arteries in other parts of the body than the liver may determine an excessive blood-pressure in the arteries of that organ, and so set up glycosuria, the liver itself not being necessarily at fault. There is one form of glycosuria to which I shall presently draw your attention as being possibly explained by such conditions.

The first practical point to which I should like to draw your attention is the influence of heredity in bringing about glycosuria. Of this my notes afford several instances. In one case both parents have passed sugar in the urine for many years; the father dying at the age of 75, the mother being still alive at an age over 80. Here the eldest son, a remarkably powerfully-built and stout man of 55, has glycosuria. In another case the eldest daughter of a gentleman, who died also at the age of 75, after passing sugar for many years, has glycosuria to an amount justifying the application of the term diabetes. She is a tall very stout lady, enjoying apparently very good health; but she passes daily from 100 to 150 ounces of urine loaded with sugar. Again, a gentleman of extremely nervous temperament comes with intermittent glycosuria. His nervousness goes often so far as to annul self-control, so that he dare not travel about the streets of London without a companion; and his glycosuria appears mainly to coincide, in its development, with his perturbations. He states that his mother has diabetes, and is under restraint on account of mental aberration. My notes give me also two other cases of inheritance of a similar kind. They further present more than one case in which brothers, or brothers and sisters, of one family have had glycosuria. In one of these it is probable that one of the parents had been a subject of the malady. It is of course evident that the existence of glycosuria in minor degrees will have been often overlooked in the past, and that a better estimation of the transmission of the tendency will, in the future, be more possible under the steady maintenance of careful examination of the urine. I think it is certain that in many cases the disease is transmitted from parent to child; and it is worth our while to consider in what way the transmission may be ordered.

In the first case to which I have drawn attention there was a transmission from the father's side of gout as well as of glycosuria. Glycosuria is well recognised as a not infrequent symptom of gout; and here it is to my mind very probable that the gouty diathesis determined in each case the occurrence of the glycosuria.

Glycosuria, again, is certainly often observed in people subjected to great nervous strain, and in victims of excessive nervous irritability. Here, again, the possibility of a double transmission must be before us. But, when we come to consider cases in which these conditions are absent, a different view is presented.

Gout and nervous disorder being absent, both in parent and child, it is reasonable to suggest that tissue imperfection is to be invoked. In the second case which I have quoted the lady who presents a sharp glycosuria is also abnormally stout. Her father, it may be noted, had at one period of his life been of very full habit.

The conjunction suggests that her tissues are, in more than one way, abnormal tissues; that, correlated with the excess of fat, there may be an imperfect constitution of glycogen, rendering it unstable and prone to change. In considering heredity observed in diabetes we surely have not only to recognise the handing down of morbid processes, but also the handing down of various constitutions and modes of behaviour of the several tissues.

The occurrence of glycosuria in very stout people is certainly a noteworthy fact. I have seen it in people stout by inheritance and without other sign of disease; in people stout by reason of unwise habits of life, sometimes in the way of want of exercise, notably in the way of alcoholic indulgence; and I am inclined to regard both the accumulation of fat and the occurrence of glycosuria as marks of imperfect forms of nutrition. In addition to these causes we cannot overlook the influence of persistent alcoholic excitement of the liver in many cases included in the group just referred to. I find in my notes records of many cases in which, together with obesity, there were marked indications of affection of the liver. In most cases the liver was enlarged and tender; in a much smaller number, reduced. In most, with the alteration in the size of the liver, there coincided such symptoms as occasional jaundice, morning sickness, and great impairment of appetite. It is fair to suppose that in such cases the irritation of the liver by alcohol produced a reflex active hyperæmia, and consequently glycosuria, so that the relation of corpulence to glycosuria is decidedly complex. It is necessary, however, to remember that not a few of the victims of alcoholism come to us emaciated and still present glycosuria. I am much interested in finding that, in a very considerable proportion of cases of this class, valvular disease of the heart is detected, in addition to the affection of the liver. At first sight this, by causing backward pressure into the liver, would appear to oppose the introduction into that organ of an excessive amount of arterial blood. I am not prepared at the present moment to explain the part taken, if any, by the valvular disease in the favouring of glycosuria. But the concurrence comes out strongly in my records and must

demand further attention. I think it probable that irregularities of arterial tension will here have to be considered.

There is another group of cases which I think must be placed in close approximation with the foregoing. We not infrequently find that people presenting in a typical form the symptoms of contracting granular kidney have also glycosuria. Within the last few weeks I have seen a farmer, aged 60, who presented all the symptoms of contracting granular kidney of about a year's duration. He had no valvular disease; had a considerable enlargement of the liver, and, it is to be noted, much anasarca. His urine was of specific gravity 1022, contained a good deal of albumen, and gave a very definite sugar reaction. He had been a stout man, but was now much wasted, and had not been guilty of alcoholic excesses. He had no definite sign of gout. Now, whether in this case the glycosuria was due to a general defect of assimilative or constructive process, or related with a very definite arterial tension, is not easily to be decided. I put it forward as one of the many problems awaiting solution in the study of glycosuria. To these I will at the moment add another. I have observed the occurrence of glycosuria in two cases of Raynaud's disease, and with these I may couple the notes of a case which I had the opportunity of watching for several years. The patient was a gentleman of the age, when I first saw him, of 64. He was rather stout, had albuminuria and casts in the urine, and was passing a good deal of sugar without polyuria.

When I found these conditions I put him upon a careful diet, which, I am bound to say, he entirely disregarded. Shortly afterwards circular sloughs of very slight depth made their appearance on his legs, about equally on both. Their form made me suspect the influence of syphilis, but upon this point he was not communicative. The history of his children makes it pretty certain, however, that he had had syphilis severely. I treated him with iodide of potassium and kept him at rest for many weeks, with the result that the sloughs separated and the wounds healed. He now remained fairly well, though with diminished faculties, for six years, and then again consulted me for the reappearance of sloughs, now mainly confined to his left leg, in which I found, in addition to extensive sloughs still of a superficial character, a complete obstruction of the femoral artery, which certainly had not existed before. Placed in bed and carefully nursed, while the administration of iodide of potassium was steadily maintained, he survived for more than six months. Renal disease, glycosuria, and syphilis seemed all to have played their part in the fatal termination, and to the end there was no such general sloughing as one would have expected to result, in such a damaged constitution, from the blocking of the femoral artery. Here is another illustration of the complexity of the symptoms which are found in many cases of glycosuria, or I may perhaps say of the complexity of the causes which may determine the occurrence of glycosuria.

I am here reminded of a case which I recorded many years ago, looking at it from a different standpoint from the present. A young man of 25, who had contracted syphilis, consulted me on account of mischief in the mastoid process. The mischief turned out to be of a very serious character. On examination of his urine I found that it contained both albumen and sugar in considerable quantities. The albumen was pretty clearly referred to contracting granular kidney, but the sugar was not so easily disposed of. The first idea in any way of explanation was that irritation had spread from the mastoid process, inward to the medulla, and had affected the glycosuric centre therein. The next idea was that the liver might be involved in the meshes of syphilis, and be consequently disordered in its glycogenic function.

I must confess that the case at the time engaged my attention chiefly in respect of the remarkable form of uric acid observed in the urine, which indeed led me to undertake a prolonged observation on the influence of the constituents of urine normal and abnormal upon the form of uric acid as observed under the microscope. Whatever may have been the cause of the glycosuria in the case to which I refer, it is evident from cases which I have since seen that glycosuria is often present in cases of tertiary syphilis, and under conditions not involving irritation of the medulla.

My notes supply me with several instances of the association of glycosuria with tertiary syphilis without the least suggestion of implication of the medulla. The well-known incidence upon the liver of the effects of tertiary syphilis leads me to presume that hepatic irritation is mainly chargeable with the production of the symptom of glycosuria; and on review of my subsequent cases I find that signs of hepatic disorder were always present. But I dare not speak in any tone of decision upon this point, being confronted by the profound alterations in general nutrition brought about by syphilis, and by the recognition of the possibility that, independent of hepatic irritation, faulty tissue-building may have to be considered: and such defect of anabolism may not concern the liver only. We know that there are other organs in which glycogen is formed and stored, notably the muscles. And as I review glycosuria as it has presented itself to me, I experience much doubt as to whether I have not been keeping the liver too pre-eminently in my mind. The comparatively small amount of sugar found in the urine of many persons fairly advanced in life may possibly be inadequate to the majesty of that great organ. I know of no methods of analysis which may enable us to distinguish a glycosuria of hepatic origin from one of muscular origin. I can see no reason which should prevent a glycosuria from being the result of perturbations in the several glycogen-forming structures respectively; that is to say, it seems to me quite possible that a disturbance of nutrition in muscles, in spinal cord, and in liver might exist independently in each and give rise to glycosuria, while, on the other hand, a deep dystrophy might affect all at once. You will see that the consideration is rather wide, and I think that it offers a problem worthy of careful analysis.

I will pass now to another somewhat new aspect of glycosuria. In the paper to which I have already referred I noted several cases in which glycosuria or, as it has been called, diabetes, preceded, or was preceded by, angina pectoris, and subsequently coexisted with it. Several cases of the same kind have since come under my knowledge. I will venture to detail one which was under my observation for some time.

A gentleman, of the age of 62, consulted me in June, 1886, complaining, in the first place, of a cough which had been distressing him for six weeks. The cough did not appear to be due to any affection of the lungs, heart, or stomach, but rather was attributable to a deep dusky congestion of the throat, such as one often sees in gouty people. The patient was a man of singular refinement and delicacy, and at the same time of much acute sensitiveness and irritability. He had lost flesh, complained of low spirits, of much unfounded anxieties, and of serious want of sleep. His urine was at that time of specific gravity 1020, and while containing no albumen, gave a very decided reaction of sugar. I prescribed for him a careful diet, bromide of ammonium and codeia, but did not see him again till some weeks later, when he was the subject of a very sharp attack of quinsy—a typical gouty quinsy. During this attack the sugar disappeared entirely from the urine, but albumen made its appearance. After the attack the sugar returned, but in smaller quantity, and for a time his health improved; but in June, 1887, after an absence of several months, he came to me with new symptoms. They were, in the first place, symptoms of angina pectoris. He lived in a suburb from which a train took him to the city. To catch the train it was necessary that he should walk up a short acclivity beginning at his garden gate. Starting from home, shortly after breakfast, he was obliged, after walking a few yards, to stop and hold on by the palings, feeling, as he said, as if he were ready to die by reason of a strong sense of constriction of the chest, which seemed to be about to stop him altogether from breathing. After holding on for a few minutes he would recover his breath, and would generally be able to walk to the station. Sometimes, however, a second attack would intervene. At this time, although he had gained flesh, his general condition was a good deal worse than it had been a year before. His heart was now decidedly enlarged, and the enlargement appeared to be due chiefly to dilatation on both sides. The heart sounds were weak and obscure, and although I could detect no definite murmur I came to the conclusion that there was not only impaired nutrition of the muscular wall, but commencing valve disease. He was still suffering from much irritability and insomnia. The urine was now of specific gravity 1028, contained a little albumen, and gave a strong reaction of sugar. Rest, diet, and the use of strophanthus, in addition to codeia, brought about some improvement for a time. But three months later I was called, in great haste, to see him in consultation with his usual medical adviser. I found now that he had constantly recurring attacks of angina, by day and by night, altogether independent of muscular exertion. A careful examination led to the establishment of the diagnosis of sharp gastric catarrh. He had a foul tongue, thirst, frontal headache, nausea, occasional vomiting, and loss of appetite. The urine contained still a little albumen and much sugar. I advised careful evacuation of the bowels

and the use of sedatives for the stomach in the form of carbonate of bismuth, with bicarbonate of potash and tincture of belladonna. But before these remedies could have time to operate, his sufferings increased to a terrible degree. His attacks of angina were almost continuous, and he had to sit night and day with his head supported on a rest in front of him. Under these circumstances, many remedies were used by those in immediate charge of him. Nitro-glycerine and nitrite of amyl were of some use. For the insomnia various hypnotic remedies were applied. But it appeared to me that they were only of temporary value, and that the essential method of treatment was to overcome the gastric catarrh. It seemed that this definitely established condition was the abiding cause of the angina, so we resolutely attacked it with various remedies until it yielded. When it passed away, the angina gradually diminished, and the patient was able to leave his house and go to Margate, where he remained for some time in comparative comfort—until one day, moving suddenly from the breakfast table, he was seized with a fatal attack of angina. During all this illness, his urine was carefully examined. There were, indeed, difficulties in the way of estimating the quantity of urine passed daily; but the quantity of sugar in the specimens examined was always greater than it had been before.

I could cite other cases, but will only say that the same kind of association has been more than once observed. Now, if we carefully consider what is called angina pectoris, I think we must admit that it is no more an essential disease than glycosuria; and, as I have seen it, and thought over it, I recognise in it varieties of form and causation which run in curiously parallel lines with those of glycosuria. Every one, no doubt, must recognise the typical form of angina pectoris wherein degeneration of the heart muscle plays one part and arterial stress another; and everybody also will, I think, be ready to admit that disorder of innervation plays an important part in disturbing the balance between the heart and the arteries. Not improbably, indeed, this may be the first and common factor. In such a case as I have just described it looks very much as though disordered innervation was the starting point of the whole mischief.

If it were so, the position of the glycosuria has to be fixed. It might have been also a mark of disordered innervation. It certainly preceded heart and stomach disorder; and after being a herald of them, increased as they began and developed. But if the glycosuria were of hepatic origin, it seems to be necessary to admit that while there was undoubted tension of peripheral arteries in the limbs and head and neck, there must have been dilatation of the hepatic artery, or indeed some defect of digestion or of assimilation. It is impossible to eliminate entirely the last two causes, or to estimate their possible value. But comparing this with other cases, I cannot help cogitating in what ways disturbance of the arterial circulation of the liver may possibly occur in angina.

It is I think quite certain that excitements of the central nervous system may produce at one and the same time arterial relaxation in one part of the body and arterial contraction in another. One often sees people who, under one or the other form of perturbing influence, become flushed and hot in the face and cold in the extremities, or hot in the extremities and cold in the face.

In such a case as that which I have quoted we might, on the one hand, recognise a perturbing nervous influence as a cause of peripheral arterial tension, of defective nutrition of the heart, of glycosuria, and probably of the faucial and gastric affection.

There is much reason in fact to look upon this as the best explanation of the whole array of phenomena. But in a preponderance of the cases presenting glycosuria together with symptoms of angina, the evidence of primary neurotic disturbance has not been so strong. In thinking over these I have been inclined to recur to a point shortly dealt with in the commencement of this paper, and to consider how far it might be possible that excessive tension of the arteries in one part of the body might be, so to speak, balanced by excessive blood pressure in arteries or other parts of the body. Surely this is what we, in a way, invoke when we attribute an internal inflammation to a chill of the external surface, or when we apply an irritant to the surface of the body in order to reduce inflammation in an internal organ. In addition we must not forget the reflex influence of one organ on another. Stomach disorder may have had its share in the production of the glycosuria, as it certainly had, in the case quoted, its share in the intensification of the angina. As one studies angina, one certainly finds that many apparently accessory conditions have to be dealt with in its treatment, notably for one, constipation.

All constipation is certainly attended with increase of arterial tension. In the treatment of angina I have found practically that the maintenance of a daily action of the bowels has been a need of the first importance, just as I have found that the avoidance of over-filling of the stomach, often resorted to where the patient is weak and failing, is imperatively necessary.

But I must not be diverted into a paper on angina, and I do not at the present propose to enter further into the relation of affections of the nervous system with glycosuria than has been dealt with in my former paper, and illustrated in this.

I have but one conjunction to put before you. A year or two ago one of my house-physicians, Mr. W. W. Ord, making thorough examination, according to rule, of a patient just admitted to St. Thomas's Hospital, found that her urine gave a strong reaction of sugar. She had been admitted for acute rheumatism, arising during lactation. Her child having been separated from her, it had been necessary to use applications to stop the flow of milk. The breasts had been strapped with belladonna plasters, and extract of belladonna had been applied over the nipple areolæ. The examination of the urine was made within a few hours after the institution of this treatment, which evidently proved effective in staying the secretion of milk. After the detection of sugar, frequent examination of the urine was made. The sugar reaction turned out to be most marked in the beginning, and gradually diminished until at the end of three days it had entirely disappeared. Similar observations have been made in six cases—four in St. Thomas's Hospital, two at the Cane Hill Asylum. The chemical reactions obtained have appeared to correspond exactly with those which would be yielded by glucose, but their rapid evanescence has so far stood in the way of the obtaining any sufficient quantity of urine to afford opportunity of a complete investigation. The indication is, apparently, that the stoppage of the secretion of milk has determined a backward flow into the vessels of lactose in a quantity so large as to be represented by the appearance of a considerable quantity of glucose in the urine. That lactose introduced into the system as a constituent of milk through the stomach, not only acts as a diuretic, but gives rise to glycosuria is asserted by M. Germain Sée. About last midsummer my friend Dr. Keser was good enough to send me a copy of the *Semaine Médicale* of June 12th, containing a note on "Un Nouveau Médicament Diurétique dans les Maladies du Cœur, la Lactose."

I have since seen many references to this paper, which states that an enormous diuretic action is established by the use of 100 grammes of lactose (that is to say, the quantity contained in two litres of milk), while there is no certainty of obtaining this effect by four or five litres of milk. M. Sée goes on to say that while milk taken in large doses produces diuresis and a very marked glycosuria, large doses of lactose cause a remarkable polyuria, but no glycosuria. My house-physician's observation would appear to agree with this, so far as the suppression of lactation is concerned. The two sets of notes appear to confirm one another.

Both appear to me to suggest questions that should be carefully worked out. Why lactose given by itself should produce diuresis without glycosuria; why lactose given with other constituents of milk should give rise to both, while requiring a larger dose, is what at present I do not profess to understand.

M. Germain Sée believes that the sugar remains in the blood when lactose is administered pure. With all respect to him, I think that the whole conditions require further elucidation.

With this I conclude my paper this evening. I trust that you will understand that I have been, so to speak, talking from my notes, thinking of the many ways in which glycosuria presents itself as a symptom in various diseases and disorders, and trying to find out what may be the instruction afforded in the several instances of sugar in the urine.

On the subject of treatment I do not propose to dwell to-night. If my views of the analysis of the causes of glycosuria are at all to be admitted, it must follow that the treatment of a subordinate glycosuria must be involved in the treatment of the major part of the case.

Not many years ago, when albumen was found in a patient's urine he was supposed to have Bright's disease. So now it is very often the practice to speak of the existence of a small quantity of sugar in the urine as justifying the use of the term diabetes. I think that those who have studied the question most thoroughly will agree with me that this is a most unwise use of

the term; unwise as bearing alike upon prognosis and treatment.

Finally, I trust you will see that all I have put forward is rather analytical and suggestive than final or didactic. I wish to submit for your criticism, and to propose for your investigation, certain associations of glycosuria which have presented themselves to me, and to which I have devoted a good deal of thought.

A DISCUSSION
ON
RECENTLY INTRODUCED HYPNOTICS AND ANALGESICS.

In the Section of Pharmacology and Therapeutics at the Annual Meeting of the British Medical Association, held in Leeds, August, 1889.

I.—DANIEL JOHN LEECH, M.D., F.R.C.P.,
Physician, Manchester Royal Infirmary; Professor of Materia Medica, Victoria University.

THE medical profession is often reproached with the slowness of the advance of therapeutics, and certainly, with regard to many classes of remedies, we cannot boast that we know much more than those who have preceded us in the practice of medicine, but, in some directions, especially where the chemist, the pharmacologist, and the practical therapeutist have been able to work together, there has been progress, and many new and potent remedial agents have been introduced.

As a result of such combined work the hypnotics, and analgesics especially, have been largely added to, but the comparative utility of the new agents is by no means definitively settled. An interchange of experiences of many observers, extending over a wide area of the field of disease, is essential for determining the exact value of any new remedy, and for such interchange this Section is especially adapted.

I propose to limit my remarks, for the most part, to the hypnotics connected with the fatty series. In this class, however, are contained all but three of the newer sleep-producing agents, and of these two, hyoscine and tannate of cannabin, are only old friends with new faces, whilst the third, boldin or boldo-glucin, has neither been thoroughly investigated nor practically employed.

The following is the list of hypnotics connected with the fatty series which have been brought into use in the past seven years:—

1. Urethane $C{=}O(NH_2)(OC_2H_5)$

2. Acetal (diethyl-acetal or ethidine-diethyl-ether) $CH_3CH(OC_2H_5)_2$

3. Methylal (methylene-dimethyl-ether) $CH_2(OCH_3)_2$

4. Sulphonal (diethyl-sulphon-dimethyl-methan) $(C_2H_5SO_2)_2C(CH_3)_2$

5. Amylene hydrate (dimethyl-ethyl-carbinol or tertiary amyl-alcohol) $(CH_3)_2(C_2H_5)COH$

6. Paraldehyde $(CH_3COH)_3$

7. Hypnone (aceto-phenone or methyl-phenyl-ketone) $C_6H_5COCH_3$

8. Chloralurethane $CCl_3{-}C(OH){-}H(NHCOOC_2H_5)$

9. Chloralamide $CCl_3CH(OH)(NHCOH)$

The fact that hypnotics have been sought for and so largely found amongst combinations connected with the fatty series is well worthy of note.

In the admirable Croonian lectures delivered by Dr. Lauder Brunton[1] before the College of Physicians—lectures which must be looked upon as marking an epoch in scientific therapeutics, and serving as a point of departure for future investigations, the dependence of physiological action on chemical composition, in the case of hypnotics as well as of other groups of remedies, has been ably pointed out. I will not deal at length with this part of the subject; nevertheless, it is desirable that I should refer briefly to it before pointing out the nature of the substances I am about to speak of.

The alcoholic radicles or alkyls, that is, the substances belonging to the series C_nH_{2n+1}, of which methyl (CH_3) and ethyl (C_2H_5) are familiar examples, tend to give the compounds into which they enter a power of depressing the functions of the higher cerebral centres and of producing either sleep or that complete insensibility to external impressions known as general anæsthesia; by their further action the motor and reflex centres are weakened, and eventually the vasomotor and respiratory centres and the cardiac ganglia lose their power, the nervous centres being affected in the inverse order of their development.

In some combinations the influence of the alkyl element is not apparent, as, for example, in methyl hydride CH_3H, and acetic acid (CH_3COOH). If, however, the molecule of H, or of COOH, be replaced by OH or COH we get methylic alcohol (CH_3OH) and aldehyde (CH_3COH), in both of which the influence of the alkyl element on the nervous centres is manifest.

Very little is known as to the laws which govern the appearance of this influence in the various classes of combinations into which the alcoholic radicles enter, but it is possessed by so many of these combinations that pharmacologists have been led to search amongst them for those which most effectively depress the higher nervous centres without exerting a deleterious influence in other ways, and this search has led to the large addition to our sleep-producing agents shown in the list.

The halogen elements, chlorine, bromine, and iodine, have, too a tendency to depress the functions of the higher nervous centres, but they likewise tend more than the alkyls to depress the functions of those lower centres which preside over respiration and circulation, and they influence the heart more markedly, weakening its action; the combination of an alkyl with chlorine, or the replacement of one or more of the molecules of hydrogen in an alkyl compound by chlorine, will in many cases augment its influence on the nervous system; but at the same time it increases its depressing effects on the circulation and respiration. It is on this account that chloral hydral ($CCl_3CH(OH)_2$), though an admirable hypnotic, may give rise to evils which are not produced by the newer and non-chlorinated hypnotics. By combining chloral with other groups, it has been sought in some degree to minimise these possible evils, and the two last substances in the list have been introduced with this view.

Apart from chemical structure, the physical properties of compounds influence their physiological effects; hence it is that some of the combinations into which alcoholic radicles enter are anæsthetic, some hypnotic; anæsthetics being found amongst those substances which are volatile and quickly eliminated, soporifics amongst those which have a heavy molecule and are either liquid or soluble in form, so that they may be given by the mouth, and, being absorbed into the blood, may continue to act.[2]

As the action and utility of hypnotic agents are greatly affected by their physical characteristics, I will shortly set forth the points of chief importance relating to them.

Urethane is a solid, very soluble in water, without much taste, and without unpleasant smell, though some specimens have a foul, mouselike odour, due probably to acetamide, produced during the manufacture of the drug.[3] It was introduced by Schmiedeberg in 1885.[4]

Acetal is a light-coloured fluid with an unpleasant smell and taste, which was proved by von Mering[5] to have soporific properties in doses of one to three drachms.

Methylal is a motile, colourless fluid, with a chloroform-like smell and pungent, slightly bitter taste. When impure, as Dr.

[1] JOURNAL, June, 1889.
[2] Brunton, JOURNAL, June 29th, 1889.
[3] *Med. Chron.*, September, 1888.
[4] *Practitioner*, vol. xxxv.
[5] *Berl. klin. Wch.*, 1882, vol. ii, p. 43.

Richardson says it often is, the taste is very bitter and unpleasant. As shown by Dr. Richardson in 1868, it has anæsthetic properties, and he has likewise pointed out that when administered by the mouth in doses of 1 to 4 drachms, it acts as a hypnotic. Personali[6] described minutely its physiological effects in 1886, and since that time its effects as a soporific have been recorded by several observers.

Sulphonal is a crystalline substance devoid of smell and taste, and so slightly soluble that 450 parts of water at 60° F. are required to dissolve one part of sulphonal. It is more easily dissolved in warm water, and, according to Professor Kast, of Freiburg, who first advocated its use in 1888, it is more soluble in slightly acid and in saline solutions than in water alone. Kast finds, too, that peptones prevent its precipitation from solution in hot water, in which it is fairly soluble (1 in 20).

Amylene hydrate, unlike the compounds already mentioned, which are structurally ethers, is a tertiary alcohol. It is a liquid soluble in eight parts of water, and with a camphoraceous but not very disagreeable taste. It was first recommended by von Mering in 1887.

Paraldehyde, a polymeric modification of ordinary aldehyde, has a pungent, unpleasant taste. When added to water, it floats near the surface in large oily drops; on shaking the fluid an emulsion is formed, if the paraldehyde is in excess of the quantity which water will take up; a drachm dissolves in about 7 drachms of water. Cervello first gave an account of its action as a soporific in 1882.

Hypnone, the French addition to the list of hypnotics, is a colourless or slightly yellowish oily fluid, having a pungent taste and a peculiar smell, reminding one of oil of bitter almonds. It is very slightly soluble in water, but easily dissolved by alcohol, and irritates the mucous membrane more powerfully than any of the other new hypnotics. Dujardin-Beaumetz accorded to it soporific properties in 1885.

Chloralurethane, called also ural, is made by dissolving urethane in chloral. On adding hydrochloric acid, a substance insoluble in water (chloralurethane) separates, which during the past year has been recommended as a soporific.

Chloralamide, the newest of the hypnotics, was brought out by Schering, of Berlin, at von Mering's suggestion a short time ago. It is a combination of chloral and formamide ($CHO\,NH_2$), and is a colourless crystalline material, soluble in nine parts of water, with a slightly bitter but by no means pungent taste.

Of the hypnotics thus introduced in the past ten years, two, acetal and hypnone, have given but little promise of utility, and we have not sufficient data concerning the action of the two last named on the list to discuss their relative merits as compared with other hypnotics. These four substances therefore, I will briefly allude to, and then dismiss.

Acetal has been used as a hypnotic with more or less success by Stoltenhoff,[7] Holler,[8] Peretti,[9] and Langreuter.[10] Its unpleasant smell and taste, however, and the fact that it has no special advantages, will prevent it coming into general use.

Hypnone, according to Dujardin-Beaumetz,[11] will cause sleep in doses of 3 minims. In alcoholic subjects he thinks it acts better than paraldehyde or chloral hydrate, but even its introducer acknowledges that its effects are not constant; some are not acted on by hypnone, which appears rather to favour sleep than to ensure it. Mairet and Combemale,[12] however, noted sleep follow in only one out of twenty-one people requiring a soporific. Rottenbiller, of Buda-Pesth,[13] found it totally inefficient. It produced gastric pain, and influenced the blood injuriously. It so irritates the stomach, that it cannot be given in capsules by itself, but only after mixing it with glycerine or almond oil, and is so nauseous that no adjuvant can render it acceptable to the stomach; and as even where it seems to produce sleep at first its influence is soon lost unless the dose be increased, it is not likely to prove a useful soporific.

Chloralurethane contains, as its name implies, a urethane element. Now urethane, as I shall point out, tends to stimulate the medullary centres, which chloral depresses, and Poppi[14] recommends it as an excellent hypnotic. He says it produces quiet sleep, more rapidly and of longer duration, than any other drug, causing in ordinary doses no disagreeable accidents. The extent to which the urethane element in the compound counteracts the influence of the chloral element on respiration and circulation has yet to be determined.

The observations on chloralamide are, so far, few in number, but they seem to indicate that it may prove a useful hypnotic. According to Reichmann,[15] 45 grains introduced into the stomach of a dog only caused heaviness and sleepiness, not true sleep; but in man 15 grains sometimes induces sleep. After 30 grains, the effect was not always prompt, but 45 proved an effective soporific, acting occasionally better than sulphonal, or even small doses of morphine.

Slight giddiness was at times noticed when the drug was given and sleep prevented, and, after a night draught of the drug, tiredness and weariness were sometimes noticed in the morning. It seems probable that the formamide element, containing as it does a substituted NH_2 group, will stimulate the circulatory and respiratory centres in the medulla, thus tending to counteract the depressing influence of chloral on them; and Reichmann shows that this seems to be the effect so far as the circulation is concerned, for 30 to 60 grains do not lower the pressure, whilst 45 grains of chloral hydrate have a distinct effect in reducing tension. Pieper[16] has obtained similar results, doses of 30 to 35 grains causing sleep in half an hour to an hour and a half. He finds it is best adapted for sleeplessness in nervous people, and in those affected with disease of the spinal cord, bronchial asthma, subacute rheumatism, and stomach affections not accompanied by great pain. Six out of twenty-six patients felt inclined to sleep during the morning following the exhibition of the drug; three complained of headache, and one vomited twelve hours after taking a dose of the drug.

Chloralamide is decomposed by carbonated and by bicarbonated alkalies.

The other newer hypnotics—urethane, methylal, amylene hydrate, sulphonal, and paraldehyde—require a more detailed consideration, and I propose to compare their action with that of the older hypnotics (including chloral), to point out the advantages and disadvantages which seem to pertain to their administration, and to indicate the special sphere in which each is useful.

Analgesic Influence.—First of all it may be noted that, like chloral, they possess little, if any, analgesic influence; all may at times relieve pain by causing sleep, and rarely they may seem to remove pain, but none of them possess that wonderful power which opium has of preventing the conduction or perception of painful receptions, and, therefore, they cannot rival this most ancient of hypnotics as a soporific where pain prevents sleep.

Hypnotic Potency.—It is difficult to decide the relative hypnotic power of drugs, for individual idiosyncrasy causes difference in the effect obtained, and the nature of the ailment for which the hypnotic is given affects the result of its administration. Dose, too, is an important element in the comparison; but, by comparing the results obtained by such amounts of each drug as will produce sleep, without causing troublesome after-effects, some idea of the relative power of the various members of the hypnotic group may be obtained. All fail occasionally to produce the desired effect, and many writers have recorded the proportion of times in which sleep has followed the administration of single doses in individual cases; some have even taken the precaution of so alternating the administration of inert substances with that of the soporific, that the effect of expectation could be excluded from the results obtained.[17] I will not trouble you with the statistics which have been given, but will only say that from my own observations and from the writings of others, the order of potency seems as follows: 1, sulphonal; 2, amylene hydrate; 3, paraldehyde; 4, urethane; 5, methylal; none of these drugs equal chloral hydrate in the certainty of their effects. Gürtler asserts, indeed, that amylene hydrate is as potent as the older drug: and the same claim has been made by Oesterreicher for sulphonal, but, it seems to me, without sufficient proof. It is true that both of the newer hypnotics at times succeed where average doses of chloral hydrate have failed; but comparing the effect of twenty grains of chloral hydrate with twenty of sulphonal or thirty minims of amylene hydrate, there can be little doubt that the chlorinated compound exerts its influence with greater certainty than either of the other two, whilst,

[6] *Giornale della reale Acad. di Med. di Torino*, 1886, p. 295.
[7] Erlenmeyer's *Centralb. f. Nervenk.*, 1883, No. 6.
[8] *Deut. med. Woch.*, 1883, No. 9.
[9] *Irrenfreund.* Heilb, 1883.
[10] *Arch. f. Psych.*, 1884, No. 15.
[11] *Gaz. Heb.*, November 26th, 1885.
[12] *Comptes Rendus*, December 28th, 1885.
[13] *Cent. f. Nervenk.*, 187, No. 10.
[14] *Boll d. Sc. med. di Bologna*, 1889.
[15] *Deutsche med. Woch.*, August 1st, 1889.
[16] *Deutsche med. Woch.*, August 8th, 1889.
[17] Rosenbach, *Berl. klin. Woch.*, June 11th, 1888.

if the doses are increased, the greater potency of the chloral hydrate is more apparent. The comparative influence of sulphonal and amylene hydrate is less easy to decide, but my own experience leads me to give the palm to sulphonal; certainly, on raising the dosage of amylene hydrate and sulphonal to double the average of amount given, I have seen the former fail most frequently, and it seems probable that there is a greater liability to danger in increasing the dose of the liquid than of the solid hypnotic; there is more difficulty, too, in the administration of large doses of the former. Methylal has, in my hands, failed more frequently than any of the others. In healthy subjects, indeed, I have not succeeded in producing sleep in the daytime, even by large doses; and urethane also, under the same conditions, very frequently fails, even when given in doses of 120 grains. After paraldehyde, in one or two drachm doses, given to students in the daytime for experimental purposes, I have seen sleep occur whilst pulse tracings were being taken, and in large doses (two to four drachms) it usually causes sleepiness if the surrounding conditions are favourable. If we compare the effect of small doses of the agents we are considering, they seem to rank in potency in the order in which I have already placed them; five to ten grains of chloral will occasionally cause sleep, and sulphonal is often, if not quite, as efficacious in doses of eight to fifteen grains, but small doses of amylene hydrate and paraldehyde hardly ever produce any effect, and from small doses of urethane and methylal I have seen no results.

It is not possible to state with any degree of accuracy the amount of one hypnotic drug which corresponds in influence to given doses of the others; but it seems probable that a dose of sulphonal has, as a rule, about the same soporific action as three-fourths its weight of chloral; and von Mering is of opinion that half a drachm of amylene has the same power as 15 grains of chloral or 45 minims of paraldehyde. Scharschmit holds that 15 to 22 grains of chloral equal in efficacy 40 to 50 minims of amylene hydrate, and that 25 minims of amylene hydrate correspond in activity to rather more than a drachm and a half of paraldehyde.

Rapidity of Action.—The time in which sleep caused by hypnotics sets in will vary much according to the condition of the stomach at the time of their administration, but it depends, too, to some extent on the readiness with which they can be absorbed. Urethane, as might be expected from its solubility and non-irritating properties, is most rapid in its action; a tendency to sleep is often noticed a few minutes after administration. Paraldehyde, too, not infrequently acts with great rapidity, causing sleep in five to fifteen minutes. Amylene hydrate differs but little from paraldehyde in the rapidity of its effect, but sulphonal more than chloral or any other drug is slow in producing its effects, and two to three hours not infrequently elapse before they are apparent, though at times sleep follows in from one-half to three-quarters of an hour.

Duration of Action.—The duration of action of these drugs depends partly on the potency of their cerebral influence, partly on the rapidity of excretion. On this latter account, the hypnotic effects of urethane most quickly pass away; and if the tendency to sleep, soon after its exhibition, be counteracted its influence is not again observed. Methylal, too, is very quickly eliminated. The other new hypnotics, when given in sufficient doses, seem to produce, like chloral, a sleep of five to seven hours. Rabbas says that sulphonal acts for a longer time than chloral hydrate, but this view is not generally held, though sometimes the effects of sulphonal are very long lasting. I have known a patient sleep twenty hours after 20 grains, and troublesome nervous effects may last many days after a single dose.

Deferred Action.—It is well known that after a dose of chloral hydrate a patient is occasionally sleepy during the following morning, and the influence of the drug is sometimes noted on the second night after its administration. More rarely, instead of sleeping after taking chloral hydrate at bedtime, the patient remains wakeful all night, but next day is oppressed by sleep; now this prolonged deferred action is more marked and frequent after sulphonal than after chloral or any other hypnotic; indeed, it is one of the chief objections to the use of sulphonal, and it cannot always be prevented by giving the drug some hours before bedtime. In the weaker hypnotics this deferred action is but rarely seen. I have known, indeed, apparent instances of it after paraldehyde, but never after urethane or methylal.

Dangerous Effects.—A larger dose than 20 grains of chloral hydrate is capable under some conditions of producing a fatal result, though double and treble this amount is often taken without any sign of evil following. Sulphonal, even in huge doses, has never produced death, though Burnett[18] records cyanosis and a semicomatose condition after 30 grains of sulphonal in a patient suffering from arterio-sclerosis. A patient under Wolff,[19] too, a child, aged 11, suffering from chorea, after taking sulphonal in 4-grain doses four to six times daily for six days, was apathetic and sleepy for many hours. It vomited subsequently, and the pulse became irregular and infrequent. Paraldehyde and urethane seem quite devoid of danger; concerning amylene hydrate and methylal we know too little to speak with certainty, but there is reason for believing that in very large doses grave evils may be produced by both.

Unpleasant Effects connected with the Nervous System.—Excitement instead of sleep has been known to follow the use of chloral hydrate; amylene hydrate, too, has, though very rarely, produced excitement before sleep, and in dogs von Anrep[20] says he has seen it follow small but not large doses of urethane. After sulphonal patients sometimes pass a restless and excited night, and occasionally there is bewilderment, as well as restlessness, very rarely delirium.

Paraldehyde is practically free from this inconvenience. Giddiness is not infrequently present after the administration of hypnotics, though when present it is not invariably due to the drug, but sometimes the outcome of expectation, for it has been complained of even when an inert substance thought by the patient to be a hypnotic has been taken; after sulphonal, especially if a large dose be given, this giddiness is sometimes most pronounced, and may last a day or two. It is occasionally accompanied, especially after large doses, by a staggering gait, somewhat like that seen in cerebellar disease, or there may be distinct evidence of an ataxic condition. Bornemann[21] records a case in which thirty grains of sulphonal, preceded by one-third of a grain of morphine, gave rise to muscular inco-ordination, and a condition resembling drunkenness. Fischer,[22] after giving huge doses (150 to 225 grains daily) to a man suffering from the effects of morphine and cocaine, noted ataxia, which affected the upper as well as the lower extremities; the patient was unable to walk about in the dark, and the speech, too, became affected. Burnett[23] and also Rehm[24] have seen the drug cause inco-ordination, and the latter observed it after the continued use of 18-grain doses. Perregaux has noted ataxic disturbances of certain fine movements of the hand.[25] Not infrequently a sense of fatigue and depression is observed after sulphonal. Hallucinations also have been known; Bornemann's patient thought he had four arms, four hands, and two heads; he is stated, too, to have had double vision; others have met with ringing in the ears and headache after sulphonal. It may be that the greater popularity of sulphonal makes us better acquainted with its effects: but none of the other hypnotics seem to produce such disturbances of the nervous system as those reported after sulphonal, though amylene hydrate occasionally causes headache, giddiness, and a feeling of drunkenness. All the hypnotics probably have some direct action on the spinal cord; methylene hydrate antagonises the action of strychnine, and paraldehyde and urethane have been employed as depressors of reflex functions. Sulphonal is said by Shick[26] sometimes to depress, sometimes to exalt reflex excitability; but the comparative influence of the newer hypnotics on spinal centres requires further investigation.

Effects on Circulation and Respiration.—It is with regard to the influence on circulation and respiration that the newer hypnotics differ so markedly from the older, Chloral hydrate, as shown by Ringer and Sainsbury, directly affects the heart muscle, slowing and then arresting the beat in diastole, and eventually extinguishing the contractile power of the muscular substance. It also dilates the arterioles, acting on their walls, perhaps also on the vasomotor centre; at times, too, it tends to weaken the respiration, though not so powerfully as opium, the evil effects of which are chiefly seen in its depressing influence on the respiratory functions; even average doses (25 to 30 grains) of chloral hydrate may, under some conditions, give rise to danger and death, owing to

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[18] *New York Medical Journal*, March 2nd, 1889.
[19] *Berl. klin. Woch.*, 1889, No. 11.
[20] *St. Petersb. med. Woch.*, 1886, Nos. 36 and 37.
[21] *Deut. med. Zeit.*, 1888, No. 95.
[22] *Neurol. Cent.*, 1889, No. 7.
[23] *New York Med. Jour.*, March 2nd, 1889.
[24] *Berl. klin. Woch.*, No. 16, 1889.
[25] JOURNAL, April 20th, 1889, p. 913.
[26] *Journal of Nervous and Mental Disease*, January, 1889.

their effect on the circulation; whilst small doses of opium may, under other conditions, fatally interfere with respiration.

Now the newer hypnotics are to a large extent devoid of this evil influence, and very rarely, perhaps never, affect the circulation and respiration unless given in doses such as are not used medicinally. Kisch,[27] indeed, records a case in which the pulse was retarded after 60 grains of sulphonal taken in divided doses during one night; and Wolffe, as above stated, met with irregularity and infrequency of the pulse; but such results are quite exceptional, even after large doses of sulphonal. Coze, experimenting with urethane on the separated frog's heart, noted at first a little acceleration of the beat, and then some slowing; the systole, he says, does not lose its amplitude, nor is the regularity affected. I have myself seen a slowing effect also when the separated heart is exposed to the action of urethane, and in man I have observed the same effect after large doses, and this too when sleep has not been induced; but even after large doses the force of the heart and the respiratory power are not depressed;[28] and from Schmiedeberg's experiments on rabbits, it seems possible that respiration is slightly stimulated. This indeed is what might be expected from the chemical constitution of the drug, for in urethane we have an alkyl compound, into which carbamic acid ($CONH_2$ OH) also enters; now carbamic acid contains the amidogen group NH_2 tends to stimulate the respiratory centre, and an ethyl compound of carbamic acid is likely to have communicated to it the special influence of the NH_2 group.

Cervello has shown that on the isolated frog's heart paraldehyde has hardly any influence, and we have no reason to believe that amylene hydrate or methylal act injuriously on this organ, the latter, indeed, is said by Eloy to quicken it. Nor is the blood apparently affected by the newer hypnotics. The cyanosis noted on two or three occasions after large doses of sulphonal, if in any way due to the action of the drug, must have been caused by some respiratory influence. And though paraldehyde is said, by Frohner, to cause destruction of red corpuscles in some animals we have no clinical proof that it can do so in man.

The vascular influence too of the newer hypnotics differs from that of chloral. It is not always easy to determine the effect of a drug on the vasomotor centre, but its influence on the vascular walls can to some extent be determined both in cold and warm blooded animals, by passing through the tissues in the one case saline solutions charged with the drug, and blood similarly charged in the other.

Chloral distinctly dilates the arterioles both in warm and cold blooded animals, and Kobert's experiments[29] seem to show that urethane and paraldehyde have a similar but slighter effect. In my own experiments I could get no definite result from the action of urethane and amylene hydrate on the vessels, and the influence of paraldehyde was open to doubt. In man the two first drugs produced no alteration in pulse tension; paraldehyde seemed slightly to lower it. Dr. Gordon, however, in his interesting paper on paraldehyde published in the JOURNAL last year, states that he can find no evidence that paraldehyde lowers tension, and Clouston noted no effect after an ounce of the drug had been given.[30] He thinks indeed that paraldehyde tends to strengthen the heart's action. I have found that sulphonal has a slight local dilating influence on the vessels in cold blooded animals. Methylal, on the other hand, seemed to me slightly to contract vessel walls, and this was specially seen on passing blood, charged with the drug, through the excised kidney. Dr. L. Lojacono[31] finds high tension produced in some cases by sulphonal, and it has been said first to dilate then to contract vessels, but after full medicinal doses, given to patients, I have been unable to detect any influence on tension from either drug, and practically we may consider that the newer hypnotics containing the alcoholic radicles produce very little effect on circulation and respiration, and in these points are superior to both chloral and opium.

Gastric disturbances do not commonly occur after the exhibition of chloral or any of the newer hypnotics. Anorexia and vomiting have been recorded in a few cases after sulphonal, thirst and dryness of the mouth more rarely, and the unpleasant flavour of paraldehyde and amylene hydrate will in a very few cases lead to nausea and even vomiting; but the influence of the newer hypnotics on the digestive organs is but slight. Cramer[32] says that the amylolytic changes due to the saliva are not affected by chloral hydrate, paraldehyde, amylene hydrate, or sulphonal; that gastric digestion is slowed by chloral hydrate, paraldehyde, and amylene hydrate, but not influenced by sulphonal. Schmiedeberg found that urethane caused vomiting in dogs, hence he advised the administration in small and frequent, rather than in large and single doses. Ughi,[33] too, says in doses of 4 to 10 grammes it may cause pain at the stomach. I have, however, given 60 to 120 grains, and never found gastric irritation follow, but in one case after repeated small doses of urethane (20 grains), so much sickness was produced that I had to stop the medicine.

Skin Eruptions.—The flushing, blotchy rashes, and purpura which chloral hydrate produces, owing to its influence on the vascular system, and perhaps too on the blood, are not usually seen after any of the newer hypnotics, yet an erythematous rash has, on two or three occasions, been observed after sulphonal: this occurrence is very rare and devoid of importance.

Habituation, Cumulative Influence, and Craving.—The effects of habituation on the action of the newer hypnotics has not yet been generally settled. Patients get quickly accustomed to urethane, and it sometimes appears as if after repeated administration of sulphonal, paraldehyde, and amylene hydrate habituation leads to failure of power, but this is by no means proved, indeed, several observers have been unable to find in the case of amylene hydrate, any indications of this; and Clouston has noted no habituation after the continued use of paraldehyde; Paretti's experience, however, is that patients soon get used to the remedy.[34] Mairet says, in the case of sulphonal, that if large doses (30 to 45 grains) be given for a day or two, and then replaced by smaller doses (15 grains), these small doses will have a soporific influence, which they had not previously, but in a few days this is lost, yet it can be again regained if the system be saturated as it were with the larger doses; it would appear therefore as if there were a cumulative action in the case of sulphonal. The balance of evidence, however, shows that habituation does not occur, and the other newer hypnotics are not cumulative. With regard to methylal, there is evidence that patients get accustomed to it quickly, and then require large doses to produce sleep.[35]

The question whether any of the newer hypnotics will be found to give rise to craving for them can only be determined after a longer experience of their use; already, indeed, one instance has been recorded[36] of what may be called the paraldehyde habit. Von Krafft-Ebing says that this drug may lead to symptoms resembling chronic alcoholism, but there can be little doubt the fear of excessive indulgence in the newer hypnotics is far less than in the case of chloral.

My remarks concerning the special spheres in which the newer hypnotics are available must necessarily be short, and in comparing the practical uses of hypnotics I shall omit further mention of methylal.

It has been recommended by von Krafft-Ebing[37] in delirium tremens, by Mairet and Combemale in doses of 75 minims to 2 drachms in dementia, and by Richardson as an antispasmodic. It may at some future time be found to fill some special purpose, but its high price (5s. to 7s. 6d. per ounce) at present precludes its general use.

We employ hypnotics (1) when want of sleep, not associated with pronounced changes in the structure or functions of any of the bodily organs, is the main symptom to be treated; (2) when sleeplessness is connected with, and more or less produced by, such changes; (3) when mental disease is present. In sleepless subjects of the first class opium should, of course, be avoided. Bromide of potassium in moderate doses is usually a satisfactory and harmless remedy; but, this failing, we are often bound to resort to some other drug. Recourse to chloral hydrate is a possible cause of great evil, for its seductive influence is great, and many have received grave injury from it. Sleeplessness of the kind to which I allude is especially common among the nervous and impressionable, who have not power to resist temptation to the excessive use of hypnotics. It is apt to occur, too, in those whose circulatory condition renders them ill able to withstand the effects of the large doses of chloral they are tempted to take. It seems pretty

[27] *Berl. klin. Woch*, No. 7, 1889.

[28] A Russian observer, Vakulowski (*Medical Record*, July 15th, 1886) finds that urethane decreases force as well as frequency of the heart's beat, but his statement has not been confirmed.

[29] *Arch. f. exp. Path. u. Pharm.*, October, 1888.

[30] *International Medical Journal*, April, 1889.

[31] JOURNAL, June 1st, 1889, p. 1246.

[32] *Medical News*. September 1st, 1888.

[33] *London Medical Record*, July 15th, 1886.

[34] *Berl. klin. Woch.*, 1883, No. 40.

[35] Mairet et Combemale. *Prog. Med.*, July 2nd, 1887.

[36] JOURNAL June 1st, 1889, p. 1265.

[37] *Therap. Monat.*, February, 1888.

well proved that the system does not get so habituated to chloral that large doses can be taken without danger; and there seems to be good reason for believing that fatal consequences at times arise from a dose which has several times previously been taken with impunity. Inasmuch as we have now many hypnotics which seem to be free from most of the dangers to which chloral may give rise, we ought never at once to order this drug for simple sleeplessness, but should first order one of the other four which we are considering. In slight cases I find that urethane, in doses of 20 to 30 grains, is often very successful. It is not disagreeable, especially when given in a sweetened, slightly flavoured mixture; and of all the hypnotics it is the least likely to give rise to dizziness, headache, or other discomfort. I know of no recorded instance in which any craving has followed its use, but its hitherto limited employment prevents us being certain that such craving might not occur. The drug should be given immediately before the patient settles down to sleep, for it is quickly absorbed, and the slightest disturbance may prevent its good influence. Though the effect of the urethane is of short duration, the sleep induced is continued naturally. If necessary, the dose may be increased up to 2 drachms; a larger dose than this at times causes dizziness, if it does not produce sleep.

The tastelessness of sulphonal has rendered it a favourite remedy in simple sleeplessness, and comparative small doses, such as 10 to 15 grains, sometimes suffice to cause the desired effect. But such doses more often fail, and it is necessary to raise the dose to 20 or 30 grains. Some recommend doses of 45 to 60 grains, but, from doses above 20 grains, troubles affecting the nervous system are, I think, sufficiently common to render some warning to the patient with regard to their possible occurrence desirable. It is well to give the drug, finely powdered, in soup or warm milk about two hours before bedtime. Occasionally small doses seem to cause more discomfort than larger ones, which are sufficient to cause sound sleep. Women are said to require smaller doses than men.

Paraldehyde is so nauseous that many refuse to take it. In the dose ordinarily given, too (℥j), it is somewhat uncertain in its effect, and larger doses are usually objected to, both on account of the taste and the bulk of the draught; but, given in sweetened water 50 minims in each ounce, it is well taken by many patients. Capsules containing 15 minims of the drug I have found useful, but they produce a sense of heat in the stomach when the capsule gives way. The powerful odour imparted to the breath by paraldehyde is an objection to its use. Nevertheless, it has one advantage; no one can take paraldehyde secretly, as the breath always indicates the nature of the drug swallowed.

Amylene hydrate, in doses of ℥iss, may be administered either in a sweetened and flavoured mixture or in capsules. As before stated, it dissolves in one part to eight of water, and experience has shown that it should not be dispensed[38] in more than one dose if mixed with a smaller quantity of water than will dissolve it, for it floats on the surface of the water, and thus might be given in an undue quantity. I need hardly here mention the combination of hypnotics which may be given should single ones fail, but may say that the combination of chloral and urethane I have often found of signal benefit.

When sleeplessness is connected with, or dependent on, changes in the structure of, or function of, any of the various organs, we have to consider the influence of the hypnotic we administer on these conditions. When sleeplessness is due to pain there can be no doubt that no other hypnotic approaches opium in value, and in such cases it has always appeared to me that the possible evils consequent on the administration of opium are minimised. After opium, though at a long interval, comes chloral, which undoubtedly at times relieves pain, and below chloral in efficacy come the other hypnotics, urethane being the weakest of all.

In febrile conditions chloral hydrate is usually well borne, provided the circulation be fairly good; when the circulation is depressed sulphonal may come in useful, due regard being had to its influence on the nervous system; but it often has but little effect. Paraldehyde and amylene hydrate are objectionable because of their taste and comparative uncertainty.

In cardiac affections accompanied by sleeplessness, opium stands out prominently as the best soporific, especially when given in the form of subcutaneous injections. Chloral hydrate is always to be looked upon with suspicion, though doubtless sometimes both safe and beneficial; but, before using it, it seems to me desirable that the more harmless soporifics should be tried, and sulphonal in 20-grain doses, paraldehyde, or amylene hydrate may well be employed. Urethane, too, has been found useful. Exception has been taken by Schmey[39] to the use of sulphonal in the case of degeneration of the vessels. In such a case, he saw augmented anginal attacks follow its use, though it is by no means certain they were caused thereby. Burnett and also Lovegrove[40] have noted cyanosis follow the use of sulphonal in these cases. Joachim[41] has recently recorded a case of cardiac disease, with bronchitis and dyspnœa, in which sulphonal seemed to cause increased restlessness, palpitation, and breathlessness; and there is some reason to believe that it may do harm, whilst it is certainly often ineffectual. Kast, however, found sulphonal relieve cardiac asthma, and Ott speaks well of its influence in cardiac irritability. In sleeplessness connected with heart troubles I prefer paraldehyde, which is well borne, and, in doses large enough, is fairly effective. I have, so far, made but little use of amylene hydrate, but several observers speak highly of its advantages.

In the sleeplessness attending lung affections, opium is, of course, out of the question, and I have so often seen, apparently, evils arising from chloral hydrate that it is only when other drugs have failed that I employ it. In such cases, however, the newer hypnotics often fail. Rosin thinks sulphonal is a sedative to the pulmonary mucous membrane, but others have not found this effect, and large doses are required to produce sleep in these cases. Paraldehyde is often very unreliable here, and in one case of dyspnœa it has seemed to be injurious.[42] I am inclined to believe in the superior efficacy of amylene hydrate in these cases, but my experience is not sufficient to enable me to be positive on this point. Scharschmit[43] says it may be safely given in diseases of the respiratory and circulatory organs. Time will not allow me to mention in detail other ailments, and I will only add that where delirium is associated with sleeplessness, as in delirium tremens, the milder hypnotics usually fail unless given in very full doses, and urethane has, in my hands, never succeeded even in the largest dose. The older hypnotics, chloral hydrate and bromide of potassium, are more effective remedies. It is in cases of sleeplessness with delirium, as is well known, that hyoscine is often used with such great advantages, especially where great mental disturbance is accompanied by considerable excitement of the circulation.

With regard to the use of hypnotics in mental disease I shall say but little, since I cannot speak from any large personal experience. To the evils which may arise from chloral hydrate in continued doses, Sir James Crichton Browne has borne strong testimony, and opium has long been looked upon as a two-edged sword. Bromide of potassium often fails, unless it be given in quantities sufficient to seriously influence the heart. Urethane is manifestly out of the question, owing to its feeble influence; sulphonal, paraldehyde, and amylene hydrate have all their advocates, and, in moderate doses, seem all worthy of trial; but as amylene hydrate has been known to produce very serious effects when given in excessive doses, and sulphonal in large amounts is capable of giving rise to unpleasant nervous phenomena, it appears probable that paraldehyde is the best drug to give when hypnotics have to be administered in full doses and continuously; and Dr. Clouston, in a recent paper, expresses his opinion, founded on long experience of its use, that in mental cases paraldehyde is the purest and least harmful hypnotic when insomnia is marked and intractable. He begins with 40 minims or a drachm, and goes up to 2 drachms in ordinary cases, sometimes to 3 or 4, and once to 6 drachms. Sulphonal, he says, will not compare with it; other observers praise sulphonal, especially if given in small and repeated doses; and Rabbas[44] says it will act where paraldehyde fails; Garnier,[45] too, thinks it better in 30 to 75 grain doses than any other hypnotic; he prefers large single doses to accumulated small doses.

In conclusion, I should like to draw attention to the possibility that we may yet discover new and more valuable hypnotics than we now possess. Amongst the large number of combinations containing alcoholic radicles which have been produced, and amongst the still larger number which may in the future be formed artificially, there is good hope that hypnotics may be discovered of

[38] *Deutsche med. Woch.*, No. 18, 1888.

[39] *Therap. Monats.*, July, 1888.
[40] JOURNAL, May 26th, 1888, p. 1113.
[41] *Therap. Monats.*, May, 1889.
[42] Rolleston, *Pract.*, November, 1888.
[43] *Therap. Monats.*, September, 1887.
[44] *Berl. klin. Woch.*, 1888, p. 330.
[45] *Progrès Médical*, 1888, p. 254.

much greater value than any we now have. And inasmuch as we know it is possible to join to groups containing alcoholic radicles other groups capable of acting beneficially on other centres, there seems the further hope that we may in time possess compounds of the greatest therapeutical value. There may, for example, be groups which have a similar power over the perception and conduction of painful impressions as alkyls have over the higher cerebral centres. In cocaine or opium some such group may exist, and may in time be identified; and knowing as we do the power which chemists have of building up new substances by replacing one atom or group of molecules by another, it is not beyond the range of possibility that we may eventually obtain hypnotics with anodyne power as great as that possessed by opium, but without its disadvantages, and others which may act on cardiac and respiratory functions as we desire.

Such are the possibilities which chemistry and pharmacology open up for us. Meanwhile, it is our duty to define as precisely as we can the areas of usefulness of the substances already known.

II.—JOHN GORDON, M.D.,[1]

Physician Aberdeen General Dispensary; Assistant-Surgeon Sick Childrens' Hospital; Assistant to Professor of Materia Medica, University of Aberdeen.

THE following observations were undertaken with the object of investigating certain points of the pharmacology of urethane, which had been recommended as a hypnotic by Schmiedeberg, of Strassburg. The advantages claimed by him were, that it did not lower the blood pressure like chloral hydrate, and that it was free from the objectionable taste and smell of paraldehyde.

My observations followed similar lines to those I adopted in my recent paper entitled "Contributions to the Study of Paraldehyde." I endeavoured to investigate the influence of urethane on the spinal cord, on blood pressure, on respiration, on motor and sensory nerves, and on muscle, and knowing of no other observations, I resolved to ascertain the action of the drug on the excretion of urea, and the fluid constituents of urine in healthy subjects. At the same time, I thought it useful to ascertain its action as a hypnotic on subjects in good health, and in disease when sleeplessness was a factor.

URETHANE.

Urethane is the ethylic ether of carbaminic acid, and its formula is $C_3 H_7 NO_2$. It occurs in transparent crystals, which have a cool, saline, and somewhat bitter taste. It is readily soluble in hot or cold water, is also soluble in its own bulk of rectified spirit, but slightly less soluble in ether. Its ready solubility in water, as well as its non-irritant nature, allow of its being employed hypodermically as well as by the mouth.

Action on Reflex Functions of the Spinal Cord.—A series of experiments were performed on frogs to observe the action of the drug on the reflex functions of the spinal cord. The method employed was to decerebrate a frog, to wait till the shock of this operation had so far passed off, to ligature the iliac artery and vein of one limb, to suspend the frog by the head, allowing the hind limbs to depend, to immerse the hind limbs alternately or together in a solution of sulphuric acid (1 in 600), to record by a metronome the time of movement or withdrawal from the acid solution, and to well wash in water the limbs after each withdrawal. When the moment of withdrawal or movement was almost the same in both limbs to inject below skin of thorax the dose of urethane dissolved in salt solution (0.75 in 100), and to proceed with the immersion as before. The result of a large number of the experiments showed that a longer period of time elapsed between the application of the stimulus and the reflex action. The urethane thus diminishes the excitability of the spinal cord.

That urethane had an action on the peripheral endings of the sensory nerves was shown by the elongation of the period at which the unligatured limb was moved or withdrawn from the stimulus; and also, in some cases, by its rapid abolition of all movement in the unligatured limb. It was further observed that sometimes frogs, in which reflex action had been quite abolished by 0.5 decigramme of urethane, recovered their reflex action in twenty-four and even forty-eight hours, when kept carefully moistened with a three-fourth per cent. salt solution. The great majority of frogs died shortly after the administration of this dose of urethane.

It was observed by M. Coze, in his experiments on frogs, guinea-pigs, rabbits, and dogs, that its action was antagonistic to the effects of strychnine, and he accordingly recommended its use in conditions attended with convulsions, and more especially in cases of tetanus. My experiments, which show that urethane diminishes the excitability of the spinal cord, tend to confirm its antagonistic action to strychnine.

Decerebrated Frog 28 grammes in weight. Left Iliac Artery and Vein Ligatured. Stimulation in $\frac{1}{600}$ $H_2 SO_4$ at intervals of 3 minutes: 0.5 decigramme dissolved in $\frac{3}{4}$ salt solution, injected into Anterior Lymph Sac.

Ligatured Limb.	Unligatured Limb.
Before Injection:	
5 seconds, limb withdrawn.	6 seconds, limb withdrawn.
4 ,, ,, ,,	5 ,, ,, ,,
4 ,, ,, ,,	5 ,, ,, ,,
After Injection of 0.5 decigramme of urethane:	
3 seconds, limb withdrawn.	12 seconds, limb withdrawn.
3 ,, ,, ,,	10 ,, ,, ,,
3 ,, ,, ,,	7 ,, ,, ,,
4 ,, ,, ,,	10 ,, ,, ,,
6 ,, ,, ,,	8 ,, ,, ,,
6 ,, ,, ,,	12 ,, ,, ,,
8 ,, ,, moved.	12 ,, ,, ,,
10 ,, ,, withdrawn.	14 ,, ,, ,,
8 ,, ,, moved, not withdrawn.	20 ,, ,, moved, not withdrawn.

Blood Pressure and Respiration.—Kymographic experiments on blood pressure and respiration were conducted. As a type of the result of experiments on the smaller carnivora the following observations are recorded illustrating its action on a cat. The cat was fully under the influence of ether, and the urethane was injected into the femoral vein and carotid artery as detailed in the table appended. It is evident that the most marked feature of the influence of the drug in this experiment is its action in slowing the respiration, which occurs after each injection of the urethane, the reduction being as great as that produced by double vagotomy. There was a general tendency to slowing of the pulse, and a gradual impairment of blood pressure; but after division of the vagi the pulse rose within two minutes to its original rate, and the blood pressure to within 2 millimètres of its normal level.

This seems to point to an action being exerted by the drug upon the central nervous system—in all probability on the vagus roots. The acceleration of the pulse and the elevation of the blood pressure are more than could have been anticipated under the circumstances, as a result of vagus tonus, provided that no stimulation of the central vagus apparatus had been present.

EXPERIMENT A.—*Cat under Ether.*

Time.	Dose of Urethane.	Respirations.	Pulse.	Blood Pressure.	Remarks.
Mins.					
0	—	14	144	132 mm.	—
15	0.2 gramme	10	132	120 ,,	Urethane dissolved in salt solution was injected slowly into left femoral vein.
17	—	9	132	110 ,,	—
19	—	14	132	94 ,,	—
25	—	18	108	118 ,,	Pulse stronger.
29	0.2 gramme	9	144	111 ,,	Urethane dissolved in salt solution injected into distal end of left carotid artery.
31	—	9	156	118 ,,	Respirations irregular and jerky. Ether abolished these conditions.
36	—	12	abolished.	—	Spasmodic breathing well marked. This had, however, existed more or less throughout the whole experiment.
41	0.4 gramme	—	132	108 mm.	—
43	—	—	108	111 ,,	Urethane dissolved in salt solution was injected into left femoral vein.
45	—	12	84	98 ,,	Pulse strong.
47	—	—	84	84 ,,	Pulse irregular.
48	—	7	108	128 ,,	Vagi divided.
78	—	9	132	—	No occasion to renew ether during last hour. No spontaneous movements. No reflex from limb, trunk, etc.
103	—	9.5	144	130 mm.	—

Action on the Motor Nerves.—Many experiments were performed on the sciatic nerve of frogs to elicit the action of the drug on irritability. These experiments showed that the nerve

[1] The expense of this research was defrayed by a special grant from the Scientific Grants Committee of the British Medical Association.

trunk was not markedly affected by the smaller doses (2 per cent. solutions), but when treated with stronger doses (4 per cent. solutions) the nerve trunk speedily lost its conductivity, which it did not recover by subsequent washing in salt solutions (¾ per cent.). The muscle of the preparation which was not immersed in the urethane solution responded to stimulation.

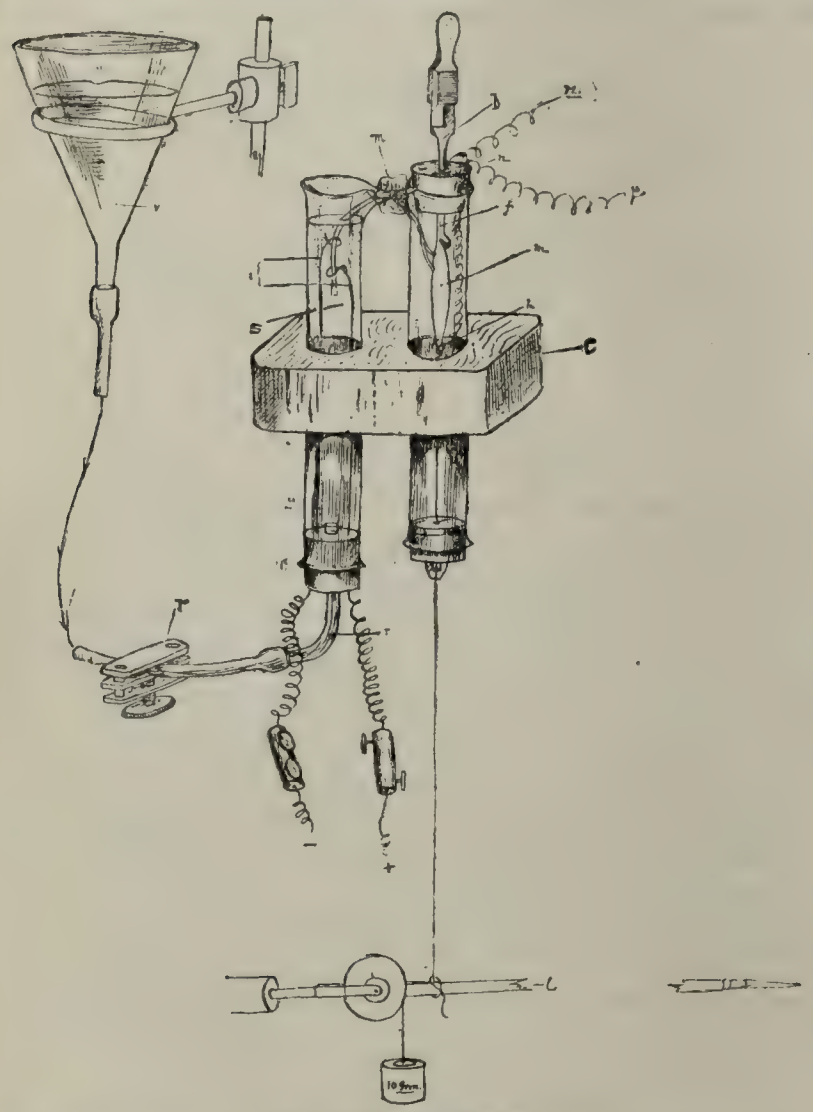


Fig. 1.—Muscle chamber.

M, muscle; *f*, femur; *n*, nerve; *e*, electrodes; *c*, cork disc; *b*, bull-dog forceps clamping femur; *t*, tube connecting *v* with nerve chamber; *r*, Bunsen screw clamp; *s*, solution; *l*, lever; *m*, bibulous paper covering exposed part of nerve; *n*, *p*, electrodes for direct stimulation; *v*, funnel with urethane solution.

Experiments to Contrast the Action of a Poisonous Dose on Muscle and Nerve.

The method employed was to inject a lethal dose (1 decigramme) into a decerebrated frog, and fifteen minutes after death to rapidly dissect out the gastrocnemius and to prepare it for the muscle chamber, and to dissect out the sciatic nerve and to place it over the electrodes in the muscle chamber. As the result of a large number of experiments it was found that the minimal irritability of the nerve was still greater than that of the muscles; thus, for example: sciatic nerve responded to coil at 15.5 c.m.; gastrocnemius muscle responded to coil at 4.0 c.m. It was also noticed that when the poisoned nerve and muscle were washed in a ¾ per cent. salt solution, the muscle showed a marked tendency to recover its irritability, but the nerve did not.

Action on Muscle Substance.—The muscle chamber, which was invented by Professor Cash, formed an essential part of the apparatus employed in the experiments on muscle substance. This muscle chamber has been fully described by him in the *Phil. Trans. of the Royal Society*, Part I, 1884, pp. 231-32. Two sets of experiments were performed, namely:

1. Immersion of the muscle in a solution of urethane in a ¾ per cent. salt solution, and single stimulations given to test the irritability of the muscle.

2. Immersion of the muscle in a solution of urethane in a ¾ per cent. salt solution, and the application of the faradic current to test the irritability of the muscle.

As the result of a large number of experiments on the gastrocnemii of frogs to test the irritability of the muscle substance by single stimuli, it was found: (1) that weak solutions—namely, 1 and 2 per cent.—of urethane slowly abolished the irritability of muscles (Fig. 3); (2) that after immersion and washing in salt solution, the muscle, which had been immersed in weak solution and which had ceased to respond to single shocks so far recovered its irritability; (3) that strong solutions—namely, 4 per cent.—of urethane rapidly destroyed the irritability of muscle substance (Fig. 4); (4) that subsequent immersions and washings in salt solution only very slightly restored the irritability in muscle that had been immersed in strong solutions (Fig. 5), and also that frequently no restoration of irritability took place.

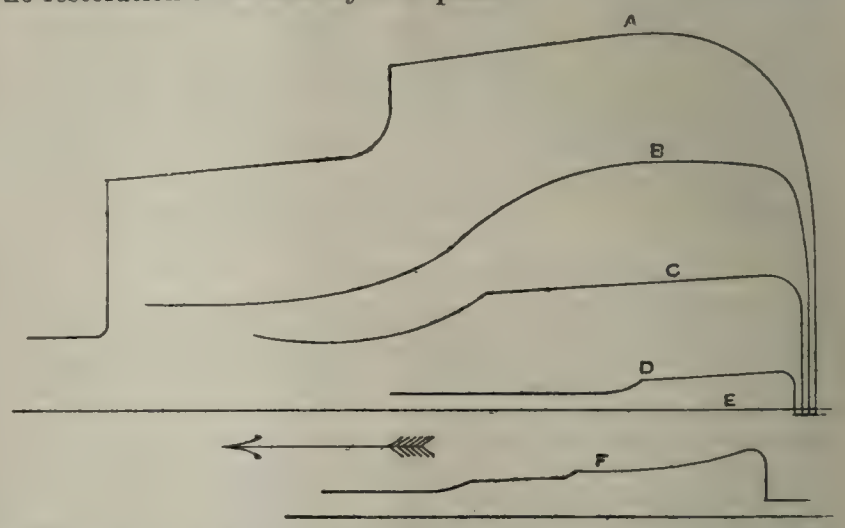


Fig. 2.—Faradic stimulation. Urethane solution used was 4 per cent., 10 minutes between each stimulation. Tracings show: A. Normal tetanic curve after 10 minutes' immersion in salt solution. B. Lowering of curve after 10 minutes' immersion in 4 per cent. solution of urethane. C. Greater lowering by a second 10 minutes' immersion in 4 per cent. solution of urethane. D. Still greater lowering by a third 10 minutes' immersion. E. Abolition of curve after a further 10 minutes' immersion. F. Recovery of muscle after 15 minutes' immersion and washing in salt solution.

Action of Faradic Current on Muscular Irritability.—The result of a series of experiments on this part of the subject showed (1) that 2 per cent. solutions of urethane in salt solution abolished the normal tetanic curve, which, on further stimulation at definite periods, became still weaker, and finally failed to respond to faradic stimulation; (2) that if the muscle at this point were well washed in salt solution and immersed in it for five to ten minutes and stimulation again applied, the irritability of the muscle was found to have been so far recovered; subsequent washings and immersions still further tending to restore the irritability; and that this abolition of irritability by urethane and its recovery by washing in salt solution could be continued for a considerable time. (3) Further, it was found that when 4 per cent. solutions of urethane in salt solution were used the irritability of the muscle substance was speedily abolished, as shown by the lowering and abolition of the normal tetanic curve; (4) and that the muscle, although immediately washed at this point in salt solution, showed only slight tendency to recover its irritability.

The action of urethane on muscle substance is much alike to that of paraldehyde. Both drugs in weak solutions temporarily abolish the irritability of muscle substance; both allow of considerable recovery of the irritability when the poisoned muscle is speedily washed with salt solution; and with strong solutions urethane, like paraldehyde, tends to destroy the irritability of muscle, so that washings in salt solutions only feebly recover it. Also with strong solutions both drugs tend to cause the muscle to pass into rigor. Urethane, however, does not show any initial rise of irritability in the muscle when applied in weak solutions, as paraldehyde often does.

Clinical Observations.—The cases selected for observation were boys who had recovered from some minor surgical ailment. They were placed on a selected mixed diet of their own choice, the fluids of which were carefully measured and the solids accurately weighed. This regulated diet was steadily continued during the time of the observations. It was nearly always noticed that, although the boy relished the diet well for a considerable time, as the experiment progressed the appetite began to flag, and when this condition became marked the experiment was discontinued. The boy was allowed free exercise in the ward, when not under the influence of the drug, and was confined to bed only on the days when the drug was exhibited.

The total quantity of urine excreted was carefully collected,

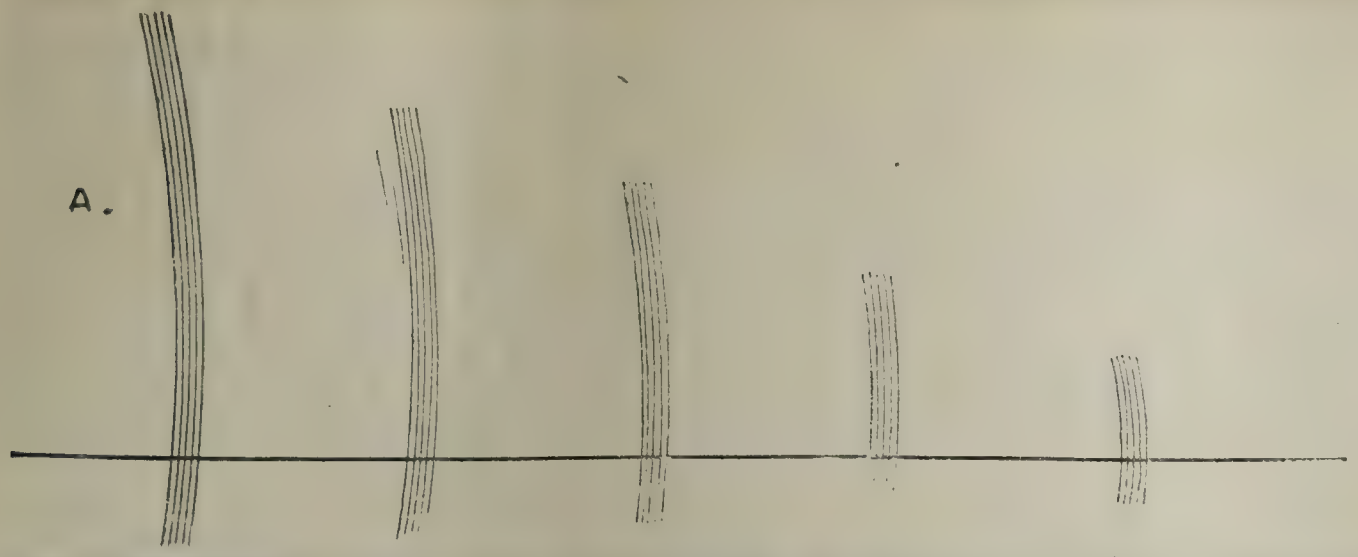


Fig. 3 A shows the action of a 2 per cent. solution of urethane on muscle—gastrocnemius of frog. The first set of stimuli represent the responses of the muscle in normal salt solution, $\frac{3}{4}$ per cent.

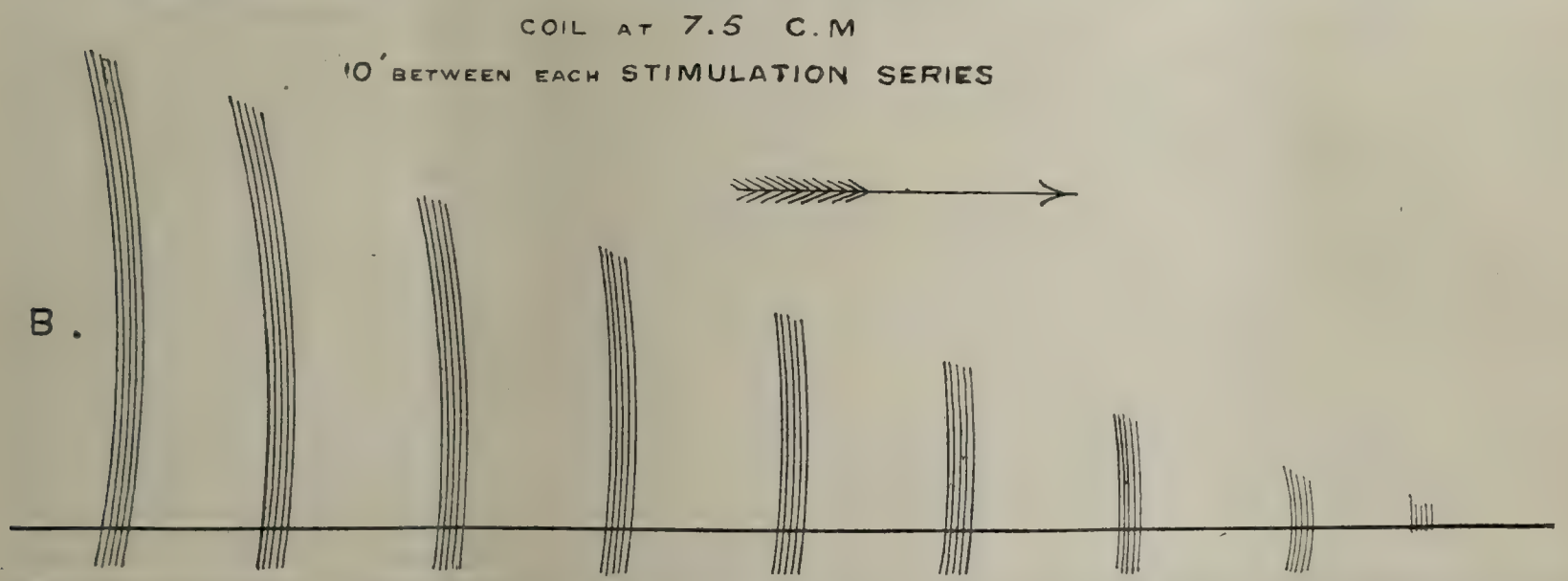


Fig. 4 B shows the action of a 4 per cent. solution of urethane on muscle—gastrocnemius of frog. The first set of stimuli were obtained from the muscle in normal salt solution.



Fig. 5 C shows the gradual recovery of the irritability of the muscle, poisoned with 4 per cent. solution, when washed and immersed in salt solution.

and the amount is expressed in cubic centimètres. The urine collected between 9 A.M. and 9 P.M. was termed "day urine," that collected between 9 P.M. and 9 A.M. "night urine." The quantity of urea in the "day" and "night" urine was estimated separately. The reaction on litmus paper was noted when the urine was passed.

The dose, which was simply dissolved in cold water, was given in the morning at 9 o'clock. It was thought that by choosing this hour its action as a hypnotic could be better observed, as the subject, having presumably had a good night's rest, would be less inclined to sleep; further, it was more convenient to watch the action of the drug. After the administration the subject was kept quiet in bed.

Method of Administration.—In three cases which were sufficiently complete to be recorded, after it had been ascertained by a series of observations that the excretion of urea and fluid constituents of the urine were fairly constant, the drug was exhibited on three successive mornings, then followed three mornings without administration of the drug, and so on alternately, the dose being doubled at each fresh administration until the observations were finished. In one other case, however, in which it was just desired to notice the action on the excretion of urea and the fluid constituents and reaction of the urine, the drug was given for seven successive mornings. This was followed by an equal period of non-administration, and so on alternately until this special observation was concluded. In addition to these further observations were recorded on the influence of the drug on the pulse, respiration, temperature, the appetite and digestion, and on the skin.

Diet.—The diet was essentially similar in the quantities of its liquid and solid constituents in these recorded cases, and was as follows:

		Fluids. Cubic Centimètres.	Solids. Grammes.
Breakfast	Porridge	—	114
	Bread	—	56
	Milk	340	—
Dinner	Soup (brown)	226	—
	Bread	—	29
	Rice pudding	—	114
	Beef	—	70
	Potatoes	—	42
Supper	Milk	340	—
	Bread and butter	—	114
	Egg	—	46
	Water	284	—
	Total	1,190	585

The results in the three cases being constant, one is taken as a type. In order that the various points of the series of experiments may be more easily followed, a daily journal of the typical case is appended.

Daily Journal of CASE I. *C. T., aged 10 years.*

Date.	Urethane Dosage.	Urine passed in 24 hours.	Reaction.	Specific Gravity.	Urea.	Pulse.			Respirations.		
						9 A.M.	9.30 A.M.	11 A.M.	9 A.M.	9.30 A.M.	11 A.M.
1888		C.c.			Grammes						
Sept. 7	None	950	Acid	1020	8.7	—	—	—	—	—	—
,, 8	,,	1,255	,,	1021	8.5	—	—	—	—	—	—
,, 9	,,	870	,,	1022	8.9	—	—	—	—	—	—
,, 10	Gr. 5	1.130	,,	1020	8.8	96	98	100	26	24	26
,, 11	,,	910	,,	1025	8.6	90	92	94	25	24	23
,, 12	,,	970	,,	1024	9.7	92	96	90	25	26	20
,, 13	None	980	,,	1025	7.8	—	—	—	—	—	—
,, 14	,,	1,060	,,	1022	7.5	—	—	—	—	—	—
,, 15	,,	1,280	,,	1018	9.5	—	—	—	—	—	—
,, 16	Gr. 10	1,360	,,	1021	11.2	93	92	90	24	24	26
,, 17	,,	1,300	,,	1018	7.8	96	90	98	26	27	26
,, 18	,,	720	,,	1026	6.65	92	90	90	26	26	26
,, 19	None	950	,,	1022	7.5	—	—	—	—	—	—
,, 20	,,	1,080	,,	1020	8.8	—	—	—	—	—	—
,, 21	,,	1,025	,,	1021	6.5	—	—	—	—	—	—
,, 22	Gr. 20	1,120	Slightly alkaline	1016	7.1	80	82	86	26	24	24
,, 23	,,	850	,,	1024	6.0	82	88	90	24	22	22
,, 24	,,	1,010	,,	1020	5.9	86	92	90	24	23	24
,, 25	None	1,040	,,	1020	8.85	—	—	—	—	—	—
,, 26	,,	900	Acid	1025	6.5	—	—	—	—	—	—
,, 27	,,	1,060	,,	1018	7.8	—	—	—	—	—	—
,, 28	Gr. 40	1,270	Slightly alkaline	1018	8.75	80	70	80	28	26	26
,, 29	,,	1,160	,,	1020	7.65	80	74	80	26	22	24
,, 30	,,	570	,,	1025	3.15*	94	94	94	26	24	24
Oct. 1	None	940	,,	1018	5.4	—	—	—	—	—	—
,, 2	,,	1,020	Acid	1016	6.8	—	—	—	—	—	—
,, 3	,,	920	,,	1020	6.1	—	—	—	—	—	—

Note.—Urine turbid from urates from 22nd.
* Sick.

CLINICAL OBSERVATIONS.

Excretion of Urea.—The urea was estimated by Russell and West's apparatus, in which the urea is decomposed by a freshly prepared solution of sodium hypobromate, and from the liberated nitrogen the quantity of urea is ascertained. In most of the cases, control observations were performed. The result showed that with the small doses of urethane, namely, 5 to 10 grains, the amount of urea excreted was increased. Thus the estimation of the urea for three days preceding the exhibition of the drug was 26.1 grammes, but when 5 grains of urethane was administered for three consecutive days the amount of urea increased to 27.14 grammes; and during the three succeeding days, when the drug was not given, the amount of urea excreted diminished to 25.3 grammes. When 20 grains were given on three succeeding days, the excretion of urea rose to 25.6 grammes. For the three days preceding the exhibition of 40 grains of urethane, the amount of urea excreted was 22.95 grammes, but following the administration of daily doses of 40 grains the excretion of urea fell to 19.55 grammes. The maximum excretion of urea in twenty-four hours was 11.2 grammes, and this excretion followed a dose of 10 grains. The minimum excretion of urea in 24 hours was 3.15 grammes, and this excretion followed a dose of 40 grains. The total quantity of urea excreted in twelve days, without the administration of urethane, was 97.15 grammes. The total quantity of urea excreted in twelve days, with the administration of urethane, was 91.2 grammes, or a decrease, with urethane, of 5.95 grammes, almost half a gramme per day. If the six days when small doses, namely, 5 to 10 grains, were given, be compared with the corresponding six days during which no urethane was given, the following result is noticed. Total quantity of urea excreted in six days without urethane, 50.4 grammes; total quantity of urea excreted in six days with urethane, 52.7 grammes, or an increase with urethane of 2.3 grammes. Again, if the six days in which a large dose, namely, 20 to 40 grains, was given be contrasted with the six corresponding days during which no urethane was given, the following is the result: total quantity of urea excreted without urethane, 45.75 grammes; total quantity of urea excreted with urethane, 38.5 grammes; or a decrease with urethane of 7.25 grammes.

It must be remarked that in one of the cases it was observed that the decrease in the excretion of urea began as soon as a 10-grain dose was reached, and this decrease was more evident the larger the dose. In this case, after the administration of the first three 5-grain daily doses, the excretion of urea was markedly increased. Thus for the three days preceding the giving of the drug, the quantity of urea excreted was 33 grammes, and during the succeeding days on which the urethane was given the excretion of urea reached 48.9 grammes, an increase of 15.9 grammes. However, after this initial increase in the excretion of urea, it was found that the average of the three days' excretion of urea was less when the drug was given than the average for three days during which the drug was not given. It was also observed that the greater the dose the smaller was the excretion of urea. This was specially noticed when daily doses of 60 grains were administered. When a daily dose of 60 grains was given for three successive days, the total quantity of urea excreted for the three days was 29.2 grammes, while the excretion of the three preceding days before the administration of these doses was 38.1 grammes—a decrease of 8.9 grammes.

As the result of observations in the case where the administration of the drug was modified to the extent of giving it in divided daily doses for seven succeeding days followed by seven days during which the drug was not given, the following was observed: Seven days without urethane, urea excreted 64.7 grammes; seven days with 20-grain doses of urethane, urea excreted 55.5 grammes—a decrease of 9.2 grammes. Seven days without urethane, urea excreted 72.9 grammes; seven days with 40-grain doses of urethane, urea excreted 63 grammes—a decrease of 9.9 grammes. Seven days without urethane, urea excreted 58.0 grammes; seven days with 60-grain doses of urethane, urea excreted 48.9 grammes—a decrease of 9.1 grammes.

Excretion of the Fluid Constituents of Urine.—The result of the observations on the excretion of the fluid constituents of urine showed a small but constant increase while the subject was under the influence of the drug, for example, in Case I there was excreted in twelve days without the urethane 12,255 cubic centimètres; in twelve days with urethane there was excreted 12,400 cubic centimètres, or an increase of 145 cubic centimètres. In Case II, in six days without urethane there was excreted 5,420 cubic centimètres; in six days with urethane 5,950 cubic centimètres was excreted, or an increase with the urethane of 530 cubic centimètres. In Case III, in twelve days without urethane there was excreted 11,955 cubic centimètres; in twelve days with urethane there was excreted 13,075 cubic centimètres, or an increase with urethane of 1,120 cubic centimètres. In Case IV the increase with the drug was very small, and this experiment was continued for a longer period (forty-two days) than any of the others. In twenty-one days without the drug there was excreted 20,780 cubic centimètres; in twenty-one days with the drug there was excreted 20,790 cubic centimètres, or an increase with the urethane of 10 cubic centimètres. It was also observed that the chief increase in the fluid constituents of the urine took place with the smaller doses, and where a large dose was given (that is, 60 grains) there was a diminution of excretion. It will be seen that there was a steady though small increase in the totals on the days in which the subject was under the influence of the drug.

Reaction.—The urine was acid in three of the cases during the whole course of the observations, but in Case I it became slightly alkaline when a dose of 20 grains was given. This alkalinity continued during the three days of the administration as well as in the day immediately after the exhibition of the drug; on the two succeeding days the urine became acid. When the next dose (namely, 40 grains) was given the urine became alkaline, and so continued for the three days and the day following the administration of that dose. With the larger doses of the drug there was slight turbidity from the presence of urates. There was nothing abnormal in the odour.

Pulse.—The pulse, which was taken before the administration, half an hour after, and two hours subsequent to administration tended to show that there was a slight increase in the rapidity with small doses, but with the larger doses the pulse was slightly slowed.

Respiration.—The respirations, which were taken at the same intervals as the pulse, showed little alteration with the small doses, but with large doses, as 40 to 60 grains, there was decided diminution in the number of respiratory acts, amounting to 1-4 per minute.

Action on the Skin.—With small doses no appreciable effect was observed, but with large doses there was frequently noticed a tendency to perspiration of the whole body, continuing for several hours, and the face was also often flushed.

Temperature.—The temperature, which was taken both in the axilla and rectum, before administration and at intervals of half an hour for four hours after, continued normal throughout the whole series of experiments. A few continuous temperatures were taken, but they showed no point of interest.

Effects on Digestion.—It was observed in all the cases that following the larger doses, namely, 40 to 60 grains, there was a distinct loss of appetite, and the subjects could only with tact be induced to take the full quantities of the regulated diet. Resource had often to be had to giving the food at shorter intervals to ensure the full diet being taken. In two of the cases, when the dose of 60 grains was reached, sickness and vomiting supervened. This condition did not take place immediately after administration of the drug, but generally an hour or two later. Sometimes, however, the vomiting took place on the following morning. The subject did not at any time complain of pain in the stomach nor bowels, and no tenderness was elicited on pressure. There was no tendency either to relaxation nor constipation in any of the cases. It has to be remembered that the continued administration of a regulated unchanging diet, however palatable it may be, has of necessity a tendency to blunt the edge of appetite. Therefore the whole loss of appetite cannot be attributed to the action of the drug. Still, it seems to be evident from these experiments that large doses of the drug have a tendency to cause anorexia as well as an irritant action on the gastric mucous surfaces, as was shown by the vomiting which frequently took place after a large dose. The anorexia, sickness, and vomiting have been already pointed out by other observers who had tried the drug in cases where its hypnotic action was indicated. This compares unfavourably with the action of paraldehyde on the appetite and digestion; for although the taste and odour of paraldehyde may be unpleasant to some, it does not seem to produce sickness, loss of appetite, nor interference with digestion in any. This disturbance of the digestive functions must somewhat limit the selection of cases in which the drug might be exhibited with advantage, and points to the need of caution where the continued use of a hypnotic is indicated.

Hypnotic Action.—The dose was given at 9 A.M., and the subject kept quietly in bed in a retired portion of the ward, so as to give as favourable conditions as possible for the onset of sleep. It was thought advisable—the object being to test the hypnotic action of the drug on a healthy subject—to administer it in the morning. Each of the subjects was a good sleeper, and since he had passed a good night's rest before the exhibition of urethane, there seemed to be offered a fair amount of natural resistance to a hypnotic, and to reduce to a minimum the possibility of the subject being sleepy without the influence of the drug. The result of all these observations on the hypnotic action of the drug was purely negative, for with neither the smaller nor larger doses was any hypnotic action observed. There was not even a tendency to drowsiness in any case, and the subject invariably replied, when asked if he felt sleepy, that he was not, and his appearance corroborated his statement. Still larger doses might have been pushed, had it not been for its disturbing effect on the digestive system. These observations point to the conclusion that, with doses far in excess of those recommended by other observers as sufficient to procure hypnotic effect in cases of disease where sleeplessness is present, it has no hypnotic influence on the healthy subject; from this it would follow that in suitable cases during its administration in periods of insomnia, there would be little tendency to habitual abuse of the drug; and its tendency to disorder the digestive functions, when its use is prolonged, would still tend further to prevent its abuse.

Clinical Observations in Cases of Insomnia.—As the result of the administration in a considerable number of cases in which its use seemed to be indicated, it had a distinct hypnotic action when given in doses of 30 to 60 grains. The sleep which it produced was always pleasant. The patient awoke without any confused feeling, never complained of headache, loss of appetite, nor any disagreeable sensation, but on the contrary expressed gratitude for the refreshing sleep. It was noticed, however, that in many of the cases a rapid tolerance of the drug took place. It was repeatedly found that, although a dose of 30, 45, or 60 grains, when administered for the first or second time, produced some hours of tranquil sleep, when the same dose was given on the succeeding night, it was found that no hypnotic action followed.

Several friends who, at my suggestion, were kind enough to test the action of the drug in the insomnia of cerebral cases in asylum practice, informed me that in large doses—namely, 60 to 100 grains—they found it unreliable; in many cases its hypnotic action was not noticeable after the first few doses. No period of excitation was observed to follow the administration of any dose, and, when the drug acted, the onset of sleep was within ten to fifteen minutes.

In point of reliability, urethane compares unfavourably with paraldehyde, which has no specially marked period of toleration, and which in many cases can be taken for months with equally reliable results. This unreliability of urethane seems to have been noticed by various observers, among others Otto and König.

Although the effects of the drug, in cases of insanity, did not show satisfactory results in the hands of my friends, still Kraepelin, in doses of 1 to 3 grammes in cases of insomnia, obtained hypnotic action fifteen minutes after its exhibition, which lasted for several hours. In paralysis he obtained satisfactory results in 60 per cent. of the cases, and, in melancholia and in cases of great anxiety, he obtained good results in 70 per cent. In cases where there was much excitement he did not find it of service. Otto and König found it only of doubtful use in doses of 4 to 8 grammes in cases of insanity with excitement, and in doses of 10 to 12½ grammes it was very uncertain. Sticker found it useful when, from external or direct irritation, there was excited sensibility of the cerebrum; he also found that the reflexes were not much altered during sleep, that the frequency of the pulse was diminished, and the respiration became first deeper and quicker. Rothenbiller, with doses of 2 to 4 grammes, obtained sleep for several hours; he also administered it hypodermically in nine cases, and obtained considerable sleep in all. Dr. Myrtle, of Harrogate, found it useful both as a sedative and hypnotic in a variety of cases.

MM. Mairet and Combemale, as the results of their administration of urethane 200 times to thirty-seven patients, found that in cases of excitement it did not have any hypnotic effect, but seemed rather to increase the excitement; that in less excited cases it produced sleep, which was calm, regular, and free from nightmare. The dose they recommended was from 3 to 5 grammes; they also observed that its action was not lasting, and that, after administration of two to three or six to seven days, it failed to produce sleep, and they accordingly recommended that it should be discontinued for a week or more and again re-administered.

The cases in which I tried the hypnotic action of the drug were chiefly those of painless insomnia complicating heart disease, acute croupous pneumonia, and bronchitis; it was also tried in the insomnia accompanying cases of hysteria, as well as in the insomnia associated with senile changes. The following examples are typical of many cases:

M. M., aged 52. Mitral regurgitation. Insomnia for some time previously. Dose of 60 grains gave "the best night's rest she had had for weeks." The occasional administration of like doses in this case continued to give equally good results.

T. W., aged 25. Mitral regurgitation. Insomnia for some nights before the exhibition of the drug. A dose of 40 grains procured six hours' sleep. A like result followed a second dose of 40 grains, but subsequently no hypnotic action followed, although the dose was increased to 80 grains.

J. H., aged 16. Acute croupous pneumonia; slight pain, and no sleep for four nights previous. First dose of 20 grains induced four hours' sleep; subsequent doses had no effect.

S. T., aged 36. Acute croupous pneumonia; pain and no sleep for three nights previous. First dose of 60 grains did not produce sleep. The dose was repeated at intervals of six hours for twenty-four hours without any hypnotic action.

C. W., aged 21. Acute croupous pneumonia; slight pain; no sleep for two nights previous. First dose of 30 grains induced six hours' sleep. The night following the patient slept well without urethane. On onset of insomnia on the third night, and a similar dose being given, five hours' sleep followed.

M. B., aged 56. Bronchitis; neurotic temperament; insomnia. Doses of 30 grains were given every four hours for two days, but no hypnotic effect was induced.

G. J., aged 22. Bronchitis. Insomnia for three nights. First dose of 40 grains gave five hours' sleep. Subsequent doses when required gave equally satisfactory results.

J. N., aged 56. Hysteria, insomnia. A dose of 45 grains procured sleep in about twenty minutes after administration, and a like dose continued to induce sleep so long as it was required for that purpose.

K. C., aged 65. Dyspepsia and nervous irritability. A dose of

60 grains, given on three consecutive nights, had no hypnotic action. Sulphonal in a dose of 15 grains induced sleep an hour and a half after its exhibition.

J. H., aged 84. Insomnia from senile changes. A dose of 15 grains at bedtime did not induce sleep on the night of administration, but eight hours' sleep was obtained the night after without readministration. In this case a like result followed in each 15-grain dose for a short time. The dose had subsequently to be increased to 40 grains, and the result continued to be satisfactory.

S. W., aged 70. Insomnia from senile changes. Doses of 60 grains were given every six hours for three days, but no hypnotic result followed. A combination of chloral hydrate (15 grains) and ammonium bromide (30 grains) produced the desired effect.

J. G., aged 79. Insomnia from senile changes. Doses of 30 grains at bedtime produced five hours' sleep for the first two nights, but subsequently failed entirely.

C. G., aged 70. Paralysis agitans; insomnia for some nights. A dose of 30 grains at bedtime gave four hours' sleep. Subsequent doses gave a similar result. After a week's administration the insomnia did not return.

K. N., aged 18. Insomnia from pain, which was relieved by opening a mastoid abscess. After operation insomnia continued for two nights. Thirty grains of urethane gave eight hours' refreshing sleep. This dose being repeated next night, pleasant sleep again followed.

A. B., aged 29. Exophthalmic goître, complicated with gastric irritation. No sleep for a week. Dose of 15 grains gave four hours' sleep. Next night no urethane required. In this case 1½-grain doses of opium failed to induce sleep. Subsequently, 30-grain doses were employed in this case with no result. A dose of 30 grains of sulphonal induced refreshing sleep after the urethane had failed.

The sedative action of urethane on nerve and muscle suggested its probable use in such a disease as asthma, and in two cases in which I have tried it beneficial action seemed to result. I have also tried it in insomnia from over-study with fairly good effect.

As the results of the cases detailed, it is evident that the drug cannot always be relied upon in cases in which it seems to be indicated, but that frequently it produces a valuable hypnotic effect. It is, however, a feeble hypnotic, the action of which is readily overruled by excitement or pain. That it has the power of controlling or relieving pain to some extent is shown by the action that it had in the case of croupous pneumonia, and also by the narcotic influence it exerted as a sequel to the administration of ether to cats, as well as its controlling power on the sensory nerves of the frogs. Most observers agree that a period of tolerance to the drug is speedily reached, and my experience confirms this observation. Its comparatively pleasant taste compared with that of paraldehyde makes it much more agreeable to the patient; and its ready solubility, and speedy onset of sleep after its exhibition in a suitable case, are advantages, on the other hand, over sulphonal.

The following summary embodies the results of the observations detailed in this contribution to the study of urethane:

1. It reduced the excitability of the reflex action of the spinal cord.
2. It diminished peripheral sensation.
3. Pharmacological and clinical observations showed that it slowed the respirations.
4. It also slowed the pulse.
5. It lessened the blood pressure immediately after its injection, but the blood pressure had a distinct tendency to recover soon after the injection, and finally rose to near its initial height.
6. It had an anæsthetic action as a sequel to the administration of ether.
7. Small doses (2 per cent in salt solution) did not markedly affect the motor nerve trunk.
8. Large doses (4 per cent. in salt solution) quickly destroyed the conductivity of motor nerves, and subsequent washings did not recover it.
9. In frogs poisoned with urethane, the minimal irritability of nerve was still greater than that of muscle, and subsequent washings in salt solution increased the irritability of the muscle, but did not alter that of the nerve.
10. That small doses (2 per cent. dissolved in salt solution) abolished the irritability of muscle, but that washing in salt solution so far restored the irritability.
11. That large doses (4 per cent. in salt solution) almost entirely destroyed the irritability of muscle, and that subsequent washings in salt solution only slightly (and in many cases not at all) tended to restore the irritability.
12. That small doses (5 to 10 grains) increased the excretion of urea.
13. That large doses diminished the excretion of urea.
14. That the fluid constituents of urine were slightly increased while it was administered.
15. In one case the urine was slightly alkaline after doses of 20 and 40 grains.
16. That the skin with large doses showed a tendency to perspiration and flushing.
17. That it had no effect on temperature.
18. That no hypnotic effect was produced in good health, even in large doses.
19. That its prolonged exhibition tended to cause loss of appetite, and that vomiting occasionally followed its continued administration.
20. That in cases of insomnia it was somewhat unreliable.
21. That the sleep which followed its administration was tranquil, pleasant, and natural.
22. That no confused feelings were experienced when the patient was awakened during the action of the drug.
23. That it was not contraindicated in cases in which a slight degree of pain was present.

In conclusion, I have to express my debt of gratitude to Professor J. Theodore Cash for the use of his apparatus and laboratory, and for the many suggestions and guidance which he gave me during the researches on this subject, as well as for the performance of needful operations.

III.—T. CRANSTOUN CHARLES, M.D.,

Lecturer on Practical Physiology, St. Thomas's Hospital Medical School.

DR. CRANSTOUN CHARLES, in the first place, criticised the experiments referred to, in which the rate of flow of fluids containing hypnotics through the excised kidneys was taken as a guide to the action of the same bodies during life. Seeing that Dr. Leech had taken up the chemical side of the question so completely, he said he would limit his remarks entirely to some observations he had made upon himself and upon some of his patients.

Paraldehyde he had found to be a most excellent hypnotic; it acted promptly and safely, was not cumulative in its action, and did not readily lose its effects; it appeared also to strengthen the heart's action, and to diminish the frequency of the pulse. The only objections to its use were its disagreeable and nauseous taste, and the odour it imparted to the breath. He had never noticed the hæmiuglobinuria which had been stated occasionally to occur under its use. To one patient of his it had been given for the last seven months with the greatest advantage; he had also taken it himself with most beneficial results. Rarely had its action been followed by headache or digestive disturbance of any kind. Whisky had served as a very good vehicle. To students who had been afflicted with general wakefulness during examination time it had proved of great service; and two students who obtained distinguished places in the recent Indian Civil Service examinations, and who had become almost sleepless, used it with the greatest advantage during the greater part of the time these examinations lasted.

As to hypnone, although when it produced sleep this was deep and lasting, yet it failed so often in his hands that he had given up administering it. Besides, it was nasty to take, may irritate the stomach, and imparts a bad odour to the breath. In some cases of simple insomnia, however, it acted fairly well, and gave very good results in some phthisical patients.

The action of amylene hydrate gave great satisfaction, sleep generally being produced rapidly, and lasting six to twelve hours. Burgundy and sugar were good vehicles. The respiratory and cardiac activities were not affected, neither was the digestion. It acted well when combined with morphine for the relief of sleeplessness associated with pain. In cases of sleeplessness with delirium tremens, melancholia, and phthisis, it was very useful; indeed, it sometimes appeared superior to paraldehyde, which it excelled, in that its taste was not so repulsive nor the odour imparted to the breath so unpleasant. There was rarely any disturbance of the appetite or bowels produced, and in a case of fatty heart, in which urethane had entirely failed, it succeeded

admirably. It slightly diminished the reflexes, slowed the heart, lessened the blood pressure, quickened the respiration, and in one or two cases lowered the temperature. On the whole, therefore, Dr. Charles had found it most satisfactory as a hypnotic.

Urethane, on the other hand, frequently disappointed in its action. In addition to its want of energy in many cases, it frequently brought about gastric disturbances. In himself light and imperfect sleep was produced by 45-grain doses in about twelve to fifteen minutes after a short stage of slight excitement, lasted six hours and a half on an average, produced no headache, and the presence of the drug could, after waking, be detected in the urine. In cases of delirium tremens it was of no value, but was fairly useful in the sleeplessness of children and in some cases of melancholia.

Methylal acted efficiently in a few cases of sleeplessness, with gastric or intestinal irritation. The blood pressure was slightly lowered, and the respiration slowed.

Hydrate of butyl chloral had proved most serviceable in his hands in a case of Bright's disease, with hypertrophied heart, in which chloral had produced alarming results. No depressing action of the heart apparently occurred under its action. It was particularly useful in the sleeplessness associated with headaches, tic, facial neuralgia, and certain uterine derangements. Combined with sodic or potassic bromide and cannabis indica, it occasionally gave splendid effects, particularly where the insomnia was attended with high arterial tension.

Sulphonal, however, was the hypnotic Dr. Charles had been using most frequently of late, and with the best results. The sleep was produced slowly, as a general rule, sometimes very many hours even elapsing before any hypnotic action was manifested; but the sleep was both light and refreshing, and no deleterious effects were produced on the circulation; the arterial pressure was slightly lowered, though in three cases a subsequent slight rise was noticed; indeed, the only bad after-effects appeared, as a rule, to result solely in cases where the dose had been too small. In one case alone, that of a nervous girl, aged 16, had he observed any serious after-effects—headache, hysterical attacks, some hyperæsthesia, with thickness of speech, giddiness, and temporary loss of power in the muscles of the legs showing themselves. In the sleeplessness of phthisis it acted well; in simple insomnia, in the insomnia of Bright's disease, in that accompanying intercostal neuralgia and delirium tremens, and in a case of mania where chloral and paraldehyde had failed, in all it gave the fullest satisfaction.

In a case of epilepsy, with motor spasms and sleeplessness, and in the case of a betting man after races in which he had lost heavily, and where there was delirium with great excitement, subcutaneous injections of hyoscine ($\frac{1}{100}$ gr.) rapidly produced deep sleep, preceded by a short stage of stupor.

In a few cases—nervous palpitation, hysteria, urogenital excitement—much benefit had also been gained from monobromated camphor; while in the sleeplessness of business men a late supper of beer and salad, sometimes the slow sipping of beer containing lactic acid, the administration of strychnine in small doses, the bathing of the feet in hot water and of the head in cold water, or the application of a hot-water bag to the abdomen often induced the wished-for sleep most happily and effectually.

Dr. NEEDHAM (Gloucester) considered urethane to be of very small use, a very mild hypnotic and very uncertain; sulphonal to have the disadvantage of being uncertain in its action, insoluble, and extremely liable to produce derangement of the digestive organs. He regarded paraldehyde as one of the most valuable hypnotics in use, generally certain in its action, causing no constipation, no loss of appetite, no decrease of weight. The dose should be fairly large—not less than a drachm—and should be repeated. It calmed excitement and produced sleep, and expedited the recovery of patients in incipient cases of insanity, and from acute insanity in its more advanced stages. The taste was covered largely by fluid extract of liquorice. If long continued it was liable to cause irritation of the mucous coat of the stomach. —Mr. J. P. RICHARDS (Hanwell) had found urethane practically useless, and had never found it act as a sleep-producer in the insane. On the other hand, paraldehyde had had a most marked hypnotic action in cases of acute or delirious mania, but even in these he had found that the dose had to be a large one in the first instance, and repeated by a smaller one at a short interval. In many cases of delirious mania he had tried in vain the usual hypnotics; sleep would not come. He then, as a last resource, gave a pint of Scotch ale with the desired effect; the patient had had a refreshing sleep, and had awakened practically recovered.—Dr. H. WOODS said that chloral hydrate was so excellent a hypnotic that one of its compounds might probably be found which would be free from its defects. The principal of these were bad taste, depression of the heart, and slight analgesic influence. Chloral hydrate was frequently prescribed with one of the bromides, and he was of opinion that in such a mixture we had a definite compound formed. If the drugs were mixed in molecular proportions, the change was complete. Chloral hydrate mixed with ammonium bromide in solution appeared to form a compound which he might call ammonium trichlorethidene bromide (chloral hydrate being trichlorethidene alcohol). The above compounds decomposed in the solid state; but if chloral hydrate was dissolved together with ammonium bromide in molecular proportions, a liquid of a fairly good taste was obtained, which he found to be very free from depressing action on the heart, and which had a more definite analgesic effect than chloral. He found such a combination most effective in simple insomnia, and very harmless.—Dr. GORDON remarked that he had found valuable results from the action of paraldehyde in doses of 1 to 3 drachms; that it procured quiet, refreshing sleep, and that little gastric disturbance followed its use, and that syrup of lemons so far abolished its disagreeable taste. He recommended the use of urethane in doses of 30 to 60 grains in cases where a mild hypnotic action was indicated, and where there was not evidence of much pain; in cases of sleeplessness, in senile changes, in hysteria, and certain pulmonary conditions. From sulphonal he had obtained good results in many cases; he recommended, since the drug was insoluble, that it should be given in the finest possible state of subdivision, and, as the chlorides had a soluble influence on the drug, to combine it with them. In one case he noticed that the drug had a marked action over the motor apparatus, that the patient had extreme difficulty in walking, that he was giddy, and that all his movements looked like those of one under the influence of alcohol. But the higher centres were not much affected; the patient was able to answer any question, knew every person he saw; and no headache followed, although he slept nineteen hours, nor was the gastric function interfered with.—Professor LEECH said, in reply, that the discussion indicated the necessity for a still more minute examination of the influence of hypnotic drugs. In order to use a drug with confidence, it was essential that we knew its possible as well as its ordinary effects; that we should know the direction in which it tended to influence all the organs, for it sometimes came to pass that an action usually little noticeable, in man at least, was exaggerated and became a marked, and it might be troublesome, feature among the symptoms produced by the drug on diseased conditions, or in individuals peculiarly constituted. By knowing thoroughly the physiological action of the drug, we might not only anticipate its possible evil influences, but might to some extent guard against them. Hence the great value of such work as that done by Dr. Gordon, to whom the thanks of all engaged in therapeutics were due. On one point his experience of urethane differed from that of Dr. Gordon, who had not been able to find that urethane produced sleep in healthy people in the daytime. Doses of 2 drachms had seemed to him (Dr. Leech) distinctly to induce sleep in healthy people in the daytime. It was not, of course, easy to say whether sleep which followed a drug was due to the drug or not, but he had seen sleep so often occur in those who had taken urethane, whilst it did not occur in those in the same ward who had taken nothing, that he could hardly doubt that the sleep was the effect of the drug. It must be remembered, however, that sleep tended to follow quickly after urethane; and if prevented, as it easily might be, it did not occur again. Hence it so often happened that no sleep followed this drug's administration; its chief use, indeed, was to accentuate the tendency to sleep. The experience of Dr. Gordon that repeated doses of urethane caused sickness was interesting, and coincided with the results noted in the paper in one case. With regard to sulphonal, it seemed, from the remarks which had been made, that this drug was capable of producing more unpleasant effect than had been supposed. Great difference of opinion appeared to exist as to the effect of this drug on the stomach, and it seemed just possible that different specimens of sulphonal might differ in the character of their effects. The difference in the effects noted from the use of hyoscin most probably arose from changes which occurred in the drug itself, but tropein compounds were apt to undergo spontaneous changes; sulphonal was not. The experience of one speaker that ale was a useful hypnotic at times was quite in keeping with the views held by pharmacolo-

gists as to the influence of the alkyls, of which the sedative principle of the ale is one of the best known compounds. With regard to the use of bromide combinations, which had been mentioned, it seemed probable that our most prized hypnotics of the future would be those not containing halogen elements, since those elements tended to give combinations in which they were contained too great a depressant effect on lower nerve centres and on muscle.

BRITISH MEDICAL ASSOCIATION.

FIFTY-SEVENTH ANNUAL MEETING.

PROCEEDINGS OF SECTIONS.

SECTION OF PATHOLOGY AND PHYSIOLOGY.

WEDNESDAY, AUGUST 14TH.

Nature of Constitutional Susceptibility to Disease.—After the address on the subject by the President (Dr. JOSEPH COATS), which was published in the JOURNAL on August 24th, p. 409, Professor GAIRDNER made the following remarks: He said that he had no intention of raising a discussion on the President's address, but he thought it would be a misfortune, alike for the author of that address and for the Section in which it was spoken, if words so thoughtful, so very suggestive, and (considering the obscurity of the subject) so luminous were to pass altogether without observation. At the commencement of his address Dr. Coats alluded to the remarkably powerful control, or it might almost be called coercion, exercised over the field of physiology and pathology by certain phrases derived from John Hunter. That was by no means an unusual result of the progress in doctrine as influenced by a great mind; and John Hunter's was one of the greatest and most original minds that their profession had ever known. But in Hunter's case the idea had to be clothed in language which, even according to his own estimate, must have appeared at the time inadequate; for John Hunter was no highly-educated man, and he knew well that in his case the ideas and the language together came hot, as it were, from his own brain, and almost without reference to any preceding state of medical doctrine. It was not to be wondered at, therefore, if thoughts and words thus uttered failed in some degree in sustaining criticism now. At the time when he (Dr. Gairdner) was a student the Hunterian phrase of "coagulable lymph" had been replaced, to a great degree, by "exudation," the theory being in this case that all manner of physiological materials and pathological productions were alike transuded from the capillaries, and the differences among them depended exclusively on differences in the quality of the plasma. This theory was even worked out into a kind of system, which, however, was again obliged to give way when Virchow gave to physiology and pathology the great impulse derived from his conversion of Harvey's phrase "omne vivum ex ovo" into the wide-reaching hypothesis "omnis cellula e cellulâ." The implication here was that everything pathological—pus, tubercle, cancer, all kinds of tumours—were alike determined by changes in the mode of growth of pre-existing cell forms, or the germs of these, in the living and healthy tissues. But here again the causes of the first step in pathological change were left in comparative obscurity; and no doubt the doctrine in question, as promulgated by Virchow, had to submit to important modifications in view of the importance attached to parasitic germs, that was, not cells generated in the diseased body, but coming into it from without, in the origin of some of these conditions. But here again the difficulty arose, how to reconcile the fact of a disease originating in a microbe with the nearly unquestionable facts of heredity in some of these cases. This was a part, but only a part, of the problem before Dr. Coats in the address referred to. Another point, not altogether distinct from the preceding, and very carefully discussed in the address, was the relation of constitutional to local changes. Any attempt to deal with this question led at once into some of the darkest and most difficult regions of biology—speculations which had led the mind of Charles Darwin himself into his curious, and as yet unaccepted, theory of pangenesis. It might almost be said that the more one thought of the distinction between local and constitutional the more difficult it became. What could be more local, for instance, than a mere habit, apparently, as it were, accidental or the result of repetition, in the automatic movements of one limb? Yet, in one of Darwin's books there would be found a well-attested case where a habit of this kind, having no other significance in itself, was transmitted through three generations; and in one of these it was impossible for any kind of parental influence to have been exercised otherwise than through heredity, for the father died while the child was still in the cradle. Dr. Coats had not finally disposed of any of these difficult questions; no one could even attempt to do so in such an address; but he had given some important considerations towards their being viewed in the light of modern science and thought, and he (Dr. Gairdner) had no hesitation in saying that, as a teacher of medicine, he would never be able to lecture again on the relations of constitutional to local disease without taking count of this most admirable and thoughtful address.

Neoplastic Processes from an Evolutional Standpoint.—Mr. ROGER WILLIAMS read a paper in which he pointed out that of the two great common pathological theories—that of Virchow and the germ theory—the former had been for some time stationary, partly through the action of its originator, but that an extended version of the cell theory, enlarged by the knowledge of general biological considerations, would explain the facts. In the genesis of neoplasms they must consider the cells and the force that regulated their combinations, and that the former showed a degree of autonomy, so that one cell might produce an enormous neoplasm, but that this tendency to increase was inhibited by the influence of the whole organism. Certain cells, however, remained more or less unspecialised, and so constituted the real tumour germs. The condition which determined their growth was the removal of the restraining influence of the organism, allowing of the formation of the subordinate centres of development; so in the embryo certain monstrosities arose. The first step in the process was increased growth; secondly, cell-multiplication. A scientific classification should be founded on the degree of development attained by the cells, and the original archiblastic (epithelial) and parablastic (connective tissue) would be further divided, each into the lowly and highly organised structures.—Dr. SIMS WOODHEAD could not agree with Mr. Williams that the micro-organismal theory of the causation of tumours was so absolutely ridiculous. It was quite possible that certain growths now known as sarcomas would be relegated to the category of specific infective growths. In the case of cancers the matter had to be looked at from a different standpoint. They were in no sense due, so far as he could see, to micro-organismal activity.

CLINICAL MEMORANDA.

ARTHRITIC HÆMOPTYSIS.

I HAVE read with much interest the able and suggestive remarks on "arthritic hæmoptysis," by Sir Andrew Clark, which appeared in the JOURNAL of October 26th.

I should like to mention a case of pulmonary hæmorrhage which has come under my observation, and which seems to be confirmatory of the views put forth by this distinguished physician. Several years ago I was summoned to attend a gentleman, about 80 years old, who, after having had a sail in an open boat during an easterly wind, was suddenly seized with copious hæmoptysis, associated with bronchitic symptoms. There was no evidence of cardiac disease, of thoracic aneurysm, or of tuberculosis. As the breathing was considerably embarrassed, saline aperients with diaphoretics were prescribed.

At my next visit, on the following day, I was agreeably surprised to find the hæmorrhage had entirely ceased, but that an acute attack of gout had supervened in the right foot. Under the usual alkaline treatment the podagra speedily disappeared, the recovery being complete.

Does not this case supply the *experimentum crucis* necessary to establish the correctness of Sir Andrew Clark's view? Was it not clearly one of gouty hæmoptysis due to thrombosis of the terminal blood-vessels of the lung?

JOHN MOORHEAD, M.D.

Weymouth.

RECURRENT CHANCRE.

MR. H. contracted a chancre early in 1888, and was treated for it by a London surgeon, who mercurialised him to salivation, applied nitric acid several times to the sore, and gave the patient lunar caustic to touch it with. The seat of the sore was at the free edge

of the prepuce, on the dorsal aspect, half an inch to the right of the median line. He had also congenital phimosis.

In June of the same year he consulted me. He was then anæmic, had lost much flesh, had sore throat and severe pain in the limbs, and his hair was falling out; there was no rash on the skin. At the site of the sore was a slight cicatrix, and in the left groin a gland was enlarged and threatened to suppurate. He was told to rest, given mercury in small doses, and glycerinum belladonnæ to paint over the gland, which, however, suppurated, but soon healed. He improved rapidly under treatment and was soon well. He was recommended to continue the mercury for at least six months, which he did, leaving it off at Christmas, when he felt quite well. In January, 1889, a large abscess formed in the left groin, which burst and healed; being in the south, I did not see him at this time. Soon after this a sore began to form exactly on the site of the old one. In March he came to me again, when the sore was found to be a raised and well-defined induration, ulcerated on the smooth surface and secreting a thin watery discharge. A gland was enlarged and hard in the right groin. Mercury internally and the usual applications did no good, doubtless owing to the stretching of the phimosed prepuce at each act of micturition and the irritation of the urine. He felt quite well, and had no other symptoms. Circumcision at once removed the "recurrent" chancre, and cured him of his phimosis. That the second sore was not due to a fresh infection is proved by his absolute denial of fresh exposure, and to the fact of its not being followed by any other symptoms of syphilis.

Stanhope. WILLIAM ROBINSON, M.S. and M.D.

EPIDEMIOLOGICAL MEMORANDA.

COW DISEASE AND SCARLATINA.

WITHOUT presuming to throw any new light on the supposed connection between disease in the cow and scarlet fever in the human subject, I may relate a case which occurred recently in my practice, where no source of the infection of scarlatina could be traced, but one of the cows on the farm suffered from ulcers on the teats.

The patient, W. K., a boy, aged 14, lives with his parents on the farm of Fullwoodhead, in this parish. The farmhouse is situated on a hill, quite isolated from any other human dwelling, and built on one of the knolls of gravelly sands which surmount an extensive stratum of boulder clay. The boy had been attending school until Monday, October 14th, when he complained of illness. I was called to see him on the morning of the 16th, when I found him covered with the characteristic rash of scarlet fever, the throat, temperature, etc., confirming the diagnosis of a typical case. As I knew of no other case of scarlatina in the district, and could find no history of exposure on the part of the boy to any infection, I naturally asked if there was any case of illness among the cows. The boy's mother told me that the cow which supplied them with milk had very sore teats for nearly a fortnight, but she applied lard to them, and they were now getting better; that the cow seemed ill and feverish for some days; and that a calf fed (not suckled) with the cow's milk had been purging for a few days, and not taking his milk as usual.

I examined both the cow and calf. The cow, I was told, gave birth to a dead calf some months ago, and the calf fed with her milk was six weeks old. On all the cow's teats there were ulcers, more or less of an oval shape, and in size varying from 5 to 15 millimètres in length, and the width about three-quarters of their length, the edges well defined. The largest ulcer was on one of the hind teats near its base. There were from two to four ulcers on each teat, and also one, covered with a scale and almost healed, on the udder between the two right teats. I could find no affection of the cow's integument, and the calf appeared by this time to be in a healthy condition.

The boy was isolated as far as circumstances would permit, the drinking of the cow's milk discontinued, and there is as yet no appearance of the infection spreading to two other members of the family, one older and the other younger than the patient, who never had scarlatina.

The question, then, that suggests itself is: Can there be any relation between the bovine and the human disease in this case? There is no history of a previous case of scarlet fever, no clue to the exposure of the boy to any infection, the milk supply was from the cow with the sore teats, none of the milk from this cow being sold. The water supply is from a shallow well sunk in the sand near the house, and the disposal of sewage by the dunghill for application to land. It is possible that some of the children from other parishes who were attending school with the boy might have carried the specific poison to school; but the fact that only the boy in question caught the disease in a school with over 170 pupils renders such a supposition highly improbable. It appears, therefore, that the only etiological factor remaining is the disease of the cow. In the absence of any experiment as to whether the cow suffered from the so-called "Hendon disease," which, according to Klein, is due to the streptococcus scarlatinæ, the same micro-organism as is invariably found in the blood of patients with human scarlatina, we cannot be sure of a direct relation of cause and effect in this case, but the facts mentioned, I consider, are at any rate sufficient to warrant a suspicion in that direction. C. R. MACDONALD, M.D., D.P.H.Camb.

Beith, Ayrshire.

PATHOLOGICAL MEMORANDA.

FIBROID THICKENING OF THE SPLENIC CAPSULE.

MR. A. G. R. FOULERTON'S unfortunate reference to this subject as having escaped the attention of the later morbid anatomists suggests the reflection that the space of the medical journals might be economised if those who bring forward supposed novelties would go through the standard textbooks on the subject before sending in their contributions. The condition referred to has been described, not only by Baillie, but by almost every writer, British or foreign, on systematic morbid anatomy in this century, at least, from Andral and Rokitansky onwards; and, indeed, this could hardly be otherwise, considering that it must be familiarly known to all practical pathologists. An adequate account, with a figure, may be found in Handfield-Jones and Sieveking's *Pathological Anatomy*, either the first edition of 1854 or the second of 1875 (p. 659). It is also mentioned in the second edition of Dr. Coats's textbook, though I think it was not clearly defined in the first.

Wimpole Street. J. F. PAYNE, M.D.

SURGICAL MEMORANDA.

"HUNTER'S" KNEE.

SURGEONS are often consulted by those who ride a good deal, or, in fact, take leg exercise, for the relief of frequently excruciating pain in the neighbourhood of the knee-joint, referred to one particular spot, sometimes its area being as large only as the tip of one's finger. Almost invariably it is the result of some well-remembered blow—cricket-ball, for example—or twist; and the pain is persistent, aggravated on walking, riding, and on pressure of any kind, even clothing. Frequently distinct synovitis follows an attack of pain, laying the sufferer up. Splints and knee-caps, blisters, embrocations, rest seem of no use, and the condition becomes chronic.

I have found the following a very simple and effective method of dealing with such cases. First absolutely localise the point of extreme pain; then introduce a very fine tenotome flatwise through all tissues down to the spot, and when on to the periosteum (for I am sure it is a periostitis), freely divide it till the bone is reached. Often a little pent-up fluid escapes into the surrounding tissues. At all events, tension is relieved, and the patient gets well forthwith. I send this note for what it is worth, but, having had a good many cases, I can recommend the treatment.

EDWARD BELLAMY, F.R.C.S., Senior Surgeon to Charing
Wimpole Street. Cross Hospital.

CASES OF INTUSSUSCEPTION CURED BY INVERSION.

S. M., a strong young man, aged 21, who resided five miles from my residence, applied to me for treatment, having congestion of bowels and kidneys, etc. After ten days he was quite convalescent, but four days after my last visit I received an urgent message to visit him, as he was taken suddenly worse and thought to be dying. On my arrival about 2 A.M. I found him in great pain in his bowels, especially over the right iliac region, with intense thirst, retching, vomiting, tenesmus, and discharges of mucus. Pulse small and irregular; temperature subnormal; body feeling cold. On inquiry as to the cause of this serious condition, I learned that he had left his room on the previous day, and had eaten and

drunk very freely, after which he was seized with excruciating pain in the bowels. The diagnosis then seemed to be somewhat uncertain as to perforation or intussusception. I gave him some pills containing half a grain of opium, one to be taken every two hours. On visiting him at 3 P.M. he was more comfortable and free from pain, but could only lie on his right side.

On external examination his abdomen was very tense and painful, with an area of dulness over the ileo-cæcal valve. Nothing could be felt *per rectum*. I then gave him an enema, which was soon returned, with an addition of mucus and stool. This gave a temporary relief. On the following morning he was visited by my son, Mr. H. Davis, who found that all the symptoms were more severe, with an addition of stercoraceous vomiting; the abdomen more tense, having a distinct tumour in the iliac region; pulse 120; temperature 99.5°. The diagnosis was then definite, being one of intussusception. I visited him myself at 7 P.M., when he was much worse, vomiting incessantly; countenance very anxious; pulse very small, 130. It was then evident that nothing but an abdominal section would be of any avail; but, as it was then late, I deferred the operation until the morning. In the meantime I would try inversion.

I had my patient suspended by his legs, but, after fifteen minutes, the pain in the bowels increased so much, with a feeling of faintness, that I had to desist. On his being put back into the bed, he felt the tightness lessening, and, becoming more free from pain, within two hours the vomiting ceased, and he had frequent involuntary discharges of stool. Twelve hours later he was very comfortable. Temperature normal, pulse soft and regular—90. Two days later there was a discharge of blood with the stool, but since perfectly healthy; and my patient has now made a good recovery—October 14th.

Another case I had a few years ago was that of a woman, aged 50, who, having been ill with symptoms of intussusception five days, was rapidly approaching a state of collapse. Pulse hardly perceptible—160. Countenance very anxious, severe stercoraceous vomiting, hands and feet cold. Injections of air and fluids were used, but of no service. As a last resource inversion was tried, which proved successful. As this method of treatment is not universally recommended nor tried, I think that the result of these two cases ought to teach us to employ inversion prior to surgical interference, which undoubtedly adds more gravity in these generally fatal cases.

H. DAVIS, M.D. St. And.

Callington, Cornwall.

REPORTS

ON

MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

EGYPTIAN GOVERNMENT HOSPITAL, PORT SAID.

A CASE OF PORRO'S OPERATION IN WHICH THE CHILD WAS BORN ALIVE, BUT WITH A FATAL RESULT IN THE MOTHER AFTER SIXTY HOURS.

(Under the care of W. S. ROBERTSON, M.S., Senior Medical Officer.)

THIS case can be of interest only from a statistical point of view, for which reason I record it.

F. B., an Austrian subject, aged 25, unmarried, and a primipara, was admitted on the evening of September 12th, 1889. She gave the following history: that she had been in labour from the midnight previous, and had been attended by a midwife (the custom of the country) until 10 o'clock next morning, when she was seen by a French doctor, who told her he could do nothing for her, but advised her removal here. Some hours afterwards she was visited by an Austrian doctor, who gave similar advice, which was ultimately adopted.

On admission she was first examined by my assistant, who, finding that craniotomy at least would be necessary, at once sent for me. After having carefully examined her, I concluded that abdominal section was her only hope, and we then both agreed that, of the two, Porro's operation gave her a better chance than Cæsarean section.

The subject herself was a very small rachitic dwarf, about four feet in height, and the widest diameter of the pelvis at the outlet was under three inches.

The operation was performed as follows: Having shaved and well washed the parts, and after having drawn off the water by catheter, and by examination found that the liquor amnii had already escaped, an incision was made from the pubes to a little above the umbilicus, the different layers being gradually cut through, and all bleeding points carefully attended to. On reaching the peritoneum it was opened with the aid of a director. The gravid uterus was then pulled forward through the incision, opened lengthwise, and a child at full term safely delivered. The broad ligaments were tied, and then the uterine pedicle, by four interrupted strong catgut ligatures, and separation effected by means of the scissors. There was no hæmorrhage except from one uterine vein, which was tied. The pedicle was returned to the abdominal cavity, which was then thoroughly well flooded with a warm sublimate solution (1 in 5,000), until no trace of blood remained. The incision was then sewn up, first the peritoneal lining by uninterrupted catgut, and then the skin by silver wire and catgut alternately, a drainage tube (elastic) being left between the two layers, but quite external to the abdominal cavity. The dressings applied were iodoform and carbolised cotton-wool.

On regaining consciousness the patient was very restless, with a quick feeble pulse. She was given a hypodermic injection of morphine, and ordered one teaspoonful of brandy with a tablespoonful of milk every hour during the night.

At 8 A.M. on the 13th her temperature was 101.3° F., and pulse 160. Under carbolic spray the dressing was changed, having been found saturated with a thin reddish discharge. After a similar fresh dressing ice was applied to the abdomen, and continued until the end. The brandy was discontinued, but an opium pill (one grain) was given. She passed the day quietly. At 8 P.M. the temperature had fallen to 100.4° and the pulse to 140.

On the morning of the 14th the abdomen was slightly distended. The temperature was 101.8° and pulse 140. Belladonna was applied to the mammæ. At 5 P.M. she vomited a little, and was ordered a mixture containing hydrocyanic acid, and a hypodermic injection of morphine. At 8 P.M. her temperature was 101.3° and the pulsation 140, but weaker. During the night she had three hypodermic injections of ether, but died at 8 A.M. on the morning of the 15th from peritonitis, tympanites having gradually increased during the previous twenty-four hours.

During her illness the urine was drawn off by catheter every six hours, but the bowels were never moved, and the nourishment she had was milk and soup, with small pieces of ice to suck.

REPORTS OF SOCIETIES.

CLINICAL SOCIETY OF LONDON.

FRIDAY, OCTOBER 25TH, 1889.

CHRISTOPHER HEATH, F.R.C.S., President, in the Chair.

Cholecystotomy.—Mr. MAYO ROBSON (Leeds) communicated a paper on fourteen cases of cholecystotomy which he had performed, eleven being for gall-stones, one for empyema of the gall-bladder, and two for distended gall-bladder, due in the one case to cancer of the head of the pancreas, in the other to cancer of the bile duct. All the patients operated on for gall-stones had recovered. Of the other cases, the patient suffering from empyema of the gall-bladder was operated on when apparently dying from acute peritonitis, but after the operation she made a good recovery except for a biliary fistula, which was afterwards closed by cholcystenterostomy. The case of cancer of the pancreas had succumbed on the eighth day to a constant oozing of blood from the interior of the gall-bladder and from the suture punctures. It commenced on the day following the operation, and was apparently due to the altered condition of the blood brought on by persistent jaundice of several months' duration. In the case of cancer of the bile duct, although there was intense jaundice, there was no subsequent bleeding or other complication; this might possibly be due to the arrest of hæmorrhage at the time of operation by ligatures instead of by forcipressure. Of the cases operated on for gall-stones, six patients had sought advice in consequence of the presence of a tumour combined with the usual symptoms. In these cases, Mr. Robson pointed out that the operation was usually much simpler than in the other group where no tumour could be felt, although in one, where an ap-

parently solid tumour was exposed which was due to the matting of the viscera surrounding the gall-bladder, so that the mass appeared at first to be a malignant growth, it was found impossible to shut off the general peritoneal cavity by suturing the parietal peritoneum to the gall-bladder, as it (the gall-bladder) was practically destroyed by suppuration, and drainage with sponge-packing had to be resorted to to prevent general peritoneal infection. Dr. Churton had pointed out to Mr. Robson that he had previously seen in the *post-mortem* rooms a similar condition of affairs, where suppuration of the gall-bladder had led to the formation of a tumour resembling a malignant growth, but where an exploring needle pushed through the overlapping edge of the liver had revealed the presence of pus. Of the cases, five in number, operated on, on the strength of symptoms alone, Mr. Robson remarked that he believed many such cases of frequently recurring biliary colic would in future be saved the intense suffering and the many dangers of their disease by timely operation. He pointed out that these operations were not always easy, as the gall-bladder was frequently very small, and could with difficulty be brought to the surface; in fact, in his fourteenth case, the gall-bladder was shrunk to the size of the last joint of the thumb, and was lying very deeply under cover of the liver, so that when he had incised it and removed several gall-stones from the duct, the lower part of the opening could not be made to reach the parietal peritoneum, and a piece of omentum was brought up and sutured on the one hand to the gall-bladder, and on the other to the parietal peritoneum, thus shutting out the general peritoneal cavity. Mr. Robson thought that omentum grafting, first proposed by Dr. Senn for enterorrhaphy, but he thought not hitherto performed to surmount a difficulty of that kind above related, would in future often be found very useful in abdominal surgery, and perhaps especially in such cases as he had mentioned. With regard to the danger of biliary fistula, Mr. Lawson Tait had remarked that "biliary fistula after cholecystotomy could only be permanent when the operation happened to be performed at a time when a gall-stone was impacted in the common duct;" the author of the paper said that he believed this to be true generally, as proved by Mr. Lawson Tait's cases; but in the only case of biliary fistula, No. 3 in his list, which had followed the operation in his own hands, the cause was other than gall-stones, as when he had performed the operation for the closure of the fistula he had very carefully examined the whole length of the common duct, without finding an obstructing calculus. In conclusion, he remarked that he believed that with due care cholecystotomy, in the absence of malignant disease, was a procedure attended with comparatively little danger, and that the great relief which the operation conferred amply compensated for the attendant risks.—The PRESIDENT remarked that the thanks of the members were due to Mr. Mayo Robson for his interesting paper, for the abstract of his cases which he had printed for their use, and for the collection of gall-stones which he had brought to the meeting.—Dr. CHURTON (Leeds) said that when the operation was first done the physicians used to be present, as it was novel, and apparently very hazardous. Lately they had ceased to attend. In cases of small gall-bladders packed with stones, he had found that the calculi could be reached with a needle passed through the thin edge of the liver; and he had noticed that gall-bladders containing mucus were generally cases of blockage of the duct by a single stone, and that they did not contain many stones. The cause of this he did not know. Whilst some gall-stones were softish, others were so hard and so firmly impacted in the duct that there was the greatest difficulty in dislodging them; and he had even seen cases abandoned for that reason. In one of the cases of epithelioma surrounding the duct, he thought the growth had been produced by the irritation of a gall-stone in a predisposed person.—Dr. WILBERFORCE SMITH remarked that of the fourteen cases, eleven were in women, three in men; and of these three, two were cases of malignant disease. In the single case of gall-stone occurring in a man, he was 57 years old, which agreed with his experience that gall-stones in men occurred later in life than in women. Possibly, the greater prevalence of gall-stones in women was due to the pressure of the corset on the liver.—Dr. ANGEL MONEY had had a case in which Mr. B. Pollard had operated for him. The patient was a tailor, who suffered much from "spasms," and had a large tumour in which manipulation revealed a grating sensation. After the operation he gained in health and colour and strength, but had a fistula discharging bile for some fifteen months subsequently.—Mr. B. POLLARD said that the tumour in that case was as large as a small cocoanut, and that many stones were removed from it. The case did well, except that a fistula remained, for which he wore an india-rubber tube through which some 16 or 20 ounces of bile were discharged daily. His stools were pale; but he returned to his work, and was able to do it well.—Surgeon-Major BARKER had treated a case of biliary colic with a large dose (half a drachm) of pure chloroform, and the pain at once ceased. This method of treatment was recommended in Flint's *Practice of Medicine*.—Mr. KNOWSLEY THORNTON thought that the difficulty which met the surgeon was the question of diagnosis. It was not always easy to distinguish between a distended gall-bladder and a tumour of the kidney. Cases also in which there were thick adhesions around the gall-bladder, with suppuration, were exceedingly difficult to diagnose. He had cut through an inch and a half of inflammatory thickening, doubting whether or not it was malignant, which thickening afterwards melted away quickly, when the operation was successful. All his cholecystotomies had healed slowly, possibly (one even after two months), but he had never had a fistula remain open. If the gall-bladder was distinct the operation was very easy. If the stone had passed into the cystic duct the operation was difficult. It was a good plan in such a case to break up the stone by needling it, and let the fragments be afterwards passed away along the duct to the duodenum. In one case he had slit up the common duct, removed the stone, and then stitched up the duct. That operation was highly hazardous, but the patient had recovered. He had been struck with the enormous amount of fluid which passed away from the gall-bladder after these operations, though he did not think it was all bile. His experience did not coincide with that of Dr. Churton. In one case, with 413 calculi in the gall-bladder, there was mucus as well, and in other cases multiple calculi also. He had tried the American oil treatment, which apparently in one case brought away a wonderful collection of green softened gall-stones. These when examined, however, were found to be large quantities of olive oil which had undergone a curious transformation in the intestine. He considered the artificial connection of the gall-bladder with the intestine a radically wrong procedure, inasmuch as the opening in the bowel-wall was likely soon to close. He considered cholecystectomy the operation of the future. It caused no more risk to the patient, and effectually prevented the possibility of another stone blocking the cystic duct in the future.—Mr. CHARTERS SYMONDS mentioned a case in which it seemed quite necessary to make the gall-bladder communicate with the intestine, as large quantities of bile were being constantly discharged. The opening made into the bowel sloughed, and the patient eventually died; but it had seemed as if no other operation could be done for him. The second operation was done six weeks after the first, when the gall-bladder had so much shrunk that it was barely more than a small tube. Altogether he had seen three cases, all of which had turned out to be of the same kind—an unfortunate experience.—A MEMBER asked if there was any risk in allowing bile to get into the peritoneum?—Mr. BARKER mentioned a case of impacted gall-stone, diagnosed as such by two well-known physicians. At the operation he found a distended gall-bladder, but no stone therein. There was a trace of hardness in the head of the pancreas. He had closed the wound, and the patient quickly benefited by the operation, but he did not know to what cause to attribute the improvement. That patient was now well.—Mr. BLACK suggested that Mr. Barker's patient might also have recovered without any operation at all. He alluded to a male patient, aged 30, suffering from what was considered to be gall-stone colic, in which there was lead poisoning, the lead being contained in some home-made ginger-beer. That patient had jaundice, but quite recovered without any operation.—Mr. ROBSON, in reply, said that, as to Mr. Barker's case, he thought the improvement was probably due to the release of the adhesions. He knew of two cases, though they were not his own, in which the gall-bladder was brought to the surface and stitched there, and perfect recovery ensued, although nothing abnormal was found on opening the gall-bladder. Possibly some cases of cholelithiasis were due to the passage of thickened mucus along the gall-ducts, and free drainage restored the membrane to a healthier state. In one classical case, after operation, the peritoneum became distended, ten pints of bile were then drawn out of it, and the patient recovered; but he nevertheless considered it most necessary to close the opening from the peritoneum and prevent the bile from entering it, knowing the large amount of bile which was secreted daily. He reserved all remarks on the subject of cholecystenterostomy for a paper to be read shortly before

the Royal Medical and Chirurgical Society. He was interested in the remarks as to the treatment by oil, because his eleventh case had tried it. She had in fact taken pints of salad oil, but although masses of concreted oil were passed, they were certainly not biliary calculi, and the patient was afterwards operated upon and recovered. In one only of his cases had a permanent fistula followed the operation, and the inconvenience was very slight, as the daily discharge did not exceed an ounce and a half in amount, and was colourless and inodorous. He thought the plan of slitting up the common duct to get rid of a calculus a very hazardous proceeding, and even the crushing of a stone in it, near as it was to the thin-walled portal vein, he also considered extremely hazardous, although Mr. Thornton had done it successfully. The operation of cholecystotomy was much simpler than that of cholecystectomy, the latter often being very difficult, and risking the leaving of a fistula at the end of a deep wound. As to the diagnosis of gall-stone, when there were deep adhesions he considered the best procedure was to open the abdomen and pass an exploratory needle in the supposed direction of the stone. As to Dr. Churton's remarks, he might say that in no case in which he had opened the gall-bladder and found it distended with mucus, had he happened to find one gall-stone alone therein.

MEDICAL SOCIETY OF LONDON.

MONDAY, OCTOBER 28TH, 1889.

C. THEODORE WILLIAMS, M.D., President, in the Chair.

Some Obscure Points in Connection with Glycosuria.—Dr. ORD read a paper on this subject, which is published in full on p. 965.—The PRESIDENT thanked Dr. Ord, on behalf of the Society, for his highly-suggestive paper, much of which was quite new to him. He himself was disposed to look upon glycosuria as a chemical disturbance rather than as of neurotic origin.—Dr. PAVY observed, with respect to the connection between glycosuria and obesity, that this was by no means constant, and even doubted whether he would be justified by his experience in concluding that any such connection existed. The affection was possibly more amenable to management in stout persons, but, if untreated, it ran much the same course. Moreover, it was not rare to witness emaciation in the course of the disease. He quite endorsed Dr. Ord's views as to the relation between glycosuria and enlargement of the liver, the latter phenomenon being sometimes very well marked. At the same time, in many of these cases, the glycosuria was not of the ordinary form, in the sense that, although patients might not be over and above careful in the matter of diet, their urine was not laden with sugar. He agreed that there was some sort of association, too, between diabetes and contracted kidney, yet his own observations tended to show that the presence of the contracted kidney exercised a restraining influence over the diabetic condition. He instanced the case of a remarkably diabetic patient, obliged to be exceedingly careful as to diet, who, in the course of time, had symptoms of contracted kidney and the cardio-vascular changes associated therewith. It was then found that indiscretions in diet were no longer followed by glycosuria. He considered that glycosuria was the result of an altered condition of the arterial system, and when the vascular changes incidental to contracted kidney came about, the arteries becoming reduced in calibre, the conditions which produced glycosuria were no longer present. Passing on to consider the alleged connection between glycosuria and Raynaud's disease, he observed that glycosuria was frequently accompanied by peripheral neuritis and peripheral neuritis was a frequent concomitant of albuminuria and glycosuria, especially in persons past middle age. There was certainly an amount of pain in the gangrene which followed diabetes out of all proportion to the gangrenous condition. He thought that this was comparable with Raynaud's disease so far as causation was concerned. The connection between glycosuria or diabetes and angina pectoris was one they were not unprepared for, if they accepted the view as to the neurotic origin of glycosuria. He recalled, too, that he had seen diabetes associated with another distinctly neurotic affection, namely, exophthalmic goître. He agreed that one's attention ought not to be concentrated on the liver. In a disease like glycosuria, where they had defective assimilation of carbo-hydrates, the subject must be looked at from a broad point of view. He pointed out that even in healthy persons there existed a standard of assimilation beyond which the organism would be unequal to the task of disposing of the carbo-hydrate element, and sugar would appear in the urine. Anyone could induce a passing condition of glycosuria by an excessive consumption of sugar. In glycosuric patients this standard was lowered, but except in acute cases, occurring in young people, the withdrawal of the carbo-hydrate element led to the disappearance of the sugar in the urine. Some glycosuric patients could take six ounces of bread without giving evidence of defective assimilation; others eight or ten ounces; the standard, in fact, was a variable one, according to the individual, and doubtless the same variability existed in healthy persons. In none, even in the healthiest, was the assimilative capacity unlimited. He remarked that there were persons whose livers were so extensively diseased that very little liver substance was left, yet they were not diabetic; it was evident, therefore, that they must look beyond the liver for an explanation of the reason for the carbo-hydrates failing to undergo the usual changes before passing into the blood. He looked upon the presence of sugar in the urine as evidence of the presence of sugar in the blood, and the quantity of sugar in the urine was proportional to that in the blood. Under ordinary circumstances he said there must be an assimilative power which checked the passage of carbo-hydrates into the blood, whence it found its way into the urine.—Dr. RALFE divided cases of glycosuria into two groups, according as they were acute or chronic, and ascribed importance to arterial tension as a factor in its production. An old teacher of his had shown him some tracings proving that the tension was almost exactly that of renal cirrhosis, although repeated examination of the urine failed to reveal the presence of albumen or casts. He quoted a French observer to the effect that at a certain period of diabetes the arteries became thickened, and the heart hypertrophied. This thickening and hypertrophy subsequently gave place to degeneration, and this, he suggested, would doubtless account for the connection which had been shown to exist between this disease and angina pectoris. With respect to the glycosuria of suckling women, he mentioned that a French physiologist had succeeded in obtaining crystals of unaltered lactose from the urine. He mentioned an instance in which the ingestion of stale bread caused sugar to appear in the urine, which was not the case when fresh bread-crumb was taken.—Dr. SAVAGE urged that diabetes, like insanity, was directly hereditary, and it was very common to get a history of diabetes in the parents of the insane. At the same time, it was comparatively rare to find glycosuria in the actually insane. The assertion, made some years since, that sugar was often found in the urine of the insane, had not been confirmed by observations at the Bethlem Hospital. When it was found, it was almost invariably in puerperal cases. He mentioned that in some instances the supervention of insanity coincided with the disappearance of the sugar, which returned when the mental disturbance subsided, not only in functional cases, but in such progressive diseases as the general paralysis of the insane, an instance of which he narrated.—Dr. S. WEST pointed out that some confusion appeared to exist between glycosuria and diabetes, and he asked which condition was really intended. (Dr. ORD: Accidental or incidental glycosuria.) He observed that the relation of accidental glycosuria to nervous disease was a very interesting subject, but he doubted whether glycosuria and diabetes could be regarded from the same point of view, and the conclusions of the one used to interpret those of the other. With reference to arterial tension as a factor in the production of glycosuria, he pointed out that in exophthalmic goître the tension was low. So far as his experience went, glycosuria was a rare phenomenon in granular kidney. He asked whether they were to believe that diabetes, as well as mere glycosuria, might result from errors in diet, and he mentioned the case of a girl employed in a grocer's shop. She owned to having consumed pounds of sugar daily, and she ultimately died of an extremely acute form of diabetes. With respect to the relationship of diabetes to insanity, he observed that mental disturbance was common as a late symptom in diabetes.—Dr. PAVY said he did not believe that increased arterial tension had anything to do with diabetes. It was rather vasomotor paralysis and dilatation affecting certain vessels.—Sir WILLIAM ROBERTS said he had been struck with the way in which glycosuria complicated all sorts and descriptions of ailments, a fact which showed that they were still far from having grasped the essence of this disorder. He quoted an observation of the late Dr. Sharpey's, to the effect that "the next best thing to knowing a thing, was to know that you didn't know it," and this miscellaneous association of diabetes showed that much still remained to be elucidated in this interesting but difficult problem.—Dr. MITCHELL BRUCE doubted whether the case of gangrene alluded to would be admitted by everyone to be presumptive of Raynaud's disease. He pointed out the beneficial

effects to be obtained from opium and morphine in certain cases of gangrene, and in view of the fact that the use of opium or morphine had been recommended in diabetes, he suggested that they might, in some cases of glycosuria, have to do with a condition of peripheral neuritis. In other words, glycosuria might be of peripheral as well as of central origin.—Dr. MAGUIRE observed that although gout might lead sometimes to granular kidney, and at others to diabetes, any direct connection between granular kidney and diabetes was rare. Yet they had one thing in common, namely, that in the final stages of diabetes they often got albuminuria. He insisted upon the necessity of distinguishing this form of albuminuria for prognostic purposes, for he had always held that the supervention of albuminuria in diabetes did not seriously aggravate the prognosis. He had often observed *post mortem* that the granular condition of the kidney in diabetic patients was but slight. The albuminuria, therefore, was probably due merely to the irritation caused by the passage of sugar. He asked on what grounds Dr. Ord had diagnosed granular kidney in the cases mentioned by him.—The PRESIDENT asked Dr. Ord in what proportion of his cases carbuncle had existed, also whether he had noticed any combination of diabetes and phthisis.—Dr. ORD, in reply, said that carbuncle was common enough in real diabetes, which, however, was not under discussion, but he knew nothing of any connection between glycosuria and phthisis. He attached a good deal of importance to the suggestion of peripheral neuritis as a possible cause, and he thought it one well worth bringing out. The association of glycosuria with exophthalmic goître was, however, quite new to him. He had hitherto been unable to carry out the investigations he had long desired to make into the kind of sugar that was found in the urine of suckling women. In his case of albuminuria he pointed out that the quantity of sugar excreted was so small that it would hardly be credited with having produced the albuminuria. He himself would like to know whether diabetes could be produced by errors in diet; glycosuria certainly could be thus induced. A large quantity of milk or too hearty a meal of liver would do it—an experiment he had verified on himself. It was in view of the fact mentioned by Sir William Roberts, that the subject was the despair of pathologists in their endeavour to form a coherent theory of glycosuria, that he had brought the subject forward. In reply to Dr. Bruce, he said that the case of gangrene mentioned by him was not adduced as one of Raynaud's disease.

BRITISH GYNÆCOLOGICAL SOCIETY.

WEDNESDAY, OCTOBER 9TH, 1889.

ARTHUR MACAN, M.D., President, in the Chair.

Fibro-cystic Tumour of the Ovary.—Dr. BANTOCK exhibited a fibro-cystic tumour of the ovary, which had been in existence eight years. On opening the abdomen he found the tumour fluctuating, and drew off seven ounces and a half of fluid, containing cholesterin. The pedicle was attached to the right broad ligament at the corner of the uterus, but free from it. The patient was single, aged 35, and had done well.—After remarks by Dr. BARNES, Dr. HEYWOOD SMITH, and Dr. R. T. SMITH, the specimen was referred to the Pathological Committee.

Epitheliomatous Tumour of Clitoris.—Dr. EDIS showed an epitheliomatous tumour removed from the clitoris. The patient was a single woman, aged 43. The growth had existed for about five years; it was about the size of an almond, and was removed by Paquelin's cautery. The inguinal glands were not enlarged, and now, after four months' interval, there was no recurrence. More recently he had seen a case which had been treated as a chancre for twelve months, and in which the disease was so advanced and the glands so implicated that nothing could be done.—Dr. BARNES said that these cancerous diseases of the vulva and clitoris were more amenable to treatment than in any other part of the body. He knew cases he had treated seven or eight years ago still remaining well.

Mole.—Dr. EDIS showed a so-called mole. The patient was subject to menorrhagia in June and July; from that time all sanguineous discharge ceased until September. Then she began to flood again, to extreme blanching; removal of the specimen shown caused immediate arrest of the hæmorrhage. It was an ovum, and there had been hæmorrhage into the chorionic tissues. It was attached inside the internal os, which was very much contracted.—Dr. HEYWOOD SMITH, Dr. BARNES, and the PRESIDENT made remarks on the case.

New Uterine Dilator.—Dr. LYCETT, of Wolverhampton, showed an apparatus for dilating the uterus. It consisted of a metallic cone, maintained in position by means of a waistband and two india-rubber perineal bands. The stem of the cone contained a coil-spring, the pressure of which was regulated by a wheel at the base. The stem was capable of being adjusted to the varying length of the vagina.—Dr. EDIS said he preferred using elastic pressure.—Dr. FENTON thought the instrument too elaborate in construction.—Dr. ROUTH feared that it might cause inflammation by pushing up the uterus too much.—The PRESIDENT did not think the process was likely to do harm unless the tissues were torn, and then it would be a case of septic poisoning. In cases where anything like force was needed he preferred making an incision.

Relation between Gynæcology and General Practice.—Dr. BANTOCK resumed the discussion on Dr. Dolan's paper on the Relation between Gynæcology and General Practice. He said he was a strong supporter of Dr. Dolan's remark that a few years spent in general practice constituted a most valuable education of a specialist, and this was equally true of every department of specialism. He thought Dr. Dolan was a warmer advocate of some of the new operative methods of dealing with misplacements than he himself was. He commended the paper to the earnest study of all the Fellows.

HUNTERIAN SOCIETY.

WEDNESDAY, OCTOBER 9TH, 1889.

R. CLEMENT LUCAS, B.S., F.R.C.S., President, in the Chair.

President's Address.—The PRESIDENT delivered a short address, in which he referred to the postponement of the meetings of some of the principal metropolitan societies owing to the delay in completing the buildings of the Royal Medical and Chirurgical Society. This, he thought, was a strong argument in favour of decentralisation. The Hunterian was the only medical society situated within the walls of the ancient City of London. He had opposed the proposal to associate their library with the library of the British Medical Association because he thought that to remove the only medical library from the City would be little short of a calamity to those resident in the central and eastern districts; and that to carry the library west of Temple Bar would tend to weaken the influence of the Society in the City, and not only interfere with its present usefulness but tend eventually to its decadence and dissolution. He looked forward during the present session to the possibility of gaining the assistance of the City Companies in making the library more complete and in rendering the Society's position in the City more permanent and secure. He then referred to the deaths of two Fellows of the Society—Dr. Owen Rees and Dr. Leonard Wooldridge.

Forced Feeding in Childhood.—Dr. TURNER read notes of the cases of two children treated successfully by forced feeding, including in that term all measures adopted to procure the ingestion of a sufficient amount of food in the presence of indifference or repugnance, or in opposition to resistance on the part of the patient. Comparing these cases with cases of anorexia hysterica, treated on the Weir-Mitchell method, and with cases of chorea treated on the same principle, Dr. Turner said that he thought his cases especially worthy of consideration, as illustrations of the applicability of the same line of treatment to cases of different and varying clinical aspect, with nervous symptoms suggestive of, and in part due to, nervous lesions, but in which the gravity of the patient's condition was dependent upon chronic starvation, due to a functional failure of the cerebral centres, to be met, as in typically neurotic patients, by forced feeding.—The PRESIDENT, Dr. F. J. SMITH, Mr. STEVENS, Dr. DAVIES, and Mr. BIDWELL took part in the discussion which followed.

CLINICAL SOCIETY OF MANCHESTER.

TUESDAY, OCTOBER 15TH, 1889.

LESLIE JONES, M.D., President, in the Chair.

Recent Advances in Dermatology.—Dr. BROOKE gave an address on this subject. A scientific scheme of classification was as yet impossible, and had become much more so since the recent influx of bacteriological investigations. The active diseases fell mostly under the head of blood diseases, nerve diseases, and parasitic diseases. The former arose from the action of poisons (auto-inoculations, as in gout, rheumatism, etc., or from drugs or foods). They had so close a connection with many purely nervous affections (for example, urticaria) that it was necessary to suppose

that the poisonous matter exercised a specific action on various nerve centres in the skin, resembling the specific action of poisons on the various nerve centres. Amongst the nerve diseases a great advance had been made by the formation of the group of hydroa, the dermatitis herpetiformis of Duhring and "scar-erythemata" of Unna, comprising "lupus erythematosus" and the chronic atrophic form of non-parasitic sycosis. The group of parasitic diseases was continually growing in number, and would probably be found finally to constitute the great bulk of all the dermatoses. Their development was often greatly influenced by the general health and external surroundings of the patient, and this had led, as formerly in the case of tuberculosis, to the presumption that many of them were constitutional. One of the newest additions to the class was the group caused by a low form of animal organism, the psorosperm (Darier), which had been found in a peculiar disease "psorospermose folliculaire végétante," characterised by a plugging of the pilosebaceous orifices and the development of large tumours, chiefly about the groins. Similar bodies were found in Paget's disease of the nipple, where they appeared to be the direct cause of the epitheliomatous growth (Wickbam). In the degenerative affection known as pityriasis rubra several distinct varieties had been separated out, of different origin, course, and prognosis. Apart from the introduction of various new drugs and modes of application, the recent tendency of dermatological therapeutics had been largely in the direction of antiparasitics.

Cases, etc.—Dr. JUDSON S. BURY showed a woman, aged 24, who presented a combination of Scleroderma and Raynaud's Disease. She first noticed about two years ago that her hands went white and dead, and soon afterwards the tips of some of the fingers "gathered and broke." When seen in March the hands were cold and the ends of the fingers blue, and at the tips of some of them were a few minute pits. Both hands and fingers were thicker and harder than natural, and owing to the hide-bound condition the fingers could not be fully extended. The skin of the backs of the forearms and of the cheeks was also thickened. The smooth hardened condition of the cheeks robbed the face of expression. Her condition was still much the same. There had never been any evidence of hæmoglobinuria. Dr. Bury also exhibited water-colour drawings (1) from a case of Xanthoma Diabeticorum, (2) from a case of Extensive "Port-wine Mark."—Other cases were shown by Dr. THOMAS HARRIS and Dr. COLLINS.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

THURSDAY, OCTOBER 24TH, 1889.

C. N. GWYNNE, M.D., President, in the Chair.

Cases.—Mr. ATKIN showed a case of Complete Mydriasis, resulting from a blow on the eyeball. After nearly four months' treatment no contraction had been effected. It was assumed that the same irritation which had paralysed the fibres of the third nerve had stimulated those of the sympathetic. Recent experiments were quoted to show that it was probable that all branches proceeding from the Gasserian ganglion contained motor fibres, and that it was probable that the dilator of the pupil was supplied also by the fifth nerve. As myotics, cauterisation, and electricity had been tried, irritation of branches of the fifth nerve and ocular gymnastics were suggested as most likely to succeed; but reservation was made that if Dr. Woakes's theory of the reflex relationship of the afferent and efferent elements of the sympathetic system were correct, then stimulating the branches of the fifth nerve might act reflexly on the dilator, as well as on the contractor of the pupil, and so nullify any result.—Dr. PORTER showed a sawgrinder, aged 44, suffering from what was believed to be Thoracic Aneurysm, though there was an absence of many of the symptoms to which such a condition might have been expected to give rise in the six years the patient had bsen under observation. His chief complaint had been of shortness of breath, cough, and occasional attacks of hæmoptysis. In 1885 he lost his voice completely for a time, and the left vocal cord was found to be paralysed. His voice had continued husky ever since, and the vocal cord more or less motionless. A short systolic murmur was audible to the left of the sternum in the third interspace, and to the left of the spine behind in the interscapular region, and the heart's apex was displaced downwards and outwards. There were no signs of a tumour or other pressure symptoms. There was a history of syphilis many years previously. The attacks of hæmoptysis continued to recur from time to time, but always yielded to five-grain doses of succinate of potash.—Dr. PORTER also showed a case of Lupus Erythematosus (

Ulcerative Endocarditis.—Dr. DYSON related the case of a minister, aged 35, who was overworked and overworried. His illness began like ague, and was treated as such at first. There was then nothing to be observed but anæmia, bleeding piles, cerebral asthenia. He had no heart murmurs whatever. Subsequently pyrexia became more continuous, severe endocarditis supervened with aortic, systolic, and diastolic murmurs; great perspirations, enlargement of the spleen, congestion (? embolism) of the lung with hæmoptysis, embolism of right middle cerebral artery, and also thrombosis of axillary artery on the left side, left hemiplegia, and absence of left radial pulse. A profound typhoidal state came on before death, which occurred ten weeks and five days after acute symptoms began.

Etiology of Tuberculosis.—Dr. BURGESS read a paper on this subject, in which he contrasted the meagre results obtained by clinical observation and medical statistics with what had been done during the scientific epoch of Villemin, Cohnheim, and Koch. The difficulty of connecting a given case with a previous one was not surprising when the very variable and indefinite incubation period, the numerous possible sources of infection, the impossibility of aërial dissemination from fresh sputum, and the fact that dried sputum retained its virulence for months were borne in mind. The case of a girl, aged 17, the eldest child of a poor family, and the only member of it who contracted phthisis from the father, was quoted to emphasise the importance of individual susceptibility as an etiological factor. Remarks were made on predisposition, sources of infection, modes of invasion, etc., and several cases were quoted to illustrate some of the points dwelt upon. Some obvious prophylactic precautions were mentioned. It was maintained that many of the worst cases might easily be isolated if they were not eligible as out-patients at hospitals, nor attended gratuitously at home. From the history of leprosy, a disease closely allied to tuberculosis, he inferred that it would take many decades to estimate fairly, and centuries to realise fully, the effects of preventive measures.—Mr. A. JACKSON, Dr. DYSON, Dr. GWYNNE, Dr. KEELING, Dr. MARTIN, and Mr. ROBINSON joined in the discussion which followed.

REVIEWS AND NOTICES.

THE OPERATIONS OF SURGERY, intended especially for the Use of those recently appointed on a Hospital Staff, and for those preparing for the Higher Examinations. By W. H. A. JACOBSON, M.A., M.B., M.Ch.Oxon., F.R.C.S., Assistant-Surgeon Guy's Hospital, Teacher of Operative and Joint Teacher of Practical Surgery in the Medical School, Surgeon to the Royal Hospital for Children and Women. London: J. and A. Churchill. 1889.

IN preparing this book the author has left the usual track and has dealt with operative surgery on a plan which is novel from several points of view. Not only are all the ordinary operations fully dealt with, usually under the headings "indications," "different methods," "causes of failure," but excellent accounts are given of others outside the common run; trephining for mastoid and cerebral abscess and traumatic epilepsy, the operations on the kidney, excision of the rectum, wiring the patella. In addition to these there are other sections less strictly "operative," which are markedly the practical experience of one who has had excellent surgical opportunities at one of our largest London hospitals. Such sections are those on "Palmar Hæmorrhage," "Operative Treatment of Lupus," "Surgical Interference in Aneurysms of the Innominate and Aorta," "Treatment of Compound Fracture," and the aphorisms at the commencement of the pages on excisions of bones and joints of the tarsus (p. 1071). The arrangement of Mr. JACOBSON's book is different from that of others, the operations being placed, not under the usual headings of "Ligatures," "Amputations," "Excisions," etc, but under regions—namely, Part I, Operations on the Upper Extremity; Part II, Operations on Head and Neck, etc. At first sight this plan may appear inconvenient to a student who wishes to perform the ligatures on the dead subject consecutively, but it has the advantage of following the anatomy of the parts concerned, while it is difficult to see how any other arrangement could have included equally well a number of operations which, not given in other books of the kind, meet us here.

Part I, in addition to all the operations on the upper extremity usually described, contains accounts of many for which the

operating surgeon would have to hunt in journals, monographs, etc.; for example, "Union of Divided Tendons," "Contraction of Palmar Fascia." Others have probably been included for the benefit of army surgeons; for example, excision of the shaft of the humerus and of the radius and ulna in continuity. It may be suggested that in a future edition Mr. Jacobson should shorten his account of transfusion, considering how very rarely this step is called for. At present this includes several methods, direct and indirect; while arterial transfusion, the use of milk, and saline solutions are all alluded to. It is only fair to add that the account of reinfusion as practised by the Edinburgh surgeons promises to be of much interest to hospital surgeons called upon to amputate in severe railway smashes. A little later, nine pages are taken up by "Removal of the Scapula," which might have been given in half the space.

Part II, Operations on the Head and Neck is very full. We would recommend to those of the younger generation who are exceedingly zealous for operations a careful perusal of Mr. Jacobson's remarks on "Removal of the Thyroid," partial and complete, the "Removal of Deep-seated Growths in the Neck," and "Excisions of the Larynx." There is a good account of "Cerebral Localisation in reference to operations;" and two sterling chapters on "Removal of the Tongue" and "Tracheotomy." In the former Mr. Jacobson, here as elsewhere, is strongly in favour of the scissors operation of Mr. Whitehead. Not only are the different methods and the writer's favourite one clearly described, but such points as the "uncancerous stage," the "probability of a permanent cure," and, this failing, "of bettering the patient's condition," are lucidly discussed. The account of tracheotomy for membranous laryngitis is most interesting throughout its minuteness; it is arranged under the headings of "Age," "Right Time of Operating" and "Wise Selection of Cases," "Operation," "After-treatment," "Complications of the After-treatment," including an account of those conditions which impede the removal of the tube. Noteworthy sections also are those on "Removal of the Breast," "Lateral Lithotomy," and "Excision of the Knee-joint." Here, as indeed throughout the book, are no *ossa, arida ossa* of mere accounts of operations. The descriptions abound from end to end with points of practical and clinical detail, the outcome of carefully-used surgical experience.

In Part IV (Operations on the Abdomen), the chapter on "Operative Interference in Gunshot and other Injuries of the Abdomen" is, as might be expected, largely recruited from the work of American surgeons. One feature of Mr. Jacobson's book is his acquaintance with, and frequent references to, American surgery. In the account of "Excision of the Pylorus," as in the case of some other operations which have not made for themselves a firm foundation in English surgery, the writer expresses himself cautiously, but adversely, assigning reasons which may be recommended to the notice of younger surgeons.

Part V (Operations on the Lower Extremity) opens with a capital account of "Amputation at the Hip Joint," including a description of Furneaux Jordan's amputation, a nowadays frequently performed amputation. In this section, in addition to the ordinarily performed operations, others useful to the operating surgeon are included, namely, "Ununited Fracture of the Femur," "Removal of Loose Cartilages from the Knee-joint," "Wiring the Patella;" For Necrosis, Mikulicz's tarsectomy, and numerous others. The book closes with chapters on operations on nerves, on the vertebral column, and an appendix on Tapping the Pericardium, which should have been included in Part III which deals with the thorax.

Of the 199 illustrations, a great number are original, drawn, as the preface tells us, by Dr. Hogarth, of Brixton. Many of these are excellent, namely, those showing excision of the knee—Furneaux Jordan's and Syme's and Pirogoff's amputation. Some are decidedly poor, for example, Fig. 33, the second stage of amputation of the shoulder by lateral flaps. Those showing ligature of the arteries seem meagre and disappointing, but this is perhaps explained by a remark of the writer, that in "tying an artery a test of the masterly application of the ligature is the fewness of the structures seen." True as this is of the surgeon, we think that this rule has been carried too far in a book intended for students working on the dead subject, as well as for hospital surgeons.

We have read this volume with very great pleasure. Mr. Jacobson shows an earnest desire to make his book as complete and helpful as possible, and a fixed intention throughout to do justice to the writings of others. This last, a high merit at the present day.

The English is scholarly, the writing vigorous. The book is the more valuable for its frequent and most interesting allusions to cases and the prominence throughout given to the clinical side. Its wide and comprehensive scope, the amplitude of its details, the laborious pains which have been taken to bring it up to date and to render it complete, make this book second in usefulness to none of the current textbooks on operative surgery.

A MANUAL OF PATHOLOGY. By JOSEPH COATS, M.D. Second Edition. London: Longmans, Green and Co. 1889.

THE English medical student of to-day cannot complain of any dearth of textbooks of pathology, even without counting translations, or manuals limited to the surgical side of the subject. He has now a choice of guides to whom he may safely commit himself, though each will lead him into a somewhat different region of the same wide country. He may, for instance, study comparative pathology with Sutton, morbid anatomy with Wilks and Moxon, morbid histology with Green, or he may follow out other developments of the science with Hamilton or Payne. Among all these teachers, COATS occupies somewhat of an intermediate position. He is rather an eclectic, partaking of all the schools. In his first edition, he proposed "to take into account the etiology, morbid anatomy, and general pathology of each morbid condition," and all these aspects of the subject were no doubt regarded. At the same time the general scope of the work did not differ greatly from that of a treatise on pathological anatomy—such as, for instance, Ziegler's. The physiological side was at all events little regarded. In the present edition, something has been done in the physiological direction by the introduction of a chapter on fever, such as is now customary in pathological works, and there is a preliminary chapter on the nature and causes of disease. But the scope of the book remains mainly morphological. We almost wonder that Dr. Coats, after having once made up his mind to go beyond the limits of pure morbid anatomy, did not treat some subjects more after the manner of Cohnheim from the physiological side. For instance, the question of blood pressure, which is surely a fundamental one in cardio-vascular pathology, might have received some attention. However, it is only fair to observe the old rule, "in every work regard the writer's end," and to judge of a book like this by what it professes to include.

Comparing the second with the first edition, we find in every chapter and in almost every page new facts added, paragraphs rewritten, the style condensed and revised. Indeed we might say, without depreciation of the first edition, that its relation to the present one is something like that of a first sketch to a finished picture.

In opening a work on pathology, it is natural to turn to the chapter on inflammation. Here we note first that Dr. Coats, like some other recent writers, shirks, or at least avoids, the difficulty of giving a definition of the word. He only refers, without approval, to the traditional definition derived from Celsus, but gives no other in its place. We do not know exactly what the professor's answer would be if pinned by some irrepressible student with the question, "What is inflammation?" but to such a question we cannot help thinking some sort of definite reply, whether in one word or a hundred, ought to be given. It is not fairly answered by a mere enumeration of the phenomena. The treatment of the subject is improved in some particulars, but not essentially altered from the first edition. The chapters on hyperæmia and allied subjects appear to us to show a better appreciation of modern researches. The section on bacteria, as might be expected, is very greatly enlarged, but not at all too much so. The illustrations of this part are hardly equal to those of some other chapters. In speaking of yeasts, the pathological importance of which is, of course, very small, reference might have been made to what is perhaps the commonest epibyte of the human body—the saccharomyces of the scalp.

The pathology of the heart and blood-vessels is evidently a favourite topic with Dr. Coats, and his chapters on this subject are on the whole very complete. We find a good account of ulcerative (or perhaps better, infective) endocarditis, as a bacterial disease. The frequent occurrence of this affection in hearts previously damaged by chronic disease, a well-established clinical fact which fits in very well with the bacterial theory, is not noticed. The section on valvular disease would have gained in interest by some reference to the clinical features of the subject, and to the dynamics of cardiac pathology.

The chapters on diseases of the nervous system are improved in

arrangement, and generally revised without important additions. That on pulmonary phthisis is, on the other hand, much enlarged and improved, and has several new illustrations. There are new chapters on the diseases of the thymus and thyroid, and on those of the eye and ear.

A valuable feature of the new edition is the introduction of references to original sources of information in each subject, which greatly adds to the usefulness of the book for purposes of consultation.

The typography has been improved by the use of two kinds of type and of more systematic headings to the paragraphs. The new figures are numerous, many of them being original and very good. In conclusion, we must congratulate Dr. Coats on having very greatly improved both the substance and the appearance of his valuable textbook.

ALGERIAN HINTS FOR TOURISTS. By C. E. FLOWER. 12mo., pp. 60 London: E. Stanford. 1889.

THESE short hints, meant to be supplemental to Murray and other guide-books, though not specially addressed to invalid visitors of Algiers, will be found useful by them. The author complains of the poor food and filthy arrangements of most hotels throughout the country. He says that the new hotels in Biskra and Oran are the only ones that come up to English requirements, and he also with justice, speaks well of the hotel at Hammam R'Irrha. As Mr. FLOWER has been a great traveller, and also an invalid, we give his opinion of the comparative merits of Algiers and of the Riviera, in which, in the main, we agree with him:

"If a really warm winter is essential, then nothing nearer than Egypt or Madeira can be of use, and anything short of that may as well be obtained without the disadvantage of crossing the Mediterranean in winter or spring. Forty or even fifty hours from Algiers to Marseilles is not uncommon. The thought of this alone is a great drawback to an invalid who cannot feel, as at Cannes or Mentone, that in case of emergency he may return home or be joined by friends in a definite number of hours. I certainly do not think Algiers a good place for invalids; the climate is very slightly better than that on the French and Italian Riviera, while there is much discomfort of living."

Mr. Flower was told that the windy and rainy weather which he experienced in the early months of the year was exceptional, but the weather in Algiers is seldom settled at that time.

A TREATISE ON THE SCIENCE AND PRACTICE OF MIDWIFERY. By W. S. PLAYFAIR, M.D., LL.D., F.R.C.P.; Physician-Accoucheur to H. I. and R. H. the Duchess of Edinburgh; Professor of Obstetric Medicine in King's College, etc. In Two Volumes. Seventh Edition. London: Smith, Elder, and Co. 1889.

THE appearance of this—the seventh—edition of PLAYFAIR'S *Midwifery* is a sufficient proof of the favour with which the work continues to be regarded by students and the profession. The features that have rendered previous editions attractive are retained in this one. It is pleasantly and clearly written, and therefore easily read. The author is both a practitioner and teacher of large experience, and what he writes has, therefore, an authority that it could not otherwise possess. Remembering that midwifery is essentially a practical subject, Dr. Playfair, no doubt intentionally, only gives us as much anatomy and pathology as is essential for an intelligent comprehension of the rest.

When another edition is in preparation, we think the time will have come, if it has not come already, when it will no longer be necessary to describe traction on the cord as the usual method of removing the placenta. That it has ceased to be so is, no doubt, largely due to Dr. Playfair's own teaching.

In cases of abortion, inevitable or incomplete, where it is necessary to dilate the cervix, and similarly in cases of vesicular mole, we think dilatation by means of Hegar's dilators superior in every way to dilatation by sponge or laminaria tents as recommended in the text.

On pages 348 and 349, vol. ii, are plans showing how defective sanitary arrangements in houses may cause puerperal fever. One diagram represents a bedroom in which an innocent-looking wardrobe turned out to be a water-closet in disguise. In regard to this it would seem that wardrobes are not infrequently used for this purpose on the Continent. The French word for "wardrobe," "garde-robe," has a second meaning—namely, "privy"—against it in the dictionary. In the case referred to the concealed water-closet was in direct communication with the main drain, without any ventilation, so that sewer gas was carefully laid on. Upon this state of things being discovered, the patient was removed to another room, when her symptoms soon abated.

In this edition the obstetric nomenclature decided on by a committee appointed at the International Medical Congress, held at Washington in 1887, has been introduced. Speaking of the treatment of early extra-uterine gestation by the faradic current, Dr. Playfair says; "Many successful cases have followed the use of the faradic current—one pole being passed through the rectum or vagina to the site of the ovum, the other being placed on a point in the abdominal wall, two or three inches above Poupart's ligament." We regard the evidence of such successes as insufficient, and very probably Dr. Playfair only means that many cases have been reported as successful under this treatment. Where the diagnosis is so exceedingly difficult, as it is admitted to be in cases of early extra-uterine gestation, in any given case the probability would rather be that the diagnosis had been mistaken, than that the condition had been cured by the use of electricity.

BEDSIDE URINE TESTING: A CLINICAL GUIDE TO THE OBSERVATION OF URINE IN THE COURSE OF WORK. By Dr. GEORGE OLIVER. London: Lewis. 1889.

Dr. OLIVER'S aim is to supply in a small compass the leading data in regard to urinary observation by pointing out what ought to be looked for, as well as the readiest methods to be adopted. The practical character of the book is well maintained throughout, and that it has supplied a want is shown by this being the fourth edition. Of course, the author directs his attention chiefly to the detection of abnormal constituents by the use of test papers. These are undoubtedly of great value to the general practitioner, particularly for bedside work, as, in addition to their utility, they possess much reliability if they have been carefully prepared and have not undergone alteration; although for our own part we confess to a preference for the same tests differently applied; however, Dr. Oliver's little book is a most valuable one, and well deserving of a place in the general practitioner's and even the physician's library.

NOTES ON BOOKS.

Instructions to Inventors as to obtaining Letters Patent and registering Trade Marks and Designs. By WILLIAM JORDAN, Patent Agent.—This pamphlet is an advertisement issued for the purpose of inducing inventors to patronise Mr. Jordan; but it contains information which is likely to be generally useful. Hints are given as to the proper method of drawing up the specification and the procedure to be followed in order to obtain letters patent. A table of the cost to be incurred in various countries is also to be found. The pamphlet also contains a description of what is required in order to obtain valid registration of a trademark. As far as it goes the information given is correct, but it is in an exceedingly abbreviated form, and is only calculated to indicate the course which an inventor must pursue in order to obtain proper protection for his skill, without professing to furnish him with a complete guide.

Inorganic Chemistry. By IRA REMSEN. (London: Macmillan and Co. 1889.).—This is a most carefully written, and, in many respects, original volume. After detailing in some ten chapters the chemistry of the constituents of water and of hydrochloric acid and the oxides of chlorine, with which are incorporated definitions of the atomic theory, the nature of atoms and molecules, allotropism, acids, bases and salts, the author gives a chapter on the Natural Classification of Elements and the Periodic Law. From this point onwards he professes to follow the classification introduced by Newlands and Mendeejeff; but, from motives of convenience, certain elements of Family VII lead off the race, whilst Family I comes in a bad fifth in Chapter XXV. This is rather embarrassing. Another fault of arrangement, as it seems to us, is deferring to an appendix all experiments, such as are used in the lecture room for illustrating the properties of the most important elements and their compounds, which, with their attendant woodcuts, form such a characteristic feature of most large works on chemistry. When such experiments are interspersed throughout the work in their appropriate places, the task of reading is lightened to the student, and he gets a better grasp

of the subject than he would do if asked to concentrate his mind entirely upon abstract ideas. Even when the experiments do come in Mr. Remsen's book, they are few in number and insufficiently detailed. Thus, eight lines only are devoted to experiments with nitrous oxide, and in no part of the work do we find an account of the eudiometric analysis of this gas. The theoretical part of the work is more detailed—indeed, in some cases too much so, for the author tells us on more than one occasion, after presenting to our notice an elaborate formula with many "bonds," that this is at present "purely speculative," or that there is "no experimental evidence in support of this theory." The educational value of such dicta is less than *nil*. They tend to shake the student's faith in formulæ generally; and unless the matter dealt with happens to be included in an examination syllabus, he will not readily pardon the author for unnecessarily troubling his mind with such (to him) unimportant matters. The chapters on Chemical Physics and on all theoretical matters are very clear and satisfactory.

How to Analyse Simple Salts. By H. BELCHER THORNTON, F.C.S. *Analytical Exercise Forms* (same author). (London: H. Silverlock).—The preface to the first of these volumes says that "this booklet is intended to fill a vacant place in chemical literature." Both the existence of the vacancy and the capability of the booklet to fill such a vacancy if it did exist may be doubted. We can point to such works as Bloxam's *Laboratory Teaching* and Tilden's little work on *Qualitative Analysis* as fully meeting the requirements of the student in this field; and, as regards Mr. Thornton's work, though it is good in design and contains many hints which will be most valuable to the student, still such a book is useless if not accurate, and the following inaccuracies have been detected in the present issue. On p. 14, iron is said to give an "amber-coloured bead" when heated with borax, in both the reducing and the oxidising flame. The bead is bottle-green in the reducing flame. On p. 14, ferrous sulphate is said to dissolve in water, forming a brownish solution. The solution is pale green unless heat be applied, in which case the brownish colour is due to partial decomposition. On p. 21, *cupric iodide* is said to be insoluble in water, but soluble in acids. *Cuprous iodide* is evidently intended. On p. 21, sulphides, without qualification, are said to be insoluble in water, but soluble in acids. The sulphides of the metals of the alkalies and alkaline earths are, however, soluble in water. On page 30, ammonia silver nitrate is said to give a yellow precipitate with arsenic acid in solution. At bottom of p. 36, however, the correct reaction—namely, a brown precipitate—is described. On p. 33, manganese is stated to give an amethyst-coloured bead when heated with borax. No mention is made of the oxidising flame, although the bead obtained in the reducing flame is colourless. On p. 35, a dry strontium salt is said to impart a bright crimson colour to the flame. Many strontium salts, however, give no colour unless moistened with HCl. On p. 37, borates in solution are said to give "no distinctive test." We recommend the following: Acidulate with HCl; dip turmeric paper, and dry. A red colour appears on the paper, which is changed to green by potash. Besides the above, it is incorrect to talk about iodide of potash and cyanide of potash. There is no oxygen in these salts, as the above names would imply. We hope to see these errors corrected in a future edition.—*The Analytical Exercise Forms* are likely to prove useful in the laboratory for the purpose of encouraging the habit of reporting accurately and systematically the results of analysis.

An Elementary Textbook of Chemistry. By W. G. MIXTER. 2nd Edition. (Macmillan. 1889.)—This book is one which may be recommended without hesitation to both students and teachers. There is but one fault to be found with it, and that is in the matter of classification. The author has adopted the arrangement of the elements furnished by the periodic law, but has been compelled to depart from the arrangement of groups of elements which prevails therein. Now there can be no question concerning the importance of the periodic law of the chemical elements, but it seems hardly necessary to arrange schemes of classification of the elements according to it—at all events, in educational works. Surely, for educational purposes, it is wiser to introduce the several elements to the notice of the student in such a manner that the due understanding of the chemistry of those elements which are to follow may be facilitated by the study of those which have gone before. Professor Mixter's book possesses a good table of contents, an excellent index, clear print, and well-executed woodcuts. The author acknowledges in his preface the co-operation of many of his colleagues.

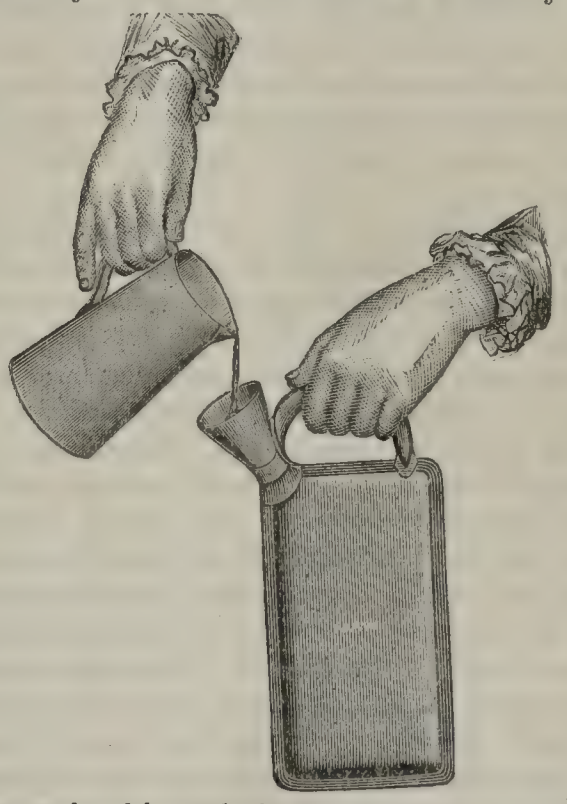
Ground Water and Shallow Wells. By W. B. FEATHERSTONE, M.B., etc. (Birmingham: Charles Stocker.)—This pamphlet contains in a readable form the information which has been accumulated by numerous workers upon the influence of impure water on the health of those who drink it, and some observations by the author himself are incorporated therewith. Numerous quotations from the BRITISH MEDICAL JOURNAL, Parkes's *Hygiene*, Buck's *Hygiene*, etc., show that the author has studied the literature of his subject, besides contributing his personal observations thereto. We could wish that this little book might have a large circulation, not only amongst experts, but also amongst the intelligent lay public, who might glean many an invaluable lesson from Dr. Featherstone's clearly-written pages.

Organic Chemistry. By A. BERNTHSEN, Ph.D. Translated by G. MCGOWAN, Ph.D. (London: Blackie and Son. 1889.)—Besides giving very clear explanations of principles and good descriptions of organic compounds, we find in this work much historical matter relating to discoveries, etc., which is often extremely important. Often both the discover's name and the date of discovery of a compound are placed in brackets after its formula. The translator has, moreover, introduced into the English edition a great number of discoveries and new matter which has appeared since the German edition was published. For this he receives the thanks of the author in his preface to the English edition. "The requirements of students of medicine and pharmacy have been carefully borne in mind."

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

HOT-WATER BAG.

MESSRS. MAW, SON, AND THOMPSON forward a specimen of a hot-water bag which they have lately introduced, which is more convenient than any other we have seen. It is stoutly made of



india-rubber, enclosed in a plush covering, which is exceedingly soft and comfortable to the skin, while it retains the heat, and is likely to be much appreciated. It is filled by a very convenient and well arranged india-rubber funnel, which projects beyond the outer covering. It is perfectly water-tight when screwed down.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1889.

SUBSCRIPTIONS to the Association for 1889 became due on January 1st; and notice is hereby given, in accordance with by-law 5, that Branch Secretaries' subscription-accounts close on October 31st, and all unpaid subscriptions must be forwarded, after that date, to the General Secretary, 429, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, NOVEMBER 2ND, 1889.

TUBERCULOUS MEAT: A NATIONAL QUESTION.

IT is daily becoming more and more evident that the tuberculosis question is one which, in its bearings on our meat supply, will have to be taken in hand by Government promptly and vigorously. It is, however, a good sign that so many cases are coming up for decision before the magistrates; and that, on the other hand, the butchers themselves are becoming quickened as to the sense of the importance of the situation. For example, we find that in Sheffield the butchers are asking for the appointment of a jury of experts, consisting of a veterinary surgeon and two or three butchers, to whom all doubtful cases should be submitted; and that in Belfast, cases in which the treatment of tuberculous carcasses is involved are being brought up in the Custody Court for arbitration and decision.

In connection with these movements, however, it may be pointed out that any jury on which a majority of persons more or less directly interested are empanelled, cannot, in any sense of the word, be satisfactory; with every desire in the world to be impartial, their decisions must inevitably be somewhat biassed. Some other way out of the difficulty must be found.

In Belfast the evils of the law court or magistrate system are most markedly exemplified. One day, according to the *Northern Whig*, Mr. MacCarthy was on the bench, and the carcasses were ordered "to be destroyed;" a few days or weeks later, two other magistrates sat who refused to give an order for the destruction "of two carcasses which were clearly shown to have been diseased with tuberculosis." On careful examination of the evidence, it would appear that the abdominal and thoracic viscera and the parietal pleura were all affected. No attempt was made to define the nature of the tubercle, but, from the fact that the liver was apparently affected with acute tuberculosis, it seems probable that the carcass was unfit for human food. This, even on the theory that extremely localised chronic tubercle in a single organ should not be looked upon as sufficient cause for the condemnation of the whole animal should have been sufficient evidence to procure a conviction. One of the magistrates, in giving the verdict, said "he was not inclined to give such a decision in this case, as it would have a ruinous effect upon the cattle trade of the country, and one which would touch both farmer and butcher. If tuberculosis were a serious disease like pleuro-pneumonia, the Government should make provision for the compensation of the fleshers."

It is surely ridiculous that the decision as to the suitability or unsuitability of meat for human food should be left to a gentleman who, however well educated in law and literature, has such ideas on the subject of tuberculosis in cattle, and its relation to the health of the community.

Such, evidently, is the opinion of some of the other justices of the peace, for we find that they, on appeal, decided that the meat was unsound and unwholesome, and must be destroyed. We agree with the spokesman in this case on more points than those involved in the decision. The butchers, he says, "were a respectable body of citizens, and had been brought there without any knowledge of having done injury. They purchased the animals without the knowledge that they were diseased, and paid a high price for them.....However, their interest was a minor consideration to that of the public at large."

In Glasgow we have another example of the glorious uncertainty of the law in respect to this question. The stipendiary magistrate inflicts a penalty of £1 on a cattle salesman for a contravention of Section 271 of the Glasgow Police Act, in respect of his having in his possession four carcasses of cattle which were unfit for human food, with a view to sale. One of the Lords of Session in the Court of Appeal quashes this conviction on a point of law, and on the ground that the meat was not meant for human food.

Let us go a step further. Recent proceedings in Glasgow have caused a considerable quickening amongst medical officers of health and others having to do with the question of diseased meat. Some are actively engaged in carrying on a crusade against the sale of tuberculous meat, and are making some headway against very long odds; but, on the other hand, we find on referring to the thirty-third annual report of the medical officer of health to the Metropolitan Board of Works, Holborn District, that the bacillary theory of consumption is utterly scouted, that the report of the Royal Committee is pooh-poohed, and that the bacilli of tuberculosis are compared to "the worms that spread under and cover our corpses, and perform their allotted and beneficial *rôle* in the economy of Nature. The attempt to extirpate them is, to my mind, an impossible task—a vain endeavour to thwart the immutable laws of God and Nature." How can the lay public be brought to consider the matter seriously when a medical officer of health, who is understood to be engaged in waging continual war against filth and refuse and disease and death, talks in this way, and confuses things that have absolutely nothing to do with one another? Even all medical officers of health, then, cannot be relied upon in this matter.

The present system, or want of system, is radically bad. Farmers, cattle dealers, and butchers have no solid ground on which to stand. One day they may be fined and the next acquitted; by one medical officer their fault may be condemned and by the next condoned; and by one judge they are told that the Act says this, and by another that it says something very different. No wonder is it, then, that the butchers wish to form themselves into a jury. They would, at any rate, be thoroughly consistent in their arbitrations.

What we want, and what the medical profession must fight

for, is a definite system of control, placed in the hands of thoroughly qualified inspectors, who shall have full power to condemn without appeal and destroy all meat that they may consider unfit for human food. The foreign system of stamping meat must be introduced, so that all meat not actually killed under direct supervision must still pass under the inspector's examination.

Whether the compensation is to be out of the rates, out of the slaughter-house dues, or by a system of mutual insurance, has still to be considered, but that a competent medical and veterinary, or simply veterinary, inspecting staff must be appointed, with very full executive powers, is becoming more and more evident to those who are interesting themselves in the matter of our meat supply.

Let it once be understood that the inspection of dead meat is not a sham, and that there is equally rigid inspection in every district, and it will soon be found that butchers and cattle dealers will be more prompt in detecting tuberculosis during life. As soon as tuberculous cattle cease to pay, the supply will be cut down to the demand; and when the cattle that are now rejected in Glasgow, Sheffield, and Belfast can find no buyers in other markets, fewer of these animals will, during life, find their way into the hands of either salesmen, butchers, or consumers.

RECENTLY INTRODUCED HYPNOTICS AND ANALGESICS.

THE chief interest of the discussion in the Section of Pharmacology and Therapeutics lies in the fact that it will serve a much-needed purpose in systematising our knowledge of the relative therapeutical values of the recently discovered hypnotics. During the past few years a large number of such substances have been introduced into practice, the newer ones following the older with such rapidity that it has been impossible for most of us to give each a fair trial, and thus obtain definite ideas regarding their comparative advantages and disadvantages as sleep-producers.

The substances are well known to most of us by name. We are aware that they are hypnotics; we see them warmly recommended as such, but after one or two trials, in possibly unsuitable cases, each in turn is thrown aside, and we return to the older drugs which, from our greater experience of them, we can use with more confidence and precision. This is much to be regretted if the new remedies present any advantages over the old in the treatment of disease, a matter which can only be decided by collating and comparing the results of a large number of clinical observers.

The chief reason of the present unsettled state of opinion regarding the general utility of the newer hypnotics is undoubtedly to be found in the absence of carefully worked up and reliable reports embracing a sufficiently large series of cases. The communications in the different medical journals regarding them have been extremely numerous, but for the most part too fragmentary to afford much information or guidance for their application in practice.

We are all familiar with the range of usefulness of such hypnotics as chloral hydrate, opium, or bromide of potassium, and the only interest which the newer hypnotics have for practitioners lies in the question as to whether they are capable of advantageously replacing the older ones in certain cases. It is probable that every observer, in using a new hypnotic, takes one of these three drugs as a standard by which to test its efficacy. Yet in comparatively few reports has much indication been given us why or in what cases we should use one in preference to another. Broadly speaking, the same advantages are claimed for all the new drugs, namely, that they do not depress the circulation as chloral hydrate does, nor do they produce the unpleasant after-effects of opium.

From the first, however, it has been admitted that none of them is so powerful as the two last-mentioned drugs, and that their analgesic effect is small. We already knew these facts from the results of experiments on animals, what we were deficient in being a clear comprehension of their applicability and utility in the treatment of disease. Further, it is essential that our pharmacopœia should not be burdened with a large number of drugs having similar actions, and hence, difficult as the task admittedly is, it is urgently necessary definitely to fix the relative clinical value of each remedy. That having been done, it is an easy matter to discard those which by common consent are admitted to be less suitable than the others.

In the discussion at Leeds we have laid before us the experience of competent authorities who have paid special attention to the subject, the result being a distinct accession to our practical knowledge. In Professor Leech's admirable introduction to the discussion we have a carefully considered and clear statement of general principles along with thoroughly practical descriptions of the merits and demerits of each drug. In reading it we are at once made conversant with all the questions and issues involved, and more especially with the relative points for and against each drug. As a result we may conclude that acetone, hypnone, and methylal are, from one cause or another, inferior to the others; while as regards chloral-urethane, and chloralamide we have not enough information to enable us to come to a decision. This leaves urethane, amylene hydrate, sulphonal, and paraldehyde, and in the discussion we have laid down clear indications for our guidance in their use.

When sulphonal was first introduced it was highly recommended as a valuable and safe hypnotic, which produced no unpleasant after-effects. It is unfortunately the fate of many new remedies to be at first highly praised, but, fortunately, their deficiencies are soon discovered. This is especially so with drugs such as hypnotics, which act on the higher cerebral centres. If prescribed for simple insomnia their unpleasant action is strongly marked, and the more so as the tendency of the disordered nervous system in many of these conditions is to exaggerate slight symptoms. There is no hypnotic at present discovered which does not possess some drawback. The unpleasant effects following the administration of this class of drug may be summarised shortly. They may be too slow in producing their effect; vomiting may follow their action; the effect may be too prolonged, lasting into the succeeding day; sleep may not be produced at all, only a fitful drowsiness; a condition of excitable wakefulness may be induced by the drug, and on the succeeding day functional disorders of the nervous system may be present, such as giddiness, and inco-ordination of movement. We are also as practitioners confronted with the fact that the same hypnotic will produce many varying effects

in different individuals, a result no doubt owing to the varied development of the higher cerebral centres, at present so little understood.

In applying these remarks to sulphonal, it is found that the majority of observers have obtained good results from its use. Speaking generally, in doses of 20 to 40 grains it produces a quiet sleep from which the patient awakes refreshed. But this is not always so, and Dr. C. Griffith has in a recent paper in the *Therapeutic Gazette*, May, 1889, given a summary of the results obtained by different practitioners as well as himself for the use of the drug. One great disadvantage of sulphonal is its insolubility, which causes it to have a slow action. Its absorption by the stomach is hastened, as Kast has shown, by administering it in a large quantity of liquid, and by the presence of hydrochloric acid, of peptones, and of salts, especially sodium chloride.

A greater disadvantage of the drug, however, is, as Dr. Griffith emphasises, "the marked tendency which its hypnotic action has to persist during the succeeding day." And this is a great drawback, as it renders patients with simple insomnia incapable of exertion during the day. There is also no fixed standard of dose, but this is an objection which can be raised against the majority of potent remedies. With sulphonal a dose of 60 grains may be ineffectual. A dose of 30 to 60 grains is, however, in the majority of cases, more likely to produce a hypnotic effect than a smaller dose. As sometimes happens with morphine, a condition of excitement instead of sleep follows the administration of sulphonal. Dr. Griffith's cases in which this happened comprised such different conditions as disseminated sclerosis, neurasthenia, rheumatoid arthritis, alcoholic delirium, and simple insomnia. The sleep produced by sulphonal may, in many cases, also be restless and not refreshing. A sense of fatigue, depression, and confusion of mind may follow the use of sulphonal. But one of the most important symptoms noticed is undoubtedly the disturbance of gait experienced by the patient. This ataxic condition, which may be so severe as to cause inability to walk in the dark, has been noticed by many authors in Germany; it was also made prominent by several speakers in the discussion on hypnotics in the Section of Pharmacology and Therapeutics. It has been noticed by several observers also that this incoordination is very liable to occur if sulphonal be given at the same time as opium or to opium *habitués*.

It is tolerably evident that none of the new hypnotics can be regarded as a perfect hypnotic, the chief fault being that no one of them is sufficiently powerful in action for certain cases. They induce sleep rather than compel it. The number of such chemical bodies which can be made is, however, practically limitless, and there is good reason for hoping that we shall ultimately obtain a hypnotic which will act as powerfully as chloral hydrate without exercising any depressant effect on the circulation.

HOW INFECTION IS SPREAD.

One of the most difficult matters with which sanitary officers have to deal is the spread of infection from the sick to the healthy. Sometimes the spread is the result of inadvertence, sometimes, and unfortunately much too frequently, it is the result of gross ignorance; but in other instances the infection is spread through culpable carelessness, or through utter disregard of warnings and of the duty which each member of the community owes to his fellow men. It is to be feared that a vast number of cases belonging to this latter class occur and pass without due punishment; but when such a case of wilful exposure is discovered, it is a matter of public importance that the offender should receive the punishment which he so richly deserves, and that the occurrence should be used as a means of conveying instruction to the more ignorant portion of the general public.

The Portsmouth sanitary authorities have set a good example in this respect. A dealer in second-hand clothes who lives in Landport was summoned recently under Section 126 of the Public Health Act, 1875, for having exposed his child in the street whilst suffering from scarlet fever, without taking proper precautions against spreading the disease. From the evidence it appears that the child was ill from August 15th to September 20th. On August 26th the medical officer of health received a certificate from the medical attendant to the effect that the child was suffering from scarlet fever. The sanitary inspector visited the house, which was a shop for the sale of second-hand clothes, and, in consequence of his report, the health officer endeavoured to induce the parents to allow the child to be removed to the Hospital for Infectious Diseases, where the patient would be properly isolated and nursed. This advice was not, however, accepted, and the parents were therefore warned that the patient must be kept upstairs with a proper nurse, for six or seven weeks—perhaps even longer—until her skin had finished peeling off. Notwithstanding this warning, the child was found downstairs within three weeks, with the skin peeling from her hands and infecting the clothes in the shop. It is not possible to estimate the amount of misery that may have resulted from the exposure of this scarlet fever patient, but it is doubtless very inadequately represented by the fine of £3 which was imposed.

Two other cases, which, if less culpable, were no less dangerous to the public health, were recently investigated by the coroner for the eastern division of Middlesex. In one case the mother of the deceased child was a maker of match boxes. Medical advice had not been called in, but the mother had treated the child as best she could with saffron. There were other children in the same house, and one of them, a little boy, was subsequently taken ill. Upstairs there were three children belonging to the family of a tailoress suffering from scarlet fever, and next door there was another child also suffering from the same disease. The tailoress did not desist from her work during the illness of her children. The grandmother of the deceased child made the somewhat startling statement that she did not know that scarlet fever spread.

In the other case investigated by the coroner, the child was the infant daughter of a cigar maker, who remained at his work during his child's illness. Another child living in the same house continued at school during the illness.

All these cases illustrate the importance of educating the public to regard the sanitary hospital as an institution, established at the cost of the rates, not only for the protection of the health of the community, but also for the benefit of the individual resident, who may either be himself attacked by infectious disease, or have it in his family. It is seldom

that a poor man's house affords the means of properly isolating a case of infectious sickness, or that the natural affection of the patient's relatives can provide all that is needed for the recovery of the sufferer. In a well-ordered hospital, however, the patient is sure to receive careful nursing, good treatment, and proper food. Recovery is thus much facilitated, and if the hospital is, as it should be, free for the use of the inhabitants of the district, no expense whatever is imposed on the patient or his family. Moreover, the other members of the family are relieved from the risk of contracting the disease, and are left free to pursue their ordinary avocations without endangering the public health. It is satisfactory to find from the reports of medical officers of health and others that there is a growing inclination on the part of the public, both rich and poor, to avail themselves of the benefits of the sanitary hospital where the local authority have been sufficiently far-sighted to provide such a building. Without a proper infectious diseases hospital a district is without one of the most effective defences against epidemics.

ACTION IN LUNACY.

THE action of Somerville *versus* Rose was tried this week in the High Court of Justice, Queen's Bench Division. It was an action against a medical man to recover damages for an alleged libel. The libel was stated to be the certificate signed and made by the defendant, under which (with other documents) the plaintiff had been sent to an asylum as a person of unsound mind. From the asylum it appeared she had been released after a short time, "it being ascertained that she was not insane," according to her counsel's statement of case, as reported. The certificate had been made and signed, and the plaintiff had been placed under care and control, and released therefrom more than seven years ago. The date of the medical certificate was October 10th, 1882; its contents were to the effect that the facts indicating insanity observed by the certifier were as follows: "I found her very much excited. She had smashed a mirror over the mantelpiece, and when I asked her why she did it she told me she had done so because it was her birthday, and that she wanted to call public attention to the fact. She also told me that she heard voices at night that kept her from sleeping. Her appearance and manner were both indicative of a person of unsound mind." Also that her husband "told me she was often violent, that she often threatened to destroy herself, and that she behaved with violence towards her own children."

In defence it was stated that the defendant had a complete answer to the charge of acting without due caution, but that there was an objection which was fatal to plaintiff's case. The only ground upon which the action could be brought was that of acting recklessly. That being so, as the writ in the action was not issued within twelve months next after the release of the plaintiff from the confinement consequent upon the writing of the certificate, her right to sue was barred by statute. This was a stale claim, brought six years after expiry of the right to sue.

Lord Coleridge assented. If the act complained of was an act done in pursuance of the statute, the action must be brought within one year; otherwise the statute would be very oppressive. He gave judgment for the defendant, with costs.

In a number of actions brought against medical men in recent years for signing certificates of insanity years before, the statute above-mentioned has been vainly pleaded in defence; so that the twelve months' clause appears to afford a very precarious defence against actions brought even years after release of the complainants from the care and control to which the certificates conduced. There is no mention of double costs being granted to the defendant in the action above-mentioned; the statute cited says that under such circumstances he shall recover double costs.

Apart, however, from this particular point, this action (which we believe is the first of the kind that has occurred since the passing of the Lunacy Acts Amendment Act, 1889, though it was begun a year ago) might perhaps have been arrested at an earlier stage under the power given by the new Act, which provides that "1. A person who has, either before or after the passing of this Act, signed or carried out an order or medical certificate that a person is of unsound mind, shall not be liable to any civil or criminal proceedings if such person has acted in good faith and with reasonable care. 2. If any proceedings should be taken, they can be stayed by a summary application to the High Court of Justice. 3. This section shall come into force immediately after the passing of this Act."

It is probable that if a summary application had been made to the High Court of Justice to stay the action, it never need have come into Court at all, and that the defendant might have been saved much annoyance and waste of valuable time.

THE collections of the Birmingham Hospital Sunday Fund amounted on October 27th to £3,690, as against £3,421 at the corresponding date of last year.

THE Harveian Lectures will be delivered on November 21st, 28th, and December 5th by Mr. J. Knowsley Thornton, the subject being "The Surgery of the Kidney."

AT a recent meeting of the New York Society of Medical Jurisprudence and State Medicine a resolution was unanimously adopted expressing sympathy with Drs. Irwin, Ferguson, and Hance, who were recently charged with having improperly performed a necropsy on Bishop, the thought reader.

THE corner-stone of an American hospital at Teheran was recently laid by the Minister of the United States to the Court of the Shah. The proposal to erect the hospital originated with Dr. W. W. Torrence, of Teheran, and funds have been obtained partly by donations raised in America and partly by subscriptions in Persia itself, many distinguished Persians having made generous contributions.

THE OBSTETRICAL SOCIETY OF LONDON.

THE next meeting of this Society will be held at eight o'clock in the evening of Wednesday, November 6th, at the Society's Library 54, Berners Street, W.

DEATH OF A MEDICAL MAN FROM GLANDERS.

OUR Vienna Correspondent writes: A painful sensation has been caused here by the death of Dr. Hofmann von Wellenhof, assistant to Professor Grüber in the Institute of Hygiene. Dr. Hofmann, who was only 26 years of age, had under his care a coachman who had contracted glanders from one of his horses. In preparing

microscopic specimens of the bacilli of glanders Dr. Hofmann himself fell a victim to the disease, the infection, as was proved by *post-mortem* examination, having taken place through the mucous membrane of the respiratory passages. Death ensued very rapidly. It is said that another case of glanders has since come under observation in Professor von Schrötter's clinic.

M. RICORD'S FUNERAL.

Our Paris Correspondent writes: Professor Ricord's funeral took place on Saturday, October 26th. It was an imposing ceremony. The coffin and hearse appeared buried under the enormous quantity of wreaths placed on them, bearing testimony to the personal esteem he won during lifetime; and the military honours rendered to the deceased were evidence of the worldly distinction he had attained during his professional career. M. Péan spoke in the name of the Academy of Medicine, and M. Fournier represented the pupils of the late distinguished professor.

CHLORATE OF POTASSIUM.

Dr. Coghill, in a paper read at the ninth International Medical Congress, confirmed the results of Wöhler that chlorate of potassium is excreted in the urine unchanged and in the full amount ingested, and hence does not give off oxygen to the tissues. Nevertheless, besides its local uses, he finds it of value in preventing abortion, in all cases of pulmonary insufficiency, as phthisis, chronic pneumonia, and bronchitis, in anæmia, chlorosis, and general malnutrition. In addition it has an antiseptic action in diseases of the genito-urinary tract where there is suppuration or purulent or phosphatic urine.

NOTIFICATION OF INFECTIOUS DISEASES IN THE METROPOLIS.

The Infectious Diseases Notification Act came into force in London on Wednesday last, and in future every medical practitioner will be bound by law to notify to the medical officer of health for his district every case of small-pox, cholera, diphtheria, erysipelas, or scarlet, typhus, typhoid, relapsing, continued or puerperal fevers, which he may be called upon to attend. Every practitioner in the metropolis ought before this to have received a book of certificate forms, and anyone who may find that he has been accidentally omitted ought to make application to the medical officer of health of the district in which he resides. In most cases the certificate forms have been accompanied by printed documents explaining the scope of the Act. The information thus afforded by the parish of Chelsea, acting on the advice of Dr. E. Seaton, the medical officer of health, is fuller than in any other case which has come to our notice. In this parish medical practitioners have been furnished not only with the notification certificates in a most convenient shape and size, but with a copy of the Bill and a map of the district. This is a most valuable addition, as the boundaries of the various metropolitan districts are very intricate, and we suspect that for some time to come a good deal of confusion will arise in districts where the vestry have not taken the precaution which Dr. Seaton's forethought has devised

THE ANTISEPTIC FUNCTION OF THE GASTRIC JUICE.

Professor Kast, the Director of the new General Hospital, Hamburg, writes on this subject in a "Festschrift" on the occasion of the opening of the hospital. Spallanzani showed, a hundred years ago, that the gastric juice has an antiseptic influence, and it has since then been proved by N. Sieber, C. Schmidt, and others that this influence is due to the free hydrochloric acid which it contains. The investigations of Baumann have shown that in healthy subjects the aromatic bodies found in the urine are due exclusively to intestinal decomposition, their amount, as united with sulphuric acid, being in a direct relation with the amount of the products of decomposition in the intestine. In Professor Kast's experiments the exact relation of the ether sulphates to other sulphates in the urine was ascertained by daily examinations, a uniform diet being given, and then copious alkalies were supplied in the food, so as to neutralise the gastric HCl; and the effect of this on the ether sulphates of the urine was examined. The conclusion is arrived at that the antiseptic function of the gastric HCl is its chief function, while its digestive function is a subordinate one. This is only true so far for the products of ordinary decomposition; the case is different with the pathogenic bacteria, many of which are highly resistant organisms. We have no means at present of estimating the amount of the chemical products due to the vitality of pathogenic organisms in the intestine. It is true that Brieger regards the diamines as due to pathogenic bacteria. But the diamines are a direct product of such bacteria, not, like the aromatic bodies found in the urine, formed from a previous substratum due to bacterial activity. Moreover, we have no clear ideas on the transition of such diamines into the urine. Hence at present we have only to fall back on the physiological action of pathogenic bacteria as an index of their existence. Baumann's and von Udransky's quantitative estimate of pentamethylene diamine (Brieger's "putrescin") in the urine, but originating in the intestine, constitutes the latest advance in this direction.

HERNIA AND DISEASE OF THE UPPER AIR PASSAGES.

Dr. W. Freudenthal read a paper on this subject at the meeting of the American Medical Association, at Newport, Rhode Island, last June. He stated that of 500 subjects with abdominal hernia who had passed under his examination, 143 were subject to marked disease of the upper air passages that made surgical interference absolutely necessary. Among about 80 members of a family, also examined by Dr. Freudenthal, almost all had diseases of the upper air tract and one-third had herniæ. Where nasal diseases are less frequent there also less herniæ are found. According to the frequency of diseases of the upper air passages, hernia was found in 50 out of 1,000 conscripts in the United States, in 22.89 in France, in 16.61 in Italy, in 14.09 in Austro-Hungary, and in less than 14 out of 1,000 conscripts in the German Empire. Hard physical work such as lifting weights and ascending mountains never gave a predisposition to hernia. On the other hand, sedentary occupations and certain causes which predisposed men to post-nasal catarrh and other diseases of the upper air tract decidedly, on that account, predisposed to hernia. In women hernia was rarer than in man, on account (according to Dr. Freudenthal) of the weaker stress used in pressing down the intra-abdominal contents during the act of hawking or clearing the throat.

THE MEDICAL PROFESSION IN SOUTH AUSTRALIA.

A recent decision of the Supreme Court for South Australia has placed the medical profession in the colony in a position of considerable difficulty. The Medical Board of the colony is bound by an Act passed in 1880 to register the name of any person proving to the satisfaction of the Board that he possesses qualifications which would entitle him to practise medicine in all its branches, and to hold appointments as a Government medical officer in any foreign State. In 1881 a person holding the degree of M.D. of the Hahnemann College of Chicago, obtained, as is alleged, after a very short curriculum, applied for registration and was refused. The application was several times repeated, but the Medical Board, having taken the opinion of the Attorney-General, adhered to its refusal. The applicant then appealed to the Supreme Court for a *mandamus* directing the Medical Board to register his name. The

last issue of the *Australasian Medical Gazette* which has reached this country contains a full report of the case, which was heard before two judges. The *mandamus* was issued, the Court being apparently guided to this decision mainly by certain affidavits, which set out that the degree of M.D. of the Hahnemann College entitled its holder, after registration by the Board of Health of Illinois, to practise medicine in all its branches in that State, and to hold medical appointments under the Government of that State. Also, that on presentation of the diploma to the board of health of any other State he would be entitled to similar privileges in that State, and so on throughout the Union. The Medical Board met shortly after the *mandamus* was issued, and gave a certificate of registration to the applicant, but, without transacting further business, the members resigned. A meeting of the South Australian Branch of the British Medical Association was summoned to consider the present unsatisfactory condition of the laws regulating the practice of medicine in that colony. Fresh legislation is urgently needed, and it is hoped that the Government may take the matter up, as the Premier, Mr. James Cockburn, is a member of the medical profession and an M.D. of the University of London. The possibility of a difficulty of this kind arising was happily foreseen at the time of the passing of the Medical Act (1886) in this country, only such foreign diplomas being registrable (Clause 13) under any circumstances of reciprocity after they have been recognised "by the General Medical Council as furnishing a sufficient guarantee of the possession of the requisite knowledge and skill for the efficient practice of medicine, surgery, and midwifery." The want of any authoritative statement of the status and requirements of the various universities and colleges in the United States is a source of great inconvenience to the profession throughout the world.

THE PECULIAR PEOPLE.

From time to time reports appear in the papers headed "The Peculiar People Again." The same story is told before a coroner's jury, the same medical evidence is given, and the same verdict is returned. On a recent occasion the coroner and jury slightly varied the proceedings, the former by declaring that "this state of things ought to be stopped," and the latter by hissing the inculpated parents. The fanatics themselves appear to have varied their ritual of late, for in this case, though "the Elder" was called in, the child was not "anointed." The next step, we presume, will be to dispense with the questionable services of "the Elder," and then it will be a difficult thing to decide what is the difference between a "peculiar" death from neglected bronchitis and a common one. The coroner said that "it was disgraceful that through the views the mother held, four of her children should, have died," and protested that he was tired of it; the mother intimated that she had still another child which she was prepared to sacrifice in a similar manner "if it were the Lord's will." It seems to us that, in the words of the jury, it is quite time that the Legislature should interfere, What is to prevent the formation of a child murdering company, under some fantastic religious appellation, the members of which by various means, all too easy to practise, should sacrifice their children after this fashion? It is very questionable if we do not stretch our charity too far when we concede that this is a religious question at all. In a country where some 250 religious sects have freedom to preach any doctrine they like, it may seem undesirable to interfere with any doctrine, however absurd; but we fail to see in this case where the doctrine comes in. Bronchitis, convulsions, and bowel irritation are as distinctly amenable to skilled medical treatment as is a hungry stomach by wholesome food, or a chilled back by a warm coat, and if we punish a parent who lets his child go without the latter necessaries, we are equally bound to see that the former is not withheld. The religious question is really not involved, and the pretended scruples have no real bearing on the question. The "anointing"—surely a vital portion of the ritual if it were seriously believed in—has been dispensed with, and the farce of treating the matter as in any sense one of conscientious religious scruple should no longer be maintained. There have been religious fanatics who have had conscientious scruples against wearing clothes, and recently a faddist declared it sinful to wear woollen garments, as their use necessitated the robbing of sheep of their wool; but as we should not respect the conscientious scruples of parents who turned their children naked into the streets, we may equally, without "tyranny" or "persecution," demand that medical assistance in serious illness, which the law provides gratuitously, shall be equally considered a necessary which it is criminal to refuse. The vaccination laws, and the new Infectious Diseases Notification Acts, are interferences with the liberty of the subject, and probably in some cases run counter to the crazes of particular religionists, but the common sense of the great majority of English people supports them. We sincerely hope the Home Secretary, or (if he is powerless) the Legislature itself, will bring common sense to bear on what is nothing less than a peculiar and disgraceful scandal.

THE ROYAL COMMISSION ON VACCINATION.

The Royal Commission on Vaccination, which was appointed at the end of May, has held six sittings, during which it has examined four witnesses: Sir John Simon, Dr. William Ogle, Dr. Thorne Thorne, and Dr. Rauch, medical officer of the Illinois State Board of Health. An interim report has just been issued containing the evidence of these witnesses (to which we shall refer at an early date), and a description of the manner in which the inquiry is to be carried on. The heads into which the evidence is to be divided are (1) the historical and statistical case in favour of vaccination; (2) the arrangements made for vaccination under the existing law, and the mode in which the law is administered; (3) the case against vaccination, and especially against its continuing to be made compulsory; (4) the reply to these objections; (5) any substitutes that can be suggested in place of vaccination for the purpose of preventing the spread of small-pox; (6) any improvements that can be suggested in the present law or its administration for the purpose of removing objections to vaccination or making it more effective. The full inquiry is expected to occupy about two years. Dr. Barry gave, on Wednesday last, further evidence; and Staff-Surgeon Theodore Preston, of the Medical Department of the Admiralty, was afterwards examined as to the success of vaccination in the navy.

CLINICAL SOCIETY OF LONDON.

The first meeting of this Society after the long vacation took place on Friday, October 25th, instead of a fortnight earlier, October 11th, on which date it should have been held. The members assembled in one of the rooms of the new home of the Royal Medical and Chirurgical Society at 20, Hanover Square, as the large meeting-room is not yet ready for use. After the reading of the minutes of the previous meeting, the President (Mr. Christopher Heath) addressed the members. He considered that the Society had done well in accepting the terms offered them by the Royal Medical and Chirurgical Society, although those terms were somewhat higher than they had formerly paid; but a special meeting of the Council, held last session, had decided to accept them. The President of the Medical Society had also kindly offered them the gratuitous use of that Society's rooms in Chandos Street for two or three meetings at the beginning of this session, but the officers of the Clinical Society, thinking the new premises at 20, Hanover Square would be ready, had declined the friendly offer. The volume of the Society's *Transactions* had been already distributed to the members earlier than in previous years, and for

this increased expedition the thanks of the Society were due to its honorary secretaries. One change was also to be noted in the volume. It contained an appendix, giving the later histories of many cases detailed in former volumes, in accordance with a suggestion made last session by Mr. Heath himself. The size of the type in which the names of the members are printed is also reduced, with the result that much space was thus saved. Next year it is proposed to carry this compression still further by excising the names of the appointments held by each member, and giving only the members' names, addresses, and offices held by them in the Society, and number of the papers read by them at the meetings. The illustrations in the volume were as good as those of former years; some being paid for by the Society, some by the authors of the papers. The President then called the attention of would-be authors to the regulation which prescribes that, "as a rule, the length of time occupied in the reading of papers should not exceed ten minutes." He thought the rule a good one, and authors should endeavour to curtail their papers to that extent. He remarked that the paper about to be read by Mr. Mayo Robson was one instance of how the compression might be done. Mr. Robson had tabulated the fourteen cases detailed in his paper, which he had had printed, so that a copy was ready for each member present at the meeting. These slips added much to the interest experienced by those present in the reading of Mr. Robson's interesting paper, and supplied definite data upon which the discussion was based.

THE SCIENTIFIC GRANTS OF THE BRITISH MEDICAL ASSOCIATION.

DR. SIDNEY MARTIN has, on the recommendation of the Scientific Grants Committee, at its meeting held on October 15th, been reappointed by the British Medical Association one of its research scholars for one year. The following additional grants have been made by the Council in accordance with the recommendation of the Scientific Grants Committee: Mr. Hankin £50 to continue his investigations into the nature of an albumose that has been obtained from anthrax cultures under certain conditions[1]; Dr. R. Kirk £10 for a research on alcaptonuria and on the distinction between albumen and mucin in the urine, and some other points in connection with proteids in that fluid; Dr. J. R. Bradford £15 for some experiments on the action of the cortex cerebri on the vaso-motor system; Dr. H. H. Ashdown £10 for a continued research upon absorption from the bladder.

THE THEATRICAL PIT.

THE humble lover of Thespis who seeks the pit is once more complaining of its discomforts. There are discomforts even in stalls and private boxes, and benevolent persons who see the play from those coigns of vantage naturally feel for their fellow-playgoers who are situated in the yet more uncomfortable pit. Grave as must be the danger to the audience in the more expensive regions in case of fire, the peril of the pittites in many theatres is awful to contemplate. At the best, seeing out a play from the pit is a trial even to the robust constitution of an active young man; yet the pit ought to be the healthiest part of the house, far below the hot air of the galleries, and well away from the heat and draught near the footlights. Unfortunately, it has all the disadvantages of a low-roofed chamber, being more or less (sometimes completely) overhung by the dress circle. Pit reform must be slow, for people flock to the pit notwithstanding the time-honoured difficulties in getting into it, and the equally ancient discomforts in staying there. Still, theatrical managers would do well to better the condition of the pittites, for by so doing moderate and even bad plays would "draw" far better. People will not go in numbers to a doubtful performance to see what it is like, though they will undergo tortures for a great tragedian. The pit doors should open much earlier than is still the custom, and regulations should be devised to prevent the crowding and the final rush—a relic of theatrical barbarism worthy of the old "sea-fights" between the pit and the actors who performed on the canal which ran across old Sadler's Wells Theatre. The pit should be advanced from under the dress circle, and the back rows raised considerably; this would necessitate a lowering of the floor towards the stage, after the plan carried out in many lecture-rooms. The gangways should never be filled up; the "standing-room" system is another anti-hygienic barbarism. Some correspondents of the daily papers believe that the pittite should not only be allowed to enter the pit at leisure and in good time, but also be enabled, by suitable illumination of the building, to pass away his time by reading till the orchestra strikes up. Such an arrangement would be very inadvisable; the diffused light of a theatre is bad for reading. The pittite had best read his Shakespeare or Sheridan at home, and spend his time in the theatre by first inspecting the audience and then following the play. The theatre is meant for observation and recreation, not for study and contemplation.

[1] JOURNAL, October 12th, p. 810.

SIR RISDON BENNETT ON SPECIAL HOSPITALS.

ON Monday, October 28th, Sir Risdon Bennett, M.D., F.R.S., consulting physician to the Victoria Park Chest Hospital, opened the course of lectures which the medical staff propose to give during the winter, with an introductory address. Sir Risdon Bennett referred to the many distinguished members of the profession who had been attached to the Victoria Park Hospital, among others, Mr. Erichsen, John Hilton, and the present Presidents of the Royal College of Surgeons and the Royal College of Physicians; and pointed out what good work might be accomplished in special hospitals, for although specialism in practice had its weak side, yet nowadays the domain of medicine is so extensive that time must be devoted to research in special subjects for a prolonged period in order to obtain any useful results. The lecturer also mentioned several points in which the ideas as to the treatment of phthisis had altered since he was first attached to the hospital. Opinions, for example, regarding the climatic treatment of the disease had completely altered in the last fifty years, and the ground for this alteration might be found in the observation (made independently by several physicians) that in many cases patients with even advanced phthisis did better outside than inside the hospital. This, of course, is not a universal rule, but it indicates the necessity of fresh air, dry and not necessarily warm, for consumptive patients. Sir Risdon Bennett considered that one of the uses of special hospitals was that they were great fields for original research into the natural history of disease. In a chest hospital, for example, the different conditions considered in the etiology of phthisis might be investigated, such as the temperature, moisture, etc., of the air, and the question of heredity. The question of race, too, was important; the Jews were, for example, considered as more or less free from tubercular affections, and this might be due to the careful selection of their meat. Dr. Livingstone, the great African traveller, had also told the lecturer that the native races of Africa were particularly free from tuberculosis; and yet it is a generally accepted fact that the negro race is peculiarly prone to phthisis if he comes under the influence of civilisation. Sir Risdon Bennett dwelt on many other interesting topics, for which his lecture (which will be published) must be consulted. He concluded by wishing success to the new scheme of opening the hospital for clinical instruction. The first lecture of the course will be given on November 7th, at 4.30 P.M., by Dr. Thorowgood, the subject being "Basic Disease of the Lung."

MR. RITCHIE ON THE HOUSING OF THE POOR.

At a dinner given by the Lord Mayor at the Mansion House to the mayors and provosts of the United Kingdom, Mr. Ritchie, President of the Local Government Board, spoke of the importance of proper housing of the poor. He said:—"To his mind, the most important question of the day was the social condition of our people, and the most important element in this was the obtaining for the working people dwellings fit to live in. It was not so much the legislation that was at fault. If the existing law were adequately put in force, there ought not to be an insanitary or overcrowded dwelling in any town in England. It was not the ratepayers who ought to be called upon to amend this condition of things, but the owners and landlords, who should be compelled to put their insanitary dwellings into a sanitary condition. The powers possessed by municipalities were ample to compel owners and landlords to keep their houses in a sanitary condition, and put a stop to overcrowding." There can, indeed, be little doubt but that a vigorous exercise of existing powers by the local authority to prevent overcrowding, subletting, and the persistence of insanitary conditions would soon make it worth while for the builder to provide healthy block tenements in the neighbourhood. Without such vigorous local action the provision of new blocks of residences will effect but little good. Miss Octavia Hill (who is well acquainted with the homes of the poor), in an article contributed to the *Nineteenth Century*, speaks of frequently finding in close proximity modern healthy blocks of dwellings with vacant tenements, and dreadful crowded courts. This writer continues:—"Why is this? The sympathetic visitor is apt to jump to the conclusion that the reason is that in the healthy blocks the rents are too high for the tenants in the court. Will he inquire what the rents are in each? If he does, ten to one he will find the rent, room by room, far cheaper in the healthy rooms than in the court. He will find that in many, I had almost said most, instances the reasons why good rooms stand empty and bad ones are full are the non-interference in the court with overcrowding, subletting, and rowdiness. If the authorities simply spend money in providing new blocks of tenements in place of exercising their authority to preventing overcrowding and insanitary conditions, the ratepayers' money will be spent but the existing evils will remain. Let the law as it exists be be vigorously carried out when needed, and much good will be effected.

BACILLI IN SALT-FISH (RED COD).

Dr. Alexander Edington has made a report to the Fishery Board of Scotland, in which he considers (1) the cause of the red coloration in salt-fish, (2) if fish in such a condition is fit for human food; (3) what micro-organism might be present in such fish, and in others free from the red coloration; (4) if any method could be suggested whereby fish might be preserved in a dry state free, or comparatively free, from such micro-organisms. Dr. Edington has tried to show that the cause of the condition known as the "red cod" is probably due to a bacillus, and as the bacillus was also found in the salt used for the process of curing, it was possible that the infection was carried in this way. In order to test whether this bacillus was detrimental to life, he performed an inoculation experiment. A quantity of the red growth was injected hypodermically into the cellular tissue of a guinea-pig, but this was unattended with any pathological result. Two tubes of Koch's jelly were taken and mixed with boracic acid, so that the quantity of the latter present in it was 3 per cent. These were, after sterilisation, inoculated with cultivation of the red bacillus, at the same time that two tubes without boracic acid were also inoculated. The four tubes were then placed in an incubator for five days, with the result that the boracic acid tubes were quite clear and sterile, while in the ordinary tubes the thick pellicle and other visible signs of profuse growth of the bacillus were present. The general conclusions drawn are: First, the method of curing cod as at present practised is unsatisfactory, for even if these organisms, isolated, are not hurtful to man, the very fact that they grow there shows that such fish might at any moment be contaminated with organisms of a virulent type; secondly, that the salt used for curing cannot be looked upon as antiseptic; thirdly, that the use of boracic acid to the amount of 3 per cent., while not hurtful to the material, is evidently a means whereby the fish may be kept comparatively free from putrefactive organisms. From these statements the practical suggestions which Dr. Edington would make are: (1) That the water used for curing fish should be as pure as possible; (2) that clean salt fish should be used (heating the salt does not interfere with its qualities); (3) that after salting, the fish should be dried as quickly as possible; (4) that boracic acid should be used in the curing, in the proportion of not less than 3 per cent. of the water used.

SCIENTIFIC TEMPERANCE TEACHING IN SCHOOLS.

In the United States, twenty-five State Legislatures, besides the National Government, have made scientific temperance a compulsory school study in their respective States and Territories. This area includes more than two-thirds of the entire population. Thus some 12,000,000 children are, by law, taught the nature and effects of alcoholic and other intoxicating beverages. The National and States Governments have also adopted graded series of temperance textbooks issued by leading publishers. Various praiseworthy attempts to teach children at school in Britain have met with an encouraging amount of success. The most recent effort of this kind has been one of the most satisfactory, the School Board of Glasgow having allowed Dr. Snodgrass to deliver lectures during one of the regular school hours usually allotted to hygiene and physiology. In this way the temperance lesson has become a part of the recognised school curriculum. It is hoped that, ere long, scientific temperance teaching will be included in our Government Educational Code.

THE INEBRIATES LEGISLATION COMMITTEE'S CIRCULAR TO GUARDIANS.

It will be in the recollection of many of our readers that, at the Cambridge meeting, a resolution was agreed to at the general meeting of the Association, in favour of legislation to empower guardians of the poor to detain habitual drunkards for purposes of cure. At different periods thereafter two circulars were issued to guardians, asking their opinion of this proposal. The response to the first circular was meagre, that to the second considerably better. Three weeks ago a third circular was sent to about 700 boards of guardians, again inviting their opinion as to whether they should be invested with the power (if they should desire to exercise it) of paying for the detention and treatment of pauper inebriates, on like conditions to those now operative with regard to lunatics and paupers having special diseases, namely, either by detention in the workhouse or in some special institution for the treatment of inebriety. The circular referred to "ins and outs," entering the workhouse to recover from the effects of an outbreak, and taking their discharge as soon as they were capacitated to drink afresh. The Committee pointed out that these inebriates were the victims of a diseased condition which had set up an overmastering impulse or crave for intoxication which many were powerless to resist; and that the only chance of curing this disease was by seclusion from intoxicants under proper medical treatment, with freedom from temptation and the adoption of means to aid in the restoration of the lost will-power. The Committee added their belief (a belief shared with the Council of the Society for the Study of

Inebriety) that it would be true economy to deal with such diseased paupers under the provisions of the Inebriates Acts, which Acts, it was hoped, would soon be increased in efficiency by the compulsory reception, in properly conducted homes, of inebriates too broken down in will-power to apply voluntarily for admission. So keen has been the interest invoked by the receipt of this circular that a large number of extra copies have been applied for by various Boards, and many full discussions have taken place at their meetings. So marked has been the advance that some 151 replies have already been received by the chairman. Still more remarkable is the fact that, up to the present, the replies in favour of the Committee's proposal have outnumbered those declining to express any opinion and conveying direct opposition. The numbers are: favourable, 79; no opinion, 64; opposed, 8. Our readers who are acquainted with guardians would do well to use their influence on behalf of the Committee's appeal.

SCOTLAND.

T. SPENCE MEIGHAN, M.D., has been appointed to the Chair of Ophthalmic Surgery in Anderson's College Medical School.

THE Queen has been pleased on the recommendation of the Secretary for Scotland to appoint Dr. Robert W. Reid, joint Lecturer on Anatomy at St. Thomas's Hospital, London, to be Professor of Anatomy in the University of Aberdeen in the room of Professor Struthers, resigned.

THE Council of University College, Dundee, have elected Mr. E. Waymouth Reid, B.A., M.B.Cantab., M.R.C.S., Professor of Physiology. During the past four years Mr. Reid has been assistant lecturer on physiology in the medical school of St. Mary's Hospital.

THE number of medical students who have matriculated at the University of Edinburgh this session, up to noon on October 31st, was 1,525 (approximately). At the University of Glasgow, the total number who had matriculated up to October 29th was 835, of whom about 300 were medical students. This number will probably be largely exceeded during the course of the present week.

ST. MUNGO'S COLLEGE.

THE course of lectures on ophthalmic medicine and surgery is to be conducted by Dr. Wolfe at the Ophthalmic Institution until the eye department in the Royal Infirmary is more fully organised.

EDINBURGH UNIVERSITY COURT: NEW MEMBERS.

IT is announced that Dr. John Duncan, President of the Royal College of Surgeons, Mr. Thomas M'Kie, Advocate, and Mr. W. S. Dalgleish have accepted the invitation of the Committee of the Edinburgh University Council Association to be candidates for the three new Assessorships in the University Court, to be filled up by the General Council at a special meeting to be held on November 29th.

PUBLICITY AT PROFESSIONAL EXAMINATIONS.

THE General Council of the University of Edinburgh has adopted the following resolution anent publicity at professional oral examinations, proposed by Dr. Alexander James: "That it be represented to the University Court, 'That in order to secure the advantages of publicity, any member of the General Council of a Scottish University shall have the right to be present at any of the oral professional examinations in the University of Edinburgh in the faculties in which they are held.'" In speaking to the motion, Dr. James accentuated the fact that there was nothing dangerous or revolutionary in the motion. On the Continent, publicity appertained in relation to examinations, and, to some extent, in England. If the system were adopted in Scotland, the misstatements which sometimes went before the public as to the conduct of their examinations would be discredited, and confidence would be increased.

NEW PRIZE AT THE EDINBURGH SCHOOL OF MEDICINE.

AT the opening of the class of materia medica at Surgeons' Hall Edinburgh, Dr. Craig announced that Colonel William Bathgate had presented for competition to the Royal College of Surgeons a gold medal, to be called the "Bathgate Memorial Prize," in memory of his late father, William McPhune Bathgate, F.R.C.S.E.—to be awarded annually in the department of materia medica and therapeutics. The first examination was held last Saturday, and was open to all candidates who have passed the second professional examination for the triple qualification of the Royal Colleges of Physicians and Surgeons of Edinburgh and the Faculty of Physicians and Surgeons of Glasgow during the current year. The examiners have awarded the prize to Mr. Charles E. Lester, student of medicine.

THE UNIVERSITIES ACT AND THE EDINBURGH MEDICAL SCHOOL.

IN moving the adoption of the Business Committee's report at the half-yearly meeting of the General Council of the University of Edinburgh, Mr. Taylor Innes, advocate, emphasised the importance of the Universities Act to the extramural schools. The subject of extramuralism would require most careful deliberation and inquiry at the hands of the Universities Commission. In the Act it seemed as if the matter were coming up under a new name, and the subject of affiliation was introduced for the first time. It was plain that that subject would come before the Commission in a very serious way. In Glasgow the College of St. Mungo would come up, and he suggested that it was of great importance that the Edinburgh School of Medicine should bring forward its claim for regularising its position in the University. It would be unfortunate if new and untried proposals from another city should engross attention without at the same time full care being bestowed on the existing successful system, with which they were familiar.

THE QUALIFICATIONS OF PHYSICIANS TO THE EDINBURGH ROYAL INFIRMARY.

IN reference to the resolution adopted by the General Council of the University of Edinburgh at its spring meeting, begging the Managers of the Royal Infirmary of Edinburgh to alter their rule as to the qualification of their physicians, so as to make the M.D. of Edinburgh University a sufficient qualification, the following communication was read at the meeting of Council last week from the treasurer of the infirmary, of date April 29th, 1889: "I submitted extract from the minutes of the General Council of the University of date 16th instant, to the managers of the Royal Infirmary at their meeting to-day, and was directed to inform you that the subject of the qualification of their physicians was carefully considered by them in November last, and that they now adhere to the decision then come to." The qualification at present recognised by the managers is the Fellowship of the Royal College of Physicians.

GLASGOW UNIVERSITY LOCAL EXAMINATIONS.

THE annual distribution of prizes and certificates under the University Local Examination Scheme took place on October 26th, in the Bute Hall of the university, under the presidency of Dr. James A. Campbell, M.P. In connection with the Glasgow scheme

there are now thirteen local centres, and the board of examiners numbers fifty-five. The number of candidates is this year 609, eight less than last year, the diminution in numbers being in the common, not the higher subjects. Of the candidates, 488 were girls, only 142 boys, a possible explanation of the preponderance of girls being that they had comparatively few opportunities of undergoing such a test.

SCOTCH UNIVERSITY COMMISSIONERS.

THE Commissioners appointed under the University Act have issued regulations for the election of assessors to the General Council in the University Court of each university. The Council of Glasgow University and that of Aberdeen are to meet on November 27th, the Council of Edinburgh University on November 29th. In the absence of Chancellor and Rector, the Chancellor's Assessor, if a member of Council, or the Rector's Assessor, if a member of Council, is to be chairman; and, in the absence of all these, the meeting elects a chairman. If more than three assessors are nominated, a show of hands is to be taken, but a poll may be demanded. If a poll be demanded, the vote is to be taken by voting papers sent through the post, returnable not later than December 19th. On December 20th the votes will be counted and the results intimated. A member of Council applying personally will be entitled to have his voting paper delivered to him or sent to a different address from that in the register, provided intimation is given to the registrar not later than the day after the Council meeting. The Senate of Glasgow University is ordered to meet on November 28th, of Aberdeen on December 7th, and of Edinburgh on November 30th, to elect their representatives. The General Council of Edinburgh University has resolved to recommend for the consideration of the University Commissioners that the necessary quorum for meetings of Council should be fixed at ten for every completed thousand of members on the roll. The feeling was generally expressed that the meetings of Council were inadequately advertised, and a motion regarding this matter has been tabled for next meeting.

THE ROYAL MEDICAL SOCIETY.

THE opening address of the 153rd session of the Royal Medical Society was delivered last week by Professor Sir Douglas Maclagan. In comparing the former age of medicine (within the learned professor's own recollection) with the present time, Sir Douglas made especial reference to the change of thought and practice in the matter of venesection. Thoughtless and sneering persons were too apt to say that this was just an instance of fashion on the part of doctors. But if they examined the question in a true spirit, he thought they would arrive at the conclusion that the reasons for refraining from the use of the lancet were drawn from the advance which medical science had made during recent years. Were their professional forefathers wrong in employing venesection and were the moderns right in their rejection of this therapeutical agency, which must be admitted to be a powerful one for good or evil? They had the experience of centuries of physicians who regarded blood-letting as one great remedy in inflammation, and the recorded result of their practice by such masters of their profession as Cullen and Gregory was that it was a remedy which they placed in the foreground of their therapeutic agencies. Those were men of too acute powers of observation not to have discontinued its use if it had been inefficient, or, still more, if it had been a hurtful proceeding. Therefore, if bleeding was no longer called for, or was found to be injurious, this must be owing to a change in the type of disease. He was not prepared to say that there was a change in the type of disease, but he acknowledged some change of type on the part of the patient. The conditions of life of all ranks of men had marvellously altered within the last hundred years. Life was now faster, more active, and spent under much higher pressure than formerly. Hence, perhaps, it was that they saw fewer of those sthenic diseases for which their forefathers had no hesitation in using the lancet. Of course if people were never bled now they could not say whether pneumonia patients now would bear bleeding as well as their forefathers did. His contention was that as physicians they would be justified in withholding this remedy, not because they thought patients could not bear it, but because they thought they did not require it. On the motion of Dr. H. Littlejohn, jun., President, the thanks of the Society were accorded to Professor Maclagan for the address. In acknowledging the vote of thanks, Sir Douglas Maclagan returned to the subject of venesection, and indicated that he had some misgivings in his mind as to the modern method. He was not sure whether they had not discarded the lancet too much. For example, in apoplexy, he thought the lancet might be advantageously used in such cases more than at present.

GREENOCK PHILOSOPHICAL SOCIETY.

THE session of this society opened with an inaugural lecture, by Professor Edward Caird, on the genius of Carlyle. Among other lecturers are Dr. Cameron, M.P., who discourses on "The New World of Pasteur;" Professor Cleland, M.D., who gives two lectures on "Teeth;" Dr. G. Sims Woodhead, on "The *Rôle* of Bacteria in Nature;" and Mr. Eric Stuart Bruce, on "Light, Optics, and Optical Illusions."

CLINICAL TEACHING IN ABERDEEN.

DR. GARDEN delivered the introductory lecture on Clinical Studies in the Royal Infirmary to a large attendance of the students of the surgery classes. He paid a warm tribute to the talents of Professor Struthers as a successful teacher, popular lecturer, and students' friend. He also referred to the radical changes in the internal administration of the hospital, and to the gratifying progress displayed in the erection of the new buildings, the completion of which will place Aberdeen in the front rank of cities possessing very complete hospital accommodation and administration. Dr. Garden then proceeded to point out the importance of early and accurate methods of clinical work, and he advised every student to begin to train his powers of observation at the infirmary, so soon as he began university study, if he desired to be a useful practitioner. At the Aberdeen General Dispensary the attendance of students on the six teachers is larger than in former years. Still the medical staff of the institution have ample material in their large clinical fields for daily demonstration. Although much has been done by the directors of this institution to develop its value as a teaching centre, still the present building, so great has been its development in the confidence of the poor who claim its aid, and the students who attend, is too small and hampered to be looked on as the final one of this institution. And we hope that amongst the improvements of the future a new dispensary may not be lost sight of, especially as city improvements are being mooted in the locality. At the Sick Children's Hospital daily demonstrations are given by the physicians and surgeons to an attendance of advanced students largely in advance of last year's. The municipal rulers have offered facilities for the study of epidemic diseases under the care of the medical officer for the city, Professor M. Hay, and a limited number of students attend. It is abundantly evident that there is, at present, a healthy activity in clinical teaching, and that at no time in the history of the school was its value more appreciated. If the school may not claim the large numbers of cases obtained in densely populated districts and larger cities, it may be pointed out that if the principles of thoroughness in examination, and the making the best of the clinical material under considera-

tion be to keep their hold on scientific confidence, there are abundant cases for the needs of a still more developed university.

IRELAND.

TYPHOID fever is said to have broken out among the military in Belfast garrison.

ROYAL COLLEGE OF SURGEONS.

DR. HEUSTON has resigned his place on the Council in order to become a candidate for one of the professorships of anatomy vacant by the resignation of Dr. Thornley Stoker under the amalgamation scheme. Dr. Corley and Dr. Bellew Kelly are candidates for the vacancy, which will be filled on November 5th.

ROYAL BARRACKS.

THE improvements in the Royal Barracks are still far from completion. The troops have been removed from the Phœnix Park to the Agricultural Buildings, and they will not return to their old quarters until they have been made quite suitable for habitation.

TYPHOID FEVER.

TYPHOID fever is just now rather prevalent in Dublin, and we regret to state that three members of the profession—Dr. A. Horne, Dr. Auchinleck, and Dr. Ashe—are suffering from it, although they are all now in a fair way of recovery. The statement in a weekly Society journal is, however, calculated to mislead, as deaths which were not caused by typhoid, and typhoid cases which occurred elsewhere, are all jumbled together in an alarmist paragraph.

COTTAGE HOSPITAL FOR COLERAINE.

A MEETING of the inhabitants of Coleraine and district was held recently to decide with regard to the establishment of a cottage hospital. The funds already promised amount to £277 and an annual subscription of £120. Some objections to the proposal were overruled, and Drs. Mathers and Caldwell spoke strongly in favour of the scheme. They considered it would be a great boon to the public, and also allow the medical practitioners of the district to treat their patients in serious cases at home in place of sending them to Belfast. It was finally decided to carry out the founding of the hospital.

PRESENTMENT FOR THE CORK LUNATIC ASYLUM.

LAST week an application was made to the Recorder of Cork to make an order compelling the Corporation to contribute its share to the maintenance of lunatics in the Cork District Lunatic Asylum. The Crown Solicitor appeared, on behalf of the Inspectors of Lunatic Asylums in Ireland, to ask the Recorder to pass a presentment for £2,019 5s. 8d., which had been rejected by the Council upon the ground that the Corporation think they were properly represented on the Board of Governors. The Act of Parliament was precise that the Corporation should present for the amount, and, if not, the Recorder should make an order. The 40th and 41st Vict. empowered the Inspectors of Lunatic Asylums in Ireland to present, and, in default of payment by the Grand Jury, the amount shall be raised by the order of the Judge of Assize, or of the Court, at any presenting term, which order should have the force of a presentment. The Recorder, having heard the Mayor of Cork, who entered a protest, made an order for the presentment.

THE Eighth Congress of Russian Naturalists and Physicians will be held at St. Petersburg from December 27th, 1889, to January 7th, 1890.

SLAUGHTER-HOUSES AND COW-HOUSES IN LONDON.

THE London County Council have already given proof in various ways of their anxiety to promote the sanitary welfare of the Metropolis, and it is to be hoped that ere long their efforts may result in the removal of many anomalies and unwholesome arrangements which have too long been tolerated. One of the sanitary duties which the Council have inherited from the late Metropolitan Board of Works is that of annually licensing the slaughter-houses and cow-houses within the metropolitan area. They have delegated that duty to a Sanitary and General Purposes Committee, who held their first annual meeting for the purpose of discharging the duty on October 24th. On that occasion they were called upon to consider as many as 709 applications for licences for slaughter-houses, and 671 for licences for cow-houses in various parts of London and the suburbs. Of these applications, 81 were opposed, either by the Council's own inspectors, or by the local sanitary officials, or by interested residents in the vicinity of the premises to be licensed; but the majority being unopposed, they were granted by the Committee without much demur. In the case, however, of the opposed applications, the Committee showed their determination to discourage the continuance of unwholesome arrangements by declining to renew the licence in most of the cases. This action may in some instances cause hardship to individual owners; but the meat and milk supply of the community is a most important matter, and the police are coming day by day to recognise the necessity for insisting on the greatest possible care being exercised in the preparation and distribution of that supply. Many of the metropolitan slaughter-houses and cow-houses are utterly unfit for their respective purposes. Leaving out of account the interests of present owners in existing premises, there is no public necessity for private slaughter-houses in crowded London or urban localities, and public opinion is tending to discourage their existence. Slaughtering can, on all grounds, best be done in public abattoirs, where the sanitary surroundings can be closely looked after, and the meat properly supervised by skilled officers. The Council have done well to revise the existing regulations as to slaughter-houses, and no doubt when the new and more stringent regulations come into force it will be found that many of those premises which have this year obtained a renewal of their licence will on a future occasion be found not to fulfil their requisite conditions. Nor, in these days of rapid railway communication, can any plea of public convenience or necessity be urged for maintaining cow-houses in crowded localities. Those premises are also regulated by by-laws, but it would be well if the present very moderate requirements of those by-laws were made more stringent.

PROFESSOR BARDELEBEN.—A bronze bust of Professor Adolf Bardeleben, subscribed for by his pupils and friends on the occasion of his 70th birthday which he celebrated in March last, was unveiled on October 10th. Professors Waldeyer, von Bergmann, and Pistor formally received it from the sculptor, Herr Martin Wolff, and handed it over to Surgeon-General Mehlhausen and Dr. Spinola, the directors of the Charité Hospital. The bust, which is one-third larger than life-size, stands on a high pedestal of Swedish granite on the round grassplot between Professor Virchow's Pathological Institute and the "Sommerlazareth."

PROFESSOR GERHARDT, in handing over the office of Rector of the University of Berlin to his successor, Professor Hinschius, on October 15th, presented a report, in which he stated that during the academic year 1888-89 the total number of matriculated students was 4,034, of whom 985 belonged to the medical faculty. Two hundred and thirty-nine degrees were conferred, including 140 in medicine.

PROFESSOR NEUMANN, who was called in to the late King of Portugal, has had the Cross of a Commander of the Order of Santiago de la Espada conferred on him. According to a Portuguese newspaper, *Jornal do Comercio*, he received a fee of £4,032 for his visit to Lisbon.

THE Seventh International Pharmaceutical Congress will be held at Milan in the early part of September, 1890. Notice of intention to take part in the proceedings must be sent to the Committee not later than November 30th, 1889. The fee is 10 lire.

THE COMING MEETING AT THE ROYAL COLLEGE OF SURGEONS.

THE Council of the Royal College have published their annual report, to be presented to the Fellows and Members of the College at the meeting to be held at the College on Thursday, November 7th, at 3 P.M. The first subject in the report is the adoption of certain recommendations of the Committee on the extension of the College premises. The sum of £278 16s. was set aside for the provision of lightning conductors and additions to the libraries, and £230 for the erection of a new party wall on the east side of the building, which, when complete, will form the conservator's house. The estimate, amounting to £3,410, for the building of that house was sanctioned by the Council, as was also an estimate of £5,217 18s. for the construction of a new museum building, with heating apparatus, at the back of No. 43 Lincoln's Inn Fields.

The report of the Committee on the extension of the Examination Hall buildings includes the expenses incurred by the two Colleges in connection with the erection of the statue of the Queen and the ceremony of unveiling that work of art, the said expenses amounting to £264 14s. 3d. It also includes the arrangement by which the action Greenfield *v.* the Royal Colleges of Physicians and Surgeons was settled relative to ancient lights. Passing over agenda relating to the election of examiners and the regulation of examinations, the next item of importance is the ratification of the new by-laws and the consequent framing and issue, previous to the annual meeting of Fellows for the election of members of Council, of voting papers. The new system accordingly came into force last July.

The action of the Council in respect to the resolutions carried at the meeting of Fellows and Members held on Thursday, November 1st, is important. The Council felt unable to accede to the requests contained in these resolutions, and held that it was for the interest of the College that discussion on disputed subjects should close with the grant of the supplemental charter. Particular exception was taken by the Council to the claims in favour of Members of the College.

These claims had been embodied in three resolutions: the first urging that a further supplemental charter be drawn up, according the extension of some of the rights enjoyed by the Fellows to the Members, the Council appointing a committee to consider with representatives of the Fellows' and Members' Associations the matters to be included in the petition for the supplemental charter. The Council were further requested to forward a copy of the above resolution to the Lord President of the Privy Council. The third resolution was to the effect that the meeting of Fellows and Members resolved that the Fellows and Members of the College ought to be consulted as to all extraordinary expenditure.

The natural sequence to the action of the Council was the letter from the Association of Members requesting the Council to summon a meeting to consider the course of Parliamentary action with a view to obtain alterations in the constitution of the College. The Council declared such a meeting to be inexpedient. The Association of Members then requested—as before, through their secretaries, Mr. Warwick Steele and Mr. Ashton Ellis—to be allowed to meet in the College buildings. This was refused, and a legal question was raised relative to an advertisement in the JOURNAL and *Lancet*, signed by the secretaries of the Members' Association, summoning the projected meeting. The President directed the secretaries of the College to send a letter to the newspapers, stating that the meeting would be illegal, according to a clause in the College by-laws, the secretaries of the Members' Association claiming, on the other hand, on legal advice, that the Section xvii of the by-laws containing that clause was not valid nor applicable to the matter in hand. The Council finally decided to close the College on February 28th, the day settled by the Members' Association for the intended meeting. After this step had been taken, the consideration of the infraction of the by-laws by the conveners of the suppressed meeting was deferred pending proceedings in Chancery—including a motion by Mr. Lawson Tait—calling in question the validity of Section xvii.

The Council, in considering the penal powers of qualifying medical authorities and of the Medical Council, decided that the disciplinary or penal powers of the College ought to be still exercised by its Council, and increased so as not to confine misconduct to publication and advertisement, but to extend it to cases of infamous conduct in any professional respect. The College Council were adverse to any extension of penal powers to the General Medical Council. The Council agreed to the placing of Mr. Brock's bust of Sir Erasmus Wilson in an ornamental marble niche over the mantelpiece in the East Library, at an estimated cost of £100. Mr. Macnamara was nominated as representative of the College, on a representative committee (under the presidency of the Earl of Camperdown), to consider the pay and condition of army and navy surgeons. The Council agreed that the President, for the time being, of the College, be associated with the *Lancet* Relief Fund as an almoner, the legal adviser of the College, Mr. Wilde, stating that the President, in accepting that office, would incur no practical responsibility. The publication of *The Fatal Illness of Frederick the Noble*, by Sir Morell Mackenzie, was strongly condemned.

After the annual election the President reported the re-election of Mr. Hulke and Mr. Christopher Heath, and the election of Mr. Howse. Mr. Hutchinson was elected President, Mr. Bryant and Mr. Croft Vice-Presidents, for the ensuing year. The Council had resolved, at the quarterly meeting in October, 1888, that a section of the by-laws be so amended that in order to be elected President or Vice-President, a majority of the votes of the members of Council present at the meeting for such election was necessary.

The annual Calendar has also just been published by the Council of the College. It contains the names of 1,138 Fellows of the College, of whom 737 obtained the Fellowship by examination, 11 were elected as Members of twenty years' standing under Section 5 of Chapter 15, Victoria, and 2 *ad eundem*. It also contains the names of 17,170 Members and 866 Licentiates in Midwifery (the examination for this licence, which had been suspended since 1876, has now been abolished). The Licentiates in Dental Surgery are stated to number 676. Holders of the Diploma of Public Health (granted by the Royal Colleges of Physicians and Surgeons) number 29.

The Examiners in Elementary Anatomy and Physiology, appointed in conjunction with the Royal College of Physicians under the scheme for an examining board in England, are elected annually. There have been four examinations during the past collegiate year; 679 candidates presented themselves in Elementary Anatomy and Physiology, of whom 478 passed in both subjects, 79 in Elementary Anatomy, 56 in Elementary Physiology; 66 candidates were referred in both subjects. Fifty-six candidates presented themselves in Elementary Anatomy, 43 of whom passed; 98 presented themselves in Elementary Physiology, of whom 73 passed. The fees received from candidates for this examination amounted to £3,937 10s., the examiners receiving as fees £559 5s. 879 candidates presented themselves in Chemistry, 552 passed and 327 were referred; 804 presented themselves in Materia Medica, 493 of whom passed and 311 were referred.

The Examiners in Anatomy and Physiology, appointed in conjunction with the Royal College of Physicians under the scheme for an examining board in England, are elected annually. They have conducted the "Primary" Examination under the old regulations, as well as the Second Examination of the Examining Board, and have held during the year four examinations, at which 973 candidates presented themselves in Anatomy, 582 of whom passed, and 391 were referred; 1,069 candidates presented themselves in Physiology, of whom 579 passed, and 490 were referred. The fees received for these examinations from candidates amounted to £5,014 16s., the examiners receiving in fees £1,972 5s.

The Board of Examiners in Anatomy and Physiology for the Diploma of Fellow consists of nine members, annually elected by the Council from the Fellows of the College, and has held during the past collegiate year two examinations; 179 candidates presented themselves, of whom 73 passed, and 106 were referred. The fees received from this examination amounted to £1,176, the Board receiving £805 10s. in fees.

The Court of Examiners consisted of ten members, elected by the Council from the Fellows of the College. They conducted the Third and Final Examination in "Surgery" of the Examining Board, as well as the Pass or Final Examination under the old regulations, and the Pass or Final Examination for the Fellowship. During the year the Court has held two examinations for the Fellowship, and four for the Membership. At the former there were 83 candidates, 48 of whom passed, 10 being referred for one year, 25 for six months. For the Membership there were 864 candidates, of whom 476 passed and 388 were referred. The fees pai

by candidates amounted to £10,133 18s., and the fees paid to the Court of Examiners and the Examiners in Midwifery amounted to £5,513 17s. The Examiners in Medicine under the scheme are elected by the Royal College of Physicians: 466 candidates presented themselves, of whom 334 passed and 132 were referred. The Examiners in Midwifery are appointed in conjunction with the Royal College of Physicians. 541 candidates presented themselves, of whom 365 passed and 176 were referred.

The Board of Examiners in Dental Surgery has held two meetings for the examination of 48 candidates, 31 of whom received the diploma. The fees paid by them amounted to £325 10s., of which the Board received £151 4s.

The receipts from all sources during the collegiate year amounted to £121,337 14s. 5d., the largest receipt being from sale of stock, namely, £87,462 1s. 3d., the next largest being fees for examinations for the diplomas of the College, namely, £20,587 14s.; incidental receipts, that is, Public Health Examinations, hire of rooms, sale of calendars, fees from Council, etc., £558 6s. 11d. Receipts from house property and investments, £7,057 8s. 9d.; from trust funds, £273 7s. 7d. Fees retained for candidates, £933 5s. Balance at banker's Midsummer Day, 1888, £4,465 10s. 11d. The expenditure for the year amounted to £121,166 13s. 6d., leaving a balance of £171 0s. 11d, the largest item being for purchase of stock, £83,892 1s. 6d., the next largest being for fees to Examiners, £8,902 1s. Extension of College premises, £6,861 15s. 4d. Half expenses extension of Examination Hall, £4200. Salaries, wages, and pensions for officers and servants in the three departments, library, museum, and office, amounted to £5,319 3s. 6d. Fees to Council, £302 8s. Rates, taxes, and insurance absorbed the sum of £1,126 10s. 3d. Alterations and repairs, £707 5s. 11d. Extraordinary expenses, furniture, *conversazione*, Hunterian Festival, etc., £1,326 0s. 8d. Fees returned to candidates, £1,051 5s. Half general working expenses Examination Hall, £4,260 11s. 7d. Under miscellaneous items—fuel, light, printing, stationery, trust funds, lectures, etc., about £3,300 appears to have been expended.

PARLIAMENTARY BILLS COMMITTEE.

A MEETING of the Parliamentary Bills Committee of the British Medical Association was held on Thursday, October 24th, at the offices of the Association, 429, Strand, to consider the resolutions and references to this Committee from the annual meeting at Leeds and from the Council. There were present: Dr. Robert Barnes (London), Dr. J. W. Browne (London), Mr. H. T. Butlin (London), Surgeon-General Cornish (London), Dr. Walter Dickson (London), Mr. George Eastes (London), Mr. E. H. Galton (London), Dr. A. J. Harrison (Clifton), Mr. Ernest Hart (London), Mr. Brindley James (London), Mr. Robert Jones (Earlswood, Redhill), Mr. C. Macnamara (London), Mr. Parkinson (Wimborne Minster), Dr. Phillips (Reading), Mr. Noble Smith (London), Dr. Danford Thomas (London).

The following resolution of the Council, appointing the Committee for the year, was read:—

Resolved: That the gentlemen whose names are as follows be appointed the Parliamentary Bills Committee: The President *ex officio;* the President-elect *ex officio;* Dr. T. Bridgwater, President of the Council *ex officio;* C. Holman, M.D., Treasurer *ex officio;* Mr. S. H. Agar; Mr. D. B. Balding; H. Barnes, M.D.; Mr. J. Wickham Barnes; Robert Barnes, M.D.; G. B. Barron, M.D.; J. W. Browne, M.D.; A. Carpenter, M.D.; W. Carter, M.D.; Surg.-Gen. W. R. Cornish; G. W. Crowe, M.D.; P. M. Deas, M.D.; Walter Dickson, M.D.; J. Langdon H. Down, M.D.; Mr. George Eastes; Alfred Eddowes, M.D.; R. Esler, M.D.; Sir B. W. Foster, M.D., M.P.; Mr. E. H. Galton; C. E. Glascott, M.D.; Bruce Goff, M.D.; Ogilvie Grant, M.D.; W. C. Grigg, M.D.; A. J. Harrison, M.D.; Mr. C. H. Rogers Harrison; Mr. Ernest Hart; Mr. W. R. Heath; Mr. J. H. Hemming; Mr. J. R. Humphreys; Mr. A. Jackson; Mr. G. E. Jeaffreson; A. Emrys Jones, M.D.; R. Jones, M.D.; Mr. Hugh R. Ker; Mr. C. Macnamara; W. J. Mickle M.D.; F. Needham, M.D.; Mr. R. H. B. Nicholson; D. Nicolson, M.D.; Professor A. Ogston, M.D.; William Ord, M.D.; C. Orton, M.D.; Mr. C. H. W. Parkinson; G. H. Philipson, M.D.; H. H. Phillips, M.D.; Mr. J. Prankerd; James Ritchie, M.D.; Mr. S. W. Sibley; Mr. Noble Smith; Mr. W. D. Spanton; W. Strange, M.D.; James Stuart, M.D.; Mr. F. Wallace; Mr. A. Winkfield.

Mr. Ernest Hart, on the motion of Dr. BARNES, seconded by Mr. EASTES, was unanimously re-elected chairman for the ensuing year.

The minutes of the last meeting, which had been circulated and printed in the JOURNAL, were confirmed.

Letters expressing regret at inability to attend were received from: Dr. Henry Barnes (Carlisle), Dr. Cameron (Huddersfield), Dr. W. Carter (Liverpool), Dr. G. W. Crowe (Worcester), Dr. Langdon Down (London), Dr. Bruce Goff (Bothwell), Dr. C. E. Glascott (Manchester), Mr. C. H. Rogers Harrison (London), Mr. J. H. Hemming (Kimbolton), Dr. G. B. Mead (Newmarket), Dr. F. Needham (Gloucester), Mr. S. W. Sibley (London), Mr. W. D. Spanton (Hanley).

The Appointment of Medical Officers of Health.—The CHAIRMAN reported that at the general meeting of members, held at the Mechanics' Institute, Leeds, it was resolved in the Public Health Section:

That the best thanks of this meeting be tendered to the Parliamentary Bills Committee for their action in reference to the appointment of medical officers of health; that the Committee be requested to continue their labours in the matter, and that in the English Local Government Act a clause should be inserted providing that no medical officer of health should be dismissed from office without the consent of the Local Government Board; and also that in regard to the appointment of any such officer the word "shall" should be substituted for "may" in the English Local Government Act.

In respect to that resolution he (the Chairman) thought the only action that was open to this Committee at the present moment was to forward a copy of it to the President of the Local Government Board, calling his attention to it, and asking that in the event of any amending Bill to the present Local Government Act, this request might be taken into consideration. It was an object to effect which their Committee made considerable efforts throughout the passing of the Local Government Act, and although they were unable to get the insertion of such a clause into the English Local Government Bill, they succeeded in obtaining its introduction into the Scotch Bill.

This suggestion, together with one made by Mr. PARKINSON to forward a copy of the above resolution to the representative of each Branch, with the view of that Branch taking individual action in support of the action of this Committee, was adopted.

Sanitary Examination, Registration, and Certification of Hotels and Boarding-houses.—The following further resolutions were reported from the Leeds meeting:

Resolved: That this meeting of the Public Health Section of the British Medical Association recommends that all keepers of hotels, hydropathic establishments, and boarding-houses in a town (or other convenient district), should form themselves into an association for the mutual sanitary protection of themselves and visitors.

That this Association should have for its principal objects: (1) An agreement that insists upon the removal (as soon as practicable and when consistent with safety) of *all* members of an infected family. (2) An agreement to require the signature of every visitor to a declaration that none of his or her party has recently been suffering from any infectious disease, or to his or her knowledge exposed to infection. (3) The establishment of a Register of Hotels certified to be in a perfect sanitary condition.

The Section recommends that such certificates, which must be approved by the local sanitary authority, should be renewed annually, after inspection, and that they should be exposed in a prominent position in every hotel, etc.

The Section also recommends such a combination of hotel-keepers, etc., that in towns where no sufficient provision for such purposes exists they should themselves provide, either jointly or separately, a detached building for the isolation of infectious or doubtful cases.

Moved by Dr. LITTLEJOHN, seconded by Dr. ALLFREY, and

Resolved: That the resolutions be referred to the Parliamentary Bills Committee, with full power to deal with the matter.

The CHAIRMAN said that the first course that occurred to him, with the view of carrying into effect the above recommendations, was that a copy of these resolutions, together with a covering letter supporting the same, should be addressed to every local sanitary authority and to the County Councils, with a request that they would take them into their consideration, and consider whether it was within their power to take measures for bringing such regulations into force in their respective districts. The immediate effect of that would be that these recommendations would be brought before their medical officers and would be discussed in the towns; they would then get answers from a certain number of sanitary authorities and County Councils, and they would then see whether they had the chance of getting together a sufficient body of authority either to get a general measure brought forward, or to get clauses such as the above introduced from time to time into private Bills, with the assistance of the Sanitary and Police Committee of the House of Commons.

Mr. NOBLE SMITH thought it a little arbitrary to expect an hotelkeeper to insist on every person, even such as arrived late at night, signing such a certificate. Was it likely to be able to be carried out, and had the matter been sufficiently considered?

Mr. GEORGE EASTES explained that the resolutions were passed at a meeting of the Public Health Section at Leeds, and were chiefly in respect to foreign health-resorts. He did not know whether it would be possible to convey the spirit of them to the chief places abroad at which Englishmen congregated.

The CHAIRMAN pointed out that the matter had been very carefully considered by the most experienced body of men that could be brought together, namely, medical officers of health from all

parts of the country, and the resolutions were proposed by Dr. Littlejohn, the medical officer of health for Edinburgh, and seconded by Dr. Allfrey.

Mr. BUTLIN thought the Committee should be very careful not to suggest anything which was at all impracticable.

After some further discussion, in which the opinion was expressed that the resolutions were originally intended to apply only to foreign hotels, the matter was referred to a subcommittee, consisting of the Chairman, Dr. Harrison, and Mr. Eastes, who would communicate with Dr. Littlejohn on the subject, and lay before him some of the questions raised.

Royal College of Surgeons; Representation of Members.—The SECRETARY reported the following resolution, moved by Mr. Rivington and seconded by Dr. Danford Thomas, as having been carried with one dissentient at the annual meeting of the Association at Leeds:—

Resolved: That it is the opinion of this meeting that the Members of the Royal College of Surgeons of England should have a voice in the management of that College and the election of its Council, and that it be an instruction to the Council of this Association to further this object through the action of the Parliamentary Bills Committee, or a special committee to be appointed for the purpose at this annual meeting.

Whereupon it had been resolved by the Council of Association

That this matter be referred to the Parliamentary Bills Committee, and that the gentlemen whose names are as follows be added to the Parliamentary Bills Committee:—Mr. Rivington, Dr. Danford Thomas, and Mr. Butlin.

The CHAIRMAN said the only facts he thought it necessary to communicate to the meeting in reference to the resolution, before they commenced to discuss it, was: first, he understood that at a meeting of the Members' Association it was resolved that in view of the parliamentary proceedings which had been taken to secure the representation of Members of the Royal College of Surgeons in the management of their College, and in the belief that such Parliamentary proceedings were the best methods of furthering the object of the Members (and especially those of them who were concerned in promoting an action at law in furtherance of certain of their special rights) that such action should be discontinued; and he believed the action had been discontinued. The other fact that should be before them was that the annual meeting of the Fellows and Members of the Royal College of Surgeons had been publicly convened by the College for November 7th next. It occurred to him (the Chairman) whether the most courteous and probably the most efficient way of commencing to take action on the specific instruction of the Association would not be that this Committee, having the instruction and this duty imposed on it, should communicate to the President of the College of Surgeons, especially also in his quality as President of the convened meeting of Fellows and Members, a copy of the resolution passed at the annual meeting of the British Medical Association, so as to bring it officially to the notice of the College, and add the expression of hope of the Committee that the Council of the College might see its way to carrying out in some degree, and in a manner thought most fitting, the objects of that resolution, and to express the willingness and desire of the Committee to co-operate in any way with the Council towards that end. He thought it would be very becoming of the Committee that it should at once commence by endeavouring to place itself in the most courteous and amicable relations to the Council; that it should at once officially inform the Council of the resolution committed to its keeping, and of the duty imposed upon it in the name of the Association, without indicating any specific way of carrying out that object, but inviting the Council to consider whether it would be willing to accept this proposition in any form, and, if so, to express the desire of the Committee rather to co-operate with the Council in carrying out any such object than to act in any way opposed to it. He did not know how that view presented itself to the members of the Committee.

Mr. PARKINSON and Dr. BARNES expressed themselves in favour of not committing the Committee to any definite mode of carrying out the objects in view.

Dr. DANFORD THOMAS said those who were acquainted with the history of the College from its earliest times (and the BRITISH MEDICAL JOURNAL had afforded them that opportunity) knew that the present condition and government of the College had been instituted by law and by Royal Charter, and, until that law was altered, of course the College held legal powers for what it did. They contended that that charter was obtained behind and in opposition to Parliament; for a short time before, when the Council of the College endeavoured to get a Bill before Parliament, they signally failed, and the Bill was thrown out. They then got a Royal Charter behind Parliament, and they were informed by the Privy Council that it would require a short Act to alter it, unless with the consent of the Council. This they thought to be the best and most effective way of effecting the object in view. He had no doubt, if amicable arrangements could be brought about between the Council and the Members, a most expeditious method could be adopted. If the College agreed, and any Committee could meet them and agree together on a course which the present Draft Bill indicated, he had not much doubt that an alteration could be made in the charter to meet the wishes of all concerned; but if the Council still declined to come forward and assist in the matter, and still took the part of perfect inactivity and obstruction, almost inviting them to go forward to Parliament, then he thought there was only one course, and that was a Bill which would give Members a voice in the management of their own College.

A letter was read from Mr. Rivington, suggesting the appointment of a subcommittee to consider the Draft Bill. It was felt, however, that at the present stage of the question the whole matter could be better dealt with by the whole Committee.

After some further discussion, the following resolution was unanimously adopted:

That a communication be made to the President and Council of the College of Surgeons, conveying to them the wording of the resolution of the annual meeting of the British Medical Association, expressing the hope that the Council of the College may see their way to carrying out this resolution in some suitable form, and offering the co-operation of the Association in every possible way if they should see their way to accept it.

It was further moved by Mr. NOBLE SMITH and seconded by Dr. DANFORD THOMAS:

That a communication be addressed to the Council of the Members' Association and to the Council of the Fellows' Association, forwarding them copies of the resolution passed at the last annual meeting of the British Medical Association at Leeds, requesting any observation thereon or suggestion from them, together with any documents which may assist in carrying out that resolution.

This was carried unanimously.

INEBRIATES LEGISLATION COMMITTEE.

AT a meeting of the Inebriates Legislation Committee, held at the offices of the Association, 429, Strand, on Monday, October 14th, 1889: Present: Dr. Norman Kerr, *Chairman;* Dr. Alexander Grant, Mr. Gray, Surgeon-Major Poole, Surgeon-Major Pringle, Mr. Hugh Ker, Dr. Wynn Westcott,

Read resolution of Council appointing the Committee.

Read letters of apology from the President of Council, Dr. Hart Vinen, and Dr. Williams.

Resolved: That Dr. Norman Kerr be appointed Chairman to the Committee.

The Chairman reported that 651 circulars had been sent to the boards of guardians respecting pauper inebriates.

Read letter from the Hereford Board of Guardians approving the views of the Committee.

Resolved: That the Inebriates Legislation Committee of the British Medical Association respectfully request the good offices of the Home Secretary and the Government in securing the appointment of a Parliamentary Committee to inquire into the practical working and results of the Inebriates Act.

Resolved: That the Inebriates Legislation Committee of the British Medical Association, without expressing an opinion upon the various clauses, welcome Mr. Charles Morton's proposed "Restorative Homes (Scotland) Bill," as embodying three leading provisions which the Association has repeatedly endorsed: (1) The compulsory reception in properly conducted special institutions of inebriates who are unwilling or unable by reason of their diseased condition to make voluntary application; (2) Accommodation at the public charge for the treatment and detention of destitute inebriates; (3) Reception and detention of voluntary patients without appearance before justices.

Resolved: That a copy of this resolution be sent to Mr. Morton.

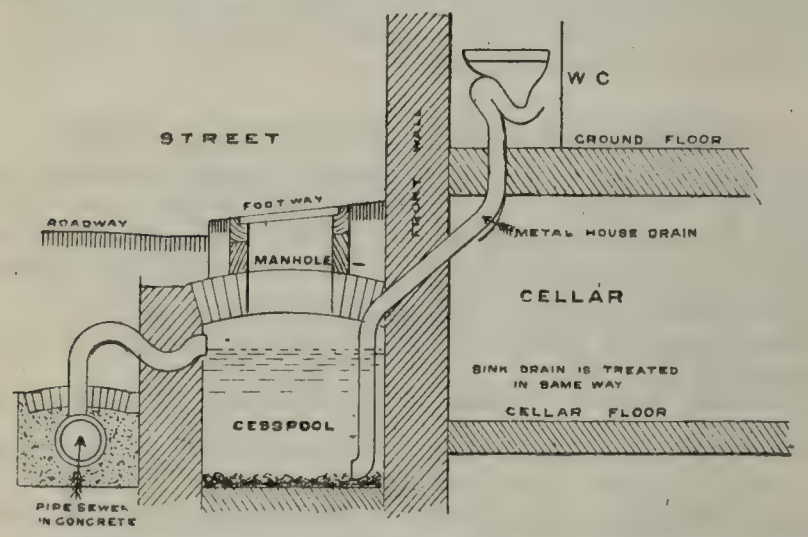
THERE were reported on Saturday, October 19th, to be 1,360 cases of scarlet fever in the hospitals of the Metropolitan Asylums Board.

PREPARATIONS are being made at Hull for the erection of a college, towards which the sum of £50,000 has been acquired by the corporation from the Hymers bequest. It has been agreed by the Council this week to hand over nearly £20,000 to the newly elected body of governors, with the view of operations being commenced at once.

HOUSE SANITATION AT THE PARIS EXHIBITION.

MANY of our readers will be interested by a notice of what the French are doing in the way of house sanitation as it is set forth at the Paris Exhibition. The Ville de Paris has naturally come to the front with its exhibit in two large and handsome pavilions, wherein are shown the various public works executed under its control, and one small division of this exhibit is devoted to house sanitation. The Frenchman has copied from South Kensington the idea of showing side by side the "maison insalubre" of the past and "maison salubre" of the present. The old style of things, with the big leaky cesspool below the central courtyard in the former case is put in strong contrast with the modern *tout à l'égout*, as the French call it, and very great, of course, is the advance.

The engineers or sanitarians of the city of Paris, who have organised this exhibit, have, however, gone a step further, and are showing on the walls of their pavilion large scale diagram sections of houses drained, as they think, in the most advanced sanitary fashion, and it may be interesting to compare the details shown on one of these diagrams with the practice of our English sanitarians. For this purpose, we have had photographed and annex a reduced copy of one of the large diagrams exhibited by the city of Paris, which is intended to be a typical example of the sanitary arrangements in a large French house, planned out, as most French houses are, in flats.



Judging from the section we reproduce, we should think that the small central well-hole, from which many of the rooms take their light, would, according to our insular notions, be sufficient to condemn the architect's work; but it is rather with the arrangement of pipes and drains that we are concerned. And, first of all, let us call attention to the manifest advantages of the section shown in this model exhibit.

Starting with the street sewer; this is not only a sewer, but a subway also, and along the top of it are carried the gas and water pipes, with space for telegraph and telephone wires and power mains, and it is large enough for the necessary access of workmen. If only our metropolitan streets were so constructed, we should avoid the constant breaking up of our pavements; but that is an old story—as old as the now defunct Metropolitan Board of Works, which, in its early days, proposed to construct subways in connection with street sewers beneath all our metropolitan streets.

The next noticeable point is the small private subway from the street subway or sewer to the house. Here again the French teach us a lesson, and the sooner we learn it the better. We may be in advance of public opinion in this matter, but the day has come when every house in every great city should have its subway entrance for drainage, water, gas, telegraph, telephone, and power supply, just as certainly as it has its front door for the entrance of customers or visitors. So far the Frenchman's ideal and practice are in advance of our own.

But now let us look critically at the Frenchman's notion of drains and waste pipes as compared with our own. Here, as we think, the balance is strongly in favour of the English and against the French practice, if the latter be fairly set forth in the model exhibit of the Ville de Paris.

Taking, first of all, the house drain, partly above the level of the cellar floor, and partly buried below the floor of the subway. This has five main vertical affluents: (1) the rain-water pipe from the front gutter trapped at foot; (2) the soil pipe in middle area, untrapped at foot, opened at top as vent pipe; (3) a general close waste pipe from sinks, untrapped at foot and in direct communication with drain, and open at top as vent pipe; (4) back rain-water pipe delivering over a trapped gulley in back yard; and (5) a back ventilating pipe carried up one of the back chimney stacks, venting its foul breath within a foot of the chimney pots of the flues of the back rooms.

There is a disconnecting trap shown between the street sewer and the house drain, with its cleansing cap level with the floor of the house subway; and there is an inlet ventilator to the house drain, though awkwardly designed, close to the house side of this disconnecting trap. So much for Stack 1.

Then as to the vertical stack of Pipe 2. Valve and flush-out closets are shown, similar to those used in English practice, and each closet trap is separately ventilated by a 2-inch pipe, which connects with the top of the main soil-pipe above the level of the highest closet, again agreeing with our English practice. On the ground floor, however, is a group of three lavatory basins, the waste pipes of which are in direct communication with the soil drain, whereas we should undoubtedly have disconnected them, making them deliver into or over a trapped gulley in the middle area. The Frenchman has separately trapped each basin, and ventilated each trap by a pipe opening into the middle area, the effect being that when the little hinged flap on this vent pipe sticks fast, as it is sure to do, the house drain may vent itself through it into the bottom of this middle area.

Now let us look at Stack 3. We in England should have made this stack of pipe deliver over a trapped gulley in the middle area, with heads at the level of each floor to receive the sink wastes, each of which would have delivered into the outer air, instead of connecting with a vertical extension of the foul soil drain. Moreover, on this stack the Frenchman shows to the trap of each of his three sinks and his two baths a vent pipe opening direct into the middle area. Doubtless each of these vent pipes is intended to have a mica flap; but what will happen if one or all of these five flaps should stick fast? The sewer gas from the house drain will again vent itself into the middle area close under the window sills. This, according to our notions, is a most faulty arrangement, and is a step backward from our English practice.

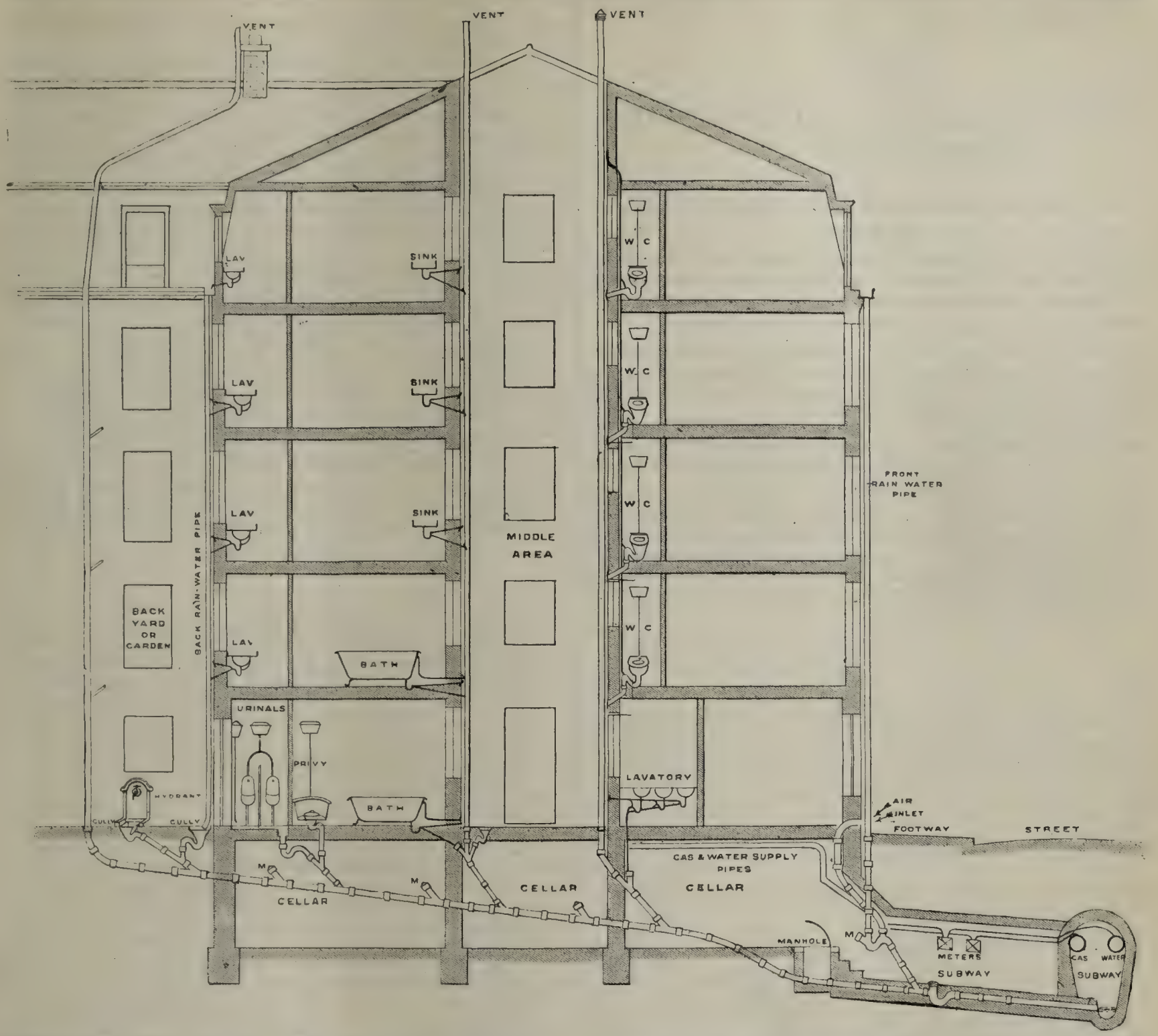
Vertical Stack 4 is the back rain-water pipe, and delivers over trapped gulley in back yard, as it should do. The wastes of three lavatory basins connect with it, and each trap is separately ventilated.

Stack 5, the ventilating pipe untrapped at foot, which delivers, as we before mentioned, far too close to the tops of the chimneys, has three connections on to it which are apparently waste pipes. Where they come from is not shown in the diagram. We certainly should not have connected any waste pipes on to this vent pipe.

Now, looking at the section of the back yard, there are two trapped gullies doing the work of one. Then as to the arrangement of urinals and servants' waterclosets. This last is truly to be made of glazed stoneware, but it is of the filthy pattern for squatters, which was an object of horror to the writer when he first visited France thirty years ago. Surely no house which harbours such an abomination can be called a sanitary house; that should disappear entirely.

The worst of all is to come. We pass by the defective construction of the urinals, because some of our own English patterns might be subject to similar adverse criticism. But what shall an English sanitary engineer say of the drain in basement shown on this model (?) section? This drain passes for much of its length above ground through the house cellars. It is shown of earthenware pipes with cement joints two feet apart. An English engineer would have constructed it of cast iron protected pipes, with joints nine feet apart. The branch connections to this drain are on top of the drain; an English engineer would have made side connections to it at a sharp angle.

And now comes the funniest point of all. The Frenchman who has designed this model section has evidently been impressed by the notion that it is a delightful thing to inspect the operation of a model house drain, and so he provides five inspection openings



(marked M on section) into that drain, irrespective of manholes; and, to crown all, he puts a manhole of the English pattern at the outfall where no junction of pipes occurs, where no disconnecting trap occurs, where he has already in existence a subway which is far better than the ordinary manhole, simply because "Messieurs les Anglais" usually put a manhole at the outfall of their house drains.

Surely we must acknowledge the French supreme at caricature. There is no indication of a self-acting flushing tank, but the fall of drain is so steep that it would probably not be required. We should probably have put a manhole in the back yard, and have avoided the numerous inspection openings in the basement, which, it seems to us, are entirely superfluous and additional sources of possible leakage.

So much for the Ville de Paris and the teaching of its sanitary engineers.

In wandering through the grounds of this most wonderful "World's Show," we examined the contents of a pavilion among the outbuildings which is labelled "Hygiene of the House." Many plans and models are there of deep interest, but if, as we think, the drainage of a house represents 90 per cent. of the hygiene of a house, then surely we in England are far ahead of our Continental neighbours. Annexed is a sectional sketch of the drainage arrangements in the Maison Ouvrière de la Caisse d'Épargne—a large block of workmen's dwellings. A sketch from the exhibited section of these model dwellings requires no criticism. A liquid sewage cesspool exists beneath the street footway in front of each house, with the possibility of soaking into the house cellars. There are no inlet or outlet vents to this cesspool, and the house sink delivers into the same cesspool as the house soil-pipe. What say our English sanitary engineers to this? Only the overflow of the cesspool passes *à l'égout* (the sewer), and this is shown as an example of what Frenchmen are doing with the hygiene of their workmen's dwellings!

The writer could multiply illustrations from the Paris Exhibition which might have passed current in England as ordinary practice ten or twenty years ago, but which here are now, fortunately, matters of ancient history. As sanitary engineers we in England are far in advance of our neighbours. They do well to follow us: but when they retain cesspool construction in town buildings, ventilate their drains into their middle areas, and multiply manholes and inspection openings in their basements for the fun of the thing and in caricature of the English fashion, we may fairly say it is not common sense, but the imitative faculty, which is most strongly represented in this department of their great show.

NOTES
ON
SOME GERMAN UNIVERSITIES.

By WALTER K. SIBLEY, M.B.Camb.

I.—THE UNIVERSITY OF STRASSBURG.

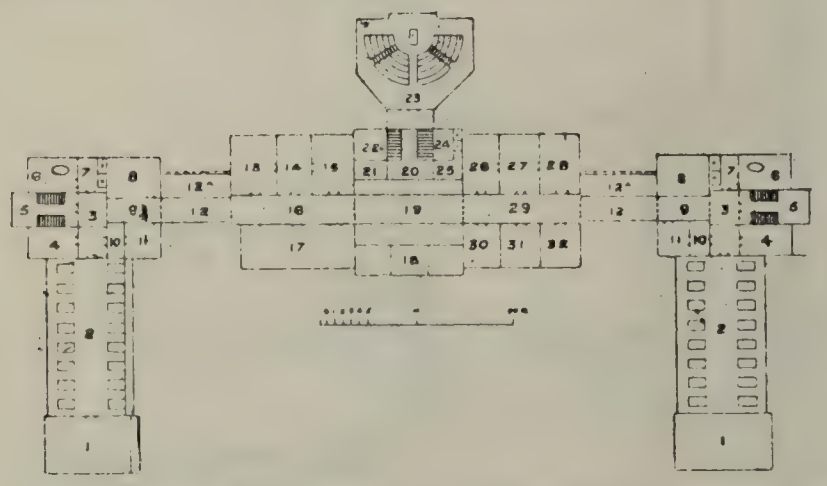
(Continued.)

Surgical Clinic; Operating Theatre: Antiseptics; Dressings The Professor of Surgery; Operations: The Wards; The Assistants.—Psychological Clinic.—Maternity Clinic; The Professor of Gynæcology; Laparotomies.—Special Clinics.

For most of the acknowledged departments of medical science there are in Strassburg separate hospitals. It is intended to build a new general medical hospital, the medical wards of the existing hospital being old and behind the times.

The Surgical Hospital is built with two wings, one for male and the other for female patients, together with a central block in which are the children's wards. The hospital contains 60 male, 36 female, and 28 children's beds, making altogether 124 beds.

The operating theatre is immediately opposite the entrance hall on the ground floor; it is large and very well lighted, being built in the form of a semicircle, and fitted with seats extending nearly round the curve. The seats thus more or less surround the operating table, which stands on a tiled floor, the instruments being mostly kept in drawers and cupboards around.



Surg cal Hospital.—Ground Floor.

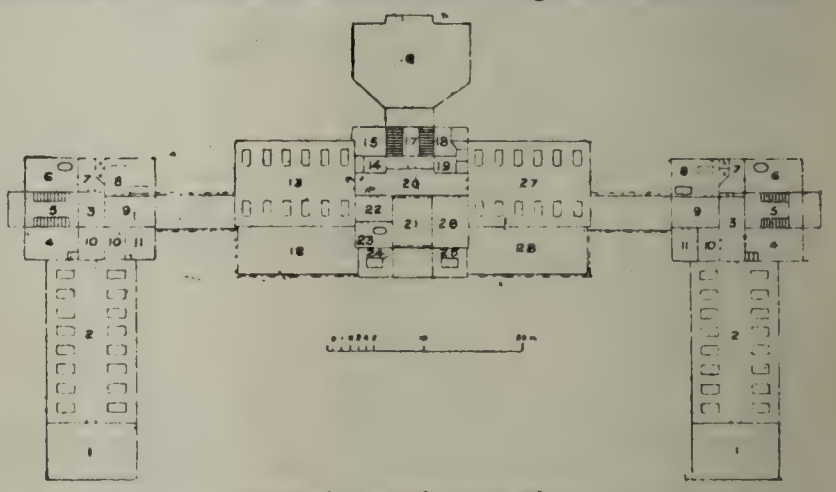
1. Day room
2. Ward
3. Corridor
4. Sister
5. Stairs
6. Bath room
7. Closet
8. Special ward
9. Corridor
10. Tea kitchen
11. Nurses
12. Passage
12A. Balcony
13. Director
14. ,,
15. First assistant
16. Corridor
17. Instrument room
18. Entrance hall
19. Hall
20. Staircase
23. Operating theatre
24. Urinal
26. Waiting room (o.-p.)
27. Out-patients
28. ,,
29. Corridor
30. Porter's lodge
31. Assistant
32. ,,

The clinic takes place daily from 9.30 to 11 A.M., and consists usually of cases for operation, which are brought into the theatre, and, after being examined by a dresser, and discoursed upon by the professor, are placed under an anæsthetic. Any cases of interest attending the policlinic (out-patient department) are also exhibited and discoursed upon.

With regard to anæsthetics, chloroform is nearly always used, often preceded by a subcutaneous injection of morphine. Ether is seldom or never employed. The strictest antiseptic precautions are followed by Professor Lücke. The fluids for irrigation purposes—carbolic acid and corrosive sublimate—are kept in large vessels or irrigators attached high up on the wall of the theatre. These can be readily lowered by a cord passed over pulleys for refilling, each vessel having a long soft india-rubber tube, with a nozzle and stopcock at the end, so that a free supply is ever at hand to wash out the wound when required, without moving the irrigators about the theatre.

The professor and his assistants are dressed in loose washing gowns, coming quite down to the toes, and, if the operation is likely to be accompanied by much hæmorrhage, a mackintosh apron is worn under the gown. Loose sleeves are dispensed with, and all have their arms bare to above the elbow. Much fluid is used for washing about the seat of operation, and, without any trouble being taken to catch it all in basins and trays, is allowed to flow over the operating table, where blankets and sheets are replaced by mackintosh and towels. Thence it flows on to the tiled floor, where it all rapidly drains off. In this way much labour and anxiety are saved, both to the operator and his assistants, as they have not to arrange a system of receptacles each time fluid is used for washing or disinfecting purposes; and the surgeon is not disturbed at every stage of the operation by having a sponge thrust in his way to absorb excess of fluid. The view, moreover, is not unnecessarily interrupted, as it often is at home.

A very large amount of material is used for the dressings. Iodoform gauze is usually applied next to the wound, and, if necessary, stuffed into it; then many layers of soft bandage are applied, the whole dressing being generally surrounded by a few turns of starched gauze bandage. Thus a comparatively air-tight chamber is formed; the covering of starch being, however, thin enough to be readily cut with scissors, or unrolled when the dressings are changed. The bandages themselves are made of what is called *Mull-gauze*, which is very soft and light, and folded some three or four times. These mulls are often used to spread ointment on, and



Surgical Hospital.—First Floor.

1. Day room
2. Ward
3. Corridor
4. Special ward
5. Nurses
6. Bath room
7. Closet
8. Special ward
9. Corridor
10. Sister
11. Special ward
12. Balcony
13. Children's ward
14. Lift
15. Nurses' room
16. Operating theatre
17. Staircase
18. Urinal
19. Lift for food
20. Corridor
21. Day room
22. Tea kitchen
23. Bath room
24. Special ward
25. ,, ,,
26. Sister's room
27. Children's ward
28. Balcony

are then immediately applied to the wound instead of lint. The bandages are afterwards washed, and, after being sterilised by subjection to heat, are used over again. Occasionally a few turns of roller bandage are used to fix the dressings. Small bags made of these gauze bandages, often containing cotton wool, which when once used are destroyed, are substituted for sponges in cases with fœtid discharges.

A large number of major operations are performed in Strassburg, and tumours are very frequent; at least, so it seemed during my stay there, especially compared with the experience of our London hospitals. Sarcomas of the limbs, comparatively infrequent with us, are here common. Professor Lücke, as is usual with German surgeons, is much bolder with his operations than we are; thus major operations are more frequently performed, and the incisions are comparatively freer, their extent not being considered of much importance, and thus the field is clearer. Professor Lücke has exceedingly good results with his cases, his care with the dressings not ceasing in the operating theatre, but extending into the wards.

The wards are lofty, well ventilated, and clean, and all have a separate compartment at one end for the patients who are up to

live and have their meals in. Small wards are also situated by the main ones for cases with offensive or infective discharges. Huge feather-bags are still used as a means of bed-covering instead of blankets; these must of themselves be a very ready medium for the preservation of germs. All the dressings, antiseptic fluids, and the like are arranged on a small table with two trays on wheels, which is rolled from bed to bed as the surgeon makes his round. Although osteo-myelitis appeared of frequent occurrence, we were never able to satisfy ourselves that many of the cases so described would not in England be called acute diffuse periostitis.

Fractures are treated more on the principle of mechanical extension by systems of pulleys than by means of rigid splints, and this is especially the case with children. Thus a fractured thigh in a child is put up in the following way: the leg and lower end of the thigh being enclosed in plaster bandages, an extension apparatus is thereby fixed to the limb. The whole limb is then raised in a vertical position at right angles to the trunk, and the extension cord is passed over a pulley above the bed, arranged so as to prevent rotation of the limb. Approximate weights are then applied, and the parts are thus maintained comparatively at rest, without any cumbersome bedsore-forming splints. At the same time, not only are the ends of the bone maintained in apposition, but every possible means are used to prevent shortening. The actual seat of fracture being left exposed to view, it can be readily examined without removing bandages or splints, so that if any rotation occurs it can be at once detected and remedied by altering the line of traction.

The hospital work is mostly done in the morning, the assistants commencing in their wards at 8 o'clock. The professor comes at 9, sees anything that is urgent in the wards, and commences his clinic at 9.30. There are four resident assistants, the senior having charge of the out-patient department, and operating in cases of emergency in the absence of the professor. The professor, assistants, and dressers all wear long washing aprons, both in the operating theatre and also in the wards. The nursing is performed by sisters with ecclesiastical uniforms, and by male attendants; in the operating theatre almost entirely by the latter.

Immediately opposite the Surgical Hospital is situated that for nervous diseases, including insanity in its many forms. This is quite new, and contains 120 beds. Here Professor Jolly gives very instructive clinics upon many cases of great interest.

Next to this building is the Hospital for Women, which has 58 beds for gynæcological diseases, and 40 for lying-in women. The laparotomies take place early in the morning in the large operating theatre, but to these the students do not come. Professor Freund is very strict in his antiseptics, and his methods of procedure are characteristic. Upon his arrival for an operation, the professor changes all his clothes, and takes a bath; then, dressed in clean washing trousers and loose gown, he commences the operation; the assistants and also any visitors present are requested to leave their coats outside, and are provided with loose washing gowns. Professor Freund is one of the most rapid and neat operators I have ever seen; he uses the cautery very largely instead of the knife upon all structures inside the abdominal cavity, and his results are remarkably good.

In addition to these there are the special hospitals. For example, that for syphilis and skin-diseases, with 38 male beds, 12 for female skin-diseases, and 72 for female syphilis, making altogether 122 beds; the hospital departments for children, for the eye, ear, and so forth.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

THE annual general meeting was held on Friday, October 25th, in the College of Physicians, Dr. Gordon, President of the Academy, in the chair. The report was read by the general secretary, Mr. Thomson. It appeared that the Fellows numbered 244, an increase of 28; that the Members had decreased by 6, and the Student Associates had increased by 9. The amount in Consols is £596 2s. 4d.

The following officers were elected for the ensuing year:—

General Secretary: William Thomson.

MEDICAL SECTION.—*President:* Lombe Atthill. *Council:* J. Hawtrey Benson, E. MacDowel Cosgrave, A. W. Foot, Richard A. Hayes, J. W. Moore, A. N. Montgomery, John Molony, S. M. MacSwiney, Conolly Norman, Joseph M. Redmond.

SURGICAL SECTION.—*President:* Austin Meldon. *Council:* J. K. Barton, A. H. Corley, H. G. Croly, Kendal Franks, Edward Hamilton, Patk. J. Hayes, Edward Stamer O'Grady, Sir W. Stokes, W. Thornley Stoker, R. L. Swan.

SECTION OF OBSTETRICS.—*President:* Samuel M. Mason. *Council:* J. J. Cranny, R. H. Fleming, Andrew J. Horne, F. W. Kidd, J. L. Lane, A. V. Macan, T. More Madden, R. D. Purefoy, A. J. Smith, W. J. Smyly.

SECTION OF PATHOLOGY.—*President:* Edward H. Bennett. *Council:* A. W. W. Baker, C. B. Ball, Wallace Beatty, A. H. Benson, H. Bewley, J. Magee Finny, J. M. Purser, J. A. Scott, Walter G. Smith, J. B. Story.

SECTION OF ANATOMY AND PHYSIOLOGY.—*President:* John M. Purser. *Council:* John Barton, A. Birmingham, H. St. J. Brooks, H. Broomfield, D. J. Cunningham, F. T. Heuston.

SECTION OF STATE MEDICINE.—*President:* A. W. Foot. *Council:* Sir C. Cameron, E. MacDowel Cosgrave, T. W. Grimshaw, S. M. MacSwiney, J. W. Moore, J. M. Redmond.

ROYAL COLLEGE OF PHYSICIANS.

AN ordinary meeting of the College was held on Thursday, October 31st, at 5 P.M.

The PRESIDENT announced that he nominated as Vice-Presidents for the ensuing year Dr. Quain and Dr. Wilks. It was referred to the Council to consider and report to the College on the existing rules for the appointment of Vice-Presidents.

The following gentlemen were admitted as Members of the College: G. A. Carpenter, M.B.Lond.; J. Davison, M.D.Queen's Univ.; E. B. Forman, M.D.Brussels; E. Goodall, M.D.Lond.; E. H. Greves, M.D.Edin.; A. A. Jamison, M.D.Glasg.; A. P. Luff, M.B.Lond.; E. C. Perry, M.D.Camb.

The PRESIDENT announced that Sir Henry Pitman had resigned his appointment of member of the Committee of Management, and a cordial vote of thanks was passed for his valuable services in that capacity.

A bronze copy of the Moxon Memorial Medal was submitted for the inspection of the Fellows.

A letter was read from Dr. Gowers, as Secretary of the Wilson Fox Portrait Fund announcing that the portrait was now ready to be sent to the College, and on the motion of the President the portrait was gratefully accepted.

A communication from the Charity Commissioners relative to the City of London Charity Act was read.

A communication from the Foreign Office was received informing the College that in future only in exceptional cases would English medical practitioners be allowed to apply to be examined for a licence to practise in France, and was referred to the Council for consideration.

A communication from the College of State Medicine, requesting recognition of its lectures and laboratory course, in view of the recommendations of the General Medical Council respecting the teaching of hygiene was referred to the Committee of Management.

A letter from Dr. T. R. Fraser, of the University of Edinburgh, was read, announcing that only two candidates had presented themselves for the Murchison Scholarship, and that it had been awarded to Arthur John Whiting, M.B., C.M.Edin.

A letter from Professor Heidenhain, of Breslau, was read, acknowledging the award to him of the Baly medal, and regretting that his official professional duties prevented him from being able to come over to this country and receive it in person.

A communication from the College of Surgeons announcing the list of members to serve on the Joint Committee in reference to the new scheme of the University of London was received.

Communications, addressed to the College, were also received from the General Medical Council, the Secretary of the Tudor Exhibitions, and from the Solicitor to the College.

The resignation of Membership (dated 1839) of Patrick Fraser, M.D., was received.

The Treasurer presented the annual balance sheet, showing a surplus of income over expenditure amounting to upwards of £4,000.

The quarterly report of the Finance Committee was received, and on the motion of Sir HENRY PITMAN, the stipend of the registrar was considerably augmented.

Dr. Allchin's motion for the enactment of a new by-law relative to the resignation of Fellows or Members was postponed until the opinion of the standing counsel should have been obtained.

It was decided to take the remainder of the business on the agenda paper at an adjourned meeting.

THE following gentlemen, having conformed to the by-laws and regulations, and passed the required examinations, were, at a meeting of the College on October 30th, admitted Licentiates:

*Barker, J. C., St. Bartholomew's.
Barker, J. H., Manchester.
Bates, S. H., University College.
Bentham, A. O., Manchester.
Bergin, G. F., Bristol.
Bevan, T. W., St. Bartholomew's.
Beyts, W. G., Guy's.
Birkenhead, H., Manchester.
Boase, W. G., St. Bartholomew's.
Borrett, G. G., London.
Cameron, E. G., Middlesex.
Carrell, G. N. P., Guy's.
*Cato, A. McL., Westminster.
Cayley, C. H., Middlesex.
Cheetham, S. W., Liverpool.
Cleveland, R. A., University College.
*Collett, H. G. O., King's College.
Collins, A. B., St. Bartholomew's.
Conway, B. W., Manchester.
Cooke, J. A., Manchester.
Cuthbert, H. P., London.
*Dane, R., Middlesex.
Dewhurst, J. H., Cambridge and St. Thomas's.
Dickson, T. H., Cambridge and St. Thomas's.
Dowse, H. E., Westminster.
Duigan, W., London.
Edmonds, G., St. Bartholomew's.
Edwards, J. H., St. Bartholomew's.
Elam, G., Middlesex.
Elliot, R. H., St. Bartholomew's.
Enraght, W., St. Bartholomew's.
*Evans, T. H. F., St. Bartholomew's.
*Foley, C. N., St. Thomas's.
George, A. W., Edinburgh and St. Thomas's.
Gibbs, S. F., St. Bartholomew's.
Giffard, G. G., St. Bartholomew's.
Glinn, G. F., St. Mary's.
Godding, J., London.
*Griffin, J. H., St. Bartholomew's.
Heath, A. J., University College.
Hickley, A. M., St. Mary's.
Higginson, J. W., University College.
*Hooton, W. A., Manchester.
*Hughes, A. E. P., St. Thomas's.
Hugo, E. V., St. Bartholomew's.
Jamieson, S., Edinburgh.
Kelbe, W. E., Guy's.
Khan, M. A., London.
Kitchin, H. B., University College.
Knox, J. J., Cambridge and St. Mary's.
Lewers, A., St. Mary's.
Lewis, L., Westminster.
Ley, G. L., University College.
Lightbody, J. H., Liverpool and St. Bartholomew's.
*Livsey, W. E., Liverpool.
Major, A. C., London.
Manning, H. P. O., Guy's.
*Mansbridge, J., Charing Cross.
Martin, A. E., London.
Meyers, D. C., Toronto.
Milner, A. S., Charing Cross.
Morris, G., St. Bartholomew's.
Naylor, J., St. Bartholomew's.
Neill, B., St. Bartholomew's.
Norburn, A. E., Guy's.
Norton, E. E., Middlesex.
O'Leary, A. P. E., Bristol.
Olive, E. J. P., St. Bartholomew's.
*Ormerod, H. L., Bristol.
Osborne, O., London.
*Paget, Peter, Guy's.
Paul, M. E., London.
Pires, G., Bombay and University College.
Pollock, C. S., St. George's.
Powers, C. H., St. Mary's.
*Pratt, E. F., Birmingham and Newcastle-on-Tyne.
*Purnell, P., Guy's.
*Rayne, W. T., Westminster.
Rees, J. M., St. Bartholomew's.
Rendel, A. B., St. Bartholomew's.
*Rowlands, H. P., Guy's.
*Rubinstein, D., Leipzig.
Rudyard, H. A., University College.
Saunders, F. W., Cambridge and St. Bartholomew's.
*Scott, G. H., Leeds.
Shepherd, H. B., St. Thomas's.
Simmons, F. H., St. Bartholomew's.
*Simpson, G. W., Westminster.
*Smith, H. W., Birmingham.
*Snape, E. A., Charing Cross.
Speechly, H. M., London.
Stabb, A. F., St. Thomas's.
Standage, R. F., St. Bartholomew's.
Stokes, W. G. G., Cambridge and St. Thomas's.
*Sullivan, E. H. C., St. Thomas's.
Taylor, E. E., Edinburgh.
*Tindall, E. E. P., Guy's.
*Toller, S. G., St. Thomas's.
Tuppen, H. S., St. Thomas's.
*Verano, L. L., St. Bartholomew's.
Walters, A. P., University College.
Warde, W. B., St. Bartholomew's.
Watkins, H. E., Manchester.
Wightman, H. T., Sheffield.
Williams, E. M., University College.
*Williams, E. G. H., Charing Cross.
Woodall, R. W., London.

* Candidates who have not presented themselves under the regulations of the Examining Board.

ASSOCIATION INTELLIGENCE.

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members, in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the office.

NOTICE OF QUARTERLY MEETINGS FOR 1890. ELECTION OF MEMBERS.

MEETINGS of the Council will be held on January 15th, April 16th, July 16th, and October 15th, 1890. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting, namely, December 25th, March 27th, June 25th, and September 4th, 1890.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No member can be elected by a Branch Council unless his name has been inserted in the circular summoning the meeting at which he seeks election.

FRANCIS FOWKE, *General Secretary.*

NOTICES OF BRANCH MEETINGS intended for insertion in the JOURNAL of the current week should be forwarded, addressed to the Editor, so as to reach the office not later than mid-day Wednesday of that week.

BRANCH MEETINGS TO BE HELD.

WEST SOMERSET BRANCH.—The autumnal meeting of this Branch will be held at the Railway Hotel, Taunton, on Thursday, November 7th, at 5 o'clock. Dinner at half-past five. The subject for discussion after dinner will be Proposed Legislation for amending the constitution of the Royal College of Surgeons of England. Mr. Rigden will open the discussion. Members having any communication to bring before the meeting are requested to send early notice of its title to W. M. KELLY, M.D., Honorary Secretary, Taunton.

SOUTH-EASTERN BRANCH: WEST KENT DISTRICT.—The next meeting of the above District will take place on Thursday, November 21st, at Maidstone, Dr. White in the chair. Gentlemen desirous of reading papers or exhibiting specimens are requested to inform the Honorary Secretary of the District, A. W. NANKIVELL, F.R.C.S., St. Bartholomew's Hospital, Chatham, not later than October 31st. Further particulars will be duly announced.

SOUTHERN BRANCH: SOUTH-EAST HANTS DISTRICT.—A meeting will be held on Thursday, November 7th, at Grosvenor Hotel, Queen's Gate, Southsea. W. F. Brook, Esq. (President) will occupy the chair. Members desirous of exhibiting pathological specimens or making communications are requested to signify their intention at once to the Honorary Secretary, J. WARD COUSINS.

METROPOLITAN COUNTIES BRANCH: EAST LONDON AND SOUTH ESSEX DISTRICT.—The next meeting will be held, by the kind invitation of Dr. Adams, at Brooke House, Upper Clapton, on Thursday, Nov. 21st, at 8.30 P.M. A demonstration of interesting cases of skin diseases will be given by Stephen Mackenzie, M.D. Visitors will be welcomed.—J. W. HUNT, Honorary Secretary, 101, Queen's Road, Dalston.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT.—The next meeting of the above District will be held at Canterbury on Thursday, November 28th. Mr. Schön, of Bridge, in the chair. All communications to be sent to the Honorary Secretary, W. J. TYSON, 10, Langhorne Gardens, Folkestone.

THAMES VALLEY BRANCH.—The next meeting will be held at the Talbot Hotel Richmond, on Wednesday, November 6th, at 5.30 P.M. punctually, Dr. Sealy in the chair. Agenda:—1. Presidential Address: On Some of the Errors of Routine. 2. Dr. Burney Yeo will open a discussion on Some Points in the Treatment of Typhoid Fever and Pneumonia. 3. Consideration of Dr. Rentoul's Public Medical Service Scheme. Members are requested to make themselves familiar with ths scheme, as described in the JOURNAL of June 22nd, p. 1425. A full attendance is earnestly requested. Dinner at half-past seven. Kindly give me twenty-four hours' notice if you hope to be present.—CHARLES C. SCOTT, M.B., Honorary Secretary, St. Margaret's, Twickenham.

WORCESTERSHIRE AND HEREFORDSHIRE BRANCH.—A meeting of this Branch will be held at the Infirmary, Worcester, on Tuesday, November 5th, at 3.30 P.M., in accordance with instructions of the Council of October 16th, "That Dr. Rentoul's resolutions be forwarded to the Branches for consideration, and that a Committee be appointed to receive and digest the replies, and to report upon them to the Council." It is hoped that a large number of members will attend, as the subject is one of great importance to general practitioners. Dinner will be provided at the Star Hotel, at six o'clock. Tickets 5s. each, exclusive of wine. If you intend to be present will you kindly inform me on or before Saturday, November 2nd.—GEO. W. CROWE, Honorary Secretary, Foregate Street, Worcester.

LANCASHIRE AND CHESHIRE BRANCH.—The autumn meeting will be held at Blackburn, on Wednesday November 6th, at 2.30 P.M. By the courtesy of the Mayor and Corporation, the meeting will take place in the Council Chamber of the Town Hall. Agenda:—The consideration of Dr. Rentoul's application for a special meeting of the Branch to discuss his resolutions. Medical and Surgical communications: Dr. John M. H. Martin will show three cases: 1. Aneurysm of the Ascending Aorta. 2. Hypertrophy of the Cheek. 3. Ectopia Vesicæ. And two specimens: 1. Resected Ends of Fractured Clavicle, woman, aged 22. 2. Ununited Fracture of Clavicle from boy, aged 3. Mr. Hunt will exhibit a specimen of Horseshoe Kidney, one extremity Hydronephrotic. Mr. Rushton Parker will remark on a few cases of Stone in the Bladder with peculiar features. Dr. Emrys-Jones will show coloured drawings of two cases of Cysts of the Iris, and read short notes. Dr. Thomas Harris will make some observations on the Curability of Pulmonary Phthisis, and show some preparations of Healed Phthisis. Dr. Judson S. Bury will read a paper on The Face as an Index of Disease. Mr. Hare will give some recent experiences in Cerebral Surgery, with remarks on the Localisation of Lesions. Dr. Hirst will read a short paper on The Medical Training of the Country Practitioner of Forty Years ago. Dr. Briggs will mention an Obstetric case (Scolio-rachitic Dwarf) Refreshments will be provided by the members of the Branch in Blackburn for those coming from a distance, in the ante-room of the Town Hall, from 2 to 2.30 P.M. Dinner: A dinner will be held (Dr. Davidson, President of the Branch, in the chair), at the Old Bull Hotel, at 5.30 P.M. Tickets, 7s. 6d. each (wine not included). Cotton Mill: By the kindness of Mr. Fred Baynes, his mill will be open to the inspection of the members. Gentlemen wishing to see over the mill should communicate with Dr. Martin, Honorary Local Secretary, Arnheim, Blackburn, who has undertaken to make the necessary arrangements.—CHARLES EDWARD GLASCOTT, M.D., General Secretary, 23, St. John Street, Manchester.

PROCEEDINGS OF THE COUNCIL.

At a meeting of the Council, held at the offices of the Association, 429, Strand, W.C., on Wednesday, October 16th, 1889:

Present.

Dr. T. Bridgwater, President of the Council, in the chair.
Mr. C. G. Wheelhouse, Leeds, President-Elect.
Dr. Holman, Reigate, Treasurer.

Dr. H. Barnes, Carlisle.
Dr. F. Bateman, Whitchurch.
Dr. J. S. Bristowe, F.R.S., London.
Mr. H. T. Butlin, London.
Dr. J. S. Cameron, Huddersfield.
Surg.-Gen. W. R. Cornish, London.
Dr. J. Ward Cousins, Portsmouth.
Dr. G. W. Crowe, Worcester.
Dr. J. L. H. Down, London.
Dr. D. Drummond, Newcastle-on-Tyne.
Mr. George Eastes, London.
Dr. W. A. Elliston, Ipswich.
Sir B. W. Foster, M.D., M.P., Birmingham.
Mr. R. S. Fowler, Bath.
Dr. J. H. Galton, London.
Dr. C. E. Glascott, Manchester.
Dr. Bruce Goff, Bothwell.
Dr. O. Grant, Inverness.
Dr. T. W. Grimshaw, Carrickmines.
Mr. J. H. Hemming, Kimbolton.
Mr. G. F. Hodgson, Brighton.
Mr. T. V. Jackson, Wolverhampton.
Mr. T. R. Jessop, Leeds.
Mr. Evan Jones, Aberdare.
Dr. W. M. Kelly, Taunton.
Mr. H. R. Ker, Halesowen.
Mr. C. Macnamara, London.
Dr. W. Withers Moore, Brighton.
Dr. F. Needham, Gloucester.
Mr. C. H. W. Parkinson, Wimborne Minster.
Dr. C. Parsons, Dover.
Dr. R. Saundby, Birmingham.
Mr. S. W. Sibley, London.
Dr. E. M. Skerritt, Bristol.
Mr. Noble Smith, London.
Dr. W. Strange, Worcester.
Mr. T. Sympson, Lincoln.
Dr. T. W. Trend, Southampton.
Dr. W. F. Wade, Birmingham.
Mr. F. Wallace, London.
Dr. G. E. Williamson, Newcastle-on-Tyne.
Mr. A. Winkfield, Oxford.

The General Secretary having reported that the minutes had been printed and circulated, and that he had received no objection to them, the President of the Council signed them as correct.

Dr. Williamson, of Newcastle-on-Tyne, called attention to the omission of his name in the printed minutes of the meeting of the Council of August 15th sent out; the General Secretary reported that the omission had been rectified in the Minute Book.

Read letters of apology for non-attendance from Dr. Mackenzie Booth, Mr. Thomas Crosse, Mr. Jones Morris, Mr. W. Pearse, Dr. W. Russell, and Dr. Alfred Sheen.

Read letter from the Medical Defence Union asking for the use of a room for meeting.

Resolved: That the use of the Council Room be granted to the Medical Defence Union upon payment of the usual fee, £1 1s.

Read communication from the Therapeutic Committee asking for the addition of four members to the Committee.

Resolved: That in accordance with the request of the Therapeutic Committee, the gentlemen whose names are as follows be added to the Committee, namely: Professor Fraser, Professor Cash, Dr. Mitchell Bruce, and Dr. Donald MacAlister.

Dr. William Strange reported that he had been requested by the widow of the late Dr. Joseph Rogers to ask the Council to accept a portrait of him—an oil painting.

Resolved: That the offer of Mrs. Rogers be accepted, with thanks.

The President reported that a resolution, of which the following is a copy, was passed at a general meeting of members held in the Coliseum, Leeds, on Tuesday, August 13th, 1889:

Resolved: That it is the opinion of this meeting that the Members of the Royal College of Surgeons of England should have a voice in the management of that College and the election of its Council, and that it be an instruction to the Council of this Association to further this object through the action of the Parliamentary Bills Committee, or a Special Committee to be appointed for the purpose at this annual meeting.

Read letter from the Chairman of the Parliamentary Bills Committee suggesting members for election on the Parliamentary Bills Committee.

Resolved: That the resolution as requested be referred to the Parliamentary Bills Committee, and that the gentlemen whose names are as follows be added to the Parliamentary Bills Committee: Mr. Rivington, Dr. Danford Thomas, and Mr. Butlin.

The President of the Council reported also that the following resolution was passed at the annual meeting, Leeds, on August 13th last, upon reading the letter of Sir Joseph Lister, of August 1st, with replies, and resolution of Council (No. 1644), and that copies had been forwarded to Sir Joseph Lister.

Resolved: That this meeting desires to express its satisfaction with the result of the present representative system of government of the British Medical Association, and their approval of the steps taken by the Council for the management of its Journal.

Also the following resolution on August 13th last:

Resolved: That the motions of Dr. Rentoul and Mr. Brindley James be referred to the Council of the Association; that the Council invite the Branches and individual practitioners to forward suggestions to them; and that the Council furnish their report to the Journal within six months of the present date, and refer their conclusions to a general meeting.

Motion of Dr. Rentoul.—See proceedings of annual meeting.

Resolved: That Dr. Rentoul's resolution be forwarded to the Branches for consideration, and that a committee be appointed to receive and digest the replies, and to report upon them to the Council.

Resolved: That the gentlemen whose names are as follows be appointed to receive and formulate the replies, namely, Dr. Rentoul, Dr. Hugh Woods, Mr. Nelson Hardy, Mr. Brindley James, Dr. Major Greenwood, Dr. Brierley, Mr. Wickham Barnes, Sir Spencer Wells, Dr. Bristowe, Dr. Henty, Mr. George Brown, the President of the Council, the Treasurer, the Chairman of the Parliamentary Bills Committee, Dr. Ogilvie Grant, Dr. Wallace, with power to add to their number.

The President of Council reported also that the resolutions, of which the following are copies, were passed at the Leeds meeting in August last.

At a general meeting of members, held at the Coliseum, Leeds, on Thursday, August 15th, 1889:

Resolved: That the best thanks of this meeting be tendered to the Parliamentary Bills Committee for their action in reference to the appointment of medical officers of health; that the Committee be requested to continue their labours in the matter, and that in the English Local Government Act a clause should be inserted providing that no medical officer of health should be dismissed from office without the consent of the Local Government Board; and also that in regard to the appointment of any such officer the word "shall" should be substituted for "may" in the English Local Government Act.

At a general meeting of members, held in the Coliseum, Leeds, on Friday, August 16th, 1889, the following resolutions were reported from the Public Health Section:

Resolved: That this meeting of the Public Health Section of the British Medical Association recommends that all keepers of hotels, hydropathic establishments, and boarding houses in a town (or other convenient district), should form themselves into an association for the mutual sanitary protection of themselves and visitors.

That this association should have for its principal objects—(1) An agreement that insists upon the removal (as soon as practicable and when consistent with safety) of *all* members of an infected family. (2) An agreement to require the signature of every visitor to a declaration that none of his or her party has recently been suffering from any infectious disease, or to his or her knowledge exposed to infection. (3) The establishment of a Register of Hotels certified to be in a perfect sanitary condition.

The Section recommends that such certificates, which must be approved by the local sanitary authority, should be renewed annually, after inspection, and that they should be exposed in a prominent position in every hotel, etc.

The Section also recommends such a combination of hotel-keepers, etc., that in towns where no sufficient provision for such purposes exists, they should themselves provide, either jointly or separately, a detached building for the isolation of infectious or doubtful cases.

Resolved: That the resolutions be referred to the Parliamentary Bills Committee, with full power to deal with the matter.

The President of Council reported that the following resolution had been passed at a general meeting of members, held in the Coliseum, Leeds, on August 13th, 1889.

Resolved: That the travelling expenses of representatives of Branches, incurred in attending meetings of the Council in London, be defrayed out of the funds of the Association.

Read resolutions of committee appointed to investigate and report as to the average development and brain power among children in primary schools.

Resolved: That the Committee, acting in the spirit of resolutions passed unanimously by the Section of Psychology at the annual meeting of the Association, 1889, request the Council to urge upon the School Board for London, the Government, and other educational bodies the importance of undertaking a scientific inquiry as to the condition of school children in London.

Read resolution passed by the Psychological Section at the annual meeting held at Leeds, together with a memorial concerning the appointment of a scientific inquiry as to the school population.

The following resolution, moved by Dr. Yellowlees, and seconded by Mr. North, was carried: "That the Section of Psychology of the British Medical Association, having conducted an investigation and considered their report as to the average development and brain power among children seen in primary schools, is of opinion that a Scientific Committee should be appointed by the Government for the further elucidation of this question."

The Committee suggest that the memorial of the Council be presented by deputation.

MEMORIAL CONCERNING THE APPOINTMENT OF A SCIENTIFIC INQUIRY AS TO THE CONDITION OF THE SCHOOL POPULATION.

The Section of Psychology of the British Medical Association having conducted an investigation, and considered their report as to the average development and brain power among children in primary schools, is of opinion that a scientific inquiry should be conducted by the School Board for London, the Government, and other educational bodies for the purpose of determining the condition of portions of the school population, as to the average development and brain power among them, the best means of classifying them, and ascertaining the relative numbers and distribution of the different classes of children.

Such inquiry should be conducted in selected public elementary schools, certified industrial schools, schools for the blind and deaf, and other exceptional schools, as well as among groups of children exempted or summoned for non-attendance at school.

Such inquiry should be conducted by examination of the children, as well as by inquiry among teachers and others.

Further, it is desirable that schools should be examined where exceptional methods of education are employed, such as Slöjd, and technical instruction, with a view to determine the effects of such methods upon the children seen.

Resolved: That the memorial be forwarded to the School Board, signed by the President of the Council and the President of the Association.

Resolved: That the correspondence on voting by proxy be referred to a committee consisting of the President, President-elect, the President of the Council, the Treasurer, and Dr. Ward Cousins, to confer with the solicitor, and to bring up a report to the Council at the next meeting.

Resolved: That 85 out of the 88 candidates whose names appear on circular convening the meeting, together with 17 of the 18 gentlemen previously elected at the Council meeting held at Leeds on August 15th, and now brought up for confirmation, be, and they are hereby, elected members of the British Medical Association.

The names of three candidates whose forms were signed irregularly by non-members of the Association were deferred until the forms had been received properly signed by three members.

Resolved: That the minutes of the Journal and Finance Committee of to-day's date be received and approved, and the recommendations contained therein carried into effect.

The Journal and Finance Committee minutes contain the report upon the quarterly accounts, amounting to £7,028 12s. 2d., the auditors' report for the quarter, and recommendations for grants of £25 to the Parliamentary Bills Committee and £10 to the compositors' sick fund.

Resolved: That the minutes of the Scientific Grants Committee of the 15th instant be received and approved, and the recommendations contained therein carried into effect.

The Scientific Grants Committee contain the recommendations for the distribution of the remaining balance of the Fund—namely, £82—and the re-appointment for one year of Dr. Sidney Martin as Scientific Scholar.

Resolved: That the minutes of the Trust Funds Committee of the 15th instant be received and approved, and the recommendations contained therein carried into effect.

The minutes of the Trust Fund contain suggestions to be communicated to Mr. Middlemore for a modification of his trust deed.

Resolved: That the minutes of the Inebriates Committee of the 14th instant be received and approved, and the recommendations contained therein carried into effect. See page 1003.

Resolved: That the minutes of the Premises Committee of the 14th instant be received and approved, and the recommendations contained therein carried into effect.

The minutes of the Premises Committee contain recommendations for a trial of the electric light in some of the rooms.

Read letter from Dr. Carpenter, of which the following is a copy:

Duppas House, Croydon, October 14th, 1889.

MY DEAR DR. BRIDGWATER,—Will you kindly ask the Council to relieve me of the duty of acting on the Premises Subcommittee. I think the time has arrived at which it is better for younger men than myself to take such duties. I am not now often in London, and not so able to give the attention required as I used to be.

I have now assisted in the work of the Council for a long number of years, and have seen it come from lodgings in a back street, through the hired premises in the Strand, to its present noble home.

I sincerely hope it will continue to be prosperous and long preserve its commanding position.—Believe me, faithfully yours, ALFRED CARPENTER.

Dr. Bridgwater.

Resolved: That Messrs. Price, Waterhouse and Co. be re-appointed public auditors for the ensuing year, in accordance with Bylaw 26.

The President of Council reported that the following resolution had been passed at a general meeting of members held in the Coliseum, Leeds, on Wednesday, August 14th, 1889.

Resolved: That the Council be empowered to arrange for a place of meeting of 1890, and to appoint a President-elect.

Dr. Wade, Sir Walter Foster, Mr. Lawson Tait, Dr. Saundby, Mr. Hugh Ker, and Mr. Vincent Jackson, attended as a deputation from the Birmingham and Midland Counties Branch. Dr. Wade, on behalf of the deputation, offered a warm invitation to hold the annual meeting of 1890 in the city of Birmingham.

Resolved: That the invitation to hold the annual meeting of 1890 in the city of Birmingham be cordially accepted, and that Dr. Wade be appointed President-elect.

Resolved: That the gentlemen whose names are as follows be appointed an arrangement committee to consider the necessary arrangements for the annual meeting of 1890, namely:—Dr. Wade, Mr. Lawson Tait, Mr. Lloyd Owen, Mr. Hugh Ker, Dr. Saundby, Dr. Carter, Mr. T. H. Bartleet, Mr. Bennett May, and Mr. Jordan Lloyd, together with the President, President of Council, the Treasurer, Mr. Eastes, Dr. Glascott, Mr. Jessop, Dr. Needham, Dr. Markham Skerritt, and Dr. Williamson.

METROPOLITAN COUNTIES BRANCH: EAST LONDON AND SOUTH ESSEX DISTRICT.

THE inaugural meeting of the session was held at the Hackney Town Hall on Thursday, October 24th. Nineteen members and visitors were present. The chair was taken by the PRESIDENT of the Branch.

Paper.—After the usual formal business, a paper on Certain Forms of Hepatic Cirrhosis was read by Sir DYCE DUCKWORTH, M.D. The paper was listened to with much interest, and called forth considerable discussion, in which the PRESIDENT (Dr. Ord), Drs. ANGEL MONEY, GREENWOOD, WOODS, HUNT, FULCHER, and others took part.

Votes of Thanks.—Most hearty votes of thanks were proposed and carried with enthusiasm to Sir Dyce Duckworth and Dr. Ord.

DORSET AND WEST HANTS BRANCH.

THE autumn meeting of this Branch was held at Weymouth on Wednesday, October 23rd, Mr. P. W. G. NUNN, President, in the chair. Thirty-seven members and visitors were present.

Election of Officers.—Dr. Edward Monro Spooner, of Blandford, was elected President; and Dr. P. W. MacDonald, of the Dorset County Asylum, and Mr. William Rendell, of Marden Newton, Vice-Presidents for 1890. Dr. William Vawdrey Lush, of Weymouth, and Mr. C. H. Watts Parkinson, of Wimborne, were re-elected joint Honorary Secretaries and Treasurers.

New Members.—Mr. John Benson Cooke, of Portland; Mr. Hubert Houssemayne Du Boulay, of Weymouth; and Mr. George Moule Evans, of Bridport, were elected members of the Branch.

Next Meeting.—It was resolved that the May meeting should be held at Ringwood.

Vote of Sympathy.—A vote of sympathy was accorded to Dr. Eadie, of West Coker, Somerset, and congratulations on his vindicating his character from unfounded charges. Notice was given that at the next meeting a vote of confidence would be moved to Mr. Charles Marsh, of Yeovil.

Medical and Surgical Emergencies.—A discussion on Some Medical and Surgical Emergencies was opened by the PRESIDENT, and taken part in by Drs. LAWRIE, MOORHEAD, GRIFFIN, MC LEAN, SNOW, and TIZARD; Messrs. PARKINSON, LYS, and MARSH.

Communications.—Dr. MACDONALD: Notes on a case of Tumour of the Cerebellum, with an absence of all symptoms. The specimen was shown.—Dr. CHILDS: Astigmatism as a Common Cause of Headache.—Dr. MOORHEAD: Case of Extroversion of the Bladder. The patient was shown.—Dr. LAWRIE exhibited a set of Apostoli's Instruments for the Electrical Treatment of Uterine Tumours, and Dr. MOORHEAD boxes of Dr. Ward Cousins's Artificial Antiseptic Ear Drums.

British Medical Benovolent Fund.—A donation of two guineas was granted to the British Medical Benevolent Fund.

Dinner.—The members and visitors dined together at the Royal Hotel.

NORTH OF ENGLAND BRANCH.

THE autumnal meeting was held at the Royal Infirmary, Newcastle-upon-Tyne, on Wednesday, October 23rd, at 3 P.M., the President, Dr. BARRON, in the chair.

Cases.—Dr. COLEY showed Two Typical Cases of Duchenne's Paralysis, which gave rise to a good discussion.—Dr. ROBERTSON showed a case of Tubercular Tumour of the Larynx treated by Tracheotomy.

Medical Defence Union.—Dr. PHILIPSON brought forward the question of a medical defence union, and it was resolved that a division for the counties of Northumberland and Durham be formed.

Treatment of Hæmorrhoids.—Dr. MURPHY described the method he adopts for the operative treatment of hæmorrhoids. The remaining papers were postponed.

Dinner.—After the meeting the members dined together at the Douglas Hotel.

STIRLING, KINROSS, AND CLACKMANNAN BRANCH.

THE autumn meeting of this Branch was held in the Scottish National Institution for Imbecile Children at Larbert on Friday, October 18th, at 4 P.M. Dr. STRACHAN was in the chair, and there were also present Drs. Haldane, Leslie, Linton, Ronald, Cribbes, Wickham, Griffiths, Joss, Mackintosh, Peake, and Lewis.

Apologies for absence were received from Drs. Macpherson, Spence, Oswald, Lindsay, Keith Macdonald, John Fraser, Hosack Fraser, Reid, McCandlish, and Kirkwood.

The minutes of last meeting were read and approved.

Imbecility in Children.—Dr. LESLIE read a paper on the types of imbecility in children, and illustrated his remarks by the exhibition of a large number of imbecile children. He said the term "imbecile child" was one of no exact scientific value, but the sense in which it was accepted might be illustrated by giving a classification of children in general based on their attitude towards education: 1. The class of the normal child of varied mental endowment, but who were all educable by the methods of our ordinary schools. 2. The class of the imbecile child of varied but all of weak mental capacity, educable only by special more elementary methods, the class for which the Larbert Institution was specially devoted. 3. The class of the idiot child, where the mental incapacity was so profound that the children composing it were practically unable to benefit by any form of education. Some of the more common and important characters, chiefly of physical defect, which many imbecile children exhibited, such as abnormalities of the cranium, palate, teeth, muscularity, vision, speech, etc., were then described, and cases exhibiting them in a marked degree were shown. Special attention was directed to the characters of the "Mongolian" group. In the course of the address medical statistics of the institution were given; 22 per cent. of the number resident suffered or had suffered from epilepsy; speech was absent in 32 per cent.; 14.5 per cent. of the girls and only 3 per cent. of the boys were of the Mongolian type. The improvement in mental and physical condition often attained, even in the least hopeful, by special modes of education was then referred to, and the speaker concluded by giving an account of the methods in use in the Larbert Institution.—Dr. HALDANE proposed a vote of thanks to Dr. Leslie for his most interesting demonstration, and this was carried unanimously.

Dinner.—The members were then conducted over the institution by Dr. Leslie, and later they were most hospitably entertained at dinner by the directors of the institution, who gave a cordial welcome to the visit of the Branch.

MIDLAND BRANCH; LEICESTERSHIRE DISTRICT.

THE first meeting ever held of this District took place at Melton Mowbray on October 24th, and was fairly attended; G. T. WILLAN, Esq., President of the Branch, was in the chair.

Sudden Death after Labour.—The PRESIDENT read notes of a case of sudden death occurring after labour, and discussed the probable cause.—Dr. NEWMAN and Mr. FRANKLIN attributed it to embolism of the pulmonary artery.

Vomiting of Pregnancy.—Dr. PRATT read a paper on vomiting of pregnancy, in which he stated he had cured two serious cases by application of cocaine to the os uteri by means of a vaginal suppository. The effect was permanent, and not merely transitory, as in some other cases where cocaine was used.—Dr. POPE referred to a paper by Gottschalk,[1] in which menthol was recommended in such cases, and stated that he had since found it answer in a case of vomiting due to ovarian irritation.

Typhoid Pneumonia.—Dr. HANDFORD read a paper on typhoid pneumonia, in which he drew attention to the frequent coexistence of epidemics of enteric fever and pneumonia, and also to an attack of pneumonia proving the first symptoms of an attack of enteric fever, and suggested that a common cause might underlie the fever and certain cases of the lung disorder. He showed many beautifully executed water-colour sketches of microscopical preparations from cases of the two diseases, and especially insisted on the fact that enteric fever was not to be considered a disease localised in the intestine, but that it had its manifestations in almost all organs.

[1] *Berl. klin. Woch.*, October 7th, 1889.

Post-Nasal Growths.—Dr. BENNETT related instances where deafness, etc., had been caused by post-nasal growths, and described the disadvantages arising from inability to breathe through the nose. He recommended removal of soft growths with the finger nail, and showed instruments—a scoop and cutting forceps—which might be used should the nail not be sufficient.

New Lunacy Act.—Mr. R. C. STEWART described instances in which lunacy certificates had been improperly filled in, and gave an account of the requirements of the Commissioners in Lunacy, and also of the changes which the new Lunacy Act would effect in the duties of those signing certificates.

Vote of Thanks.—Dr. HANDFORD proposed, and Mr. L. POWELL seconded, a vote of thanks to the President.

Dinner.—Most of the members then dined together.

SPECIAL CORRESPONDENCE.

PARIS.

Surgical Congress: The Surgical Treatment of Tubercular Diseases.—Removal of Meckel's Ganglion in Facial Neuralgia.—Laryngeal Cancer.—Thallin.—Puerperal Fever.—The "Cholera Scare."—Pseudo-Urinary Troubles.

M. LE DENTU dealt with several subjects, degeneration of the medulla of long bones placed at a distance from tubercular arthritic affections, nephrectomy in renal tuberculosis, suprapubic cystotomy in tubercular disease of the bladder, scraping of the prostate gland. With regard to the first of these subjects, M. Le Dentu said the bone medulla in this affection was steatosed, this condition forbade excision and might render immediate amputation necessary. Sometimes the medulla became rarefied, and the medullary canal was completely empty; M. Le Dentu mentioned several cases of amputation in which bones were observed to present this condition, also fistulæ. In the other cases he adopted a more radical treatment; for fungoid arthritis of the elbow-joint he amputated the limb, leaving half of the upper part of the arm; the bones were observed to be friable; M. Le Dentu therefore decided on disarticulating the stump; in arthritis of the knee-joint, M. Le Dentu performed disarticulation of the hip-joint. After nephrectomy for renal tuberculosis, the patient was troubled by the presence of a fistula, iodoform administered internally during three or four years arrested suppuration. Suprapubic cystotomy was unsuccessful in a case of tubercular disease of the bladder, complicated with pain and hæmaturia, the kidneys being probably attacked. Another patient operated on two years, found life bearable. In a very severe case of tubercular disease of the bladder, M. Le Dentu left permanently an india-rubber catheter. The patient's condition was considerably improved. M. Le Dentu suggests that this treatment should be tested in cases of tubercular cystitis. M. Le Dentu records a case of abscess of the perineum cured by scraping the prostate gland.

Dr. Daniel Mollière stated that he had three times removed Meckel's ganglion to relieve incurable facial neuralgia. In one case five years had elapsed since the operation, and there was no recurrence. In the other two cases neuralgia has returned.

Dr. Demons, of Bordeaux, showed a patient whose larynx he had removed, two years and four months ago, for laryngeal epithelioma; there was no sign of recurrence.

M. A. Robin stated, before the Academy of Medicine, that thallin acts as a poison on red blood corpuscles, nerve tissue, and all tissues containing a considerable quantity of sulphur and phosphorus; it is not therefore a good antipyretic, because it hinders elimination of uric acid, and should never be administered to arthritic patients.

The fact that recently epidemics of puerperal fever are of frequent occurrence has been brought under the notice of the Minister of the Interior. These epidemics are attributed to the neglect by French midwives of antiseptic injections. The midwives, on the other hand, allege that they are forbidden to use antiseptics, all of which, applied in certain doses, are caustic and toxic. The Minister sought advice from the Academy of Medicine, and a committee appointed by that body recently presented its report. It decides that antiseptic precautions should be practised by midwives, but at the same time states that druggists cannot sell mercuric salts or carbolic acid unless authorised to do so by a prescription signed by a medical man or an *officier de santé*. The committee therefore proposes that druggists be

legally authorised to sell to midwives solutions of carbolic and boric acid, not stronger than 5 per cent., which are to be used in water. These decisions were criticised by MM. Charpentier, Brouardel, and Lefort. M. Charpentier said the solutions were too weak. M. Panner observed that the carbolic acid solution would act, but in other countries, where life is as highly valued as in France, midwives were punished if they did not use antiseptic agents. M. Lefort proposed that midwives be authorised to have in their homes antiseptic substances, from which they can prepare solutions. M. Gueniot observed that this custom would be dangerous. M. Brouardel answered that danger would be compensated by the number of lives saved. This discussion is only a further proof in support of a well known fact—the French midwife is an anomaly; she is authorised to practise in a department of medicine without receiving the necessary medical training; she is thus a legalised danger, and Government, afraid of its own imprudence, trammels her by laws and prohibitions. The whole system requires revising; committees such as those appointed by the Academy of Medicine, at the instigation of the Minister of the Interior, serve only to waste the time of doctors and printers.

There has recently appeared in an English paper a somewhat sensational article on M. Proust's Report on Cholera in Mesopotamia; he is accused of "doing his best to get up another cholera scare." There is no evidence of such an intention in the calm and careful report laid before the Académie de Médecine. M. Proust wisely reminds Russia of its sanitary duties and responsibilities, the safety of Europe depending on their fulfilment. The *Progrès Médical* echoes M. Proust's words. It is well that Russia should be reminded of this fact as often as possible. The official report sent to the Minister of Foreign Affairs states that cholera broke out three months ago on the banks of the Euphrates and Tigris. It is gaining ground, and has attacked Recht, a city on the borders of the Caspian Sea.

M. Bazy, in a paper read at the Surgical Congress, gives some interesting particulars concerning a class of affections M. Guyon terms "faux urinaires" (pseudo-urinary troubles). Sometimes the symptoms clearly indicate uterine, rectal, or anal affections. Most often, however, they exhibit characteristics which differentiate them from this class of illnesses, though they have one common point of resemblance, the nervous system is disturbed, and general paralysis or hysteria, etc., may ensue. M. Bazy has examined several cases without detecting any lesion; he has collected notes on seven cases, which he classes as glycosuria not diabetes. Except in one instance, there where no symptoms indicating that the urine should be tested for sugar; in this knee-jerk was absent. M. Bazy affirms that this symptom occurs even in slight glycosuria. Pseudo-glycosuria resembles glycosuria by the existent nervous troubles common to both forms. M. Bazy says "pseudo-urinary conditions are easily diagnosed. The general condition is frequently good, and glycosuria generally disappears when a proper diet is strictly followed. Sugar is often only detected after meals, and the proportion in twenty-four hours is not important.

VIENNA.

Balsam of Peru in Diseases of the Air Passages.—Menstrual Urticaria cured by Spaying.—General News.

PROFESSOR SCHNITZLER has tried Peruvian balsam in various affections of the larynx, trachea, bronchi, and lungs, as well as in those of the mouth, naso-pharyngeal cavity, and nose. The results were good in the vast majority of cases. The drug was used in the form of inhalation, and was also applied with the brush and with the spray-producer; it was likewise given internally. Finally, the most important constituent of the Peruvian balsam—namely, the cinnamein—was also tried. Inhalations of the Peruvian balsam did not differ in effect from those of turpentine, and they were equally indicated in affections of the bronchi and lungs. Inhalations of the pulverised emulsion of Peruvian balsam, however, were, according to Schnitzler, very efficacious in many diseases of the larynx and the trachea. These were prescribed according to the following formulæ:—1. ℞ Bals. Peruv., 0.25 gramme; f. l. ad emuls., 250 to 500 grammes; chlorate of potassium, laurel water, āā 5 grammes; oil of peppermint, gutt. 5. 2. ℞ Bals. Peruv., 0 25 gramme; f. l. ad emuls, 250 to 500 grammes; cocain. muriat., 0.25 gramme; chlorate of potassium, 5 to 10 grammes; oil of peppermint, gutt. 5. 3. ℞ Bals. Peruv., 0.25 gramme; f. l. ad emuls., 250 to 500 grammes; benzoate of sodium, laurel water, āā 5 to 10 grammes; oil of peppermint, gutt. 5. 4. ℞ Bals. Peruv., 0.25 gramme; f.l. ad emuls., 250 to 500 grammes; cocain. muriatic., benzoate of sodium, laurel water, āā 5 to 10 grammes; oil of peppermint, gutt. 5; etc. M. D. S. For inhalation by means of the pulverising apparatus. These inhalations were particularly indicated in acute and chronic catarrhal inflammatory affections of the mucous membranes of the mouth, the pharynx, the larynx, and the trachea, the morbid process being not only rendered milder, but recovery being also greatly accelerated. Touching the question as to the penetration of pulverised medicaments into the air passages, which has recently been much discussed, Professor Schnitzler says that numerous experiments and observations have led him to the following conclusions: medicated pulverised liquids, which do not contain volatile resinous substances, for the greatest part become precipitated in the oral cavity, and only a small portion reaches the larynx, and still less passes through the rima glottidis into the trachea. As to the bronchi of the first order a part of the inhaled substances penetrated into them only exceptionally; those of the second and third order were hardly ever reached. It thus became evident that the inhalations of non-volatile astringent and resolvent medicaments were indicated only in affections of the upper air passages. The volatile resinous substances, however, which, at each inspiration, reached as far as the most delicate ramifications of the bronchi, were indicated in diseases of the deep air passages, and a combination of the medicaments as in the formulæ given above, could always be used. Peruvian balsam had the great advantage that its taste was not disagreeable, which was hardly the case with carbolic acid, creosote and creolin. Professor Schnitzler also insufflated Peruvian balsam in the form of powder, or its most important constituent—namely, the cinnameinum or the cinnamylic acid, into the larynx. Some of the formulæ were:—1. ℞ Bals. Peruv., 2 grammes; pulverised alum, lactate of sugar, āā 10 grammes. 2. ℞ Bals. Peruv., 2 grammes; subnitrate of bismuth, lactate of sugar, āā 10 grammes. 3. ℞ Acidi cinnamylici, 0.2 gramme; pulverised alum, lactate of sugar, āā 10 grammes; oil of peppermint, gutt. 10. 4. ℞ Acidi cinnamyl., 0.2 gramme; phosphate of lime, lactate of sugar, āā 10 grammes; oil of peppermint, gutt. 5, etc. M.D.S. for insufflation. The insufflations proved particularly efficacious in catarrhal inflammatory processes and in superficial ulcers of the larynx. In the case of deep infiltrations, and especially in laryngeal phthisis, the diseased parts were energetically brushed with Peruvian balsam or cinnamein; on some occasions this was done after the tuberculous infiltrations and ulcers had been scraped with a sharp spoon, or the vegetations had been destroyed with the hot wire. As for the brushings, the following combinations were employed:— 1. ℞ Cocain, mur., 0.50 gramme; bals. Peruv., alcohol, āā 10 grammes; oil of peppermint, gutt. 5. 2. ℞ Bals. Peruv., 15 grammes oil of peppermint, collod. flex., absolute alcohol, āā 5 grammes; 3. ℞ Acid. cinnamyl., 1 gramme; absolute alcohol, 5 grammes; pure glycerinne, 15 grammes; oil of peppermint, gutt. 10. Peruvian balsam, in this respect, was more efficacious than most of the other common remedies; it combined in itself the antiseptic bactericide property with the mild irritative one which favourably influenced the formation of the cells, and thus not only checked the further progress of the morbid process, but also accelerated recovery. Internally, Peruvian balsam was first tried in the form of an emulsion according to the prescription of Bouchardat, and later on in the form of pills, gelatine capsules, and compressed pastilles. It was tried in cases of chronic pulmonary tuberculosis. For the pills the following formula was used:—℞ Bals. Peruv., 10 grammes; ceræ flavæ, pulv. radicis altheæ āā quantum sufficit ut. f. pill. 100. D. S. From two to five pills morning and evening. For gelatine capsules:—℞ Bals. Peruv., 0.1 to 0.2 gramme; cod-liver oil, 1 to 2 grammes; exhibe in caps. gelat dent tales, 100. Or ℞ Bals. Peruv. 0.1 to 0.2 gramme; lipanin, 1 to 2 grammes, etc.; dent tales, 100. D. S. From 2 to 5 pieces to be taken in the morning and the evening. For the pastilles: ℞ Bals. Peruv. 2 grammes; phosphate of lime, bicarbonate of sodium, āā 10 grammes. F. pastill. compress. 20. D. S. From 2 to 5 pastilles in the morning and the evening. When the drug is given internally, and also after frequent inhalations, the urine should be carefully examined, as, according to Litten, nephritis occasionally occur even after the external use of Peruvian balsam.

At the Congress of the German Dermatological Society, recently held at Prague, Professor Pick brought forward a woman, aged 30, in whom each menstruation used to be associated with severe colicky pains, and an extensive eruption of urticaria. The

woman was emaciated, and suffered from bilateral oöphoritis and gonorrhœal salpingitis. Both the ovaries and oviducts were extirpated by Professor Schauta. Since the occurrence of the artificial climacteric the eruption of urticaria had disappeared, together with the other disturbances. The woman was in perfect health, and looked very well

Professor R. Chrobak, who has succeeded the late Professor Breisky in the second clinic for obstetrics and gynæcology, and Professor von Krafft-Ebing, who has taken the place of the late Professor Leidesdorf in the clinic for mental diseases in the Vienna Landes-Irrenanstalt, "read themselves in" on October 15th and 16th respectively.

MANCHESTER.

Southern Hospital.—Owens College Medical School.—Edinburgh University Club Dinner.—Typhoid Epidemic at St. Helens.

THE annual meeting of the subscribers to the Manchester Southern Hospital for Diseases of Women and Children, and the Manchester Maternity Hospital, was held last week in the Town Hall; 378 in-patients were admitted during the past year; 19,028 out-patients (both women and children) had been relieved; 782 poor married women had been attended to at their own homes in their confinements, and 86 women had been received into the maternity wards. In consequence of the large extensions made during the last two years, the ordinary income had not equalled the expenditure.

All former Owens College men must have noticed with satisfaction the extremely flourishing condition of the medical department of the College as far as the number of entries is concerned (the numbers were published in last week's issue of the JOURNAL). To anyone who has compared the statistics of the attendance of students during this with previous years, it will be evident, judging from numerical data, that the medical department of this school has not only maintained, but increased its popularity as an attractive school of medicine. With a medical school—such as the Owens College Medical School—thoroughly equipped in all its departments, scientific, practical and clinical, it is not to be wondered at that steady and sustained progress has characterised the fortunes of this school. In a manufacturing centre such as Manchester, with its teeming populations in adjoining districts, the immense variety of the diseases that are presented for study in its hospitals is such as to offer an unrivalled field for clinical study.

The Edinburgh University Club dinner was held last week; the number of members who attended the annual dinner was larger than usual, although it is always a large one. The guest of the evening was Mr. Joseph Bell, of Edinburgh. To many of those present it was a pleasant experience to renew acquaintance with one whom in years gone they had regarded as a trusty guide in the earlier years of their surgical studies. The Rev. Benjamin Bell presided.

It is stated that 381 cases of typhoid fever and 50 deaths have occurred in St. Helens, a borough of 70,000 inhabitants, within the past five months. Dry weather early in the season, defective drainage, and a stagnant and offensive brook, into which sewage flows through the centre of the town, are regarded as causes of the outbreak, and the Corporation have decided to immediately spend £10,000 in laying down a new main sewer.

LIVERPOOL.

Compulsory Notification of Infectious Diseases.—The Education of the Deaf and Dumb.

THE Health Committee having requested the medical officer of health to report on the desirability of adopting the Infectious Diseases (Notification) Act, Dr. Stopford Taylor has, through the medium of the President of the Medical Institution, invited the co-operation of the medical profession in Liverpool in order to carry out the Act. He proposes to supplement the form of notification prescribed by the Local Government Board by asking the medical attendant, when notifying, to state whether the patient was properly isolated, or required removal to hospital; whether any children in the infected house were attending school; whether the sanitary arrangements were satisfactory, and when the house would be ready for disinfection. It would be optional with the medical attendant to supply this information, but his doing so would obviate the frequent visits of the inspectors, and minimise the possibility of any misunderstanding arising. Dr. Taylor's letter was read by Dr. Carter at the ordinary meeting of the Medical Institution, when the proposals therein contained met with general approval from the members, and a deputation was chosen to confer with the medical officer of health. The Act has been adopted by the Wallasey Local Government Board.

At a recent meeting of the Medical Institution, Dr. C. Macalister and Mr. C. G. Lee drew attention to the recommendation of the Royal Commission on the Deaf and Dumb, advocating the use of the pure oral method in schools. Dr. Macalister urged that, however suitable the pure oral system might be for the children of the well-to-do, it could not be satisfactorily taught to the children of the poor on account of the time necessary to acquire it, and the small number of pupils that could be taught at one time. It was further maintained by various members that to deprive the deaf and dumb of the use of signs was to inflict a cruelty on them; that the sign language was capable of eloquence and humour which those who used it might be seen heartily to enjoy, while the lip language was entirely wanting in these qualities. The advantages claimed for the pure oral method were more imaginary than real, inasmuch as when the deaf learned to speak their intonation was exceedingly harsh and painful to listen to; and the power of lip reading, when acquired, was of little practical value, as it seldom enabled the deaf to understand strangers, unless they spoke with very great precision. Dr. Nevins, in supporting Dr. Macalister and Mr. Lee, drew attention to the importance of the minority report of the Rev. Charles Bloomfield and the Rev. William Owens, the only members of the Commission who had an extensive acquaintance with the education of the deaf and dumb, which differed from the report of the majority with regard to the pure oral method. It was also pointed out that the supposed dangers from the marriage of the congenitally deaf had been much overstated in the report, and that the statistics of Liverpool and other large towns showed that such marriages did not tend to the production of deaf children. It was unanimously resolved that, in the opinion of the meeting, the combined method of education was to be preferred to the pure oral for the masses of the deaf.

CORRESPONDENCE.

THE PRACTICAL ELEMENT IN MEDICAL EDUCATION.

SIR,—I did not immediately reply to Dr. Gairdner's letter in the JOURNAL of October 19th, as up to that time Dr. Clifford Allbutt had remained silent, and I am anxious not to waste the valuable space you so generously place at my disposal. Now that I have both letters before me, I need only ask for very few lines, and these, I feel sure, you will give me.

Dr. Gairdner's answer is, as I fully expected it would be, a simple plea for thoroughness in clinical work. After careful consideration of the position he takes up, I am satisfied that he and I do not in reality differ in principle. He pleads for one thing, and one thing only—namely, thoroughness—in all the work the student does; and *so do I.* But Dr. Gairdner appears to me to forget, or to ignore, the necessity *for this very principle* so far as *preparation for student life* is concerned. And, as Dr. Clifford Allbutt admits that he had not really read my address, and was speaking only on vague recollection of what he believed my opinions to be, I can well afford to rest content with his explanation. Of one thing I was quite certain—that he would not wilfully misrepresent me; and though I may regret that, speaking on so important an occasion as the opening of St. George's School, he should have spoken under mistaken impressions, I am quite content to accept this explanation. Our friendship is too old and too sincere to admit of any other course. At the same time, speaking as I did in my address not only as a member of the General Medical Council, but of its Educational Committee, he might have felt sure that I should have weighed seriously every word I wrote. He, too, appeals for thoroughness of work, and so does everyone else who has taken part in the discussion so far; but I maintain that I make the same appeal much more tho-

roughly than does either Dr. Gairdner or Dr. Clifford Allbutt, for I seek first to build on a good foundation, well and solidly laid, and to raise upon that an enduring superstructure. To obtain this, I cannot believe that it can be safe or scientific first to build your house, however substantially, and then to seek to put in your forgotten foundation afterwards.

I have also carefully and thoughtfully read each of the other letters that have appeared in your columns upon the subject, and I am grateful to those who have written them. Some seem to me to hit the right nail on the head, but others are already beginning to wander from the point in question. Therefore, with a view to keep the discussion on strictly correct lines, I venture to restate the items of the programme I propound:

A. A sound preliminary education, carefully and satisfactorily tested before registration.

B. A short preparatory pupilage of *one*, or, under very favourable circumstances, of even *two* years either with a certificated practitioner or at a public institution.

C. A curriculum of four years, devoted to scientific and clinical study, to be spent at a medical school or hospital, or, *when possible*, at a university.—I am, etc., C. G. WHEELHOUSE.

Leeds, October 28th.

SIR,—There are few things that have surprised me more than my friend Mr. Wheelhouse's attitude on the vexed subject of practical medical education. That he would advocate some form of apprenticeship we only expected of him, but that he should produce divisions in the camp of the reformers we were not prepared for.

On what ground he can recommend a return to the baneful system of edged tools being handled by raw and inexperienced lads I am quite at a loss to understand. Surely this would be the most certain plan of demeaning the tyro to the position of errand boy and surgery sweeper. How could his employer expect the public to allow such to do the smallest piece of work entailing the merest amount of skill or trace of responsibility? On the other hand, in spite of the jeers of the ultra-scientist, how can I ask my assistant, a graduate and an educated man, to undertake purely menial functions?

I have seen something of beginning at the wrong end, and my experience is that a man who dabbles at prescribing in early life without any real knowledge of anatomy never reasons afterwards in that logical way which another does who first lays the foundations of his practice, broadly and firmly, on a thorough acquaintance with healthy structure and function.

I cannot see any flippancy in Dr. Clifford Allbutt's eloquent and masterly address, and, advocate as I am of practical acquirements, I think Dr. B. James carries his arguments too far. The cases he quotes are too extreme, and simply, I fear, point to laxity on the part of some of the examining bodies, which we of the Medical Council are directly responsible for.

Turning to Professor Gairdner's address, what does his argument for thoroughness amount to? Is thoroughness possible? I say unhesitatingly, No. I do not in the least disparage the advantages of good, sound clinical training. I firmly believe in it and in its influence for good. But why say it is thorough? In the sense of teaching everything, it is not thorough. This Dr. Gairdner would be the first to allow. But, says the Professor, it sets him in the right path. Yes, but in only a few of the paths. Very often not in the way of prescribing, for instance. I have heard of professors who went on diagnosing till their patient died! Is such a plan applicable to every-day medical practice? Does clinical teaching deal in any great measure with temperaments, fashion, or the idiosyncrasies of patients? Does it bear at all on the pecuniary element of ordinary practice? And even on its own ground, does it not merely lift the curtain over a very limited field of disease? And yet every future field may require different treatment as regards its cause, prevention, and cure. The truth is, in the hospital the student is but beginning his life-study in the rudest way. The hospital in many respects is only the anteroom to the dead-house or dissecting room, whereas general practice is in direct contact with living, striving, criticising human beings—men and women—not cases. Time and leisure for study are the real desiderata. By all means take three years if necessary to the scientific side; do that well, but do it finally; pass the necessary examinations at least; and then devote other three years, if you can, to the study of medicine and surgery practically in the operating theatre; at the bedside in the hospital wards; in the out-patient room; but, above all, in seeing and, where practicable, handling and treating for yourself cases of all forms and varieties of diseases in their own homes, and especially in those of the poor.

Has there ever any man risen to eminence who has not began there, and why? Because he has been able to come to close quarters with disease, and to see it and manage it familiarly and closely.

No one venerates the genuine scientific spirit more than the writer. Men such as Darwin, Faraday, Cuvier, he considers, are real heroes. But heroes are not, as a rule, fitted for everyday tear and wear, and neither are purely scientific doctors. Science and practice combined constitute the highest claims to distinction in our profession; but there is no blinking the fact that in some respects they are antagonistic. Too much of one or other will not do; and, whatever we may think, the public will stick more to the doctor who acts on the motto of "Tuto, cito et jucunde" than to him who can predict the exact state of matters *post mortem*. The patient may submit to be rapped upon and knocked about, and made thrust his tongue out, but he cares merely to be cured, and is in no way anxious to be looked upon as a good case. To be able to tell him where he errs, and how best to get well, these are the qualities which he values in his medical attendant, and these qualifications are to be acquired only by practice, and the sooner the better.—I am, etc.,

Dingwall. WILLIAM BRUCE, M.A., M.D.

SIR,—As one who has had the good (?) fortune of being a pupil or apprentice before entering on my medical career, I beg a few lines in which to give my experience.

In 1879, I went to assist a friend of mine in his dispensary practice. I had no notion then of entering the medical profession, but very soon developed a passionate fondness for practical work. I learnt dispensing, bandaging, tooth extraction, etc., and could recognise the various kinds of ulcers, etc., with the appropriate treatment for each.

In 1881, I entered as a medical student, and thought I should carry everything before me as I had seen so much, and vainly imagined that the smattering of chemistry I had imbibed was to carry me through my first professional examination. Fortunately for myself I was soon undeceived, and came to the conclusion that the best manufactory of "chronics" and "unqualified full curriculum men" is pupilage—an opinion which I have seen no reason to change. After my third year of study was completed, I resided in a dispensary with a qualified man, a resident surgeon. He was then a young graduate of great promise, and has since made his mark in the profession. While in the dispensary I learned how to apply my theoretical knowledge, and in all cases of difficulty I could consult the resident surgeon. What I learnt from that man is imprinted in my memory never to be obliterated.

In all the discussion, I think this point has been overlooked—namely, the importance of each dispensary having a resident surgeon, otherwise the outdoor practice tends to become a farce, and does the unfortunate student as much harm as pupilage in the olden days seems to have done to some of our *confrères*.—I am, etc.,

M.B., C.M.ED.

SIR,—Although you must, I fear, be getting overwhelmed with correspondence on this subject, yet I hope I may not be too importunate in alluding afresh to the same, having noticed serious comments bearing on my letter.

While warmly congratulating Dr. Clifford Allbutt on his frank reparation to Mr. Wheelhouse, I cannot but protest against his sarcastic attack on an inoffensive "second correspondent," who only wishes to see fair play. More gratifying to me is the support conceded to Mr. Wheelhouse's views and mine by "M D Lond.," and the corroboration my experiences of mistakes by practitioners receive from "M.D. also L M." Might I, however, suggest—and very likely this gentleman will agree with me—that these extraordinary errors are ascribable less to defective education than to a deficiency of *ignis sacer*, or, in plainer words, to their adoption of a profession for which they possess but scanty aptitude?

"M.D.Lond.'s" plea for the preponderance of clinical teaching I most heartily endorse, for I find in it an additional support to mine for individual pupilage. As at present given clinical tuition is too concentrated; there are not clinical instructors enough, and their teaching is given to a crowd, not to individuals; whereas in private practice the pupils are in daily personal contact with their professional mentor, and, as Dr. Gairdner so ably points out, a few cases well studied teach more than can be learned in other

and more abstract methods. It is also evident that modern medical education is too hasty, and it is absurd to expect new-fledged lads from school to hurry-scurry through a few years into efficient members of the most difficult and multifarious of professions.

In conclusion, I beg to rectify another error Dr. John M. Miller evidently entertains: that I place the specious smartness of nimble-fingered men above less pretentious though more solid attainments. This gentleman has not caught my meaning, namely, that the practitioner, to be of any use to his suffering fellow-men, should possess practical abilities, combined with readiness of resource and presence of mind in emergencies, with also promptness of decision; while the erudite but vacillating and timid theorist not only distrusts himself, but also disheartens and alarms his patient. Moreover, to be successful the doctor must be a man of tact and a gentleman. I have seen really able young men irritate and offend patients of even a very modest social grade, and consequently injure their own future career by abrupt and careless discourtesy. Now, are they not far more likely to attain that *suaviter in modo* patients expect their medical adviser to possess in the personal example of their veteran instructors than in the rough-and-ready routine of a large hospital? I once had as assistant an able M.B.Lond., with whom I had very soon to part company, as I found his coarse and unfeeling surliness was rapidly driving away my *clientèle*.—I am, etc.

J. BRINDLEY JAMES.

Jamaica Row, S.E.

THE DEAF AND DUMB.

SIR,—May I beg for space to make one or two remarks on Dr. E. Symes Thompson's letter respecting the education of the deaf and dumb? Dr. Thompson appears to me to have fallen into some of the errors which characterise the Report of the Royal Commission, for, in common with the Commission, he has seen deaf-mutes in school, and observed their capability to converse with their teachers or friends. He forthwith proceeds to describe, in graphic language, the only means by which he considers "the deaf can be taught to communicate with and diffuse themselves amongst the general population."

The result which Dr. Thompson claims for the oral system I believe to be entirely hypothetical; the fact being that the deaf-mute denied the knowledge of sign language is much worse adapted for that diffusion among the general population of which Dr. Thompson speaks than if he had been permitted to exercise in full the senses of sight and touch, which are of so much importance in the sign-manual method.

Many persons could be pointed out who, although they have been most systematically and carefully trained on the oral system and not themselves wanting in intelligence, are yet quite incapable of conversing with any but their most intimate friends.

With regard to the percentage of congenitally deaf children who are the offspring of deaf-mutes, despite the statistics of Mr. Graham Bell, we are still in want of accumulated and reliable facts. As a small contribution, I may say that in Liverpool we have 62 deaf and dumb couples with 225 children, not one of whom is deaf. And, again, the records of the Liverpool School, where there are 121 pupils, do not contain a single instance of a child having deaf-mute parents, while, on the other hand, the consanguinity in the parents is not of infrequent occurrence.—I am, etc.,

CHARLES G. LEE,

Oculist and Aurist to the Liverpool School for Deaf and Dumb.

Liverpool, October 29th.

CHLOROFORM ADMINISTRATION.

SIR,—Dr. Ormsby, in his letter published in the JOURNAL of October 26th, says: "Again, with my ether inhaler, the patient breathing and rebreathing the same ether-charged air economises the quantity of ether used, and is not likely to produce the kidney trouble alleged to be produced by its effects."

As for ether, I cannot say much regarding its effects. But, as for chloroform, the danger in its administration seems to lie in breathing and rebreathing the respired air charged with chloroform. Some years ago a student mentioned the fact to me that whilst experimenting with chloroform he had to leave the room, and on doing so placed the animal (a kitten, I believe), along with the rag saturated with chloroform, into a large drawer. On returning shortly he found the animal dead, much to his surprise. Trying to explain this it occurred to me that chloroform with respired air must be poisonous. Some experiments made afterwards clearly proved this fact. The danger in the administration of chloroform depends on not allowing the patient to breathe the fresh air freely along with chloroform vapour. When a fatal result took place formerly it was usually put down to failure of the heart's action. Now it has been shown that it more frequently depends on cessation of respiration. On opening the thoracic cavity the lungs are found in a shrunken condition. As for chloroform inhalers, these should be avoided, the cheapest and best appliance being the ordinary towel.—I am, etc., G. R. GILRUTH.

Edinburgh, October 28th.

THE GUILD OF ST. LUKE.

SIR,—My attention has just been called to an annotation on page 934 of the JOURNAL of October 26th on the Guild of St. Luke. I do not know who your informant may be, but the paragraph is full of inaccuracies. I am concerned only with one, and that the mischievous statement that the guild, "entirely composed of medical men," was "founded for evangelistic work among their patients." A statement like this suggests even more than it says, and is calculated to discredit the Society in the eyes of your readers. I ask you, in common fairness, to allow me to say that the statement is untrue. The Society was founded twenty-five years ago to help students and young medical men in their desire to follow the teaching of St. Luke, and was for the individual improvement of its members, and not in any sense to make them proselytising agents amongst their patients. I enclose a copy of the objects of the Society.—I am, etc.,

Cavendish Place, W., October 29th. GEORGE COWELL.

ASSOCIATION OF MEMBERS OF THE ROYAL COLLEGE OF SURGEONS.

SIR,—I am instructed by my committee to forward you the enclosed proposed resolutions for publication in the JOURNAL should you think fit.—I am, etc.,

WM. ASHTON ELLIS, Joint Honorary Secretary.

14, Grosvenor Road, Westminster, S.W.

Resolutions to be proposed on behalf of the Association of Members of the Royal College of Surgeons of England at the meeting of Fellows and Members on November 7th, 1889.

1. That this meeting of Fellows and Members of the Royal College of Surgeons of England having considered the report of the Council dated October 17th, 1889, is of opinion that immediate steps should be taken to forward the introduction early in the next parliamentary session of a Bill to amend the constitution of the College, so as to secure to the Members a just representation in and upon the governing body of the College, and that a committee be hereby appointed to co-operate with the Central Committee of the Members' Association in taking the necessary steps to give effect to this resolution.
2. That the following gentlemen be appointed members of the Committee, with power to add to their number * * * .

NAVAL AND MILITARY MEDICAL SERVICES.

THE VICTORIA CROSS.

THE Queen has been graciously pleased to signify her intention to confer the decoration of the Victoria Cross upon Surgeon Ferdinand Simeon le Quesne (Medical Staff), whose claim has been submitted for Her Majesty's approval for his conspicuous bravery during the attack on the village of Tartan, Upper Burmah, by a column of the Chin Field Force on May 4th last. The act of courage for which he has been recommended is recorded as follows:—"Displayed conspicuous bravery and devotion to duty during the attack on the village of Tartan by a column of the Chin Field Force on May 4th last, in having remained for the space of about ten minutes in a very exposed position (within five yards of the loopholed stockade from which the enemy were firing), dressing with perfect coolness and self-possession the wounds from which Second Lieutenant Michel, Norfolk Regiment, shortly afterwards died. Surgeon Le Quesne was himself severely wounded later on whilst attending to the wounds of another officer."

THE NAVY.

THE following appointment has been made at the Admiralty:—JOHN HUNTER, Surgeon, to the *Excellent*, November 7th.

THE MEDICAL STAFF.

SURGEON J. H. DALY, who is serving in the Bengal command, has leave of absence for six months on medical certificate.

Surgeon A. O. GEOGHEGAN, at present stationed at Woolwich, has received orders to proceed to India.

Surgeon-Major R. COLLINS, M.B., has been appointed Inspecting Medical Officer and Consulting Surgeon, and Surgeon-Major R. G. THOMSETT to be Assistant-Surgeon at the Civil Hospital, Gibraltar.

Surgeon D. M. GREIG, who is serving in the Bengal command, has been granted leave to England pending retirement from the service.

Brigade-Surgeon WILLIAM TANNER, who was placed on temporary half-pay on account of ill-health on November 7th last, has now been granted retired pay.

ARMY MEDICAL RESERVE.

ACTING-SURGEON ARTHUR CORRIE KEEP, M.D., 2nd Volunteer Battalion Worcestershire Regiment (late the 2nd Worcestershire Volunteers), to be Surgeon, ranking as Captain.

INDIAN MEDICAL SERVICE.

THE undermentioned Surgeons, having served twelve years in that grade, are promoted to be Surgeons-Major:—Bengal Establishment: S. J. THOMSON, R N. CAMPBELL, M.B., E. S. BRANDER, M.B., F. C. CHATTERJIE, M.B., and G. A. EMERSON, M.B.; Madras Establishment: C. H. BENNETT, M.D., W. H. THORNHILL, M.D., and M. E. REPORTER; Bombay Establishment: D. C. DAVIDSON, J. C. H. PEACOCKE, K. S. NARIMAN, and A. F. SARGENT.

Surgeon-Major C. H. JOUBERT, M.B., Bengal Establishment, officiating Professor of Midwifery, Calcutta Medical College, has leave of absence for six months, and Surgeon C. ADAMS, M.B., Madras Establishment, has leave for one year on medical certificate.

THE VOLUNTEERS.

ARTHUR THOMAS HOLDSWORTH, M.D., is appointed Acting Surgeon to the 1st Volunteer Battalion Royal Warwickshire Regiment (late the 1st Warwickshire).

VOLUNTEER MEDICAL STAFF CORPS.

THE annual competition for the challenge shield took place on Saturday, October 26th, at Westminster Hall. Three companies competed, namely, No. 1, Surgeon V. Matthews; No. 4, Surgeon-Major J. A. Watson; and No. 5, Surgeon F. E. Squire, M.D. Surgeon J. Falvey, M.S., Assistant Instructor to the Medical Staff Department, Aldershot, acted as judge. The companies were put through various movements in bearer-company and stretcher drill, and examined in bandaging and first aid to the injured. After a spirited competition the shield was awarded to No. 1 Company, the contest, however, having been very close. Surgeon Falvey having addressed the officers and men of the corps and complemented them on their work, Surgeon-Major Platt, V.M.S.C., in the absence of Surgeon-Commandant Norton, thanked Surgeon Falvey, in the name of the corps, for his kind services, bringing a most interesting afternoon's work to an end.

"POST-GRADUATE COURSES" FOR NAVAL MEDICAL OFFICERS.

R. N. writes: Now that the Admiralty have decided to appoint temporary service surgeons in the navy it might be possible for them to make some arrangements by which surgeons could attend a post-graduate course. Haslar Hospital is very well for officers holding appointments there, but for those in harbour ships it is very out of the way; they also have their duties on board their own ships, and I do not think that lectures on naval hygiene are what one requires after getting rusty from long service at sea. If it is a money difficulty in the way, why not allow three months on half pay (full time to count on obtaining certificates at the medical school when the studies are passed)?

I am sure that many would be only too glad to avail themselves of the opportunity on these terms. I think it really time, in the best interests of our service, that something of the sort should be done, as there is no doubt that, except in a few cases where some have special opportunities, we do deteriorate as length of service increases, but in the majority of cases I do not for a moment believe it is due to the man himself.

INCREASE OF AGE RETIREMENT.

R. M. S. C. writes from India: The Medical Staff appreciate the liberal manner in which their grievances are redressed in the recommendations of Lord Camperdown's Committee. But there has been no sufficient protest against the proposed increase of the age retirement of surgeons-general, which will seriously handicap the deputies and brigade-surgeons. In all fairness the latter should have corresponding increases in their period of service.

*** We discussed this matter in recent leading articles.

THE THREE YEARS' RANK.

STATISTICS writes: The late order that all officers must serve three years in a rank before they can claim the pension of it hits medical officers very hard. No others are called upon to spend 50 per cent. of their service abroad. The result is the heavy mortality in tables 13 and 14 of Lord Camperdown's report. The order will no doubt relieve the taxpayer by killing off the medical officers. In nine cases out of ten, foreign service means service in unhealthy climates.

DOUBLE TITLES.

P. M. O. writes: In a leading article in the JOURNAL of September 21st it is stated that "the proposed new titles are combinations identical with existing titles of Surgeon-Major and Surgeon-General, which have not been found objectionable." Surely this is at variance with the report on relative rank, in which 75 per cent. of medical officers condemned compound titles. Such will never be used in official or social life in the army, and so are utterly useless; let them, then, not have the support of the JOURNAL, which throughout all the agitation has so ably represented the views of the officers of the Medical Staff.

*** We trust that amid conflicting opinions we shall continue impartially to reflect the views of medical officers. We merely reasoned that the proposed compound titles could not fairly be condemned as outlandish and un-English innovations, seeing they were really amplifications of existing titles. We are well aware the majority of medical officers are against them, while at the same time admitting their consecutive application would be a clear advance on the present disjointed nomenclature. We look upon them as mere stepping stones, and as such not to be hastily rejected in the present critical condition of the department. Nothing, indeed, would give us more pleasure than speedily to see that which must ultimately come—the formation of a "Royal" medical corps, in which the medical officers shall have substantive rank and military titles; but in aiming at that, care must be taken not to reject recommendations leading to such a goal. The Committee did not see fit to recommend radical measures of reorganisation, which we fear they saw would have been summarily rejected; but in not a few respects they have defended the department from an agitation which might have destroyed it, and which at least would have wrought much hardship and injustice to individuals. We speak of the recommendations in the body of the report, not of some of the "dissents."

TITLES OF MEDICAL OFFICERS.

VIVE UT VIVAS writes: The supreme ignorance and indifference of civilians towards the titles of army medical officers is well shown in the following recent examples:—

In an Aldershot newspaper (!) he read of Sergeant-Major A. for a well-known Surgeon-Major; in the post office of a large provincial town, on a list displayed of those holding licences to kill game, he saw, among a number of officers of the garrison, the name of Sergeant-Major F. for Surgeon-Major. He himself has been so often called Sergeant that he begins to doubt whether after all he really is a commissioned officer. With such glaring examples of the application of slipshod titles, it is simply a grim joke to talk of the dignity of the medical profession in the army. Why not at once cut short these misnomers by giving well-understood titles, as Captain or Major, and Surgeon? What artillery or engineer officer would take to, or even tolerate, such compound titles as Gunner-Captain or Sapper-Major.

MEDICAL REORGANISATION.

ROYAL SURGEON hopes the letter of "Medical Staff" in a late number of the JOURNAL expresses the feeling of practically the whole body of army medical officers. While recognising their own helplessness and urgent need of outside assistance in struggling for their rights, at the same time they most gratefully appreciate the efforts made by friends and this JOURNAL in their behalf.

The recommendations of the Camperdown Committee, if carried out in a liberal spirit, would, even with the cumbersome double titles, be a great improvement. It is probably too much to expect that the present War Office and Horse Guards authorities are prepared to treat the rank and titles question radically once for all, and to generously recognise the true position of medical officers in the army, This, however, can only be done by organising the medical service into a corps on the lines of the Royal Engineers.

MEDICO-LEGAL AND MEDICO-ETHICAL.

THE CHARGE AGAINST DR. MOON.

ON Monday, October 28th, Dr. Moon was placed on his trial at the Old Bailey, before Mr. Justice Stephen, on the charge of having caused the death of a woman named Eleanor Tebbut by having performed on her an unlawful operation, with the object of bringing about a miscarriage. Briefly the chief points in the case were as follows: It seems that in June last the deceased, a married woman who had had three children, the last about a year previously, consulted Dr. Moon. She stated that she was suffering from hæmorrhage, and therefore Dr. Moon did not on that occasion make an examination. About a month later she came again to Dr. Moon's house one evening, about 7.30; and it was with regard to what was alleged to have occurred at this interview that the charge was made.

Dr. Moon said that on the occasion in question he examined the patient, and that, having the history of her having suffered from hæmorrhage before him, when he found nothing to account for it outside the womb, he thought she might be suffering from a tumour of the womb, and proceeded to pass the sound. While the sound was in the uterus he passed a tent into the cervix, with a view to further exploration. On withdrawing the sound and finding no blood on it, he said to the patient, "I believe you are pregnant." She laughed, and said, "Yes, I am." Dr. Moon then inserted a plug of cotton-wool, soaked in tincture of opium, into the vagina, and sent the patient home, telling her to keep quiet. A day or two later the fœtus came away, but not the after-birth. Subsequently the patient became very ill, and Dr. Townsend, who was called in to see her, found that she was suffering from acute peritonitis. In spite of treatment she became worse, and died

within a few days. The *post-mortem* examination showed that the cause of death was acute peritonitis. The condition of the uterus indicated that it had recently contained an ovum of not less than three months' development.

The trial lasted till midday on Wednesday, when the jury, after a very few minutes' consideration, returned a verdict of "Not guilty," with which the judge expressed his full concurrence.

The defence was conducted by Mr. Lockwood, Mr. Poland, Mr. Besley, and Professor W. R. Smith, M.D., of King's College.

We think there are two points to which we may usefully direct attention—(1) that a medical man engaged in general practice is unwise, in his own interest, to decide on using tents without consultation with someone having special experience in gynæcology, and (2) that, if it has been decided to use a tent, the patient should be in bed when it is inserted, and should be kept there for some days after it has been withdrawn.

PRELIMINARY VISITS OF COURTESY.

G. V.—The following extract from the *Ethical Code*, chap. iv, rule 2, page 90, will afford our correspondent the desired information: "In towns of not exceeding 35,000 inhabitants, and containing some thirty, more or less, medical men, a preliminary visit of courtesy should be paid to each several practitioner; but in those in which the preceding numbers are much exceeded, the call or visit may very fairly be limited to such practitioners as live within a radius of (say) half a mile, or less, according to the nature and population of the locality."

CONTRACTS NOT TO PRACTISE WITHIN AN AREA.

FREEMASON writes: 1. Some time ago I sold the remaining share of my practice to a gentleman who had been my partner for twelve months, and in the deed of dissolution was a clause to the effect that I was not to practise, nor aid nor assist any one in practising, within a certain specified area under a named penalty, or the alternative of being proceeded against by injunction. I may mention that the practice was situated in a village nearly 100 miles from London, and was practically unopposed. Since my leaving, however, an opponent has obtained some of the appointments and many of the patients, amongst them a patient who has asked me to meet the opponent in consultation on the case. Am I justified in meeting the said opponent (who is a qualified registered man) having regard to the aforementioned prohibitive clause?

2. Is it illegal to make a charge for giving a death certificate?

*** 1. Unless the penal clause in question be unusually stringent, we take it that, in acceding to the request for a consultation with the practitioner alluded to, our correspondent will not render himself liable to the penalty or injunction. Nevertheless, such assent would, in our opinion, more or less involve a moral if not legal grievance to his late partner, and he should therefore avoid as far as possible the least appearance of opposition to him. If, however, from the peculiar nature of the case, his consultative advice be especially desirable, and he be induced to visit his former patient, we would strongly urge him to write, prior thereto, an explanatory note to his successor in the practice.

2. No charge ought to be made for other than a duplicate of the ordinary certificate of death, and for such as may be required for the information of life insurance companies, and the like.

CLAPHAM MATERNITY AND SCHOOL OF MIDWIFERY.

IN reference to a notice paper of the Clapham Maternity, and an editorial note which appeared in the JOURNAL of October 19th, Miss M. Ritchie, Honorary Secretary of the Clapham Maternity and School of Midwifery, requests us to publish the two accompanying letters:—

King and Queen's College of Physicians, Ireland,
Kildare Street, Dublin, July 10th, 1889.

Dear Madam,—Your letter of explanation concerning the issue of a handbill from the Clapham Maternity, and Miss McCall's connection therewith, was read before the President and Fellows of the College, and considered satisfactory.—Yours faithfully,

JOHN WILLIAM MOORE, B.A., M.D.Univ.Dub., Fellow and Registrar.

Miss M. Ritchie.

King and Queen's College of Physicians, Ireland,
Kildare Street, Dublin, October 23rd, 1889.

Dear Madam,—In answer to your letter of October 21st, I beg to draw your attention to an official letter of mine which appeared in the *Medical Press and Circular* of October 16th, p. 398, with the editor's remarks thereon.

We have replied to certain gentlemen in and about Clapham who have complained of the circular that your explanation of the nature of the charity has been satisfactory.—I am, yours faithfully,

JOHN WILLIAM MOORE, B.A., M.D.Univ.Dub., Fellow and Registrar.

Miss Marion Ritchie.

A NEW edition (the third) of the *Dutch Pharmacopœia* will appear in the course of the next year.

MEDICAL WOMEN IN RUSSIA.—From official statistics recently published it appears that in those administrative divisions of the Russian Empire in which there is no "district medical service" the number of female medical practitioners is 31. In those in which that system is organised, and in the province of the Don, the number of medical women amounts to 283, in the Caucasus to 14, in Siberia to 9, and in the Baltic provinces to 10.

OBITUARY.

WILLIAM COCKCROFT, M.R.C.S., L.S.A.

THE subject of this obituary notice resided at Catterick, Yorkshire, where he conducted a large country practice for nearly fifty years. A healthy-minded, active, and energetic man, with a sound practical knowledge of his profession in all its branches, he enjoyed the confidence of a large circle of patients; whilst his simplicity of character, his contented and happy disposition, and his straightforward and honourable conduct gained for him the respect of all his neighbours and the friendship of those who knew him sufficiently to estimate his true worth. He was busily engaged in professional work in the early part of 1887, when he met with a fall from his horse. He did not appear to sustain any injury at the time, but shortly afterwards brain mischief began to show itself, ultimately developing into the painful affliction from which he never recovered. After a long illness, extending over a period of two years and a half, he expired rather suddenly on the morning of Sunday, October 13th, in the 75th year of his age.

His remains were interred in Catterick churchyard, in the presence of a large number of those on whose behalf he had laboured conscientiously and truly for so many years.

RICHARD EATON POWER, L.R.C.P.LOND., L.R.C.S.EDIN.

"HIS gentleness and courtesy were felt both by officers and prisoners alike, and the most hardened of the poor unfortunates shed tears when they heard of his sudden death." This is the statement of the officers who served under the late governor of Woking Prison. Mr. Richard Eaton Power was the son of Mr. Edmund Power, of Castlecomer, co. Kilkenny. He received his medical education at the Ledwich School of Medicine, Dublin, and, on obtaining his professional qualifications, he joined the Royal Mail service and served as surgeon for several years. In 1865 he entered the Civil Service, and acted as assistant medical officer both at Portsmouth and Dartmoor. He was appointed chief medical officer at the Portsmouth Convict Prison in 1879, and only in May of the present year he was promoted to the important post of governor and medical officer of the Woking Convict Prison.

Mr. Power was an excellent surgeon, and contributed many valuable papers to current medical literature. During his long service he had acquired great experience in the management of criminals—a kind of professional work, he often remarked, that was surrounded by special anxieties, and quite unlike any other form of medical practice. In his official position he was always just and humane, and his kindly disposition often made him lean to the side of leniency. When he was present during corporal punishment a convict seldom received his full sentence of lashes, and it is related that when Benson, the notorious forger, was in Portsmouth Prison, and shammed sickness to escape the cat, he got the benefit of the doubt and was sent to the infirmary; but by careful observation the cheating was soon detected and the prisoner was sent away to Dartmoor.

In every position he occupied Mr. Power enjoyed the confidence and esteem of all the officers around him, and he was a universal favourite with his professional friends. He could often be seen in the theatre of the Royal Portsmouth Hospital on operating days, and will be long remembered for his modest but hearty manner and genial wit. He possessed a very humorous way of telling a story, and on a recent occasion he related that a convict, an incorrigible old thief, was brought in, having received a wound on the ulnar side of the right hand. "Be careful, Doctor, please," said the old man, "and cure me without a seam." When interrogated as to his anxiety about a scar, he replied, "Why, when I get out to work again, if you ain't careful with me, a notch on the side of my hand will hang up in the gentlemen's pockets."

Mr. Power was a man of literary taste and an accomplished painter, and all the leisure he could snatch from his professional work and study he devoted to his favourite art. He was passionately fond of country life, and entered upon his last appointment with much anticipation; but he lived only a few months to enjoy his new and pleasant residence at Surrey. He died, after a few hours' illness, on October 2nd, at the comparatively early age of 56 years, and was buried at St. John's, Woking. When the sad intelligence reached Portsmouth, it caused throughout his large circle of friends a deep and widespread sympathy and regret. For many years Mr. Power was a member of the British Medical Association.

UNIVERSITY INTELLIGENCE.

OXFORD.

DR. W. S. CHURCH has been elected the representative of the University on the General Medical Council, in the place of the late Dr. T. K. Chambers. An examination will be held in Preventive Medicine and Public Health, commencing on November 25th, at 10 A.M. The examination is only open to those who have passed all the examinations requisite for the Bachelor of Medicine at Oxford. Names must be sent to the Regius Professor by November 11th.

CAMBRIDGE.

GENERAL MEDICAL COUNCIL.—The term of five years for which Professor Humphry was elected to represent the University on the General Medical Council expires on November 13th. Professor Humphry has been elected on four occasions, and he has written a letter to the Vice-Chancellor thanking the University for the honour thus conferred on him, and stating that it is not his intention to offer himself for re-election. The Vice-Chancellor fixes Thursday, November 7th, from 2.30 to 3.30, for the election of a successor, the voters being all persons who are on the register of members of the Senate. A circular has been sent out, signed by Professors Paget, Humphry, Macalister, Liveing, Foster, and Roy, the Master of Downing (Dr. Hill), Dr. Gaskell, and a number of other resident members of the medical faculty, stating that Dr. Donald MacAlister will be voted for.

JUNIOR DEMONSTRATOR OF PHYSIOLOGY.—W. B. Hardy, B.A., of Gonville and Caius College, has been appointed Junior Demonstrator of Physiology, in place of Mr. Wingfield, resigned.

CRANE'S MEDICAL CHARITY.—A meeting of the distributors of Crane's Charity will be held in Trinity Lodge on Tuesday, November 19th, at 10 A.M., to make grants "to poor scholars, for their relief that are sick, for paying their physick diet, or other things necessary for them in their sickness." The application of scholars must be made by their college tutors.

JOHN LUCAS WALKER FUND.—The Managers, on October 19th, made the following grants in aid of Original Research in Pathology:

a. A grant of £14 2s. 3d. to J. G. Adami, M.A., M.B., Christ's College, Demonstrator of Pathology, to defray certain expenses incurred by him in his investigations on the Pathology of the Heart.

b. A grant of £35 to William Hunter, M.D.Edin. (St. John's), John Lucas Walker Student, to defray certain of the expenses incurred in his research on Pathology of the Blood.

c. A grant of £30 to E. Hanbury Hankin, B.A. (St. John's), to defray certain expenses in his research on the Nature of Immunity from Infectious Diseases.

MEDICAL EXAMINATIONS.—The following table has been issued by the Registry:

Examinations.	Names Sent In.	Corrected List Issued.	Certificates Received.	Examination Begins.
First M.B. ...	Nov. 20	Nov. 29	Nov. 28	Dec. 3
Second M.B. ...	„ 20	„ 29	„ 28	„ 3
Third M.B. I ...	„ 27	Dec. 7	Dec. 6	„ 10
Third M.B. II...	„ 27	„ 7	„ 6	„ 11
M.C.	„ 27	„ 10	„ 9	„ 13

ELECTORAL ROLL.—The Council of the Senate have issued a report recommending several changes in the statute respecting the Electoral Roll, the body which elects the Vice-Chancellor and the Council of the Senate. The chief alterations of principle are (1) the inclusion as *ex officio* members of readers and University lecturers in addition to heads and professors; and (2) the exclusion of public examiners, as not having a sufficiently permanent connection with the University to justify their retention *ex officio*.

EXAMINER IN ZOOLOGY.—Professor Ray Lankester has been appointed a Second Examiner in Zoology for the Natural Sciences tripos.

TEACHER OF PHYSICS.—The Special Board of Medicine recommend that L. R. Wilberforce, M.A., Trinity College, Assistant-Demonstrator at the Cavendish Laboratory, and Lecturer at Gonville and Caius College, be appointed as a Teacher of Physics, with reference to the medical regulations.

MATRICULATION.—On October 21st no fewer than 946 freshmen were matriculated, against 862 on matriculation day last year. The largest increase appears to be at St. John's and Jesus Colleges; Selwyn and the *non-ascripti* show also considerable increases.

THE Council of Cavendish College, Cambridge, will give a luncheon on the occasion of the opening of the new college hall on Saturday, November 16th, at 2 o'clock, which will be presided over by the Marquis of Hartington.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns, including London, which have an estimated population of 9,555,406 persons, 5,709 births and 3,433 deaths were registered during the week ending Saturday, October 19th. The annual rate of mortality in these towns, which had declined from 17.9 to 17.5 per 1,000 in the three preceding weeks, rose again to 18.7 during the week under notice. The rates in the several towns ranged from 13.2 in Derby, 13.5 in Leicester, 14.5 in Nottingham, and 14.6 in Brighton to 25.1 in Hull, 26.3 in Newcastle-upon-Tyne, 31.4 in Plymouth, and 34.1 in Preston. In the twenty-seven provincial towns the mean death-rate was 20.3 per 1,000, and exceeded by 3.4 the rate recorded in London, which was only 16.9 per 1,000. The 3,433 deaths registered during the week under notice in the twenty-eight towns included 98 which were referred to scarlet fever, 83 to diarrhœa, 64 to measles, 59 to whooping-cough, 57 to diphtheria, 53 to "fever" (principally enteric), and not one to small-pox; in all, 414 deaths resulted from these principal zymotic diseases, against numbers declining from 535 to 352 in the four preceding weeks. These 414 deaths were equal to an annual rate of 2.3 per 1,000; in London the zymotic rate was equal to 1.8, while in the twenty-seven provincial towns it averaged 2.6 per 1,000, and ranged from 1.0 in Leicester and in Birkenhead, and 1.4 in Cardiff to 4.0 in Bradford, 6.0 in Preston, 6.2 in Sunderland, and 11.3 in Plymouth. Measles showed the highest proportional fatality in Halifax, Preston, and Sunderland; scarlet fever in Sheffield, Bolton, Brighton, Blackburn, and Plymouth; whooping-cough in Oldham, Portsmouth, and Wolverhampton; and "fever" in Leeds, Birkenhead, Bradford, and Portsmouth. Of the 57 deaths from diphtheria recorded during the week under notice in the twenty-eight towns, 41 occurred in London, 3 in Salford, 3 in Sheffield, and 2 in Derby. No fatal case of small-pox was registered either in London or in any of the provincial towns; and no small-pox patients were under treatment in any of the Metropolitan Asylums Hospitals on Saturday, October 19th. These hospitals contained, however, 1,339 scarlet fever patients on the same date, against numbers steadily increasing from 538 to 1,287 in the sixteen preceding weeks; 181 cases were admitted during the week, against 134 and 168 in the two previous weeks. The death-rate from diseases of the respiratory organs in London was equal to 3.6 per 1,000, and was considerably below the average.

During the week ending Saturday, October 26th, 5,801 births and 3,204 deaths were registered in twenty-eight of the largest English towns, including London, which have an estimated aggregate population of 9,555,406 persons. The annual rate of mortality in these towns, which had been 17.5 and 18.7 per 1,000 in the two preceding weeks, declined again to 17.5 during the week under notice. The rates in the several towns ranged from 9.7 in Birkenhead, 10.5 in Norwich, 11.7 in Derby, and 11.8 in Portsmouth to 24.0 in Manchester, 27.6 in Newcastle-upon-Tyne, 28.0 in Plymouth, and 29.0 in Preston. The mean death-rate in the twenty-seven provincial towns was 19.0 per 1,000, and exceeded by 3.3 the rate recorded in London, which was only 15.8 per 1,000. The 3,204 deaths registered during the week under notice in the twenty-eight towns included 356 which were referred to the principal zymotic diseases, against 352 and 414 in the two preceding weeks; of these, 83 resulted from scarlet fever, 60 from diarrhœa, 58 from "fever" (principally enteric), 54 from whooping-cough, 53 from diphtheria, 48 from measles, and not one from small-pox. These 356 deaths were equal to an annual rate of 1.9 per 1,000; in London the zymotic death-rate was 1.7, while it averaged 2.2 per 1,000 in the twenty-seven provincial towns, and ranged from 0.3 in Leicester, 0.6 in Wolverhampton, and 0.9 in Bristol to 3.2 in Newcastle-upon-Tyne, 3.9 in Sunderland, 4.5 in Preston, and 5.3 in Plymouth. Measles caused the highest proportional fatality in Preston, Newcastle-upon-Tyne, and Sunderland; scarlet fever in Liverpool and Plymouth; whooping-cough in Preston; "fever" in Nottingham and Halifax; and diarrhœa in Norwich and Preston. The 53 deaths from diphtheria recorded in the twenty-eight towns during the week under notice included 37 in London, 2 in Salford, and 2 in Cardiff. No fatal case of small-pox was registered, either in London or in any of the provincial towns, and no small-pox patients were under treatment in any of the Metropolitan Asylums Hospitals on Saturday, October 26th. These hospitals contained, however, 1,388 scarlet fever patients on the same date, against numbers increasing from 538 to 1,338 in the seventeen preceding weeks; 172 cases were admitted during the week, against 135, 168, and 181 in the three previous weeks. The death-rate from diseases of the respiratory organs in London was equal to 3.4 per 1,000, and was considerably below the average.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday, October 19th, 873 births and 524 deaths were registered in the eight principal Scotch towns. The annual rate of mortality in these towns, which had declined from 18.8 to 18.3 per 1,000 in the three preceding weeks, rose again to 20.5 during the week under notice, and exceeded by 1.8 per 1,000 the mean rate during the same period in the twenty-eight large English towns. The lowest rates were recorded in Paisley and Greenock, and the highest in Aberdeen and Glasgow. The 524 deaths registered in these towns during the week included 61 which were referred to the principal zymotic diseases, equal to an annual rate of 2.4 per 1,000, which slightly exceeded the mean zymotic death-rate during the same period in the large English towns. The highest zymotic death-rates were recorded in Aberdeen and Perth. The 235 deaths registered in Glasgow during the week under notice included 7 from whooping-cough, 5 from diarrhœa, 4 from measles, 4 from diphtheria, 4 from "fever," and 2 from scarlet fever. Two fatal cases of diphtheria occurred in Edinburgh, and 3 of scarlet fever in Perth. The death-rate from diseases of the respiratory organs in these towns was equal to 4.6 per 1,000, against 3.6 in London.

In the eight principal Scotch towns, 855 births and 494 deaths were registered during the week ending Saturday, October 26th. The annual rate of mortality in these towns, which had been 18.3 and 20.5 per 1,000 in the two preceding weeks, declined again to 19.3 during the week under notice, but exceeded by 1.8 per 1,000 the mean rate during the same period in the twenty-eight large English towns. Among the Scotch towns the lowest rates were recorded in Paisley and Edinburgh, and the highest in Perth and Glasgow. The 494 deaths

in these towns during the week under notice included 46 which were referred to the principal zymotic diseases, equal to an annual rate of 2.2 per 1,000, which was 0.3 above the mean zymotic death-rate during the same period in the large English towns. The highest zymotic death-rates were recorded in Edinburgh and Leith. The 236 deaths registered during the week in Glasgow included 6 from diphtheria, 4 from "fever," 4 from whooping-cough, and 2 from scarlet fever. Three fatal cases of diphtheria were recorded in Edinburgh and 2 in Leith. The death-rate from diseases of the respiratory organs in these Scotch towns was equal to 4.8 per 1,000, against 3.4 in London.

HEALTH OF IRISH TOWNS.

In the sixteen principal town districts of Ireland the deaths registered during the week ending Saturday, October 19th, were equal to an annual rate of 24.1 per 1,000. The lowest rates recorded were in Wexford and Galway, and the highest in Drogheda and Kilkenny. The death-rate from the principal zymotic diseases averaged 3 0 per 1,000. The 179 deaths registered in Dublin during the week under notice were equal to an annual rate of 26.5 per 1,000 (against 26.2 and 23.2 in the two preceding weeks), the rate for the same period being only 16.9 in London and 19.1 in Edinburgh. These 179 deaths included 19 which resulted from the principal zymotic diseases (equal to an annual rate of 2.8 per 1,000), of which 10 were referred to different forms of "fever," 6 to diarrhœa, 2 to measles, and 1 to scarlet fever.

During the week ending Saturday, October 26th, the deaths registered in the sixteen principal town districts of Ireland were equal to an annual rate of 19.9 per 1,000. The lowest rates were recorded in Drogheda and Wexford, and the highest in Galway and Lisburn. The death-rate from the principal zymotic diseases in these towns averaged 2.8 per 1,000. The 142 deaths registered in Dublin during the week under notice were equal to an annual rate of 21.0 per 1,000 (against 23.2 and 26.5 in the two preceding weeks), the rate for the same period being only 15.7 in London and 15.4 in Edinburgh. These 142 deaths included 18 which resulted from the principal zymotic diseases (equal to an annual rate of 2.7 per 1,000), of which 9 were referred to diarrhœa, and 6 to fever.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

CLEATOR MOOR (Population, 10,420).—*Favourable Statistics.*—Dr. John Eaton reports very favourably of this district during the year 1888. The death-rate from all causes was 4.5 less than that of England and Wales for 1888, though that of the latter is the lowest that has ever been recorded since 1837. The zymotic death-rate was about half the average rate of the past fifteen years, and the death-rates from pulmonary, tubercular, wasting, and convulsive diseases were much less than the mean rate from such causes in the district during the same period. The rate of infant mortality in the district was also very satisfactory, the deaths under one year having been at the rate of 135 per 1,000 of the registered births, while the rate for England and Wales during 1888 was 137 per 1,000.

FRIERN BARNET (Population, 6,896).—*Low Death-rate.*—Mr. Hugh Stott reports that the number of deaths registered during the year 1888 was in excess of that registered in 1887, or in any year since 1884, although the death-rate was only 10.2 per 1,000. The excess was not, however, in any particular disease, but was distributed amongst general disorders. The number of deaths included 9 from whooping-cough, this disease being fatal at the beginning of the year; consumption caused 8 deaths; cancer 4 deaths. There was nothing to show the existence of any cause for either the deaths from consumption or cancer in the particular district in which these deaths occurred. The only other deaths from zymotic diseases were, 1 from scarlatina and 1 from diarrhœa.

GATESHEAD (Population 81,303).—*Steady Decline in Death-rates: Diphtheria attributed to Keeping of Poultry, etc.: Usefulness of Hospital.*—The general death-rate for 1888 was 17.0 per 1,000, and 132 deaths occurred from the seven principal zymotic diseases, equal to a rate of 1.6 per 1,000. Dr. Robinson gives statistics for ten years, showing a steady and gradual reduction in both these rates, and also in the infantile mortality, more especially since 1883; but in no previous year has so favourable a record been made as in 1888. Contrasted with 1887, there was a marked decrease in the fatality and prevalence of zymotic diseases except scarlet fever, which was present in mild epidemic form in all parts of the borough. No cases of small-pox were known to exist, and only one death from measles was registered. The year was marked by an absence of the usual summer diarrhœa. Whooping-cough caused the greatest number of deaths, after diarrhœa, whilst diphtheria and diphtheritic croup came next in order. Dr. Robinson considers that one of the cases of diphtheria arose from the keeping of poultry, pigeons, and rabbits in a very confined space—partly in the yard and house. The patient, a child, was constantly among them, and was the only one of the household who contracted the disease. There were 8 cases of typhus in the borough, all of which were promptly removed to the Fever Hospital, where 2 proved fatal. Five deaths from doubtful fever were also recorded.

HOSPITAL AND DISPENSARY MANAGEMENT.

THE PROPOSED PUBLIC MEDICAL SERVICE.

SIR,—I have devoted some time to an analysis of Dr. Rentoul's scheme, published in the JOURNAL of June 22nd, 1889. It requires a great deal of analysis, as it really embodies two schemes formulated on different lines, either of which is incomplete without the other, but both of which cannot, it seems, be worked together, yet each is presumably to be worked by the same staff of medical men.

The first is a scheme for a Public Medical Service for those who are physically strong enough to come to their own doctor, and a scale of fees for this is suggested. This scheme to be self-supporting. The second ("without which the first is incomplete") is called a provident system, and is to take the form of an insurance against sickness, providing for the attendance of patients at their own homes. The rate proposed (September 28th) being 7s. per member per annum, and this scheme not to be self-supporting, but to be aided by charitable contributions, and therefore to be called "provident."

So far so good. The scheme, if involved, is, if not workable, intelligible. The Public Medical Service is solely for the relief of those who can come and pay pay 1s. or 2s. a consultation. The provident system is for those who cannot come, and are therefore to be visited at 7s. per annum.

But, on September 28th, under the heading of "Proposed Scale of Fees of the Public Medical Service of England" (the first scheme for attending people who are fit to come for relief to the branch dispensary, and who are earning under 45s. per week for family from all sources), I read: "Visit at patient's home from 11 A.M. to 6 P.M., 2s. From 6 P.M. to 11 A.M., 5s. (with or without prescription)." Does this mean that the provident insurance scheme is dropped and merged into the Public Medical Service, or that the Public Medical Service has enlarged its scope and is entering into competition with the provident scheme? There is a tangible discrepancy between 7s. per annum all round and 2s. a visit (with or without prescription.)

There are certain things which pass man's understanding, and this is one of them. The necessity for it is another. The sick poor are provided for by the State. Those who can pay ever so little can arrange, according to their means, through sick clubs and private doctors, for attendance when ill, and do so.

The out-patient department of hospitals (with the exception of the special ones) are not wanted, and the same may be truly said of Dr. Rentoul's scheme. And here let me say that I think his remarks on the probable attitude of members of the hospital staff to his scheme are in the worst possible taste. I have little doubt but that when the time comes they will be the first to lay before the Royal Commission the terrible tax which the departments levy on the hospital funds, and how small is their practical utility.

The interests of the general practitioner and the consultant are one and the same. Each should be and is an adjunct to the other, and I firmly believe that there is only one reason for the peculiar attitude taken up by a few well-known men in connection with "provident" schemes, and that it is not want of sympathy with, but want of knowledge of the details and requirements of general practice.

I will not ask you to follow me through the maze of incongruities with which Dr. Rentoul's scheme is saturated, but I will crave a small portion of your space to point out some of its most glaring faults.

Rule 2. "The staff to consist of three to six medical men and a dental surgeon." I have just looked in the *Medical Directory* at one district, and find that fifty-eight medical men reside in it. Suppose that this comparatively small area could be divided into six districts, what does Dr. Rentoul think would become of the twenty-two men left out in the cold? Would they give up their clubs, etc., in order to give his thirty-six public servants their increased medical fees; or would they fight the scheme tooth and nail in the usual manner?

Rule 2, continued. "No medical man to be eligible unless he has been two years resident in the neighbourhood." I acquit Dr. Rentoul of any deliberate wish to establish a "medical corner;" but he must plainly see that this would be the outcome of his scheme. What, may I ask, is to become of the scores of poor young fellows who are yearly shot out of all our hospitals, and

who have spent their all, or all their parents can allow them, on a most expensive education and in the fees for acquiring their newly-won diplomas? These would either be compelled to sit down and starve for the two years' probation or become wanderers on the face of the earth, either as ship doctors or qualified assistants; or, worse still, would be compelled in their desperation to enter into fierce competition with the Public Medical Service by opening "open surgeries," etc., with all their degrading adjuncts of handbills and advertising. And who then could blame them?

While on the subject of advertising, let us turn to one portion of the scheme which alone will be sufficient to condemn it in the eyes of all those who have the dignity of our profession at heart. "There are to be no handbills or advertising of any sort," but each patient is to have a card, on the front page of which is to be emblazoned, "The Public Medical Service of England," "the names of the doctors," "their hours of attendance," and the legend "always bring this book with you." On the back page, "list of medical and dental staff, with addresses and hours of attendance," "scale of fees and rules referring to patients." Dr. Rentoul's ethical gorge rises at the idea of handbills, but a card! To my mind the worst part of the whole scheme is this covert attempt to obtain advertisement and publicity by means of the card trick. The medical profession have already given their opinion as to its morality in the matter of the Metropolitan Provident Dispensaries' Association.

I will not trouble you further by going through such rules as Rule 4, which allows the chemist the right to refuse medicine at 4d. per bottle until he has consulted the doctor, when he imagines the patient is in a position to pay more. The procedure would be eminently satisfactory to both patient and doctor in a case of croup.

The out-patient departments of hospitals are undoubtedly in need of great reform, but the object will not be gained by erecting a scheme of this sort to remedy their shortcomings. The only way to remedy the evil is to convince the public and hospital authorities by means of evidence before the forthcoming Royal Commission, that nearly all the out-patient departments (with the exception of some of the special ones) are useless so far as the patients are concerned, an encumbrance on the hospital funds, and an illegitimate opposition to the young general practitioner. That the very poor are provided for already by an elaborate Poor-law system of relief, and that every facility is afforded already by general practitioners in the localities where these people dwell, for their attendance either by clubs or small fees according to their respective means. When this is accomplished the result will be a quiet revolution, in which all the superfluous out-patient departments of hospitals will be abolished. No new philanthropic movement will be allowed to start until Government has heard both sides of the question, and is convinced that they are really needed; and a large field will be opened for the individual efforts of the junior members of our profession, to the everlasting good both of themselves and the wage-earning poor.

Let general practitioners band themselves together to see that this Royal Commission is thoroughly and properly conducted. In this I believe they will have the hearty co-operation of all the leading consultants in the profession. Let them understand that those of the wage-earning class who are not constitutional paupers have set them already a brilliant example in combination for supplying their wants, medical and political; that they have done it among themselves, and have no need of further provident systems than those which they have already contracted for.

Let general practitioners once for all understand that on self-reliance, without the assistance of the lay public, is their only hope in raising the profession from the backboneless state into which it has fallen.

First, let them understand and use their enormous numerical strength to bring pressure to bear for the removal of the abuses which are eating away the foundation of their cause, and then let them tackle to the battle of life, and make the best they can of it according to their abilities.

In all professions, trades, businesses, etc., some must succeed and some go to the wall. But let the start in life at least be fair; and I would earnestly entreat all members of our profession who have sons intent on following their steps to pause before they institute another huge monopoly, which they may in years to come be reminded of by the bitter reproaches of those for whose future they should now be providing.

In conclusion, Dr. Rentoul's latest efforts in drawing up a scale of fees is sufficient to show how little practical experience he can have of the income and expenditure of an average artisan.

The objections to the scheme are: 1, that it is unworkable; 2, that it is unfair; 3, that it would be an advertising medium; 4, that it would in a short time become a huge vested interest for the few, to the exclusion of the many; 5, that it is not wanted.—

I am, etc.,

T. H. CORBYN, M.R.C.S.Eng., L.R.C.P.Edin.

Abercorn Place, St. John's Wood, N.W.

EBORACENSIS writes: The proposals of Dr. Rentoul are, in the opinion of men who have worked in thickly populated districts, perfectly impracticable. The class who earn £1 a week and under are those whom we wish to benefit, and the fees he has proposed are such as cannot be got from the poorer working classes.

One way of meeting the difficulty would be for the whole body of the profession, in any community, to combine and have a free dispensary, where each would take his turn daily for an hour, and give gratuitous advice and medicine to persons recommended by himself and other members of the staff. Each man could bear his own share of the expenses, which would not be heavy; all the shaky payers could be weeded out, black lists could be passed from one to another, and the remaining practice could be made remunerative and agreeable. This admirable result only needs union among the profession. As to bad payers' midwifery cases, they could be sent to the relieving officer for his order for the parish doctor. When they came to engage any medical man, and if not in so necessitous circumstances as to require parish help, they could be compelled to pay half the fee in advance before undertaking the engagement. In a few years' time the profession in moderately-sized towns would soon get to know the paying qualities of the inhabitants, and could train up people to find that the doctor could not be at their beck and call as was the endowed clergyman and his curate.

This is a practicable scheme, and the charitable work would be done cheerfully and willingly, instead of often, as at present, grumblingly and perfunctorily. The sole condition for success is union among medical men. The law is in their own hands.

Let us avoid all co-operative schemes, such as clubs, provident dispensaries, etc. When we do charity let it be charity, and when we work let us be suitably rewarded.

MEDICAL NEWS.

BEQUESTS.—The Royal Medical Benevolent College has received £100 under the will of the late Baroness Clementina von Roemer.

THE annual dinner of the Metropolitan Police Surgeons' Association will be held at the Criterion Restaurant on Thursday, November 14th, at 7 o'clock.

THE medical officers and lecturers of the National Dental Hospital and College will give a dinner at the Holborn Restaurant on Friday, November 8th, on the occasion of the annual presentation of prizes, Mr. Henry Morris, M.A., M.B., in the chair.

THE Hampstead Medical Society has now been fully organised and held its first meeting at the Hampstead Home Hospital on October 29th. The following officers were elected: *President*, W. Heath Strange, M.D.; *Treasurer*, Andrew Miller, M.D.; *Secretary*, A. H. Cook, M.B.

STERILISED LINT.—M. Regnier renders lint sterile by heating it to a temperature of 120° C. (248° F.). M. Regnier has tested the antiseptic value of lint thus prepared in dressings applied after operations of various kinds with good results. At the recent Surgical Congress he stated that he considered sterilised lint equal to antiseptic dressings.

WE are requested to state that the adjudicators named by the late Dr. Joseph Rogers, in founding a prize for the best essay on the treatment of the sick poor, were the President of the Royal College of Physicians, the President of the Royal College of Surgeons, and the Master of the Apothecaries' Company for the time being.

AN Anglo-American Vienna Medical Association has been formed for the purpose of furnishing information to English-speaking medical men coming to study in Vienna. The office will be at No. 12, Landesgerichts Strasse. Membership will be open to any British or American physician or medical student, on payment of an entrance fee of one gulden.

AT the Central Criminal Court, on October 25th, Elizabeth Jane Frost, against whom three charges of murder by poison, at Deptford, had been preferred, was sentenced to seven years' penal servitude for committing forgery, in order to obtain the insurance money recoverable upon the policies effected on the lives of the deceased persons. No evidence was offered on the capital charge.

THALLIN AND THALLIUM.—In *Merck's Bulletin*, attention is drawn to the fact that some confusion exists among physicians and chemists regarding these two substances, thallium sulphate having been prescribed in many cases when thallin sulphate was

meant. Thallium is of course a metal and of no therapeutical importance, while thallin is an alkaloid of the chinolin group having antiseptic properties which make it useful in medicine.

THE *Standard* understands that the Government propose to supplement their Local Government Bill for London with another measure dealing with the vestries and their amalgamation with district councils, to be elected in the same manner and for smaller areas, as are members of the County Council. The provisions of the Act are virtually settled, but due care will be taken to preserve all vested interests.

MESSRS. GILL and Co. have just issued a card headed "Sanitary Hints for Householders," by G. M. Lawford, Associate Inst. C.E. It is intended to be hung up as a memorandum, and gives general directions to servants, together with certain precautions with regard to cleaning and inspecting drains, etc., weekly, quarterly, half-yearly, and yearly. Some diagrams are appended to render the directions clearer. It is a useful memorandum for householders as a reminder of things that are often overlooked.

PRESENTATION.—Mr. Sidney Plowman, F.R.C.S., late apothecary, teacher of pharmacy and lecturer on materia medica at St. Thomas's Hospital, was presented on Saturday last, by the medical and surgical staff, together with past and present students of that institution, with an oak cabinet containing a complete set of the *Encyclopædia Britannica*, on the occasion of his leaving for Melbourne, where he has been appointed demonstrator and lecturer on chemistr y, pharmacy, etc., at the College of Pharmacy.

GLASGOW OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.—At a meeting of this Society on October 23rd, the following office-bearers were appointed: *Honorary President:* Professor Leishman. *President:* Dr. Murdoch Cameron. *Vice-Presidents:* Drs. Robert Park and George Halket. *Treasurer:* Dr. Robert Pollok. *Secretary:* Dr. George A. Turner. *Reporting Secretary:* Dr. E. H. Lawrence Oliphant. *Pathologist:* Dr. J. Nigel Stark. *Council:* Drs. T. Tindal, T. F. Gilmour, Alex. Scott, Alex. Miller, T. Richmond, A. Milroy.

TRANSMISSION OF DISEASE BY BRUSHES AND DENTAL INSTRUMENTS.—A discussion recently took place at the Conseil d'Hygiène concerning the transmission of certain diseases by hairdressers and dentists, the brushes and instruments being used in common for all their clients. M. Lancereaux wished to have stringent measures enforced, and cited a case of phthisis which Dr. Cochrane, an American dentist, alleged was transmitted by a dentist's instrument; M. Dujardin-Beaumetz and others declared that there were great difficulties in the way, but recommended great care in schools and public institutions.

SANITATION IN FRANCE.—A decree issued June 3rd, 1889, authorises the city of Angoulême to negotiate a loan for the purpose of defraying the expense of improving the water-supply of that city. The city of Alençon is also authorised to effect the same improvements. Beaune (Côte d'Or) is authorised to contract a loan to pay for an improved water-supply and for the construction of sewers. The cities of Sedan and Nice are authorised to improve the drainage by contracting a loan to defray expenses. Reims and Poitier have followed the example set them by the French capital as regards the sewage system and subsequent utilisation in agriculture.

THE MEDICAL PROFESSION AND TEMPERANCE.—During the past week an unusually large number of important temperance conferences have been held, including a National Temperance Congress at Birmingham. It is significant of the lively interest taken by members of the profession of medicine in the temperance movement that at Birmingham two metropolitan physicians and at Norwich a metropolitan physician and a distinguished provincial surgeon took a prominent part, while at Glasgow a leading place in the proceedings was assigned to the assistant of one of the university medical professors. A public meeting at Birmingham was addressed by several provincial members of our Association. The British Medical Temperance Association numbers over 400 members, all abstainers.

THE ANTIPYRETIC ACTION OF DIGITALIS.—Dr. Joseph Leidy has found in seventeen cases of heart disease that the administration of digitalis was followed by a slight fall in temperature, which remained subnormal—96 3° to 97.8° F.—during the use of the drug and for one or two days after. Ten cases of typhoid fever were also treated with digitalis. In six of these there was a decided fall of temperature, in three a slight fall, and in one no change. The decrease in temperature averaged from 1.5° to 3° F. Dr. Leidy is of opinion that digitalis is not of much value as a pure antipyretic, but thinks that its antipyretic action may be useful in fever cases where it is given primarily to stimulate the circulation.

BIRMINGHAM QUEEN'S COLLEGE MEDICAL SOCIETY.—The thirteenth annual meeting of this Society was held in the library of Queen's College on the evening of Wednesday, October 23rd. The chair was occupied by the President, W. F. Haslam, F.R.C.S. The annual report showed that the Society was in a flourishing condition. Dr. T. Nelson was elected President and Mr. J. Hall-Edwards Vice-President for the ensuing session. Mr. Brice was re-elected Honorary Treasurer and Dr. Mahood and Mr. Sproat were elected Joint Secretaries. The following gentlemen were elected to serve on the Council: Mr. W. F. Haslam, Professor Windle, Mr. A. Clay, Dr. Purslow, and Dr. John C. Grinling. The retiring President read his valedictory address on "Recent Advances in Surgery."

OPHTHALMOSCOPIC DEMONSTRATIONS AT THE ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Mr. Frost gave the third demonstration in this course on Tuesday, October 29th. Paintings showing the varying appearances seen in the yellow-spot region under physiological conditions were projected upon the screen, and also one illustrating the "cherry-red spot" seen in embolism of the central artery of the retina. The majority of the paintings illustrated morbid conditions of the choroid coat, including "guttate choroiditis," or vitreous infiltration of the choroid, and the various stages of atrophic, disseminated, and central choroiditis. A marked example of "choroid tigrée" was also shown, where the great excess of the normal choroid pigment caused the choroidal vessels to appear as light streaks on a dark background.

THE LATE MR. PERCIVAL LEIGH.—In Mr. Percival Leigh, who died last week in the seventy-sixth year of his age, the medical profession has lost one of its most humorous, if not one of its most learned, members. He was the author of the *Comic Latin Grammar* and the *Comic English Grammar*, which appeared under the *nom de plume* of Paul Prendergast, and which led to his being asked to join the staff of *Punch* when it was first started. He was the friend and collaborator of Leech and the Mayhews, of Thackeray, Dickens, Douglas Jerrold, and Albert Smith, and was a constant contributor to *Punch* down to the time of his death. Mr. Percival Leigh was born in 1813, and received his medical education at St. Bartholomew's Hospital. He was admitted a Licentiate of the Society of Apothecaries in 1834, and a Member of the Royal College of Surgeons in 1835.

HYDROPHOBIA AND MUZZLING.—From a return recently issued it appears that from August 3rd until September 30th, no fewer than 782 unmuzzled dogs were seized in the County of Middlesex by the police. Of this number 554 were taken to the Dogs' Home, and only 142 were claimed by their owners. The majority of the others were destroyed. The course pursued has been for the dogs to be taken to the district veterinary surgeons' premises and kept there by them for seven days, after which they are taken to the Dogs' Home at Battersea. A sum of 5s. per dog is paid to the veterinary by the Council for his trouble, and persons claiming the dogs have to pay 6d. per day for their keep. The veterinary surgeon is paid in addition 3d. per mile for all batches of dogs take by him to the Dogs' Home. The Middlesex County Council pays these fees, together with 4d. for each animal taken to the home. There were seventeen cases of rabies during the quarter ending September 30th. There have only been fifty-six prosecutions under the order, and the fines and costs only amount to £35 10s.

MEDICAL VACANCIES.

The following Vacancies are announced:

BALLINASLOE DISTRICT LUNATIC ASYLUM.—Resident Assistant. Salary, £100 per annum, with £50 in lieu of rations, furnished apartments, and certain allowances. Candidates must not be over 32 years of age. Applications not later than November 9th. Election on November 11th.

BOROUGH OF HUDDERSFIELD.—Medical Officer of Health. Salary, £400 per annum. Applications by November 12th to G. B. Nalder, Esq., Town Clerk.

CENTRAL LONDON SICK ASYLUM.—Assistant Medical Officer and Dispenser. Salary, £100 per annum, with board and residence. Applications by November 9th to William Appleton, Clerk's Office, Cleveland Street, W.

CHARING CROSS HOSPITAL.—Surgeon-Registrar. Salary, £40 per annum. Applications by November 4th to the Chairman of the Medical Committee.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—House-Physician. Board and residence. Applications by November 15th to the Secretary at the office, 24, Finsbury Circus, E.C.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—Resident Medical Officer. Salary, £100 per annum, with board, etc. Applications by November 15th to the Secretary at the office, 24, Finsbury Circus, E.C.

FLINTSHIRE DISPENSARY.—House-Surgeon. Salary, £100 per annum, and furnished house, etc. Applications by November 11th to the Secretary, Board Room, Bagillt Street Holywell.

GORDON HOSPITAL FOR FISTULA, Vauxhall Bridge Road.—Assistant-Surgeon. Applications by November 9th to the Secretary.

LEICESTER INFIRMARY AND FEVER HOUSE.—Assistant House-Surgeon. Salary, £80 per annum, with board, lodging, and washing. Applications by November 24th to the Secretary. 24, Friar Lane, Leicester.

LIVERPOOL EYE AND EAR INFIRMARY.—House-Surgeon. Salary, £80, with board and lodging. Applications by November 4th to Reginald Haigh, Honorary Secretary, Grosvenor Buildings, Liverpool.

MIDDLESEX HOSPITAL.—Second Chloroformist. Applications by November 8th to the Secretary-Superintendent.

NATIONAL DENTAL HOSPITAL, 149, Great Portland Street, W.—Anæsthetist. Applications by November 7th to the Secretary.

NATIONAL DENTAL HOSPITAL, 149, Great Portland Street, W.—Assistant Dental Surgeon. Applications by November 7th to the Secretary.

NORTH DEVON INFIRMARY, Barnstaple.—House-Surgeon. Salary, £100 per annum. Applications by November 16th to the Secretary.

NORTH-WEST LONDON HOSPITAL, Kentish Town Road, N.W.—Junior Resident Medical Officer. Applications by November 4th to the Secretary.

PERTH DISTRICT ASYLUM.—Assistant Medical Officer. Salary, £100 per annum, with board and lodging. Applications by November 14th to the Medical Superintendent.

PUBLIC DISPENSARY, 59, Stanhope Street, Clare Market.—Resident Medical Officer. Salary, £105 per annum, with furnished apartments, etc. Applications on or before November 6th to the Secretary.

SALOP INFIRMARY, Shrewsbury.—House-Surgeon. Salary, £100 per annum, with board and residence. Applications by November 2nd to the Board of Directors.

SHEFFIELD GENERAL INFIRMARY.—House-Surgeon. Salary, £120 per annum, with board, lodging, and washing. Applications by November 2nd to the Medical Staff of the Sheffield General Infirmary to the care of the Secretary.

SHEFFIELD GENERAL INFIRMARY.—Assistant House-Surgeon. Salary, £80 per annum, with board, lodging, and washing. Applications by November 2nd to the Medical Staff of the Sheffield General Infirmary to the care of the Secretary.

VICTORIA HOSPITAL FOR SICK CHILDREN, Queen's Road, Chelsea.—Ophthalmic Surgeon. Applications by November 18th to the Secretary.

MEDICAL APPOINTMENTS.

BAYS, James, M.B.Lond., M.R.C.S., L.S.A., appointed House-Physician to the Hospital for Sick Children, Great Ormond Street.

BEAVER, R. A., M.R.C.S.E., L.R.C.P.Lond., L.M.S., appointed Assistant Medical Officer to the Lancashire County Asylum, Rainhill, *vice* F. H. Barendt, M.D.Lond., resigned.

BENTLIF, P. B., M.R.C.S., L.S.A., appointed Honorary Medical Officer to Jersey Infirmary and General Dispensary, *vice* W. Peel Yates, M.R.C.S., L.S.A., resigned.

BRISCOE, J. E., M.R.C.S.Eng., L.R.C.P.Lond., appointed House-Surgeon to the Clayton Hospital and General Dispensary, Wakefield, *vice* R. E. Williams, L.R.C.P.Lond., M.R.C.S.Eng., resigned.

BROOK, W. F., F.R.C.S., L.S.A., appointed House-Surgeon to the Hospital for Sick Children, Great Ormond Street, *vice* C. Batchelor, L.R.C.P., M.R.C.S., resigned.

CADDY, A., M.R.C.S.E., L.R.C.P.Lond., appointed House-Surgeon to the General Infirmary, Leeds, *vice* W. Thompson, L.R.C.P.Lond., resigned.

COOPER, E., M.R.C.S.Eng., L.R.C.P.Lond., appointed Assistant House-Surgeon to the Royal Portsmouth, Portsea, and Gosport Hospital.

DENNISON, T. S., M.R.C.S., L.R.C.P., appointed Resident Obstetric Officer to the General Infirmary, Leeds, *vice* J. E. Briscoe, M.R.C.S.E., L.R.C.P. Lond., resigned.

DOBBS, C. J., M.R.C.S., appointed Junior Assistant Medical Officer to the Hants County Asylum, *vice* M. I. Finucane, L.S.A., M.R.C.S.E.

DUNLOP, T. Cameron, M.D., appointed Surgeon to the Sick and Accident Society Steel Company of Scotland, Blochairn, Glasgow.

ELAM, George, appointed Casualty House Surgeon to the Middlesex Hospital.

GIBSON, L. P., M.R.C.S.Eng., L.R.C.P.Lond., appointed House-Surgeon to the Royal Portsmouth, Portsea, and Gosport Hospital, *vice* J. O'Connor, M.B., resigned.

GODFREY, T. H., M.B., L.R.C.P., M.R.C.S., appointed Resident Medical Officer to the Geneneral Dispensary and Infirmary, Jersey, *vice* J. Melhuish, M.R.C.S.Eng., L.R.C.P.Lond.

HAWKES, L. A., M.B., C.M., appointed Resident Medical Officer to the Royal National Hospital for Consumption, Ventnor.

LIGHT, E. M., M.B., L.R.C.P.Lond., appointed House-Physician to the General Infirmary, Leeds, *vice* R. Walker, M.R.C.S.E., L.R.C.P.Lond., resigned.

MCLEAN, W. W. L., M.R.C.S., L.R.C.P.Lond., appointed Medical Officer and Public Vaccinator to the Stickney District of the Spilsby Union; and Medical Officer to the Coltman Lodge of Odd Fellows, and Keal Cotes Lodge of the Ancient Order of Foresters, *vice* J. A. MacLaren, M.B., C.M., resigned.

PORTER, W. E., M.D., C.M.Edin., M.R.C.S.Eng., appointed Medical Officer to the Royal Masonic Institute for Boys, Wood Green, *vice* W. Hall, resigned.

SELLERS, A. E., M.R.C.S., L.R.C.P., appointed House-Surgeon to the Leeds General Infirmary.

TUNNICLIFFE, F. W., M.B.Lond., M.R.C.S.Eng., L.R.C.P.Lond., appointed House-Surgeon to the Paddington Green Children's Hospital, *vice* A. E. Hensley, M.R.C.S., L.S.A.

WOOD, H. M., M.R.C.S., L.R.C.P., appointed Assistant Resident Medical Officer to the Royal National Hospital for Consumption, Ventnor.

YEOMAN, W. M., M.B., M.R.C.S., appointed Medical Officer to the Stokesley Union, *vice* W. G. Forbes, M.B., M.S., deceased.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the announcement. The first post on Thursday mornings is the latest by which advertisements can be received.

BIRTHS.

JACKSON.—October 25th, at 7, Buckland Terrace, Plymouth, widow of Louis Pilkington Jackson, of a daughter.

MASON.—On October 23rd, at Rosemont, Maidenhead, the wife of David James Mason, M.D.Edin., of a son.

MARRIAGES.

LESLIE—ALEXANDER.—October 24th, at Rutland Square Church, Dublin, by the Rev. J. D. Osborne, M.A., assisted by the Rev. John Knox Leslie, Cookstown (the father of the bridegroom), Richard Whytock Leslie, M.D., M.Ch., Strandtown, Belfast, to Rosa, eldest daughter of the late Robert J. Alexander, Londonderry.

MOIR—ALLAWAY.—On October 24th, at All Saints', Cheltenham, by the Rev. J. W. Goodall, M.A., Vicar of Dalton, Surgeon John Drew Moir, Army Medical Staff, youngest son of the late Rev. Charles Moir, M.A., of Chatham, to Constance, only daughter of the late W. A. H. Allaway, Esq., of Craig-y-Nos Castle, Brecknockshire.

DEATHS.

CASKIE.—On October 28th, John Boyd Caskie, M.D., of 19, Tyndale Place, N., and 89, Goswell Road, aged 52.

IMLACH.—October 26th, at 30, Hope Street, Liverpool, Amy, wife of Francis Imlach, M.D., aged 35. Friends will please accept this, the only intimation.

JOHNSON.—On October 5th, at his residence, Montserrat, West Indies, the Honourable Burdett Johnson, M.R.C.S.E., L.S.A.Lond., J.P., for over twenty years member of the Executive and Legislative Councils of the Island of Montserrat and senior medical officer, aged 54. Beloved and respected by all who knew him.

DIARY FOR NEXT WEEK.

MONDAY.

ODONTOLOGICAL SOCIETY OF GREAT BRITAIN, 8 P.M.—Dr. Felix Semon: On some Points in the Etiology, Diagnosis, and Treatment of Empyema of the Antrum.

MEDICAL SOCIETY OF LONDON, 8.30 P.M.—Sir Joseph Lister: A New Antiseptic Dressing.

TUESDAY.

PATHOLOGICAL SOCIETY OF LONDON (20, Hanover Square), 8.30 P.M.—Dr. F. J. Smith: Hypertrophic Cirrhosis in a Child. Mr. D'Arcy Power: An Unusual Case of Cirrhosis of the Liver. Dr. Samuel West: Addison's Disease in a Diabetic. Mr. Barwell: A Singular Cyst of Unknown Nature removed from the Groin of a Woman. Dr. Norman Moore: Cases of Congenital Heart Disease. Dr. F. W. Mott: Pernicious Anæmia. Mr. Stephen Paget: Occipital Meningocele with Cleft Palate and Talipes Calcaneus.

WEDNESDAY.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND, Bethlem Royal Hospital, 4 P.M.—Drs. Dodds, Strahan, and Greenlees: Assistant Medical Officers in Asylums; their Status in the Specialty. Appliances and Pathological Specimens will also be exhibited.

OBSTETRICAL SOCIETY OF LONDON, 54, Berners Street, 8 P.M.—Specimens will be shown. Dr. Cullingworth: Case of Vesico-Utero-Vaginal Fistula. Dr. Rasch: Case of Large Chylous Cyst of the Mesentery. Dr. Lewers: Case of Lupus of the Vulva. Dr. Braxton Hicks: Case of Inversion of the Uterus.

THURSDAY.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E., 4.30 P.M.—Dr. Thorowgood: On Basic Disease of the Lung.

HARVEIAN SOCIETY OF LONDON, 8.30 P.M.—Dr. Cagney: The Administration of Drugs by the Aid of Electricity. Mr. A. P. Luff: The Antifermentative Treatment of Infantile Diarrhœa. Mr. J. T. Clarke: A Specimen of Abnormality of the Spinal Cord associated with Club Foot.

FRIDAY.

CLINICAL SOCIETY, 20, Hanover Square.—Living specimens at 8 o'clock:—Mr. Macnamara: (1) Excision of Head and Neck of Humerus for Myeloid Sarcoma: no recurrence of disease. (2) Removal of Testicle for rapidly growing Round-Celled Sarcoma; patient free from disease after two years. Dr. Handford: Unilateral Myositis and Neuritis in a Man aged 48. Dr. Abercrombie: Myxœdema in a Young Subject. Mr. G. H. Makins: Rheumatoid Arthritis in a Child. Mr. C. B. Lockwood: Hip-Joint Disease, Anterior Incision. Papers 9 P.M.:—Mr. W. Rivington: Case of Pott's Fracture with Fracture and Displacement of Astragalus followed by Symptoms of Tetanus, which subsided after Removal of Displaced Fragment. Mr. W. G. Spencer: Case of recent Dislocation Backwards at the Elbow of both Bones of the Forearm, Irreducible from the Lower End of the Humerus being held like a Button by a Rent in the Anterior Ligament. Mr. E. A. Barton: Case of Paroxysmal Hæmoglobinuria.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the office of the JOURNAL, and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429 Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

QUERIES.

TREATMENT OF VENEREAL WARTS.

A LICENTIATE writes: I should feel obliged if some of your readers would suggest a permanent cure for venereal warts under the prepuce and on the frænum. Solid nitrate of silver has been applied frequently, and strong nitric acid once, with no effect.

ASCARIDES.

F.R.C.S. would feel obliged if any member would suggest a reliable treatment for seat-worms. The patient, a medical man himself, has tried all the ordinary methods of treatment, including Hegar's monster enemata, without success.

ANSWERS.

PHYSICIAN: Messrs. Longmans, Green, and Co. are the publishers of *The Marriage of near Kin, considered with respect to the Laws of Nations, the Results of Experience, and the Teachings of Biology*, by Alfred Henry Huth, second edition; revised. Price 21s.

LOSS OF SMELL AND TASTE.

DR. J. F. MANNIX (Cahirciveen) writes: I would recommend "A Member" to try iodide of potassium in 5-grain doses with nux vomica and belladonna, until iodism is produced, also to introduce a plug of cotton-wool saturated with glycerine, having a fine string attached, into the nares alternately, leaving the plug fixed for a quarter of an hour each day. I have found the above line of treatment to restore the loss of smell in two cases without any symptoms of iodism.

LECTURES FOR MIDWIVES.

INQUIRER writes: Can you inform me in your next issue as to name and address of any society which will aid medical men in the country in getting up a short course of lectures for country midwives?

*** According to the "Regulations for the Examination of Midwives" of the Obstetrical Society of London, every candidate is expected to pass a written and practical examination in the following subjects: 1. The elementary anatomy of the female pelvis and generative organs. 2. The symptoms, mechanism, course, and management of natural labour. 3. The indications of abnormal labour, and the emergencies which occur in practice. 4. Hæmorrhage, its varieties, and the treatment of each. 5. Antiseptics in midwifery, and the way to use them. 6. The management of the puerperal state, including the use of the thermometer and the use of the catheter. 7. The management, feeding included, of newborn children. 8. The duties of the midwife with regard to the patient and with regard to the seeking of medical advice. The above will also serve as a useful syllabus for lectures. For further information our correspondent should apply to the Librarian, Obstetrical Society of London, 54, Berners Street, Oxford Street, W.

SCHOOL FOR TROUBLESOME BOY.

DR. JOHN H. GALTON (Norwood) writes, in reply to "Morshead:" A school such as is required will be found at Lynchmere, Maberley Road, Upper Norwood, where Miss Askell has had charge of cases similar to the one described, and has treated them to my knowledge with considerable success.

DR. F. F. GERMAN (Seaforth) writes, in reply to "Morshead": I have seen several such cases as the one he narrates; notably one, a family of three children, all of whom were similarly afflicted. Everything was tried at home, but ultimately each had to be sent (in turn, according to age) to the school connected with the Royal Albert Asylum, Lancaster.

THE CLIMATE OF THE NORTH AND SOUTH OF ENGLAND.

M.B. C.M. asks: What is the difference in the climate of the north-east coast, for example, that of South Shields or Hartlepool, as compared with London, especially as regards the amount of sunshine and the severity of the cold.

*** The following figures will probably suffice:—

Temperature of North Shields (mean of twenty years) 47.1°.

Temperature, Greenwich (mean), 50.2°.

Mean temperature January: North Shields, 37.8°; Greenwich, 38.3°.

Mean temperature, July: North Shields, 58.2°; Greenwich, 63.9°.

Duration of sunshine: Durham (mean, three years), 1,365 hours; Greenwich (mean, three years), 1,261.

Years 1883, 1884, and 1885: mean of Greenwich, 1,206 hours; London, 974 hours.

VACCINATION.

R. N. I. and M.D.EDIN.—The papers and writings in support of vaccination are too numerous to be enumerated with any approach to completeness; but the following list contains some of the most authentic and better known:—

1. Papers relating to the History and Practice of Vaccination, prepared by Mr. (now Sir John) Simon, for the General Board of Health in 1857, and presented to Parliament.
2. Report of Select Committee of House of Commons on the Vaccination Act of 1867; published as a Parliamentary paper, No. 246, Session 1871.
3. The Annual Reports of the Medical Officers of the Privy Council and the Local Government Board (especially that for 1881).
4. *Handbook of Vaccination*, by the late Dr. E. C. Seaton.
5. *Essay on Vaccination*, by Dr. E. Ballard.
6. *The Truth about Vaccination*, by Mr. Ernest Hart. 1880.
7. *Shaw's Manual of the Vaccination Laws*. Shaw and Sons, London. 1887.
8. *Vaccination Vindicated*, by Dr. J. C. McVail. Published by Cassell and Co., Limited. 1887.
9. A paper on the German Vaccination Commission, and other papers on Vaccination, published in the *Transactions of the Epidemiological Society of London*, new series, vol. v, session 1885-86. Shaw and Sons, London.
10. Official Report on the Epidemic of Small-pox in Sheffield in 1887. Sold by Eyre and Spottiswoode, London. Command paper 5,645, Session 1888.
11. Numerous articles in the JOURNAL, *Lancet*, and other medical papers from time to time.
12. Article in the *National Review* for June, 1889, on Vaccination and the *Encyclopædia Britannica*, by H. Preston Thomas [with a "reply" by Dr. C. Creighton in the July number].
13. Evidence already given before the Royal Commission now sitting on the Vaccination question.

NOTES, LETTERS, ETC.

FALSE TEETH AND NEURALGIA.

MR. N. STEVENSON (Wimpole Street) writes: I have recently had to treat several very severe cases of facial neuralgia which would have been cured years ago if they had been sent to a dentist. I believe there are many people suffering from diseased teeth, or are dyspeptic from inability to masticate their food properly, who never receive any suggestion from their doctor about the state of their mouth: on the other hand, some physicians always insist that the teeth shall be put right before any other treatment is followed.

The present fashionable mode of immovably fixing false teeth into roots and natural healthy teeth is responsible for an increase of neuralgia, and should, I think, be discouraged in every way. It is surely unscientific in principle, and must in the result end in disappointment or more serious evil. All false teeth (except those fastened singly into healthy roots) ought to be easily and frequently removed for cleansing, and should never be allowed to damage the natural teeth.

SULPHONAL AS AN ANALGESIC.

DR. J. ARTHUR WEST (King Henry's Road, N.W.) writes: In the July number of the "*Journal of Medical Science*" there are some valuable notes on the use of sulphonal by Dr. W. R. Watson, who remarks: "In such of the articles upon sulphonal as have come under my notice, I find but scanty reference to it as a remedy for the relief of pain; but undoubtedly this result was obtained in several of the cases to which I have already referred where pain was a prominent symptom. The first effect of the drug was a gradual cessation of pain, and after a period of variable length sleep came on."

I am able to add another case of this kind from my own recent experience. The patient is a young man, always of delicate health, who suffers frequently from intense vertex headache, described as being sometimes accompanied by "a numb feeling, and sometimes sharp, acute pain, like knives cutting." Being asked to suggest something for him, I prescribed a draught containing 20 grains of sulphonal, as he had been almost entirely sleepless for several nights in consequence of the pain. The patient's home being in the country, I was not able to watch the case, but, writing for information as to the result of the draught, I received the following reply from a friend with whom he has been staying: "He generally has a draught by him of a night, and when that fearful pain comes on, takes it. It has never failed yet to send him to sleep, although the time before it takes effect varies a little according to the intensity of his pain; sometimes he will sleep right on till morning after it, but sometimes the pain rouses him again for a time during the night. The draught is certainly a great blessing to him and to me, as I can leave him when he is with us without thinking that he is moaning with pain half the night; he is generally fairly free next morning too."

Perhaps this case may be worth recording at the present time, when sulphonal is more or less on its trial.

PROPHYLAXIS OF INFECTIOUS DISEASES.

DR. T. HOLMESTED (Eastbourne) writes: Measles, scarlet fever, and diphtheria seem rampant, and schools are reported as being closed, infectious hospitals established, and mothers generally frightened. Dr. Brunton some time back reported that lemons placed in a silver bowl did not become mouldy, this slight silver influence being sufficient. Dr. Hodgson, I think, some few years back wrote, advising that children and others exposed to contagion should take small doses of arsenic, iron, and chlorate potash. I had some opportunities of trying above, and in the few families I tried it the effect was capital; but my cases were too few to verify it. I think the idea is a good one, and well worthy of an extended trial. Unfortunately, as Dr. Wilson says, our successes are very detrimental to our pockets.

"ILLUMINATED" PHYSIOLOGY.

WHEN a gifted woman has added to her other charms and accomplishments the distinction of M.D. of the University of Paris, most people would suppose she had good reason to be satisfied with her intellectual achievements. From a perusal of a new work by the late Dr. Anna Kingsford, entitled *Clothed with*

the Sun, we find that this well-known lady doctor considered herself a seer and a prophetess, and accordingly the sub-title of the book indicates that it is composed of her "illuminations." Her "priceless insights," it appears, were acquired by the "means of dreams." We should have imagined, were it not for this assurance, that the study of the *Kabbalah* and the works of Madam Blavatzky, acting upon a poetical and mystical nature, would have accounted for most of the strange theories concerning soul and body with which the work is filled. The origin of the soul is a question not at all difficult to an "illuminated" M.D., and we accordingly give the authoress's account of it for the benefit of our unilluminated readers: "When two persons ally themselves in the flesh and beget a child, the moment of impregnation is usually—though not invariably—the moment which attaches a soul to the newly-conceived body. Hence, much depends upon the influences, astral and magnetic, under which impregnation and conception take place. The pregnant woman is the centre of a whirl of magnetic forces, and she attracts within her sphere a soul whose previous conduct and odic condition correspond either to her own or to the magnetic influences under which she conceives. Sometimes, however, the moment of impregnation or conception passes without attracting any soul, and the woman may even carry a false conception for some time, in which cases abortion occurs." Plants and animals have souls, but metals have none, according to Dr. Kingsford. Molecules are regenerate and unregenerate; nucleus and nucleolus correspond to soul and spirit in her "illuminated" physiology, all which goes to show that no amount of learning and natural science will prevent a prophet or a seer from talking, dreaming, and writing the sheerest nonsense.

Insurance Policies.

Mr. C. J. Radley, Secretary of the Medical Sickness, Annuity, and Life Assurance Society (26, Wynne Road, Brixton) writes: In the Journal of October 12th, Mr. Colin G. Campbell (Saddleworth) calls attention to the numerous "exceptions" under which no claim can be made by persons holding an ordinary accident policy. Without remarking on this, may I be allowed to point out that no such distinctions are made by the Medical Sickness, Annuity, and Life Assurance Society, which makes payment in all cases where its members are compelled to cease professional work from illness or the results of accidents, excepting only incapacity arising from "intemperance, immorality, or misconduct"?

Dr. R. A. Brannigan (Liverpool) writes: I would like to add my testimony to that of your correspondent, Dr. George C. Kingsbury, with regard to the promptness which the "Sickness and Accident Assurance Company" of St. Andrew's Square, Edinburgh, shows in paying the claims upon it. I was first insured against accident, and happened soon after during my holidays to sprain my ankle. For this I received £10. I then insured against sickness, and within a year was attacked by typhoid fever. The company very promptly paid me £60 in three remittances of £20, being at the rate of £4 weekly for thirteen weeks, and £2 weekly for four weeks more. My premium, I may add, was £7 4s. 8d.

Mr. James Ferguson (Perth) writes: In reference to Mr. Colin Campbell's letter on the above subject, and the letters of subsequent correspondents on this matter, I have examined the policy which I hold in the General Accident and Employers' Liability Assurance Association, Limited, of this city, and 4, Abchurch Yard, London, E.C., and I find that the conditions are in every respect most liberal to the assured; it does not exclude unprovoked assaults; its limit of time for giving notice of an accident is extended to twenty-one days; blood poisoning is not excluded; nor are there any of the little vexatious restrictions in the policy which was the case with the majority of accident insurance companies some years ago. In my opinion it is to some of the younger offices we now have to look for liberal conditions of assurance and generous and prompt treatment in the settlement of claims.

Errata.—In the Journal for October 26th, page 921, column 1, line 13, from bottom, for "seized it with the other hand," read "seized it together with the other foot;" and on page 951, column 2, line 45, for "latent" read "fatal."

COMMUNICATIONS, LETTERS, etc., have been received from:
Dr. J. P. A. Gabb, Guildford; Mr. W. Rivington, London; Mr. N. Stevenson, London; Mr. W. M. Brown, Nanstadt, Ontario; Mr. J. H. Waters, London; Dr. C. C. True, Clifton; Dr. P. S. Abraham, London; Mr. J. H. Reynolds, Daventry; Mr. T. P. Allen, London; Mr. T. J. Pritchard, Retford; Mr. W. L. Saunder, Manchester; Messrs. Street and Co., London; Mr. C. J. Hewetson, Scarborough; Mr. F. H. Moore, Ely; Mr. E. W. Farmer-Bringhurst, Waterford; Dr. E. Cutter, London; Dr. W. E. B. Davis, Birmingham, Ala.; T. Thomson, M.B., Sheffield; J. Wilkie, M.B., London; Dr. W. M. Ord, London; Dr. William Robertson, Newcastle-on-Tyne; C. E. G.; M.R.C.S.; Dr. W. Walter, Manchester; The Secretary of the Sheffield Medico-Chirurgical Society, Sheffield; Mr. W. W. Wagstaffe, Sevenoaks; Dr. W. F. Haslam, Birmingham; Mr. A. G. Osborn, Dover; Mr. W. H. Haley, Sheffield; Mr. J. G. M. G. Stack, Spalding; Dr. J. W. Hunt, London; Professor McCall Anderson, Glasgow; Mr. C. 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AN ADDRESS
ON
A NEW ANTISEPTIC DRESSING.

Delivered before the Medical Society of London. November 4th, 1889

By Sir JOSEPH LISTER, Bart., F.R.S.,
Professor of Clinical Surgery in King's College.

Mr. President and Gentlemen,—When I last had the honour, five years ago, of addressing this Society at the request of its President, I brought before you an attempt I had made to utilise the powerful antiseptic properties of corrosive sublimate without the great disadvantages attendant upon its highly irritating qualities. I had ascertained that when corrosive sublimate precipitates albumen, the precipitate is not, as had been generally supposed, an albuminate of mercury, that is to say, a combination of albumen as an acid with mercury as a base; in other words, that the albumen does not displace the chloride from its combination, but that the bichloride of mercury retains its properties intact, the albumen being loosely associated with it, in a species of solid solution, if I may so speak.

Further, I had found that this precipitate, even after drying, is capable of being dissolved in the serum of the blood, and that the solution in blood serum is powerfully antiseptic, while not irritating. I proposed and brought before you a new dressing in the shape of what was termed the sero-sublimate gauze, charged with a solution of corrosive sublimate in the serum of the blood. This gauze gave very satisfactory results, both in my own hands and in those of surgeons in places so far distant as Poland and Spain. Nevertheless, it was not all that could be desired by any means; it was somewhat harsh mechanically; it was not very absorbent, a serious defect, and one of the materials of which it was made, the serum of horse's blood, was not always easily obtainable. I was, therefore, well disposed to look for something superior.

A few weeks after that communication was made to the Society, a firm of manufacturing chemists, Messrs. Gibbs, Cuxson and Co. wrote to me saying that they had found that if chloride of ammonium or sal-ammoniac in quantity equal to one-fifth part of the weight of the bichloride of mercury was added to the mixture of bichloride of mercury and blood serum, the result was a much more fluid preparation than I had obtained. If I used a preparation of 1 part of bichloride of mercury to 100 of blood serum, I got a thick liquid somewhat difficult to diffuse in gauze. They therefore suggested that by adding sal-ammoniac in that proportion, I should get a much more workable arrangement. On consulting chemical works, I found that one-fifth of sal-ammoniac was exactly sufficient to produce with bichloride of mercury the salt long known to chemists as sal-alembroth, a double salt of bichloride of mercury and chloride of ammonium. I naturally wished to ascertain whether this addition of sal-ammoniac would impair or even destroy the antiseptic properties of the bichloride of mercury. I therefore made experiments on the point, and I found that the sal-ammoniac associated in the form of a double salt with the bichloride of mercury did not by any means impair its antiseptic properties; on the contrary, it improved them, so far, at least, as concerned that which we have to deal with as surgeons, an albuminous fluid like the serum of the blood. Sal-alembroth and bichloride of mercury proved to be exactly equivalent weight for weight as antiseptics in such a fluid. Each had to be used in normal serum of specific gravity of about 1025 in the proportion of nearly $\frac{1}{100}$, in order to prevent altogether the development of micro-organisms. Those who are acquainted with Koch's researches will consider this a very high proportion. Koch has shown that in a solution destitute of albumen $\frac{1}{1000000}$ part of bichloride of mercury is sufficient to prevent the development of organisms; but when we have albumen present in the solution the case becomes altogether altered. Albumen interferes with the antiseptic action of corrosive sublimate, and thus in serum of the blood of specific gravity 1025 we require, as I have already said, as large a proportion as about $\frac{1}{100}$ instead of $\frac{1}{1000000}$.

When the albumen is small in amount, less corrosive sublimate proves efficient. Thus in a case of spermatocele, where the specific gravity of the fluid was exceedingly low—only 1007—I found that $\frac{1}{10000}$, just intermediate between the proportions required for blood serum and water was efficacious. On the other hand, when blood-corpuscles are mixed with the serum in the same amount as in the circulating blood, making the albuminoid substances much more abundant that in serum, we require proportionately more of the corrosive sublimate; at least 1 to 500 is required for the purpose of preventing development. This is a most important consideration after an operation. In the first twenty-four hours the discharge contains a large amount of blood-corpuscles as well as serum, whilst, at the same time, it is the most copious, more copious than it will be in any subsequent day, provided all goes well aseptically. It is, therefore, an exceedingly serious consideration that in the first twenty-four hours we have a discharge which in both these respects tests our antiseptic more severely than it will ever be tested again, both from its abundance and from its quality. Still the sal-alembroth, whether used with blood serum or with a normal mixture of serum and corpuscles such as that obtained by whipping the blood of the ox so as to get rid of the fibrin, proved equivalent antiseptically to bichloride of mercury.

I may, perhaps, say in a few words how the experiments were conducted. For the purpose of ascertaining whether a given antiseptic can or cannot prevent development of organisms, a very simple mode of experimentation suffices. What we have to do is to ascertain whether it is *inhibitory;* not whether it is *germicidal.* The only special apparatus required for such experiments is a warm chamber, which can be kept pretty constantly about the temperature of the human blood. Beyond this a few stoppered bottles, with well-fitting stoppers—perhaps half-ounce stoppered bottles—are really all that is required. Into a series of such bottles serum of the blood, to the amount, say, of 150 grains, containing solutions of the antiseptic of different strengths is introduced. These are all inoculated by means of a small syringe pipette with the same quantity, say 1-10th of a minim, of some potently septic liquid such as blood serum in a state of advancing putrefaction. The bottles are placed in the incubator, and then, if development takes place, that is evidence that in the bottle in which it occurs such proportion of the antiseptic as that bottle contains is inadequate; if no development occurs we have proof of antiseptic efficacy. The transparency of the serum permits a recognition of the development of the organisms, which invariably causes opacity. If we have no change in this respect, if the serum maintains its transparency, at the same time keeping its odour unimpaired, and, further, if microscopic examination of any little sediment there may be shows that it contains no organisms, we have clear evidence that the antiseptic in the proportion concerned has proved efficacious.

Now, if the sal-alembroth was equivalent to the bichloride of mercury weight for weight, that shows that the sal-alembroth was really more efficacious as regards the quantity of bichloride of mercury it contained. The bichloride of mercury having the sal ammoniac added to it, and also water in the double salt that is formed, is increased in atomic weight very considerably; and therefore if an equal weight of alembroth is equal in antiseptic action to bichloride of mercury, that shows that the bichloride of mercury is made more efficacious in the blood serum by the addition of the chloride of ammonium. The chloride of ammonium in combination protects the bichloride of mercury, so to speak, to a certain extent, from the interfering influence of the albumen.

At the same time, the sal-alembroth proved much less irritating than bichloride of mercury. Experimenting on my own skin, I ascertained that it has certainly not half the irritating property of corrosive sublimate. The chloride of ammonium attached to the bichloride of mercury, while it protects the bichloride in some degree from the influence of albumen interfering with its antiseptic operation, prevents it also from acting so powerfully on the human skin. And thus the union of sal-ammoniac with corrosive sublimate had the double advantage of rendering it both more efficacious antiseptically and much less irritating.

Hence I was at first much pleased with sal-alembroth. But it soon appeared that there were certain disadvantages attending it. These depend very much upon its excessive solubility. It is essential for a satisfactory antiseptic dressing that the antiseptic should not be readily washed out of it by the discharge. Sal-alembroth is so exceedingly soluble that it is washed out with the greatest ease; thus we were always, even if we used large masses of sal-alembroth gauze, in fear that when the discharge was copious the antiseptic would disappear,

say within the first twenty-four hours, and then the septic mischief would have an opportunity to enter. There was another disadvantage from this great solubility. When the discharge entered a mass of the sal-alembroth dressing it dissolved out the alembroth from it, passed into another part of the dressing. and there took up another portion of the sal-alembroth, and so went on from part to part of the dressing, until if the discharge was copious and the dressing large, as it must be when the discharge is copious, before the discharge got to the edge of such a dressing it became so concentrated a solution of the sal-alembroth as to be highly irritating. We have seen, for instance, after the removal of the mamma, when the first dressing is changed on the following day that there has been over the scapula and the neighbourhood a huge blister. No doubt that was only a temporary inconvenience. We never had the discharge again so great as in the first twenty-four hours; but still it was a great inconvenience.

Such being the disadvantages of sal-alembroth dressing, I was disposed to seek for something better. I may say that I myself have never published anything in favour of sal-alembroth dressings; I have never been satisfied with them. It has leaked out that I have used them, and they have come into extensive employment, but never with my published sanction.

In the course of the following year I made various experiments in the hope of rendering sal-alembroth more useful in different ways, with which I need not trouble you, but without much success. In February, 1886, my attention was drawn by Mr. Martindale, of New Cavendish Street, to cyanide of mercury as possibly a valuable antiseptic, and, if so, having this advantage, that it did not coagulate albumen. I therefore proceeded to make experiments with cyanide of mercury, and I found indeed that in inhibitory power it was remarkably efficacious. I have said that with blood serum sal-alembroth or bichloride of mercury is required in about $\frac{1}{10000}$th part. I found that the cyanide of mercury kept blood serum, with only $\frac{1}{100000}$th part, perfectly free from organic development, in spite of inoculation with potent septic fluid, for a month, when the experiment ended. I may remark that we have in cyanide of mercury a striking instance of the discordance that there may be between inhibitory power and germicidal power in an antiseptic. In inhibitory power the cyanide of mercury is, as we have seen, exceedingly high; but in germicidal power it turns out to be very low. Mr. Cheyne has made experiments for me, which have shown that even $\frac{1}{1000}$th part in water is incapable of destroying the germs of bacteria. Still the inhibitory property of cyanide of mercury was a most important point if in other respects the salt were not disadvantageous; but, unfortunately, it proved to be so highly irritating that the greater irritating property of the cyanide of mercury more than counterbalanced its superior inhibitory power. It naturally occurred to me that the cyanide of mercury might perhaps combine with some other cyanide and form a double salt, having advantages corresponding with those presented by sal-alembroth as compared with bichloride of mercury. I tried the soluble double cyanide of mercury and potassium, but found it quite too irritating. I here again consulted Mr. Martindale, and he mentioned to me that in Watts's *Dictionary of Chemistry* it is stated that a double cyanide of mercury and zinc of very slight solubility may be formed by mixing together a solution of the double cyanide of mercury and potassium with a soluble salt of zinc, the zinc taking the place of the potassium. I therefore obtained some of this material, and proceeded to make experiments on it. I ascertained, in the first place, that it was quite insoluble in water. This seemed at first extremely unpromising. It was soluble in about 150 parts of glycerine, but insoluble in water. I found, however, that it was soluble in about 3,000 parts of blood serum, and therefore it was possible that it might work antiseptically. I made experiments to ascertain whether such was the case or not, and I found that this zinco-cyanide of mercury, as we may call it, had really most important antiseptic properties; that in the proportion of $\frac{1}{5000}$th part it kept blood serum perfectly free from the development of organisms for eighteen days, in spite of potent septic inoculation.

I then tried experiments with serum and blood corpuscles as presented in the whipped blood of the ox. On instituting comparative experiments between sal-alembroth, cyanide of mercury, and this double cyanide, I found that with the alembroth all proportions lower than $\frac{1}{300}$th putrefied within twenty-four hours after septic inoculation, while with the cyanide of mercury $\frac{1}{300}$th part sufficed to preserve the serum and corpuscles from putrefaction. At the same time with the double cyanide I was much surprised and much pleased to find that $\frac{1}{1200}$th, half as little again, was sufficient to keep the mixture of serum and corpuscles permanently free from putrefaction. It may be said that the absence of putrefactive odour is but a rude test. There may be organisms developed without any putrefactive odour being present; that is perfectly true. At the same time, if in a given experiment we find that with one agent putrefaction occurs within twenty-four hours with $\frac{1}{100}$th part, while with another salt there is no putrefactive odour after the lapse of weeks with $\frac{1}{1200}$th part, we have pretty conclusive evidence that, so far as the mixture of corpuscles and serum is concerned, we have a more efficacious antiseptic in the latter. I therefore proceeded to prepare dressings of this new substance, diffusing it—for it is an exceedingly fine powder—in water with a little glycerine added to fix it, to prevent it from dusting out. If you simply diffuse it in water and pass gauze through it, with nothing more than the water, the result is that you have gauze which, with the slightest touch, gives out the double cyanide in a cloud of dust, which produces not only inefficacy of your dressing by loss of the proper proportion of the substance, but becomes in the highest degree irritating to the nostrils of those who are near. A little glycerine, however, prevented the double cyanide from thus dusting out. I proceeded to try it in practice. I confess I did not dare to use it—considering its very slight solubility in serum—unmixed, and I associated with it some of the very soluble cyanide of mercury; and with this cyanide gauze we tried various experiments in the way of dressing and got some admirable results. But then, on the other hand, there were disappointments. We found, for one thing, now and then very troublesome pustules as the result of a peculiar kind of irritation. Another disadvantage was that occasionally we got suppurations, coming on at a late period in the case, such as we had never been accustomed to with our carbolic dressings. A case might go on perfectly well for, say, ten days, and then suppuration might occur about a stitch track and spread perhaps further; and sometimes the healing of cases was greatly protracted by this late suppuration. In consequence of these two circumstances I gave up the use for the time being of this material.

I then directed my attention to biniodide of mercury, which has been highly spoken of for its antiseptic powers, and which has the advantage over alembroth of being comparatively little soluble either in water or in serum. I found that the iodide of mercury gauze answered our purpose very well so far as its antiseptic properties were concerned, but that it had the great disadvantage of producing irritation, which it was extremely difficult to control. In order to control it we interposed between the iodide of mercury gauze and the skin unprepared gauze, except in so far as it was steeped in a weak solution of bichloride of mercury (1 to 4,000). But we found that different skins differed greatly in liability to this irritation. The iodide of mercury, which is so very slightly soluble, as you know, in water, is much more soluble in serum, and the solution in blood serum becomes irritating. In consequence of this we had the same disadvantages from irritation as we had with the alembroth; and although, as in the case of the alembroth, this was only a transient inconvenience, I became dissatisfied with the iodide of mercury gauze. There was, however, one point of considerable interest, both theoretically and (as it turned out afterwards) practically, which we found in this investigation with the iodide of mercury. If we simply charged with iodide of mercury, say from a solution in spirit of wine, and then applied the gauze so prepared, we found that the particles of iodide of mercury tended to gravitate down towards the skin, and there produce the most fearful irritation. It was absolutely necessary that it should be fixed. I tried various means, and among the rest a solution of starch, and then there came out this remarkable fact, that if a solution of starch is used with one of the ingredients employed for forming the biniodide of mercury by mixing a solution of iodide of potassium with solution of bichloride of mercury—if you dissolve the iodide of potassium in a weak solution of starch—the iodide of mercury thus formed in the nascent state associates itself with the starch particles in the most intimate manner and becomes entirely precipitated along with the iodide of mercury. If you take a drop of the red fluid formed by mixing these two solutions, and place it on a piece of calico, the watery material is absorbed by the calico and passes into the surrounding parts without colouring them, while the red spot with its insoluble

iodide remains. If now you take a little iodine water, and apply it to the part of the calico moistened by the fluid that has exuded, you find that the iodine water produces no blue colour of iodide of starch, showing that there is no starch in the fluid that thus oozes out and leaves the iodide of mercury behind; whereas, if you take a simple solution of starch and apply it as such to a piece of fabric, as far as the fabric becomes moistened so far do you get a blue colour with the iodine. Here we have, as it seems to me, a somewhat analogous case to the so-called albuminate of mercury. We have the starch particles associated with the particles of iodide of mercury: the starch remains as such, the iodide of mercury remains as such; still they are attached to each other. And so the result was that when such a red solution produced by mixing these two liquids was used for charging gauze, the iodide of mercury was stuck to the gauze by means of the starch, and we had a most satisfactory arrangement in that respect. The iodide of mercury could not be washed out by water, nor did it in the least dust out. The value of this observation with reference to our present subject will appear shortly.

Being dissatisfied with the iodide of mercury, I turned my attention again to the double cyanide of mercury and zinc. Looking back to my notes, I found such evidence of its superior antiseptic properties that I felt that we had deserted this material too readily. In the interval we had had other experience of importance with the alembroth gauze. Occasional late suppurations had at first occurred under its use, just as was the case with the double cyanide gauze. These, however, had ceased to trouble us after my attention had been directed to the expediency of always using mercurial dressings in a moist condition. If they are used dry, the mercurial salt having no volatility, and having no power therefore of destroying any micro-organism in contact with it, whether derived from the manufactory or elsewhere, there could be no security that the dressing when applied was free from living organisms. This important object could, however, be infallibly attained if the dressing were used moist with an efficient germicidal solution. I put this idea into practice, and during the two years that have since elapsed, we have never on any single occasion had to complain of these late suppurations. Might not the same immunity attend our cyanide gauze if we adopted with it the same expedient?

The other objection to this double cyanide gauze had been the irritation which it occasioned. Might not this have been due to the simple cyanide, which, as I have said, I used along with the double cyanide? The simple cyanide is highly irritating, and, just as with the sal-alembroth, being freely soluble, it can be taken up by successive portions of discharge, and, when the discharge is free, may come to be in so strong a solution as to irritate. On the other hand, experiments on my own person had shown that the powder of the double cyanide might be kept applied to the skin for an indefinite time, whether moistened with water or with blood, without occasioning any irritation whatever. If this was the explanation, and if, as our experiments indicated, the double cyanide could be trusted, we might get rid of irritation by using a double cyanide dressing moistened with a weak solution of bichloride, say 1 to 4,000, which, while it is securely germicidal, can never irritate. But here arose a new difficulty. I have told you that when we tried this double cyanide in a gauze at first, in order to prevent the dusting out, with its great inconveniences, we used glycerine; but if we moistened the gauze with 1 to 4,000 solution of corrosive sublimate, we should run great risk of washing out the glycerine, and then the double cyanide would be free to dust out on drying. And, besides that, it must be admitted that the glycerine arrangement was not a good one, independently of that consideration, inasmuch as when the discharges flowed into the gauze they would wash away the glycerine, and then the double cyanide might be washed out also, and so fail in one of the most important requisites of an efficient antiseptic dressing —the storage of the antiseptic in the dressing in spite of the discharge. How was this difficulty to be overcome?

Now came to our aid our experience with the iodide of mercury and the starch. Might it be that the particles of the double cyanide might attract starch as those of the iodide had done? It did not seem very likely, seeing that cyanogen is not known to have the special affinity for starch that iodine has. Still, I thought I would try the experiment. I prepared the double cyanide by mixing a solution of the double cyanide of mercury and potassium with a solution of sulphate of zinc. I tried this with one of the ingredients dissolved in a starchy solution; and, to my great satisfaction, I found that the precipitated double cyanide left a supernatant liquor almost absolutely free from starch, and that the particles which thus fell, the double cyanide with the starch associated, fixed themselves to a gauze in such a way that it did not in the least dust when dry. Not only so, but immediately after being charged with the precipitate diffused in water, it might be washed in the wet state without the double cyanide being washed out of it, so closely did the starchy particles stick the double cyanide to the fabric. It is of great importance that in some way or other the double cyanide should be washed, because at the same time that an insoluble double cyanide is formed, there are produced other double cyanides which are soluble, and which are in the highest degree irritating; they must be washed out.

Well, I thought I had thus attained my object, and that by mixing starch with one of the two solutions necessary for forming this double cyanide and allowing the precipitate to fall, then decanting, pouring in more water, and, after precipitation, decanting and repeating the process another time, so as to get rid of all the irritating soluble salts, and then diffusing the precipitate through a gauze I should have all that I desired. But when I tried to get this done commercially I found that I got such blundering as to make the thing practically hopeless. There was nothing for it but in some way or other to get the double cyanide from the chemist as a definite product, and then in some way devise a means of fixing that powder of the double cyanide to the fabric. I therefore naturally tried whether a solution of starch would answer this purpose; whether the starchy particles would associate themselves with the double cyanide particles, not only in the nascent state, which we had before tried, but also when the already formed double cyanide was mixed with the starchy solution. I found that it did so; that when a starchy solution was stirred up with the double cyanide in the proportion of one part of starch to two of cyanide, the starch was almost all precipitated, and the precipitate so formed adhered to the gauze in the most satisfactory manner.

But though its adhesion was satisfactory enough, it turned out that the precipitate thus formed aggregated into a tenacious mass, which could not be diffused uniformly through the gauze, and here I was again at fault. This difficulty was overcome by first charging the gauze with the double cyanide powder diffused in water, and then transferring it to a starchy bath. This at once fixed the cyanide in the gauze; and whereas, before it was placed in the starchy bath, the slightest squeeze made a milky fluid exude, no sooner had it been well penetrated by the starchy liquid than you might squeeze it as you pleased, and nothing came out but a clear fluid. I was much pleased with this, and it is in this way that I have prepared the gauze that I have used for the last twelve months, both in the hospital and in private practice. Still, this method had its disadvantages. When the gauze had been passed through the fluid in which the double cyanide had been diffused without any starch, it required very tender handling. If you gave it a squeeze, out came a quantity of double cyanide; and it was plain that, although one might do it oneself satisfactorily, if we trusted to the manufacturers, there would be an utter uncertainty as to what quantity of material might ultimately remain in the gauze.

Only lately has this difficulty been surmounted. It occurred to me that perhaps if the starch were first blended with the double cyanide, and then dried and reduced to powder, if water were afterwards added to this dried dissolved starch associated with the cyanide, there might not be the same tendency to lumpiness and difficulty of diffusion. I found that the process did not answer quite as I hoped in the first instance, in this respect, that the dried starch and double cyanide were extremely difficult to scrape off from any plate on which they were put to dry, and also very difficult to pound up and to diffuse for charging the gauze. I got rid of these inconveniences by means of sulphate of potash, used for the same reason as Dover's powder—that is, that it is an inert substance, with sharp, gritty particles. Mixing a pretty strong solution of starch with the double cyanide powder and adding to this a quantity of pounded sulphate of potash, the result is that you get a material which, after drying, is easily scraped off by the manufacturer and easily reduced by him to an impalpable powder, which is then readily diffused in water, and makes a perfectly uniform gauze. Being mixed in large quantity with water in order to charge the gauze, the sulphate of potash is practically got rid of, and if any of it remains it does no harm, because it is inert. Thus we have the means of easily charging fabrics with this double cyanide.

I have spoken of diffusing this preparation in water, but in reality we employ for this purpose the 1 to 4,000 solution of bi-chloride of mercury, which fortunately does not in any way interfere with the process. I may remark that the double cyanide, like the simple cyanide of mercury, though very efficient as an inhibitor, cannot be trusted as a germicide. There are different ways in which absorbent gauze such as this may be charged. One is to pass it folded in about sixteen layers through a trough, such as the one before me, which I have myself used, having a bar near the bottom to ensure the gauze being kept well under the liquid. It is then, as soon as you please, squeezed, to press out superfluous liquid, and then, if wanted for immediate use, a simple way is to place the masses of gauze—say, six-yard pieces—in a folded sheet, turn the folded sheet over them and roll it up. The folded sheet then absorbs the still redundant liquid, and you have moist gauze ready for use in five minutes. For the use of the ordinary surgeon it will probably be best to have the gauze dried, on the understanding that it is again moistened with 1 to 4,000 sublimate solution before being used. Here is a sample of the gauze in the dry state, which you see does not give off dust even when freely handled.

Other articles may be charged as well as gauze with this substance. The double cyanide being perfectly unirritating, there is no objection to having an excess of it. If you take therefore some of the preparation and stir it up with water, so as to produce an opaque liquid, and put linen rags into it, and then place them in a folded towel to take out the excess of liquid, you have your dressing ready prepared then and there. It can thus be very easily worked on an emergency.

We have seen that the double cyanide requires about 3,000 parts of blood serum to dissolve it. If therefore it is present in a gauze in the proportion of about 3 per cent., you will easily understand that blood serum may soak through such a gauze time after time without washing the ingredient all out; so that it is a material which is admirably stored up in the dressing. That is one of its three great advantages, the others being that, while trustworthy as an antiseptic, it is completely unirritating. In actual practice the few layers placed next to the wound are washed in a solution of carbolic acid, 1 to 20; this washes out the corrosive sublimate, which, though present in small amount, might irritate the wound to some extent. The carbolic acid soon flies off, and there is left in the application next the wound merely the unirritating double cyanide, and under this we find that not only do wounds, the edges of which are brought accurately together, unite beautifully by first intention, but even granulating sores heal by the gradual process of cicatrisation from the edges—heal by scabbing in a way that we have never seen so satisfactorily under any other dressing.

Having satisfied myself that this was really a useful material, I proceeded to request a manufacturing chemist to provide it for me on a large scale. Messrs. Morson and Son, of Southampton Row, kindly undertook to do this, and I have to thank them for the great pains they have taken in carrying out experiments on this subject at my suggestion. Their manager, Mr. Taubman, soon informed me that in his opinion there was exceedingly little mercury in this so-called double cyanide of mercury and zinc. Very little mercury could be got from it on testing, in comparison with what would be obtained if it were a true double salt. He asked if I was sure that the cyanide of zinc was not after all the thing that was efficacious! Was the idea of the double cyanide altogether a delusion? I need not say how much pleased I should have been if such had been the case—if we could have had the cyanide of zinc without any poisonous mercury in it as an antiseptic. The cyanide of zinc was a perfectly definite compound, there could be no mistake about it. I proceeded to make experiments, and I found, indeed, that cyanide of zinc has antiseptic properties. I made, for instance, experiments of this kind—I took a piece of glass tube and packed it in two inches of its length with gauze charged with cyanide of zinc only, and then, holding it vertically, poured serum of horse's blood into it till the gauze was fully moistened; and then poured more in, till a quantity dropped out from the lower end equal to that which had produced saturation, the upper part of the gauze being thus thoroughly washed with the serum.

I then inoculated the top of the gauze with a potent septic drop. I had another similar tube with gauze that had no cyanide of zinc in it, and after pouring serum through it I inoculated that. I put each into stoppered bottle, so as to prevent any evaporation, and placed them in the incubator. At the end of four days I opened the two bottles. That which contained the gauze without the cyanide of zinc stank, and, on taking portions of the gauze from either one end or the other, squeezing them and examining under the microscope the fluid that escaped, there were seen teeming multitudes of bacteria of various sorts. The bottle with the cyanide of zinc, on the other hand, had a pure odour of hydrocyanic acid, which this gauze always has when moist. I then examined drops squeezed from both ends, and I found no bacteria in the clear serum that was pressed out, not only from the lower end, but even from the upper end in the immediate vicinity of the inoculating drop, and where the gauze had been drenched repeatedly with the serum.

Now that, so far, is a result such as no other antiseptic had ever given me. Take iodide of mercury, for example. Comparatively insoluble as it is, if you pour blood serum upon it in such profusion you wash the iodide of mercury out, and if you inoculate septically the part so washed you induce bacteric development. The test applied was, of course, an extremely severe one. In actual surgical practice the discharge which pours into the dressing is pure to begin with, supposing the wound to be aseptic at the outset. The septic agency acts from without upon unwashed parts of the dressing, and in a far milder form than here, where a potent septic drop was used. Thus we had clear evidence that the cyanide of zinc is an antiseptic. On the other hand, it turned out to be not so powerful antiseptically as our double cyanide so-called. In order to compare the two salts I made another experiment similar to that last described. I packed three pieces of glass tube with gauze in two inches of their length, one of the gauzes being charged with cyanide of zinc, and another with the so-called double cyanide (neither of these gauzes having been treated with solution of bichloride of mercury), while the third gauze was unprepared. Serum of horse's blood was poured into the upper end of each vertically-held tube till it thoroughly soaked the mass of gauze, after which each gauze was inoculated septically at the centre of its upper end. The tubes were then placed vertically in stoppered bottles in the incubator. It happened that in the septic liquid used for the inoculation that I used there was, among other organisms, a species of streptococcus which had a remarkable power of producing an acid fermentation in blood serum. After four days I proceeded to examine the contents of the three tubes. In the unprepared gauze there was utter putrefaction. In the gauze prepared with cyanide of zinc only, no putrefaction had taken place, but acid fermentation had occurred; both at the upper and lower end of the gauze litmus paper was reddened on application to the serum. In the putrid gauze turmeric paper was most intensely reddened, much more so than by normal blood serum, an alkaline fermentation having occurred there. On the other hand, with the gauze that contained the double cyanide, with mercury as well as zinc, both at the upper and at the lower end the turmeric paper was reddened exactly as it was by the normal blood serum. This state of things continued the next day; but on the following day, six days after the commencement of the experiment, I found that at the upper end, in the vicinity of the inoculated spot, this gauze purpled litmus, while at the lower end it still reddened turmeric. At the end of seven days the same condition persisted. After eight days, however, both the upper and lower end of the gauze purpled litmus. This peculiar septic organism, with the power of producing acid fermentation in serum, had gradually worked its way down, in spite even of the cyanide of zinc and mercury; but the cyanide of zinc and mercury, you observe, had been much more efficacious than the cyanide of zinc alone. The cyanide of zinc had prevented the development of organisms that produced putrefaction, and only permitted the growth of the coccus that produced acid fermentation. Cyanide of zinc and mercury had for several days prevented all development. This was proof, therefore, that the mercurial element in our compound was valuable, and that we could not dispense with it.

It may be thought an unsatisfactory thing that there should have been any organism able to work its way thus through a gauze charged with our antiseptic. But I may remark, in the first place, that, as above stated, we tested the material exceedingly severely; in the second place, that it was a long while before the organism penetrated the gauze even for a short distance; and, in the third place, that penetration of micro-organisms through such a dressing into wounds does not seem to occur in practice, seeing that in the year during which I have used this antiseptic in my surgical work at King's College Hospital we have had no single instance in which we have had any reason to suspect septic change in the deeper parts of our dress-

ing; we have had no instance in which deep-seated suppuration has occurred in an operation wound made through unbroken integument. If we have had any pus at all in such cases it has been from the surfaces exposed between stitches or at situations where drainage tubes have been inserted, where what I have termed antiseptic suppuration has shown itself occasionally, and even this in very slight degree. Such being the case. I feel not only permitted but bound to bring this material under the notice of my professional brethren.

As to the composition of this so-called double salt, it is for the present uncertain. This much is already established: that the cyanide of mercury is in very much smaller proportion to the cyanide of zinc than Watts's *Chemistry* would lead us to expect the double salt would give. But what the precise composition of the salt is we do not yet know. I am having it investigated by the Pharmaceutical Society, who have kindly undertaken the work.

There is another use for this material besides the charging ot dressings. The powder moistened with a weak solution of corrosive sublimate may be rubbed into hairy parts, when it will convert the hairs into an antiseptic dressing. Not long ago a medical friend of mine brought his wife to me with no less than seven sebaceous cysts in the scalp, requesting me to remove them. Having washed the hair with 1 to20 carbolic acid solution,I simply passed a comb over each tumour in the line where I was about to transfix, without shaving at all; and after taking out the cysts, rubbed some of the moistened powder into the hair in the vicinity. I then applied a dressing of cyanide gauze, and I was glad to learn that all the seven wounds had healed without disturbance.

We have now in the hospital a case of psoas abscess, shown to be of spinal origin, not only by the history of the case and the symptoms, but by the discharge of a portion of bone with the pus. That case is pursuing a course which, allow me to say, psoas abscesses will pursue in the great majority of cases, if the surgeon uses a trustworthy antiseptic,and takes the same pains with dressing to the last as at the outset; that is, he will find his trouble rewarded by the complete cure of these formerly incurable cases. I say this because I grieve to think that psoas and lumbar abscesses still seem to be regarded as hopeless affairs by many surgeons. In this man's case the temperature has never been affected in the least; he has put on flesh rapidly; the discharge, after the purulent and curdy matter that existed originally in the abscess was got rid of, has been of serous character, and is in small and diminishing quantity. But the opening made for the discharge is in the vicinity of the pubes, and the pubic hairs used, under such circumstances, to be a constant source of anxiety to us unless frequently shaved away. Here we rub in at each dressing a little of the moistened cyanide, and convert the hairs into an antiseptic application.

I will not at present enter into the details of the preparation of this material; these will be supplied in a note on a future occasion.[1]

The sketch which I have given you of this investigation, though it has, I fear, wearied you, conveys but a small idea of the toil it has involved. There are those who still believe that the use of antiseptic substances in surgical practice is always useless, if not injurious. The germ theory of septic diseases is indeed now happily established incontrovertibly. All now admit that septic mischief in our wounds depends upon the development of micro-organisms in them derived from without. But the gentlemen to whom I refer are, more or less logically, disposed to trust everything to the antiseptic powers of the human tissues.

I believe I happened to be the first to direct attention to the antiseptic agency of living structures, and there is perhaps no one who attaches greater importance to it than I do. Without it surgery in former days would have been absolutely impossible. Still I know too well from experience that it cannot always be trusted, and that the use of antiseptic adjutants is in the highest degree important. And I have the satisfaction of knowing that there is among you a constantly increasing number who, when for the application of their dressings, if they see septic inflammation occurring in the wound with its attendant dangers, know that it is their fault or the fault of the antiseptic appliances at their disposal. To those among you who are impressed with this conviction I offer the dressing which I have described as the most satisfactory that I have hitherto met with; and I venture to hope that you will regard it as a not unwelcome addition to your resources.

[1] This note will appear in our next issue.

AMPUTATION AT THE HIP-JOINT.

By THOMAS MYLES, F.R.C.S.I.,
Surgeon to Jervis Street Hospital.

I HAVE recently been practising on the dead body a new operation for amputation at the hip-joint, though I have not yet had an opportunity of trying it on the living.

The dangers of this operation are three—shock, hæmorrhage, and infection of the wound from its proximity to the anus. The first-named will exist probably in spite of every improvement; the two latter I think are obviated by this new method of operating, which I will now briefly describe.

The femoral artery is carefully felt for below Poupart's ligament; one inch below Poupart's ligament and half an inch outside the artery a stout nickel or steel skewer is thrust straight through from before backwards, and emerges on the posterior aspect a little above the gluteal fold. This skewer passes just inside the neck of the bone in the angle between neck and shaft of femur. A piece of india-rubber like that used in boy's catapult is passed on the inside of the thigh, and twisted in a figure

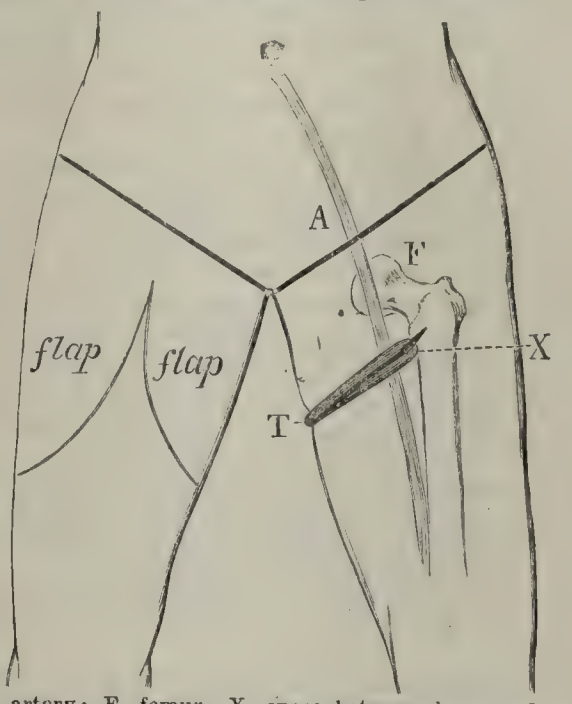


FIG. 1.—A, artery; F, femur; X, space between bone and artery into which pin is thrust from before backwards; T, elastic or india-rubber band passed around limb and ends of pin on inner side.

of 8 over the projecting ends of the skewer. It can be tied or, preferably, clamped with a bit of soft metal. By this means the femoral artery is completely controlled above the origin of the profunda. A long straight transfixion knife is now passed in the same direction as the skewer, but entering the skin at a slightly lower level, and emerging at a slightly lower level behind. A straight vertical incision, about two inches long, is now made with the knife, which is finally carried inwards, making a tapering flap from the tissues on the inner side of the limb.

During this part of the operation very little hæmorrhage is likely to occur, as the femoral in front and the sciatic artery behind are compressed by the elastic band. The limb is now forcibly abducted, and the capsule, stretched over the protruding head, comes into view, a nick with the knife allows the head to escape, and the blade is now carried first above and then outside the great trochanter, keeping close to the bone; and, finally, a second flap, similar to the first, is cut from the tissues on the outside of the limb.

This operation can, of course, be modified by tying the femoral and other visible vessels after the first incision; or, when the head is freed, a second pin, an elastic ligature, may be made to encircle the outer flap before it is completely divided. The accompanying rough diagram explains the method. The advantages of this are:—(1) extreme rapidity; (2) complete control of hæmorrhage; (3) the wound is vertical, therefore allows for drainage; cleanly cut, therefore ensures apposition and prompt union; away from the anus, and, therefore, not liable to infection. I trust that other surgeons will at least try the method, which, I believe, will be found most satisfactory.

A DISCUSSION
ON THE
SURGICAL TREATMENT OF TYPHLITIS.

In the Section of Surgery at the Annual Meeting of the British Medical Association, held in Leeds, August, 1889.

I.—FREDERICK TREVES, F.R.C.S.,
Surgeon to, and Lecturer on Anatomy at, the London Hospital.

THE term typhlitis is conveniently applied to a form of localised peritonitis occurring in the cæcal region. In its general features and potentialities this variety of localised peritonitis differs in no essential from other likenamed conditions within the abdomen. The inflammation may spread to the general surface of the peritoneum. It may lead to suppuration, or it may not. If the peritonitis remain simple in character it may leave scarcely a trace of its existence, or it may, on the other hand, produce adhesions of almost any grade. If it result in suppuration the pus will, with few exceptions, be encysted, and the resulting abscess may either burst through the skin or open into the abdominal cavity, or find its way into some neighbouring hollow viscus or into the connective tissue of the vicinity.

In all its chief phenomena this form of peritonitis is identical with that known as pelvic peritonitis, or with the peritoneal inflammation which may follow upon abscess of the liver, or a slowly perforating tubercular ulcer of the bowel. It differs from these and from other varieties of localised peritonitis in site, in anatomical surroundings, and possibly in the matter of causation. These latter features, and these alone, give to the trouble any distinctive peculiarities which it may possess. They serve also to modify the treatment which, in its primary motives, is the treatment simply of localised peritonitis.

It is unfortunate that the term typhlitis directs conspicuous attention to the cæcum, and still more unfortunate that the appreciation of this variety of peritonitis should have been encumbered by mere terms and obscured by classifications.

It was at one time customary to divide inflammations about the cæcum into three or four classes: (*a*) inflammation of the cæcum itself (typhlitis); (*b*) inflammation of the peritoneum about that bowel (perityphlitis); (*c*) inflammation of the connective tissue supposed to partly surround the cæcum (paratyphlitis); and (*d*) inflammation of the appendix (appendicitis). This classification has long since been shown to be unsound.

Without entering at length into the pathology of the affection, the following points may be briefly stated:

1. There is no evidence to show that primary inflammation of the walls of the cæcum, independent of catarrh or ulceration of the mucous membrane, exists.

2. Inasmuch as both the cæcum and the appendix are entirely covered by serous membrane, a perforation in either of these organs cannot lead to suppuration of the connective tissue of the iliac fossa. Primary inflammation of this connective tissue may safely be said to be unknown.

3. Catarrh of the cæcum occurs in connection with a more general colitis, but the symptoms produced are those of colitis, and not of typhlitis. Catarrh of the cæcum, even when of an acute kind, does not appear to produce the symptoms of typhlitis.

4. Ulceration of the cæcum is common. The most usual form of ulcer is that known as the stercoral, and is due to the impaction of fæces in the part. Other forms of ulceration are associated with tuberculosis, with dysentery and typhoid fever, with the impaction of foreign bodies, and possibly with syphilis. (Cancer of the bowel is not considered). An ulcer of the cæcum, so long as it remains limited to the mucous membrane, may cause no symptoms, and will in any case not produce the symptoms of typhlitis. When such an ulcer has spread to the outer walls of the caput coli a peritonitis ensues, and the typical phenomena of typhlitis of some grade are usually produced. Any ulcer of the cæcum may lead to perforation. In connection with the stercoral ulcer the perforation appears late, and follows upon the symptoms of prolonged fæcal obstruction. A large number of cases of fatal fæcal accumulation terminate by perforation or rupture of the cæcum, but in such instances the preceding symptoms have not been those of typhlitis.

5. Perforation of the cæcum as (what may be termed) a primary condition is very rare. Fitz in his elaborate monograph (dealing with 257 cases of perforative appendicitis and 209 cases of typhlitis—so called) could only find three examples, one from the impaction of a pin, another from impaction of a fish bone, and a third from some "strangulation" of the bowel. I have known perforation of the cæcum to occur as a primary condition, preceded by few abdominal symptoms, in a case of tubercular ulcer of the colon in a subject of phthisis. When a typhlitic abscess is evacuated it is not uncommon to find that the abscess communicates through a ragged aperture with the cavity of the cæcum. In nearly every instance of this there is evidence to show that the abscess had commenced outside the cæcum (in the appendix), and had made its way into the caput coli, just as it might have burst into the bladder or ileum, or have entered the connective tissue behind the ascending colon.

6. Abscesses resulting from mischief in the cæcum or appendix are primarily intraperitoneal, and are encysted forms of suppurative peritonitis. Inasmuch as the cæcum and vermiform process are normally entirely surrounded by serous membrane, any inflammation extending from them must first implicate the peritoneum. The pus resulting from the encysted suppurative peritonitis (the intraperitoneal abscess) may burst into the abdominal cavity, or make its way through the skin or into the connective tissue of the vicinity, or effect an escape through any adjacent hollow viscus such as the rectum or bladder.

7. The milder varieties of typhlitis are usually due to a peritonitis over the cæcum which has been set up by the spreading in depth of a stercoral ulcer. The severer forms, and notably those which induce suppuration, usually depend upon troubles in the appendix such as may be due to a foreign body—a fæcal concretion, the twisting or strangulation of the process, and the like. The records of the London Hospital during the last few years show twenty-five fatal cases of "typhlitis," in every one of which the appendix was found to be involved. During the same period over thirty-five cases of typhlitis were admitted in which complete recovery followed without suppuration, and with no other than medical treatment. Fitz, as the result of his investigations, remarks, "In most fatal cases of typhlitis the cæcum is intact, while the appendix is ulcerated and perforated." On the other hand, I have been able to show that typhlitis of quite a mild grade may follow troubles in the appendix, and may end in speedy resolution, and that severe forms of typhlitis may be due to mischief in the vermiform process without any suppuration following. In one case under my care the patient had had fourteen attacks of typhlitis; surgical exploration showed that the appendix was the cause of the trouble, but not one drop of pus had been formed. (See below).

8. With regard to the specific troubles in the appendix which cause typhlitis, the cases collected by Fitz, Bull, and others show that a fæcal concretion may be expected to exist in nearly one-half of the cases, and a foreign body in nearly one-eighth. The latter include seeds, grape stones, cherry stones, bristles, pins, shot, small gall stones, and the like. The appendix in these instances is found to be perforated, or in a state of sloughing or gangrene. The process may be found perforated, and yet no foreign body be detected. It may become gangrenous from being twisted upon itself, or may be found to be enormously distended with mucus from obliteration of its lumen, or to be the seat of acute ulceration. It may be adherent to the cæcum, to the ileum, the rectum, the bladder, the ureter, the mesentery, or to the peritoneum of the pelvis or abdominal wall. The resulting abscess may burst through the anterior abdominal parietes or make its way into the pelvis or thigh, or open into any neighbouring viscus. It has extended along the connective tissue behind the ascending colon, and has reached the liver, and even perforated the diaphragm. It has entered the hip-joint, and has laid bare the ilium. As regards the usual tendency of the abscess, an analysis of sixty-seven cases collected by Bull shows the following: In twenty-eight instances the abscess burst through the anterior abdominal parietes, in fifteen it entered the cæcum, in eight the general peritoneal cavity; in two instances each it made its way respectively into the thorax, the rectum, and the bladder.

By an examination of the fatal cases Fitz shows that no less than 68 per cent. die during the first eight days, and that two-thirds of these die between the fourth and eighth days inclusive

This analysis refers to cases of suppuration following trouble in the appendix.

The general clinical phenomena of typhlitis are clearly enough drawn. At the outset, however, of a consideration of the clinical features of the trouble a discrepancy appears as to the gravity to be attached to the disease considered as a whole. On the one hand, the utterances of certain surgical writers leave the impression that the disorder is of the very gravest character, that it is attended by a high mortality, and that the prospects of recovery lie mainly within the possibilities of a surgical operation. On the other hand, there are physicians who would lead us to suppose that typhlitis is an affection of no great gravity, and that it can be successfully dealt with by medical measures alone. In the discussion which followed the reading of my paper on the treatment of relapsing typhlitis before the Royal Medical and Chirurgical Society in 1887 a physician of great experience—Dr. Hare—stated that "he had met with a good many cases of typhlitis, but he ventured to say that none had gone to a point requiring surgical interference." Both positions are tenable, or, in other words, typhlitis is met with under very varying degrees of severity.

For the purpose of discussing the treatment of the disease, typhlitis may be divided into three classes:

1. The mild form of the trouble. This, as hospital records show, is the commoner variety of typhlitis; is a form which usually ends in resolution, and is amenable to simple medical measures. It would appear to be usually that variety which depends upon fæcal accumulation in the cæcum, or, at least, upon the lodgment of some irritating matter in that bowel. Stercoral ulcers result, lead in due course to some peritonitis in the serous membrane about the caput coli, and the phenomena of typhlitis are present.

Comparing this form with the severer variety next to be described the following points may be enunciated:—

The trouble is more common in males than in females, although the proportion is not so marked as in the severer variety. The patients are mostly young adults. Thirty-six per cent. are under 20; 21 per cent. are over 40. In perforating appendicitis 50 per cent are under 20 and only 9 per cent over 40 years (Fitz).

The patients are usually the subjects of constipation and have passed scybala; or they may be suffering from the diarrhœa induced by the presence of scybala (colitis). The pain appears suddenly, but is on the whole less severe than in the graver form. There is seldom any rigor, the fever is not so high, the vomiting not so marked, and the pain is less apt to radiate to distant parts, for example, to the thigh or testis. The tenderness is perhaps less pronounced; the tumour appears earlier—possibly from the first—it is comparatively large, is apt to be doughy, and to feel less fixed; it cannot so readily be made out through the rectum. Bladder troubles are usually absent. The inflammatory symptoms gradually subside, and the attack passes off—so far as its acute symptoms are concerned—in from three to seven days.

It is impossible to be emphatic in these distinctions, nor can it be urged that some of the severest forms of suppurative typhlitis do not occasionally commence with quite mild symptoms. The continued absence of the local signs of suppuration as time advances is a noteworthy point, however, to which considerable importance must attach.

This form of typhlitis yields readily to medical treatment, and is the form which physicians have in mind when opposing surgical interference in this disease. With this milder form of typhlitis must be included also a large number of cases in which the mischief is probably in the appendix, and in which the symptoms are not severe and end in resolution. In some of such cases it is possible that the appendix becomes practically obliterated. I have frequently found in the *post-mortem* room a shrunken appendix, buried among adhesions, in patients who have had no severe attack of abdominal trouble during life.

2. The severer form of typhlitis leads to suppuration, and nearly always depends upon some trouble commencing in the appendix. The sex and the age of those who are most usually the subjects of this malady have been alluded to.

The symptoms, generally speaking, are more severe and progress more rapidly. There is often an initial chill or rigor. The condition cannot usually be associated with any preceding constipation or digestive disturbance. As a matter of fact, the state of constipation does not favour the lodgment of foreign bodies in diverticula of the bowel. There is in not a few of the cases a history of cold, or possibly of injury. The pain is severe, the vomiting marked, the tenderness and other signs of peritonitis pronounced. The fever is usually high. The tumour is slower to appear; can often be made out through the rectum, and, when felt, is demonstrated to be fixed. The pain is apt to radiate, to spread to the testis, thigh, or perineum, and to be associated with tenesmus and disturbances of micturition. Pain on moving the right thigh is often marked. The local swelling or the area of dulness take on the phenomena attending suppuration, and, at a varying period from the commencement of the trouble, evidences of pus are distinctly present. The symptoms just detailed are subject of necessity to great variation.

The very first manifestations of disease may be those of perforation, and the patient may be in a dying condition in forty-eight hours, or even less. On the other hand, the symptoms may be latent or unaccountably delayed. Buck reports that a sailor was at work rolling barrels of flour till the day of his admission to the hospital. He then had a prominent fluctuating iliac tumour, extending along the outer half of Poupart's ligament. Another sailor left Portland (U.S.A.) for New York, and arrived five days later. In the meantime he purged himself, in consequence of right iliac pain. Although suffering, he kept at work during the following week. He then left for Boston, where he arrived on the thirteenth day after the beginning of the pain. Symptoms of general peritonitis were evident, and he died the next day. A gangrenous appendix was found lying in the cavity of an iliac abscess. (Fitz.)

It is in this form of typhlitis that a prompt and definite surgical treatment is distinctly indicated.

3. Under the last variety are included the cases of relapsing typhlitis. This usually depends upon some trouble in the appendix, which falls short of producing suppuration. If an abscess has formed and the patient has recovered, he is not likely to have other attacks. With the evacuation of the abscess, the cause of the trouble has been probably removed; the fæcal concretion or the foreign body has been discharged, or the offending appendix has been destroyed by gangrene.

The simple form of typhlitis (the stercoral form), dealt with in the first of these three divisions, is apt to relapse if the conditions which originally produced it are themselves reproduced. The trouble, however, retains its primary character, and the repetitions are few, and possibly limited to one occasion.

In the relapsing typhlitis, due to appendix troubles, the attacks return with vigour. They may be, and usually are, quite independent of constipation, and burst out even while every care is being taken of the patient's health. They are apt to increase in severity, and to leave the patient weaker after each repetition. The pathological condition which usually underlies this form is as follows:

The trouble is due to a retention of mucus within the vermiform process. The appendix is found twisted or bent upon itself, or held down at an angle by adhesions, or its lumen has been nearly occluded by cicatrisation after ulcer. The end of the process is found to be enormously distended with mucus, and often to be singularly hard. In one case in which I exposed such an appendix by operation, I found its extremity so large, so hard, and so rounded that it appeared as if it contained a concretion. The tube was bent upon itself, and, on setting it free, the mucus escaped and the resemblance to a concretion vanished.

There is no stone nor foreign body in these cases. The distended appendix sets up a certain amount of peritonitis, in time it relieves itself, and the patient enters a quiescent period, which may or may not precede another attack. In other and less frequent examples a foreign body has been found which had induced two or possibly more attacks before it caused suppuration.

In one case already alluded to, the patient, a gentleman aged 19, under the care of Dr. Phillips, of Tickhill, had fourteen attacks of typhlitis between November, 1887, and March, 1889. The appendix, when exposed during a quiescent period, was found to be bent upon itself and distorted, and held down by a complex mass of tough adhesions. The cæcum was sound, and no evidence of suppuration existed.

The Treatment of Typhlitis.—It may be considered that the clinical and pathological position of typhlitis has been reviewed at a length not justified by the title of this paper; but it may also be evident that no sure line of treatment can be laid down independent of such a view.

1. Cases that may be considered to belong to the first described variety of typhlitis, the mildest form, do well enough under the recognised medical treatment. The patient is kept absolutely at rest, opium is cautiously administered, the least possible amount of fluid food is given, leeches are applied to the skin over the right

iliac region, or some rubefacient fomentation is made to cover the abdomen. At an early period the colon is evacuated by enemata, and for a considerable time the diet is restricted to the simplest and most easily digested elements.

2. In the treatment of that variety of typhlitis in which suppuration is expected to occur or to have occurred, surgical measures stand pre-eminent, and in their application a careful judgment must be exercised. It is to be assumed that in every instance rest will be insisted upon, opium given, the colon cleared by an enema, and the diet reduced to starvation limits. Opium should be given in the smallest efficient doses. If recklessly administered it is apt to mask the symptoms to an undesirable degree.

It may be anticipated that an incision will have to be made to meet the simple surgical principle, *ubi pus, ibi evacua*, and in connection with this incision three points have to be considered: *a*, the time at which the incision should be made; *b*, the preliminary use of the exploring needle; and *c*, the site of the incision.

a. In connection with the first point, it may be said that the use of the knife will very rarely be called for before the fifth day. Indeed, I would venture to think that surgical interference before the fifth day should not be undertaken except in the presence of very emphatic symptoms. The great majority of the operations for typhlitis are performed after the first week.

The treatment of this disease by rational and precise surgical methods is a matter of recent years. The older method of practically leaving the malady to itself, and of not opening the abscess until it was about to burst through the skin, may excuse the excessive enthusiasm of some modern surgeons who have gone to the other extreme and advise the use of the knife without compromise and without delay. One writer on this subject[1] compares the delay in operating in typhlitis to a like delay in dealing with strangulated hernia. That the author does not recognise the incongruity of his comparison is shown by the following heroic advice: "After persevering for forty-eight hours with this treatment" (an original treatment by means of opium, saline purgatives, and massage under ether), "if relief is not obtained, I would at once resort to laparotomy."

Many surgeons of eminence, however, and notably among them Dr. W. T. Bull, of New York, whose admirable work in abdominal surgery cannot be too liberally recognised, are in favour of early interference. Dr. Bull's earliest operation was performed thirty hours after the first symptom. It is urged in favour of early incision that a large number of recorded cases afford examples of an operation performed too late, or of a fatal issue which could have been averted by operation. Such cases exist, without doubt. They afford an argument in support of earlier interference, but do not necessarily imply that the opening of the abdomen within the first forty-eight or seventy-two hours should be the routine treatment of a case of typhlitis. The large number of cases which undergo spontaneous cure must not be lost sight of, nor can the opening of the abdomen through the muscular parietes over the cæcum be regarded as a trifling procedure. It is urged also that certain cases have ended fatally within the first thirty-six hours by perforation into the general peritoneal cavity. Such cases are, however, comparatively rare; they cannot be anticipated. In not a few of them the very first symptoms were those of perforative peritonitis. When such a case is met with the abdomen should, of course, be at once opened, the perforation dealt with, and the serous cavity well washed out, as is the practice in dealing with other forms of perforative peritonitis. A case of death from perforation within thirty-six hours of the appearance of the symptoms of typhlitis does not afford a legitimate argument for the routine performance of an operation within that period in even the majority of the cases. Some of the milder forms of typhlitis —those which end early in resolution—commence with quite acute symptoms, so that the severity of the symptoms is not alone a test of the need for early operation, although it is true that, in general terms, the more acute the manifestations the greater is the need for prompt surgical measures.

Then, again, it is asserted that the abscess, if left, will burst into the peritoneal cavity and cause death, and that such a termination has been recorded when the abscess contained but an ounce or so of pus. This assertion, also, does not afford an unqualified argument in favour of the early use of the knife. As a rule, the abscess makes its way through the abdominal parietes, and does not burst into the general serous cavity. Dr. Bull himself has shown that in sixty-seven cases of abscess the pus escaped in twenty-eight instances through the belly wall, and that in only eight examples did it burst into the peritoneal cavity. Whilst it is true that small collections of pus have followed the latter course, it is also true that abscesses containing pints of matter have been successfully opened through the integuments some weeks after the commencement of the symptoms of typhlitis.

In this connection it must also be remarked that a very small collection of pus is not easy to discover, and that in not a few recorded cases the early incision has not revealed the collection. It is true that the sooner retained pus can be let out the better, but that aphorism does not guarantee the harmlessness of speculative incisions for matter, especially when the pus is within the abdomen, and in a region the anatomical features of which are liable to great variation. Moreover, it is most desirable that the matter should be well localised, and that the resulting adhesions should have connected the inflamed district directly with the parietes. The later the operation is delayed the most easily and directly can the pus be reached. If a very early incision became the rule it would frequently happen that the matter could not be reached without first opening the general peritoneal cavity, and could not escape without first finding its way into that space.

Deeply-seated pus is slow to make its presence evident, and in the majority of cases the evidence will not be unequivocal before the fifth day. Should its presence be made clear before that period it is obvious that surgical interference should not be delayed; and it must also be allowed that urgency of symptoms may justify an exploratory incision before the arbitrarily fixed time is reached. With some reserve Dr. Bull's dictum may be accepted: "The more rapid the development of the symptoms the earlier should the surgeon interfere."

b. The exploring needle has been extensively employed by American surgeons, but, in spite of their advocacy, I think that its use is to be strongly condemned. This needle is thrust into the iliac region of the abdomen to the depth often of three or four inches, is passed in different directions, and is sometimes introduced three or four times at one sitting. Its object is to discover pus. In the first place it may be suggested that deep-seated pus, in sufficient quantity to demand surgical interference, may possibly be diagnosed by other means, and that if an exploration must be made it would be safer to trust to a cautious incision than to a series of plunges made in the dark.

In the next place the use of the needle can hardly be urged to be free from risk. In the course of its employment it must be thrust now and then into the cæcum, and if that part of the bowel be in a condition of ulceration it is possible that the needle may induce a suppuration that previously did not exist. It has been shown that the use of the hollow needle in extreme tympanites is not unattended with risk, and it is not to be expected that the risk will be less when it is thrust into the inflamed and softened coat of an important part of the bowel.

Typhlitis is often due to extreme distension of the appendix with mucus. An appendix so involved may reach the size of a small walnut. The typhlitis indicated may end in complete resolution. A needle introduced during the acute period in such a case may very easily tap the distended process, allow a quantity of fœtid mucus to escape, and so bring about a suppuration which was by no means inevitable.

It would be unfair to draw conspicuous attention to some cases in which repeated puncturings gave no evidence of pus but in which an abscess appeared some days later. Even when an abscess does exist it must be remembered that its walls are often formed by the cæcum and some coils of ileum matted together, and into such an abscess (when small) a needle can scarcely be introduced without risk. In one reported case[2] I observe that the pus evacuated, after the use of the needle, was bloody, a very unusual condition in typhlitis uncomplicated by the use of this instrument.

In the hands of a skilful surgeon—such as Dr. Bull—the method of exploration may be free from the objections urged, but if the practice be extensively adopted it may be possible to learn what ills may follow upon an introduction of a needle into the iliac vessels, the ureter, or the iliac connective tissue after it has passed through an area of unhealthy inflammation.

The needle, moreover, does not appear to always fulfil the arguments for its existence. In one case of Dr. Bull's the needle punctures revealed nothing, but an incision made immediately afterwards evacuated no less than four ounces of pus. In other instances such large quantities of matter have been let out shortly

[1] *Jour. Amer. Med. Assoc.*, June, 1888, p. 713.

[2] *Trans. Amer. Surg. Assoc.*, 1888.

after the presence of pus had been made evident by the needle as to raise the question of the possibility of the pus having been detected by other and simpler means.

c. The best situation for the incision cannot be settled in an arbitrary manner. It should be placed over that part of the inflamed area which appears to cover the seat of suppuration. This can be usually fairly well made out during an examination under ether, provided that such examination include a digital exploration through the rectum.

It is desirable that the pus should be reached by the shortest route, and allowed to escape in the most direct manner. The most convenient incision is one made obliquely from above downwards and inwards just external to the deep epigastric artery, ending a little above and to the outer side of the middle of Poupart's ligament, and following the general inclination of the wound made for securing the iliac vessels.

An incision made on the right semilunar line will be found, in the great majority of cases, to be inconvenient and to be ill-judged, in so far as it will not permit of a direct evacuation of the pus.

A median incision is bad. The pus is localised by adhesions, and so shut off from the general peritoneal cavity. An incision in the linea alba would, except in a very few instances, fall to the inner side of the collection; the general peritoneal cavity would be opened up, and through that cavity the pus would have to be evacuated. The best placed incision is that which leads into the peritoneal enclosure without opening the general peritoneal cavity.

In my Hunterian Lectures, and elsewhere, I have drawn attention to the variations in the position of the cæcum and appendix. The situation of the abscess will obviously be influenced by such variations, but any gross deviation can usually be detected by a rectal examination.

Other points in connection with the opening of the abscess remain to be considered. The incision should be free. A careful examination should be made for fæcal concretions and foreign bodies, and a search should be made for the appendix, and its condition, if possible, be determined. These investigations should be conducted with the greatest care, the frail character of the abscess wall should be borne in mind, and regard be paid to the fact that it will be made up of fresh adhesions, and often of loosely attached coils of bowel. The careless introduction of the finger may break down important adhesions, and may cause a perforation into the general peritoneal cavity, or, failing this, may bare a portion of the exposed cæcum of its serous covering. The less that is done after the abscess has been opened the better.

The walls of the abscess cavity should never be scraped, as some advise. The cavity should be well washed out by means of a gentle stream of a weak and warm antiseptic solution directed through an irrigator. A large-sized drainage-tube, or a long strip of iodoform or carbolic gauze, should be introduced. If a perforated, diseased, or gangrenous appendix be discovered, a ligature of catgut or silkworm gut should be passed round the proximal part of the process where its tissues are healthy, and be tightly secured. The appendix beyond should then be divided and removed.

It is useless under such circumstances to attempt a more elaborate method for removal. The condition of the organ and of the surrounding tissues forbids a more precise surgical procedure. If the appendix be entirely gangrenous, or be perforated close to its point of origin from the cæcum, it had better be left untouched, and in such cases I think no attempt to apply a ligature should be made. When the process is very adherent it is undesirable to make any determined attempt to remove it by dissection, or even by gentle tearing. It will probably do best if it be left quite alone. The anatomical details of the abscess cavity, moreover, are not always clear. In one case, in which I found an inch or so of a dilated ureter exposed in the walls of the abscess, it was not difficult to understand that the urinary tube might be mistaken for the vermiform process, and dealt with under that impression. The opening of the abscess is the main thing; dealing with the appendix is a secondary matter. If the appendix be at once discovered, and can be dealt with readily and simply, it is well, but persistent attempts to remove the process at all costs are to be strongly condemned.

The pus from these abscesses is occasionally healthy, but it is more usually fœtid. If actual fæcal matter is present, it will indicate a direct opening into the cæcum. When a perforation of the cæcum is discovered in the depths of a typhlitic abscess, I believe it will be wiser to make no immediate attempt to close it by operation. The margins of the opening will be thinned and probably in a sloughing condition, and the serous covering of the gut will have been destroyed. No condition could be less favourable for a plastic operation—for the careful closure of the opening by sutures. The condition will probably be made worse by a more elaborate procedure involving a resection of the cæcal wall forming the margin of the perforation. These fæcal fistulæ, if studiously left alone, more often close spontaneously than remain patent, and especially is this the case if every possible care is taken to keep the abscess cavity perfectly drained and frequently irrigated.

Cæcal fistulæ are very difficult to deal with by operation, no matter at what stage the attempt at closure is undertaken. On the other hand, their tendency to close spontaneously under careful treatment, both as regards local measures and the care of the patient's diet and bowels, is very noteworthy.

The treatment of cases of relapsing typhlitis by removing the appendix during the period of quiescence offers, probably, more admirable results than are to be obtained in the treatment of any other form of the disease. I first performed this operation in 1887, and have elsewhere very fully dealt with the circumstances and details of the procedure.[3] In these cases the patients had had three or more severe attacks of typhlitis. The relapses had occurred in spite of every possible care. The pathological condition discovered was such as has been already described. One patient had passed into the condition of a chronic invalid, and had been confined to bed for some months; others were anticipating with dread the repetition of the attack. In one case notably[4] the patient had had three attacks; they had been of increasing severity, and the prospect of his surviving a fourth attack had become a legitimate question. In this instance an enormously-distended appendix was discovered, with a deep ulcer in its wall, and the train laid for an outburst of perforative peritonitis.

Before the operation the position of the diseased appendix will be made out, if possible. Its position might have been indicated during one of the attacks.

The points I have already suggested in connection with the operation itself are the following:—

1. The operation should not be performed until all inflammatory and other symptoms have quite subsided.

2. The incision should be made obliquely from above downwards and inwards over the cæcal region, its lower extremity ending just external to the epigastric artery. The incision should not be made directly over the appendix or over the dullest region. If it be so placed a number of adhesions will probably be encountered, and the demonstration of the peritoneal cavity might be difficult. The cæcum or the appendix might be actually adherent to the anterior abdominal wall. The incising of the peritoneum should, therefore, be conducted with the very greatest care. It is well that the parietal cut should open the abdomen at a point just beyond the diseased area, and where no adhesions exist.

3. When the appendix and cæcum are exposed, the area of the operation should be cut off from the general abdominal cavity by sponges. If this plugging with sponges be well carried out, no blood should enter the peritoneal space.

4. All adhesions should be divided by cutting; none should be "broken down." The latter measure is apt to tear the bowel, or, at least, to bare it of peritoneum.

5. The appendix should be lightly clamped close to the cæcum, and should be divided about half-an-inch from that intestine; it should not be secured by a simple ligature. The mucous membrane should be united by many fine sutures, or by a continuous suture; then the divided outer walls of the process should be brought together by a second row of sutures; it is practically impossible to bring the serous coats together. To still further secure the orifice, the stump of the appendix might be lightly attached to any adjacent surface of peritoneum.

6. The abdominal wound should be closed; no drain is required.

During the progress of the operation, any adhesions likely to give rise to trouble might be dealt with; this more especially applies to adherent omentum, or to adhesions binding down coils of small intestine. If the appendix be closely adherent to the

[3] *Med.-Chir. Trans.*, vol. lxxi, p. 165; *Lancet*, February 9th, 1889.
[4] *Lancet, loc. cit.*

ureter, or to a coil of the ileum, or be found deeply attached in the pelvis, its removal may be attended with very considerable difficulties. The management of such a case must be left to the judgment of the individual surgeon.

Mr. BENNETT MAY congratulated Mr. Treves on his paper. He thought those American surgeons who advocated operation in all cases of inflammation in the right iliac fossa failed to discriminate the importance of differentiating cases. He (the speaker) thought the first thing to do in any case was to try to discriminate those of perforation or disease of the appendix. In these operation would sooner or later be necessary, and had better be sooner. In the others, recovery was the rule without operation. Of course, the discrimination was not easy, but Mr. Treves had emphasised the principal differential features. In operating Mr. May did as little as possible. Having reached pus he simply inserted a drainage tube, and made a very limited search for appendix or foreign body. In three cases a foreign body had been carried into his hand by the escaping pus, or the appendix had presented itself with a foreign body partially extruded. He had simply ligatured and cut this off with success. In one case he had had free bleeding from an ulcerative lesion of an ileo-colic vein, caused by a stone which had perforated the cæcum.—Dr. EASTES mentioned a case of typhlitic abscess in which he was called in consultation about four years ago, in which the fluctuation could be detected above the crest of the ilium as well as in front of the abdomen. A deep incision was therefore made an inch and a half behind the anterior superior spinous process, and the abscess reached, washed out, and drained with a glass drainage tube, which was removed at the end of a week. Recovery took place in three weeks. The case was narrated to show how very simple the necessary operation might be in some cases.—Mr. LAWFORD KNAGGS mentioned a case in which a perityphlitic abscess was opened and a separated intussusception was found lying in the abscess cavity. The patient, a young soldier, made a good recovery.—Dr. MEAD (Newmarket) mentioned a case in which there were repeated attacks, beginning at 9 years of age, in a lady who was troubled at intervals varying, with one exception of about ten years, from three to four years. Ultimately, a very serious attack occurred in her 47th year, from which, however, she recovered, but in her 51st year another attack proved fatal. Much serious consideration was given during the attacks and subsequently to the advisability of an operation, but this was negatived by all who were consulted.

ABDOMINAL AND OTHER CAPITAL OPERATIONS PERFORMED DURING PREGNANCY.

BY A. W. MAYO ROBSON, F.R.C.S.,

Honorary Surgeon to the Leeds General Infirmary; Honorary Consulting Surgeon to the Batley Hospital; and Lecturer on Practical Surgery at the Yorkshire College of the Victoria University.

THE occurrence in my practice of five cases in which I have found it necessary to perform a serious operation during the course of pregnancy, which has in none of the patients caused premature expulsion of the uterine contents, led me to think that a report of the cases might prove of interest.

CASE I. *Fibroid of Cervix Uteri removed in the Seventh Month of Pregnancy.*—In February, 1886, I received a letter from my friend Dr. Black, of Harrogate, asking me if I would remove a large polypus of the uterus in a woman, aged 30, seven months advanced in pregnancy, as he feared that if the tumour were not removed, labour could not be effected through the ordinary channel.

She was admitted to the infirmary on February 9th, when she gave the following history: That she had had six children, the last twins, two years previously; that one month after confinement she suffered from what she supposed was "a falling of the womb," which was replaced and kept in position by a pessary. She had been quite regular in her menses until August, 1885, when she became pregnant. In September she noticed a swelling protruding from the vagina, and consulted Dr. Black, who replaced the protruding mass, and told her the nature of her ailment, advising its removal. She suffered from time to time from an offensive vaginal discharge.

On admission the vagina was occupied by a rounded mass the size of a small cocoa-nut, which was attached to the whole of the anterior lip of the cervix uteri; the os being represented by a slit high up on the posterior aspect of the tumour very difficult to reach. The posterior lip seemed quite free. The abdomen presented the ordinary signs of a six to seven months' pregnancy. There was a constant offensive blood-stained discharge exuding from the vagina. The tumour was quite distinct from the urethra, but the mucous membrane began to be reflected over it half an inch behind the point where the urethra ended in the bladder. The patient was otherwise in fair health.

Operation, February 25th.—The vagina having been well syringed with a sublimate lotion (1 in 4,000) thrice daily for two days before the operation, the patient was put under ether, and placed in the midwifery position. A Sims's speculum having been placed in the vagina, a good view was obtained of the posterior surface of the tumour, which was drawn down with vulsellum forceps. The urine was drawn off by a silver catheter, which was turned round so as to distend the posterior wall of the bladder. The mucous membrane between the bladder and the tumour was incised, and the base of the bladder separated from the growth. Into this groove was passed the wire of a galvano-écraseur, which was then pushed up until it completely embraced the anterior lip of the uterus, when the battery was connected, and the mass cut away. Although the galvano-cautery had been used, there was considerable hæmorrhage, which required the application of several ligatures to arrest it. The bleeding having been arrested, the vagina was again syringed out with sublimate lotion. On examination the tumour was found to be a fibromyoma, growing in the anterior lip of the cervix uteri, and having a complete capsule.

The patient had neither pain, retention, nor discomfort of any kind; there was a little serous discharge for a few days. When examined on March 6th the wound appeared to be perfectly healed, and the os uteri seemed to be in a normal position. The temperature throughout was never above 99°. The vagina was syringed twice daily with weak sublimate lotion.

On May 3rd Dr. Black wrote to say that the patient was perfectly well, and had not miscarried; that on vaginal examination the cervix and os uteri felt quite normal, so that no one could have told that an operation had lately been performed; the os was a little patulous, and through it the fœtal head could be easily reached.

On May 6th Dr. Black sent me word that the patient had been safely delivered of a healthy child at the full time, the labour being perfectly normal.

CASE II. *Carcinoma of Breast; Amputation in Third Month of Pregnancy.*—Mrs. S. came under my care in 1887, for a rapidly growing tumour of the breast which, having only been noticed two months, had increased with great rapidity during the three weeks before I saw her, when the breast was extensively involved and the axillary glands were enlarged. She was three months pregnant. A colleague who saw the case agreed with me that the wisest course would be to operate at once, as to wait for six months would mean to put aside all chances of cure. Amputation of the breast was performed, together with complete removal of the glands in the axilla, the operation being done antiseptically but without the spray. Recovery was uninterrupted, and healing occurred by first intention, without pain, fever, or discomfort of any kind. The pregnancy proceeded to the full time, and I have reason to believe that the patient has had no return of the disease.

CASE III.—*Multilocular Ovarian Cyst with Extensive Adhesions to Uterus; Removed in Tenth Week of Pregnancy.*—Mrs. S., aged 37, was sent to me in February, 1888, by my friend and late house-surgeon, Mr. Ambrose Atkinson, as a case of rapidly growing abdominal tumour, probably complicated with pregnancy. The history given was that the abdominal swelling had been noticed for fifteen months, at first small, but afterwards rapidly enlarging. Its growth had been accompanied by severe pain in the abdomen and back. The menses had been perfectly regular. On admission there was a large, rounded, fluctuating, and freely movable swelling occupying the hypogastric and adjoining parts of the iliac and umbilical regions. To the left of, but below the umbilicus, there was a small, hard, rounded nodule, afterwards made out to be a fibroid of the uterus. Examination, *per vaginam*, revealed a soft velvety os with a developed cervix. The uterus was felt to move with the tumour as if the two were intimately blended.

The ordinary operation of ovariotomy, so far as the emptying of the cyst, was performed with full antiseptic precautions, including the spray. On withdrawing the cyst, after emptying as far

as possible, the tumour was found to be very firmly adherent to various structures in the pelvis, including large and small intestine, but more particularly to the back of the uterus. By dint of careful manipulation, the adhesions were separated, leaving a large raw surface on the back of the uterus. The bleeding, which was somewhat profuse, was arrested by sponge pressure. On examining the uterus, it was found to be pregnant (probably about ten weeks), and from its anterior surface a small rounded pedunculated fibroid was springing. This was not interfered with. On account of the extensive adhesions it was considered advisable to insert a glass drainage-tube, which was emptied once in twelve hours until the end of the second day, when it was removed. After the operation the vagina was syringed out thrice daily with salufer lotion (twenty grains to the pint) during the first week, so that if abortion ensued, there would be no risk of septicity.

The patient recovered without a bad symptom, there being an entire absence of pain and distension, and no vomiting after the first few hours; the wound healed by first intention, and the stitches were removed on the seventh day; she was allowed to be up at the end of three weeks, the cicatrix being supported by adhesive plaster. The tumour proved to be a proliferous multilocular cyst, with a large amount of solid growth that seemed to have perforated the true cyst wall and invaded the peritoneum, thus causing the extensive adhesions, and the free hæmorrhage when they were broken through.

In July, Mr. Ambrose Atkinson sent me word to say that he had attended the patient in labour, from which she had made a good recovery.

CASE IV. *Strangulated Femoral Hernia operated on in the Third Month of Pregnancy.*—On June 23rd I was asked by my friend Dr. Purdy, of Woodlesford, to see a case of strangulated hernia with him, with a view to operation, when he gave me the following history of the case. That Mrs. H. had had two previous pregnancies, and had always suffered very severely from vomiting; that during the present pregnancy, which had advanced three months, she had vomited more or less every day. The sickness had been so severe on June 21st as to lead her to seek medical aid.

On the 22nd she incidentally mentioned that she had a small swelling in the left groin, which, on examination, proved to be a strangulated femoral hernia. On the 22nd the vomiting became stercoraceous, and on the 23rd I saw the case with Dr. Purdy. The A.C.E. mixture was administered by Dr. Purdy, and, the parts having been thoroughly asepticised, the hernial sac was opened, and a small knuckle of bowel was found to be tightly nipped by a very small femoral ring, which required division before the contents of the sac could be reduced. The sac was then surrounded by a catgut ligature and excised.

The patient made an uninterrupted recovery, but although the stercoraceous vomiting at once ceased, the pregnancy sickness continued as before. The patient did not miscarry, and is, I believe, going to the full term.

[*Later Note.*—Dr. Purdy writes to inform me that Mrs. H. was safely delivered at the full period of pregnancy.]

CASE V. *Rotation of Ovarian Tumour in Second Month of Pregnancy, causing Acute Symptoms; Ovariotomy; Recovery without Miscarriage.*—Mrs. A., aged 25, was seen for the first time by my brother, Mr. Herbert Robson, on July 7th, when she gave the history that she had been married two months, and that although she was not strong before marriage, so far as she knew she was otherwise well. At the time of her marriage her menses had just ceased, and the periods had not since recurred, but she thought she was not pregnant. After a rather free supper on July 7th, she was seized with a pain on the left side of the abdomen opposite the umbilicus, which she thought to be colic, and which had to be relieved by a morphine injection. My brother noticed that the abdomen was larger than natural, and suspected the presence of a tumour. Although the pain was severe she was not faint.

On July 8th we found a fluctuating abdominal tumour reaching to within an inch and a half of the umbilicus. The swelling was dull on percussion, and was surrounded by resonance. There was no marked tenderness over the abdomen, and the veins were not enlarged; the most careful auscultation failed to elicit the signs of a fœtal heart or of a placental *souffle*. The os uteri was soft and velvety, and the cervix was elongated. The tumour and the uterus moved together. Between the 8th and the 14th of July the patient had two attacks similar to the first, though not so severe.

On July 14th the dulness had reached to the umbilicus, but the flanks were quite resonant.

On July 15th the acute pain returned, and had to be relieved by morphine.

On July 16th the dulness had reached to 2 inches above the umbilicus, where there was marked tenderness. Fluctuation could be distinctly felt across the abdomen, but it appeared to be less defined and more diffuse. It had been explained several days before that an operation might be called for at any moment; but now that the symptoms were becoming more severe, and the patient was manifestly running down, the pulse being persistently 100 or more, permission to operate was asked for; but before operating we asked Mr. Pridgin Teale if he would see the case with us, and he agreed that laparotomy was urgently called for.

On July 17th, my brother administering the anæsthetic, Mr. F. H. Mayo and Mr. Moynihan assisting in the operation, and Mr. Teale being present, I opened the abdomen by an incision of $2\frac{1}{2}$ inches. Free bleeding occurred from the abdominal walls, and on reaching the peritoneum a dark fluid showed through. On opening the peritoneal cavity about a pint of dark coffee-coloured fluid escaped, exposing a multilocular tumour of the left ovary, which had rotated from left to right, twisting the pedicle, and partly strangling the tumour. The pedicle was ligatured by the Staffordshire knot, cut, and the peritoneum carefully dried. The wound was closed by silk sutures. The cyst contained nine pints of fluid. The pulse, which before the operation had been 108, was found immediately after to be 112. No sickness followed; the temperature never rose above 99°. The catheter was never employed. The sutures were removed on the seventh day, when the wound was found to be healed. The patient had no pain; she was up on the fourteenth day, and went to the seaside at the end of a month. Since the operation she has gained a stone and a half in weight, and is better in health than she has been for a considerable time. The pregnancy appears to be following a normal course.

REMARKS.—To the best of my recollection these are the only cases in which I have performed a serious operation during the course of pregnancy, and in no case has miscarriage followed; this I attribute primarily to the absence of pain, and the lessening of shock during the operation by the use of anæsthetics, and secondarily, to the entire absence subsequently of any wound complication such as tension, pain, or fever, owing to the strict observance of antiseptic methods.

In no case was any sedative required or given, and in all the cases the wound healed by first intention. Although the operations were serious, and in Cases I, III, and V involved extensive interference with the uterus or its appendages, there was not the slightest uterine action set up.

The hernia case is also of interest, because of the vomiting of pregnancy gradually merging into that of strangulation, but without much local pain to attract attention to the affected part. It shows the need of careful examination in severe pregnancy sickness.

In the breast case to have waited was to have condemned the patient to death, for I think it has been clearly made out that carcinoma of the breast grows rapidly during pregnancy, whereas the removal did not produce abortion, and has probably resulted in the cure of the patient. In the uterine fibroid case I think it would have been impossible to have delivered *per vias naturales*, and the removal of such a tumour during labour would, I think, have been an extremely dangerous procedure. The period at which the operation was performed (at the seventh month) would seem to show that, even so late in pregnancy, the uterus is a very tolerant organ.

The rotated ovarian cyst is, perhaps, the most important case in the series, and might be worthy of separately recounting, even if pregnancy had not complicated the case. Those who saw the patient would, I feel sure, agree with me when I say that her appearance of extreme illness gave a not very hopeful prospect of recovery; yet she not only recovered, but having now attained the sixth month of pregnancy is in better health than she has been for many months.

Hitherto it seems to have been a matter of chance whether the patient would or would not miscarry after an operation during pregnancy. May we not hope that by the use of antiseptics, as well as anæsthetics, we may operate on such cases with a greater certainty of success?

[*Later Note.*—Mrs. A. was safely confined of a girl in February, 1889.]

OPHTHALMOLOGICAL MEMORANDA.

THE DETECTION OF COLOUR BLINDNESS.

THE subject of colour blindness seems to be occupying considerable attention at the present time, but few seem to be aware of the imperfections of the tests used by the different railway companies.

I will not deal with tests which are manifestly useless, but confine myself to that test which is recommended by many as an efficient one—I mean Holmgren's wool test. At an early period in my experience in colour blindness I found that there were very grave objections to this test, from a practical as well as from a theoretical point of view. I will confine myself to the practical aspect of the test.

1. Who are we to reject by this test? If we reject all the (so-called) partially red and green blind we shall reject many persons who are practically competent. If we only reject the (so-called) completely red or green blind we shall allow many persons who are dangerously colour blind to officiate as signalmen. The test is more theoretical than practical, the main object of testing for colour blindness being apparently lost sight of; thus it has to be proved that a man who puts a confusion colour with a green wool cannot distinguish between a red and a green light. Then when a man has put a confusion colour with a green wool there is still the point to be decided whether he has been judging more by shade than by colour. To an uneducated man a light green and a light greenish-grey are very much alike. In my experience, an ignorant four-unit-colour blind (that is, a person who is partially colour blind, but not colour blind to an extent necessitating his rejection) is more likely to fail than an educated two-unit (red-green) colour blind.

2. A person with central scotoma will escape detection if examined by this test. For example, I examined a person with central scotoma with my pocket colour test (in which pieces of coloured material are ranged in rows), and found him perfectly colour blind with regard to red, green, and grey. I then examined him with Holmgren's test, and he went through it correctly with the greatest ease. As a light at a distance occupies the central portion of the field of vision, these persons will be found to recognise colours when close to them, but not when they are at a distance.

3. The red end of the spectrum may be considerably shortened, so much so, that a person may scarcely be able to distinguish red from black. It is obvious that this will not prevent him from matching a light green wool with other green wools.

4. The test, being based on a fallacious theory instead of upon practical observations, repeats all the errors of this theory. Some of the features of the test are really due to impurities in the colours used.

With regard to the test which should be used, if the persons to be tested have to distinguish between the standard red and green lights, these lights should be used as a basis of the test, because if any other test were used we should still have the same problem before us from a practical point of view. Space will not permit me to go into the details of my test. Briefly, I put the person to be tested in as nearly as possible the same conditions as he would be likely to be in when following his employment. Thus in combination with coloured glasses I use special kinds of neutral glass of different degrees of thickness. These glasses obstruct the light in the same way that the atmosphere or fog does, and therefore put the examinee in a similar position to that in which he would be likely to be in. It is perfectly certain that a colour blind person cannot judge by the intensity of a colour when there is a thick neutral glass in front of it.

Naming colours is certainly the best method under these circumstances, because it is the expression of the idea present in the examinee's mind. Ignorance of colours would be quite as fatal as colour blindness if a sailor thought that a red light was called green, and steered as directed for a green light. I think the argument that Holmgren uses against naming colours is really one in favour of it; thus many uneducated men who would put a light greenish-grey wool with a light green wool would not make this mistake if told to pick out all the greens.

With regard to the person who should conduct the examination for colour blindness, there seems to be no doubt that the testing should be conducted by a medical man specially trained in colour blindness. Testing for colour blindness is not an easy matter, and requires as much experience as using an ophthalmoscope or stethoscope.

I am strongly of opinion that we shall make no real advance until a committee is appointed to report on the subject, and to examine and appoint properly trained examiners. I know of one case in which the examiner himself was colour blind. I hope colour blindness in connection with railways will be considered before some great railway accident draws universal attention to the subject and the worthlessness of the tests in use.

Finsbury Park, N. F. W. EDRIDGE-GREEN, M.D.

CLINICAL MEMORANDA.

SUSPENSION AND LOCOMOTOR ATAXY.

IT can scarcely be acknowledged that the treatment of locomotor ataxy by suspension has received that notice from the medical profession in this country which it deserves. Outside Russia, where the treatment was first introduced, it has been practically ignored, until quite recently, when in Paris M. Charcot's name became associated with it. Since then, although the system has been much adopted, it must be admitted that the results lately published by several medical men have not been at all encouraging. This must be due either to the unsuitable nature of the cases operated upon, or to imperfection in the carrying out of the treatment. M. Charcot lays great stress on details, and all minutiæ of the operation are performed with the greatest regularity and precision.

With reference to cases recently published in the medical press, I notice that the patients' toes were allowed to touch the ground; also, that the first time they were suspended, the length of such suspension varied from 40 seconds to 5 minutes. Possibly these may be only insignificant details, still they are in direct antagonism to M. Charcot's practice and recommendation at the Salpêtrière. I have seen from thirty to forty patients suspended at the above named hospital during the early hours of the morning, and each operation was conducted with the same uniform regularity, every patient being suspended, to commence with, for 20 seconds, then 30 seconds, and so on. Not only were the toes taken off the ground, but were separated from it by at least 9 inches. There was no jerking, no unnecessary rough pulling. The patient was raised very gradually, and then as slowly let down again. After which rest was enforced for a quarter of an hour.

Another reason probably of its non-success may be attributed to the fact that in this country patients do not seek advice when merely the premonitions exist, as they are too often ascribed to rheumatism, or neuralgia, and it is only when the loss of co-ordination becomes manifest, that the patient seeks regular medical advice. At this stage there is structural disorganisation in the spinal cord, and the chances of any improvement resulting from the treatment must be in proportion to the organic change that has occurred.

When, however, premonitory symptoms alone have developed, and when possibly there is but, at the most, a parenchymatous inflammation, we may confidently look forward to very gratifying results. Out of a number of over forty patients who presented themselves three times weekly at the Salpêtrière, I only saw six where the loss of co-ordinating power was decidedly evident, while in four other cases it was beginning to show itself; but in the great majority there only existed the typical symptoms characteristic of commencing tabes. It must be admitted that in some instances there was no evidence of organic disease, but simply functional disturbance of the spinal cord; still the suspension treatment is so well known in Paris, that as soon as patients experience any pain or uneasiness in the region of the spine, they at once repair to the Salpêtrière. Owing to different circumstances it is difficult to give the exact results as obtained at this hospital, but I observed that there was but little if any improvement in the muscular power, except in cases of recent origin, where it was decidedly more distinct. On the other hand, in nearly every case the lightning and girdle pains, together with the stomach disorders, disappeared, whilst in every instance there was a marked improvement in the urinary troubles. Some benefit was also perceivable in other directions, such as in the decrease of the cold sensations experienced in the lower extremities and paræsthesia of the soles of the feet.

In four cases under my own care I have found that in three of them the suspension has been successful, while in the fourth the improvement was *nil*. I hope later on, when I have a more extensive experience of this treatment, to publish in detail the results.

T. GERALD GARRY, M.D., M.Ch.

Liverpool.

TREATMENT OF A COMMON COLD.

IT may not be as widely known as it deserves to be that 20 grains of salicylic acid, given in liq. ammon. acet. three or four times a day, will so far control a common cold that the aching of the brow, eyelids, etc., and during movements of the eye, will cease in a few hours, while the sneezing and running from the nose will also abate, and will disappear in a few days, and, more fortunate still, the cold will pass off, and not finish up, as is customary, with a cough. It may be that it is only in persons tainted with rheumatism where we find a chill followed by such a train of troubles, and certain it is that different persons suffer in different ways after a chill. But for a very great number of people of fair health who are liable to take a common cold, it is highly desirable to avoid a cough, and the salicylic acid treatment places this in our power.

S. WILSON HOPE.

Petworth, Sussex.

A CASE OF SCARLET FEVER COMPLICATED BY MEASLES DURING THE STAGE OF DESQUAMATION.

ON September 2nd I was called to see A. B., aged 10 years, suffering from sore throat and other symptoms indicative of scarlet fever, my diagnosis being confirmed by the presence of the usual scarlatinal rash, which was followed in a few days by desquamation of the cuticle. The case progressed favourably until September 13th, when my attention was directed to a second copious eruption, "flea-bite" in character, appearing first on the face and forehead, afterwards extending, and accompanied by catarrhal symptoms, leaving no doubt as to its being measles. Thirty-six hours from the appearance of the second eruption the patient sank into a typhoid state, and died.

Warrington. JAMES MENZIES, L.R.C.P., L.R.C.S.Edin., etc.

REPORTS

ON

MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

HONG KONG ROYAL NAVAL HOSPITAL.

CASE OF CARIES OF OLECRANON PROCESS OPENING INTO ELBOW-JOINT: EXCISION OF DISEASED BONE: RECOVERY.

(Under the care of Deputy Inspector-General W. H. LLOYD, M.D.)

[Communicated by the DIRECTOR GENERAL OF THE MEDICAL DEPARTMENT OF THE NAVY.]

A MEDICAL officer of the Royal Navy, aged 36, had for six years suffered from disease of the right olecranon process; the exciting cause was an injury, but there was a history of old specific disease. Eight months before he was seen suppuration had taken place, and since then pieces of carious bone had upon two occasions been removed under chloroform.

When he first appeared here on June 4th, 1889, the right olecranon was enlarged, out of shape, and nodulated, being about half as broad again as the left. On its posterior surface was a narrow sinus about three-quarters of an inch in depth, leading into the substance of the bone; it was discharging pus, and diseased bone could be felt inside with a probe. There had been constant pain and uneasiness since the commencement of the disease, and flexion and extension of the elbow-joint were incomplete, owing, apparently, to the enlargement of the bone.

Four days after this, while on board his ship, he was suddenly seized with severe pain in the elbow, rigors, and vomiting, with spasm of the surrounding muscles; the temperature rose to 103.8° F., and the pulse to 130. After a night of severe pain he came to the hospital next day. The elbow and surrounding parts were then much swollen, the skin tense and shining, and fluctuation was to be felt at both sides of the ulna; the joint was flexed. He was at once admitted into hospital and put under chloroform.

On attempting to move the joint, synovial fluid came drop by drop from the sinus; a free incision was now made at the outer side of the ulna, over the fluctuating point, which gave vent to synovial fluid mixed with flakes of pus. The sinus at the back of the olecranon was opened up and some diseased bone that could be felt was gouged away. Drainage tubes were inserted into both openings, and the wounds dressed with protective and alembroth gauze. Solution of perchloride of mercury (1 in 4,000) were syringed through the joint twice daily; this passed, but not very freely. All antiseptic precautions were strictly enforced. The limb was bandaged to a rectangular splint on its inner side. By the evening pain had almost gone, and the temperature had fallen to 102°; the swelling of the elbow and œdema of the arm quickly subsided.

Six days afterwards, on June 10th, no progress was being made, and a probe passed into the cavity encountered rough hard bone on three of its sides. He was again put under chloroform, and a longitudinal incision, to the extent of 2½ inches, was made over the old sinus at the back of the olecranon, and the soft parts, including the periosteum, reflected back. The edges of the orifice in the bone, the surface of which was found to be healthy, were removed with a small saw and chisel, making an opening about 1 inch long by ¾ of an inch wide, which allowed all the diseased bone to be removed freely with a gouge. When this had been done a cavity was left about the size of a small walnut. The shell of the olecranon only remained, and at the bottom the back of the articular cartilage of the joint was scraped bare. Deep in the cavity, and at its outer side two small holes, close together, with grey edges, that just admitted a probe, communicating with the joint. The piece of the articular cartilage, including these orifices, was carefully removed with the gouge, and some grey puffy membrane that presented from the joint was picked up with a forceps and excised; this left a hole in the cartilage about the size of a threepenny piece, through which the opposing joint surface, looking healthy, could be plainly seen. On rotating the forearm, this proved to be the head of the radius.

Drainage tubes were now inserted into the cavity and the original counter-opening above, between which fluid now passed freely through the joint, and the wound was sutured. Free irrigation with sol. hydrarg. perchlor., 1 in 4,000, was carried out night and morning, with other treatment as before the operation.

Except for some starting of the joint during the first two or three nights after the operation, there was no pain or uneasiness, for the first time for six years. The sutures cut themselves out in a few days, and the cavity opened out, but the periosteum remained adherent, and there were never more than a few drops of pus on the dressings from first to last. Action in the cavity was at first slow, but a soft creamy deposit covered the bottom and sides, and granulations appeared at the edges; by June 27th fluid had ceased to come through the joint, and the drainage tubes were removed. After this the cavity in the bone filled up slowly but steadily. Passive motion was begun as soon as the joint was safely closed, and by the end of July the range of motion was nearly as good as before the operation. He was discharged to duty on August 16th.

A fortnight later he came to show himself, when his condition was as follows: Operation wound firmly healed, and covered with sound skin; a shallow furrow, about a quarter of an inch deep, remained over the cavity, the substance of which gave the sensation of bony hardness. Supination and pronation of the joint were perfect, and flexion and extension nearly complete, and improving daily; the latter motion was slightly impaired by the size of the olecranon.

The case is, I think, interesting from the perfect reproduction of the joint surface, and filling up of the bony cavity, with so little to fall back upon; there was no backing of bone behind the articular cartilage round the opening into the joint, or in its immediate neighbourhood; and from the unyielding nature of the parts engaged, there could have been no stretching of tissue to repair the loss of substance. At the time of operation the case did not appear hopeful; but, with the extensive disease of the bone and open joint, if let alone, there can be little doubt the elbow must have gone on to disorganisation, or become a case for entire resection later.

DR. G. GRANVILLE BANTOCK has been elected an Honorary Fellow of the American Association of Obstetricians and Gynæcologists.

REPORTS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF LONDON.

TUESDAY, NOVEMBER 5TH, 1889.

W. H. DICKINSON, M.D., President, in the Chair.

THE PRESIDENT opened the session by referring to the migration of the Society from Berners Street to Hanover Square. He said that, owing to the late period of the summer when the proposal was made to them by the Royal Medical and Chirurgical Society, it had been impossible to call a general meeting of the Society. He added that the Council had agreed to pay the Royal Medical and Chirurgical Society one hundred guineas per annum, instead of seventy-five guineas as heretofore, in consequence of the very advantageous terms and much larger accommodation offered them by that Society. He showed a copy of the eleventh volume of the Society's *Transactions*, which was very nearly ready for distribution to members.

Hypertrophic Cirrhosis in a Child.—Dr. F. J. SMITH read the notes of a case of hypertrophic cirrhosis of the liver (from a specimen sent to him by Mr. J. A. Jones, of Aberavon) in a little girl aged 4½. There was no hereditary taint of any form. The child suffered from icterus neonatorum at birth, but this cleared up entirely in a few weeks. Some symptoms of rickets had appeared at the end of the first year. At the age of 3½ she had bronchitis and jaundice, without ascites, but both conditions cleared up under treatment, though the liver was felt to be and remained enlarged. When 4 years old a second attack of bronchitis and jaundice appeared, from which the child never rallied; diarrhœa supervened, and led to exhaustion, which terminated at the end of six months in coma and death. A limited necropsy was all that could be obtained; the liver was found enlarged, nodular, and slightly tough. The spleen was about twice its normal size. Under the microscope the liver showed an enormous development of new connective tissue, both between and penetrating the lobules. Dr. Smith remarked that he did not propose to discuss the disease in question, but thought it of sufficient rarity to warrant a full report.—The PRESIDENT referred to the fact that gin had once been surreptitiously given to the child.—Dr. WILKS asked why the case was considered one of hypertrophic cirrhosis. Was it simply because the organ was enlarged, or was the term used with the strict pathological meaning that Charcot had defined for the term?—Dr. SAMUEL WEST referred to the rarity of this disease, and agreed with Dr. Smith that this specimen was one of typical hypertrophic cirrhosis. He referred to a case that had been previously under his care, which was somewhat similar to the present specimen, in which there was a great increase of connective tissue in the liver, with rapid destruction of the liver cells.—Dr. SMITH replied that it was believed that gin was only once given to the child, and then referred to the histological differences between hypertrophic and alcoholic cirrhosis.

Non-Alcoholic Cirrhosis of the Liver.—Mr. D'ARCY POWER showed a specimen which was removed from the body of a person who had for many years undoubtedly been a total abstainer. The specimen presented the ordinary characters of cirrhosis, being hobnailed, hard, and pale. The gall-bladder was contracted, and bound down to the liver substance by dense adhesions. It contained one large stone and several smaller ones. The liver was infiltrated by a very vascular small-celled growth, which had destroyed the lobules by pressure; the connective tissue was entirely interlobular; the liver cells had not undergone any fatty change, nor was there any abnormal development of pigment. The specimen was procured by Dr. Evan Alban, and was taken from the body of a clergyman, aged 63, who had been a total abstainer for thirty-seven years. During the last five years of life he had suffered from repeated attacks of hepatic colic, which lasted for periods of from seven to ten days, and during these attacks he used to pass gall-stones and became jaundiced. In the last two years of life the patient had symptoms of angina pectoris, and, six weeks before death, ascites first appeared. At the *post-mortem* examination, the large arteries were found to be hard and atheromatous, particularly the coronary arteries. The patient had been a great sugar consumer. He considered that the irritation of the successive gall-stones and obstruction would be sufficient to account for the development of the fibrous tissue.—Dr. NORMAN MOORE referred to biliary cirrhosis as not being a very uncommon disease.—Dr. WEST mentioned the rarity of the combination of gout with cirrhosis.

Addison's Disease in a Diabetic Patient.—Dr. SAMUEL WEST read the notes of a case of diabetes mellitus which occurred in a patient, aged 49, affected with Addison's disease. The urine contained 2.5 per cent. of sugar, had a specific gravity of 1034, and contained a trace of albumen. The liver was enlarged and tender, and there was a little dulness at the base of each lung. The skin was discoloured, of a greyish cyanotic hue. After admission to hospital the patient had dysuria, which was due to cystitis, and caused a temporary rise in the temperature. Careful diet was prescribed, with pilocarpine and a small quantity of opium occasionally. This caused a considerable diminution in the quantity of sugar in the urine. A month after admission an attack of subacute rheumatism developed, the temperature rose to 105° F., troublesome vomiting set in, and the patient died. The suprarenal capsules were found at the necropsy to be embedded in dense fibrous tissue, by which they were bound to the kidney on each side, and to the other parts in the neighbourhood. On microscopical examination they showed no trace whatever of suprarenal structure; nothing but connective tissue, richly supplied with blood vessels, remained. He regarded the association of diabetes with Addison's disease as nothing more than an accidental coincidence. Dr. West also showed a second case of a suprarenal capsule with a large central cavity resembling a cyst, probably due to *post-mortem* decomposition, taken from the body of a Spanish woman who had died of phthisis. The organs presented no abnormal external appearance, and the hollow in the interior contained no fluid. The microscopical appearances and pigmentation of the skin were normal.—Dr. WILKS referred to the remarkable fact of Addison's disease being found in association with diabetes. He asked Dr. West what the condition of the pancreas was, and then referred to the cysts in the suprarenal capsules.—Dr. HALE WHITE referred to a case in Guy's Hospital of Addison's disease in connection with exophthalmic goître, and also to a family in which ophthalmic goître and Addison's disease were found together.—The PRESIDENT considered that the combination of Addison's disease and diabetes was probably accidental.—Dr. WEST agreed with the President that the combination in this case was probably accidental.

Cyst of Doubtful Nature Removed from the Groin.—Mr. R. BARWELL gave the history of the following case: A lady had noticed sharp pains, somewhat resembling bearing-down pains, six years ago. They were most severe in the lower part of the abdomen on the right side, and she noticed a lump in the right groin. It was then diagnosed as an enlarged gland in connection with a tumour of the uterus. Two years later it was considered to be a hernia of the ovary. At the time of the operation there was an ovoid fluctuating tumour the size of a tangerine orange in Scarpa's triangle. On cutting down, Mr. Barwell came upon the cyst immediately beneath the outer layer of the superficial fascia, and when he had cut through this the anterior part of the tumour was laid bare. The cyst was fairly readily dissected out, and found to have a pedicle which passed through the cribriform fascia. This pedicle was divided, and the tumour removed. It was thin-walled, and contained 14 drachms of orange-coloured fluid, which on cooling became gelatinous, and consisted largely of albumen. The interest of the case depended on the situation and nature of the cyst, whether it was an old deserted hernial sac or a cyst of new formation.—Mr. SHATTOCK suggested that the cyst might have arisen in connection with the lymphatic system, and that the pedicle of the cyst was probably an enlarged lymphatic vessel coming off at the upper part of the thigh.—The PRESIDENT referred the specimen to the Morbid Growths Committee.

Cases of Congenital Heart Disease.—Dr. NORMAN MOORE showed and described the two following specimens: (1) The Heart of a girl, aged 8½, who was a patient of his in St. Bartholomew's Hospital, and died of abscess in the posterior half of the left lenticular nucleus with basal meningitis. The upper part of the septum ventriculorum was absent. The pulmonary artery was very small, and opened from the right ventricle somewhat nearer the middle line than natural. The origin was surrounded by a thickened base, and no valves were visible unless this base was formed by thickened and adherent valves. The arch of the aorta was dilated and so was the right auricle. The ductus arteriosus was closed, but a deep pit marked its insertion into the aorta. The left common carotid and innominate were nearer to one another than was commonly the case. The patient had been blueish and short of breath from birth. Her fingers were clubbed. A loud systolic murmur was audible over the whole cardiac area, and also at the angle of the left scapula, loudest at

the second left intercostal space near the sternum. The cerebral abscess was probably due to an embolon from a firm *ante-mortem* clot contained in the right auricle, and which came very near to the orifice of the aorta. (2) A Heart which showed chronic fibroid degeneration of the wall of the left ventricle without valvular disease. The whole of the lower half of the left ventricle was much thinned, and in one part hardly any muscular tissue remained. The heart bulged out at the point, so that a species of aneurysm was present which contained an *ante-mortem* clot. The coronary arteries were degenerated, and one was blocked by a firmly adherent thrombus. The patient was a woman, aged 58, who died in one of Dr. Gee's wards in St. Bartholomew's Hospital with general dropsy. This condition was sometimes due to syphilis, but in this case there were no signs of gummata in the cardiac wall or in any of the viscera. There were numerous old hæmorrhagic infarctions in the kidneys. He said that chronic endocarditis of this form was very rare, and during the past ten years only two similar cases had occurred in the *post-mortem* room at St. Bartholomew's Hospital.—The PRESIDENT thought that the second case was very similar to those found occasionally in syphilis.—Dr. WEST referred to some similar specimens which had been recorded by the late Dr. Fagge and himself in some of the earlier numbers of the Society's *Transactions*. The conclusion they had come to was that these cases were probably of syphilitic origin.—The PRESIDENT mentioned the case of an old Indian officer who had died in Hyde Park, in whose heart the left ventricle appeared to be formed almost entirely of fibroid tissue.—Dr. STEPHEN MACKENZIE mentioned the case of a man who had been admitted into the London Hospital for syphilis in an early stage, with the chancre still recent and a secondary eruption out upon him. Soon after his admission he had died suddenly, and at the *post-mortem* examination a gumma was found in the heart, which had undoubtedly caused his death. This case had often been referred to on account of the early stage of the disease in which a gumma had been present. Had the man lived longer, the condition of his heart would no doubt have been similar to the one at present under discussion.—Dr. WEST replied that in his case no other evidence of syphilis had been able to be detected.

Occipital Cephalocele, with Cleft Palate and Talipes Calcaneus.—Mr. STEPHEN PAGET showed a specimen of this condition from an illegitimate seven-months child, who had died when a few weeks old. At the *post-mortem* examination the contraction of the feet had nearly disappeared. The cephalocele opened by a narrow track into the left lateral ventricle, and was lined with a fine layer of brain tissue, which was not visible to the naked eye, but was clearly seen under the microscope. The basal ganglia and the rest of the brain appeared natural.—The PRESIDENT asked what part of the brain was in the cyst.—Mr. STEPHEN PAGET replied that the interior of the cyst was in direct communication with the posterior limb of the lateral ventricle.

MIDLAND MEDICAL SOCIETY.

WEDNESDAY, OCTOBER 16TH, 1889.

WILLIAM ROSS JORDAN, M.R.C.S., in the Chair.

Hereditary Chorea (Huntington's Chorea).—Dr. SUCKLING showed a man, aged 39, a machinist, suffering from this complaint. He had suffered from jerky movements of the hands and feet for three or four years. He stated that he was always "on the jerk" and often stumbled. He was constantly "sniffing" from spasm of the diaphragm. The knee-jerk was normal, and there were no signs of disease beyond the movements. He had had rheumatism slightly in one shoulder, but the heart was unaffected. He stated that the disease was in his family, and that his mother died at the age of 56 after suffering for sixteen years from the complaint. She became quite helpless and unable to feed herself some years before she died from bronchitis. The patient's sister, aged 38, was also affected. She had suffered from the disease for five years, and could not be trusted to wash dishes, etc., as she always dropped them. The patient's youngest daughter, aged 12, was also affected with the disease. Dr. Suckling pointed out the distinctive features of hereditary from ordinary chorea. Hereditary chorea affected adults chiefly; it might come on in middle life; it was directly hereditary, not indirectly so, as was ordinary chorea. It could not skip a generation; if a member of an affected family escaped, then the inheritance in his or her case ceased. At first the movements could be controlled by the will, but the disease progressed and became quite involuntary, until the patient was unable to walk, became bedridden and demented. Ordinary chorea got well. Hereditary chorea might remit or exacerbate, but never got well. It was probably due to congenital faulty development of the nervous system, and in this respect was analogous to Friedreich's ataxy.

Muscular Atrophy in Locomotor Ataxy.—Dr. SUCKLING showed a stenographer, aged 29, suffering from locomotor ataxy with well-marked muscular atrophy. The man had lived in America for four years, and had suffered from ague. His present illness began in December, 1887, when he was seized with incessant vomiting. He used to suffer regularly every month for three or four years from attacks of severe pain at the stomach, with incessant vomiting. After a year these attacks became more frequent, and now occurred every few days. In June, 1888, he noticed his hands were numb, the numbness beginning between the index and middle fingers of the right hand; and since then his hands and feet, forearms and legs had wasted. He had twice lost the use of the left arm, the loss of power lasting several days, and gradually disappearing. He had also had double vision and ptosis at times. His hair was grey, and he was emaciated and feeble. The Romberg symptom was present, but there was not much ataxy; the knee-jerk was lost on both sides; the other reflexes were normal. The pupils did not respond to light, but did so to accommodation. He suffered from shooting pains in the legs and arms, and occasionally round the body. He had quite lost sexual power, and his bladder was weak. His hands were clawed and much wasted; the muscles of the feet were also much atrophied, and the feet were also clawed. No fibrillary contractions had been observed. He had recently had an attack of weakness of the left upper extremity, the grasp being very weak and the wrist dropped. The fingers of both hands were numb, as was also the ulnar side of the left forearm. Sensation was markedly impaired in the little and ring fingers of both hands and along the inner side of each forearm, and also on the left side of the trunk from the second to the sixth intercostal spaces (all forms of sensation were impaired). The man had never had syphilis, had been steady, and there was no hereditary history. The reaction of degeneration was not present, but the reactions were short and sudden in the muscles of the left forearm. M. J. Déjérine had shown that the muscular atrophy in tabetics was due to peripheral neuritis, and Dr. Suckling considered that this case supported his view from a clinical aspect. Suspension was tried in this case, but could not be borne. Quinine was useless; morphine was the only drug that gave relief.

Amputation of Leg.—Mr. JORDAN LLOYD showed a leg that he had recently amputated for chronic ulceration. There was great hypertrophy of the skin and subcutaneous tissues, together with some thickening of bone.

Malignant Disease of Rectum.—Mr. MARSH read a paper on the treatment of malignant disease of the rectum, and showed a patient from whom he had excised the rectum after having done a preliminary colotomy.

Officers and Council.—The following gentlemen have been elected: *President:* Mr. Lawson Tait. [*Ex-President:* Mr. Hugh Ker.] *Members of Council:* Dr. Holmes Joy, Dr. A. Underhill, Dr. Simon, Mr. Bennett May, Mr. Jordan Lloyd, Mr. Messiter, Mr. Chavasse, Mr. Barling, Mr. Priestley Smith, Mr. A. Clay, Mr. Eales, Mr. W. Thomas. *Treasurer:* Mr. Garner. *Secretaries:* Dr. Suckling, Mr. Haslam.

LEEDS AND WEST-RIDING MEDICO-CHIRURGICAL SOCIETY.

FRIDAY, OCTOBER 18TH, 1889.

A. F. MCGILL, F.R.C.S., President, in the Chair.

President's Address.—The PRESIDENT delivered a short address, in which he related the circumstances of the foundation of the Society (in 1874), of which he acted as one of the first secretaries, and reviewed its gradual development both in numbers and in the character of the communications. The principal feature in the modern development was the great increase of the pathological element, and he thought the time had now come for a larger number of meetings especially devoted to pathological subjects.

Remarkable Bronzing of Skin.—Dr. BRITTON, after referring to recent cases of extreme pigmentation and of partial distribution, described by Drs. Crocker and Carrington, related the case of a man, aged 57, who, in February last, began to suffer from small patches of pigmentation in the popliteal regions, beginning in the left side. In ten weeks the whole body became brown, the legs

and neck black. There was itching, desquamation, and eruption of pustules, like boils, all over the body and slightly on the limbs, which burst and discharged offensive matter. In April he was under the care of Dr. Patterson, of Grantham, who described the condition of the skin as resembling eczema, red and crusted, without much pigmentation, but the latter greatly increased later. He was admitted to the Harrogate Bath Hospital on September 12th. At that time his general health was good, but the abdomen, chest, back, face, and arms were brown, like the bronzing of Addison's disease, with numerous paler patches marking the situation of the boils. The neck and legs were covered with black scales, as if the skin had been dusted with plumbago. No parasitic element could be detected microscopically. The man improved considerably under the use of sulphur baths.—Dr. EDDISON thought the case resembled eczema rubrum, modified by the age of the patient.

Poisoning by Chloral.—Dr. PURDY related the case of a drunkard on the verge of delirium tremens who was given a mixture containing 180 grains each of chloral and pot. bromide, one-eighth to be taken for a dose. The whole was taken at once, and the patient, seen shortly afterwards (at 4 15 P.M.), was in a comatose condition, with stertorous breathing; the pulse could not be counted, and the complexion was livid; the pupils were contracted. The stomach was washed out and coffee injected. At 6.10 the patient could be slightly roused and the pupils were dilating. Cutaneous irritation, forced exercise, and cold affusion to the head were used and liq. strychniæ ♏ 4 and liq. atropiæ ♏ 3 injected. He gradually gained strength, and in ten days' time was enabled to resume his usual occupation. Some weeks later he died rather suddenly, and the necropsy showed cirrhosis of the liver, enlargement of spleen and kidneys, and a heart with firmly adherent pericardium. Dr. Purdy called attention to the large dose from which the patient, though constitutionally much diseased, recovered, and thought that, of the measures adopted for treatment, the most effective was cold affusion to the head. —Mr. BRISCOE related a case where a woman suffering from puerperal hæmorrhage received, by a dispenser's mistake, about 305 grains of chloral. The stomach was immediately washed out, coffee and ammonia injected, and in about four hours the patient began to regain consciousness.—Dr. EDDISON, in discussing the measures usually adopted in the treatment of narcotic poisoning, had seen very bad effects from the use of forced exercise.—Dr. JACOB agreed with Dr. Eddison, and thought that before energetic treatment was adopted, other than that of washing out the stomach, it might be possible to determine whether the dose which was absorbed was one likely to be fatal or only sufficient to cause prolonged sleep. Patients had been known to recover from large doses after long coma without special treatment.

Transfusion.—Mr. LITTLEWOOD read a paper on the intravenous injection of saline solution in cases of hæmorrhage. Hæmorrhage, he said, was fatal because there was not sufficient fluid in the vascular system, and not on account of the lost corpuscles and proteid elements of the blood. Attempts to supply these, either by the direct transfusion of blood or defibrinated blood, were difficult, very little good, and sometimes positively dangerous. In more than a dozen cases he had transfused saline solution (Little's formula) with Aveling's apparatus; no bad results directly due to the operation were observed in any of the cases. He thought a solution of common salt (one drachm to a pint) was equally good, and in cases of emergency more easily obtainable; and that transfusion by a gravitation apparatus was less complicated than Aveling's. He read notes of two successful cases.

Cases and Specimens.—Mr. E ATKINSON showed a case of Spina Bifida in a Child aged 10.—Dr. CHURTON: Atheroma of Pulmonary Artery, with Hypertrophy of Right Heart.—Mr. MCGILL: Rupture of the Heart from General Concussion.—Dr. JACOB showed a number of Photographs and Microscopic Specimens illustrating the Principal Lesions of Leprosy.

GERMAN MEDICAL STUDENTS.—The following are, according to official statistics just published, the numbers of students in the medical faculties of the various German-speaking universities during the summer semester of 1889: Vienna, 2,064; Munich, 1,462; Berlin, 1 186; Würzburg, 983; Dorpat, 931; Leipzig, 874; Graz, 586; Krakau, 522; Freiburg, 452; Greifswald, 422; Bonn, 402; Breslau, 380; Halle, 337; Kiel, 316; Erlangen, 301; Strassburg, 300; Heidelberg, 297; Zürich, 288; Innsbruck, 285; Königsberg, 266; Tübingen, 265; Bern, 251; Marburg, 236; Göttingen, 227; Jena, 226; Giessen, 173; Rostock, 155; Basel, 109.

REVIEWS AND NOTICES.

THE INSANE IN FOREIGN COUNTRIES. By WILLIAM P. LETCHWORTH, President of the New York State Board of Charities. New York: G. P. Putnam and Sons.

THIS handsome volume of nearly 400 pages is a record of visits paid to British and Continental asylums by an enthusiastic and trained observer, supplemented and brought up to date by later perusal of reports and official returns.

The professional reporter of foreign institutions, when an American, always provides useful and thoughtful work. He sees us from another standpoint, and enables us to see ourselves as others see us. Superintendents of English asylums in the autumn have many such visitors, and generally find them perfectly honest and clear in their judgments. There is nothing of the *dilletante* in them; they come with an object, and will not be gainsaid.

A few years ago they came to worship at the Mecca of "non-restraint;" to see how it was managed, and to carry each their experience to be used in their own country. In this volume full justice is done to us, and we are shown that we were not the first in the advance of humane treatment of the insane, though, when once started, as usual with our people, the idea spread rapidly and became universal.

We find in the book under notice not only full descriptions of the legal methods for controlling the insane in the various countries, but the author has grasped the slighter differences in the law of allied countries, such as England, Scotland, and Ireland. It would be well if our legislators had studied the Scotch system, as here described, more fully before attempting to alter our system on what is supposed to be the Scotch plan, while adding clauses which are not to be found in the northern lunacy laws, and attempting to adjust conditions which cannot be made alike, in consequence of essential differences in the countries and their local government.

But to proceed with our review, we must praise the manner as well as the matter of the book. It is well printed on good paper, and has a series of interesting engravings, several of them being historically noteworthy. The frontispiece is *Pinel à la Salpêtrière* by P. Henry, representing that asylum reformer removing chains and other means of mechanical restraint. Next there are representations of the older methods of treatment, or rather of coercion, such as circulating swings, bands, and chains; and then comes the picture of Norris in chains at Bedlam. It seems, by the way, rather hard on Bethlem that this should be the only representation of the interior of the Royal Hospital, as nowadays the wards may compare favourably with the most ornamental in the kingdom, and have been greatly embellished by the work of the patients themselves. The day rooms and a cottage hospital as they exist at Brookwood are well represented, and the English series concludes with four sketches from photographs from Prestwich, Lancashire. This asylum without doubt, under the able headship of Mr. Rooke Lay, has shown what can be done by patients to make a pauper asylum beautiful, and it is pleasant to see our American *confrères* appreciate the work done. Scotland is only represented by the picture of the last burning of a witch, that is, an insane old woman. This we think a pity, for at Morningside, Garlands, and elsewhere there are many very noteworthy things deserving a picture. Again, Ireland has only a picture of horror in the old method of taking lunatics to an asylum at the cart-tail.

The engravings from Continental asylums are of less personal interest to us but are good, including the church of St. Dymphna, at Gheel, the city of the simple in Belgium, where first of all the much talked of boarding-out system of to-day had its prototype.

There are several illustrations taken from the asylums of Altscherbitz in Saxony, which make one wish some of our English asylums were built in a less grand but more comfortable way, that there were fewer grand halls and more cottages.

But little space is left for the consideration of the rest of the book; the illustrations have been selected so as to supply a popular book with popular pictures.

The whole volume is one of a class which seems to appeal more to our American and to our Colonial relations than to us. Picture books and books of universal information attract growing minds and growing nations, and the one under consideration is a very

brilliant example of the universal provider. In a pleasant way the reader will find placed before him all that he need know of the present state of lunacy law and practice in Europe. Our author has selected the only most noteworthy asylums in Britain, but there are many others doing equally good though less pretentious work, which deserve full recognition.

We now leave the book with recommendations to those interested in lunacy to read this as a holiday book.

A Textbook of General Therapeutics. By W. Hale White, M.D., F.R.C.P. London: Macmillan and Co. 1889.

Dr. White's book consists of a series of short treatises on those therapeutical methods and agencies which lie outside the materia medica, and which are, as a rule, entirely omitted from, or only very inadequately discussed in, our textbooks on therapeutics. There are very readable and well written articles on climatology, massage, baths, electricity, diet, hypnotism, and other similar means of treating disease. Although such subjects are of great importance in practice, the average student receives little or no instruction regarding them, and commences practice in entire ignorance of their value and effects. Those who wish to remedy this defect find that the literature is scattered and diffuse, and in many cases not very reliable. Dr. White must be considered to have done a great service to junior practitioners in putting together a short and trustworthy account of what is known regarding these subjects. An exhaustive treatise could hardly be expected, but this is made up for by a bibliography at the end of each chapter, which renders further information easily accessible.

It seems to us that the title "general therapeutics" is hardly a correct one by which to designate the methods of treatment discussed in Dr. White's work. Massage, electricity, baths, or hypnotism, are simply departments of special therapeutics, and have no more right to the title "general" than, for example, treatment by mercury or digitalis. Wood includes them under the heading "Remedial Agents which are not Drugs," a much more correct terminology, though, perhaps, not easy to condense into a compact title for a book. The term "general therapeutics" is generally understood to mean the broad principles of treatment, deduced from a study of all the facts known regarding individual or special drugs and methods.

Lectures on General Pathology. By Julius Cohnheim. Translated by Alexander McKee, M.B. Volume ii. London: New Sydenham Society. 1889.

This second volume of the English version of Cohnheim's lectures contains the Pathology of Nutrition, and completes the first volume of the original. In this section are included such subjects as Necrosis, Atrophy, Degenerations, Hypertrophy, and Tumours. Having so lately noticed the first volume of this translation, we need not speak at length of this portion of the work. Under the head of tubercle it is interesting to note how very nearly complete was the infective theory of tuberculosis on the eve of Koch's great discovery of the bacillus. Cohnheim shows elaborately how all the phenomena of tuberculous disease would be explained by the presence of a virus in the form of a specific organism, and can be explained by nothing else; and he expresses the hope that a discovery similar to that of the leprosy bacillus may be made in regard to tubercle. These remarks were published in 1882, the very year in which, as is well known, the tubercle bacillus appeared upon the scene.

Very interesting also are Cohnheim's views on the origin of tumours; though the fascinating theory which he expounds has not yet reached the position of a demonstrated truth, and cannot therefore be regarded, like the bacterial explanation of tuberculosis, as an established part of science.

It is unnecessary to enlarge on the importance of Cohnheim's work, or to characterise the translation, since what was said about the first will apply equally to the second volume, But we are glad to see that the publication of the English edition is making rapid progress.

Report upon an Outbreak of Typhoid Fever in Newtown and Macdonaldtown, New South Wales. By Ashburton Thompson, M.D., D.P.H., and G. H. Stayton, M.Inst.C.E.

In this report is contained not only the history of an outbreak of typhoid fever in two of the west central suburbs of Sydney, but also a very interesting summary of the etiology of this disease and the methods to be adopted for its prevention. Typhoid appears to be severely endemic in Sydney, the mortality being estimated at between 4 and 5 per 10,000 of the population, whilst in some of the suburbs the death-rate is over 12 per 10,000. These rates are very much in excess of any recorded recently in the large towns of this country, and are sufficient indications that the sanitary condition of Sydney and its suburbs is not up to the standard considered necessary in this country. Of this abundant evidence can be obtained from Dr. Thompson's report. The system of excrement disposal is most faulty, porous cesspits, which pollute the soil and poison the air, being still allowed; drains, where they exist, are often untrapped at their house terminations; and the public sewers are in many instances very old and defective. The system of filling up excavations in the soil with dustbin refuse is not by any means unknown in Sydney, and these plots of "made" ground become very soon the sites of rows of suburban villas. To judge from Dr. Thompson's report, we are justified in concluding that not only are the Municipal Councils, as sanitary authorities, very indifferent to matters affecting the public health, but that there is no legislative enactment comparable to our Public Health Act which would enable the Municipal Councils to carry through effective measures of sanitary reform if they were so minded. It is possible that public opinion in the Australian colonies is not yet sufficiently ripe for such comprehensive sanitary laws as are now in force in this country; and, if such be the case, Government officials like Dr. Thompson and Mr. Stayton, by their instructive reports and comments, will, no doubt, greatly assist in the desired enlightenment.

The Clinical Use of Prisms and the Decentering of Lenses By Ernest E. Maddox, M.B. Hamilton Adams and Co. 1889.

We have no doubt that this book will prove very useful as an introduction to a subject which is too much neglected in our textbooks. The optical properties of weak prisms and the effect of decentering lenses are dealt with rather fully and with much clearness, but the clinical side of the questions dealt with does not receive as much consideration as might be expected from the title.

Very simple and practical methods are described for testing the strength of prisms and the centering of lenses, and the objections to the present system of numbering prisms according to their refracting angle are pointed out. We doubt, however, whether the author's suggestion that they should be numbered in metrical angles will meet with general acceptance, and feel sure that it will not be found practically convenient. The fact that the metrical angle has no constant value, but varies with the interocular distance, is a most serious objection. Numbering according to the minimum deviation that they cause has already been adopted and is likely to come into general use.

We cannot agree with the author that prisms are useless for measuring diplopia; they do not measure it accurately, but they afford a very ready and practically efficient means of noting the progress of a case of paralysis of an ocular muscle.

There is a possible source of error in using a prism for the detection of feigned monocular blindness, which, as far as we know, is not mentioned by any writer, but which might well have found a place here—namely, the fact that one eye alone looking through a prism at a flame will often see two or more images, owing to reciprocal reflection between the two surfaces.

The most useful part of the book is that dealing with decentering of lenses, and the table giving the amount of decentering required for different lenses to produce a desired prismatic effect will be found very valuable for reference. It is suggested that, as far as practicable, the whole lens with its prism should be displaced, to avoid the increased thickness which is necessary when the lens alone is decentered; but, unless the amount of decentering is very slight, it produces rather an unsightly effect.

We think the writer has done well in calling attention to this subject, and hope that in a future edition he will enlarge the scope of the work and give more prominence to its clinical aspects.

Diseases and Injuries of the Ear. By Charles Henry Burnett, A.M., M.D. Edinburgh and London: Young J. Pentland. 1889.

On first looking at this book we were somewhat in doubt for what class of readers it was intended. On closer inspection, however,

it appears to be addressed to the general public rather than the professional reader, for its object, as we learn from the preface, is to present the subject of diseases and injuries of the ear in a form free from technical terms, so that it may be understood by anyone. By showing the inexpert what to avoid in the treatment of ear diseases the general reader is to be warned against error in treatment.

The author, who is well known from his large book on the ear, devotes thirty-four pages to a brief description of the anatomy and physiology of the organ of hearing, and the remainder of this little work to the common diseases, their prevention and cure.

We cannot agree with the author's statement on washing out the nose with liquids. It is not the general experience that sniffing up liquids into the nose often causes inflammation of the middle ear, neither does careful syringing of the nose in our experience. The nasal douche, no doubt, is often harmful, and if used at all it should be employed very carefully; but to prohibit the practice of sniffing up liquids or of syringing the nose seems quite unnecessary, and cuts the ground away from much useful treatment of nasal disease. Possibly the author's prejudices against these means may arise from the use of unsuitable liquids. None but the mildest and most harmless solutions should be employed for this purpose, the most generally useful, according to general experience, being a solution of common salt (one teaspoonful to a pint).

The effects of a chronic running of the ear upon the patient are described (p. 87) in such graphic, not to say terrifying, terms that they can hardly fail to make a patient perusing them apply for relief from this symptom. As the author has not set himself the task of showing the reader what to avoid in the treatment of ear disease it is rather singular that, as far as we have noticed, there is no warning given against the use of the "ear drums" so loudly vaunted and advertised in this country, but possibly less frequently so in America.

The author shows his disbelief in the local use of alcohol when he says (p. 91): "No form of local application will cause a polypus to shrink and drop from its stem." We learn, on page 103, that in the United States chalk spots in the membrana tympani are rare. Their more frequent occurrence in Europeans he attributes to "the universal habit of wine and beer drinking in Europeans, and the consequent gouty tendency in them." The author speaks of excision of the tonsils as a bloody and barbarous operation, followed by symptoms of grave depression of health in many instances. Whilst agreeing with the author that the "wholesale excision" of these glands is certainly to be avoided, we cannot help thinking that remarks like his are calculated to prejudice the laity against removal of the projecting portions of enlarged tonsils—an operation which is, in many cases, necessary, and to which the public, in this country at least, are already very disinclined.

The author rightly deprecates most strongly boxing the ears of children, which he designates as "a most senseless form of sport and a cruel barbarous method of punishment." So much harm does the author attribute to sea bathing that he hopes to see the daily surf-bath of men, women, and children soon become obsolete, and replaced by a properly-warmed bath in a bath-house.

The book contains some very useful hints and instructions for the hygiene of the ear, but whether, as a popular book, it does not go into unnecessary details of surgery is a matter of opinion. It is clearly and pleasantly written, and we should say could be understood by the general reader.

NOTES ON BOOKS.

Observations on some Rare Diseases of the Skin. By JOSEPH FRANK PAYNE, M.D.Oxon., F.R.C.P.Lond. (London: Smith, Elder and Co. 1889.)—The excellent papers on Granuloma Fungoides and Erythrasma contributed by Dr. Payne to the *Transactions of the Pathological Society of London* are reprinted, with considerable additions, in this small volume, along with a paper on a Nodose Condition of the Hair from the same volume of *Transactions*, and one on Pruritus Hiemalis from the BRITISH MEDICAL JOURNAL. Dr. Payne has done well to give a permanent form to these papers, especially to that on granuloma fungoides, a case of which terminated fatally under his care in St. Thomas's Hospital. Two coloured plates are given showing the naked-eye appearances in this remarkable disease, and one plate illustrates its histology. Dr. Payne is unable to accept the explanations given of the morbid structure by Port and Kaposi, who consider it to be a sarcoma, and by Ranvier, who considers it to be a lymphadenoma. He has little doubt that the structure of the diseased tissues is essentially that of a granulation tumour or chronic inflammatory growth. As Continental authors have described micro-organisms as the cause of this disease, it is important to note that neither Dr. Payne nor Dr. Acland, Mr. Watson Cheyne nor Professor Dreschfeld, of Manchester, could detect any micro-organisms whatever, either in the vessels or the tissues in preparations from the case at St. Thomas's. Dr. Payne describes the parasite which is found in the epidermic scales of erythrasma, and he considers the organism to have more resemblance to proteus mirabilis than to any other described species. An attempt which was made to furnish decisive proof of the nature of the organism by cultivation was frustrated by the perplexing variety of organisms which were found, including moulds and micrococci. A plate is given showing the peculiar microscopical appearance of beaded hairs, a condition which is probably frequently overlooked. In that common and distressing affection described as "frost itch," or pruritus hiemalis, Dr. Payne recommends the application of oily or viscid applications to the skin. These observations, as might have been expected, form a valuable contribution to scientific medicine, and deal authoritatively and instructively with the four diseases of the skin which form the subject of the observations.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

ANTISEPTIC VENTILATION FOR HOSPITALS AND SANITORIUMS.

MR. S. M. BURROUGHS has devised a system of ventilation by propulsion, the motor used being the rotary fan of the Sturtevant Blower Company. Before the air enters the wards it can be warmed or cooled, dried or moistened, filtered and medicated to suit the various requirements of the patients. The object of the arrangement is to enable hospital physicians or surgeons to have under their control not only the temperature of the air entering their wards, but its freedom from dust, its moisture, and the kind and amount of volatile antiseptic they consider desirable. There can be little doubt that the hospitals of the future will be ventilated on the propulsion system—a system which so readily lends itself to the requirements of modern hospital hygiene.

THE NEW CYANIDE GAUZE.

MR. JOHN MILNE, Ladywell, London, forwards us specimens of the Cyanide Gauze described by Sir Joseph Lister in his address to the Medical Society of London, which we publish in another column. Before using the gauze it must be moistened with a corrosive sublimate solution of the strength of 1 in 4,000. The directions for its use are fully given in the address of Sir Joseph Lister. The gauze, which is of a white soft open texture, will be easily adapted to the folds of the body.

NEW ARTIFICIAL ANTISEPTIC TYMPANUM.

MR. RICHARD EMMETT (Portsmouth) writes: I have read the very interesting paper of Dr. Ward Cousins which appeared in the JOURNAL of September 28th relating to his new antiseptic artificial membrana tympani. I am much struck with the truth of his remarks as to the very little interest general practitioners as a rule take in the treatment of chronic deafness. The patient is generally supplied with a lotion or drops with a hope that it might do some good, and too often nothing more is attempted. This no doubt is due in a great measure to the fact that hitherto we have had no cheap and simple appliance which we could recommend our patients, and which they can manage themselves. All this is now changed by the inventions which Dr. Ward Cousins has introduced to the notice of the profession.

I find that the aural probe has been considerably improved since the meeting of the Association in August last by the addition of a sliding arrangement at the blunt end; by this the drum is pushed off when in position. It is also of great service in all cases of discharge from the ear; by winding a small piece of cotton-wool round the blunt end of the probe the ear can be effectually mopped out without soiling the fingers. I feel quite sure that with this new artificial antiseptic membrana tympani, which is so simple and inexpensive, much more will be done for sufferers from chronic middle-ear disease than has hitherto been the case, and in my own experience the results have far exceeded my expectations.

ROYAL COLLEGE OF SURGEONS.

ANNUAL MEETING.

THE annual meeting of the Fellows and Members of the Royal College of Surgeons was held on Thursday afternoon; Mr. JONATHAN HUTCHINSON, President, in the chair.

The PRESIDENT said great pains had been taken in the preparation of the report, in order to make it convey in a clear and concise form a record, not only of the proceedings of the Council, but of the results of examinations and other functions of the College in which its general well-being was concerned. In it would be found a detailed statement of the receipts and expenditure for the year. Although the report might perhaps be permitted to speak for itself, it was his intention to ask the indulgence of the meeting for a short time whilst he passed in rapid review some of the most important topics with which it dealt. He would take first the principal function of the College. They might note with pleasure that the number of candidates for the diploma continued to increase, and that the association of the College of Physicians with them for the purpose of giving a combined and more complete examination and a joint licence continued to work exceedingly well. With regard to their own higher diploma of Fellow, it was with great satisfaction that he noted there was a very definite advance in the number of those who sought it. He found from statistics which had been prepared for him that the average number of candidates at the final examination for the Fellowship from 1879 to 1883 was 37, while from 1884 to 1887 it was 64. Those who had taken the trouble to look into the tables recording the results of the examinations would be struck with the great reduction in the numbers of those who presented themselves for the final as compared with those who appeared for the earlier examinations. At each stage of examination the number diminished, and when the final was reached, it was found as a rough result that somewhat less than three-fifths succeeded. These facts might be held to indicate that on the whole the curriculum of study laid down and the successive examinations required worked well, and that at the earlier stages many were eliminated who were not qualified for professional pursuits. They might, he thought, still further be held to show that those to whom the College entrusted the most important duty of protecting the profession against the entrance of imperfectly educated men had performed that duty with care and success. It was impossible to charge against a college which rejected at its final examination for its diploma more than two-thirds of the already much reduced number of aspirants that it gave its credentials too easily, or that it in any way permitted motives of self-interest to influence its conduct. A challenge from the other side, a complaint of too great strictness, was not likely to be made excepting from one of two quarters—the public or the candidates themselves. There was no loud complaint from the public as to any defect in the supply of medical advisers; and, whilst he sympathised with the natural feelings of candidates or their relatives, he knew well that the real interests alike of the public and the profession were served best by keeping the standard high. It might, then, be taken for granted that the present standard was not too high either for the wants of the public or the dignity of the profession. Provided that the means taken to ascertain the relative merits of candidates were just and adequate, and that the right men were always taken and the unsuitable ones always left, they could scarcely have too high a standard. During the past year much attention had been given both by the Council and by the associated Board of which it constituted a part to the details of the examinations, with a view to possible improvements. In particular he would mention that they had carefully considered anew the question as to the practicability of making the performance of operations on the dead body a necessary part of the examination of Membership. In the Conjoint Board, when inquiring into the causes of the heavy rejections in anatomy and physiology, the belief was arrived at that it was not wise any longer to permit students to come up to those two subjects at the same time. The College Council enjoyed the advantage of having at its meetings more than half of the Court of Examiners, as well as a few of those constituting the several Boards. The opinions and experience of those gentlemen on all details were thus always at their service. The joint Committee of Management, on which their own examiners had seats, had had special conferences with the examiners with a view to ascertain whether there was any desire for alteration in the mode of conducting the examinations. It was satisfactory to say that those conferences did not lead to any important proposals for change. A similar result attended the appointment of inspectors by the General Medical Council. The Committee of Management was able to thank the Medical Council for a copy of their report, advising that the report on the College did not call for any comment from them. It was, in fact, in the main commendatory of the examinations as at present conducted. It would be seen from these facts that the details of their examinations had been very carefully scrutinised by independent authorities, and that they had well stood the test. It would be seen that the College had declined to transfer to the Medical Council the guardianship of its honour in reference to the conduct of its Members, and he had no doubt that that decision would meet with the approval of the meeting. Amongst the instances of professional misconduct which had been brought under their notice during the past year, in only two, he was glad to say, had the offences seemed to the Council grave enough to require the extreme penalty of the withdrawal of the diploma. In each of those instances the proceedings were deliberate and careful, and only after evidence of conduct prejudicial to the interests and derogatory to the honour of the College, and disgraceful to the profession of surgery, was the extreme penalty inflicted. In each instance the fact of the removal of the name was in due course communicated to the Registrar of the General Medical Council, and led to its being struck off their *Register*. In a third instance the Council, whilst not believing that so severe a measure was either required or justified, yet felt it to be its duty to express in unmistakable terms the deep regret which the conduct of one of its Members had caused. He felt assured that they need not allow their pleasure at the fewness of those cases to be in any degree dashed by the suspicion that the Council had either been negligent as to its vigilance, or restricted in its powers. It had neglected no case brought under its notice, and in each had found its powers adequate to what the occasion seemed to demand. The College had had in hand, during several years, the extension of its premises for the threefold purpose of its library, its museum, and the promotion of experimental research. The past year had witnessed considerable activity in all three directions. The library in its enlarged and greatly improved condition had for a considerable time been in full use, and he was glad to be able to state that the improvements had been followed by a very large increase in the number of those who read there. An experiment was being tried there for three months, as to whether the library should be opened in the evenings or not. They must thank their Librarian for the willingness with which he acceded to the proposal of the Council that that experiment should be tried. It would depend very much on its success during the three months whether, at the expiration of the term, the Council took into consideration the question of the continuance of the boon. The first of the two new museums for which plans had been prepared was now so far advanced as to be ready for its fittings, and it was expected that within a few months it would receive its contents. The other and much larger room was not yet begun, but the plans were in hand, and the buildings which occupied its site were in rapid process of removal. It was of course in consequence of the funds placed at their disposal by the munificent bequest of Sir Erasmus Wilson that the College had been enabled to proceed so rapidly with its building processes; it should not, however, be forgotten that prior to that bequest the Council had passed a resolution affirming the necessity of providing increased museum accommodation—more especially for the illustration of disease as seen in the living subject. Among the objects to be speedily realised this would, he trusted, be one; and another would be the better display of the series of beautiful dissections which had been recently accumulated, and which now encumbered the cases in the larger museum. In addition to these two special objects, they might feel sure that all departments of the collection would share in the advantages of the increased space, and that the utility of the Hunterian Museum would be vastly increased. To those who with himself believed that if there were a royal road to knowledge in such subjects as natural history, anatomy, and pathology, it lay through the galleries of a well-arranged, well-catalogued, and well-labelled museum, this prospect of larger accommodation for the museum afforded unmixed pleasure; nor would he conceal his own strong hope that in the future the objects specified in the original resolution under which they commenced to build would not be forgotten, but that they would endeavour to achieve in this

collection a museum which should illustrate diseases in the living subject on even a wider basis than that which was now the pride of the Hôpital St. Louis in Paris. During the year a large, well-fitted photograph room had been opened in the College premises, and a gentleman had been appointed who was well qualified both with pencil and photography to take at any time records of disease in the living subject, and if any practitioner were inclined to send to the College a rare instance of a living subject worthy of photographing, they were prepared, under certain restrictions, to undertake its illustration. The College was engaged jointly with the College of Physicians in the erection of some large premises on the Embankment behind the Examination Hall. They were now fast approaching completion, and would comprise a double series of workrooms and a commodious lecture theatre. They would be opened as a school of advanced research in subjects connected with medicine and surgery. They would be under the joint control of the two Colleges, and it was trusted that they would supply a want which had long been felt. The various courses of lectures had during the past year been given as usual, but with more than usual success. They had resulted in the permanent addition to surgical literature of several volumes which would make their mark, by Sir Spencer Wells, Mr. Berkeley Hill, Mr. Howard Marsh, Mr. Mayo Collier, Mr. Bland Sutton, and the Museum Conservator, Professor Stewart. It was the duty of the President each year to choose a Bradshaw Lecturer, and he had this year chosen the Senior Vice-President, Mr. Bryant. The lecture would be given on December 5th. He had the pleasure to announce that under the appointment of the Council the Morton Lecture on Cancer and Cancerous Diseases would be delivered on November 18th. The lecturer would be the President of the General Medical Council and past President of the College, and one to whom they had been under obligation for many years—Mr. Marshall. While on the subject of lecturing, he would call attention to the circumstances that during the two years past, but still as an experiment, they had altered the hours of the afternoon lecture from 4 to 5. Upon that point the Council would be glad to receive an expression of opinion from the Members. Among the more important events of the year, he might mention that the new by-laws, having been improved by the Secretary of State, had come into action in the summer. The principal change introduced by them was the permission to vote by proxy paper at the election of the Council. The last election was conducted under that rule, and the result was that 600 Fellows recorded their votes, whereas the average of the preceding eight years under the rule requiring personal attendance had been only 270. Thus, while some might regret that the change had had the effect of diminishing the importance of a day which had assumed the character of a college anniversary, yet it was clear that it had afforded facilities to the Fellows of which they had gladly availed themselves, and it had no doubt saved them much trouble and expense. It was perhaps possible that in the future the annual meeting of Fellows and Members might assume the pleasant features of an anniversary, and might replace that which had been taken from them by the proxy by-law. It would, however, have an advantage over that, inasmuch as Members as well as Fellows would take part in it. On June 24th last the statue of Her Majesty, which now graced the entrance-hall of the examination buildings, was unveiled by the Prince of Wales, and in the ceremony the President (Mr. Savory) sustained an important part in a manner which entitled him to their most grateful thanks. In June last an important memorandum in reference to the proposed amendment of the Lunacy Acts was drawn up by the President at the request of the Council and forwarded to the Secretary of State for the Home Department. By the benevolent action of the proprietors of the *Lancet* a fund had been constituted for the relief of the necessitous members of the profession, and a request was forwarded to the President that he would act as one of its almoners. With the approbation of the Council, Mr. Savory accepted for himself and his successors in office that responsible but very agreeable duty. The willingness of the Council to co-operate, whenever thought suitable, in works of philanthropy was also displayed in the appointment of Sir James Paget as one of the almoners of the Father Damien Fund for the relief of lepers, and of two other members of the Council to act in co-operation with others in a standing committee for the investigation of that disease. The Council of June 13th last was one which was to be ever regretfully remembered in the College annals. In it Sir James Paget sat officially among them for the last time. It was not too much to assert that no one in the past had ever excelled Sir James in devotion to the interests of the College in all its various departments of work. No one could approach him in the amount of time which could be regarded as having been freely given, and none could rival him in the ability with which that time was used. The Hunterian Museum owed to Sir James Paget a debt second only to that due to its great founder; its catalogues were mainly his creation, and in all departments with unwearied zeal he had assisted its arrangements and promoted its development. It was not, however, in the Museum only—or, indeed, chiefly—that the College was indebted to Sir James. Wise in opinion and eloquent in expression, such had for many years been his position that he practically held the position of joint President—a sort of permanent College President. It was a deep pleasure to him to know that, although no longer in the Council, Sir James was still in full energy, and able at any time to assist with his sagacious advice. The retirement of Sir Henry Pitman, too, from work was a loss to professional education, which would be felt more especially by the sister College, to which he belonged. The two Colleges were, however, now so happily associated that a loss to one was felt as such by the other. None who knew Sir Henry Pitman could have failed to form such an estimate of his character and ability as would make his retirement from active duty a matter of most sincere regret. Although Mr. Savory had retired voluntarily from the chair which he had filled for four years, he had fortunately not left them in any other sense, and they would still enjoy his services in the Council. It was not the less right that at the end of so prolonged a tenure of the highest office, the meeting should express their high appreciation of the dignified and most able manner in which he had discharged his duties. In conclusion, he said that if any resolution were proposed bearing upon matters concerning the College which were at present under adjudication in the Law Courts, it would be his duty to rule them out of order. The reasonableness of this would be obvious to all. The restriction, however, did not extend far, for the issues before the Court of Chancery at present were distinctly limited. A resolution had been placed before him which affirmed the desirability of having Members on the Council. If the meeting wished it, the resolution must be discussed, but he would call attention to the resolutions adopted by the Council a year ago. In the short summary of the College year which he had put before the meeting, he had endeavoured to show that the affairs of the College were in a prosperous condition. There was a life and energy in every department of their multiform organisation. The Council was doing its very best, in the examinations it conducted and in the influence it exerted on medical education, to maintain and raise the standard of professional qualification, to afford to its Members the most ample opportunities for the acquisition of surgical knowledge. It was ever ready to defend the dignity of the profession as represented by those who held the diploma. Not the shadow of an abuse that he knew of existed, nor had any personal grievances been brought to the knowledge of the Council. So far as the daily work of the College was concerned, no one had ever contended that there was any need for any important change. It would be unsuitable for him to refer to the merits of the question which the resolution he had alluded to dealt with. It was the earnest desire of the Council that it should be allowed to rest. They were in a state of prosperity, and they prayed for peace. He asked no man to suppress his convictions, but in any discussion which might ensue he hoped they would remember the most important part of the duties which lay before the College; that they would remember at the same time that life is very short and art is very long; that they would take care not to waste their strength in anything which might be likely to prove unprofitable. If he had seemed to praise the actions of the College during the past year, he hoped they would bear in mind that he was praising no individual and no body of men. He was not thinking of the President or the Vice-President for the past year; they had simply been those who had temporarily held office under the organisation of the College, being representatives of the great body of Members and Fellows. In conclusion, he asked all to remember that in anything they might think it their duty to do, either as defending the present condition of things or in the very laudable endeavour to improve it, they were the guardians of the interests of an institution which had a long and most noble pedigree, and one which,

at the present time, in relation to the promotion of the science of healing as based upon anatomy, biology, and physiology, stood second to none in the world.

Dr. ELLISTON, of Ipswich, then moved the following resolution:

"That this meeting of Fellows and Members of the Royal College of Surgeons of England, having considered the report of the Council dated October 17th, 1889, is of opinion that immediate steps should be taken to forward the introduction early in the next parliamentary session of a Bill to amend the constitution of the College, so as to secure to the Members a just representation in and upon the governing body of the College."

He said that he rose with great diffidence to move the resolution at the request of the Committee of the Association of Members of the College. The resolution, he believed, had been framed by that Committee, and met with the approval of the Association. It had also, with strict courtesy, been submitted to the Council, and they had amended it to a certain extent, which he believed the College of Surgeons accepted. He trusted that the moderation in the tone of the resolution in its demands would meet the support of that large meeting of Fellows and Members. He regretted exceedingly that, at that their first meeting after the granting of the Supplemental Charter, it should be necessary to move a resolution expressing dissatisfaction with that Charter, and more particularly as the President had been pleased to say that it was hoped that with the granting of that Charter they would arrive at peace and goodwill. He ventured briefly to review the circumstances and events that had occurred since the meeting of Fellows and Members on November 1st, 1888. On that occasion certain resolutions were proposed and carried by large majorities. The resolutions were five in number, and they appeared on page 21 of the report. The first, which was perhaps the most important, expressed regret that no provision had been made for giving effect to the recommendations contained in certain resolutions passed at a general meeting of Fellows and Members held in March, 1884. Another resolution passed was "that this meeting of the Royal College of Surgeons of England resolves that the Members and Fellows of the College ought to be consulted as to all extraordinary expenditure." Those two resolutions appeared to have been received by the Council; no reference, however, was made to them. The other three resolutions related to questions of reform under discussion at various times at the College. A particular feature in respect to those resolutions was that the Council were requested to send them to the Lord President of the Council, in order that he might determine what changes were necessary before the Supplementary Charter was issued. Within one week of the passing of these resolutions at the College meeting, they were reported to the Council of the College, and they then passed the following resolution:

"That a copy of the following resolution be sent to the movers of Resolutions 2, 3, and 5, namely: The Council regret that they cannot accede to the requests contained in the resolutions carried at the meeting of Fellows and Members on November 1st. It seems to the Council best, in the interests of the College, that the discussion on the subjects which have been in dispute should close with the grant of the Supplemental Charter. They cannot believe that any advantage is likely to arise from reopening questions which have been fully considered, and on behalf of the College they trust that these questions will now be allowed to rest."

He (Dr. Elliston) wished to know on what basis those constitutionally expressed opinions were thus treated. A new charter had been granted, and no provision whatever was made to give the Members of that College any participation in government, such as the resolutions of the Fellows and Members had called for. They were Members, but they were Members in name only. Seeing the course that the Council thought proper to adopt, it seemed to him and to the Association of Members that two courses only were open to them. One would be to seek restitution of what they believed to be their just right in the law courts of this country, and the other alternative was what they proposed to do, and they hoped that that meeting would agree with them that the latter was the wiser course—to endeavour to obtain an Act of Parliament in the next session for permission to amend the Charter of the College. They believed that the latter was the better course, for this reason: they did not desire to squander large sums of their own money or that of their College in litigation. They relied upon the inherent justice of their cause in the fact that they had been deprived of their just rights by Royal Charter, and in their belief that no Royal Charter could override an Act of Parliament. So far as he knew, no Act of Parliament had been attempted to be introduced since the year 1797, and the object of that Act was to do away with the rights and privileges of Members of that College; but that was rejected. He thought it would be a wise end to the question if they now appealed to Parliament for the solution of this difficulty. The Corporation of the College at present consisted of Fellows and Members, and that Corporation was governed by a Council of twenty-four members elected solely from one class of Fellows, and by Fellows. The Members recognised in the Fellowship a severe surgical degree or academic distinction, which he believed was now open to any Member of the College who felt himself competent, But it was so shackled with irksome conditions as to age, the amount of hospital curriculum, and dissection required, that it was impossible to obtain the necessary credentials unless their lines happened to fall near a school of medicine. The Members failed to see in what way the Fellows were more eligible for the franchise than they themselves. He knew of no such parallel for such a distinction. Taking for instance the government of the Universities by their senates, the franchise was not restricted to those who had taken honours in the Tripos Examination, but was given to all who had taken the Master of Arts degree in the examination of the Colleges. It seemed extraordinary that the 17,000 Members of that College, most of them general practitioners, hospital physicians, and surgeons in the public service of the State, should not be considered equal to exercise the franchise. Certainly he thought it might be said of them that they were not the least cultured or intelligent of Her Majesty's subjects. He wished, in conclusion, just to touch upon the question of finance and the large expenditure on capital account. He did so because he thought it would influence Parliament greatly in the consideration of this question, and because a resolution had been passed on November 1st last year particularly expressing the wish that upon all questions of capital account the Fellows and Members should be consulted at the annual meetings. There was now the large annual income of £28,476, but there was an enormous expenditure. He had no doubt that the expenditure was carefully watched over, and of that they could not complain; but, in spite of that large revenue account of this year, the expenses in capital account had been so large that stock had been sold out to the extent of £3,600, and the balance of £4,000 they had at the beginning of the year was reduced to a matter on the other side at the end of the year. In questions of finance of that kind the Members were quite as competent as the Fellows to give an expression of opinion, and that was one great reason why they should have an extension of the franchise. They believed, too, that the change was necessary in the interest of the College itself. Time was when the great bulk of the profession of England obtained their surgical diplomas from that College. Now it was far different. In every district were numbers of men who had obtained qualifications elsewhere, and the old English Universities, Oxford and Cambridge—notably Cambridge, with its hundreds, nearly a thousand, students—together with the Irish and Scotch Universities, created surgeons, in the shape of Masters of Surgery, who would not care for the further expenses of the Membership of that College if the privilege offered them was merely that which they did not need—the right to practise. If the College, with the larger franchise and larger sympathies, could rise to the position which it ought to occupy, not only to examine and license to practise, but to assist its Members in various fields of higher education, then it might have a great and beneficent future before it which would be a benefit to the profession and to the nation.

Dr. DANFORD THOMAS, in seconding the resolution, said he should do so in very few words. He thought the course mentioned therein would be the most legitimate and useful one to settle the disputes now pending between the Members and the Council. It had been resolved upon after very careful consideration, and steps were being taken to ensure its success. The Bill had already met with a very favourable response from a very large number of Members of Parliament, and Lord Randolph Churchill had promised to introduce it in the House of Commons. He hoped the Council if they desired a peaceful solution of the question would take no measure to oppose it. The Members did not wish to fight at all, they had no desire to raise any discussion in the matter, and, if the Council would allow Parliament to settle it, the Members would have nothing further to complain of. He did not propose to go into any further details on matters with

which the Members were well acquainted, but would content himself with seconding the resolution.

Dr. HAUGHTON said it had been stated by the proposer of the resolution that there were two courses open. There were alleged rights; if they existed, the proper tribunal in which to assert them was the High Court of Justice. The reason that those rights were not taken there for adjudication was very obvious—they did not exist. A corporation was the creature of a charter; the provisions of that charter were its rule of existence, and when they were granted the rights created under a charter were indefeasible. They might be surrendered, but they could not be taken away, except from abuse. That was the law with regard to a corporation. Those rights were so well known that, although it might be made a bargain between the Crown and the chartered corporation, when the chartered corporation applied for an extension of power, that some of the old chartered rights should be surrendered, yet the corporation could not be obliged to surrender the rights. They might say: "We will not take the extension; we will keep what we have." That was the legal position, and it was something new to him to be told that Parliament could interfere to take away its rights from a corporation any more than from a private individual. The gentlemen who were promoting this agitation appeared to him to have been badly advised. In the first place, they made a great mistake: they petitioned the Crown to alter the Charter of the Corporation. The Crown had no power to alter the Charter of the Corporation; he supposed they had found out that mistake, and were obliged now to go to the only tribunal that could do it, and that was Parliament. He thought he might assure them beforehand that Parliament would do no such thing. They might pass any resolution they liked, but Parliament would not interfere and take away rights which had hitherto been regarded as inviolable.

Mr. W. C. STEELE wished to state, in reply to the previous speaker, that the Members had proceeded to the courts of law on this question, and that they had not asked the Crown to alter the Charter of the College. If Dr. Haughton had made inquiries beforehand he would have found that that was so.

Surgeon-Major SMITH, of Bristol, stated that when, with regard to the extension of the franchise, he canvassed personally every Member of the Royal College of Surgeons in Bristol, with the exception of about six or seven, they obtained the signature of every Member to the petition which was sent in. He mentioned this to show the feeling amongst the Members residing in Bristol and its suburbs.

The resolution was then put and carried by a large majority.

Mr. BROWN said he wished to be allowed to propose a vote of thanks to their President for his able conduct in the chair. He was sure he was only expressing the feeling of the whole meeting in saying that they wished to tender their hearty congratulations to Mr. Jonathan Hutchinson on his reaching the very high position which he now held. They recognised in it a fitting tribute to the great work he had done for surgery in general, and also to the work that he had accomplished for that College in particular. He also wished to express the satisfaction of the Members that the Council of the College had shown during the past year considerable activity in purging the Calendar of the College of Members who had behaved in a disreputable manner. He hoped they would continue in the good work.

Dr. COLLUM seconded the motion.

Mr. JOSEPH SMITH wished to say how much the Members were indebted to the President for having—if he might say so—taken them into his confidence. It was the first time since he (Mr. Smith) had the pleasure of addressing these meetings that the President had deigned to address them at all. He was sure he only expressed the feelings of the Fellows and Members when he thanked the President for his introductory address.

The resolution was carried.

The PRESIDENT, in thanking the Members, said that, although he was solely responsible for what he had said, it had been said at the suggestion of some of the members of the Council.

The proceedings then terminated.

DR. ALONZO GARCELON, who is 76 years of age, who was once Governor of the State of Maine, and is still actively engaged in a country practice, has been amusing his leisure by calculating the number of miles he has driven during the course of his professional career. His estimate is 360,000 miles, or about fourteen times round the earth.

ROYAL COLLEGE OF PHYSICIANS.

ADJOURNED MEETING.

AN adjourned comitia of the College was held on Thursday, November 7th, at 5 P.M.; Sir ANDREW CLARK, Bart., F.R.S., President, in the chair.

A portrait of the late Dr. Wilson Fox was presented to the College by the subscribers, and accepted by the President, on behalf of the Fellows, in suitable terms.

The President nominated Dr. Edward Liveing and Dr. W. M. Ord to be members of the Committee of Management.

Dr. William Newman was admitted a Member.

A report from the Committee of Management was received and adopted respecting the regulation for clinical clerkships, and making it compulsory that of such clerkship not less than three months should have been in the wards, and making more stringent regulations for candidates who shall have been referred in any examination.

A report from the Committee of Management on the educational or scientific uses to which the building on the Embankment now in course of erection by the two Colleges can be best applied, and generally as to its maintenance and management was presented. It was resolved:

"That the management of the new building be intrusted to a Conjoint Committee of the two Colleges, to be called the 'Laboratories' Committee.

"That the 'Laboratories' Committee' do consist of six members, three to be appointed by each College.

"That one member from each College retire from the Committee annually, the retiring members not to be eligible for reappointment.

"That the 'Laboratories' Committee' report their proceedings quarterly to the two Colleges.

"That a director to superintend the work in the laboratories be appointed annually by the two Colleges on the recommendation of the 'Laboratories' Committee;' that he be re-eligible for seven years, and that after that period he shall be ineligible for reappointment except by a special vote of the two Colleges on the recommendation of the 'Laboratories' Committee;' that there be fixed hours for the attendance of the director.

The following conditions relating to the use of the laboratories were agreed to:

I. Permission to work in the laboratories shall not be restricted to those whose names are on the *Medical Register*.

II. All applications for permission to work in the laboratories shall be made to the director in the first instance, and shall be submitted by him to the Committee at its next meeting for decision.

III. When such application is made a description of the proposed investigation shall be sent in, with as complete a list as possible of the necessary instruments and apparatus.

IV. No research, other than that originally approved by the Committee, shall be undertaken without their previous sanction.

V. The publication of the results of work done in the laboratories shall be under the control of the Committee.

VI. Workers in the laboratories shall not receive pecuniary remuneration for work done, but the expenses of investigation, approved by the director, may be defrayed by the Colleges.

VII. No purchase of instruments or apparatus shall be made without the sanction of the "Laboratories' Committee."

VIII. All instruments or apparatus provided by the Committee are the property of the Colleges, and shall, under no circumstances, be removed from the laboratories.

A proposal to permit Fellows of either of the two Colleges to use the laboratory for investigations in clinical medicine was referred to the Committee of Management.

On the recommendation of the Committee of Management, Dr. Thomas Stevenson, Dr. Edward Ballard, Dr. Thorne Thorne, and Dr. Wm. H. Corfield were re-elected examiners for the diploma in Public Health. The resolutions of the General Medical Council in reference to this diploma were considered, and it was decided to take counsel's opinion as to whether the General Medical Council had the power legally to impose such rules.

A resolution of the Committee of Management, asking the College to sanction an extension of the medical curriculum to five years, was referred to the Council of the College.

A proposal by the Registrar to make an alteration in one of the by-laws relating to the appointment of Examiner in Hygiene was also referred to the Council of the College.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1889.

SUBSCRIPTIONS to the Association for 1889 became due on January 1st; and notice is hereby given, in accordance with by-law 5, that Branch Secretaries' subscription-accounts close on October 31st, and all unpaid subscriptions must be forwarded, after that date, to the General Secretary, 429, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, NOVEMBER 9TH, 1889.

ABUSE OF OUT-PATIENT DEPARTMENTS AND THE PROPOSED PUBLIC MEDICAL SERVICE.

AT pages 65 and 66 of the advertisement columns of this number of the JOURNAL is issued the series of propositions which Dr. Rentoul, with the approval of the Council and of the annual meeting of the Association at Leeds, desires to submit to the consideration of the members of the Association individually and in their collective capacity, meeting in Branches. We have already published so considerable a mass of explanatory communications from the author of these propositions, and from a number of correspondents who have dealt with them in our columns, that it is unnecessary here to enter into further detail. We have more than once, in editorial comment on the correspondence, pointed out the great importance, in view of the desired attainment of a practical result, of the close examination in detail of the scheme laid down. The evil which it is proposed to deal with is very widely felt, and it is one which increases rather than diminishes as the years go on. The subject, however, is so complex, and the interests involved so various, that it is only by common understanding loyally observed that any good results can be expected. It is an effort in which each man must put his shoulder to the wheel, and all must unite in subscribing to a common obligation if an arrangement of any sort in the direction which Dr. Rentoul indicates can be agreed on by common consent.

In the stage at which the question has now arrived everything will depend upon the reality of the interest felt by the profession at large, and the extent to which they may find themselves prepared to adopt these propositions, and on the energy and loyalty with which each practitioner and groups of practitioners will translate any resolution which they may pass into a binding undertaking to carry out their own proposals. It will, we hope, be considered a duty by every practitioner who receives this copy of the JOURNAL to examine for himself the whole scheme as proposed, and to ask himself definitely whether it is one which he thinks capable of being brought into practical operation; and especially whether it is one to which he is prepared to bind himself to assent and in practice to act upon. Whatever objections or difficulties he may see to the practical working of the scheme in his own neighbourhood should be stated either in the papers returned to the President of Council, or in a communication to the Secretary of his local Branch, where it may be discussed, and the conclusions arrived at forwarded in collective form. Nothing could be more conducive to a good result than that these proposals should, by every member of the Association, be closely sifted, and applied by each one to his own circumstances and the conditions of his district. If they come into operation they will affect the prospects of each man individually, and it is a duty which he owes to himself and to his profession to give his best attention to this laborious effort to better the individual position of general practitioners, and to improve the relations of the whole body to the charitable institutions of the country, and to the industrial classes. We hope that every reader of the JOURNAL will turn to page 65, as indicated, and *will detach it, and forward it by post with his observations.* The number of forms returned, and the care and accuracy with which the accompanying comments are drawn up, will afford some test of the interest felt by the profession at large in a question which a large number undoubtedly feel to be of vital importance, and such careful comment and analysis will be of the greatest value to the Committee appointed by the Council of the Association to deal with these propositions. The subject is a great one, and the interests at stake are by no means purely sentimental.

The Council of the Association feel warm sympathy with the objects in view, and are desirous to promote them in every possible way. Of this they have given an earnest, not only by the facilities afforded for a discussion at the general meeting, and by the large amount of space which has been devoted to the subject in the columns of the JOURNAL, but also by their appointment of a special committee, with instructions to give especial care to the circulation of the propositions in question, and the analysis of the answers received by way of adhesion, comment, or criticism. The functions of the Council in such a case must be defined largely by the sentiments of the members individually, and by the conclusions of the Branches.

The Branch organisation of the Association affords an excellent means of bringing these proposals to the test of local debate, and it may be hoped that the interest of the issues raised will be recognised in the Branches by full meetings, and by discussions and resolutions which will elucidate the difficult points of the problems involved, and assist to guide the special committee in its conclusions.

As we have already pointed out in dealing with the subject at its earlier stage, the resolutions are valuable chiefly as preliminaries to action, but their value will be greatly enhanced if the reports of Branch meetings in this subject forwarded to us for publication are of a complete and careful character, and if it be understood that where such resolutions are passed the local profession will be prepared to act upon them.

RICH LUNATICS AND POOR.

THE vacancy in the clinical professorship at the State Asylum in Vienna, caused by the superannuation of the late Dr. Leidesdorf, was filled by the appointment of Dr. E. von Krafft-Ebing, of Graz, who is already well known by his handbooks on psychiatric medicine and jurisprudence, who

entered on the duties of his chair at the commencement of the present winter session. Judging from a report of his inaugural address, which recently appeared in the papers, he made some startling, if not alarming, statements. First of all, he said that in civilised countries 1 in every 200 of the adult population was insane. Griesinger, with doubtless imperfect statistics, gave the proportion for Austria as 1 to 500, and Dr. Hack Tuke, after making liberal allowances for the cases not placed under certificates, came to the conclusion that for England and Wales the proportion was 1 to 300. It may be doubted whether Austria is worse off than we are.

The next part of Professor von Krafft-Ebing's statement was that the average of cures among the lower classes was 56 per cent., whereas in the higher classes it was only 16 per cent. ; and this he attributed to the fact that rich people, when they began to feel mental disturbance, had recourse to hydropathic treatment and other mere palliatives, and were not placed in asylums till too late.

It is well to compare the returns of the English Commissioners in Lunacy with the above. In the report for 1888 we find that the average percentage of cures on admissions was 40.16 in county and borough asylums, 47.24 in registered hospitals, 35.11 in metropolitan licensed houses, 36.44 in provincial licensed houses, and 14.96 of cases in single private care.

From these returns it would appear that our large asylums are far behind Austria in the percentage of cures, 56 per cent. being discharged cured in Austria, as against 40 per cent. in England. We cannot explain this discrepancy, but would suggest that the asylums of the two countries differ very considerably in their relative proportion to the population, and that, as a consequence, only the more acute, and presumably more curable, pass at once into asylums in Austria. As to the small proportion of the richer patients who are cured, we can only compare the 14.96 per cent. of patients in single care in England with the 16 per cent. of private cases cured among the Austrian higher classes.

In English private asylums the Commissioners' returns point to a good proportion of cures ; but those who know the inner working of private asylums know that a very large number of patients are sent to private asylums only after every other form of treatment has failed, and therefore the chances of their recovery are less. This seems, according to Dr. von Krafft-Ebing, to be still more the case in Austria ; and we suppose that on the Continent hydrotherapy, at least baths and *Kurhäusen*, are much more commonly made use of for mental patients than with us. That there is such a difference between the cases among the richer and the poorer classes is by no means made out ; all those richer patients, who are cured by hydrotherapy, travel, and the like do not come into the calculation at all—so that, in fact, the argument might rather be that general forms of treatment are so well carried out in Austria that only the incurable cases settle naturally into asylums. It may be said that surely equally careful and skilled general treatment is given to the richer English patients as to the Austrians, but this is not quite so clear. We believe that, though insanity is beginning to be seriously studied in England, hitherto foreign physicians have had a more general training in psychiatric medicine than have their English brothers. At the Vienna Asylum the resident staff is much larger than that of an English asylum of the same size, and the students are more numerous and are more carefully taught ; so that we should be more inclined, as we said before, to attribute the small returns of cures among the upper classes in Austria to the nature of the cases admitted than to the antecedent treatment.

Dr. von Krafft-Ebing speaks of the future of hypnotism in the treatment of insanity with some hope. We can only say that in England the results of trial have been very unsatisfactory.

THE SCIENTIFIC USES OF VERY HIGH TOWERS.

It appears that we are really going to have in London a second, revised and enlarged, edition of Eiffel's Tower. Probably the first object of most promoters of such a tower would be to make it pay ; but there are other uses a lofty structure of this kind might be applied to, and it would undoubtedly afford valuable means of scientific observation, especially of a meteorological character.

Mr. Glaisher has gone up in a balloon to investigate the state of the atmosphere at different elevations. The proposed tower would allow of an inquiry into the atmospheric conditions up to 1,200 feet. From such a height we should look down upon the hills of Wimbledon and Norwood ; and when the Thames Valley and surrounding hills have disappeared in fog-land, we should probably, on our aërial station, enjoy a genial warm sunshine in a blue sky, while gazing upon a vast sea of fog, from which the towers of the Crystal Palace would peep out like two lighthouses. On our way down there would be endless observations to make on the changes of temperature, or, to speak more to the point, on the absorption of solar heat by the fog stratum. Now that we are able, thanks to Sir G. Stokes's and Mr. Jordan's sunshine recorders, to obtain permanent tracings showing the length of time the sun is shining or obscured by clouds, such an instrument at the summit and at the foot of the proposed tower would not fail to give very interesting records in comparison with each other.

Instruments for measuring the heat of the sun's rays, such as black bulb thermometers *in vacuo*, and actinometers, disposed at the top and bottom of the tower would also give very interesting readings, the instrument at the highest station probably showing an excess of the sun's heat over the other, because of the atmospheric humidity intervening between the earth's immediate surface and an altitude of 1,200 feet. Thermometers disposed at various heights, and properly screened from radiation, would show the temperature of the atmosphere at different levels, giving this curious result, that the sun would be warmer at the top than at the bottom, but, in the absence of sun, the air would be colder at the top.

At night the distribution of the temperature in the atmosphere is known to be the reverse of the daytime. On a fine clear night the temperature will be found higher at 1,000 feet than it is on the earth, while on a cloudy night it will be much the same at both stations ; but we have much to learn on the laws of terrestrial radiation, and the proposed tower would be very useful in that respect.

Of course an observer would not be expected to race day and night up and down a tower 1,200 feet high, to make observations and read thermometers; this would be too great, and indeed an unnecessary, devotion to science. The whole thing can be done from below in a comfortable building by means of Siemens's electric thermometers. Such an instrument has been used for some time, and is now at work at the Lincoln Cathedral, giving correct thermometer readings on the earth's surface from a height of 270 feet.

Besides observations for temperature at various altitudes, the state of humidity of the atmosphere, a condition greatly concerned in the formation of fogs, could be readily examined, dry and wet bulb thermometers disposed at various heights and in electrical connection with the station below would yield interesting observations, and assist materially, in conjunction with the barometer, in forecasting the weather.

The force and direction of the winds at various altitudes are subjects for meteorological inquiry of much interest and importance, there are eddies in the atmosphere, spiral and upward currents, of which little is known, and a tower such as that now contemplated would allow of very interesting observations to be made on winds. We may also venture to suggest that the information thus obtained would have an important practical bearing in an engineering point of view, as showing the strength of the wind buildings may have to withstand at great heights.

The measurement of rainfall, made simultaneously at 1,200 feet and on the ground, would add to our knowledge of the laws of rainfall; it would be found that less rain falls at the top than at the bottom. The connection of this phenomenon with atmospheric humidity and temperature would be very interesting to investigate. But fancy being in the track of a thunderstorm in such a lofty, mid-air station, and perhaps enjoying the sight of lightning not above, but below, with deafening peals of thunder and rain forming underfoot; hail may be heard rattling from one cloud to another, or brushing sideways into the face. This, indeed, would be worth being lifted up to 1,200 feet to witness, and such a sight could not fail to leave a long-lasting impression.

Finally, earth tremors, the forerunners of earthquakes, would be felt at the summit of a high tower much more readily than in contact with the earth, and earthquakes might be expected to produce greatly magnified effects at such an elevation; hence a seismometer would find a fitting place at the top of the proposed building.

A great deal might be added on this subject. We have not touched on the astronomical uses of a very high tower, from the greater clearness of the atmosphere at such an altitude. There are also other points of physiological interest that could have been dwelt upon, such as the influence of an altitude of 1,200 feet on respiration, or on the nervous system. It might be remarked that there would be little fear of feeling giddy when looking down from a tower such a height, although the view over a precipice of 1,200 feet would not be unlikely to produce a most unpleasant sensation. This is owing to the fact that there would be high bulwarks round the platform at the top of the tower, giving perfect security; anybody may have experienced the absence of giddiness while looking down from the summit of Eiffel's tower.

Enough has been said, we think, to show that Sir E. Watkin's tower, if constructed, will prove of great use from a scientific point of view, and we trust that due accommodation may be reserved at the top of the tower and down below for instruments and observers.

TINNED FOODS.

Captain Segrave, the British Consul at Baltimore, has sent a report to the Foreign Office upon the provisions preserved in tins for export from the United States. Warnings as to the risks which may attend the use of tinned foods have appeared at rare intervals in professional papers, and have ultimately found their way into the daily press; but, beyond a passing reference to the sluggishness of "the authorities" who do not "do their duty" by taking steps to protect the public from peril, little, if anything, has been done to call general attention to the matter. Captain Segrave points out that a serious danger lies in the use of certain materials for soldering the tin cans and making them air-tight. The better qualities of solder used are, it seems, composed of equal parts of tin and lead, but larger proportions of lead are often present, and a flux "composed of chloride of zinc, containing free hydrochloric acid," is applied to the surfaces to be soldered, which are, as a rule, the inside instead of the outside surfaces.

There have been serious cases of poisoning in this country which have been attributed to the use of certain tinned foods, and which have been placed upon record by those who were concerned in their treatment. It is not unreasonable to suppose that there have been many cases of this kind—probably of a mild description—which have never found their way into print; but, apart from this, the peril to the public is sufficiently obvious, and, having regard to the well-known cumulative effect of continued small doses of the salts of tin, lead, and zinc, it must not be thought that the absence of numerous and startling cases of metallic poisoning is a proof of the generally innocuous nature of canned goods.

The outer layers of substances preserved in tins have occasionally been found, on analysis, to contain metallic salts, obviously derived from the containing vessel, and this is of course no more than might reasonably be expected, under certain circumstances.

It is suggested that a law should be passed rendering it compulsory to solder cans of provisions on the outside only. Whilst this might be useful, it must be admitted that such matters cannot be adequately dealt with by piecemeal legislation. To deal properly with the impurities and adulteration to which our food supplies are liable, far more comprehensive laws than those at present in existence in this country are required. It is not generally known that under the law as it at present stands there would be the greatest difficulty in getting manufacturers or vendors of tinned goods containing small quantities of poisonous metals convicted, and again there is the difficulty of deciding upon whom the punishment, if any, should fall. The question of "injuriousness to health" is a vexed one upon which "experts" always differ widely. The absolute prohibition of the presence of certain metals in foods beyond a fixed limit appears to be the only principle likely to be satisfactory.

Dr. Lauder Brunton has arrived at Hyderabad to take part in the chloroform investigation. Dr. Bonford represents the Government of India.

The Morton Lecture, on Cancer and Cancerous Diseases, will be delivered in the theatre of the Royal College of Surgeons on Monday, November 18th, at 5 P.M., by Mr. John Marshall, F.R.S.

SCOTCH AND IRISH GRADUATES IN ENGLAND.

At the last meeting of the Governors of the Derbyshire Infirmary, Dr. Murray Lindsay, M.D.Edin., Medical Superintendent of the Derbyshire Lunatic Asylum, objected to one of the revised rules submitted for approval, on the ground that it would have the effect of disqualifying for the office of physician the holders of Scotch and Irish diplomas. He was supported by Dr. Ogle, Senior Physician to the Infirmary, but, on a division, the rule was adopted unaltered by a very large majority.

THE "MEDICAL REGISTER."

We are requested by the Registrar of the General Medical Council to call attention to the advertisement published in this number reminding medical practitioners of the necessity of at once sending in to the Registrar or District Registrar any change of address, in order that such change may be duly notified in the *Medical Register;* and to point out that if such request is not complied with, the practitioner is, by section 14 of the Medical Act, 1858, liable to have his name erased from the *Medical Register*, and by sections 31 to 39 of the said Act to lose the rights that such registration gives.

THE POISONOUS EFFECTS OF WATER GAS.

A new use for nitro-glycerine has been discovered by Dr. Kloman, of Baltimore. Called to see a negro girl in a profound state of coma from poisoning by illuminating gas, Dr. Kloman determined to try the effect of nitro-glycerine, and injected a solution containing one-fiftieth of a grain into her arm. At the time she was quite pulseless; in two minutes a return of the pulse at the wrist could be made out, and in five minutes there was a full and strong pulse, and the girl made a rapid recovery. As evidence of how much more dangerous the modern illuminating gas (the so-called water gas) is than that made from coal, Dr. Kloman mentions that since 1881, when the water gas began to be used in Baltimore, there have been fifty-one deaths from this form of poisoning, whilst before that date there was but one death.

TESTIMONIAL TO PROFESSOR STRUTHERS.

At a preliminary meeting of former pupils of Professor John Struthers, presided over by Sir Andrew Clark, Bart., as an old friend of Professor Struthers, it was resolved to initiate a movement for presenting Professor Struthers with a testimonial. A large number of Professor Struthers's pupils have already taken up the idea enthusiastically, including Sir W. Guyer Hunter, M.P., Dr. R. Farquharson, M.P., Professors W. S. Playfair, Rutherford, Sinclair, Reid, Wardrop Griffith, Drs. Mitchell Bruce, Goodhart, Walsham, Stephen Mackenzie, Clement Godson, John MacCombie, A. Westland, R. W. Burnet, S. Taylor, L. Napier, and other medical men both in London and the provinces. Sir Andrew Clark was appointed Chairman of the London Committee, and Dr. James Anderson Secretary and Treasurer. The precise form of the testimonial was left at present undecided, but it is anticipated that it will take the form of his portrait to be presented to himself and a scholarship bearing his name to be founded at the University of Aberdeen. It was proposed that not only Professor Struthers's former pupils at the Universities of Edinburgh and Aberdeen, but also any of his personal friends who wish may join in the movement, and we are asked to state that subscriptions may be forwarded to Dr. James Anderson, 84, Wimpole Street, London, W.

THE BIRMINGHAM HOSPITAL SUNDAY FUND.

The Birmingham Hospital Sunday Fund now amounts to £4,600. Unfortunately, the day for the collection was the wettest of the year; this was, however, to some extent remedied by supplementary collections at several churches on the following Sunday. It has, unhappily, to be acknowledged that this fund has not the elasticity displayed by the Hospital Saturday Fund, for the average collections during the last five years compare unfavourably with those of almost any similar period since the movement was started. The class to whom this collection most directly appeals is the retail shopkeeper and similar people, who frequently send their servants and workpeople to hospitals, but who neither give the subscriptions of the large employer nor the weekly mite of the artisan. The attention of those interested in the promotion of the Hospital Sunday Fund ought to be specially directed to the class mentioned.

DONATION TO THE PASTEUR INSTITUTE.

A meeting of the Committee of the Pasteur Institute Fund was held at the Mansion House, on Wednesday, November 6th. The Lord Mayor presided, and there were present Sir Henry Roscoe, M.P., Mr. F. B. Craven, Professor Fleming, Professor Michael Foster, F.R.S., Mr. Ernest Hart, Professor Ray Lankester, F.R.S., Mr. Everett Millais, Mr. Norris-Elye, Professor Penberthy, Mr. Sydney Turner, and Dr. Armand Ruffer. It was unanimously resolved, on the motion of Professor Ray Lankester, seconded by Mr. Ernest Hart, "That the Lord Mayor be requested to transmit to M. Pasteur, for the use of the Pasteur Institute, the sum of 40,000 francs, in grateful recognition of the services rendered by him in the successful treatment of more than 200 British subjects bitten by rabid animals, and that the Lord Mayor be desired at the same time to express to M. Pasteur the high appreciation of the subscribers of the great benefits which he has conferred on science and humanity."

RECOVERY AFTER DESTRUCTION OF THE LARYNX.

An extraordinary case of recovery after destruction of the larynx has recently been recorded[1] by Dr. Chassaignac, of New Orleans. The patient was a robust negro, aged 23, who received on the left side of the neck and lower jaw a charge of No. 3 shot from a distance of eight or ten yards. He travelled by train some fifty miles to New Orleans and entered the Charity Hospital there. It was there found that the following structures had been shot away: The lower half of the middle third of the lower jaw, the integument of the anterior part of the neck from the chin to within an inch of the sternum, the hyoid bone, a part of the muscles forming the floor of the mouth, the lower anterior part of the pharynx, and the entire larynx, with the exception of its posterior attachments. In addition, the integument of the right side of the neck was badly lacerated, and there was a compound fracture of the inferior maxilla at its middle third (left side). The œsophagus was not wounded, nor were any important vessels or nerves of the neck. The lacerated integument on the right side was sutured, and the wound thoroughly irrigated with the acid sublimate solution (1 to 2,000), after which it was dusted freely with iodoform and dressed with bichloride gauze; a tracheotomy tube was inserted. No food was given by the mouth for the first three or four days, and the tracheotomy tube required constant attention; but he ultimately made a good recovery. Five weeks after the accident his general condition was good; the lower jaw

[1] *New Orleans Medical and Surgical Journal*, October, 1889.

had united in good position; the wound was healed, with the exception of a small superficial ulcer, and by placing his finger over the tracheotomy tube he could speak in a voice which could be understood at a distance of five or six yards.

THE CREMATION OF REFUSE.

At a meeting of the Yorkshire Branch of the Society of Medical Officers of Health at Bradford, Dr. McLintock read a paper on The Cremation of Refuse. Freyer's destructors, while doing their work in a very efficient way having regard to the quantity and character of the refuse, had been found, according to Dr. Odling, to be not wholly unattended with a discharge from the chimney shaft of a little unconsumed vapour, which, by its varying proportions and character, sufficed at times to impart to the chimney products generally an objectionable smell recognisable some distance away. The Bradford Sanitary Committee, in seeking a remedy, had by a happy thought suggested the combination of Jones's cremator and Horsfall's steam injectors. The method of operation was described, and those present had an opportunity of seeing the works in operation. The destructors consumed about 500 loads of refuse per week, which was disposed of in such a way as to be rendered quite innocuous. The temperatures at which the furnaces were kept varied from 700° F. to 1,150° F., a heat of about 1,000° F. being, in his (Dr. McLintock's) opinion, best for rendering the process inoffensive. Since the alteration he had detected no smell, although he was constantly on the alert, and no complaint had been made. The President remarked that Dr. McLintock had rendered good service in giving such valuable information.

THE RECENT DEATH FROM GLANDERS AT VIENNA.

The death of Dr. von Hofmann from glanders, of which notice appeared in the Journal last week, has given rise to many false rumours. The following are the exact facts: At the end of September Dr. von Hofmann was engaged in some experiments on glanders, for which the material was furnished to him by Dr. Kowalski, a military surgeon, who devotes much time to bacteriological and hygienic investigations. The object of Dr. von Hofmann's experiments was to ascertain whether the cultivated bacilli of glanders were virulent, a point as to which he felt some doubt. About October 8th he fell ill with fever and pains on the left side of the chest. Physical examination detected pleuritic crepitant *râles*. After a slight apparent improvement, rheumatic symptoms supervened on October 13th. About the same time Dr. von Hofmann gave himself two injections of morphine, using a sterilised syringe belonging to the Hygienic Institute. Fever and general prostration increased daily, and in eight days more erythema-like knobs appeared on the skin; these, after a few hours, developed into purulent vesicles and abscesses. When taken into the General Hospital, on October 22nd, Dr. von Hofmann presented the symptoms of glanders. He died on the following day, and the *post-mortem* examination confirmed the diagnosis. It also showed that the supposition of an infection through the hypodermic syringe was quite erroneous. This supposition was, immediately after the necropsy, publicly contradicted by Professor Kundrat, the director of the Anatomo-Pathological Institute, who examined the body. The following are the conditions which were found: innumerable metastatic nodules and abscesses of glanders in the skin, the muscles, etc., etc.; the subcutaneous cellular tissue, however, even that around the sites of injection, was quite free from infiltration. There were, however, several infiltrations in the larynx, the trachea, and the left main bronchus. The cellular tissue of the posterior mediastinum was pervaded with partly yellow, partly purulent infiltrations, of the size of 2 centimètres. The infiltrations under the left pleura and along the ribs and the lymphatic vessels in that situation extended outside the chest; in connection with this the deep muscles of the back were infiltrated with pus. On the left side, there was severe hæmorrhagic pleurisy; as also on the right to a lesser degree. The spread of the infiltrations was in favour of an infection through the air passages, particularly the trachea. The question as to how the infective substance arrived there was hardly possible to be answered. The rumour that the case had caused a wing of the general hospital to be closed for a time, and the nurses to be kept out of contact with anyone not belonging to the hospital, is absolutely untrue. The fact is that the room in which Dr. von Hofmann was treated was isolated from the other wards, and that the nurses who had charge of him were strictly ordered not to have intercourse with the other nurses or any other person. The General Hospital does not admit certain infectious diseases, such as small-pox, glanders, etc., for which there exists an "extra hospital," the so-called "Blattern Spital" (small-pox hospital). When Dr. von Hofmann was admitted into the General Hospital the diagnosis of glanders had not yet been made; and, moreover, the patient was kept in a room of the so-called "Zahlstock" (pay department), into which only paying patients are admitted, and which has separate rooms for each patient. Cases of glanders are in general very rarely observed in Vienna. The following is a brief sketch of Dr. von Hofmann's career which has come to so untimely an end. The son of a military officer of high rank, he studied medicine at Vienna and Graz where he obtained his M.D. degree. He was for some years assistant in the Zoological Institution of Graz, and, later on, he became assistant to the Chair of Pathological Anatomy. He wrote a treatise on diphtheria and on the bacilli of expired air. Two years ago he became assistant to Professor Gruber, the incumbent of the Chair of Hygiene in the Vienna Medical Faculty. Several of the professors, including Professor Vogl, Dean of the Medical Faculty, were present at the funeral.

TREATMENT OF ASTHMA BY LOBELINE.

It is some considerable time since the ethereal tincture of lobelia inflata was recommended in the treatment of asthma. The drug, however, had only a passing popularity, owing to its disagreeable effects, such as the production of vomiting and diarrhœa, and in some cases stupor. A drug which has a tendency to affect the cerebral hemispheres seriously is obviously a dangerous one in cases of prolonged dyspnœa, in which its effect on the brain is likely to aggravate the pathological condition of the respiratory centre in the medulla. Dr. Silva Nunès, of Rio, in an interesting paper communicated to the Brazilian Congress of Medicine and Surgery held last year, attributes the emetic action of the tincture to the form of preparation; in other words, that the solvent separates from the plant an emetic principle, different from the principle beneficial in asthma, and which is usually considered as the alkaloid—lobeline. He states that lobeline does not produce, in medicinal doses, either nausea or vomiting. Its action is rapid and evanescent, like that of lobelia, and its elimination takes place very quickly. It may be prescribed in hypodermic injection, in pill, or to children in fruit syrup. The dose given by Dr. Nunès by the mouth varies greatly—namely, from five to forty centigrammes (from three-fourths of a grain to about six grains). No rule can, therefore, be laid down for dosage; some patients are relieved by the smaller dose, and so it is best to begin with a dose of three-fourths of a grain. In most of Dr. Nunès's cases, however, the dose had to be gradually increased until twenty and thirty centigrammes were given daily. The cases recorded are partly simple uncomplicated asthma, or bronchitic asthma; in some the asthma was associated with bronchitis. In recording results of the treatment of asthma, it would seem a mistake to speak of the paroxysms of dyspnœa occurring in bronchitis and emphysema as

a form of asthma; such terms, indeed, as "bronchitic" asthma and "cardiac" asthma ought to be discarded from the medical vocabulary, and the term asthma limited to the spasmodic dyspnœa which is associated with various neuroses, and is itself a neurosis. From Dr. Nunès's record of cases, he seems to have obtained excellent results with lobeline in the treatment of spasmodic asthma and of bronchitic dyspnœa; he places his observations before the medical public with the view of obtaining a fair trial of the alkaloid. Cases of asthma appeared permanently relieved many months after taking the lobeline. In children, too, doses of one to five centigrammes (one-sixth to three-fourths of a grain) permanently relieved the dyspnœa of asthma. Taking into account the fact that lobeline does not produce nausea or vomiting in any serious physiological effect in the doses used by Dr. Nunès, it appears worthy of an extended trial in the treatment of asthma.

THE REPORT OF THE LOCAL GOVERNMENT BOARD.

The eighteenth annual report of the Local Government Board which has just been published, and of which we hope to give an extended notice later, is exceptionally interesting from the review which it contains of the working of the new Local Government Act, and of the County Councils. This section of the report may be said to describe a year's experience of the operation of the Act of last year, and relates chiefly to the election and the finances of the newly constituted bodies. Other chapters of the report treat of the relief of the poor, of the poor rate, and of the numberless subjects dealt with under the head of public health and local administration, and of local taxation and valuation. In the voluminous appendices are the circulars of the Local Government Board, the reports of inspectors on the education and boarding out of pauper children, and other matters; statistics of pauperism, and much miscellaneous information as to the administration of the Poor-rate, vaccination, the Metropolitan Common Poor Fund, and the public health and local administration.,

NON-RETENTION OF URINE IN WOMEN.

Dr. H. Marion Sims has given special attention to cases of obstinate non-retention of urine due not to cystitis or morbid growths in the bladder, but to gradual contraction of the vesical walls, due to hypertrophy of the muscular coat. This pathological change entails a great diminution in the holding capacity of the bladder. He has treated this condition with great success by forcible dilatation of the bladder with warm water. In one of his cases a young lady, aged 17, had been tormented ever since she was two years old by constant desire to pass urine, and incontinence of urine at night. The pelvic organs were explored under anæsthesia, and the bladder was found to measure only $2\frac{3}{4}$ inches from the meatus to its posterior wall. The mucous membrane lay in folds. Through neglect during infancy the capacity of the bladder had been thus reduced. The bladder was forcibly dilated by warm water thrown up by means of a Davidson's (very similar to a Higginson's) syringe, to which a silver catheter was attached. At the first sitting the bladder could not be made to hold over $1\frac{3}{4}$ ounces. The washing was continued daily, a little more water being thrown up each day. The process was painful but the patient was courageous. At the end of two months' treatment the bladder could hold twelve ounces of water, and for the first time in her life the patient slept without wetting her bed. At the end of three months the bladder could hold 18 ounces. The patient was then cured, and has never had any return of her diuresis for eight years. In connection with the treatment Dr. Sims sometimes has recourse to a mild faradic current, applied directly to the neck of the bladder by means of a Simpson's sound connected with the battery. In the case of a woman, aged 50, where chronic contraction of the vesical walls and diuresis followed old cystitis, a saturated solution of boracic acid or water was thrown up daily. At first the bladder could only retain one ounce of the solution; at the end of three months it could hold 22, and she could go for six hours without making water. The cure appeared to be permanent. Dr. Sims, who wrote the above observations in the September number of the *American Journal of Obstetrics*, admits that Dr. Braxton Hicks has recorded the treatment of one case of incontinence of urine in a young subject by mechanical dilatation with warm water, but in what quantities Dr. Sims could not find out.

THE GRAPHIC ARTS IN MEDICINE.

On Friday, November 1st, a meeting was held in the large theatre of the medical school of St. George's Hospital, with Sir Prescott Hewett in the chair, to inaugurate a society for the encouragement of the pictorial and allied arts amongst past and present students of the hospital. In opening the meeting, the Chairman expressed his opinion of the extreme value of drawing and painting to the medical man, not only for the actual results produced, but also, if seriously followed, on account of the value of the training. He then related how his pre-medical career had been passed in a French studio, and how the training had developed his accuracy of sight, and of what great importance this had been to him in his surgical work. Referring to photography, he mentioned that its importance was becoming daily more and more recognised, both in clinical and museum work and reminded his hearers that modern photography owed its recent great progress to the enthusiasm of amateurs. Dr. Dickinson formally moved: "That a society be formed in connection with St. George's Hospital for the purpose of encouraging sketching, painting, engraving, modelling, carving, photography, and the arts of representation in general." One of the ways in which it was proposed to attain this end was to hold a meeting of the society at least once a year, at which members should exhibit any of their productions that could be included under the above headings. The meeting closed, after the election of officers and council, with a very cordial vote of thanks to Sir Prescott Hewett for taking the chair, and the society is fortunate to have secured him as its first President. Past students of St. George's who may be desirous of joining the society are requested to send their names to Dr. Penrose, the Honorary Secretary, at the hospital.

SANITATION OF THE RIVIERA.

Great credit is due to Sir Edward Watkin for the generous and public-spirited action which he has taken in connection with the sanitation of the principal hotels at Cannes. At his own cost he employed a competent engineer to report on the sanitary defects of the particular hotel in which the members of his family fell ill, and by the publicity which he gave to the results of that investigation, he has brought about improvements. On a further visit Mr. Lynde is able to report that not only have the defects pointed out in his report of February last been satisfactorily remedied at a cost of £800 in this particular hotel, but some eighteen other of the hotels of Cannes have taken the hint, and have carried out sanitary improvements at an expenditure of about £8,000. There can be no doubt of the substantial benefit thus conferred on foreign visitors, and especially on the large class of invalids who annually resort to Cannes. At the same time, it must be remembered that two other things are necessary; the first is that the town authorities should show a like zeal in improving the general sanitary condition of the sewers, the streets, and seaboard; and the second is that that which has been put in order should be kept in order, and that it should be regularly and periodically inspected and reported on. It is very easy by a relatively small expenditure to carry out

adequate house sanitation, but it frequently happens that after a short interval that which is intended to be conducive to health becomes, by neglect or ignorance, a trap for disease. It is, moreover, very suggestive to find that even at Cannes, where the attention of the authorities has been repeatedly called by publications which have produced a great impression on the public mind to the need for sanitation, and where there has been much agitation and much talk of health improvements and many reports made, with great show of zeal, a state of things should have existed such as only the accident of Sir Edward Watkin's peculiarly energetic and liberal intervention has sufficed to cure. What, then, about the other health resorts of the Riviera, especially those where the already defective drainage and water supply were sadly interfered with by the shocks of the recent earthquake? Cannes was supposed to be peculiarly the home of sanitary activity. It has the benefit of an able staff of resident English medical men, who have used their great and just influence to bring about a satisfactory state of things. If they had succeeded so imperfectly in a town so wealthy and so active as Cannes, what must be the state of things in smaller places, with less ample resources, and where the English influence is less strong? These are questions which the municipal authorities should be called upon to consider with as much energy and with as little delay as possible.

THE ACTIVE PRINCIPLES OF THE SEEDS OF ABRUS PRECATORIUS (JEQUIRITY).

Drs. Sidney Martin and Wolfenden have communicated to the Royal Society the results of an investigation into the action of one of the active principles of jequirity seeds. As is well known, a watery effusion of the seeds dropped into the eye causes severe inflammation of the conjunctiva, while, injected under the skin, it also causes great local irritation, and death in some hours. Both these actions were formerly ascribed to a bacillus, until Warden and Waddell demonstrated that they were dependent on a proteid body which they named "abrin." Dr. Martin has previously found that there are two proteids present—a globulin and an albumose. In the present paper the authors show that the physiological action of the globulin is the same as that of the watery extract of the seeds and as the abrin of Warden and Waddell. When applied to the eye or injected under the skin there is intense local irritation. The general action begins shortly after administration with a fall of temperature, but the first very evident symptoms are only seen after some hours, and consist in languor and dulness. These increase, breathing becomes more rapid, there is bloody diarrhœa, and death in about twenty-four hours. There is no suppuration locally, and the blood pressure is scarcely altered. *Post mortem* there are found petechiæ in the serous membranes and hæmorrhagic gastro-enteritis. Exposure to a temperature of 75° or 80° C. destroys the activity of the globulin. Dr. Martin has also investigated the action of the albumose. The results are very much the same as in the case of the globulin. The symptoms are similar, and heating destroys its poisonous properties. In conclusion, the striking resemblance between jequirity and snake-poisoning is pointed out.

HYPNOTIC SUGGESTION IN LABOUR.

Professor S. Ramon Cajal, of Barcelona, reports (*Medicina Practica*, Sept. 28) a case in which he abolished the pain of labour without in any way weakening the power of the uterine contractions by means of hypnotic suggestion. The patient was a robust woman who had already had five children. Although Dr. Cajal warrants her as not in the least "nervous" in temperament, it should be noted that she had been the subject of frequent experiments in hypnotism; in fact she could be thrown into a trance by a mere effort of will. Ten days before her sixth confinement was due, Dr. Cajal "suggested" to her during hypnotic sleep that her labour would be short, and that she would feel little or nothing of it. She obeyed the suggestion to the letter, the dilatation of the os, the rupture of the membranes, and the expulsion of the fœtus being all accomplished in less than half an hour. The patient is said to have had full consciousness of the contractions of the uterus, but without any sensation of pain, although the pulse was quickened and the breathing became laboured as is usual under the circumstances; so little did she suffer that it was difficult to keep her awake during the last stage. When all was over she walked to bed with a firm step, and soon afterwards asked for something to eat. She suckled the child on the second day, got up and resumed her domestic duties on the fifth, and was perfectly well within a fortnight from the date of lying-in. Dr. Cajal points out that the rapidity of the process in this case was not less noteworthy than the absence of pain; and this was the more remarkable inasmuch as her previous confinements had all been very long. He describes the effects of the hypnotism as having been to paralyse the nerves of pain while leaving the perception of tactile impressions and the muscular sense unaffected. He suggests, as a further development of this new addition to obstetric therapeutics, that it may be possible to effect delivery during hypnotic sleep.

TRIPLETS AND QUADRUPLETS.

Dr. Vogt, of Bergen, describes, in a Norwegian contemporary, a case of triplets, with eclampsia. The patient was a primipara, aged 32. During labour she had five severe fits, so the forceps were applied, and the first child delivered; it weighed 2,200 grammes. The second child, weighing 2,300 grammes, was brought into the world by turning and extraction; the third (3,200 grammes) was delivered by the same method. Four convulsions followed the labour. The mother and all the children survived. The size, good development, and great combined weight (about seventeen pounds) of the triplets were unusual features in the case. According to statistics, only one case of quadruplets has been observed in Norway since 1863. No instance of quintuplets has been noted in that country since 1743.

GASEOUS CYSTS OF THE NECK.

Dr. L. H. Petit has issued this year an important monograph on these cysts, known to previous authors as "aëroceles," "bronchoceles," "laryngoceles," or "tracheoceles." The monograph has appeared in several numbers of the *Revue de Chirurgie*. Dr. Petit concluded that there existed in the neck air-holding tumours produced by a communication between the larynx or trachea and cellular or interfascial spaces in their neighbourhood. The predisposing causes may lie in normal structures, the ventricles of the larynx or the membrane uniting the tracheal rings posteriorly, or in anomalies of those structures, or in pathological changes in the mucous membrane or cartilages, or in wounds of the trachea. Violent coughing or straining may set up a gaseous cyst. These cases begin either by a direct hernia of the laryngeal or tracheal mucosa, or by passage of air through a rent or ulcer in the same into the adjacent tissues. Hence, a gaseous cyst may have a distinct lining membrane, sometimes consisting of the herniated mucous membrane, or may lack any true wall, as in ordinary emphysema of connective tissue. The circumscribed type sometimes develops suddenly, sometimes grows suddenly long after development, and in other cases increases slowly but steadily from first to last. Whenever the communication with the air passage closes early and completely, the gaseous tumour remains as a rule stationary. When the communication remains unobstructed, the tumour feels soft and flaccid during rest, but enlarges rapidly during expiration, coughing, or straining, diminish-

ing on compression, deep inspiration, or forced extension of the head. The tumour is resonant on percussion, and causes modifications in the voice. The skin remains unaffected. Dr. Petit, contrary to previous writers on the subject, holds that certain forms of gaseous tumours may undergo spontaneous cure. He refers to the variety which appears suddenly at one effort, and without any chronic disease of the respiratory tract or abscess in the surrounding parts. The other varieties remain stationary or slowly increase. Dr. Petit also holds that in some cases an operation similar to the radical cure of hernia might be attempted; but compression from without would be less hazardous. In other cases, when fits of suffocation occur frequently, tracheotomy is indicated under certain precautions.

REPORT ON INTEMPERANCE AND DISEASE.

We have had occasion repeatedly to call attention to the misrepresentations of the report on the connection of disease with the habit of intemperance, which was presented by the Collective Investigation Committee to the Dublin meeting of the Association two years ago. Within the past six weeks this misrepresentation, with a gloss of implied novelty, as if the report had "just been handed in," has broken out afresh, and the erroneous statement has appeared in the majority of the newspapers in the kingdom. A table, giving the average age at death of abstainers, habitually temperate, careless, free, and decidedly intemperate drinkers, has been extracted from the report, and the figures have been cited as demonstrating that habitual drinkers live longer than teetotallers, and that moderate drinkers excel both water-drinkers and drunkards in longevity. It is true that the figures in this particular table appear at first blush to point to these conclusions, as the average age at death of the abstaining lives was 51 years 22 days, of the decidedly intemperate 53 years 3 days, and of the habitually temperate 63 years 13 days. But, as was pointed out in the report, owing to the bulk of abstainers being young persons, the average age of living abstainers is less than the average age of drinkers of all degrees. Common sense and common experience testify that habitual drunkards die sooner than abstainers, and the report expressly stated that there is not in the returns the means of coming to any conclusion as to the relative duration of life of total abstainers and of habitually temperate drinkers. The report further stated that on the whole the Committee might not unfairly claim to have placed on a basis of fact the conclusion that habitual indulgence in alcoholic liquors beyond the most moderate amounts has a distinct tendency to shorten life. Other tables given in the report, of deaths at greater ages, prove the accuracy of the Committee's statement; and we can only express the hope that in future the Committee will not be quoted as stating exactly the opposite of what is contained in their report.

HYPOCHONDRIA AND HYSTERIA IN MEN AND WOMEN.

Paget and other authorities have pointed out that hypochondria is much commoner in men than in women. Some physicians are too ready to believe that this aphorism implies a precise homology between hysteria and hypochondria, the former being, so to speak, the form which the latter assumes in woman. Yet few can deny that men are sometimes attacked with a disease bearing all the general symptoms of hysteria. A man may have hysterical fits, or may show chronic hysteria, becoming bedridden or fancying that a joint is stiff or inflamed. German and Russian authorities have discovered that true hysteria in man is frequent, not in over-civilised countries but among semi-civilised nations, such as the Circassians and Persians. Dr. Mendel has recently written a paper in the *Deutsche med. Wochenschrift* on Hypochondria in the Female Sex. He maintains its distinction from hysteria. He distinguishes three forms which he has observed in women. The first is characterised by great fear of death or of some disease to which the patient is not subject, without moral or physical timidity or cowardice in any other respect. This form, common in men, is rare in women. In the second type, much more frequent in the female, the patient believes that some particular organ is already diseased, and really feels pain in the affected or suspected part. In the third, also common in woman, the phenomena of the second type are present, with disorder of the special senses and common sensation. Hypochondria diminishes during pregnancy and increases after childbirth. Dr. Mendel further dwells on the distinction between hysteria and hypochondria. The former begins, as a rule, about puberty; the latter appears later in life. In hypochondria clavus, globus hystericus, and localised anæsthesia, paralysis, etc., are not observed. A feeling of fear and anxiety is constant in hypochondria, and there is generally pain in the præcordia; the loss of hope is marked. These symptoms are unusual in hysteria. The troubles of a hypochondriac are stereotyped; in hysteria the patient fancies herself subject from time to time to a new disease or symptom. In hysteria the local symptoms of a disease are ably counterfeited, but the facial expression of suffering is best imitated in hypochondria. We all know how a young woman with hysterical spinal disease looks well-nourished and smiles and talks readily. In hypochondria in women, as in so many men, the face is deep-lined, as though racked with pain and eaten up by care.

DISPLACEMENT OF THE TIBIÆ IN AN ACARDIAC MONSTER.

Dr. Eckardt, of Halle, describes in the *Centralblatt für Gynäkologie*, No. 31, 1889, a remarkable case, worthy of the attention of obstetricians. A primipara, aged 22, gave birth at term to a well-nourished, healthy fœtus. Three long bones, measuring an inch and a half in length, adhered to its neck. Immediately after its birth, an acardiac acephalous twin was expelled. This monster was of the most common variety of acardiacus; it consisted of a ball of flesh, having two lower extremities. The legs were absent, each foot, comparatively well developed, being attached to the lower part of the thigh by a fleshy band. This band showed no external cicatrix or groove, and contained no bones. On careful examination, the bones which had contracted adhesions to the neck of the normal twin were found to be the missing bones of the legs. As only three bones were displaced in this remarkable manner, we presume that one fibula was wanting. A description of acardiac monsters in London museums will be found in Part I of the *Transactions of the Obstetrical Society of London* for the current year.

ASEPTIC BONE CAVITIES.

Dr. Senn lays down the following aphorisms respecting the healing of aseptic bone cavities by implantation of antiseptic decalcified bone, in a paper bearing that title which appeared in the September number of the *American Journal of the Medical Sciences*. Antiseptic decalcified bone is the best substitute for living bone grafts in the restoration of a loss of substance in bone. In the treatment of bone cavities, antiseptic decalcified bone is preferable to Schede's blood clot, as it is not only a perfect aseptic, but at the same time also a strongly antiseptic substance. Implantation of a disc or plate of antiseptic decalcified bone into a cranial defect may be relied upon as a hæmostatic measure in arresting bleeding from the vessels of the diploë. It constitutes a good temporary substitute for the lost portion of the cranium. It prevents the direct union of the brain or its envelopes with the pericranium. Lastly, implantation, under the above-named circumstances, furnishes the most favourable condition for the for-

mation of new bone from the margins, and the closure of the remaining defect by a firm and unyielding membrane. The packing of an aseptic bone cavity with chips of antiseptic decalcified bone guards against unnecessary loss of blood, and exerts a potent influence in the prevention of infection by pus microbes that might have remained upon the surface of the wound or in the tissues. Capillary drainage by an absorbable drain should be established after implantation for the purpose of preventing the accumulation of more blood in the wound than is necessary to form a temporary cement substance between the bone chips and between the contents of the cavity and the surrounding tissues. In the treatment of an aseptic bone cavity by implantation of chips of antiseptic decalcified bone, the packing answers the purpose of an antiseptic tampon, and furnishes the best medium for the growth and development of the tissue resulting from the regenerative process initiated by the trauma. Secondary implantation can be successfully practised in the treatment of a suppurating bone cavity after suppuration has ceased and the cavity can be transformed into the same favourable conditions for healing as an aseptic wound.

BRIGHT'S DISEASE IN PREGNANCY.

THE existence of acute or chronic nephritis in pregnancy has been for long recognised as a very grave complication. Its treatment has been much disputed amongst obstetricians. Dr. James Tyson, of Philadelphia, read a paper on the Induction of Premature Labour in Bright's Disease before the annual meeting of the American Medical Association last June. He distinguished two conditions where the induction of premature labour was justified. In Bright's disease complicating pregnancy, when puerperal convulsions attended nephritis in a previous pregnancy, premature labour should be induced, and the same treatment is called for in all primiparæ where Bright's disease has existed previous to pregnancy. In this case premature labour should be induced as soon as the fœtus is viable. True Bright's disease must be distinguished from simple albuminuria, which has been observed in pregnancy, and has given rise to interesting papers, published in the archives of the obstetrical and other societies.

BACTERIA IN DISEASE OF THE EAR AND NOSE.

IN relation to the recent death of a distinguished surgeon, certain papers published by Dr. Zaufal in the *Präger med. Wochenschrift* are worthy of consideration. The papers are of a very obstruce character, and began to appear two years since, whilst three have been published in the course of the present year; but good and full abstracts are to be found in several German periodicals, and in the *American Journal of the Medical Sciences* for September. Material was taken from the middle ear in cases of acute rhinitis, pharyngitis, ozæna or bronchitis, without pneumonia. In sero-sanguinolent matter the capsule bacillus of Friedländer was detected; it is also to be found in the nasal secretion in acute coryza. In sero-purulent matter from the tympanum, Dr. Zaufal found the pneumo-diplococcus of Fränkel, an organism also seen in healthy saliva. Both these microbes can cause croupous pneumonia, and enter the middle ear by passing up the Eustachian tube, especially when the mucous membrane of the tube and middle ear become favourable cultivating ground, owing to colds in the head. These researches confirm much that has long been suspected. The uninformed multitude are aware that it is dangerous to neglect a cold. There is no knowing what mischief may not be set up by the infected foci in the mouth, pharynx, and nasal cavities. That the germs may pass up the Eustachian tube into the ear, and cause catarrhal suppurative disease of the tympanic cavity, the above and previous researches amply prove. How chronic otitis media may give rise to far more serious complications is yet more generally known.

THE SPECULUM IN ANCIENT SURGERY.

DR. ALI COHEN, of Gröningen, describes, in the *Nederland Tidschrift van Geneeskunde*, a remarkable passage in the Talmudic treatise called the Niddah. The physician is there instructed, when it is uncertain whether hæmorrhage proceeds from the vagina or the uterus, to introduce a "siphopheroth," into which a "mechul" is introduced bearing "mouch." When the "mouch" is found, on retraction, to be covered with blood, that shows, according to the Niddah, that the hæmorrhage is uterine. It is expressly stated that the apparatus does not wound the patient in any way. The "siphopheroth" was a cone of lead; its orifice was bent inwards, so as not to wound the vagina. The term is manifestly corrupted from the Greek. The "mechul" was a long wooden rod, and "mouch" signifies a preparation very like charpie. Thus the mechul and mouch were the equivalents of the speculum forceps and wool. The siphopheroth was not the strict homologue of the speculum, but rather a contrivance meant to guard against a source of fallacy respecting the seat of hæmorrhage in pelvic disease. It is not stated that the instrument was designed for direct inspection of the cervix. Facts of this kind, unearthed by Dr Cohen, are of considerable interest. They show that the sound scientific methods and ideas which prevailed in the old civilisation of the Mediterranean basin were not confined to the Egyptians, Chaldees, and Græco-Roman nationalities, but also certainly flourished in Judea. Historians are fond of tracing the arrest of true scientific research, so marked in the Middle Ages, to that blending of Græco-Roman and Semitic ideas, so favourable to humanity in other respects. That very blending brought about more than one enlightened and philanthropic religious system. Logically, it should have aided science. But science remained in abeyance till the Renaissance. The fault probably lay not in Christian and Jewish systems of civilisation, but in the intellect of the Teutonic and Latin nations, which was insufficiently developed during the Middle Ages to appreciate science.

SCOTLAND.

THE Edinburgh Medico-Chirurgical Society has elected Sir Joseph Lister and Dr. Priestley as members to represent the Society on the Committee of the International Congress of Hygiene and Statistics, London, 1891.

THE SCOTTISH MICROSCOPICAL SOCIETY.

THE first session of the newly inaugurated Scottish Microscopical Society was opened on Friday, November 1st, by an address from the President, Sir William Turner. There was a good attendance of members. The meetings will be held monthly on the evening of the third Friday.

SPECIAL COURSES AT EDINBURGH.

THE system of special courses—intended more particularly for graduates and senior students—has been further enriched by the announcement of a series of ten lectures on the Nervous System by Dr. Alexander Bruce. It is only by the further development of this specialisation that the Edinburgh Post-Graduate School is likely to preserve itself in life. This view was freely expressed by many of the members of the late Post-Graduate session, and not a little adverse criticism was passed on the conception of the more general programme of a constantly shifting variety of lectures.

THE FREELAND BARBOUR FELLOWSHIP.

It is announced that Dr. A. H. Freeland Barbour has offered to the Royal College of Physicians of Edinburgh a sum of money for the purpose of founding a Fellowship in Medicine. The object of the Fellowship is especially to encourage original research in the Laboratory of the Royal College. The Fellowship will be of the annual value of £100, and will be competed for biennially. The power of award will rest with the Royal College of Physicians, and it is understood that the Fellowship will be given for the best piece of original research which may, subject to certain conditions, be submitted for competition. In the event of two pieces of work appearing of equal merit, preference will be given to an investigation in the department of obstetrics or gynæcology. The prize will be named the Freeland Barbour Fellowship, in memory of Dr. Barbour's late father. The foundation of the prize is peculiarly gratifying, in view of the recent most successful elaboration of the Royal College's Laboratory Scheme. The results of the past year have justified, in an eminent degree, the establishment of the laboratory, and the publication of the first volume of the Laboratory Reports has called forth a large amount of congratulatory approval. It is to be hoped that the appearance of the second volume of this extremely important collection will not be long delayed.

THE GENERAL COUNCIL OF EDINBURGH UNIVERSITY AND THE UNIVERSITY COURT.

The return of the three gentlemen recommended by the Committee of the Association of the General Council of Edinburgh University as members of the new University Court, namely, Dr. John Duncan, Mr. McKie (advocate), and Mr. W. Scott Dalgleish, will not be unopposed. There is a general feeling that the first of these names could not be improved, and the medical profession is to be congratulated on having available a candidate at once so widely respected and so capable of fairly representing the wishes and needs of the progressive party in the Council. With Dr. Heron Watson and Dr. John Duncan, moreover, as members of Court, it will be allowed on all hands that the interests of medicine, in so far as these may fall within the scope of the University Court, are in safe keeping. On the other hand, it is felt that the large and influential non-medical portion of the Council is entitled to stronger representation than may seem, without disparagement to the two gentlemen in question, to be afforded by the names of the other two nominees of the Association. Other gentlemen are mentioned as more likely candidates; and, in particular, it has been suggested that the late Lord Advocate, the present Lord Justice Clerk, who has had a good deal to say in the framing of University measures, would be a more generally acceptable representative.

QUEEN MARGARET COLLEGE, GLASGOW.

The session of Queen Margaret College was opened on November 1st by Professor McKendrick, who lectured on "Science and Medical Teaching for Women." The address had a special bearing on the circumstance that a proposal has been mooted to supply in the College all the necessary medical training for women, at present to be had only in Edinburgh or London. In Dr. McKendrick's opinion, facilities could readily be provided for such a purpose, financial difficulties alone being in the way, which those interested in Zenana work might be able to assist in clearing away. This year the College opens better equipped than ever for the work it has undertaken in the west of Scotland, new physical and chemical laboratories having been built and furnished during the vacation. Chemistry and physics are this year the scientific subjects to which special attention is being given.

THE BUILDING DISASTER AT GLASGOW.

During the height of the storm on Friday of last week the whole front of a building in course of erection as an addition to a carpet factory in the east end of Glasgow was blown down, and went crashing through an older and lower portion of the factory, in which 140 women were at the time employed at their looms. Of the workers 81 escaped uninjured, but 31 were more or less seriously injured, one of whom has since died, and 28 dead bodies were, in the course of the succeeding night, removed from under the ruins. Of the storm, Professor Grant, of the Glasgow Observatory, writes that, though it was of considerable magnitude, it was surpassed in intensity by several which have visited the city during the past ten years. Its maximum intensity was attained at 5.20 P.M., an immense gust at that time indicating on an Osler's anemometer a pressure of 17 lbs. on the square foot, the velocity being about 48 miles in the hour. It was just about this time the building fell. During the Tay Bridge storm the maximum pressure was 37 lbs. on the square foot, and the velocity 72 miles. Official inspections of the fallen building have been made. Its exposed front was 130 feet long, and the thickness of the wall was from 18 to 25 inches. The roof was not on the building, and there was an absence of internal dividing walls to act as supports to the front. There is only too good reason to suppose that, if the authorities had power to make and enforce building regulations of a thorough kind, such a calamity would have been prevented; and, if the result is the vesting of such powers with the Dean of Guild Court or other competent public body, even out of such a catastrophe some good will come.

IRELAND.

Dr. Wm. Josiah Smyly has been elected Master of the Rotunda Lying-in Hospital, in succession to Dr. Arthur V. Macan, who retires at the close of the usual term of seven years.

Dr. Anthony H. Corley has been elected to the Council of the Royal College of Surgeons, in the room of Dr. F. H. Heuston, who has resigned.

The epidemic of typhoid fever which has prevailed in Belfast for the past few months has begun slightly to abate. The mortality-rate has been 14 per 100, according to the health officer's return.

REV. DR. HAUGHTON, F.R.S.

We regret to state that the Rev. Dr. Haughton, M.D., F.R.S., has been seriously ill for some time from pulmonary congestion. He is now, however, better, and he hopes to be able to take his usual active share in the many works with which he is identified.

DEATH OF MR. JOHN BRENNEN.

The death is announced of Mr. John Brennen, who for nearly forty years was connected with the College of Surgeons, Ireland, and for a great portion of that time acted as Registrar. Mr. Brennen was an excellent officer, and his death is very sincerely regretted by the Fellows of the College.

THE TUBERCULOSIS QUESTION IN BELFAST.

The question of tuberculosis in cattle—with which we dealt in a leading article last week—continues to excite great interest in Belfast. It came before the Belfast City Council at its last meeting, on November 1st, when a resolution recommending compensation to butchers for the destruction of tuberculous meat was carried by the narrow majority of 1, the Mayor voting in the

minority. The question also came before the meeting of the North of Ireland Branch of the Association, on October 31st, when, after a very animated discussion, a committee, consisting of Dr. Burden, Dr. Lindsay, Dr. Strahan, and Dr. Colwell, was appointed to look into it.

INTRODUCTORY LECTURES.

THE "Introductories" in Dublin this year have been few, and, as elsewhere, are losing their importance. At the Adelaide the address was given by Dr. Kendal Franks; at St. Vincent's, by Dr. Cox; and at Jervis Street by Dr. Meldon, President of the College of Surgeons. At St. Joseph's Children's Hospital Dr. McVeagh urged upon students the importance of devoting a part of their time to the study of the peculiarities of disease as observed in children, and expressed regret that regular attendance at a children's hospital was not a part of the prescribed curriculum.

BELFAST ROYAL HOSPITAL: OPENING OF THE WINTER SESSION.

THE winter session of the Belfast Royal Hospital was opened on October 31st. There was a very large muster of students. The introductory address was delivered by Dr. Lindsay, who chose for his subject "The Art of Observation," and dealt with the methods of observation necessary in clinical work, the laws to which observation must conform, the fallacies to which its exercise is liable, and the habit of mind requisite for successful observation. This session at the Royal Hospital is likely to be memorable, among other things, for the fact that for the first time clinical instruction is thrown open to women, of whom there are three in attendance.

THE FIRST REPORT OF THE ROYAL COMMISSION ON VACCINATION.

THE first report, which was issued last week, of the Royal Commission now sitting to inquire into the subject of vaccination is the first instalment of what promises to be an exhaustive and lengthy review of the whole subject. The Commissioners—Lord Herschell, Sir James Paget, Sir Charles Dalrymple, M.P., Sir Guyer Hunter, M.P., Sir Edwin Galsworthy, Mr. Savory, Mr Bradlaugh, M.P., Dr. J. S. Bristowe, Dr. W. J. Collins, Mr. Dugdale, Q.C., M.P., Professor Michael Foster, Mr. Jonathan Hutchinson, Mr. J. A. Picton, M.P., Mr. S. Whitbread, M.P., and Mr. F. Meadows White, Q.C.—judiciously decided to keep the evidence on the several points submitted to them distinct, and to take evidence on the question in the following order: (1) the historical and statistical case in favour of vaccination; (2) the arrangements made for vaccination under the existing law, and the mode in which the law is administered; (3) the case against vaccination, and especially against its continuing to be made compulsory; (4) the reply to these objections; (5) any substitutes that can be suggested in place of vaccination for the purpose of preventing the spread of small-pox; and (6) any improvements that can be suggested in the present law or its administration for the purpose of removing objections to vaccination or making it more effective. The present report relates to the first six meetings of the Commission and to the evidence of only four witnesses coming under the first of these headings; so that only the fringe of the question has yet been touched.

The first witness examined was Sir John Simon, who for many years was medical officer of the Privy Council, and who is specially qualified to afford an insight into the history of small-pox and vaccination. He handed in the valuable and closely reasoned report which he prepared for the Board of Health in 1857, and which, with some slight modifications and amplifications, expresses his opinions on the subject at the present time. Those opinions are in effect that vaccination has had a beneficial effect in reducing the prevalence of and the mortality from small-pox. But he points out that the report is thirty-two years old, and that much additional experience has during that time been gained. "On the necessity for revaccination," he observes, "I should express myself more strongly than I did in the year 1857, and on the question of possible ill effects from vaccination I should speak much more precisely than I did in 1857; otherwise nothing occurs to me at this moment in which I should wish to speak otherwise now than as I spoke in 1857." Revaccination at puberty—that is, at 12 or 15 years of age—he strongly advocates, as the protective value of primary vaccination becomes weakened by age, although it never becomes obliterated if properly performed. "There is accumulating evidence of the impermanence of infantine vaccination," he remarks, "but whether that evidence represents in any degree an increased use of weak lymph is not quite absolutely known. What we certainly know a great deal better than we knew in 1857 is, that infantine vaccination by itself is not as protective for the whole life as Jenner hoped it would be; but whether the impermanency of that protection is increasing in the successive generations, we are not sure." As a striking instance of the good results of revaccination, he adduces the experience of the Germans and the German army.

Speaking of the prevalence of small-pox before the discovery of vaccination, the witness observed that "everybody expected small-pox in the last century sooner or later. People would go on to a very advanced age in some cases without having it, as they now go on sometimes without getting measles or whooping-cough; but it was a common current contagion in the country, and sooner or later—I do not say everybody without exception—but nearly all people got it."

The figures quoted by Sir John Simon to show the reduction in the rate of mortality from small-pox are remarkable. In the years 1629 to 1635 small-pox gave 189 deaths per 100,000, and in 1660 to 1679 it gave 417 per 100,000 of the population. In the period from 1728 to 1759 the rate was 426; from 1771 to 1780, which was the middle of the inoculation period, it was 502; from 1801 to 1810 it was 204; from 1831 to 1835 it was 83; and from 1840 to 1854 it was 40 per 100,000. The witness laid considerable stress on the fact that the quality of public vaccination has vastly improved during recent years. Questioned by Mr. Picton and Dr. Collins as to the nature of vaccination, Sir John Simon expressed his opinion that it is what Jenner called it, "variola vaccinæ," or small-pox grafted upon the cow. In reference to so-called "spontaneous cow-pox," the witness remarked that there may be speculative ground for believing that there is such a thing, but, as a matter of fact, he had never known of spontaneous cow-pox any more than spontaneous cat or dog.

The immunity from small-pox experienced by the vaccinated and revaccinated nurses in the small-pox hospitals is a weighty piece of evidence in support of vaccination; but Mr. Picton endeavoured to suggest a fallacy in the evidence by inquiring whether nurses took small-pox more frequently before vaccination was discovered than afterwards. In reply, Sir John Simon referred to the probability that a large proportion would have had small-pox as children; but if the unvaccinated of the present day would like to make an experiment for the public service, let them try how they would fare if they exposed themselves to the same test.

Dr. W. Ogle, the Superintendent of Statistics in the Office of the Registrar-General, was next examined on the statistical portion of the subject. Some of his evidence was very instructive. Taking, as a basis for comparison, the ten years from 1871 to 1880, which are the years which include the great outbreak in London in 1870 71, it is found that the small-pox deaths numbered 20 out of every 1,000 deaths from all causes. Going back 100 years to the corresponding decennium in the eighteenth century, 1771-80, it is found that the small-pox deaths were then 97 per 1,000, whilst for the years 1671-80 the proportion was 66 per 1,000. Taking, further, the three periods, 1838 to 1853 when vaccination was purely optional, 1854 to 1871 when it was nominally compulsory but not enforced, and 1872 to 1887 when it was enforced, the small-pox death-rate was 408 per million in the first, 223 per million in the second, and 114 per million in the third period, showing a marked progressive decline, coinciding in time with the changes in the vaccination laws, the decline in the whole time being about 72 per cent. But objection was raised to this arrangement. In 1838 there was an epidemic, and should be dealt separately, whilst it was urged that the second and third periods should be 1854 to 1867 (when the Act was passed, although the machinery for enforcing the law was not provided until the Act of 1871) and 1868 to 1887. By this means the epidemic of 1871 falls into the third period, but still the marked decrease is evident, the figures being 336, 188, and 155 per 1,000 for each period respectively. It was urged that this decline was due not to vaccination

but to improved sanitation. If such were the true explanation the decrease would be equally shared by persons of all ages. But such is not the case. Dr. Ogle showed that in the first five years of life, when vaccination is most powerful, the mortality has fallen 85 per cent., in the next five years it has fallen 64 per cent., between ten and fifteen years 27 per cent., whereas at every age-period after that the death-rate has actually increased. No such change of incidence of mortality is exhibited by fever or other zymotic diseases.

Then, as to the condition, with regard to vaccination, of those who have died of small-pox, Dr. Ogle stated that since 1880 the small-pox deaths have been separated into vaccinated, unvaccinated, and those whose vaccinational antecedents are unknown. Since that date, omitting the deaths of all children under three months of age, there have been altogether 10,578 deaths from small-pox. Of these, 2,843 were certified to have been unvaccinated and 2,032 to have been vaccinated, while as to 5,703 there was no information. Assuming, as may be done, from the returns of the Local Government Board, that the unvaccinated number about 5 per cent. of the population, we see that 58 per cent. of the deaths were of unvaccinated persons, instead of the 5 per cent. which we should expect if vaccination exerted no influence in the matter. But even if all the 5,703 doubtful cases be reckoned as vaccinated, the unvaccinated have still contributed 27 per cent. instead of 5 per cent. Further figures produced by Dr. Ogle show that, out of every 1,000 who died unvaccinated, 597 were under the age of 15; whilst, out of every 1,000 who died vaccinated, only 126 were under 15 years of age. Then, again, the general death-rate has only decreased 9 per cent., while the small-pox rate has fallen 72 per cent.

Dr. R. Thorne Thorne, assistant medical officer to the Local Government Board, and Dr. John H. Rauch, have also given very valuable evidence, which we hope to refer to on a future occasion.

EDINBURGH SCHOOL OF MEDICINE FOR WOMEN.

On November 2nd Lord Kyllachy gave judgment in the action at the instance of Miss Grace Ross Cadell and Miss Martha Georgina Isabella Cadell against the Executive Committee of the Edinburgh School of Medicine for Women for declarator that they were entitled to readmission to the school as professional students, to complete their course of study, or otherwise that a payment of £500 should be made to each of the pursuers. Counsel for the pursuers asked for a judgment, affirming that there was a definite contract between the ladies and the Committee, and to finding that the defenders had broken the contract, and that the pursuers were entitled to damages for breach of contract. Counsel for the defenders maintained that the contract was a progressive one, and the arrangements between the defenders and the pursuers merely tentative. Lord Kyllachy, having taken the case *ad avizandum*, has concluded in favour of the pursuers, and assessed the damages at the sum of £50 each, which he thought would probably pay their pecuniary loss and sufficiently mark the sense which he entertained of the wrong they had sustained. In giving judgment his lordship said that the pursuers were two young ladies, aged 23 and 30 respectively, who had been, in fact, expelled from what was known as the Edinburgh School of Medicine for Women, and who had been so in the middle of their curriculum, and who complained of this expulsion as unwarranted, and as constituting a breach of the contract between them and the Executive Committee. Although the expulsion complained of was the act, in the first instance, of only two members of the Committee, no question was raised as to the responsibility of the whole Committee. The questions at issue were, first, was there a contract between the pursuers and the defenders whereby the latter undertook to provide the pursuers with a full curriculum extending over four years? and, secondly, did the defenders, by refusing to read with the pursuers after the close of the second year commit a breach of their contract; or were they, on the other hand, justified in what they did? Having considered the proof which was led before him last session, and heard counsel, he had formed the opinion that upon both those points his judgment must be for the pursuers. There had, he thought, been a contract, and the dismissal or expulsion involved a breach of that contract, for which the defenders were answerable. As to the contract, he based his judgment largely on the terms of the amended prospectus of 1887. By that time the proposals were not tentative, but full arrangements had been made; a committee had been organised, pupils had been secured, and, as he read it, the prospectus contained in express terms an offer or undertaking to provide a full and complete curriculum, extending over four years, the classes for each year being specified more or less definitely. What, on the other hand, were the counter obligations of the pursuers? As expressed in the prospectus, they were simply (1) to pay certain fees and (2) to conform in all respects to the regulations enforced from time to time. He also assumed what, of course, was clear enough, that the pursuers and the other ladies were bound to conduct themselves with propriety, to maintain order in the several classes, and to treat with due politeness the lecturers and officials. They were not, in his opinion, bound to abstain from criticism of the arrangements; they were entitled to be dissatisfied with these arrangements, and to express their dissatisfaction. They were not children sent to school by their parents, but grown-up women, who were providing themselves with medical education which the defenders had agreed to furnish on specified terms. In particular, the lady students were not bound to submit to be lectured by the organising secretary, still less to be insulted by her. If occasion arose they were as much entitled to complain of and to her as she was entitled to complain of and to them. Nor could the contract of parties be altered, or their relations changed, by the defenders subsequently conferring upon the organising secretary the somewhat ambitious title of "Dean." Such being the contract, the next question was whether the defenders had broken it, or rather whether they had established that the pursuers broke their part of it, so as to entitle the defenders to put an end to it, which they admittedly did. With regard to this, it was to be observed, first, that the defenders did not dismiss the pursuers on the ground of any alleged fault. When the pursuers had been dismissed and asked an explanation, they were informed that no reason would be given. It was only now that the defenders had advanced the plea that the conduct of the pursuers had been such as to warrant their dismissal. In view of the more important evidence which had been led to establish this plea, his lordship's opinion was that the pursuers were in the right, and that they were certainly within their rights so far as regarded their conduct with the defenders; and, moreover, that they acted in every respect as became young ladies. In respect of this, Miss Jex-Blake was entirely in the wrong. He therefore considered that the defenders had entirely failed to justify their procedure by reference to specific instances, while he attached little value to more general evidence of grumbling and the like, which was obviously much exaggerated and highly coloured. The truth was that Miss Jex-Blake mistook and overrated her position, and, by demanding too much, perhaps failed to receive the consideration to which she was well entitled. It was possible that the young ladies sometimes forgot, under the provocation of her masterful ways, how much they owed her, and how much a title she had to their consideration and gratitude. He had only to add that he did not think the pursuers had suffered in their character. His lordship accordingly gave decree for the pursuers, with damages as stated above, and expenses.

The Dental Hospital of London.—The annual dinner of the staff and past and present students will be held on Saturday, November 30th, at the Holborn Restaurant, under the presidency of Mr. Christopher Heath. Gentlemen either now or formerly connected with the hospital or medical school, who may through inadvertence not have received special notice, and who desire to be present, are requested to communicate with the Dean at the Dental Hospital, 40, Leicester Square.

Richmond, Whitworth, and Hardwicke Hospitals Dinner.—The first old pupils' dinner of the Richmond, Whitworth, and Hardwicke Hospitals took place on the evening of October 30th in the Ancient Concert Rooms, Dublin, under the presidency of Dr. S. Gordon. The guest of the evening was Sir John Banks, K.C.B., the senior physician. The company numbered close upon 130, and included many of the leading men in the profession. The toast of Sir John Banks was received with three times three, and was responded to amid great enthusiasm. The other speakers were Professor Purser, Mr. Thomson, Sir W. Stokes, the Provost T.C.D., Mr. Dickson, M.P., and Dr. Moffett, President of Queen's College, Galway.

ASSOCIATION INTELLIGENCE.

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members, in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the office.

NOTICE OF QUARTERLY MEETINGS FOR 1890. ELECTION OF MEMBERS.

MEETINGS of the Council will be held on January 15th, April 16th, July 16th, and October 15th, 1890. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting, namely, December 25th, March 27th, June 25th, and September 4th, 1890.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member the by Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No member can be elected by a Branch Council unless his name has been inserted in the circular summoning the meeting at which he seeks election.

FRANCIS FOWKE, *General Secretary.*

NOTICES OF BRANCH MEETINGS intended for insertion in the JOURNAL of the current week should be forwarded, addressed to the Editor, so as to reach the office not later than mid-day Wednesday of that week.

BRANCH MEETINGS TO BE HELD.

GLOUCESTERSHIRE BRANCH.—The next meeting will be held at the General Infirmary, Gloucester, on Tuesday, November 18th, at 6.30 P.M., under the presidency of H. E. Waddy, Esq. Agenda: 1. Presidential Address. 2. *a*, Cases of Evisceration (Mules's Operation); *b*, Cases of Suction Operation for Lamellar Cataract; *c*, A Case of Buphthalmos (the patients themselves will be shown), by E. D. Bowers, Esq. The supper will take place at the Bell Hotel, at 8.15 P.M.; tickets 3s. 6d. each, exclusive of wine.—G. ARTHUR CARDEW, Honorary Secretary, Bayshill Villas, Cheltenham.

METROPOLITAN COUNTIES BRANCH: EAST LONDON AND SOUTH ESSEX DISTRICT.—The next meeting will be held, by the kind invitation of Dr. Adams, at Brooke House, Upper Clapton, on Thursday, Nov. 21st, at 8.30 P.M. A demonstration of interesting cases of skin diseases will be given by Stephen Mackenzie, M.D. Visitors will be welcomed.—J. W. HUNT, Honorary Secretary, 101, Queen's Road, Dalston.

METROPOLITAN COUNTIES BRANCH: SOUTH LONDON DISTRICT.—A special meeting of the above District will be held at Bethlem Royal Hospital, St. George's Road, S.E., on Wednesday, November 13th, at 8.30 P.M.; Dr. Frederick Taylor, Vice-President of the District, in the chair. A discussion, opened by Mr. H. Nelson Hardy, will take place on the resolutions presented to the annual meeting of the Association at Leeds in August last by Dr. Rentoul, of Liverpool.—R. PERCY SMITH, Honorary Secretary, Bethlem Royal Hospital, S.E.

SHROPSHIRE AND MID WALES BRANCH.—A special general meeting will be held at the Salop Infirmary, on Tuesday, November 19th, at 3 P.M., for the discussion of Dr. Rentoul's scheme for correcting the abuse of the medical charities. Dr. Cureton will read a paper on the subject to open the discussion.

SOUTHERN BRANCH: SOUTH WILTS DISTRICT.—The annual meeting of this District (postponed from July last) will be held on Wednesday, November 13th, at the Angel Hotel, Salisbury, at 2 o'clock. The business will be as follows: 1. Statement of accounts. 2. Election of officers, and general business. 3. Mr. Kelland will move that in future all officers be elected biannually. Papers and communications will be read as follows: Two Cases of Recovery from Severe Injury to the Elbow-Joint: Mr. Wilkes. Microscopic Specimens from the Spinal Cord in a Case of Hydrophobia: Mr. Wilkes. The Notification of Diseases Act: Mr. Kelland. The Lunacy Acts Amendment Act, 1889; its Origin and Scope: Mr. Manning. Luncheon will be provided at 1 o'clock, at 3s. 6d. a head, not to include wine or ale. Members intending to be present to give notice to H. J. MANNING, Honorary Secretary, Laverstock House, Salisbury.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT.—The next meeting of the above District will be held at Canterbury on Thursday, November 28th. Mr. Schön, of Bridge, in the chair. All communications to be sent to the Honorary Secretary, W. J. TYSON, 10, Langhorne Gardens, Folkestone

SOUTH-EASTERN BRANCH: EAST AND WEST SUSSEX DISTRICTS.—A conjoint meeting of the East and West Sussex Districts of the South-Eastern Branch will be held at the Marine Hotel, Worthing, on Thursday, November 28th, at 3.30 P.M.; Mr. G. B. Collet in the chair. The following papers will be read: Dr. Angel Money, on Nitrate of Pilocarpin and Naphthalin; their Use in Infantile Therapeutics. Dr. Herbert R. Spencer, on Abdominal Palpation in Pregnancy. Gentlemen desiring to make communications to the meeting will kindly send word as soon as possible to the Honorary Secretary, W. AYTON GOSTLING, M.D., Barningham, West Worthing.

SOUTH-EASTERN BRANCH: WEST KENT DISTRICT.—The next meeting of the above District will be held at the West Kent General Hospital, Maidstone, on Thursday, November 21st, at 3.30 P.M., Dr. White in the chair. Papers to be read: 1. Dr. Adam: A few remarks upon some of the more important Changes which will be effected by the Lunacy Acts Amendment Act, 1889. 2. F. Treves, Esq.: The Treatment of Prolapse of the Rectum. 3. Dr. Oliver: Notes of a Case of Congenital Defect of the Urinary Organs and Rectum. The dinner will take place at the Star Hotel at 6.30 P.M.; charge 6s. 6d., exclusive of wine. To facilitate the arrangements gentlemen who intend to dine are particularly requested to signify their intention to the Chairman, Dr. White, 7, Clarendon Place, Maidstone, not later than November 19th. All members of the South-Eastern Branch are entitled to attend this meeting and to introduce friends.—A. W. NANKIVELL, F.R.C.S., Honorary Secretary of the District, St. Bartholomew's Hospital, Chatham.

SOUTH-WESTERN BRANCH.—A special and intermediate meeting of the Branch will be held at the Royal Eye Infirmary, Millbay Road, Plymouth, on Wednesday, November 20th, at 11.30 A.M., for the following purposes: 1. By request of the Council of the Association, to consider the suggestions of Dr. Rentoul, of Liverpool, regarding the Reform of the Out-patient Departments of Medical Charities, etc., as published in the JOURNAL of July 27th, 1889, p. 219. 2. Papers or Notes of Cases; Exhibition of Cases, Specimens, etc. Luncheon will be provided at the Lockyer Restaurant, at 2 P.M., at 2s. 6d. a head. Notices of papers, cases, etc., to be sent to the Honorary Secretary, and members who propose to attend the meeting and luncheon are requested to inform the Honorary Secretary not later than November 16th.—P. MAURY DEAS, Honorary Secretary, Wonford House, Exeter.

STAFFORDSHIRE BRANCH.—The first general meeting of the present session will be held at the North Stafford Hotel, Stoke-on-Trent, on Thursday, November 28th. The President, Mr. Vincent Jackson, will take the chair at 3.30 P.M. —GEO. REID, General Secretary.

BATH AND BRISTOL BRANCH.

THE first ordinary meeting of the session was held at the Grand Pump Room Hotel, Bath, on Thursday evening, October 31st. W. J. FYFFE, M.D., President, in the chair; there were also present thirty-five members and one visitor.

Communications.—Dr. J. MICHELL CLARKE read a paper on Suspension in Locomotor Ataxy; the subject was well discussed by Drs. SHINGLETON SMITH, H. F. A. GOODRIDGE, E. MARKHAM SKERRITT, H. WALDO, J. E. SHAW, and the President.—Dr. J. K. SPENDER read a paper on Osteo-arthritis as an Immediate Sequel of Rheumatic Pyrexia, which gave rise to a discussion, in which Drs. SWAYNE, WALDO, MICHELL CLARKE, and Mr. S. CRADDOCK took part.—Mr. W. M. BEAUMONT brought forward The Boracic Acid Massage Treatment of Diseases of the Palpebral Conjunctiva, and gave notes of cases successfully so treated.

OXFORD AND DISTRICT BRANCH.

A GENERAL meeting of the Branch was held on Friday, October 25th, at 3 o'clock, at the Radcliffe Infirmary, present the President, Mr. SLADE BAKER and thirty-five members. The minutes of the last meeting were read and confirmed.

President's Address.—The PRESIDENT read an address on midwifery, basing his remarks on his last 900 cases.

Vote of Thanks.—The EX-PRESIDENT (Mr. A. Winkfield) proposed and the VICE-PRESIDENT (Mr. T. Cheatle) seconded, and it was carried unanimously, "That a vote of thanks be given to the President for his able and interesting address."

New Members.—Dr. Douty of the Moulsford Lunatic Asylum, and Mr. Williams of King's Sutton were elected members of the Branch.

ABERDEEN, BANFF, AND KINCARDINE BRANCH.

THE annual meeting of the Branch was held at 198, Union Street, Aberdeen, on Saturday, October 19th, at 1 P.M., when the chair was taken by the new President, Dr. JAMES FOWLER (Woodside).

Minutes and Nomination.—The minutes of the last meeting were read and approved, and Dr. Davidson (Portlethen) was nominated for ballot at the next meeting.

President's Address.—The PRESIDENT delivered an address on the Medical Aspects of Present-Day Education, in which he showed how the present educational system pressed hardly on the children in Board Schools, and instanced from his own experience some of the evil effects resulting from it. Amongst these he specially called attention to night-sweating, chorea, incon-

tinence of urine, and affections of the eyes. At the conclusion of his address a hearty vote of thanks was accorded to the President.

Report of Council.—The Council's report for the session 1888-89 stated that the membership of the Branch was still well maintained, the counties covered by it being well represented in proportion to the number of practitioners, and the numerical strength standing at 130 as compared with 126 last year. A movement had been initiated to promote some basis of union between the local societies, so far as the meetings were concerned, so that, by conjoining their force and material, more interesting and more numerously attended meetings might be held. The ordinary meetings during the year had been fairly well attended. The summer meeting, which was in 1889 held at Aboyne, was very successful, but, on account of the remoteness of the locality, less numerously attended than had been the case of late years. The Treasurer's balance sheet showed that the financial position of the Branch was more favourable than on any former occasion. This report was adopted by the meeting.

Treasurer's Balance Sheet.—The balance sheet for the year was next submitted, showing a credit balance of £20 2s. 4d. due to the Branch.

President-elect.—On the motion of Dr. FOWLER, seconded by Professor OGSTON, Dr. Ogilvie Will (Aberdeen) was chosen as President-elect for the ensuing year.

Secretaries and Treasurer.—Drs. Garden, Mackenzie Booth, and Hall were also re-elected Honorary Secretaries and Treasurer respectively.

Members of Council.—In terms of Rule viii the following three town and three country members were elected to act on the Council of the Branch for 1889-90, namely, Drs. Angus Fraser, John Urquhart, and Patrick Blaikie Smith (Aberdeen); and Dr. George (Keith), Dr. Mitchell (Old Rain), and Dr. Cran (Banchory).

Proposed Change of Meetings.—Dr. CRAN (Banchory) then moved in terms of the notice given at the summer meeting: "That the day of the ordinary meetings should be fixed for Saturday instead of Wednesday, in order to allow of the attendance of country members." After some discussion it was referred to the Council to draw up a report on the subject.

Summer Meeting, 1890.—On the motion of Dr. MOIR, Inverurie was chosen as the place of next June meeting, the members from Aberdeen being conveyed thither by coach.

Proposed Poor-Law Medical Service.—The proposal by Dr. RENTOUL, of Liverpool, anent a Poor-Law Medical Service, was, on account of want of time, remitted to the Council and a future meeting for consideration.

Annual Dinner.—After the meeting the members dined together at the Imperial Hotel, under the Presidency of Dr. Fowler, with Dr. George (Keith) as Croupier.

Demonstrations.—Demonstrations were also given in the forenoon by Professor OGSTON, Dr. BLAIKIE SMITH, and Dr. MCKENZIE DAVIDSON, at the Royal Infirmary, and these were well attended by the members from a distance.

SOUTH-EASTERN BRANCH: WEST SURREY DISTRICT.

THE autumn meeting of this District was held at the house of Dr. Daniel, at Epsom, on Thursday, October 31st, Dr. DANIEL in the chair.

Voting by Proxy.—The HONORARY SECRETARY made a communication relative to altering the rules of the Association so as allow voting by proxy at the general meetings, and asking members to join in the requisition to the Council; unanimously declined.

Communications.—Dr. DANIEL described a case where death occurred in an adult three weeks after being struck by lightning, due to hæmorrhage; also a case of Hæmophilia, where death resulted from hæmorrhage from a suppurating lymphatic gland.—Dr. BOXALL described cases and showed two specimens of Uterine Polypi; also showed Uterus and Appendices of case where death occurred within few hours after delivery, owing to rupture of varicose veins causing extravasation behind the peritoneum reaching up to kidney.—Dr. GABB related case of Fleshy Mole retained ten months after threatened miscarriage.

Dinner.—After the meeting Dr. Daniel entertained the members and visitors present at dinner.

CEYLON BRANCH.

A GENERAL meeting of this Branch was held at the Colonial Medical Library on February 15th, 1889. Present, the Hon. Dr. ANTHONISZ, M.L.C. (President), Drs. Archer, Attygalle, Brito, Eleyatamby, Keegel, Rockwood, Vanderstraaten, Vandort, VanGeyzel, Schokman, and Woutersz.

Amendments to By-laws.—In accordance with previous notice given, the HONORARY SECRETARY moved amendments of local By-laws 3, 4, and 8, 12, and repeal of By-law 2, passed at Council of February 4th, 1888, which were confirmed.

Report for 1888.—The report of the Branch for the year 1888 was read by the SECRETARY, and on a motion proposed by Dr. BRITO and seconded by Dr. ATTYGALLE, was adopted. The Honorary Treasurer undertook to circulate among the members an audited account of the Branch for the past year.

Election of Office-Bearers.—The President having vacated the chair, Dr. ARCHER was elected as chairman *pro tem.* The Council then proceeded to elect its office-bearers for this year. Proposed by Dr. VANDERSTRAATEN, seconded by Dr. VANDORT, that the Hon. Dr. Anthonisz be re-elected President; carried unanimously. The re-elected President resumed the chair.—Proposed by Dr. ANTHONISZ, seconded by Dr. VANGEYZEL, that Dr. Kynsey be elected President-elect; carried *nem. con.*—Proposed by Dr. ROCKWOOD, seconded by Dr. KEEGEL, that Drs. Loos, Vanderstraaten, and VanGeyzel be elected Vice-Presidents; carried *nem. con.*—Proposed by Dr. KEEGEL, seconded by Dr. WOUTERSZ, that Dr. Brito be elected Honorary Secretary; carried *nem. con.*—Proposed by Dr. ARCHER, seconded by Dr. VANDORT, that Dr. Macdonald be elected Honorary Treasurer; carried unanimously.—Proposed by Dr. ATTYGALLE, seconded by Dr. ELEYATAMBY, that Dr. Koch, be elected representative of the Branch on the Council of the parent Association; carried unanimously.

President's Address.—The PRESIDENT then delivered his address.—Dr. ARCHER moved a vote of thanks to be accorded to the Honourable President for the very able and thoughtful address just delivered.—Dr. VANDERSTRAATEN, in seconding the motion, said how valuable the suggestions were that were offered by the President, and how gratifying it would be to the President if they were carried into effect. He (Dr. Vanderstraaten) drew attention to the absence of all information with regard to the medical topography of the island, one of the subjects for investigation mentioned in the address. He would act upon the principle of division of labour and of organisation, so ably contended for in the address, and he moved that committees be formed for presiding over different departments of scientific and professional work. He himself would take up the department of medical topography, associating Dr. Keegel with the work. Vital statistics was placed under Dr. Eleyatamby; hygiene of food, water, etc., under Dr. Woutersz; bacteriology under the Honorary Secretary (Dr. Brito); endemic diseases under Dr. Loos; materia medica of Ceylon under Dr. Attygalle, who expressed a wish to have Mr. Jayasinghé associated with him; pharmacy under Dr. Schokman; sanitary state of Fort under Dr. Archer; sanitary state of crowded parts of town, such as Pittah, after establishment of municipal city and water supply, under Dr. VanGeyzel; preventive medicine, Dr. Asserappa; investigation of Parangi, Dr. Rockwood; insanity, Dr. Vandort.

Demonstrations.—Two visitors (Mr. F. Ballord and Hume Purdie) were introduced by the Honorary Secretary; the latter exhibited models of artificial palate made by him. The Branch has to convey its thanks to Mr. PURDIE for two specimens of Singhalese dentistry presented by him.—Dr. BRITO exhibited under the microscope sections made by him of different stages of the Parangic eruption: living and stained specimens of hæmatozoa detected by him in the blood-sucker (chameleon); and dissections of the chameleon showing the male and female parent worms *in situ*; the Parangic specimens were illustrated by beautiful diagrams made by the College artist, Mr. Silva. The specimens attracted a deal of interest, and provoked some discussion.

Conversazione.—A general *conversazione* followed, and refreshments were handed round.

AN ordinary meeting was held at the Colonial Medical Library on April 6th, present, Dr. VANGEYZEL (Vice-President) in the chair, Drs. Asserappa, Attygalle, Vandort, and Honorary Secretary. Minutes of the general meeting read and confirmed.

Papers.—Dr. SCHOKMAN'S paper on some Surgical Cases was read.—Dr. ASSERAPPA proposed a vote of thanks for the very interesting paper contributed by Dr. Schokman.—Dr. VANDORT

seconded the motion. The other papers were postponed for the next meeting.

Meeting of Council.—A meeting of the Council of the Branch was held on April 6th, present, Dr. VANGEYZEL (Vice-President) in the chair, Drs. Attygalle, Asserappa, Vandort, and Honorary Secretary. After some preliminary business the audited accounts of the Honorary Treasurer were circulated among the council members. A letter of resignation was read from Dr. Macdonald. It was resolved that the resignation be accepted. Resolved that consideration of Dr. Attygalle's motion be deferred till the arrival of President-elect.—Dr. ATTYGALLE moved that Drs. Dias, Morgan, and Thornhill be appointed non-resident members of the Council, seconded by Dr. ASSERAPPA. Unanimously carried. The CHAIRMAN proposed that Dr. Attygalle be appointed Honorary Treasurer, seconded by Dr. ASSERAPPA. Carried unanimously.—In view of By-law 17 D of the parent Association, resolved that Dr. Levira be elected representative of the Branch on the Council of the parent Association in place of Dr. Koch, and that the attention of the parent Association be drawn to the impracticability of always abiding by this by-law if it is to be understood that the representative appointed should be a resident in England.—The HONORARY SECRETARY, on behalf of Dr. HUYBERTSZ, moved "That there be an annual dinner of the Ceylon Branch of the British Medical Association; that it be held on the same day as the annual meeting of the General Council of the Association; that admission to the dinner be by subscription tickets, and that members of the Branch be allowed to invite guests on purchasing tickets for them."—Dr. ATTYGALLE proposed that Dr. Huybertsz's resolution be adopted with the following amendment, namely, to substitute the words "on the day of the annual general meeting of the Association" for "the annual meeting of the General Council of the Association."—In terms of the notice given, the HONORARY SECRETARY moved: "That the Honorary Secretary be empowered to ask each member in Ceylon to remit through the Honorary Secretary his subscription to the parent Association in the form of post office or other orders made payable at sight to the General Secretary in London." Resolved that the Honorary Secretary be empowered to ask for subscriptions in terms of his motion.

SPECIAL CORRESPONDENCE.

PARIS.

Ophthalmia Migratoria.—Tubercular Virus Transformed into Vaccine.—The Contagious Element of Tuberculosis: Sanitary Precautions.—Pseudo-Tuberculosis and Zooglœic Tuberculosis.—Vichy Water.—Cholecystenterostomy.—A New Military Dressing.—A Prophylaxis for Athrepsia and Choleraic Diarrhœa.—General News.

FORMERLY one form only of sympathetic ophthalmia was recognised. M. Deutschmann has discovered an ophthalmia migratoria (migratory ophthalmia). M. Abadie confirms the validity of the discovery, and M. Louvet minutely describes this form of ophthalmia in a memoir on the subject. M. Deutschmann injected aspergilla spores into the optic nerve or vitreous body of a rabbit. He used a 75 per cent. solution of sodium chloride, in which the spores were held in suspension. A small papule appeared on the injected eye, and the other one quickly presented the same appearance. Microscopic examination showed that without germinating the injected spores had produced inflammation, neuritis, and perineuritis of the optic nerve and the chiasma. The spores were observed near the spot where they had been injected intact, and surrounded by pus. These experiments indicate that inflammation can be transmitted by the optic nerve from one eye to the other. In order to ascertain the exact *rôle* of the optic nerve in the transmission of sympathetic ophthalmia, M. Deutschmann injected one drop of a mixture of croton and olive oil at 1-20 per cent.; the animal died eighteen hours afterwards. Microscopic examination showed that the mixture was diffused along the left optic nerve and its sheath, reaching the chiasma. In these instances migratory ophthalmia is produced by chemical and irritating substances. Aseptic substances do not produce it. In another series of researches M. Deutschmann injected cultivation fluid of staphylococcus pyogenes aureus. Two drops of this fluid diluted with water, injected into the vitreous body of a rabbit, was followed by death on the third day; the animal exhibited symptoms of meningitis. Before death the pupil was a bright red colour. The vessels were dilated and sinuous. Meningitis was avoided in a further series by diluting the fluid injected. The animals died from general infection, but sympathetic ophthalmia was distinctly evident. M. Deutschmann has published notes on sympathetic ophthalmia in which microscopic examination demonstrated the presence of pathogenic microbes in the section of the nerve attached to the enucleated eye, also in the sympathetic. These microbes belong to the class staphylococcus pyogenes. In another case M. Deutschmann extracted by puncture fluid from the anterior chamber of the sympathetic eye; this was cultivated, and the same microbe was found. The treatment consists of enucleation of the affected eye, puncture of the sympathetic eye, and mercurial friction.

M. Daremberg has made a series of experiments on the lower animals which inspire him with the hope of eventually obtaining a prophylactic vaccine for tuberculosis. He observed, during his researches, that oil or fatty substances given to the animals under experiment enables them to resist the tubercular infection when the virus is inoculated under the skin; glycogen had the opposite effect. When the virus is passed directly into the blood death is inevitable. Cod liver oil is only useful when the entire organism is not infected by the tubercular virus; it is a protective agent, not a curative. In all forms of phthisis strengthening food and tonics help the economy to withstand the influence of the poisons formed in the stomach and intestines by abnormal ferments; they also facilitate the elimination by the kidneys, skin, etc., of the poisons resulting from defective nutrition found in the cells of different organs. The evolution of tuberculosis can in some animals be rendered slower by gradually accustoming them to the influence of tubercular virus, inoculating under the skin a small quantity of sterile tuberculosis cultivation before inoculating the deadly one; spinal medulla removed from an animal dead of phthisis reduced to a pulp, and used for inoculation, has also this effect. M. Daremberg concludes from these researches that tubercular virus can be treated like mineral or organic poison; it can be increased or decreased; also that the animal economy can be protected more or less against the action of tubercular virus. With these data acquired he foresees the day when he will transform tubercular virus into tubercular vaccine.

M. Villemin, in a report read before the French Academy on the prophylaxis of tuberculosis, states that the most frequent and direct source of contagion is the sputa of phthisical patients. These are, in the fresh state, comparatively harmless, but are excessively dangerous when desiccated and in a pulverised state. The excrement of phthisical patients also contains the contagious principle. M. Villemin recommends that fluids, not dry substances like sand or cinders, should be put in spittoons; the contents of spittoons should be burned, not emptied into dustbins, dungheaps, gardens, or yards. It is highly important that they be thoroughly cleansed with scalding water. Linen soiled by phthisical patients should immediately on removal be plunged into boiling water, and kept immersed in it some time before sending it to the laundress; thus the sputa and the stains are not allowed to dry and become powdery. Rooms in hotels, villas, etc., in localities frequented by phthisical patients should be furnished in such a way that they can be easily disinfected. M. Villemin also desires that the sale of flesh of bovine animals dead from phthisis be forbidden by the State. Tuberculous mothers, he says, should not suckle their children.

M. Nocard, a few months ago, read before the Biological Society a paper on A New Form of Zooglœic Tuberculosis in a Cow. Some of its sputa was injected into a guinea-pig, and produced zooglœic tuberculosis. The cow was killed, but no special lesion was observed, only chronic bronchitis. The bronchial tubes were dilated, and contained muco-pus. M. Nocard adopts MM. Grancher and Ledoux-Lebard's opinion, who consider the pseudo-tuberculosis observed in guinea-pigs and rabbits by MM. Charrin and Roger, also by M. Dor and M. Nocard, to be identical with the zooglœic tuberculosis discovered by MM. Malassez and Vignal.

M. F. Poucet, Senior Surgeon to the Hôtel Dieu Hospital at Vichy, has analysed the mineral water known as Vichy water. MM. Mallat, Cornil, Chantemesse, and Fremont detected some time since microbes in Vichy water; but M. Miguel affirmed that water drawn directly from springs not in contact with atmospheric dust nor neighbouring impure water does not contain either bacteria or germs. M. Poucet states, towards the end of the year, when there are few visitors, and consequently less dust circulating round the

springs, his analytical researches of this water enabled him to detect the presence of a small micrococcus, about twenty to a drop. M. Poucet rejects the supposition that this microbe can influence the digestive functions.

At a recent meeting of the Académie de Médecine, M. Terrier described an operation of cholecystenterostomy he performed for permanent obstruction by a calculus of the choladic canal. M. Terrier is the first French surgeon who has performed this operation. He first punctures the biliary vesicle, and sews this to the intestines by means of several sutures; he then punctures the vesicle and then the intestine. The stools were coloured two days after the operation, and a month after the patient, a woman, was cured.

M. Patein has invented a dressing he calls "a preliminary military dressing," which can be used on the battle-field to prevent hæmorrhage, and thus enable the wounded to wait until medical help arrives without immediate death occurring. M. Chauvel, at a recent meeting of the Surgical Society, reported on the merits of this dressing. He considers that it is too cumbersome. Soldiers could not carry it—it weighs 150 grammes—neither could they apply it. Its use might in some instances save the wounded from dying whilst waiting for medical care. It consists of ten antiseptic linen compresses, an antiseptic linen bandage, and an india-rubber bandage, one side of which is covered with plaster. This bandage, unless used by the initiated, might do harm.

M. le Docteur José Triano, of Colombia, asserts that a drop of balsam of copaiba, placed on the umbilical cord of new-born infants after section, protects them from athrepsia and choleraic diarrhœa. It acts as a vaccine, and is a certain prophylaxis for these affections. Previous to Dr. Triano's discovery, the infant mortality resulting from them in Colombia, like in France, was considerable, but now they have almost disappeared.

M. Richet, the well-known surgeon, has sent to the Minister of Public Instruction his resignation as hospital surgeon and clinical lecturer to the hospital of the Hôtel Dieu. M. Richet has reached his seventieth year, and has for some years ceased to attend to his hospital practice. M. Le Dentu has of recent years assumed the duties and responsibilities of the honourable and honorary post.

The Société Médicale des Hôpitaux has received a donation of £40 from Mme. Adèle Vincent, to be awarded as a prize for the best work on angina pectoris and arterial sclerosis.

The danger of indiscriminate hypnotism is attracting public attention. The Paris *Temps* records two instances which prove the truth of the old axiom, "It is best not to play with edged tools." At Helsinborg a medical student summoned a medical man because he hypnotised him several times without his permission. His health was injured; his mental faculties were impaired. Several witnesses were called to prove the truth of his assertions. These contradicted each other, and made such startling assertions that nothing could be gathered from their evidence. A medical man then appeared, who stated that his *confrère* had hypnotised all the witnesses and suggested to them what they were to say. A few days ago a party of young men were chatting and laughing at a restaurant. One among them said that he could hypnotise. A lady present consented to undergo the operation. Though the hypnotiser was an amateur, he succeeded so well that the girl could not be roused. She was removed to a chemist's, where, after two hours of energetic treatment, she awoke. Her companions with her were all taken to the police station, but, the commissary of police not considering the practice of hypnotisng to be a misdemeanour, set free the hypnotiser and hypnotised.

The friends and pupils of the late Professor Ricord wish the Hôpital du Midi to be called Hôpital Ricord. To this hospital the deceased surgeon has bequeathed his extensive scientific library; to the Académie de Médecine he has left £400, to the Surgical Society £250 and to the Association Générale de Secours Mutuels £400.

VIENNA.

Creolin in Diseases of Children.—Local Treatment of Eczema.—After-effects of Injections of Insoluble Preparations of Mercury.—Hydrastis Canadensis in Membranous Dysmenorrhœa.—A New Operation for Incontinence of Urine.

Dr. Schwinz, of Prague, in a recent number of the *Casopis Lékaru Ceskych*, gives some important details as to the use of creolin in the Czech Foundling Hospital, of which he is director. The affections in which he tried the drug were the following: 1. Ophthalmo-blennorrhœa neonatorum: In 10 cases irrigations of a 1 per cent. solution of creolin were tried; only 2 mild cases recovered in from four to six days. In the other 8 cases the remedy failed, even when used for four or five weeks, so that the usual method (boracic acid with the nitrate of silver) had to be resorted to. It was evident that the irrigations of creolin caused greater pain than the instillation of a from 1 to 2 per cent. solution of the nitrate of silver. 2. Thrush and Bendar's Aphthæ: In 11 cases in which the use of the chlorate and the permanganate of potassium, as well as boracic acid, etc., had formerly proved futile, washing of the mouth and pharynx with a 1 per cent. solution of creolin for from five to seven days resulted in complete cure. 3. Omphalitis of Newborn Children: In all 4 cases a complete cure was effected in four days by rubbing the navel and the surrounding parts with pure creolin. 4. Erysipelas of the Navel: The affected parts were rubbed twice a day with pure creolin. The effect was excellent, and although the application was continued for about six days, in none of the cases did symptoms of poisoning occur. 5. Acute Gastro-enteritis: In 9 cases the drug was used as follows: ℞ Creolini from 2 to 3 drops; cinnamon water, 80 grammes; syrupus altheæ, 20 grammes. S., a coffeespoonful every hour. In the case of older children: ℞ Creolini from 0.5 to 1 gramme; white sugar, elæosacchari fenic, āā 2.5 grammes; M. fiant pulveres Mitte 10. D.S. from one to two powders a day. In general the results were very satisfactory, the only untoward symptom observed being vomiting, which occurrred in some infants at the breast. 6. Creolin proved very valuable in surgical cases in quite young children in which carbolic acid and sublimate could not be used. A solution from $\frac{1}{2}$ to 1 per cent. was quite sufficient for disinfection of the field of operation, the wound, etc. Recovery occurred very rapidly. Neither erythema nor eczema was observed. The author, among other things, mentions the case of an excessively large cephalhæmatoma in a child 8 days old, in which healing by first intention occurred within five days after irrigation of the cavity with a little of a $\frac{1}{4}$ per cent. solution of creolin; the wound was united by four sutures, and a creolin dressing was applied.

At the recent Congress of the German Dermatological Society at Prague, Professor Pick read a paper on the local treatment of eczema. He used salicylic soap plaster, which contained from 5 to 10 per cent. of salicylic acid; it was applied to the affected parts, and left there for several days. In slight cases amelioration took place within eight days, and desquamation came on in severe cases; this lasted from fourteen days to three weeks. The plaster was then taken off, and a 10 per cent. salicylic gelatine was applied. The treatment in the case of moist eczemata was exactly the same. In the papulous form, and when the disease was in the squamous stage when it first came under observation, the salicylic gelatine was at once resorted to. Besides its excellent results, the method had great advantages. The troublesome application of plasters was reduced to a minimum; the dressing did not require to be so frequently changed, and the patient was not prevented from doing his daily business.

At the same Congress Dr. Lesser, of Leipsic, read a report on the after effects of injections of insoluble mercurial preparations. Among 500 injections of such substances (calomel, hydrargyrum, oxydatum flavum, hydrargyrum salicylicum, tannicum, grey oil) intestinal disturbances and dysenteric conditions had occurred twelve times. In three cases symptoms of embolic pulmonary infarction supervened immediately after the intra-muscular injections. The symptoms were irritative cough, cyanosis, and pains in the back. These conditions were probably to be explained by the fact that the bulk of the injection had penetrated into one of the large veins. The danger in the case of injection of insoluble salts of mercury lay in the fact that a deposit of mercury was established in the body, from which it penetrated slowly, but constantly, into the organism. Furthermore, in the case of the occurrence of symptoms of poisoning, the conveyance of mercury to the organism could not always be immediately discontinued, as, for instance, in the case of the inunction cure, or in that of the administration of soluble mercurial salts.

Dr. F. Jordan, of Buda Pesth, in a recent number of the *Pester medicinisch-chirurgische Presse*, illustrates the effect of the fluid extract of hydrastis Canadensis in membranous dysmenorrhœa by the following case. A nullipara, aged 35, who had had regular profuse menstruation for from eight to nine days since the age of 12, was attacked with very severe hæmorrhage which lasted for eight days, after a slight injury sustained in jumping out of window. Since that time she had suffered the most intense pains at each period, and flesh-like pieces were expelled, which were

recognised as detached uterine mucous membrane. From 1872 to 1888 she suffered from severe pains during menstruation, which subsided about the seventh day, when the hæmorrhage suddenly stopped. After a period of remission, which lasted about six hours, the pains came on again with greater intensity, assuming the character of real *dolores conquassantes*, and only ceased when the patient had a sensation as if something had slipped down in her abdomen. The hæmorrhage recurred, and usually lasted for about five days. Treatment of various kinds was tried in vain. In January, 1888, Dr. Jordan had recourse to hydrastis Canadensis, of which 25 drops twice a day were given at each hæmorrhage. The result was that there was only slight hæmorrhage, lasting from three to four days, and very slight pain. Later on the patient began to take the remedy eight days before the hæmorrhage began, when it lasted only three days, and the pain became still less. The patient was able to leave her bed during menstruation without pain and hæmorrhage becoming augmented.

Dr. R. Gersuny, of Vienna, who some time ago transplanted a rabbit's nerve into Professor von Fleischl's arm, has recently devised a new operation for incontinence of urine. In a case of epispadias in a girl, the urethra admitted the little finger, and had the form of a funnel, 1 centimètre long; the clitoris was cleft; there was complete incontinence of the urine. At the age of 14 years the mucous membrane corresponding to the cleft was excised from the anterior commissure of the labia up to the neck of the bladder, and the edges of the cleft were sutured. The girl was then operated on by Professor Pawlik, according to his own method, but the patient could hold her water only for an hour when sitting; on walking or standing she could not do so at all. Five years later Dr. Gersuny operated on the patient, who was then 19 years old, by laying bare the urethra as far as the arcus pudendi, twisting the external orifice of the urethra to the extent of a semicircle (180°), and suturing it in this position. The success was incomplete, and this was also the case after a second operation, in which the urethra was further twisted to the extent of 90°. Four weeks later a further twisting, to the extent of 180°, was effected. This proved completely successful. The external orifice of the urethra was turned round to the extent of one circle and a quarter (450°), and the urethra was twisted in its longitudinal axis in the form of a screw. After the last operation there was retention of urine (ischuria) for three days, so that the patient had to be catheterised. From that time she could micturate spontaneously, and the urine never passed involuntarily. The capacity of the bladder was at first from 100 to 200 cubic centimètres. Evacuation took place under strong pressure, and lasted for ten minutes. This condition improved rapidly, and after five months the patient could hold her water for five hours in any position; then she was attacked with strong tenesmus, and evacuated, without effort, half a litre of urine; the act, however, still required about four minutes. The progressive improvement was the result of the gradual dilatation of the bladder and the strengthening of the detrusor urinæ. The operation of Dr. Gersuny is indicated in those cases in which the sphincter of the bladder is quite powerless and the detrusor intact.

SHEFFIELD.

Sanitary Plumbing.—Inspection of Meat.—News.

THE principal of the Technical School has been trying to interest the plumbers in the class which it is proposed to form in plumbers' work at the school. For this purpose he met a large number of the members of the Plumbers' Association, and pointed out the value the instruction to be given would be to men whose work was of so much importance to the public health. The result of the conference appears to have been satisfactory.

It is reported that the Health Committee have considered the proposal of the Sheffield Butchers' Association that a jury of three butchers and a veterinary surgeon should act with the medical officer of health in the examination of carcasses of suspicious quality. They have declined the request on the ground that the Public Health Act (1875) imposed the duty and responsibility of examining carcasses, and seizing such as might appear unfit for food on the medical officer of health and meat inspector.

Mr. Arthur Jackson, after a keen contest, has been successful in retaining his seat in the Town Council. His medical brethren, considering the work he has done in the Health Committee and in other ways, resented the factious opposition to his return which sprung up almost at the last moment.

The annual report of the centre of the St. John Ambulance Association testifies to the work still progressing. Since the formation of the centre there have been 3,000 passes.

Through the will of the late Mr. J. H. Hunter, legacies have been bequeathed as follows: General Infirmary, £500; Public Hospital Dispensary, £250; Jessop Hospital for Women, £250; Children's Hospital, £100.

LIVERPOOL.

University College: Opening of Session: Walker Engineering Laboratories.

THE formal opening of the session of University College and the Medical School took place on November 2nd, when Lord Derby distributed the prizes to the successful students. The faculty of engineering was the chief centre of interest in the annual celebration this year, in consequence of the inauguration of the splendid Walker engineering laboratory, which took place on the day mentioned. The usual introductory address to the students was delivered by Sir John Coode, President of the Institution of Civil Engineers, and had reference chiefly to railways; but it was also of value to students in other departments of learning, and contained an earnest exhortation to the cultivation of literature and languages by all who aspired to take a leading position in their profession.

The engineering laboratories have been presented by Sir Andrew B. Walker, Bart., as his jubilee gift to the city, and form part of the buildings of University College. They have been erected and equipped at a cost of £20,000, and contain all the newest appliances for the study of engineering, so as to be second to none for completeness and efficiency.

In the evening of the day of opening, a *soirée* was given in the new laboratories, and was attended by about 1,200 persons. A life-sized statue of the late Prince Leopold, by Count Gleichen, was unveiled in the hall by the Hon. Lady Walker, who afterwards formally handed over the buildings to University College and declared them to be open.

University College has not yet completed the first decade of its career, and it has grown up in a period of comparative commercial depression; but, besides possessing the full professional staff that has qualified it for affiliation with Victoria University, it already possesses two laboratories—those devoted to chemistry and engineering, constructed in accordance with the most modern designs and unsurpassed in efficiency. Another year will witness the completion of the new Royal Infirmary, when the College will have a field for the study of clinical medicine that will be one of the best appointed in existence.

CORRESPONDENCE.

THE PRACTICAL ELEMENT IN MEDICAL EDUCATION.

SIR,—It is quite evident that the practical element is conceded on all sides as being a necessary and important part in the training of medical students. The chief point of dispute appears to be when it should be begun. I think the experience of those who have had a term of pupilage before beginning their studies should not be overlooked, and an inquiry into the causes of so many remaining unqualified might throw some light upon the question.

Mr. Wheelhouse would have us produce the lesser branches of education before the trunk of more solid acquirements has been formed, and refers to a clinic with half a dozen cases of pneumonia, etc. I have no experience of such a limited field of instruction being dignified with the name of clinical instruction, and should condemn it, no matter how thoroughly the subjects be treated. But I can corroborate the statement made by Dr. Gairdner as to the number and variety of individual cases studied during each course of instruction, and, moreover, to a practical familiarity with all the common zymotic fevers; so that, as far as Glasgow is concerned, no student need plead ignorance through want of opportunity in seeing these cases.

Mr. Brindley James merely maintains what he asserted in his previous letter, and which I perfectly understand; he has expressed his opinion in different language. We are evidently both at one as to the desirability of practical training. I do not dispute the fact of there being coarse and surly M.B.'s, but as I said before this is a matter of individuality, has nothing to do with hospital experience, and unqualified men may have the same fail-

ings as he instances. Why select men evidently unfit for their profession as examples of a system? I grant that contact with the experienced practitioner influences more or less the manner and bearing in dealing with patients; but why should the hospital-trained student come into practice deficient in these qualities? In the great majority of cases he does not. The hospital physician is as courteous and considerate to his patient as could be desired, and surely he is as qualified in teaching and displaying the *suaviter in modo* as excelling in diagnosis. He is frequently a successful practitioner, and probably this is in great part due to his manner with patients. But I place the acquirement of genuine clinical work—not half a dozen cases of pneumonia, etc.—before these qualities, no matter how important, there are the lesser branches, which will grow on and become familiar afterwards; and I maintain that no man need be wholly ignorant of them who is at all adapted for his profession, and who has been attentive to his studies and environment. If these qualities are not inherent in a greater or less degree in the individual they can never be produced. No amount of pupilage will produce tact or make a gentleman. These are qualities which should be possessed by all who aspire to the medical profession; and I believe the absence of them to be the chief causes of so many unqualified men, and the discovery of their absence when it is too late one reason for unsuccessful qualified men.

Largs, N.B. JOHN M. MILLER, M.B.

THE DANGER OF CHLOROFORM AND THE SAFETY OF ETHER AS AN ANÆSTHETIC.

SIR,—I was extremely interested in reading the valuable letter from Dr. L. H. Ormsby, published in the JOURNAL of October 26th, and, with one exception, I agree with all the arguments which he advances in support of the superiority of ether to chloroform, in so far as the immediate safety of the patient is concerned. Indeed, the advantages of ether in this respect over chloroform are so palpable that some serious attempt ought to be made to control or restrict the use of chloroform. Should this desirable measure not find favour, surgeons will soon be compelled to use ether more frequently, for, as Dr. Ormsby so well points out, the laity not only read the medical journals but act upon what they read therein, and it is no unusual thing for patients to take alarm at the idea of chloroform being administered to them, and, on their own responsibility, make it a *sine quâ non* that the less dangerous anæsthetic be used, and specify ether. It will not be long before those who, in the face of all that has now been written on this very important question, still use chloroform as a routine anæsthetic will incur criminal responsibility, and can scarcely expect to escape from severe censure, if nothing more, at an inquiry into an "unhappy event," of which too many such have unfortunately been recently recorded.

I am bound to state, speaking from my own experience, that Dr. Ormsby, in his enthusiastic advocacy of ether, exaggerates its many claims to our confidence when he says "I have seen far more excitement follow the inhalation of chloroform than I have ever seen in the case of that of ether;" but, at most, this excitement is, in the majority of cases, an inconvenience, though in a few, such as, for instance, an aneurysm, it would be decidedly dangerous. But these few objections should have little weight against the manifold advantages which follow the routine use of ether.—I am, etc.,

HENRY DAVIS, M.R.C.S.,
Teacher and Administrator of Anæsthetics at
St. Mary's and the National Dental Hospitals.

Queen Anne Street, W.

THE ROMAN WATER SUPPLY.

SIR,—Year after year I am consulted by travellers visiting Rome, who tell me that before leaving home they had been warned not to drink any water whilst residing in Rome, and in not a few instances these warnings have come from friends of my own, of high rank in the profession.

I can only suppose that some general prohibition or warning about the danger of drinking the water of foreign cities has been made to include Rome, for it has been known for many generations that the water supply of Rome is among the best and purest in the world; a fact for which the modern Italians can take no credit, as it is due to the magnificent aqueducts of the ancient Romans.

The chief water supply of Rome is derived from the Marcia, which is carried from the neighbourhood of Subiaco (35 miles), where it has its chief source in an uncontaminated mountain lake. It is so cold as to require no ice, even in the greatest heat of summer. The sole objection to it is its hardness (27.5°) which is, however mainly due to carbonate of lime; this is to a large extent got rid of in transit, being held in very feeble solution.

The next best water is the Vergine, better known as the Trevi, which is brought from a distance of eight miles. The Trevi has its apparent source at Sulane, and is really the filtration, through rock formations of the Alban Mount, of the lakes of Albano and Nemi, which occupy the craters of extinct volcanoes. Alike amongst the vulgar and the learned, it has always been held in high estimation, and even now houses supplied with it are at a premium in the market. It is less hard than the Marcia (18°) and is of high organic purity. The greater softness of this water accounts for the saying of Pliny: "Marcia potu, Vergine tactu."

The Aqua Felice, so-called after Pope Sixtus V (Cardinal Felice), who recovered it by reconstructing the ruins of the old Marcian and Claudian aqueducts, is a very pure water, and the Aqua Paola, which is chiefly used in Trastevere, is the water of the Lake of Brucciano (another extinct crater), thirty miles distant.

Such are the chief sources of water supply to modern Rome, and by their agency the city possesses probably the largest and purest supply of water in the world, amounting, as calculated on the population on December 31st, 1885, to 674 litres per person per twenty-four hours; a continuous supply uninterrupted by day or night, and yet through some extraordinary misconception visitors are warned by the profession at home not to drink Roman water, and drink in consequence, to their hurt, Roman wines; these are nowadays notoriously adulterated with bad spirit and other abominations, with results well known at the Manicomio, or municipal lunatic asylum.

The following analysis, recently made by Professor Cannizaro Mauro and colleagues, by order of the Government, will show how unfounded are the suspicions entertained of the Roman water.

Per 100,000 Parts of Water.

—	Value Limits.	Vergine.	Felice.	Paola.	Marcia.
CaO.	11-12	8.52	13.72	3.91	11.0
Mg O.	4.0	1.87	2.77	1.88	3.27
Anhydrous S O_3	2-6 3	1.7	2.0	2.09	0.26
Cl.	0.2-0.8	1.28	1.001	3.7	0.39
Anhydrous $N_2 O_5$	0.4	0.8	0.6	0.2	0.27
,, $N_2 O_3$	0-trace	trace	trace	—	—
Ammonia	0-trace	—	—	trace	—
Total residue dried at 180°	10-50	36.9	43.8	27.80	28.6
Total hardness in French (°) ...	28 32	18.3	29.3	11.8	27.5
Quantity of O. consumed in Tidy's process, third hour	0.05-0.25	0.0096	0.0064	0.0104	0.0032

I may add that while the cholera death-rate in 1837 was 5,419; in 1854-5. 1,646; and in 1867, 2,040; in 1873 it fell to 22, and in 1884, to 5; and this notwithstanding the enormous increase in the population since Rome became the capital of Italy. It cannot be doubted that this remarkable result was largely due to the circumstance that it was in 1867 that the great Marcia Water Company reconducted to Rome and distributed throughout the city the water of that famous ancient aqueduct.

Rome. EDWARD DRUMMOND, M.D.Edin., D.P.H.Camb.

PORCINE PNEUMO-ENTERITIS AND HUMAN ENTERIC FEVER.

SIR,—In the JOURNAL of October 26th reference is made (p. 959) to a recent report of Dr. Cameron's, in which that gentleman, if not directly, certainly indirectly, implicates the pig as being the host of a disease not only allied to typhoid fever, but capable of propagating that disease in the human subject. I hope I shall not be wanting in courtesy to the members of the medical profession when I say that, having failed to prove their case in cow and human disease, Dr. Cameron has taken up the cudgels they let fall from their hands, but, instead of saddling the cow with the responsibility, he endeavours to shift the burden to the back of the pig.

If, Sir, there was any pathological relation between "swine plague" and "human typhoid," I should be the first to assist in any investigation having for its object the tracing of the origin of the latter in a disease affecting swine, but, inasmuch as swine plague is a disease peculiar to the pig, and has no analogue

amongst the eruptive fevers of any other animal, I fail to see on what grounds Dr. Cameron has based his conclusions, or shall I say suspicions?

Swine plague has existed for a long period in England and Ireland, and also in the United States of America, and attention has at different times been directed to it by members of the medical profession in both England and America; and, if I mistake not, it was by medical men that the synonyms "hog cholera" and "pig typhoid" were first applied to the malady.

In the *Veterinarian* for December, 1858, there is an account given of the disease as it occurs in America, by Dr. Sutton, of Indiana, in which the resemblance to cholera of the human subject is particularly noted.

In the *Edinburgh Veterinary Review*, vol. i, 1858-9, Dr. McDonald called attention to the disease as observed by him in an outbreak which occurred near Glasgow, and he also points out particularly those symptoms which resemble the symptoms of cholera.

In 1865 Dr. William Budd, of Clifton, in a paper read before the Royal Agricultural Society, gives the synonym of "typhoid fever of the pig" to the disease.

It was in 1878 that Dr. Klein combated the idea that swine plague bore any pathological relation to typhoid in the following sentences: "But, under any circumstances, the microscope reveals a marvellous difference in the two diseases, for in the pig typhoid these patches, whether nodules or ulcers, have absolutely nothing whatever to do with lymphatic follicles; whereas in human typhoid we find, in the first stage, round or generally oblong, prominent papulæ or patches of swollen lymph follicles surrounded by swollen mucous membrane, after which stage the swollen lymphatic patch dies and is finally discharged as a slough, leaving behind a pit-like excavation bordered by elevated overhanging mucosa." Dr. Klein also directed attention to a fact perfectly familiar to veterinary surgeons—namely, that the lesions of swine plague are located, in the vast majority of cases, in the large bowels, extending no further forward than the ileo-cæcal valve, and, indeed, showing a marked tendency to originate in the follicles grouped round its base.

If, as it is generally assumed, the micro-organism of typhoid fever finds a congenial soil for its development in filth, then such conditions were forthcoming in the surroundings of Dr. Cameron's patients; but that neither filth nor swine plague, separately or together, will produce typhoid must be patent to all who have had much experience of the combination. It has been my lot to have to deal with these combinations to as large as extent as most men, and I have never yet had the slightest reason to link swine plague and filth in causal relationship with human typhoid. Not many years ago I had to deal with an outbreak of swine plague amongst some 2,000 pigs scattered over a very limited area, and with the most filthy surroundings it is possible for the mind of men to conceive, and during the course of the enzöoty, and also in subsequent enzöotics, I have seen men, women, and children living amongst their pigs—almost with them, in some instances—and sitting down to their meals with their hands begrimed with filth, and yet not one single case of typhoid has occurred amongst these people. Moreover, I have made scores, I may say hundreds, of *post-mortem* examinations of pigs of all ages and in all stages of the disease, demonstrating the lesions to my class for hours, and have never yet suffered from any form of indisposition that could be traced to swine plague.

I am quite well aware that the evidence I have here given is of a purely negative character, but, so far as I can see, the evidence on which attempts have been made to establish a causal relationship between the two affections in question is equally negative in character.—I am, etc.,

THOMAS WALLEY.

Royal Veterinary College, Edinburgh.

THE ST. JOHN AMBULANCE ASSOCIATION.

SIR,—The question raised by Dr. Stanley Haynes in the letter in the JOURNAL of October 12th was so clearly defined by Dr. de Burgh Birch in his letter of October 26th that it is unnecessary for me to reply at any length. I am, however, anxious to assure Dr. Birch that I cordially agree with his statement of the case, and to inform him that in issuing the circular letter referred to by Dr. Haynes to the staff of the St. John Ambulance Association I was not acting on my own initiative, but in response to an official application for information which could not readily be obtained in any other manner. The time allowed for a reply was too short to permit me to make it as complete as I could have wished, but the opinion of the medical profession on the desirability of such a register as that which it is sought to obtain may be gathered from the fact that within ten days I received 114 letters from physicians and surgeons; of these, 70 signified their willingness to be enrolled, 15 could not place their names on the register as they already hold commissions, 25 expressed entire approval but were prevented by age or other private reasons from adding their names, and there were only 4 absolute refusals.

The position of the St. John Ambulance Association in relation to the Army Medical Department and the Volunteer Medical Staff Corps, as indicated by Dr. Birch, is undoubtedly the proper one, and I am sure that this is generally recognised. It must be remembered, however, that there is as yet no organisation in the country capable of meeting all the hospital requirements of such a war as might occur, though we always hope it may never happen. Let us learn something from our powerful neighbours on the continent of Europe and leave nothing to chance, and, should we have war either at home or abroad, British ambulance arrangements will be found in as complete a state as we trust our army and navy will be; and behind the Army Medical Department and the Volunteer Medical Staff Corps there will be a strong ambulance reserve of civilians ready to undertake their share of national work without dislocating or disturbing the normal hospital arrangement of the country.—I am, etc.,

South Kensington, October 29th. JOHN FURLEY.

TOXIC EFFECTS OF ATROPINE DROPS.

SIR,—In reference to a note by Dr. Tyson, of Folkestone, in the JOURNAL of October 26th, on this subject, it may be useful to state that I remember, several years ago, being cautioned by a most eminent oculist to avoid this danger by always pressing on the lachrymal duct with a finger while introducing the drops, and so preventing the passage of the solution, *viâ* posterior nares, into the stomach. I should think the precaution would be more necessary in the case of children than in that of older persons.—I am, etc.,

CHARLES W. CHALDECOTT.

Dorking, October 30th.

NAVAL AND MILITARY MEDICAL SERVICES.

THE NAVY.

THE following appointments have been made at the Admiralty:—JOHN R. CONWAY, Fleet-Surgeon to the *Eagle*, temporarily, November 23rd; HENRY W. RICKARDS, Surgeon to the *Wildfire*, additional, October 30th; FRANCIS A. JEANS, Staff-Surgeon to the *Pelican*, November 19th; CORNELIUS BRADLEY, Surgeon to the *Redpole*, November 20th; GEORGE HEWLETT, Surgeon to the *Curlew*, November 20th; A. B. TROWSDELL, Staff Surgeon to the *Australia*, November 19th; C. A. MACAULEY, Staff-Surgeon to the *Belleisle*, November 19th; R. W. ANDERSON, Surgeon to the *Australia*, November 19th; G. BATE, to Plymouth Hospital, November 19th.

Deputy Inspector-General ROBERT IRVINE died at St. Margaret's, Twickenham, on November 3rd, at the age of 65. His commissions were dated:—Surgeon, February 2nd, 1848; Staff-Surgeon, May 10th, 1856; and Fleet-Surgeon, July 13th, 1870: he retired with the honorary rank of Deputy Inspector-General, April 1st, 1881.

THE MEDICAL STAFF.

SURGEON-GENERAL WILLIAM SIM MURRAY, M.B., has been granted retired pay. Entering the service as Assistant-Surgeon, January 10th, 1851, he became Surgeon, January 28th, 1858; Surgeon-Major, January 10th, 1871; Deputy Surgeon-General, June 26th, 1877; and Surgeon-General, September 8th, 1883. At the time of his retirement he was Principal Medical Officer at Portsmouth, to which he was appointed in the spring of last year. The *Army Lists* do not credit him with any war service.

Deputy Surgeon-General ROBERT WYATT MEADOWS is promotèd to be Surgeon-General, ranking as Major-General, *vice* J. A. Marston, M.D., C.B., F.R.C.S., retired. Surgeon-General Meadows's previous commissions are dated:—Assistant-Surgeon, May 26th, 1854; Surgeon, August 22nd, 1865; Surgeon-Major, March 1st, 1873; Brigade-Surgeon, November 27th, 1879; and Deputy Surgeon-General, February 6th, 1883. He served (says Hart's *Army List*) with the 9th Regiment in the Crimea from October, 1854, including the siege and fall of Sebastopol, and assault of the batteries on June 18th (medal with clasp, and Turkish medal). The official *Army List* says he was also at Inkerman, but this seems to be erroneous, as he has no clasp for that battle. He was also in the Afghan war in 1879-80, and was present in the engagements at Ahmed Kheyl and Urzoo near Ghuznee (medal with clasp).

Brigade-Surgeon JOHN COLAHAN, M.D., is promoted to be Deputy Surgeon-General, ranking as Colonel, *vice* R. W. Meadows. Dr. Colahan's commissions date as follows—Assistant-Surgeon, May 25th, 1858; Surgeon, March 1st, 1873; Surgeon-Major, April 1st, 1873; Brigade-Surgeon, July 16th, 1884; and now Deputy Surgeon-General, October 16th, 1889. He has no war record.

Surgeon-Major FRANCIS JOHNSON, M.B., F.R.C.S.Ire., is promoted to be Brigade-Surgeon, ranking as Lieutenant-Colonel, *vice* J. Colahan, M.D. He dates as Assistant-Surgeon from March 31st, 1864; as Surgeon from March 1st, 1873; and as Surgeon-Major from April 28th, 1876. He also has had no war experience.

ARMY MEDICAL RESERVE.

SURGEON JOHN ADAM WATSON has resigned his commission, which bore date June 20th, 1888.

INDIAN MEDICAL SERVICE.

SURGEON E. S. BRANDER, Bengal Establishment, Supernumerary Civil Surgeon in medical charge of the Bara Banki district, on being relieved of the medical charge of that district, is appointed to officiate as Superintendent of the Central Prison at Agra, during the absence on deputation of Sir J. W. Tyler, K.C.I.E.

Surgeon W. W. WEBB, M.B., Bengal Establishment, Medical Officer to the Meywar Bheel Corps, and officiating Civil Surgeon of Bikanir, is granted furlough on medical certificate for two years from July 31st.

It is reported from India that a question has arisen in connection with the promotion of surgeons-major in the Indian Medical Service, to the administrative rank of brigade-surgeon, and of brigade-surgeons to that of deputy surgeons-general. Under an old rule, which had been in force for nearly a century, they claimed the right to refuse promotion, the reason being that some of them had to vacate lucrative posts on being given a step in rank. The Government of India, after fully considering the question, have passed orders under which such officers must accept promotion in their turn, and the matter has been referred to the Secretary of State for final approval.

THE VOLUNTEERS.

CHARLES S. BREWER, L.R.C.P., L.R.C.S.Edin., and JOHN EDWARD GEMMELL, L.S.A.Lond., and M.B. and M.S.Edin., have been appointed Surgeons to the Liverpool Brigade of the Royal Naval Artillery.

ROBERT CHARLES GORDON DILL, late Surgeon Army Medical Staff, is appointed Surgeon to the City of London Artillery. He entered the service January 30th, 1886, and resigned it on April 27th last.

Acting Surgeon A. REES, of the Severn Division Submarine Miners Royal Engineers, is promoted to be Surgeon.

Surgeon-Major (ranking as Major) F. CADELL, Queen's Rifle Volunteer Brigade Royal Scots (late the 1st Edinburgh), has resigned his commission, with permission to retain his rank and uniform; he dated as Surgeon from November 21st, 1870, and as Surgeon-Major from February 1st, 1889.

Surgeon-Major P. P. GILES, of 1st Hereford Volunteers, is appointed Brigade-Surgeon (ranking as Lieutenant-Colonel) to the Welsh Border Brigade of Infantry Volunteers.

RANK AND TITLES.

INDIAN MEDICAL SERVICE writes: I am serving abroad in a large Indian station, and have thus had an opportunity of comparing notes with many brother officers on the effect of Lord Camperdown's Committee on the medical services. The general feeling is that of disappointment and a conviction that the Committee has put forward some slight concessions as a sop to, for the time, allay the intensity of our present discontent without attempting or desiring once for all to wipe out root and branch the numerous grievances their deliberations could not have failed to discover. Especially is this the case with respect to the subject of the rank and titles of officers. Here the almost unanimous voice of the service is calmly ignored, and we are expected to accept with gratitude a new and cumbersome nomenclature, which will, equally with the now existing designations, fail to convey any definite meaning either in the ranks of the army itself or to the general public. The fact that it would be impossible to make use of these titles colloquially, socially, or in any form except upon an official docket is of itself quite sufficient to condemn them utterly. Double titles are not uncommon in the army. We have Lieutenant-Colonel, Major-General, and the like, but the colloquial use of even a double title is opposed to the genius of the English language, and, in consequence, the possessors of such titles are on all occasions spoken of and addressed as "Colonel" or "General" unless when written to officially. Were this unwritten law in the army followed with the proposed titles to be given to medical officers, it would be possible to make use of them in everyday life, but the objection would at once be raised (did a Surgeon-Lieutenant-Colonel drop the Surgeon-Lieutenant, and follow the custom of an officer of similar rank in the combatant branch by permitting himself to be addressed as Colonel) that he was desirous of sinking his profession with a view to conceal the branch of the service to which he belonged.

Nothing short of the formation of the medical services into a Royal Corps and the granting of military titles pure and simple after the lines of the Royal Engineers will produce an efficient and contented service. Short of this, any rank, however exalted, remains no rank at all, and fails to carry with it any military respect. Imagine the position of the Royal Engineers were they suddenly to be given the titles of "Engineer-Captain," "Engineer-Major," "Engineer-Lieutenant-Colonel," etc. I for one should consider their military rank as very much wanting the true ring, and Engineer officers would shortly find their position in the army to be a very anomalous one.

Our professional civil brethren should understand that this desire on our part for military rank and titles is really a struggle to maintain the dignity of our common profession owing to the impossibility of obtaining by any other means that military respect which is a necessity if service in the army is to be performed with honour and a maintenance of self-respect. We are portions of a machine which is incapable of measuring distinction except when gauged by a military standard. A military title *per se* carries with it the military respect attached to the rank it describes, quite apart from any personal qualities of the bearer. In the medical services this is not the case, for the rest of the army steadily refuses to accept the titles borne by the medical branches as being really military titles at all, and it will continue to refuse recognition to any modification of such titles. A medical officer may thus serve his Queen and country during a lifetime, be present at a dozen battles, be wounded in some foreign clime, and yet meet with no increase of rank or popular estimation any more than if he had remained a civilian and never smelt powder or shared the hardships of a campaign. Make him an officer, with a title it does not require a special education to understand, of the Royal Corps of Surgeons, and all this will at once be changed. He will then be placed on an equal footing with the other branches of the service and capable of gaining his share of that popular respect paid to one who risks life and health in his country's cause now exclusively reserved for the so-called combatant ranks.

A Royal Corps of Surgeons on the lines I have indicated would be an honour to our common profession as much as the present military status of the medical services is a disgrace to it.

PAY OF MEDICAL STAFF IN INDIA.

IN reply to "Inquirer," the rates of consolidated Indian pay for surgeons are given in Appendices 23 and 24 of Lord Camperdown's Report as follows:

	Rs.	a.	p.
Surgeon under 5 years	317	8	0
,, in 6th year	335	12	2
,, after 6 years	433	10	2
,, ,, 10 ,, ...	451	14	5

These rates include allowances and extra pay for special charges a surgeon of the Medical Staff will finger very little of. The rates for surgeons-major are, we think, Rs.825; after 20 years' service, 1,051; and after 25 years, 1,093. The unfortunate brigade-surgeons get no increase on these rates.

LEADING ARTICLES.

A CORRESPONDENT writes: I am informed that your leading articles, etc., on the subject of army medical officers are published in pamphlet form.

*** Our articles have not been republished in pamphlet form; our correspondent has been misinformed.

EXTENSION OF AGE RETIREMENT.

JUSTITIA writes: Much hardship and injustice would result from the extension to surgeons-general of the 62 years' recommendation. Three courses seem open to Mr. Stanhope: 1. Leave age retirements as they are. 2. If surgeons-general be extended to 62, let it also apply to deputies, and the age for brigade-surgeons be 57 or 58. 3. Give money compensation to those shut out from promotion by the extended age accorded to their seniors.

EMPLOYMENT OF RETIRED OFFICERS.

SURGEON M.S. writes: The recommendations of the Committee regarding the employment of retired officers seem sensible, and uninfluenced by ulterior motives. Home service will get smaller and smaller until no appointments are left for officers on the active list; that will be bad for the service and the country. The proposal of some correspondents that retired medical officers should be employed even on active service seems absurd and incongruous in the last degree. Such a proposal, if made in the combatant ranks, would be laughed out of court.

MEDICAL OFFICERS' UNIFORM.

MEDICAL STAFF writes: Acknowledging the generous and persevering manner in which the JOURNAL has always maintained the rights and set forth the wants and aspirations of the Medical Staff, I submit the inadvisability of publishing such letters as the one received from India, on medical officers' uniform, which appeared on October 26th; evidently it was your courtesy, and not concurrence, which prompted the insertion. The service from which the letter emanated can be inferred; for it is clear the writer, in publishing such fantastic and Quixotic ideas, if nominally a military medical officer, is practically a civilian, sharing little in the spirit of the gallant Indian Medical Service, and knowing nothing at all of the military position and duties of the Medical Staff. Probably he has never considered that the latter have other than merely "medical" duties to perform, and surely never could have pictured to himself the scene of a large body of the Medical Staff Corps marching past at a royal review, headed and commanded by an individual decked out in a costume similar to that of the mate of a penny steamboat! It is not in fear of such heretical and retrograde ideas as those of your correspondent being adopted that prompts me to write, but to point out their publication is calculated to bring discredit and ridicule upon medical officers who realise they are an integral part of, and wish to identify themselves with, the army in every possible way.

*** "Medical Staff" may rely that nothing designedly calculated to weaken the position and just claims of army medical officers would knowingly appear in these columns. We have always vigorously endeavoured to maintain the military position of medical officers whether as regards status, duties, or uniform; and at the same time strenuously opposed the absurd attempts to civilianise them, whether by open foes outside or pseudo friends inside the department. In the mass of letters which reach us, while we endeavour to exclude personalities and unworthy remarks, we see no harm, but rather benefit, in occasionally publishing comments, even if although, as in the letter in question, they should be "fantastic and Quixotic." They often stimulate healthy criticism, and more clearly bring out the true bearings of a subject, as witness in this very instance. But for the "fantastic" letter of our Indian correspondent we should not have had the excellent comments of "Medical Staff;" wherein is shown the glaring absurdity and futility of attempting to deal with medical officers, even in the matter of uniform, on any other footing than as ordinary military officers. To deck out men of the stamp of Surgeons Crimmins and Le Quesne—the two latest recipients of the Victoria Cross—in a bastard uniform would indeed be an outrage on common sense and the very fitness of things; these be "good doctors" in the highest military as well as civil sense of the term. The present letter, moreover, confirms what we were already well aware of, that medical officers will not submit to any offensive process of being "ticketed" or made "guys" of under specious pretexts of distinguishing them from the rest of their army brethren.

THE UNIVERSITY OF COIMBRA.—This university completes its first century of existence next year, and there is some talk in Portugal of celebrating the occasion in a fitting manner. A Portuguese medical journal, however, says that before thinking of organising any commemorative "function" of the kind, the Government should take steps to prevent the hospital of the university from crumbling to ruins. The state of the buildings is said by our contemporary to be a "national disgrace."

HOSPITAL AND DISPENSARY MANAGEMENT.

THE NEED FOR HOSPITAL REFORM: MEETING AT BIRMINGHAM.

A MEETING of a provisional committee of medical men practising in Birmingham was held on November 4th, to consider the necessity for a reform of the present hospital system. A draft report prepared by a subcommittee was considered and accepted. It will be brought before a general meeting of the whole profession on Wednesday, November 20th.

The report points out that the original purpose of our medical charities, which was to provide medical treatment for persons who by reason of insufficient means were unable to obtain for themselves the treatment they require, had been widely departed from. The difficulty of drawing a hard-and-fast line must be great, because the fitness of an applicant depends not only upon the means and earnings usually at his or her disposal, but upon the nature of the illness and the cost of the treatment required.

Under the "ticket system" it is notorious that tickets are often given to unfit persons; are purchased either directly or indirectly by those who propose to use them, and are thus diverted from their proper purpose. Under the so-called "free system," though inquiry is usually made as to the position of the applicant, the same abuses exist. Well-to-do persons, after an accident, or requiring a surgical operation, are often to be found among the in-patients. Hospital officers acquiesce in the admission of unsuitable cases, and other medical men are not always sufficiently careful as to the status of those whom they recommend for hospital treatment. As a result, the demands made upon the hospitals are greater than they can adequately meet, and are increasing from year to year. The out-patients are often too numerous to be dealt with in a satisfactory manner, and in consequence the waiting rooms are overcrowded, patients suffering from serious maladies are kept long waiting, and adequate time cannot be given in the consulting rooms to individual cases. Greater difficulties exist as to in-patients. Through insufficiency of beds, patients requiring surgical operations are kept waiting for weeks. Cases urgently needing indoor treatment are sometimes unable to obtain it, and the stay of those admitted is undesirably shortened. The pressure on the time and energy of the medical officers tends to diminish their efficiency as teachers. The hospitals have endeavoured to meet the difficulty by appealing for additional funds, and the public have liberally responded to the appeals from time to time, but the pressure on the root of the evil, namely, the indiscriminate extension of charity, has not been attacked.

"The following table exhibits the growth of the voluntary hospital system in Birmingham during the twenty years from 1867 to 1887. The total number of cases treated by the medical charities in the year 1867 was, in round numbers, 67,000; in 1887 it was 166,000:—

*Table Showing Number of Patients Treated at the Birmingham Medical Charities in the years 1867, 1877, 1887.**

Name of Charity.	1867.	1877.	1887.
General Hospital (including Jaffray Branch	21,818	28,757	48,381
Queen's Hospital	11,490	16,117	29,211
General Dispensary	6,841	19,286	27,128
Eye Hospital	7,323	10,844	15,329
Children's Hospital	10,066	16,430	14,104
Women's Hospital	1,145	2,194	3,083
Ear and Throat Hospital	1,822	1,098	3,615
Royal Orthopædic Hospital	558	706	2,274
Skin and Lock Hospital	—	—	2,040
Dental Hospital	2,783	3,800	12,133
Homœopathic Hospital	2,400	3,669	4,365
Lying-in Charity	1,016	891	930
Medical Mission	—	3,313	4,024
Total ...	67,332	107,104	166,617
Decennial increase	—	39,772	59,513
Total increase	—	—	99,285
Decennial increase per cent. of patients..	—	59.06	55.39
Total increase per cent. of patients ...	—	—	147.4

* The figures in this table relating to the year 1867 are obtained from a pamphlet prepared and published by the late Mr. Sampson Gamgee, as President of the Birmingham and Midland Counties Branch of the British Medical Association, in which much important information bearing upon the subject may be found. The figures for other years are obtained from the published reports of the several institutions, or, failing them, from the *Medical Directory* of the year in question.

—	1867.	1877.	1887.
Estimated population of Birmingham ...	325,895	377,436	441,095
Decennial increase	—	51,541	63,659
Decennial increase per cent. of population	—	15.81	115,200 16.86
Total increase per cent. of population ...	—	—	35.3
Ratio of patients treated to population...	1 in 5	1 in 3.5	1 in 2.6

"This is an increase of 147 per cent. During the same period the population increased by about 35 per cent., namely, from 326,000 in 1867, to 441,000 in 1887. In other words, during the last twenty years hospital patients have increased more than four times as rapidly as the population."

After making every allowance, the report states that, "at the present time, one-third of the total population of Birmingham, apart from the pauper class, receives gratuitous medical treatment in the course of twelve months." Yet increased facilities have been given by admitting patients without recommendations of any kind; by charging a small admission fee in place of requiring a subscriber's "ticket" ("letter"); by selling tickets to patients; by extending the hours of admission; by opening the out-patient departments in the evenings. With each fresh facility the crowd of applicants grows larger and the abuse increases.

This state of things, it is urged, is unjust to those who give money to hospitals under the belief that it is only used for charitable purposes, and is injurious to the recipients, for the hospitals attract more patients than they can relieve and render it impossible for any provident or self-supporting agency to succeed.

Prominent mention is made of the Hospital Saturday movement as one of "the causes which have led to the present abuse of hospitals." The mode of raising money thus introduced tends, the report states, "to obscure the charitable principle, and to create the idea that every contributor has a right to claim benefits in return when he desires them. Working men who are urged or compelled to contribute regularly for the purpose in question think, not unnaturally, that the hospitals are bound to afford them treatment in times of sickness, irrespective of their ability to obtain it in other ways. They are apt to regard the hospitals as being supported by their own provident efforts; they object to the use of the word 'charity' in connection with them; they forget that they pay only a portion of the working expenses, and that the medical service is given to them gratuitously. If the Hospital Saturday collection is to entitle the contributors to demand treatment in times of sickness, it must be devoted to the maintenance of a self-supporting provident system.

"Lastly, the present state of things is an imposition on the medical profession. The hospital physicians and surgeons are called upon to treat overwhelming numbers of persons, many of whom are not in need of special skill or experience; moreover, they are frequently consulted at the hospitals by persons who ought to pay for their advice. It would be easy to give instances of well-to-do people obtaining the opinion of one or more consultants in this way without cost to themselves, and of others who, objecting to the idea of receiving gratuitous treatment, give a donation to the hospital funds, and consider that this discharges their whole obligation. A more serious injustice is done to the general body of the profession. Many of the patients who now crowd the hospital waiting rooms could obtain the treatment they require from private practitioners at a cost well within their means; a much larger number could do the same, and with great advantage to themselves, under a properly conducted provident system. It is notorious that almost every medical charity competes unfairly with the medical men who practise in its neighbourhood.

"In considering the present needs of the community, it must be remembered that at the present time the ratepayers, through the Poor-law authorities, provide for the sick poor in a way which was entirely unknown when most of the voluntary hospitals were founded. Twenty years ago poor people requiring highly skilled medical treatment could obtain it only at the voluntary hospitals; now, in accordance with the Act of 1867, such treatment is provided for them in the Poor-law infirmaries. The new Birmingham infirmary, which has every modern excellence of structure and appointment, contains at the present time more than twice as

many patients as all the Birmingham hospitals together, and has accommodation for many more."

The report concludes with the following suggestions, which, it is thought, will serve to indicate the directions in which reform is chiefly needed:

"A large part of the work which is now done in the out-patient departments of the hospitals should be done by provident dispensaries.

"Those who are too poor to belong to provident dispensaries should be treated, under all ordinary circumstances, through the agency of the Poor Law.

"The voluntary hospitals, co-operating both with the provident and the Poor-law systems, should treat cases of severity, difficulty, or importance, such as would be properly referred to them for the special advantages of hospital treatment.

"In order that medical education should not suffer through such restriction of the work of the voluntary hospitals, the Poor-law infirmaries and the provident dispensaries should also be utilised for this purpose.

"It is not desirable that radical changes of any kind should be suddenly introduced. Careful and impartial inquiry as to the existing state of things must precede any practical attempt to establish a better, and no attempt can succeed unless there be a general agreement on the part of the several institutions and public bodies which are concerned. A conference between representatives of the voluntary hospitals, of the board of guardians, of the Hospital Saturday Committee, of the existing provident dispensaries, of the Charity Organisation Society, and of the general body of the medical profession, is the first thing to be desired."

PROPOSED PUBLIC MEDICAL SERVICE.

THE first meeting of the North London District of the Metropolitan Counties Branch was held on Thursday, October 31st, 1889, at the Athenæum, Camden Road, N. Dr. BRIDGWATER, J.P., Vice-President of the District, in the chair.

Public Medical Service.—Dr. HUGH WOODS read a paper on Dr. Rentoul's scheme for forming a "Public Medical Service." The general meeting at Leeds, he said, had decided that some action must be taken. The present provision for the medical aid of the poor, consisting of an aggregate of incomplete systems, such as hospitals, provident dispensaries, Poor-law infirmaries and the like, was extravagantly expensive to the public, highly injurious to both the public and the medical profession, and at the same time lamentably inefficient as regards the treatment of the poor. In the metropolis alone the combined expenditure of all these public institutions amounted to about a million and a quarter pounds a year, or, roughly speaking, 5s. 6d. a year for every head of the population. Practitioners in colliery and similar districts undertook the whole medical and surgical treatment of the working population, including the supply of drugs and ordinary surgical appliances, at a charge of 3s. 6d. a year per head, or even less than this. In London persons who were supposed to be unable to provide medical aid for themselves were supplied with it at a cost so great that if the money expended were paid directly to medical men, as in contract practices, it would suffice to provide medical and surgical attendance, with drugs and all ordinary surgical appliances, not merely for the whole population of the metropolis, rich and poor, but for the whole existing population of London, Liverpool, Manchester, Birmingham, and a few smaller towns into the bargain. In spite of this enormous expenditure the great proportion of such medical work was absolutely unpaid. Further, a very large proportion of those who were treated at this high rate could with perfect ease provide paid medical aid for themselves. For some years past medical men, finding it hopeless to compete with charitable institutions on the old lines of medical practice, had resorted to the establishment of the cheap private dispensaries, in connection with which a large part of the medical work among the poor was now done. Many of the medical men who personally conducted these dispensaries were men of high ability, with high qualifications, and quite as good men as those who point at them the finger of scorn. The evident success of many of these dispensaries was due to several causes. One of these was their having adopted the ready money or cash system. Another cause of their success was the attractive power of their showy shop fronts, a custom for which they were not to be praised or imitated. Another point in which these dispensaries suggested a lesson was this, that they had fixed charges, and people knew beforehand what they would have to pay. While these private dispensaries were competing only with charitable institutions and private practitioners working on the old lines, they grew and flourished. Now, however, they had come into competition with one another, the charge of 1s. 6d. went down to 1s., the 1s. to 6d., and the 6d. to a charge of 4½d. Many of these dispensaries were conducted by men in no way qualified to act as medical practitioners or even as druggists. Trusting, often enough, to the protection or "cover" of a practitioner perhaps living miles away, a man who would not be trusted to dispense Epsom salts in a chemist's shop boldly took in hand the lives of his dupes. If these shops were opened for the supply of drugs as a merchandise the law would see to it that the shopkeepers were trained chemists; but when the keeper of the shop professed to prescribe as well as to supply his medicines he had but little to fear. These private dispensaries were more and more taking into their hands the medical attendance on the poorer classes, while the hospitals are laying themselves out to attract the middle classes. The hospitals ought to be restricted to those who are really too poor to pay for medical attendance in the case of out-patients, or for medical attendance with suitable nursing, etc., in the case of in-patients. Turning, then, to Dr. Rentoul's scheme for a Public Medical Service, he said that it was put forward for discussion so as to obtain the opinion of the bulk of the profession. Dr. Rentoul recommended that a wage limit be fixed, forbidding out-patient treatment or home visits by the medical charities to persons with incomes of 20s. a week if single, or 25s. if married. Dr. Woods thought these limits too high. In country places labourers with wages about 14s. a week were able to provide for sickness by means of their clubs. The wage limit must be strictly enforced. The only adequate method for this purpose was the Manchester system, which, by means of a society such as the Charity Organisation Society, inquired into the circumstances of patients at their own homes. A definite statement of income ought to be taken from patients applying for treatment, refusing at the first (which is not done at Manchester) those whose incomes were over the limit. The society making inquiry ought then to be instructed to prosecute for fraud those who deliberately made false statements. It might be said that this was very harsh, turning away sick people, but they could get attendance from a doctor at the next corner for 1s., or perchance 6d., not to say 4½d. Many of the hospitals made some pretence of keeping away the well-to-do, but the methods employed for this purpose were worse than a mockery. A wage limit for in-patients should be higher than that for out-patients, but a limit there ought to be. If persuasion failed, he thought that if the mass of the profession clearly pronounced in favour of restricting the hospitals to the poor, the hospitals who neglect the demand would do so at their peril. Turning next to Dr. Rentoul's proposal to establish a Public Medical Service for the purpose of providing efficient medical, surgical, and dental treatment for persons earning up to 30s. a week if single, or 45s. for a family, he remarked that hospital reform of a thorough kind being necessary to the well-being of such a service, Dr. Rentoul, in his resolutions at Leeds, gave precedence to hospital reform. After speaking of the establishment of a Public Medical Service, Dr. Rentoul, in the next section of his resolution, advises the subsequent appointment of a committee for the purpose of establishing a provident system such as will be fair to both patients and doctors. The precise details of these schemes need not be discussed at the present stage. If the main features of such a scheme could be arranged, the details could with care be satisfactorily worked out. Dr. Rentoul had sketched the constitution of the Public Medical Service in the BRITISH MEDICAL JOURNAL of June 22nd. He proposes a central board of general management elected by the Branches subject to its control. The first board might consist of representatives elected by the Branches of the Association. Such a board would be well adapted for arranging details, and to it the details might be left. It would, in the first place, determine what reforms were necessary in the working of the hospitals, and recognise only such hospitals as carried out the reforms recommended. The public would certainly see the wisdom of contributing in preference to those institutions whose mode of procedure was approved by a representative body of medical men. Such a board could take in hand the systematising of medical practice among the poor, and, without interfering with the interests of any who would submit to its general supervision, could ensure fair play between doctors and patients. It could determine the lines on which practice among the poor could be best conducted, and decide what were the best rules for provident systems, if such be expedient. Such

a board could take active steps to carry out the necessary reforms. Why should the profession wait for the Charity Organisation Society or the Government to get us out of the mess into which our profession has got itself? They must learn to help themselves. He concluded by proposing the following resolution: "That this meeting heartily sympathises with the object of Dr. Rentoul's resolutions, and urges the Council and the Association to take such steps as may best carry out these necessary reforms."

Dr. BRIDGWATER, after complimenting Dr. Hugh Woods on the paper he had just read, desired to express to the meeting the readiness and earnestness in the Council of the Association, and also the Council of the Metropolitan Counties Branch, to give facilities for the discussion of this great question in holding district meetings and ascertaining the different opinions of the general practitioners and members of the hospital staff.

Dr. WALTER SMITH seconded the resolution, and, after a general discussion, in which Messrs. BRINDLEY JAMES, A. KISCH, GEORGE BROWN, C. B. LOCKWOOD, Dr. BEALE, Dr. F. GODFREY and some others took part, Dr. HUGH WOODS replied.

Dr. BRIDGWATER put the resolution to the meeting, and it was carried unanimously.

Votes of thanks to Dr. Woods and the Chairman concluded the meeting. There were twenty-three members and visitors present.

AT the meeting of the Oxford District Branch on October 25th, the SECRETARY read the circular of October 18th sent by the Council to the Branches for their opinion. Dr. COLLIER proposed and Mr. WINKFIELD seconded, and it was carried after several members had spoken:—"That this Branch of the British Medical Association is of opinion that the best means of checking the existing abuse of our hospital out-patient departments is by the general introduction of a system of more careful supervision."—Dr. GRIFFIN proposed, the PRESIDENT seconded, and it was carried:—"That in the opinion of this meeting the proposals of Dr. Rentoul as regards a public medical service are impracticable." It was proposed, seconded, and carried that the meeting approves of paragraph 5 of Dr. Rentoul's motion. It was proposed, seconded, and carried that the meeting approves of Dr. Rentoul's motion respecting the management of medical charities. It was proposed, seconded, and carried that this meeting does not approve of Mr. Brindley James's motion.

HOSPITAL OUT-PATIENT REFORM AND THE PUBLIC MEDICAL SERVICE.

SIR,—The following figures, given in tabular form, will help to show how very many persons in this country are receiving free medical relief in one year:

Number treated at 759 hospitals and dispensaries	2,828,296
,, ,, 118 ,, ,, ...	(no returns)
Number receiving Poor-law medical relief, medicine included ...	831,353
Number treated in metropolitan fever hospitals	6,537
Number treated in provincial cities and towns fever hospitals ...	(no returns)
Number receiving free private medical aid from doctors ...	338,600
Total receiving free medical relief	4,004,786

As regards the number treated at the voluntary medical charities, it has been said that one patient is counted two or three times over. I should like some proof of this. The Poor-law numbers are collected twice yearly only—in July and January—so that all the Local Government Board report says is, that on these two dates so many persons are in receipt of relief. If all were counted in who come between these dates the number would be very much larger. If we had the total number of fever cases treated in the various municipal fever hospitals, the total would be very much greater.

As to the number receiving private aid from doctors, I take it that each doctor treats twenty such yearly. If we refer to the fourth report of the Statistical Committee of the Medical Council of 1888, we find that there were 16,930 doctors practising in England. This multiplied by twenty will give the above number. The population of England being 28,000,000, this gives us the deplorable fact that one in every six says he or she is unable to pay for medical advice. The above numbers do not include the 457,301 persons who received free vaccination in one year. Nor do they include those treated at the various charitable homes for widows, orphans, fallen women, and such like. I think if one said that one in three was provided with free medical relief in this country, a very near approach to accuracy would be made. I do not say that the medical profession is not paid something for treating some of the above; but I have no hesitation in stating that if all the money received were evenly divided over the above number it would not exceed 2d. per annum per patient.

One correspondent has said that our profession should be a religious calling and not a business. Very well. But are we not told that true charity should begin at home; and that, instead of depending on these benevolent institutions, we should make due provision for ourselves, our wives, widows, and children? There is no reason, moreover, why a religious profession should be an underpaid one. Is the labourer not worthy of his hire? Each clergyman in the Scotch Church has £200 a year at least guaranteed him. In the Church of England each curate has about £120 a year. What doctor has such advantages as these? But the chief point to grasp is that we doctors, in giving free treatment to hospital patients, are not performing a charitable act, as it is well known that many thus supplied are in no sense deserving of our charity. True charity consists in giving to the proper kind of applicants, and not in making and encouraging well-to-do people paupers. True charity also consists in not only relieving disease but in removing the causes which produce it. Why do our hospital reports say each year they are glad to say that there is an increase in the number of patients? Is this anything to boast of? If disease is preventable, we should rather be ashamed of the fact.

The above figures have for so far been unchallenged, and may, I feel, be taken as fairly accurate. This being so, surely it rests with the medical profession to recognise its great responsibility, and to come forward with a scheme by which good honest treatment may be provided for the working classes. The very fact that cheap or sixpenny dispensaries flourish proves the necessity for our providing. If anyone will refer to the JOURNAL of August 10th he will find a tabular statement of the average weekly wages paid to 69 trades union workmen, taken from Blue Book C. 5,505, this showing clearly, I think, that these classes are well able to pay small fees, and only such. This is further proved by the fact that the last census returns showed that there were 8,649,259 of industrial classes between the ages of 15 and 65 in England of a population of 36,000,000; over 30,000,000 of these are in receipt of salaries of less than £150 per annum. Yet how can these pay 3s. 6d. or 5s. fees? The vast amount of sickness, again, proves the necessity for our action. Sir James Paget has shown that 15,317,204 men and women between 15 and 65 suffer over 20,000,000 weeks' sickness, and if we calculate that each one of the entire population suffers on an average nine days' sickness, this will give us a total sick-rate for the entire community of 38,845,000 weeks. At least 13,248,950 persons are ill each year in this country. It will not do to say that the various friendly societies supply the want of a medical service, for of the 4,000,000 members belonging to these, about 2,000,000 are insured for sick pay and a doctor; the others belonging to burial societies. It is, therefore, to be hoped that doctors will now try to bring about a lasting reform in our hospitals. If we all tried for once to agree, and not boast that each one had a special solution of the difficulties, then there would be very little call for any Government inquiry, which must show, I fear, that the medical profession has been doing its best to pauperise a very large portion of the well-to-do public. What ends we have to gain in doing so we must know best. At all events the subscribing public are looking rather askance at the present state of mismanagement. Whose fault is this?—I am, etc.,

ROBERT R. RENTOUL.

Liverpool.

SIR,—Mr. Corbyn points out inconsistencies, some real and some imaginary, in Dr. Rentoul's proposals. They cannot all at once be framed so as to satisfy all requirements. They are now in process of development, and necessarily imperfect.

Mr. Corbyn desires the abolition of the out-patient departments of the hospitals, and thinks the hospital staffs will be the first to urge the need of this. Does he really suppose that the physicians and surgeons to the out-patient departments will try to destroy their *raison d'être?* I trow not. I hope that Dr. Rentoul's scheme will be modified so as to admit every respectable medical man on the staff of the service. This would meet Mr. Corbyn's objections, and is, I think, quite practicable.

As to the Public Medical Service not being wanted, I think there is most urgent need to systematise and improve practice

among the poor by a powerful combination of medical men.—I am, etc., HUGH WOODS, M.D.

Highgate, N.

SIR,—In dealing with the existing abuse of our out-patient departments I think most men will agree that no scheme which does not meet with the approval of the great bulk of the profession is likely to attain much success.

Now, judging from the reports of the discussions which have taken place at various branch meetings of the Association, and from the letters which have appeared in the JOURNAL, Dr. Rentoul's scheme is not likely to gain very general support. Most of us seem to think it too elaborate and too complicated to work well. Again, the suggestion that the out-patient departments should be altogether abolished would, I feel sure, meet with the keenest opposition not only of many, if not all, of the honorary medical officers of our hospitals, but also of a very large number of general practitioners who are in the habit of sending patients from time to time to the hospitals. On the other hand, I believe the adoption of some moderate rather than sweeping measure, such, for example, as a general system of careful supervision, with the introduction of a wage limit, similar to that in force at Manchester, would meet with the hearty support of the great majority of medical men, and would put an end to much of the existing abuse. I have little doubt, in spite of all that has been said to the contrary, that any moderate and well-considered scheme would be heartily supported by our hospital physicians and surgeons. A week or two since, when I moved at our local Branch meeting a resolution in favour of the Manchester scheme, the first five gentlemen who supported my resolution were all of them connected with our local hospitals.—I am, etc., WM. COLLIER,

Physician to the Radcliffe Infirmary.

Oxford, November 4th.

PROPOSED HOSPITAL FOR THE INSANE OF LONDON.

AT the usual weekly meeting at the Guildhall, on November 5th, of the London County Council, the Earl of ROSEBERY presiding, Mr. Brudenell Carter as chairman of a committee on a hospital for the insane, submitted the following report, which was agreed to by the Council:—

"Your Committee were instructed to inquire into, and to report to the Council upon, the advantages which might be expected from the establishment, as a complement to the existing asylum system, of a hospital with a visiting medical staff, for the study and curative treatment of insanity.

"Your Committee have now concluded their inquiries with regard to the question submitted to them.

"Your Committee have received important *vivâ voce* evidence from sixteen distinguished members of the medical profession, namely, Dr. Clifford Allbutt, F.R.S. (a Commissioner in Lunacy); Sir John T. Banks, K.C.B.; Dr. Charlton Bastian, F.R.S.; Sir J. Crichton Browne, F.R.S. (Lord Chancellor's Visitor in Lunacy); Dr. Buzzard, Mr. T. Bryant, Sir Andrew Clark, Bart, F.R.S. (President of the Royal College of Physicians); Dr. Ferrier, F.R.S.; Dr. Gowers, F.R.S.; Professor Victor Horsley, F.R.S.; Mr. Jonathan Hutchinson, F.R.S. (President of the Royal College of Surgeons); Dr. Stephen Mackenzie, Professor Marshall, F.R.S. (President of the General Medical Council); Dr. Quain, F.R.S.; Dr. Batty Tuke, and Dr. Whipham. These witnesses include not only eminent experts in insanity, and physicians chiefly engaged in the treatment of diseases of the nervous system with which insanity is not necessarily associated, but also physicians and surgeons in more general practice. Printed questions have been sent to every medical superintendent of a public asylum in England and Wales, as well as to a few other persons of admitted authority, including the Medical Officer of St. Pancras Workhouse, who has had large opportunities of witnessing the operation of the present system. Sixty-five replies to these questions have been received and analysed.

"Your Committee have arrived at the conclusion that a hospital of the kind described would be likely materially to increase the present knowledge of the nature and causes of insanity, and therefore ultimately to increase the means available for its prevention and for its cure. They are consequently prepared to make the following recommendations:—

"(*a*) That an adequately equipped hospital, containing one hundred beds, for the study and curative treatment of insanity in pauper lunatics of both sexes, be established in the metropolis, and that it be under the direction and control of the Council.

"(*b*) That the ordinary medical staff of the hospital consist of a chief resident medical officer who has had asylum experience, of an assistant resident medical officer, of four visiting physicians, each of whom shall hold office as physician or assistant physician in a general hospital, and a pathologist. The members of this staff to perform such duties and to receive such stipends or honoraria as the Council may from time to time direct.

"(*c*) That, in addition to the ordinary medical staff, the following honorary medical officers be appointed, namely: A surgeon, an ophthalmic surgeon, an aural surgeon, a laryngologist, and a gynæcologist. Each of these honorary officers should hold, or should have held, similar office in a general hospital, and they should all be available as consultants whenever required by the physicians, or for the performance of operations which fall within their respective departments, when such operations are decided upon."

The Committee concluded by requesting to be empowered to draw up a detailed report on the whole question.

PROVIDENT DISPENSARIES.

THE LORD MAYOR presided, on October 31st, over a meeting held at the Working Lads' Institute, Whitechapel Road, for the purpose of promoting the opening of dispensaries in connection with the Metropolitan Provident Dispensaries Association. The Lord Mayor expressed his hearty sympathy with the objects of the Association. The hospitals and the dispensaries might, he said, work very well together, and he hoped the result of the meeting would be that many persons would be induced to join the dispensaries, and thus do good to the Association and to their own wives and families—Mr. W. BOUSFIELD read a letter from Mr. Carr Gomm, chairman of the London Hospital, stating that he and his colleagues viewed with interest the opening of a dispensary in the locality. There was room for both, and the two institutions would assist each other. Letters of regret at inability to attend were read from Lord Brassey and Dr. Adler, the Chief Rabbi. Mr. Bousfield said that this was the fourteenth dispensary established by the Association, and there were now about 30,000 persons availing themselves of the provident system. Another branch was about to be established at the University Club in Bethnal Green, and there was also in view the opening of at least one evening dispensary in Stepney.—Mr. S. MONTAGU, M.P., moved the following resolution: "That this meeting, having heard from the Lord Mayor and the Chairman of the Metropolitan Provident Medical Association the principles upon which the association is conducted, whereby efficient medical attendance is brought within the reach of the working classes, is of opinion that the scheme should be supported by the working classes of East London." Mr. Montagu said he had strong sympathy with the movement, which promoted the independence and self-reliance of the working classes.—The Rev. S. A. BARNETT seconded and Mr. F. W. BUXTON supported the resolution, which was carried unanimously.

OBITUARY.

PHILIPPE RICORD, M.D.

As Heinrich Heine claimed to be the first man of his century on the ground that he was born on January 1st, 1800, Philippe Ricord used to call himself the "last folly" committed by the eighteenth. It appears, however, that instead of coming to this great stage of fools "on December 31st, 1799, at 11.45 P.M.," as he used jestingly to say, he was actually born nearly a year later, on December 20th, 1800. Like Claude Bernard and several other men who have afterwards risen to a high position in the medical world, Ricord began his career in a druggist's shop at Baltimore, where his parents had settled. From this he was rescued by his elder brother, Jean Baptiste, an enthusiastic naturalist, whom he accompanied on his scientific expeditions. In one of these Philippe Ricord was fortunate enough to come across the distinguished French naturalist Lesueur, who was in America collecting materials for the Paris Museum. To Philippe and his brother Alexander was entrusted the task of conveying Lesueur's collection to Paris, where they arrived in 1820. Here Philippe, apparently more by accident than design, was led to study medicine, in which he made such rapid progress, that in 1822 he successfully competed for the post of *interne*. He first served under Dupuytren, with whom, however, he parted company after a short time.[1] The

[1] Dupuytren, in lecturing, alluded to a patient who had died of delirium tremens (pronouncing the Latin words of course in the usual French way). Ricord, who was in attendance, remarked in an audible aside "*Pas très mince puisque le pauvre diable en est mort*," for which apparently harmless pleasantry he was publicly reprimanded by his chief.

accounts of this incident are as various and conflicting as those of more important historical events. According to some, a bad pun brought the distinguished pupil into disfavour with his eminent master; and it is at any rate certain that Ricord was all through his long life "*capable de tout*" in the way of playing on words. Again, it is said that Dupuytren asked Ricord to make some bibliographical researches, with the view of establishing his priority on a debated point, and that the conscientious *interne* was driven by the evidence to give the point against his chief, a conclusion which he conveyed to him in a report bearing the motto *Amicus Plato sed magis amica veritas.* The truth seems to be that there was decided incompatibility of temper between the two, the master being of a magisterial and unbending disposition, while on the other hand, veneration was not a prominent feature in the pupil's character. On leaving Dupuytren, Ricord served for some time under Béclard, and afterwards under the famous surgeon Lisfranc, to whose favour his quarrel with *le grand boucher du bord de l'eau* (Lisfranc's polite designation of his great rival Dupuytren) was a useful passport. In 1826 Ricord took his Doctor's degree, and after a year or two of general practice at Ollivet, near Orleans, and afterwards at Crouy-sur-Ourcq, he competed for the post of surgeon to the Bureau Central (the first rung in the ladder of hospital appointments in Paris). After failing at his first trial, he came out first in 1828. For the next few years he lived by teaching anatomy at La Pitié, till in 1832 he began his professional life in earnest on being appointed surgeon to the Hôpital du Midi, the great centre for the study of venereal disease in Paris. From that time forward his career was one of unbroken success, both as a teacher and as a practitioner.

In order to understand the value and importance of Ricord's work in the department of venereal diseases it is necessary to bear in mind that at the time we speak of the whole question of the nature, causes, and treatment of these maladies was in a most unsatisfactory state of confusion, and that, notwithstanding the labours of Benjamin Bell (1793) and others many years before, tending to show that gonorrhœa was distinct from syphilis, all kinds of venereal disease were pretty generally looked upon and treated as though they were all due to the same cause. In this country, it is true, Sir Astley Cooper clearly recognised the distinction between the two diseases, and strongly insisted upon it in his lectures; but that such knowledge was not general or, at any rate, not generally acted upon, is too clear from the deplorable account he gives of the treatment of gonorrhœa by mercury to the extent of salivation in the "foul" wards of Guy's and St. Thomas's Hospitals.[2]

As surgeon to the Hôpital du Midi, which at that time received persons of both sexes, Ricord had of course ample material at his command, and he at once set to work to observe and experiment for himself, with the result that in 1838 he published his *Traité pratique des Maladies vénériennes*, which contained a large number of full reports of his cases, and it was this work that practically determined the final separation of gonorrhœa from other venereal diseases. But though this distinction between gonorrhœa and syphilis was now generally accepted, it was not until some years later that the next step, of separating the so-called "soft" or local chancre from syphilis, was completed. This, under Ricord's supervision, was accomplished chiefly by Léon Bassereau, one of his pupils, who published the result of his observations in a work entitled *Affections de la Peau symptomatiques de la Syphilis* in 1852.

In 1850, Ricord's famous *Lettres sur la Syphilis* began to appear. These letters were addressed to M. Amédée Latour, the editor of the *Union Médicale*, and were published in that journal in 1850-51, and afterwards in book form, with an introduction by M. Latour. In 1851 also was completed the *Clinique Iconographique de l'Hôpital des Vénériens*, a work which had been appearing in parts since 1842, and which is still referred to and valued for the fine coloured plates by which it is illustrated.

By this time Ricord's fame as a surgeon as well as a teacher had spread far and wide. Patients came to him from all over the world, and surgeons and students flocked to his lectures at the Midi, which, in fine weather, were frequently delivered under the lime trees in the garden of the hospital.

In 1852, the discussion "Sur la Syphilisation et sur la Transmission des Accidents secondaires" took place at the Academy of Medicine. In this celebrated discussion Velpeau, Malgaigne, Gibert, and many other distinguished surgeons took part, and Ricord, in a long and eloquent address, maintained what he had hitherto taught in his lectures, namely, that the secondary manifestations of syphilis were not contagious. This position, of course, had to be abandoned later on, and if it seems at first sight difficult to understand Ricord's attitude on this important question at that time, in the face of Dr. Wallace's cases of successful inoculation of secondary lesions which had been published in 1836-7, it becomes less so on reading Ricord's criticism of these cases, and it is curious to note the light and airy manner in which in his "Letters" he pulls them to pieces, apparently without ever having seen the original papers, as he quotes them from a German publication.

In 1860, M. Ricord resigned his hospital appointment, and about this time were published his *Leçons sur le Chancre*, edited and annotated by his *interne*, M. Alfred Fournier, now the well-known physician of the Hôpital Saint Louis, and author of several valuable works on syphilography. From this time Ricord devoted himself chiefly to his private practice, which had now become immense.

In 1870, during the siege of Paris, the veteran syphilographer showed that his devotion to his special field of practice had not made his right hand lose its surgical cunning. In spite of his 70 years, he worked as an ambulance surgeon with the enthusiasm and vigour of a young man. For his services to the wounded he received the Grand Cross of the Legion of Honour. After the war a German order was offered to him, at the instance of Von Langenbeck; but this Ricord thought himself bound by patriotic feeling to decline. He could afford to do so, as he is said to have been the possessor of more decorations than any man in Europe, with the possible exception of Prince Bismarck.

In 1872 Ricord was present at the meeting of the British Medical Association at Birmingham, and, in connection with a paper read by his former pupil, the late Mr. Acton, explained his matured views on the treatment of syphilis. He also at the same time strongly insisted that the soft chancre, when accurately diagnosed, never gives rise to constitutional disease.

Besides the works already mentioned, M. Ricord contributed numerous notes to M. Richelot's translation of Hunter's work on *The Venereal Disease*, and was also the author of many papers on various subjects which appeared in the *Bulletins de l'Académie de Médecine*, and elsewhere. M. Ricord became a member of the Academie de Médecine in 1850, and was elected President in 1868; he was also one of the original members of the Société de Chirurgie, and was appointed consulting surgeon to the late Emperor in 1869. He was a member of many learned societies both at home and abroad. His last appearance in public was at the banquet of the International Congress of Dermatology and Syphilography recently held in Paris.

Philippe Ricord was not only a medical specialist of the first rank, but a man of cultivated mind and refined tastes. He had a fine collection of works of art, and had a decided turn, if not for poetry, for graceful verse-making. Only about two months ago he composed a quatrain in honour of Mr. Edison's visit to Paris. He was one of the recognised wits of the French capital, and, like Falstaff, not only witty in himself, but the cause of wit in others. His encounter with M. Crémieux, at that time Minister of Finance, is well known. They met at a fancy dress ball, both being in the ordinary evening garb of civilised humanity. "You should have got yourself up as Plutus (the God of Wealth)," said Ricord to the Minister. "And you should have come as Mercury," was the retort. Ricord was a man of unbounded generosity, not only to relatives and friends, but to patients. He is said to have been a model of punctuality in the discharge of his hospital duties, and his politeness to his poor patients and his delicate consideration for their feelings were an example to all medical men holding such appointments. It may be added that, unlike many French medical men, he was a man of strong religious convictions.

[2] *Lectures on Surgery*, 4th edition, 1835.

FRANCIS JAMES BAILEY, M.R.C.S.Eng., L.R.C.P.Lond., L.S.A., Liverpool.

We regret to record the death of Mr. Francis James Bailey, of Liverpool, which took place at his residence, Grove Street, on October 30th.

The deceased, who was 56 years of age, was a native of Blackburn; he studied at Charing Cross Hospital, and qualified in 1856. Upwards of thirty years ago he went to Liverpool, and took the practice of Dr. Nottage on the retirement of the latter.

He acquired a large high-class general practice, was well known in professional and literary circles, and took an active part in the

work of several learned societies. He was at one time President of the Philomathic Society and Vice-President of the Historical Society of Lancashire and Cheshire. At the time of his death he was Chairman of the Dental Hospital and Treasurer of the Medical Institution, of which he was formerly a vice-president. He held the rank of surgeon-major (honorary lieutenant-colonel) in the Volunteers, and was popular with all ranks in the service. He was also a prominent Mason. He was much interested in the education of the deaf and dumb, having served as honorary surgeon to the Deaf and Dumb School; and at the ordinary meeting of the Medical Institution, on October 24th, he spoke earnestly in opposition to the proposed introduction of the pure oral method in schools for the masses of the deaf. He was much beloved and esteemed by his patients and friends.

Though he had not been in good health for some time, he continued to attend to his ordinary work till the day before his death, when he had an apoplectic seizure of a very severe character, and it was evident to his medical attendants that the end was at hand. He never rallied, and died a few hours after the seizure. He leaves a widow and two sons and one daughter.

WILLIAM McCHEANE, F.R.C.S.Eng., L.S.A., Liverpool.

By the death of Mr. William McCheane, which took place at his residence, Shaw Street, on November 3rd, the profession in Liverpool loses one of its oldest and most esteemed members, one who was always deeply interested in whatever concerned its welfare, and was also an ornament to the social life of his native city.

Though born in Liverpool, his family originally came from Waterford. He was born in 1820, and educated in Liverpool. He began his professional education at the Liverpool School of Medicine while it was yet in its infancy, and spent five years as resident pupil in the Royal Infirmary. He then went to London and completed his studies at St. Bartholomew's Hospital, becoming M.R.C.S.Eng. in 1843 and L.S.A. the following year. Having obtained his qualifications to practise, he was appointed house-surgeon to the Liverpool Royal Infirmary, and held that office for two or three years, until, in 1848, he commenced private practice in Watmough Street, Everton, from which he subsequently removed to Shaw Street. Soon after commencing practice he was appointed surgeon to the Lock Hospital in connection with the Royal Infirmary, an appointment which he held up to a few years ago.

In 1868 he was made Fellow of his College. He filled the presidential chair of the Medical Institution during the years 1874-75, and was surgeon-major in the militia. In private practice he was more than usually successful. His early appointment to the Lock Hospital led to his giving special attention to the class of diseases treated in that institution, and he acquired a wide reputation in syphilis. In this speciality his practice was large and lucrative, and he continued to carry it on with unabated vigour until his last illness laid him aside. Though his health had been failing for some months past, he continued to see his numerous patients as usual until about two months before his death, when, after a more than usually busy day, he expressed himself as feeling somewhat tired. His last illness was marked by the same unfailing cheerfulness and consideration for others that endeared him to all who knew him.

His death was due to Bright's disease of the cirrhotic type, accompanied by the usual vascular complications. He was attended by Dr. Wm. Carter and by his lifelong friend, Mr. C. B. Wilson. He was never married.

All who knew him will feel they have lost a warm friend, a cheerful companion, and a skilful, trusty adviser.

HENRY RIDLEY DALE, Jun., M.D.

We regret to have to announce the death of Henry Ridley Dale, jun., M.D., late of Sunderland, at the early age of 33. He died on October 29th at the residence of his twin brother Dr. Hilton Dale, of Belsize Park, London. Dr. Dale was a son of Mr. Henry Ridley Dale, of London, and his ancestors were originally of the county of Northumberland. He studied medicine at University College, London, and carried off in every class certificates of honour, besides securing the silver medal in ophthalmic medicine and surgery, and also in the theory and practice of medicine. Dr. Dale became M.R.C.S. and L.S.A. in 1887, and in the same year obtained the licences in medicine and midwifery of the Royal College of Physicians of Edinburgh. He graduated as M.D. in the University of Brussels in 1883. He was a member of the British Medical Association.

On his arrival in Sunderland in 1878 Dr. Dale succeeded to the practice of the late Dr. Evans as medical officer to the parish of Sunderland. Very favourable prospects in the practice of his profession were opening out before him when he was attacked by illness of a painful character, and had to leave Sunderland in search of health. He was strongly advised to settle in the south of England, but after a short stay at Bournemouth he came to London, where he died. Dr. Ridley Dale during his short career found time for the display of considerable literary activity; besides contributing various papers to the medical journals, he was the author of the *Epitome of Surgery* (published in the early part of this year), which we favourably reviewed. His wife, a daughter, and a son survive him.

W. D. SHEPPARD, L.R.C.S., L.R.C.P.Edin.

We regret to record the death of Mr. William David Sheppard on October 22nd, at the age of 38. His sudden and unexpected death has cast a gloom over the neighbourhood of Glencorwg and Maesteg, where he was much beloved and respected. Mr. Sheppard had been suffering for several days from bronchitis, but on the day previous to his death he was somewhat better, and later in the evening he was urged to see a case of strangulated hernia. Making light of his own serious illness, according to his wont, he decided to go, and arrived at the house of his patient a little before midnight, and successfully performed the operation along with another surgeon. Soon after the operation was over his breathing became much worse, so that he could not return home, and quietly expired at 4.30 A.M.

Mr. Sheppard was a native of Haverfordwest, but his parents removed to Dublin when he was very young. He studied at the Ledwich, Richmond, and Coombe Hospitals, where he had a distinguished career, taking the first prize in several subjects. By his patients and in private life he was greatly beloved, by reason of his gentleness, courtesy, his thoughful consideration for others, and his quiet sense of humour. It may be truly said of Mr. Sheppard that he very seldom made an enemy and never lost a friend. He leaves a widow, a father and mother, and a large circle of friends to lament his death.

UNIVERSITY INTELLIGENCE.

CAMBRIDGE.

General Medical Council.—We received last week from our Cambridge Correspondent, but too late for insertion in that week's Journal, a notice stating that Dr. Latham, the Downing Professor of Medicine, would be voted for as a representative of the University on the General Medical Council. The notice was signed by the heads of Clare, Trinity Hall, Pembroke, Magdalene, and Jesus, the Rev. G. F. Browne (Disney Professor of Archæology), and Mr. J. Hamblin Smith. A subsequent notice received this week was subscribed by thirteen London physicians and surgeons, namely, Sir Henry Pitman, Dr. J. Martin, Dr. Hare, Dr. E. Liveing, Dr. R. Liveing, Dr. Ralfe, Dr. Reginald Thompson, Dr. Ewart, Dr. Habershon, Dr. Lees, Mr. Page, Mr. Critchett, and Mr. Clutton. In the University much interest was taken in the contest thus raised between Professor Latham and Dr. Donald MacAlister, and on Thursday, November 7th, Dr. MacAlister was declared elected by 194 votes to 139.

State Medicine Examination.—The Syndicate which controls the examination for the diploma in public health report that they have received certain communications from the General Medical Council respecting the preliminary training in sanitary science to be required of candidates, and recommend that the suggestions of the Medical Council be so far followed that the following Regulation shall henceforth apply to all except (1) candidates on the *Medical Register* on or before January 1st, 1890; (2) candidates who have for three years held the position of medical officer of health to a county, or large urban or rural sanitary district. "Regulation 2. That any person whose name is on the *Medical Register* of the United Kingdom be eligible as a candidate, provided:

a. He be in his 24th year at least when he presents himself for the first part of the examination, and have attained 24 years of age before he presents himself for the second part.

b. A period of not less than twelve months shall have elapsed between the time when he first obtained a registrable qualification and the time when he presents himself for the second part of the examination.

c. He produce evidence of having, after obtaining a registrable qualification,

attended during a period of six months on a course of practical laboratory instruction in the subjects of the first part of the examination, such course having been approved by the Syndicate.

d. He produce evidence of having for six months practically studied the duties of outdoor sanitary work under the medical officer of health of a county or large urban district."

FELLOWSHIPS AT ST. JOHN'S COLLEGE.—At the annual election on November 4th the following were elected Fellows: Mr. Humphy Davy Rolleston, M.B., B.C., B.A. (First Class Natural Sciences Tripos, 1886), who has filled in succession the post of University Demonstrator in Human Anatomy, Physiology, and Pathology, and is known as the author of numerous papers on anatomical, physiological, and pharmacological subjects; John Parker, B.A. (seventh wrangler 1882), author of important memoirs on thermo-electricity; Alfred William Flux B.A. (bracketed senior wrangler 1887), author of papers on physical optics. Mr. Rolleston is the son of the late Professor Rolleston, of Oxford, and is now Assistant Demonstrator of Anatomy at St. Bartholomew's.

G. H. LEWES STUDENTSHIP.—Mr. E. H. Hankin, B.A., of St. John's College and St. Bartholomew's Hospital, has been appointed a George Henry Lewes Student in Physiology.

EXAMINERS.—Mr. E. G. Browne, M.B., of Pembroke College, has been appointed an Examiner for the Indian Languages Tripos; and Dr. Sheridan Lea, of Gonville and Caius College, an Examiner for the Degree of Bachelor of Music.

GLASGOW.

UNIVERSITY COUNCIL.—The usual half-yearly meeting of the General Council of Glasgow University was held on October 31st, in the Bute Hall of the University, under the chairmanship of Professor Edward Caird, in the absence, through indisposition, of the Principal. There was no business of much importance to be brought before the meeting. The universities are waiting for the action of the University Commissioners, and there was little to be done beyond the expression of mutual congratulation that "after so many years of discussion and so many abortive Bills, a University (Scotland) Act received the Royal assent on August 30th last." On the motion of Mr. Galbraith Miller, it was agreed that a Committee should be appointed to consider and report as to the changes which are required in the curricula and regulations for graduation in law to bring them into harmony with the demands of modern legal science; and on the motion of Dr. McVail it was decided to continue the Committee formed to promote the endowment of a chair of pathology, and to instruct them to report to the Council in regard to all their work at the next half-yearly meeting. Professor Gairdner was appointed Sub-convener of the Committee.

UNIVERSITY COUNCIL ASSOCIATION.—The annual report of the Glasgow University Council Association has just been issued. Coming as it does a few months after the passing of the Universities Act, it is naturally divided into two parts, which the report, with a brevity to which the rest of the report is a stranger, puts as "Work done" and "Work to be done." The earlier portion is a recital of the work of the Association at the various stages of the struggle for a real university reform. It points, not without justifiable satisfaction, to the improvements in the reconstituted University Court, and in the matter of extra-mural teaching and affiliation of new colleges. The report emphasises the fact that, though the Act recognises the principles of university extension and university reorganisation, the practical steps by which these are to be carried out have yet to be determined by the Commission, and that the decisions of the Commission will be largely determined by the voice of the universities themselves through the courts. In what voice the courts will speak will be considerably affected by the results of the voting in the coming election of assessors. The reform policy which the Association desires to see carried out consists of these chief points—the affiliation to the university of new colleges, the extension of extra-mural teaching, the opening up of the arts curriculum, the admission of the teaching profession to the same university status as belongs to the other professions, the institution of satisfactory entrance examinations, the reconstruction of examining boards, the opening up of a career as teachers and examiners to distinguished graduates, the better maintenance and utilisation of the libraries and museums, and the reorganisation of the university finance.

DR. GERSON DA CUNHA, of Bombay, has received the Cross of a Commander of the Portuguese Order of St. James.

MEDICO-LEGAL AND MEDICO-ETHICAL.

DEATH CERTIFICATES.

ENQUIRER writes: I understand that a medical man can give only one death certificate. I have always done so, the registrar of deaths giving a duplicate if required. Lately the registrar has refused to give a duplicate. Is he justified in doing so by law, and am I right in declining to give a second certificate? The certificate is required by an insurance agent.

*** If by "death certificate" our correspondent means the medical certificate of the cause of death on the official form supplied by the Registrar-General in accordance with the Registration Act, he is right in asserting that the medical practitioner can only give one certificate relating to each death. The registrar of births and deaths is bound to furnish for insurance purposes a certified copy of the entry of the death in his death register in the case of the death of a person insured in a registered friendly society, without which certificate the relatives of the deceased person cannot obtain payment of the sum for which such person was insured. For such purpose the medical certificate of the medical practitioner is legally of no avail. Our correspondent's reference to a case in which a registrar refused to issue the legal certificate is too indefinite to enable us to express any opinion as to the legality of his action.

THE NOTIFICATION OF INFECTIOUS DISEASES.

DR. M., of C.—A medical officer of health who examines cases of infectious disease without the consent of the medical practitioner who reported the cases to him is guilty of a breach of professional etiquette. It is no part of the duty of a medical officer of health under the Infectious Disease (Notification) Act, 1889, to verify the diagnosis of cases reported to him. A medical officer of health in a rural district, who by the courtesy of his brother practitioners receives notification of infectious disease, but abuses his position so far as habitually to examine the patients so reported, at the same time criticising the diagnosis or treatment so as to throw discredit on the practitioner in attendance, is deserving of severe censure.

In rural districts the Notification Act can be enforced after its adoption by resolution of the rural sanitary authority, who must then supply to every medical practitioner in the district forms of certificate for notification.[1] A medical practitioner who fails to notify a case of infectious disease renders himself liable to a fine of 40s. In case the local board of C. should adopt the Act, we should advise Dr. M. not to put himself in the wrong by refusing to notify. But should he find that his reputation with his patients is being injured by the course of conduct pursued by the medical officer of health, we should suggest his consulting a solicitor with a view to taking such legal action as may be necessary to safeguard his professional character from the aspersions cast upon it.

"RUNNING" HIS OWN DOCTOR.

"THE Pharmacy, ——. Dear Madam,—Ever since Dr. —— has been unable through illness to attend to his duties, and since his sad death, which took place in London, on the 19th inst., I have had numerous applications from customers requiring medical aid. I am therefore pleased to be able to state that —— ——, Esq., Physician and Surgeon, is now resident in —— (at present in my house), and that he can be consulted in the morning from 9 till 10, and in the evening from 6 till 7. All notices relative to visits can be either sent direct to Dr. —— or handed in to me, and shall have immediate attention. As I possess a well-appointed stock of drugs and medical appliances, customers can rest assured of their wants being fully and promptly met. Thanking you for your kind patronage in the past, and soliciting your further favours, I remain, dear Madam, your obedient servant, —— ——. —— 21st, 1889."

*** We are induced to give insertion to the above printed circular, with the especial view to impress a caution upon our young, and consequently more or less inexperienced, professional brethren, lest they should fall into a like error and be so ill-advised as to identify themselves with local chemists as a means of entering into private practice. The circular itself, we need scarcely add, renders editorial comment unnecessary further than to regretfully note the haste evinced by chemist and practitioner in issuing it within two days of the decease of the lamented practitioner therein alluded to.

FEES FOR CERTIFICATES.

H. S.—A house-surgeon to a general hospital would be entitled to require the payment of a proper fee for signing such certificates as those of the Employers' Liability Assurance Company, but whether as between himself and the governors of the hospital such fees would have to be accounted for by him we are unable to say without knowing the terms on which he holds his appointment.

"NERVOUS DEBILITY."

A SUBSCRIBER.—The name in the advertisement forwarded does not appear in the *Medical Register*. Technically speaking, this is not a case of practising medicine. To bring it within the Apothecaries' Act so as to enable the Society to proceed for penalties, it would have to be shown that the advertiser was consulted by some one to whom advice was given and medicine compounded and supplied for gain. Under an Act passed this year, and which comes into operation on January 1st, 1890, it is made a criminal offence to deliver or cause to be delivered such an advertisement as that forwarded.

A MEMBER.—In the absence of express agreement to the contrary, appointments of a personal nature held by individual partners are not partnership property, and this would be so in the case quoted.

[1] JOURNAL, September 28th, p. 745.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

THE TRUE DEATH-RATES OF LONDON DISTRICTS DURING THE THIRD QUARTER OF 1889.

In the accompanying table will be found summarised the vital and mortal statistics of the forty-one sanitary districts of the metropolis, based upon the Registrar-General's returns, for the third or summer quarter of the current year. The mortality figures in the table relate to the deaths of persons actually belonging to the respective sanitary districts, and are the result of a complete system of distribution of deaths occurring in the institutions of London among the various sanitary districts in which the patients previously resided. By this means the precise number of deaths of persons actually belonging to the respective sanitary districts is known, as all deaths occurring in institutions of persons who had previously resided in another district have been excluded from the total number of deaths in the district in which the institution is situated, and credited to the districts from which they came.

The births registered in London during the third quarter of the current year were equal to an annual rate of 29.2 per 1,000 of the population of the metropolis, estimated at 4,351,738 persons, which showed a further decline from the rates recorded in the corresponding periods of recent years. The birth-rates in the various sanitary districts last quarter showed the usual wide variations, the sex and age distribution of the population differing greatly. In Kensington, St. George Hanover Square, St. James Westminster, and St. Martin-in-the-Fields the birth-rates were considerably below the average; while in East London, St. George Southwark, St. Luke's, Woolwich, and Fulham, where the population contains a large proportion of young married persons, the birth-rates showed a marked excess.

The 17,576 deaths of persons belonging to London registered during the quarter under notice were equal to an annual rate of 16.2 per 1,000, which was 2.7 below the mean rate in the third quarter of the ten preceding years, 1879-88, and corresponded with the low rate in the third quarter of 1888, which was below that in the corresponding period of any year on record. The lowest death-rates among the forty-one sanitary districts during the three months ending September last were 11.1 in St. George Hanover Square, 11.8 in Kensington, 12.2 in Hampstead, 13.1 in Islington and in Plumstead, 13.2 in Lewisham (excluding Penge), and 13.5 in Camberwell; in the other districts the rates ranged upwards to 22.3 in Stepney, 22.7 in Westminster, 23.2 in St. George Southwark, 23.3 in St. Martin-in-the-Fields, 24.5 in St. Saviour Southwark, 25.7 in Fulham, and 30.4 in St. George-in-the-East. During the quarter under notice 3,282 deaths resulted from the principal zymotic diseases in London; of these 1,961 were referred to diarrhœa, 456 to diphtheria, 300 to whooping-cough, 218 to measles, 190 to scarlet fever, 157 to different forms of "fever" (including 5 to typhus, 143 to enteric or typhoid fever, and 9 to simple and ill-defined forms of fever), and not one to small-pox These 3,282 deaths were equal to an annual rate of 3.0 per 1,000 which was 1.3 below the mean rate from the same diseases in th

Analysis of the Vital and Mortal Statistics of the Sanitary Districts of the Metropolis, after Complete Distribution of Deaths occurring in Public Institutions, during the Third Quarter of 1889.

Sanitary Areas.	Estimated Population middle of 1889.	Births.	Deaths.	Annual Rate per 1,000 Living.			Deaths from Principal Zymotic Diseases.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric Fever.	Simple and Undefined Fever.	Diarrhœa.	Deaths of Children under one year of age to 1,000 births.
				Births.	Deaths.	Principal Zymotic Diseases.											
LONDON	4,351,738	31,628	17,576	29.2	16.2	3.0	3,282	—	218	190	456	300	5	143	9	1,961	183
West Districts																	
Paddington	112,590	725	390	25.8	13.9	2.4	68	—	1	—	16	3	—	3	—	45	168
Kensington	196,226	884	575	18.1	11.8	2.2	110	—	1	15	36	5	—	5	—	48	171
Hammersmith	102,453	690	376	27.0	14.7	2.6	67	—	1	10	11	4	—	3	—	38	186
Fulham	66,441	813	426	49.1	25.7	5.6	92	—	8	9	7	9	—	—	—	59	223
Chelsea	104,375	743	426	28.6	16.4	2.9	75	—	5	3	3	15	—	4	1	44	203
St. George, Hanover Square	87,944	416	243	19.0	11.1	1.9	41	—	6	1	9	—	—	6	—	19	120
Westminster	54,875	404	310	29.6	22.7	3.4	47	—	5	5	8	2	—	1	—	26	200
St. James, Westminster ...	27,231	133	109	19.6	16.1	2.2	15	—	2	1	2	2	—	1	—	7	226
North Districts																	
Marylebone	149,639	1,099	616	29.5	16.5	2.3	86	—	5	4	7	23	1	7	—	39	159
Hampstead	57,534	372	175	26.0	12.2	1.9	27	—	7	1	3	4	—	—	—	12	129
St. Pancras	245,291	1,752	1,051	28.7	17.2	3.0	181	—	10	9	11	23	—	8	—	120	207
Islington	337,596	2,289	1,101	27.2	13.1	2.4	205	—	15	6	18	12	—	17	—	137	164
Hackney	244,109	1,594	837	26.2	13.8	2.1	127	—	1	7	24	5	1	11	—	78	157
Central Districts																	
St. Giles	39,344	280	218	28.6	22.2	4.0	39	—	7	—	7	1	—	2	—	22	186
St. Martin-in-the-Fields ...	14,836	76	86	20.6	23.3	3.2	12	—	1	1	1	1	—	1	—	7	263
Strand	28,896	177	142	24.6	19.7	3.8	27	—	1	2	3	2	—	—	—	19	254
Holborn	29,937	243	151	32.6	20.2	3.4	25	—	3	6	2	2	—	2	—	10	152
Clerkenwell	70,860	516	323	29.2	18.3	3.7	65	—	4	7	9	4	—	3	—	38	192
St. Luke's	52,000	484	227	37.4	17.5	3.2	42	—	3	4	4	1	—	2	—	28	157
London City	37,054	185	177	20.0	19.2	1.7	16	—	4	—	2	1	—	1	—	8	168
East Districts																	
Shoreditch	125,340	1,052	610	33.7	19.5	3.9	121	—	—	6	23	8	—	6	—	78	207
Bethnal Green	132,079	1,173	648	35.6	19.7	5.0	164	—	9	7	54	11	1	7	1	74	197
Whitechapel	66,916	589	339	35.3	20.3	4.6	76	—	12	—	9	2	—	5	—	48	217
St. George-in-the-East ...	46,142	432	349	37.6	30.4	7.0	81	—	4	5	15	1	—	3	—	53	287
Stepney	58,888	499	327	34.0	22.3	4.6	67	—	1	3	12	4	—	4	—	43	192
Mile End Old Town	115,889	973	471	33.7	16.3	3.4	98	—	2	15	12	1	1	3	—	64	178
Poplar	190,896	1,345	653	28.3	13.7	2.1	100	—	3	5	18	10	—	4	—	60	160
South Districts																	
St. Saviour, Southwark ...	27,084	206	165	30.5	24.5	4.9	33	—	—	3	4	7	—	1	—	18	296
St. George, Southwark ...	60,133	526	347	35.1	23.2	3.7	56	—	5	4	3	6	—	—	—	38	234
Newington	123,278	915	543	29.8	17.7	3.6	112	—	12	12	16	16	—	1	—	55	215
St. Olave, Southwark	14,500	104	71	28.8	19.7	4.4	16	—	3	1	—	1	—	—	1	10	212
Bermondsey	90,143	739	406	32.9	18.1	3.7	82	—	3	5	8	7	—	5	—	54	181
Rotherhithe	44,316	369	181	33.4	16.4	2.8	31	—	2	1	—	4	—	2	—	22	179
Lambeth	289,474	2,124	1,138	29.5	15.8	3.2	233	—	13	14	49	30	—	5	3	119	179
Battersea	165,927	1,227	594	29.7	14.4	3.0	125	—	8	1	5	19	—	5	2	85	192
Wandsworth	130,489	1,026	450	31.6	13.8	2.4	78	—	1	5	10	9	—	4	—	49	125
Camberwell	264,999	1,728	893	26.2	13.5	2.7	179	—	22	4	24	24	—	5	—	100	177
Greenwich	160,376	1,267	766	31.7	19.2	4.2	169	—	19	5	7	15	1	3	—	119	208
Lewisham (excluding Penge)	67,161	411	221	24.6	13.2	1.7	29	—	2	2	1	2	—	—	—	22	173
Woolwich	37,212	361	180	38.9	19.4	2.7	25	—	3	—	—	3	—	3	1	15	150
Plumstead	81,265	687	265	33.9	13.1	2.0	40	—	4	1	3	1	—	—	—	31	127

corresponding periods of the ten preceding years, 1879-88. The lowest zymotic death-rates among the various sanitary districts last quarter were recorded in Lewisham (excluding Penge), London City, Hampstead, St. George Hanover Square, and Plumstead, in each of which sanitary districts the rate did not exceed 2.0 per 1,000. The zymotic death-rates ranged upwards in the other districts to 4.6 in Stepney and in Whitechapel, 4.9 in St. Saviour Southwark, 5.0 in Bethnal Green, 5.6 in Fulham, and 7.0 in St. George-in-the East. Compared with the preceding quarter the fatality of measles and of whooping-cough showed a marked decline, while that of each of the other zymotic diseases, especially of diphtheria and enteric fever, showed an increase. No death from small-pox was recorded in London during the quarter under notice, and no small-pox patients were under treatment at any time during the three months ending September last. Diphtheria showed the highest proportional fatality in Westminster, St. Giles, Shoreditch, Lambeth, Kensington, Stepney, St. George-in-the-East, and Bethnal Green; whooping-cough in Newington, Chelsea, Marylebone, and St. Saviour Southwark; and diarrhœa in Shoreditch, Strand, St. Saviour Southwark, Whitechapel, Stepney, Greenwich, Fulham, and St. George-in-the-East. Measles, scarlet fever, and enteric fever were not fatally prevalent last quarter in any of the sanitary districts. The number of scarlet fever patients in the Metropolitan Asylums Hospitals, which had been 738 at the beginning of the current year, had declined to 547 at the end of June; but since that date they have steadily increased, and were as many as 1,206 at the end of September. The admissions into these hospitals of persons suffering from scarlet fever, which had been 614 and 625 during the first two quarters of the year, further rose to 1,449 during the three months ending September last. There was also a marked increase in the number of diphtheria patients in the Metropolitan Asylums Hospitals during the quarter under notice; at the beginning of July the number was 52, since which date it has steadily increased, and was 122 at the end of September. The admissions, which had been 83 and 129 in the first two quarters of this year, further rose to 276 during the three months ending September last.

Infant mortality in London last quarter, measured by the proportion of deaths under one year of age to births registered, was equal to 183 per 1,000, against an average rate of 206 in the corresponding periods of the five preceding years, 1879-88. Among the various sanitary districts the rates of infant mortality were lowest in St. George Hanover Square, Plumstead, Wandsworth, Hampstead, Woolwich, and Holborn; while they showed the largest excess in Fulham, St. James Westminster, St. George Southwark, Strand, St. Martin-in-the-Fields, St. George-in-the-East, and St. Saviour Southwark.

ENTERIC FEVER IN ST. HELENS.

For several months past the town of St. Helens, Lancashire, has been suffering from a severe epidemic of enteric fever, which has caused much local anxiety. A report on the subject has just been issued by the medical officer of health, Mr. R. McNicoll, which shows that, although the town was singularly free from the disease in the early part of the present year, there were notified in May last 2 cases, in June 41, in July 97, in August 115, and in September 126 cases, making a total of 381 cases in five months. Of these cases, 50 were fatal, including one of typhus fever. The cause of the outbreak is obscure, but Mr. McNicoll is forced to the conclusion that the drainage of the infected districts of the town is at fault, and can only be remedied by carrying out the plans already prepared of a main sewer with ventilating shafts at short distances through the heart of the town at a very low level, whereby a sufficient outlet will be provided for the drainage. This is a work which has more than once been recommeuded by the health officer, and which Mr. Spear, the Inspector of the Local Government Board, advocated after his inspection of the town in 1882. The abolition of the old privy midden system is also an important requirement in St. Helens. Mr. McNicoll considers that another contributory cause of the outbreak was the offensive condition of the Eccleston Brook, which flows through the town. It is regrettable that a town of the importance of St. Helens should wait for an epidemic of fever before carrying into effect important drainage improvements which were shown to be essential more than seven years ago.

Professor Drasche, who attended the Grand Vizier of Persia during the Shah's visit to Vienna, has lately received the Cross of a Commander of the Persian Order of the Sun and Lion.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Birmingham (Population, 447,912).—*Lower Death-rates and Improved Sanitary Circumstances.*—The very favourable nature of the returns for 1888 marks Dr. Alfred Hill's report for that year as one of special interest and importance. The comparison which he institutes between this and former records, both of health and sanitation, brings out the fact that the death-rate for the year 1888, 17.5 per 1,000, was the lowest ever recorded in the written sanitary history of the city, and the state of the streets, dwellings, etc., better than it has ever been. A comparison of this year's figures with those of 1887 reveals an unusual fact, namely, a decrease in the mortality at every period of life. Further examination of the figures shows that the reduction has been greatest in persons between 5 and 20 years of age and in infants under 1 year, particularly in the latter. The smaller mortality in infants under 1 year is mainly the result of a reduction of 35 per cent. in the number of deaths recorded at this period of life in the summer quarter, when owing to the cool weather the deaths from infantile diarrhœa were far less numerous than usual. The distribution of mortality differs materially from that observed in any previous year, excepting 1885, with which it is in very close agreement. In no previons year, except the one just mentioned, has the percentage of mortality from zymotic disease been so low as in the year under review, one consequence being that the relative proportion of all the other principal classes of disease is higher than usual. The actual numbers of deaths recorded in each class are, however, considerably lower than usual, and lower than in 1887 with one exception, the deaths in the constitutional class of disease. No death from small-pox was registered, though eighteen cases were reported to the department. A map appended to the report and marked with spots and crosses, to show the locality and general distribution of measles, scarlet fever, and typhoid fever, contains fewer marks, and shows a greatly diminished prevalence, though there was a slight augmentation of scarlet fever mortality.

Saltley (Population, 7,800).—*High Infant Mortality: Improper Feeding of Infants.*—During the year 1888, 119 deaths were recorded in this district, giving a death-rate of 15.2 per 1,000. This Mr. Creswell considers very satisfactory, and an evidence of an exceedingly healthy community. Small-pox was entirely absent, and there was a comparative freedom from scarlet fever and no fatality from that disease. Of 21 deaths attributed to zymotic diseases, 7 were caused by measles, 4 by diphtheria, 3 by true croup, 2 by whooping-cough, 1 by typhoid fever, 2 by diarrhœa, 1 by erysipelas, and 1 by puerperal fever. The least favourable part of the annual report is that which relates to the infant mortality, which for 1888 was at the rate of 141 per 1,000 births, and was again above the average. Mr. Creswell considers improper feeding a very powerful factor in the production of this mortality, and suggests that local authorities should issue leaflets on the subject, and that the central authority should cause these leaflets to be distributed by the registrars of births at the time the births are registered.

INDIA AND THE COLONIES.

MEDICAL AID TO THE WOMEN OF INDIA.

The Merchant Taylors' Company has granted 20 guineas in aid of the funds of the National Association for Supplying Female Medical Aid to the Women of India. Recent reports confirm the healthy growth of this deserving movement. There are at present over 200 native women studying medicine in the schools of Bombay, Calcutta, Lahore, Madras, Hyderabad, and Agra. The majority of these will not carry their education further than will permit them to rank as "hospital assistants," in which capacity they will have the opportunity of doing much useful work. Out of the eleven fully qualified medical women now practising in India, under the auspices of the Association, five were trained in this country and six in their own. In 1888, His Highness the Maharajah of Patiala set apart 30,000 rupees for the construction of a female hospital at the headquarters of his territory, and also granted 10,000 rupees a year for its maintenance, and before leaving India the Marchioness of Dufferin and Ava laid the foundation stone of the building. The hospital is now approaching completion, and, on the application of the Maharajah, the United

Kingdom branch of the Association has selected Miss Mary Crawley, Edinburgh, to the medical charge and as physician to the family of His Highness and those of his Sirdars.

MEDICAL NEWS.

THE Committee of Management of King's College Hospital have been able to reopen a ward of thirteen beds, being one of the two which were closed in 1885 for lack of funds.

A SOCIETY OF PRACTICAL BROMATOLOGY, which, from its name, we presume will concern itself with the study of food stuffs, has lately been established at Lisbon. The President is Dr. José Thomaz de Sousa Martins.

NOTIFICATION OF INFECTIOUS DISEASE.—The Hornsey, Rowley, Wallasey, Sheerness, and Saltley Local Boards, and the Billesdon Rural Sanitary Authority have decided to put in force the provisions of the Infectious Diseases (Notification) Act.

OF the 1,637 patients reported, on Saturday last, to be under treatment in the Metropolitan Asylums Board Hospitals, 1,423 were scarlet fever cases, 102 diphtheria, six typhus, and 103 enteric fever.

IT is announced that a new weekly medical journal will appear in Paris on January 1st, 1890, under the direction of Professor Germain Sée, with the collaboration of the whole medical staff of the Hôtel Dieu.

MR. GEORGE WILLIAM PALMER, of Reading, has presented to that town twenty-one acres of land to be used as a public recreation ground, and has further promised a sum of £300 towards the cost of laying out the ground.

TWO cases of bite by a mad dog are reported this week at Highgate—one of a private gentleman, another of the police constable whose attention he had called to the dog, and who succeeded in killing it, not before it had bitten him in the wrist. The constable has been sent to the Pasteur Institute in Paris.

THE Council of the British Medical Temperance Association has just admitted eight new members and three associates (students). A written examination on alcohol will be held in January next for third-year students. Prizes are offered of the value of £10 10s. and £5 5s.

A MEDICAL SENATOR.—Dr. Francisco Alonso Rubio, some time physician to the Queen of Spain, and the leading obstetrician and gynæcologist of the Peninsula, has recently been named a life Senator by the Spanish Government. The appointment has given great satisfaction to the medical profession in Spain.

THE Home Secretary has appointed Mr. Richard Brayn, L.R.C.P., M.R.C.S., who was for many years medical officer of the Woking Convalescent Convict Prison, to the office of governor and medical superintendent of Woking Female Convict Prison, in succession to the late Dr. Power.

WHOLESOME FOOD FOR RUSSIAN SOLDIERS.—The medical department of the Russian Ministry of War has decided to establish movable laboratories of toxicological chemistry and bacteriology attached to each army corps. In these laboratories all food supplied to the troops will be analysed.

FIRST AID IN THE ITALIAN ARMY.—The Italian Minister of War has requested the medical department to draw up a programme of instruction in the elements of medicine and surgery suitable for use in military schools. It is intended that all cadets and non-commissioned officers shall make themselves competent to give first aid in cases of accident and other sudden emergencies.

SURGERY AT GÖTTINGEN.—A new Surgical Institute was formally opened at Göttingen on October 23rd, in the presence of the Minister of Education, Herr von Gossler, and Professor von Bergmann. Professor König, of Göttingen, received the Order of the Crown (Second Class) on the occasion. The new building is the first of several other clinical institutes which it is intended to establish in connection with the University of Göttingen.

AT the Bangor City Council, it was resolved that the Council should adopt the Infectious Diseases (Notification) Act, to come into operation on the 1st of December next. It is intended that the Act should be made applicable also to measles. Arrangements are being made for the provision of an Isolation Hospital, and the Mayor has offered £500 towards the hospital, to obviate the necessity of allowing the expense of maintaining it to fall upon the rates.

MEDICAL STUDY IN PORTUGAL.—The number of students who have matriculated this winter session in the University of Coimbia is 117. Of these 29 have entered for the first year, 32 for the second, 32 for the third, 8 for the fourth, and 16 for the fifth, which is the last of the regular curriculum. The numbers do not strike one as overwhelming, but the *Coimbra Medica*, while congratulating the professors on the prospect of well attended classes, hints that the presence of such crowds of students in the dissecting rooms, laboratories, and hospital wards will make individual instruction difficult.

OPHTHALMOSCOPIC DEMONSTRATIONS AT THE ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Mr. Frost gave the fourth demonstration in this series on November 5th; he treated of those morbid conditions of the optic nerve and retina which usually accompany each other. Several anatomical diagrams were projected on to the screen to illustrate the vascular and lymphatic supply of the optic nerve. The majority of the diagrams illustrated the various ophthalmoscopic appearances of neuro-retinitis. One diagram showed clearly the smooth appearance of a hæmorrhage situated just beneath the membrana limitans interna, as contrasted with the ordinary frayed appearance of a hæmorrhage into the nerve-fibre layer. Paintings illustrative of the consequent degenerative changes in the optic disc and retina were also exhibited on the screen.

THE ROYAL SOCIETY.—The following is the list of names recommended by the President and Council of the Royal Society for election into the Council for the year 1890, at the forthcoming anniversary meeting on November 30th:—*President:* Sir George Gabriel Stokes, M.A., D.C.L., LL.D. *Treasurer:* John Evans, D.C.L., LL.D. *Secretaries:* Professor Michael Foster, M.A., M.D.; and Lord Rayleigh, M.A., D.C.L. *Foreign Secretary:* Dr. Archibald Geikie. *Other members of the Council:* Professor Henry Edward Armstrong, Ph.D.; Professor William Edward Ayrton; Charles Baron Clarke, M.A.; Professor W. Boyd Dawkins, M.A.; Edward Emanuel Klein, M.D.; Professor E. Ray Lankester, M.A.; Hugh Müller, Ph.D.; Professor Alfred Newton, M.A.; Captain Andrew Noble, C.B.; Rev. Stephen Joseph Perry, D.Sc.; Sir Henry E. Roscoe, D.C.L.; Edward John Routh, D.Sc.; William Scovell Savory; Professor Joseph John Thomson, M.A., Professor Alexander William Williamson, LL.D.; and Sir Charles William Wilson, Colonel R.E.

VOLUNTARY EXAMINATION IN SHORTHAND OF MEDICAL STUDENTS.—The following is the result of the examination (eleven candidates) held on October 11th, 1889 (E. B. Gray, M.D.Oxon., Hon. Physician to the Radcliffe Infirmary, and Thos. A. Reed, Hon President of the Phonetic Shorthand Writers' Association, examiners):—

Part I. General Examination.—Class I (in order of merit): Caiger, H., University College, and Russell, A. E., St. Thomas's Hospital, prize equal; Brown, W. L., London Hospital; Savage, W. A., University College; Soutter, D. L., King's College.

Class II (alphabetically): Purvis, W. P., St. Thomas's Hospital; Ransome, A. S., London Hospital; Smith, E. H., London Hospital.

Part II. Special Examination in Method of Use.—Brown, W. L., prize; Caiger, H., *proxime accessit;* Russell, A. E., and Savage, W. A., commended.

N.B. The Committee desire to intimate that the general examination in proficiency for students already engaged in studies is exceptional, and that it will not be held after this year, in order that there may be no inducement to devote to learning shorthand the time that ought to be given to professional work. The part of the examination will therefore in future be restricted to first year's students.

MEDICAL VACANCIES.

The following Vacancies are announced:

BALLINASLOE DISTRICT LUNATIC ASYLUM.—Resident Assistant. Salary, £100 per annum, with £50 in lieu of rations, furnished apartments, and certain allowances. Candidates must not be over 32 years of age. Applications not later than November 9th. Election on November 11th.

BOROUGH OF HUDDERSFIELD.—Medical Officer of Health. Salary, £400 per annum. Applications by November 12th to G. B. Nalder, Esq., Town Clerk.

CENTRAL LONDON SICK ASYLUM.—Assistant Medical Officer and Dispenser. Salary, £100 per annum, with board and residence. Applications by November 9th to William Appleton, Clerk's Office, Cleveland Street, W.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—House-Physician. Board and residence. Applications by November 15th to the Secretary at the office, 24, Finsbury Circus, E.C.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—Resident Medical Officer. Salary, £100 per annum, with board, etc. Applications by November 15th to the Secretary at the office, 24, Finsbury Circus, E.C.

FLINTSHIRE DISPENSARY.—House-Surgeon. Salary, £100 per annum, and furnished house, etc. Applications by November 11th to the Secretary, Board Room, Bagillt Street Holywell.

GORDON HOSPITAL FOR FISTULA, Vauxhall Bridge Road.—Assistant-Surgeon. Applications by November 9th to the Secretary.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway Road, N.—Ophthalmic Surgeon. Applications by November 27th to the Secretary.

LEICESTER INFIRMARY AND FEVER HOUSE.—Assistant House-Surgeon. Salary, £80 per annum, with board, lodging, and washing. Applications by November 24th to the Secretary, 24, Friar Lane, Leicester.

LONDON HOSPITAL, Whitechapel Road, E.—Surgical Registrarship. Salary, £100 per annum. Applications by December 2nd to the Secretary.

LONDON TEMPERANCE HOSPITAL, Hampstead Road.—Junior House-Surgeon. Applications by November 23rd to the Secretary.

MANCHESTER ROYAL INFIRMARY.—Assistant Medical Officer. Salary, £80 per annum. Applications by November 9th to W. L. Saunder.

METROPOLITAN ASYLUMS BOARD, South-Eastern Fever Hospital, New Cross, S.E.—Assistant Medical Officer. Salary, £15 per month, with board, lodging, and washing. Applications by November 12th to the Offices of the Board, Norfolk House, Norfolk Street, Strand.

NORTH DEVON INFIRMARY, Barnstaple.—House-Surgeon. Salary, £100 per annum. Applications by November 16th to the Secretary.

PERTH DISTRICT ASYLUM.—Assistant Medical Officer. Salary, £100 per annum, with board and lodging. Applications by November 14th to the Medical Superintendent.

SCARBOROUGH HOSPITAL AND DISPENSARY.—Assistant House-Surgeon. Salary, £25 for six months, with board and lodging. Applications by November 16th to the Medical Staff, Eldon Street, Scarborough.

TOWER HAMLETS DISPENSARY.—Resident Medical Officer. Salary, £120 per annum, with furnished rooms, etc. Applications by November 16th to J. F. Garioch, Esq., Tower Hamlets Dispensary, White Horse Street, Stepney, E.

VICTORIA HOSPITAL FOR SICK CHILDREN, Queen's Road, Chelsea.—Ophthalmic Surgeon. Applications by November 18th to the Secretary.

MEDICAL APPOINTMENTS.

ALTHORP, C. J. M., M.R.C.S., L.R.C.P., appointed House-Surgeon to the Bradford Infirmary and Dispensary.

BEAVER, R. Atwood, L.R.C P.Lond., M.R.C.S.Eng., L.M.S., appointed Assistant Resident Medical Officer to the Lancaster County Asylum, Rainhill, *vice* Dr. Barendt, resigned.

BROADBENT, Frank, M.R.C.S., L.R.C.P.Ed., appointed Medical Officer to the Collingham District of the Newark Union, *vice* John Broadbent, M.R.C.S., L.S A., resigned.

BRODIE, R. C., M.B., appointed Junior Assistant to the Glasgow Royal Asylum, *vice* L. R. Oswald, M.B., promoted.

BUCHAN, William A., M.B., appointed Certifying Factory Surgeon, Plymouth.

BURROWES, H. A., appointed House-Surgeon to the Liverpool Infirmary for Children, *vice* R. W. Murray, L.R.C.P.Lond., M.R.C.S.Eng., resigned.

CHAMBERS, J., M.D., M.Ch Irel., appointed Assistant Medical Superintendent to the Royal Asylum, Montrose.

CHEESEWRIGHT, John F., L.R.C.P.Edin., M.R.C.S.Eng., appointed Medical Officer to the Rawmarsh District of the Rotherham Union, *vice* W. J. Smith, L.R.C.P.Edin., L.M., L.S.A.Lond., resigned.

DIXON, H. W., M.D., appointed Resident House-Surgeon to the Gateshead Dispensary, *vice* R. Hardie, M.B., resigned.

FARQUHARSON, W. F., M.B., C.M.Edin., appointed Junior Assistant Medical Officer to the Counties Asylum, Carlisle.

FRIPP, A. D., M.R.C.S., L.R.C.P., appointed House-Physician to Guy's Hospital.

HARE, E. E., M.R C.S., appointed House-Physician to the East London Hospital for Children, Shadwell, *vice* Dr. McClure, resigned.

KERR, J., M.B., B.C., appointed House-Physician to the Bradford Infirmary and Dispensary.

MACCONKEY, H. T., M.B., B.C., B.A.Cantab., appointed House-Surgeon to Guy's Hospital.

MACILWAINE, S. W., M.R.C.S., L.R.C.P., appointed House-Surgeon to Guy's Hospital.

MAHON, R. B., M.D., M.Ch., appointed Medical Officer to the Ballinrobe Union, *vice* J. D. Kelly, L.R.C.S.I., L.R.C.P.Ed., deceased.

MILNER, E., M.R.C.S., appointed Surgeon to the London Lock Hospital, *vice* W. Coulson, F.R.C.S.Eng., deceased.

MOORE, Frederick Hone, L.K.Q.C.P.I., L.R.C.S.I., L.M., appointed Medical Officer and Public Vaccinator to the Littleport and Reduced District; also to the South Welney Union.

NASH, W. G., L.R.C.P.Lond., M.R.C.S., appointed Senior House-Surgeon to the South Devon and East Cornwall Hospital, Plymouth.

NORBURN, A. E., M.R.C.S., L.R.C.P., appointed House-Physician to Guy's Hospital.

NORTON, Everitt E., appointed House-Physician to the Middlesex Hospital.

OSWALD, Landel R., M.B , appointed Senior Assistant to the Glasgow Royal Asylum, *vice* John Hay, M.D., retired.

PEARSON, James, L.R.C.P.Lond., M.R.C.S.Eng., appointed Resident Medical Officer to the Bootle Borough Hospital, *vice* E. A. Beaver, L.R.C.P.Lond., M.R.C.S.Eng., L.M.S., resigned.

PHILLIPS, S., M.D., M.R.C.P., appointed Physician to the London Lock Hospital, *vice* Sir E. H. Sieveking, M.D., F R.C.P., resigned.

PORTER, W. E., M.B., C.M.Edin., M.R.C.S.Eng., appointed Medical Officer to the Royal Masonic Institution for Boys at Wood Green, N.

REID, E. W., M.B.Cantab., M.R.C.S., appointed Professor of Physiology at University College, Dundee.

ROSS, D. M. M., M.B.Edin., appointed Assistant Medical Superintendent to the Counties Asylum, Carlisle.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the announcement. The first post on Thursday mornings is the latest by which advertisements can be received.

BIRTHS.

CLELAND.—At 2, The University, Glasgow, on the 4th instant, the wife of Professor Cleland, M.D., of a son.

O'CALLAGHAN.—On November 3rd, at Waldeck, Clarendon Road, Southsea, the wife of Surgeon Kenneth McDonald O'Callaghan, Army Medical Staff, of a daughter.

UNDERHILL.—On November 1st, at Bromsgrove, the wife of T. Edgar Underhill, M.D., F.R.S.Edin., of a son.

MARRIAGES.

BARNETT—WEBB.—On October 30th, 1889, by the Rev. Hadrian Harries, B.A., at Holy Trinity Church, Coalbrookdale, Salop, Horatio (Guy) Barnett, M.B.Cantab., to Margaret Elizabeth, the youngest daughter of the late Matthew Webb, M.R.C.S., of Ironbridge, Salop.

CRAN—SMITH.—At St. Paul's Episcopal Church, Aberdeen, on October 24th, by the Rev. G. W. Rowntree, George Cran, M.D., M.C., Banchory, fifth son of the late Alex. Cran, M.R.C.S.E., Tarland, to Annie, daughter of Alex. Emslie Smith, Esq., Advocate, Aberdeen.

MURRAY—DUNNE.—On October 8th, at Graaff Reinet, Cape Colony, by Rev. Canon Steabler, George Everitt Murray, M.B., F.R.C.S., eldest son of W. E. Murray, Esq., of Roode Bloem, to Kathleen, second daughter of Captain J. J. Dunne, late Governor of Castlebar Prison, co. Mayo, Ireland.

DEATHS.

EDMUNDS.—October 31st, at Pontnewydd, Mon., John Richard Montagu, infant son of Richard Edmunds, M.R.C.S.

FENTON.—On October 31st, at 89, Asylum Road, S.E., George Fenton, M.R.C.S., late of Westminster and Hastings, in his 63rd year.

GROSVENOR.—On October 7th, at 121, Ladbroke Grove, Kensington Park, George Fox Grosvenor (eldest son of the late Wm. Grosvenor, of Alsager, Cheshire), M.D., M.R.C.P., M.R.C.S. For twenty-six years resident at the above address. Beloved and respected by all who knew him. Friends please accept this intimation.

DIARY FOR NEXT WEEK.

MONDAY.

MEDICAL SOCIETY OF LONDON, 8.30 P.M.—Mr. Marmaduke Sheild: On a case of Cerebral Abscess due to Ear Disease, evacuated by the Trephine. Dr. Ewart: On Pneumothorax and the Value of its Treatment by Aspiration; with observations on the Composition and Pressure of the Gaseous Contents of the Pleura.

TUESDAY.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY, 20, Hanover Square, 8.30 P.M.—Mr. J. Bland Sutton: A case of Ruptured Tubal Pregnancy, with remarks on the cause of early rupture.

WEDNESDAY.

ROYAL MICROSCOPICAL SOCIETY, King's College, W.C., 8 P.M.

BRITISH GYNÆCOLOGICAL SOCIETY, 8 P.M.—Council meeting. 8.30 P.M.—Mr. W. D. Spanton: Specimen. Dr. Ingleby Mackenzie: Case of Prolonged Gestation. Adjourned discussion on Dr. Bantock's paper: Series of 400 Completed Ovariotomies.

HUNTERIAN SOCIETY, 8 P.M.—Clinical evening. Mr. Clement Lucas: 1. Case of Intussusception Cured by Inversion and Inflation. 2. Recurrent Orchitis in a Gouty Subject. Dr. Turner: A case of Hemiatrophy of the Tongue. Mr. Poland: Case of Amputation through the Knee-joint, and other cases.

THURSDAY.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E., 4.30 P.M.—Dr. Heron: On the Question of the Contagiousness of Consumption. Lecture I.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM, 8.30 P.M.—Patients and card specimens at 8 P.M. Mr. C. Wray (introduced): A Form of Conjunctivitis. Mr. Silcock: Anomalous Position of the Ciliary Processes, conjoined with Shrunken Lens and (?) Persistent Capsulo-pupillary Membrane. Mr. Doyne: Recovery from Hemianopsia, with Subsequent Necropsy. Dr. James Anderson: Homonymous Hemianopsia; Recovery; Subsequent Death and Necropsy. Mr. Priestley Smith: On the Size of the Cornea in Relation to Age, Sex, Refraction, and Primary Glaucoma. Professor Snellen, of Utrecht (introduced): New Methods of Treatment for (1) Symblepharon; (2) Ptosis; (3) Episcleritis. Mr. J. Tatham Thompson: Note on a Case of Hereditary Tendency to Cataract in Early Childhood.

FRIDAY.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM, 9 P.M.—Bowman Lecture, by Professor Hansen Grut of Copenhagen: Anomalies of the Positions of the Eyes.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the office of the JOURNAL, and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429 Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

ANSWERS.

AMBULANCE asks if there is any place where he can borrow models of the trunk and a few other requisites for an elementary ambulance class.

*** Mr. Lewis, Medical Bookseller, 136, Gower Street, could probably supply the required articles.

A SMALL FRENCH TEXTBOOK OF MEDICINE.

FRANÇAIS.—Probably the following work would answer our correspondent's purpose: Moynac, *Pathologie et Clinique Médicale*, 4th ed., 1888. It can be obtained from A. Maloine, 91, Boulevard St. Germain, Paris; price, including postage, between six and seven shillings. For physical signs, etc., Lasègue and Grancher's *Technique de l'Auscultation, Palpation, et Percussion*, 1882, price between one and two shillings, may be recommended.

DENTAL SURGERY FOR GENERAL PRACTITIONERS.

A MEMBER asks to be recommended a good book which would supply a country practitioner with useful practical knowledge as to stopping and regulating teeth, with such other aids to minor dental surgery as falls to the lot of a practitioner in an out of the way district.

*** Tomes's *Dental Surgery* (Churchill) or Coleman's *Dental Surgery* (Smith, Elder, and Co.) would probably answer the purpose.

PRACTICE IN SOUTH AFRICA.

DR. H. HAVELOCK STURGE (New Eltham) writes: In answer to "M.D.", in the JOURNAL for October 19th, the medical profession is well represented both as regards number and ability at Cape Town. Rivalling most other cities, it contained a short time since among its practitioners both a lady and a black doctor. There are other openings, no doubt. With the magnificent gold fields recently opened up, the immigration of late into the Transvaal has been estimated at 15,000 per annum. Johannisberg has a population of over 20,000, and will probably begin an era of still greater progress at the end of November.

The climate of South Africa is extremely healthy. In winter the days are bright, bracing, and sunny, with sharp frosts at night. The summer is hotter than in England, but the heat is not sufficient to interfere with outdoor occupations. Near the sea there are no marked changes of season. A place as *locum tenens* or assistant would not be readily obtained; the pay for such would be about double the amount usually given here. As to marriage, your correspondent is referred to the back numbers of the *Daily Telegraph*.

In answer to "Raeson," in the JOURNAL for October 26th, the climate of Johannesberg is grand, dust storms being the only drawback. The place is not considered healthy. Sanitary arrangements are primitive, and typhoid prevalent. The roads are unmade, the surface undrained, and scavenging much needed. Pails are in use for latrines. British qualifications are sufficient.

NOTES, LETTERS, ETC.

THE HOT WATER OPERATION TABLE.

DR. ALEXANDER DUKE, F.K.Q.C.P.I., Ex-Assistant Master of the Rotunda, Gynæcologist to Steevens's Hospital, writes: Now that the winter has come I hope the suggestion I made in the JOURNAL about a year ago may be adopted, namely, that of having an operating table with double top, hollow, constructed of zinc and filled with hot water, covered with a blanket, and which I feel sure would contribute considerably to the comfort of patients undergoing operation, and prevent the subsequent collapse. The attempt made by the use of hot water bottles—sometimes applied at random, often too hot, and occasionally not kept in proximity to the patient's body—would be, I think, advantageously supplanted by the use of the hot water operating table. The comfort to both patient and doctor would, I feel sure, amply compensate for the small outlay additional in providing such.

CARBOLIC ACID IN PUERPERAL RIGOR.

DR. A. D. LEITH NAPIER (Harley Street, W.) writes: With reference to an Obstetric Memorandum in the JOURNAL for October 26th, I fancy Dr. Ian Mackay must have known that carbolic acid has been prescribed for puerperal septic conditions for about twenty years. If not, and should he desire to corroborate his experience of the usefulness of the drug in such cases, a consultation of Waring's *Therapeutics*, third edition, will afford some information. I also venture to ask his attention to my articles in the *Obstetrical Journal* for 1888 on Puerperal Fever, and in the *Practitioner* for this year "On the Treatment of Puerperal Pyrexia." I have found carbolate of quinine to be usually the best form of administering carbolic acid internally. A reference to the sources indicated will afford fuller details.

THE MEDICAL SERVICE OF THE LEEWARD ISLANDS.

SENEX writes: There are two or three vacancies in the Medical Service of the Leeward Islands, and as the Crown agents for the colony are probably endeavouring to obtain men to fill these appointments I think the following facts should be made known to intending candidates. The pay ranges from £200 to £250, the fees (vaccination, etc.) average £20. There is no pension, no "free quarters," no increase of pay with length of service; an officer on leave goes on half pay. House rent is high, living is expensive and unsatisfactory, the climate is trying and uncomfortable for Europeans, and as for the work it is simply heart-breaking. Hitherto the medical officer has looked to his private practice for a means of living, and the very few leading practices in the colony are fairly respectable as to income; but all this is to be altered, the doctors appointed after this are to be transferred to any part of the colony as may seem fit and proper to the Governor. The meaning of this is that his Excellency may by a stroke of his pen practically ruin a man who has a decent practice and has incurred his displeasure. These islands may be healthy, but they certainly are not so for doctors. The number of medical appointments in the colony is twenty-four, the average filled being twenty-two. Now, during the last fifteen years at least sixteen medical officers have died, six have left permanently on account of ill-health, five or six have left for other colonies, two have been tried for manslaughter and acquitted, then dismissed the service. The bulk of the good practices are in the hands of colony-born men, and any young fellow coming out would be relegated to a country district, where the society and the chances of making a decent income are very small.

DOG BITES IN LONDON, AUGUST, 1889.

DR. JAMES TURLE (North Finchley) writes: I have only just noticed in one of your recent issues a paragraph in which the number of persons reported to the police as having been bitten by dogs in London in August was the enormous one of 1,681. The number given in the official report was 186.

ARREST OF GROWTH IN CANCER BY THE INTERRUPTED VOLTAIC CURRENT.

DR. INGLIS PARSONS (South Kensington) writes: My attention was recently drawn by Dr. Purdy, of Leeds, to an article in the *Eastern Morning News* of June 19th last, on my method of treating cancer. As there seemed to be an impression in some quarters that I was responsible for this, I beg to state that I never even heard of the paper before, that I was unaware that any notice had appeared, that I had nothing to do with it, and I disclaim all connection whatever with it. The only tribunal to which I appeal for judgment is that formed by my own profession.

THE PRACTICAL ELEMENT IN MEDICAL EDUCATION.

A LICENTIATE writes: The various letters on the above subject have been read with much interest by me. It is one of infinite importance to the medical student, since, on the kind of training received at hospitals, and the use made of the opportunities presented to him, much of his future success as a practitioner depends.

One can I think safely, and with much benefit, dispense with the systematic course of lectures adopted in various medical schools. By many students (and I was not an exception) such lectures are considered a waste of time, as one is able to gain a far better knowledge of his subjects from studying recognised systematic works devoted to them. It would be more profitable were this time taken up with clinical instruction, of which one cannot have too much, as it lays the groundwork of a knowledge which is most essential to the youthful practitioner, and leaves a deeper and more lasting impress of the most important truths on his mind.

In giving such instruction—and this is specially needed in overcrowded hospitals—a large staff of competent clinical teachers should be employed, and each should endeavour to take a certain number of students in hand—say ten or a dozen. For many reasons such a plan is to be recommended: (1) the clinical teacher is thrown more in contact with the students he instructs, and knows exactly those who will be suited to the profession. At present a very large number of students who are unsuited for the work enter our hospitals; they either remain there as hospital "chronics," or by some stroke of good fortune, or a process of cramming for the occasion, pass their examinations; (2) the practical knowledge acquired will be gained in a far shorter time than at present, and the quiet evening hours could be devoted to theoretical study; (3) such a method of instruction would do away with the much despised apprenticeship system.

As soon as the student passes his examinations, and before starting on his own account, a year or a couple of years' work as an assistant to a general practitioner will be of the greatest use to him, in not only giving him an insight into the workings of a general practice, but in imparting that additional knowledge, which cannot be undervalued, and which unfortunately cannot be taught in hospitals.

NOTES OF A CASE OF POISONING BY A PLANT KNOWN AS TATULEH.

MR. J. HORNSEY CASSON, L.K.Q.C.P.I., M.R.C.S.E., Physician to Her Majesty's Legation in Persia, writes: On Saturday, May 29th, whilst enjoying a few days' holiday on the Elbruz mountains some sixteen miles north-east of Teheran, I was visited by two villagers from the little mountain hamlet of Bujāw, who, in great distress, begged "the Hakeembāshi" to come to their village, where six people were poisoned by eating a herb known as tatuleh, which had been taken by mistake. One man, they informed me, was already dead, and the other five were in a dying condition. Armed only with a small medicine chest containing a few very simple remedies, I followed my guides some eight miles up a narrow rocky pass, and arrived at the village, where I found five persons—three males, aged about 60, 25, and 15, and two females, aged 30 and 8, in a condition of extreme distress. The herb, which is known by the Persians to be poisonous, had been gathered by the woman in mistake for another very similar in appearance, and made into a stew with milk and bread, and eaten by herself and the five others some forty-six hours before my arrival. The symptoms were much the same in every case. All were more or less unconscious, the two younger ones being moribund, and only the older man and the woman being capable of being roused to consciousness. All were extremely jaundiced, the pupils dilated, with an anxious pained expression of

features, and moaning as if in severe internal pain. There was no spasm of abdominal or other muscles, and I could detect no signs of enlargement or tenderness of liver or spleen. The pulse was small and thready, as in peritonitis. The urine passed by all presented an appearance of being mixed with blood, and was deeply tinged with bile colouring matter. All were constipated. There was frequent vomiting of yellow bilious fluid, and in three cases a large quantity of dead worms (lumbricales) were vomited. In every instance there was epistaxis, more or less severe in character. I administered with difficulty warm milk, to which I added carbonate of soda, and to the old man and the woman, who seemed most in pain, I gave an opiate. Within a further thirty-six hours all were dead, the woman and the old man being the last to succumb. Only the six persons who died had eaten of the stew.

*** The specimen enclosed is Crozophora tinctoria, a plant of wide geographical range, extending from Spain to the North of India. For a full account of its properties, see Lindley's *Flora Medica*. It is well figured in Sibthorp and Smith's *Flora Græca*, Tab. 951, under the name of Croton villæus.

Epilepsy after Vaccination.

Dr. Julius Althaus (Harley Street) writes: I have been very much surprised by seeing a letter from Mr. Climson Greenwood, Public Vaccinator of Marylebone, in the Journal of October 26th, in which he adversely comments upon a case of mine which appeared in your Hospital Reports some weeks ago. I am bound to say that in this matter Mr. Greenwood has treated me with very scant courtesy. The facts are these: Shortly after the appearance of the report alluded to, he wrote to me asking for the address of the patient in question; and although he was a perfect stranger to me, I gave it him most readily, and likewise afforded him every facility for investigating the case. I should certainly have expected from him under the circumstances that he would have asked me, when he found that his "ferreting," as he calls it, elicited different results from mine, to see the patient and his relations with him, so as to arrive together at an explanation of the discrepancies between his account and mine. Instead of that he has rushed into print, without communicating with me at all; and I emphatically protest against such a proceeding as unprofessional.

At present I will only say that the notes given in the hospital report were taken down by me at the first visit of the patient, who came to the hospital accompanied by his father, a very intelligent man, and that I then inquired minutely into the family history and habits of the patient. The answers to my questions were given by both men without the slightest hesitation, and with such apparent straightforwardness, that I did not see any reason for doubting their accuracy. I shall now make a fresh inquiry, not, however, in conjunction with Mr. Greenwood, and will acquaint you with the results.

Mr. Greenwood is quite wrong in stating that I have brought any "accusations" against vaccination; on the contrary, I endeavoured to explain the apparent connection between the vaccination and the outbreak of epilepsy in the present instance by suggesting that perhaps the operation might have been carelessly performed—a supposition which appeared justifiable from the symptoms which were mentioned to me as having occurred subsequently. I have, however, before this had occasion to notice that there are people who look up to vaccination as a kind of divinity which must be worshipped without questioning, and at all hazards: while my criticism of their goddess is considered by them to amount to little short of sacrilege. Such pretensions as these appear to me positively ridiculous in an age like ours, where nothing is exempt from criticism.

I shall on a subsequent occasion have something to say about the age of the patient, as predisposing to epilepsy or not; when I hope to show that, although the first outbreak of epilepsy is frequent between 10 and 16 years of age, the curve rapidly sinks after 16, and that indeed, as stated in the report, epilepsy does not commonly originate at the age of the patient (19).

Dr. John Cordwent (Milverton, Somerset) writes: The public vaccinator for Marylebone gives a very fair review of Dr. Althaus's statement of a case of epilepsy after vaccination. The family history of the patient was bad. The three first children of the mother being born dead is suggestive of a strong syphylitic taint, which in its tertiary stage may readily have passed from the father without inducing any evil obvious to the mother. Either this poison, or some pelvic or uterine evil subsequently overcome, is necessary to account for death at birth of the first three children. After an official medical examination of the young man referred to, he was accepted for Post Office service as being in good health, on condition of his being revaccinated, which operation he submitted to, and on the tenth day after it a metastatic disease expressed itself in the knee and ankle of the vaccinated side. Epilepsy followed in the course of a month. A bad paternity is stated to show a want of vital resistance, but as this want of vital resistance is an unknown quality often existing, how is the law justified in constantly placing it on a severe and dangerous trial?

Unqualified Assistants.

A Member writes: A communication appears in the Journal of September 28th by "Sine Diploma," which may possibly be intended as a reply to mine of September 14th. I have never been an unqualified assistant, nor am I now seeking a qualified assistantship, as I have been for some years in practice as a legally qualified medical man, so that I presume I am by this time pretty well feathered.

The question of the relative merits of qualified and unqualified assistants is, after all, a matter of opinion which cannot be proved by the comparison of individuals; but I may remark that "Sine Diploma" has not alluded to the last paragraph of my letter, which I think proves that, though unqualified assistants may be without fear, they certainly are not without reproach.

Yellow Fever: a New Treatment.

Dr. Jasper Cargill (St. Andrew, Jamaica) writes: Dr. Wolfred Nelson, of New York, has issued a pamphlet copy of a lecture, which he read before the State Medical Society of Arkansas May 28th, 1889, in which he states that in yellow fever the germs prey upon and destroy the red corpuscles of the blood. He instances a fatal case in which Dr. L. Girerd failed to find a single red corpuscle on the fourth day. He believes that these blood-killing germs perish when brought in contact with an acid, and recommends phosphoric acid as the treatment, having cured with it three successive cases. This method of treating yellow fever is diametrically at variance with Dr. George Sternberg's theory, which is that the disease being characterised by highly acid secretions should be treated by alkalines, an idea suggested by me eleven years ago. Dr. Sternberg recommends bicarbonate of soda with small doses of perchloride of mercury, which treatment was very successfully tried by Dr. Raphael Weiss, in the Garcini Hospital, Havannah, on thirteen patients, all of whom recovered.[1] Dr. Sternberg believes that the specific micro-organism of yellow fever finds its *habitat* in the alimentary canal. Notwithstanding the supposed absolute destruction of the blood (necræmia), Dr. Nelson asserts that the disease "has no pathology." This is somewhat illogical. Every physician who has had much to do with yellow fever must have noticed that the survivors in most cases recover rapidly. Their convalescence, except retarded by complications, is a quick one. I have seen a case given over as past recovery going about two weeks after with little or no traces of the storm he has weathered. If there has been much destruction of red corpuscles, anæmia would invariably be a sequela. This, I assert, is not the case, therefore necræmia cannot be the mischief caused by the yellow fever germ, or, in other words, its pathology. It is in the pernicious malarial fevers that we find anæmia caused by blood poisoning. Lately I have met with many such cases in persons who have left Colon fever-stricken. These cases at first look very like pernicious anæmia, but arsenic, iron, and Jamaica air restore them in time. If such persons were attacked by yellow fever, necræmia would most certainly be a fatal complication. Dr. Nelson's description of the three stages of yellow fever is forcible and graphic, and should be carefully noted by the inexperienced. Many a patient has slipped through during "the period of calm," that most deceptive stage of the disease, to the consternation of doctors, nurses, and friends. A patient apparently mending in the morning is found dead in the evening. A very little exertion in this stage puts the heart out. Dr. Nelson's statement that sometimes the disease has only one stage is too true. I recollect some years ago a Russian lady, a governess in a family in Jamaica, mounted her horse early in the morning feeling very well, and rode thirteen miles. On dismounting she felt giddy and faint. I was sent for soon after, and was at once able to diagnose yellow fever. That afternoon her urine became albuminous; black vomit soon followed, and the evening after she died from uræmia. This was the most rapid case I ever saw, and its incubation was equally rapid. It was yellow fever in one stage.

The Sale of Cocaine.

Mr. F. Passmore writes: Referring to the subject of a communication from Mr. Douthwaite, that appeared in the Journal of September 28th, p. 750, top of col. 1, I would point out that "all poisonous vegetable alkaloids and their salts" are included in Part I of the Poison Schedule, and as the circumstances of the case show that cocaine in the quantities supplied is capable of acting as a poison, it would, *ipso facto*, be brought within the scope of the regulations. It seems to me that it would be a case of the same nature as one submitted to the Privy Council some years ago in relation to preparations containing opium, when the opinion was expressed by Mr. Simon, I believe, that the holding of a preparation to be a poison would depend somewhat upon its capability of acting as a poison.

A Frequent Source of Fallacy in Ophthalmoscopic Diagnosis.

Mr. S. Johnson Taylor, M.B. (Norwich) writes: I wish to draw attention to what seems to me to be insufficiently pointed out in textbooks on eye diseases—namely, the ease with which one may diagnose slight commencing neuro-retinitis in an eye which is perfectly healthy, but is the subject of astigmatism. Such mistakes are very likely to be made by physicians and others contented with a smattering of the subject, especially as such persons are nearly always satisfied with the indirect examination, and are unable to use a refraction ophthalmoscope. The appearances, certainly, are very deceptive, for, owing to the difference of refraction of the two principal meridians, all the parts are not in focus at the same time, and parts of the disc and surrounding retina appear more or less hazy and ill-defined according to the amount of astigmatism present, whilst, if there be a little tortuosity of the vessels at the same time (as is not uncommon), or a congested state of the disc from ocular strain, the deceptive appearances are still more accentuated.

I have had two or three illustrations of this lately, my most marked case being oneof simple hypermetropic astigmatism of 6 dioptres, an unusual amount. Here, of course, no spherical glasses gave any improvement, nor, beginning as usual with a low cylinder, could I get my patient, a middle-aged man and a schoolmaster, to admit any improvement in his vision until I began to use about a + 2.5 D cyl. The indirect examination in this patient showed marked haze of parts of the disc and neighbouring retina, those parts being, of course, out of focus; and had I been contented with such method, and had I not pushed my cylinders, I might readily have put it down as slight partial neuro-retinitis and treated it as such; as it was, with + 6 D cyl. (axis 120° down out) V= $\frac{5}{6}$ (5 letters).

Retinoscopy, estimation by the direct method, and the usual statement, which is nearly always a proof of astigmatism—namely, "I have tried ever so many pairs of glasses and never could get any to suit me," soon clear up all doubts; but if the examination be hurried and incomplete, astigmatism, especially hypermetropic astigmatism, may easily be mistaken for slight neuro-retinitis.

Case of Successful Vaccination after Small-pox.

Dr. W. Boulting, L.R.C.P.Lond. (Hampstead) writes: J. C. P., aged 13, had small-pox when he was 9 days old. His father, brother, and sister had the disease at the same time, and the father is deeply pitted. The mother escaped. He also is slightly pitted on the face and arms. The fact of his having had small-pox is further confirmed by a certificate from a well-known practitioner, Dr. Ford Anderson, of Hampstead, whose certificate to that effect and also to insusceptibility of vaccination (one trial) I have seen. I vaccinated the patient, who required a certificate of revaccination, with an admirable result.

The Performance of Laparotomy by Obstetric Physicians.

Dr. A. E. Aust-Lawrence (Clifton, Bristol) writes: In the notice of the *Transactions of the American Association of Obstetricians and Gynæcologists* in the Journal of October 26th, allusion is made to the importance of obstetric physicians performing their own abdominal sections, and certain London hospitals where the practice is carried out are named. I might mention that this view of the subject was recognised by the staff of the Bristol

[1] Journal, October 20th, 1888.

General Hospital nearly five years ago, when I was elected for my second ten years of office, and it was decided that I should be allowed to operate on my own cases. I believe that this rule now obtains in most of the large provincial hospitals, and I consider it a very wise one, as we never know, in being called to a difficult case of labour, what we may have to do, and it certainly is not wise for a man to have to do a Cæsarean section or a Porro who has not had some little experience in abdominal surgery.

Triplets.

MR. W. H. SUTCLIFFE (Jersey) writes: Mrs. G., aged 26, multipara; two previous confinements, difficult and instrumental. Seen at 10 A.M., September 30th, 1889. In labour all night; presentation, breech; delivered 11.45; another bag presented; vertex; delivered at 12.15; yet another bag; vertex; delivered 12.30; all living. The first and second were females, the third male; each child perfectly developed and healthy, though small. There was a separate bag for each child, and for the first a separate placenta; for the others one common to each. At this date, October 27th, the three infants are well, and have been the recipients of the Queen's bounty.

The Danger of Chloroform and the Safety of Ether as an Anæsthetic.

A MEDICAL STUDENT writes: Mr. Lambert Hepenstal Ormsby, in his letter in the JOURNAL of October 26th, writes that chloroform "has been proved beyond doubt to be eight times more dangerous than ether." Where is the proof to be found? He also writes: "If deaths have occurred from ether, it is because the patient was suddenly asphyxiated by an ignorant or inattentive administrator, who probably did not know what he was doing." May not the same cause be given for "death from chloroform?"

Labial Herpes in Pneumonia.

DR. J. G. M. G. STACK (Spalding) writes: Since sending you the case of "Pneumonia complicating Pregnancy," published in the JOURNAL of October 12th, I find that the prognostic significance of labial herpes occurring in pneumonia, and reasons given for believing it, can be found in Dr. Pye-Smith's edition of Fagge's *Medicine*, vol. ii, p. 138.

Telegraphic Addresses in the Medical "Directory."

THE EDITORS OF THE MEDICAL DIRECTORY write: Your correspondent in the JOURNAL of October 26th had no authority for the assumption that unregistered telegraphic addresses would be inserted in the *Medical Directory*. Only registered addresses are inserted, and we require the certificate of registration to be forwarded, with stamped directed envelope for its return.

To Correspondents.

OUR correspondents are reminded that prolixity is a great bar to publication, and, with the constant pressure upon every department of the JOURNAL, brevity of style and conciseness of statement greatly facilitate early insertion We are compelled to return and hold over a great number of communications, chiefly by reason of their unnecessary length.

COMMUNICATIONS, LETTERS, etc., have been received from:

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A DISCUSSION ON RENAL SURGERY.

In the Section of Surgery at the Annual Meeting of the British Medical Association, held in Leeds, August, 1889.

I.—HENRY MORRIS, M.A., M.B., F.R.C.S.,
Surgeon to, and Lecturer on Surgery at, the Middlesex Hospital.

IN considering how best I could respond to the invitation to open a debate on the Surgery of the Kidney, there seemed to me two courses, either of which might serve to excite discussion: first, to present an epitome or summary of all that has been done in this branch of surgery up to the present hour; or, secondly, to lay before you some of the impressions and conclusions of my personal experience, drawn from bedside observations and from operations. I have chosen the latter as best suited to an occasion which is intended to provide us with an opportunity of exchanging opinions and recording our results, to see how far they agree with, or differ from, those of other workers in the same field, and so in this manner to learn to what extent our opinions require to be modified and our results are capable of improvement.

Following this course, I thought it would best conduce to the clearness and precision of discussion if I arranged the remarks I have to make under some definite headings. I will, therefore, ask your attention to the following:

1. The various ways in which renal calculi are imbedded in the kidney require special precautions whilst operating.

2. Tubercle of the kidney, as well as suppurating foci due to other causes, may give rise to the same tactile impressions as small calculi.

3. Tubercular disease of the prostate is a source of fallacy in diagnosing renal calculi.

4. Nephrectomy is of very doubtful value in advanced tubercular renal disease.

5. Lumbar nephrectomy is the proper treatment for advanced hydronephrosis, and for large collections of fluid behind the peritoneum, the result of lacerated kidney. In these cases nephrectomy, without previous incision and drainage, should be more frequently resorted to than has been the practice hitherto.

6. Nephrorrhaphy for movable kidney is of great service. A brief account is given of one or two cases of movable kidney accompanied by unusual symptoms.

7. The changes which the perinephric tissues undergo under long-continued irritation sometimes render the search for the kidney very tedious and difficult, and, may be, even ineffectual.

1. In performing nephrolithotomy it becomes forcibly impressed on the surgeon that calculi are imbedded in the kidney in various fashions, and that as a consequence, and quite apart from the size of the stones, some are much more difficult to discover than others. If a calculus is imbedded in the parenchyma of the kidney towards the posterior surface, it is almost certain to be readily detected by the finger passing over the surface of the organ whilst the kidney is well supported in front by the hand of the surgeon or his assistant. This was the case with specimens Nos. 1, 5, and 9.[1]

If the calculus is similarly imbedded in the front of the kidney, pressure from behind may not reveal its presence, and then it is requisite to free the anterior surface and pass the finger-tip over this surface whilst the kidney is supported by the psoas muscle and the spinal column. This was the case with No. 2. To do this satisfactorily, it is best to turn the patient on his back, so that the kidney may fall into its natural place. The examining finger is thus left free to test the degree of resistance of the renal structure without having to use any force in keeping the kidney against its counter-resistance—namely, the vertebræ and muscle.

Sometimes, in feeling over the kidney, a portion of it, varying in size from a sixpence to a five-shilling piece or more, is found soft, flaccid, thin or fluctuating, and there is nowhere any sense of hardness or increased resistance, such as might be expected from even a phosphatic stone. On incising or puncturing this soft part, pus or purulent urine is drawn off, but no stone is felt; but on introducing the finger into the interior of such an organ, a small calculus may be detected, freely movable within an enlarged pelvis, or fixed in a dilated calyx or recess in another part of the kidney, or possibly at the apex of a funnel-shaped pelvis. Nos. 4, 13, and 14 gave illustrations of these conditions.

Such cases show that aspiration, or simple incision and drainage, are insufficient, and that one ought not to be satisfied with anything less than a digital examination of the interior of the pelvis, of the calyces, and of the commencement of the ureter of such kidneys.

Another arrangement of the calculus is sometimes found in sacculated kidneys. The renal cavity may be wholly or partially filled by a soft mortary phosphatic calculus which gives no sound or resistance to the scalpel or trocar, and yet, on incising the renal substance and inserting the finger, a stone of considerable size may be felt and the whole of the interior found lined with a layer of mortary concretion. Specimens 11 and 12 were of this nature. Both calculi were so soft that they broke down under slight pressure, and had to be removed in fragments and granular particles like a vesical calculus after the use of the lithotrite. Specimen 12 shows the whole calculus broken down thus; and, on drying, it presented itself as a coarse powder.

When several calculi of a harder nature are present there is much less likelihood of their escaping detection by the trocar, and in one instance in which there were over 120 uric acid calculi, of small but very various sizes, in a kidney with very flaccid thin substance, the sensation of moving the trocar within a bag of small stones was at once felt. The very opposite state of things to that last described may sometimes deceive when searching for stone. A large-branched calculus may be so tightly embraced by the kidney substance, and the kidney may be so uniformly even on its surface that nothing more than a very firm tough organ may be thought to be present, and even on passing a needle into it no sense of calculus, but rather the resistance of a tough fibroma, is met with. In such a condition incision ought to be made into the kidney, when a calculus will at once be felt. Nos. 7 and 10 are calculi removed from kidneys of this sort. In these cases much difficulty will be experienced in freeing the stone from its encasement, and for this purpose a moderately free use of either a straight or curved bistoury will be requisite.

It is astonishing how some of the large branches of a calculus may escape detection, unless the surgeon is aware of the firmness and closeness with which they are embraced by the tough renal tissue. After removing several large pieces of calculus I have, in one or two cases, thought that all must have come away, because, with my finger in the kidney, nothing but renal tissue could be felt; and yet, after scratching through at some point where the resistance was greater than elsewhere, branch after branch of calculus has been exposed, showing that more of the calculus would have been left behind than had been removed had the operation been discontinued because no further actual contact with the calculus was made with the finger in the interior of the kidney. There is a condition of impaction which absolutely baffles detection, unless by chance the stone is struck on probing the kidney. This is when the calculus is fixed in a recess of the kidney, of normal size and consistence, with a thick layer of renal tissue all round it. A specimen of this kind is seen in the kidney now exhibited, in which nephrectomy was performed after two unsuccessful explorations had been made at an interval of six months.

When a stone has long rested in the same spot a thin layer of more or less vascular limiting membrane lines the recess it occupies. Sometimes hundreds of minute calculi become encysted in this manner, in groups of from eight or ten or more to 200 or more; and the limiting membrane in some of these is inflamed, or even ragged and suppurating. I have described such a case in the Clinical Society's *Transactions*, vol. xx, p. 111. To detect a stone so encapsuled the only plan is to bring the kidney well into view, and even partly out of the wound, and then to make an incision along its convex margin or into one of its surfaces.

There is one other condition in which it may be difficult to seize a stone weighing even a drachm or more, namely, in calculous pyonephrosis. Specimen 13 came from a kidney from which three or four ounces of pure pus escaped through a cannula, after exposing and puncturing the kidney of a woman aged 21. On cutting into this abscess a small star-shaped calculus, weighing $3\frac{1}{2}$ grains, was removed on the finger-tip. At the same time a rough end of another calculus was felt, and, on freeing this, a stone weighing 84 grains was set loose and a large quantity of purulent urine rushed out of the renal pelvis. On reintroducing the finger the

[1507]

[1] These numbers refer to calculi which had been removed from the kidney by the author, and which were exhibited at the meeting.

stone was missed, and a long and careful search was needed before it could be rediscovered, partially hidden within one of the large recesses of the renal pelvis and masked by blood clot which had formed during the operation.

A difficulty occasionally met with in the search for a calculus arises from the high position of the kidney, or, more properly speaking, from the low descent of the ribs, the lower end of the kidney barely reaching below the twelfth rib. When this is the case much valuable aid in manipulation is obtained by making an upward incision over the last rib a little posterior to the front extremity of the oblique wound. The extra space thus obtained is out of all proportion to the length of the incision.

The removal of the calculus after it has once been set loose of the surrounding tissue is not usually difficult, and is best accomplished by a pair of slightly curved forceps, or by using the finger-tip with a scoop-like action.

2. A misimpression may be caused during an exploration of the kidney by a deposit of tubercle, or by a small abscess, just beneath the renal surface, which, from its hardness and outline, gives the same tactile sensation as a calculus. I have experienced this in three or four cases of tubercular disease, and in one case in which the subsequent favourable course of the case suggests that the abscess was not of tuberculous nature.

After exposing a kidney of this kind the surface is seen more or less mottled, puckered, and uneven, and, on passing the finger over it, a hard circumscribed spot is felt. On scraping through the kidney this hard spot vanishes as the finger-nail reaches it, and, if the wound at the time is free of blood, a little cheesy matter or a drop or two of pus is seen escaping from it. Or what may happen is this: the hard spot, after being felt and pressed upon two or three times, softens, and then becomes flaccid, and on puncturing it a little pus or cheesy matter escapes. When only one such spot of the size of a pea or horsebean is felt, the sensation strongly suggests a calculus; but when the deposits are multiple mistakes are not so likely to arise, though groups of tubercles of miliary size give the sensation of particles of sand adherent to the capsule.

It is well to bear in mind during the operation the difference in the appearance of a tubercular kidney and of a kidney the seat of calculus. It has been possible on several occasions by this means to correct the diagnosis arrived at before the exploration. Thus, when stone has been suspected, the diagnosis has been given up at once on seeing the yellow whitish mottling or the starred and fissured pallid surface of the kidney; and, conversely, in a case of supposed tubercular pyonephrosis the diagnosis was at once altered to that of calculous pyonephrosis on seeing the uniformly even and uniformly dark red colour of the kidney. Two stones (shown in case No.13) were extracted from this organ.

There may be an area of a different appearance to the rest of the kidney when a calculus is imbedded near the surface, or when the renal cortex has become thin and flaccid by the changes wrought by a calculus free within the renal pelvis. This difference consists in a deepening in the colour of the affected area sometimes almost to a bluish black colour—the very opposite effect to that presented by tubercular disease. In tubercular disease the thickened, tough, and indurated condition of the upper end of the ureter sometimes affords confirmatory evidence of the nature of the disease.

Clinically, one of the most important signs of calculus, as distinct from the early stages of tubercular disease, is the tenderness on pressure over the kidneys so frequently felt in calculous disease.

3. Various diseases of the prostate—tubercle, abscess, and stone, certainly—may give rise to symptoms which simulate renal calculus. In tubercular disease the presence of tubercle bacilli in the urine, when discovered, is generally characteristic. It has happened to me twice to explore the kidney for stone with negative results, and the subsequent course of the case has shown that the symptoms were caused by tubercular disease of the prostate. In another case, subsequently to the exploration of the kidney, I had to open an abscess of the prostate; and in a fourth case, where nothing was found at the exploration of the kidney, a prostatic calculus was discovered after death.

Considering the nervous associations between the several parts of the genito-urinary system; and remembering how frequent and painful micturition sometimes is in renal affections, and in what various and distant parts the pain of renal calculus is sometimes felt, there is nothing surprising in the converse condition—namely, pain transferred to the renal region from disease in the lower urinary tract. If, in addition to this pain, there is a small amount of pus or pus and blood in the urine without the symptoms of cystitis, it is easy to understand how doctor as well as patient may associate the seat of the pain with the other symptom. In some cases, it is probable tubercular disease begins simultaneously in the kidney and prostate, as in a man, aged 34, who had a deposit in the left lobe of his prostate at the time I explored his left kidney, and opened a scrofulous abscess in it. His history briefly was that he had been taken suddenly two years before with pain in his left loin, and groin and testes, and at the tip of his penis, that this pain lasted a few hours, and passed off as suddenly as it came on. This attack was followed at intervals by similar others lasting about an hour, and his urine, which was acid and specific gravity 1020, used to contain small quantities of pus and blood. He was much relieved by the evacuation of the renal abscess, and the wound in the loin had quite healed within two months, but pus and blood continued to be passed in the urine; there was occasional pain in the groin, whilst the deposit in the prostate increased, and the vesicula seminalis and globus minor of the testes of the same side became affected.

Although there is a recognised tendency for tubercle to attack several of the genito-urinary organs on the same side of the body in succession, the disease does in the majority of cases restrict itself for a considerable time to one organ, and our difficulty lies in making sure if that organ is the kidney or not.

As a step towards a correct diagnosis, when stone or tubercle of the kidney is suspected, a careful examination *per rectum* should be made of the prostate and vesiculæ seminales; the urine should be passed in three separate portions, and each portion separately examined by the microscope, and the presence of minute worm-like threads of mucus visible to the naked eye should be looked for in the urine. When the prostate is affected these threads are often found, and the urine, all or part of it, is feebly acid, neutral, or even slightly alkaline, whereas in tubercular disease of the kidney the urine contains a large quantity of pus, and is unusually acid, unless both kidneys are affected.

4. From a limited experience of nephrectomy in tubercular disease, I am inclined to think that the operation is of very doubtful value, excepting in quite early stages. In advanced cases it is dangerous and useless, because the abdominal lymphatic glands and the opposite kidney so generally share in the disease.

In two cases in which I have done nephrectomy secondarily to nephrotomy I have found abscesses of large size in the upper part of the kidney, suppuration around the kidney, and extensive affection of the lymphatic glands. In another case a woman lived three days after nephrectomy and died of anuria, having passed only three ounces of urine in the three days. There had been before the operation no evidence that the other kidney was affected; but after death there was scarcely any sound tissue left in it, and though of normal size it was full of small foci or scrofulous matter.

Such a case as this might lead one to regret that our methods for testing the capacity of each kidney separately are not more perfect, yet I know, only too certainly, that though positive evidence of the unsoundness of the opposite kidney would warn us against nephrectomy, negative evidence in the urine does not prove that the organ from which it is derived is unaffected by commencing tubercle, and may be incapable of sustaining its function for long, or even at all under the stress and shock of nephrectomy.

In quite the early stages of tubercle, on the other hand, I believe good results will in future be obtained by nephrectomy. By the early stages I do not mean to imply any measure of time, because there is so much variableness in the rate of progress of tubercular affections of the urinary organs. In some cases the disease will take several years to accomplish what in other cases it does in as many months or weeks. But we have, I think, a test of some value in the tendency of tubercle to spread amongst the genito-urinary organs of the same side; so that with symptoms of the disease of one kidney lasting for some months, or even for one or two years, without any enlargement of prostate, vesicula seminalis, vas deferens, or testis of the same side, we have as good grounds as any we can at present obtain for believing that the disease is still limited to its original site, and that by removing the kidney we take away the whole of the parts affected by the disease. But even so, we have to take the risk of acute tuberculosis in lungs or opposite kidney setting in at some time after the operation, and may be before convalescence is completely established.

5. With the conservatism which influences the surgeon to spare an organ or part, if it is likely to be of further use to its possessor, I have till the last year or two advocated incision and drainage for pyonephrosis; and repeated tappings followed, if necessary, by nephrectomy for hydronephrosis when large enough to form an abdominal tumour.

The results of this treatment have, however, been disappointing, for the tapping has had to be again and again repeated, and nephrotomy has frequently been followed by a urinary fistula in the loin. So far as the effect on the life and health of the patient is concerned the results have been, however, satisfactory. And if it is true that the excretion of ten or twelve ounces of urine a day by the wasted kidney is an extra security to the patient in the event of any disease arising in the opposite organ there is as a set off to this the daily and hourly inconvenience of having to wear an instrument, never over easy to keep adjusted, for the purpose of collecting the urine from the fistula.

I have found, after putting the circumstances fairly before the patients that they elect to take the risks of nephrectomy.

In three cases during the last twelve months I have therefore performed lumbar nephrectomy without any preliminary operative treatment (in one case the cyst has been tapped several times by the patient's regular medical attendant) and in each instance the patient made a rapid recovery.

The incision employed has been the oblique one in the iliocostal space, cutting down through muscles, fasciæ, and fat until nothing intervenes between the dilated kidney and the finger. This done, a trocar and cannula are inserted, and the pent-up urine withdrawn. When the renal sac is partly emptied it is seized with two pairs of forcipressure forceps, and dragged out of the wound. With a little gentle traction, using the fingers at the same time to peel off the surrounding areolar tissue, the kidney is extracted with the same ease as an ovarian cyst which has but few and recent adhesions. It then remains only to ligature the pedicle, which is done by surrounding first the renal artery, and then the renal vein and the ureter, by kangaroo tendon ligatures.

It matters not whether the tumour formed by the hydronephrosis is immovably fixed, or is capable of being moved about to a considerable degree; nor whether the sac has been previously aspirated or not. In any case there is no difficulty whatever in shelling out the kidney and withdrawing it in its collapsed state through an opening four inches and a half in length, if only the cyst itself is fairly reached before the attempt to separate it from its bed is commenced. I do not know whether this will be effected with the same facility in all cases of pyonephrosis, but on looking back, one can recall several which have been treated by tapping and drainage, but which could have been removed with the same ease as the hydronephrotic cysts in the three cases I have operated upon in this manner.

There is the same inconvenience following the tapping, incision, and drainage treatment in cases of a collection of fluid behind the peritoneum, the result of injury to the kidney as in hydronephrosis. And for the same reason in these cases, as in hydronephrosis, providing always the other kidney is working well, I should advise nephrectomy. There is in some of these cases of injury (when the escape of urine takes place rapidly, and is mixed with extravasated blood) such an amount of fever and local inflammation that nephrectomy could not be thought of for the time; and nothing more than free incision and drainage are requisite to secure the safety and immediate relief of the patient. But happily these urgent cases are the ones most likely to recover without leaving a fistula.

But in the cases where a collection of urine slowly forms behind the peritoneum, without fever, or much local inflammation, and in which the kidney on exposure is found to be lacerated and raised forward with the peritoneum, it would be best to remove the kidney at once. In these cases a subsequent attempt at nephrectomy may have to be abandoned because of the matting of the perinephric tissue with the injured organ.

For the above reasons I have come to the conclusion that nephrectomy without previous incision or drainage should be more frequently resorted to than has been the practice hitherto in these cases.

6. Nephrorrhaphy in the treatment of movable kidney has proved very successful in its ultimate results as well as in the readiness of recovery from the operation. I have performed it in ten cases; in every one the wound had healed well; in none has any disturbance in the excretion of urine occurred, and in none of the last seven cases in which I have sutured the kidney, as well as its adipose capsule, to the parietal wound has there been enough subsequent slackening of the organ to cause any return of the symptoms. In one case in which both kidneys were mobile the patient felt so much relief after the operation on one side, that she returned eighteen months later to have the other organ fixed, and she remains well now two years after the second operation. In the first three operations I contented myself with drawing the adipose capsule well up into the wound, and cutting some of it away so as to diminish the size of the space in which the kidney had wandered; then, stitching the shortened capsule to the cut edges of muscles and skin by three or four sutures, leaving a considerable part of the loin wound to heal by granulation with the view to thereby secure a firmer hold on the kidney by the new formed tissue of the wound. Finding this was not a sufficient holdfast, in my subsequent operations I inserted sutures into the kidney substance in the following way. Three kangaroo tendons are passed through the posterior surface of the kidney, one nearer the upper the other nearer the lower end, and the third midway between the other two but nearer the hilum. Each suture is buried for a length of three-quarters of an inch within the renal substance, and penetrates about half-an-inch into the thickness of the organ. The upper suture passes through the upper edge of the shortened adipose capsule, the transversalis fascia, and the muscles, and is tied to them; the lower suture is similarly passed through and tied to the lower edges of the cut structures, and the intermediate suture is passed through both edges of the divided capsule, fascia, and muscles, and laces all up together. The ligatures are then cut short and buried in the wound; one or two catgut sutures bring the rest of the cut edges of the muscles together, and the skin is closed by silk sutures, one or two of which are made to fix the adipose capsule well up between the edges of the skin. The wound is covered by iodoform cotton wool, and a large elastic pad of cotton wool is fastened over the front of the kidney, so as to steady and support it in its new position. The wound heals without suppuration, except that a track is sometimes left for a few weeks along the course of the drain tube. I would especially draw attention to a case of movable kidney in which the symptoms were of an unusual kind, and of a much more severe degree than I had ever previously seen.

The patient was a lady between 35 and 40 years of age, tall and spare, and of very active habits. For between two and three years she had been subject to attacks of abdominal pain, coming on without warning, and without reference to posture, exercise, diet, catamenia, excretion of urine, vomiting, diarrhœa, or other gastric or intestinal trouble. The pain was referred to the abdomen generally and not to any particular part of it, but it was accompanied by the severest cramp of the abdominal muscles, sometimes affecting the whole parietes, sometimes only a portion of one rectus, or of the oblique of one side. Whilst the pain lasted some part or the whole of these muscles were as hard as stone, and the patient writhed in agony, throwing her body forwards on to her thighs. Anodynes failed to give relief, so chloroform was tried, and its influence was often kept up for six to eight hours at a time. At first these attacks were at considerable intervals, but at length they became more and more frequent, until three severe ones occurred in the same week. The urine was always quite normal in all respects. She had seen several general and gynæcological physicians, but without finding a satisfactory solution of or remedy for her trouble. As long as she remained under my care, and the right kidney was replaced before her abdominal belt was applied in the morning, she had no attack; but as soon as she returned home, and the adjustment was left to herself, the pain and cramp returned with their former violence. Nephrorrhaphy was therefore performed in January last, and up to the present time she remains quite well, and describes herself as better than she has been for years. The nephrorrhaphy in this case has been a marked success, and has restored this lady to her former active life, and secured her deepest gratitude.

Dr. Playfair, who saw this patient three or four times, related to me the case of a Colonial lady who twelve months before was staying in London to be under his treatment, and who was suffering in almost precisely the same way. One of her kidneys was markedly movable, but it was not at the time thought of as the cause of the symptoms. She returned home unrelieved, but now, as I understand from Dr. Playfair, he has no doubt that the mobile kidney was the cause of the abdominal pains, and that relief could be obtained by nephrorrhaphy.

7. The changes which the perinephric tissue undergo under long-

continued irritation are of much consequence to the operating surgeon. Sometimes suppuration, either diffused or circumscribed, is met with. In other cases a condensed, tough, gristly, fibrous tissue encases the kidney, or fixes it by means of strong tough bands of tissue to the parietes, the under-surface of the diaphragm, or the spleen.

If the kidney has been the subject of a former operation, if it has atrophied from any cause, or if it has long been the seat of a calculus, the perinephric tissue is prone to become so altered in structure, so inseparably adherent to the kidney, that it may be very difficult, and even impossible, to make out the kidney at all. I have realised this once in nephrolithotomy, in a case in which specimen No. 9 was removed. I was guided by the sensation of hardness caused by the stone, without having been able from first to last to recognise any trace of renal tissue; and in another case, from which No. 15 was removed, the same condition of the perinephric tissue existed, though there was besides extensive perinephric suppuration.

I have met with the same difficulty in once attempting nephrectomy two years after having incised and drained a traumatic urinary cyst. In this case the kidney was so encased by the altered perinephric tissue that the organ could not be made out at all, and the operation had to be abandoned.

I have also seen the same thing in the *post-mortem* room, once in a case of scrofulous disease of the kidney, and once when a perinephric abscess had been set up by calculous pyelitis. In a case in which nephrolithotomy had been performed eight years before death, all that could be found of the kidney was a mass of renal tissue lying embedded in an area of gristly cicatricial tissue. In the midst of this dense fibrous tissue the enlarged infundibulum of the ureter was also found.

These changes, and the difficulties to which they give rise, seem to me to furnish an important argument against nephrotomy and drainage in cases in which it is probable that nephrectomy will, in the long run, be requisite or desirable.

This is a point which I think is worthy of particular attention, more especially in considering the treatment of hydronephrosis and injuries to the kidney.

II.—BENNETT MAY, M.B., B.S.Lond., F.R.C.S.,
Professor of Surgery, Queen's College; Surgeon to Queen's Hospital, Birmingham.

I HAVE operated on 15 patients for stone or suspected stone; namely, 12 males and 3 females. In 13 of the patients I found what I was in search of, and in 2 (both females) I did not find stone. The results are exhibited in this case of specimens. I differentiate varieties of cases depending on the way the stone is imbedded in the kidney, and I find that the distinction extends to differences in the nature and kind of stone, the symptoms and clinical history of the case, and the prognosis after operation. Fully half my cases have had the stone fixed in the parenchyma of the kidney. These stones are mostly of slow growth, of oxalate of lime, circular or pyramidal in shape, not branched, and occur in young males. The kidney itself remains apparently healthy, even in a late stage of the disease. The prominent symptom in these cases is the pain; the diagnostic test on which I place most reliance is the pain on deep local pressure over a small area below the last rib. There may be small microscopic traces of blood or blood in considerable amount after exercise; but pus is commonly absent or present only in small amount.

These stones are difficult to find, but give the most perfect results if removed. Several of these patients had a narrow escape of leaving the table with their stones undiscovered. In exploring the kidney I prefer to enter the needle and the knife at the outer border, and carry it inwards, radiating to the hilus, as it much more thoroughly sweeps the tissue in this way than if entered from behind, and there is less chance of wounding the large vessels. But I always cut into the kidney and explore it with the finger and sound, if acupuncture fails. I confess this is often an anxious and difficult proceeding, and I know no way of overcoming it except by patience and confidence in one's diagnosis.

Stones in the pelvis of the kidney commonly grow much more quickly and to a larger size. Pus appears early and is a prominent feature, and the kidney soon undergoes structural changes, ending in pyonephrosis. These stones are usually easy to find, but recovery is apt to be imperfect.

A small stone loose in the pelvis may act as a ball valve, causing well known symptoms with dilatation of kidney. On incising the kidney a gush of fluid may carry the stone outside. The finger should enter the wound at once and fix the stone as it comes to the surface, or it may recede and be difficult to recover. This small stone I was fortunate to recover in this way. Of course one might almost cut a healthy kidney to pieces without finding anything so small. The patient was a youth of 20, whose prominent symptoms were intermittent partial suppression with pyuria; a gush of fluid brought it to my finger; the urine soon cleared, and rather to my surprise he has got perfectly well.

In another case I was less fortunate in finding this small stone. It was a case of obstructive suppression, complete anuria, of eight days' duration in a man of 50. There was no difficulty in diagnosing the kidney on which to operate, and on opening the interior I at once felt it, but lost it again in the dilated organ. I ultimately recovered it, but the delay cost him his life by shock and hæmorrhage.

On the special point raised by Mr. Morris in proposition No. 3, my experience is negative, as all my fallacies of diagnosis have occurred in women, in whom I think fallacies are far more common than men.

Referring to No. 7, I show this stone, which I removed from the kidney of a man aged 50, who had symptoms of stone forty years. A sinus had formed in the loin about two years before, and it was the most difficult and tedious of these operations which I have done. The kidney and surrounding structures were converted into a mass of dense fibrous tissue in which I could distinguish no traces or signs of the organ.

III.—DAVID NEWMAN, M.D., F.F.P.S.Glas.,
Surgeon, Western Infirmary, Outdoor Department, Glasgow.

I HAVE listened with much interest to the paper read by Mr. Henry Morris. When I was asked to take part in this discussion by the Secretary of the Surgical Section, I prepared a contribution to submit to this meeting. A few weeks ago I was informed that those who have the management of the business of this Section deemed it advisable to limit remarks to a *vivâ voce* discussion rather than to encourage the reading of a number of independent papers. In this arrangement I fully concurred, and it will be my object to take up only a few of the points presented to us to-day. In renal surgery the condition of which I have the most experience is movable kidney. This malposition of the kidney is more frequently met with, and gives rise to graver symptoms, than most medical practitioners suspect. But while common, and leading to much inconvenience to the patient, it rarely demands operative interference. Out of twenty-seven cases which I have met with in hospital and private practice, only seven have called for treatment by operation. In the great majority of cases the application of a well-fitting elastic bandage, with an air pad, is sufficient to relieve the patient from distressing symptoms. The method of employing pressure which I have found most useful, and most easily applied by the patient, is to have a well-fitting abdominal elastic bandage, extending from the line of Poupart's ligament to the level of the sixth or seventh rib. The bandage should be made to fit the body accurately and firmly, but without exerting undue pressure at any point. It may be made of one piece, or, what I consider much better, of strips of elastic bandage sewn together, and united in the middle line in front by means of steel slips similar to those used to fix stays (busks). The patient should have her bowels well opened every morning, and then, before getting up for the day, should slip over the lower extremities, and upwards around the abdomen, a tight-fitting jersey, applying over the region of the kidney an air pad, and then buckling over it the broad elastic bandage.

The method of performing nephrorrhaphy described to you to-day is precisely the same as the one employed by me in performing the operation for the first time in this country in 1883. In addition to stitching the kidney to the abdominal parietes, I now split the fibrous capsule, and separate it from the surface of the kidney, as I find it is of little use to stitch the adipose capsule on account of its being so loose. I have no doubt that the failures in fixing the kidney have arisen from neglect of this precaution. When the fibrous capsule is not divided, the granulations of the wound in the parietes fail to form a firm attachment to the surface of the dense fibrous capsule; but when the raw surface of the kidney is exposed, a most intimate band of adhesions is formed. The amount of granulation tissue occupying the lower portion of the wound should be increased by keeping a large drainage tube be-

tween the deeper parts of the wound and the surface of the kidney. By so doing, a wedge-shaped mass of granulation tissue forms, the apex corresponding to the cutaneous surface, while the base lies against the raw surface of the kidney. In all the cases in which I have operated the result has been most satisfactory. There are some writers who deny the efficiency of this operation, but this must surely arise either from want of experience, or from prejudice.

Mr. Morris's remarks in connection with the various ways in which renal calculi are embedded in the kidney were most interesting to me. I have a preparation almost identical to the one shown to you by the gentleman who introduced this discussion. My case was one of renal calculus, where the patient suffered from severe renal colic and hæmaturia for fully five years. I performed nephrotomy, and carefully explored the kidney, but failed to discover a calculus, and subsequently performed nephrectomy. After the kidney was removed a stone was found impacted in its substance in such a way that it was almost impossible to find it without making a complete section of the organ. The patient made a good recovery, and is now well. All surgeons who have paid much attention to the statistics of operations for the cure of renal calculous disease must have been struck by the fact that early diagnosis and successful treatment go hand in hand. This is distinctly exemplified by contrasting the results of nephrolithotomies with and without suppuration. In the former, of 60 cases, 34 recovered, and 26 died, giving a mortality of 43.3 per cent.; whereas in 42 cases without suppuration of the kidney there was not a single death. This indicates very clearly the importance of making an early diagnosis; and any information which we can collect to aid us in detecting renal disease in its early stages must necessarily improve our statistics. Catheterisation of the ureters, and the estimation of the quantity of albumen and the amount of hæmoglobin in the urine may aid one in determining the seat of the hæmorrhage, and in ascertaining whether or not the disease is limited to one kidney. Many writers have depreciated the value of results procured from catheterisation of the ureters, while others have almost denied the possibility of performing such an operation. The only way to learn the mode of procedure is to practise repeatedly upon the dead body. By so doing, one acquires the necessary skill, and can operate even more easily upon the living than upon the dead subject. I do not mean to say that this operation can be performed upon all cases, as there are many in which morbid changes in the bladder preclude the possibility of collecting the urine separately from the two ureters.

In my book upon *Surgical Diseases of Kidney*, p. 417, the method of catheterising the ureters is described, so that it is unnecessary for me to enter into detail now. Urine containing blood is always albuminous, but the relative proportion existing between the red corpuscles and the serum depends whether or not the hæmorrhage is associated with inflammation. For example, in acute nephritis not only do the elements of blood escape from the injured part, but the general inflammatory hyperæmia causes a large quantity of albumen to pass into the urine independently of the hæmorrhage. The relationship between the quantity of hæmoglobin and the amount of albumen in the urine will, therefore, aid one in determining the seat of the hæmorrhage.

The quantity of hæmoglobin having been estimated by a method I have described,[1] and the amount of albumen determined by one or other of the recognised processes, the two results should be compared. If the ratio of albumen to hæmoglobin is as 1 to 1.6, then it may be concluded that the appearence of albumen is entirely due to the presence of blood; but if the quantity of albumen is much increased beyond the proportion just mentioned, the indication is in favour not only of an independent albuminuria, but also points to a renal affection as the cause of the hæmaturia.

A point in connection with the treatment of renal calculus is the benefit derived from perfect rest. This was most strikingly brought under my notice in a case where I deemed it advisable to perform nephrolithotomy, but where the patient refused to submit to the operation. I then resorted to rest in bed. After a month's rest the renal colic and hæmaturia, from which the patient suffered severely, disappeared, and his general health steadily improved. After three months I permitted him to take moderate exercise, and now (three years later) he is able to move about with almost complete freedom, seldom complains of any discomfort, and no hæmaturia has been observed during the last fifteen months. With this case in view it is now my general rule to try the effects of rest in bed for a considerable period before submitting the patient to even a moderate risk of a nephrolithotomy. By adopting this treatment the calculus may become so firmly fixed in the substance of the kidney that it causes hardly any distress to the patient. However, should this treatment fail, the sooner a radical operation is performed the better, as there is always the danger of the calculus setting up suppuration in the substance of the kidney, when the prognosis is rendered more grave. Since 1872 60 nephrolithotomies for calculus, with suppurative disease of the kidney, have resulted in only 34 recoveries, and the statistics have not improved, as might be expected, during the latter half of that period.

It has always seemed to me more important for the surgeon accurately to determine the most suitable time for operation, rather than to trouble himself unnecessarily as to the precise mode of procedure. The surgeon should not only aim at saving the life of his patient, but should also endeavour to preserve from destruction the secreting tissues of the affected organ; although this may not always be attainable, it should at least be attempted by operating as early as it is possible to form a reliable diagnosis. Performed in the early stage of disease, and with all the improved methods of the present day, nephrolithotomy and nephrotomy are operations attended with comparatively little risk, while, if delayed, the results are far from satisfactory. It should, therefore, be our first endeavour to form a true estimate of the relative value of symptoms, and to improve our present methods of diagnosis. Any surgeon of experience can perform the manual work of an operator, but it requires the most careful and accurate study of cases to know just the proper time to operate.

[1] Newman, *Surgical Diseases of the Kidney*, p. 81. London: Longmans and Co 1888.

IV.—LAWSON TAIT, F.R.C.S., M.D., LL.D.,

Professor of Gynæcology, Queen's College, Birmingham.

My first contribution to this subject was not made till July, 1884,[1] though my first operation on the kidney was performed on April 24th, 1874. In the paper I referred to, I could only give one case of nephrectomy and eleven cases of nephrotomy; in all twelve cases the results were satisfactory. I am now able to give a much more extended list of cases, amounting in all to seventy-four operations, divided into groups as given in the following table.

TABLE I

—	Cases.	Deaths.	Mort. Per Cent.
Simple exploratory incisions... ...	4	0	0.0
Nephrotomy	44	1	2.3
Nephrectomy	22	4	18.0
Incomplete operation	1	1	100.0
Nephrorrhaphy	3	0	0.0
	74	6	8.1

TABLE II.—*Operations on Tumours of the Kidney: Simple Exploratory Incisions.*

Residence.	Medical Attendant.	Age.	M. or S.	Disease.	Date.	Result.
Norton Lindsay ...	Dr. Croft	25	M.	Cystic kidney	April 24, 1873	R.
Shrewsbury... ...	Dr. Withers	53	,,	Cancer	Nov. 2, 1883	*
Hereford	Mr. Whitfield	28	,,	,,	June 25, 1886	R.
Wolverhampton ...	Dr. Collis	62	,,	,,	Oct. 15, 1887	,

* This patient died eight days after the operation.

[1] *Birmingham Medical Review.*

TABLE III.—*Cases of Nephrotomy.*

Residence.	Medical Attendant.	Age.	M. or S.	Disease.	Date.	Result.
Birmingham ...	Dr. Hickinbotham	20	S.	Cyst	March 5, 1880	R.
Uttoxeter	Dr. Tylecote	45	M.	Calculus	,, 13, ,,	,,
Dudley	Dr. Allen	24	,,	Tumour	June 25, ,,	,,
Coventry	Dr. Fenton	23	S.	Suppurating kidney	Jan. 28, 1881	,,
Erdington	Dr. Hickinbotham	23	M.	Abscess	,, 25, ,,	,,
Gresley	Dr. Crofts	22	S.	Hydatids	Oct. 8, 1882	,,
Bridgnorth	Dr. Thursfield	54	,,	Sarcoma	March 18, 1883	,,
Birmingham ...	Mr. Yates	38	M.	Cyst	May 18, ,,	,,
,, ...	Mr. Fairley	21	S.	Abscess	Oct. 8, ,,	,,
Leicester ...	Dr. Blunt	65	M.	Tumour	March 3, 1884	,,
Dudley Port ...	Dr. Price	63	,,	Abscess	April 26, ,,	,,
Birmingham ...	Mr. W. Williams	—	—	Calculus	March 14, 1885	,,
,, ...	Dr. Wilson	22	M.	Abscess	May 20, ,,	,,
Castle Donington ...	Dr. Suckling	35	,,	Calculus	,, 23, ,,	,,
Birmingham ...	Dr. Savage	32	,,	,,	June 16, ,,	,,
Wolverhampton ...	Dr. Smith	59	,,	,,	July 13, ,,	,,
,, ...	Dr. McMunn	32	,,	,,	Aug. 15, ,,	,,
Tamworth	Dr. Buxton	36	,,	,,	Dec. 14, ,,	,,
West Bromwich ...	L. T.	28	,,	,,	Jan. 23, 1886	,,
Birmingham ...	,,	37	S.	Hydatids	Feb. 2, ,,	,,
Conway	Dr. Hughes	42	,,	Calculus	March 20, ,,	,,
Wolverhampton ...	Dr. Lycett	43	M.	,,	May 3, ,,	,,
Bromsgrove... ...	L. T.	36	,,	Hydatids	June 15, ,,	,,
Motherwell, N.B. ...	Dr. Moffat	27	,,	? Pyelitis	July 9, ,,	,,
Stourbridge... ...	Dr. Underhill	29	,,	Calculus	Aug. 2, ,,	D.
Birmingham ...	L. T.	19	S.	Abscess	Sep. 9, ,,	R.
,, ...	Dr. F. Jones	26	,,	Hydatids	Sep. 13, ,,	,,
,, ...	Dr. Marrion	42	M.	Calculus	Dec. 12, ,,	,,
,, ...	Mr. Flewitt	54	,,	Abscess	April 22, 1887	,,
Southam	Dr. Thursfield	21	,,	Blood cyst	Nov. 29, ,,	,,
Birmingham ...	L. T.	39	,,	Abscess	Jan. 16, 1888	,,
Leamington ...	Drs. Thursfield and Marriott	54	,,	Sarcoma	Jan. 25, ,,	,,
London	Dr. Turner	29	,,	? Pyelitis	May 3, ,,	,,
Walsall	Dr. Gwinnett Sharp	33	,,	Abscess	Aug. 9, ,,	,,
Birmingham ...	Dr. Hunt	45	,,	Hydatids	,, 17, ,,	,,
Whitchurch ...	Dr. George	24	S.	Sarcoma	Sep. 28, ,,	,,
Birmingham ...	Mr. Yates	30	,,	? Pyelitis	,, ,, ,,	,,
Walsall	L. T.	38	M.	Calculus	Oct. 17, ,,	,,
Birmingham ...	Dr. Fairley	40	,,	,,	,, 20, ,,	,,
Stratford-on-Avon ...	L. T.	39	,,	Abscess	Jan. 30, 1889	,,
Birmingham ...	Mr. Bennett May	25	,,	,,	Feb. 7, ,,	,,
,, ...	Mr. Price	21	S.	,,	,, 19, ,,	,,
Warwick	Dr. Guthrie Rankin	17	,,	? Pyelitis	,, 27, ,,	,,
Henley-in-Arden ...	Dr. Arthur	41	M.	Abscess	March 7, ,,	,,

TABLE IV.—*Cases of Nephrectomy.*

Residence.	Medical Attendant.	Age.	M. or S.	Disease.	Date.	Result.
Coventry	Dr. Fenton	25	S.	Suppurating kidney	May 8, 1882	R.
Birmingham ...	Mr. Mills	32	M.	Pyo-nephrosis	July 22, 1884	,,
,, ...	Dr. Taylor	17	S.	Cyst	Nov. 19, ,,	,,
,, ...	Dr. Bottle	45	M.	Suppurating kidney	April 16, 1885	D.
,, ...	L. T.	38	,,	Tumour	April 20, ,,	R.
Wednesbury ...	Dr. Collins	45	,,	Hydro-nephrosis	June 18, ,,	,,
Birmingham ...	L. T.	17	S.	Hydro-nephrosis	July 1, ,,	,,
Wolverhampton ...	Dr. McMunn	32	M.	Abscess	Nov. 17, ,,	,,
Birmingham ...	Dr. Clay	35	,,	,,	Dec. ,,	,,
Coventry	Dr. Milner Moore	49	,,	,,	May 21, 1886	,,
Bromsgrove... ...	Dr. Prosser	47	,,	Sarcoma	June 7, ,,	D.
Tamworth	Dr. Fleming	37	,,	,,	Aug. 27, ,,	R.
West Bromwich ...	L. T.	29	,,	Strumous kidney	Feb. 22, 1887	,,
Woolaston	,,	30	,,	Sarcoma	April 27, ,,	D.
Birmingham ...	,,	38	,,	Tumour	July 29, ,,	R.
,, ...	Dr. Sproston	48	,,	Sarcoma	March 7, 1888 (Disease recurred)	,,
,, ...	Dr. Hogg	60	,,	Cyst	April 5, ,,	D.
,, ...	Dr. Ord	29	—	,,	April 9, ,,	R.
Shifnal	Dr. Gibson	27	S.	Suppurating kidney	April 10, ,,	,,
Ettingshall	Dr. Smith	3	S.	Sarcoma	April 14, ,,	,,
Coventry	Dr. Lynes	35	M.	Cyst	June 21, ,,	,,
Leamington ...	Dr. Smith	68	,,	,,	July 10, ,,	,,

TABLE V.—*One Incomplete Operation.*

Residence.	Medical Attendant.	Age.	M. or S.	Disease.	Date.	Result.
Birmingham ...	Mr. Paton	24	M.	Sarcoma	May 8, 1888	D.

TABLE VI.—*Cases of Nephrorrhaphy.*

Residence.	Medical Attendant.	Age.	M. or S.	Disease.	Date.	Result.
Birmingham ...	Mr. Hallwright	45	M.	Floating kidney	Feb. 3, 1886	R.
,, ...	Dr. Taylor	32	,,	Movable kidney	March 8, ,,	,,
,, ...	Mr. Kingland	23	,,	Movable kidney	Nov. 22, ,,	,,

The first point upon which our attention must rest is the mortality, and I pointed out in my first paper that primary operations on the kidney must no more be mixed up with secondary operations than must primary amputation of the limbs be classed with those for disease. I gathered together 25 cases of primary removal of the kidney with 5 deaths, a mortality of 20 per cent. Of 84 cases of nephrectomy for disease only 40 survived the operation, a mortality of over 52 per cent. Though the statistics are by no means large enough for exact conclusion, and though they were gathered in the higgledy-piggledy fashion which makes surgical statistics often of very little value, yet there is quite sufficient ground to show that the records of primary and secondary nephrectomy must be kept apart.

As I have never been called upon to operate for injury to the kidney, my statistics are free from this qualification; all my operations have been for disease. My cases of nephrectomy, 22 in number, with 4 deaths, giving a mortality of 18 per cent., show that we have immensely improved since 1884, and that the removal of a diseased kidney has no longer the deterrent mortality of 52 per cent. It must be borne in mind that the mortality of an operation is the best that can be got in the hands of experienced operators and not the mortality of cases gathered, as I gathered mine in 1884, from all sorts of sources. That proceeding was necessary then, but it is so no longer. I have also to say that two—I almost believe also three—of the fatal cases were due to the delay in submitting the patients to the surgical treatment. They had been kept in medical wards of various hospitals until their systems were impregnated with purulent products, and their deaths can hardly with fairness be attributed to the operation. The mortality of ovariotomy has almost disappeared, since we have given the patients the advantage of early operations, and this has proved to be true about the kidney; indeed, it will be proved to be still better, for kidneys will in future be saved by early nephrotomy instead of being sacrificed by deferred nephrectomy.

Eighteen per cent. must be regarded as a low mortality for an operation as serious as the removal of an essential organ; but when we look at a list of cases, 44 of nephrotomy with only 1 death, the record is little less than marvellous, seeing that it is not yet twenty years since I was plucked at an examination merely for suggesting that a suppurating kidney discharging pints of pus into the bladder should be made to discharge into the loin, or even be removed.

Removal of a calculus from the kidney seems to be now less risky than perineal lithotomy in the male adult, for of those 44 cases there were 14 in which renal calculus was the main trouble, and there was only 1 death, a death certainly due to delay of the operation.

Of the nephrotomies, four were cases of mere exploration—that is, cases where we expected to find calculus or essential disease of the kidney, and found nothing. They are marked "? Pyelitis." In none of these cases was the slightest harm done by the operation, and in two complete and permanent relief followed it, showing that something beneficial had unwittingly been done. In four of the cases of nephrotomy the operation failed to be of permanent relief, and the kidneys had to be removed subsequently. But there can be no doubt that the early performance of nephrotomy will not only cure a vast number of otherwise incurable cases, but it will save many of these essential organs from removal. Finally,

it will make subsequent nephrectomy far less risky. Five of the cases of nephrotomy were performed for hydatid disease, and all of these have been completely and permanently cured. Fourteen of them were performed for calculus (excluding the four cases of mere exploration and the fatal case), and all of these have been completely and permanently cured. Three were operated upon for simple cyst, and were all cured. Of the remaining 18, 11 were operated upon for suppuration of the organ, and, of these, 4 required its subsequent removal, 6 have been cured, and 1 died from the progress of the disease declining further operative proceedings. Treatment of a suppurating kidney by any kind of medication is so completely hopeless, that 50 per cent. of complete success, with a bonus of another 40 per cent. of partial success, is argument enough in favour of early surgical interference. Of my 74 operations, there are 3 upon which I look back with inexpressible regret—cases in which I was induced by the excessive pressure of other people to perform the operation of so-called "nephrorrhaphy." I do not know any subject on which more nonsense has been written than that of "movable kidney." I have said over and over again that, in my experience, all enlarged kidneys become more freely movable in the horizontal direction than they are normally. I am still of opinion that the condition of "mesonephron," which we know only in museums, is not a matter of surgical importance—it certainly never yet has been proved to be. Yet, in spite of this condition, I have been persuaded to perform three of these useless and unscientific operations, with the result that not one of the patients have been benefited in the least, and one of them has died under such circumstances that I think the operation might fairly be blamed for it. I shall have nothing more to do with fixing kidneys.

Much has been written on the best method of reaching the kidney, either for merely opening it or for its removal, and variously named "lines" of incision have been argued for by those who have had least opportunity of making use of them. The real fact is that the kidney is best reached by the most likely looking road, and, in this respect, different patients exhibit great variety of condition. Whether the peritoneum be opened or not makes not a scrap of difference to the mortality, and makes very little difference to the *technique* of the operation. If the tumour is of a suspicious nature, and nephrectomy be determined upon, the capsule should be removed, though the disease will recur in 50 per cent. of the cases of solid tumour whether this be done or not. If the kidney is merely the seat of inflammatory destruction, the capsule may be left. Uncertainty of diagnosis in the kidney seems to prevail to about the same extent (10 per cent.) as elsewhere in the abdomen. I have made exploratory incisions, hoping to find ovarian tumours, and have found huge, soft cancers of the kidney. Once I diagnosed a huge hydatid tumour of the liver, and found a huge soft sarcoma of the right kidney; I could have removed that tumour if I had had my present experience. Opening the kidney for calculus and finding none is a mistake that will occur from time to time; but I would rather discover my failure with my finger tips than be led astray by "broddling" the kidney with a skewer. Of the cases in detail, one (December 24th, 1885) was remarkable, in that the stones I removed from the pelvis of a suppurating kidney were gall-stones. Doubtless, an abscess of the gall bladder had opened into the kidney, and discharged the gall-stones into the pelvis, for no one has yet produced samples of cholesterine calculi from the urinary bladder, and my specimens from the kidney have all the peculiar facetings of gall-stones, and are formed entirely of cholesterines.

One of the nephrectomies (May 22nd, 1886) is worthy of brief recital in detail, as it was the subject of diagnosis by five different men, all competent to give an opinion in such cases. Their opinions were that it was a uterine fibroid, that it was a cancer of the ovary, and a suppurating ovarian tumour. It was not until I got the tumour out that I found it was the left kidney enormously distended by pints of pus. The cyst weighed one pound and a half.

The broad conclusions I draw from my experience so far are that all tumours of the kidney, all suppurating kidneys, and all kidneys with persistent, incurable, and unbearable pain in them should be exposed by incision, laid open, and thoroughly explored by the finger-tip. Stones may then be removed, abscesses drained, and hydatid or cystic growths removed with trifling risk. If this treatment be carried out early I believe it will be successful in the great bulk of the cases, and the removal of the organ will rarely require to be resorted to save in the case of sarcomatous growths. Even in them sometimes mere exploration leads in a mysterious way to a cure.

In Dr. George's case (September 28th, 1888) I opened the enlarged kidney, and found nothing but a mass of what I believed to be cancer, no stone and certainly no pus. I did not remove the kidney, because I had been disheartened by the return of the disease in a very similar case just before. Yet in a few months that kidney, as large as a cocoa-nut at the time of the operation, almost entirely disappeared, and I gladly gave my sanction to the marriage of the patient at a time when I fully expected she would have been in her grave.

V.—W. BRUCE CLARKE, M.B., F.R.C.S.,

Assistant-Surgeon to St. Bartholomew's Hospital, Examiner in Surgery to the University of Oxford, etc.

THE speaker began by stating that the points to which he was drawing special attention in his speech were those derived from his own personal experience in the matter, and had no pretensions to embrace much of the recent work which had been done upon the subject.

In addition to the five cases which he had published in a paper in the *Illustrated Medical News* in October, four cases had since been operated on by him, one of them being a second operation performed on one of the patients there described. One of the most striking points in connection with the subject of calculus in the kidney was perhaps the severe symptoms to which very small stones might give rise. One case of this kind was before alluded to in his paper, whilst another somewhat similar instance had come under his own notice during the past year. In this second case the patient (sent to him by Dr. Pope, of Hammersmith) was a girl aged 18, who had suffered most severe pain, quite incapacitating her for any kind of work or enjoyment of life, for over eighteen months, and it was only by keeping perfectly quiet and almost absolutely in a recumbent position that life was at all bearable. A small amount of blood had appeared on one or two occasions in the urine, but there had never been any exhibition of pus. The usual lumbar incision was made, and the kidney was found to be invested by a complete mesentery, so that it was extremely movable within the abdomen, and at the same time could be most completely handled on all sides with a view to its examination. The patient was thin, and no difficulty was experienced in pulling the kidney up to the surface of the wound and handling it with both hands whilst it was pierced in various directions by means of a needle, with a view to ascertaining, if possible, whether any stone lay in its interior. No stone could be detected; and, as it seemed possible that the symptoms might be due to the extreme mobility of the organ, it was firmly sutured with three pieces of silk, which passed through the substance of the kidney, as well as through its peritoneal covering, and fixed it to the wall of the abdomen. An excellent recovery took place, and for a few weeks the symptoms were decidedly better. As soon, however, as the patient began to move about again, her symptoms returned with all their previous severity, and they were accompanied by the passage of a small amount of blood with the urine. Under these circumstances, at the urgent desire of the patient, a second operation was undertaken. The kidney was found firmly fixed to the abdominal wall, instead of being movable as on the previous occasion; and an incision was made into the pelvis through the kidney substance, so that the finger could be introduced with a view to examining its interior as completely as possible. No stone whatever could be detected. As the pain had proved so severe as to make life practically intolerable, it was decided to remove the kidney, which was done without any trouble. But it was only after a long search had been made that a small calculus, not much larger than a good-sized pea, was detected, which was covered with small prickly spines on its surface, thus explaining the intense agony which the patient had suffered. A good recovery ensued, and the patient was now well.

Shortly after the description which was given of A. M. in the *Illustrated Medical News* about a year ago, she returned to him with further symptoms of pain. The wound was re-explored, some small calculous masses were removed, and the interior of the kidney as far as possible washed out. The pain was again relieved, and the discharge almost entirely ceased, until about three or four months back, when she again returned, desiring to have something further done. Under these circumstances he decided to make an examination of the kidney through the peritoneum, with the view, if possible, of ascertaining what its exact condition was, and whether any further operation, short of removal, should be attempted. The lower part of the kidney, which had before contained the calculi, could now be easily felt, with one

hand in the peritoneum and the other in the sinus on the outside, to be perfectly and completely contracted, whilst some more calculous matter had formed at its upper end. With the aid of one hand in the peritoneum and the other in the lumbar sinus, several calculi were removed, and the interior of the kidney thoroughly irrigated and washed out, since which time the patient had been completely free from pain, and scarcely passing any pus by the wound or with the urine. It of course remained to be seen whether a complete recovery would take place, but he was strongly of opinion that a case of this kind showed that in a healthy individual a kidney should not be rightly removed, even if the alternative were a series of three or four operations before the patient was completely restored to health.

A third case had come under his care in which excruciating pain, accompanied by severe vomiting, had been present for over eleven years. There had never been any distinct amount of pus passed with the water, but only some blood from time to time. This patient was also sent to him by Dr. Pope, of Hammersmith, who was present at the operation. As the man was extremely stout, it was thought quite possible that great difficulty might be encountered in getting at the kidney satisfactorily from behind, and the anterior incision was employed. Owing to the patient's fatness and a cough from which he suffered, the operation was a very prolonged one, and though the stone could be distinctly felt in the kidney at its lower portion, the patient became so exhausted, and the intestines gave rise to such difficulties, that it was deemed advisable to defer any further attempts until a future occasion. Since the time of the operation, now nearly three months since, although the patient had been in active employment, and driving about over rough roads in a gig, he had been almost completely free from pain; and he would suggest that it was quite possible that the manipulation to which the kidney was subjected at the time of operation had caused the stone to become encysted, and had thus placed the patient in a condition of comfort. So long as he remained so he was of opinion that it was advisable not to attempt any further operation, though the patient was quite willing to undergo one whenever it was deemed necessary.

Nephrorrhaphy.—On the subject of this operation there was but little novel to state, excepting to advocate its judicious application in those instances where severe pain was suffered, on account of movable kidney. It was too often the fashion, he thought, to ascribe such pain purely to hysteria, and in four cases in which he had operated, exclusive of the one just referred to of the stone in the kidney, great relief had been experienced, and the operation had presented no special difficulty.

Tubercular Kidney.—Perhaps the greatest difficulty was experienced in determining what was the best plan of treating a tubercular kidney. Its removal, it had always seemed to him, was fraught with the very greatest danger, and drainage from the loin appeared to be the most appropriate treatment; it, at any rate, afforded temporary relief, and though it was unquestionably far easier to remove a kidney which had not been previously drained, yet the greater safety which was ensured by preliminary drainage far outbalanced, in his mind, the mere consideration of the ease of removal. Where, however, it was perfectly clear that only one kidney was involved, there was certainly no objection to removing the organ at once, and for his own part he preferred the abdominal incision.

Nephrectomy.—After saying that he fully agreed with Mr. Morris's remarks, the speaker went on to state that he had somewhat changed the opinion which he had advocated in his book, and he felt sure that the large kidney was much easier and safer to remove by the anterior incision than from the loin. Of course, where the kidney was small and where it could be easily reached from the loin, there were many advantages to be gained by its removal from that side. There was one little point which he had recently adopted which he found materially aided in the healing of these wounds—namely, that whenever it was possible, after the kidney had been shelled out of its capsule, the edges of the capsule should be stitched to the skin when the pedicle had been secured. By this means the wound very readily healed, and if any pressure required to be employed for the arrest of severe hæmorrhage later on, the pedicle could be more readily and easily reached by this plan than by any other. Further than this, there was no chance of the ureter infecting the general cavity of the wound, which had been urged, and he believed with some amount of justice, to be an objection to the lumbar operation. In one instance in which he had seen this plan employed, a small amount of hæmorrhage had occurred two or three days afterwards, but the bleeding point was easily secured, and no harm ensued to the patient. It would probably be urged that this plan was not applicable in all instances. He was quite aware of it, and only advocated it where it could be easily performed.

VI.—KENDAL FRANKS, M.D., F.R.C.S.I.,

Surgeon Adelaide Hospital, Dublin.

MR. KENDAL FRANKS called attention to a class of cases which were not uncommon, namely, those in which the diagnosis of renal calculus was almost certain, and in which the symptoms clearly indicated the affected side, and yet in which, when the kidney was exposed, the most careful digital manipulation and the most systematic exploration with a long needle failed to detect the presence of a stone. Now, in such cases the practice had most frequently been to take one of two courses. The first course—and perhaps that most usually adopted—was to close up the wound and to trust to relief being afforded by the division of the nerves which necessarily resulted from the exploratory incision. Such temporary relief often followed, but it was very rare to find it lasting, and he ventured to look upon such a proceeding as surgically unsound. The second course which had been adopted was to excise the offending organ, as had been done by Mr. Henry Morris. But this was too severe a remedy, and one which Mr. Morris himself condemned, suggesting that it might be wiser to incise the kidney *in situ* and to search for the stone systematically. This was a proceeding Mr. Franks had himself adopted with marked success. He did not consider that incision into the kidney substance was a formidable proceeding, and as an exploratory measure was much to be preferred to excision. Should the stone be found, it was better to find it in a kidney which, otherwise healthy, still formed part of the patient's body, than in a kidney on the dissecting table. In the case he alluded to the symptoms of stone were tenderness on pressure over the right kidney, with intense paroxysmal pain, beginning in the right renal region and shooting down the right side into the hip and groin. There was a well-marked deposit of oxalates in the urine but no blood or pus. When the kidney was exposed, no stone could be felt anywhere, and a needle passed systematically through the renal substance failed to detect it. Mr. Franks then incised the kidney for a length of about two inches from the convex border right through to the pelvis, and, after some careful search, reached a small abscess cavity containing a small stone and some crystalline particles. The incision in the kidney had to be enlarged to the extent of three inches in order to clear out the cavity thoroughly. The patient made a complete recovery, and had not since been troubled with any of her former symptoms.

Mr. Franks also laid stress upon the importance of leaving the wound in the kidney to granulate without using any means to close it. A case he mentioned showed the aggravated symptoms of renal colic which might be caused by a foreign body such as a gauze plug inserted into the renal wound. He also thought that by leaving it gaping all blood-clots and *débris* would be gradually washed out, and thus the danger of their forming later the nuclei of stones would be avoided.

In cases of tubercular disease of the kidney, he thought with Dr. Newman that excision of one of the kidneys should be performed, if the case could be got sufficiently early before the second one was involved. It was not easy to diagnose a scrofulous kidney from a case of stone, but an exploratory incision would clear away all doubt. The difficulty was to know whether the second kidney were involved.

VII.—R. LAWFORD KNAGGS, M.A., M.B.CAMB., F.R.C.S.,

Huddersfield.

MR. LAWFORD KNAGGS called attention to the symptom of bloody urine after certain renal operations. In a case of nephrectomy for medullary carcinoma, after the operation the passage of small quantities of bloody urine constituted the most marked symptom, and gave rise to the opinion that the remaining kidney was congested. At the necropsy that kidney was found perfectly healthy, but the bladder contained clots; and it was evident that the bloody urine was due to hæmorrhage from the diseased kidney during the manipulation of removal. Such a symptom might be very misleading, but when its cause could be accurately ascertained, its gravity was considerably diminished.

VIII.—FRANCIS IMLACH, M.D.

Dr. Imlach, referring to the question which had been raised as to nephrectomy or nephrotomy in pyonephrosis and hydronephrosis, pointed out that Mr. Morris's success in the minor operation in cases of pyonephrosis told rather against his argument in favour of nephrectomy in the first instance. His own experience in four cases was in the same direction. No doubt where the kidney was riddled with pus it was best to remove it, but this was not a common condition. In hydronephrosis, where the kidney grew as large as any ovarian tumour, it was customary to remove the organ. It was an easy and safe operation, but emptying and drainage might be sufficient. A large proportion of the renal tissue remained healthy though it was spread out, and such a kidney was by itself an efficient excretory organ.

He had experience of a case in which the other kidney was no bigger than a bean. Drainage might leave a useful kidney; and he thought the disastrous effects of the ancient practice of drainage of ovarian tumours had no analogical lesson.

CASE OF GASTRO-ENTEROSTOMY WITH THE AID OF DECALCIFIED BONE PLATES.

By T. KILNER CLARKE, M.A., F.R.C.S.,
Surgeon to the Infirmary, Huddersfield.

One of the most interesting and, from a practical standpoint, probably the most valuable of the reports made to the Scientific Grants Committee of the British Medical Association is the Report on Intestinal Surgery by Mr. Frederick B. Jessett. It is given at full length in the British Medical Journal of July 27th, 1889, and consists mainly of the results and experiences Mr. Jessett has gained in investigating the mode of operation suggested by Dr. Senn.

Gastro-enterostomy, by means of approximation plates, is there so lucidly described and illustrated that I would refer the reader to that paper for the full details of the operation. I wish rather, in recording my own case, to dwell on the points where it is possible to go wrong. According to the tables published by Mr. Herbert Page, gastro-enterostomy has been performed thirty-six times with twenty-one recoveries. Of the English cases, three in number, Mr. Barker's and Mr. Page's recovered, and lived some considerable time; Mr. Jessett's died on the tenth day, not from the operation, which was perfectly successful, as the *post-mortem* examination showed, but from kinking of the bowel occurring five days after operation.

The following case is the first, I believe, which has been done by means of the bone plates.

J. C., aged 48, pattern weaver by trade, an anæmic, emaciated, slightly built man, consulted me on September 17th. He stated that his illness began fourteen weeks before with pains in the small of the back, between the shoulder-blades and under the middle of the sternum; that he had vomited all solid food since the beginning of his illness, and had lost much flesh and strength. On examining the abdomen, I found a movable tumour, two inches and a half in the horizontal diameter by one inch and a half in its vertical, reaching as low as the navel, four-fifths of it being on the right of the middle line. Attached to it was the dilated stomach, stretching downwards to the left. This tumour existed in all probability before giving rise to any marked symptoms, as his medical attendant, Dr. Orr, had discovered it in the early part of his illness. Diagnosing the case as one of cancer of the pylorus, I advised an exploratory incision and further operation if the diagnosis proved correct. I operated on September 20th, assisted by Dr. Orr, Mr. Dyson, and Dr. Scougal, who gave the anæsthetic, which was one part chloroform and two parts ether.

Carrying my incision, three inches in length, in the middle line to the level of the lower edge of the navel, I came down at once on the thickened and enlarged pylorus. The next step, and the only difficult part of the proceeding, was to get hold of the jejunum. The way to make certain of this is to follow with the finger the gut from the duodenum downwards until it can be readily pulled out of the abdominal cavity. Pulling the bowel out of the wound I emptied by gentle pressure about four inches of it, and isolated this by means of two ligatures of rubber tubing passed through the mesentery at its attachment to the bowel. The gut was then opened to the extent of an inch, the opening washed clean, bleeding points stopped, and the decalcified bone plate slipped inside and fastened in position by its attached threaded needles. A portion of the stomach was then pulled out of the abdomen, and the second plate was fixed in position, about one inch and a half from the pylorus and the same distance from the greater curvature. The two plates were now placed in apposition, and the corresponding threads of fine Chinese silk tied. A few Lembert sutures of catgut were introduced round the edges of the plates and the parts were returned into the abdomen. Before closing the abdominal incision, I carefully spread out beneath it a layer of omentum. No toilet of the peritoneum was needed, and cleanliness was the only antiseptic. The wound was dressed with Gamgee tissue, and a thick pad of towel bound firmly over it.

The patient's condition when put back into bed was good. An enema of beef-tea and brandy was given. The subsequent progress of the case was as follows:—

September 21st. Patient's condition very good; very little pain. Pulse 86; temperature 98.4°; is being fed by nutrient enemata.

September 22nd. Removed the thick pad, and began feeding by the mouth with wine, whey, and veal broth. Pulse 84; temperature normal.

September 24th, 10 A.M. Abdominal wound healed, stitches removed. Pulse 84; temperature 98.4°. Passed a good formed motion; taking plenty of fluid food. 3 P.M., attack of dyspnœa. I did not see him till 10 P.M., when I found his temperature 101° and pulse 120, and the heart's action feeble and intermittent. There was dulness of the lower half of the right lung and tubular breathing at the base. I ordered poultices and ten drops of tincture of digitalis, with acetate of ammonia and nitrate of potash, every two hours.

September 27th. Much better; says he "feels a young man again." Sputa offensive; ordered carbolic acid to be sprinkled all over the room.

September 29th. Pulse 72; temperature 98.4°; less sputa; cough troublesome at night. Wound gaping somewhat. Ordered egg and stale teacake.

October 2nd. Doing well. Cough slight and sputa scanty. Has taken during the last twenty-four hours—milk two pints, beef-tea one pint, with Valentin's beef-juice; fish, bread and butter, an egg, and bitter beer.

October 11th. Feels to be gaining strength; complains that solid food causes flatulence and discomfort; no vomiting since the operation, very little sputa or cough.

October 29th. Doing very well, and gaining flesh and strength.

The points to be more especially remembered and those in which it would be most easy to err in doing this operation are: (1) to bring plenty of stomach outside the abdomen, so that the assistant may grasp it easily and without stretching it, behind the plate when the latter is *in situ;* (2) to have some six inches of intestine outside when making the connection; (3) not to make too large incisions into the stomach and intestine; and (4) to be careful to tie the rubber tubing very loosely round the bowel. It is, I think, a needless expenditure of time to tie all the bleeding points. A spouting vessel may be tied; the pressure of the plates will stop the rest.

The plates, kindly sent me by Mr. Jessett, were of the following dimensions—namely, two inches and a half long by one inch wide and one-eighth of an inch thick, having an oval opening in the centre three-fourths of an inch long by half an inch wide. It would be a convenience if Messrs. Maw, Son, and Thompson, of Aldersgate Street, who keep the bone plates, would send them decalcified and fitted with Chinese silk.

ENTERECTOMY FOR ARTIFICIAL ANUS: RECOVERY.

By THOMAS SINCLAIR, M.D., F.R.C.S.Eng.,
Professor of Surgery in Queen's College, Belfast.

Since the publication of a short account of a jejunal enterectomy in the British Medical Journal of June 2nd, 1888, another opportunity has been afforded me of resecting the intestine for artificial anus, again with a satisfactory result.

Fifteen months before the operation, the patient, a young man, aged 20, states he had a severe illness, and, from his description of it, there can be no doubt that he suffered from strangulated inguinal hernia on the right side. Admitted into another hospital, he declined herniotomy until he had endured a week. The bowel, a portion of the ileum, was found gangrenous at the time of the herniotomy, and his surgical advisers of that time left it

to form an artificial anus in the groin, discharging him from hospital in seven weeks. A distinct spur had formed, and the angle of flexion being fairly acute, it was only by the use of a flat pad in the recumbent position that the contents could be made to traverse the lower bowel. Attempts were made throughout the year by other surgeons to close the opening by strapping, by refreshing the edges, by pad and bandage, by truss pressure, and by the wide rubber tubing method suggested by Banks.

The use of the truss in the recumbent position had the advantage of improving the general health, which had somewhat declined, by diverting the intestinal contents into the distal bowel. The opening, however, showed no disposition to close, even after the most patient trials of the milder means; a couple of fingers could easily be thrust into the two ends of the gut. Resection was then undertaken in the Royal Hospital.

As the success of the operation depends, to some extent, on careful preparation of the patient and on the subsequent alimentation, he was kept in bed for one week before operation, and had four castor-oil purges during this time. The diet was such as to leave little residue on the two days before operation, consisting chiefly of beef-tea. A hypodermic injection of morphine before the chloroform rendered the exhibition of much chloroform unnecessary. A limited parietal incision, obliquely made across the artificial anus, admitted to the abdomen, and six inches of the liberated coil were condemned, owing to the matting, and to the existence of a kink and a stricture caused by the earlier strangulation. Warm boracic acid lotion was the antiseptic employed for cleansing the coil. Simple tubing clamps were used, the bowel being sliced obliquely to its long axis and the mesentery divided close to the intestine. Twenty-five fine Chinese silk sutures were introduced in one row after Lembert's method, care being taken to narrow the base of the inter-mesenteric triangle on each side, as well as to suture the edge of redundant mesentery, and thus afford support to the intestinal seam. The parietal wound was closed entirely as regards the abdomen by silver sutures, but a drain tube was inserted in its more superficial part. The temperature was subfebrile throughout, the highest point reached being 99.6° F. The dressings were not disturbed for eight days, when most of the silver sutures were removed.

For seven days after operation nothing was given by the mouth save fifteen minims liq. opii. sedat., twice daily. Nutrient enemata, composed of four ounces of pancreatised milk with half an ounce each of beef-jelly and brandy, were given four times daily, the brandy being omitted after the second day. The rectum was occasionally washed out, and half a pint of tepid water was injected at intervals when thirst was complained of. A few predigested beef-tea suppositories were introduced with the water, after the fourth day, to supplement the nutrient enemata. Milk-whey in tablespoonfuls by the mouth was given on the seventh day, and some lemon-juice diluted; the opium was discontinued. Tea without bread was allowed on the ninth and beef-jelly on the tenth day by the mouth—all rectal feeding being abandoned at this period.

After the fortnight, ordinary diet was ordered. A natural motion from the bowels occurred at this time, and no purgative was given throughout. The patient was shown to the members of the North of Ireland Branch of the British Medical Association in Belfast five weeks after the operation, when he was discharged from hospital, the bowels acting normally, and the wound in the parietes having healed. Since then he has resumed his employment, merely wearing a flannel spica bandage to support the cicatrix for some time longer.

THE SURGICAL TREATMENT OF GENERAL PARALYSIS.

By T. CLAYE SHAW, M.D., F.R.C.P.,
Lecturer on Psychological Medicine, St. Bartholomew's Hospital.

The hopelessness of remedies to stay the progress of general paralysis of the insane has led me to consider the advisability of trying surgical interference at an early stage of the disease, and I beg to submit the following case where trephining was performed with the result that the prominent symptoms disappeared. Whether general paralysis is a disease *sui generis* or not, it is certain that the pathological appearances point to irritative (probably inflammatory) processes in the upper layers of the convolutions in the earlier stages, and to pressure signs from the presence of fluid in the later.

To modify these conditions is the object of the operation, but beyond suggesting that by producing an alteration in the existing state of the morbid process at work a new and reparative nutritive process may be set up, I do not at present offer an explanation. This, however, must be borne in mind that early headache of a tensive character is a very frequent symptom, and that trephining seems to be a more certain way of relieving the pressure than depletion by purgatives or medicines given with the view of lowering vascular tension. How nerve-stretching acts in ataxy is not known, though of its efficacy there is now no doubt. Why should not the same process have favourable results when applied to the brain? The only way of stretching the brain is by giving it more space in which to expand, by allowing it to relieve itself from the increased arterial tension which the sphygmograph has shown to be one of the early conditions in general paralysis. It is easy to see how surely trephining must relieve the later symptoms due directly to fluid pressure such as the paralyses, attacks of stupidity, loss of power of swallowing, talking, etc. To propose trephining in the early stage of a disease seems a formidable remedy, but the operation is nowadays attended with little risk, whilst the steady progress towards death if the disease is left to itself makes it imperative to consider the feasibility of any remedial measure however severe.

Occasionally we read of cases of general paralysis recovering in an unexpected manner; but without denying the correctness of the reported instances, it must be said that they are so few in number, and so obscure in the description of the manner in which the cure was effected, that we must put them out of the category of results most likely to happen. Acting, then, on the principle that the relief of tension and the endeavour to set up a changed nutritive process was to be the guiding one for treatment, and that to be of any value it must be done in an early stage, I communicated with Dr. Ferrier, and asked him to see with me the case of a man upon whom I proposed to operate. We agreed that the patient was rapidly approaching a condition of dementia of the paralytic form, and that the only hope of giving him relief was in the manner I am now indicating. The great difficulty that one has to contend with is in getting the consent of the friends for the operation to be performed, for the signs which have so fatal an import to those conversant with the disease are not especially striking to the uninitiated.

The main features of the case are as follows: W. H., admitted November 14th, 1888, a packer, in an excited, grandiose mental state, affection of speech, exaggerated reflexes, gait very unsteady, and retention of urine. On the certificate of admission, his delusions were described as very "large" in extent, and there was no doubt that when admitted he was in an elevated and happy frame of mind, altogether incompatible with a realisation of his true condition. It was probable that the man was suffering from a bulbar lesion, and that the mischief, which had probably begun there, was extending to the superficial parts of the brain. From time to time, W. H. had convulsive attacks and short periods of loss of sensation, chiefly in the left extremities, and his powers of deglutition and talking became more and more impaired, whilst his mental condition was fast approaching a well established dementia. On July 28th, the patient was trephined on the right side of the skull over the central sulcus, and about two inches outside the longitudinal fissure.

The operation, performed by Mr. Harrison Cripps, assisted by Mr. Bruce Clarke, consisted of making two holes with a trephine, cutting away the intermediate bone so as to make an opening about $1\frac{1}{2}$ inch long by $\frac{3}{4}$ inch wide, cutting away the dura mater, and letting out a considerable quantity of subarachnoid fluid.

Strict antiseptic precautions were taken, and the after-course of the operation was very satisfactory, for at no time did the temperature exceed 99.5°; and by the tenth day healing was complete, and the patient was able to sit out of bed. With the exception of a little tingling in the fingers of the left hand on August 9th and 15th, there have been no cerebral symptoms since the operation. The present state of the patient is a great improvement upon what it was; in fact he is no longer insane, and I propose to discharge him. We did not expect him to show any marked improvement in the bulbar symptoms, although I think that even here his condition is better, and he certainly swallows and speaks more easily and distinctly; but in his mental tone the difference is most marked, for he is no longer optimistic in his ideas, nor

has he had any of the convulsive epileptoid attacks to which, before operation, be was very subject. He reads the paper daily, is free from headache, eats and sleeps well, and is able to hold his urine. I pointed out the case to Dr. Clifford Allbutt on the occasion of his recent visit here, and he agreed that the man could no longer be considered insane.

I consider, then, that the operation has been justified by success, inasmuch as the mental signs of exaltation have disappeared together with the convulsive attacks; and though the prominent bulbar symptoms remain, they have to some extent been benefited, beyond which we expected nothing. My object in reporting this case is that I believe it to be the first that has been done with the distinct object of introducing surgical measures into the early treatment of general paralysis; at any rate, I am not aware of any other reported case, nor have I before heard this mode of treatment suggested.

Little can, of course, be postulated from one operation, but the results of this case have been so satisfactory, that I feel encouraged to go on, and I shall hope to be able to report additional successes from time to time. Much of the success attending this case is due to the very careful manner in which Mr. Cripps conducted the operation, and I was very fortunate in obtaining the valuable opinion of Dr. Ferrier as to the advisability of doing an operation which might or might not be creditable to brain surgery.

SURGICAL MEMORANDA.

AMPUTATION AT THE HIP-JOINT.

In the JOURNAL of November 9th is described what is called "a new method of operating" for amputation at the hip-joint. The writer, Mr. Myles, of Dublin, states that of the three sources of danger—shock, hæmorrhage, and infection of the wound from its proximity to the anus—the two latter are obviated by the new method. May I be allowed to point out that this method is not a new one? It has been taught in the class of surgery at the Edinburgh University for years past, and I remember in June, 1883, being present in attendance at an operation where amputation at the hip being regarded as likely to prove necessary, the skewer was placed among the instruments. My notes taken in May, 1885, contain a full description of the operation with the use of the skewer, with the comment that it is an operation "preferable to others because of the efficient control of hæmorrhage." The flaps were also described to us as planned to avoid the danger of the wound being infected from the perineal region. The detail of the mode of passing the skewer and of getting the flaps was, however, very slightly different from that in Mr. Myles's operation, but the objects aimed at and means used were essentially similar. J. C. VAUGHAN, M.B., C.M.Edin.

Royal Victoria Hospital, Netley.

In the JOURNAL for November 9th Mr. Myles described a method of amputation at the hip-joint which he has practised on the dead, but not on the living, body, and in connection with it he suggests the use of a skewer for the prevention of hæmorrhage. Having already successfully employed this mode in a recent case of amputation at the hip-joint for sarcoma extending high up in the thigh, I can vouch for its efficiency, the loss of blood having been extremely slight, the femoral artery having been so thoroughly compressed between the skewer and rubber band that not a single drop of blood escaped from it.

The mode of amputation which I adopted was that of Furneaux Jordan, the skewer being passed from without inwards, between the bone and the soft parts in front of it, through the upper end of the vertical incision with which Mr. F. Jordan's operation commences.

The use of the skewer did not originate with me, but was proposed and employed by the late Professor Spence, of Edinburgh, for some time before his death. The combination of Mr. F. Jordan's procedure with the addition of Professor Spence's skewer is a most admirable one, and really leaves nothing to be desired, for it is simple, easy, bloodless, well adapted for efficient drainage, while the presence of unbroken skin on the inner side of the thigh is a matter of not inconsiderable moment.

OGILVIE WILL, M.D., F.R.S.E.,
Surgeon to the Aberdeen Royal Infirmary.

ON THE NON-RETENTION OF URINE IN WOMEN.

In one of your short articles under the head of "The Week" you allude to the above subject, quoting the treatment adopted by Dr. H. Marion Sims. At the end of the article you say "that Dr. Sims admits that Braxton Hicks has recorded one case of treatment in a young subject by mechanical dilatation with warm water, but in what quantities Dr. Sims could not find out." I do not know from what source Dr. Sims had his information, but he will find in the *Lancet*, July 4th, 1868, in "The Mirror," the report of two cases of simple kind, together with another following cystitis. The quantity retained is given. Remarks are given as follows: "A cause of incontinence of urine is indicated in the following cases, which is not generally recognised. The treatment which Dr. Hicks applied was very successful, and we have no doubt that the record of it will be of great service to practitioners who have patients suffering from this very troublesome condition." Again: "Dr. Hicks remarked that the constant evacuation of urine permitted by some mothers to their children allowed the bladder to become so constantly empty that after a time the muscular power of the sphincter was not sufficient to counteract the contractility of the organ. In recent cases, no doubt, this could be voluntarily overcome by adults; but in old-standing cases, although we might do much by lessening the sensibility of the bladder, yet we might proceed at once to overcome its resistance by mechanical force, so that further treatment would not be required." "Dr. Hicks suggested the applicability of this treatment to both sexes. He thought it possible that in some cases there were congenitally small bladders."

I think that by these quotations it will be granted that so long ago as 1868 I had not only treated cases, but that I was the first to do so, and to lay down the principles of the treatment and its applicability to other conditions. J. BRAXTON HICKS.

George Street, Hanover Square, W.

In an annotation upon the above subject, in the JOURNAL of November 9th, attention is directed to the value of expanding the contracted bladder by means of forcible gradual dilatation with warm water. I have been accustomed for some years to treat contracted bladders in this way, with varying success, and I believe a very important distinction must be drawn in the method of treatment between the inflammatory and the non-inflammatory types. The liability to rupture upon dilatation is very much greater in the former, and the utmost care and patience is necessary to avoid splitting the rigid, inelastic wall. *Festina lente* is as sound a motto in the dilatation of the bladder of diminished capacity as it is in the dilatation of an old-standing stricture of the urethra. It has not, I believe, been pointed out that in some cases a distinct rise of temperature marks each step in the reaccession of vesical capacity (? absorption markings). Thus, in one case sent me by Dr. Jackson Cummings, of Cork, in which there was at first complete incontinence, no vesical capacity—the bladder feeling like a flattened prostate *per vaginam*—and no sphincter power, each drachm capacity gained by dilatation was marked by a temperature of 100° to 101°, or even higher; in fact, on one or two occasions the treatment had to be suspended until the temperature fell. To control this observation on one or two occasions I merely irrigated the bladder without pressure, and the temperature remained low. E. HURRY FENWICK.

Old Burlington Street.

TWO SUCCESSFUL CASES OF LITTRE'S COLOTOMY.

On February 18th, 1889, with the assistance of Dr. Starling and Mr. Watson, I operated upon Mrs. L., a much-emaciated patient, with extensive deposit and great contraction in her rectum, which extended beyond the line which I could reach with my index finger.

In every detail the method of Mr. Allingham was carried out; the large intestine was quickly found; the skin was stitched to the parietal peritoneum; the bowel was pulled out, and the direction of the axis of the mesentery was apparently found. A double silver suture passing through the mesentery and the skin edge at each side then made the spur, two-thirds of the protrusion being arranged for the upper aperture, one-third for the lower, and the bowel stitched through peritoneal and muscular coats to the skin all round. On the third or fourth day the anterior wall of the bowel was cut away, and, during the next few days, beyond some troublesome protrusion of the mucous membrane and a decided

retrocession of the operated bowel into the abdominal cavity, all went well.

A week or two passed, and then I found to my surprise that the fæcal matter was passing by the lower or smaller opening, and the upper or larger aperture led into the rectum; the spur was complete. The relief was great to the patient; but in six or seven weeks she sank from exhaustion.

CASE II.—On July 31st, 1889, I operated on Mrs. A. in the General Hospital, Tunbridge Wells, for a stricture, with much deposit, and fixation in the rectum, the upper limit of which I could not reach with my index finger.

The bowel was adherent to the great omentum, and through this medium was also attached firmly to the parietal peritoneum; so the task was difficult, and the hæmorrhage was free. With great care the adhesions were broken down, the bowel drawn through the aperture, and the axis of the mesenteric attachment carefully noted. The skin and peritoneal edges were then fastened together with silk sutures. The bowel was again protruded, and the mesentery transfixed by a silver probe, close to the posterior margin of the bowel. This was allowed to remain resting upon the skin on each side. The bowel was stitched to the skin all round. All went fairly well; there was no retrocedence of the operated bowel, but four days afterwards, when I had cut away the anterior wall of the bowel, I again found that the fæcal evacuations took place through the lower and smaller aperture, whilst the upper or larger led into the rectum. In my opinion these apertures should be made equal.

The patient left the hospital with a properly-applied truss and pad, and at the time of writing is still in great comfort.

CLELAND LAMMIMAN, F.R.C.S., Surgeon to the General Hospital, Tunbridge Wells.

THE TREATMENT OF SEVERE CASES OF NASAL POLYPUS.

I CAN remember two or more cases of nasal polypus which have resisted repeated attacks with the nasal snare and forceps. As soon as one crop has been removed another begins to grow, and in the course of a few months the patient returns as bad as ever. I will here mention a case.

Mrs. M., aged 62, has had polypi during the last twelve years. The late Mr. Kirby Smith, my predecessor at the infirmary, removed them at different times; at the least, he used the snare twenty times. Though relieved she could never breathe through her nose properly. I have removed several, using the snare and forceps six times, and yet she was very little the better for it.

Looking at Mr. Jacobson's book on surgical operations, I found he, in such inveterate cases, recommended this more radical proceeding. The patient was put under chloroform with her head over the couch, so that the blood might run out of the nose instead of down the throat, then, with strong serrated forceps, I wrenched away the superior and middle turbinated bones as completely as possible; on the portions of bones removed I found innumerable little polypi, showing that as soon as the large ones were removed these would grow and fill up the nose again. This operation I performed six weeks ago, and I saw the patient last week, when she expressed her great gratitude for the comfortable state she was now in. She can breathe through her nose perfectly, which for twelve years she has been unable to do.

I believe that this is a method of treatment which is invaluable in severe cases of nasal polypus. I ought to add that Mr. Mitchell Banks first advocated this procedure. R. A. MILLIGAN.

Northampton.

CLINICAL MEMORANDA.

THE FARADIC BRUSH IN LOCOMOTOR ATAXY.

IN discussing the effects of suspension in locomotor ataxy it should be borne in mind that the disease may undergo arrest or remission when left to itself, and that the change may sometimes be attributed to remedial measures. I have myself observed this to follow in a notable proportion of cases on energetic faradisation for the relief of pains. The first instance I met with was very striking, and it may be thought worth recording, both for this reason and also because I was enabled by accident to follow the event to its termination.

J. R., a man aged 50, came to the electrical department of St. Mary's in the end of 1886. He was in an advanced stage of tabes, in the highest degree ataxic; gait so exaggerated that he could not walk a mile without great fatigue; the tendon reactions altogether gone; Argyll-Robertson pupil, marked colour blindness, and restriction of the field of vision; visceral and peripheral pains intense and almost unremitting. I applied a strong current to the trunk and lower limbs with the faradic brush several times a week. The pains gradually left; the sleep, which they disturbed, was restored, and general nutrition greatly improved. At the same time co-ordination and tactile perception slowly mended, while the visual symptoms remained. At the end of two months the patient went, by my advice, to a convalescent home, and came back in a fortnight to say that he considered himself well. He had walked nine miles without fatigue, and was entirely free from pains. He came back from time to time to assure me that this state of things continued, and then left altogether. At that time he could not stand long with his eyes closed, but walked with ease, and his upper limbs were quite restored. I met him two years afterwards, when he brought his wife to the hospital to be operated upon, and he was then slowly relapsing to his former state.

After this I treated several cases in a similar manner, entirely relieving pain in the majority, and securing at the same time in two instances a general amendment of the patient's condition. My experience has convinced me that there is in this a useful resource which should not be neglected, though it has no pretensions to be thought a radical cure. Neither would I concede such to the suspension treatment. The prospect of a cure for so formidable a disease as locomotor ataxy has naturally given rise to great hopes, and great hopes make room for no less disappointment. Neither seem quite justified here. The method is empirical, and it should be tested by patient observation. The *omne ignotum pro magnifico*, if true of the vulgar, is a reproach from which medicine should free itself. Dr. Churton is plainly of this view when he would dismiss the matter on the evidence of two cases which were not very conclusive. Little, on the other hand, can be gained by recording ever so many results as simply positive or negative. The disease has in it much that is obscure, and it may be safer to treat it rather as a collection of symptoms than as a clinical entity. It may then be found that the relief of certain of these—a great result in itself—will influence the progress of the others, and a step towards the truth will be made. To account for disputed facts by a method which has no rational basis is to encounter the formal fallacy of deducing *ignotum ex ignotiore*. What should be attended to are the minutiæ to which Dr. Althaus refers, and more interesting even than his promised cases will be his statement as to what may be seen by "watching the patient carefully during the proceeding and for some little time afterwards." JAMES CAGNEY.

Welbeck Street, W.

TREATMENT OF A COMMON COLD.

IF Mr. S. Wilson Hope will apply salicylic acid locally to the irritated lining membrane of the nose before any inflammatory action is established, that is, when sneezing manifests itself, he will find a single application quite sufficient to abort a common cold. The formula I have suggested is: ℞ Sodii salicylatis ℈iv, acid. boracis (pulv.) ʒi; cocainæ hydrochlor. gr. 22. M. Mix by agitation, not in a mortar. Or even the ordinary Dover's powder well blown into the nose by an insufflator will answer, preferably the J.R.P., which can be obtained from Messrs. Maw, Son, and Thompson, from whom also full instructions may be had for use of same. The few days' treatment he mentions may also be avoided.

Moorcroft, Parkstone. JOHN R. PHILPOTS.

INFLAMMATION AND VESICATION OF FINGER.

ON August 13th, Mrs. H., a middle-aged lady, who had been overfatiguing herself by nursing, asked me to see her on account of the swelling of her left ring-finger, and the inability to remove two rings which she had long worn, and which for some time had seemed tight. The swelling had begun with very sharp shooting pains along the outer side of the finger. After removal of rings and application of warmth, the swelling disappeared, but the following symptoms have occurred on three separate occasions after the patient had worn her gloves throughout a day: A sleepless night, owing to the intense irritation of the finger; then next day great heat, redness, and swelling confined almost entirely to the first two phalanges; and again, later, the appearance of vesicles, varying in size from a pin's head to a threepenny-piece, situated principally to the outer side of the finger, and containing a clear

watery serum. By lead lotion, warmth, and wearing the hand in a sling, the finger each time rapidly got well.

Whether the above symptoms were produced simply by a lowering of the vitality of the part akin to a partial frost-bite, or were of a herpetic nature, due to constant pressure on the nerve, it is difficult to say. I incline to the former opinion.

R. M. WILLIAMS, M.D.Lond.

St. Mark's Road, North Kensington.

OPHTHALMOLOGICAL MEMORANDA.

CATARACT OPERATION WITHOUT IRIDECTOMY.

ON July 12th, 1887, I read a paper on Cataract Operation without Iridectomy at a meeting of the Grant College Medical Society, which has been published in the *Transactions* of that society.

After reading the above paper I have further modified the steps of this operation as follows: On the day previous to the operation I dilate the pupil to its fullest extent with atropine. At the time of the operation I anæsthetise the eye with cocaine and, laying the patient on the table, wash the eye with the corrosive sublimate lotion. I separate the lids with the wire speculum, fix the globe at the lower part, and pierce the cornea with Graefe's knife at the outer margin, about one or two lines above the horizontal meridian, according to the size of the cornea, at its upper margin. I now carry the point of the knife downwards as far as the lower margin of the dilated pupil, and I pierce the capsule with it, and, lowering the handle of the knife towards me, I open the capsule vertically upwards to a little above the line of the corneal puncture; then, drawing out the knife a little, I again pierce the capsule horizontally on a level with the corneal puncture, and carry the point of the knife through, and raising it a little make the counterpuncture in the cornea exactly opposite the puncture, and complete the section of the cornea. I then press out the lens with the tortoiseshell spatula, instil atropine, and apply antiseptic compress and bandage. Formerly the patient was taken to his bed on a stretcher; latterly, however, I make him walk up to it. After the first forty-eight hours I allow him to sit up, if he feels uncomfortable in the sleeping position. The eye is opened and dressed once in twenty-four hours with the instillation of atropine each time. I do not use eserine, because I have found that the prolapse of the iris occurs more frequently under its use than under the use of atropine; and the reason seems to me to be this, that while the pupil is fully dilated with atropine, the striæ of the iris being fully contracted are not sufficiently lax to protrude through the corneal section. When, however, the pupil is contracted with eserine the striæ remain partially relaxed, and the fresh secretion of the aqueous humour can easily force the iris through the wound, the power of the sphincter of the iris being insufficient to prevent its protrusion.

By this method I have operated successfully on eighty-six cases in the Bombay Eye and Ear Infirmary, and on forty-four in private practice. In a very few cases there has appeared a small prolapse of the iris, or a piece of the capsule in the pupil. These inconveniences, however, did not interfere with good vision. I do not operate by this method unless the pupil dilates to the fullest extent under atropine; and it should not be attempted where posterior synechia is present, because, when the pupil is not well dilated, it is apt to embarrass the delivery of the lens. The shortest time in which I have been able to perform this operation was twenty-five seconds, but fifty are ample. No assistant is required to perform this operation, and only one instrument is introduced within the eye, namely the Graefe's knife.

Bombay. J. ACCACIO DA GAMA, K.C.J.C.

THERAPEUTIC MEMORANDA.

THE USE OF SALICYLIC ACID OR THE SALICYLATES IN GONORRHŒA AND GLEET.

HAVING read Professor Latham's (of Downing College, Cambridge) Croonian Lectures, 1886, and it having been suggested to me by Dr. J. P. Wills, I tried sodium salicylate in a case of obstinate gleet—which had resisted nitrate of silver (gr. xx ad ℥ j) as an injection, and as a urethral ointment thallin ointment and sandal-wood oil—with complete success. Encouraged by the good results then obtained I tried it in a case of gonorrhœa with left epididymitis and orchitis, the notes of which I append:

J. D., married, aged 30, came to me on October 10th with gonorrhœa and commencing left epididymitis, also glands enlarged and tender in left groin. October 12th. The left testicle was now slightly inflamed. October 19th. I strapped the testicle. October 24th. All hardening, except one small spot in globus major of left epididymis, had disappeared, and the gonorrhœa was cured.

The case was treated with an injection of potassium permanganate (gr. x, ad ℥ i), and a mixture containing sodium salicylate (gr. xv, ad ℥ i). There was no vomiting, very little tenderness, and the organ was never very much enlarged.

EDWARD H. RYAN-TENISON,
Bexhill-on-Sea. A.A.Oxon., M.R.C.S.Eng.

CARBOLIC ACID AND OIL OF PEPPERMINT IN GONORRHŒA, AND SALICYLIC ACID IN PUERPERAL PYÆMIA.

SOMEWHAT *à propos* to the allusion to carbolic acid internally by Dr. MACKAY in the JOURNAL of October 26th, I am desirous of stating that I have occasionally seen great benefit ensue when I prescribed carbolic acid and oil of peppermint internally in gonorrhœa, even in cases where "specifics" failed. Carbolic acid is quickly and entirely eliminated by the urinary organs, and oil of peppermint is, like it, a powerful antiseptic. In other cases, but less often, salicylic acid or the salicylates appear to have a marked action. In two cases of puerperal pyæmia, where abscesses formed extensively all over the body, I was entirely pleased with the effects of large doses of salicylic acid. I am aware that peppermint has been long used in mixtures for gonorrhœa, but evidently only as a means of disguising the taste of nauseous drugs.

JAMES MAC MUNN.

Crouch End, N.

OBSTETRIC MEMORANDA.

CURE OF AMENORRHŒA BY SHOCK.

I READ with interest the "Cure of Amenorrhœa by Shock" reported by Dr. Collins in the JOURNAL of October 26th, p. 921. The following case has recently come under my notice.

E. P., single; first menstruated at 11, and was regular, but had very profuse periods for several years. They stopped altogether, quite suddenly, for nine months. One evening she had a scare when out for a walk, fancying she saw the ghost of a man who hanged himself. During the next few days she had great pains all about her body, and this was followed by her periods commencing again, and she has been regular ever since. She cannot remember her age when her periods recommenced. She is now 25, and menstruation lasts five days, is not profuse, and of bad colour.—I am, etc., R. J. ROBERTS, B.A., M.B., B.C.Cantab.

Lowestoft.

GYNÆCOLOGICAL MEMORANDA.

ACUPUNCTURE IN CHRONIC PELVIC INFLAMMATIONS.

IN the discussion on Dr. Playfair's paper in the JOURNAL of October 19th, Dr. Horrocks alludes to a case where aspiration failed to remove pus, and yet in a short time the effused material disappeared. This happened to me in a case some years ago where the patient maintained a temperature of 101° for five weeks with slight pain, and the uterus was fixed by a hard inflammatory effusion which would not become absorbed. Aspiration was performed, and no pus drawn off, yet in two weeks the whole effused material was absorbed. I was so struck with the case that I invariably puncture these effusions after they have remained some time without showing signs of becoming absorbed, and always with good results. A case occurred at the Bristol General Hospital a short time ago precisely like Dr. Horrocks's, and was treated with the same result. I puncture with a hollow needle in case pus may be present, but in eight cases no fluid whatever was withdrawn, and the puncturing certainly induced a most rapid absorption. Although I believe in the use of electricity in gynæcology, yet I think that in these cases simple puncture is enough, although several cases like the ones I have mentioned have been treated by Apostoli, and mentioned by him as illustrating the good effects of the electric current in assisting absorption. There is one advantage in puncturing with the negative pole (by a fine

needle), and that is, you leave a sinus for draining. This is very well if there is a purulent collection to drain, but in the cases I have named there is nothing but the results of chronic inflammation, which simply remains quiet, and the little easy plan of passing a small hollow needle through the mass *per vaginam* will cause fresh action, and absorption will proceed more rapidly.

Clifton, Bristol. A. E. AUST-LAWRENCE, M.D.

REPORTS

ON

MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

THROAT AND EAR HOSPITAL, NEWCASTLE-ON-TYNE.

TUBERCULAR TUMOUR OF THE LARYNX: TRACHEOTOMY: RECOVERY.[1]

(By WM. ROBERTSON, M.D., Surgeon to the Hospital.)

C. A., aged 29, presented herself at the hospital about the end of July last, complaining of hoarsenes, cough, stridor, dysphagia, and severe suffocation attacks. She was married, and had carried one child to full term, which was killed at birth. There was no history of syphilis. The present illness had commenced twelve months earlier. She had been aphonic eight months and had suffered from dysphagia three months.

Examination of the chest elicited signs of a cavity in the right chest; the left apex was also slightly involved. With the mirror, the epiglottis was found free from disease. The arytenoids, partially immobile, together with the interarytenoid fold, were greatly hypertrophied, of a pale colour, and covered with aphthous ulcers. The false bands were enlarged and covered with whitish adherent secretion. The vocal cords, lying abnormally near each other through hypertrophy, presented each the appearance of a strip of granulating ulcer; the parts beyond could be seen with great difficulty, as the cords displayed little of their respiratory function. The mucosa of the larynx was generally thickened.

The treatment adopted at once was large doses of iodide of potassium; the larynx was brushed over with a solution of lactic acid. This latter had the effect of clearing up diseased surfaces which could be reached, with some amelioration of the symptoms. The stridor and suffocation attacks, however, did not cease. During a more than usually favourable opportunity of observing the interior of the larynx, there was discovered a considerable round, smooth swelling under the left vocal cord; this was noticed to act in further narrowing the already dangerously small lumen of the glottis, and accounted more precisely for the suffocation attacks.

On account of these, after two months' treatment, local medication had to be given up, and, as the symptoms persisted, tracheotomy was recommended and consented to. On September 19th, under the influence of cocaine, the trachea was opened and a cannula introduced. Little hæmorrhage was encountered during the operation—perhaps two ligatures were used—and the trachea was opened as low down as possible. The upper part of the isthmus was divided centrally and left unligatured. The wound in the trachea was free and admitted the cannula without trouble. The patient bore the operation well, suffering neither from shock nor panic. Cough could be readily controlled by letting fall into the trachea one or two drops at a time of a 20 per cent. solution of cocaine. These controlled the paroxysms for hours without repetition.

Since the operation there has been no rise of temperature. Nutrition has improved distinctly, dysphagia has disappeared, cough is less troublesome, expectoration is easily effected and is less in amount, although of the same character.

So far as the case has gone, the result would seem to show that tracheotomy has been beneficial, not only locally, but generally. Examination of the larynx now shows collapse of the swelling of the arytenoid and interarytenoid regions, with disappearance of previous excoriations over these parts. The vocal cords still present the same raw, ulcerating surface as before; the condition of the rest of the parts now prevents a good view of the subchordal region; generally the larynx appears cleaner, and is free from the aphthous-like secretion. The patient finds that the expectoration comes away with much more ease now than formerly, and that it is gradually decreasing in amount. No difficulty whatever is now experienced in swallowing, and she takes her food heartily and is increasing in weight. Sleep is also much improved, although yet liable to interruptions from cough. Examination of the chest shows improvement in the lung signs. The sputa continue to show the characteristic tubercular bacilli, which examination recently shows, however, to be decreasing.

REMARKS.—As to the course followed out in this case, I fail to see what was to be hoped for from any other measure. Certainly mechanical dilatation was to be feared where the use of lactic acid induced almost dangerous suffocation. Besides, from such treatment the sudden occurrence of acute œdema glottidis is not unknown. The use of cocaine robs operation in these cases of many of the drawbacks observed under chloroform, where notoriously it is so badly borne, not only at the time but afterwards, by the lungs. From such favourable considerations, the slight shock from operation, rest to larynx, improved nutrition, etc., the opinion held by many that tracheotomy ought to be more frequently employed in tubercular laryngitis demands attention. Where rest and nutrition, on account of laryngeal conditions, are dangerously impaired, no other consideration can weigh in the balance against this step. Tracheotomy ought no longer to be looked upon as merely a palliative, but as a distinctly remedial measure, where every hope is not lost on account of the pulmonary affection.

The principal feature of interest pathologically is, no doubt, the subchordal tumour noticed under the left cord, which must be looked upon, I suppose, as a tubercular infiltration assuming the form of a tumour. Such, apart from mere excrescences in the neighbourhood of ulcers, are referred to by Gottstein, Chiari, Hennig, and others. Gottstein refers to them as distinct tumours, round and smooth, of the size of a pea, and containing single bacilli.

I find the rubber-tube for permanent wear gives the patient the most distinct satisfaction; but instrument makers ought to provide these with a shield to prevent the clothing falling over the orifice. The patient is instructed to wear a loose pad, of permeable structure, impregnated with creasote, over the cannula.

[1] Read before the North of England Branch.

MONKSTOWN HOSPITAL, CO. DUBLIN.

CASE OF ACUTE CROUPOUS PNEUMONIA, FOLLOWED BY ACUTE BRONCHITIS, LEADING TO EMPHYSEMA OF LOWER LOBE OF RIGHT LUNG.

(By ARMSTRONG H. T. TODD, M.B.Dub., House-Surgeon.)

H. R., aged 28, was admitted into the hospital from H.M.S. *Belleisle* on September 7th, 1889, suffering from pneumonia of the lower lobe of the right lung, accompanied by the following history, as given by the medical officer: On Tuesday morning, September 5th, he was seized with a severe rigor, headache, and vomiting; his breathing became very short, and he suffered severely from pain in the right side about 1 inch below and external to the nipple, which was aggravated by his short frequent cough. He commenced spitting up rusty sputa in the evening of the same day that he caught the cold he attributed his attack to. His urine was scanty, high coloured, specific gravity 1015; acid, chlorides not completely absent, and containing no albumen. On examination of his right side the whole of the lower lobe of the right lung was solid, with some slight effusion into pleura, very slight, if any, displacement of apex beat of heart. Pulse full and bounding, 113 to the minute; respiration 37, short and shallow; temperature 103°; skin hot and dry. Urine much as reported by the medical officer. Evening temperature 101.8; skin less dry than in the morning; pulse 93, rather inclined to be collapsing; ordered brandy ℥ss. every four hours during the night.

September 8th. Did not sleep at all last night, coughing up a good deal of viscid mucus, slightly tinged; temperature 99°. He sweated a good deal during the night, and this morning complains of the pain in his side. On examination of his right lung there was a pleural friction sound to be heard; also signs of resolution going on in the neighbouring lung tissue. I applied a blister to his side, which removed the pain in a day or two, but the side remained very sore for a fortnight. Evening temperature 99.2; pulse 69, slow but with improved tension.

September 9th. Temperature normal; still spitting up viscid tenacious mucus, but in increased quantity; no blood in it, and slightly frothy on the surface. Ordered him ℞. Pot. iodidi grs. xxiv; tr. digitalis ℥ss.; tr. cinchonæ co. ℥iii; sp. chlorof. ℥ii; aq. ad ℥viii. Cap. ℥ss. quartâ quâque horâ; which mixture

he continued for four days, when I diminished the dose to ℥ss. ter die, and this he continued to take for fourteen days, when he was allowed out, in order to fit him to return to his duties as steward on board H.M.S. *Belleisle*. His lungs by this time were perfectly free from any exudation, so far as I could gather from auscultation, but his pleura still remained thickened.

September 29th. He complains of a cold in his nose, watering from the eyes, and sneezing, which he said came on for the first time last night between 12 and 2 o'clock. Temperature normal, pulse 74. I immediately stopped his mixture, thinking perhaps he was idiosyncratic to pot. iodidi, and gave him pulv. ipecac. co., gr. xv to be taken at night. He slept well, but next morning the cold in his head had increased, and he gradually developed acute bronchitis, his temperature rising to 100° at night 99° in the morning for a day or two. He then began to cough incessantly, and filled a half-pint spitting mug twice in the twenty-four hours. Under a mixture of tr. benz. co. ℥iij; acid. hydrobrom. ℥vij; glycerini ℥ij; aq. ad ℥vj; cap. ℥ss quartâ quâque horâ, his cough diminished in frequency, and the *râles* became larger and more consonant, and expiration was enormously prolonged, occupying the whole of the period of rest over the lower lobe of right lung, but to a less extent elsewhere over the lung's area. His cough during the daytime finally ceased, but between 12 and 4 o'clock every night he had "a severe coughing fit," during which time he used to fill his cup three times. The emphysema was evident on auscultation, but nowhere could I find a cavity or bronchiectasis. Under terebene in 4-drop doses every six hours his lungs became clearer and his cough diminished in its duration and amount of expectoration, and finally disappeared on October 12th, up to which date the cough periodically came on at night. The emphysema did not disappear, although the expiratory sound was not quite so prolonged as when it first developed. During the first week or ten days of the bronchitis his right heart was evidently dilated, and the pulmonary second sound was very much accentuated, but later on he became stronger, and the right heart evidently recovered itself, as the reduplication of the first sound of the heart as heard during the acme of the bronchitic attack disappeared and the accentuation of the pulmonary second sound grew less marked. He was finally discharged on October 18th in very fair health.

I have been led to record this case, having come across one similar recorded by Hertz of a cornet player to a regiment, who, while suffering from double pneumonia, continued to play his instrument after the fever subsided, and thereby rendered his lungs so emphysematous that he was unable some months after to make a sufficient expiratory effort to play his instrument. Hertz, however, to the best of my recollection, does not record whether the emphysema was purely isolated, as in this case, to the diseased tracts, which was so marked as to be noticed immediately I compared the two sides and the lower with the upper lobe of the lung affected.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, NOVEMBER 12TH, 1889.

Sir E. H. SIEVEKING, M.D., President, in the chair.

A Case of Ruptured Tubal Pregnancy, with Remarks on the Cause of Early Rupture.—Mr. J. BLAND SUTTON, in this paper, gave an account of a case of ruptured tubal pregnancy in a woman who, though married for seventeen years, had never before been pregnant. The rupture took place into the peritoneal cavity, and was accompanied by profuse hæmorrhage. An operation undertaken seven weeks after rupture was completely successful. An apoplectic ovum and fœtus were found. The author attributed early rupture to the formation of an apoplectic ovum suddenly distending the tube, and urged that no intra-peritoneal hæmatocele should be attributed to ruptured tubal pregnancy unless membranes, a fœtus, or both were forthcoming, however suggestive the clinical evidence might be. It would also be valuable to obtain an expression of opinion as to the significance of the presence or absence of breast signs in tubal pregnancy. The author of the paper also communicated details of another case. A woman, aged 25, was admitted into the Middlesex Hospital under Dr. Duncan's care with pelvic pain and painful menorrhagia. Vaginal examination revealed a tumour on the left side of the uterus as large as a Tangerine orange. In September, 1886, a few weeks after admission, abdominal section was performed by Mr. Bland Sutton, and a hæmatocele, encysted in a portion of the great omentum, was removed with tube and ovary. The hæmatocele was supposed to be due to rupture of an ovarian follicle, of which many large ones existed in each ovary. A more critical examination of the specimen showed that it was a ruptured tubal pregnancy. The rupture seemed about an inch from the abdominal ostium of the tube, and an apoplectic ovum lay singly nested in the omental fold surrounded by blood clot. The ovum equalled a chestnut in size and would correspond to about the fourth or fifth week. How long the hæmatocele had existed it would be very difficult to state, as it was impossible from the history to fix the date of the rupture. The patient made a rapid and excellent recovery.—Dr. PRIESTLEY allowed that some cases of ruptured tubal pregnancy might be due to an apoplectic condition of the ovum. This was not always the case, for undoubtedly the tube at times gave way because it could not bear the strain of the increasing size of the tumour. There was great difficulty in diagnosing between rupture of a tubal pregnancy into the abdominal cavity and a simple hæmatocele. If a simple hæmatocele was left alone it would probably get well, but if interfered with it would often end unfavourably from suppuration taking place. If the evidence of pregnancy was clear it was probably safer to operate, notwithstanding the danger. He commented on the difficulty of diagnosis, and advocated that if there was any doubt, the patient should be left alone.—Dr. MATTHEWS DUNCAN said that there was no clear rule to guide surgeons in these cases. The success of laparotomy had led to an extension of the operation. The enthusiasts stated that there was no such thing as a hæmatocele, except with a ruptured tubal pregnancy. But a hæmatocele might occur in a virgin. This relation of hæmatocele to ruptured tubal gestation was an error, and was fostered by another error, namely, that all ruptured tubal pregnancies, if left alone, were fatal. The conclusion drawn from these two errors was that it was necessary to operate in all cases. Cases of ruptured tubal gestation probably got well oftener when left alone than when operated on. He agreed with Mr. Sutton that the presence of a hæmatocele was no evidence of a ruptured tubal pregnancy. An apoplectic ovum was not a common cause of rupture, but it possibly was the cause in Mr. Sutton's cases.—Dr. HERMAN asked for a definition of the term apoplectic ovum. If it was a term applied to slight hæmorrhage into the chorion, then it was a probable cause of most ruptured extra-uterine gestations. The hæmorrhage was gradual, a small one taking place first, and the blood clotting and becoming organised; then there might be another, and finally a larger hæmorrhage, which might cause the rupture. In these cases clots of different dates were found. The paroxysmal pains which were met with were due to repeated small hæmorrhages, in his opinion. He remarked how very few cases there were on record in which an operation had been performed previous to the rupture of the gestation sac.—Dr. ROBERT LEE questioned whether it was right to speak of apoplexy of the chorion. The hæmorrhage took place outside the chorionic villi, and so the term apoplectic ovum was not a physiological one. The hæmorrhage came not from the fœtal villi, but external, and was not a hæmorrhage into the structure of the chorionic villi. It was impossible at present on clinical grounds to say whether hæmorrhage was from a ruptured tubal gestation sac.—Dr. HEYWOOD SMITH asked for some guide as to treatment. He reminded the author that, granted the diagnosis of rupture was right, here was a possibility of the fœtus living and going on to full term. When was the best time to operate?—Dr. CULLINGWORTH claimed that there was abundant evidence that intra-peritoneal hæmatocele might occur independently of ruptured tubal pregnancy. Two recent cases had come under his care; in each a dilated tube was felt, and laparotomy performed. In the one case the blood had come from a hæmato-salpinx, the oozing having taken place from the mucous membrane of the tube, and in the second from a burst varicose vein in the tube. As a rule, the proper treatment of a hæmatocele was to wait. If a tubal gestation was diagnosed, laparotomy ought to be performed, although there was no sign of rupture, for it was certain that the majority of cases of tubal gestation ruptured and died; the minority ruptured and got well.—Dr. WALTER (Manchester) mentioned a case which he thought corroborated the view of Mr. Sutton, that an apoplectic ovum was a cause of ruptured tubal pregnancy. A woman aged 32, married eleven years, who had had two children and five miscarriages, was seized with

sudden pelvic pain and faintness while at work. She considered herself to be two months pregnant, and had milk in the breasts and morning sickness. She was admitted into St. Mary's Hospital, Manchester, and a large elastic tumour was found reaching to the umbilicus. The os was patent, and the cervix above the symphysis. The anterior wall of the uterus was pushed against the abdominal parietes. The uterus was empty. The tumour was opened through the abdominal parietes, and over a pint and a half of fœtid chocolate-coloured fluid given exit to. The finger introduced into the sac found a smooth-walled cyst, the anterior boundary of which was the posterior surface of the uterus. *Per vaginam*, the floor of the apparent cyst was the roof of the vagina, and closely adherent to this was a clot as big as a closed fist; this was extracted. The cyst was stitched to the abdominal parietes and drained. The woman recovered. The clot was examined by Mr. Bland Sutton, who reported: "The concave aspect of the clot was lined with a smooth membrane; this was carefully peeled away and gently washed with water, and found to be covered with villous tufts. It was clearly fœtal membrane. The clot was then searched, and a small fleshy mass detected, shaped like a fœtus about the sixth week. On tearing this I exposed the remains of the intestine and a piece of viscus resembling liver. This apparent clot was in reality an apoplectic ovum."—Mr. SUTTON, in reply, said he was waiting for the obstetric physicians to define the term "apoplectic ovum." The hæmorrhage occurred into the chorionic villi in the very early weeks of pregnancy. He insisted that a case of hæmatocele was to be considered due to ruptured tubal gestation only if the embryo or membranes were found. Failing this, the case must be put amongst the unclassed cases.

CLINICAL SOCIETY OF LONDON.

FRIDAY, NOVEMBER 8TH, 1889.

CHRISTOPHER HEATH, F.R.C.S., President, in the Chair.

Excision of the Head and Neck of the Humerus for Myeloid Sarcoma: No return of the Disease.—Mr. MACNAMARA showed this patient, who was a strong healthy young fellow, aged 22, and who had applied to him in September, 1887, with a tumour of the shoulder, which had been growing for about nine months, and caused the patient such intense pain that he wished to have his arm amputated. There was no family history of cancer or of any hereditary disease, and the patient had received no injury to the part, nor could he in any way account for the growth. On examination a tumour was found to occupy the position of the head of the humerus; it was about as large as an orange and of bony hardness, except at one spot, where fluctuation could be felt. A trocar and cannula was passed into this part of the tumour, but nothing except bloody fluid escaped through the instrument. Mr. Macnamara determined to excise the head of the bone, believing he had a myeloid sarcoma to deal with, and an incision having been made down to the morbid growth, the tendon of the biceps being preserved, the humerus was sawn through about one inch below the lesser trochanter. The wound healed without suppuration, and the patient has now a very useful arm. There has been no recurrence of the disease, the patient being, now upwards of a year after the operation, in admirable health. On section the tumour was found to be a myeloid sarcoma confined to the head and neck of the humerus.

Unilateral Myositis and Neuritis.—Dr. HANDFORD showed a man, aged 48, the subject of unilateral myositis and neuritis. The disease had begun four months and a half ago, with progressive weakness in the right arm, which was swollen and œdematous. The biceps, deltoid, and pectoralis major had a "woodeny" feel, and there was then considerable atrophy. He asked whether the muscular affection was consequent on the neuritis, or whether the myositis was primary.

Actinomycosis.—Dr. KELLER showed a patient suffering from actinomycosis. Three months before the patient had a slight swelling at the side of the lower jaw, which was attributed to a dental abscess, and a tooth was consequently extracted, but the swelling did not disappear. Then incisions were made both from the outside and from the mouth, giving issue to characteristic pus, viscid, stained with blood, and containing grains of actinomycosis fungus. The patient never had anything to do with cattle. There was no history of syphilis. He diagnosed this case from the presence of a fistula, which opened and then closed without any local necrosis, etc., to account for it. In another case he had noted induration round the incision. He proposed to lay the abscess cavity now open, scrape it, and stuff it with iodoform gauze.

Myxœdema.—Dr. ABERCROMBIE brought forward a patient, aged 15, with well-marked myxœdema. The disease had commenced when he was 8 or 9 years of age, and was noticed to follow an illness, said to be Bright's disease. He was formerly a bright lad, but had become dull and apathetic. The skin was coarse, and the features had become changed. The growth was stunted, and the typical deformities of myxœdema were present.

Rheumatoid Arthritis in a Child.—Mr. G. H. MAKINS showed a child, aged 3½, suffering from rheumatoid arthritis involving the fingers, wrists, elbows, and knees. Lately the hips had become affected and stiff, and the patient had pronounced hallux valgus. —The PRESIDENT remarked that this was the youngest patient whom he had seen suffering from that disease.—Dr. A. E. GARROD had seen three cases; in one instance the child was a member of a family in good circumstances.—Mr. MAKINS said that the lower jaw moved well, but he believed every joint in the spine was affected. The heart was not usually affected in these cases.—Dr. T. BARLOW said there were drawings of three cases of the kind in Great Ormond Street Hospital, in all of which the joints were more swollen than in this case.—Mr. MAKINS said there was creaking in the synovial membranes of the joints, but no rubbing between the ends of the bones.

Pott's Fracture with Fracture and Displacement of the Astragalus, followed by Symptoms of Tetanus, which Subsided after Removal of the Displaced Fragment.—Mr. WALTER RIVINGTON read notes of this case. T. S., aged 27, labourer, fell fourteen feet from a scaffolding, and sustained the above-mentioned injuries to the left leg and foot on October 26th, 1887. He was admitted into the London Hospital. There was a good deal of swelling, and the limb was placed on a splint. Inflammation of the soft parts was followed by suppuration, and some sloughing over the displaced astragalus. Symptoms of tetanus supervened on November 24th, when Mr. Rivington explored the part and removed the displaced astragalus (which was broken across the body just below the lateral facets) by means of the forceps. The symptoms subsided in a day or two, and the patient recovered with a useful foot. Cases of dislocated astragalus in which tetanus supervened and subsided after amputation, referred to by Bryant and Holmes, were cited, and the possible causes of tetanus, namely, nerve irritation, nerve inflammation, nerve tension, muscle tension, and blood poisoning, briefly discussed. The author considered that if practised early excision was preferable to amputation, but that where the tetanic symptoms were fully established probably amputation might be regarded by some as the safer procedure.—The PRESIDENT said it was a question as to the advisability of immediate resection of the astragalus under antiseptic precautions; and Mr. Rivington's suggestion that the tetanic symptoms were, in the this case, due to local nerve irritation. Both these points were worthy of discussion.—Mr. RIVINGTON had removed the astragalus in one case primarily, and in two or three other cases he had done the operation secondarily, in all cases leaving a useful foot. In one of the latter cases the skin was about to slough. In any future case he would advise immediate excision.—The PRESIDENT remarked that there was no doubt as to the correctness of the treatment that whenever there was a source of irritation in tetanus it should be removed. If Mr. Key, in the case quoted, and Mr. Holmes, in another case of commencing tetanus, had had the same good result upon excising the astragalus he thought they and Mr. Rivington were all to be greatly congratulated.

Simple Recent Dislocation backwards at the Elbow of both Bones, Irreducible from the lower end of the Humerus being held like a Button by a Rent in the Anterior Capsule Ligament.—Mr. W. G. SPENCER described this case. A boy, aged 10, was knocked down by a carriage, and Mr. J. G. Oakman, of Battersea, found a dislocation of both bones backwards at the elbow. He tried reduction without and with chloroform. After waiting a week he tried again under chloroform, using considerable force. Mr. Oakman then brought the boy to Westminster Hospital, and Mr. Spencer tried to reduce the dislocation under an anæsthetic, both by Astley Cooper's and Lister's methods. After two weeks' rest in bed, the arm remained semi-extended without active or passive movement. Three weeks after the injury, a posterior vertical incision was made into the joint, and the olecranon with the whole of the great sigmoid notch of the ulna was removed. A tight band was then found stretching across the back of the humerus, at the level of the olecranon fossa. This band was found to become tighter when any attempt at flexion was made, or when the hand and forearm

were pulled upon in the long axis of the limb. The forearm was pushed upwards sufficiently to slacken the band, which was then pushed over the end of the humerus. The lower end of the humerus became quite free, and the rent in the anterior ligament could be felt. After the wound had healed, and the boy had become an out-patient, passive movement was not well kept up. Still he had recovered with a good arm, and was shown at the meeting; he could flex it to a right angle, and extend it to about 150°. Complete extension was apparently obstructed by the lower end of the humerus, which was not taken away. The manner in which the backward dislocations took place was then referred to, also their production on the dead subject. Only one case could be found in which a simple recent dislocation had been examined. In this case, under Professor Michaux, of Louvain, the arm was amputated for gangrene a week after the injury, during which time several forcible attempts at reduction had been made. The lower end of the humerus had torn the anterior ligament and the brachialis anticus. The tendon of the biceps and part of the brachialis anticus were behind the external condyle. (Both the median nerve and the brachial artery had been ruptured. The radial pulse had been felt after the accident and before the manipulations, after which it disappeared.) Therefore, in this case, both Cooper's and Lister's method of reduction tightened the rent in which the lower end of the humerus was grasped, and any great force would have certainly torn off the lower epiphysis of the humerus. No subcutaneous tenotomy could have got at the band. Active treatment was indicated, since it was impossible to bring the arm to a right angle, as had been done in other cases of irreducible dislocation.—The PRESIDENT said that the paper was valuable, as injuries near the elbow-joint were apt to give the surgeon much trouble. Light might be cast upon obscure cases by exploration of the injured joint, which might be now safely done, under antiseptic precautions. For disintegration, for example, of the interior of the knee-joint, the joint might be opened, and the cartilage stitched into its proper place. He asked what was the experience of surgeons in regard to excision of the elbow-joint in young subjects in whom the epiphyses were not yet united to the shafts of the bones.—Mr. RIVINGTON had had a few cases of excision of the elbow-joint, some in children; but had lost traces of them, so that he could not give their subsequent history.—Mr. SPENCER, in reply, said he had seen two cases of excision of the elbow in children. In one case the child was aged 10, and had afterwards a useless joint. The other was aged about 15, and in that case, when the elbow was fixed on a right-angled splint, the child could use the fingers for the finest movements, as in sewing, etc.

Paroxysmal Methæmoglobinuria.—Mr. BARTON gave details of this case, which had been under the care of Dr. Ringer, who gave permission to publish the particulars. C. M., aged 39, came to University College Hospital complaining of passing bloody urine at intervals, with shivering. He had had ague in India, and primary and secondary syphilis. He had also been in a lunatic asylum. His first attack came on in India. He caught cold while out walking, and suddenly began to shiver, his face and hands becoming blue and cold. He experienced numbness in the feet and legs, gradually extending upwards to the trunk, and followed by shooting pains in the region of the kidneys. This was followed by the passage without pain of some dark urine. He then went home to bed, and, after sweating and a few hours' sleep, woke feeling quite well. All his organs were healthy, except for slightly enlarged liver. There was nothing in the family history bearing on his disease. The attacks usually lasted about six hours, and he felt quite well in the intervals of the attacks. In those which occurred whilst under observation it was noticed that on one occasion albumen was present before the colouring matter could be detected; that the greater the depth of colour the less the quantity of urine passed, the quantity gradually becoming normal as the colour disappeared; and that the urine after the attacks was very light in colour and of low specific gravity. In the urine passed during an attack no corpuscles, oxalates, or crystals were found. A specimen was sent to Dr. MacMunn for spectroscopic examination, who claimed that all its colour was due to methæmoglobin, and stated that all the cases of paroxysmal hæmoglobinuria whose urine he had examined gave the same result. The blood of a finger round which a ligature had been tied and the finger immersed in ice and water for ten minutes showed little tendency on the part of the corpuscles to form rouleaux. The corpuscles were irregular in shape, and had a tendency to adhere to one another at their edges. The white corpuscles were often smaller than the red, and the effect of a meal on the relative number of white to red corpuscles showed no deviation from the normal. With other methods of treatment chlorate of potash was given in gradually increasing doses, the time of administration being strictly from 9.30 A.M. to 12 midday, until in that time he took ℥ss. On another occasion two 4-grain doses of nitrite of sodium were given, with half-an-hour's interval, but in neither case was the urine or blood or the patient obviously affected. Nitro-glycerine tablets of $\frac{1}{100}$th of a grain were tried, and on one occasion the patient took twenty-eight, or more than a quarter of a grain, in two hours and a half, without obvious effect on urine or blood. Treatment was unsatisfactory, but arsenic seemed to produce longer intervals between the attacks, though this may have been due to the approach of summer, when his attacks became always less frequent.—The PRESIDENT observed that cases such as this had lately received much attention, and might be profitably discussed.—Dr. BARLOW said that no more complete account of a case had ever been recorded than that just read. It was to be observed that a large amount of albumen was found before the colouring matter appeared in the urine. The disease was obscure, and the only way to elucidate it would be the careful notice of the clinical coexistences. It stood in some kind of relationship to syphilis, with which disease a large number of the adult cases had been affected, though no one could assert that syphilis was the cause of it. Just as many of the cases had also had ague. He had seen a case in the Children's Hospital in a child the subject of congenital syphilis. The disease often also was associated with Raynaud's disease. He asked whether the patient after one of the attacks had any appearance of yellow staining of the skin, blood-jaundice.—Dr. A. E. GARROD said that in attacks of nephritis serum albumen was present in the urine before there was hæmoglobinuria; and he asked if Mr. Barton could state whether there was staining or non-staining of the blood serum.—Dr. COUPLAND stated that the late Dr. Mahomed, in making researches into scarlatinal nephritis, showed that the blood-colouring matter escaped in the urine before albumen was found, at the onset of that disease. Possibly a microbic poison was at work, acting on the walls of the vessels or the blood itself.—A MEMBER asked what was the effect of the chlorate of potash that was given. Cases of the kind had been surmised to be due to chlorate of potash poisoning. Had quinine been given to this patient?—Sir DYCE DUCKWORTH asked what had become of so many of these cases already reported. What other diseases had occurred in their course; in the event of death having occurred, how did they die; and what was found *post mortem?* This would be excellent work for a Subcommittee of the Society.—Mr. BARTON, in reply, said that in a case reported by Dr. Bristowe in the *Lancet* there was distinct jaundice. In his own case there was a lemon-yellow colour of the conjunctivæ, but no jaundice. Hæmoglobin had been sometimes found in the serum of a blister. Albumen, in Dr. Bristowe's case, was found before the colouring matter in the urine. His (Mr. Barton's) patient had febrile symptoms between the attacks; but the temperature during the shivering stage was 97.2° F. Chlorate of potassium was given in gradually increasing doses, until it became about half an ounce given between 9.30 A.M. and 12.30 P.M. It seemed to have no effect on the man, his blood, or his urine.

MEDICAL SOCIETY OF LONDON.

MONDAY, NOVEMBER 11TH, 1889.

C. THEODORE WILLIAMS, M.D., F.R.C.P., President, in the Chair.

Case of Cerebral Abscess.—Mr. MARMADUKE SHEILD read a short paper on a case of cerebral abscess due to ear disease diagnosed and evacuated by the trephine. The patient was a Scotch gentleman, a patient of Dr. Cruikshank, of Nairn, and his principal symptoms were long-standing otorrhœa, pain in the head, and occasional vomiting. He improved under simple treatment, and the presence of abscess, though suspected, was negatived. Suddenly rigors and high fever, with "Cheyne-Stokes" respiration, and sluggish cerebration, supervened. Trephining over the temporo-sphenoidal lobe was performed, and an abscess was found containing about a drachm of offensive pus, and lying deep in the temporo-sphenoidal lobe. The operation entirely failed to relieve the symptoms, and he died in forty-eight hours after the operation. No optic neuritis was present, but dilatation of the pupil on the same side (right) were observed just before operating. The leading points of the necropsy were caries of the temporal bone, and the presence of an abscess cavity the size of a walnut in the

temporo-sphenoidal lobe. The drainage tube lay well in the centre of this. The abscess was of old date, but had ruptured into the ventricles, and recent basal meningitis extended from the pons Varolii to the Sylvian fissure. It seemed that the operation had been performed just too late. Attention was drawn to the advisability of exploration by fine trocar and cannula through a small trephine opening, in cases where abscess was reasonably suspected to exist. And the clinical point was emphasised, that these abscesses might exist without any symptoms to denote their presence, until fatal rupture occurred.—Dr. H. SAINSBURY mentioned the case of a boy aged 7 who was admitted into the Royal Free Hospital with discharge from the right ear. He had been under treatment elsewhere for pain on the right side of the head, feverishness, vomiting, and diarrhœa. For three weeks prior to admission he had been gradually failing, and the symptoms had recurred with increased intensity. The papilla was swollen, and there was subsequently well-marked neuritis. The boy gradually became drowsy and lethargic, but there were no symptoms enabling them to do much in the way of localising the abscess, the presence of which was suspected. He consulted with his colleague, Mr. Battle, and they decided to explore. No disease, however, was found of either the bone or membranes. On puncturing the temporo-sphenoidal lobe, an excessive quantity of clear yellow fluid came away. Failing to find any sign of disease, and in the absence of any localising symptoms, he came to the conclusion that it was probably a case of basic meningitis. The wound was therefore closed. Later on, as the condition of the lad became worse and worse, and he acceded to Mr. Battle's suggestion to explore the cerebellum. On making a first puncture in that direction the patient became so faint that he declined to sanction a second puncture, and again the wound was closed without anything having been found. He died soon after, and *post mortem* a large abscess was found in the anterior part of the cerebellum, which they had narrowly escaped opening at the last operation.—Mr. BATTLE confirmed the account of the preceding case. He also recalled one recorded by Dr. Macewen in which there were signs of an old abscess cavity inside of more recent date, which had destroyed the entire temporo-sphenoidal lobe.—Dr. F. DE HAVILLAND HALL insisted upon the desirability of refusing all persons with a purulent discharge from the ear when examining them for life assurance. This he always did himself, for he looked upon such persons as in the position of Damocles—one of constant danger.—The PRESIDENT endorsed what Dr. Hall had said. He observed that one never knew the turn the disease might take, especially as people with such discharges were often very careless.—Mr. SHEILD, in reply, observed that the position of abscesses in the cerebellum was such that they could usually be reached by puncture from a point above and behind the ear. He observed that when a boy showed signs of brain-pressure the case was probably a severe one, young brains not reacting to pressure as in older persons. He mentioned that discharge was not always present in ear disease, and while he agreed with what had fallen from Dr. Hall and the President as to refusing such cases for life assurance, he urged that a systematic examination of the ear was desirable in every case, special attention being paid to the presence of any fœtid odour. Among the causes which would light up such mischief he mentioned (1) the entrance of salt water into the ear, as in bathing; (2) traumatisms, such as the practice of "boxing" the ear; and lastly (3) a trifling operation in the neighbourhood of the ear, such as the removal of a polypus, would sometimes light up acute inflammatory symptoms.

On Pneumothorax.—Dr. EWART read a paper on pneumothorax and the value of its treatment by aspiration, with observations on the composition and pressure of the gaseous contents of the pleura. The clinical cases to which reference was made included two cases of pneumothorax in phthisis. In another patient, recovering from alcoholic peripheral neuritis with cerebral manifestations, physical signs, suspicious of empyema, developed in the left chest, and an exploratory puncture was made. The puncture was followed within a few minutes by urgent dyspnœa and cyanosis, together with the usual features of pneumothorax. During the ensuing days, in spite of persisting orthopnœa, the heart slowly moved back towards the left side, and relief by puncture was deemed unnecessary; but the patient's strength became exhausted, and death occurred suddenly on the seventh day. After death the left pleura was found to contain air and a small quantity of blood-stained fluid, and the small wound caused by the trocar was distinctly seen in the parietal pleura; but the left lung, which was collapsed, bore no visible trace of any lesion, and when strongly inflated under water it was found to be absolutely air-tight. In structure it was perfectly healthy, with the exception of a small encapsuled caseous mass in the depth of the apex. The brain was shrunken and wet, and the heart flabby and rather soft. The interest of the second case, one of tubercular phthisis, lay in the very gradual onset of the symptoms of pneumothorax, in its degree, and in the great temporary relief which followed aspiration. Under the influence of the latter, the heart-beat returned towards the left as far as the epigastrium, and the patient was able to sleep the following night, but the next morning the displacement of the heart was the same as at first, and the patient died quietly thirty-two hours after the operation. Indurative tubercular phthisis with small excavations existed in both lungs. At the left apex an emphysematous bulla had become laterally adherent to the pleura, and, being stretched by the retraction of the lung, its lower surface had suffered a minute perforation through which air could reach the pleura very slowly. The left pleura was filled with air, and contained a very small quantity of clear fluid. The third case, to which Dr. Dickinson had kindly allowed allusion to be made, was one of rapid phthisis in a young man. Perforation took place into the right pleura with acute symptoms, and the patient died on the eighth day. The case was remarkable chiefly for the size of the pleural accumulation of air, and for the great displacement of the liver. In the second case manometric observations were made during life and after death. Before parancentesis the pressure within the left pleura was equal to the atmospheric, and there was no respiratory oscillation; but on cough, pressure rose to about 12 inches, and gradually fell to a level of $\frac{1}{4}$ inch above the former level, where it remained. After death, pressures in the left pleura of the same subject were registered during a series of dissections designed to test the influence exerted on pressure by various structures. In these experiments Mr. Withington and Mr. McCarthy gave valuable help. Air was also collected from the chest and analysed; it consisted of O 3.5 per cent., CO_2 17.4 per cent., N 79.1 per cent. These amounts were calculated by Dr. Rideal, and were substantially correct, in spite of slight defects in the gasometric process employed by the author. Much attention was devoted to the consideration of intrapleural pressure in its relation to the movements of inspiration and of expiration, and a special study made of the influence exerted by cough. In connection with the interchange of CO_2 and of O within the chest, and with the power of the pleura to absorb, or even to empty itself of air, an explanation was suggested consonant with accepted views as to the power of absorbing fluids possessed by the pleura. In some cases the process of absorption was very slow, and the question of operative treatment arose. With special reference to the advisability of paracentesis, cases might be grouped in three classes: (1) where the dyspnœa was urgent, the chance of affording decided, even though only temporary, relief to the dyspnœa, and of allaying the strain on the heart, was a sufficient warrant for the operation; (2) in cases where prognosis was doubtful, paracentesis might prove a valuable means of ascertaining (*a*) whether the perforation had healed, (*b*) whether it was of large or of small size; (3) cases where a previous attempt had shown that the perforation was either small or valvular, the operation should be repeated after the lung had enjoyed a sufficient interval of physiological rest. Had aspiration been performed in the case first described, life would probably have been saved. A pneumothorax derived from phthisis as a cause was hardly likely to be made worse by the introduction of an aseptic trocar and cannula, and in a healthy chest the danger of any inflammation following such a procedure might be said not to exist.—The PRESIDENT observed that the paper was one of very great scientific value, though perhaps not directly applicable to practice. As a scientific profession, however, it was their duty to consider the causes that conduced to these pathological phenomena. He regretted somewhat that the cases had not been gone into more in detail. He pointed out that pneumothorax might be due to rupture of an emphysematous vesicle—a common source of the affection—and these cases usually recovered. A second form was of traumatic origin, and a third was due to the bursting of a gangrenous abscess into the pleura, and these, too, usually did well. Another important class of cases were those in which an empyema had broken into a bronchus. Lastly, there was the tubercular pneumothorax, a variety which occurred principally in cases of rapid caseous degeneration, when there had not been time for adhesions to form with the pleura. This condition was often seen just prior to rupture, in the *post-mortem* room. He

said he had never met with a case in which the intra-pleural pressure was as high as 12 inches of water; the most he had seen was 7 inches. He then discussed the mechanism of its production and the chances of recovery.—Dr. HAWKINS asked how long Case III had had pneumothorax prior to aspiration, and how long he survived it. He had seen a case just as bad linger on for four days.—A FELLOW asked whether allowance had been made for the expansion due to the temperature of the contained gases, and whether the patient's own temperature had been taken into account.—The PRESIDENT mentioned that the local temperature on the side of the pneumothorax was usually from one half to two degrees below that of the opposite side.—Dr. EWART, in reply, thanked the Fellows for listening to his long paper. The patient described in Case III had been in the hospital four days; but the symptoms had come on so gradually that it had been impossible to ascertain the duration of the pneumothorax. He survived aspiration thirty-six hours. The question of the temperature of the gases in relation to their absorption had not engaged their attention, but that of the patient was of the hectic type.

OBSTETRICAL SOCIETY OF LONDON.

WEDNESDAY, NOVEMBER 6TH, 1889.

A. L. GALABIN, M.D., President, in the Chair.

Specimens.—Dr. BOXALL: Pelvic Hæmatoma following Delivery; Death Four Hours after Labour.—Dr. W. S. A. GRIFFITH: Microscopic Sections of the Uterus at Different Periods of the Puerperium, showing complete absence of the alleged fatty changes.—Dr. CULLINGWORTH: Uterus, Ovaries, and Tubes from a Case of Cæsarean Section.—Dr. DAKIN: Retroflexed Fœtus with Ectopia of the Viscera and Talipes Valgus.—Dr. W. DUNCAN: Myoma of the Broad Ligament.

Report.—A report was read on Mr. ALBAN DORAN'S specimen of membrane passed from the uterus, exhibited at the July meeting.

Case of Large Chylous Cyst of the Mesentery.—This paper was read by Dr. RASCH. An anæmic girl, aged 21, was admitted into the Deaconesses' Hospital at Tottenham on February 9th, 1889. About a month before admission she lifted a heavy trunk; a week later she was seized with severe abdominal pain. A large, roundish, elastic swelling occupied the middle of the abdomen, extending mostly to the left. Its upper extremity reached two inches above the umbilical level. The pelvic organs were normal. At the operation, on March 22nd, a glossy, pale pink tumour was discovered. A milk-white fluid exuded on tapping. On exploration it became evident that what appeared to be a cystic tumour were the two layers of the mesentery, separated from each other by a collection of milky fluid. The inside of the cyst was intensely congested, and oozed freely. The cyst cavity was sponged clean, and, like the peritoneal cavity, washed out with warm boracic lotion. The cut edges of the cyst were sewn to the abdominal wound, and the cavity packed with iodoform gauze. The whole was covered with sublimate gauze after dusting with iodoform. Six pints of the cyst contents were collected. Next day the fluid (at first white) became pink, and contained a firm, pinkish clot. The microscope and chemical examination appeared to prove that the fluid was chyle. No epithelial lining could be found on a small piece of the cyst wall, which had been cut away for examination. The patient made a fair recovery; the milk-white fluid oozed for some time from the cyst cavity, which at length closed up. During the drainage she lost weight considerably, and regained weight as the escape of fluid lessened. Dr. Rasch believed that this was the first recorded case of a chyle cyst of the mesentery occurring in a woman. Winiwarter had recorded a chyle cyst in the right hypochondrium of an infant. Dr. Kilian operated on a large retroperitoneal lymph cyst. Dr. Rasch did not think that in his case the cyst arose from obstruction of the thoracic or other lymphatic duct, but more probably from the rupture of a mesenteric lymphatic during exertion. Dr. Rasch then spoke of the difficulty of diagnosis. Mesenteric tumours generally appeared first in the middle line near the umbilicus, and had free transverse, but little vertical, mobility. Professor Bergmann's case of chyle cyst of the mesentery occurred in a man aged 63. Dr. Rasch lastly justified his treatment as preferable to extirpation of the cyst or closure, after emptying of the contents, without drainage.—Dr. WILLIAM DUNCAN suggested that the tumour in Dr. Rasch's case might well be dermoid and not chylous.—Dr. BOXALL could scarcely see how the escape of chyle into the loose cellular tissue of the mesentery could produce a cyst, but he thought that the possibility of a chylous cyst in that situation originating in an echinococcus cyst should be entertained. Hydatid cysts were sometimes barren, and if blood and bile could find their way into them, there were *primâ facie* grounds for believing that in a situation in which lacteals abounded chyle might do the same, and distend the cyst so that all trace of its pristine nature might eventually disappear.—Dr. C. H. CARTER referred to his case of large cyst of the mesentery simulating an ovarian cyst, published in the JOURNAL, vol. i, 1883, page 7. He agreed with Dr. Rasch that a tumour of this kind should not be enucleated, but stitched to the abdominal walls and drained.—Mr. ALBAN DORAN considered that Dr. Rasch's definition of the tumour as a chylous cyst was perfectly reasonable and probably correct. Non-ovarian dermoids of the abdomen were rare; dermoid cysts of the ovary frequently became detached from their pedicles and adherent to omentum, mesentery, or bowel, an obvious source of fallacy, especially when the pelvic organs were not explored. In Dr. Rasch's case those organs were explored.—Dr. MATTHEWS DUNCAN mentioned a case where Mr. Thornton removed a large mesenteric cyst with clear contents. The operation showed no connection with the uterus and broad ligaments. In another case Mr. Langton removed both ovaries converted into dermoid cysts, and also took away a third dermoid tumour from between the layers of the mesentery; it had no connection with either ovary.—Mr. DORAN remarked that an exogenous secondary cyst, springing from the surface of an ovarian dermoid, might easily become detached, and so be taken for a non-ovarian tumour.—Dr. RASCH was confident that the cyst in his case was chylous, and neither of hydatid origin nor dermoid.

A Case of Vesico-utero-vaginal Fistula.—Dr. CULLINGWORTH read notes of a case where incontinence of urine followed instrumental labour; the patient was aged 37. A vesical fistula was found in the middle line of the anterior vaginal wall, running transversely just in front of the cervix, in the furrow formed by the reflection of mucous membrane from the vagina to the cervix. The fistula admitted the tip of the finger up to the first joint. The portion of the cervix projecting into the vagina was intact, but on passing the finger through the fistulous opening, a laceration with ragged edges was detected higher up, in the posterior wall of the bladder, extending into the cervix. On passing a uterine sound into the cervix, the point entered the bladder through the laceration. An operation was performed when the morbid condition was over two years old. Dr. Cullingworth divided the anterior lip of the os uteri; the cervical laceration at once gaped widely, and by elevating the anterior margin of the vaginal portion of the fistula with a hook, it could be seen to extend obliquely upwards and to the left, to the distance of about an inch. The edges of the laceration were then freshened and united by three or four silkworm-gut sutures passed from the outer aspect of the cervix, and tied, presumably within the bladder. The ends, left long enough to reach the vulva, were brought through the vaginal portion of the fistula. By the milk test the vesico-uterine fistula was proved to be closed. On the thirteenth day the stitches were removed, and the wound appeared to have healed. The vaginal portion of the fistula was closed by operation six weeks after the first procedure; it had already undergone contraction, and its long axis was no longer transverse, but nearly parallel with the axis of the vagina. The sutures were removed on the eighth day. The patient shortly afterwards left hospital perfectly cured. Dr. Cullingworth called attention to his practice of leaving the ends of the sutures sufficiently long to hang down in the vagina. This plan greatly facilitated removal and avoided much irritation from pricking up of the vaginal mucous membrane. Had the first operation not succeeded, Dr. Cullingworth intended to dissect up the bladder from the cervix and deal with the uterine fistula after Dr. Champneys's method.—Dr. W. S. A. GRIFFITH had recently operated on a similar case by the usual operation. The bladder remained watertight, but he had heard that the menstrual blood passed entirely into the bladder. He offered to correct this condition, but the patient was so pleased with the freedom from the ordinary inconvenience of menstruation that she declined to have anything done.—Dr. WILLIAM DUNCAN always used silver sutures in vesical fistulæ, fastening them with coils and shot to facilitate removal, and passing all the sutures through a piece of india-rubber tubing to prevent irritation of the vagina.—Dr. CULLINGWORTH referred to a valuable memoir on the subject by Mr. Milton, of the Civil Hospital at Cairo, published in the *St. Thomas's Hospital Reports*

for 1887. Mr. Milton had operated on fifty cases, in some patients more than once. The native women, who simply waited till the child was born, were very subject to urinary fistulæ; on the other hand, lacerated perineum was scarcely ever seen. He trusted that Mr. Milton's paper would not be overlooked.

A Case of Lupus of the Vulva.—Dr. LEWERS read a case of a woman, aged 22, and married six years, who was admitted into the London Hospital in August, 1888. There was a history of gonorrhœal but not syphilitic infection. A small growth appeared on the vulva, which became swollen. On admission a spherical pendulous lump, whitish and smooth on its inner surface, brownish and nodular on its outer aspect, was found growing from the left labium minus, prepuce of clitoris, and part of the right inner labium. The labia majora were swollen, not pitting on pressure, and were studded externally with small warty prominences, also seen on the perineum and mons Veneris. On August 28th, 1888, the tumour was cut away by the thermo-cautery, its base being first held secure by two Wells's large pressure forceps. In January, 1889, a lump the size of an almond was pinched up and dissected out from the right side of the vulva by the thermo-cautery. The labia majora remained swollen. Dr. Lewers found that the tumour consisted of an enormously hypertrophied labium minus. The tendency of lupus was towards hypertrophy combined with ulceration, and recurrence had occurred in this case after apparently complete removal of the hypertrophied and ulcerated tissue. The general health of the patient had been little if at all affected.—Dr. WILLIAM DUNCAN noted that in the discussion on Dr. Matthews Duncan's paper on Lupus of the Vulva Mr. Jonathan Hutchinson expressed his opinion that the cases were syphilitic and not lupous. With this opinion Dr. W. Duncan strongly coincided, and he considered that Dr. Lewers's case was hypertrophic syphilide, exactly similar to several which had come under his own care. He asked if Dr. Lewers had put the patient under a course of strong antisyphilitic remedies.—Dr. LEWERS stated in reply that, when Dr. Matthews Duncan read the paper referred to, it was agreed that the administration of antisyphilitic remedies decided nothing, since late results of syphilis were often unaffected by these specifics. Dr. Lewers gave reasons for rejecting any suspicion of syphilis in his own case. Winckel figured, in his *Diseases of Women*, a morbid condition identical with that which was seen in Dr. Lewers's patient under the name "elephantiasis of the vulva."

HUNTERIAN SOCIETY.

WEDNESDAY, OCTOBER 23RD, 1889.

R. CLEMENT LUCAS, B.S., F.R.C.S., President, in the Chair.

Foreign Bodies in the Air-passages.—Mr. T. MARK HOVELL read notes of two cases of foreign body in the air-passages. Case I was that of a woman, aged 33. A piece of bone (from a sheep's head which she had been eating) three-quarters of an inch long was lodged in the trachea a quarter of an inch below the vocal cords for two months. It was successfully removed through the mouth by means of forceps after the larynx had been sprayed with cocaine. Case II was that of a lady with a quarter of peeled walnut lodged in the right bronchus. It was coughed up at the end of five days.

Colour of the Urine.—Mr. F. ROWLAND HUMPHREYS read a paper on the clinical examination of the colour of the urine. The urine pigments were principally two: urobilin, which had not been isolated, and which appeared to be hydrobilirubin absorbed from the contents of the intestines; and urochrome, discovered by Thudichum, excreted to the amount of 0.551 gramme *per diem*. Both pigments came from the hæmoglobin of the blood. The author had made use of comparison of the colour of the urine with that of a 4 per cent. solution tinct. iodi, *P.B.* The method was as follows: The standard amount taken was ℥i (3.4 c.c.); half of this was placed in a large test tube, and water added till it was of exactly the same colour as a sample of the urine (previously cleared by warming or filtering, and, if then clouded, diluted with water equal parts), placed in a similar test tube, and compared by means of light reflected through the two liquids from a sheet of white paper held close behind them. The test was done twice, the sum of the diluted solutions being measured in a 100 cubic centimètre measure, and the result recorded either as a fraction whose numerator was 1, and whose denominator was the number of cubic centimètres, or else this fraction multiplied by 1,000, and divided out to give a convenient whole number. The total urine for the twenty-four hours being reduced to the normal, 50 ozs. for men, 40 ozs. for women. All the pigments in recently passed urine being yellow, such a record would give the total colouring power of the yellow pigment matter of the urine, but would not, of course, differentiate them. A gas jet surrounded by an opaque white globe formed a good source of light, where daylight could not be obtained. Each sample of urine passed by a healthy adult on six successive days was investigated as to its pigment, with the following results: the pigment was at its true maximum three to five hours after a (nitrogenous) meal (like the excretion of the bile salts, which had the power of causing solution of the red blood corpuscles). It was increased by nitrogenous food, constipation, and severe brain work. It was diminished during the night (though the first morning urine was highest in colour), and by free action of the bowels. As to disease, a sudden leap from one extremity to the other, in either direction, was often the first sign of recovery. It was increased largely in acute febrile conditions, less so in parenchymatous nephritis, in some forms of anæmia (apparently when the waste of hæmoglobin was in excess of its formation), in hysteria (in two cases great increase in the quantity of urine and of the salts passed), and in gastric catarrh. It was decreased immensely in acute uræmia, less so in renal cirrhosis and in chronic uræmia; a steady fall in the excretion preceded death in one case (apparently when the formation of hæmoglobin was deficient). The paper was illustrated by numerous charts, by some samples of urine showing varying degrees of colour, and by a demonstration of the method of examination which had been employed.—Dr. THUDICHUM said Mr. Humphreys's method would become useful provided that he produced an invariable and reliable standard. Urochrome could now be isolated easily by the phosphomolybdic acid process, and separated from the other six alkaloids of the urine, by precipitation with ferric chloride. It could be freed from every vestige of the acids of the urine by that remarkable body called mercuramin, also termed after its discoverer, Millon's base. In that state it would serve to furnish a reliable standard for Mr. Humphreys's method. The entire subject of the alleged chemical relationship of the pigments of the body was, however, in so shadowy a state, that he would caution that audience not to connect any practical considerations with them. —Dr. PYE SMITH said work such as that of Mr. Humphreys was much needed. Daily variations in many of the constituents of the urine needed as much investigation as the physiological processes in other organs. Dr. Pye Smith thought that reflected light as from a sheet of white paper, transmitted through the urine, was the best for judging of the colour, much better than direct sunlight. Urine in febrile states, although high coloured, did not necessarily contain an increase in the amount of pigment, inasmuch as the urine was usually scanty and the water diminished. Again, in hysteria, the urine, although pale, and of low specific gravity, was abundant and much diluted, and therefore the colouring matter might be normal and in excess. The pale urine of chronic Bright's disease, the pale urine of diabetes, and the pale urine of hysteria, all required a series of investigations to determine the daily amount of pigment in each. Admitting that the colouring matter of the urine did not come from the bile pigment, it was derived from the same common source—namely, hæmogloblin. All other colouring matters of the body, in the muscles, the serum, synovia, and bile, with the exception of the black pigment of the choroid, derived from hæmoglobin, but were not derived from one another. Observations such as those of Mr. Humphreys promised to give important insight into the various conditions of the blood. As yet but little was known about the chemistry of the blood, except about the corpuscles.—Remarks were also made by the PRESIDENT and Dr. F. J. SMITH, and Mr. HUMPHREYS replied.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

FRIDAY, NOVEMBER 1ST, 1889.

H. CAMPBELL POPE, M.D.Lond., F.R.C.S., President, in the Chair.

Medical Defence Union.—The PRESIDENT made a short statement, calling attention to the Medical Defence Union, and the proposed formation of a metropolitan branch.

Naso-Pharyngeal Fibromata.—Dr. THUDICHUM read a paper on this subject. He described the application of the electro-cautery to these cases. The operation was done through the nose, and only subsidiary aid was rendered by operations through the mouth. Only in a few cases had the meatus to be widened by partial abscission of the lower turbinated bone. He related a

number of cases treated by this method, all of which had recovered.—Dr. WOAKES made some remarks.

Sanitary Legislation.—Dr. REGINALD DUDFIELD read a paper on the sanitary Acts of last session, referring to the Public Health Act, 1889; the Horse Flesh Act, the Poor Law Act, and the Infectious Diseases (Notification) Act. After detailing a history of the passage of the Act and its provisions, he discussed the results which might be expected from it. With reference to the word "forthwith" in Section 3 of the Act, it was suggested that the Legislature did not demand a hasty diagnosis, but a prompt despatch of the certificate of notification after a diagnosis had been made. Statistics were given showing that the deaths from measles and whooping-cough together exceeded the total deaths in 1886 and 1887 from the diseases included in the present schedule of the Act. It was pointed out that given notification of these two diseases, isolation and forced non-attendance of relations at school would do much to check the prevalence of the disease without hospital treatment. It was pointed out that the Act gave the sanitary authorities no new powers of interference between patient and doctor, but that they would, of course, take the necessary steps to ensure proper isolation of the sick, and complete disinfection on the termination of the case. The whole system of the present machinery for dealing with infectious disease was a policy of insurance held by the metropolis to cover risks of loss of life and money through infectious, preventable disease. The medical profession shared in the advantage of such policy, and should, therefore, accept without demur the extra work imposed by the Act.—The PRESIDENT said he was amazed to see that puerperal fever had been included in the schedule, and thought friction would be likely to arise in questions of that disease. He could honestly say that he could not define what was meant by that term. He would like to know if, according to the working of the Act, two medical men being called in to a case, both would have to notify. This would have to be decisively settled.—Dr. WALTER SMITH saw no reason for there being any friction between medical men and the sanitary authorities; he hoped all the former would before long be acting as assistant health officers.—Dr. ALDERSON thought it was only puerperal cases of a malignant type that would have to be notified.—Drs. MALLAM, TRAVERS, MACKENZIE, LLOYD, and BALL joined in the discussion.—Dr. T. ORME DUDFIELD thought that the cases of puerperal fever proper to be notified were those of a communicable nature often spread by careless midwives, and those due to blood-poisoning resulting from insanitary surroundings of the patient. It surely could not be necessary to report cases of local erysipelas due to scratches, etc., but such only of those of septic origin as were attended with marked constitutional symptoms. No work of a new sort was imposed on the medical officer in his relations with the sick by the Act, but more work of the sort he had been accustomed to perform. His relations with private practitioners would not be different, and he saw no reason why friction should occur in the future any more than in the past. The services of the sanitary department, especially for disinfection, would be tendered, and there the matter would end.—Dr. REGINALD DUDFIELD replied.

Specimens, etc.—Mr. PERCY DUNN exhibited a specimen of Spina Bifida.—A series of microscopical specimens illustrative of Phthisical Conditions of the Lung was exhibited, lent by Mr. ARTHUR TOWNSEND, of Birmingham.—Dr. ABRAHAM exhibited microscopical sections of Psoriasis. He also showed an unusual case of Psoriasis.

NORTH OF IRELAND BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

THURSDAY, OCTOBER 31ST, 1889.

GEORGE GRAY, M.D., President, in the Chair.

Comminuted Fracture of the Skull.—Dr. HENRY O'NEILL showed a rivetter, aged 20, who was admitted to the Royal Hospital on June 17th, 1889, suffering from a compound comminuted depressed fracture of the left parietal bone close behind the left parietal eminence, caused by a heavy bar of iron falling on his head. The area of depression was the size of a shilling; brain substance and blood-clots were mixed with fragments of bone; part of the dura mater remained untorn. There were no signs of compression. The patient complained merely of the scalp wound. After giving 2 minims liq. morph. hypoder., chloroform was administered, and the scalp was shaved and thoroughly washed with turpentine, ether spirit, and carbolic lotion. The scalp wound was enlarged, the fragments of bone gently removed by forceps, the larger pieces broken to the size of split peas, and purified in carbolic lotion. After the wound was washed with carbolic lotion, and all hæmorrhage arrested by gentle pressure seven small pieces of bone were laid on the untorn part of the dura mater. A decalcified chicken bone drainage-tube was inserted into the wound, and the edges drawn loosely together by one catgut suture, the parts dusted over with iodoform and boracic acid, and a wood-wool pad bandaged over the wound. Ice was applied to the head. The patient slept well. Milk food was given. The temperature never rose above 99° F., and the pulse ranged from 74 to 84 per minute. The wound was dressed as before on June 24th and looked healthy; there was slight serous discharge on the dressings. The anterior half of wound of skull pulsated regularly. The wound was again dressed on July 12th, 21st, and 27th, when the parts were firmly healed. No suppuration occurred. The patient left the hospital on July 27th, and went to work three weeks later, where he has continued as a rivetter ever since. At the date of the report (October 30th, 1889) he was strong and well; at work every day. The scalp was firm over the seat of injury. He complained of headache occasionally over the right temple.

Plumstone in Trachea.—Dr. O'NEILL also showed a schoolboy, W. K., aged 6, who on July 27th, 1889, accidentally permitted a plumstone to pass down the trachea. He was brought to the hospital on July 31st. He had a few severe attacks of coughing, but otherwise seemed quite well. On August 2nd chloroform was administered and tracheotomy performed. The wound was kept open with a dilator. The patient was turned heels upwards and patted sharply between the shoulders, when, during a fit of coughing, the plumstone dropped out. The wound was dressed with iodoform gauze. During treatment the temperature remained normal, and on August 23rd he left hospital quite well, the wound having healed firmly. On October 22nd he was at school, and was quite well. A small white cicatrix remained over the seat of the tracheotomy wound.

Intubation of the Larynx.—Dr. FRIER (Waringstown) read notes of six cases of intubation of the larynx for croup, in five of which there was diphtheritic membrane on the tonsils, with two recoveries. The dyspnœa and croupy noise were relieved in all. The duration of life after the insertion of the tube in the four cases that died averaged eighty-six hours.—Professor SINCLAIR gave an account of two cases of intubation of the larynx for diphtheria. The children were $2\frac{1}{2}$ years old in both cases. No difficulty occurred in the introduction, but in one case feeding was carried out with much trouble. On the whole the method made a favourable impression upon all concerned, the tube being well tolerated, and the relief quite as marked as after tracheotomy.

Hysterectomy.—Dr. ST. CLAIR BOYD read notes of a case of supra-vaginal hysterectomy for soft œdematous myoma, and showed the tumour removed.

Abdominal Section.—Dr. BYERS reported two cases of abdominal section. In one, a patient aged 44, the tumour was thought to be ovarian and malignant, but, as there was considerable doubt as to its exact nature, it was decided to do an exploratory operation. On opening the abdomen the tumour was seen to be a malignant ovarian growth, very vascular in its nature, and so closely adherent to the intestines that it could not be removed. The abdomen was closed, but the patient sank in fifty-six hours. In the other case the tumour, an ovarian cystoma, was removed, and the patient, aged 22, made an uninterrupted recovery.

Perineorrhaphy.—Dr. BYERS read a paper on this subject based on a series of cases done by him. He urged the importance of the immediate suturing of the perineum in all cases in which it was lacerated (beyond a mere tear of the skin or mucous membrane) at childbirth, in order to diminish the risks of sepsis, and to prevent the necessity of a secondary operation at a later period. He then described the immediate operation, the principles being thorough cleanliness, the perfect coaptation of the torn surfaces, and the subsequent rest of the parts. In reference to the later or remote operation, he had had the best results from what was known as the "flap-splitting" method introduced by Mr. Lawson Tait, the main principles of which were splitting the septum between the rectum and vagina, thereby forming flaps which were drawn upwards and downwards, the tissues being brought together from the opposing sides and united by transverse sutures, so as to restore the rent in the position of the original median raphé of the perineum. He described Tait's operation, and the modification suggested by Sänger. The great advantage of the

"flap-splitting" method was that there was no loss of tissue, and, consequently, if it failed in any case, the patient was none the worse, and could have the operation attempted a second time.

Tuberculosis in Cattle.—The following resolution was proposed by Dr. CULWELL, and seconded by Dr. J. A. LINDSAY: "That in view of the recent discoveries with regard to human and bovine tuberculosis, and of the opinions held by many eminent scientific authorities concerning the communicability of tuberculosis from man to animal and from animal to man, and in view of the enormous prevalence of the disease in one form or another among mankind, this meeting of the North of Ireland Branch of the British Medical Association disapproves the practice of allowing any part of the carcass of an animal, which has been shown to have been affected with tuberculosis, to be sold as sound and wholesome meat," but after a long discussion it was arranged to put off the further consideration of the matter until the special meeting of the Branch to be held in December to consider Dr. Rentoul's resolutions. A Committee, consisting of Dr. Calwell, Dr. Strahan, Dr. J. A. Lindsay, and Dr. Burden was selected to examine the recent literature in reference to bovine tuberculosis, and to draw up a special report for the meeting upon the evidence of the transmissibility of tubercle from animals to man.

HARVEIAN SOCIETY OF LONDON.

THURSDAY, NOVEMBER 7TH, 1889.

THOMAS BUZZARD, M.D., F.R.C.P., President, in the Chair.

The Administration of Certain Drugs by Electricity.—Dr. CAGNEY said that experiments by Eulenburg, von Bruns, and Hermann Munk had shown that certain drugs could be made to pass through animal tissues between the poles of a galvanic current. He had used iodide of potassium in this way for the cure of labyrinthine deafness and in lead palsy. Only very small doses, however, could be administered through the skin. The method was best adapted for the treatment of diseases of the skin and mucous membranes, or of small tumours immediately beneath them. The indications for the method were those for the local use of iodine and iodide of potassium. In syphilitic and other affections of the throat, and especially in chronic pharyngitis, it was very useful. Nodes and gummata in accessible situations seemed to yield readily to it, and this was equally true of tubercular ulcers, in the later stages of syphilis, mucous patches, and papular syphilides. Amongst non-specific affections it served well in the treatment of indolent ulcer, lupus, and acne, and to promote absorption in enlarged strumous glands. Benefit might be expected also in bronchocele and exophthalmic goître. The method seemed to possess certain advantages. By its use it was possible to administer in perceptible doses a drug which was among the most useful of those available—a drug, moreover, which was not easily tolerated by every constitution, and in a manner which was least likely to disturb the system. It was conveyed directly to the part where its action was needed, and presumably in a condition of maximum activity. Finally, the lesion, if it were due to errors of nutrition, or if, as in metallic poisoning, it were attended with paralysis, was at the same time benefited by the stimulating action of the galvanic current. In the application of the method a very strong current was not needed, but a sufficient current density was required, and the tissues under treatment must be brought directly in the path of the current. The electrodes might be either sponges holding solution of iodide of potassium or a modification of Dubois's conducting tubes filled with the fluid. The latter gave the best results in Munk's physiological researches, and doubtless they were to be preferred where the skin had to be penetrated. They should then be of large size. For the treatment of mucous surfaces an electrode might be made of a glass tube, which could be filled with fluid, having a zinc wire introduced through the bottom, and the mouth (which might be cut to any desired curve) blocked with a fine sponge. This was connected by means of the zinc wire with one pole of a galvanic battery. The electrodes should be of large surface area. The fluid should be a saturated solution of iodide of potassium, and it ought to be supplied, where possible, at both poles. Where this was not possible the solution should be at the negative pole. The current should be passed for ten to fifteen minutes, and its strength would be determined by circumstances. Its direction should be reversed every minute. It was for this reason that both poles might be charged with advantage. Under suitable conditions the positive pole might be carried by a gold needle, which was plunged in a convenient situation beneath the skin. This expedient served especially in the treatment of strumous glands, and perhaps of bronchocele. By its means the obstacle arising from the depth or inaccessibility of the part under treatment might sometimes be overcome.—Mr. JULER remarked that the method employed was one of great practical possibilities. He asked if one pole could be placed under the skin without great pain. He also inquired what was Dr. Cagney's experience of the use of electricity in tobacco amblyopia. He himself had found it of great service, and was prepared to expect even better results, both in the form of amblyopia and in that due to lead poisoning, from the combination of electricity with the local action of drugs.—Dr. SPICER asked if Dr. Cagney had used this method in the treatment of atrophic rhinitis, where other remedies usually failed to effect a cure.—Dr. FRANKISH pointed out that the drug used was employed only locally and in small quantities, and he believed that it was therefore little likely to be of use in syphilis. In syphilitic deafness especially large doses of the iodide were required to produce permanent effects.—Mr. HILL showed that it was certainly of use to influence the local lesion, even if the constitutional disease had to be treated separately.—The PRESIDENT would take an early opportunity of testing this new method. It was evident, he thought, that a very strong current must be used to cause the drug to pass through the tissues to any considerable depth. In the case of abdominal tumours, great strength of current had been used, but only with non-polarisable electrodes, and it seemed essential to this new process that polarisation should take place.—Mr. JESSETT spoke of experiments at the Cancer Hospital upon the electrolysis of malignant tumours. Extraordinarily high strength of battery had been used, but it had been found very difficult to pass more than five or six milliampères through a tumour. He doubted if such great currents really reached the tissues. The skin must be pierced, and this, when done by electrodes, was very painful. In his experience, electrolysis had no effect on cancerous tumours.—Dr. CAGNEY, in reply, said that the pain caused by passing electrical currents beneath the skin through needles was not unbearable. In all the cases which he had treated he had not used excessively strong currents, nor did he think them advisable, but he employed saturated solutions of iodide of potassium. Only slight results could be expected when the current had to pass through the cuticle, and especially when two layers of cuticle were to be traversed.

Anti-Fermentative Treatment of Infantile Diarrhœa.—Dr. LUFF read a paper on the causation and treatment of that variety of acute infantile diarrhœa produced by irritative products, resulting from fermentations set up in milk either previous to or after ingestion. While admitting that though probably several irritating substances resulting from the fermentation of milk were factors in the production of the form of acute infantile diarrhœa under consideration, he contended that the principal share of the blame rested with the milk or cheese ptomaine tyrotoxicon produced during the fermentation of milk under certain conditions. The treatment of acute infantile diarrhœa with the view of arresting the abnormal intestinal fermentation was then considered. Carbolic acid, creasote, resorcin, salicylic acid, salicylate of soda, naphthol, and salol had been given in the hope of checking the putrefactive changes in the bowels. Ringer had recommended the administration of a weak solution of bichloride of mercury in infantile diarrhœa attended with very slimy stools. Dr. Luff then referred to Dr. Illingworth's antiseptic treatment of infantile diarrhœa, which he had himself found most useful, and the employment of which had first directed his attention to the treatment he had used. This consisted in drug treatment and diet treatment combined. The drug treatment consisted in the administration of 1-50th of a grain doses of the biniodide of mercury dissolved in iodide of potassium, combined with 1-grain doses of chloral hydrate. It was shown experimentally that the soluble biniodide of mercury was an extremely soluble and diffusible salt, and that it possessed the property of combining with and rendering insoluble the milk ptomaine tyrotoxicon. As regards the diffusibility of the biniodide of mercury, Dr. Luff had detected it in the urine within two hours of its administration. Dr. Luff had never found that the soluble biniodide of mercury itself acted as an intestinal irritant. Of eighty cases of acute infantile diarrhœa treated by this method, the diarrhœa ceased within two days in seventy-two of the cases; in five out of the remaining eight cases it ceased within four days, and in no case did it last over seven days.

Congenital Club-foot and Spina Bifida.—Mr. J. J. CLARKE

showed the body of a female child which died a few hours after birth at full term. Hydrocephalus, spina bifida, and double talipes were present. The spina bifida was a myelocele. When the head was pressed there was a flow of liquid from the aperture of the central canal at the upper end of the myelocele, which at the same time was lifted up by the increase of pressure in the cerebro-spinal fluid behind it. At birth both hips and knees were fully flexed. The feet w re crossed, and fixed by four turns of the umbilical cord. The right foot showed marked equino-varus; the left similar characters, but was also flattened. Dissection of the right side showed that the anterior ligament of the hip and the posterior ligament of the knee were short and prevented extension. The ligaments on the inner side of the foot were similarly shortened, and the bones were considerably altered in shape. The deformity appeared to be fully accounted for by the mechanical conditions present. The microscopical appearances of the nerves and muscles were normal.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

PATHOLOGICAL AND CLINICAL SECTION.

FRIDAY, OCTOBER 25TH, 1889.

LANGLEY BROWNE, F.R.C.S.Ed., in the Chair.

Contracture of Hand.—Dr. T. STACEY WILSON showed a patient, aged 21, suffering from contracture of her hand in the flexed position, which had persisted since an attack of hemiplegia in childhood, but in whom the contracture had been nearly removed and the muscular tone much improved by persistent rubbing and passive movement. Dr. Stacey Wilson believed that the paralysis, although originated by organic lesion, was now functional or hysterical in character, and could be overcome by appropriate means.

Œdema of Face.—Mr. EALES showed a man, aged 45, suffering from considerable thickening of the whole skin of the face and nose, and whose appearance was much deformed by excessive œdema of the upper and lower eyelids, causing much swelling on each side, and which had resulted from repeated attacks of erysipelas during the last few years. There was no œdema elsewhere, and no signs of cardiac or of renal affection, or of myxœdema.

Thoracic Aneurysm.—Dr. SUCKLING showed an iron-worker, aged 33, who for eleven months had complained of severe pain shooting round the left side. He was admitted into the Queen's Hospital, and it was found that there was bulging on the left side of the spine, in the infra-scapular region (with pulsation), and a dull area, about six inches long and two inches wide, on the left side of the spine. A systolic *bruit* could be plainly heard over this area. The radial pulses and pupils were unaffected, and the aneurysm was evidently below the root of the left lung. The man had suffered from syphilis, and had done heavy work. After six weeks' rest in bed and treatment with iodide of potassium, the pulsation and pain had disappeared and the dull area had much diminished in size.

Tertiary Syphilis.—Mr. HASLAM showed a woman, aged 45, who sixteen years previously had contracted syphilis from washing dirty clothes. The initial lesion was in the thumb, and was accompanied by great inflammatory action and glandular enlargement in the axilla. The secondary stage was ill marked, there being only some sore throat and falling out of hair. There was no rash. The tertiary symptoms had been severe, ulcerations having occurred on the arm, leg, scalp, neck, tongue, and angle of mouth.

Cases.—The PRESIDENT showed a case for diagnosis (?) Cardiac or Aneurysmal.—Mr. GILBERT BARLING showed a patient with remarkable deformities after Acute Rheumatism.—Mr. WYNNE THOMAS showed for Mr. PRIESTLEY SMITH (1) Hydatid Cyst of Eyebrow; (2) Adeno-Sarcoma, simulating Microcele.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.

TUESDAY, NOVEMBER 5TH, 1889.

T. C. DENBY, M.D., President, in the Chair.

Disseminated Sclerosis.—The PRESIDENT demonstrated a case of disseminated sclerosis, complicated by the presence of exalted ideas, which at first made the diagnosis from general paralysis difficult.—Dr. MAJOR commented on the case.

Polypus of External Meatus.—Dr. A. BRONNER showed a case of perforation of the mastoid antrum into the external meatus, leading to the formation of a polypus in the latter.

Disease of Cerebellum.—Dr. MAJOR showed a specimen of disease of cerebellum, in which the diagnosis *inter vitam* had been made of a tumour of the middle lobe pressing on the motor tracts of the medulla, and causing paralysis. A peculiar feature was almost constant lividity of both arms. *Post-mortem* examination showed a large cyst occupying the middle lobe and part of the left hemisphere, filled with clear serum.—Drs. GOYDER, G. CARTER, and Mr. ALTHORP joined in the discussion, the latter advancing a suggestion that this cyst might be a fœtal remainder of a ventricle in the cerebellum, as was to be found in some birds.—The PRESIDENT also recorded details of a case of cerebellar disease, in which the cerebellum had been filled with small tumours.

Communications.—Dr. GOYDER read notes on a case of Prolapsed Ovary, in which he had successfully reduced the ovary and kept it in position with a modified Hodge's pessary.—Drs. RABAGLIATI, S. JOHNSTON, and the PRESIDENT joined in the discussion.—Dr. H. BRONNER read notes on a case of Rachitic Softening of the Right Acetabulum, giving rise to symptoms of congenital dislocation of the hip-joint, and successfully treated with an apparatus similar to the one described in Erichsen's *Science and Art of Surgery*, 1884, vol. i, p. 686.—Dr. A. BRONNER read notes on a case of Empyema of the Maxillary Antrum, successfully treated by drainage through the lower meatus after Mickulicz.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

FRIDAY, NOVEMBER 1ST, 1889.

A. F. J. MCGILL, F.R.C.S., President, in the Chair.

Catarrh of Bursa Pharyngea.—Dr. ADOLF BRONNER, of Bradford, read a paper on some cases of catarrh of the bursa pharyngea, a disease to which Dr. Tornwaldt first drew attention in 1885. Suchanneck and others had proved that the pharyngeal bursa was not a congenital structure as Tornwaldt thought, but simply a result of pathological changes which had taken place in the fissure normally dividing the pharyngeal tonsil from before backwards. Attention was drawn to the important relation between catarrh of the bursa and diseases of the pharynx, nares, and middle ear. He described and showed the instruments used for the examination of the naso-pharynx and for the removal of the bursa. In most cases he used Trautmann's sharp spoon or a modification of Hartmann's curette, operating under cocaine without general anæsthesia. Several cases were recorded in full. In one the patient had suffered for some years from all the typical symptoms of post-nasal catarrh, in spite of many kinds of treatment. The pharyngeal tonsil was enlarged and partly covered with two yellow crusts. On removing these, two small apertures were visible in the middle line of the tonsil, and a probe revealed a cavity of 1 to 2 centimètres. The bursa was removed with the curette and the symptoms immediately disappeared. In another case a clergyman complained of recurrent hoarseness and sudden loss of voice, which had prevented him from preaching for some months. Here also a large cavity was found in the pharyngeal tonsil. After removal of the bursa with the sharp spoon complete recovery took place. Another case, a lady aged 30, showed all the symptoms of "aprosexia," as described by Guye.[1] Removal of the bursa with the curette effected complete cure. A case of recurrent deafness of the left ear, with rhinitis, resisted all methods of treatment till the bursa was destroyed by chromic acid.—Dr. CHURTON questioned whether these operations were not becoming too fashionable, and referred to a case of considerable chronic enlargement of the faucial tonsils, which disappeared entirely under the topical use of glycerine of tannin.—Mr. LITTLEWOOD said that since Dr. Bronner read a paper about a year ago he had seen many cases of post-nasal adenoid growths, and had operated upon a considerable number. He advocated general anæsthesia in preference to cocaine, as the hæmorrhage was always severe enough to be alarming to the patient, if not embarrassing to the operator. The term "pharyngeal bursa" was an obvious misnomer, as it was a mere slit, the opposite sides of which, under certain pathological conditions, contracted adhesions and formed a cavity.—Dr. WHITE, of Bradford, related a case in which, amongst other symptoms, the patient complained of the repeated "bursting of an ulcer," followed by temporary relief. This symptom seemed to refer it to the same category as Dr. Bronner's cases. The patient saw an eminent London throat specialist, who thought there was nothing serious the matter. Permanent recovery took place after

[1] JOURNAL, September 28th, p. 709.

the use of a solution of 10 grains $AgNO_3$ in a drachm of sp. etheris nitrosi.—Dr. BRONNER said that the faucial tonsil differed from the others in containing glandular tissue, in addition to adenoid. The lingual tonsil was a frequent cause of pharyngitis. The pharyngeal bursa could not be felt unless there was a cyst. He was of opinion that the faucial tonsils were frequently removed when the pharyngeal tonsil was at fault. He also believed that there was much less likelihood of serious faucial and pharyngeal complications in such diseases as diphtheria and scarlet fever when the pharyngeal tonsil had been previously removed.

Chloride of Zinc as a Caustic in Cancer of Female Generative Organs.—Dr. BRAITHWAITE read a communication on cases illustrating the advantages derivable from the use of chloride of zinc as a caustic in cancer of the female generative organs. 1. When the knife could be used it was usually preferable to employ it, and only resort to the zinc upon the first appearance of a return. 2. In some cases the zinc should be the first, and indeed only, weapon used, as in commencing cancer of the cervical canal of the uterus, when, from any cause, the organ could not be pulled down into view, as when the uterus was fixed by old inflammatory adhesions. In commencing cancer of the vulva or vagina, if the disease were superficial and not of great extent, this treatment alone was necessary, but it might or might not be preceded by erasion a few days before. 3. It should be applied by means of a very thin layer of cotton-wool wetted with the zinc solution and lightly pressed between two pieces of blotting paper. It then did not run. 4. A saturated solution should be used. The fluid resulting from the deliquescence of the solid was the most convenient form. 5. The caustic required time. Usually, in twenty-four hours it had acted sufficiently; but, if a deeper action were required, it might be left longer. 6. Its use was followed by great contraction of the parts—a safeguard to some extent against return of the disease. In this, as in other respects, it was superior to Paquelin's cautery, acid nitrate of mercury, and potassa fusa. One case was related in which a slough was made of the whole interior of the uterus, not too deep to be dangerous, but sufficient to remove the surface and some of the adjacent tissue. The patient was being weakened by hæmorrhage and poisoned by absorption of the sanious discharge.—Mr. C. J. WRIGHT asked Dr. Braithwaite whether he had used the chloride of zinc in conjunction with a previous application of a strong solution of the protosulphate of iron—a method which he himself had largely used in cases of carcinoma uteri, especially where the cervix was mainly or solely affected. He removed the disease with scissors and curette, and then applied a tampon with the iron solution, leaving it *in situ* for two days. He next applied the zinc chloride in the same way, and left it for the same length of time. Upon removal a large slough came away, which was really a considerable portion of the uterus. With this method the eschar was deeper and the pain less. He also asked what precautions were taken to prevent the spread of the caustic beyond its proper object and limits, and advocated the use of a pomade or solution of bicarbonate of soda.—Dr. WHITE related a case of continuous metrorrhagia possibly from subinvolution, in which, after other methods had failed, a plug of zinc chloride made up with a paste of flour brought away a complete cast of the uterus, and entirely arrested the hæmorrhage, which had not recurred.—Mr. MAYO ROBSON said that he was not convinced of the utility of the procedure advocated by Dr. Braithwaite, as in the first two cases only a few weeks had elapsed since the cases had been treated, and already other applications had been required. The third case had resulted in sloughing of the cervix, when the disease had not been proved to be cancer; and in the fourth case merely temporary relief had probably been given. Mr. Robson thought that when cancer of the uterus could be removed completely by the scissors or knife it should be done, but when the uterus was fixed and the disease was beyond the reach of the knife the application of caustic was dangerous, uncertain, and unscientific.—The PRESIDENT remembered that when he first came to Leeds there was a swing of the pendulum in favour of the treatment of cancer by the use of *flèches caustiques*, and he also remembered that it was a ghastly failure. If the action of caustics on the surface, where it could be watched, controlled, and regulated was a failure, he thought it was more likely to be so in inaccessible and invisible regions.—Mr. CROFT thought that Dr. Braithwaite had somewhat overstated his case as regards the question of pain. At any rate, in those cases in which he was associated, where the disease affected the vagina, the pain was severe, morphine being required for two or three days afterwards.—Dr. BRAITHWAITE, in reply, said that in many cases, at any rate, the pain was slight. He thought that bicarbonate of soda neutralised the effect of the zinc chloride. He regulated the action of the caustic by using a small quantity, which answered just as well. He freely admitted that in every case where the knife could be used it should be used. In uterine surgery the knife could not be used so freely or repeatedly as in other regions. He referred to a case of breast cancer which recurred after excision, and was perfectly sound when seen five years after treatment by caustics. His method was not dangerous in deep parts, the slough being only about one-sixth of an inch in thickness. It was said that the relief was temporary. Was that not the case in all cases of cancer? At any rate, the relief was marked. As regards the reproach that it was unscientific he was of opinion that patients would prefer to be cured by methods that were unscientific rather than be left to die, because the only available means of cure rested under that terrible stigma.

Pathological Specimens.—Mr. MAYO ROBSON: (1) Blood Cyst of Broad Ligament; (2) Parovarian Cyst with Capsule; (3) Unusual Form of Multilocular Ovarian Tumour.

REVIEWS AND NOTICES.

THE DISEASES OF CHILDREN, Medical and Surgical. By HENRY ASHBY, M.D.Lond., M.R.C.P., Physician to the General Hospital for Sick Children, Manchester; Lecturer and Examiner in Diseases of Children in the Victoria University; and G. A. WRIGHT, B.A., M.B.Oxon., F.R.C.S.Eng., Assistant Surgeon to the Manchester Royal Infirmary, and Surgeon to the Children's Hospital. London: Longmans, Green and Co. 1889.

[*First Notice.*]

THE number of books on disease in children which have recently issued from the press may be taken to prove a growing interest in this department of practice, and a growing appreciation of its importance. Though not to be regarded as a speciality, yet it will not be denied that the careful study which has been given by many physicians and surgeons to the diseases of children has resulted in important additions to knowledge. "The constitutional peculiarities of childhood," it has been well said by Dr. Eustace Smith, "and the weakness due to immaturity, so shape the course and symptoms of disease, that there are few complaints which do not assume special features when present in the young." Dr. ASHBY and Mr. WRIGHT have attempted in the volume now before us to give a complete review of the whole subject, and their book has a special character and completeness owing to the combination of the labours of a physician and surgeon. How well they have succeeded in their task will be gathered from the following sketch of the scope of the volume.

The first chapter, on the physiology of infancy and childhood, is excellent; in particular, we notice that the absurd statements which have long passed current in popular works as to the small capacity of the infant's stomach are corrected; its capacity at the third month is correctly stated to be about five ounces, and at the end of the first year about ten ounces. In passing we may note the rather curious statement that children from 12 to 13 years of age only sleep eight or nine hours; most children of 12 or 13 will sleep nine or ten hours if allowed. It has always seemed probable that the short hours of sleep from which the children of the poor suffer is one of the main causes of the condition of nervous exhaustion to which the much-abused term "overpressure" has been applied.

The diseases incident to birth are adequately, perhaps indeed, even somewhat too fully treated; and then we come to a really excellent chapter on the hygiene of diet of infants and children. It is short, but appears to us to be written in a more scientific spirit than most other essays on this subject, while being at the same time thoroughly practical. The amount of proteids in human and in cow's milk is correctly given. This is a pitfall into which nearly every preceding writer of a systematic handbook has fallen, owing to the servile copying of old analyses. The fact that cow's milk contains from twice to three times as much casein and albumen as woman's milk is of the first importance, and really forms the basis of all successful systems for the artificial feeding of infants, even of those which are purely empirical. The authors lay perhaps too much stress on the density of the curd

formed from diluted cow's milk, but a rational view is taken of the value of condensed milk. The sweeping condemnations of this useful preparation have been ill-considered. When good fresh cow's milk can be had, and there is a careful nurse to prepare the bottle, the fresh milk will be preferred, and in 99 cases out of 100 will give satisfactory results. But in cities, and especially in summer time. it will often be found that condensed milk is the lesser evil.

When summer diarrhœa is prevalent the use of condensed milk is perhaps the best single prophylactic, and should be generally recommended to the poor living in crowded tenements. It is said that a long continuance of an exclusive diet of condensed milk tends to favour the appearance of rickets and scurvy, and to produce plump children without stamina to resist acute diseases. "We must confess to doubting the value of much of this evidence" is the observation which Dr. Ashby and Mr. Wright make upon this. While disposed to sympathise with this doubt it may be pointed out that the prolonged use of an exclusive diet of condensed milk can seldom be necessary. Cow's milk for the first six and last three months of the year, and condensed milk for the third quarter, is not a bad rule for general guidance.

It used to be the fashion not long ago to pooh-pooh the old theory that dentition was responsible for a good many of the disturbances of health from which infants suffer. Recent researches of laryngologists and rhinologists, and the large amount of literature which they have produced on the remoter effects of irritations of the mucous membranes, have not been without their effect upon the manner of looking at the question. It is, therefore, not surprising to find a good deal more importance attached to dentition in the chapters of this work on diseases of the digestive system than would probably have been accorded a few years ago. The contention that because dentition is a natural process therefore it cannot be a cause of disturbance will not stand in the face of facts. Whether the little savage in a state of Nature suffers from teething troubles we cannot, in the absence of data, pretend to determine; probably he does, but, whether he does or not, the civilised infant (and the civilised puppy also, it may parenthetically be added) does, in the very large majority of cases, suffer from more or less general and serious disturbance directly traceable to the process of dentition.

The articles on diarrhœa are good and practical, but special praise may be given to the remarks on the treatment of "zymotic diarrhœa." The wisdom of using this term in a clinical treatise may, however, be doubted, and a further subdivision would probably have contributed to clearness.

On the difficult subject of the etiology of acute peritonitis in children no fresh light is thrown, and no distinct reference is made to the not infrequent coexistence of acute peritonitis with acute pleurisy and pericarditis in the absence of perforative communication between these cavities. The point is one which requires examination, and it is possible that its elucidation might clear up much which is now obscure as to the pathology of the great serous cavities. By an easy transition we are brought from a discussion of the treatment of chronic peritonitis, in which surgery has recently had so many triumphs, to an article on intussusception, the first distinctly surgical article in the book. The subject is treated in a thorough and masterly manner, which inclines the reader to form a high opinion of Mr. Wright's capabilities as a writer. The anticipation will, we venture to say, be fully confirmed by the subsequent pages from his pen.

Prolapsus recti is so common an affection in young children, that Mr. Wright's observations on its anatomy and treatment will be read with interest, and form a good test of his method. Three forms are described. In the first there is simply a pushing out of a ring of mucous membrane, which has radiating folds diverging from the central orifice. It is easily reduced, and often only comes down when the child strains. In the second form, the prolapse involves all the coats of the rectum; the protrusion is longer, conical in shape, marked by annular folds, and having a small central orifice. It is evident that where a protrusion of this class reaches large dimensions, five or six inches for instance the peritoneum must be dragged down, but the fact does not seem to have been before so clearly stated. The point is illustrated by the mention of a specimen now in Owens College Museum in which there was a definite diverticular pouch with a sharp lunated edge projecting from the recto-vesical hollow down the anterior wall of the rectum. "It seemed," the writer adds, "probable that the presence of a coil of bowel in this pouch would have much to do with keeping down the prolapse." This observation, which appears to be novel, is valuable. In the third form of prolapsus recti, the upper part of the rectum or the sigmoid flexure is invaginated into the bowel below, and protruded from the anus. This is, however, as is pointed out, really a form of intussusception, and may be distinguished by observing the sulcus between the protruding bowel and the anus. In the severe forms of prolapse the application of Paquelin's cautery is advised, four or five narrow lines being drawn in the long axis of the gut from skin margin to near the anus. In intractable cases the excision of wedge-shaped strips is recommended, and a timely warning is given as to the danger of clamping and removing the protrusion. The peritoneal pouch above described probably exists in all severe cases, and may contain a coil of small intestine or the ovaries.

The malformations and deformities of the mouth and pharynx are dealt with in a discriminating manner, that is to say, the mode of origin and treatment of harelip and cleft palate are fully discussed, while brief notices are given of other rarer, and practically less important, malformations. A chapter headed Diseases of the Liver concludes the part of the book which deals with the digestive system, perhaps on the whole the most important section of any work on the diseases of children. Dr. Ashby mentions the frequency with which the liver may be observed to be enlarged in children, and attributes it "partly to its vascular nature, its veins being very readily distended, and partly also to the ready way in which it appears to store away fat." A fuller discussion of this matter, especially of the clinical significance of enlargement of the liver, as well as of the spleen, a subject which is very briefly dismissed, would not have been out of place; either or both may be a prominent physical sign in those transitory pyrexial disturbances in childhood, which are often the cause of much perplexity to the physician.

THE GREAT PLAGUE OF LONDON. An Address by MAJOR GREENWOOD, jun., delivered at the Westminster Town Hall, Saturday, May 11th, 1889, before the Association of Public Sanitary Inspectors of Great Britain.

As an effort to bring to the mind of men interested and occupied in sanitary work the relation which a great epidemic bears to the accompanying sanitary conditions of the locality where it occurs, this address is a very admirable one, and it is perhaps unfair to point out its shortcomings in logical analysis, since all that it professes to be is a popular paper.

That the great fire of London was the cause of the after freedom of that city from the plague, by necessitating the erection of better and more commodious dwellings, is one of the commonplaces of history. That a polluted river and an impure and inefficient water supply, together with narrow and tortuous streets and overcrowded houses, provided all the necessary environments for a great epidemic Dr. GREENWOOD shows; but that they were the sole antecedent causes and the fire of London the efficient cure of the disease he fails to prove. It would, in our opinion, be difficult to show that the sanitary condition of either London or the Thames was better in the latter third of the seventeenth century and the first half of the eighteenth than in the sixteenth and early two-thirds of the seventeenth centuries. That the streets were made the receptacles of both urine and excrement in the eighteenth century Hogarth shows us; that the Thames, Fleet Ditch, etc., were the common sewers of the city both poets and historians inform us, and that things were in as sanitarily dreadful a condition as they well could be even up to very recent times our own memories supply us with information. It is true that the plague epidemic of 1665 was the last one that devastated London, but was not this rather because the disease was retreating from Europe than because the great fire had improved the sanitation of the metropolis? It will be seen by consulting Hirsch that, with the exception of an isolated outbreak in Provence in 1720, in no country of Western Europe was there an epidemic of plague of any moment after 1681; and that Great Britain, Scandinavia, the Netherlands, and France were permanently free from the disease before 1669. That the fire of London cut short the plague in the metropolis is about as well-authenticated a historical fact as that Tenterden steeple was the cause of Goodwin Sands. That some factor in the antecedents which, *plus* infection, resulted in the plague, disappeared from Europe about the end of the first two-thirds of the seventeenth century is certain; what that factor was we understand too little about the natural history of the disease-germs to venture to decide.

It is a mistake to quote Defoe's *History of the Plague* in a serious

paper as an authority, since its author was only 4 years old at the time of the epidemic, and did not publish the journal until 1722, when he was 61 years of age. He was, moreover, always more celebrated for imagination than accuracy.

What authority can Dr. Greenwood produce for the statement that the streets of old cities were built in a winding manner for the purposes of defence? We fancy it would be difficult to prove this by contemporary evidence.

It is an amusing instance of the one-sided way in which people look at sanitary matters, that in the resulting discussion on this paper (published at the end) Mr. Stace, of Limehouse, and Mr. West, of Walthamstow, both agreed that the cholera epidemic of 1866 was not caused by the badness of the East London water supply, but by the dirty habits of the people; and we are sorry to see that Dr. Greenwood supports them in this conclusion by stating that there "was considerable doubt on the subject."

Historical epidemics may be traced to their true cause; for though the lapse of time renders this difficult, it has, at the same time, removed the vested interests and prejudices of contemporary people, which would have rendered it impossible. But modern epidemics must be traced "to the dirty habits of the people;" to publish the East London or any other water company as the cause of an epidemic would be too serious a danger to the rights of property.

WINDOWS OF CHARACTER, AND OTHER STUDIES IN SCIENCE AND ART. By Rev. EDWARD PAYSON THWING, M.D., Ph.D. London: S. W. Partridge and Co.

THIS is a little volume of inaugural and other addresses delivered in London and New York by a clergyman who, in addition to a high measure of training in his sacred calling, possesses the advantage of a medical education and sympathies with the science of the age. Given literary ability, such a man's words should be interesting to the thoughtful physician, and we think Professor THWING has been well advised to collect and republish his most suggestive, bright, and intelligent papers. Medical readers will be most interested by the lectures on "Psychological Studies," "Mental Automatism," "The Clinical and Forensic Study of Trance," and "The Basis of Remedial Science." The author demands that the educated doctor shall be a profound student of psychology. In his opinion the practical study of the principles of psychological science will bring to light newer and truer conceptions of man's nature and needs, and introduce a philosophy of human life more intelligent and humane than has yet prevailed. In the lecture on "Mental Automatism" we are shown how great a factor in human existence is the involuntary life. "Consciousness appears to be but a helpless spectator of a minute portion of a huge amount of automatic brain-work." The paragraphs on abnormal mental automatism are particularly interesting. Trance as a remedy for sea-sickness by restoring nervous equilibrium sounds like quackery, but in these days of hypnotism it is unscientific to dismiss such suggestions with contempt. Our wisdom will be shown "in maintaining a reserve of possibility" in reference to such subjects as hypnotic phenomena and thought transference. The weak point in this branch of psychology is the facility for, not to say the inducement to, fraud. The chapter on "The Basis of Remedial Science" is exceedingly suggestive and well done. "The man," says Dr. Thwing, "is to be treated as well as the malady; his own mind is to be regarded as oftentimes a more potential ally than the diets or the drugs." Here again we may open the door to such quackeries as "mind cure," "Christian science healing," "faith cures," and the like. We heartily agree with the author that there are faith cures with which faith has really little to do. Perhaps "hope cure" would be a better term. Any way, "we must treat the soul as well as the spleen," as Dr. Gould says.

Not the least interesting features of Professor Thwing's book are his copious quotations. He culls from a wide field of reading brilliant illustrations from scientists and philosophers. By the apt use he makes of these he is acquitted from the charge of padding. Mr. Spurgeon once said, "He who never quotes will never be quoted." Professor Thwing enhances the value of his gems by his artistic setting. A medical man who has a son or a pupil at a hospital might do worse than purchase a copy of *Windows of Character*, read it carefully himself, and send it on to the young fellow who is grinding up bones and peering through microscopes, and perhaps flattering himself that with a "higher power" and more complicated apparatus he will one day discover the mystery of man.

NOTES ON BOOKS.

Du Tamponnement Utérin en Gynécologie Appliqué à la Dilatation et à la Thérapeutique. Par le Dr. A. BÉTRIX, Ancien Médecin Assistant de Clinique Obstétricale et Gynécologique à la Maternité de Genève. (Paris: Lecrosnier et Babé. Genève: Stapelmohr.) [On the Application of the Uterine Tampon in Gynæcology for Dilatation and for Therapeutic Purposes.].—Dr. Bétrix is an extreme advocate of the uterine tampon. That contrivance alone, he thinks, is sufficient when dilatation of the uterine cavity is desired in order to allow of the introduction of the finger or of a large catheter. When the cavity is to be subjected to some operative measure, or kept open for a long period, the tampon may be used at first in conjunction with other dilating agents, such as metallic bougies or laminaria. In these cases, however, the dilatation, once effected, should be maintained by the tampon alone, and may be prolonged "*ad libitum*" (such are Dr. Bétrix's words) without fear of accidents. The author greatly prefers the uterine to the vaginal tampon in cases of hæmorrhage. Medicated tampons act beneficially in gonorrhœal and tuberculous endometritis. Like others of the Genevese school, Dr. Bétrix places much reliance in massage; but, true to his own especial doctrines, he would combine massage with *tamponnement* in cases of flexion and chronic disease of the appendages. In cancer, the tampon allows the application of antiseptic and deodorising agents to the uterine cavity, and keeps diseased surfaces apart. Dr. Bétrix must not be blamed too much for looking upon his system as a gynæcological panacea; he has seen it properly carried out by Dr. Vaucher and others with excellent results. His readers will do well, however, to remember that interfering with the uterine cavity is a proceeding almost as dangerous in unskilled hands as removal of the uterine appendages. The inexperienced should never be allowed to acquire the notion (too ready to enter their heads) that tampons and sounds are mere tools like the stethoscope or measuring tape, their application involving no danger, and affording sure diagnosis; nor should the beginner be deceived into thinking that while operations on the female organs from the abdominal side are "major," those performed from the vaginal side are "minor." The application of the tampon is a true operation, requiring great care, and the resulting dilatation may be of no profit in aiding the inexperienced in diagnosis. For men who have enjoyed experience in uterine and pelvic diseases, Dr. Bétrix's work is of distinct value.

Spinal Caries: Operative Treatment: Laminectomy. By H F. WILLARD, M.D.—This is a reprint from the *Transactions* of the College of Physicians of Philadelphia, and is a summary of modern opinions on the subject, but without any cases or any new light to guide the worker. Dr. Macewen, of Glasgow, is the chief and almost only authority from whom Dr. Willard takes his cue; and his summary of the present state of our knowledge concludes with the observation that trephining, or, as he prefers to call it by the hybrid term "laminectomy," is permissible when, "after persistent treatment by suspension and fixation, complete motor and sensory paralysis, with spastic rigidity of the muscles, exists, together with exaggerated reflexes which have been present, but which have after a time subsided or been lost." What this may mean is not at all clear, and we do not think our knowledge will have been advanced by this paper. Mr. Thorburn's recent work might be recommended to the author for perusal.

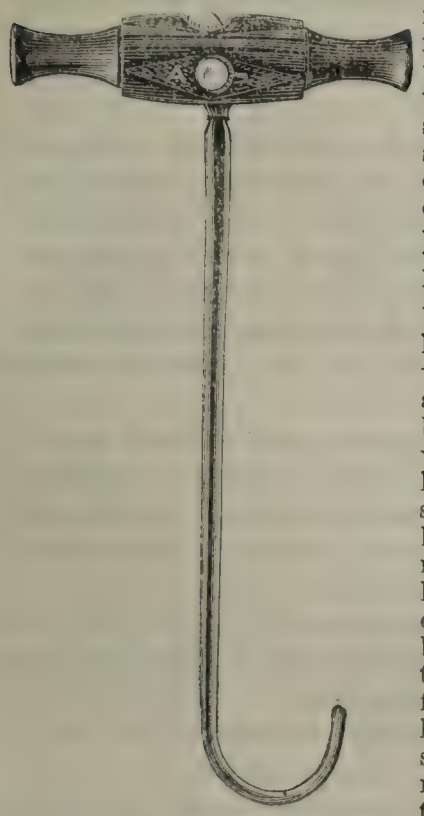
On the Physiology of the Vascular System; Three Lectures delivered at the Royal College of Surgeons. By MARK PURCELL MAYO COLLIER, M.B., M.S.Lond., F.R.C.S., Professor of Comparative Anatomy and Physiology at the Royal College of Surgeons, England; Demonstrator of Anatomy at the London Hospital Medical College; and Senior Assistant Surgeon to the North-West London Hospital. (London: H. K. Lewis.).—That a series of lectures, including theories so important as those propounded by Mr. Mayo Collier, should be published is only right. They are issued in the form of a small but highly instructive volume; and, notwithstanding the extreme complexity of latter-day physiology, the lecturer makes himself intelligible not only to experts, but also to those who in science schools or in schools of medicine have learnt the rudiments of physiological lore, but have not worked

specially at the circulation since their tutelage. His important modifications of former doctrines relating to the mechanism of the auricles and ventricles, and the cause of the heart-sounds, constitute the substance of Mr. Mayo Collier's lectures, and deserve very careful consideration.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

MODIFIED TRACTION HOOK.

As in the use of any mechanical aid to employ traction on a presenting portion of the child it is very desirable that Nature's method of giving a screw-like movement to the part as it advances from the pelvic brim through the cavity and outlet should not be opposed, it has seemed to me that in using the ordinary blunt hook with straight or transverse fixed handle we were preventing this screw-like movement, and merely using straight traction, I had a blunt hook made with transverse handle, in which the stem revolved. This answered perfectly as far as traction was concerned, but in use I found that it was very difficult to adjust, as the highly polished stem was too slippery to be controlled by the hand. Accordingly, I had one made, of which I enclose an outline. In this the handle can with ease be fixed or allowed to revolve by removing a side screw A, so that the operator with the handle fixed can perfectly control the hook however far it may be inserted, and yet can, after adjustment by removing the screw, use traction, which allows the stem to revolve, and the presenting part to advance in the same manner as Nature herself. The blunt hook thus modified has been made for me most satisfactorily by Messrs. Walters and Co., of Moorgate Street.

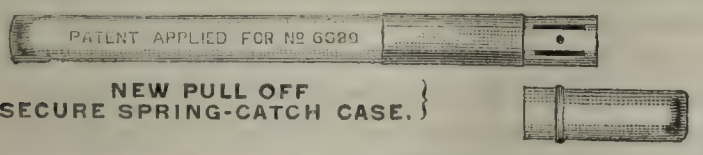


ASHBY G. OSBORN.

Dover.

A SPRING CATCH THERMOMETER CASE.

A NEW case, to replace the clinical thermometer case with ordinary screw or "pull-off" tops, is manufactured by Mr. S. G. Denton, of 25A, Hatton Garden. The construction is sufficiently explained by the engraving. As will be seen, the socket on to



which the top fits is split and carries a button, the arrangement forming a spring which holds the top with sufficient firmness to prevent its slipping off, while permitting it to be instantaneously pulled off. The invention is simple, and is likely to be found very convenient.

A PORTABLE HYPODERMIC SYRINGE.

THE accompanying woodcut represents a new portable hypodermic syringe, which will be found much more convenient to carry than the ordinary bulky box containing the usual syringe and bottles, and which in times of emergency is often absent from the pocket of the surgeon, owing simply to this bulkiness.

The instrument I have devised may be always kept in readiness in the pocket of the surgeon like an ordinary pencil case, for its entire length is about four inches, and is represented by figure A.

This instrument has been arranged for the use of tabloids, which are much more convenient for general use, as each tabloid is of a definite strength and does not deteriorate by keeping; neither are they affected by climate, like the fluid solutions.

The syringe B may be used for the injection of fluids in bulk, as ether, etc., and has been graduated on the metal case for this purpose. It has been furnished with two needles; the one C, after having been used, is replaced on the syringe B, and then fits into the centre of the case G when this has been screwed on to the syringe B. The second needle D, with rigid wire E, is passed into the hollow piston of the handle. Figure G represents the metal case in which are placed three tubes, in each of which are twenty tabloids (Burroughs and Wellcome's), also a small glass pestle for triturating the tabloid, when required for use, in the metal cap F, which is intended to be used for this purpose.

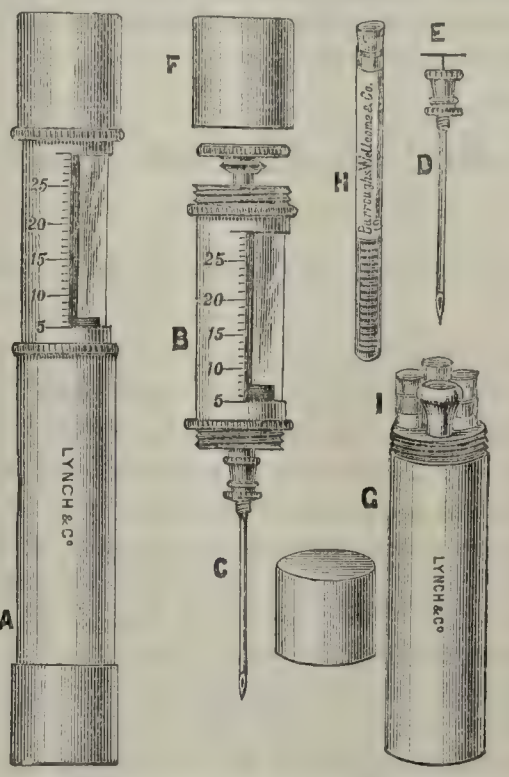


Figure H represents the ordinary tube of tabloids.

This convenient instrument has been constructed for me by Messrs. Lynch and Co., Aldersgate Street, London.

A. HERBERT BUTCHER,
Honorary Surgeon, Birkenhead Borough Hospital.

GLOUCESTERSHIRE COMBINED (Population, 93,686).—*Severe Prevalence of Measles: Absence of other Zymotics: Neglect of Vaccination.*—This combination of sanitary districts was materially curtailed in extent during 1888 by the secession of two authorities, and Dr. Francis Bond's annual report for that year deals with a lessened area and a diminished population. The gross mortality of the district as at present constituted was at the rate of 15.1 per 1,000, a reduction of 0.5 upon the previous year. In those separate districts in which the death-rate was higher, the increase was mainly caused by a heavy mortality from measles. The report, as might be expected from so experienced and conscientious an officer as Dr. Bond, contains an excellent account of each portion of the district, the incidence of zymotic disease being described and the cases of special interest particularised. With the exception of a very serious and extensive epidemic of measles, the absence of epidemic disease has never been so marked during the past fifteen years. Continued fever, scarlet fever, diphtheria, whooping-cough, and diarrhœa all show a decline of mortality to at least as low, and in most cases to a lower point, than they have before attained during that period. Not a single case of small-pox came under notice, but Dr. Bond has to deplore the systematic disregard of vaccination in the Gloucester Union. Unfortunately the reckless assertions and invectives of the energetic but imperfectly informed opponents of vaccination have had the desired effect in the Gloucester district. It is to be hoped that those who have thus been misled may not have a disastrous awakening.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1889.

SUBSCRIPTIONS to the Association for 1889 became due on January 1st; and notice is hereby given, in accordance with by-law 5, that Branch Secretaries' subscription-accounts close on October 31st, and all unpaid subscriptions must be forwarded, after that date, to the General Secretary, 429, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, NOVEMBER 16TH, 1889.

OPEN-AIR TREATMENT OF PHTHISIS.

AMONG the many changes which have taken place in the treatment of phthisis in the last forcy yeas, none is more marked than the substitution of a system of bracing and hardening the patient for one of "coddling," and foremost in this plan is the principle of open air, or exposure of the patient as much as possible by day and by night to the influence of the atmosphere. The great object of change of climate is to afford greater facilities for this process, and it appears from the testimony of most authorities that the meteorological phenomena which interfere with the success of the system in England are not the coldness of the climate, but its humidity and the prevalence of fog and mist, and the fear of exposure to these elements prevents its being completely carried out here.

There is no question now that cases not only of non-pyrexial, but also of pyrexial phthisis are favourably influenced by open-air treatment, which produces a diminution of the troublesome symptoms such as high temperature and night-sweats. The plan, though adopted at several places on the Continent, is perhaps most completely carried out at Dr. Dettweiler's large establishment at Falkenstein, in the Taunus Mountains, at an elevation of 400 mètres above sea level, and it may be well to quote M. Pouzet's description of a recent visit to Falkenstein.[1]

The consumptives are placed on open balconies, sheltered from wind and exposed to the sun. Here, on mattresses or bamboo couches, they recline in loose but warm clothing, with tables alongside for books, letters, etc., and the inevitable glass of milk; or they sit in shelters movable on pivots to protect them from wind, or in kiosks with open sides, but, whatever the form of protection, the invalids live all day in the open air, independent of the state of the weather.

Dr. Dettweiler appears to be a rigid disciplinarian, and to enforce early rising, with fines and the pain of dismissal, and the patient commences the day with a friction to the skin in the form of a dry rub, or with a towel moistened with water or alcohol, but the stronger patients are submitted to the action of the douche.

After a rather simple breakfast, which would not satisfy all English patients, they betake themselves to their couches, from which they occasionally rise to take short walks, generally up a gentle slope, at the same time throwing back the shoulders, and each quarter of an hour drawing at least ten full deep inspirations through the nose, and thus emptying and filling completely the organs of respiration. The more hardy take long walks in the neighbouring forest.

The dinner and supper are both substantial meals, washed down by red or white wine, and milk is taken between times. Expectoration into handkerchiefs or on the ground is forbidden, and patients are furnished with ordinary spittoons or portable ones on the pattern described in the BRITISH MEDICAL JOURNAL of October 12th, 1889.

The patients sleep with the windows of their bedrooms open at the top, and all curtains, carpets, or hangings are carefully removed. Stoves appear only to be allowed to be lit during dressing in the morning, and never at night, but sleeping in woollen underclothing, and the avoidance of too many coverings to the bed, is advised.

The French physicians appear to be likewise advocating the open-air treatment of phthisis, and especially sleeping with windows open, but some of them object to the common-sense practice of sleeping in flannel, for fear of promoting perspiration, which they say is so tiresome a complication of phthisis—confounding this, it seems, with the characteristic night-sweats which it is well known are a form of watery flux quite independent of clothing or of pyrexia.

The system of open-air treatment pursued at Davos and St. Moritz differs from that pursued by Dr. Dettweiler at Falkenstein in the larger amount of lung gymnastics it includes, and far surpasses it in results, but these must be largely credited to the effect of the mountain climate.

The douches to the chest, which were formerly largely used at Davos as a means of promoting deep inspirations, have lately been, for the most part, abandoned, probably owing to the great dislike of English and other patients to their use in winter, and to the same result being pleasantly arrived at by the more agreeable exercises of mountain ascents, tobogganning, etc.

It is doubtful whether in England we are sufficiently alive to the advantages of the open-air treatment in phthisis, for though in our palatial hospitals the systems of ventilation and warming have been carried to a high state of perfection, and the atmosphere is changed frequently and without draught, the exposure of the consumptive patient on a terrace or balcony to the sun's rays and free breezes of heaven would probably be far more beneficial, provided the effects of chill and damp were guarded against. Even in pyrexial phthisis the removal of the consumptive's bed from the hot ward to a cool covered terrace is often accompanied by beneficial results, and we commend this treatment to the medical men who have charge of consumptive patients.

[1] *Revue Générale de Clinique et Therapeutique.*

"DETECTIVE MEDICINE."

ATTENTION has been called to some instances of frustrated malingering gathered from the current Blue-Book reports of Her Majesty's Convict Prisons. The cases quoted are those of assumed paralysis and epilepsy, in commenting upon which reference is made to the apparent facility with which detection was arrived at. We are disposed to think that the determining of the true nature of many cases of the kind referred to,

and the subsequent "cures," entail a far greater effort of observation, ingenuity, and patience than might be supposed on the perusal of their narration as completed events. Of course there are many trivial examples of malingering which can be easily disposed of, but, to our thinking, every case of serious malingering "cured" means a small perhaps, but exacting campaign, successfully planned and carried through. There can be no doubt that the variety and multiplicity of devices resorted to by the more confirmed exponents of this imposing art show a remarkable degree of ingenuity, perverted, it is true; and cases arise where special opportunity of gaining knowledge of the more subtle signs of disease must have been found, and fully and intelligently turned to account, otherwise how could we see exhibitions in which such indications as "ankle clonus" and inequality of the pupils have been brought to bear fictitiously and appropriately as parts of schemes of simulation? What resources does an impostor evidence who can at will produce a copious hæmatemesis by swallowing fragments of glass, and proceeding to knead his stomach by external pressure!

In addition to the infinite varieties of physical malingering, there are, of course, many subtle forms of assumed insanity which tax even expert alienists, and indeed for a time even baffle their diagnostic powers. It must, moreover, be borne in mind, when gauging the difficulties which beset the whole subject, that so determined and reckless are some men—and women, too—in their career of imposture, more especially amongst the criminal classes, that they only stop short at a point where actual danger to life becomes imminent; and so far, sometimes, has the self-induced mischief advanced that the voluntary effort at recuperation, prompted at last by the instinct of self-preservation, has come too late, and death has been the result. Of course we are referring now to cases where there has been no question of real suicidal tendency, or of any form of insanity in its usually accepted sense.

Enough has been said to indicate the intricacies and difficulties which must beset the practitioner who has to cope with the more expert class of malingerers; but, in prison practice especially, the battle is only half fought when the impostor has been run to earth, for there yet remains the task of inducing in such a creature the moral change which shall incline him to return to the ordinary course of the duties and customs of life around him; and here, in truth, no science taught in schools can aid the physician. Here, often close insight into human nature and the mainsprings of action, backed up by bold device, must be called into play, and, as probably no two natures will in a given circumstance respond to the same stimulus, a discerning selection of means must be made. The promptings of pride, shame, honour, and indeed a multitude of elements, must be brought into play—each in its appropriate moment; and in this *rôle* he will prove to be the most successful tactician who is trammelled by no preconceived routine of conduct, and whose perceptions are open to each and every feature which reveals itself, as affording a target to the shafts of his own individuality; and here it may be remarked that pride, shame, and honour are potent elements, even in the breasts of convicts; and the medical man who feels the effects of their potency and respects these powerful sources of stimulus will find in them his best aids in endeavouring to recall a malingerer from his perverse and oblique line of action.

It is well to remember that malingering is not confined to the convict's cell, but is to be found at times in a greater or less degree wherever men or women are; for it is a fact that some natures, in all else honourable, but perhaps not overweighted with principle, will feign illness when a sufficient motive exists, but the motive is often far from evident. The "victim" of a railway accident is sometimes a malingerer of as deep a dye as the convicted felon, and in varying degrees assumed maladies are rife around us. Thus this form of deceit must always find a place in any practitioner's mind, and he who would not trip in his work must remember these peculiarities of human nature. He must, however, keep his observations discreetly within himself, and whilst he uses his facts he must, above all, beware of taxing his "patient" bluntly with his discovery, or he may regret the results. The moral influence which is paramount in these branches of practice must be gained by science, it is true; but science must be guided in its action by opportunity, discretion, and tact.

LABOUR, RECREATION, AND PLAY.

WHILE labour strikes are of constant occurrence, when schoolboys complain of being compelled to play games, and school urchins parade the streets as a protest against "parsing and home lessons," it may be interesting to consider the conditions, healthful or otherwise, which are at work upon the mental structure of the population as the evolution of our present civilisation proceeds. The social demonstrations referred to are probably connected, not by an organisation for agitation, but by widely-spread natural causes acting upon humanity. Men who are utterly prostrate less often bestir themselves to better their condition, or to obtain what they believe to be advantages for themselves; it is those who have some spontaneity that agitate successfully and bring about a useful result. An utterly down-trodden and exhausted population does not agitate or communicate among its members by mental processes, argue, then show its strength, and finally win—it explodes. It is the weak-brained population that is to be feared as a source of social trouble; among whatever social classes it be found, the weak brain is liable to convulsive uncontrolled outbursts of force. The better class brains are possessed of some spare power and capacity for thought, and these bring about the social changes that are useful and improve the State. On the contrary, men long hardly pressed, degraded by deprivation of all means of healthy mental impressions, may act suddenly and wildly, producing devastation. It is the ill-organised and weakened brains that are most to be dreaded as dangers to society and civilised order; the prevention of such conditions is one of the highest departments of hygiene. In the recent events referred to, in the labour strikes particularly, we see signs that a portion of the population have that healthy spontaneity of nerve system which leads to fresh lines of action—not always convenient to others, but such as may be organised for the improvement of a class.

The labour question stands differently as regards women; and wrong lines of action in these matters, though equally certain to lead to evil results, may be manifested in other

ways equally baneful to society as rioting and disturbance of commercial relations.

The nerve system of the female differs in several characters from the male; it is more mobile, quicker in action, more easily affected by external conditions at the moment of action, more liable to chronic exhaustion of power. The conditions of inheritance in children, the make, not only of the body but also of the nerve system, probably depend largely upon antecedent conditions of the mother. The present high percentage of neurotic children, as well as those with ill-made brains, may probably be traced in large part to antecedents in the mothers. The condition of future generations is, without doubt, largely dependent upon the state of the female portion of the population engaged in labour.

In the school boy's plea to be let off from organised games and home lessons, there seems an unwillingness to submit to that control from without which is the only means by which mental spontaneity is co-ordinated to the conditions of well regulated and useful social life.

The general results of observation appear to indicate progress in the average conditions of development, and more spontaneity of the nerve system among the population; to favour such progress should be one of the highest aims of hygienic science. The social reformer would do well to investigate the proportion of cases of exhaustion and ill development among various classes, as well as conditions of ill living and bad environment; improved surroundings, better food, and recreation undoubtedly tend to improve mental power. Depressing circumstances of life, acting upon plant, animal, or man, tend to produce "sports" and reversions, represented in the human species by ill-made bodies and feeble minds. Education is trained spontaneity, and depends for its success on the impressionability of the subject and its capacity for co-ordination of action: hence in school life submission to training is essential. The public school boy needs his games to bring him into the social system; he usually has plenty of spontaneity by inheritance, but this needs culture. The school board child needs encouragement in play, and teaching to organise his play as games in which he becomes associated with his companions.

THE Manchester medical students' dinner took place on November 5th—Dr. G. W. Mould, of Cheadle, in the chair. There was a large attendance of medical students and members of the teaching staff, the number being over 100.

As was anticipated, the result of the Metropolitan Hospital Sunday Fund, which closed its financial year on October 31st, shows an increase over that of any previous year. The sum collected reaches the total amount of £41,744 12s. 11d., representing an increase of £1,137 5s. 3d.

M. PASTEUR has addressed a letter to the late Lord Mayor acknowledging, in the name of the Council of the Pasteur Institute and his own, the receipt of the sum of 40,000 francs voted by the Mansion House Committee as a donation to the Pasteur Institute, with an expression of grateful thanks for the valuable donation and the "flattering" reference to the results obtained through the application of his investigations.

THE remains of the late Mr. Haynes Walton, F.R.C.S., consulting surgeon to St. Mary's Hospital, were on Saturday last cremated at Woking, in accordance with his earnest desire, expressed many months before his death. The ashes were afterwards deposited in the family grave at Kensal Green.

THE report of the Health Committee of the Lancashire County Council, recommending the appointment of a medical officer of health for the administrative Council of Lancaster, at a salary of £800 per annum, has been referred back for report as to the duties of such an officer and the legal powers he would possess to enforce sanitary legislation.

THE Bradshaw Lecture at the Royal College of Surgeons will be delivered on Thursday, December 5th, at 5 P.M., in the Theatre of the College, by Mr. Thomas Bryant, one of the vice-presidents. The subject which the lecturer has chosen is "Colotomy, Lumbar and Iliac, with special reference to the choice of operation."

THE session of the General Medical Council commences on Tuesday, November 26th. At the meeting of the Executive Committee, which takes place on the previous day, the finances of the Council will probably demand very serious consideration. Several applications for restitution to the *Medical Register* will come before the Council, but the chief business of the session will probably be a discussion on the practical element in medical education, arising out of the inspectors' reports.

EPIDEMIC PNEUMONIA.

THE circumstances attending the death of Mr. Storrs, of Doncaster, which occurred on October 30th, and of his assistant a week later, are singular and particularly sad. Mr. Storrs had been attending a patient who died of acute pneumonia. A day or two after his decease Mr. Storrs sickened, and after three days' illness succumbed to the same disease. The day following Mr. Storrs's death, Dr. Adams, his assistant, was prostrated by an attack of acute pneumonia, and died at the end of a week. He was only 30 years of age.

THE SALE OF POISONS.

THE decision of the Judge of the Wandsworth County Court, in a prosecution instituted by the Council of the Pharmaceutical Society, may affect future dealings in poisons in this country to an extent that is not apparent at first sight. Hitherto it has been assumed practically that the qualification of a person keeping an open shop in which poisons are sold covered the act of a servant who might effect the sale. If the present decision stands, however, it will follow that the actual conduct of the sale of scheduled poisons must be by qualified persons, under liability of a penalty of £5 for each breach of the law. This will no doubt involve some inconvenience to owners of shops who do not keep qualified assistants; but, on the other hand, the safety of the public will be increased, and probably even the interests of these owners will be served by an accentuation in the eyes of the public of the difference between the skilled and the unskilled dealer. The decision is of considerable importance also to those medical men who keep open shops for the retailing of medicines.

TRIALS OF POISONING CASES.

THAT the whole system of medical testimony in criminal cases, and especially in cases of poisoning, is unsatisfactory will probably be universally admitted. Whether the often proposed court of criminal appeal would be any remedy is at least doubtful. A correspondent of a leading daily contemporary, who styles himself "Emeritus," thinks we could not do better than adopt the

German custom. In Germany the rule is in any case of supposed poisoning for a preliminary investigation to be made by eminent medical men on behalf of the State, and, if they report that death was due to poisoning, then a trial is conducted to determine whether the death was the result of accident, suicide, or murder, it not being disputed that the death was due to poison. Such a system has much to recommend it; but we doubt whether it could be safely introduced here, unless or until the system of trial by jury is modified or overthrown, though, of course, no body of men could be more ill-fitted to decide between conflicting scientific witnesses than the ordinary British jury.

THE CURE OF ROARING IN HORSES.

It is not long since the operation of laryngotomy was announced as an infallible cure of roaring in horses, and there can be no doubt that a good many roarers were very decidedly benefited by the operation, which consisted of an incision through the cricothyroid membrane and cricoid cartilage, and the removal, if we understood the directions aright, of the left vocal cord and arytenoid cartilage. It now appears, however, from a case recorded by Professor Walley, that this operation may completely fail. A horse was purchased at Tattersall's in the early part of last summer; he proved to be a roarer, and his respiration became so much embarrassed that tracheotomy was performed. Two months later the animal died suddenly whilst the cannula was being cleaned, and on *post-mortem* examination it was discovered that an operation had been performed at some previous time, and that the left arytenoid cartilage had been removed. It is said that the operation has already been discontinued in the army upon instructions from headquarters, and it is highly probable that we shall hear very little more of this method of curing roaring in horses.

A CURIOUS BILL.

We have received a copy of a Bill entitled "The Foreign and Colonial Medical Practitioners Law, 1889," which is being introduced into the Legislative Council of Jamaica by an elected member, Mr. Bourke. The first clause of the Bill runs as follows:—"1. Notwithstanding anything in any law to the contrary, it shall be lawful for any person holding a diploma, licence, or certificate in respect of a qualification according to the allopathic, homœopathic or electric (*sic*) systems, from any one of the universities, colleges, or schools of medicine or surgery mentioned in the schedule hereto, or which may, as hereinafter provided, be added thereto, be entitled to be registered in this island as a practitioner in medicine and surgery, or in medicine or surgery, in the same way and to the same extent as British medical practitioners may now or hereafter be registered." Mr. Bourke shows that he is very little acquainted with the subject of medical education and qualification in drafting such a clause. The possession of diplomas such as some of those above indicated would be no guarantee whatever that the person holding them has any skill or knowledge in the treatment of disease such as should be required under a Registration Act. The Bill cannot be taken seriously, and will, we should hope, receive no support.

HORSE AS BEEF AND SAUSAGES.

A few days ago, at Newcastle-on-Tyne, a glimpse was afforded of a disgusting traffic being carried on between that port and Antwerp. Charles Lowther and William Miller were charged at the local police court with cruelty to animals. According to the evidence given, two trucks loaded with horses had just arrived from Carlisle, and were found to be in "a shocking' condition;" but, although this was complained of by a police inspector, the defendants insisted on putting the horses on board the Antwerp boat. A man on the quay said that every week horses were shipped to Antwerp for the purpose of being made into beef. The Inspector for the Royal Society for the Prevention of Cruelty to Animals deposed that forty-nine horses were shipped that morning. He had been told that when they arrived at Antwerp the horses were sorted, the first-class ones being made into beef and the second-class into sausages. Whether there were any which would rank as third-class, and, if so, what became of them, was not stated. An ex-Mayor of Newcastle said he understood the horses were examined at Antwerp by a Government inspector, and the diseased ones rejected. As the offence charged—cruelty—was proved, the defendants were each fined 20s. and costs. It would appear that all the defendants will have to do in future to avoid being brought into the police court will be to avoid doing anything cruel. So long as they do not export animals too sick or infirm to travel and do not overcrowd them, etc., they may carry on their business with impunity, and there is no law to prevent them. If, however, the horses thus shipped to Antwerp should be reimported into this country as salt beef or pork sausages, there is full power to seize them, provided only they could be recognised as horseflesh.

SYSTEMATIC INFECTION BY OÏDIUM ALBICANS.

MM. G. Roux and Linossier, who have been making a thorough morphological and biological examination of the oïdium albicans, reported to the Société des Sciences Médicales of Lyons during October the results they had obtained with regard to the occurrence of systemic infection. They used artificial cultivations grown on carrots, the fungus under these conditions growing only in the torular form. Two rabbits were inoculated by injection into the auricular vein. One animal remained perfectly well until the fifteenth day, when it suddenly became paraplegic and rapidly died. The other, which received a smaller quantity of the culture, was more rapidly affected; on the day after the inoculation it was dull, passed but little urine, and the head and ears were inclined to the left; after the second day no urine was passed; and on the fourth day the animal lay on its left side, owing, it was thought, to giddiness. In both animals the cortical substance of the kidneys and the muscular substance of the heart contained numerous small white nodules like large miliary tubercles, and consisting of tangled masses of the filaments which under certain conditions are known to develop from the torular form of oïdium albicans. In neither case were any lesions of the central nervous system or of the labyrinthine canals discovered, but MM. Roux and Linossier point out the resemblance of the symptoms in the second rabbit to those observed by Lichtheim after injection of *aspergillus*. These observations extend and confirm those of Klemperer, and lend support to the view, based upon a few scattered clinical records, that the oïdium, which is usually strictly limited to the epithelium, occasionally enters the circulation, and may give rise to systemic infection and serious visceral lesions—even multiple cerebral abscess (Zenker, Robbert).

IRISH MEDICAL SCHOOLS' AND GRADUATES' ASSOCIATION.

The autumnal general meeting of this Association took place at 11, Chandos Street, London, on November 7th. Dr. Richard Fegan (Blackheath), President, was in the chair. The chairman of Council, on behalf of the members of Council, presented to Dr. James Stewart an illuminated address and a handsome clock, in recognition of his labours for the Association as one of its honorary secretaries for the last five years, and as a mark of their personal regard. An alteration of Rule VII, enabling the Council to increase the number of honorary secretaries, was then proposed, seconded, and adopted. On the proposition of Dr. Stewart, a vote of sympathy was passed to Dr.

John Eadie, of Yeovil, a member of the Association, on the occasion of the false charge to which he had been recently subjected. On the motion of Dr. Abraham, seconded by Sir Thomas Crawford, a vote of congratulation to Sir John Thomas Banks, K.C.B., a Vice-President and former President of the Association, was adopted on the occasion of the distinguished honours of which he has recently been the recipient. On the same evening fifty-four members and their friends dined together at the Holborn Restaurant, the President in the chair. After the loyal toasts had been given and received with musical honours Dr. White proposed "H. M. Services," which was responded to by Surgeon J. O'B. Williams, R.N., and Surgeon-Major Norton, Commandant Volunteer Medical Service. The President gave "The Guests," for whom Mr. Ernest Hart and Dr. Stewart responded. The toast of the evening, "The Association," was then given by Professor Curnow, and acknowledged by Dr. Gilbart Smith. The President's health was proposed by Sir Thomas Crawford, and other speeeches followed. A musical programme was rendered by Messrs. W. B. Martin, Cummins, R. and H. Turner, Taylor, Bentham, and Drs. P. S. Abraham, Brown, and Campbell Pope.

THE LATE KING OF PORTUGAL.

FROM a detailed account of the last illness of the late Dom Luiz I of Portugal, which has recently been published in a Lisbon medical journal,[1] it appears that His Majesty had suffered from diabetes for some time before his death. Two years ago a large tumour formed near the point of attachment of one of the upper limbs to the trunk; this naturally caused the gravest anxiety, more particularly as there was a cancerous element in his family history, but the swelling proved to be of inflammatory nature and subsided under appropriate treatment. For the rest of His Majesty's life, however, there was a marked tendency to glandular enlargement in various parts of the body. Some time ago symptoms of inflammation of the spinal cord showed themselves, and the King suffered much from neuralgic pains in the sciatic nerves, and later on from paraplegia. In the last months of his life he suffered most severely from gangrenous ulceration, involving extensive areas of the cutaneous surface, especially on the back and the extremities. Professor Neumann, who was called in towards the end, could only confirm the unfavourable prognosis of the nine Portuguese physicians in attendance. The immediate cause of death appears to have been the exhaustion of fever caused by absorption of septic products from the extensive ulcerated surfaces. The most revolting details were published by the Portuguese political press, a violation of the decencies of journalism, for which they are justly censured by our professional contemporary.

TYPHUS FEVER IN SOUTH LONDON.

MEDICAL practitioners in London will do well to be warned in time by the fact that several cases of typhus fever have recently been removed to one of the hospitals of the Metropolitan Asylums Board from a crowded court in Horselydown. This disease is one peculiarly liable to be mistaken for some other disorder in its earlier stages. As Dr. Buchanan, the Medical Officer of the Local Government Board, remarked in his Annual Report for 1886, "One of the chief difficulties of sanitary authorities in dealing with typhus that has already appeared in their district arises from the unfamiliarity of medical practitioners with the disease. Younger generations of them have never seen typhus, and early cases of this disease are repeatedly confused with enteric (so-called 'typhoid') fever. Even medical officers of health have made this confusion." "Until the time shall come," adds Dr. Buchanan, "when masses of population, brought down to nearly starvation point, shall cease to inhabit foul courts into which no air can enter, and to huddle their miserable families into rooms that ought not to hold the half of them, we cannot hope that typhus will not appear again and again in our English towns. But typhus is a disease that sanitary authorities have two potent means of checking: the one by using such means as the law provides for preventing overcrowding and for exercising due supervision over common lodging houses and other houses let in lodgings; the other by providing their districts with isolation hospitals, to which the very earliest cases of the disease should be removed."

[1] *O Correio Medico de Lisboa*, November 1st.

THE EFFECT OF HYSTERECTOMY ON THE OVARIES.

THIS question is of high interest now that the appendages are so often removed, whilst, on the other hand, the uterus is frequently extirpated. Professor Grammatikati recently experimented on rabbits to gain knowledge which might throw light on three questions. First, what changes in the ovaries follow total extirpation of the uterus? Secondly, when one uterine cornu is removed, what alterations take place in the corresponding ovary? Thirdly, does it make any difference in the second case, if the cornu alone be removed or the corresponding Fallopian tube cut away with it? He found that when the uterus was removed and the ovaries left intact, the latter continued to discharge their functions. If the subject were killed long after the operation the follicles were found in every stage of development together with recent corpora lutea. The removal of one cornu, whether with or without its tube, had no influence on the functions of the ovary. These researches were confirmed by the examination of the ovaries of a woman who died three years after total extirpation of the uterus. These organs showed no trace of atrophy, and follicles and corpora lutea were detected in every stage of development. Professor Grammatikati's paper appeared in the *Centralblatt für Gynäkologie*, No. 7, 1889. His conclusions tend to induce operators to remove the ovaries whenever hysterectomy is performed, so as to spare the patient from the ill effects produced by the persistence of active but useless ovaries.

LETTING OF TENEMENT HOUSES.

THE case of Walker *v.* Hobbs, reported in the November number of the *Law Reports* for this year, is one which should be generally known. As we have several times pointed out, the Housing of the Working Classes Act, 1885, 48 and 49 Vict., c. 72, imposed a fresh liability on owners of house property by providing that, in contracts for letting houses for habitation by persons of the working classes, there shall be an implied condition that the house is reasonably fit for human habitation. This enactment altered the general rule under which the tenant is bound to see that the house he takes is habitable, and has no remedy, if he gets a bad bargain, through his own failure to make proper inquiries; so that, since 1885, the legal position of a tenant belonging to the working classes has been better than that of other tenants. The case now reported is, so far as we know, the first in which the meaning of the Act has come under the consideration of the Judges of the High Court. The tenant, about eight months after taking the premises in question, was injured by the fall of some plaster from a ceiling, which was in a defective condition at the time when they were let. He brought his action and recovered damages, on the ground that the landlord had broken the condition which the law implied against him in the letting of such premises. It was argued on behalf of the landlord that the statute gave the tenant no right of action, but merely a right to leave the premises if the legal condition as to their being fit for habitation should not be fulfilled. The County Court Judge at Lambeth, and Lord Coleridge and Mr. Justice Mathew on appeal, held, however, that this argument was unfounded, that the tenant has a right of action in

such cases. His right to recover the damages awarded by the jury was, therefore, affirmed; and the liability of landlords who let defective tenements to working class tenants is established. This decision is a confirmation of the view which we have previously held of the meaning of the statute, and may lead to a better appreciation of the legal position of the owners of houses let in tenements to the working classes.

MIDWIFERY IN KAZAN.

Dr. Looff has issued a report of the Obstetrical Department of the Provincial Hospital at Kazan, from September, 1887, to September, 1888. Like the managers of most other institutions, he makes a serious complaint that a large number of applicants have to be refused admission, and the poorer women of the city are badly provided for, although another lying-in establishment, also under excellent management, is attached to the University of Kazan. The cause of this evil lies in two facts. First, these institutions are not sufficiently large and lie at a great distance from other lying-in hospitals. Secondly, young domestic servants, who constitute five-eighths of the inmates of the Provincial Hospital, are in Russia almost invariably married before they enter service, quite contrary to the custom in Germany and Western Europe. Hence they have no true home, and always seek admission into a hospital, or are sent there by their employers. This curious social condition is a relic of older times. When, however, the great majority of female servants were serfs, their home was in their master's house, where they were always kindly treated. The now free population of Kazan includes a large proportion of very poor, utterly shiftless women, They are badly off for the reasons just explained, and the hospitals are crowded, although many women, through religious prejudices, strongly object to enter a hospital; and although, again, the large Tartar population have similar objections, so that only one Tartar woman lay-in at Dr. Looff's hospital within the year included in his report. Altogether, only 410 women were under treatment. Over two-thirds were not primiparæ; this is intelligible, since two-thirds were married servants, accustomed to enter the institution year after year as their families increased. Over five-eighths were between 20 and 30 years of age. The youngest was 15, very young for Russia, the eldest 50. There were many instrumental labours, and other severe cases. The establishment appears to be very well managed.

THE INCOMPATIBLES OF ANTIPYRIN.

If extractum cinchonæ liquidum be added to a solution of antipyrin in distilled water a dense reddish-brown precipitate is formed. Upon examination this precipitate is found to contain tannic acid and antipyrin. The liquid extract of cinchona is, therefore, incompatible with solutions of antipyrin, because the cincho-tannic acid present in the extract precipitates it in an insoluble form. The greater part of this precipitate dissolves on the addition of dilute sulphuric acid, the insoluble portion being probably the colouring matter of the bark, for if a solution of tannic acid be used instead of the ext. cinch. liq. as a precipitating agent, a pure white precipitate forms, which entirely and easily dissolves on the addition of the dilute sulphuric acid. It follows, therefore, that decoctions, infusions, and tinctures containing tannic acid would act in the same manner. The effect, however, produced by these preparations is very small compared with the liquid extract of cinchona. Antipyrin is not precipitated by solutions of the alkaloids, quinine, cinchonine, or cinchonidine. Therefore it can be prescribed in a mixture containing quininæ sulph. and acid. sulph. dil. When strong solutions of chloral hydrate and antipyrin are mixed together a white precipitate is formed, which soon becomes resolved into globules of oily-looking liquid, which sink to the bottom and form a distinct layer. This layer, in the course of some hours, changes into a crystalline mass, from which the clear upper liquid can be drained off. These crystals are soluble in water, but considerably less so than antipyrin or chloral hydrate. They have a distinct taste of chloral without its pungency, and they are not so bitter as antipyrin. In solution they give with ferric chloride the characteristic colour reaction of antipyrin, and heated with liquor potassæ they evolve chloroform. It would seem, therefore, that this crystalline mass is a compound of antipyrin and chloral, which has been thrown out of solution on account of its sparing solubility. This precipitation does not occur in dilute solutions. and it is possible to mix together a solution containing 60 grains of antipyrin to the fluid ounce with one containing the same amount of chloral hydrate without any precipitate being immediately formed, although in a few hours small crystals begin to appear. A solution containing 15 grains each of antipyrin and chloral hydrate to the fluid ounce appears to be a permanent one, for at the end of a week there is no appearance of crystalline matter. Clinical experience alone can determine whether mixtures of these two bodies possess any therapeutic properties different from those of the constituents. In prescribing them together it is to be borne in mind that the solutions must be dilute.

THE APPROACHING RECONSTITUTION OF THE UNIVERSITY OF LONDON.

The Special Committee of the Senate of the University of London on November 6th received a deputation representing Convocation, and consisting of Sir Philip Magnus, Sir Albert Rollit, and Drs. Baines, Sophia Bryant, Collins, Napier, and S. P. Thompson. We understand that during the discussion there was a general concurrence on matters of principle, but the deputation suggested certain modifications in detail which were subsequently considered by the Committee. The Committee of the Senate have, we understand, drawn up a report which we have reason to believe embodies suggestions for a reconstitution of the University on the lines indicated by the report of the Royal Commission; and that it proposes that the University should consist hereafter not only of Senate and Convocation as heretofore, but also of Constituent Colleges, Faculties, and Boards of Studies. The mode of election and the duties of these various bodies will be defined, and the relation which should exist between the University and the Royal Colleges of Physicians and Surgeons will be indicated. The report will be considered at the next meeting of the Senate on November 20th.

STIMULANTS IN WORKHOUSES.

We have from time to time recorded the remarkable diminution in the expenditure on intoxicants in the Poor-law service. In the four years prior to December 31st, 1885, there had been a reduction of 25 per cent., and in 15 years of more than 45 per cent. In certain workhouses the decrease had been much greater. In one case the total annual charge on this head fell from £1,000 to £80. In another, with an average of 2,046 of an indoor population, this annual alcoholic charge dropped from £1,633 to £6 8s. 9d., even the latter small amount having been for malt liquor at the Christmas dinner, alcohol having no place in the dietary. In yet another workhouse, with an average of 1,233 inmates, no intoxicating beverages whatever are supplied. In the four years referred to there was a diminution of nearly 32 per cent. in the metropolitan area. The results of this marked decrease have been watched with deep interest. Isolated testimonies by workhouse medical officers have gone to show that the health of the paupers has not suffered, that the rate of mortality has not been heightened, and that discipline has been decidedly improved. A more formidable array of evidence has recently been collected from parochial medical

officers, of which body more than one-third have responded to an appeal for their evidence on the effects of the lessened use of alcohol. More will probably be heard of this mass of skilled opinion. It is satisfactory to learn that 80 per cent. of the reporters have observed no injurious influence on the health and life of the patients under their care.

POST-GRADUATE TEACHING IN LONDON.

It will be recollected that a short time back we stated that arrangements were in progress between some of the leading special hospitals for establishing a definite post-graduate course; those arrangements have been completed, and the prospectus of the first course is now before us. The hospitals which have entered into combination for this purpose are all well known and thoroughly representative of the different branches of medical science; they are the Brompton Consumption Hospital, the Children's Hospital, Great Ormond Street, the Queen Square Hospital for Nervous Diseases, the Moorfields Eye Hospital, and the Blackfriars Skin Hospital. The total number of lectures and demonstrations to be given in the course is seventy-two, spread over a period of eight weeks, and shared between twenty-six teachers. The course will commence on January 13th, 1890. With the exception of the ophthalmoscopical demonstrations at Moorfields, all the teaching is to be done in the afternoons. The teaching is to be as far as possible of a practical character, including demonstrations of selected cases, and lectures on the diagnosis and treatment of the diseases for the study of which these hospitals afford especial facilities. The committee of delegates from the different hospitals concerned consists of Mr. Jonathan Hutchinson, F.R.S., Dr. Buzzard, Dr. Kingston Fowler, Dr. J. F. Payne, Dr. Octavius Sturges, Dr. Theodore Williams, Dr. Beevor, Mr. Nettleship, Mr. Marcus Gunn, and Mr. Arbuthnot Lane. The Secretary is J. Fletcher Little, M.B., of 60, Welbeck Street, to whom applications for cards of admission or for further information should be made.

THE STUDY OF INFECTIOUS DISEASES.

There is every reason to hope that before long real opportunities will be offered to those willing to profit by them for the study of the infectious diseases. Until the passing of the Poor-law Amendment Act last summer the hospitals under the control of the Metropolitan Asylums Board were not available for the purposes of clinical teaching, owing to a clause which was unfortunately insinuated into an Act of Parliament passed twenty years ago. Sir John Lambert has given the history of this in a letter to the *Times*. It formed part of the scheme of the 30th Vict., c. 6 (Hardy's Act), which placed the administration of the Poor-law relief in the metropolis on a new footing, that the asylums established under it should be used as medical schools; and Section 6 enacted that "Where the asylum is provided for the reception of the sick or insane it may be used for purposes of medical instruction, and for the training of nurses, in such cases and manner and subject to such regulations as the Poor-law Board from time to time by order direct." But Sir John Lambert points out that in two years after the passing of the Act, and before the asylums could have got into proper working order, or any medical students had been admitted into them, this beneficent provision was, except as regards the training of nurses, repealed by Section 6 of the Metropolitan Poor Amendment Act, 1869. This repealing clause was not in the Bill as introduced, nor was it afterwards moved by the Government, or at the instance of the managers or the guardians of the metropolitan unions; and the only reasons urged in support of it were more or less of a sentimental character. The Act passed last session has, however, happily changed this, and it is evident that the Board is sincerely desirous of doing all it can to obviate what has hitherto been such a gap in our medical curriculum. The College of Physicians, at the instance of Dr. Seaton, who is also a member of the Asylums Board, took up this question at the beginning of the year, and appointed an influential committee, and the Bill which was introduced by Lord Granville last session into the House of Lords was almost entirely due to this Committee and the College of Physicians; in July last the College reappointed the Committee as a Standing Committee, and since then a Subcommittee of three of their number has been in direct communication with a Committee of the Asylums Board to consider how best to carry into effect the new Act of Parliament.

A NEW TEST FOR ALBUMEN IN URINE.

Trichloracetic acid is stated by M. Boymand in the *Répertoire de Pharmacie* for the present month to be the best reagent for the detection of albumen in urine. It is more reliable and possesses none of the disadvantages of the ordinary tests, such as nitric acid and metaphosphoric acid. It has also the power of precipitating that peculiar form of albumen which is thrown down by heat but redissolved on the addition of acetic acid. Trichloracetic acid is obtained by the action of chlorine gas upon acetic acid, three atoms of the hydrogen of the radical acetyl being replaced by chlorine. The compound is represented by the formula CCl_3 CO.OH. It is a crystalline solid body, very soluble in water, and it forms salts analogous to the acetates. Acetic acid may be regenerated from it by the action of nascent hydrogen. The test may be used in a solid form or in solution. If the solid be employed, a small fragment is placed in a test-tube containing the urine; it sinks to the bottom and is dissolved, producing a cloudiness, or, with very clear liquids, a zone of cloud. The solution can be used either saturated or fairly concentrated. When poured upon the urine to be examined it forms a characteristic ring, like that obtained by means of nitric acid, but without producing any coloration. When the urine is rich in urate of soda it is better to dilute with distilled water, and thus avoid a cause of error which is common to all reagents. We have not been able to obtain a specimen of trichloracetic acid for the purpose of verifying the statements made respecting it as a precipitant of albumen in urine under all conditions, but we hope to do so in a short time, and to report the result of our experiments.

ŒDEMATOUS FŒTUS.

The birth of a fœtus disfigured by extreme œdema has frequently been recorded; such a fœtus surprises the practitioner and puzzles the teratologist. In an acardiac twin, the headless and often armless trunk is always more or less œdematous, owing to the abnormal course of the circulation. Drs. Alfred Smith and Ambrose Birmingham have recorded, in the *Journal of Anatomy and Physiology*, for July, 1889, a case where œdema was due to absence of the thoracic duct. The subject was one of a pair of male twins prematurely born at the twentieth week of pregnancy. The authors of the article in this case did not state whether the placenta was double or common to the twins, a point of some importance, as there is always a common placenta when one twin is acardiac. In this case, however, the diseased twin had a normal heart and large vessels, and did not seem to want any of its limbs. The appearance of the œdematous twin was grotesque; it was three times as large as its brother, and resembled two large tomatoes strung together, the uppermost being the head, the lower the body. The features were buried in the big tuberosities which made up the face. The skin was of a peculiar pinkish colour, which increased the resemblance of the monster to a pair of tomatoes. On dissection, the thoracic duct, the receptaculum chyli, and the mesenteric glands could not be found. The mesentery, skin and subcutaneous tissue were all carefully examined under the microscope, but no mesenteric glands and no lymphatic

trunks could be detected. The subcutaneous tissue abounded in lymph spaces greatly distended with fluid, which could not be carried off owing to the absence of lymphatic vessels. In the twin brother of this œdematous fœtus the lymphatic system presented no abnormality. Thus this case differed in many respects from the œdematous acardiac twin, better known to teratologists, although it would be interesting to know if the cord, in Drs. Smith and Birmingham's case, joined that of the normal twin or was even inserted into the placenta very near the latter; an apparently trifling amount of communication between single placenta twins may cause great malformation. In order to throw more light on this subject it is very advisable that all who practise obstetrics should preserve any specimens of œdematous twins, acardiac or amorphous twins, and fœtuses bearing parasitic twin brothers, which may come under their notice in the course of their practice. Such specimens should be sent to some pathologist or curator for careful dissection.

THE DIFFERENTIAL DIAGNOSIS OF VACCINATION SYPHILIS.

THE *Deutsche med. Zeitung* of July 18th, 1889, reproduces a summary of Professor Fournier's clinical lectures on this subject by Dr. P. Portalier. The lines of distinction between syphilitic and other appearances are drawn with equal clearness and elegance by the French syphilologist. I.—Differential diagnosis between vaccinal ulcers and primary chancre: The latter never develops before the fifteenth day after vaccination, the time required being mostly three weeks; twenty days after inoculation it is still in its earliest development. A "vaccination ulcer" is present, if ever, twelve or fifteen days after vaccination; after twenty days it is fully developed. The clinical differences are as follows: In the case of vaccination ulcer, (1) all the pustules are affected as a rule; (2) much inflammation and ulceration; (3) deeply-excavated ulcer; (4) much suppuration; (5) irregular margin as in soft chancre; (6) floor of ulcer uneven, suppurating; (7) inflammatory induration; (8) inflammatory, erysipelatous areola; (9) gland swelling none, or else inflammatory; (10) complications often present, sloughing, erysipelas, etc. Syphilitic ulcer: (1) Is restricted to one or a few pustules; often these do not develop; (2) the inflammation is slight; (3) the loss of substance is superficial; (4) suppuration is scanty or absent; crusts form; (5) border not notched, slightly elevated, gradually lost in floor; (6) surface of floor smooth; (7) the "parchment" induration is specific, not merely inflammatory; (8) hardly any inflammatory areola; (9) gland swelling constant, indolent; (10) complications rare. II.—Differential diagnosis between vaccination rashes and secondary syphilitic eruptions: Under the former are comprised roseola vaccinalis, miliaria vacc. vaccina bullosa, and hæmorrhagica, also accidental rashes, rubeola, scarlatina, lichen, urticaria, etc. A true vaccinal rash (1) appears between the ninth and fifteenth day after vaccination; (2) absence of inoculation chancre; (3) eruption has not syphilitic characters; (4) is attended with fever; (5) is evanescent. A secondary syphilitic eruption (1) appears, at the earliest, nine or ten weeks after vaccination; (2) requires the pre-existence in every case of a specific ulcer at the site of vaccination, that is, to constitute the rash due to vaccination; (3) shows the characters of true specific eruptions; (4) is not attended with fever; (5) lasts a long time; (6) is accompanied as a rule with specific appearances on the mucous membranes. III.—Differential diagnosis of vaccination-syphilis from hereditary syphilis, which may show itself about the time of vaccination: Vaccination syphilis (1) begins with a local affection, chancre, and indolent bubo; (2) has a typical development in four stages, namely, incubation, chancre, second incubation, generalisation (secondary rashes, etc.); (3) never appears earlier than the ninth or tenth week after vaccination. Hereditary syphilis (1) has no chancre, but begins with general phenomena; (2) has no typical development after vaccination; (3) is wholly independent of the latter as to time; (4) is attended by the habitus syphiliticus, or syphilitic bodily aspect; (5) other manifestations of hereditary lues may be present; (6) the history may indicate syphilis. The only point in the above admirable summary requiring correction is the statement that a secondary syphilitic rash is not attended by fever.

SCOTLAND.

A LEGACY of £100,000 has been left to the University of St. Andrews by a millionaire centenarian—Mr. Berry—long a resident in Australia.

THE success of the Scottish Microscopical Society, the most recent addition to the list of Edinburgh societies, seems assured. No fewer than eighteen new names were balloted for at the last meeting.

EDINBURGH UNIVERSITY has sustained a severe loss in the death of Professor Muirhead, Professor of Civil Law. He was associated with every large movement for the extension and development of the University, and had taken the greatest interest in the establishment of the Students' Union.

DR. J. C. RENTON and Dr. George T. Beatson have been promoted from the dispensary to the rank of assistant surgeons on the staff of the Glasgow Western Infirmary; and Dr. A. E. Maylard and Dr. T. A. Dalziel have been appointed to the vacancies in the dispensary.

GLASGOW MEDICAL SOCIETIES.

THE medical section of the Medico-Chirurgical Society met on November 8th, when Dr. Walker Downie read a paper on "Intralaryngeal Injections in the Treatment of Pulmonary Affections." Dr. Weigert's hot-air apparatus, for use in the treatment of consumption, was shown. The second meeting of the Pathological and Clinical Society was held on November 11th. Dr. Napier showed a case of lymphoma affecting mainly the anterior mediastinum; Dr. Coats showed a specimen of a strangulated inguinal hernia, in the sac of which was also an irreducible loop of the sigmoid flexure; Dr. Macewen showed a foreign body removed from the trachea of a child during impending suffocation; Dr. Finlayson exhibited tracings illustrating curious alternations in rate and rhythm from a case of aneurysm; and Mr. Maylard showed tube cultivations of microbes found in sea-water from the Bay of Biscay.

PLEUROPNEUMONIA IN SCOTLAND.

AT the annual general meeting of the Scottish Chamber of Agriculture, the subject of pleuropneumonia came up for discussion. An attempt was made to insist on the advantages of inoculation, as practised in France. But finally the meeting adopted the following resolution, with only five dissentients: "That the only effectual means known at the present time for the suppression and extirpation of pleuropneumonia are (1) the slaughter of all affected animals, and (2) the isolation or slaughter of all the cattle that had been in contact with the affected animals; and in order that the regulations may be more systematically and more uniformly carried out, there ought to be a central authority for Great Britain, with the payment of all indemnities by the Exchequer."

GLASGOW SOCIAL UNION.

A SOCIAL UNION has been formed at Glasgow, and was inaugurated on Monday last by a *conversazione*, presided over by Sir

James King, and attended by a large number of prominent citizens. The objects of the Union are to improve the physical, moral, and social condition of the poor; and among other means to be adopted the Union proposes to bring pressure to bear on landlords and on the sanitary authorities to get improvements in the dwellings of the poor carried out, raising the standard of comfort of the poor themselves by affording them information in reference to food, cooking, care of children, and kindred subjects, endeavouring to get sufficient open spaces set apart in all densely-populated areas for rest and recreation, undertaking the management of property entrusted to the society, and co-operating with the authorities and with all societies and movements in the city for the amelioration of the condition of the poor. The Lord Provost of the city has accepted the presidency of the society, and the ex-Lord Provost, Sir James King, the vice-presidency.

ABERDEEN UNIVERSITY COURT ASSESSORSHIPS.

A MEETING of medical graduates of the Aberdeen University was held in the hall of the Aberdeen Medico-Chirurgical Society on Wednesday, November 6th, at which it was resolved: "That, as the medical graduates form about one-third of the total number of the members of Council, it was essential that the medical profession should be represented in the University Court." It was further resolved: "That steps should be taken to nominate and secure the election of Dr. Angus Fraser, who from his being resident in Aberdeen would be able to attend the meetings of the University Court, which, for some time, at any rate, must be numerous." Dr. Angus Fraser has been closely connected with the Aberdeen Medical School ever since his student days, and is well known to take a warm interest in educational matters, both medical and general. We understand that Dr. Fraser has expressed his willingness to stand should a general desire that he do so be manifested.

OPENING OF NEW RECREATION GROUNDS AT KING'S COLLEGE, ABERDEEN.

LORD ABERDEEN formally opened the splendid new recreation grounds on Saturday, November 2nd, in presence of a large and representative gathering of the University professors, students, and general public. The students, after four years of waiting and working, have now been rewarded by a recreation ground which is possibly the finest in Scotland. The field lies immediately to the east of the venerable pile of King's College, and extends to King Street Road. It occupies eight acres in extent, and is replete with all the most improved plans. It possesses ample provision for football and cricket, there are four tennis greens, and it is proposed to erect a gymnasium and pavilion. The undertaking, so satisfactorily inaugurated, cost upwards of £2,000. The football match which ensued between a selected Glasgow and Aberdeen team resulted in a victory to Glasgow by 14 points to 0. A dinner and smoking concert which followed the match gave, in the classic language of Principal Geddes, "an epic completeness" to the toilsome endeavours of the day.

THE TEACHING OF ANATOMY AT ABERDEEN.

ON November 11th Professor Reid delivered his first lecture on anatomy to a class which tried the available accommodation of the room to its fullest extent. The introductory remarks of the Principal were received with a running fire of good-humoured chaff, but all effervescence had boiled over before the new professor rose, and his address received the close attention which its interest deserved. Beginning with a generous tribute to the merits of his predecessor, and to the admirably arranged museum which the University owes to his industry and care, he proceeded to sketch the history of anatomy through the far-famed professors of Egypt and Italy down to the classical researches of Harvey. The bearings of anatomy on surgical procedure next came under review, and the lecturer illustrated this part of his subject by reference to the writings of Broca and Ferrier, to some experiments of his own, and to the brilliant operations of Macewen, Horsley, and others. Some remarks on the respective merits of lecturing and of practical work called forth the enthusiastic applause of his hearers, and it was quite evident that Dr. Reid touched from the first a sympathetic note which cannot fail to be sustained during the rest of the session. At the same time, however, we feel that he is entitled in some measure to our sympathy, for it appears that he only received formal notice of his appointment on the 4th, so that he had to put together his introductory remarks, make the acquaintance of his museum and department, and prepare to start his course in less than a week after the decision of the authorities had been made known. We cannot absolve the Government from blame in this matter, even if it be the case that a meeting of Privy Council could not be held until a comparatively recent date to receive Professor Struthers's resignation; the choice of his successor could have been ready for publication at once, and the anatomical class might thus have been spared the somewhat novel experience of being unprovided with a teacher at the outset of their existence. The delay has been unfair to the Professor, to his present class, and to that which he has left, and it must produce an impression of slackness and indecision far from creditable to those who are principally concerned.

IRELAND.

AT a meeting of the Council of the Royal College of Surgeons on Thursday, November 7th, Dr. Thomas Myles was elected Professor of Pathology in the school.

THE LATE ROBERT McDONNELL, F.R.S.

A MEETING was held in the College of Surgeons on Wednesday, November 6th, to promote the movement for a memorial to the late Robert McDonnell. There was a large attendance. It was resolved to have a bust and a portrait of the deceased surgeon placed in the College, and to limit the subscriptions to one guinea. Among the speakers were the President of the College (Dr. Meldon), Sir George Porter, Bart., Sir John Banks, K.C.B., Sir Wm. Stokes, Sir C. Cameron, Dr. G. H. Kidd, Mr. W. Stoker, Dr. W. Moore, Mr. Edward Hamilton, Mr. W. Thomson, etc. Dr. A. H. Corley, 16, Merrion Square North, was appointed Honorary Secretary, and Sir John Banks, 45, Merrion Square East, Honorary Treasurer.

SIR JOHN BANKS, K.C.B.

SIR JOHN BANKS, K.C.B., the Senior Physician of the Richmond, Whitworth, and Hardwicke Hospitals, who presided over the Dublin meeting of the British Medical Association in 1887 with so much grace and efficiency, was entertained at dinner on October 30th by the old pupils of these hospitals. Dr. Gordon, one of the governors of the hospital, presided. Amongst those present were the Provost of Trinity College, Sir Howard Grubb, Surgeon-General Sinclair, Sir William Stokes, President of the College of Physicians, Mr. Samuel Smith, M.P., Dr. G. H. Kidd, Dr. William Moore, Dr. Cruise, Professor Moffet, Dr. Nedley, Professor Purser, Dr. C. J. Nixon, Mr. Swanzy, Dr. Thornley Stoker, Dr. J. W. Moore, Dr. R. K. Johnstone, Dr. W. J. Martin, Dr. Thomson, Dr. Dunne, Dr. Blythe, Dr. A. H. Jacob, Dr. Thomas Little, Dr. Leonard Kidd, Dr. J. A. Byrne, Dr. O. B. Miller, Dr. Conolly Norman, Dr. Conway Dwyer, Dr. Macan, Mr. Lambert Ormsby, Dr. Foot, Dr. G. P. Nugent, Dr. C. B. Ball, Dr. J. Ringwood, Brigade-Surgeon White,

Surgeon-Major O'Farrell, etc. Dr. Gordon proposed the health of Sir John Banks, K.C.B., which was received with enthusiasm. Sir John Banks replied in a felicitous speech, thanking those present for the congratulations which they had offered to him on the receipt of a personal honour, which he accepted as a compliment to the whole profession. He referred with regret to the fact that neither the late Dr. William Stokes nor the late Dr. Robert McDonnell had ever received any recognition from the State. The toast of "The Richmond, Whitworth, and Hardwicke Hospitals" was proposed by Professor Purser and acknowledged by Dr. Thomson, who referred at some length to the proposed Bill for dealing with these hospitals. Sir John Banks having proposed the health of the Chairman, which was duly honoured, Dr. Foot gave the health of the guests, coupled with the names of the Provost of Trinity College, Mr. Nixon, M.P., and Professor Moffet.

ROYAL ACADEMY OF MEDICINE.

THE opening meeting of the Surgical Section took place on November 8th, when the President of the College of Surgeons, Dr. Austin Meldon, read an address. He paid a graceful tribute to the memory of the late Robert McDonnell, and then proceeded to refer to some interesting cases in his hospital practice. Mr. William Thomson read a paper on the "Operative Treatment of Tuberculosis of the Knee-joint," which gave rise to an animated and prolonged discussion, in which Messrs. Tobin, Wheeler, Thornley Stoker, A. H. Corley, J. K. Barton, Franks, Bennett, Lentaigne, and Sir Wm. Stokes took part. An interesting point was that Dr. Bennett observed that Mr. Holmes's challenge to have a case of excision of the knee in private practice produced had never been met, when Mr. Thomson, Mr. Wheeler, and Mr. Franks stated that they had had such cases. Subsequently Dr. Meldon entertained 150 guests at supper, and the company did not break up until a late hour.

TYPHOID FEVER IN DUBLIN.

THERE does not appear to be any reduction in the cases of typhoid fever. No special locality is the centre. The persons attacked belong chiefly to the middle and upper classes. A rumour is very prevalent that the disease is associated with the eating of oysters, and undoubtedly many cases of violent diarrhœa from this cause have been reported. At a public meeting in connection with the registration of plumbers, Sir Charles Cameron, officer of health, alluded to the prevalence of typhoid, and observed that there appeared to be an undue development of the disease all over the United Kingdom. He had no doubt that certain conditions of soil and atmosphere powerfully contributed to bring about an epidemic. He believed, at the same time, that the drains in one-half the dwelling houses were in a defective condition. He further stated that he had examined the Rathmines water, and found it to be excellent and quite free from deleterious substances. The question of house drainage affects all communities, and it does not appear that fully satisfactory results will be attained until the law requires official inspection by qualified officers, and throws on the owners of houses—not on the occupiers, whether leaseholders or not—the necessity of keeping the drains in perfect order. Thirty cases were admitted to hospitals last week, and 131 were under treatment on Saturday last, being 10 over the preceding week; 13 deaths were registered as due to typhoid. Eight officers of the garrison are at present suffering from the disease.

DR. PANK, medical officer of the Houghton Rural Sanitary Authority, has been presented by that authority with a cheque for £30, in acknowledgment of his assiduity in connection with the recent outbreak of typhoid fever at New Herrington and Philadelphia.

ROYAL COLLEGE OF SURGEONS.

A MEETING of the Council was held at the College on Thursday, November 14th, when the minutes of the last Quarterly Council were read and confirmed.

A report was received from the Board of Examiners in Dental Surgery, in which several important changes in the dental curriculum were recommended.

A report was received from the Committee of Management, in which they recommended that candidates for the conjoint examination, after having passed the second examination, "be required to discharge the duties of a medical clinical clerk during six months, and of surgical dresser during other six months, of which in each case not less than three months shall have been in the wards." The Committee also recommended the insertion of the words "and diseases peculiar to women" after the word "midwifery" in the tenth line, and the omission of the word "practical" in the twelfth line of Paragraph XIX, Sec. II, of the Regulations. This report was approved and adopted.

The sixteenth report of the Committee on the Extension of the College Premises, dealing with estimates for the fitting up of the new small museum, was adopted.

The PRESIDENT reported that the annual meeting of Fellows and Members was held on the 7th instant; and the resolution carried at that meeting was read.

A letter of October 25th from Mr. Francis Fowke, General Secretary of the British Medical Association, reporting resolutions carried by that Association in reference to the constitution of the College, was laid before the Council.

The PRESIDENT reported that there would be three vacancies in the Court of Examiners, occasioned by the expiration of the term of office of Messrs. Hulke, Langton, and Pick; and that these vacancies would be filled up at the ordinary meeting of the Council on December 12th; also that there would be two vacancies in the Court of Examiners' Section of the Board of Examiners in Dental Surgery, occasioned by the cessation of office on the Court of Mr. Hulke and Mr. Langton, and that these vacancies would be filled on the same date.

The PRESIDENT stated that the Morton Lecture on Cancer would be delivered by Mr. John Marshall on Monday, November 18th; and the Bradshaw Lecture by Mr. Thomas Bryant, on Thursday, December 5th next, at 5 o'clock P.M. on each day. The subject of the Bradshaw Lecture will be, "Colotomy, Lumbar and Iliac, with Special Reference to the Choice of Operation."

THE SALE OF POISONS.

THE PHARMACEUTICAL SOCIETY OF GREAT BRITAIN *v.* JAMES P. WHEELDON.

THIS was an action which came before the Wandsworth County Court on Tuesday, November 12th, under the Pharmacy Act of 1868, to recover from the defendant a penalty of £5 for having sold a scheduled poison—namely, strychnine—he being an unqualified person.

The facts as stated were that one Sunday evening a few weeks since a girl named Housden went to a chemist's shop where the defendant was employed, at Battersea, and purchased some Battle's vermin killer, stating that she wanted it for destroying rats. Wheeldon seemed to have sole charge of the shop at the time, and, although unqualified, he served her, entering the sale in the poisons book, and signing his own name as a witness to the transaction. Some hours later the girl was found, having, as she herself told the medical man that was called in, taken a quantity of the poison, which eventually caused her death. An inquest was held in due course, and a verdict of temporary insanity returned. The coroner, Mr. Braxton Hicks, brought the facts under the notice of the Council of the Pharmaceutical Society, and asked that a suit for a penalty should be instituted against Wheeldon, on the ground that the liability under the fifteenth section of the Pharmacy Act of any unqualified person who sells a scheduled poison applies to the actual seller, whether master or servant. Evidence having been given, his Honour, in giving judgment, said the plaintiffs must recover the penalty of £5 and costs; but, as this was the first case in which a decision upon this particular point had been given, he hoped the defendant would take it to a higher Court

IT has been decided to establish a Medical Faculty in the University of Czernowitz (Austria).

THE MEDICAL PROFESSION AND PUBLIC LIFE.[1]

By VINCENT JACKSON, F.R.C.S.

GENTLEMEN,—The Staffordshire Branch of the British Medical Association was founded April, 1874, in consequence of a very general desire that this county should possess a medical society, for until the Branch was established Staffordshire was without one, although nearly 300 medical men reside within its area. From time to time local societies had been established; these at first flourished, then dwindled, and finally ceased to exist, but as the want of a medical centre was at that period much felt, the only existing one being the North Staffordshire, and as heretofore all local efforts as regards permanency had failed, it was determined that an attempt should be made to promote the formation of a county medical society. This proposal was discussed at a meeting of the North Staffordshire Medical Society, specially convened for the purpose, and the following resolution was unanimously adopted:

"The North Staffordshire Medical Society, after an independent existence of twenty-five years, wishing to extend its influence and usefulness, resolved at a meeting of members held at Stoke-upon-Trent, on Thursday, April 7th, 1874, to amalgamate with the British Medical Association."

In furtherance of that resolution, the medical profession of the county was invited to assemble in Stafford on Thursday, April 30th, 1874. The meeting was a large and representative one, the chair being occupied by Dr. Weaver, the President of the North Staffordshire Medical Society. The formation of a Staffordshire Branch of the British Medical Association was at once agreed upon. The draft of the rules and regulations for the government of the Branch was approved, and the first meeting was fixed to take place at Stoke on the last Thursday of the following October. Mr. Garner of that town was elected the first President; Dr. Weaver (Longton) and Mr. Yates (Newcastle), Vice-Presidents; Mr. Vincent Jackson and Mr. Ralph Goodall, Secretaries; Mr. Weston, Treasurer.

From then to now the Branch has steadily pursued a prosperous career, and it has realised every anticipation, and at the present time, however regarded, it may with truth be said to have successfully fulfilled the great objects for which the Association was established—namely, "the promotion of medical and the allied sciences, and the maintenance of the honour and the interests of the medical profession."

I have for a good purpose refreshed your memories with an initial summary of the nativity of our Branch, for it has been inferred that it was called into existence for personal reasons. The Branch history is a complete refutation of this kind of criticism, for it was conceived in the north of the county, Stoke-on-Trent, a division which is not near to, or overlapped by, any Branch, it was matured in the centre of the county (Stafford), and it first came into existence in the atmosphere of its impregnation. Again, Thursday, the day on which we hold our meetings, is to us a historical day, it being the day of the week on which every kind of preparatory work was arranged and settled prior to what may be called our founder's day, which was Thursday, October 29th, 1874. It has, I know, occurred to some as well as to myself that the present is an opportune time to publish the proceedings of our Branch for the last fifteen years.

The volume would be an instructive and interesting one, and a memorial, to some extent, of the labours of those who have helped in the origin, progress, and permanent stability of this flourishing medical society. If the idea meets with a favourable response, I shall be happy to assist others who will undertake the labours of compiling and editing such a record. The funds for such a purpose are ample, and have only to be voted.

To-day I occupy this chair as your sixteenth President. The position is an honourable one, and he who by your courtesy sits here must remember that he has to attempt to sustain everything that is memorable in the past, as well as being responsible for the present, and, to some extent, for the future—*magni nominis umbra*, as it were. It has, I believe, been customary for the President, on his installation, to express humbly his obligations to those who have conferred the honour upon him. For my own part, I have considered that my predecessors were somewhat off the line in so expressing themselves, and they took more to themselves than they were entitled. I consider that the electors have far more to do with the appointment than the elected, and, therefore, that they must take their full measure of responsibility for what they do, and that the shortcomings of the elected are to be placed to their door rather than to his. Do I not re-echo what all my predecessors must have felt when I say that while we did not seek, yet we do not despise the honour of being your president—*nec quærere nec spernere honorem.*

The subject of my address is one which I have naturally deeply considered, for the selection of a topic is not an easy task, and, speaking generally, each year the task must become more difficult. The subjects of the presidential addresses which have been delivered to the members of this Branch[2] afford a variable range of professional topics, so much so that I felt it would be impossible for me to treatisise any one of them with any hope of producing fresh novelty, but rather, in all probability, I should simply resay the thoughts and opinions of the writer in merely altered phraseology. Moreover, it is, I think, a pleasant omission occasionally to refrain from discussing at our annual meeting purely professional subjects. Material of that kind is more, I opine, in its proper place at our ordinary meetings; and even an enthusiast of the highest and driest scientific type will, I feel convinced, forgive me for giving him a little breathing time in the relaxation which is afforded by turning his thoughts and fixing his attention, if I can do so, upon a subject which, if not distinctly classical, is certainly germane to our relations with the public amongst whom we live and daily come in contact.

Regarding the medical profession impartially and as a whole, no one will deny that, looking at it in all directions and from all points of view, it is as a body immeasurably superior to what it was a generation since. Medical men seem less desirous now of living for and with themselves, and more desirous of living for and with the public, hence we may perhaps with advantage consider what I am wishful to speak about, namely, "The Medical Profession and Public Life."

The personal history of the members of the medical profession is in most instances mainly a record, from their professional cradle and upwards, of the continuous and almost unceasing application as well as devotion to the study of that mass of built-up experience and knowledge comprised under the head of the principles and practice of their calling. Day after day, and often night after night, they pursue the even tenour of their way, and which practically means an amount of toil, weariness of spirit, monotony of existence little dreamt of by those who derive from their unselfish and frequently gratuitous services and labours a restoration to health which is often equivalent to a renewal of happiness and the enjoyment of the pleasures of life to those dependent upon the invalid if he or she has been the breadwinner or stay and support of the household.

Labor ipse voluptas seems to be the motto of the mass of our brethren, and no body of men either in spirit or letter apparently more surely realise the full meaning of those three Latin words or exhibit to the world at large the intense and persistent pleasure they take in labouring to their utmost "to do good unto all men," and especially are they ever ready to "take compassion on the multitude." Full medical work entails, in addition to the great mental and physical strain which it enforces, an almost complete abnegation of all social and I am not far wrong if I add of much domestic enjoyment, the one cause being the uncertainty of the calls made upon our time; doubtless the public might in a great measure remedy this difficulty by seeking advice, whether of the consultant or family physician, earlier in the day than it is too frequently requested. Again, the disturbed, hurried, or delayed meal is not so uncommon or infrequent that it can be talked of as an exceptional occurrence, but rather as a misfortune which is almost too universal to be forgotten and apparently to be

[1] Presidential Address to the Staffordshire Branch.

[2] 1874-75, Mr. R. Garner, A Retrospect of Medicine; 1875-76, Dr. Day, The Study of Medicine; 1876-77, Dr. Millington, The Real Origin of Man and the True Descent of Man; 1877-78, Dr. Arlidge, The Pathology of Chorea; 1878-79, Mr. F. E. Weston, The Abnormalities of the Human Body in Relation to the Doctrine of Evolution; 1879-80, Dr. J. H. Tylecote, The Geographical Distribution of Disease; 1880-81, Mr. Folker, Statistical Record of the Capital Operations performed by him whilst Surgeon to the North Staffordshire Infirmary; 1881-82, Dr. J. K. Wynne, A Review of the Art of Medicine; 1882-83, Dr. Tatherick, The Relations of the Medical Profession to the Public; 1883-84, Dr. Orton, The Effects of our Present System of Education on the Health of our Children; 1884-85, Dr. E. T. Tylecote, Epidemics; 1885-86, Mr. J. T. Hartill, Sixteen Years in General Practice: Thoughts on the Past, Suggestions for the Future; 1886-87, Dr. W. G. Lowe, Certain Typographical and other Subjects in connection with the Town of Burton-on-Trent; 1887-88, Mr. Spanton, Surgical Instinct; 1888-89, Mr. F. Boldero, Our Profession and the Advancement of Medicine.

altered or revolted against. To a great extent I consider all this drudgery is unnecessary and is performed, I believe, from a mistaken consideration of the duties and obligations attending the vocation of the medical practitioner; and it is, I take it, only right and proper that he should begin to recognise that he is, from a material point of view, quite as much or of more importance to the State and the community generally than the members of the other professions, and that he should begin to realise and to be influenced by the consideration that the popular conception of the men of our profession has grown. From charlatans they have become in the eyes of their neighbours examples of the very highest and noblest type of humanity.

An educated and trained professional man is surely worthy of a more varied existence than the monotonous and the daily round of routine and often depressing labour that many a medical man is contented with. To be a mere hewer of wood and drawer of water is to be a person so totally devoid of everything that is elevating or ennobling, and it evidences a complete want of that *vis vitæ* which is, I believe, naturally implanted in all of us, but which will in time, like other forces, cease to drive us on if its impulses are checked or neglected.

A one-grooved existence such as this engenders a narrowness of mind and a captiousness of disposition which induces a readiness to perversely contemplate the conduct and actions of competing practitioners, and causes a hasty assumption of an intentional professional injury having been inflicted; then is let loose that kind of ill feeling usually described as professional jealousy, and which, when exhibited, exposes the individual or the body to the laughter and sarcasm of the general public.

The medical profession seems to me much wanting in *esprit de corps;* the members do not "hold together;" there is hardly any unity, and not much friendly intercourse.

A recent writer says (Dr. Thursfield, Leamington): "I do hold most strongly with Sir Walter Foster, who says that though the excuse given to explain our absence from the duties of public life is our absorbing interest in a most laborious profession, yet it is, though a good one, more or less a species of selfishness; that in many instances it arises from a want of independence of character; and that until medical men will take their share, and their fair share, in that which is becoming day by day more and more the duty of all good citizens, they must expect those of the citizens who do submit to the heat and burden of the work, to estimate lowly and even to despise those who shirk it."

The cure for this crystallised and narrow mode of living, or rather, of existing, is, I believe, an active participation in public business, otherwise called public life. The mixing with one's fellows removes many of the cobwebs of a too home life, which are apt to environ and entangle us, and nothing so much causes us to take a more healthy and generous view of the conduct and actions of others than intercourse with them, and associating ourselves with them in efforts which tend to human benefit and progress. The mind of the medical man is strengthened and refreshed, and returns with new vigour to the daily routine dulness of professional life. The single-groove man may not be a less able man, but certainly is less useful than the man who embarks in public life, and does his best to leave the affairs of this world better than he found them.

The time has now arrived and is now quite opportune for able medical men to step forth from their seclusion and take their share in Imperial and local self-government, and to prove to the community that they are equally and even more competent to legislate in the many important measures involving interests of a multifold, important, and sometimes of a vast character, which from time to time have to be considered and discussed.

The objection urged by medical men for disregarding public work is the common one of "no time;" but is this a real or sufficient excuse? Surely what our professional brethren in other countries can do we can and ought to do. If French, German, and Italian doctors can be elected members of their national assemblies the profession in England ought to contribute its contingent to the House of Commons and to the borough, city, and county councils; but we know it does not sufficiently do so. At this moment, and to his praise and honour be it stated, Sir Walter Foster is our only representative in the House of Commons; a man of great ability he has made himself heard and listened to, and his increasing influence is a just acknowledgment of his great merits and his singleness of purpose in so steadfastly standing forth as the spokesman of the profession of which he is so eminent a member; but why do not others follow his example?

Our ranks are not wanting in men of ability, eloquence, ambition, and means, yet no one seems willing to contest a seat or to take his chance at the polls. Surely the dearth of medical men in the House of Commons is not to last, and at the next general election I hope we shall see more medical candidates in the field and more medical men sitting in the House of Commons.

Never was the period more opportune for medical men to enter public life. A recent writer in a weekly periodical says: "Outside the profession medical men are assuming important social and political positions which are hardly sufficiently recognised by the press and the public. Bad times are depriving landlords and their agents and country parsons of much of the local influence they formerly possessed, and in many cases are even driving them from their country houses, while the greater diffusion of riches, as shown by the recent Report on Trade Depression, has saved the doctor from similar misfortunes, and the lowering of the county franchise has placed him in more immediate contact with the great mass of the voters and brought them more immediately within the sphere of his daily influence.

"The tendency, moreover, of local government is in the direction of increasing the power of sanitary boards, and so of increasing the local influence and importance of medical men; a few years ago it was a comparatively rare occurrence for a country doctor to be made a county magistrate, and it was almost impossible to get one or two sent to Parliament, but now both appointments are common, and will become more and more common as medical men recognise their new position and responsibilities."

Let me urge those of you who have the inclination and the capacity to lose no time in embarking in public life; unless individual members of our body do so, we can never hope to obtain recognition and weight with the powers that be.

It is not what we are, but what we can do. No Government—imperial or local—will introduce or pass any measure of reform or improvement unless it is numerically and influentially supported by the outside public and ably sustained in both Houses of Parliament, and session after session questions of the utmost, nay vital, importance to the community are before the country, such as Sanitary, Educational, Lunacy, Army and Navy, and Local Government Bills.

In measures such as these the interest and status of the medical man is involved; and if we were as careful of our own advancement as members of the legal profession are of theirs, we should be up and doing and assist, much more than the Branches of the Association seem inclined to do, that active band of medical reformers, the Parliamentary Bills Committee. The Chairman of the Committee, Mr. Ernest Hart, is doing a great work. The annual reports—I am afraid they are not generally read—indicate the utmost alertness on the part of the Committee to all the measures affecting the welfare of the profession which are set down for probable or possible legislation at the commencement of or during each session of Parliament. The work of this Committee is laborious, and some of its achievements are magnificent: but the reason it is not so successful as it deserves to be is, first, that there are so few medical voices in the House of Commons to back it up; and, secondly, because the profession through the length and breadth of the land is so supine, passive, lukewarm, and even occasionally hostile, concerning questions which, because interests foreign to their own homesteads are involved, as it were, pays no heed to them, and will not even by voice or action lend them the slightest support.

Gentlemen, may I ask you, may I plead with you, to give the most practically beneficial Committee of the Association—the Parliamentary Bills Committee—more attention and the most active aid and support you possibly can? It is well understood that a Minister will readily accept modifying or additional clauses to a Bill which he is rather shy of initially embodying.

In the Local Government Bill for England there can be no doubt, if the profession generally had bestirred itself, the *permissive* clause, allowing County Councils to appoint a sanitary officer through whom the powers conferred upon them would be exercised, would have been a *compulsory* clause. In my opinion that most desirable addition to the English Bill was lost through the apathy, indifference, and want of unity and concord of the profession; for if on this point its voice had been as unanimous as was that of the medical officers of health the portion of the House of Commons to whom it was unacceptable would have been overpowered and silenced, and a great boon would have been conferred directly upon the nation, and indirectly upon our own calling.

Gentlemen, the ground which I have travelled over has not been

untrodden previously; others have journeyed over the same path; others, also, by their voices and their writings have brought this important subject before us, and have regretted that the medical profession as a body is so listless and inert in reference to it, and so stands aloof from active participitation in public affairs.

Let me remind you that the French Chamber contains forty-eight doctors, and let me ask you to bear that fact in your memories, and I trust also that it may induce some of you to try the invigorating excitement of public life as a set off to the sameness and the depressing features of the daily recurring routine work of a medical man in ordinary practice; and, gentlemen, whatever you may feel called upon to do, remember to "work while it is day, for night cometh when no man can work."

RUMOURED RESIGNATIONS.

A PARAGRAPH appeared last week in a number of provincial and metropolitan newspapers announcing that a private meeting had been held in the metropolis of some of the gentlemen in whose name a communication was addressed to the Council of the British Medical Association at Leeds, and that they have resolved to carry out their threat of secession. It will be opportune at this moment to recall the facts of the case.

On March 12th they addressed to the Council a document in which they indicated their sense of individual responsibility for all that the JOURNAL contained, and (1) recommended that all editorial articles should be signed, and (2) complained of the character of the advertisements admitted. To this the Council, after careful consideration, replied that they appeared to mistake the character of their responsibility for the JOURNAL, and referred them to the by-law of the Association which relieves them of such individual responsibility. In respect to the signing of all editorial articles, it was pointed out that this was, in the judgment of the Council, not only inadvisable but impracticable.

With respect to the advertisements, it was pointed out that a very rigid supervision had always been exercised over them, and that numerous advertisements had been excluded which were currently admitted into other medical journals of high repute; but it was added that the Journal Committee would be happy to receive any specific criticisms or suggestions in that respect. At the same time that this answer was sent an Editorial Committee was appointed, consisting of the President of Council, Dr. Bridgwater, J.P., of Harrow; the Treasurer of the Association, Dr. Holman, J.P., of Reigate; Dr. Farquharson, M.P., a Fellow of the Royal College of Physicians, formerly a Lecturer and Assistant-Physician at a metropolitan hospital; and Dr. Donald MacAlister, Fellow of the Royal College of Physicians, Secretary of Council of the University of Cambridge, practically versed in medical editing, and since elected by his University a member of the General Medical Council. To them the proofs of every article prepared for publication in the JOURNAL are forwarded from day to day, and the Committee meets on Thursday to pass the pages for the press.

In August the following letter was addressed to the Council on behalf of some of the complainants:—

To the Council of the British Medical Association.

London, August 1st, 1889.

GENTLEMEN,—Many members of the Association have been much disappointed to find that the hopes which they had been led to entertain of an improvement in the conduct of the JOURNAL have not been fulfilled. So strong is this feeling that a large number of men in influential positions in the profession, warmly attached to the Association, but jealous of its honour and despairing of seeing the improvement they desire, have expressed their determination to resign their membership.

But before carrying into effect a resolution so serious, it has been thought right to approach you, as the governing body, with the request that you will give this matter your earnest consideration, and take such steps as shall make the JOURNAL in all respects worthy of the Association which it represents. —We have the honour to be, gentlemen, your obedient servants, (Signed) JOSEPH LISTER, Chairman.
W. H. ALLCHIN,
W. A. MEREDITH, } Secretaries.
JOHN WILLIAMS,

Reply of President of Council.

DEAR SIR.—I beg to acknowledge the receipt of your letter dated August 1st. I will lay it before the Council when they meet in Leeds next week. I must be permitted, meanwhile, to assure you that you may safely leave the honour of the Association where it has been safely preserved for so many years. Yours faithfully,
(Signed) T. BRIDGWATER.

In reply to it, the Council passed the following resolution:

Resolved: That the Council do not admit that the signatories of this letter are better judges than themselves, or more solicitous than they are for the honour of the Association and of the profession, but if there are any points which the signatories desire to particularise, in which they consider that the JOURNAL admits of or calls for improvement, they will, as they ever have been, on receiving them through the representatives of their Branches in Council, be ready to give such suggestions their most careful consideration.

Having submitted the letter and their resolution to the general meeting of the Association, the following resolution was passed by the meeting with only one dissentient:

That this meeting desires to express its satisfaction with the result of the present representative system of government of the British Medical Association, and their approval of the steps taken by the Council for the management of its JOURNAL.

The complainants did not make any appearance at the Meeting, nor since then have they invited their representatives on the Council to any meetings which they may have held, nor have they made any representations through them either to the Council or to the Editorial Reference Committee. They have thus declined to put any suggestions, which they might have thought beneficial, to the test of the judgment either of their fellow members when assembled at the annual General Meeting, or of the General Council of the Association, in which they are largely represented by men of undoubted capacity and high character; nor have they offered any advice (as they were invited to do) to the Editorial Reference Committee. Signatures may probably be obtained to a document drawn up under the auspices of some influential and respected persons who have committed themselves to the course stated; but it is known that a considerable number of influential metropolitan consultants have withstood private solicitation from members of their own professional class, and have signified their attachment to the Association, their loyalty to its constitutional methods, and their sympathy with the great professional objects which it has achieved, and with the important work in which it is engaged; thus declining to take part in proceedings that are opposed to constitutional and conservative principle, not less than to the representative character of the institution assailed. Even if it be assumed—and it is an enormous assumption—that the signatories were altogether in the right; that whatever their policy may be it is one of unquestionable wisdom; that the elected representative Council, consisting of 84 of their brethren and peers in the profession, directly elected by the Branches of the Association throughout the United Kingdom, are no longer capable of maintaining the honour and usefulness of the Association, and of conducting the JOURNAL—although they have not been wholly unsuccessful in that effort for the last fifty years; even if the "despair" expressed be well founded and reasonable—although "to despair of the republic" has never been held to be a civic virtue or a patriotic sentiment—yet they might have been expected to follow constitutional methods and to adopt a less high-handed procedure, before having recourse to the last resource of despair—collective and ostentatious resignation.

THE MEDICAL DEFENCE UNION.

A MEETING for the formal inauguration of a metropolitan branch of the Medical Defence Union was held on Friday, November 8th, at the offices of the British Medical Association, 429, Strand, Mr. LAWSON TAIT (Birmingham), President of the Union, in the chair. There were present Drs. F. J. Allan, S. H. T. Armitage, Fancourt Barnes, T. Bridgwater, J.P., LL.D. (President of the Council of the British Medical Association), H. Radcliffe Crocker, Andrew Clark, F.R.C.S., James Calloway, W. A. Dingle, W. Ashton Ellis, John E. Foster, E. Gilbert, Clement Godson, Edward Gray, F. de Havilland Hall, W. Culver James, M. Handfield Jones, J. P. R. Jameson, Albert Kisch, G. B. Mead (Newmarket), J. Alfred Masters, Sir Morell Mackenzie, Drs. Farquhar Matheson, F. Nicholls (Croydon), W. J. C. Nourse, E. J. Nix, James Oliver, J. J. Pitcairn, H. Campbell Pope, Sir Edwin Saunders, Drs. Percy B. Travers Stubbs, G. Danford Thomas, John Ure, Hugh Woods, the following officers of the Union: Dr. Mead, Organising Secretary; Dr. Granville Bantock, Honorary Treasurer; Dr. Bateman (London) and Dr. Leslie Phillips (Birmingham), Honorary Secretaries; Mr. Rogers, Solicitor; and others.

The CHAIRMAN gave a brief history of the progress of the Medical Defence Union from its foundation, which was shortly followed by the formation of a Birmingham branch, and this had been most successful in its working. Of this branch his colleagues had done him the honour of electing him president, and he very soon found that the whole scheme of the Union would have to be altered if it were to be of any practical use, and steps were taken to put the Union on a thoroughly democratic basis. After consultation with those whose judgment he valued, an institution was established which would, he thought, commend itself to every member of the profession and its machinery found to be as workable as anything of the kind. His presence was purely for the purpose of technically inaugurating a metropolitan branch of the Medical Defence Union, which in its extent covered the whole of the United Kingdom; it should be as the Branches of the British Medical Association and other branches were, perfectly self-governing, electing its own president and officers, and managing its own affairs, subject only to this, that no expenditure would be made of anything like an extravagant amount without the sanction of the Council, by whom the ultimate control of all expenditure should be held, so that the metropolitan, like the other branches, would be an *imperium in imperio*. The experience of every medical man, either in his own practice or in that of some one with whom he had been associated, showed the necessity for some kind of union in cases of trouble. He referred to the enormous benefits which had already accrued to medical men by the Union taking up actions which, by reason of their want of capital and other difficulties of their position, medical men could not have carried through for themselves. One of the great charms of the work which the Union had to do rested in the fact that in bogus actions and actions of terror, no sooner did the plaintiff find that behind the defendant was a strong body of medical men ready not only with their purse, but what was of far more importance, with their moral support, than the attempt at extortion collapsed. The Chairman related one or two incidents of the kind at length. Their experience, he said, so far had been uniformly good. They had met with no disaster, and with nothing but what they could congratulate themselves upon. Their work, which was by no means small in amount, showed how much need there was for an institution of the kind; and he ventured to say if the metropolitan branch became as successful in its extent of members proportionate to the metropolis as they had been in the East Anglian and midland district, very great good would accrue. Other branches throughout England would be formed, and hundreds of their professional brethren who were subject to extortion, injustice, and unfair play in many instances would have justice given them under the strong arm and protection of professional brotherhood. After referring to some of the difficulties which it might be expected would arise, but which he thought would in the future, as in the past, be successfully met, the Chairman said it only remained for him further to say that the initiation of the metropolitan branch, and the work (which had been by no means small) so far had been carried on to a very large extent single-handed by his friend Dr. Mead.

Dr. BRIDGWATER proposed, and Sir EDWIN SAUNDERS seconded, the resolution,

> That a metropolitan branch of the Medical Defence Union be formed,

which was unanimously carried.

The CHAIRMAN, in reply to a question from Dr. BRIDGWATER, said all sums were paid unto a common fund, Dr. Bantock being the Treasurer, each branch retaining a certain sum for petty cash expenditure.

Dr. MEAD (Newmarket) proposed the next resolution:

> That Dr. Bridgwater, J.P., M.B., of Harrow, the President of Council of the British Medical Association, be requested to act as first President of this Union for the ensuing year.

Dr. Mead described the part he had taken first in East Anglia, and ultimately in the metropolis, in the foundation of the Union, or rather in carrying on and extending it, especially in grouping together the districts where attempts had already been made to start a similar society, and in bringing them over into the Medical Defence Union, a work which had been left almost entirely in his own hands. He had only been personally interested in the defence part of it, but there was a strong feeling throughout the northern towns that they should protect the public against quacks, and especially those quacks who went about levying blackmail. Dr. Philipson, of Newcastle, had consented to assist in the formation of a branch for Northumberland, Cumberland, Westmoreland, and Durham. They had a branch in East Anglia, a fairly active Yorkshire branch, and Lancashire was in process of organisation with every prospect of success. They would have an institution having powerful divisions, with one central council working the whole thing, each division acting in harmony with it.

The resolution was seconded by Sir MORELL MACKENZIE, and carried.

It was proposed from the Chair, and seconded by Mr. MASTERS:

> That the names of Vice-President and Council in the list submitted do constitute for the present the members of the metropolitan division, with power to add to their number.

Carried *nem. con.*

Dr. DANFORD THOMAS proposed and Mr. MASTERS seconded:

> That the officers of the metropolitan branch should be selected from the members of the branch,

which was approved.

Dr. BRIDGWATER, in thanking the meeting for electing him as President, expressed the hope that for a time at least they would have the assistance of Dr. Mead and Dr. Bateman's valuable services.

Dr. Campbell Pope was elected Secretary and Dr. Bantock Treasurer.

The CHAIRMAN suggested that an executive should be appointed empowered to act until the first general meeting of the metropolitan branch.

Dr. DANFORD THOMAS thought it important that in selecting members for the executive they should, as far as possible, be chosen so that the different districts of London should be represented.

On being put to the vote, the following were chosen as members of the executive: Dr. Corner, Mr. Ernest Hart, Dr. Danford Thomas, Mr. Felce, M.R.C.P.; Mr. Goodsall, L.R.C.P., F.R.C.S.; Mr. Masters, L.R.C.P.; Mr. Roche Lynch, L.R.C.P.; Mr. Noble Smith, F.R.C.S.Ed.; Dr. Fancourt Barnes; Dr. W. Verdon; Dr. de Havilland Hall; Dr. Prior Purvis.

A vote of thanks to Mr. Lawson Tait for presiding, proposed by Dr. BRIDGWATER, brought the proceedings to a close. A Council meeting was subsequently held.

Drs. A. Bateman and Leslie Phillips, Honorary Secretaries to the Medical Defence Union, write:

"We are requested by the Treasurer of the Medical Defence Union to ask you to allow us to acknowledge in the columns of the JOURNAL the receipt of £3 1s. 3d. as a donation towards the funds of the Union, sent by Dr. Reginald Sleman, this sum being the balance of a subscription invited by Dr. Sleman for the purpose of eliciting a declaration of the exact title which the qualification L.S.A. carries.

"A resolution was passed by the Council of the Medical Defence Union, at a meeting on November 8th, thanking Dr. Sleman for his kindness to the Union."

IT is stated that the Governors of Firth College, Sheffield, have received official intimation from the Treasury of an annual grant of £1,200 to the college.

THE ARRAN MURDER.

Medico-Legal Aspects.

In connection with the tragedy which recently occurred in Arran, the final act of which has commenced with the conviction and condemnation of the prisoner Laurie, or Annandale, at Edinburgh last week, medical evidence of a peculiarly interesting character was led. The circumstances of the case will be fresh in the minds of our readers. A Mr. Rose, of London, accompanied the man Laurie or Annandale in an ascent of Goatfall, in the island of Arran; they were seen together on the summit, apparently arranging the route of descent. Laurie reached the foot of the hill safely, and decamped rapidly from the island, taking some of Rose's things with him.

After considerable delay and the organisation of a search party, Rose was found dead near a gulley on the route the two men had selected. His head was smashed in, his shoulder was broken, the left superior maxilla was separated from the base of the skull, and the nasal bones were completely broken. The body was carefully hidden by someone under a large boulder, and the unfortunate man's jacket was turned up over the head before the stones were placed on the body. Dr. Gilmour, Linlithgow, saw the body as it lay on the hill side. He reports that the clothes covering the body were free from rents and showed no indications of rough usage. The pockets were empty. The body was a little decayed in parts, but there was very little evidence of this on the arms and legs. The left shoulder-blade, near the point where it formed the upper and outer boundary of the shoulder-joint was broken off. The head and face were terribly smashed. The lower jaw was dislocated on the left side. The upper jaw was detached from its connection with the bones of the face. The nasal bones were lying loose. The bones of the left side and the top of the head were all fractured, and portions of them lying inside the skull, which was empty of brain matter. There were no marks of blood on the body.

Dr. Gilmour thus concludes his report: "I have no hesitation in certifying that these fractures were not produced by a fall down a cliff or steep incline, but by a number of blows inflicted by a hard blunt instrument, such as a large boulder; that these blows produced fractures of the skull and injury to the brain-matter, which, in my opinion, was the cause of death."

After being removed from the hill the body was again examined jointly by Dr. Gilmour and Dr. Fullarton, Lamlash, who drew up another report, which concludes: "From the examination of the body made by us, and from the nature of the injuries then present, we are of opinion that death was caused by repeated blows on the left side of the head, and that these blows were inflicted by some heavy blunt instrument."

Dr. Littlejohn, Edinburgh, made an examination on September 27th, along with Dr. Fullarton, of the exhumed body. The result of this was the corroboration of the views expressed in previous reports. From his own experience with regard to the effect of falls from heights, which was considerable, Dr. Littlejohn thought it quite impossible that a single fall from a height would inflict so much damage to the head and face. He laid special emphasis on the separation of the superior maxillary. For the defence Dr. Heron Watson was called. Having read the reports already alluded to, he concluded that the injuries described were very much more consistent with the theory of a fall than with that of a succession of blows. He alluded to the extreme difficulty of fracturing a skull *post mortem* for purposes of demonstration, and showed how the head usually required to be fixed in position. He could not conceive that the injuries described could have been done by a stone. Dr. Chas. McGillivray, Edinburgh, and Dr. H. A. Thomson, who had both visited the supposed site of the tragedy recently, confirmed Dr. Watson's view, that the injuries described were more consistent with the occurrence of a fall than a blow or succession of blows. The disposition of rocks in relation to the body and to the property of the deceased man, discovered scattered about the place, afforded additional support to this theory.

The jury, having been admonished by the judge not to look on the question as one of two competing medical theories, but to form their conclusions from a broad common-sense standpoint, returned a verdict of guilty. The verdict was, however, concluded by a majority of the jury, the actual numbers being understood to be eight to seven. The prisoner was sentenced to death.

St. George's Medical School.—The Entrance Scholarship of £65, open to students from the universities, has been awarded to Mr. Harold B. Grimsdale.

ASSOCIATION INTELLIGENCE.

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

Members are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members, in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the office.

NOTICE OF QUARTERLY MEETINGS FOR 1890. ELECTION OF MEMBERS.

Meetings of the Council will be held on January 15th, April 16th, July 16th, and October 15th, 1890. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting, namely, December 25th, March 27th, June 25th, and September 4th, 1890.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member the by Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No member can be elected by a Branch Council unless his name has been inserted in the circular summoning the meeting at which he seeks election.

Francis Fowke, *General Secretary.*

Notices of Branch meetings intended for insertion in the Journal of the current week should be forwarded, addressed to the Editor, so as to reach the office not later than mid-day Wednesday of that week.

BRANCH MEETINGS TO BE HELD.

Methopolitan Counties Branch: Hertfordshire District.—A special meeting of the above will be held at the Town Hall, St. Albans, on Thursday, November 21st, 1889, at 6 o'clock. Business: A discussion will take place on the resolutions presented to the annual meeting of the Association at Leeds in August last, by Dr. Rentoul. Infectious Disease Notification Act, 1889. This discussion will be opened by Dr. Brett, Vice-President of the District. Other necessary business.—H. Leslie Bates, Honorary Secretary, St. Albans.

Metropolitan Counties Branch: East London and South Essex District.—The next meeting will be held, by the kind invitation of Dr. Adams, at Brooke House, Upper Clapton, on Thursday, Nov. 21st, at 8.30 P.M. A demonstration of interesting cases of skin diseases will be given by Stephen Mackenzie, M.D. Visitors will be welcomed.—J. W. Hunt, Honorary Secretary, 101, Queen's Road, Dalston.

Gloucestershire Branch.—The next meeting will be held at the General Infirmary, Gloucester, on Tuesday, November 19th, at 6.30 P.M., under the presidency of H. E. Waddy, Esq. Agenda: 1. Presidential Address. 2. *a*, Cases of Evisceration (Mules's Operation); *b*, Cases of Suction Operation for Lamellar Cataract; *c*, A Case of Buphthalmos (the patients themselves will be shown), by E. D. Bowers, Esq. The supper will take place at the Bell Hotel, at 8.15 P.M.; tickets 3s. 6d. each, exclusive of wine.—G. Arthur Cardew, Honorary Secretary, Bayshill Villas, Cheltenham.

Shropshire and Mid Wales Branch.—A special general meeting will be held at the Salop Infirmary, on Tuesday, November 19th, at 3 P.M., for the discussion of Dr. Rentoul's scheme for correcting the abuse of the medical charities. Dr. Cureton will read a paper on the subject to open the discussion.

South-Eastern Branch: East Kent District.—The next meeting of the above District will be held at Canterbury on Thursday, November 28th. Mr. Schön, of Bridge, in the chair. All communications to be sent to the Honorary Secretary, W. J. Tyson, 10, Langhorne Gardens, Folkestone

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South-Eastern Branch: East and West Sussex Districts.—A conjoint meeting of the East and West Sussex Districts of the South-Eastern Branch will be held at the Marine Hotel, Worthing, on Thursday, November 28th, at 3.30 P.M.; Mr. G. B. Collet in the chair. The following papers will be read: Dr. Angel Money, on Nitrate of Pilocarpin and Naphthalin; their Use in Infantile Therapeutics. Dr. Herbert R. Spencer, on Abdominal Palpation in Pregnancy. Gentlemen desiring to make communications to the meeting will kindly send word as soon as possible to the Honorary Secretary, W. Ayton Gostling, M.D., Barningham, West Worthing.

SOUTH-EASTERN BRANCH: WEST KENT DISTRICT.—The next meeting of the above District will be held at the West Kent General Hospital, Maidstone, on Thursday, November 21st, at 3.30 P.M., Dr. White in the chair. Papers to be read: 1. Dr. Adam: A few remarks upon some of the more important Changes which will be effected by the Lunacy Acts Amendment Act, 1889. 2. F. Treves, Esq.: The Treatment of Prolapse of the Rectum. 3. Dr. Oliver: Notes of a Case of Congenital Defect of the Urinary Organs and Rectum. The dinner will take place at the Star Hotel at 6.30 P.M.; charge 6s. 6d., exclusive of wine. To facilitate the arrangements gentlemen who intend to dine are particularly requested to signify their intention to the Chairman, Dr. White, 7, Clarendon Place, Maidstone, not later than November 19th. All members of the South-Eastern Branch are entitled to attend this meeting and to introduce friends.—A. W. NANKIVELL, F.R.C.S., Honorary Secretary of the District, St. Bartholomew's Hospital, Chatham.

SOUTH-WESTERN BRANCH.—A special and intermediate meeting of the Branch will be held at the Royal Eye Infirmary, Millbay Road, Plymouth, on Wednesday, November 20th, at 11.30 A.M., for the following purposes: 1. By request of the Council of the Association, to consider the suggestions of Dr. Rentoul, of Liverpool, regarding the Reform of the Out-patient Departments of Medical Charities, etc., as published in the JOURNAL of July 27th, 1889, p. 219. 2. Papers or Notes of Cases; Exhibition of Cases, Specimens, etc. Luncheon will be provided at the Lockyer Restaurant, at 2 P.M., at 2s. 6d. a head. Notices of papers, cases, etc., to be sent to the Honorary Secretary, and members who propose to attend the meeting and luncheon are requested to inform the Honorary Secretary not later than November 16th.—P. MAURY DEAS, Honorary Secretary, Wonford House, Exeter.

STAFFORDSHIRE BRANCH.—The first general meeting of the present session will be held at the North Stafford Hotel, Stoke-on-Trent, on Thursday, November 28th. The President, Mr. Vincent Jackson, will take the chair at 3.30 P.M. —GEO. REID, General Secretary.

ABERDEEN, BANFF, AND KINCARDINE BRANCH.—A meeting of this Branch will be held at 198, Union Street, Aberdeen, on Wednesday, November 20th, at 8 o'clock. Dr. Fowler, of Woodside, President, in the chair. Business: Minutes, nomination of members, etc. Ballot for the admission of Dr. Davidson, Portlethen. Case of amputation of the entire nose, with exhibition of the specimen, by Dr. Ogilvie Will. Communication by Professor Ogston. Suggested improvements in the Aberdeen General Dispensary as a field of clinical study, by Dr. Mackenzie Booth. 1. Exhibition of large Uric Acid Calculus removed by Lithotomy, after failure of Lithotrity, by Dr. Hall. 2. Exhibition of Patient, showing marked Improvement on use of Artificial Drumhead, by Dr. Mackenzie Booth. N.B. Council meeting at 7.45 P.M.—ROBERT JOHN GARDEN and J. MACKENZIE BOOTH, Honorary Secretaries.

SOUTHERN BRANCH: SOUTH-EAST HANTS DISTRICT.—A special meeting of the above will be held at the Grosvenor Hotel, Queen's Gate, Southsea, on Thursday, November 21st, 1889. The chair will be taken by the President, Mr. W. F. Brook, at 4.30 P.M. Adjourned meeting. Copy of resolution passed at the Grosvenor Hotel, Southsea, on November 7th, 1889. Moved by Dr. J. G. Blackman, seconded by Dr. Hackman, and resolved: "That the discussion be adjourned, and that a special meeting be summoned for the consideration of the proposed scheme." For information regarding the resolutions, see JOURNAL of the 9th inst., page 1047, and pages 65 and 66 of the advertisement columns.

SOUTH MIDLAND BRANCH.

A Question of Medical Ethics.—A special meeting of the Committee of Management of this Branch was held at Northampton on November 7th, for the purpose of reconsidering a question of medical ethics between two members of the Branch. The case had been adjudicated on at a previous special meeting, held on June 13th,[1] but was reopened at the instance of one of the parties to the suit, on the express understanding that further and important evidence was forthcoming. Several witnesses were examined, and a prolonged discussion ensued, the following resolution being ultimately drawn up, and carried *nem. con.:*

"The Committee, in consequence of further evidence adduced to-day, is glad to feel that it is able to some extent to modify the opinion expressed on the occasion of its former meeting on June 13th. The Committee has come to the conclusion that there was no intentional breach of the rules which should govern professional intercourse; and that, as the clubs in question had been declared vacant and had been advertised, it was open to any medical man to apply for the appointments. The Committee still regret that a misunderstanding, which it thinks might have been avoided by a neighbourly communication between the parties in the first instance, should have arisen; but it trusts that a friendly feeling may shortly be re-established." It was further resolved: "That the Honorary Secretary should forward the above resolution to the BRITISH MEDICAL JOURNAL for publication."

THAMES VALLEY BRANCH.

A MEETING of this Branch was held at the Talbot Hotel, Richmond, on Wednesday, November 6th, at 5.30 P.M. Dr. SEALY, the President of the year, occupied the chair, and there was a large attendance of members. The minutes of the previous meeting were read and confirmed.

[1] JOURNAL, June 22nd, p. 1430.

New Members.—Dr. Hayes, 17, Clarges Street, Mayfair, proposed by Dr. Langdon Down and seconded by Dr. Fenn, and Mr. Richards, 9, The Green, Richmond, proposed by Dr. Fnn and seconded by Dr. Scott, were elected members of the Branch.

The late Dr. Price Jones.—On the motion of Dr. LANGDON DOWN, seconded by Dr. FENN, a vote was passed conveying the sympathy of the members to the widow and family of the late Dr. Price Jones, of Surbiton, who was one of the prime movers in the formation of the Branch, and for many years regularly attended its meetings.

President's Address.—Dr. SEALY gave a presidential address On Some of the Errors of Routine, for which he was accorded a hearty vote of thanks.

Treatment of Typhoid Fever and Pneumonia.—Dr. BURNEY YEO then opened a discussion on Some Points in the Treatment of Typhoid Fever and Pneumonia, in which the PRESIDENT, Dr. LANGDON DOWN, Dr. GRAHAM, Mr. POWELL, Mr. BATEMAN, Dr. FENN, and others took part.

Dinner.—The members and guests afterwards dined together.

LANCASHIRE AND CHESHIRE BRANCH.

THE autumn meeting of this Branch was held in the Council Chamber of the Town Hall, Blackburn, on Wednesday, November 6th. There was a large attendance of members.

Abuse of Out-patient Departments of Hospitals.—It was resolved that a special meeting of the Branch be held at Liverpool, on December 11th, at 4 P.M., to consider the proposals of Dr. Rentoul and Mr. Brindley James, and to discuss the whole subject.

Communications.—Dr. JOHN M. H. MARTIN showed three cases: Aneurysm of the Ascending Aorta; Hypertrophy of the Cheek; Ectopia Vesicæ; and two specimens: Resected ends of Fractured Clavicle, woman, aged 22; Ununited Fracture of Clavicle from Boy, aged 3. Dr. Martin also exhibited for Mr. HUNT a specimen of Horseshoe Kidney, one extremely hydronephrotic.—Mr. RUSHTON PARKER remarked on a Few Cases of Stone in the Bladder, with peculiar features.—Dr. THOMAS HARRIS made some observations on the Curability of Pulmonary Phthisis, and showed some preparations of healed phthisis.—Dr. JUDSON S. BURY read a paper on the Face as an Index of Disease.—Mr. HARE gave some recent experiences in Cerebral Surgery, with remarks on the localisation of lesions.

Dinner.—After the meeting forty-one members dined together at the Old Bull Hotel, under the presidency of Dr. Davidson, President of the Branch.

WEST SOMERSET BRANCH.

THE autumnal meeting of this Branch was held at the Railway Hotel, Taunton, on Thursday, November 7th, at 5 P.M. There were present sixteen members; Mr. W. A. HUNT, President, in the chair. The minutes of the annual meeting were read and confirmed.

New Members.—John Currie, M.D., Taunton, and Mr. James W. Papillon, Brent Knoll, already members of the Association, were elected members of the Branch.

Exhibits.—Sundry pharmaceutical preparations sent for exhibition were examined.

The Royal College of Surgeons and its Members.—After dinner, Mr. RIGDEN, in bringing forward the subject settled by the Council for discussion, as to proposed legislation for amending the constitution of the Royal College of Surgeons of England, gave a short history of the College from the commencement of the present century. He then in a clear and impartial manner stated the claims which a large body of Members had recently put forward to have a voice in the management of the affairs of the College, and described their proceedings with a view to attaining this object. Every member present joined in the discussion which followed, and gave his views on the subject. Written answers from Mr. Prankerd and Mr. Sincock were read by the Secretary. The following resolution was then put to the meeting, and carried by 10 to 5. Resolved: "That this meeting, having considered the question of Members of the Royal College of Surgeons of England being empowered to take part in the government of the College, is of opinion that it is desirable that an equal power of voting should be given to Members as is now vested in Fellows of the College."

Clinical Meetings.—Mr. W. BURROUGH COSENS proposed the following resolution (notice of which had been previously sent to every member of the Branch); it was seconded by Dr. MAC-

DONALD, and carried unanimously. Resolved: "That clinical meetings of the Branch be held in the Board Room of the Taunton and Somerset Hospital during the coming winter on the second Thursday of each month, at 3 P.M., at which members are invited to read papers and show cases on medical, surgical, and gynæcological subjects." It was further resolved "that Mr. W. B. Cosens be Assistant Secretary for these meetings, and that the first meeting be held on December 12th."

SOUTHERN BRANCH; ISLE OF WIGHT DISTRICT.

THE quarterly meeting of this District was held at Sandown Hotel, Sandown, Isle of Wight, on October 24th, at 4 P.M.; the President, Dr. PLETTS, of Ryde, in the chair.

Strangulated Umbilical Hernia.—An interesting discussion upon this subject was raised in connection with a report of a case read by Dr. GROVES, in which the question of operative interference had after consultation been decided against, and by the progress of the case so far warrantably.—Drs. HARLAND BUCK, BARKER, and WARD COUSINS gave their experience in similar cases.

Laryngismus with Tetany.—Two cases were brought before the meeting by Dr. WILLIAMSON, who laid great stress upon the necessity of attentive care to the dieting of such patients, and illustrated the necessity by referring to the causative influence of dietetic errors in the cases in question. The value of certain nervine sedatives as adjuncts to treatment was commented on.—Drs. GROVES, HOLLIS, PLETTS, and ROBERTSON joined in the discussion which ensued.

Sarcoma of the Kidney in a Child.—Notes of the progress of this case during life were contributed by Mr. W. J. JOLIFFE, who also exhibited microscopic specimens taken from the growth after death, which proved it to be a sarcoma of the round-celled type.—Drs. BUCK, BARKER, GROVES, ROBERTSON, and WARD COUSINS commented upon the difficulties in diagnosis in such cases.

Flexible Eustachian Catheter.—This instrument was shown by the inventor, Dr. WARD COUSINS.

Vote of Thanks.—The PRESIDENT proposed a vote of thanks to the contributors of papers, and the meeting then terminated.

STAFFORDSHIRE BRANCH.

THE sixteenth annual meeting of this Branch was held at the Bell Medical Library, Wolverhampton, on Thursday, October 31st, Mr. BOLDERO, President, in the chair.

New President.—The PRESIDENT having introduced his successor (Mr. T. Vincent Jackson, of Wolverhampton), vacated the chair.

Financial Statement.—After a vote of thanks had been passed to the retiring President, the FINANCIAL SECRETARY read the financial statement, which showed a balance in favour of the Branch of £38 0s. 1d.

Report of Council.—The report of the Council stated that the usual number of general meetings had been held during the past session. The attendance averaged thirty-eight as compared with thirty the previous session. At the general meeting at Stoke-on-Trent the members of the Branch presented the late General Secretary, Mr. Vincent Jackson, with a piece of silver plate and an illuminated address, as a slight acknowledgment of his untiring exertions in the interest of the Branch during a period of fourteen years. The following matters had received the consideration of the Branch during the session: At Stafford, in February, a memorial, recorded in the minutes, passed at a meeting held at the Marlborough Rooms with reference to the publication of certain details in the JOURNAL. The Branch passed a resolution endorsing the opinion expressed in the memorial. At the same meeting the Branch decided to contribute £2 2s., in response to an appeal from the Cambridge and Huntingdon and East Anglian Branches for a contribution to a testimonial to Dr. Mead, of Newmarket, in consideration of his recent successfully contested action at law, the cost of which was considerable. At Wolverhampton, in May, with regard to a resolution passed at the Worcestershire and Herefordshire and Gloucestershire Branches, advocating an inquiry into the growth of the out-patient departments of hospitals and the management of provident dispensaries, medical aid associations, and sick clubs, the Branch passed a resolution agreeing, and suggested that some competent committee should be formed to consider the matter. At this meeting Dr. Isambard Owen kindly gave a demonstration of the series of maps forming the report of the Collective Investigation Committee, on the geographical distribution of rickets, acute rheumatism, chorea, cancer, and urinary calculus in the British Islands. The following members had contributed to the work of the Society during the session: Mr. Folker, Dr. McAldowie, Mr. Spanton, Mr. Vincent Jackson, Dr. Arlidge, Dr. W. G. Lowe, Dr. Hind, Dr. J. H. Tylecote, Dr. Orton, Mr. Phillips, Mr. Wolfenden, Dr. C. Reid, Dr. Blumer, Mr. Boldero, Dr. Lycett, and Mr. J. M. Taylor. Twelve members had been elected during the session, three had withdrawn, and the number on the books was now 140. Regret was expressed for the death of Mr. Taylor, late Assistant Medical Officer of the County Asylum, Stafford, a young member of the Branch, who was beloved by all who knew him, and whose loss was the sadder as being the result of a wound incurred in the discharge of his duties.

Officers.—The following officers were elected:—*President-elect:* Mr. John Alcock, Burslem. *Vice-Presidents:* Mr. W. D. Spanton, Mr. F. Boldero. *General Secretary:* Dr. George Reid, Stafford. *Financial Secretary:* Mr. J. G. U. West. *Auditor:* Mr. Folker. *Council:* Dr. Arlidge, Stoke; Mr. Baddeley, Newport; Dr. Ridley Bailey, Bilston; Dr. Blumer, Stafford; Mr. F. J. Gray, Old Park Hall, Walsall; Dr. Lycett, Wolverhampton; Dr. McAldowie, Stoke; Mr. H. M. Morgan, Lichfield; Mr. G. A. Phillips, Walsall; Mr. C. R. Smith, Wolverhampton; Dr. Wolfenden, Tutbury; Dr. J. K. Wynne, Eccleshall. *Representative in the Council of the Association:* Mr. Vincent Jackson, Wolverhampton. *Representatives upon the Parliamentary Bills Committee of the Association:* Dr. W. G. Lowe, Mr. W. D. Spanton.

President's Address.—The PRESIDENT (Mr. Vincent Jackson) then read his inaugural address, entitled "The Medical Profession and Public Life," which is published on p. 1118.—On the proposal of Dr. W. G. LOWE, seconded by Dr. LYCETT, a cordial vote of thanks was given to the President for his address.

SPECIAL CORRESPONDENCE.

PARIS.

Atrophy of the Pancreas and Diabetes.—Injection of Chloride of Zinc in Hydrocele.—Cumulative Effects of Bromide of Potassium.—Rheumatic Ocular Scleritis and Colchicum.—Tobacco Smoking and Hysteria.—Hypohæmatosis.—Infantile Affections.—Vaccination in France.—General News.

PROFESSOR LÉPINE, of Lyons, is studying the relation between diabetes and pancreatic lesions. M. Lancereaux is the first Frenchman who studied the question, and affirmed that atrophied pancreas and diabetes are coexisting. Numerous clinical facts ratify this belief, and lesions of the solar plexus concomitant with those of the pancreas are supposed to determine diabetes. Laboratory experiments indicated that with atrophied pancreas urine would be free from sugar. Arnozan and Vaillard tied the pancreatic duct in a rabbit; there was absence of sugar in the urine. In the course of this year two physiologists at Strassburg have repeated these experiments, and have observed that, on removing the pancreas from a dog, sugar appears in the urine. M. Lépine's experiments furnish the same results; the first dog under experiment survived the removal of the pancreas seventy hours; during these seventy hours it refused all nourishment; it lost 20 per cent. of its weight, 37 grammes of urea, and 54 grammes of sugar, which appeared in the urine a few hours after the operation, and gradually increased until death took place. The second experiment confirmed the first; in this instance the animal was rendered unconscious by morphine; in some of the dogs the pancreas was not entirely removed; these furnished negative results. At the necropsy it was seen that eight grammes of pancreas remained.

M. Polaillon no longer injects tincture of iodine in treating hydrocele; he substitutes a one-tenth solution of zinc chloride, and thus prevents the patient from suffering the pain caused by the iodine tincture. M. Abadie stated at a recent meeting of the Academy of Medicine that he knew of an instance of death resulting from an irrigation of four centigrammes of cocaine during an operation for ectropion. The patient, a woman, had previously exhibited cerebral hæmorrhage. She was operated on at 3 o'clock and died at 8 o'clock, probably from a second attack of cerebral hæmorrhage. M. Polaillon observed, as cocaine is dangerous and iodine painful, it is best to use zinc chloride.

M. Doyon furnishes some useful data concerning the accumulation of potassium bromide. An epileptic patient, who had been treated by potassium bromide given in large doses, died suddenly. Before death he was continually somnolent. The liver and brain were removed from the body and analysed. They were calcined and then treated with nitrate of silver; the potassium bromide present was thus changed into bromide of silver. It was ascertained that the brain contained 1.934 gr. of potassium bromide, and the liver 0.73 gr. M. Doyon does not consider that this case should induce medical men to give small doses of potassium bromide. Careful clinical observation of patients treated by potassium bromide show this substance to be very slightly toxic. M. Doyon has also made experiments on animals, which prove that large doses of potassium bromide can be administered for a considerable time without injuring the health.

MM. Abadie and Darier treat rheumatic ocular scleritis with colchicum; it is administered in granules, from two to four a day, each containing 1 milligramme. The results have been most satisfactory; patients who had been under treatment for years without any benefit improved, and in some instances were completely cured.

At a recent meeting of the Hospital Medical Society, M. Gilbert showed the members a patient, aged 62, who had worked in a tobacco factory forty years, and smoked excessively. About a year ago he exhibited symptoms of motor and sensory disturbance in the lower limbs. These were apparently cured by the influence of a magnet, but soon afterwards reappeared in the form of motor hemiplegia, with sensory anæsthesia. These cases often occur in tobacco factories. MM. Gilbert and Letulle diagnosed the case as toxic hysteria. M. Hayem objected to the constant misapplication of the term hysteria.

Dr. Maurel has read a paper before the Academy of Medicine, on Hypohæmatosis, which may be summarised as follows: The height, weight, and measurement of the thoracic region have a definite proportion one to the other. This proportion is variable according to age, but is definite for any given age. When what may be called the normal proportion does not exist, a series of abnormal conditions exist which M. Maurel classes under the name of hypohæmatosis. Sometimes these several conditions collectively produce a special condition—anæmia resulting from imperfect oxidation of the tissue, or, in other words, non-combustion owing to imperfect thoracic development. Gymnastic exercises frequently remedy this evil, and thus act as an antidote to hypohæmatosis.

M. Michaux, at a recent meeting of the Lyons Medical Society, showed a tuberculous testicle which he had removed from a child of eight years of age; these cases are rarely met with before the age of puberty. In M. Maygrier's wards there was recently a child, eight days old, under treatment for abscesses, which quickly succeeded each other. The first appeared in the bend of the elbow; a few days after another was detected in process of formation on the olecranon; eight days later a third appeared on the forearm, others on the left foot, on the right leg, left wrist, right knee, and finally in the thyroid region. All these abscesses were opened and treated antiseptically; the treatment continued two months. The child was anæmic and had frequent diarrhœa, but finally recovered. The cause of this considerable pus formation could not be traced. A few such cases are mentioned in M. Bouchut's *Treatise on Infantile Diseases*. At a recent meeting of the Hospital Medical Society, M. Hayem read a paper on anæmia in suckling children. When children are born their blood contains a larger proportion of red blood corpuscles than that of adults; a few days later on the quantity decreases, and during the entire suckling period is below the average quantity in adults. The most frequent causes of anæmia in newborn babes are, according to M. Hayem, syphilis, disturbed digestion, and especially diarrhœa. The lesions of red corpuscles in infants are the same as those observed in adults, with one exception—giant-cells often appear, whereas in adults only when anæmia is very marked. In infantile anæmia red nucleated corpuscles are seen in adults only in leucocythæmia and severe anæmia. M. Hayem described two cases of infantile anæmia—one child was two years old, the other two years and a half.

M. Hervieux recently read before the Academy of Medicine the official report on vaccinating and revaccinating in France and the colonies. The major part of the report dealt with the question of compulsory vaccination, which M. Hervieux wishes to see enforced; also revaccination every ten years. All schools and Government establishments exact the observance of this precaution, but nevertheless there are many unvaccinated at large, a danger to themselves and to the community in general.

M. Gourmay, a chemist and druggist at Passy, who made a mistake in dispensing a prescription which caused the death of the patient, was sentenced to pay 1,600f. damages to the family. The French medical press, in commenting on the occurrence, object to the punishment, considering it too severe for a man who is known to be upright and honourable, more especially when fines inflicted on charlatans, who pursue their dishonest trade for years, are nominal.

A new hospital is to be built at Giens, in the Var Department, at the expense of the city of Lyons. Principally scrofulous patients will be treated in it. The hospital will consist of isolated pavilions.

Paris is now provided with two stations where carriages and litters will be held in readiness for removing patients with contagious diseases to hospitals. Each station has twelve carriages. The commission appointed by the Municipal Council decided on the kind of carriage fit for use; these have been made at a cost of £108 for each carriage, which is composed of a branched or letter A flexible metal seat for the nurse who accompanies the patient and a speaking tube. The litter is articulated, and can be placed in different positions; also be used in a narrow space. The patient can be removed sitting or lying down. After the patient is safely lodged at the hospital there is a general disinfection of man, horse, and carriage. The entrance-door is at one end of the establishment, that of egress at the other; at the former is a disinscting stove.

When will a prophet be a prophet in his own country? History tells us this was not so in the time of our forefathers; current English literature reminds us to-day of this discouraging truth. M. Sicard, of Begiers, according to an English lay paper, has discovered the microbe of small-pox, and quotes his memoir on the subject sent in for the Alvarenga Prize. The *Bulletin of the Académie de Médecine* mentions this memoir in the list of competitive essays, and adds: "The experiments are not proven; we will wait, therefore, until M. Sicard satisfies his judges before we call the attention of our readers to his researches."

It has lately been decided in the law courts that wives of chemists and druggists who carry on the business during the absence of their husbands, often repeated, are acting illegally.

EGYPT.

Nursing Sisters at Kasr-el-Aini.—Out-Patients.—General Health.—Leprosy in Egypt.—Prisons.—The Dervish Prisoners.

THE Prime Minister, Riaz Pasha, lately paid a visit to Kasr-el-Aini Hospital, and, after a minute inspection, expressed his entire approbation of the manner in which this establishment is conducted. He was especially struck with the cleanliness and order prevailing in the female division; and, when informed that this was greatly owing to the English nursing sisters, and that it was proposed to increase the number of these ladies from two to six, at once declared his willingness to assist in bringing about this desirable result; so there is every reason to hope that before long the necessary Order of Council will be issued. As the quarters occupied by the sisters at present are not considered very wholesome, in consequence of their proximity to the river, it is proposed to build a house at the entrance to the hospital, of which the lower portion shall be devoted to administrative purposes, the upper floor being reserved for the sisters.

The out-patient department at Kasr-el-Aini has developed of late years in a remarkable manner. Formerly not a dozen people thus sought medical aid during the year, whereas in 1888 the number treated amounted to 70,000. This, of course, led to increased expenditure, so Dr. Milton has received orders to limit the free distribution of medicines and appliances to undoubted paupers only, and to exact payment from all in easy circumstances.

Egypt is now happily free from all epidemic disease, so tourists and visitors may come and enjoy our unrivalled winter climate without fear. A short time ago it was reported that dengue fever had again made its appearance in Cairo, but there seems to be no foundation for the report. At this season of the year, owing no doubt to the dampness following the rise of the Nile, there is generally a prevalence of muscular rheumatism, and it is probably in consequence of this that the rumour originated.

The Prince of Wales, whose interest in leprosy is known, asked Dr. Greene Pasha to let him have a memorandum on the preva-

lence of the disease in Egypt before his departure. Lepers are apparently very numerous in the country, the sufferers being afflicted chiefly with the tubercular variety; but no attempts at segregation are made, and the malady is not regarded as contagious.

The Prisons Department has again been placed under the exclusive control of Dr. Crookshank, the experiment of attaching it to the Public Security Division, as the Police is now called, not having been found to give good results. Dr. Crookshank proposes to institute many reforms, which are much needed, and to employ the prisoners in remunerative work, such as sack and boot making.

The remarks, in a recent letter, regarding the manner in which the Dervish prisoners were disposed of by the military authorities during the late operations up the Nile were by no means meant as a reflection on the Medical Department of the Egyptian Army, which was most efficiently administered by Surgeon-Major Hayes Bey, officiating principal medical officer. As far as it lay in the power of that able and energetic officer, everything was done that was possible under the circumstances; but with the resources at his disposal it was, of course, impossible to take charge of thousands of prisoners, nor, strictly speaking, would it have been within his province to do so.

NEWCASTLE-UPON-TYNE.

The Infirmary.—The Clinical Society.—The College of Medicine.—Demonstrations at the Newcastle Eye Infirmary.

THE quarterly meeting of the Governors of the Infirmary was held on November 7th. It was stated that the workmen's contributions for the ten months ending October 31st had been £2,401 13s. 4d., as compared with £2,012 6s. 5d. for the corresponding period of last year. The subscriptions (ordinary) showed an increase of £206 16s. 2d. There was a larger expenditure in spirits and in surgical dressings; with regard to the former, it was decided that an account should be kept of the amount ordered by each member of the staff. A discussion subsequently took place on the desirability of reintroducing the old system of out-patients. Some time ago the system of making each in-patient present a governor's in-patient letter was done away with, and the hospital was made a free one, the only necessity for admission being that the patient applying should be a suitable case for treatment in the wards. At that time the system of having daily free out-patients was done away with. It is well known that for teaching purposes the out-patient department was most valuable, and the staff now supported the motion that it should be recommenced. Considerable discussion on the question took place, and it was finally referred to the annual meeting in February. Under the old system the out-patient department was largely in the hands of the house-surgeons, who, as a rule, took every opportunity of demonstrating the cases to the students, who usually attended in large numbers. The closing of the department has been a great loss to the students, because they now have little opportunity of seeing cases which occur in everyday practice, and which flocked to the infirmary, as many as 27,000 being seen in one year. Some opposition was expressed to the motion, because large numbers of cases of venereal disease had been treated.

The first meeting of the Clinical Society was held in the last week of October, and was largely attended. The President-elect, Dr. Beattey, was inducted to the chair. The Treasurer's report showed a large balance in hand. It was decided to take the opinion of the members of the Society as to the desirability of altering the place of meeting to the New College of Medicine, provided the permission of the Council of the College could be obtained. Voting papers have been sent out, and the question will be settled at the next meeting. Several interesting specimens were shown, amongst them one of cerebral abscess, which had been diagnosed, but on which operation had been refused. Dr. Atkinson read a paper on the influence of digitalis on the secretion of the kidney. Dr. Atkinson also gave some original observations which he had made on dogs when placed in confinement and kept on special diet.

A circular has been promulgated amongst old Durham graduates and students, asking for subscriptions towards paying off the debt which at present exists on the new building of the College of Medicine and towards the building of a students' residential hall. The debt amounted to £10,000, and £4,000 has already been subscribed. The building is most admirably arranged for its purposes, and it requires very little self-denial on the part of those who have reaped benefit from it to complete it in accordance with the original plans, to place it out of debt and thoroughly equip its various departments. The classes are now in full swing, the only change being in the chair of anatomy, which is in the hands of Dr. Howden, late assistant to Professor Turner in Edinburgh, who fills the vacancy caused by the resignation of Dr. Mears. Dr. Howden is an able lecturer and good demonstrator, and will without doubt justify the wisdom of the Council in electing him to the chair.

Dr. Jeafferson, the senior surgeon to the Newcastle Eye Infirmary, commenced on November 8th a course of lectures and demonstrations on diseases of the eye. The first lecture was mainly introductory, and was attended by a large number of the practitioners of the neighbourhood and by many students from the college. They will be illustrated by well-marked cases from the wards of the hospital.

CORRESPONDENCE.

THE SANITARY STATE OF ROME.

SIR,—The letter of Edward Drummond, M.D., D.P.H.Camb., on the Roman water supply, calls for some comment. He begins his letter by telling us that men of high rank in the profession warn visitors to Rome not to drink any water whilst residing there, and goes on to show that the water supply is unexceptionable. He tells where the several supplies come from, and how they are carried to Rome, and having got the water to the city in a pure and uncontaminated state, he seems honestly to wonder that professional men of high rank can warn their patients against drinking water in Rome. Dr. Drummond must know that between the aqueduct, even of a Claudian, and the dinner table of a hotel in Rome, there are possible sources of contamination. I was in Rome so recently as March of this year, and in what was said to be one of the healthiest hotels, and certainly one of the largest, the water-closets were so foul smelling as to have disgraced a city where the light of sanitary science had never shone. Until the hotels of Rome are overhauled, as many of those in Cannes have been, visitors will do well to be careful in drinking water.—I am, etc.,

JOHN HADDON, M.D.

Marsh House, Canonbie, N.B.

DERBYSHIRE INFIRMARY: QUALIFICATIONS FOR PHYSICIAN AND SURGEON.

SIR,—Under the heading "Scotch and Irish Graduates in England" (page 1050) you have been misinformed as to what took place at the meeting of the Derbyshire General Infirmary. Instead of correcting the mistake I enclose you a copy of the rules relating to the qualifications required of candidates for the position of Honorary Medical Officer; and I shall be greatly obliged if any of your readers, bearing in mind that our infirmary, for medical, surgical, and fever cases, has 185 beds, and that the population of Derby and borough is about 90,000, and that there are many county families round about, will give me their candid opinion; and in particular that they will say whether they think me justified in contending that anyone holding the position of Physician (I should like to add Surgeon also) ought at least from the date of election to abandon the practice of pharmacy. It used to be necessary for the physician to abandon surgery and midwifery as well as pharmacy.—I am, etc.,

Derby, November 12th. WILLIAM OGLE.

QUALIFICATION OF PHYSICIANS AND SURGEONS.

No gentleman shall be eligible to the office of Physician who is not a graduate in medicine of Oxford, Cambridge, or London; a Fellow, Member, or Licentiate of the Royal College of Physicians of London; a Fellow or Member of the Royal College of Physicians of Edinburgh; or a Doctor of Medicine of any University of the United Kingdom.

No gentleman shall be eligible to the office of Surgeon who is not a Fellow or Member of the Royal College of Surgeons in London, Dublin, Edinburgh, or Glasgow.

No gentleman shall hold the office of Ophthalmic Surgeon who practises any other branch of medicine or surgery, either in or out of the infirmary. He shall not be eligible for any other honorary appointment in the institution, but in all other respects shall have the same status as the other members of the staff.

No two persons standing in relation of father and son, or of brothers, or being partners, shall both be Medical Officers to this institution at the same time. Every Physician and Surgeon must be duly registered under the Medical Acts.

NAVAL AND MILITARY MEDICAL SERVICES.

CHANGES OF STATION.

THE following changes of station among the officers of the Medical Staff of the Army have been officially notified as having taken place during the past month:—

	From	To
Surgeon-General J. Ferguson ...	Aldershot...	... Portsmouth.
Dep. Surg.-Gen. R. W. Meadows, M.D.	Devonport	... Gibraltar.
,, R. Lewer, M.D.	Hong Kong	... Dover.
Brig.-Surgeon J. Colahan, M.D.	Dublin ...	... C. of Good Hope
,, W. C. Robinson...	Portsmouth	... Gosport.
Surgeon-Major R. De B. Riordan	Cork ...	... Portsmouth.
,, T. G. Bolster, M.D.	Ipswich ...	... Landguard Fort
,, H. Stannard ...	Kilkenny...	... Bengal.
,, R. D. Bennett...	Devonport	... Plymouth.
,, J. M. Beamish, M.D.	Aldershot...	... Weedon.
,, W. S. Pratt, M.B.	Home District	... Headquarters.
,, G. B. Hickson...	Leeds ...	... York.
,, N. M'Creery ...	Portsmouth	... Hilsea.
,, J. J. Morris, M.D.	Parkhurst	... Portsmouth.
,, J. F. Brodie, M.D.	Dublin ...	... Cork.
Surgeon W. A. Parker ...	Portsmouth	... Marchwood.
,, E. R. Power, M.B. ...	Dublin ...	... Cork.
,, A. A. Lyle	Lichfield ...	... Chester.
,, H. E. W. Barrington, M.B.	Aldershot...	... Bengal.
,, W. P. Feltham ...	Woolwich...	... Madras.
,, K. S. Wallis	Aldershot...	... Sheffield.
,, F. R. Barker, M.B. ...	Hilsea ...	... Gosport.
,, C. B. Hill	Gosport ...	... Portsmouth.
,, T. Dorman, M.D. ...	Longford ...	... Dublin.
,, A. E. J. Croly ...	Curragh ...	... ,,
,, W. D. A. Cowen ...	Belturbet ...	... Portsmouth.
,, J. Watson, M.D. ...	Armagh ...	... Belfast.
,, G. F. Poynder ...	Gravesend	... Madras.
,, P. Mulvany	Portsmouth	... Gosport.
,, J. M'M. Bolster ...	Limerick ...	... Buttevant.
,, E. O. Milward ...	Gosport ...	... Marchwood.
,, C. R. Woods, M.D. ...	Ashton-u.-Lyne	... Lancaster.
,, R. L. Love, M.D. ...	Belfast ...	... Enniskillen.
,, R. Jennings, M.D. ...	Gosport ...	... Portsmouth.
,, T. F. W. Fogarty, M.B.	Devonport	... Horfield,
,, E. Butt	Dunfanaghy	... Falcarragh.
,, T. R. Lucas, M.B. ...	Okehampton	... Devonport.
,, T. Moynihan ...	Dunfanaghy	... Belfast.
,, W. C. T. Poole, M.B....	Shoeburyness	... Warley.
,, W. Babtie, M.B. ...	Christchurch	... Portsmouth.
,, J. M'Laughlin, M.D.	Belfast ...	... Holywood.
,, F. J. Lambkin ...	Canterbury	... Shorncliffe.
,, R. J. Fayle	Devonport	... Cardiff.
,, F. H. M. Burton, M.B.	Birmingham	... Burnley.
,, C. E. Nichol, M.B. ...	Netley ...	... Fermoy.
,, C. R. Bartlett ...	Aldershot...	... Netley.
,, R. Kirkpatrick, M.B.	Perth ...	... Edinburgh.
,, H. E. Deane... ...	Dover ...	... Canterbury.
,, A. Baird, M.B. ...	Edinburgh	... Glasgow.
,, J. R. S. Robertson, M.B.	Waterford	... Clonmel.
,, T. B. Winter ...	Marchwood	... Gosport.
,, R. H. Clement ...	Colchester	... Shoeburyness.
,, L. E. Anderson ...	Jamaica ...	... Barbados.
,, J. R. Forrest ...	Landguard Fort	... Colchester.
,, C. W. Johnson, M.B.	Stratford-on-Avon...	Lichfield.
,, A. De C. Scanlan ...	Aldershot...	... Dover.
,, S. G. Allen	— ...	... Dublin.
,, A. A. Sutton ...	Portsmouth	... Golden Hill Fort
,, B. H. Scott	Hay Camp	... Plymouth.
,, A. B. Hinde	Portsmouth	... Hilsea.
,, A. Y. Reily, M.B. ...	Maidstone	... Aldershot.
,, G. F. Alexander, M.B.	Glencorse...	... Edinburgh.
,, A. J. Luther... ...	Gosport ...	... Portsmouth.
,, H. S. Peeke	York ...	... Sheffield.
,, J. G. Deacon, M.D. ...	— ...	... Sierra Leone.

THE NAVY.

FLEET-SURGEON JAMES FLANAGAN has been placed on the retired list, with permission to assume the rank of Deputy Inspector-General of Hospitals and Fleets. His commission as Surgeon dates from May 24th, 1856; that of Staff-Surgeon August 3rd, 1859; and that of Fleet-Surgeon December 7th, 1876. He was Assistant-Surgeon in charge of the *Shannon* Naval Brigade during the Indian Mutiny, and was at the siege of Lucknow (medal with clasp).

Fleet-Surgeon EDWARD W. DOYLE has been appointed to the *Castor*, *vice* Flanagan.

THE MEDICAL STAFF.

BRIGADE-SURGEON JOHN ROBINSON has been granted retired pay, having attained the age of 55 on November 4th. His commissions are dated: Assistant-Surgeon September 22nd, 1858; Surgeon March 1st, 1873; Surgeon-Major April 1st, 1873; and Brigade-Surgeon November 20th, 1884. He was engaged in the Afghan war in 1878-80 (medal); in the Egyptian war of 1882, being present at the battle of Tel-el-Kebir (medal with clasp and Khedive's bronze star); and in the operations in Zululand in 1888.

Surgeon-Major A. E. HAYES, who, it will be remembered, was specially mentioned by Sir Francis Grenfell for his services during the action fought near Toski, on the Soudan frontier, on August 3rd last, is now nominated a Companion of the Distinguished Service Order, in recognition of those services.

It is reported that Dr. W. A. THOMSON, Surgeon-General of Her Majesty's Forces in India, will be granted a two years' extension of office. As Dr. Thomson was only appointed in February last, he would otherwise have to vacate at the end of one year's tenure only.

Surgeon EUGENE CORMACK, who entered the service May 30th, 1885, and who has been serving in Bengal since the close of that year, died at Shahjehanpore on October 17th, at the age of 29.

A recently published Army Order announces that, under exceptional circumstances, to be approved in each case by the Secretary of State, an acting-surgeon may be appointed to a regiment of yeomanry cavalry, but he will not be entitled to either pay or allowances.

ARMY MEDICAL RESERVE.

SURGEON EDWARD LUKE FREER, 1st Volunteer Battalion Warwickshire Regiment (late the 1st Warwickshire), and Acting-Surgeon ALFRED GEORGE BATEMAN, M.B., 16th Middlesex Rifle Volunteers, are appointed Surgeons ranking as Captains.

INDIAN MEDICAL SERVICE.

SURGEON D. ST. J. D. GRANT, Bengal Establishment, Civil Surgeon of Jullunder, has obtained privilege leave of absence for three months.

Surgeon-Major J. A. W. SPENCE, Madras Establishment, died in London on November 5th. He entered the service as Assistant-Surgeon, March 31st, 1865, and became Surgeon-Major, January 28th, 1878. He retired January 17th, 1881.

The Rev. W. FRENCH CLAY, M.A., M.D., M.R.C.S., formerly an Assistant-Surgeon on the Bombay Establishment, died at Clapham on November 9th, aged 67.

Surgeon IGNATIUS P. DOYLE, of the Madras Establishment, has been nominated a Companion of the Distinguished Service Order, in recognition of his services during the late operations in Burmah.

THE VOLUNTEERS.

WILLIAM JAMES TIDY, Esq., F.R.C.P., F.R.C.S., is appointed Surgeon to the Bristol Brigade of the Royal Naval Artillery Volunteers.

Mr. T. W. J. ALLEN is appointed Acting-Surgeon to the 1st Volunteer Battalion Lincolnshire Regiment (late the 1st Lincoln Volunteers).

Acting-Surgeon A. G. BATEMAN, M.B., of the 16th Middlesex (London Irish), is promoted to be Surgeon.

The initials of Brigade-Surgeon GILES, given in the JOURNAL of November 9th, should be P. B., and not as therein stated.

EVIDENCE BEFORE THE COMMITTEE.

MEDICAL STAFF suggests that, the evidence given before Lord Camperdown's Committee not being representative of the views of medical officers on army rank and title, copies of the Report on Relative Rank should be circulated to members of Parliament, with an attached slip summarising the question. He offers to bear part of the expense of such a circulation.

SLOWNESS OF PROMOTION.

A SURGEON-MAJOR (India) writes, protesting against the proposed increase of age service to Surgeons General; it would irretrievably block promotion. The first five Brigade-Surgeons on the list have already thirty-one years' service each, with only the relative rank of lieutenant-colonel; and two out of the five, one of whom has served with much distinction, are on the point of being compelled to retire under the age clause. Surely it cannot be contended these gentlemen have been fortunate in promotion. Promotion in the senior executive ranks is indeed excessively slow.

PHYSICAL EXAMINATION FOR THE INDIAN MEDICAL SERVICE.

A. M. writes: Would you kindly inform me (if possible) whether they allow false teeth to pass in the physical examination for the Indian Medical Service? I have twenty-two sound teeth, and I thought about having those I have lost replaced. They are all back teeth. I am myopic to the extent of — 4.5.

*** The teeth, if sufficient for mastication, will not be a source of rejection. Probably no question would be asked about them; but the degree of myopia named (4.5 D) is just within the limit, which is 5 D; with correcting lenses, V must be capable of being brought to $\frac{6}{6}$ in one eye, and at least to $\frac{6}{12}$ in the other eye.

MEDICAL STAFF LIBRARY.

A. M. S. writes: Will you allow me to make a proposition in the pages of the JOURNAL, where so many useful reforms affecting the Medical Staff have been initiated and discussed? It is only possible for medical officers to carry about with them a few standard professional books, and the difficulty of easy reference to new works is much felt. Could not a system similar to that in the Royal Engineers be adopted? That corps has accumulated a huge professional library, from which the latest works are sent to officers stationed in different parts of the United Kingdom. They have also branch libraries at all headquarter stations. Could not a similar system be adopted for the Medical Staff? The nucleus of such a library already exists at Netley. A small subscription would suffice. I am at present preparing for my examination for promotion, and am painfully conscious of the inadequacy of the books of reference which I have, for purposes of study, by me.

*** This seems a good suggestion.

THE COMMISSION REPORT.

X. writes: Your remarks on the report are so pertinent that they leave little to add, but there is one point I have not seen touched on, namely, the present system of allowing Surgeons-General to remain in that position in perpetuity, tempered only by senility. It was bad enough to see a Surgeon-General promoted soon after 50, remaining on till 60, but how much worse will it be if allowed to remain on till 62? Why should not the universal rule of the army be applied, namely, to make these five year appointments, or on completion of a certain age. Generals, Commissary Generals, and all staff officers have to vacate at the end of five years' tenure. Why should a Surgeon-General be the only man for whom an exception is made? The extension of the age to 62, if made universal, will press very heavily on a number of old officers, and they will never get their promotion in consequence.

The general feeling out here (India) is, that it would have been better to have left the age at 60, and to give power to the Commander-in-Chief, on the recommendation of the Director-General, in special cases, for the good of the service, to extend the age of any officer one or two years, provided always he was physically fit. The present Surgeon-General (Mr. Thomson) of H.M.F. in India is a case in point, and it would be for the benefit of the Service if he were retained one or two years longer, but there are a good many other old gentlemen we could well spare to make way for younger men.

MEDICAL TITLES.

A. M. D., writing from abroad in reference to recent articles in the JOURNAL on Lord Camperdown's Committee, pertinently says: The "three" dissentients who aver that change in medico-military titles would entail a similar change in naval medical titles give no logical or other reason for the absurd assertion. The two services are entirely different; surgeons, paymasters, engineers, etc., in the navy, all non-combatants in fact (if such a term can be applied to men having equal risks in a war ship), are clearly designated by professional titles. But in the army an engineer has long ceased to be called such, and now recently so have commissaries, ordnance, paymasters and quartermasters; all have fine military titles, such as Captain, Major, and Colonel. Such changes have not entailed changes in the navy, and why should the medical? The "dissent" will not hold water. The Medical Staff must be levelled up to the other department; no other course is open.

*** We designated the "dissent" that change in army medical titles would involve change in naval medical titles as the veriest red herring dragged across Mr. Stanhope's path.

MEDICO-LEGAL AND MEDICO-ETHICAL.

DR. HENRY M. SHAND (Port Elliot, South Australia).—We are of opinion that, under the circumstances mentioned, an action would not lie in this country against the father.

THE UNINTENTIONAL PROCUREMENT OF ABORTION.

DR. JOSEPH STEPHENS, (Brighton) writes: Your comments on "The Charge against Dr. Moon" remind me of an artful attempt to get me unwittingly to induce abortion which occurred to me some twelve months ago. A stylishly dressed woman, in appearance and manners quite a lady, appeared in my consulting room one evening, and told me she was suffering from displacement of the womb. I asked whether she had been under treatment, and she said she had in London, and that the doctor passed a uterine sound, and told her there was a "flexure of the womb." She was now staying in Brighton, and wished me to examine her, and undertake the treatment of her case. I asked her about the symptoms she suffered from, but could elicit nothing which led me to believe in "flexure." I told her so, but she insisted on my passing a sound, in order that I might be sure. My suspicions were aroused by her pertinacity, and after some cross-questioning, I said plainly: "I believe you are pregnant, and you want me to pass a sound to induce abortion." She was taken aback, and confessed that it was so. She told me that she was living apart from her husband and had been intimate with another man, and she was determined to get rid of the effects of this intimacy somehow. She had been reading up the matter and found that the introduction of a uterine sound would be pretty sure to bring on a miscarriage, and she had applied to me with this object. I pointed out the dangers she would have incurred to no purpose, for when she left me she said she was quite as determined about it as ever; she would go to another medical man and make the same proposal, "and she would take care, now that she knew where her failure with me arose, that she would not again confess to pregnancy."

It appears to me that if women in similar difficulties make an equally astute study of the subject of procuring abortion, and there are great facilities for their doing so, it will be as easy as possible in these days, when pessaries, sounds, tents, *et hoc genus omne* are in the hands of almost every practitioner, to procure abortion whenever it seems desirable,

TOUTING FOR SPECIAL HOSPITALS.

WE have had forwarded to us a letter addressed to a lady, begging for her "kind sympathy and support" in favour of "The British Hospital for Mental Disorders," out-patients "treatment." Enclosed with the letter is a circular setting forth the objects of the (proposed) institution.

As the letter and circular are both signed by one and the same person, and as we are of the opinion that the profession should be in possession of the facts, we publish the letter and circular in full. It will be noted that in the circular mention is made of the proposal to "found" and "establish" such a hospital, and that before either of these ends are attained it is already possessed of a "Consulting Physician and Medical Director," and that his is the only name and address given.

We confess it appears to us to be a most unusual proceeding for a medical practitioner to issue such an appeal for "kind sympathy and support" in favour of founding and establishing a hospital, of which he appears, both by his letter and circular, to be the sole representative and promoter.

We do not think it necessary to comment upon the subject matter of the circular, it speaks for itself.

70, Wimpole Street, Cavendish Square, W.
October 10th, 1889.

Dear Madam.—In forwarding the enclosed prospectus, I venture to hope that the subject referred to may meet with your kind sympathy and support, to enable such an hospital to be established on a proper basis, and thus supply a want long existing.—Faithfully yours, L. FORBES WINSLOW.

THE BRITISH HOSPITAL FOR MENTAL DISORDERS,
"OUT-PATIENTS" TREATMENT.

Objects of the hospital.

1. To enable the indigent poor, suffering from mental disorders, to obtain skilled professional advice gratuitously.
2. To treat and deal with mental disorders in their incipient stage, and before the development of the more dangerous symptoms.
3. To found a school to enable medical students and those desiring it to receive practical instruction in the study of mental disorders.

It has been said by many that there is no necessity for special hospitals for the treatment of certain diseases, but the fact remains, that notwithstanding the opposition offered by persons who have a direct interest in suppressing such institutions, they still exist, and are well supported, solely because of the immense real good they do.

Up to the present time there has been no hospital established solely for the out-patient treatment of mental disorders, although such an institution is much wanted at the present day, and were it founded, it could not fail to do a great good both morally, medically, and materially.

It is therefore proposed to establish an institution to be called The British Hospital for Mental Disorders, "Out-Patients" Treatment, which hospital shall be entirely free to the indigent poor.

There has been ample proof of late of the need of such an institution, judging from the numerous murders and suicides committed by the poorer classes, while suffering from temporary mental derangement, and it is also well-known that many varieties of such mental derangements could have been alleviated had those afflicted been placed immediately in the way of obtaining proper professional advice.

When a case of insanity occurs in a poor man's family, it is either neglected altogether or treated by the relatives as a slight illness, and nothing more. None of the family know where to go to get a proper opinion on the case, which, from its peculiarities, are such as to require special study, based on practical experience to cope with.

It is with a view to help all mentally afflicted who choose to apply, but the indigent poor especially, that the hospital proposed to be founded has been brought to your notice, and it is earnestly hoped that if the scheme suggested meets with your approval, you may be pleased to give the matter your kind support.

Contributions, to further the object, may be paid into the London and County Bank, Hammersmith (Hospital Account), or will be thankfully received and acknowledged by the undersigned.

L. FORBES WINSLOW, M.B., LL.M.Cantab, D.C.L.Oxon.,
70, Wimpole Street, Cavendish Square, W.,
Consulting Physician and Medical Director to the British Hospital for Mental Disorders, "Out-Patients" Treatment.

LEGAL STATUS OF LICENTIATES OF THE ROYAL COLLEGE OF SURGEONS, IRELAND.

CHIRURGUS asks whether the Royal College of Surgeons, Ireland, is enabled by its Charter to license its Fellows and Licentiates to practise and recover fees in medical as well as surgical cases? Even before the Act of 1858 that College included the practice of physic, materia medica, etc., in its examinations.

*** We are informed that the College, acting upon legal advice, granted, about twenty years ago, licences in medicine, but it did not apply for registration of these licences, and has long since ceased to issue them; that the rights of its Licentiates in Surgery are identical with those of the Surgical Licentiates of all other Bodies as defined by Section 31 of the Medical Act of 1858 and Section 6 of the Act of 1886; and that a large number of practitioners are registered, and practise in all branches of the profession upon no other qualification than the L.R.C.S.I., and their right to do so has never been disputed.

POSITION OF ASSISTANT OF DECEASED PRACTITIONER.

J. J. K.—Assuming A. to have been appointed by the executor of the deceased practitioner, B., he will be "acting correctly and legally in continuing to manage the practice for the widow." The second question, however, in reference to the "unqualified resident assistant," is too indefinite to enable us to give a specific answer thereto, but we may observe that, inasmuch as A. will be legally responsible for the conduct of the practice, the other assistant will necessarily have to be subordinate in every sense, otherwise A. will, in our opinion, act advisedly in declining the responsibility, and retiring.

FEES FOR LONG JOURNEYS.

ST. ANDREW.—So far from our correspondent's charge of twenty-five guineas being, as alleged by the lawyer and executor in question, "most unreasonable, an entire mistake surely!" it is, in our opinion, under the circumstances narrated, unduly moderate; in confirmation of which we would refer him to the recommendatory charges laid down for Class III, in the *Medico-Chirurgical Tariffs*, under the heads of Special and Night Visits, Mileage, and Detention, explanatory notes 2, 3, 4, and 5, page 13; and also, Mileage exclusive of Fee, as a Consultant, page 15; in which latter capacity St. A. may, under the specific circumstances, and from his professional status, justly regard himself. The fees suggested in the *Manchester Medical Tariffs* are, it may be noted, somewhat higher than those in the preceding tariffs; both of them may be consulted with advantage.

CONSULTANTS AND GENERAL PRACTITIONERS.

F.R.C.P.E. writes: Owing to the frequent complaints made in the JOURNAL by general practitioners of consultants taking and retaining their patients, I am tempted, as a physician and consultant, to state my recent experience, and I know my case is not unique.

Within the past ten days I have been consulted by the patients of five different medical practitioners living in the neighbourhood, and some well known to me—here I want particularly to note that these patients brought no introductions to me. After each visit, having ascertained the name of the patient's usual medical man, I wrote to him, according to my usual custom, stating I had seen a patient of his, and my views of the case. From not one of these five have I received any reply; which, to say the least, is discourteous.

THE Royal Commission on the Vaccination Acts met last week, with Lord Herschell in the chair, when Dr. Preston, of the Naval Medical Department, and Brigade-Surgeon Nash, of the Army Medical Department, were under examination for a considerable time as to the working of the Acts in the naval and military establishments.

HOSPITAL AND DISPENSARY MANAGEMENT.

THE PROPOSED PUBLIC MEDICAL SERVICE.

THE correspondence which reaches us from week to week with reference to the abuse of the out-patient departments of hospitals and dispensaries being somewhat unwieldy, and tending often to obscure, by repetitions and amplifications, the main points at issue, we propose to publish them in abstract, indicating the main lines of argument used by our correspondents. We reserve space for the reports of the discussion at the meetings of the Branches, which it is particularly desired may be forwarded with promptitude after each meeting. The letters thus dealt with here will be handed to the Special Committee, which meets on November 27th, for further consideration:—

UNION IS STRENGTH.

The Abolition of "Club-Monopolies."

DR. J. S. BELCHER (Gloucester) comments on the apathy with which the schemes to alter and improve the various phases of medical practice have been met. He attributes it partly to the difficulty of the problem and partly to the clashing of the various interests at stake. He considers the idea of establishing a Public Medical Service, as suggested by Dr. Rentoul, a mistake, as there are already too many schemes in operation for providing medical treatment for the poor. He maintains that it is impossible to frame any scheme better than a modification of the existing sick-club system. The difficulty might be solved if each practitioner could be convinced that it was to his individual interest for all to unite so as to come to a definite understanding (1) as to the charges to be made to club patients; (2) as to the restriction of the clubs to persons unable to pay ordinary fees; and (3) as to the wage limit. As to (1) and (2), he considers a sliding scale of fees, compelling every club member to pay an amount proportionate to his average weekly income throughout the year, indispensable. The amount of extra clerical work involved in using the sliding scale would be trifling. It is true that at the present time the sick clubs, by advertising, could obtain scores of needy practitioners willing to undertake to do whatever was required at the terms offered by the club. Medical practitioners must meet this difficulty by laying aside the distrust which has been produced by individual isolation and severe competition, and acting in unison. To attain this end the monopoly characteristic of the club system must be replaced by a system which would throw the clubs open to every registered medical practitioner, each member of the club selecting his own practitioner. This would not cause injury to anyone who has a club, for if the club were thrown open the medical officer would retain at least seven-eighths of the members, the small percentage who would leave would be those who felt disqualified. The experience of the provident dispensaries showed that a newcomer starting in practice and admitted a member of the staff did not secure, as a rule, more than 5 per cent. of the members at liberty to select him. Struggling practitioners who under present circumstances would accept almost any offer the clubs might make would, if monopoly were done away with, feel that they had a chance of obtaining a livelihood by getting a few club patients and others without becoming slavish drudges. To meet the case of men actually starving a fund should be formed by small annual subscriptions paid by every registered practitioner. The sliding scale Dr. Belcher suggests is as follows: Adults earning 15s. a week should pay 3d. per month; 20s. a week, 4d. per month; and everyone whose income is more than that should pay at the rate of ½d. per week for every 5s. earned, so that persons earning 30s. would pay 2d., and 50s., 4d. per week. As to whether the wife and children should be attended at the same terms, must be left to the profession to decide. This and every other important question would be decided by voting, as by that means the opinions and wishes of everyone would be known. The only thing else required is that every club member should pay 1d. for each prescription or medicines supplied, but not more than 4d. should be charged in one week to anyone.

A TEST SCHEME.

Charges for all Certificates.

DR. W. F. MACDONOGH (Twickenham) expresses the opinion that if co-operation among medical men were possible—which he doubts—almost anything could be done. To test the possibility of co-operation he suggests as a test scheme that every medical practitioner and medical student should give a signed undertaking not to sign any kind of certificate or school attendance card without first receiving a fee of at least 1s. for each and every certificate—public vaccination and death certificates, as to which there are statutory obligations, to be the only exceptions. Due notice would have to be given by practitioners holding appointments under agreement to give certificates, and every person signing the proposed undertaking would at the same time sign a promise that he would not accept any appointment rendered vacant by reason, directly or indirectly, of certificates being charged.

HOSPITAL OFFICERS.

The Probability of their Co-operation.

DR. HUGH WOODS (Highgate) replies to the objection raised by Dr. Collier, of Oxford,[1] as to the complexity of Dr. Rentoul's scheme, that the questions there grappled with are extremely complicated. The adoption of a wage limit on the Manchester system, which Dr. Collier approves, Dr. Woods considers the most important section of Dr. Rentoul's resolutions. He, however, doubts whether any such scheme would receive the assistance of hospital physicians and surgeons; the subject does not yet appear to have been discussed by them, and until they begin to inform hospital governors and the public that there is urgent need for reform, their co-operation cannot be counted on. If the reform were carried out, however, the excluded patients ought not to be left to be the prey of quacks or of medical men who regard medicine simply as a commercial enterprise. The Public Medical Service is intended to guard against such dangers as these.

REFORM OF OUT-PATIENT DEPARTMENTS.

Necessity for a Scheme to give Immediate Treatment for Immediate Payment.

DR. R. R. RENTOUL, in reply to Dr. Corbyn, gives it as his opinion that a Public Medical Service and a provident society might work together, with the approval of the local medical practitioners. Dr. Rentoul points out that his scheme provides for home visits, and that all medical men of good character, who would undertake to obey the rules, ought to be eligible for election, provided they had been resident for two years, but not more than about six ought to be actually appointed to each branch. The proviso as to residence is necessary, as medical men come and go, and because the people would like to know something of the medical practitioner whom they were about to consult. As to the charge of advertising, the plan suggested is, he urges, only that adopted in the great majority of hospitals—a card bearing the name of the hospital, and of the physician or surgeon, the hours, and a space for prescriptions. It is desirable to secure the help of the chemists in order to do away with "counter-prescribing," either directly or under the cover of a medical practitioner residing in the house. The chemist under the scheme would not have the right to refuse to make up the first, but only subsequent, prescriptions. The reform, and not the abolition, of out-patient departments is what is demanded; but if the hospitals turn away about 45 per cent. of the out-patients, then the medical profession must provide some means by which the industrial classes can obtain immediate treatment for immediate payment. The chief rule of a provident society is that a person must be a member for at least four weeks before receiving treatment. Until efficient immediate medical aid is provided for those out-patients whom the hospitals are asked to turn away, the hospitals would not be justified in taking such a course.

EVILS OF DISPENSING.

Charge for Skill not "Mixtures."

EBORACENSIS urges that a most needful reform is either to divorce dispensing from the work of general practitioners or to make the fees inclusive of drugs supplied. He contrasts the custom in England and Scotland. He attributes the English custom of charging for each bottle of medicine to the fact that L.S.A.'s, who constituted the greater portion of the rank and file, were, before the Medical Act of 1858, only entitled to charge for physic. The profession has never thrown off its trade aspect, and Eboracensis suspects that the majority of practitioners pander to the popular craze for a bottle of something, and supply more medicine than is necessary. The profession has been degraded by want of union among the rank and file, and by the abuse of the dispensary system,

[1] JOURNAL, November 9th, p. 1070.

in which routine mixtures have too often done duty for careful physical diagnosis and trained observation.

Out-patient Departments,

Rendered Unnecessary by the Parochial System and Private Dispensaries.

Dr. Albert Kisch (186, Sutherland Avenue, W.) writes to express the opinion that the meeting of the North London District of the Metropolitan Counties Branch on October 31st was not representative of the medical men in that district, and that, moreover, the resolution moved by Dr. Hugh Woods was only adopted after an unqualified assurance had been given by the Chairman and the mover of the resolution that its adoption was not to be regarded as expressing approval either of the principle or details of the scheme. Dr. Kisch considers Dr. Rentoul's scheme faulty in detail, and even if it were not, too complicated to work. He considers that the opinion of the profession could only be elicited by voting-papers containing questions, for the most part readily answerable by a simple affirmative or negative. The authorities of the general hospitals ought to restrict the operations of their out-patient departments to a first attendance on urgent cases, and to attendance on any case referred to them by general practitioners. The poorest class are amply provided for by the parochial system, and the wants of the intermediate class may be met by medical men practising among the working classes charging fees which those class can afford to pay. This is now in a fair way of being achieved by the private dispensaries which, if well conducted by qualified men on their own responsibility, are of great advantage both to the poor and to the practitioners.

On Wednesday, November 6th, the Thames Valley Branch discussed Dr. Rentoul's Public Medical Service scheme. The Honorary Secretary having read the printed letter from the General Secretary of the Association with regard to the matter, the different clauses of Dr. Rentoul's motion therein contained were discussed *seriatim*, with the following result. It was moved by Dr. Graham, and seconded by Mr. Child, and carried: "That the out-patient department of our hospitals is largely taken advantage of by persons who can afford to pay for medical advice, and calls for strong efforts on the part of the authorities to check the abuse, and that this Branch approves generally of Clause 1."—*Clauses 2, 3, and 4:* It was proposed by Dr. Scott, and seconded by Mr. Powell, and carried unanimously: "That, while the thanks of the medical profession are due to Dr. Rentoul for the great trouble he has taken in the matter, the Branch fears that his Public Medical Service scheme would not be found workable. That the establishment on a firm basis of a provident dispensary system applicable to the whole kingdom would meet all the requirements of the case." It was unanimously agreed, on the motion of Dr. Graham, seconded by Dr. Crichton, that the Council of the Association be petitioned to obtain the services of a skilled actuary to find out a working basis for such a provident scheme as recommended by Dr. Rentoul in the Journal of September 14th, 1889.—*Clause 5:* The Branch entirely agreed with this clause, and was glad to hear that steps are being taken to carry it into effect.

On Thursday, November 7th, the West Somerset Branch discussed Dr. Rentoul's scheme for a proposed public medical service. The Secretary having previously sent notice to all the members of the Branch, informing them that the Council of the Association had requested him to place before this Branch the resolutions of Dr. Rentoul on the above subject, which were submitted at the last annual general meeting at Leeds, and having further given them references to the pages in the Journal where the resolutions and letters, etc., thereon were printed, he now read the circular letter of Mr. Fowke, dated October 18th, conveying the above stated request. After some discussion it was resolved: "That a special meeting of the Branch be held at Taunton on Thursday, December 12th, at 5 P.M., to consider the above-named subjects and pass such resolutions thereon as may then be decided upon."

The City of Glasgow Lunacy Board has accepted plans for the erection of a new asylum and hospital at Gartlock, as estate belonging to the Board, which extends to about 350 acres. The buildings are to cost about £70,000, and are to be arranged on the pavilion sytem, the extreme length being 600 feet. The hospital is to be situated at a good distance from the main building.

UNIVERSITY INTELLIGENCE.

CAMBRIDGE.

Extension of the Physiological Laboratory.—The Financial Board report to the Senate that Dr. Henry Sidgwick, Knightbridge Professor of Moral Philosophy, has made an offer in the following terms: "I offer to give £1,000 now and £500 more within the next two years, as a contribution to the expense of the proposed new buildings for the Department of Physiology, provided that the Financial Board, in consideration of this offer, feel themselves justified in reporting in favour of commencing these buildings without delay." In view of Dr. Sidgwick's munificent offer, the Board think that the University should undertake the proposed new buildings for the Department of Physiology at once. It has been represented to the Board that there will be considerable economy, as well as very great convenience and benefit to the University, by completing these buildings at the same time with those now in course of erection for the Department of Human Anatomy. It appears that the cost of the buildings for physiology may be taken at about £4,100. If to this sum be added the architect's commission, the salary of the clerk of the works, the cost of fittings and other contingent expenses, the whole cost of the building may be estimated at about £5,000. The Board have duly considered the various charges to which the University is already pledged, together with the means of meeting them, and they are of opinion that the proposed buildings for physiology may now be proceeded with. They therefore recommend (1) that Dr. Sidgwick's offer to contribute £1,500 to the expense of the proposed new buildings for the Department of Physiology be accepted with thanks; (2) that, in addition to Dr. Sidgwick's donation, the sum of £3,500 be provided by the University; (3) that the work on the buildings be commenced at once.

General Medical Council.—From the official announcement now before us,[1] we learn that the votes given at the recent election were: Dr. Donald MacAlister, 194; Dr. Latham, 140.

Degrees.—At the congregation on November 7th the following degrees were conferred: Edward Henry Douty, M.A., King's College, M.B.; Horatio Barnett, B.A., Gonville and Caius College, M.B. and B.C. (*Thesis:* Progressive Muscular Atrophy.)

GLASGOW.

General Council Assessors.—The contest for the three assessorships from the Council to the University Court in Glasgow promises to be a very keen one. In pursuance of their candidature the three nominees of the University Council Association called a meeting of the members of Council resident in Glasgow last week to hear their views. There was a good attendance. Unfortunately Mr. Vary Campbell's duties in the Court of Session prevented him being present. Sheriff Guthrie and Dr. McVail addressed the meeting. Dr. McVail made reference to the recent appointments to St. Mungo's College, stating, that as regards the medical chairs, the governors felt that in all possible cases they should appoint the staff of the Royal Infirmary School, which the College was about to absorb, and, therefore, it seemed to the governors unfair to advertise and so put many gentlemen to great trouble and expense when the decisions already were practically arrived at.

VICTORIA.

Degree Day.—On November 7th the ceremony of granting degrees took place at the Gentlemen's Concert Hall in Manchester. Dr. Ward, the Vice-Chancellor, in his annual statement, gave a satisfactory report of the work done by the University during the past academical year, and mentioned one or two extensions of the work of the University which are expected to come into operation almost immediately. The Vice-Chancellor referred to the increase of the number of candidates for degrees, especially in the medical faculty, and to the recently-instituted examinations for diplomas in sanitary science. Unfortunately but little of the statement of the Vice-Chancellor was heard, owing to the students in the gallery having kept up a more or less continuous noise throughout the proceedings. Sixty-one degrees were conferred, namely, Doctor of medicine, 3; bachelor of medicine and surgery, 21; master of arts, 6; bachelor of arts (honours), 5; bachelor of science (honours), 12; bachelor of arts (ordinary), 11; bachelor of science (ordinary), 3. Seven women obtained degrees, and a number of University scholarships and prizes were awarded.

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[1] *Cambridge University Reporter*, November 12th.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

THE REGISTRAR-GENERAL'S QUARTERLY RETURN.

THE Registrar-General has just issued his quarterly return relating to births and deaths registered in England and Wales during the third or summer quarter of this year, and to the marriages in the three months ending June last. The marriage-rate showed a marked increase upon that recorded in the corresponding quarter of 1888, and slightly exceeded the mean rate in the second quarters of the ten years 1879-88. The birth-rate and the death-rate were below their respective averages. The mean temperature of the air during the quarter at the Royal Observatory, Greenwich, was 58.9° F., and was 0.8° below the average for the corresponding quarters of 118 years. The mean was below the average in each of the three months of the quarter. The rainfall amounted to 5.56 inches, and was 1.76 inches below the average.

The births registered in England and Wales during the three months ending September last were 219,805, equal to an annual rate of 30.1 per 1,000 of the population, estimated by the Registrar-General to be rather more than twenty-nine millions of persons. This birth-rate, although showing a slight increase upon that recorded in the third quarter of 1888, which was the lowest recorded in the corresponding period of any year since 1847, was 2.2 per 1,000 below the mean rate in the corresponding quarters of the ten years 1879-88. The birth-rate during the quarter under notice in the several counties ranged from 23.7 in Rutlandshire, 24 3 in Sussex, 25.3 in Herefordshire, and 26 5 in Surrey to 33.8 in Durham, 34.2 in Essex, 34.6 in Northumberland, and 36.7 in Monmouthshire. In the twenty-eight large English towns, for which the Registrar-General publishes weekly returns, the birth-rate last quarter averaged 30.1 per 1,000, and corresponded with the general English rate. In London the birth-rate was only 29 2 per 1,000, while in the twenty-seven provincial towns it averaged 30 8, and ranged from 24 0 in Brighton, 24.2 in Huddersfield, and 25.4 in Bradford to 35.9 in Sunderland, 37.0 in Cardiff, 37.5 in Preston, and 39 0 in Newcastle-upon-Tyne. The births registered in England and Wales during the quarter under notice exceeded the deaths by 97,769; this represents the natural increase of the population during that period. From returns issued by the Board of Trade it appears that 97,830 emigrants (including 23 300 foreigners) sailed from the various ports of the United Kingdom at which emigration officers are stationed; of these, 52,085 were English, 7,551 Scotch, and 14,894 Irish. The proportion of British emigrants to a million of the respective populations of the three divisions of the United Kingdom were 1,795 from England, 1,852 from Scotland, and 3,158 from Ireland. Compared with the corresponding quarters of 1887 and 1888, the proportion of emigration last quarter showed a further decline in each of the divisions of the United Kingdom.

During the third quarter of 1889 the deaths of 122,036 persons were registered in England and Wales, equal to an annual rate of 16 7 per 1,000 of the estimated population. This death-rate was 0.8 below the mean rate in the third quarters of the ten years 1879-88, although it exceeded the unprecedentedly low rate recorded in the corresponding quarter of 1888. Among the urban population of the country, estimated at more than eighteen and a half millions, the rate of mortality during the quarter under notice was equal to 17.8 per 1,000; in the remaining and chiefly rural population of more than ten and a quarter millions the rate was only 14 7 per 1,000. These urban and rural rates were 0.8 and 0.3 respectively below their averages for the corresponding quarters of the seven preceding years. Among the twenty-eight large English towns the mean death-rate was 18.6 per 1,000; in London the rate was only 16.5, while in the provincial towns it ranged from 14 2 in Derby, 14.4 in Brighton, and 15.6 in Huddersfield to 25 9 in Sunderland, 26.6 in Plymouth, 27.6 in Newcastle-upon-Tyne, and 33.0 in Preston. The rate of mortality among infants under one year of age exceeded the average during the quarter under notice; whereas the death-rate among persons aged between one and sixty years, and among elderly persons, was below the average in the corresponding periods of the ten preceding years.

The 122,036 deaths registered in England and Wales during the three months ending September last included 12 202 which were referred to diarrhœa, 2,314 to whooping-cough, 2,199 to measles, 1,608 to scarlet fever, 1,595 to fever (including typhus, typhoid, and simple fever), 1,380 to diphtheria, and 2 to small-pox; in all, 21,300 deaths resulted from these principal zymotic diseases, equal to an annual rate of 2.91 per 1,000, the average rate in the ten preceding corresponding quarters having been 3.10 per 1,000. The mortality from measles and diphtheria showed an excess, but that of each of the other principal zymotic diseases was below the average. The deaths referred to small-pox, which had been 8 and 10 in the first two quarters of the current year, declined to 2 during the three months ending September last, which is the lowest number in any quarter on record; one occurred in Leeds, and one in West Ham. No small-pox patients were under treatment at any time during the quarter in the Metropolitan Asylums Hospitals.

The rate of infant mortality, or the proportion of deaths under one year of age to registered births, was equal to 166 per 1,000, and slightly exceeded the average rate in the corresponding periods of the ten preceding years, 1879-88. In London the rate of infant mortality was 183 per 1,000, while in the twenty-seven large provincial towns it averaged 231 per 1,000, and ranged from 150 in Derby and in Huddersfield, and 161 in Brighton to 269 in Salford, 279 in Sunderland, 326 in Leicester, and 371 in Preston.

WATER AT POLEGATE.

A PARAGRAPH has been going the round of the papers detailing a most lamentable state of things as existing in the hamlet of Polegate, in Sussex—a place which gives its name to an important junction station on the Brighton Railway, a few miles north of Eastbourne. We have been at some pains to make special inquiry into the facts of the case. Polegate is an outlying part of the parish of Hailsham, at its southern extremity; and, in order to make up a sufficient area for ecclesiastical purposes, outlying parts of the parishes of Willingdon and Jevington have been, in a certain sense, united to Polegate. It will thus be understood that the locality is a sort of No Man's Land, and this fact is not without its bearings on the water question. The portion of Polegate which is most closely built upon lies to the north of the railway. It is in Chancery, and is administered by a firm of solicitors at Hastings. The water supply of the hamlet had long been a matter of difficulty, but, some four or five years ago, the administrators entered into an arrangement with the Eastbourne Water Company, in virtue of which the company agreed to spend £6,000 in laying mains through Willingdon to Polegate, etc. Under this arrangement the water company have been charging, not 1s. per gallon, as some of the papers have had it, but 1s. per 1,000 gallons. The water thus delivered from the company's mains was retailed by the administrators of the estate through pipes belonging to the estate to the occupiers at 1s. 3d. per 1,000 gallons. This profit of 25 per cent. on the transaction, of course, was intended to recoup the estate its local outlay, from a landlord's point of view, including therein, of course, the maintenance of the pipes and fittings in proper working order and condition. The adminstrators of the estate, however, seem to have contented themselves with pocketing the 25 per cent. without paying any attention to their obligations as to maintenance; the consequence has been that, owing to the neglected condition of the estate pipes, much more water was registered by the water company out of their mains than was registered out of the meters used by the tenants. The deficiency has involved a loss to the estate of nearly £100 a year, and at length a stage was reached when the consumers were informed by the administrators that unless they (the consumers) would pay the deficit, and take over and repair the pipes, the administrators would terminate their arrangement with the water company and cut off the supply. This high-handed proceeding, in which the administrators appear virtually to have taken advantage of their own neglect, brought matters to a climax.

The Eastbourne Water Company seem entirely free from blame in the matter, and indeed not to be implicated in the controversy, except in the secondary sense of being the original purveyors of the water.

The administrators of the estate say that heavy arrears are due from the consumers, and that they will not pay. This may or may not be so, and, so far as it stands, is a private matter in which we do not presume to interfere. But the question has a public aspect, and as to that we must express a hope that the sanitary authority, the guardians of the Hailsham Union, will keep their eyes open, and, if necessary, put in force their powers under the Public Health Act. The latest information which we

possess is in form of a letter which the engineer of the Eastbourne Water Company, Mr. G. A. Wallis, has addressed to our representative under date of November 1st, in which that gentleman says:—

"Since I wrote to you last night a deputation from Polegate and the solicitor representing the Polegate Estate have waited upon me respecting the water supply to Polegate. I am pleased to be able to tell you that a satisfactory arrangement has been made, and the water supply will be continued."

—We here leave the matter for the present, trusting that whatever may be the legal position of the rights of some of the parties, the health and lives of 700 people will not again be placed in peril.

SUPERANNUATION ALLOWANCE TO POOR-LAW MEDICAL OFFICERS.

A SHORT time back it was stated in the JOURNAL that Mr. C. G. Read, who had been one of the medical officers of the Hoxne Union in Suffolk for forty-two years, had resigned his appointment, and had been voted by the board of guardians a gratuity of £145 on his retirement from office. This gratuity the Local Government Board has since declined to sanction, and when their refusal to do so was notified to the guardians the latter declined to recommend the honorarium in any other form than as a donation; the consequence has been that an old and deserving officer has got nothing.

It does not appear to be generally known that a donation, however small, to poor-law officers on retirement is not in accordance with the regulations of the Local Government Board; but whatever is granted, under such circumstances, must be in the form of an annuity, though not necessarily for life. We are, therefore, quite at a loss to understand on what principle the guardians of the Hoxne Union refused to grant Mr. Read an annuity for a few years equivalent to the £145 which they themselves had previously decided that he deserved, a course suggested to them by the Local Government Board. The case is, however, one of many which illustrate the hardships endured by poor-law medical officers who have to serve the boards, one of which regulates the duties of the office, whilst the other rules the pay, in many cases the latter bearing no ratio to the former, even approximating to fairness.

INFECTIOUS DISEASE (NOTIFICATION) ACT.

SIR,—Allow me to suggest that every certificate under the Act have printed on the face of it, but not on the back, "The Medical Officer of Health, Birmingham," or whatever is the name of the town at which he resides. The name of the officer should not be printed, nor yet the name of the street in which he resides, for an officer might resign, go to live in another town, and then all correspondence addressed to him by name, and not simply in his official capacity, might be redirected by the post office officials, and so cause serious delay, or even never reach the proper addressee at all.

If the address be printed on the back of the certificate, many men will put a halfpenny stamp on the back, send the document by book post, and thus make the post office officials the means of spreading information which gives rise to groundless and exaggerated reports, thereby causing immense trouble to the medical officer of health. Hitherto notification has only been in force in large towns, where the postal officers have plenty to do without reading every postcard or other open communication, but with the adoption of the Act by rural authorities circumstances are altered.

It will be well also that advertisements or handbills, issued in pursuance of the Act, should not state the name of the medical officer of health, or some delinquent, when charged before the magistrate, will plead that he did not notify because he had lost his handbill, had forgotten the name of the medical officer of health and the street in which he lived, and so could not comply with the Act.

Every demand note for rates delivered by a sanitary authority might in future have a brief epitome of the Act printed on the back of it, and then the householder would be constantly reminded of his obligations, and be furnished with instructions for addressing and posting his notice of infectious disease.

An intimation on the handbill that there is no particular form of notice provided would also be of use, or we may have great delay pending an inquiry after such document.—I am, etc.,

THE MEDICAL OFFICER OF HEALTH TO THE COMBINED SANITARY AUTHORITIES OF THE COUNTY OF ——.

THE ASSOCIATION OF PUBLIC SANITARY INSPECTORS AND THE SANITARY INSTITUTE.

AT a recent meeting of the Association of Public Sanitary Inspectors the following resolution was carried by a majority of 4 votes (15 to 11):

> That the Association of Sanitary Inspectors regrets the continued admission to the examination of the Sanitary Institute of candidates for the position of sanitary inspectors who have not, as a basis for such examination, a satisfactory practical and theoretical acquaintance with building construction, as recommended to the Royal Commission on the Housing of the Working Classes, and deprecates the examination as tending not to promote the interest of the public health, nor to improve the status of sanitary inspectors, but rather to the production of a body of underpaid, inefficient officers.

This resolution was only carried by a small majority at a small meeting, but it appears to express a feeling of hostility to the Sanitary Institute on the part of some members of the Association, which is, to say the least, unreasonable. Sanitary inspectors should bear in mind that the very much improved position which they now hold both in the estimation of local sanitary authorities and of the public generally as compared with a few years ago is very largely due to the initiation and action of the Sanitary Institute. Not only has the Sanitary Institute had a large share in the promotion of sanitary reform generally throughout the country, but it inaugurated the system of examinations for certificates of competency which has proved of so great service to the sanitary inspectors, at the same time helping to train the candidates by lectures and practical demonstrations at a merely nominal fee.

The Sanitary Institute is still the only public body which holds examinations for inspectors and gives them instruction, and it has quite recently decided to hold examinations in the north of England as well as in London, in order to suit the convenience of candidates living in the northern counties.

Mr. Alexander, the Chairman of the Association, in his annual address stated that the Council of his Association had waited upon the Council of the Sanitary Institute in February last to urge the suggested alterations in their examinations upon the latter, but that no effect had yet been given to the demands then made. Mr. Alexander should bear in mind that his Council not so very long ago went before the Sanitary Institute with proposals of quite a different character. In fact, it was asked that sanitary inspectors of a certain standing should be granted certificates without passing any examination at all. Is it then to be wondered at if the Sanitary Institute does not immediately comply with the requests made by an association which does not seem to know its own mind two years running? As regards the particular requests now made by the Association for the division of the examination into two grades and for requiring a knowledge of building construction on the part of candidates, the first is a matter which must be decided on general grounds of public expediency, as well as merely in the interests of the inspectors. Of the second it may be said that a knowledge of building construction on the part of inspectors, although no doubt desirable, is not nearly so essential as a thorough understanding of drainage and of the Sanitary Acts, which are the points to which the Sanitary Institute examinations are at present specially directed. Mr. Alexander deprecates the idea that he bears any animosity to the Sanitary Institute, but the report of the meeting and the passing of so hostile a resolution is strong evidence that the Association over which he presides is strangely forgetful of the debt of gratitude it owes to the Sanitary Institute for the Institute's unremitting exertions to secure a better status for sanitary inspectors.

POLLUTION OF LOCH LONG AND LOCH GOIL.

A CONSIDERABLE time ago Dr. Littlejohn, of Edinburgh, and Mr. Fletcher, Inspector under the Rivers Pollution Act, submitted a report to the Secretary for Scotland in regard to the alleged pollution of Loch Long and Loch Goil by the deposition, at the mouth of the former loch, of the dredgings from the bed of the river Clyde. That report expressed the opinion that such deposition was a gross evil which should be stopped. The Clyde trustees, in consequence, appointed a committee of their number last June to take skilled advice in the matter, and by them Dr. Frankland was asked to investigate the subject. His report has now been presented to the Clyde Trustees. He procured samples of water from

the Clyde, Lochs Long, Goil, Striven, and Ridden, and from the Gareloch and Holy Loch. The purest water, as regards freedom from organic matter, he found at the head of Loch Long, and, taking its amount as unity, he represents the proportional amount in each of the other samples as follows: Head of Loch Goil, 1.2,; Holy Loch, 1.5; Loch Striven, 1.5; Firth of Clyde, 1.7; Loch Long, off Ardentinny, 1.9; head of Loch Striven, 2.0; junction of Lochs Long and Goil, 2.1; entrance to Loch Long, 2.2; Garelochead, 2.2; Loch Ridden, 2.9; Loch Katrine, 3.3; English Channel, off Worthing, 1½ mile from shore, 5.0; Atlantic Ocean, lat. 59° 35′ N. and long. 9° 11′ W., 5.0. This table appears to Dr. Frankland to be the *reductio ad absurdum* of the allegation that the waters of Long Long and Loch Goil were polluted by organic matter. He asserts that these lochs contain a mixture of sea and fresh water of unimpeachable quality. He finds no trustworthy evidence from Mr. Fletcher's report that these lochs have suffered injury from the operations of the Clyde Trust. Sea-water of greater purity than that in Lochs Long and Goil has never been found; there was no trace of pollution by mineral matter in the water of any of the Clyde lochs. The bottom of all the lochs is covered by a slimy mud, generally abounding in marine life, quite inodorous when brought to the surface, which soon became putrid in warm weather. He found the scum occasionally seen floating on the surface of the water to be common to all the lochs, and not due to the operations of the Clyde Trust; the dredgings find their way rapidly to the bottom of the loch, and there became completely deodorised. He finds, however, that the shores of Lochs Long and Goil are much polluted and their amenity destroyed by the discharge of sewage and the tipping of rubbish. During the summer season the sewage of 4,000 people is discharged upon the foreshores, forming pools of stinking water and deltas of putrescent mud. He thinks that short of taking the dredgings far out to sea it would be difficult to find a better mode of disposing of them, especially as their discharge into Loch Long for more than a quarter of a century has not affected the depth of water over the depositing ground to an extent appreciable by the sounding line. Excepting perhaps actually on the depositing ground, the sodium of the lochs seems to be everywhere well adapted for sustaining fish life, abounding as it does with living organisms constituting the chief food of fish.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

HUDDERSFIELD (Population 91,419).—*Outbreaks of Small-pox, Measles, and Scarlet Fever: Insufficiency of Hospital Accommodation.*—Dr. J. S. Cameron's report for 1888 is of a most favourable character, showing a death-rate of 18.5 per 1,000, the lowest on record. The probabilities of a still further improvement in the health of the borough are duly set forth, together with the existing sanitary defects which militate against it. Dr. Cameron is of opinion that the present average rate is by no means commensurate with the advantages which Huddersfield enjoys in comparison with some other large towns. The steady progress of the last twenty years justifies the hope of a still greater reduction of the death-rate in the future, and an average of 16 per 1,000 during the coming decade is considered by the health officer as by no means an improbable result. The history of the year 1888, as regards zymotic diseases, was sufficiently eventful. There were several small outbreaks of small-pox; measles, never quite absent, was very prevalent in the fourth quarter of the year; scarlet fever proved very troublesome, owing to the insufficiency of the hospital accommodation, the wards being kept full for months together both night and day; while cases of, and deaths from, fever showed a slight increase. Diarrhœa and whooping-cough were less fatal in 1888 than in 1887, and the general zymotic rate for the year was 1.55 per 1,000, as against 3.39 in 1887. Dr. Cameron thus sums up the more urgent sanitary needs of Huddersfield: "We must diminish the overcrowding existing in some parts of our town; we must get rid of our refuse more quickly; we must purify our own sewage forthwith; we ought to extend our domiciliary visits to houses infected with measles and whooping-cough; we must have more hospital accommodation, and be able to add diphtheria to the diseases treated in this way; we must protect our citizens against lead-poisoning."

JARROW (Population 30,000).—*Satisfactory Vital Statistics: Free Infectious Hospital.*—The vital statistics of this borough for 1888 were of a most favourable description, both the general and zymotic death-rates being the lowest on record, while the infantile mortality had only once before been lower. Dr. Munro reports that of the 57 deaths caused by zymotic diseases (a rate of 1.9 per 1,000) 29 were due to whooping-cough, 16 to diarrhœa, 6 to diphtheria, 4 to scarlet fever, and 2 to "fever." There was no importation of small-pox during the year and no deaths from measles. The general death-rate was 17.1 per 1,000. Dr. Munro refers to the new hospital for infectious diseases which has been provided for the district, and specially notes his approval of the action of the Corporation in throwing the hospital open free of charge (save in pauper cases) to all persons within the borough who may be suffering from infectious disease and are under such conditions as would constitute their retention at home a source of danger to the public health. It would be well if this arrangement were more generally adopted than it is. From every point of view it is desirable that the public sanitary hospital should be available for the public free of charge.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns, including London, which have an estimated population of 9,555,406 persons, 5,783 births and 3,202 deaths were registered during the week ending Saturday, November 2nd. The annual rate of mortality in these towns, which had been 18.7 and 17.5 per 1,000 in the two preceding weeks, was again 17.5 during the week under notice. The rates in the several towns ranged from 11.6 in Brighton, 13.9 in Cardiff, 14.3 in Oldham, and 14.6 in Leicester to 22.5 in Halifax, 25.0 in Blackburn, 28.2 in Newcastle-upon-Tyne, and 32.0 in Preston. In the twenty-seven provincial towns the mean death-rate was 18.9 per 1,000, and exceeded by 3.1 the rate recorded in London, which was only 15.8 per 1,000. The 3,202 deaths registered during the week under notice in the twenty-eight towns included 79 which were referred to scarlet fever, 62 to diarrhœa, 59 to "fever" (principally enteric), 58 to measles, 55 to whooping-cough, 51 to diphtheria, and not one to small-pox; in all, 364 deaths resulted from these principal zymotic diseases, against 414 and 356 in the two preceding weeks. These 364 deaths were equal to an annual rate of 2.0 per 1,000; in London the zymotic rate was equal to 1.6, while it averaged 2.3 per 1,000 in the twenty-seven provincial towns, and ranged from 0.0 in Brighton and in Cardiff, and 0.6 in Huddersfield and in Halifax to 4.1 in Bolton, 4.5 in Newcastle-upon-Tyne, 5.8 in Sunderland, and 6.0 in Plymouth. Measles showed the highest proportional fatality in Norwich, Newcastle-upon-Tyne, and Sunderland; scarlet fever in Liverpool, Blackburn, Salford, and Plymouth; whooping-cough in Portsmouth; "fever" in Preston; and diarrhœa in Derby, Bolton, and Preston. Of the 51 deaths from diphtheria recorded during the week under notice in the twenty-eight towns, 31 occurred in London, 3 in Manchester, 2 in Liverpool, and 2 in Portsmouth. No fatal case of small-pox was registered, either in London or in any of the provincial towns; and no small-pox patients were under treatment in any of the Metropolitan Asylums Hospitals on Saturday, November 2nd. These hospitals contained, however, 1,437 scarlet fever patients on the same date, against numbers steadily increasing from 538 to 1,388 in the eighteen preceding weeks; 130 cases were admitted during the week, against 181 and 172 in the two previous weeks. The death-rate from diseases of the respiratory organs in London was equal to 3.6 per 1,000, and was considerably below the average.

During the week ending Saturday, November 9th, 5,967 births and 3,321 deaths were registered in twenty-eight of the largest English towns, including London, which have an estimated population of 9,555,406 persons. The annual rate of mortality, which had been 17.5 per 1,000 in each of the two preceding weeks, rose again to 18.1 during the week under notice. The rates in the several towns ranged from 12.2 in Birkenhead, 13.6 in Salford, 15.0 in Brighton, and 15.4 in Nottingham to 24.6 in Bradford, 24.9 in Sunderland, 25.0 in Newcastle-upon-Tyne, and 26.0 in Plymouth. The mean death-rate in the twenty-seven provincial towns was 19.8 per 1,000, and exceeded by 3.6 the rate recorded in London, which was 16.2 per 1,000. The 3,321 deaths registered during the week under notice in the twenty-eight towns included 326 which were referred to the principal zymotic diseases, against 356 and 364 in the two preceding weeks; of these, 81 resulted from scarlet fever, 66 from measles, 52 from whooping-cough, 46 from "fever" (principally enteric), 43 from diarrhœa, 36 from diphtheria, and 2 from small-pox. These 326 deaths were equal to an annual rate of 1.8 per 1,000; in London the zymotic death-rate was 1.4, while it averaged 2.1 per 1,000 in the twenty-seven provincial towns, and ranged from 0.0 in Halifax, 0.5 in Bristol and in Hull, and 0.7 in Leicester to 4.1 in Bolton, 4.5 in Preston, 4.7 in Sunderland, and 7.3 in Plymouth. Measles caused the highest proportional fatality in Wolverhampton, Nottingham, Preston, and Sunderland; scarlet fever in Birmingham, Blackburn, Wolverhampton, Bolton, and Plymouth; whooping-cough in Oldham, Wolverhampton, and Plymouth; and "fever" in Derby and Cardiff. The 36 deaths from diphtheria recorded during the week under notice in the twenty-eight towns included 23 in London and 2 in Plymouth. Small-pox caused 1 death in London and 1 in Bolton, but not one in any of the twenty-six other large towns. No small-pox patients were under treatment in any of the Metropolitan Asylums Hospitals on Saturday, November 9th. These hospitals contained, however, 1,480 scarlet fever patients on the same date, against numbers increasing from 538 to 1,437 in the nineteen preceding weeks; 183 cases were admitted during the week, against 181, 172, and 130 in the three previous weeks. The death-rate from diseases of the respiratory organs in London was equal to 3.8 per 1,000, and was considerably below the average.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday, November 2nd, 827 births and 519 deaths were registered in the eight principal Scotch towns. The annual rate of mortality in these towns, which had been 20.5 and 19.3 per 1,000 in the two preceding weeks, rose again to 20.3 during the week under notice, and exceeded by 2.8 per 1,000 the mean rate during the same period in the twenty-eight large English towns. The lowest rates were recorded in Paisley and Greenock, and the highest in Leith and Perth. The 519 deaths registered in these towns during the week included 53 which were referred to the principal zymotic diseases, equal to an annual rate of 2.1 per 1,000, which very slightly exceeded the mean zymotic death-rate during the same period in the large English

towns. The highest zymotic death-rates were recorded in Perth and Leith. The 241 deaths registered in Glasgow during the week under notice included 5 from whooping-cough, 2 from diphtheria, 2 from scarlet fever, and 2 from "fever." Five fatal cases of scarlet fever were recorded in Leith and 2 in Perth. The death-rate from diseases of the respiratory organs in these towns was equal to 6.0 per 1,000, against 3.6 in London.

In the eight principal Scotch towns, 851 births and 507 deaths were registered during the week ending Saturday, November 9th. The annual rate of mortality in these towns, which had been 19.3 and 20.3 per 1,000 in the two preceding weeks, declined again to 19.8 during the week under notice, but exceeded by 1.7 per 1,000 the mean rate during the same period in the twenty-eight large English towns. Among these Scotch towns the lowest rates were recorded in Perth and Dundee, and the highest in Leith and Glasgow. The 507 deaths in these towns during the week under notice included 53 which were referred to the principal zymotic diseases, equal to an annual rate of 2.1 per 1,000, which was 0.3 above the mean zymotic death-rate during the same period in the twenty-eight English towns. The highest zymotic death-rates were recorded in Edinburgh, Leith, and Paisley. The 245 deaths registered during the week in Glasgow included 6 from measles, 6 from whooping-cough, 4 from scarlet fever, and 2 from diphtheria. Four fatal cases of diphtheria were recorded in Edinburgh, 2 in Aberdeen, and 2 in Paisley. The death-rate from diseases of the respiratory organs in these Scotch towns during the week under notice was equal to 5.0 per 1,000, against 3.8 in London.

HEALTH OF IRISH TOWNS.

In the sixteen principal town districts of Ireland the deaths registered during the week ending Saturday, November 2nd were equal to an annual rate of 22.3 per 1 000. The highest rates were recorded in Armagh and Dublin, and the lowest in Drogheda and Kilkenny. The death-rate from the principal zymotic diseases averaged 2.6 per 1,000. The 185 deaths registered in Dublin during the week under notice were equal to an annual rate of 27.3 per 1,000 (against 26.5 and 21.0 in the two preceding weeks), the rate for the same period being only 15.8 in London and 17.1 in Edinburgh. These 185 deaths included 19 which resulted from the principal zymotic diseases (equal to an annual rate of 2.8 per 1,000), of which 11 were referred to "fever" and 7 to diarrhœa.

SPECIAL FEES FOR WORKHOUSE CASES.

EBLANA, being a workhouse medical officer, asks whether he is entitled to the same special extra fees for the treatment of fractures and midwifery cases as are allowed in such cases to district medical officers.

*** As workhouse medical officer he is not entitled to any extra fee for fractures, and he can only claim such a fee for midwifery cases as has been arranged by contract between himself and the guardians.

LUNACY FEES IN SCOTLAND.

A SCOTCH MEMBER asks if he is entitled to a fee of one guinea in the following case. He is called in a Scotch burgh police court to examine and give evidence as to the mental condition of a prisoner. The clerk has tendered a fee of 5s., which has been declined.

*** A guinea is probably the amount which our correspondent should ask under the circumstances given, and he could probably recover that amount in the sheriff court. It is assumed that he does not hold any employment under the police authorities. It is common for poor boards in Scotland to give half fees to medical officers in their employ.

OBITUARY.

HAYNES WALTON, F.R.C.S.

WE are sorry to record the death of this well-known surgeon from obscure disease of the liver. Mr. Walton had been suffering for some time past from jaundice and general debility, to which he succumbed on November 7th, at the age of 73; and, according to his express desire, was cremated at Woking. He was the son of John Walton, Provost Marshal of Barbados, and was educated at St. Bartholomew's Hospital. He led a very busy life; he was one of the first assistant surgeons at St. Mary's Hospital, and always took great interest in the welfare of that institution. He was at one time Lecturer on Anatomy, and subsequently on Operative Surgery. He held the post of senior surgeon, but for some years past had been on the consulting staff.

He was the author of a voluminous work on ophthalmic surgery, which had a large circulation, and edited "Operative Surgery" in Druitt's well-known work. Through his instrumentality the Central London Ophthalmic Hospital was established. He was a genial companion, and for many years a well-known figure in Rotten Row. He hunted with great regularity with the Queen's hounds. He was twice married; first to Miss Read, by whom he had three sons and two daughters, but one son and one daughter died a few years ago from diphtheria. He was recently married a second time. His loss will be much felt by a large circle of friends.

MEDICAL NEWS.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having passed the necessary examinations, were, at an ordinary meeting of the Council on November 14th, admitted Members of the College, namely:

Barker, John Hamer, L.R.C.P.Lond., 291, Blackburn Road, Manchester
Bates, Stephen Henry, L.R.C.P.Lond., University College Hospital, Gower Street, W.C.
Bentham, Andrew Occleshaw, L.R.C.P.Lond., 49, High Street, Standish, near Wigan
Bergin, George Frederick, L.R.C.P.Lond., 14, West Park, Clifton, Bristol
Bevan, Tom Webb, L.R.C.P.Lond., Trefilan Rectory, Talsarn, R.S.O., S.Wales
Beyts, William George, L.R.C.P.Lond., Carapina, Sunderland Rd., Forest Hill
Boase, William George, L.R.C.P.Lond., 1, Compton Pk. Villas, Mannamead, Plymouth
*Bradbury, Arnold Francis, M.D.Durh., 1, Regent Place, Halifax
*Brohier, Louis Cyrus, L.M.&S.Ceylon, 7, Torrington Square
*Burton, Harry, L.S.A., Marple Bridge, near Stockport
Cameron, Ewan Gordon, L.R.C.P.Lond., 1, Wyndham Pl., Bryanston Sq., W.
Carrell, George Northern Piccaver, L.R.C.P.Lond., Colyton Road, Forest Hill Road, S.E.
*Cato, Alexander McLean, L.R.C.P.Lond., Vambery, Norbury, Surrey
Cayley, Cyril Henry, L.R.C.P.Lond., Elm Grove, Watford
Cheetham, Sydney William, L.R.C.P.Lond., Grosvenor Terrace, Bootle, Lancashire
Cleveland, Robert Achilles, L.R.C.P.Lond., Shrover Hall, Cosham, Hants.
*Collett, Henry George Outram, L.R.C.P.Lond., 17, Randolph Gardens, Dover
Collins, Algernon Boniface, L.R.C.P.L., Hawthorn Lodge, Yapton, Arundel
Conway, Basil Wiseman, L.R.C.P.Lond., 34, Belgrave Place, Stalybridge
Cooke, John Ambrose, L.R.C.P.Lond., 23, Trafalgar Sq., Ashton-under-Lyne
Cuthbert, Henry Pierce, L.R.C.P.Lond., Clun, Shropshire
Dewhurst, John Henry, L.R.C.P.Lond., Whin Field, Skipton, Yorkshire
Dickson, Thomas Hugh, L.R.C.P.Lond., 32, Belvedere Road, Norwood
Dowse, Henry Esmonde, L.R.C.P.Lond., "Brisbane," Petersfield, Hants
Duigan, William, L.R.C.P.Lond., 25 Bernard Street, Russell Square, W.C.
Edmonds, George, L.R.C.P.Lond., Park Lodge, Bexhill, Sussex
Edwards, John Hammerton, L.R.C.P.Lond., 45, Great Percy Street, W.C.
Elam, George, L.R.C.P.Lond., 75, Harley Street, W.
Elliot, Robert Henry, L.R.C.P.Lond., 344, Green Lanes, Finsbury Park, N.
Enraght, William, L.R.C.P.Lond., St. Gabriel's Vicarage, South Bromley, E.
*Evans, Ernest William, L.S.A., 11, Highbury Terrace, N.
*Evans, Thomas Henry Fencott, L.R.C.P.Lond., 11, Highbury Terrace, N.
*Findlay, Harry, M.B.Glasg., 8, Glasgow Street, Hillhead, Glasgow
George, Alfred Walter, L.R.C.P.Lond., 112, Regent Road, Great Yarmouth
Gibbs, Seymour Farrage, L.R.C.P.Lond., Abercorn Lodge, Abercorn Road, Mill Hill, Hendon
Giffard, Gerald Godfray, L.R.C.P.L., 1, Southwell Gdns., Queen's Gate, S.W.
Glinn, George Frederick, L.R.C.P.Lond., 3, Stoke Terrace, Devonport
*Godding, James, L.R.C.P.Lond., Kingsclere Villa, Havelock Rd., Southsea
Heath, Alan Jasper, L.R.C.P.Lond., 36, Cavendish Square, W.
Hickley, Arthur Mackenzie, L.R.C.P.Lond., 297, Edgware Road
Higginson, John Wigmore, L.R.C.P.L., Thornleigh, Stonevgate, Leicester
*Hooton, William Arthur, L.R.C.P.Lond., Kersal Towers, Higher Broughton, Manchester
*Horton, Algernon John, L.S.A., 14, High St., Bromsgrove, Worcestershire
*Hues, Frank, L.S.A., 152, Soho Road, Handsworth, Birmingham
*Hughes, Alfred Edward Prest, L.R.C.P.Lond., Holy Trinity Vicarage, Darlington
Hugo, Edward Victor, L.R.C.P.Lond., 55, Bridge Avenue, Hammersmith
Kelbe, Walter Edward, L.R.C.P.Lond., 26, Falmouth Road, Borough, S.E.
Khan, Masha Allah, L.R.C.P.Lond., 47, Bromley Street, Stepney, E.
Kitchin, Henry Brunton, L.R.C.P.L., Crescent House, 8, Mornington Pl., W.
Knox, James Jenkinson, L.R.C.P.Lond., Church House, Bakewell
Lewis, Llewelyn, L.R.C.P.Lond., Southfield, Neath, South Wales
Ley, George, L.R.C.P.Lond., 29, Gratton Road, West Kensington Park, W.
Lightbody, John Henry, L.R.C.P.Lond., 2, Greenbank Drive, Sefton Park, Liverpool
*Livsey, William Edward, L.R.C.P.Lond., 3, Carisbrooke Road, Walton, Liverpool, N.
*Lord, Robert Ellis, M.B. Vict. Univ., Rotunda Hospital, Dublin
*Lourensz, Charles Ball, L.M. & S. Ceylon, 7, Torrington Square, W.C.
Major, Arthur Cundell, L.R.C.P.Lond., Hungerford, Berkshire
*Mallard, Frank Reginald, L.S.A., Cripplegate, Horsham, Sussex
Manning, Harry Paul Owen, L.R.C.P.L., 26, Falmouth Rd., Borough, S.E.
*Mansbridge, Josiah, L.R.C.P.Lond., 58, Cornwall Road, Bayswater
Martin, Albert Edward, L.R.C.P.Lond., 53, Southborough Rd., Hackney, E.
*Meerwald, Osmond Spencer, L.M.&S.Ceylon, 27, Alfred Pl., Bedford Sq., W.C.
Meyers, Donald Campbell, L.R.C.P.Lond., 23, Scott Street, Toronto
Milner, Arthur Samuel, L.R.C.P.Lond., 249, Hackney Road, E.
Morris, Graham, L.R.C.P.Lond., Hayes, Kent
Naylor, Joseph, L.R.C.P.Lond., 58, Lordship Pk., Stoke Newington, N.
Neill, Balfour, L.R.C.P.Lond., Rockport, Craigarad, Belfast.
*Nolan, Joseph Adam, L.R.C.P.Ed., 4, Oxford Street, Edinburgh
Norburn, Albert Edward, L.R.C.P.L., 26, Cazenove Rd., Stamford Hill, N.
Norton, Everitt Edward, L.R.C.P.Lond., 84, Highbury Hill, N.
O'Leary, Arthur Price Evelyn, L.R.C.P.L., 27, Redland Grove, Clifton, Bristol
Olive, Eustace John Parke, L.R.C.P.L., 154, Stroud Green Road, N.
Ormerod, Henry Lawrence, L.R.C.P.L., Westbury-upon-Trym, Bristol
Osborne, Oswald, L.R.C.P.L., Sylva Road, Snaresbrook, Essex
*Paget, Peter, L.R.C.P.L., Coombe Road, Croydon
Paul, Maurice Eden, L.R.C.P.L., 256, Brunswick Buildings, Aldgate, E.
Pires, George, L.R.C.P.Lond., 7, Bedford Place Russell Square, W.
Pollock, Charles Stewart, L.R.C.P.Lond., The Croft, Putney, S.W.
Powers, Charles Henry, L.R.C.P.L., Grendon Fields, Atherstone, Warwicksh.
*Purnell, Purnell, L.R.C.P.Lond., Woodlands, Streatham Hill, S.W.
*Rayne, William Theodore, L.R.C.P.Lond., 12, Belgrave Road, N.W.
Rees, John Milsom, L.R.C.P.L., Penydre House, Neath, South Wales

Rendel, Arthur Bowen, L.R.C.P.Lond., 44, Lancaster Gate, W.
*Richardson, William, M.B.Edin., Union Mills, Isle of Man
Rudyard, Henry Ashton, L.R.C.P.Lond., 103, St. Albans Road, Watford
Saunders, Frederick William, L.R.C.P.L., Hendingham Ho., Clapham Com.
Shepherd, Henry Bowman, L.R.C.P.Lond., Kirkby Lonsdale, Westmorland
Simmons, Frederick Hero, L.R.C.P.L., 175, Sutherland Avenue, Maida Vale, W.
*Simpson, Godfrey William, L.R.C.P.Lond., 15, Vincent Square, Westminster
*Smith, Henry Walter, L.R.C.P.L., 47, Hamstead Rd., Handsworth, Birmingham
Speechly, Harry Martindale, L.R.C.P.Lond., 141, Railton Rd., Herne Hill, S.E.
Stabb, Arthur Francis, L.R.C.P.Lond., 23, Vincent Square, Westminster
Standage, Robert Frazer, L.R.C.P.Lond., 149, Holland Road, Kensington
Stokes, William George Gabriel, L.R.C.P.L., 125, Fentiman Rd., Clapham Rd.
*Sullivan, Edward Henry Charles, L.R.C.P.L., 5, Fentiman Rd., Clapham Rd.
Taylor, Ernest Edmund, L.R.C.P.Lond., 163, Cemetery Road, Sheffield.
*Tindall, Ernest Edward Partridge, L.R.C.P.L., Hillside Villa, Redhill, Surrey
*Toller, Seymour Graves, L.R.C.P.Lond., 10, Royal Crescent, Holland Park, W.
Tuppen, Harry Stacey, L.R.C.P.Lond., 35, Tregunter Road, S.W.
*Walker, Thomas Greaves, L.S.A., 2, Groombridge Road, South Hackney
Walters, Arthur Percefield, L.R.C.P.Lond., Waterden Crescent, Guildford
Warde, Wilfrid Brougham, L.R.C.P.Lond., 14, Woburn Square
Watkins, Harold Ernest, L.R.C.P.L.L., Stoke Legh, Newton-le-Willows, Lancs.
*Whitman, Royal, M.D.Harvard., 142, Huntington Avenue, Boston, U.S.A.
Wightman, Henry Temple, L.R.C.P.Lond., 73, Clark Grove Road, Sheffield
Williams, Edgar McKenzie, L.R.C.P.Lond., 12, Cavendish Place, Bath
*Williams, Ernest Graham Hamilton, L.R.C.P.L., 2, College Lawn, Cheltenham
Woodall, Robert William, L.R.C.P.Lond., 3, Milner Square, Islington
*Woodcock, Herbert de Carle, L.R.C.P.Ed., Moorville Ho., Beeston Hill, Leeds

* Candidates who have not presented themselves under the Regulations of the Examining Board in England.

The following gentlemen, having passed the necessary examinations, were, at the same meeting, admitted Licentiates in Dental Surgery, namely:

Ambrosoni, Francis Angelo, 32, Grand Parade, Brighton
Bright, Stanley Charles, 11, Via Assarotti, Genoa, Italy
Carter, Edward George, 181, Edgware Road, W.
Cowell, Charles Joseph, Christian Road, Preston, Lancashire
Day, Joseph Henry, 3, Alfred Street, Brompton, S.W.
Dunlop, James Nairn, 120, Lord Street, Southport
Haycroft, Frederic Theodore, 9, South Lawn Terrace, Exeter
Harper, Henry Guy, 21, Charleville Road, W.
Knowles, Albert Vernon, 63, Albion Place, Reading
Mallet, John Aubrey, Powderham Crescent, Exeter
Parrott, John Ernest, 383, Hagley Road, Birmingham
Richardson, Frank Victor, Kibworth, Leicester
Seville, John William, 12, Belvedere, Bath
Spray, George Goldfinch, 8, Conway Road, Canton, Cardiff
Stoddart, Walter George, 27, Lower Seymour Street, W.

The following gentlemen passed the First Professional Examination for the diploma of Fellow at a meeting of the Board of Examiners on November 11th, namely:

C. Barker, student of Sheffield School of Medicine; H. E. R. James, of Charing Cross and Dublin; J. R. Morison, of Edinburgh University.

Seventeen candidates were referred.

Passed on November 12th:

T. E. Leadbeater, of London Hospital; R. M. Littler, of Owens College, Manchester; A. W. McMichael, of Queen's College, Birmingham; W. H. Maidlow, of St. Bartholomew's and Durham; A. W. Sheen, of Guy's Hospital; C. Williams, of University College.

KING AND QUEEN'S COLLEGE OF PHYSICIANS AND ROYAL COLLEGE OF SURGEONS IN IRELAND.—Conjoint Examinations, October, 1889.—The undermentioned candidates have been successful at their respective Sessional Examinations:

First Professional Examination.—E. A. Chartres, W. Coneys, J. G. Crozier, J. Flemming, J. E. Fox, R. P. Goode, J. V. Griffin, H. Hunt, R. D. Jephson, D. T. P. Kelly, E. Kennedy, M. Kiely, E. T. T. King, P. J. Long, J. F. Maguire, J. P. Marnell, P. Merrin, C. E. Murphy, J. P. M'Cormack, H. M'Fadden, H. Nash, H. F. Nolan, J. C. O'Malley, M. K. Quinlan, C. M. Richards, J. Robinson, J. F. Sheppard, J. Skelly.

Second Professional Examination.—A. J. Arthur, J. G. Boon, F. C. A. Bushman, C. E. Cowan, P. J. Fagan, W. B. Felton, W. A. Gordon, A. A. Hargrave, M. Keay, D. J. W. Molony, V. E. M'Donagh, T. F. M'Donnell, J. T. B. O'Brien, T. H. O'Leary, W. H. Parr, A. W. Power, G. Q. Richardson, W. W. Scarlett, J. A. Thornhill, G. T. Whyte.

Third Professional Examination.—J. J. Callanan, J. P. Calnan, W. J. L. French, A. N. Heron, P. E. W. McAdam, W. M. Meeke, H. Moore, G. N. D. Oakes, R. J. Perkins, J. C. Ryan.

Fourth, or Final and Qualifying, Professional Examination.—E. Corbett, W. B. Croker, W. S. Dodd (passed in July, and now of age), I. Dorran, T. Gilcriest, T. A. Goodchild, L. M. Hungerford, P. H. Lennon, M. J. Madden, J. H. Pim, R. P. Ryan, E. F. Stephenson, T. G. Stevens, J. S. Stewart, J. J. Tate, R. E. Thompson, R. S. Young.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.—The following registered medical practitioner has been duly admitted a Licentiate in Medicine and Midwifery of the College:

J. W. Haughton, L.R.C.S.I., 1887.

The diploma of Midwife and Nursetender was granted to Mrs. Kate Salmon.

THE following is the official statement of the results of the Examinations held under the Conjoint Scheme with the Royal College of Surgeons in Ireland during October, 1889:

Results, October Examinations, 1889.

Examination.	No. Entered.	No. Absent.	No. Examined.	Passed.		Stopped.	
				No.	Per cent.	No.	Per cent.
First Professional	42	2	40	28	70	12	30
Second ,, ...	51	4	47	20	42.6	27	57.4
Third ,, ...	30	1	29	10	34.5	19	65.5
Final ,, ...	34	1	33	16	48.5	17	57.5
Totals	157	8	149	74	49.6	75	50.4

DONATION.—Lady Meux, of Cheshunt, to whose liberality the Cheshunt Cottage Hospital is already much indebted, has promised a further sum of £500.

DR. FRANCIS WARNER has been appointed Lecturer on Materia Medica and Therapeutics at the London Hospital Medical College.

DR. EDMUND ANDREWS has in three cases found that sulphona in doses of 15 grains, repeated if necessary in four or six hours, controlled the painful muscular spasms in a fractured limb.

IT is stated that the new French Chamber of Deputies contains forty-seven M.D.s, one *officier de santé*, one veterinary surgeon, one dentist, four pharmacists, and one chemist.

THE death is announced of Mrs. Hannah Kay, known of late as the Bakewell centenarian. She was born in 1788, and was consequently in her 102nd year.

A CASE of leprosy in a woman who had formerly resided in Cayenne was recently shown at the Lyons Society of the Medical Sciences by M. Lannois.

MR. EDW. MATTHEWS, L.R.C.S.I., has been appointed a Vice-President of the Redditch Literary and Scientific Institute, and Chairman of the Committee for the ensuing year.

THE new edition of Professor Virchow's *Cellular Pathologie*, on which its distinguished author has been engaged for some time, will, it is announced, appear at the time of the International Medical Congress at Berlin.

AT the meeting of the British Laryngological and Rhinological Association to be held this day (Friday) at the Langham Hotel, the President, Dr. Smyly, of Dublin, will deliver his inaugural address.

THE Queen has been pleased to give directions for the appointment of Edward William Rawle Branch, Esq., a medical officer in the Leeward Islands, to be an Official Member of the Legislative Council of the Virgin Islands.

IT is a curious and perhaps not insignificant fact that of the seventeen thousand odd divorces granted in France since divorce became legal in 1884, there was no issue of the marriage in 48 per cent.

SURGEON-MAJOR AYLMER ELLIS HAYES, Medical Staff, and Surgeon Ignatius Purcell Doyle, Indian Medical Service, Madras, have received the Distinguished Service Order, in recognition of their services in Burmah.

THE post of Honorary Surgeon to the Liverpool Royal Infirmary rendered vacant by the resignation of Mr. Reginald Harrison, has been filled by the election of Mr. Frank T. Paul, F.R.C.S.Eng. Surgeon to the Royal Southern Hospital, and Professor of Medical Jurisprudence in University College.

DR. H. L. MACKISACK has resigned his place as house-surgeon to the Belfast Royal Hospital, a position which he has filled with great efficiency and acceptance. For the vacancy thus created two candidates are in the field—Dr. W. Wheeler and Dr. Thomas Gorman. The election will take place on November 25th.

THEFT FROM A HOSPITAL.—At the laying of the foundation-stone of the Victoria Hospital at Folkestone a few weeks ago a bottle containing coins was deposited in a cavity under the stone. This bottle was surrounded by cement and bricks, and a thief, on November 1st, when the police and town people were excited and centred at the middle of the town by the Council elections, displaced the bricks and removed the bottle.

It is believed that the municipal authorities in Belfast have in contemplation the application to the city of the Compulsory Notification of Infectious Diseases Bill. The subject was under the notice of the meeting of the Branch recently, and is also to be taken up by the Ulster Medical Society.

Food-poisoning.—A woman, named Ellen Elizabeth Watkins, aged 25, described as a strong, healthy woman, living at Stanhope Street, Camden Town, partook with her husband, on October 21st, of some fried plaice for supper. On the following day she became ill and grew gradually worse, dying on the following Saturday from exhaustion consequent upon gastritis.

Saccharin.—The importation of saccharin has been for some time forbidden by France, Spain, and Portugal; Italy and Hungary have now followed the example of these countries. In Belgium a duty of 140 francs a kilogramme is levied, not only on saccharin, but on all products containing more than 50 per cent. of it. In Holland a duty of 60 florins a kilogramme will probably soon be imposed on saccharin.

The following medical men have been elected mayors for the ensuing year: Alderman J. S. Bartrum (Bath), second time; Mr. William Kirk (Hedon); Dr. H. V. Palin (Wrexham); Dr. Sherburn (Hull); Alderman James Coombs, M.D. (Bedford), second time; Alderman Hugh Moss, M.D. (Congleton), re-elected; Mr. H. Lankester (Leicester); Alderman Joshua William Morison (Pembroke); Mr. John Amos Woodhams (Rye).

Royal London Ophthalmic Hospital.—During last year the out-patients at this hospital numbered 25,000, the in-patients 2,196, and 585 operations for cataract were performed. One thousand five hundred poor needlewomen, mechanics out of employment, and other needy persons, were supplied with spectacles free of cost. The present is an important period in the history of the hospital, inasmuch as a new building close by is contemplated, together with a rearrangement of the present hospital, to meet the medical and sanitary requirements.

Bequests.—Mr. Bernard Bedwell Portal, of Upper Tooting, bequeaths by his will £200 to the London Hospital for Incurables at West Putney Hill; £200 to the Hospital for Incurables, Clapham Road; and £200 to the French Protestant Hospital.—The trustees have been informed that Lady Combermere has left £28,000 to the Cork North Infirmary. The sum is left in trust to the Bishop and the Mayor of Cork, and is for the purpose of building an additional ward; but the will, so far as at present known, does not make any provision for endowing the same. The wing will be styled the "Gibbings Wing."

Medico-Chirurgical Society of Edinburgh.—At the first ordinary meeting of the Edinburgh Medico-Chirurgical Society, held on November 6th, the following office-bearers were elected for the ensuing session:—*President:* Professor Alexander Simpson; *Vice-Presidents:* Dr. Clouston, Mr. A. G. Miller, and Dr. Brakenridge; *Councillors:* Dr. Ireland, Dr. Matthew, Dr. A. H. F. Barbour, Mr. Charles W. Cathcart, Dr. John Smith, Dr. Strachan, Dr. Alex. Bruce, and Dr. G. Sims Woodhead; *Treasurer:* Dr. Francis Troup; *Secretaries:* Dr. James Ritchie and Mr. Caird; *Editor of Transactions;* Dr. William Craig.

Public Gardens for London.—The Duke of Westminster on Saturday last threw open to the public a new Garden in Duke Street, Grosvenor Square, a little more than one-third of an acre in extent, laid out by him on part of his estate from which old, worn-out tenements have been removed. A letter from Sir Sydney Waterlow was read at this week's meeting of the London County Council offering as a free gift, for the use of the people of the metropolis, a freehold estate of twenty-nine acres on the southern slope of Highgate Hill, well timbered, and containing one acre and a half of ornamental water. A resolution expressing grateful thanks to Sir Sydney was passed by acclamation.

Society of Medical Officers of Health.—On Thursday evening, November 7th, the Society of Medical Officers of Health entertained at dinner at the Holborn Restaurant Mr. Shirley Murphy and Dr. Edward Seaton on their retirement from the office of Honorary Secretaries. Mr. Shirley Murphy has acted as one of the joint Honorary Secretaries during the past ten years. Some thirty members of the Society were present, and during the evening testimonials were presented to the late Honorary Secretaries as marks of appreciation of the valuable services rendered by them to the Society, and of the personal esteem in which they are held by its members.

The Centenary of Galvanism.—An eventful anniversary in the history of science has been allowed to pass without (so far as we are aware) any of the commemorative ceremonies now usual in honour of much less important events. On November 6th, 1789, Luigi Galvani, Professor in the University of Bologna, made the first accidental observations in what we know now as "galvanism," which proved as fruitful in his mind as the falling apple did in that of Newton.

Cremation in Paris.—The cremation furnace in Père-la-Chaise Cemetery in Paris is now complete, and the Prefect of the Seine has approved the scale of charge to be enforced thereat. The charge for the use of the cremation furnace is to be 50 francs, which sum includes the keeping in the columbarium of the funeral urn containing the ashes for a period of five years. The urn will, however, have to be provided by the family of the deceased person. A further charge, varying from 150 francs to 12 francs, will be made for the use of the cremation buildings for the funeral ceremony. The amount charged will depend upon the decorations required. Paupers will, in certain cases, have the right to have their dead incinerated free of cost.

A Nursing Heroine.—The spirit of Florence Nightingale lives in the person of Sister Marie Tnérèse, Superior of the Sisters of Charity now serving in Tonquin, who has recently been decorated by the General in command. When she was barely 25 she was wounded at Balaclava. At Magenta she again received a wound. She accompanied French soldiers to Syria, China, and Mexico. In the Franco-German war she was grievously wounded at Reichshofen while attending the Cuirassiers who fell in that memorable charge. At a later stage of the same campaign she distinguished herself by seizing a bomb which fell into an ambulance, and carrying it away eighty yards, when it burst, seriously injuring her alone. She was scarcely recovered from the effects of this injury when she volunteered for service in Tonquin.

Dr. Nicolson, superintendent of Broadmoor Criminal Lunatic Asylum, was assaulted by one of the inmates, a convict named Lyons, when visiting the wards about noon on Sunday, November 3rd. After an interview with Lyons, Dr. Nicolson was proceeding on his way when he was struck on the head with a stone thrown with great force by Lyons. The attack was evidently premeditated by the inmate, as he had concealed the stone about him in anticipation of an opportunity. Fortunately Dr. Nicolson's hat broke the full force of the blow, which took effect above the left temple, leaving a deep scalp wound and contusion. Dr. Nicolson is progressing satisfactorily, and it is not anticipated that the results of the injury will prevent him from returning to duty in the course of a few days.

Ophthalmoscopical Demonstrations at the Royal Westminster Ophthalmic Hospital.—Mr. Adams Frost gave the fifth demonstration in this course at the above hospital on Tuesday, November 12th. Those varieties of retinitis not dependent upon optic neuritis were first considered. Several paintings showing early and late stages of retinitis pigmentosa were thrown upon the screen, and also the pigmentary changes in the retina secondary to old choroiditis. One diagram was shown of a variety of retinitis characterised by the presence of sharply-outlined white bands of cicatricial tissue stretching across the fundus, and lying beneath the blood vessels, these bands often terminating in knob-like or fan-shaped processes. Paintings illustrative of the various phases of detachment of the retina and of the cupping of the optic disc in glaucoma were also exhibited.

Medico-Psychological Association.—The quarterly meeting of this Association was held at Bethlem Hospital, on November 6th, Dr. Hayes (Newington), President, in the chair. Papers were read by Drs. Dodds, Strahan, and Greenlees on "Assistant Medical Officers in Asylums; their Status in the Speciality." Dr. Baker showed and described a new form of urinal, a fireguard with spring lock, an inspection plate for asylum doors, and marble tiling for Turkish baths, all of which were in use at the Retreat, York. A discussion followed, in which the President, Drs. Ireland, Greenlees, Savage, Hack Tuke, Whitcombe, Hyslop, Needham, Bowers, and Bonville Fox took part. Drs. Strahan and Baker replied. Dr. Hyslop exhibited under the microscope sections showing Deiter's cells and the neuroglia of the brain. The following were elected members: R. V. Skinner, M.R.C.S.; C. J. Sells, M.R.C.S., L.R.C.P.; J. P. Richards, M.R.C.S.; G. S. Pope, L.R.C.P., L.F.P.S.; W. Gibbon, L.K.Q.C.P., L.F.P.S.Glas.; W. Ireland Donaldson, B.A., M.B.

It is stated that the medical officers of the Belgian Government on the Congo have succeeded in inducing large numbers of natives to submit to vaccination.

MEDICAL VACANCIES.

The following Vacancies are announced:

GENERAL HOSPITAL FOR SICK CHILDREN, Pendlebury, Manchester.—Junior Resident Medical Officer. Salary, £80 per annum, with board and lodging. Applications by November 27th, to the Chairman of the Medical Board.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway Road, N.—Ophthalmic Surgeon. Applications by November 27th to the Secretary.

HALIFAX INFIRMARY AND DISPENSARY.—Senior House-Surgeon. Salary, £80 per annum, with board, lodging, and washing. Applications by November 26th, to Dr. E. West-Symes, Hope Hall, Halifax.

HALIFAX INFIRMARY AND DISPENSARY.—Assistant House-Surgeon. Salary, £50 per annum, with board, lodging, and washing. Applications by November 26th, to Dr. E. West-Symes, Hope Hall, Halifax.

HOLLOWAY AND NORTH ISLINGTON DISPENSARY. Resident Medical Officer. Salary, £150 per annum, with unfurnished house, etc. Applications by November 26th to C. W. Sawbridge, Esq., Honorary Secretary, 68, Aldermanbury, E.C.

LEICESTER INFIRMARY AND FEVER HOUSE.—Assistant House-Surgeon. Salary, £80 per annum, with board, lodging, and washing. Applications by November 24th to the Secretary, 24, Friar Lane, Leicester.

LONDON HOSPITAL, Whitechapel Road, E.—Surgical Registrarship. Salary, £100 per annum. Applications by December 2nd to the secretary.

LONDON TEMPERANCE HOSPITAL, Hampstead Road.—Junior House-Surgeon. Applications by November 23rd to the Secretary.

MAIDSTONE UNION.—Medical Officer and Public Vaccinator. Salary, £60 per annum and fees. Applications by November 20th to R. Hoar, Esq., 9, King Street, Maidstone.

NORTH DEVON INFIRMARY, Barnstaple.—House-Surgeon. Salary, £100 per annum. Applications by November 16th to the Secretary.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney Road, E.—Junior House-Surgeon. Salary, £30 for six months. Applications by November 30th to the Secretary, City Office, 27, Clement's Lane, E.C.

OWENS COLLEGE, Manchester.—Demonstratorship in Physiology. Salary, £150 per annum. Applications by November 20th, addressed to the Senate under cover to the Registrar.

SCARBOROUGH HOSPITAL AND DISPENSARY.—Assistant House-Surgeon. Salary, £25 for six months, with board and lodging. Applications by November 16th to the Medical Staff, Eldon Street, Scarborough.

SUSSEX COUNTY HOSPITAL.—House-Surgeon. Salary, £120 per annum, with board and lodging. Applications by November 27th, addressed to the Secretary.

TOWER HAMLETS DISPENSARY.—Resident Medical Officer. Salary, £120 per annum, with furnished rooms, etc. Applications by November 16th to J. F. Garioch, Esq., Tower Hamlets Dispensary, White Horse Street, Stepney, E.

VICTORIA HOSPITAL FOR SICK CHILDREN, Queen's Road, Chelsea.—Ophthalmic Surgeon. Applications by November 18th to the Secretary.

WARNEFORD HOSPITAL, Leamington Spa.—House-Surgeon. Salary, £100 per annum, with board, lodging, and washing. Applications by November 26th to the Secretary.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—Resident Assistant. Board, lodging, and washing. Applications by December 5th, to the Chairman of the Medical Committee.

MEDICAL APPOINTMENTS.

AMY, Joseph, L.R.C.S.Ed., appointed Physician to the Paisley Infirmary.

BROWN, John, M.D., appointed Physician for Diseases of Children, Central Dispensary, Glasgow.

COTES, C. E. H., B.A., M.B., B.S.Cantab., appointed Surgeon to the Lock Hospital, Harrow Road.

CRAIG, W., M.B., C.M., appointed Medical Officer to the Medical Aid Association of Bursay, etc., Orkney, *vice* G. V. Gilray, M.B., C.M.

DA COSTA, F. X., M.R.C.S., L.R.C.P., appointed Surgeon-Registrar to Charing Cross Hospital, *vice* F. C. Stedman, L.S.A., M.R.C.S., resigned.

DILLON, Paul, L.K.Q.C.P., appointed Physician to the Extern Department, St. Vincent's Hospital, *vice* Dr. D'Carroll, resigned.

DUNN, E. L., M.B., appointed Assistant-Surgeon to the Liverpool Dispensaries, *vice* J. Jarvis, L.R.C.P., M.R.C.S., resigned.

GIBSON, W., M.R.C.S., L.R.C.P., appointed House-Surgeon to the Burton-on-Trent Infirmary, *vice* M. W. Oldham, M.R.C.S., L.R.C.P.Lond., resigned.

GIBB, William Fletcher, M.D., C.M.Glas., appointed Surgeon to the Paisley Infirmary.

HARRIS, F., appointed House-Surgeon to the Liverpool Eye and Ear Infirmary, *vice* M. McLagan, resigned.

HELME, T. Arthur, appointed Resident Medical and Obstetrical Surgeon to St. Mary's Hospital, Manchester.

HUTCHINSON, Jonathan, jun., L.R.C.S.Eng., appointed Assistant Surgeon, London Hospital, *vice* John Cooper, F.R.C.S.Eng., resigned.

KERR, James, M.A., M.B., B.C., D.P.H.Camb., appointed House-Physician to the Bradford Infirmary.

MONTEITH, James, M.B., C.M., appointed Assistant Medical Officer to the Dorset County Asylum, *vice* R. D. Booth, M.B., resigned.

PALMER, S. J., M.B., appointed Assistant-Surgeon to the Liverpool Dispensaries, *vice* H. E. Gough, M.R.C.S., L.R.C.P., resigned.

PARSONS, George Gooden, L.R.C.P.Lond., M.R.C.S., L.S.A., appointed House-Surgeon to the Weston-super-Mare Hospital, *vice* Dr. Temple, resigned.

PAUL, F. T., F.R.C.S.Eng., appointed Honorary Surgeon to the Liverpool Royal Infirmary, *vice* R. Harrison, F.R.C.S.Eng.

STARK, Nigel, M.B., appointed Physician for Diseases of Children, Central Dispensary, Glasgow.

SWIFT, S. S., M.R.C.S.Eng., L.R.C.P.Lond., appointed Assistant-Surgeon to the Liverpool Dispensaries, *vice* J. Pearson, M.R.C.S., L.R.C.P., resigned.

WALLS, W. Kay, appointed Surgeon on the Resident Medical Staff of St. Mary's Hospital, Manchester.

WARD, P. J., L.K.Q.C.P.I., appointed Resident Assistant to the Ballinasloe District Lunatic Asylum, *vice* T. H. O'Shaughnessy, M.D., resigned.

WARE, E. E., M.R.C.S., L.R.C.P., appointed House-Physician to the East London Hospital for Children, Shadwell, *vice* Dr. McClure, resigned.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the announcement. The first post on Thursday mornings is the latest by which advertisements can be received.

BIRTHS.

ANDERSON.—On October 16th, at Barbados, West Indies, the wife of Surgeon L E. Anderson, Army Medical Staff, of a son.

CHRISTOPHERSON.—On the 7th inst., at 6, Carlisle Parade, Hastings, the wife of Cecil Christopherson, M.R.C.S., L.R.C.P., of a son.

MARRIAGE.

BRANCH—BAYNES.—On Wednesday, October 2nd, at St. John's Cathedral, Antigua, West Indies, by the Right Rev. Bishop Branch, D.D., father of the bridegroom, assisted by the Rev. S. E. Branch, B.A., brother of the bridegroom, Edward William Rawle Branch, B.A., Dunelm, M.B., C.M. Edin., Medical Officer of the Virgin Islands, to Francesca Charlotte Agatha, second daughter of the late Hon. E. D. Baynes, Esq., C.M.G., Colonial Secretary of the Leeward Islands.

DIARY FOR NEXT WEEK.

MONDAY.

MEDICAL SOCIETY OF LONDON, 8.30 P.M.—Mr. Haslam (Birmingham): 1. A Case of Ruptured Gall-Bladder; 2. Malignant Growth of Colon, with Impaction of a Foreign Body. Dr. de Havilland Hall Acute Catarrhal Laryngitis with Urgent Dyspnœa in an Adult.:

ROYAL COLLEGE OF SURGEONS OF ENGLAND, 5 P.M.—Mr. John Marshall: The Morton Lecture on Cancer and Cancerous Diseases.

TUESDAY.

PATHOLOGICAL SOCIETY OF LONDON (20, Hanover Square), 8.30 P.M.—Dr. S. West: Gastric Ulcer communicating with Colon. Mr. A. Marmaduke Sheild: Tumour of Gracilis Femoris Muscle. Dr. Hale White: Symmetrical Aneurysms of Vertebral Arteries. Dr. Washbourne: Microscopical Sections of the same. Mr. J. Bland Sutton: Albinism, Nystagmus, and Imbecility in a Monkey. Dr. Norman Moore: Specimens of New Growth at Root of Lung. Mr. E. Hurry Fenwick: Sarcoma of Crus Penis. Card Specimens: Dr. H. W. G. Mackenzie: Congenital Disease of Heart, with Right-Sided Endocarditis. Mr. Alban Doran (for Sir Spencer Wells): Dermoid Ovarian Cyst, Infiltration of Broad Ligament with Fat. Dr. Hawkins: Pelvic Calculi in Kidneys.

ROYAL STATISTICAL SOCIETY, Royal School of Mines, 28, Jermyn Street, S.W. 7.45 P.M.—Dr. T. Graham Balfour, F.R.S., etc. (President): Opening Address.

WEDNESDAY.

ROYAL METEOROLOGICAL SOCIETY, 25, Great George Street, Westminster, 7 P.M.—Mr. W. Marriott and Mr. G. M. Whipple, B.Sc.: Papers on Thunderstorms. Mr. W. H. Dines, B.A.: St. Elmo's Fire. Mr. H. Helm Clayton: Cirrus. Mr. F. C. Bayard, LL.M.: Sunshine Recorders. Mr. A. B. MacDowall: Sunshine. Professor S. A. Hill, B.Sc.: Climatological Observations.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, BROMPTON, 4 P.M.—Dr. John Tatham: On Cancerous Growths in the Lungs.

THE HOSPITALS ASSOCIATION, the Board Room, King's College Hospital, 8 P.M.—Sir William Moore, K.C.I.E.: On Leprosy and Leper Houses.

THURSDAY.

HARVEIAN SOCIETY OF LONDON, 8.30 P.M.—Mr. J. Knowsley Thornton: The Harveian Lectures on the Surgery of the Kidney. Lecture I.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E., 4.30 P.M.—Dr. Heron: On the Question of the Contagiousness of Consumption. Lecture II.

NEUROLOGICAL SOCIETY OF LONDON, The National Hospital, Queen Square, Bloomsbury, 8.30 P.M. Patients at 8 P.M.—Dr. Hale White: Case of Cured Cerebro-spinal Meningitis. Dr. F. W. Mott: Bilateral Spasm (Chorea?) in a Child. Dr. Hadden: Defect of Articulation in a Boy. Dr. Buzzard: Two Cases of Lead Paralysis. Dr. T. Savill: Widespread Amyotrophy in a Girl aged 17 years.

FRIDAY.

CLINICAL SOCIETY, 20, Hanover Square, 8.30 P.M.—Dr. Sidney Martin: Case of Pyloric Gastric Ulcer, with Systolic Epigastric Thrill; Death following Hæmatemesis. Dr. C. Scott Watson: Case of Ptomaine Poisoning. Dr. Coutts and Dr. A. Garrod: Three Cases of Rheumatic Periostitis. Mr. Bland Sutton: Tumour of Supra-orbital Nerve.

OPERATION DAYS AT THE LONDON HOSPITALS.

MONDAY.....10 A.M.: Royal London Ophthalmic.—10.30 A.M.: Royal Free (Ophthalmic Department).—1.30 P.M.: Guy's (Ophthalmic Department); Royal Westminster Ophthalmic.—2 P.M.: Central London Ophthalmic; Hospital for Women; Royal Orthopædic; St. Mark's; London.—2.30 P.M.: Chelsea Hospital for Women.

TUESDAY.....10 A.M.: Royal London Ophthalmic.—1.30 P.M.: Guy's; Royal Westminster Ophthalmic; St. Bartholomew's (Ophthalmic Department); St. Mary's.—2 P.M.: Cancer Hospital, Brompton; Central London Ophthalmic; London; Westminster.—2 30 P.M.: St. Mark's; West London.—4 P.M.: St. Thomas's (Ophthalmic Department).

WEDNESDAY....10 A.M.: National Orthopædic; Royal London Ophthalmic.—11 A.M.: St. Mary's (Orthopædic).—1 P.M.: Middlesex.—1.30 P.M.: Royal Westminster Ophthalmic; St. Bartholomew's; St. Thomas's.—2 P.M.: Central London Ophthalmic; Great Northern Central; London; Royal Free; University College; Westminster.—2.30 P.M.: St. Peter's; Samaritan Free Hospital for Women and Children.—3 to 4 P.M.: King's College.

THURSDAY.....10 A.M.: Royal London Ophthalmic.—1 P.M.: St. George's.—1.30 P.M.: St. Bartholomew's (Ophthalmic Department); Guy's (Ophthalmic Department); Royal Westminster Ophthalmic.—2 P.M.: Central London Ophthalmic; Charing Cross; Hospital for Diseases of the Throat; Hospital for Women; London; University.—2.30 P.M.: Chelsea Hospital for Women; North-West London.

FRIDAY .....9 A.M.: Metropolitan; St. Mary's (Ophthalmic Department).—10 A.M.: Royal London Ophthalmic.—10.30 A.M.: Royal Free (Ophthalmic Department).—1.15 P.M.: St. George's (Ophthalmic Department).—1.30 P.M.: Guy's; Royal Westminster Ophthalmic.—2 P.M.: Central London Ophthalmic; East London Hospital for Children; King's College; London; St. Thomas's (Ophthalmic Department).—2.30 P.M.: West London.

SATURDAY.....9 A.M.: Royal Free (Department for Diseases of Women).—10 A.M.: Royal London Ophthalmic.—1 P.M.: King's College.—1.30 P.M.: Royal Westminster Ophthalmic; St. Bartholomew's; St. Thomas's.—2 P.M.: Cancer Hospital, Brompton; Central London Ophthalmic; Charing Cross; London; Middlesex; Royal Free; University.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 1.30; Skin, M. 1.30; Dental, M. W. F., 9.

CHELSEA HOSPITAL FOR WOMEN.—M. Tu. W. and F., 1.30.

GREAT NORTHERN CENTRAL.—Medical and Surgical, M. Tu. Th. F., 2.30; Obstetric, W., 2.30; Eye, Tu. F., 10; Ear, M. F., 2.30; Diseases of the Skin, W., 2.30; Diseases of the Throat, Th., 2.30; Dental Cases, W., 2.

GUY'S.—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F. 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu. 1; Skin, Tu., 1; Dental, Tu. Th. F., 1.30.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th. S., 1.30; o.p., W. F., 1.30; Eye, M. Th., 1.30; Ophthalmic Department, W., 2; Ear, Th., 2; Skin, F., 1.30; Throat, F., 1.30; Dental, M. Th., 9.30.

LONDON.—Medical, daily, exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p. W. S., 1.30; Eye, Tu. S., 9; Ear, S., 9.30; Skin, Th., 9; Dental, Tu., 9.

MIDDLESEX.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 9.30; o.p., M. F., 9, W. 1.30; Eye, W. S., 9; Ear and Throat, Tu., 9; Skin, Tu., 4, Th. 9.30; Dental, M. W. F., 9.30.

NATIONAL ORTHOPÆDIC.—M. Tu. Th. F., 2.

NORTH-WEST LONDON.—Medical and Surgical, daily, 2; Obstetric, W., 2; Eye, W., 9; Skin, Tu., 2; Dental, F. 9.

ROYAL ORTHOPÆDIC.—Daily, 1.

ROYAL FREE.—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Dental, Th. 9.

ST. BARTHOLOMEW'S.—Medical and Surgical daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, W. Th. S., 2.30; Ear, Tu. F., 2; Skin, F., 1.30; Larynx, F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9.

ST. GEORGE'S.—Medical and Surgical, M. T. F. S., 12; Obstetric, Th. 2; o.p., Eye, W. S. 2; Ear, Tu., 2; Skin, W., 2; Throat, Th., 2; Orthopædic, W., 2; Dental, Tu., S., 9.

ST. MARK'S HOSPITAL.—Fistula and Diseases of Rectum, males, W., 8.45; females, Th., 8.45.

ST. MARY'S.—Medical and Surgical, daily, 1.45, o.p., 1.30; Obstetric, Tu. F., 1.45; Eye, Tu. F. S., 9; Ear, M. Th., 3; Orthopædic, W., 10; Throat, Tu. F., 1.30; Skin, M. Th., 9.30; Electro-therapeutics, Tu. F., 2; Dental, W. S., 9.30; Consultations, M., 2.30; Operations, Tu., 1.30; Ophthalmic Operations, F., 9.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, Tu. F., 2; o.p., W., 1.30; Eye, M. Tu. W. Th., F, 1.30; o.p., daily, except Sat., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Tu. F., 1.30; Children, S., 1.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1.30; Obstetrics, M. Th., 1.30; Tu., W. F., 2; Eye, Tu. F., 2; Ear, M. F., 9; Skin, W., 1.45, S., 9.15; Throat, Th., 1.30; Dental, W., 9.30.

WESTMINSTER.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1; Eye, M. Th., 2.30; Ear, M., 9; Skin, W., 1; Dental, W. S., 9.15.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the office of the JOURNAL, and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429 Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

ANSWERS.

DR. R.—Particulars of the Rogers Prize will be found in the JOURNAL of August 10th, 1889, page 318, and November 2nd, 1889, page 1020. The bequest does not take effect till after the death of Mrs. Rogers.

INEBRIETY AND DISEASE.

MR. P. L. BENSON, and others: The report prepared by Dr. Isambard Owen for the Collective Investigation Committee of the British Medical Association, on the inquiry into the connection of disease with habits of intemperance, was published in the JOURNAL on June 23rd, 1888. It was subsequently reprinted for the Committee, but this reprint is now out of print.

LECTURE MODELS.

PAVO asks where plates and models of the eye, suitable for lectures on that organ could be procured temporarily?

*** Messrs. Curry and Paxton, 195, Great Portland Street, have some models, and would probably be able to inform our correspondent where he could obtain diagrams.

OLD BOOKS.

MR. R. S. STEELE, M.B.—There is a book of anatomy for artists published at Rome, by M. G. Rossi (not Roffi) which we have never seen, but which is said, by Choulant, to be very rare. Dr. Steele's book may be an English edition of this; but it is too imperfectly described as to size, number of plates, etc., for any notion to be formed of its value.

E. B.—The fine plates published by Knapton, after Albinus and others, have much gone down in price, and a good copy is probably not worth more than £2 or £3, if so much.

PRACTICE IN THE ARGENTINE REPUBLIC.

L.R.C.S. and P. asks how he should set to work in order to obtain practice in Buenos Ayres, or in the immediate vicinity of that town?

*** Advice as to the method of starting in practice in Buenos Ayres was given by a correspondent in the JOURNAL of March 23rd, p. 694. From this, and from a number of previous communications we gather that there is not much opening for English-speaking medical practitioners. It would in any case, we believe, be necessary to possess an M.D. degree, and to pass an examination in Spanish.

SCHOOL FOR TROUBLESOME BOY.

MR. T. S. ELLIS (Gloucester) writes: My attention has only to-day been called to the inquiry of "Morshead," and this by Mr. J. H. Galton's recommendation of Miss Arkell (misprinted Askell) to which I feel bound to offer my own. It was on my advice that Miss Arkell settled near London. I had witnessed her very remarkable capacity, which I thought should have a wider than local scope. If I myself had a boy of weak intellect, or otherwise specially troublesome, I would certainly place him in her care.

SEAT WORMS.

A PROVINCIAL SURGEON writes: Has F.R.C.S. studied the account of the life history of these creatures given in Quain's *Dictionary of Medicine*, and showing the conclusions of Heller, in Germany, which accord with those of Cobbold, in this country?

TREATMENT OF VENEREAL WARTS.

DR. K. CHILD MACKENZIE, M.B., C.M. (Tulla, Co. Clare), writes: I would recommend "Licentiate" to cut the whole of the warts off with scissors, and to apply solid nitrate of silver to the raw surface, and dress with boracic lint. I have followed the above treatment in several cases and have never known the warts to recur. It is much less troublesome and takes less time to effect a cure than caustics alone. The pain may be lessened by the local application of a 10 per cent. solution of hydrochlorate of cocaine.

DR. FREDERIC C. WOOD (Nottingham) recommends "Licentiate" to snip off each wart with scissors, followed by a light application of the cautery.

NOTES, LETTERS, ETC.

Cold to the Chest in Hæmoptysis.

D. H. G. writes: In Sir Andrew Clark's interesting paper in the JOURNAL of October 26th, he mentions the application of ice to the chest. How is its *modus operandi* explained? Not by its direct constringent action on the vessels of the lungs nor by its depressing the action of the heart?

The icebag to the spine is a potent remedy, and intelligible; for many years I have observed its potency in active hæmoptysis.

A Disclaimer.

Dr. W. E. Steavenson (in charge of the Electrical Department at St. Bartholomew's Hospital) writes: For some time past the following advertisement has appeared in a large number of newspapers. I believe, from communications I have received both from members of the medical profession and the public that, from the clever way in which the advertisement has been drafted, I am supposed to recommend the use of Harness's Electropathic belts.

The advertisement is as follows:—

DEBILITATED CONSTITUTIONS.

Reprinted from The *Family Doctor*.

"It is extraordinary how many men suffer nowadays both in mind and body from a multitude of ailments resulting simply from weak nerves, consequent upon overwork, worry, and other debilitating causes. Doctors have tried for years past and are still trying to find some drug which will cure the distressing symptoms of nervous exhaustion, but the best they have been able to do in this direction up to the present is to afford slight temporary relief in some simple forms of the disease. The Consulting Physician and Electrician of St. Bartholomew's Hospital has, we are glad to say, made a move in the right direction. After finding that physic is practically useless for the relief of nervous sufferers, he writes:—

"'There is no doubt that electricity is one of the most powerful nerve tonics we possess. No agent so quickly restores the depressed condition of the system resulting from illness. In all states of nervous depression, as from long mental strain or overtaxed bodily powers, general galvanism has proved a refreshing and most invigorating tonic.'

"The next point therefore to be considered is as to the best method of applying these galvanic currents to the system pleasantly without any discomfort, and for this purpose we cannot do better than strongly recommend all nervous sufferers to wear one of Harness' electropathic belts."

The last paragraph is from the *Family Doctor*. I have never recommended the use of Harness's belts. The quotation from my writing is taken from a paper I read before the British Medical Association, at Belfast, in 1884. In a subsequent part of the same paper I have said:—

"The galvanic belts and portable batteries, so extensively advertised, are not of the slightest use, and are great impositions on the public. If it were possible to pass a weak current of electricity through the body, or any part of the body, for an indefinite time, no doubt great tissue changes would take place. It would be impossible for such a powerful agent—one capable of splitting up all chemical compounds—to be passed through the body without causing great tissue-changes. But the skin offers such a resistance to the passage of electricity, that the body may almost be said to be insulated. No weak current, such as is produced by these battery belts, could pass through the skin. If one pole from the battery belt be applied to the body, and a galvanometer introduced between the body and the other pole, no deflection of the needle can be detected. If the current from these appliances were strong enough to overcome the resistance of the skin, sloughs would in a short time be produced at the points of application of the electrodes, a sore first appearing at the point of application of the negative pole. The same objection holds good with regard to the electric brushes; no battery that they can contain could produce a current strong enough to penetrate the skin of the scalp."

As direct reference is made to me in the public press in a way calculated to give a wrong impression of my views, and in my opinion to the detriment of the public, I have felt it my duty to ask you to insert this disclaimer.

"Blood Poisoning."

R. O'B. writes: On September 30th I vaccinated the infant of Mrs. P. The child was a healthy child 4 months old, and I have good reason to believe that the spot was sucked by the mother, who does not believe in vaccination after Allinson, *vide Weekly Times and Echo*. On October 7th the child was brought to me with only one vesicle well developed. On the 21st I was asked to call and see the mother and child. On arrival I found that the scar had ulcerated and was now a large ulcer about the size of a halfpenny, with indurated edges, in fact a Hunterian chancre. I did not know what to do and apologised, and said that it was the fault of the Local Government Board for supplying me with impure matter, and proceeded to give directions how to treat it, remarking that she might look out for a rash, when the mother asked me to look at her hands. Raising the curtain to admit light, I found that she had a beautiful crop of copper-coloured spots on the palms, feet, and everywhere; also a sore throat. Then it struck me that the mother could not have been infected by her infant, who was vaccinated only twenty-one days ago.

On more careful inquiry about her health, and that of her husband, I ascertained that her husband had a similar rash six months ago and was treated at a so-called dispensary for "heat spots," and not getting better he had gone to a public institution where he was told that it was "blood poisoning."

"Blood poisoning" is a favourite expression with medical men, and I have seen some sad results both at the Lock and at the general hospitals through not telling the patients plainly what they are suffering from and what the consequences to others would be, and giving them full directions how to prevent its spread.

Here through mock modesty we have two innocent persons infected, with a probability of others in the house being infected. The husband did not know, till informed by me, that he was suffering from syphilis.

Death-Rate of Total Abstainers.

We have received (from Mr. James Whyte, United Kingdom Alliance, 16, Deansgate, Manchester) a circular letter pointing out the fallacy in the deductions which have been made in certain quarters. His letter concludes as follows: Working class teetotallers ought to be compared with working class non-teetotallers, and middle class abstainers with middle class non-abstainere, and so on.

In the following table the materials are supplied for a comparison between the death-rates, at various ages, of working class teetotal Rechabites and those of working class non-teetotal Foresters. It also supplies the means of comparing the rates of mortality, at the same ages, of middle class healthy assured males, with those of Rechabites and those of males of all classes. The table gives the number of deaths per 1,000 per annum at the ages named, of Rechabites, Foresters, "healthy assured males," and "males of all England." It should be read thus: Of 1,000 Rechabites, age 25, 3.722 will die before reaching the age of 26; of 1,000 Foresters, age 25, 7.370 will die before reaching the age of 26; of "healthy assured males," 6.630 will die before reaching the age of 26; and of 1,000 "males of all England," 7.729 will die before reaching that age; and so on.

Rate of Mortality per 1,000 per annum in the Order of Rechabites for the five years 1879-83.	Rate of Mortality per 1,000 per annum in the Order of Foresters for the five years 1871-75.	Rate of Mortality per 1,000 per annum of the "Males of all England," 1871-80.	Rate of Mortality per 1,000 per annum of "Healthy Assured Male Lives," according to the experience of 20 Life Assurance Offices, collected by Institute of Actuaries.	Age.
3.722	7.370	7.729	6.630	25
4.057	8.070	9.386	7.720	30
4 337	10.130	11.276	8.770	35
5.094	12.080	13.893	10.310	40
6.272	15.110	16.691	12.190	45
9.108	18.650	20,390	15.950	50
12.407	26.260	26.669	21.030	55
26.131	33.660	35.450	29.680	60
40.417	49.370	48.856	43.430	65

Epilepsy after Vaccination.

Dr. Julius Althaus, (Harley Street) writes: In the JOURNAL for October 26th, Mr. Climson Greenwood, Public Vaccinator for Marylebone, has commented upon the above case, which lately appeared in your Hospital Reports, and endeavoured to shake the conclusions at which I had arrived with regard to the pathology of it, apparently with the view to screen vaccination from reproach.

Mr. Greenwood wants to make out that the patient comes from an unhealthy stock, that he was in bad health and of dissolute habits, and that the epilepsy has therefore been due to these causes, and not to the vaccination. Let us go through these statements *seriatim*.

1. With regard to the father of the patient, Mr. Greenwood says in the first part of his letter that he is attending at the Brompton Hospital for Diseases of the Chest: while in the second part he goes further, and says that he is "consumptive." Mr. Greenwood seems to think that attendance at the Brompton Hospital is equivalent with consumption. The man in question, however, neither is nor ever has been consumptive. Dr. Thorowgood, who has kindly examined him at my request, writes to me to say: "The case is one of chronic bronchitis with some emphysema. There are a few mucous *râles* about the bases; but I do not see why the man should not do well." So much for the father being consumptive.

2. Of the mother of the patient. Mr. Greenwood says that she is "fairly healthy," but implies that she has had syphilis. This latter is a most unwarrantable assumption, for which there is not a shred of evidence. The mother has not simply been "fairly healthy," but according to her own account "wonderfully healthy," in spite of having brought up a large family under difficult circumstances. She has never had "ulcerated sore-throat," as Mr. Greenwood asserts, but occasionally an ordinary sore throat, for which she has not required local treatment. She has had a few miscarriages, but none of the children which were prematurely born showed the slightest trace of disease. Is syphilis to be inferred in every woman who miscarries occasionally? In the whole family of the patient there are no stigmata of syphilis whatever, not a single symptom of Hutchinson's triad. The number of children and miscarriages are also incorrectly given by Mr. Greenwood. He says that the mother has had fifteen children, and that the first three were born dead; the fact being that she has only had twelve children, and that the first of all—not only the eldest living, but the offspring of the first pregnancy—is now alive and well.

3. Another slipshod and unfounded statement is made by Mr. Greenwood concerning the health of the other children of the family. He states in the first part of his letter that the "rest of the children" (that is, nine living ones), are alive and healthy, though of a highly nervous temperament (mother's statement)." In the second part of his letter, however, he at once contradicts himself with regard to this point by stating that only "the younger children (he does not say how many), are of a highly nervous temperament." Both these assertions are wrong. All the children are perfectly healthy with the exception of the youngest of all, which was born about a year and a half after the father had had a severe accident, and which shook his nervous system a good deal. The youngest child, possibly for this reason, seems rather nervous and starts easily, but is otherwise well.

4. With regard to the patient himself, Mr. Greenwood says: *a*. That he has had whooping-cough as well as measles. This statement is denied by father and mother. *b*. That he suffers from nocturnal emissions. This however is not an illness unless they are very frequent, but simply a physiological relief of the glands, from which few young men of the patient's age are exempt. During the two months which he has been in the hospital, he has had three such emissions, which is not excessive. *c*. That he has on more than one occasion taken too much to drink. The fact is that the family are teetotallers, and that the patient has with one or two exceptions been perfectly temperate. He had not touched a drop of any stimulant for four months previous to the vaccination. *d*. That he admits of having had sexual intercourse. The patient informs me that this has occurred altogether on one single occasion, and that was a few months ago, after the epilepsy had become established. *e*. That he suffered three years ago from "ulcerated sore throat." This was an ordinary sore throat, which got well in a week, without any local treatment. *f*. That he has some carious teeth. This is surely a common occurrence, especially in people of his class. Suffice it to say that the upper central incisors (Hut-

chinson's) are perfectly normal. *g*. That he was at his duties before, during, and after vaccination. This is a most important point in the case, and one from which a practical lesson should be drawn. The symptoms of inflammation and constitutional disturbance, which were excited by the vaccine in the present instance, were evidently of an extremely severe character. There was not only considerable inflammation in the whole arm, and swelling in the knee and ankle-joints of the same side, as Mr. Greenwood says, but all the joints of the whole body were affected; the knee and ankle of the non-vaccinated side were "as large again," and the right hand and fingers were very considerably swollen. The skin of the body and of all of the limbs was covered with a pink rash; the patient completely lost his appetite, and felt so ill that he applied to the doctor for a few days' leave of absence from his duties. The doctor however laughed it off, and said that his arm was getting on beautifully, and that he need not lie up for so little. The patient, being afraid of being laughed at, returned home after this, and said that he would work till he dropped: and, as the father remarked, within the month he did drop. The lad, who had been in good condition previous to the vaccination, continued thoroughly out of health, and lost flesh, between the vaccination and the first outbreak of the epileptic fits. Perhaps, if he had had a week's holiday given him, and had not been obliged to actively use the left hand for stamping letters, to deliver letters, and to wheel a truck a distance of about six miles, when he was so ill, he might never have become subject to these seizures.

I have here to correct an error which has crept into my first report of the case, to the effect that the patient "in June last year applied for a situation as postman." As a matter of fact, he has been in the Post Office since 12 or 13 years of age.

h. Mr. Greenwood says that the patient was vaccinated, not in June as I had stated, but in April (in another part of his letter he says, "in the latter part of the month of April"), thus making the interval between the vaccination and the first fit much longer. This statement is on a par with the consumptive father, the syphilitic mother, and the highly nervous children. The father of the patient has on two separate occasions informed me that the patient was vaccinated in June, and that the first fit occurred within a month from the vaccination. The mother is equally positive on this point, and says that the boy was vaccinated in the week after Whitsun week. On referring to last year's diary, I find that that week extended from Monday, May 28th, to Saturday, June 2nd. The vaccination therefore probably took place on June 1st or 2nd, and not in April, as Mr. Greenwood says in one place, "nor in the latter part of the month of April," as he says in another.

I have now done with Mr. Greenwood's remarkable production, and in conclusion will only say that the case which I have recorded teaches the lesson that, whenever vaccination may be followed by severe inflammation and symptoms of blood poisoning, it is advisable that the patient should be as carefully attended to as if he were suffering from any other similar disease, lest such untoward results as occurred in the present instance should subsequently become developed.

The Moon Defence Fund.

At a meeting of the West Kent Medico-Chirurgical Society, held on Friday evening, November 8th, 1889, at the Royal Kent Dispensary, Greenwich, the following resolution was passed unanimously: "That the congratulations of this Society be given to Dr. Frederick Moon, on the result of the recent trial, October 28th, 29th and 30th, at the Old Bailey,; a verdict of acquittal on all the serious charges alleged against him being returned by the jury." It was further resolved that a special appeal be made to the profession generally in aid of the local efforts to raise a fund to defray the heavy expenses incurred by Dr. Moon in his defence.

Subscriptions may be sent to:—

Mr. Thomas Moore, F.R.C.S., President of the Society, 6, Lee Terrace, Blackheath.
Prior Purvis, M.D.Lond., Treasurer, 5, Lansdown Terrace, Blackheath.
Peter Horrocks, M.D.Lond., 9, St. Thomas's Street, Borough, S.E.
H. W. Roberts, M.R.C.S., Secretary, Wickham Terrace, Lewisham High Road, S.E.

	£	s.	d.		£	s.	d.
Prior Purvis, M.D.	1	11	6	John Anderson, M.D. ...	2	2	0
Thos. Moore, F.R.C.S. ...	3	3	0	John Prior Purvis, M.R.C.S.	1	1	0
Alexr. Forsyth, M.D.	1	1	0	Henry Wintle, M.D.	2	2	0
Ernest Clarke, M.D.	1	1	0	J. Hammersley, M.R.C.S. ...	2	2	0
Peter Horrocks, M.D.... ...	5	5	0	Thos. Creed, M.D.	1	1	0
John McGavin, L.R.C.P.Ed.	1	1	0	J. Mainwaring, M.R.C.S. ...	1	1	0
Anonymous	1	1	0	H. W. Roberts, M.R.C.S. ...	2	2	0

COMMUNICATIONS, LETTERS, etc., have been received from:

Dr. N. Stark, Glasgow; Dr. J. Anderson, London; Dr. W. Marcet, London; Dr. J. A. Byers, Belfast; W. Gemmell, M.B., Belvidere, N.B.; Dr. Rentoul, Liverpool; Dr. Kelly, Taunton; Dr. H. Woods, London; Dr. Mickle, London; The Secretary of the London Lock Hospital, London; Dr Savage, London; Crux; Mr. G. Kent, London; G. V. B.; Medical Staff; W. B. Russell, M.B., Leeds; Our Egyptian Correspondent; Mr. J. Menzies, Northwich; Dr. Cresswell Baber, Brighton; Dr. C. R. Illingworth, Accrington; Dr. W. Sykes, Mexborough; Juvenis; Dr. Park, Houghton-le-Spring; Dr. E. Seaton, London; Professor M. Charteris, Glasgow; Dr. J. Haddon, Canonbie; Mr. G. G. Sparrow, Southsea; Dr. R. Fletcher, Worcester; Mr. G. E. Jeaffreson, Framlingham; Mr. T. H. Corbyn, London; Dr. J. Althaus, London; Dr. Lewers, London; Mr. Young J. Pentland, Edinburgh; Mr. C. G. Ethelston, London; Dr. F. Vacher, Birkenhead; Dr. F. Hewitt, London; Mr. E. Mathews, Redditch; Dr. J. A. Campbell, Garlands; Dr. Berdoe, London; Mr. A. W. 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THE MORTON LECTURE
ON
CANCER AND CANCEROUS DISEASES.

Delivered before the Royal College of Surgeons.

By JOHN MARSHALL, F.R.S., F.R.C.S.,
President of the General Medical Council; Emeritus Professor of Surgery, University College.

MR. PRESIDENT AND GENTLEMEN,—I am of course reminded in this institution that I am within a very short distance of a splendid museum, from which I could have drawn a superabundance of material to illustrate the subject of this lecture; but my own impression is that it is far better for a lecturer on a special occasion like this to provide himself with his own material, and by the aid of his own materials or those given to him by his friends, rather than to enter, as it were, into the domain of this vast collection, and perhaps overburden himself with its abundant material. I have therefore selected a certain number of objects which have been supplied to me by my friend Mr. Robert Boyce, assistant in the Pathological Department of University College, and through his ability and earnest work I hope to have an opportunity of allowing you to see certain specimens under the microscope and certain pictorial representations on the screen which will illustrate the portions of the subject which I have to bring to your attention. By the rather illogical term "cancer and cancerous diseases" I presume it is intended that one should consider, not only so-called true cancers, but sarcomatous tumours and those that contain the elements of both, mixed tumours, and not to travel beyond that line. On the present occasion, however, I must limit myself almost exclusively to the true cancers, for the subject is so vast that it is quite impossible to overtake that department in one lecture, and if I were to attempt more I should most signally fail.

The term true cancer should be, I think, associated with those growths that depend primarily upon an over-development of a spurious form of epithelial, or mesothelial, or hypothelial tissue. I use the word *mesothelial* because it seems convenient to have a term to include those distinct forms of epithelioma which originate in the middle layer, from those which commence in the upper layer of the embryo, or the under layer of the embryo. I shall therefore speak occasionally perhaps of the epitheliomata, the hypotheliomata, and the mesotheliomata. We are apt also here to speak of these growths as being more or less embryonic, and the term is an exceedingly happy one—very good indeed—because it implies the incompleteness, at any rate, of the tissues of which these tumours are composed. At the same time, if used in too sharp a sense, it is untrue, because I contend there is nothing in the embryo like what you find in cancer, nor is there any cancerous element in the embryo itself. There is, in fact, a strange divergence from the embryonic type in these epitheliomatous and hypotheliomatous tissues, a strange divergence which I would rather criticise by the word *anarchy*. They are anarchical evolutions from the embryo or from the embryonic tissues; and this is a very important matter, because we are apt to suppose that an inference may be built upon that word embryo, or embryonic, namely, that the elements of these tissues may originate by a power of reversion to a true embryonic form. Now, if they were distinctly and absolutely like embryonic tissues, I should admit that theory, but until I find in a cancerous growth a distinct reproduction of the pure embryonic element, I say that it is a dangerous expression, very likely indeed to shut up inquiry, to limit our investigations, and to pass glibly on satisfied with the explanation that these are embryonic tissues. They are not embryonic tissues, they are like embryonic tissues, they originate from them even as the whole body does; they are part of the body, but they are not distinctly embryonic tissues; they are, as it were, irregular, uncontrolled tissues, and I would speak of them rather as *anarchical*. I would speak of them as anarchimorphic, anarchibolic, and anarchisynthetic, as building up a tissue.

Clearing our way, then, we may pass on to consider what is the character and what are the surroundings of these tumours. And here I, of course, throw myself upon your own experience, for it must be just as great as mine in regard to the painful history of these perilous growths as a general rule. You know how they begin, how they progress, and you know their termination as well as I do. Nor do I dwell upon the particular conditions, significations, or qualifications of this or that stage of their development; and if I do not trouble you with the influence of age, or of sex, or of hereditary influence, or of occupation, or of diet, it is because I assume that you know all about these points as much as I do.

I pass, therefore, directly, as far as I can, to ask what is the cause of cancer, and no doubt everyone here will say, "We know not the cause;" and in that I entirely agree. But does that prevent us from endeavouring to ascertain the cause? Are we not compelled as members of a scientific profession to dive into this mystery? Is it likely that Providence has, as it were, struck such a fatal and fearful blow at the human construction that there is no remedy for our ignorance, that there is no knowledge but that which we now possess? We most surely stand in a position between the past and the future; and we are responsible for carrying on this investigation and inquiring into this disease until we know something more about it; therefore, there needs no apology for attempting the solution of what seems to be an insoluble problem. But let us see how it has been approached in past times, and let us be encouraged if we can by ascertaining the mode in which and through which knowledge has been advanced in regard to these important diseases. And here I claim that the most advance has been made through the study of structure. We, of course, know the importance of studying the pathological relationships the history, the development, and the surroundings which are worked up, as it were, in this intricate problem—those also of nation, of race, of family, of hereditary influence, and so on; but we cannot conceal from our minds, I think, that as a structural condition affecting the living economy, it must be through the structural element that we must first try to reach the truth. Such has been the case, for if you study the older descriptions of this disease, you will see that they are especially remarkable for the keen appreciation of the conditions of growth, their whereabouts, the progress they make, the general career, as it were, of these tumours; but the writers are specially ill-informed as regards their structure. If we take a most admirable Thesis by one George Tabor, published upwards of a hundred years ago in Haller's splendid *Disputationes Chirurgicæ*, we shall find that he gives a most characteristic account of a cancer of the breast. He speaks of the epidermoid element, of the soft tissue, of its extreme vascularity, of the union of the ducts with the acini of the glands; and then he adds that there are two sets of lymphatics—which, of course, we now know to be an error—one conveying material to the breast and the other bringing it back. Then he proceeds to speak of the life-history of the disease, and he characterises the whole in a few remarkably good touches, expressed in a Latinity which we seem to have forgotten, embodying, in a few sentences, or sometimes in a few words, what we now spread out into a paragraph.

Now, how have we advanced since that time? Plainly by anatomical investigations in the first instance; and if I venture to put upon the screen an illustration of what has been done in the past, and then come to what we can do in the present, you will see that our advance since Tabor's time has been most remarkable. The diagram before me represents the plate in Dr. Walshe's *Cancer*, which was executed on steel from drawings by myself in the year 1846. You will find in this illustration that we knew then something more than our friend Tabor. In the centre you will see the section of a cancer of the breast. It is hard, scirrhous, with fatty lobules round about, and at the margin, the marginal glandular acini still unaffected. You will see that we were able at that time to illustrate the peculiarities of structure here, and to refer them by comparison to natural elements in the body; the red blood corpuscles, the white blood corpuscles, and then healthy epithelia, then unhealthy epithelioma, still more marked on this side, and still more wild-fashioned epithelial elements, and still more wild-looking growths in the heart of the cancer. Here you also see the remarkable stroma to which I shall have to direct your attention by-and-by—the peculiar stroma that surrounds the acini which contain the so-called cancer cells. I bring forward this plate merely to show that in the 130 years that have passed between Tabor and Dr. Walshe, the advance in knowledge was not in the history

of the disease, not in its development, not in the peculiarities relating to sex, and so forth, but was in the extent of knowledge in reference to structure. I maintain that in dealing with this point I afford the key to the most material advances which have yet been made in regard to the nature of this disease. So that I think anatomy must still be the first path of inquiry.

I will now show some specimens to illustrate by example the mode in which anatomical research has already given us even more knowledge than we possessed in 1846. First of all, in regard to the cells, I am afraid it is too frequently the case that in using the words epithelial and epithelioid cells we have neglected or ignored the particular deviations which these cancer cells certainly manifest when you compare them with healthy epi-, meso-, or hypothelial elements present in the embryo. In the embryo all is methodical; all the cells of these tissues are undergoing a straightforward and well defined career, not pressing each other out, not squeezing for victory, not forcing against any other tissue, but each co-ordinated to its destined end, and marked in the most peculiar way by characters leading to that end. Now, if you examine the epithelioid element in cancer you find distinct divarication and divergence from all that. What does it amount to? You are familiar enough with the forms of these cells, so that I need not sketch them: but you will allow me to remind you that the important part of the cell, according to modern physiological notions, is the so-called nucleus. Now the nucleus governs, as far as we can understand it, the development, the evolution of the cell, as well as its multiplication. What are the peculiarities of the nucleus in a cancerous cell? They are described in a very perfunctory manner. But have we not new methods of analysis; have we not methods of investigation which penetrate a little deeper than that? I fail to see, until recently in a paper by Dr. Heneage Gibbes, that there have been any effective researches into the *modus operandi*, as it were, of the nucleus of a cancer cell. He has undertaken this inquiry, and Dr. Lauder Brunton is working on the same lines when using various tests of colouring agents. He is not only able to discriminate between different layers or strata of healthy cells, but he has led the way, which has been followed to a certain extent by Dr. Gibbes, in his discrimination of the different changes which he sees in the cancer cell. These reagents will unlock the mystery which is lodged in the nucleus. We know that the nucleus has important properties, originating from the combination of seminal and germinal influence. developing the whole body, developing even the cancer which grows within the body. Now, this germinal and seminal influence has been shown to be associated with remarkable movements and changes of form in the core of this little bit of nucleus, a most wonderfully tufted columnar arrangement, feathering themselves out this way and that; and it is through the agency no doubt of this internal economy, through these remarkable changes, that the healthy embryonic cell, the germ and sperm cell, reaches the condition of the true embryonic cells which carry on their development still further. We must endeavour to search out this mystery, to look into the minute anatomy of the nucleus of the cancer cell. That is a hopeful, and it does not seem to me at all an impossible thing. We shall find it no doubt *anarchic*, but shall we not be able to trace the steps of the anarchy; shall we not hope as it were to unfold the mystery of mysteries which lies in the nucleus of a cancer cell?

But if we proceed further with regard to these cells, we find it is not only their structure which we must study, but we must study their composition. And here, again, it is by the agency of different tests acting upon them that we are able to discriminate between certain important portions of a healthy cell. Why should not this mode of analysis be applied at once to an unhealthy cell? Are there not swarms of agents in Nature, colouring matters, chemical substances, and other things, which should be forthwith tried to see whether we can develop by this sort of polarisation—not of light but of chemical agency—abundant characters in these unhealthy cells which will lead us to see how they become anarchic and unhealthy? Then we must apply, of course, to the chemist, because these cells are not only anarchic in their form and evolution, but in the products which they yield. The healthy epithelial cells stand out amongst the secreting agents of the body. Their function is not merely to cover up and protect, but they have functions beyond that—metabolic functions of separating from the blood secretions of an infinitely varied kind, and that must be done through mechanism and chemical affinity. It is no use believing that the process is blank. It is no use supposing that a salivary is the same thing as a mammary gland cell. That cannot be. There must be some hidden secrets in the very substance, as in the very mechanism of these cells, which give origin to their metabolic action. There must be not only a peculiarity of structure as between the different glands in these little cells, but that must be associated with peculiarities of substance. And here we want the chemist to come in; we want chemical investigation of the highest character, and we are approaching the time when we may hope that chemists will take up this subject. We have them already engaged in investigating the poisonous substances which occur in the body from decomposition, and the other poisonous products which occur in the body in the shape of leucomaines, automaines, and toxines, things that may develop sometimes by foreign agency, as we know, and sometimes in a spontaneous manner; and we call upon chemists and demand their assistance, and we urge this on the younger members of our own profession who are showing zeal in various ways abroad and at home. We must take care of our honours, for foreigners are close upon our heels and are even surpassing us. We must urge on our young chemists to take up these matters; and opportunities will be afforded them by the conjoined Colleges to undertake inquiries of this kind. It would, I say, be a pity—I dare hardly call it a shame—if some did not come forward and push on investigation in regard to these serious and calamitous forms of disease.

Now we see that metabolism, as well as the mere mechanical thrusting in of these morbid elements into the body must be seriously at work, and we ask that that metabolism should be investigated. The epithelial cells are essentially secreting or excreting structures; although deformed, although disordered in their arrangement in cancers, that part of their duty is going on, but not going on right; it is going on wrong. What do they produce? Very many years ago I took a cancer immediately after it had been removed by Liston in the theatre of University College, and within a minute I tested the juice of the cancer, and found it acid. By degrees I found that this observation was not unique, and, in fact, it had been repeated and asserted over and over again, so that I thought little of it at the time; but it leads one's mind back at this moment to the thin edge of an inquiry, What is the acid? I tried to find it out, but with the imperfect means at my disposal, and my imperfect knowledge, I could not say anything more than that it yielded a viscid sort of acid and viscous liquid when it was evaporated, and I thought it was lactic acid. But I do not believe that lactic acid by itself is a sufficient answer to this inquiry. Here, therefore, looking at the secreting power of these cells, I say we ought to investigate, and we ought to have investigated what it is that they secrete or excrete.

Such chemical researches will be most material for the subsequent examination of what takes place with regard to these cells. I have described their behaviour as anarchical. Now what is the great governor of the body? The nervous system. It is very well to say that tumours can be developed in vegetables as well as in animals. Are we sure that this analogy is true? The world is full of analogies. A man to a certain extent is like a carrot, but he is very different; and so these cellular overgrowths in plants, caused by irritation or puncture, lead us to study in a most interesting way the possible alliance or analogies between them. But that must not mislead us; we must not suppose necessarily that an anarchical growth in a plant is quite the same thing as an anarchical growth inan animal. The anarchical growth in a plant may, however, be due to a distinct detachment of that little protoplastic fibre which has been shown to run through many vegetable cells from cell to cell. With the growing plant there is a fine delicate protoplasmic fibre which has been long overlooked and only quite recently detected, which seems to govern the evolution of the outgrowing cells of the plant. Now, is there no such thing as that in the animal cell? Is there no connection between the governing fibre which really lays down, as it were, the form and structure, and the complication of the structure, of the human body or the animal body? It is said that this is merely an adaptation of the form of the nervous system to the form of the animal. I disbelieve that altogether. I believe strongly and firmly that the nervous system is the centre which lays down and commands the growth of the body in this, that, or the other direction. If not, what does it do? I can understand that in the heart of the embryo cell there should be a molecular movement which will give onset, as it were, and impulse to the growth of the cell. I can suppose that, but when once that cell has multiplied itself into hundreds and thousands can I believe that that cell, or its actual contents *per se*, still govern the body? No; the contents of that cell, the product

of this nucleus, must be growing all the time in the other cells; and it must shoot out into them and command them to go thus far and no farther, and to develop in this way and not in another. I believe this may be; you may regard it as hypothetical; but let us see what happens with regard to cancer. Has anyone ever shown, as distinctly as has been shown with regard to the secreting cells, that the epidermoid or epithelioid cells of cancer are under the influence of the nervous system?

Not many years ago we were very much struck with the fact, then expounded to us, that distinct nervous filaments had been traced into the corpuscles of the salivary gland. I saw the drawing of it, and I would hardly believe it. I thought it too wonderful to be believed, but I gradually became accustomed to it, and now we know that nerve filaments do penetrate into all normal epithelial tissues. I may mention a case that occurred to myself only this last year—that of an extremely sensitive tumour which I removed from the lip, and which, on investigation, my friend, Mr. Boyce plainly showed me was teeming, although it was a thick piece of epithelium, with many layers where there ought to be only a few, accumulated layers of epithelial cells growing from the rounded to the oval, and from the oval to the flattened form—with these little nerve filaments, exquisitely minute, running up between the rounded cells to reach the oval cells, and others, and finally becoming lost, because the epithelium had done its work and was about to be cast off. We know it has been demonstrated that a nerve, a commanding thread, an electric cord, as it were, passes into each individual cell, and what can be assigned as a function to it except that it is the governing cord, the co-ordinating fibre, the cell of its life? The blood nourishes, the lymph carries away its wasted or unused material, a duct conveys away its secretion; but what does this nerve fibre do? It gives sensitiveness no doubt in its own cell way, of the presence of external stimuli, not necessarily a consciousness of sensation. With a cut nerve there is no longer any sensation, but the cell is not destroyed. In the salivary gland the part from which the nerve is divided may still go on secreting; so may any other gland for a time, so long as the cells are in function and in health; they dwindle by degrees, but for a time may go on secreting. But the final control of the health and of the life of a cell must, I contend, be in the nerve filament, for I do not see in what other way it can be materially governed. In science we may not assume non-material agencies. We may try to conceive whatever there may be behind—that is the great unknown—but we are bound in this world to follow out material agencies, and not to be satisfied until we have traced every function through structure. After that function, and behind that, comes life, the original endowment which we can never understand and hardly approach; but once life has been imparted, it goes on in structure, and we can find out in structure everything which results from its evolution and disturbance.

Has anyone examined from this point of view the epithelioid cells of cancer? I have myself, and I cannot believe that when they are aggregated into these irregular masses and groups, when they penetrate along the lymphatic spaces as they do through the body, when they reach the lymphatic glands far away from any primitive nerve fibre which could possibly have once reached them, when they advance into distant tissues, when they recur in a cicatrix—I cannot admit without actual demonstration that the nerve fibres go on with them, so as to regulate their disordered and anarchic government. We want to know this, and here is work for the microscopist, to study carefully in a recurrent growth, in an early yet well-developed growth in a lymphatic or a lymphatic gland, the connections of possible nerve fibres with the epithelioid cells. We want an answer to that. I feel strongly upon this point. I suspect what the answer will be, from my own rude investigations. I can hardly suppose that in the pell-mell agglomeration which we see in a cancer, each cell has its own proper guiding nerve fibre. How and why may we suppose that these nerve fibres are severed? It may be simply from the extreme rapidity of the cell growth; and this may afford one indication of the mode in which cancer originates from a comparatively healthy tissue. In the healthy formation of epithelial tissue the nerve tissue would still remain in it, but in the overgrowth excited by some long-continued injury at last the cells break away from the nerves, they retain the power of multiplication within themselves, because each cell, like the cell of a minute infusorial creature, contains the quantity and kind of material which is necessary to build it up, but it does not retain the governing tissue with its power of control; that must be retained by a centralised nervous system, and as soon as you pass from the unicellular animal to animals composed of many cells, you find the governing power, the control, in the presence of a nervous system. Now, why not try and solve this problem? It seems to me to lie at the root of a great deal of the explanation of cancerous growth. Even if it be shown that the primitive stimulus, the primitive irritant, is not a common irritant but a specific one; even if it be a bacillus or a bacterium, or any of those minute bodies which are supposed by some to be responsible for cancerous growths; even then the severance of the cell from its nervous connections may lie at the root of the explanation of this anarchical form of growth. Of course I put it as a theory, as my own impression; I do not think it is established; I should be sorry for anyone to say that I believe it in that sense; but I do think there is a great deal in it, and I think that unless we can ascertain whether the nervous filaments do enter the cells or not, we are ignorant of a fact which we ought to know. Not only the growth of the nuclei, the characters of the nuclei, the mode in which they develop the cell itself, but the mode in which the cells are connected so as not to be anarchical should be made a matter of immediate and profound investigation, to say nothing of influencing changes occurring in the great nervous centres themselves.

We come next to the further question, what are the products of these cells? I mentioned that they were acid, but that is a very poor result; we must know more about them, in what tendency they run, what are their secondary products, and what will be the action of those products upon surrounding tissues. They may be the very agents which destroy the nervous connections; they may, at all events, be the very products which alter the stroma around about, and help to dissolve the materials and carry them into the lymphatic spaces and channels, so as to cause a dissemination of the disease. It is not necessary that a very large particulate cell should pass into a lymphatic channel in order to spread this disease; a very minute nuclear particle might suffice; or such particle might not be a particle of the cell itself but a foreign product, though my own view is that it would be a particle of the cell itself.

Now let us go on to the question of the *stroma*. The stroma of cancer is acknowledged to be one great peculiarity of it, as distinguished from the basis of an ordinary sarcomatous tumour, distinguishing it from sarcoma as much as the sarcoma cell itself is distinguished from the epithelioid cells. This stroma of cancer is a very remarkable substance. Long ago, in my own lectures, I defined it as a spinous-looking structure. When you washed away the cells, and disclosed the little loculi of the cancer, you found a crisp, fibrous, sharp, clear, bright-looking tissue, absolutely different from the areolar tissue of an ordinary tumour or from healthy fibro-areolar tissue, yet no doubt developed from it. Its bands are hard, glistening, vitreous-looking, and break off short; it does not run in the beautiful undulating lines of areolar tissue, but encompasses the cell masses with curved bands of a most peculiar kind. It is always developed *pari passu* with the quantity of cells, provided the tissue in which these cells are developed is a firm tissue—the tissue of a firm organ. It is harder in the mammary gland than in the salivary gland; it is harder in the salivary gland than in the liver; it is softer still in the lymphatic glands. Of course, the lymphatic gland has a stroma which is capable of this remarkable transformation. I think this stroma has not been sufficiently studied; I do not think we know enough about it. Its curious, hard, shining, glassy character is further associated with that peculiar crispness when cut, that creaking sensation, which in certain advanced stages becomes almost bony to the scalpel edge; it resembles in a remarkable way not a highly organised and regular tissue, but in certain characteristics the periosteal fibres of a growing bone which is developed from membrane, not from the cartilaginous basis of the bone. In Quain's *Anatomy* you will see something which will remind you of the spinous character of this tissue, of which I hope to be able to show you some representation on the screen. In Quain's illustrations there will be found numerous fibres. I do not say that they are like the stroma of cancer, but the stroma of cancer shows a sort of likeness in that direction.

And this leads me to say that chemistry will herein aid us, because long ago it was pointed out that cretification is one of the conditions apt to follow upon the growth of cancer, especially in the breast; and the cretification or hardness of the stroma is accompanied by a deposit of lime salts in the little alveoli themselves. So that here we find hardness and crispness and a likening to periosteal growth, associated with the presence of lime. Many years ago I had a special analysis made for me of this

peculiar tissue, and the result was that its ash contained three or four times the quantity of phosphates that the ash of an ordinary piece of mammary gland did. There was nothing remarkable in that, because the fact had been demonstrated by the microscope, and shown by Dr. Hughes Bennett many years ago, in beautiful illustrations of this transformation of tissue into calcified kind of substance. Now this is extremely interesting, because it raises the question, What is the function of stroma, and what is its origin? Is the stroma a part of the cancer, is it part of that extraordinarily powerful agent which invades the body and which produces these diseases in the healthy tissue, or is it not? Now it seems to me there are very widely different opinions here, or rather one which is more commonly expressed than the other. It has been held by most writers that the stroma is a mere web that holds the cancer cells, that it is produced by the irritation of those cells, and that by degrees it may consolidate itself into such a hard firm form as to crush the very cells under the influence and agency of which it has been developed. This, of course, leads the mind at once to a possible mode of killing these forms of disease. We cannot say that it will lead to that, but of course that is an inference easily and naturally drawn from it. But what I want to do is to have this stroma investigated; I want the anatomist to pay a little more attention to it to show in what it consists. It is utterly unlike the wavy forms of the filamentous tissue; it seems to be more like bands crushed up together, moulded, as it were, together, pressed into an indifferent form, if I may use the word, and then impregnated with earthy salts in some peculiar way. Now the acid secretion of the cells, finding its equivalent in earthy matter, may penetrate this peculiar tissue, may give it its character; and so we may learn something more of it if we know its chemical constitution and its relation to the surrounding areolar tissue. I shall be able to show you, I hope, some progressive changes which take place in areolar tissues towards the formation of this peculiar stroma. Here is a compressed mass of cancer cells with stroma passing through it. You see the peculiar stroma with its compressed nuclei branching through it. You will see how extraordinarily different it is from the ordinary areolar tissue. I think myself that the history of this stroma has been neglected. I think that we may learn a great deal by a more patient and thorough investigation of the structure, the mode of formation, and the chemical composition of the stroma. Through these channels, through a more minute study of the cell growth itself and its relations, and a more deep and profound study of the stroma, I think there are still problems that require to be answered; that they will be answered in time I feel certain, and I trust that those answers will contribute to lighten our task in combating this painful disease.

Reserving till after the lecture the demonstration of the remaining figures, I omit what I hoped to say about the blood and lymph, and add a word or two about the mode in which this cancer invades the surrounding tissues. If the cancer cells secrete a substance in superabundance—and that they have secreting powers is certain, for that is their primitive formation—if they secrete something which induces the formation of the stroma, it may also serve to dissever the elements of the cells themselves, and help to carry them on into the lymphatic spaces, as they are called, and so into the lymphatics, and onward to distant parts. But its fibres may also break down the limits between the cancerous formation and the surrounding tissue; they may be the channels through which the disease spreads, and, therefore, I say the more we know of their nature the more we may hope to arrive at a time when possibly, by remedies, we may stop the growth of the cell, stop the growth and production of these unwholesome products, and stop the invasion into the surrounding tissues; and, perhaps, if it can be shown that that is a right procedure, to harden the stroma and try to crush the cells in their nests. The invasion of cancer must come about, I assume, in this way. The elements must pass into the intervals between the surrounding tissue, they must get into the lymphatics, they must reach the lymphatic glands. The proof of this is that the lymphatic glands in the neighbourhood are always the first to be infected, and there it is again we ought to study the remarkable constituents of cancer growth.

As to the recurrence of cancer—I do not mean the spread of cancer through the system or by the agency of lymphatic glands, and so into the blood—but I speak of local recurrence after the removal of the cancer; this also affords us the most advantageous mode for investigating the isolated properties of the cell and the stroma.

In recurrent growths the cells abound; in recurrent growths the stroma is scanty; in recurrent growths, therefore, we should find the anatomy and physiology, so to speak, or the pathology of the cells much more easily followed than in the early growths. There cannot be a doubt that this recurrence very frequently takes place; and this is one important practical point which I wish to impress upon you if I can, that the true recurrence which takes place locally and on the margin of the site of old disease begins in atoms of diseased tissue which have been left behind. It is possible for an operator to say, "I know I completely removed this tumour, and it is utterly impossible anything can remain behind." But when you consider the number of lymphatic spaces, the smallness of the diseased units, and the facility with which these will creep through the healthy tissues, and the impossibility of detecting with the naked eye how far they have gone, you will see that it seems much more probable that the recurrence should be due to a local extension of the primitive disease rather than that it should be a new growth altogether. If it comes in a lymphatic gland, if it comes along the path of lymphatics, that is obvious; but we speak of recurrences near the growth, and those recurrences I have lately been studying, and I quite agree with Heidenhain that they are on the margin of the old incision. In this early recurrence, a very small one, you will find that the growth is not in the cicatrix; the cicatrix is composed of dense fibroid tissue, like an ordinary cicatrix; but exactly in the margin between that and the healthy tissue there is found a growth springing up. It may invade the cicatrix, but it goes a long way into the surrounding tissue first, and I have never found one in which I have seen it actually come in the cicatrix, but always at the margin; or, what is sometimes very deceptive, directly *beneath* the scar, which it may then invade. But suppose it did come in the cicatrix, What is the cicatrix? The cicatrix is a product of the body; it is a modified form of areolar tissue produced after accident, and intended not to kill, but to heal, to repair; and therefore it is a part of the frame, and is likely to contain its little channels and paths through which a morbid growth may extend. It is possible, therefore, that from the margin of the pre-existing tissue the cicatrix may itself become at once involved; and it does happen that the small recurrent nodule is not in the cicatrix, but in a thickened part of the surrounding tissue, loaded with stroma. Now here, again, the lesson that we learn is a perfectly obvious one, one which I myself have learnt a long time ago; and that is to disregard the neatness of an operation, the closeness to the tumour, but to sweep far away beyond what you really estimate may be the seat of the disease. Do not be timorous and hesitating, do not care about a scar, but sweep away to a great distance, follow the tissues up specially towards the axilla, especially when the tumour is on the axillary side of the mammary gland. Remember, also, that there are deep-seated tumours in the mammary glands, and that these usually have their lymphatics, not going to the axilla, but through the intercostal spaces and directly into the thorax or through the pectoral muscle, along under that, and reaching cervical or thoracic glands beyond. The position, therefore, of the growth in the mammary gland is of extreme importance. If it be central you do not know where it may extend and affect the lymphatics; if it be to the outer side, which is more commonly the case than in any other position, it is nearly sure to affect the axillary glands; if it be deep-seated it may pass into the intercostal spaces through the pectoral muscle, even long before there is any lymphatic mischief in a lymphatic gland, within the thorax or in the neck. The spaces between the muscular fibres and the spaces under the muscular fibres may be involved; this I have seen over and over again in a most characteristic way. Mr. Boyce has come here to my assistance, and gives demonstration of the fact that the cancer cells do really impregnate, as it were, the deep-seated muscular tissue and the under space between the muscular fibres, and unless these are removed, a return is almost sure to occur. The old form of sweeping operation, therefore, should be always held in respect. I believe that its good results, which were perfectly astonishing, depended on that. It does not matter about deformity, it is the preservation of the patient's life; and a very sweeping use of the knife is better, I would say, than any cautery, any electricity, any form of temporising with caustics, with pressure, with cold, or with any such means. They may answer, and in future that great force of electricity, now again on its trial by in a special form by Dr. Inglis Parsons, may come to be specially useful. We admit its value, and wish it all success; but at the same

time remember that it will only destroy what it reaches, and although it is extremely remarkable to find that the cancer tissues seem to dwindle under its influence, whilst the healthy tissues resist it, still, remembering the acid juices of cancer, remembering the mode in which it penetrates into the vacuities of the living tissues, what a tendency it has towards them, and remembering that in spite of electrical destruction this may go on, and then considering again the requisite repeated application of electricity, which come to be like the repeated application of a cautery of a simple character—remembering all this, I say we may find that it will ultimately be regarded as inferior to the knife.

The knife, which sounds so cruel, but which is not indeed cruel under the influence of anæsthetics and the use of antiseptic treatment—the knife is the most feasible method of removing these things. After the knife, however, I certainly, in my own practice where I have the slightest doubt, apply some kind of acid caustic. I do that, and I have found it extremely valuable. I have not cumbered this lecture with personal records, but when I look back to my own experience, I find cases in which accidental hæmorrhage came on, and in which I had to undo a wound and apply powerful caustics —perchloride of iron, and perhaps chloride of zinc. There are special cases, in which I could point to persons living and now perfectly well, eight, nine, ten, eleven, twelve years since operations of that kind. Comparing these cases with the hesitating use of the knife, which formerly I myself practised, keeping as near to the growth, as I was told to do by my teachers, as near to the tumour as possible, without, of course, leaving any ostensible mass behind, still keeping close to it—when I compare these later cases with those I had under observation twenty or thirty years ago, I say their success is very remarkable.

It is truly gratifying to find that success follows in proportion as you remove tissues, in proportion as you work up to the axilla and remove the axillary glands, and even cauterise the base of the wound if there is the slightest sort of suspicion about it. The gratification which one feels at the success of these operations convinces me that that is a most important practical point and a lesson never to be lost sight of.

Now, Mr. President and Gentlemen, the hour is at hand; of course you will all understand that a lecture of this kind is but playing on the surface of a great subject. If it is ever published, I may venture to append or introduce here and there illustrations that will carry perhaps conviction to some of your minds, who may not quite have followed me in all I have said. But in the meantime I thank you for listening to me for this hour, and I invite your attention to the diagrams and to the preparations which are upon the table.

NORTHAMPTON (Population, 61,352).—*Beneficial Results of Sanitary Efforts: Want of an Infectious Diseases Hospital.*—The health of this urban district for 1888 must be regarded as exceptionally favourable, for the death-rate (15.6 per 1,000) is the lowest recorded for a period of thirteen years (1876 to 1888). The history of the seven principal zymotic diseases is equally satisfactory, there being a most manifest diminution in the mortality from these diseases compared with the previous year, while there was much less prevalence. Mr. Lee F. Cogan states that no case of small-pox came under notice in the borough, but there were two cases at Kingsley, in the rural district, which had been imported from Sheffield. Only four deaths were registered as due to measles and eight to whooping-cough. Scarlet fever prevailed during the whole year, but did not assume any serious proportions. Eight cases of typhoid fever were brought under notice, seven of which were fatal. A most searching and complete examination was made of the sanitary arrangements and surroundings of the houses in which the patients lived, but in only two was any faulty condition discovered which could in any way be associated with the origin of the fever. The statistics of the past thirteen years (Mr. Cogan's tenure of office) exemplify very distinctly the beneficial influences on the health of the community exercised by the administration of the Sanitary Acts. There is evidence of progressive and substantial improvement in the diminution in the death-rates from both general and zymotic diseases. A serious deficiency in the sanitary organisation of the town is the lack of a hospital for isolation purposes; and for the speedy remedy of this deficiency Mr. Cogan pleads in very forcible language, which, it is to be hoped, may have the effect desired.

ABSCESS OF THE LIVER: TREATMENT.

Read in the Section of Medicine at the Annual Meeting of the British Medical Association, held in Leeds, August, 1889.

BY VAUGHAN HARLEY, M.B.

HAVING enjoyed the advantage of seeing abscesses of the liver treated both in the tropical East and the temperate West, it may not be unacceptable to the profession if I describe what, I think, may with some degree of truth be designated, "A rapid mode of curing hepatic suppurations."

All having had much experience in the treatment of liver abscesses are aware how exceedingly troublesome it is to get them to close up after they have been evacuated; and that, not only does the emptied suppurating cavity occasionally refill more than once, but after a free counter-opening has been made, pus will continue to ooze away for weeks, aye, even months, equally to the discomfort of the patient and discontent of the doctor.

Several methods of treating liver abscess are at present before the profession, each professing to possess special advantages; but not one of these appears to me to be either so simple, or so successful, as that which I am now about to detail, as well as to illustrate the advantages of, by narrating the results which attended its adoption in two most unfavourable cases for treatment.

Before relating them, however, in order that the subject may be perfectly plain to those who have not paid special attention to it, I will tabulate some of the general principles in connection with liver abscesses, which teaching, reading, and experience have taught me to regard in the light of pathological aphorisms.

1. That the hepatic abscesses of the tropics differ in no essential feature whatever from the same forms of suppurations occurring in temperate zones, except in one single particular, that of relative frequency.

2. Men are far more liable than women to liver suppurations.

3. Although an abscess of the liver may occur at any period of life, it is much more common between the ages of 20 and 50 than at any other.

4. Suppurations of the hepatic tissues are most frequently met with in strumous subjects; and the most unsatisfactory cases of all to treat are those in which a syphilitic taint is superadded to a constitutional struma.

5. The most noted predisposing causes to liver abscess are struma and alcohol—even when alcohol is indulged in within what is usually regarded as the limits of moderation.

6. The commonest of all the exciting causes is a sudden chill, as pointed out by Sir William Moore.[1]

7. All abscesses of the liver tend to evacuate themselves by burrowing their way to the surface of the organ, and seeking an outlet for their contents either directly through the abdominal walls, or indirectly (in general) through the pulmonary or digestive systems.

8. It is futile to evacuate a liver abscess either by knife or trocar so long as a free opening is not left to give escape to the subsequently formed pus.

9. When an accumulation of pus has taken place in the liver it not only tends to do serious mischief by causing disintegration of the hepatic tissues, but, from its becoming putrid, to kill the patient by blood-poisoning. This likewise occasionally happens when hydatids of the liver suppurate, which they frequently do when they contain daughter cysts.

10. Cancerous and tubercular deposits in the liver, by disintegration, sometimes lead to the formation of purulent formations.

11. As a natural corollary to these facts, I think all will admit that so soon as the existence of purulent matter is detected it should be evacuated, and the speedier this is done the better will be the patient's chances of recovery.

With these general remarks I shall now describe what seems to me to be the most satisfactory mode of operative procedure in cases of hepatic abscess.

So soon as the presence of pus is suspected its exact situation should be prospected in the following manner: A 6 inch long fine exploring trocar is to be passed up to its hilt obliquely from right to left into the liver, or from left to right, according to which lobe the abscess is supposed to occupy. The pus is then searched for by slowly and gradually withdrawing the instrument

[1] *Lancet*, October 31st, 1885. p. 798.

so as to allow sufficient time for a drop to appear at its orifice. If pus be found, both its situation and depth in the organ is to be carefully noted. Should blood instead of pus flow from the trocar the bleeding ought to be encouraged; for in all cases of suspected hepatic abscess the liver tissues are more or less congested, and marked benefit is likely to arise from a free hepatic phlebotomy. The presence of pus having been substantiated before withdrawing the exploring cannula, allow as much as possible to flow from it. As pus, especially thick pus like that usually met with in the liver, does not flow readily through a fine cannula, immediately on its ceasing to flow withdraw the exploring trocar, and introduce, in exactly the same direction and to precisely the same depth, one of the diameter of a No. 8 or 10 sized English catheter, and through it empty the abscess completely by aid of an aspirator. As soon as the cavity is empty, before withdrawing the cannula, wash it out with tepid water, containing 10 grains of boracic acid to the ounce, and continue the washing-out process until the solution returns clear and odourless. Immediately after this insert as large a sized silk elastic catheter as will pass through the cannula into the abscess cavity. Now withdraw the cannula, and after having cut off the extruding end of the catheter to within an inch and a half of the opening in the abdominal wall securely fasten it there.

This done, cover the whole over with a large hot sloppy linseed poultice. The abscess cavity should be washed out with boracic acid solution night and morning, and poultices constantly applied until the purulent discharge almost entirely ceases. If, however, as occasionally happens, the cavity rapidly refills with pus, another opening is to be made a short distance from the first, and a second drainage tube introduced into the abscess cavity. This counter-opening, by facilitating the washing out process, greatly expedites the cure.

While in Hong Kong I noticed that Dr. Patrick Manson, instead of daily washing out hepatic abscesses with an antiseptic solution, relied for the complete emptying of their cavities on the employment of a yard or more long syphon drainage tube. This I need not describe, as he is about to publish his mode of treating liver suppurations. The advantages of the mode of treating abscess of the liver now being advocated will be best appreciated, I think, by the narration of its results in two of the most unfavourable cases that it is possible for me to give.

The first case is one in which the patient very nearly died from the effects of blood poisoning, arising from the absorption into the circulation of toxic matters from the putrid pus in the abscess. The second is one of "multiple abscess" occurring in the greatly enlarged liver of a strumous patient. Both cases, notwithstanding their exceedingly unfavourable nature, as will be seen, made rapid recoveries under the line of treatment just described.

CASE I was that of a gentleman of delicate constitution, aged 29, who up to the age of 20 repeatedly suffered from occasional attacks of congestion of the liver, as well as from diarrhœa. He had a particularly severe attack of hepatitis while a student at Oxford in 1880-81, and in 1883 had an empyema of the right side, and, not regaining his strength after it was evacuated, he was sent on a long sea voyage.

The suppuration of the liver, about which I have now to speak, seems to have begun in the latter part of 1887 and beginning of 1888, while he was residing at Cannes. From notes of his case kindly furnished to me by Dr. Clemow it appears he had pleurisy of the right lung associated with the liver disease. In February, 1888, he had three distinct rigors; and Drs. Frank and Clemow, suspecting liver abscess, explored the organ in three places on the 19th of that month, but found no pus. That same night the patient had another very severe rigor, and, as the symptoms did not improve, and still pointed to hepatic suppuration, they again explored with a larger aspirating needle on March 10th, but again with a negative result; so they deemed it advisable to practise hepatic phlebotomy, and drew off between four and five ounces of dark venous blood. This bleeding, small though it was, acted most advantageously, for after it the symptoms rapidly improved, the temperature becoming and remaining normal, the liver dulness diminishing, and the patient gaining flesh.

In the month of June, after his return to England, the patient again became very ill, complaining of constant hepatic pain, shortness of breath, loss of strength, and exhausting feverishness.

On July 18th Dr. McEnery, of Sherborne, brought him to London, and consulted Sir Andrew Clark and Dr. George Harley. The former, after carefully examining the lungs, pronounced them comparatively healthy; the latter found the liver diseased, its left lobe being not only enlarged and indurated, but conveying to the hand the feeling as if it contained a deeply seated tumour.

At this time the patient was exceedingly weak, both in body and mind; his intellect, indeed, was so perturbed and his memory so defective that he could give no intelligible account either of his past history or present symptoms. He had even forgotten the names of his doctors, or that he had ever had either shiverings or sweatings; notwithstanding that both had been very marked. The cause of this great mental confusion was afterwards found to be due to the toxic effects on the brain of blood-poisoning.

The result of the consultation having led to the conclusion that the tumour in the left lobe of the liver was probably an abscess, it was arranged that an exploration should be had recourse to. Accordingly, on July 23rd, Dr. George Harley, in the presence of Dr. McEnery and myself, performed the operation. The patient's temperature at the time was 102° F., his pulse 108, and he had profuse sweatings, without, however, any diarrhœa. His face was of a cachectic yellowish livid colour, and wore a most anxious expression. The liver dulness reached, as shown in diagram (Fig. 1) from the right nipple to the navel, and projected at least two inches and a half to the left of the mesial line.

The effect of the poultices, which had been assiduously applied since the consultation on the 18th, had proved most favourable, for now there appeared to be an indistinct fluctuating area surrounded by a hard rim about one inch and a half directly above the navel (Fig. 1, *a*).

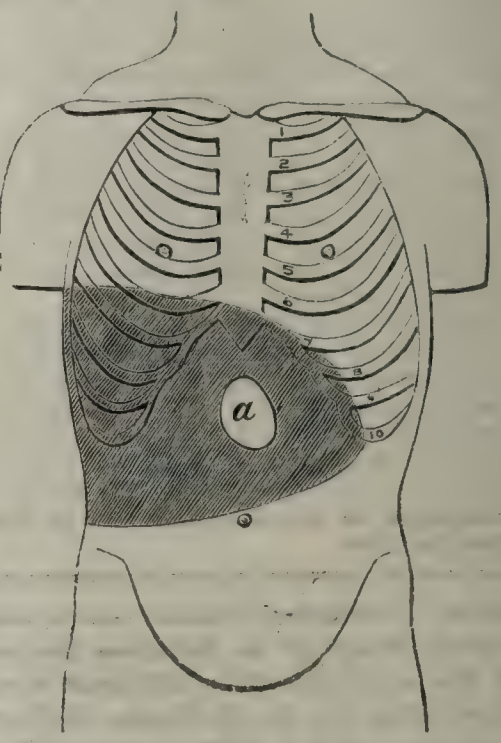


Fig. 1.—The dark area denotes the liver dulness extending from the nipple to the umbilicus, and three inches to the left of the mesial line; *a* is the point at which pus was suspected, and afterwards ascertained to exist, and through which it was subsequently evacuated with a trocar.

On a large-sized aspirating needle being introduced into the centre of this doubtfully fluctuating area, a quantity of extremely fœtid, blood-stained, putrid pus made its appearance. So offensive was its odour that not only was it almost intolerable to us three medical men, but even the patient, ill though he was, held his own nose, a very unusual thing, as Dr. George Harley remarked, seeing that people can in general tolerate the bad smells emanating from their own bodies much better than anyone else. Even the silver cannula, although it was not twenty minutes in the abscess cavity, was rendered jet black by the sulphuretted hydrogen the pus contained.

After about 18 ounces of pus had been removed, the abscess cavity, appearing to be pretty well emptied, was washed out with a tepid water solution of 10 grains of boracic acid to the ounce until the solution returned clear and almost odourless.

A drainage tube was then inserted into the cavity, which measured in a direct line backwards 5½ inches in depth, and a hot poultice applied. It was noticed that immediately after the abscess was emptied the abdominal walls receded, and left a saucer-shaped depression round the seat

of the wound. The pus, on standing, separated into three distinct layers: an upper one of a dirty yellow colour, a middle one of a pale green tint, and a lower stratum of a decidedly pink hue. Under the microscope, besides pus and blood cells, I found a great many large exudation corpuscles.

By the following morning a marked improvement had taken place in the condition of the patient. The pulse, instead of being 108, was only 99, and his temperature had fallen two degrees, that is to say, to 100°. The discharge was, however, still very fœtid, so that the cavity had not only to be washed out night and morning with boracic acid solution, but an antiseptic mixture of sulphate of iron and quinine given to the patient.

The next day a still more decided change for the better was observed, his temperature being only 99°, although the pulse remained about the same, namely, 99 per minute. On the fourth day, in spite of the drainage tube acting well, the abscess cavity had refilled with putrid pus; so Dr. George Harley made a second opening with a No. 10 sized trocar, about two inches from the first, and introduced another drainage tube into it. These two openings enabled the cavity to be thoroughly washed out; for, while the boracic acid solution was pumped in at one it flowed freely out by the other opening. From the second being also a somewhat larger drainage tube than the first it more readily permitted the numerous small blood clots and pus flakes to come away. On the fifth day the temperature was normal and the appearance of the patient greatly improved. The exhausting sweatings had ceased. The pus, though now thin and only slightly fœtid, was still so copiously discharged that the poultices were discontinued and absorbing wool used in their stead.

On the 29th, that is to say, six days after the first operation, the discharge ceased to be fœtid, and the abscess cavity was so greatly diminished in size as only to admit the probe one inch and a half, the patient being, at the same time, able to leave his bed and recline on the sofa. The following day he was well enough to get up to breakfast and to eat with an appetite a couple of eggs along with bread and butter. He said he now tasted the flavour of his food, everything previously having tasted as if it was fœtid. Moreover, the confusion of ideas no longer existed, and he had regained his memory. The appearance of his face, too, was entirely changed; the cachectic hue had disappeared, and was replaced by a healthy colour. The most curious thing, however, was that not only had the saucer-like depression over the seat of the abscess vanished, but the cavity itself seemed to have become filled up with liver tissue! At least, the sensation yielded to the hand in that situation in no way differed from that communicated to it by any other part of the liver. The discharge, too, was now so slight that the boracic solution returned quite clear.

Having to start next day for China I handed the case over to the care of Dr. Cullimore, and from this point the notes are taken from my father's casebook.

August 4th. Although it is only the twelfth day since the operation the patient is so well that he returns to the country along with Dr. McEnery to-day. A probe now merely penetrates about half an inch into the liver, if it even does so much as that, for the thickness of the abdominal parietes being in this case an unknown quantity it is impossible to say exactly how far the probe enters the liver substance.

On August 17th the patient came to town looking perfectly well. He says that he eats with a good appetite, has gained a stone in weight, and feels himself every day getting stronger. There is only a drop of discharge from each of the wounds, and that probably comes from the abdominal walls, and not from the liver at all.

September 29th. The liver is quite normal in size. He has no pain or discomfort whatever, even when he walks, rides, or drives. So he may be said to be perfectly well.

P.S.—April 25th, 1889. Have to-day heard that he is well and strong; stronger, indeed, and in better health than he has ever felt before. The last news I have of him (July 15th) is that he is engaged to be married.

CASE II is one of another kind, being one of multiple abscess in a strumous patient aged 17. The lad, who is the son of a Lincolnshire farmer, is described as having been suddenly seized with a pain in his liver, associated with sickness and shivering, in June, 1888. On September 3rd, after walking twelve miles with a drove of cattle, he felt so ill that he had to be brought home in a carriage and placed under the care of Mr. Heaven, of Colsterworth. The following history of the patient I abridge from Dr. Cooper Key's notes of the case:—On September 18th "I saw him in consultation with Mr. Heaven. He was very pale, with a small, weak, and frequent pulse. His temperature was 102°. Tongue coated; bowels irregular, with occasional attacks of diarrhœa and a good deal of pain over the hepatic region. In addition, there was a considerable amount of fluid in the cavity of the peritoneum, and a slight *bruit* over the left base of the heart."

The patient was subsequently seen by Dr. Newman, of Stamford, who suspecting hepatic abscess, explored the liver in two places, but found no pus. Early in November, the symptoms being urgent, he was sent to London to consult Dr. George Harley. On November 19th, the patient being placed under the influence of A. C. E. mixture, Dr. George Harley, assisted by Mr. Heaven and myself, proceeded to operate, making eight punctures into the liver with his long trocar without obtaining pus. The liver being exceedingly large, measuring four inches to the left of the mesial line, and two beneath the umbilicus, phlebotomy was attempted, but only a very little blood was obtained. During the night, however, profuse hæmorrhage took place through the bile-ducts into the intestines, and at 1 o'clock in the morning I found the patient in a state of collapse. In two hours (after the administration of brandy) he rallied, and, somewhat to our surprise, the bleeding was followed by the most satisfactory results, as within thirty-six hours the liver's dulness had diminished an inch and a half all round.

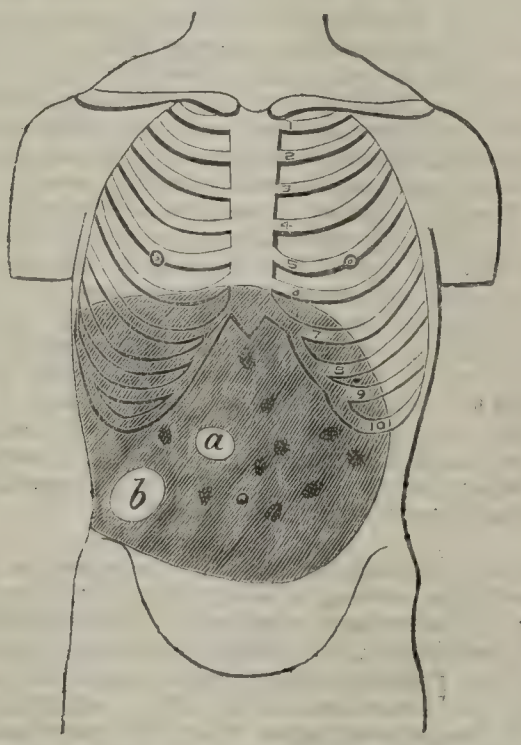


Fig. 2.—The dark area represents the extent of liver dulness, from the nipple to two inches below the umbilicus, and four to the left of the mesial line. The dots indicate the points at which the exploring trocar was introduced; *a* is the seat of the first abscess, evacuated November 25th; *b* the seat of the second abscess, emptied November 28th.

On November 25th appeared a circumscribed swelling 2 inches above and slightly to the right of the umbilicus, with a feeling of deep fluctuation; and Dr. George Harley explored it, and was successful in hitting the abscess. It contained very viscid pus. A short length of a silk elastic catheter was then placed in the cyst, and it was washed out twice daily with a 10 grains to the ounce solution of boracic acid. The temperature was 103°, and pulse 120. During the next few days the pus became very offensive, and carbolised tow was placed over the poultice to catch the discharge, which was very profuse.

On November 28th a second abscess appeared in the right lumbar region on a level with the umbilicus. This was opened, and found to communicate with the other. A drainage tube was passed into it, and the boracic acid solution used twice daily to it also. The temperature was now 101°, the pulse 112, and the discharge thin and less fœtid.

November 30th. Temperature 100°, pulse 108.

December 1st. A slight rigor. Temperature 101°, pulse 102.

December 3rd. Temperature fell to 100°, pulse 100.

December 21st. Temperature 98°, pulse 80. No longer any discharge.

January 2nd, 1889, that is to say, on the thirty-eighth day after the first abscess was opened, the patient returned to his home in Lincolnshire, a distance of 120 miles, without a single bad symptom."

In a letter from Mr. Heaven dated May 12th, he says: "G. is gaining flesh and strength rapidly, and going about as usual. There is no pain or tenderness about the liver, except a little on pressure over the seat of the abscesses."

Not only do I consider the rapidity of the recovery in this case remarkable, but that any recovery should have taken place at all, in such a weakly constitutional strumous patient, seems to me surprising; all the more so when I mention that so great is the tendency to suppurations in the lad that Mr. Heaven says, in a letter dated August 1st, that he had a few days before drawn "off a large saucerful of thick pus" from his left side—the exact seat of the suppuration not being specified.

When all the foregoing facts are taken into consideration, I scarcely think that anyone who has had much experience in treating abscesses of the liver can fail to be struck with the satisfactory results in the above-cited cases, as two more unfavourable ones for any line of treatment whatever it would be difficult to find. It is, indeed, on this very account they were selected to illustrate the advantage of treating liver suppurations in the manner I have described, and which may be briefly summed up in the three following sentences: First, by the employment of boracic acid we have not only the assistance of a thoroughly safe antiseptic agent, but the great advantage which accrues from the use of one free from the objection of coagulating the albuminoids in the pus, and thereby inducing a fouling of the instruments, such as is unfortunately the case with carbolic acid and most other antiseptic preparations. Secondly, the daily washing out of the abscess with boracic acid solution not only expedites the healing process by keeping it clean, but has the further advantage of rendering it quite unnecessary to take any precautions against the intrusion of air into the cavity, no matter how large it is. Thirdly, the washing out of the abscess with boracic solution, from its enabling us to get rid of all the purulent matter, thick as well as thin, does entirely away with the necessity of making a large opening either in the abdominal walls or liver tissues with a knife or other instrument—a point of no mean moment, seeing that it is a well recognised axiom that the smaller the breach of continuity in any animal tissue, no matter whether it has been made accidentally or intentionally (other things being equal), proportionally quicker is the healing process.

Dr. GEORGE HARLEY, in reply to the question of the danger from hæmorrhages arising after exploring the liver, said that no doubt there did exist danger, but only when the explorations were improperly performed; for, as he had explained at the meeting at Brighton when Professor Boyes Smith related his case of hæmorrhage into the abdominal cavity after exploring the liver for abscess, the danger only arose when the instrument was thrust into the liver at a point of the organ where pressure could not be applied by bandaging the abdominal walls sufficiently tightly to make them close up the opening of the puncture into the liver. He need not repeat his remarks on the subject, as the whole matter had been fully gone into in a paper published in the JOURNAL [2] in reply to Dr. Boyes Smith's criticisms upon his paper on Hepatic Phlebotomy read at the Brighton meeting.

THROMBOSIS OF VERTEBRAL ARTERY PRESSING ON GLOSSO-PHARYNGEAL NERVE: UNILATERAL LOSS OF TASTE AT BACK OF TONGUE.

Read in the Section of Pathology and Physiology at the Annual Meeting of the British Medical Association, held in Leeds, August, 1889.

BY FRANK M. POPE, M.B., M.R.C.P.,
Physician to Leicester Infirmary.

THE question whether the glosso-pharyngeal nerve is a nerve of taste is still *sub judice*. Dr. Gowers, in the last edition of *Diseases of the Brain*, p. 209, says: "There is no recorded case in which the roots of the glosso-pharyngeal nerve have been diseased, and indeed, no case in which there were symptoms of disease limited to the nerve roots of the medulla, and in which there was any loss of taste." The present case seems to me to belong certainly to the more general and probably to the latter of these two categories.

S. K., aged 76, a labourer, who had always enjoyed good health, felt weak on May 17th, 1889. He fell down on getting out of bed on May 18th, but did not lose consciousness; after this he was unable to swallow anything or to stand. There was no affection of speech, no pain in throat, no urinary trouble. He was admitted to the Leicester Infirmary on May 21st. He walked with much difficulty when supported by two persons. He was a large heavy man. The power of the left arm, hand, and leg was much diminished but not abolished. He was quite unable to swallow either liquids or solids. The house-physician considered that there was slightly less expression on the left side of his face than on the right, and that the right side moved more when speaking. This I could not see; at all events, there was far from extensive or general facial paralysis. The left pupil was much smaller than the right, and insensible to light. An œsophageal bougie or tube passed readily into the stomach.

On the next day, after he had been fed by the stomach tube, it was noticed that in addition to the expectoration of a very large quantity of frothy mucus, he regurgitated the greater part of the food that had been given him, also that the left side of the soft palate was higher than the right. The tongue was protruded in a straight line. Suspecting interference with the glosso-pharyngeal nerve I investigated the condition of his sense of taste. Two substances were employed: (1) a weak solution of acetic acid and (2) simple syrup. The tongue was thoroughly dried, and a drop of each solution in turn placed on it with a glass pipette at four different points—namely, at back and front of each side of the tongue, about half to three-quarters of an inch from the median line. Precautions were, of course, taken to thoroughly free the mucous membrane from one solution before applying the other. On the right side he tasted them well, and distinguished for himself between what he called the "sharp" and sweet tastes. He was told to signal with his hand the instant he commenced to taste, and his latent or conductive period was, as far as I could judge, rather short. On testing the left side neither solution could be tasted at the back of the tongue; the acid was tasted at the tip of that side, the sweet solution not being perceived in the latter situation.

From the great contraction of the pupil as well as the other symptoms described, it was thought probable there was a small hæmorrhage into the pons Varolii.

On May 27th, though other symptoms were unchanged, he was weaker, and complained of pain on the left side of the head and face, but said that it was numb to the touch. He could feel the prick of a pin well in the area complained of, but not stroking with a blunt instrument. After this he got rapidly weaker, and died on May 29th.

At the necropsy the left vertebral artery was found distended to about a quarter of an inch in diameter, and occupied by a firm clot for its whole course inside the theca vertebralis to its junction with its fellow of the opposite side. The enlargement was fusiform and regular; there was no sacculation. The brain was carefully examined and appeared normal. There was no valvular disease of the heart. All the other organs were healthy.

Here we have, I think, as clear evidence of the taste function of the glosso-pharyngeal nerve as could have been afforded by a precise laboratory experiment. The dilated artery pressed directly on the roots of the nerve, paralysis of which was shown by the loss of power of swallowing and the raising of the palate on the left side, due to the unopposed action of the levator palati. This is, of course, assuming that the glosso-pharyngeal is really the motor nerve of the palato-glossus and superior constrictor of the pharynx. The only other nerve involved was the pneumogastric, which cannot be supposed to have any influence on taste. The fifth was quite out of the region of pressure, as was the facial. The myosis and weakness of arm and leg on the same side as the tumour were doubtless due to deficient blood supply to the descending pyramidal tract on that side. The hypoglossal nerve, as evidenced by the tongue being protruded in a straight line, escaped pressure doubtless from the position of its roots on the opposite side of the artery to the two nerves already mentioned, namely, glosso-pharyngeal and pneumogastric. I am unable to account satisfactorily for the pain and numb feeling on the left side of the face. There was not complete anæsthesia, and in fact little loss

[2] JOURNAL, January 15th, 1887.

of sensation. The pain was not very severe, and did not follow the distribution of the cutaneous branches of the fifth nerve. The best suggestion I can make is that it was due to disturbance of the vasomotor nerves. I pass over the question of the cause of the thrombosis, which, though of considerable interest, does not affect the present question.

To conclude, loss of taste limited to the region of the tongue known to be the only part supplied by the glosso-pharyngeal nerve, with unmistakable *post-mortem* evidence of pressure on that nerve, leaves no room for doubt that, as has been usually held, the glosso-pharyngeal nerve takes part with the fifth in the taste function, and I would suggest also that the former is more directly concerned with the appreciation of sweetness, as even in the part supplied by the fifth on the damaged side, syrup could not be tasted.

REPORTS
TO THE
SCIENTIFIC GRANTS COMMITTEE
OF THE
BRITISH MEDICAL ASSOCIATION.

REPORT ON
UROLEUCIC ACID AND ALCAPTONURIA.

By ROBERT KIRK, M.D., F.F.P.&S.Glasgow.

I HAVE been honoured with several communications from Professor Huppert, of Prague, Editor of *Neubauer and Vogel on the Urine*, and at present engaged on a ninth edition of that work, on the subject of uroleucic acid, $C_9H_{10}O_5$, discovered in the urine in cases of alcaptonuria.[1] In my previous report I did not venture to say anything about the rational formula of uroleucic acid or its place in the chemical system, regarding this as involving questions which in many respects were too difficult for me. On this point more especially I have been favoured with Professor Huppert's views, of which I may here give a summary, as expressed in his last letter, dated July 26th, 1889. After thanking me for some specimens of the acid sent, and which he hopes to find time to investigate in the ensuing winter, he proceeds: "In my last letter I have already communicated to you my views on the probable constitution of the acid. It is a homologue of gallic acid ($C_7H_6O_5$), and is probably pyrogallol-propionic acid, or at least a trioxy-phenyl-propionic acid [$(HO)_3C_6H_2$, CH_2, CH_2, COOH]. The grounds for this view are: 1. It does not give the genuine Millon's reaction,[2] but only something like it, and, therefore, does not contain only one HO in the benzene nucleus, but either none, or more than one. 2. It is optically inactive, and, therefore, contains no asymmetrical carbon; that is, no HO in the CH_2 groups, and, therefore, all three HO in the benzole. 3. This view is further supported by the fact that it is very like gallic acid [$(HO)_3$, C_6H_2, COOH], in its entire behaviour. In the further investigation of the acid it will be useful to keep a comparison and reference to gallic acid constantly in mind. I have given expression to the above views in the forthcoming edition of the work of Neubauer."

In previous letters Professor Huppert stated that uroleucic acid was hitherto unknown to chemistry, and that our interest in it was enhanced by its being a homologue of gallic acid, as few such were known.

Uroleucic acid has very considerable antiseptic power, and from its reducing properties it might be expected to have an antipyretic action in the system. Some mincemeat steeped in a strong solution of the acid (2 to 4 per cent.) was allowed to stand in an open beaker alongside of another sample which was simply suspended in water. In a day or two the last was, of course, quite putrid and covered with penicillium, while none of the fungus grew on the acid mixture for nine or ten days, and the latter was still quite fresh when thrown out at the end of three weeks. In the first hour or two the acid had discharged the red colour of the meat and juice, which became of a dirty grey.

I have previously stated that there is no trace of uroleucic acid to be found in normal urine, or in any urine which I have examined, save that of cases of alcaptonuria, and I have evaporated forty ounces repeatedly with the view of proving this. It seems probable that alcaptonuria is a reversion to a type of metabolism occurring in some of the lower animals, as the horse, in the urine of which Baumann has sometimes fonnd gallic acid; and that it may thus be compared to rumination occurring in the human subject, or to reversions in anatomical type of structure. It would be of much interest if it could be shown that any constitutional idiosyncrasy, especially such a marked one as an insusceptibility to fever or other disease, or even only a greater power of resistance to any such disease, was due to the presence of a certain chemical compound in the system. An observation which has been made on the subject from whom the urine employed in this investigation has been derived may be of interest as bearing on this question. In November last, when about 13 years old, he suffered from what I have no doubt was an attack of typhoid fever, although it was modified in a very striking manner. An outbreak of this fever occurred at that time in the street where he lived, and all the cases, nearly thirty in number, were traced to milk from a single dairy where there was found to have been a case of fever. The alcaptonuric subject, H. K., was not only a large consumer of the milk, but frequented the dairy and spent a good deal of time there daily. None of the cases proved fatal, but three which I attended throughout, in addition to the case of H. K., were tolerably severe. One had almost complete aphonia for a considerable time, with sometimes a temperature of 105°; all three suffered from delirium for about a fortnight, were extremely prostrate, had a dry and glazed tongue, and all other characteristic symptoms except diarrhœa.

H. K. and another lad who lived on the same inside stair-landing were among the first attacked. While the latter was already delirious, I was called to see H. K., who had been feeling out of sorts for eight days previously. He was sitting up, and I ordered him a tonic; and it was not till two days subsequently that it was ascertained that he had a febrile temperature. He was now ordered to bed, and small doses of carbolic acid, with which the other three cases were treated, were prescribed. Throughout the illness, however, he would not stay in bed; when his mother for any reason went out, she generally found him up on her return, and he could always sit up several hours every day. The highest temperature noted at any time was 102.4°; pulse generally 120; the patient never manifested the slightest delirium; the tongue was red, but neither furred nor coated, and the patient's aspect was cheerful and lively, very unlike that of one suffering from such a grave disease. The entire illness lasted about three weeks, during which he lived on milk, and could not take solid food, but only for the last two weeks was he ascertained to be febrile, or confined to the house. In the fourth week he was running about out of doors as if nothing had happened, notwithstanding express orders that he should be kept indoors. During his illness the baby (also subject to alcaptonuria) suffered from *malaise* for a few days. Was the typhoid modified as here described, owing to the fact that the antipyretic and antiseptic uroleucic acid was circulating in sufficient quantity in the patient's blood? It is probable that the amount of the acid occurring in the urine is one-fourth per cent. or more, so that the daily excretion in his case is about forty grains, a quantity quite sufficient to exercise a marked effect. Here, however, I should recall the fact, recorded in one of my former papers, that H. K. and two brothers, all subject to alcaptonuria, suffered severely from whooping-cough, one of them even succumbing from convulsions in the sixth week of that disease.

Some statements made in my former reports require considerable modification in the light of further investigation. It has been found, for instance, that when uroleucic acid has been further purified by twice precipitating by lead acetate, it does not darken so much when heated and exposed to the air as was previously stated, and it may be prepared by evaporation of its watery solution over the water bath instead of extracting with ether or evaporating *in vacuo*. Still further qualification and explanation is required for some of the statements made about other ingredients found in the ethereal extract of the acidulated and concentrated urine.

I cannot enter into details for fear of encroaching unduly on space, but would merely refer as briefly as possible to the other

[1] See JOURNAL, August 4th, 1888, and *Journ. of Anat. and Physiol.*, vol. xxiii, p. 69.

[2] As pointed out to me by Professor Huppert, aromatic bodies with only one HO in the benzene nucleus turn red, or give a red precipitate with Millon's reagent (nitroso-nitrate of mercury). This is seen in a typical form with carbolic acid $(C_6H_6O)=C_6H_5(HO)$. Uroleucic acid does not give quite the same result, although one to a certain extent resembling it.

supposed reducing substance which I have called uroxanthic acid. The yellow aromatic filtrate left after the precipitation of uroleucic acid by the lead acetate, and which yielded this second body, was found to contain also hippuric acid and a residuum of unprecipitated uroleucic. After it was supposed to be freed from both of these it was analysed, and found to give a formula so closely approaching to $C_9H_{10}O_5$ as to show that it was still mostly composed of uroleucic acid. Indeed, as Professor Huppert suggested, it seemed to be nothing more than still impure uroleucic acid. The alcapton of Bödeker, therefore, instead of being identified as this yellow substance, as I formerly stated, must be considered to have been a mixture of it with uroleucic and hippuric acids, the latter of which, no doubt, yielded the nitrogen which his alcapton contained. Nevertheless, I felt convinced that this yellow viscid body was peculiar to alcaptonuria, and was probably an oxidation product of uroleucic acid. I have spent much time and pains in attempting to isolate it, but have not yet succeeded, chiefly on account of the small quantity in which it occurs. But it can scarcely be doubted that it is to be found in the urine; it can hardly be supposed that the uroleucic acid, whether formed by the pancreatic digestion or otherwise, can pass through the blood without undergoing some degree of oxidation. That there are important gaps in our knowledge of this question is shown by the fact, amongst others, that while we know that carbolic acid and some other aromatic substances do undergo oxidation in the blood, it has been denied that gallic acid does so, although it so readily becomes oxidised in alkaline solution when exposed to the air. The points which still remain for investigation are: Is a certain small proportion of the uroleucic acid excreted free in the urine? If so, is this also true of gallic and tannic acids when taken medicinally? Do these three acids undergo partial oxidation in the blood? and, if so, what are the resulting products to be found in the urine? How far do these products, if any, correspond, or in what do they differ from the substances resulting from the oxidation of the same acids when exposed to the air in alkaline solution? The investigation of these questions has already yielded some new facts of interest, but much still remains to be done.

CLINICAL MEMORANDA.

ACUTE PEMPHIGUS.

As Dr. Roberts, in the last edition of his *Handbook of Medicine*, states that "some difference of opinion exists as to the occurrence of an acute pemphigus," I venture to submit some cases which appear to corroborate the views expressed in his earlier editions as to the existence of an acute form.

1. M. A. W., aged 2½, was taken with diarrhœa and sickness on September 22nd last; on the 24th vesicles appeared, three being on the abdomen, one on the thigh, one on the shoulder, and one on the wrist. They were about the size of a sixpence when first noticed, with red bases, attaining the size of a hen's egg, and bursting on the 28th; besides the larger ones, a number of vesicles also appeared, which for the most part were very small. On the 29th, on which day I first saw the cases, there were red patches about the size of hen's eggs (two on the abdomen having coalesced), the sickness had subsided, but there was still some fever and diarrhœa. Small vesicles kept forming until October 6th, when convalescence was established.

2. E. A. W., aged 7, was taken with sickness and diarrhœa on September 28th, five vesicles forming, of no great size. This child was convalescent by October 2nd.

3. The infant, aged 7 months, taken on September 30th with feverish symptoms; seven small vesicles forming, there being diarrhœa and sickness. On October 9th there was only one small vesicle.

4 Besides the foregoing, the mother informed me that the eldest boy (aged 9) had had the eruption and was convalescent before I saw the others, having been affected for a fortnight.

I also met with some milder cases, which I have reason to believe were caught from those the history of which I have given.

I had never seen such large bullæ on children before as those observed in the first case (M. A. W.); but in the smaller vesicles I recognised a not uncommon form of eruption generally known about here as the blister pock, and which has sometimes interested me, as a public vaccinator, by attacking vaccine vesicles.

Southam. WALTER LATTEY, M.D.

LEAD POISONING: LEAD TREMOR.

DURING the early part of last year, while I was assistant to Dr. Davies, at Ebbw Vale, Mon., we had about thirty cases of lead poisoning within a few months—all of which were due to drinking water contaminated by lead pipes connecting the main pipes with the houses. The cases were confined to rows of houses in which the lead pipes had not been changed for galvanised iron ones. Of these cases eleven came to my lot, of which I took notes. Two presented affections of the nervous system other than the usual "dropped wrists." In fact, the latter form of paralysis did not occur in any of my cases, nor of the others that I heard of.

They came under our care during the "explosions" of lead. In nine out of eleven cases, colic and constipation, with vomiting, headache, and the blue line, were the chief symptoms. In one case there was a blue line on the inner surface of the upper lip. In three cases, during the attacks of colic and constipation, distinct jaundice occurred, with bilious tinge of the conjunctivæ and bile in the urine, which disappeared when the constipation and colic were relieved. This symptom I have not seen recorded as one usually occurring in cases of lead poisoning, but it occurred in three out of eleven cases during the "explosions." With the exception of two cases, all recovered and resumed their work after the severe attacks were over. Anæmia was marked in all; in the two worst and most chronic cases it was very severe, resembling pernicious anæmia, and in the others it resembled the dirty sallow anæmia frequently seen in syphilis, especially hereditary. The following was a severe case of lead tremor: S. B., aged 20, had rheumatic fever about six years ago. Evidence of endocarditis in a loud systolic *bruit* at apex; dyspnœa on exertion, with a tendency to fall forward when going downstairs or down a hill; intensely anæmic; subject to fainting fits. The chief condition is one of tremor on exertion, which only ceases during sleep or perfect rest. Tremor of hands and arms, of legs and trunk, of muscles of face and of tongue, on the slightest movement or even emotional excitement. The knee-jerks were got with difficulty on either side; no clonus. The speech was jerky and slow, somewhat like that of insular sclerosis—in fact the jerky tremor of the arms much resembled that seen in the latter disease. There was no nystagmus. The ophthalmoscopic appearance of the retinæ and optic nerves were normal. There was a well-marked blue line on the gums. No colic; slight constipation; anorexia and fœtor of breath. There was not much emaciation and no muscular atrophy that I could see; no paralyis of the extensors of wrists. He had not made much improvement when I last saw him.

The second case was in a girl about the same age. Here the prominent symptoms were: A progressive and severe anæmia; tremor; emaciation; and muscular atrophy. The atrophy was most marked in the small muscles of the hands and the forearms and arms. The small muscles of the hands were wasted down to the bones themselves. Tremor on attempted movement, and confined to the limbs; no "wrist drop," but weakness of the extensors; blue line on gums; knee-jerks normal; no colic; obstinate constipation. I did not obtain an ophthalmoscopic examination. This girl improved considerably under treatment.

In neither of these two cases was there jaundice. I can corroborate the opinion of Dr. Oliver, in the JOURNAL of October 30th, that the blue line sometimes disappears in two or three months.

Enfield. FRED. TRESILIAN, M.D., M.S.

THERAPEUTIC MEMORANDA.

PSYCHIATRIC MEDICINE AND PHARMACOLOGY.

IN your leading article on "Rich Lunatics and Poor," you refer to the fact that the curative treatment of the insane in Austria is greater than that in the asylums in England. In my opinion, psychiatric therapeutics in England is sadly lacking. This probably is due to the smaller number of doctors to the insane in this country than in the Vienna asylums. In some county asylums there is one medical man to 300 or 400 patients, consequently there is little time for special research into new methods of treatment. Then, again, too often the medical staff have little or no faith in the curative treatment by drugs, except by those which produce sleep. The treatment of the insane in this country consists in feeding and nursing. What advances have been made in the drug treatment of insanity for the past thirty years? Why, practically none. In other departments of medicine we have new drugs

which act with precision. Pharmacology has advanced with enormous strides, and therapeutics have been advanced thereby. The pharmacologist has demonstrated the fact that certain drugs have an elective action, and we can excite or diminish the functional activity of the glandular system; can modify, excite, or depress the functional activity of the nerve centres of the brain and spinal cord. There are drugs which act on the nerve cells, which control mental conditions—which excite or depress the psychical functions—producing exhilaration, depression, hallucinations, illusions, and other conditions. Pharmacology, as applied to the treatment of certain forms of insanity, especially the various types of melancholia, offers a promising field of research. In every lunatic asylum, one or more of the medical staff ought to devote special researches as to methods of treatment. Hydrotherapeutics have been practised to some extent, but massage ought to be more generally tried, and I believe it will prove a most valuable therapeutic agent.

The various alkaloids and active principles of drugs can be given hypodermically. To those who hold responsible appointments in lunatic asylums we look for the advancement of the therapeutics of treatment in mental diseases.

Bacup. JOHN BROWN, M.D.Vic., D.S.Sci.

EUCALYPTUS IN SCARLET FEVER.

THE value of eucalyptus in destroying the infection of scarlet fever cannot be too widely recognised. On October 20th, I saw a nurse in a family where there were three young children. She had the rash over her chest and arms, the complaint having commenced about thirty-six hours previously. She was removed to the hospital, and Tucker's eucalyptus disinfectant was ordered to be freely used in the nursery, the children being kept in an atmosphere strongly impregnated with it for three days and nights; after that they were allowed out during the day, but the disinfectant was continued in the nursery for four or five days longer, when they were considered safe.

On October 27th, I saw a girl about 11 years of age, whose sister had been sleeping with her. She had had sore throat for about two days, and the rash was fully out. The sister was not allowed to sleep with her, but she spent most of her time in the room during the next three days, when the new Act came into force, and they were separated. Here the disinfectant was rubbed over the skin of the whole body night and morning for three days, afterwards at night only; the emulsion was administered, and the disinfectant freely sprinkled over the bed and about the room. The girl had a severe attack of the fever, had rheumatism in her wrists and ankles for a few days. The desquamation was finished about the fifteenth day, and there was no appearance of albumen in the urine. The sister did not develop the disease, although exposed to the infection for five days, and three other children in the house did not take it. There was no carbolic or other sheet used over the door, the disinfection of the patient in the way described being sufficient to prevent any of the poison escaping from her.

It is to be hoped that others will try this method of disinfection, as, if it is as effectual in all cases as I have found it in all so treated during the last six months, there is every reason to believe that the infection of scarlet fever may be arrested in every case.

Bayswater. BRENDON CURGENVEN, M.R.C.S.

THE LATE MR. HAYNES WALTON.—A correspondent writes to point out that Mr. Walton was married in September, 1881, to his second wife, Kathleen Alexandra, daughter of Fleet-Surgeon Patrick Keelan, R.N., M.D., F.R.C.S.I.

BOOTLE-CUM-LINACRE (Population 51,000).—*Satisfactory Vital Statistics: Case of English Cholera.*—Mr. R. J. Sprakeling's report on this district for 1888 corroborates the general opinion as to the healthiness of that year, the general death-rate (16.5 per 1,000) being the lowest ever recorded; and the zymotic rate, though not quite the most favourable, being much below the decennial average. Compared with 1887, there was a decrease in the prevalence of the principal zymotic diseases, excepting typhoid fever, and actually no death from typhus or small-pox occurred. There were, however, five cases of the latter disease admitted to the hospital at Linacre, and all the patients did well. Deaths from diarrhœa, though less than in 1887, were still excessive and above the average of the twenty-eight large towns. One case of English cholera in an adult was registered in July.

REPORTS
ON
MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

METROPOLITAN HOSPITAL.

CASE OF CHRONIC ALCOHOLISM, WITH ATAXIC SYMPTOMS; GOUTY PAROXYSMS MUCH RELIEVED BY THE SALICYLATE OF SODA.

(Under the care of Dr. C. R. DRYSDALE.)

A MALE patient, E. R., aged 41, entered the Metropolitan Hospital on September 14th, 1889. His father had died of apoplexy; his mother was said to be alive and healthy. About 4½ years ago his foot was seriously injured by a tramcar, and was amputated. The patient had been in the Colonies, and had been of very intemperate habits, although he had led a very active life and had acquired celebrity in the Colony where he lived as a swift runner. His chief beverage had been beer. He was admitted into hospital with swelling of the lower extremities, and was at that time a stout well-nourished man. The capillaries of the face were injected; his tongue was flabby, moist, and slightly tremulous. His temperature was normal, pulse 76. The sounds of the heart were normal, and the lungs free from rhonchus except a few sonorous *râles* at the bases behind. His liver was natural in size. There was a slight amount of fluid in the abdomen, and his legs pitted on pressure. He complained of shooting pains at the pit of the stomach, not affected by what he ate. The temperature was 100° F. when he entered the wards, and the urine was free from albumen.

On October 20th a rise of temperature from 97½° to 100° marked the invasion of an attack of gout in the right wrist. On September 22nd the temperature was as high as 102° F., but the paroxysm gradually lessened, and the temperature on September 25th was below normal (98° F.). It continued below normal until September 29th, and then fell on October 1st to 97½°. In the evening of October 2nd the temperature was 99½°, and he had another attack of gout in the same joint. Fifteen grains of salicylate of soda were administered thrice daily in peppermint water, and on October 24th the temperature was again normal.

The patient began to exhibit some of the symptoms of ataxia. He tottered when standing with his legs close together and his eyes shut. He had sudden pains in the lower extremities, and the patella tendon reflex was absent or nearly absent. His pulse was 120, and he fell off in flesh, complaining of great muscular weakness.

REMARKS.—There have been various attempts to attribute the occurrence of locomotor ataxy to special causes, such as syphilis or excessive sexual relations. Chronic alcoholism seems a more likely antecedent than most of those usually considered as causes, since the property of alcohol is to produce hardening of the tissues and therefore probably, in some instances, the cord is damaged by chronic poisoning by alcohol. The effect of salicylate of soda in favouring the excretion of uric acid has been lately pointed out by Dr. Haig, and in this case the value of that drug in lessening the pain of the gouty paroxysms was well-marked on two occasions.

ST. MARY'S HOSPITAL.

SYNOSTOSIS OF THE RIBS AS A COMPLICATION OF EMPYEMA.

(Under the care of Mr. WALTER PYE, F.R.C.S., Surgeon to the Hospital.)

[We are indebted to Mr. A. K. BARRETT for the notes of the case.]

W. L., aged 22, formerly a soldier, was admitted on August 31st, 1888, with a discharging sinus in the left sixth intercostal space in the anterior axillary line. This was evidently the aperture of an old puncture for empyema, and, on inquiry, it was found that he had been so operated on a year before, and had worn a drainage tube ever since. He stated that at first he got much better, but that latterly he had been losing ground, coughing more and getting thinner. Physical examination showed that the chest wall had somewhat, but not markedly, fallen in on the affected side, the measurements at the level of the wound being—left side, 16 inches; right side, 17 inches. There was slight lateral curvature. The heart's apex beat close to the sternum in the fifth interspace. There was hardly any movement of the left side of the chest. To

percussion the left side was dull below the nipple line in front and behind. Voice resonance and breathing sounds were present above that line. but hardly at all below it, where loud dry friction sounds were to be heard, with some moist *râles*.

The right side of the chest seemed normally healthy. The discharge of pus from the sinus was continuous, but not profuse, and no dead bone could be felt with a probe. It appeared obvious that either there was some obstruction to the free discharge, or some necrosis of the rib, or some other local cause for the arrest of progress, and for the failure of the chest wall to fall in upon the lung, which itself was plainly not in a condition to greatly expand. Accordingly, after a week, during which time the chest was washed out every other day with warm boracic lotion, an exploratory incision was made about four inches long in the sixth interspace, opening up the sinus, and with the intention, if necessary, of excising a portion of one rib. Upon examining the sixth rib immediately behind the aperture of the sinus, it was found that it was firmly connected to the seventh by a strong synostosis—a bony pillar—running almost vertically between the bones, and thus maintaining an intercostal space of about three-quarters of an inch. This bridge consisted of perfectly healthy bone, and there was no trace of past inflammatory changes in its neighbourhood.

Inasmuch as the presence of synostosis appeared to be a sufficient explanation of the non-collapse of the chest wall, it was removed with little trouble by means of a Hey's saw, cutting it away from the rib above and below. A very free entry was thus obtained into the cavity of the empyema. The wound was dressed with carbolic gauze pads and blue wool.

The patient's further progress was satisfactory. After a few days the cough and discharge diminished, and soon his health improved. He left the hospital in fair condition, with the wound not completely healed, but with little discharge, and with a distinct falling in of the ribs on the side affected.

REMARKS (by Mr Pye).—I have failed to come across any examples of synostosis, such as I found in this patient, as museum specimens, either in the College of Surgeons or elsewhere, and I imagine that they are not commonly met with. My friend Mr. Bland Sutton, however, tells me that he has met with such several times, especially when working out the skeleton in human fœtuses. There is also a recorded case, with illustrations, to be found in the *Journal of Anatomy and Physiology*, vol. iv, p. 245, Plate xi. It is reported by Dr. Campbell, of Carlisle. In this case there was abnormal union of several ribs, including the sixth and seventh, as in my own; and the illustration of this particular union exactly resembles what I met with. I could not, however, myself establish the existence of other synostoses, though I cannot positively say that they were not present. The coincidence of the union of the ribs with empyema was curious and unfortunate for the patient, but it was, of course, a coincidence merely.

REPORTS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF LONDON.

TUESDAY, NOVEMBER 19TH, 1889.

H. DICKINSON, M.D., F.R.C.P., President, in the Chair.

Gastric Ulcer communicating with Colon.—Dr. S. WEST described the case of a man, aged 40, who was admitted into St. Bartholomew's Hospital on August 15th, 1889, presumably for intestinal obstruction, though there were no definite symptoms. Three years previous to admission, the patient had been seized with sudden pain in the epigastrium followed by vomiting. A week after admission he vomited some fæcal material, which led to a diagnosis of gastro-colic fistula being made, although no history of gastric ulcer had been obtained. The bowels were irregular, but there had been no obstinate constipation. On September 2nd, Mr. Cripps saw the patient in consultation, and advised an exploratory incision being made. The operation was performed, but nothing was found. The patient died the following day. At the *post-mortem* examination, an ulcer of the stomach was found in the centre of a mass of medullary cancer which communicated with the colon. Dr. West remarked on the rarity of the pathological condition and on the clinical interest of the case, in that there had been a general absence of the symptoms of gastric ulcer, that there were no general signs of malignant disease, and on the uncertainty as to the duration of time of the existence of malignant disease of the stomach.—Dr. MOORE did not consider it very rare that malignant disease should exist without prominent symptoms. He adduced a case which had been considered to be pernicious anæmia, but at the *post-mortem* examination the patient was found to have malignant disease of the stomach.—Mr. ROGER WILLIAMS said that he had seen several cases of malignant disease of the alimentary tract in which there had been no symptoms, and mentioned two or three cases.—Mr. MORGAN mentioned the case of a man who had been hustled at the recent Lord Mayor's Show, but had not noticed any ill effects for some days; nearly a week later he complained of violent pain in the abdomen over the stomach, for which he was admitted into Charing Cross Hospital. On examination, owing to the collapse and unequal pulse in the femoral arteries, the condition was diagnosed as ruptured aneurysm, with signs also of peritonitis. Mr. Morgan then opened the abdomen, in which some turbid, non-odorous fluid was found, but no disease of any organ discovered. The patient, however, died soon after the operation, and at the *post-mortem* examination a small perforation of the stomach in the centre of a patch of ulceration of the stomach was found. The stomach was adherent to the transverse colon by old peritoneal adhesions. There were two other ulcers higher up in the stomach. The ulceration of the stomach did not present the typical appearance of new growth, although it was undoubtedly of that nature.—Dr. DALTON asked if the absence of pain might not be due to the mucous membrane remaining intact till a late period of the disease.—The PRESIDENT remarked on two or three cases which had come under his observation in which the malignant disease was in the central portion of the stomach, and which had produced no symptoms until shortly before death. He asked Dr. West whether in his case the patient had vomited lumps of fæces. He then described the case of a child apparently in good health who used to produce lumps of fæces out of her mouth, and also out of her nose and ears, and who had been under his care at the Children's Hospital, Great Ormond Street, and which was evidently a case of perverted taste.—Dr. WEST replied that there were no solid fæces in the vomit, which, however, coincided exactly in appearance with the diarrhœic stools which were being passed.

Tumour of Gracilis Femoris Muscle.—Mr. MARMADUKE SHEILD showed a specimen of primary tumour of the gracilis femoris muscle. It had been excised by a long incision from the inner aspect of the right thigh of a lad, aged 15, who also suffered from webbed toes. The operation was performed on August 22nd, 1889, and in October the boy was discharged, walking well, and with the wound soundly healed. The glands and general health were not affected. There was a thickening of undeterminate nature in the right rectus femoris muscle, which did not increase during the stay of the boy in hospital. The history of the growth was quite uncertain, but it seemed to be of long duration; nevertheless, it proved to be a sarcoma. Reference was made to the various kinds of tumours and other formations found in muscles, and the rarity of true tumours insisted upon. These cases had already been fully discussed by Campbell de Morgan and Tievan.—Mr. ROGER WILLIAMS asked if any transverse muscular fibres were found in the tumour, as striped muscle fibres were the only bodily elements in which neoplasms scarcely ever occurred.—Mr. BLAND SUTTON asked if there was any possibility of syphilis in the case.—Mr. SHEILD replied that there was no history of syphilis in the case. In reply to Mr. Roger Williams, he said that the tumour was essentially an interstitial one which had displaced the muscular fibres, and had doubtless originated from the interstitial connective tissue. The specimen was then referred to the Morbid Growths Committee.

Symmetrical Intracranial Aneurysms of the Vertebral Arteries Producing Symptoms Resembling Cerebro-Spinal Meningitis.—Dr. HALE WHITE showed the brain and vertebral arteries taken from a patient who was admitted into Guy's Hospital for pain in the head, pain in the muscles at the upper part of the neck, retraction of the head, sickness, optic neuritis, paralysis of the left side of the face, paralysis of both hypoglossal nerves, hæmaturia, mitral murmur, and a slight rise of temperature. The patient died a fortnight after admission. The diagnosis made during life was that he had cerebro-spinal meningitis, and that possibly this was due to ulcerative endocarditis. At the necropsy it was found that he had ulcerative endocarditis, and that there was on each vertebral artery, about half an inch from their junction, an aneurysm the size of a large pea; these aneurysms were the result of emboli. Each aneurysm pressed upon its corresponding hypoglossal nerve, and thus explained the lingual paralysis. The facial nerves were not obviously pressed upon, but the aneurysms were

so near them that it was quite likely that during life when distended they caused some pressure. The precise explanation of the retraction of the head was not evident. The base of the brain was covered with blood-clot due to the fatal rupture of the right aneurysm. The retinal hæmorrhages and hæmaturia were also due to embolisms.—Dr. WASHBOURN said that he had examined the mitral valve, kidneys, and spleen of Dr. White's case microscopically, and that by staining sections by Gram's method, he had been able to demonstrate chains of streptococci in all these organs; the specimens were exhibited under the microscope.—Dr. HADDEN considered it a point of very great interest that there was optic neuritis in the case. He described a case of symmetrical aneurysms of the middle cerebral arteries in which there was no endocarditis, embolism, or history of syphilis.—Dr. WEST described a case of aneurysm of the middle cerebral arteries exactly similar to that described by Dr. Hadden, in which he could find no cause for the aneurysms. The patient had died of ascites from hepatic cirrhosis.—Mr. GODLEE asked if before death there had been any twitchings of the facial muscles in Dr. Hale White's case.—Dr. CROOKSHANK said that the streptococci present in the microscopical sections were apparently pure cultivations. He regretted that no opportunity of cultivating the organisms had been obtained.—The PRESIDENT remarked on the rarity of embolism of the vertebral arteries.—Dr. HALE WHITE replied that he had not seen any spasms in the facial muscles. He considered the optic neuritis might have been due to the ulcerative endocarditis, and not specially due to any intracranial disturbance.—Dr. WASHBOURNE agreed with Dr. Crookshank in his remarks.

Albinism, Nystagmus, and Imbecility in a Monkey.—Mr. BLAND SUTTON showed a drawing by Mr. Holding of an albino Macaque monkey (*Macacus sinicus*) which had suffered from horizontal nystagmus. After an attentive examination he came to the conclusion that it was imbecile. He had observed it hanging down from the wires of the cage by means of its hands and feet for many consecutive hours, occasionally uttering a low plaintive cry. It would not appear to take any notice of the persons around, but would eagerly scratch at a nut in the hand of its keeper. The mouth was kept slightly open with a peculiar stiffness of expression, which gave the animal a characteristic idiotic expression.

Specimens of New Growths.—(1) Carcinoma of Lung. Dr. NORMAN MOORE described a specimen in which the new growth extended along the large bronchi, and was a carcinoma with abundant stroma. There were small secondary growths in the liver and the left kidney. The patient was a man, aged 51, under Dr. Norman Moore's care in St. Bartholomew's Hospital, and was admitted with left empyema in August, 1889, having had pain in his left side from the previous April. A rib was resected by Mr. Walsham, and more than two pints of pus were twice drawn off. Pus exuded till the patient's death, on October 1st, from acute pericarditis. This was the only example Dr. Moore had seen of a purulent effusion associated with carcinoma of the lung, though blood-stained effusions were common. The paucity of secondary deposits and the absence of growth into any contiguous structure were also noteworthy. The duration had been about seven months. (2) Carcinoma of Œsophagus. Dr. Moore showed a specimen of carcinoma of spheroidal cells in dense stroma, originating in the mucous glands, which involved the lowest inch and a half of the œsophagus, and which produced a dense stricture. The patient was a woman, aged 58, under Dr. Gee's care. He said that carcinoma of the œsophagus was very rare in women; and another remarkable feature was that distinct symptoms had existed for sixteen months. The third specimen he showed was a Sarcoma of the Peritoneum, in which a dense whitish sarcoma covered almost the whole peritoneum, but entered none of the viscera. Microscopically it showed abundant spindle cells. The sections showed that while both the liver and Glisson's capsule were free the peritoneal covering of the liver was densely infiltrated. The growth was primary in the right testis, which had been removed ten months before the death of the patient, a boy, aged 6, who had been under the care of Sir Dyce Duckworth. There was but little ascites, and the growth was easily felt through the abdominal wall. It formed a huge mass, extending from the right inguinal region. He also showed microscopical sections from each of the specimens.—Mr ROGER WILLIAMS objected to Dr. Norman Moore's description of the microscopical specimens from the second case, in which Mr. Williams considered that the alveolar spaces were lined with cubical and not with spheroidal cells. He then remarked that if this was so, it was one of the most fatally rapid of all forms of new growth.—Mr. R. W. PARKER referred to the presence of purulent effusion into the pleura in the first case, and contrasted its rarity in comparison with the sanguineous and serous effusions.—Mr. BOWLBY remarked on the third case that the primary tumour of the testes had apparently commenced in the epididymis. He had seen two other cases of primary sarcoma of the testes in which the secondary growths were entirely confined to the peritoneum, which probably became involved by direct continuity of tissue. Mr. Bowlby also mentioned other cases in which new growths had invaded serous cavities, and in which secondary deposits had become diffused over them apparently by some method of solution in the liquid contents of these cavities, and mentioned particularly a case of carcinoma of the œsophagus which had ulcerated into the pericardium, in which there were numerous secondary deposits on both the visceral and parietal walls of the pericardium.—Dr. S. WEST referred to the changes in the lungs in the cases of carcinoma extending along the bronchi, and asked whether the changes that occurred in the lungs might not have produced the empyema that was present in Dr. Moore's first case.—Mr. GODLEE asked why, in cancer of the lungs and pleuræ, was the effusion so frequently sanguineous rather than serous or purulent. He said that he had only seen one case of purulent effusion in connection with cancer of the lung, and this was originally serous, and only became purulent after tapping.—Dr. NORMAN MOORE replied in reference to the first specimen that the tumour appeared to have originated in the mucous membrane of the bronchi, and that he had only seen four similar cases. He thought that the purulent effusion was probably at first serous, but had ultimately become purulent. In reference to the second case, he believed that the growth had commenced in the œsophagus and not in the stomach.

Primary Sarcoma of the Crus Penis.—Mr. HURRY FENWICK showed a mixed spindle and round celled sarcomatous growth, which Mr. Waren Tay had removed eighteen months ago from a man aged 36. The tumour had been growing for three years and a half; there was no history of accident, no evidence of stricture. There was no invasion of, or even pressure upon, the urethral canal. There had been but little pain, and that of a shooting character. The tumour before removal was distinctly elastic anteriorly, but firmer posteriorly, where it evidently possessed deep and strong attachments to the left crus. It had been completely removed and a small portion of the corpus cavernosum cut away with it. It originated most probably from the capsule of the crus, and had invaded the cavernous tissue at the time of operation. Kauffmann had quoted eight cases of the primary disease, and two in which it was metastatic; they usually commenced in the glans penis, ran a very rapid course (for example, eight months and a half to four months), with the presence of multiple secondary deposits in the viscera.—Mr. ROGER WILLIAMS had seen one case of tubular carcinoma of the crus penis, which had been reported a year or two ago in the *Middlesex Hospital Surgical Reports.*

Card Specimens.—Dr. H. W. G. MACKENZIE: Congenital Disease of Heart, with Right-sided Endocarditis.—Mr. ALBAN DORAN (for Sir SPENCER WELLS): Dermoid Ovarian Cyst, with Infiltration of Broad Ligament with Fat.—Dr. HAWKINS: Pelvic Calculi in Kidneys.

MEDICAL SOCIETY OF LONDON.

MONDAY, NOVEMBER 18TH, 1889.

C. THEODORE WILLIAMS, M.D., F.R.C.P., President, in the Chair.

Rupture of the Gall-Bladder.—Mr. HASLAM read the notes of the case of a man, aged 63, who was admitted into the Birmingham General Hospital on August 5th, 1889, with strangulated inguinal hernia on the right side. This was relieved by operation, and he left the hospital on August 27th, feeling perfectly well. Within twenty-four hours he was again admitted, with symptoms of peritonitis, and an inguinal hernia on the left side was down and constricted, but reducible by careful taxis. As the symptoms increased in severity the abdomen was opened in the middle line, and the peritoneum found acutely inflamed and containing a little bile-stained fluid. The distension of the intestines was so great and the man's condition so bad, that no attempt could be made to find the rent in the gall-bladder. Death occurred in eight hours. At the necropsy the gall-bladder was found to be extremely thin at its upper aspect over a space as large as a sixpence, and in the

centre of this there was a small perforation. The parts about the transverse colon and stomach were very adherent, and the omentum reached into the left hernial sac. The cause of the rupture of the gall-bladder was probably the dragging due to the tension put upon the great omentum by the descent of the left hernia, or else the vomiting may have caused it. There was considerable difficulty in getting a history, but so far as could be made out the descent of the hernia preceded the peritoneal symptoms by a short time only.—In reply to questions of the PRESIDENT, Dr. DE HAVILLAND HALL, and Mr. BOWREMAN JESSETT, Mr. HASLAM said that a probe had been passed through the ducts, which were quite free from obstruction. A piece of omentum was found lying free in the sac on the left side, and some coils of intestine just above it. There was no lesion of the intestine. He thought the dragging of the omentum across the stomach might have given a jerk sufficient to cause a laceration of the weakened wall.

Malignant Disease of Descending Colon, with Impaction of Foreign Body.—Mr. HASLAM also related the case of a woman aged 59, who was admitted into the Birmingham General Hospital on September 15th, 1889, with the following history:—Chronic constipation for four or five months past, she often going several days without passing a motion. During this time she had been getting thinner. For the last month there had been almost complete obstruction, and for the latter half of that time she had suffered from vomiting and pain in the abdomen. Enemata and purgatives had failed to give relief. On admission the abdomen was very much distended, and the coils of intestine were easily visible. There was considerable resonance, but no tumour could be made out. On rectal examination a small quantity of fæcal matter was found, but there was no sign of new growth. The general symptoms were thirst, dry brown tongue, vomiting at irregular intervals, quick feeble pulse, and great distress from the distension. An enema of castor-oil and turpentine was given, but nothing came away. The abdomen was then opened in the left inguinal region over the sigmoid flexure, and the distended large intestine was at once found; this was sutured to the wound and left unopened. No attempt was made to find the actual cause of the obstruction, as the patient's condition would not permit of any prolonged operation. Within twelve hours from this the patient's bowels were opened and continued to be so at intervals for the next two days. This gave temporary relief; but, as there was still evidently considerable accumulation, the bowel was opened, and from this a very free discharge of fæces took place. For a few hours there was some further improvement, but she soon became weaker, and died six days after admission. At the *post-mortem* examination the opened intestine was found adherent to the wound. Three inches above the opening there was an annular constriction caused by a deposit of cylindical epithelioma that would just admit the little finger, and impacted there was a piece of bone, probably part of a rabbit's sternum. An inch and a half above this there was a rounded perforation, which must have existed for some time, from the cicatrised condition of its margins; there they found some fæcal extravasation and local peritonitis. The heart was pale and flabby; the lungs showed some tubercular deposit and fibroid induration at the apices, with congestion of the bases; the kidneys were the seat of old calculous pyelitis; the intestines were soft and friable. Mr. Haslam drew attention to the fact that distended intestine was found below the seat of obstruction. This he believed was due to some leakage of gas through this, which the patient, owing to her feeble condition, was unable to get rid of. The fact of the bowels acting after the operation was probably due to the bowel having been drawn down at that time, and either the obstructing body dislodged or a limb straightened out; this would also account for the fæcal extravasation by adhesions around the perforation being disturbed.—Mr. BERNARD PITTS observed that the presence of a foreign body in association with malignant disease of the intestines was not by any means uncommon. In one such case, after doing colotomy for annular stricture of the sigmoid flexure, the patient was so much relieved that two years later she passed everything naturally, only using the artificial anus occasionally. One day, however, she was brought to the hospital with symptoms of acute obstruction. The artificial anus was by that time almost closed up. He accordingly dilated it, and removed from the bowel below quite a large number of fruit stones, and then washed the gut well out. From that time the patient went on well. In another case the patient was brought to the hospital in a collapsed condition from acute obstruction, with a history of previous chronic obstruction. The site of the obstruction was uncertain, and so the surgeon in charge did a left colotomy. The bowels were open naturally on the second day, and the patient became convalescent. Three or four weeks after, however, he was suddenly seized with acute peritonitis, and died within twenty-four hours. On *post-mortem* examination they found that he had swallowed a large quantity of fish bones, and these had caused a laceration of the gut near the cæcum. He had been very much impressed by the question of the choice of the site of the operation in cases in which the location of the obstruction was doubtful, and after mature consideration he had decided to make a median exploratory incision in all cases in which the position of the obstruction could not be made out. Of late years he had invariably carried this plan into effect. It did not add materially to the risk, and on one or two occasions he had thereby been prevented from making the opening in the wrong place.—Mr. JESSETT agreed with Mr. Pitts that it should be a golden rule to ascertain if possible the site of the obstruction before proceeding to make the artificial anus. He thought, however, that rather than make an artificial anus in the small intestine it was far preferable to cut across the small intestine and implant the end of it into the colon. He had done this recently with great relief to a patient, who had a large mass of malignant growth, from the effects of which he died about a fortnight after the operation.—Mr. BATTLE mentioned a case of acute obstruction associated with malignant disease of the liver. He performed left lumbar colotomy, and succeeded in passing his finger through the growth, with the result of finding there a large piece of bone, the removal of which afforded a great deal of relief.—Mr. HASLAM, in reply, said that in his case there was no reason to believe that the growth was low down in the colon; moreover, the woman was very feeble, and he was very anxious to get through with the operation as rapidly as possible.

Catarrhal Laryngitis.—Dr. DE HAVILLAND HALL related a case of acute catarrhal laryngitis with urgent dyspnœa in an adult treated by scarification.—In reply to observations by the PRESIDENT, Dr. WHITE, Dr. LITTLE, Mr. BENHAM, and Mr. PITTS, Dr. HALL said that when he had begun practice he had used antimony in accordance with the teaching of those days, but he had gradually come to regard the practice as dangerous, and had consequently discontinued it. In answer to the President's question as to the cases to be treated by ice, he said that when the symptoms were sudden and acute, occurring in young subjects with a high temperature, then the use of ice was likely to prove beneficial; when, on the other hand, they had to deal with elderly persons, when the temperature was not high and the symptoms not very acute, and especially if there were pulmonary complications, then the hot, moist treatment was indicated. He said he had no experience of the hot-air treatment, but judging from the condition of the parts, he did not think that it was calculated to be of service in this class of affections. He pointed out that his case was one of acute catarrhal laryngitis, and did not therefore belong to the class of cases alluded to by Dr. White. He laid special stress on the absence of pharyngeal mischief. Had this been present, he would have been disposed to regard it as a septic case. He thought that the induction of emesis was a risky proceeding in these cases, and as to the value of leeches he observed that they could not be applied over the seat of the mischief. He agreed that Mr. Pitts's suggestion as to intubation was one which should be borne in mind in these cases, and he proposed to consider the feasibility of having recourse to it on future occasions.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

THURSDAY, NOVEMBER 14TH, 1889.

J. HUGHLINGS JACKSON, M.D., F.R.S., President, in the Chair.

Recovery from Hemianopsia, with Subsequent Necropsy.—Mr. DOYNE read notes of a case occurring in an old man. The onset of hemianopsia (right-sided and homonymous) was sudden; the fields of vision recovered in the course of a fortnight, but subsequently a quadrant of the opposite side of each field was lost. Death occurred from cerebral apoplexy. At the necropsy, in addition to the extensive extravasation which caused death, there were found symmetrical lesions (softening) on both sides of the brain in the cortex of the occipital lobe, one evidently more recent than the other.

Homonymous Hemianopsia: Recovery: Subsequent Death and Necropsy.—Dr. JAMES ANDERSON gave an account of the case of a warehouseman, aged 41, sent to him by Mr. Waren Tay on March 28th, 1889, complaining of failure of vision for six weeks with severe frontal headache, and during the previous week much failure of memory and mental depression. He had been losing flesh for four months, had had no fit, no vomiting, and no loss of sensation or of motor power so far as he knew, but during the previous week he had had two severe falls from inability to see to his right side, and his speech and general manner had altered in character. The family and personal history threw no light on his trouble. He had eight healthy children, and denied all history of venereal disease. He was much depressed about himself, thin and anxious, and had some difficulty occasionally in finding words, but there was no loss of gross motor power or of general or special sensation except as regards vision. His gait and reflexes were normal, and the heart, lungs, and kidneys apparently healthy. The ocular and pupillary movements were normal, and with the exception of an old nebula on the left cornea there was no pathological change in either eye, the discs and fundi being quite healthy. He could read J. 1 with each eye separately, but only with difficulty. The right halves of both visual fields were lost up to but not including the line through the fixation point; the left halves were of average extent. From the symptoms, Dr. Anderson concluded that the patient had an intracranial growth, probably malignant, and situated in the medulla of the left occipital lobe, also that a hæmorrhage had taken place into the tumour at the beginning of the previous week. He was admitted on March 29th into the London Hospital, and prescribed full doses of sod. iod. and liq. hydrarg. perchlorid. Perimeter charts taken on March 31st by Dr. Charles Wilson showed right homonymous hemianopsia with some contraction of the remaining left half of the right visual field. Within a fortnight the headache and mental symptoms had much subsided, and the perimeter chart of April 18th showed only slight contraction of the right halves of the visual fields. Mr. Grimshaw, the clinical clerk, who watched the fields from day to day, believed that the right halves varied considerably, being smaller on days when there was severe headache. The patient left hospital on May 18th, was seized with severe headache and vomiting on May 22nd, and on May 29th had a transient attack of left hemiplegia, which had quite passed off when he was readmitted into the hospital on June 20th. The lower quadrants of the right halves of both visual fields were at this date deficient nearly up to the vertical line through the fixation point, especially on the left side, but otherwise the fields were of good extent, and reading vision was still J. 2 with the right and J. 3 with the left eye, and the fundi were normal. From this time he rapidly deteriorated in mind, and became extremely troublesome; his vision seemed to be more defective, but he would not allow his eyes to be examined. On August 9th he was sent to Banstead Asylum, where he continued in a demented state and died on October 1st. The necropsy made by Dr. Claye Shaw showed a recent blood clot in the posterior cornu of the left lateral ventricle of the brain, with hæmorrhage and softening in the tissue external to this, involving the whole of the angular gyrus up to its surface, the central part of the area being occupied by a walnut-sized cavity containing a straw-coloured fluid. The tissue replacing the angular gyrus was found to be gliomatous in structure. The rest of the brain and the remaining organs of the body seemed to be healthy, and there was no evident explanation of the temporary left hemiplegia observed four months before death. The improvement of the patient under antisyphilitic treatment and the subsequent transient left hemiplegia caused some doubt as to the early diagnosis, which was, however, confirmed by the necropsy. Dr. Anderson stated that he had not previously met with a case of recovery from hemianopsia, that in cases of hemianæsthesia with hemianopsia, for example, from a vascular lesion in the area of the posterior cerebral artery, even when the former group of symptoms disappeared, the latter, very generally at least, persisted. Hæmorrhage had in this case pretty certainly taken place into the tumour at the date of the patient's coming under observation, and a second hæmorrhage into it had been the immediate cause of death. The case was interesting in relation to modern views of visual localisation.—The PRESIDENT said that the subject of the two papers just read concerned the very important question of cerebral localisation. He mentioned two cases which had been under his own care; in one hemianopsia was associated with hemianæsthesia, in the other there was much mental confusion, but neither hemiplegia nor hemianæsthesia; he also referred to the frequent association of hemianopsia and word blindness.—Dr. HILL GRIFFITH inquired if Dr. Anderson's case had exhibited the hemiopic pupillary reaction.—Dr. S. J. TAYLOR spoke of a case of hemianopsia in which the fields of vision regained their normal limits. Death occurred shortly after, but no necropsy was obtained.—Dr. STEPHEN MACKENZIE thought that the two cases now reported pointed rather to the hemianopsia being due to pressure exerted by hæmorrhage on the parts of the brain concerned in vision. The fluctuations in the fields of vision during recovery lent support to that view rather than to the supposition that the function was taken on by some other part of the brain. He considered that the symptoms were caused by vascular changes in propinquity to the visual centres and the fluctuations in the field by variations in blood-pressure.—Mr. LANG referred to two cases of recovery from hemianopsia, and supported Dr. Mackenzie's views.—In reply, Dr. ANDERSON said that in his case the pupil acted well to light thrown on to either half of the retina. In Mr. Doyne's case it was certain that the two areas of softening in the brain were of different dates; the older patch being in the site of the hæmorrhage which occurred at the time of onset of the hemianopsia; the more recent patch marking the lesion which caused the subsequent loss of a quadrant of the fields in their opposite halves.

On the Size of the Cornea in Relation to Age, Sex, Refraction, and Primary Glaucoma.—Mr. PRIESTLEY SMITH gave an account of certain facts obtained by measurement of the cornea in a large number of human eyes. The inquiry had been undertaken to test the truth of a suggestion he had previously made to the Society, namely, that small corneas were specially connected with a liability to glaucoma in its primary form. The measurements were made by means of a simple keratometer devised for the purpose.[1] The horizontal diameter only was measured, and the nearest half-millimètre was noted. The eyes examined were chiefly those of private and hospital patients with refractive errors or slight ailments such as could not invalidate the result. A number of healthy eyes of old people in a workhouse and an almshouse were also examined. A number of persons affected with primary glaucoma were examined in like manner. The normal cornea: 250 males and 250 females were examined, giving a total of 1,000 eyes, representing all life periods from 5 to 90 years of age. Age, sex, and refraction were noted in every case. Analysis gave the following results: general average, 11.6 millimètres, size variable in individual cases, but not often greater than 12 or less than 11 millimètres; number greater than 12, 34 per 1,000, namely, 12.5, 30 eyes; 13, 2 eyes; 13.5, 2 eyes; number less than 11, 17 per 1,000, namely, 10.5 in every instance. Stature and size of head were not systematically noted, but there were many larger corneas in smaller persons and smaller corneas in larger persons, and therefore no general proportional relation existed in this respect. Classification according to age gave the following results: average, between 5 and 10 years, 11.67; between 10 and 20, the same; between 20 and 40, nearly the same; after 40, rather smaller, but the difference not large enough to be very positively asserted. The cornea, then—or at least its visible part—attained its full diameter very early in life, many years before the rest of its body completed its growth. Comparison of other data relating to size and weight of different parts during intra- and extra-uterine life (quoted from Vierordt and Manz) showed that the development of the cornea was precocious in relation to that of the eye as a whole; that of the eye in relation to that of the brain; that of the brain to that of the whole body. In advanced life the height of the body and the weight of the brain diminished; the apparent slight diminution of the cornea at the same period might perhaps represent an actual shrinkage due to the same slackening of nutrition, but this was merely a suggestion. Classification according to sex showed a very slight but probably a real difference in each life period, the cornea of the male being on the average about one-tenth of a millimètre the larger. Classification according to refraction showed the unexpected fact that the size of the cornea bore no relation to the refraction, being no smaller in hypermetropia, no larger in myopia, than in emmetropia. This was further proved by comparison of 90 highly hypermetropic with 90 highly myopic eyes. The size of the cornea was determined early in life, and was not affected by the greater or smaller extension of the posterior hemisphere which might occur later. The cornea was full grown at 5, or earlier; at any rate it did not add one-tenth of a millimètre to its diameter after that

[1] See *Ophthal. Review*, November, 1886.

age. The lens, a near neighbour of the cornea, was full grown only at the other end of life, and, if the life were a long one, added at least 2 millimètres to its diameter after the cornea had ceased to enlarge. This involved a gradual change in the mutual relations of the two which might have important consequences. The cornea in primary glaucoma: Sixty-nine persons having primary glaucoma in one or both eyes were examined in like manner. Number of glaucomatous eyes, 99; healthy, 32; some of the patients had lost one eye; the statistics comprise the whole. Average, 11.27; maximum, 12; minimum, 10. Number of corneas measuring less than 11 millimètres (spoken of as "small corneas"), 34, that was, 26 per cent. Comparing the glaucoma group with the same life periods in the healthy group, the small corneas formed 26 per cent. of the one, 4 per cent. of the other. More important even than this, among the 1,000 eyes of healthy persons there was not one cornea so small as 10 millimètres, while there were 9 such in the much smaller glaucoma group. A definite relation between the small cornea and primary glaucoma was thus proved. The explanation lay, in the speaker's opinion, in an undue proximity between the lens and the surrounding structures. But this explanation raised certain questions which called for answer. Was the smallness of the cornea a consequence of the glaucoma? The changes occurring at the angle of the anterior chamber might be supposed to opacify the corneal margin. This idea was disproved by the fact that in 7 of the glaucoma patients both corneas were small, while only one eye was glaucomatous; in one of these the other eye was attacked later. This showed that the smallness of the cornea preceded the glaucoma, and was not caused by it. Was the small cornea small from youth up, or did it become so in later life? There were grounds for holding the latter view; small corneas were much commoner in the second half of life; but they were not entirely wanting in early life, and might at that early age be associated with glaucoma (witness Mr. Hartridge's case shown to the Society on March 11th, 1886). When the cornea was small, was the globe small in proportion? As shown already, the refraction gave no answer to that question; it could only be determined by a sufficient number of measurements of cornea and globe. In a recent case of the speaker's what appeared to be a faultless iridectomy, on a glaucomatous eye with a 10 millimètres cornea, was followed by no relief of the glaucoma. On excision some months later the eye proved to be exceptionally small, like the cornea, namely, 21 millimètres antero-posteriorly by 21 vertically by 22 horizontally. The refraction of this eye had been 5 D of hypermetropia. Lastly, was the small cornea associated with a proportionately small lens? If so, the speaker's explanation of the matter fell to the ground. In the case described the failure of the operation had arisen through obstruction of the wound, which could not have been made more peripherally, by the margin of the lens. Other specimens in the speaker's possession showed the same result. In the important case published by Hocquard and Masselon—microphthalmos with glaucoma—the eye resembled the one above described, but in an exaggerated form, and the lens was found to be "much too large for the eye." The structural conditions in question—large lens, small cornea—were not necessarily present in primary glaucoma, for the disease could occur in the absence of both; but they were conditions which either singly or together gave to certain eyes a greater than ordinary predisposition to it.

Treatment of Symblepharon.—Professor SNELLEN (Utrecht) described an operation for the cure of symblepharon, which had given him very satisfactory results. His plan was to free the adherent lid, leaving any conjunctiva which might be present attached to the globe. A flap of skin was then dissected from the cheek, having a narrow pedicle close to the border of the lid near the outer canthus; a buttonhole being made beneath this flap from the inner surface of the eyelid, the flap was drawn through and attached to the raw surface of the lid. The conditions were peculiarly favourable for plastic operations, and Professor Snellen had been much pleased with the vitality shown by the flap. This plan had also proved of value in enlarging a socket for the reception of an artificial eye.

A New Operation for Ptosis.—Professor SNELLEN had recently adopted the following operation for cases of ptosis: A ligature was passed from without inwards through the entire thickness of the lid at the upper edge of the tarsus; the needle was then passed outwards through all the structures but the skin at a point near the upper limit of the conjunctival sac, and made to perforate the skin near the original puncture. The ends of the ligature were then tied tightly on the surface of the lid. Three such ligatures were employed, disposed rather towards the nasal side, on account of the position of the levator.

On the Treatment of Episcleritis.—Professor SNELLEN recommended the injection, once or twice a week, of a 1 to 5,000 solution of corrosive sublimate beneath the swollen and thickened conjunctiva and episcleral tissue. By this means he had obtained good results in a few cases of very intractable episcleritis.

Specimens.—The following living and card specimens were exhibited: Mr. SILCOCK: (1) Anomalous Position of the Ciliary Processes conjoined with Shrunken Lens and (?) Persistent Capsulo-pupillary Membrane; (2) Micro-cornea in a highly Myopic Eye. Mr. KELSALL: (1) Aniridia; (2) Syphilitic Neuro-retinitis. Mr. TATHAM THOMPSON: (1) Photograph of Unilateral Facial Hypertrophy, with Hypertrophic Ptosis; (2) Model illustrating Strabismus, Strabotomy, and Muscular Advancement.

EPIDEMIOLOGICAL SOCIETY OF LONDON.

WEDNESDAY, NOVEMBER 13TH, 1889.

SIR T. CRAWFORD, K.C.B., M.D., LL.D., President, in the Chair.

President's Inaugural Address.—In thanking the members for the honour they had conferred upon him in electing him President for the ensuing year, Sir T. CRAWFORD alluded to the good work done by the Society during the forty years of its existence in promoting correct views as to the nature, causation, and prevention of the diseases commonly known as epidemic, and in combating the erroneous notions, still too prevalent among the non-medical public, which had their origin in an ignorant and superstitious dread of the "pestilence that walketh in darkness." He recited the aims of the Society as enunciated in the articles of its incorporation, remarking that though the *Transactions* of this Society, and of others that had of late years engaged in the same field, the reports of the Local Government Board and of the medical departments of the army and navy, bore witness to an immense amount of useful work in tracing the causes of preventable disease, much still remained to be done before the public should be educated into realising that they were individually and collectively responsible for a large proportion of the deaths, illness, and loss of labour and money consequent thereon, which they were too much inclined to refer to the mysterious dispensation of Providence instead of to their own violation of those physiological laws which the Creator had revealed for their guidance. Many of the expressions in common use even among the best informed were but indications and cloaks of our ignorance, such especially as epidemic prevalence, constitutions, influences, waves, etc., and would, with the progress of clearer knowledge, be modified or discarded, as the true causes of the prevalence and progress of these diseases should be more clearly recognised. Quoting Sir W. Jenner's opinion that the acute specific diseases "dissimilar as they are in their pathology, are so intimately connected in their etiology that the removal of the causes of one of the groups would certainly and greatly diminish the mortality from all," he said that the materials afforded by the reports of the mortality and sickness of the British army, scattered as it was over every quarter of the globe, under conditions more fully ascertainable than those of the civil population, presented a rich mine of data on which to base conclusions of the highest practical value, the more so as its stations were distributed over most of the regions where epidemic diseases prevailed, and along the routes of commerce by which they were believed to be carried through human intercourse, its average strength for the year 1887—from which he would draw his statistics—having been 195,932, exclusive of our native Indian forces and local colonial troops. He would confine his figures to the subgroup (I) of general diseases in the nomenclature of the College of Physicians, or the 22 often described as zymotic, and his remarks mainly to enteric fever. The strength of the troops for the time being quartered in the three divisions of the United Kingdom, and the rates per 1,000 of admissions, deaths, and men constantly sick were respectively for: England, 72,329; 17.2; 0.40; 0.99. Scotland, 3,635; 13.2; 0.27; 0.57. Ireland, 25,150; 20.2; 0.48; 1.09. Of the total admissions under this head in the United Kingdom, 137 were of enteric fever, of whom 25 died, being just two-thirds of all deaths under this group. England, contributed 61 cases with 16 deaths; Scotland, 3 cases with 1 death; Ireland, 73 cases with 9 deaths. No military district was entirely exempt; but in many instances no cause was assigned, and in some the cases were believed to have been imported—that is contracted elsewhere by men on leave of absence. In a large

proportion, however, the fever was evidently due to bad drainage and impure water—notably at Shoeburyness, where a foul open sewer from the village was held to account for 5 cases with 4 deaths, and at Parkhurst 4 cases with 2 deaths were ascribed to an impure water supply; 50 cases with 4 deaths were reported from Dublin alone. The sanitary condition of the barracks had always been very unsatisfactory, and measures had been undertaken for their improvement, but those of the city itself, and especially the horrible state of the River Liffey, must be greatly altered before Dublin could be rendered a healthy station. There were 245 admissions under the head of eruptive fevers. including 7 with 1 death from small-pox, and 185 with 8 deaths from scarlatina. No fewer than 689 cases were reported as "continued fever," and 96 of "dysentery" with 1 death. He next dealt in order with foreign stations, but few of these call for special notice. At Gibraltar the average strength of the garrison was 4,614. The ratio per 1,000 of admissions under this group, 31.4, of deaths 1.95, and of constantly sick 4.28. Enteric accounted for 35 cases and 9 deaths, "continued fever" for 105 without a death. Most of the latter here and elsewhere should properly have been returned as enteric, of which they were doubtless the milder cases, the mortality would then have been 1 in 14 instead of 1 in 4. Indeed, the medical officer observed that they came from the same barracks, at the same time, and they ceased together when these were vacated or the sanitary defects had been remedied. In every case blocked drains, dry and ineffective traps, or rat-holes communicating with disused drains under the floors, were discovered. These diseases were confined to three regiments quartered far apart, the rest of the garrison escaping. In the case of two regiments it was held to have been brought from Egypt, and was so no doubt in the West Kent, from which it soon disappeared; but the South Staffordshire had been too long at Gibraltar to admit of such an explanation, besides the fever was limited to a detachment occupying a particular barrack, the remainder of the regiment quartered in another not having suffered at all. Malta, strength 5,499, ratio of admissions 110.7, of deaths 2.72, constantly sick 10.66. Enteric fever gave 14 cases with 5 deaths, "continued fever" 570 with 7 deaths. This last statement was eminently unsatisfactory, since the mortality would be too low for the mildest enteric fever, and many cases of illness arising from intemperance, etc., must have been included. The enteric fever could not have been owing to the insanitary state of the wine shops, as the medical officer conjectured, for the Fencibles, a local corps, were entirely exempt, as were the British troops in Valletta, who alone were provided with water from the aqueduct. It must therefore be referred to local conditions, especially the water supply. In other stations, too, the so-called "simple continued fevers" should be for the most part added to the enteric, if only from a consideration of the mortality, notably in Ceylon, where 10 cases of enteric are reported to have included 7 deaths, and 67 of continued fever none. Combined, they give a mortality of 1 in 11. Both Colombo and Galle were riddled with cesspools. Coming to India, where one-third of our army was constantly stationed, the reports from Bengal with 40,921 troops showed 538 cases of enteric with 166 deaths and 3,483 (!) of continued fever with 5 deaths. As elsewhere, the mortality ascribed to enteric alone was higher than could be reasonably accepted. These severest cases were almost exclusively among men between the ages of 20 and 23, and recently arrived in India. Cholera here figured largely, and dysentery, as in all tropical stations. In Madras, 35 of the 53 deaths under the group under consideration were referred to enteric fever, and nearly half of those in Bombay. The disease was equally prevalent among the civil population and native troops. Unfortunately, the same incredibly high mortality from enteric fever, and large item of continued fever, as well as an almost general absence of any definite recognition of the local causes, characterised all the returns from our Indian empire. From Egypt came a melancholy description of insanitary conditions of every kind, with their natural consequences, and the relation of the rise and fall of the Nile, with its influence on the ground water strongly supported Pettenkofer's views on the periodicity of enteric fever. There were 26 cases of small-pox with 4 deaths, a proportion not so creditable as Sir Thomas thought to the system of revaccination in the army. Comparing these and the other figures which space compels us to pass over, the President considered that great strides had been made during the last thirty years in the sanitary administration of the army. But as to our knowledge of the etiology of disease, he believed we were still far from certainty. Notwithstanding the recent progress of bacteriology, he could not accept the germ theory as sufficient, in the face of sporadic cases occurring in the absence of any known previous local prevalence of the disease, nor was the pythogenic hypothesis more satisfactory to his mind, since enteric fever had broken out at stations in Afghanistan probably never before occupied by man, at any rate in the then present campaign. He could not look on enteric fever, diphtheria, etc., as originating, like small-pox, solely from contagion, but believed that the two great factors concurring in their production were the influence of man on his surroundings and of his surroundings on man. The former included all that we know as filth, the latter comprised not only insanitary conditions (of climate, as being beyond our control, he would take no account), but also the habits and food of a population. As regards the last, the extension of commerce had placed nearly all civilised nations on a level and in circumstances very different from those under which they were when they subsisted on the produce of their own soil, but there was no doubt that in the past the diverse characters of the peoples of Scotland and Ireland had been to a great extent the result of their diet, in the one case of oatmeal and pease brose, in the other of potatoes; might we not attribute to diet and surroundings the different susceptibility of different races to different forms of disease? He reviewed the evidence of Royal Commissions during the last fifty years on the housing and conditions of the working classes in our rapidly growing cities, and pointed out the immense improvement shown by the average mortality, though even now these were bad enough in some localities; and referred, in passing, to the reports on the longevity and vitality of the Jews, and their physical development, as well as to the returns of the recruiting department of the army and the deliberations of the London School Board on the semistarvation of a large proportion of the scholars. In any schemes for the suppression or diminution of preventable diseases he was convinced that, valuable as might be the aid afforded by notification, isolation, disinfection, etc., the chief attention should be directed to the amelioration of the material and moral conditions of the masses, so as to render possible the development of a race of higher physique better able to resist the attacks of disease.

BRITISH GYNÆCOLOGICAL SOCIETY.

WEDNESDAY, OCTOBER 23RD, 1889.

FANCOURT BARNES, M.D., Vice-President, in the Chair.

Fibrous Tumours.—Dr. R. T. SMITH exhibited two specimens. 1. A large myoma, reaching 3 inches above the umbilicus, with an outgrowth into the left hypochondrium, removed by abdominal section with perfect success. 2. A specimen illustrative of one mode of degeneration of fibroid tumours. It was removed from a single lady, aged 50. There was much ascites, enlargement of superficial abdominal veins, and enlarged inguinal glands. A solid mass was felt in the right iliac region. The diagnosis being doubtful an exploratory operation was performed, but abandoned on finding an extensive layer of jelly-like material, which bled most profusely on handling. At the *post-mortem* examination th tumour as a whole was found to be a multiple uterine fibroide The upper mass had broken down by hæmorrhage, some of which. was encysted, some was free, and the latter, with portions of cyst-wall, constituted a jelly-like layer. The pedicle was as small as a little finger, and by an earlier operation two of the tumours could have been easily removed. The patient gave the history of tumour as of four years' duration. The case showed the value of abdominal section as one mode of treating fibroids. The specimen was referred to the Pathological Subcommittee.

Pelvic Abscess Due to a Ligature.—Mr. BOWREMAN JESSETT related the case of a patient from whom an ovarian tumour had been removed by Dr. Kelly in Philadelphia in May last. Ever since the patient had had constant severe pain and distressing bladder symptoms. Mr. Jessett found a large elastic tumour filling up the vagina. The diagnosis lay between hæmatocele and abscess, and he suspected the latter, even in the absence of pyrexia or rigors. Aspiration proving the presence of pus he freely opened up and washed out the cavity, and the ligature escaped. The result was very satisfactory.—Dr. R. T. SMITH mentioned another case, confirming the possibility of the existence of pus without rigors.—Dr. EDIS said aspiration could not be relied upon, as pus was often to thick to come away. The cannula should not be too fine.—After some remarks from Dr. BANTOCK, Mr. TAIT mentioned two cases of pyosalpinx, which he attributed to the employment of a drainage tube which impinged on the ligature

and prevented it healing over. He had over and over again seen large collections of pus in the abdomen, in the tubes and broad ligaments, without any pyrexia attending.—Dr. FENTON suggested that rise of temperature was due to tension.—Dr. BARNES thought there was some reason in this explanation; and also that the absorption of pus into the blood caused the rigor.—Dr. BEDFORD FENWICK mentioned cases of empyema and purulent pericarditis where no rise of temperature had been found.—Mr. JESSETT said pyrexia was no criterion in peritonitis.

Rare Abdominal Tumour.—Dr. FENTON exhibited a specimen in which, incorporated with the fundus, was a tumour with a cystic interior, which had contained 48 ounces of urine-like fluid. It was removed from a widow aged 54.

Ovariotomy.—Dr. BANTOCK read a paper on a series of cases of ovariotomy (168 to 400). In a period of three years he had ninety consecutive cases without a death; and the mortality of the last 100 was only 4 per cent. In treatment he said he had abandoned Listerian methods, and now restricted himself to pure water and strict cleanliness.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

FRIDAY, NOVEMBER 8TH, 1889.

HENRY E. ARMSTRONG, M.R.C.S., President, in the Chair.

On the Education, Training, and Qualifications of the Medical Officer of Health.—The PRESIDENT commenced his address by observing that the questions he had taken for its subject matter had of late attracted much attention, both in and out of the profession. There was a growing feeling "that the medical officer of health should no longer be allowed to learn his profession after his appointment to office, and gain his sanitary knowledge, perhaps after a series of ghastly failures, at the expense of the community by whom he was engaged." Time was when only the ordinary qualifications for medical practice could be required, when in the early dawn of the science of public health "its votaries had to grope their obscure way with feeble and uncertain step;" but those days were now long past. The necessity for an acquaintance with at least the elements of sanitary science by all medical men was already recognised; but how much more was a thorough knowledge of preventive medicine incumbent on those who chose it as their profession? This was now becoming felt even by the public; the idea that "prevention could not be divorced from cure was fast being replaced by the conviction that their union was objectionable on the ground of incompatibility of interests," and he hoped that the appointment to small districts of men engaged in general practice would before long be discontinued. The need for special qualifications was beginning to be understood by some sanitary authorities, though it had not been recognised by the Legislature until last year. The first step in this direction was taken in the 18th Section of the Local Government Act of 1888, which enacted that after the year 1891 no person should be appointed medical officer of health to a district or combination of districts having a population of 50,000 unless he possessed a diploma in public health, etc., or had served in that capacity for the three years immediately preceding to one of 20,000 inhabitants, or been for the same time an inspector under the Local Government Board. The Burgh Police and Health (Scotland) Bill went further, demanding the possession of a diploma by all medical officers of health, without exception, and discouraged private practice. Considering the wide range of subjects with which the medical officer of health must be conversant—legal, statistical, and administrative, engineering, chemical, biological, etc.—and the mental training required for the investigation of the problems with which he had to deal, which could not be acquired without prolonged study, Mr. Armstrong was of opinion that not only should higher degrees in public health be instituted, but that aspirants to such degrees, which should rank with the Doctorate in Medicine, might well be exempted from some subjects, as surgery, midwifery, with which they had no concern, and be allowed to offer practical training in sanitary work in lieu of a portion of the clinical practice required of candidates for medical diplomas. If the departments of curative and preventive medicine should be thus divided, the instruction in the latter given at the medical schools must undergo a great development, and it must be raised into a faculty, instead of being, as at present, looked on as one of the minor subjects. But a grave want in our medical education, from which all students alike suffered, was the absence of all opportunities for the clinical observation of infectious diseases. Many practitioners had never seen a case of typhus, and made their first acquaintance with small-pox and scarlatina after they had entered on private practice, to the injury of their patients and of their own reputation. The records of admissions to fever and small-pox hospitals bore witness to the frequent occurrence of errors of diagnosis of the gravest and most dangerous character on the part of private and parochial practitioners. Reviewing the conditions on which the existing diplomas in public health were granted, Mr. Armstrong insisted on the necessity not only for practical instruction in the laboratory, but of a period of service with the medical officer of health to a large town or district. These had, indeed, been recommended by the Medical Council, but had not been as yet introduced into the regulations. This want of administrative experience was painfully felt by medical officers when first called on to report and advise on insanitary dwellings, engineers' plans, or the construction and management of infectious hospitals, and when giving evidence in courts of law. This last requirement might, however, be dispensed with for some time to come in the case of men who had been actually in office for several years. But the medical officer of health, however well prepared to enter on his duties, must keep himself abreast of the progress of his science, and they had a right to claim that those at least who were in charge of large or populous districts should be regularly supplied with the reports of the Local Government Board and all like official publications, if only in the interest of the populations for whose well-being they were responsible.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF PATHOLOGY.

FRIDAY, NOVEMBER 1ST, 1889.

E. H. BENNETT, M.D., President, in the chair.

President's Address.—The PRESIDENT delivered an inaugural address.

Hernia Cerebri.—Dr. T. EVELYN LITTLE made a communication on a case of fracture of the skull, with hernia cerebri, in a child. The patient died on the fourteenth day, in an attack of convulsions, there having been no symptom whatsoever pointing towards a fatal result until a few hours before death. At the *post-mortem* examination meningitis was found over both hemispheres, and an excavation in the frontal lobe corresponding to the seat of the injury.—The PRESIDENT said the disproportion between the injury to the bone and the injury to the brain was fully borne out by the experiments, which had demonstrated the great elasticity of the skull in children.—Dr. SWANZY said the feature of the case which had interested him most was the symptom of the turning of the head towards the side on which the injury was situated. As Dr. Little had mentioned, that was generally associated with rotation of the eyes in the same direction. There was a conjugate deviation of the eyes and head towards the same side. But they might have one part of this duplex symptom without the other. In health a very discursive motion of the eyes to one side was usually associated with a motion of the head in the same direction; nevertheless, by a slight effort of the will, it was possible to turn the eyes while the head was kept steady, or to turn the head while the eyes were kept fixed. Consequently they need not be surprised if in any diseased condition they should occasionally find one part of this duplex symptom without the other. With regard to the position of this centre of motion of the head and eyes, Ferrier, by experiments made some years ago on monkeys, satisfied himself that it was situated in the superior and posterior parts of the middle frontal convolutions. Some time afterwards Grasset argued from clinical observations that the site was in the inferior parietal lobuli. More recently the site was placed by Horsley again in the frontal lobe. A few months ago Wernicke ascertained to his complete satisfaction that it was situated in the inferior parietal lobuli; and now they had Dr. Little placing it in the frontal lobe.—Dr. LITTLE, in reply, admitted that there were different theories with respect to conjugate deviation of the head and eyes. As to the deviation in this case having been due to some more distant lesion of the brain, he felt some difficulty in adopting that supposition. Although the amount of brain substance lost was very considerable compared with the injury, still it was remarkably definite and remarkably local; and these circumstances were of importance in connection with the question of localisation. To say that the lesion here might have produced symptoms of interference with centres in other parts of the brain was no more than what could be said with respect to any lesion, traumatic or from disease, in any part of the brain.

Renal Calculus.—Dr. J. K. BARTON communicated a case of renal calculus, which had been successfully removed by a surgical operation. The calculus had been tightly wedged into the calyces of the kidney. Dr. Barton, in reply to Dr. FOOT, said the patient had no hæmaturia. The urine was faintly acid, but became alkaline after it had stood for some time.

Conjunctival Cyst.—Dr. J. B. STORY submitted a case of conjunctival cyst, which had been removed from the eye of a baby, aged 6 weeks. It was attached to the cornea, and sent a band backwards to the internal rectus muscle, from which it had to be raised by a strabismus hook. The cyst was a dermoid, and Mr. Scott exhibited microscopic sections of its wall. Mr. Story commented upon the presence of these dermoid cysts in cases of coloboma of the lids, and dermoid bands uniting the globe to the skin of the face, and stated his approval of the theory of Van Duyse, who attributed all these defects of the existence of amniotic adhesions in embryonic life.—The PRESIDENT remarked that adhesions between the amnion and the surfaces of the embryo were the greatest cause of these congenital defects.

Tubercular Kidney.—Dr. HEUSTON submitted an example of tubercular kidney in a boy, aged 13, which had been successfully removed by surgical operation. Microscopic specimens of the kidney were on the table, showing a giant cell and other evidences of tubercular disease. He had been unable, however, to detect in these specimens the bacillus tuberculosis.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

WEDNESDAY, NOVEMBER 6TH, 1889.

JOHN SMITH, M.D., LL.D., President, in the Chair.

Successful Trephining for Epilepsy.—Dr. FELKIN showed a patient who had been subject to epileptiform seizures, and who had been successfully trephined by Professor Hare. The seizures had not returned, and the atrophied limbs had increased in size to a remarkable degree. The patient was able to use both arm and leg with some freedom.

Treatment of Spinal Diseases by Suspension.—Professor GRAINGER STEWART introduced a series of five cases of spinal disease, which he had treated recently by suspension with remarkable success. The first two patients had shown pronounced symptoms of locomotor ataxy, which considerably improved under treatment. The progress had been pretty rapid at first, then there had been a pause, followed by a more gradual improvement. Two patients, who had presented symptoms of spastic paralysis, had been similarly treated with success. All the patients expressed their satisfaction with the progress they had made, and indicated that the treatment had not produced the slightest discomfort, apart from occasional shooting pain about the neck immediately after the operation. Professor Grainger Stewart then demonstrated the method of suspension. On the first day he suspends the patient for 10 seconds, he omits the following day, and on the third day suspends for 20 seconds, and so on, increasing by 10 seconds each alternate day. He had had no bad results.

Monoplegia resulting from Injury to the Brachial Plexus.—Dr. BYROM BRAMWELL showed a patient who suffered from complete paralysis of the upper extremity, as the result of injury from falling down the hold of a vessel. The muscles supplied by the musculo-spiral nerve were included in the paralysis. Marked wasting of muscular substance had followed.

Perforating Tumour of the Skull.—Dr. BYROM BRAMWELL also showed photographs of a perforating tumour of the skull. Although the tumour was of considerable size there had been a striking absence of symptoms, apart from protrusion of the eyeball.

Glycerite Preparations.—Dr. JAMES CARMICHAEL drew the attention of the Society to this useful method of exhibiting various drugs.

Congenital Absence of Tibia.—Dr. JOHN SHAW MCLAREN showed a dissection of a limb removed from a child by Dr. Heron Watson on account of this comparatively rare congenital abnormality.

Congenital Absence of Radius.—Dr. JOHN THOMSON showed a cast of this condition from a case in his practice.

President's Address.—The retiring President, Dr. JOHN SMITH, delivered his valedictory address. He congratulated the Society on the large amount of work gone through during the two years he had had the honour of presiding over their deliberations. In particular he referred to the numerous important discussions, of a more elaborate nature, which had been suggestive of investigations, and measures from which they might hope for much in the future. In particular he cited the discussion on tuberculosis, and the after-correspondence regarding the question, which resulted in the Society's being asked to send up representatives to appear before the Commission on the subject, and to the final adoption of their views. The papers read before the Society were then reviewed in detail. Dr. Smith concluded by referring to the blanks which death had made in their ranks, and, in a happy vein of humorous lament, to the blanks which often presented themselves nightly at their meetings through the absence of those whom the comforts and luxury of attained position detained at their own fireside. There were others, too, who had not thought it worth their while to join the Society. With such, it might be hoped, that the review of the excellent work carried out during the past two years would form the best arguments. In conclusion Dr. Smith thanked the Society for the honour they had done him, and for the courtesy and kindness which they had always extended towards him.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

THURSDAY, NOVEMBER 7TH, 1889.

C. N. GWYNNE, M.D., President, in the Chair.

Cases of Eye Injury.—Mr. S. SNELL introduced two patients. In one there was a rupture of the globe of the eye, with absence of the lens and entire absence of the iris. Vision was then $\frac{2}{60}$, and the patient read J with + glass. The tension and form of the eyeball were good. The accident took place last January, and was caused by direct violence. At the time the eyeball was filled with blood, and, in consequence of pain and other causes, enucleation was considered on more than one occasion. The patient was a man, aged 42. The second case was one of rupture of the choloid and optic nerve from direct violence. The accident happened eight weeks previously. There was no light perception.

Fibromyoma of Uterus.—Mr. R. FAVELL showed two specimens of fibromyoma of the uterus. In one case an attempt was made to remove the tumour, as by mechanical pressure it was causing urgent symptoms. Abdominal section was performed, but the adhesions being so strong between the back of the tumour, and the pelvis and rectum being so intimately adherent, the attempt at removal was abandoned. The patient died fourteen days afterwards from peritonitis. At the *post-mortem* examination, the Fallopian tubes were found much thickened and enlarged, and the ovaries undergoing cystic degeneration and strongly adherent to the side of the pelvis. In the other case, the patient had died from sudden and profuse hæmorrhage. The tumour weighed about 7 lbs.; the sinuses in the capsule of the tumour were very large near the cervix, and it appeared as if the hæmorrhage had taken place by the opening of one of them.

The Temporo-maxillary Joint.—Mr. FRANK HARRISON read a short paper on the temporo-maxillary articulation. He contrasted the action of the joint in carnivora, ruminants, and in the human subjects, showing that the various movements produced a modification in the shape of the teeth. In the human subject he showed the production and use of the cusps in action and repose. He also described the triangular construction of the jaw, being equilateral, having its base between the condyles (four inches) and its apex at the lower central incisors.

Laparotomy.—Mr. PYE-SMITH read the notes of a case of unsuccessful laparotomy. The patient, a boy, aged 13, was seized with colicky pains in the abdomen after watching a football match on a cold day. He was seen by Dr. Sinclair White on the third day, and a milk diet was ordered with small doses of morphine. Pain, with vomiting and constipation, continued for four days, when the vomiting ceased and the abdomen became distended. A saline aperient produced several liquid motions. For five days more the case seemed going on favourably, but on the twelfth day a tender lump was discovered two inches above the right internal abdominal ring. Next day tenesmus set in, and another lump was found to be pressing on the anterior wall of the rectum, just above the anus. On the fifteenth day of the illness Mr. Pye-Smith saw the patient in consultation with Dr. White. There was then general and moderate distension of the abdomen, which was tender, tense, and resonant. The chief tenderness was over the iliac and hypogastric regions, and here an elongated tumour was somewhat indistinctly felt, lying transversely, and feeling to be continuous with the mass felt *per rectum*, which distended the recto-vesical pouch. No fluctuation could be made out. The rectum was empty. No peristalsis was visible. No

rigors had occurred, but the temperature had ranged from 99° or 100° to 102° F., and the pulse from 90 to 132; respirations 24, markedly thoracic. Tongue furred; pain not markedly paroxysmal; no passage of blood or mucus. Intussusception seeming by no means improbable, inflation was tried before recommending an exploratory laparotomy. Neither air nor water injection effecting any change in the tumour, the abdomen was opened with antiseptic precautions. Several coils of small intestine were matted together by firm recent adhesions. At the spot where the lump had been first observed there was a small collection of pus between the parietes and the adherent bowel. This was drained and the wound closed. After the operation the patient's father recollected that a fortnight before the commencement of his illness the lad had fallen, whilst running, with a hard green apple in his pocket, which had struck him just above the right groin, and been completely crushed. This, it was suggested, might have been the cause of the peritonitis. Thirty-six hours after the operation a quantity of offensive pus was discharged *per anum*, and the lump there was found to have disappeared. On the evening of the next day, however, the pulse began to fail, and the patient died on the following morning, three days after the operation. No *post-mortem* examination was permitted. Mr. Pye-Smith expressed the opinion that had the diagnosis and pathology been clearly recognised, the treatment should have been limited to rest, with light diet and opium, supplemented by the evacuation of local abscesses as detected.

Specimen.—Mr. PYE-SMITH also showed a specimen of Kyestine Urine.

MIDLAND MEDICAL SOCIETY.

WEDNESDAY, NOVEMBER 6TH, 1889.

WILLIAM ROSS JORDAN, M.R.C.S., in the Chair.

Congenital Heart Disease.—Dr. FOXWELL brought forward a case of doubtful cardiac condition, which he was inclined to look upon as due to congenital disease. The patient, a boy aged 12, had his apex beating in the nipple line, whilst the superficial dulness reached to the third cartilage and mid-sternum. The apical first sound was churning in nature, with a semi-thrill, but no murmur. The second sound was much accented, and over the pulmonary area it was doubled. The apical impulse was hypertrophied, and there was epigastric pulsation. The pulse small and diminished on raising his arm. The boy appeared to be in excellent health, and, except for much sweating at night, and a curious total alopecia occurring suddenly eight months ago, and still persisting, there was nothing to note in either family or personal history. The urine was normal.

Phthisis.—Dr. FOXWELL also showed a girl with advanced phthisis—cavities at the right apex, breaking down at the left—who had been under his care for eighteen months. She first came to him for dyspepsia, which soon disappeared, and ever since she has been in good health, so much so that it had been extremely difficult to keep her under observation. She had remained well nourished and quite able to work, though meanwhile the disease had made considerable progress. There was no previous history of any severe illness, though the girl remembered having a troublesome cold about two years ago.

Congenital Syphilis.—Mr. BARLING showed a girl aged 17, the subject of congenital syphilis. She was the eldest of eight children, and the only one showing evidence of the disease. She was quite deaf, had double interstitial keratitis, Hutchinson's teeth, and severe ulceration of the palate. The soft palate was adherent to the base of the tongue, and food passed into the pharynx through a perforation on the right side which was not more than half an inch in diameter.

Alcoholic Paralysis.—Dr. SUCKLING read notes of a case of a man, aged 38, a baker, who had been in the Queen's Hospital for three months suffering from alcoholic paralysis, and who was now cured. Besides the usual symptoms of the disease there were two or three symptoms of much interest. He had slight optic neuritis, and dropped wrist was well marked, being more pronounced than dropped feet. Ataxia was also well marked in both upper and lower extremities, the muscular sense being very defective. The "reaction of degeneration" was present in a slight degree. The man had been a heavy drinker of spirits, and had suffered from alcoholic epilepsy and delirium tremens. Dr. Suckling laid stress upon the occurrence of optic neuritis in chronic alcoholism, and pointed out that cases of optic neuritis and ocular palsy due to alcohol might be mistaken for cerebral tumour, vomiting and headache being usually present also in the former. The knee-jerk had not yet returned, but this was the only remaining sign of disease.

Specimens.—Mr. CHAVASSE showed the following specimens:—1. A Tumour, weighing 9 ounces, removed from the Thyroid Gland of a Woman, aged 40. The history showed that its existence had been noted in the position of the right lobe of the gland since very early life, and a marked increase in size always followed each pregnancy. After the last parturition, fifteen months ago, the growth was rapid, causing displacement of the trachea, dyspnœa, and distressing symptoms. Recovery followed operation. 2. A Spindle-celled Sarcomatous Tumour, the size of a tangerine orange, removed from the Abdominal Wall, immediately above the level of the Umbilicus of a lady, aged 77. A tumour in the same situation was excised twenty-seven years ago by Sir William Fergusson, again fourteen years ago by Mr. Carden, and three years ago by Mr. Chavasse. The present growth first manifested itself in April last, and its increase in size was more rapid than on previous occasions. 3. The Right Halves of the Thyroid and Cricoid Cartilages, removed by Laryngectomy. The patient was a boy, aged 5, who, as the result of diphtheria and intubation, had complete stenosis of the larynx. Ten days after the operation the condition of the patient was very satisfactory.

Paper.—Dr. WARDEN read a paper on Parosphresia and Paragensia.

PATHOLOGICAL SOCIETY OF MANCHESTER.

WEDNESDAY, NOVEMBER 13TH, 1889.

J. DIXON MANN, M.B., President, in the Chair.

Adenoma in a Thyroid Gland in a Leopard.—Mr. A. H. YOUNG showed sections of the thyroid gland from a young adult leopard, which contained numerous small nodules of tumour growth. The nodules varied in size, but the largest was not more than three-eighths of an inch in diameter. Each nodule was round, of a whitish or cream-like colour, sharply circumscribed and distinctly limited by a thin fibrous capsule. Sections of the nodules showed that they consisted of epithelial cells of cuboidal form, arranged in cords, which were separated in fibrous tissue continuous with the capsule. In many places a distinct lumen was present, and the vesicular character of the normal gland tissue was assumed. With the exception of these nodules the gland was normal. All the other organs of the body were normal.

Obstructive Jaundice.—Dr. WILD showed the stomach and liver from a woman aged 28, who died with the symptoms of obstructive jaundice. The stomach was dilated, and the pyloric valve presented a considerable irregular thickening, with ulceration on the duodenal aspect; the orifice was only slightly constricted. Microscopic examination showed the new growth to be a typical carcinoma; the omentum was infiltrated and also the lymphatic glands, especially a group of glands surrounding the common bile duct; three of the latter were very firm and matted together, compressing the common bile duct and occluding the lumen, thus producing obstructive jaundice. All the glands showed an infiltration of carcinoma; there were no secondary deposits in the liver, which was much enlarged, and showed an unusual amount of cell degeneration and deposit of bile pigment; the spleen was also much enlarged—18 ounces. The interesting points about the case were: (1) the age of the patient; (2) the absence of special gastric symptoms; (3) the cause of the jaundice; (4) the advanced degeneration of the liver cells, in connection with the "cerebral" symptoms towards the close of life.

Curability of Phthisis.—Dr. THOMAS HARRIS recorded some observations on the frequency with which signs of involuted tubercle were found in the lungs of persons who had died from various diseases or injuries. He had found such signs in 38.84 per cent. of all the bodies of persons over 20 years of age who had died in the Manchester Royal Infirmary. Microscopically he found that many of the cases, however, could not be regarded as perfectly obsolete tubercle, since at the periphery of some of the old caseous foci signs of activity were present. In the majority of cases no tubercle bacilli could be found in the sections made from the old caseous spots, but one case was specially noteworthy; it was the case of an old caseous focus, which, although itself apparently quiescent to both the naked eye and to microscopical examination, had caused death by acute miliary tuberculosis of the lungs, and the old caseous focus was found to contain a most unusual number of tubercle bacilli. The negative results, as regards the discovery of bacilli in the majority of quiescent foci, Dr.

Harris did not regard as indicating the absence of risk to the organism from the presence of the caseous focus in the body. Spores of the bacilli might be present, even though no full-grown organisms were to be detected. Dr. Harris believed that old tubercular foci could not be regarded as being without risk to the organism, unless they were only represented by fibrous tissue, or completely calcified caseous foci. Incompletely calcified caseous foci were dangerous to the body in which they occurred, because of the risk of their setting up either a local disease (phthisis) or a general infection (acute miliary tuberculosis).

REVIEWS AND NOTICES.

THE DISEASES OF CHILDREN, Medical and Surgical. By HENRY ASHBY, M.D.Lond., M.R.C.P., Physician to the General Hospital for Sick Children, Manchester; Lecturer and Examiner in Diseases of Children in the Victoria University; and G. A. WRIGHT, B.A., M.B.Oxon., F.R.C.S.Eng., Assistant Surgeon to the Manchester Royal Infirmary, and Surgeon to the Children's Hospital. London: Longmans, Green and Co. 1889.

[*Second Notice.*]

The first chapter on the diseases of the respiratory organs is chiefly occupied by a description of membranous croup and of the operation of tracheotomy. The view here expressed, that though nearly all cases of membranous croup are diphtheria, a few are not, is maintained on the ground that solitary cases of membranous croup occur in isolated localities, that an exposure to cold will produce in some of the children of the same family catarrhal laryngitis and bronchitis, and in others membranous croup; that membranous croup may be associated with measles, no diphtheria being present in the neighbourhood; and that fibrinous exudations in the larynx and trachea have been experimentally produced in the lower animals by irritants. The difficulty of the diagnosis is frankly admitted, and it might, perhaps, have been added that it is only as an element in the prognosis that it has its chief importance; for however probable it may seem that a case of membranous croup is not diphtheria, it would be rash in the extreme to neglect any prophylactic precautions.

There are some good remarks on the physical examination of the chest in infancy and childhood; and here again we are disposed to think that Dr. Ashby might have written more fully with advantage; as it is, however, he brings out the most important point, which is that much more may be learnt from inspection and auscultation than from percussion, which is a far less reliable guide than in the adult. Opinions differ a good deal as to the nature of the acute pneumonia of infancy and early childhood; but Dr. Ashby is probably near the truth when he implies that typical croupous pneumonia is a rare disease at that age. Complete red hepatisation is rarely seen *post mortem*; the lung retains to some extent its spongy character, and the outlines of the lobules can be distinguished; under the microscope, though some fibrin may be seen, "the cellular element largely predominates." Even accepting the diagnosis of croupous pneumonia as correctly expressing the pathology of all the cases to which it is commonly applied, the disease is rare; this is well shown in an interesting table on page 194 of the number of cases diagnosed as croupous pneumonia treated in the Pendlebury Sick Children's Hospital during ten years. There were 401 such cases, 73 being between the ages of 10 and 14 years, 193 between 5 and 10, 123 between 2 and 5, and only 12 under 2 years of age. The remarks on the treatment of pneumonia are comprehensive and practical, and as a specimen of Dr. Ashby's method, and an example of the many excellent practical points which are scattered through the book, we quote the following sentences on the use of drugs in pneumonia:

"In cases where the crisis is delayed on account of the inflammatory process extending, as in the creeping form, and the child seems low and weak, there is always a temptation to give ammonia and stimulants, and these may in some cases be needed; but our impression is that patients do better in the inflammatory stages, when the process is still extending, on small doses of aconite, antimony, or salines than they do on a too stimulating treatment. An occasional dose of alcohol may do good when a continuous dosing is harmful; alcohol in large doses acts as a narcotic, and is apt to add to the drowsiness and tendency to delirium."

The specific fevers receive adequate treatment in two chapters, and there is a comprehensive chapter on diseases of the circulatory system, which is followed by a most admirable discussion and classification of the various forms of nævus, including lymphatic nævus. Assembled under the head of general diseases we find a somewhat bewildering series of diseased conditions, having no very near relationship to each other; considered independently, however, many of the articles are very excellent. There seem to be two contrary tendencies at work with the authors, who in one place present us with an extremely condensed and often dogmatic article, while in another, dealing with a subject of not more clinical importance and pathological interest, they indite an elaborate and very readable little essay. Such a contrast is there between the treatment in this section accorded to tuberculosis and to rickets. Most readers who have no nightmare examination to dread will vastly prefer the method in which rickets is treated, and it would indeed be difficult to match that short essay in any modern manual; the etiology of rickets is discussed with a fulness of knowledge and in a temperate spirit; its morbid anatomy is given according to most recent microscopical observations, and the nature and treatment of the characteristic deformities are admirably described and illustrated, both from the medical and the surgical point of view. Differences of opinion on these subjects must continue to exist until we have larger experiences of new methods, but the general treatment of the subject is excellent. The only statement to which exception must be taken as misleading is to the effect that the pigeon-breast is a slight form of the rickety chest.

Diseases of the nervous system are very fully treated, and here and there apt drawings or illustrative cases are inserted. There is a good article on mental affections in childhood, in which the importance of providing classes in the Board schools for the education of backward children is very properly insisted upon. The necessity for this reform has again and again been pointed out in these columns. Spina bifida and meningocele are well described and illustrated, and acute polio-myelitis receives the attention which its serious character and frequency demands. Too much prominence, however, is given to the contractures which occasionally occur in these cases, the reader being rather led to suppose that deformity from contracture is the rule instead of the exception.

From this point onwards the subjects treated are mainly surgical, and this part of the book, which occupies about one-third of the whole number of pages, will be found extremely valuable. All through the volumes the descriptions of congenital malformation are more fully given than in most textbooks, and the notes on malformations of the genito-urinary organs are clear and remarkably complete. The literature on lithotomy and litholapaxy has grown so rapidly of late, and the safety of the latter operation has been so abundantly proved, that Mr. Wright will probably feel justified in another edition in recommending it more strongly. Having spoken so highly of the earlier parts of the book, it is impossible to say more than that the chapters on bone and joint disease are among the best which it contains. We may note that in discussing the treatment of tuberculous disease of the knee-joint arthrectomy is recommended as the best treatment in all cases which are seen early enough, and that in cases where excision has become necessary, the transpatellar operation (Volkmann) is preferred. Hip-joint disease and its treatment are very fully described, and the differential diagnosis discussed with great fulness; the classification of diseases with which it may be confounded, which will be found on pp. 546-7, will suffice to show the extreme complexity of the questions which may arise, and the thoroughness which characterises the author's treatment of such clinical problems.

Mr. Wright recommends that as soon "as there is any evidence of external abscess, excision should certainly be performed, and still better results will, we believe, be obtained by operating even before the pus has escaped from the articulation. The operation is discredited because it is put off until disease is so far advanced that no mode of treatment can have more than a small proportion of good results, while timely excision cuts short the disease, saves pain, lessens the time of treatment, and gives a better limb."

A good deal of space is given to the treatment of spinal disease, which is very fully dealt with without, however, so far as we have observed, any novel suggestions. The anatomy of club-foot

is well described, and there are excellent short notes on other malformations of the limbs, such as the intra-uterine amputations and congenital dislocation of the hip (so called). The subject of teratology is briefly treated, and only so far as concerns the compound congenital tumours. Injuries of the limbs and trunk are the subject of a short practical chapter, and the work concludes with a note on anæsthetics for children by Mr. Alexander Wilson, who recommends chloroform for children under three years of age, but ether as safer for older children. An appendix contains notes on diet, antipyretic methods, and on certain drugs.

The book is well illustrated by woodcuts in the text, and there is a passably good index.

As will have been seen, the work is very complete; no subject which could be fairly considered to come within its scope is omitted, and a careful examination has shown the information given to be accurate. All sources of information—the works of previous systematic authors, the *Transactions* of learned societies, and the principal medical journals have been freely laid under contribution. The result is a work unique of its kind, which reflects the greatest honour on the ability, good judgment, and industry of the authors, and affords striking evidence of the very large share which the English-speaking physicians and surgeons have had in the more solid parts of the great recent increase of our knowledge of disease in children.

TWENTY-FIFTH ANNUAL REPORT OF THE SANITARY COMMISSIONER FOR BOMBAY. 1888.

IT is impossible, in noticing the work of the present able Sanitary Commissioner for the Government of Bombay, C. W. MACRURY, D.P.H.Camb., without an expression of regret at the untimely death of his predecessor, the late Deputy Surgeon-General Hewlett, whose labours in the cause of Indian sanitation it has often been our pleasing duty to record. Dr. Hewlett was an able man, who gave the best years of his life to promote the cause he had so much at heart. The people of Western India of all ranks and races, little as they may appreciate his unselfish labours, owe him a debt of gratitude which we should like to see remembered in the shape of a memorial having some relation to the work in which so many years of his useful life were spent. He "rests from his labours;" surely the memory of his good work should not be allowed to fade without a memorial.

During 1888, 36,500 persons died from cholera; in the preceding year the number of deaths from this cause amounted 27,711. In the twenty years since 1869, ending 1888, the number of deaths in the Bombay Presidency from cholera was 183,642; the year of greatest mortality was 1869, when 52,230 persons died. In the year under notice, out of the 24,535 villages in the Presidency, 3,127, or 12.74 per cent., were affected. In all there were 67,171 attacks, with 36,500 deaths, the percentage of deaths to attacks being 54.33. The Sanitary Commissioner dwells on the fact that among the ignorant population the old notion that there is something supernatural in an outburst of cholera is as strong as ever, and is now, as always, an obstacle to the removal of proved insanitary local conditions which favour its diffusion and development. Dr. Macrury, in the following words, repeats the lesson often given by his predecessor and other fellow labourers in India, and as often forgotten:

"Let a supply of pure drinking water be furnished to every village and town in India, and the mortality from cholera may be confidently predicted to dwindle to as low a rate as that from small-pox after vaccination. Apply the principles and precepts of sanitary science still further by carrying out improved drainage, conservancy, domestic, and personal hygiene, and the disease will inevitably disappear altogether. Fevers which are really the scourge of this country will be rendered less prevalent and fatal by an improved supply of drinking water. The pernicious nature of the drinking water and the reckless manner in which it is polluted in this country is only known to the comparatively few who have travelled for years in different parts of the outlying districts of the Presidency and Sind as I have done. My experience, therefore, would dictate the improving of the drinking water in detail in the first instance. If epidemic cholera and fevers are to be averted and mitigated, this work cannot be safely entrusted to natives alone. Other sanitary improvements should not be overlooked, but the water question is the most urgent and vitally important, and until it is successfully grappled with it is hopeless to expect any improvement in the health of the public."

These are weighty words; there is not a sanitarian in the three kingdoms who will not subscribe his name to them. The native press of India, as at present conducted, far from seconding the efforts of the Sanitary Commissioners to save the lives of the helpless thousands who perish annually from preventable diseases, throws all its influence into the other scale, and occupies itself with propagating sedition, distrust of Government, and the advocacy of political schemes unsuited to the conditions of the various races of the two hundred millions who compose the so-called "people of India," in whose names the Baboos of Calcutta affect to speak without any commission so to do. Cholera is a child of dirt; kill the parent and we need not trouble ourselves much about the offspring or the comma bacillus.

Dr. Macrury has a lesson as usual for antivaccinators. In 1877 the deaths from small-pox amounted to 27,369; in 1888, notwithstanding the increase of population, the number of deaths from this cause under extended vaccination reached only 3,617.

During 1888, 304,449 persons in the Bombay Presidency died from fever, against 308,722 in the previous year, a decrease of 4,273 for the year. The deaths from snake bites and the attacks of wild beasts amounted to 1,300.

A CONTRIBUTION TO THE SURGERY OF THE SPINAL CORD. By WILLIAM THORBURN, B.S., B.Sc., M.D. London: Ch. Griffin and Co. 1889.

IT is seldom that a work with so modest a title contains so much as this book, for it is really the fullest record we have of spinal surgery. It is perhaps best described as consisting of two distinct parts—one (the chief) on spinal surgery, and a smaller part which deals with the ophthalmoscopic appearances in spinal injury and a consideration of so-called "railway spine," or, more conveniently, "traumatic hysteria," though we do not like the term. It is the first part which will prove of most value to the surgeon, and there is no doubt that it will be extensively used and consulted by those who have to work in this direction. It is not a textbook, but it contains a large store of facts and a full reference to the experience of others. The papers have many of them appeared in various journals, and have attracted considerable attention. The great advances in cerebral surgery have naturally induced thoughtful surgeons to inquire into the possibility of relief by operation for many of the injuries and diseases of the spinal cord; and Mr. THORBURN'S opportunities of observing cases of those injuries and diseases have been unusually large, as he has been for some time Registrar to the Manchester Royal Infirmary. The field of observation has, therefore, been extensive, and the author has shown an amount of originality and sound judgment in taking up his subject which the profession will benefit by. Moreover, what he has said is said in a thoroughly scientific, judicious manner, and without any attempt at magnifying his own opinions or doing injustice to those of others.

Until very recent years the published descriptions of the symptoms of spinal injuries have almost always been vague and indefinite, so as to be of little use in throwing light upon the more obscure questions of spinal pathology and physiology, or even of permitting an accurate diagnosis of the cases themselves. And yet, we have in such cases a mine of wealth which, properly used, cannot fail to advance our knowledge of the normal and diseased action of this portion of the nervous system. The advances, too, in the operative surgery of the spine, under the advantages of modern methods, have made spinal surgery a greater possibility; but accuracy in diagnosis has yet to be advanced, and there is no doubt that these contributions will prove of great practical value in this respect.

The plan adopted by the author has been to give, first, a short outline of the physiological observations upon the functions of the different spinal nerves of the special regions considered; and then to give cases showing the effect of injury to these nerves. The cases are well and simply detailed, and each is followed by a few useful remarks showing the bearings of the case. Each region of the spine is in turn considered, and it will be useful to notice the conclusions at which the author arrives. In the cervical region, injury below the origin of the fourth nerve is attended with definite symptoms, according to the particular nerves irritated or destroyed; and a scheme is given of the particular muscles affected for each nerve, and also some valuable illustrations of the peculiar position of the limbs. The occurrence of hæmatomyelia in many cases of so-called "concussion" is also carefully considered, and this is shown to take place generally

where the greatest bending of the spine must occur. In fact, concussion by shock and without organic lesions or hæmorrhage, unless there has been forcible (though recoverable) bending of the spine, is not accepted. In injuries of the dorsal region, it is noticeable that the level of the upper border of the anæsthesia is usually somewhat below the level of the lesion, and a table is given of the cases which help to prove this. This is an important practical point, when we come to trephine the spine and want to know the indications for localising the affected area; and Mr. Horsley has already drawn particular attention to this matter. When the injury is above the level of the cilio-spinal centre—above the second dorsal nerve—certain changes occur in the optic disc, which are recognisable by the ophthalmoscope. Excellent diagrams are given of the cutaneous nerve areas affected in injuries to the cauda equina and the lumbo-sacral region; and a useful table, showing the motor and sensory areas affected when the different lumbar and sacral roots are involved.

Coming now to what is, perhaps, the most interesting chapter, "The indications for operative treatment in affections of the spinal cord," we find a carefully drawn out table of fifty-six cases, and the remarks which follow are worthy of thoughtful consideration. We can only shortly notice the questions raised and the conclusions arrived at. Are the results of fractures and dislocations incurable without operation? Practically we may say they are. Is the operation necessarily fatal or so dangerous as to be unjustifiable? Certainly not. If successful, is it likely to leave the spinal column in a condition too weak to perform its functions? No. Does operation hold out a prospect of improvement in all or any cases? Clinical evidence points to the fact that the damage done by an extensive crush is irreparable, and cases of severe hæmorrhage into the cord are probably equally unsatisfactory. The author, therefore, comes to the conclusion that for most injuries operation is unjustifiable. He, however, excepts cases of injury to the cauda equina, and we are not surprised that he gives encouragement to operation in cases of irritative depression of a lamina or arch. Similarly, in caries of the vertebræ, there is much chance of doing good, for when no improvement occurs after careful waiting, but paralysis is evidently extending, trephining has been very successful in the removal of indurated tissue. Of course, too, he recognises the value of operation in cases of pressure from other causes, as shown by the brilliant work of Mr. Horsley and others for spinal tumours.

The chapter on ophthalmoscopic changes in spinal injuries points to the occurrence of congestion and haziness of the disc when the injury involves the cord above the level of the second dorsal nerve; but beyond this fact we do not gain much knowledge. A final chapter is devoted to "traumatic hysteria," or so-called "railway spine"—a very difficult subject—but here treated with a considerable amount of judgment.

The work marks an important advance in modern surgery, and we are not surprised to find that Mr. Thorburn is so highly estimated at Manchester that his election on the surgical staff of the infirmary is just chronicled in the JOURNAL. We feel that the author is to be congratulated on the appearance of so useful a work.

THE PERINEUM: ITS ANATOMY, PHYSIOLOGY, AND METHODS OF RESTORATION AFTER INJURY. By HENRY O. MARCY, A.M., M.D., LL.D., Surgeon to the Private Hospital for Women, Cambridge, U.S.A., etc. Philadelphia: W. J. Dornan. 1889.

THIS work is a reprint from the *Transactions of the American Association of Obstetricians and Gynæcologists*, September, 1888. As might be expected from its title, it treats of the female perineum only. The anatomy of that anatomical region is complicated and particularly difficult to demonstrate. Operations on ruptured perineum are often necessary notwithstanding the perfection to which practical obstetrics has been raised. Laceration of the perineum is far less easy to avoid than vesico-vaginal fistula. The latter morbid condition has become very rare in this country, the former remains frequent. Perineorrhaphy is an operation which demands and promotes manual dexterity. Yet, notwithstanding the most careful manipulation and attention to minute details, the parts may fail to unite or break down after union. More frequently they yield, after apparently firm union, to the pressure of the pelvic structures above, nor does the repaired perineum bear subsequent labours. Little wonder can there be then, when we take the above conditions into account, that so much is written on the anatomy and surgery of the female perineum.

Dr. MARCY'S book consists of but thirty-one pages; the subject is, however, so important that this publication requires more notice than is generally accorded by the critic to other works of corresponding bulk. The woodcuts are of unequal merit, but perineal operations are very difficult to explain by drawings, for it is hard to indicate the planes and perspective of the structures concerned in perineorrhaphy. Again, the author, like all writers on plastic procedures, labours under the disadvantage of having to explain intricate manipulations by written directions. Lastly, the success of a modified operation depends greatly on the skill and experience of the operator. The reader is apt to overlook this fact, and, trying a new operation unsuccessfully, he may blame the author for what is only due to his own shortcomings.

Bearing in mind these very necessary considerations, we may more safely proceed to review and criticism. Dr. Marcy describes the anatomy of the perineum and the effects of laceration. The changes in the vaginal structures are, he believes, not due to a primary injury to the part, but to the secondary forces brought to bear upon it, through the modified relations of the muscles of the pelvic floor. The transversi perinei no longer support and hold in place the other groups, but, on the contrary, retract towards their origin so as to evert the vulvar opening. The levatores ani are unable to act as a suspensory band pulling forward and closing the vaginal canal, but, on the contrary, are freed from their central moorings and draw the anus upwards and backwards. The principle of Dr. Marcy's modification of perineorrhaphy is, among other things, to bring the sundered transversi together. The posterior third of the vagina is dissected upwards from its vulvar attachment, the deeper structures, as well as the mucous membrane, being raised. The dissection is carried, as deemed necessary, into the recto-vaginal space, and the flap is retained. In rectocele with prolapse, the deep layers of the post-vaginal fascia are closed by a continuous buried animal suture (catgut or kangaroo-tendon). In lifting forward the vagina from its vulvar attachment the retracted transversi perinei muscles, with their connections, can be reached and closed also by a deep buried suture, making in this way a true restoration of the pelvic floor. All superficial surfaces are coapted by a buried animal suture, applied in a blind continuous stitch from side to side, being covered, when dry, with iodoform collodion. In order to hold the parts in complete apposition, without strain, lateral supports are contrived. These supports are pins, each consisting of two parts which fit into each other. The operation is modified in complicated cases. These directions are intricate, and can only be fairly understood by perusal of Dr. Marcy's work, although some passages in its pages are somewhat obscure. As already observed, however, allowance must always be made, in criticising books on ruptured perineum, from the great difficulty of demonstrating flap-cutting and suturing by written directions, and even by diagrams.

The operation itself appears to have been followed by excellent results when performed by Dr. Marcy, who thoroughly understands its principle. We cannot help feeling, however, that at the best it is a relatively complicated variety of a naturally complicated procedure. There are several varieties of perineorrhaphy that are far simpler in detail and afford the most satisfactory results even when undertaken by an inexperienced general surgeon. Other varieties, more complicated than these simpler methods, yet hardly as intricate as Dr. Marcy's, are highly successful in experienced hands, yet very difficult to conduct to a favourable end when the operator is a beginner. The lateral support principle has been almost universally discarded as superfluous. In the hands of operators well versed in perineorrhaphy Dr. Marcy's operation will no doubt do good service to suffering women; in fact, it appears well adapted to very bad cases of complete rupture of the perineum, especially when of old standing, so that serious changes have taken place in the damaged structures and in the neighbouring muscles and fasciæ.

The work is written in excellent taste, and is quite free from offensive or sneering criticism of operators whose opinions differ from the author's. There is a good summary of recent modifications, but in giving just prominence to German and American authorities Dr. Marcy has overlooked British opinion. Hardly seven lines are allowed for Mr. Lawson Tait's flap operation, a proceeding which deserves much consideration, and no other English operator on this side of the Atlantic except Baker Brown is even noticed.

NOTES ON BOOKS.

Report of the Annual General Meeting of the Chemical Society, 1889.—After alluding to the history of the Society during the past year, the President (Mr. W. Crookes) gave some account of his recent researches on the behaviour of substances under the influence of the electric discharge in a high vacuum, with especial reference to their spectroscopic reactions. The substances treated of by Mr. Crookes on this occasion were the rare earths, which have occupied a considerable portion of his time for many years. The general tendency of research in this branch of chemistry has been at present to indicate the existence of an increasing number of metals; earths, which were formerly considered to be pure and simple substances, having been proved to be mixtures of different earths which may be separated from one another by such processes as fractional precipitation, etc. Mr. Crookes warns us that, after one process of fractionation has done all it can in the direction of separating the different constituents of an earth from one another, further separation may be effected by employing a different method, as he himself found in separating didymium and samarium.[1] As a result of his elaborate researches, Mr. Crookes arrives at the conclusion that there are a number of substances to which he can hardly at present give the name of elements, but which have hitherto resisted all efforts to split them up further; and such substances he proposes to name provisionally "meta-elements."

Festschrift zur Eröffnung des neuen allgemeinen Krankenhauses zu Hamburg-Eppendorf; herausgegeben von den Aerzten, redigirt von Dr. C. EISENLOHR. (Hamburg: W. M. Söhne. 1889).—This *Festschrift*, commemorating the opening of the Hamburg new General Hospital, consists of the following articles:—1. Dr. A. Kast: The Antiseptic Function of the Gastric Juice Quantitatively Considered. 2. Dr. Max Schede: My Experiences of Kidney Removal. 3. Dr. C. G. Haase: Notes on Operation for Cataract. 4. Dr. C. Lauenstein: i. The Origin and Prevention of Internal Obstruction after Radical Operation for Large Ventral Hernia; ii. On Subcutaneous Fracture of the Radius. 5. Dr. E. Fraenkel: i. A Case of Spontaneous Rupture of the Aorta; ii. A Case of Primary Sarcoma of the Heart. 6. Dr. Felix Wolff: i. The Relation of Cerebro-Spinal Meningitis to the Infectious Diseases; ii. On the Etiology of Cerebro-Spinal Meningitis in Hamburg. 7. Dr. C. Eisenlohr: The Pathology of Syphilitic Disease of the Posterior Columns of the Spinal Cord. 8. Dr. M. Nonne; *Post-Mortem* Appearances in a Case of Deficient Patellar Reflex. 9. i. On Fibrinous Coagulation and Curschmann's Spirals in the Sputum in Pneumonia; ii. A Case of Cortical Hemianopsia with *Post-Mortem* Appearances. The medical and surgical members of the staff of the Hamburg New General Hospital must be congratulated, not only on the buildings and appointments of the hospital, which will attract general attention, but on their highly interesting *Festschrift*.

In Accidents, and at Other Times. By E. L. HUSSEY. (Oxford: Horace Hart).—This little book is a reprint of a lecture delivered by Mr. Hussey in the year 1864 to the City of Oxford Companies of the Oxfordshire Rifle Volunteers, and, in face of the many excellent books, both large and small, on the subject of ambulance work published since that date, the need of a third edition of this sketchy little pamphlet does not seem clear. A single lecture on such a subject as "ambulance work" can only draw the attention of the audience to the great importance of acquiring such knowledge, and this, indeed, is all that Mr. Hussey succeeds in doing. As a practical guide to "first help" for a volunteer the book is worthless. On the subject of hæmorrhage, for example, Mr. Hussey gives many instances where the bleeding has been severe, and where he has been called in to attend, but his directions as to treatment are most meagre, and no effort is made to indicate the manner of controlling such important arteries as the subclavian and femoral. Again, fractures are referred to in only the most general way, and straw is the only available splint mentioned. Fainting, drunkenness, drowning, and other emergencies, are treated in an equally superficial manner. To be of any real value ambulance instruction should be accompanied by practical illustration, as far as possible, on the living subject; the lectures should be at least six in number, and the audience should at the close of each demonstration have an opportunity of practically testing their knowledge; they should compress the arteries, apply splints, adjust bandages, and practice artificial respiration. Books should only be used to refresh the memory. Mr. Hussey's lecture was given in 1864, and since that time, as he states at the end of the present third edition, "much interest has been shown in the study of what is called 'first help,' and many books, large and small, have been published under a wider view of what is wanted." Mr. Hussey's little book has played its part, and its place has been taken by others more practical and more detailed.

[1] *Phil. Trans.*, Part ii, June 18th, 1885.

Ueber die topographischen Beziehungen des Hirns zum Schädeldach. By LUD. AUG. MÜLLER. (Berne: Schmidt, Franke, and Cie. 1889.) (On the Topographical Relations of the Brain to the Skull-cap. By Lug. Aug. Müller).—We have had occasion to call attention recently[1] to an important paper on this subject by Messrs. Anderson and Makins, and we have here another by a German observer. The method here adopted differs somewhat from others, but the author has not fully appreciated what has already been done. He draws two primary lines, one sagittal and the other horizontal, from the glabella to the external occipital protuberance, and divides each into a hundred parts. Then he makes transverse arcs between the two primary lines by joining the corresponding tenths, that is, each end of a transverse arc is the same proportionate distance from the glabella on the two primary lines. These give him certain lines from which he measures, in centimètres, the position of the important brain areas. There is no doubt that by all the different methods of authors these areas may be approximately found, but that it is only an approximation can be seen by carefully comparing them for any definite point, as has been done by Anderson and Makins, and we are impressed by the greater clearness and practical character of the method of the latter authors. The percentage distances and proportions of Dr. Müller are practical, but the plan has already been adopted by Mr. Hare, and Messrs. Anderson and Makins give fractional distances. How far the cross lines given by Dr. Müller will prove useful remains to be seen. But we recognise the value of continued observations on this important subject for the help of surgeons, and only feel that the results should be rigidly tested by some such practical method as Messrs. Anderson and Makins have proposed and adopted.

[1] JOURNAL, October 19th, 1889.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

SCHUHKRAFFT'S CRYSTALLISED PERUVIAN BARK (OR SOLUBLE QUINQUINA).

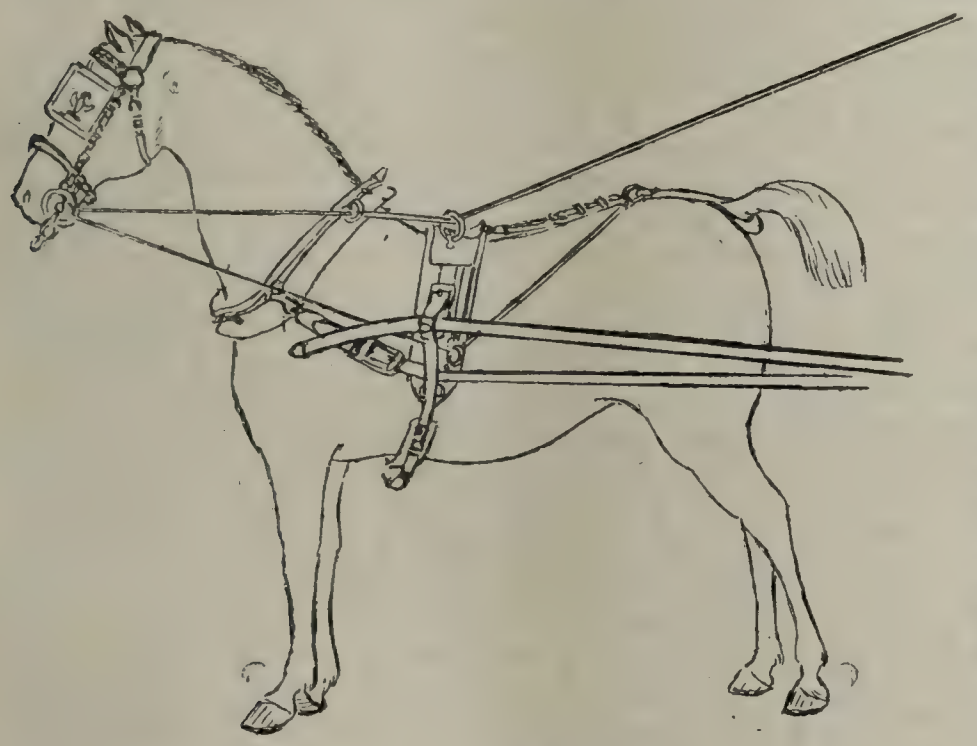
THE sample of the above, which we have received from Messrs. Burgoyne, Burbidges and Co., is a reddish-brown granular substance soluble in water. The solution has a decidedly sweet taste, with very little bitterness. It strikes black with tinct. ferri perchloridi, like the ordinary preparations of bark, thus indicating the presence of a tannin. It is stated on the label that it is guaranteed to contain exactly its weight of the purest bark imported direct from the plantations in Bolivia. This statement can hardly be taken literally, for it is soluble in water, and no vegetable tissue can be detected under the microscope.

The ordinary estimate of the value of a cinchona bark is based upon the amount of alkaloids which it contains. The *British Pharmacopœia* gives as a standard 5 to 6 per cent. of total alkaloids for the bark to be used in making the various preparations. These preparations are very bitter, and, roughly, this bitterness is a test of their quality. We do not see any statement in the pamphlet accompanying the sample as to the alkaloidal value of the crystallised Peruvian bark. It is well known that the efficacy of bark is chiefly due to the alkaloids it contains, yet it possesses certain properties of its own. The cincho-tannic acid present is powerfully astringent, and this contributes in some

measure to its effects, so that the astringent property of bark is better fitted for the treatment of relaxed conditions than quinine alone. The effervescent form of the crystallised Peruvian bark we find effervesces very feebly and dissolves slowly.

NEW SAFETY DRIVING REIN.

If the dog is, as Miss F. P. Cobbe tells us, *the* friend of man, the horse is his best servant, and to no profession are the services of the horse so essential as to the medical. The enormous extent to which the horse is used by medical men renders them specially liable to carriage accidents, as has been conclusively proved by the statistics of the Medical Sickness, Assurance, and Annuity Society, the proportion of accidents occurring during riding or driving among the insurers being considerably in excess of the proportion observed in other sections of the community. For this reason it may be well to give some description of an invention which has been perfected by Mr. Serjeant, in conjunction with Dr. Arthur Northcott. In this new appliance a long rein is buckled to the tail-band, it then passes downwards and forwards through a strong ring attached to the belly-band, then forwards and upwards through the rings of the bit, and then back to the hands of the driver through the hames and harness-pad rings in the ordinary way.



Dr. Northcott and Mr. Serjeant claim for this new safety rein advantages both as to safety and humanity. "As to safety: (1) It is a perfect stop for a runaway; (2) it prevents a horse from rearing and falling back; (3) it will, with a few times driving, cure the most determined jibber; also, with a few lessons, the most vicious kicker is made a safe and reliable horse; (4) pulling, shying, stargazing, and buck-jumping are rendered impossible by the use of the rein. As a humane appliance: (1) It completely does away with the use of that curse of modern harness, the bearing rein, also with the martingale; (2) with the worst horse a severe bit is never required, a bad puller being easily driven without any bit whatever, the reins then being passed through rings in the nose band; (3) in going uphill horses can have free use of their heads; (4) horses suddenly pulled up on asphalte and slippery roads by the head alone have a great strain thrown on their hind quarters, and, if they do not actually slip, very often sprain themselves; at a glance one can see that this is avoided by Serjeant's rein; (5) though such powerful control can be exercised over a horse, the appliance is most simple and graceful, can be fitted to any harness, and adds greatly to the appearance of the animal, causing him to carry his head and tail well and naturally."

The rein can be seen and obtained at Brown's Harness Factory, 17, Great Quebec Street, Montagu Square, W.

EXTRACTUM SENNÆ LEGUMINUM LIQUIDUM.

Senna pods differ from senna leaves in containing more of the active purgative principle cathartin, and in the almost entire absence of resinous matter and volatile oil. To this resinous matter is attributed the griping properties of senna leaves, and the unpleasant taste of the volatile oil; for if the leaves are treated with alcohol, which extracts the resin and volatile oil, and then dried, it is found that preparations made from them are purgative, and that the griping properties and taste are absent. The pods therefore appear to be specially suitable for making the preparations of senna on account of their richness in cathartin and absence of the principle which causes griping and that giving the unpleasant taste.

Messrs. Rankin and Borland, pharmaceutical chemists, Kilmarnock, have sent to us for examination a sample of liquid extract of senna pods prepared by them, which, in every respect bears out what has been stated as to the superiority of senna pods over leaves.

The preparation is a black-looking liquid, free from the slightest unpleasant taste. We have practically tested it, and have found that even in half-drachm doses it acts as an efficient purge, and that it does not produce any griping.

LANO-CREOLIN AND CREOLIN GAUZE.

Jeyes's Sanitary Compounds Company has forwarded a sample of lano-creolin, which is stated to be composed of unguentum lanolini, containing 5 per cent. of creolin. It is put up in collapsible tubes, convenient for carrying about. There is no doubt that creolin possesses antiseptic properties, and lano-creolin appears to be an excellent antiseptic ointment, and may be found suitable for disinfecting the hands before operations for gynæcological purposes.

The same company have also introduced an antiseptic gauze, containing 10 per cent. of creolin. The gauze from which it is prepared is stated to be free of all fat and acids, and most absorbent, thus rendering it a suitable material for dressing wounds.

BYNO-HYPOPHOSPHITES.

Messrs. Allen and Hanburys prepare under the above name a combination of malt extract with the hypophosphites of iron, lime, potash, and manganese, and the alkaloids of cinchona and nux vomica. It is stated to be a neutral solution, but is found to be distinctly acid to test-paper; it is, in fact, difficult to understand how a solution containing hypophosphites with the alkaloids, quinine, and strychnine, can be otherwise than slightly acid. The preparation has an agreeable taste, and is very easily miscible with water, forming a perfectly transparent solution. It is of the consistence of ordinary syrup, so that it admits of easy measurement—an important point considering that strychnine is one of the ingredients.

DIABETIC FOODS.

We have examined several kinds of Callard's diabetic foods. The samples submitted to us consisted of (1) gluten bread, (2) gluten rolls, (3) gluten cracknels, (4) gluten and almond biscuits, (5) almond biscuits, (6) cocoa-nut biscuits, (7) sweet almond biscuits, and (8) sponge cakes. The first five of these samples are stated to contain no sugar, and practically no starch, which upon analysis we have found to be the fact. The remaining foods mentioned we have found to be sweetened with a small percentage of saccharin, and to contain neither starch nor sugar, as stated by the manufacturers. The samples we have received have been very well prepared, and evidently from the best materials. The presence of the very small quantities of saccharin in these foods cannot be objected to, whatever views may be held as to the physiological effect of saccharin, and they are in every way well suited for the purpose intended.

Ricord is said to have left memoirs of his life and professional career under the suggestive title of *The Nineteenth Century Seen with the Speculum.*

An Italian translation of Dr. Jukes De Styrap's *Code of Medical Ethics* is now in course of publication in the columns of the *Gazzetta Medica Lombarda* of Milan. The translation, which is from the third edition, is from the pen of Dr. Lodovico Coulliaux.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1889.

SUBSCRIPTIONS to the Association for 1889 became due on January 1st; and notice is hereby given, in accordance with by-law 5, that Branch Secretaries' subscription-accounts close on October 31st, and all unpaid subscriptions must be forwarded, after that date, to the General Secretary, 429, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, NOVEMBER 23RD, 1889.

THE DUTIES OF COUNTY MEDICAL OFFICERS OF HEALTH.

WE have received a copy of a report by Dr. George Reid, the recently appointed medical officer of health for Staffordshire, which is the first report of its kind issued by a county council. The report, which, though short, is lucid and well arranged, will be examined with interest chiefly because it indicates some of the duties which appertain to an office which should exercise an important influence on the public health. The Local Government Act requires that the county council shall receive the annual reports and such special reports as, according to the Public Health Act, the medical officers of health of the various sanitary authorities are required to forward to the Local Government Board. Should the sanitary authorities fail to carry out the duties imposed upon them, it is the duty of the council to report accordingly to the Local Government Board. With the view of assisting the council in forming an opinion regarding the matters contained in these reports, Dr. Reid has analysed and reported on them, making such suggestions as he thinks desirable. But, as he points out, unless specially authorised to do so, he has no power to inspect personally any district, or to take any direct action for the improvement of sanitary conditions. Nevertheless, by immediately calling the attention of the Council to a threatened epidemic of typhus in a populous and most insanitary part of the county, he has been the means of rousing the local sanitary authority to a sense of its duty, and has thus rendered an important service to the authority which has lately appointed him. In like manner by selecting the report of one of his colleagues for special comment, he has brought under the notice of the Staffordshire Council the fact that in a part of the county where enteric fever specially prevails, the local sanitary authority allows polluted well-water to be used for drinking purposes when a good water supply could be easily obtained. A district so neglected is a danger to the public health in a wide sense, and to officially call attention to such districts is evidently one of the most important and responsible duties which the medical officer for a county has to perform.

But whilst admitting their importance, we think these duties might be added to with advantage. The sanitary committee of the West Riding of Yorkshire has ordered that their medical officer of health is to assist or advise local sanitary authorities and their officers, if they, the local authorities, desire his advice or assistance in the performance of their duties under the statutes relating to or affecting public health. This seems to us to be a duty which the county officer might be expected to perform, and one which, if efficiently discharged, is likely to prove of immediate benefit to the community. There are many ways in which an officer, who is independent of local interests, can render valuable help to a colleague who is placed under different circumstances, as for example, in the case of legal difficulties arising out of the interpretation which may be given to the Public Health Act, or in the case of legal proceedings necessary for the promotion or protection of the interests of the inhabitants of the county. Moreover, it will frequently happen that the duties of a local authority relate to questions in which special knowledge is required, as for example, in the preparation of by-laws for the regulation of cowsheds, dairies, and milkshops; the inspection of animals affected with diseases which render their flesh or their milk unfit for food; or the provision of hospital accommodation for the infectious sick. It will at once be seen that for such services a specially qualified officer is needed, and every county authority ought certainly to have such an officer on its staff.

We have thus indicated some of the principal duties which appear to us to belong to the newly created offices, but we fully recognise that the efficient discharge of such duties will, unless great discrimination is used, be attended with considerable difficulties. Above all it seems necessary that the newly appointed officers should make it clear at the outset that they do not regard their offices as intended to supersede those which were created by the Metropolis Local Management Act, or by Mr. Stansfeld's Act of 1872. Some of these offices have been in existence for a generation or more, and there can be no question that the existing system, though it is capable of improvement, has, on the whole, worked admirably and been of immense public benefit. There are some cases which may be quoted as glaring instances of the failure of "local self-government," but looked at as a whole our system of public health administration in England is a brilliant success. The lessening of zymotic disease and the general reduction of the death-rate since the appointment of medical officers under the Public Health Act may be pointed to as incontrovertible evidence that the duties of those offices have, in the main, been efficiently discharged.

NURSES FOR SICK COUNTRY FOLK.

WITH the natural desire to forward the interests of nurses as regards their hospital training and ulterior prospects we are prone to overlook the needs of large classes of the community, who, on account of their moderate means, are virtually deprived of the services of certificated and well-trained nurses. In large cities the want has been met to a certain extent by charitable associations, whose work is confined to the parish poor, but in small towns, villages, and rural districts attempts to cope with the difficulty have been otherwise than satisfactory, while little or no attention has been extended to the needs of that lower middle class which forms, if not the bulk, a very large contingent of the population. This want, and the causes which have led to it, are clear enough to those who have watched the changes and improvements which have

taken place in the nursing world during the last quarter of a century, and which, there is every reason to believe, will continue in operation. These causes may be traced to the high charges made by certificated nurses and by nursing institutions, the preference and aptitude shown by nurses in general for private and special nursing among people who can well remunerate them for their services, the expense of maintaining highly-trained women for district work among the poor, and, above all, the want of suitable organisation in country towns and rural districts among all classes to attain the desideratum.

We have been led to make these remarks by the perusal of a remarkable pamphlet by Miss Broadwood, of Ockley, explanatory of the working of a nursing association established seven years since at Ockley and Dorking, and which has been further developed in nine separate centres in Surrey and adjacent counties. In all fifty-eight country parishes have adopted the principles of the Ockley association, while many more in different parts of the country have the system in contemplation. When we state that it involves a departure from the orthodox basis, constantly advocated by the best authorities on the educational training of nurses, and that it utilises the services of a more humble class than are to be found in hospital or in public or private nursing institutions, we have said probably enough to condemn its principles, but let us hear what its promoters say in its defence.

Miss Broadwood contends—and most people with a familiar knowledge of the poor will agree with her—that local prejudices and predilections go a long way in securing their confidence, and that they would take infinitely more kindly to beings of their own flesh and blood known to them or to their neighbours, who would not object to cook and clean for them and to mind their children, than they would to a highly certificated nurse, fresh from the experience of a London hospital, with probably exalted notions of her own superiority. Excellent and well-trained nurses were to be had for money (many think the market is being overstocked), but the people would not employ them, preferring rather to "muddle along" when in trouble, with and often without the help of a sympathising friend.

Such appears to have been the normal state of matters at Ockley prior to the formation of the nursing association. It was resolved that the society should be founded on a co-operative basis on the parochial system, and that it should be largely dependent on voluntary help from ladies, each of whom should be resident in and represent her parish, the whole number forming the committee. To regulate the machinery it was necessary to have a resident secretary, of course honorary, and the scheme provided for a limitation of the nursing area to parishes within twelve miles of the secretary's residence. The members of committee from the various parishes were required to collect a sum of not less than £1 for every hundred of the population. To avoid the expense and inconvenience of a central home for the nurses it was resolved to lodge them in their several parishes, and to enable people of every class to obtain their services a sliding scale of subscriptions was adopted at rates which it was understood would be doubled to non-subscribers. On this last resolution, which appears to have met with some opposition at the outset, depends the whole gist and success of the scheme, and indeed of all parallel attempts to advance the welfare of the poor. People will always value most what they pay for, and indiscriminate charity, as we all know, leads to indolence, improvidence, and loss of self-respect. To enlist as large a number as possible in any provident scheme, it is above all things necessary that the subscriptions should be on the most moderate scale and in keeping with the capabilities of those we are attempting to benefit.

The annual rates fixed by the Ockley Association for their composite members are models in their way. We only hope the committee are able to differentiate between the claims of the various classes. The subscriptions from farm and village labourers amount to 2s. per annum; from artisans and school teachers, 3s.; farmers and tradespeople, 5s.; and the gentry (a somewhat indefinable term), 10s. annually. Any of these requiring a nurse for themselves or their families has to pay the secretary about double the above amounts per week, and in addition they are bound to maintain the nurse, and to pay her travelling expenses when necessary. No nurse is at liberty to attend a patient without receiving an order to that effect from the secretary or the local member of committee, who is assumed to be cognisant of what occurs in her district. In cases where residential nursing is unnecessary, as must frequently happen, a nurse may be obtained within a radius of two miles from her home at a cost of 9d. for a day or night of twelve hours, or 3d. an hour for single visits, in the course of which she may have to dress wounds or burns, or perform other acts of occasional nursing. When called to lying-in cases, which appear to constitute more than one-half of the patients attended, the nurse is required to see to all the domestic requirements of the family with the exception of the washing. Should there be no sleeping accommodation for her in the cottage, the Association defrays the cost of a bed in a neighbour's house, and chair beds are retained in custody of some of the committee for use in an emergency. Each nurse is furnished with a basket of sickroom appliances, and, lest she should fare badly in the homes of exceptionally poor subscribers, she is allowed 2s. 6d. a week in addition to the board she may otherwise receive. The women are taken on at any age from 21 to 40, and are paid at the rate of £22 the first year, and £28 after, the smaller wage being due to the fact of the society having to pay £5 5s. for a month's training for each probationer at the City of London Lying-in Hospital. This appears to be all the training the nurses receive before entering on their multifarious duties, but it accords with the small payments from the subscribers, the menial work which must be performed, and the humble class selected to perform it. There appears, however, to be no lack of willing hands.

Many will call the movement retrogressive, but on the assurance that the women are in the highest degree helpful, that their services meet with the approval of the medical men practising in the districts, and of a responsible committee of ladies, under whose auspices and supervision they are continually at work, we should have some hesitation in condemning it. On the other hand, it must strike everyone as highly desirable that the probationers should receive some little insight into hospital work apart from their lying-in experience. Miss Broadwood, to whom the inception of the system is due, admits this, but she finds the difficulties in her way are well-

nigh insurmountable. The commercial element in sick nursing as opposed to the charitable has for many years past gained the ascendency, and in consequence of a tacit agreement among most of the nurse-training hospitals not to certify their nurses under a three years' term, combined with an abundance of candidates to fill prospective vacancies, there is small hope for special facilities for training being afforded to charitable and other societies bent on parochial and district work. It is true that most large hospitals arrange with private nursing institutions to train probationers for them, for periods usually of twelve months, and on terms mutually advantageous, but such an arrangement would not suit the means and hardly the objects of charitable societies which have other motives in view. If by reason of the monopoly the doors of the general hospitals are closed against these societies, it is high time that provision should be made to meet the want elsewhere, and nowhere could it be met to greater advantage than in the poor-law infirmaries. These establishments are well known to possess a rich variety of the very cases that a nurse is most likely to encounter in rural districts, and most of them have the additional advantage of possessing lying-in wards. They are not much sought after as nursing schools, and it is greatly to be regretted that the material they contain is not more utilised for educational purposes of a medical as well as of a nursing character. Whether it will be possible in the future to break down this spirit of exclusiveness for the common benefit is a problem urgently demanding attention.

It is generally understood that the nursing in poor-law infirmaries has much improved of late years, although we hear complaints from some of the best managed institutions that the number of good nurses employed is quite inadequate to the masses of sick people they have to attend, while the pauper assistants are very unsatisfactory. There is little doubt that it would vastly improve matters if the infirmary authorities made arrangements to enable a succession of respectable countrywomen, selected by ladies' committees, to enter their service for terms, say, of six or twelve months' duration. The fresh hands would greatly assist the senior nurses in their work, and in return would be benefited by the experience; their services, which would include also a good deal of manual, very improperly called menial, work, being considered an equivalent for their board and lodging.

We would be the last to countenance any attempt to lower the standard of excellence required from the certificated and high class nurse; but where a great want exists affecting no mean portion of the population, and notably the poor, it is not only a blunder to ignore it, but our duty to use every effort to remedy it.

POSITION AND PROSPECTS OF FORENSIC MEDICINE.

ANYONE who will take the trouble to contrast the relative positions of forensic medicine and public health at the present day with their relative status a quarter of a century ago cannot fail to be struck with the fact that whilst the latter subject has come to the front by leaps and bounds as it were, and attained a prominence worthy of its great importance, the former remains exactly *in statu quo*, and this notwithstanding the fact that forensic medicine has always been a compulsory subject at our examining bodies, public health never, and that while a systematic course of lectures on forensic medicine is the rule in all our medical schools and colleges, public health has but rarely been the subject of systematic instruction. If we turn to the Continent we shall find that though the practice differs in the different countries we are alone in our virtual neglect of this important branch of public medicine. In France, Austria, Hungary, and Germany, every practitioner of medicine is liable, as is the case in this country, to be called upon to undertake a medico-legal examination, but much better arrangements are made in these countries for providing the student with the necessary opportunities for acquiring knowledge. In Paris the great school attached to the Morgue is too well known to need more than mention, and in Vienna, Buda-Pesth, and Prague, the arrangements are most complete, and the students are enabled to assist at medico-legal examinations, both as regards the *post-mortem* and the microscopical work. In Belgium, as we learn from a recent address by Professor De Visscher, of Ghent, a special medico-legal diploma is about to be created. In Germany a different system prevails, and the whole subject of forensic medicine is relegated to the hands of specialists, who have undergone a special examination and constitute a well recognised body in the State, and the institutions where these studies are carried on are frequently appealed to for an opinion on the diverging views of experts. The great mass of practitioners are not therefore liable to be called upon to give evidence in medico-legal cases, except of course as to questions of fact. We believe that the establishment of a body of trained experts, scattered over the country, competent to conduct a thorough investigation into the medico-legal aspects of any case, would be an immense public gain, and would be an enormous relief to the general body of medical men at large and, we may add, of the jury-serving community, for if a coroner had such an officer at hand to appeal to, there can be no doubt that the number of inquests he would hold in the course of a year would be materially reduced. One such officer to each coroner in the country districts would probably be sufficient, but in large towns more would be necessary. Such an officer would require to be a thoroughly skilled morbid anatomist and toxicologist; indeed he would have to be competent to solve all the problems, both medical and surgical, that might arise in connection with the dead body. His duties would be so arduous that it is not likely he would have leisure for private practice, and he should therefore be debarred from undertaking this, and in return, of course, he would require to be paid upon a liberal scale.

At present it must be admitted that but little training is given anywhere which would fit men for such an office, but in this matter we have no doubt the supply would soon be found when the demand was made evident. The present mode of teaching forensic medicine would be quite insufficient, but there ought to be no difficulty in the largest and wealthiest metropolis in the world in establishing a school which would be able to afford to its students the necessary instruction, and it would probably be found necessary to provide that the student should not commence his studies in this special branch until he was already legally qualified to practise.

Two steps which would no doubt materially contribute to bring about such change as we have indicated are, first, the establishment by some one or more of the universities or licensing bodies of a diploma in forensic medicine, and we commend this suggestion especially to the University of Cambridge, and, secondly, the formation of a medico-legal society. Such a society already exists in France and Belgium, and there are at least two societies of this kind in the United States, but here, though we have a great many societies, we have none filling up this very obvious gap. We will hope that this reproach will soon be wiped out.

GENIUS AND INSANITY.

It would be an interesting subject to inquire how much the world owes to its great insane. Popular belief inclines to the notion—rather fostered, it must be confessed, by the alienists—that we are all a little mad at times, and there is a tendency amongst even educated people to classify characters which they fail to comprehend as somewhat deranged, which often means no more than not arranged on the most conventional lines. Dr. Magnan, of Paris, recently made the rather rash statement that certain kinds of philanthrophy and harmless fads tended towards insanity. A lady who kept a hospital for sick cats, and another who abused every morning the slaughterers of oxen at Villette, were set down by this authority as mentally deranged. Disraeli, in his *Curiosities of Literature*, tells some droll stories of mediæval saints whose dirty habits would nowadays ensure their transference to a lunatic asylum. Saint Macaire, for example, was so shocked at having accidentally killed a louse on one occasion that he endured seven years of penitence among the thorns and briars of a forest. Most Englishmen would consider Saint Macaire insane, though by Buddhists (but on different grounds) the incident would not be held as evidence of impaired reason. On the other hand, the humanitarian fads which startled the French physician into making so absurd a diagnosis would be held in this country to imply nothing more than an amiable weakness on behalf of the lower animals, which unfortunately Continental nations are very far from appreciating. Before we presume to label such people as of sound or unsound mind we must have very clear and positive ideas as to what constitutes typical mental health, and at present we are far enough from any such vantage ground.

With the advancement of our mental pathology it is probable that we shall detect finer shades of intellectual aberration than our present knowledge permits; but it is equally to be expected that we shall discover that these are quite consistent with the capacity for doing a great deal of useful work in the world, and that, too, of the highest class. It is even now a question whether some of the most original and daring flights of human genius have not been prompted by definite divergencies from perfect mental health. So narrow is the boundary line between genius and insanity. "*Nullum magnum ingenium sine mixturâ dementiæ est.*" "Excellence, the daring, and the happy, can only be attained by human faculties by starts." What is the precise physiology of these? or is it, perhaps, pathology we should have said? Dr. W. W. Ireland, whose work entitled *The Blot on the Brain* is well known, has recently published what may be termed a continuation of that line of study under the rather fanciful title, *Through the Ivory Gate.*[1] This has nothing to do with the entrance to an eastern palace, as might at first sight be supposed, but is one of the portals of sleep referred to by Virgil[2] as "shining brightly, skilfully wrought with white ivory, but through this the Manes send false dreams to the world above." It is an attempt, to interpret the conduct and opinions of Swedenborg: Blake: Louis II of Bavaria: Charles Guiteau, the assassin of President Garfield: Louis Riel, the leader of the New River Rebellion: Theodore of Abyssinia: and Theebaw, King of Burmah, in the light of psychological science. There will not, we presume, be much difference of opinion as to the mental condition of all except the first two of these when the facts presented by Dr. Ireland are considered by medical men, but with respect to Emanuel Swedenborg and William Blake a more prolonged study and a more special training will be necessary.

Swedenborg, considered merely as the founder of an "ism" or a "new church," very inadequately represents the philosopher to whom Coleridge, Emerson, Browning, and many other great thinkers are so largely indebted for some of the deepest and most spiritual portions of their teaching. His was "a colossal soul," as Emerson says; "he lies vast abroad on his times, uncomprehended by them, and requires a long focal distance to be seen." When Dr. Ireland says in his preface that all the characters described in the present work suffered from some mental derangement—that they were led away by delusions or uncontrollable passions from the right comprehension of things or the right line of conduct—we cannot help thinking that he is not quite the sort of critic to whom we should look for a sympathetic presentation of Swedenborg's life and labours. If he succeeds in proving him to have been a mere lunatic dreamer, he endangers the reputation of every pioneer into the depths of untraversed forests, and of every explorer and reformer in every branch of study. Swedenborg was a physicist, a chemist, an anatomist, and psychologist—Dr. Ireland admits so much; he anticipated many later discoveries—this we know; yet, because he also "talked with angels" and "visited Heaven and Hell"—as he declared he did—he must be set down as insane, and included in a list of cases which embraces Charles Guiteau and Theebaw.

This is hard measure for one of the world's original thinkers. "Lend me your ears, brother and sister dunces," writes Mr. Birrell, "not to pluck, but that I may whisper into their furry depths 'The world has few great thinkers; let us make the most of those we have'!" We gain nothing by charging with insanity harmless visionaries who "see an angel" where we are only conscious of a happy inspiration, and who "talk with God" where an ordinary mortal is merely impressed with a great idea. It is very much a matter of expression which partakes of the poetical on the one side and of the matter of fact on the other.

In Dr. Knight's recently-published *Life of Wordsworth* there is an interesting appendix, which gives some amusing conversations with farmers and countrymen of the Lake districts,

[1] Bell and Bradfute, Edinburgh. 1889.
[2] *Aen.*, vi, 893.

who knew the poet and considered his conduct exceedingly strange. They thought him "a moody man," who would stand gazing at and talking to trees and rocks. It would probaby have been easy enough to have obtained evidence of lunacy if the opinions of these bucolic folk were accepted without qualification. When Dr. Ireland tells us that Swedenborg must have been insane because "he transferred his thoughts and interests to a world of his own fancy, and withdrew them from the ways of ordinary men" he shows as little sympathy with the mystic as the Lake farmers with the poet. Swedenborg may or may not have been mad, but we do not think Dr. Ireland has succeeded in proving that lunacy is accountable for his remarkable genius, fine ethical views, and profound insight.

Nor can we quite accept Dr. Ireland's opinion about Blake as poet and painter; his *Songs of Innocence* and his *Illustrations of the Book of Job* must ever take rank among the sanest and most admirable productions of human genius. "The greatness of Blake's mind," says Mr. Comyns Carr, "is even better established than its frailty, and in considering the work that he has left we must remember that it is by the sublimity of his genius and not by any mental defect that he is most clearly distinguished from his fellows." Yet Dr. Ireland claims Blake for his casebook because "he was deeply religious and a mystic who sought for new light on the inner sense of the Scriptures" and "believed that he conversed with the spirits of the departed."

Though we have found fault with Dr. Ireland as the exponent in these instances of an extreme view, we gladly admit that he tells his stories in an interesting way, and with much of what he says of Charles Guiteau, Louis Riel, and Kings Theodore and Theebaw we find no difficulty in agreeing. His book, though likely to raise controversy, is well worth reading.

Sir Joseph Lister will read a paper on Operative Treatment of Dislocation of the Shoulder at a meeting of the Hunterian Society, to be held on Wednesday, November 27th, in the theatre of the London Institution, Finsbury Circus. Members of the profession will be admitted on presenting their cards.

PROPOSED MEMORIAL TO THE LATE DR. J. P. JOULE.

The Mayor of Manchester has called a public meeting for November 28th, to consider the best way of doing honour to the memory of the late Dr. J. Prescott Joule, whose death we announced a short time ago. It is suggested that a monument, similar to that of Dr. John Dalton, should be erected.

PENNY-WISE FINANCE.

The President of the Egyptian Council of Ministers has promulgated a decree which seems better suited to a chapter in the *Arabian Nights* than the columns of the official journal of a Government which claims to be at least semi-civilised. The number of patients in the Egyptian hospitals supported by the Government has been, during the past administration, as our Egyptian correspondent stated in one of his recent letters, in excess of previous years, and as a consequence the expenditure has been greater. The Minister of the Interior accordingly applied for an additional credit. This has been grudgingly granted, but the decree has an extraordinary rider to the effect that such an application will not "in the future be tolerated under any pretext," and the Directeur des Services Sanitaires is made "personally responsible, under the terms of the decree of February 19th, 1887, for the amount expended in excess of the credit allowed." The sanitary department is doing admirable work in Egypt, important to the Egyptians primilarily, but also of international importance, for the persistence of insanitary conditions in Egypt is a standing menace to Europe.

MALINGERERS' FEVER.

At a recent meeting of the Manchester and Literary Philosophical Society, Dr. Alexander Hodgkinson called attention to the case of a girl, who was not suffering from any febrile complaint, but in whom the thermometer registered abnormally high temperatures. Observation led to the discovery that she had somehow learned a well-known dodge and was in the habit of wrapping the thermometer in the edge of the blanket and then inserting it in her mouth. The general conclusion drawn during the discussion of Dr. Hodgkinson's paper appeared to be that the increase of temperature is the result of the work done by the capillary attraction of the moisture.

THE GENERAL MEDICAL COUNCIL.

It is now feared that the anticipations so confidently expressed a few weeks ago to the effect that the session of the General Medical Council, which begins on Tuesday next, would be brief, will be falsified. The Council will be called upon to consider the general principles governing the exercise of their penal powers, and also to exercise them in certain cases. Several applications for readmission to the *Register* will also have to be considered. Then there is the question of the practical element in medical education which, as well as the necessity for a five years' curriculum, will certainly arise on the reports of the inspectors of examination, and, finally, to mention only one other topic, there is the propriety of the Council undertaking the duty of registering midwives, with which a Bill to be introduced by Mr. H. F. Pease, M.P., in the next session of Parliament, proposes to saddle it.

THE DWELLINGS OF THE POOR.

Sir Edward Guinness has placed a sum of a quarter of a million in the hands of Lord Rowton, Mr. Ritchie, President of the Local Government Board, and Mr. Plunket, First Commissioner of Works, to be held by them in trust for the erection of dwellings for the labouring poor. Of the whole amount, £200,000 is to be expended in London, and £50,000 in Dublin. The object of the generous donor is to provide clean and healthy homes for the poorest of the wage-earning classes, and to show that this can be done on a sound financial basis. The income derived from the rents of the houses is to be reinvested, with a view to the further development of the scheme. This munificent bequest, given for so noble a purpose, will lead to an important experiment in the housing of the poorest classes in the town populations of this country. The conditions of the experiment, it must be admitted, are very difficult to fulfil. But, if it should be successful, it will be a boon to the poor in many ways, for it will lessen the amount of illness which is the inevitable result of insanitary dwellings, and which not only tends to shorten life, but makes men unable to work and to support those who are dependent on their daily labour.

"HUNGRY CHILDREN IN BOARD SCHOOLS."

Starvation among children goes on all the year round, but is harder to bear and is more severe as winter approaches. Last year food was provided for the children at forty-eight Board schools in London by a voluntary committee, of which Mrs. Pennington is Honorary Secretary, and this Committee again appeal for means of carrying on their work. The Board say that 43,888 children need food; probably that is the fact; it is further un-

doubtedly true that these children cannot learn well or grow properly unless they are fed, neither will their conduct or school attendance be satisfactory without food. The organisation for feeding them is fairly good; an army of volunteers is ready to help in distributing food, and the necessary funds could be raised to feed them all among a warm-hearted, child-loving people. The only grave point on the other side is, Will relief to human suffering, beyond the individuals seen, be afforded? It may be feared that, if these "dinner doles" continue year by year, the number of children needing them will increase more rapidly, and parents become careless to their duties in providing and cooking meals for the children. All measures of public hygiene and popular recreation may be more safely recommended to the benevolent than any form of dole giving, however administered.

AINHUM, A BRAZILIAN DISEASE.

AINHUM was first systematically described by a Brazilian surgeon as attacking coloured races in Brazil. The merit of its actual discovery, as Dr. Radcliffe Crocker and others have pointed out, is due to Dr. Clarke, who described the disease before the Epidemiological Society in 1860, as a dry gangrene of the little toe among the natives of the Gold Coast. Dr. Da Silva, Lima, however, described ainhum as a disorder long known as existing amongst Africans and Creoles in South America, first writing about it in the *Gazeta Medica de Bahia* in 1867. Ainhum consists in hypertrophy and degenerative changes in the little toe, a constriction forming and slowly becoming deeper until the digit is amputated spontaneously or otherwise. The disease is often symmetrical and may last for years. It is now known that the fourth, or even the great toe, may be affected, and Egles describes a case where a finger was attacked. It is frequent near Bahia, and also occurs in the Southern States of America, the West Indies, the West Coast of Africa, India (where Hindoos are also liable to the disease), Réunion, and Nossi-bé. M. Cogues has described a case of ainhum, which occurred in Madagascar, in the March number of the *Archives de Médecine Navale*. The pathology of ainhum is obscure, and although spontaneous amputation of digits is a feature in some forms of leprosy, it is by no means certain that the two diseases are closely allied.

A CASE OF TRANSFUSION.

A LAD named Gilbert Taylor, while working at a threshing machine at Tarleton, was caught in the machinery and terribly injured. On being taken to the Preston Royal Infirmary it was found that he had lost his left foot, and the leg was so severely crushed that it would have necessitated, had he been in a fit condition, amputation below the knee. The lad lost a large amount of blood, five hours having elapsed from the time of the accident until his admission into the infirmary. When admitted the limb was still bleeding, and the lad was weak from loss of blood, and partly, no doubt, from shock. Dr. Platt, the senior house-surgeon, at once arrested the hæmorrhage, then applied heat, and gave suitable stimulants. The operation of transfusion was then resorted to by Dr. Platt, and four ounces of blood from the arm of Dr. William Oliver, the assistant house-surgeon, was injected. Despite all efforts the lad only rallied slightly, and died about two hours after admission.

LEGISLATION FOR INEBRIATES.

A NUMEROUS company of medical practitioners assembled under the auspices of the Midland Medical League, at the Grand Hotel, Birmingham, on November 16th, to discuss the legal and preventive remedies for drunkenness and dipsomania. Mr. Lawson Tait occupied the chair. Professor Gairdner, of Glasgow, opened the discussion, and enforced the need for further legislative measures for the more effectual restraint of habitual drunkards. In the discussion which ensued, Dr. Wade, Dr. Saundby, Dr. Norman Kerr, and Dr. F. J. Gray, in addition to the president, took part. It was unanimously resolved:—"That this meeting is strongly in favour of fresh legislation in the direction of compulsory provision for the detention and treatment of well-defined cases of habitual inebriety, in the interest of the individual and of the community at large."

LECTURES AT THE ROYAL COLLEGE OF PHYSICIANS.

THE subject of the Gulstonian Lectures by Dr. G. N. Pitt, at the Royal College of Physicians next March, will be "Cerebral Lesions." Dr. Hughlings Jackson's Lumleian Lectures will be on "Convulsive Seizures." Dr. Arthur Ransome has chosen for the subject of the Milroy Lectures, which will be delivered on February 25th and 27th, and March 4th and 6th, "The Etiology and Prevention of Phthisis." These lectures will be published in the columns of the JOURNAL.

DEGREES FOR LONDON MEDICAL STUDENTS.

THE Report of the Special Committee on the proposed reconstruction of the University of London was presented to the Senate at its meeting on November 20th. We understand that a very lengthy discussion ensued, the chief topics debated being the advisability of adding to the recommendations of the draft report a proposal to admit provincial colleges on the same footing as metropolitan colleges, and the policy of accepting the examinations of the Conjoint Board in England as qualifying in part for the degrees of M.B. and B.S. The report as emended will no doubt shortly be forwarded to the Royal Colleges of Physicians and Surgeons, the Incorporated Law Society, and to the metropolitan colleges for their consideration.

PROSECUTIONS UNDER THE PUBLIC HEALTH ACT.

WE are glad to see that the authorities at Nottingham are making an example of some of the most reckless cases of exposure of persons suffering from scarlet fever. A labourer has been lately prosecuted for allowing his wife to leave the house and visit a shop after he had been told by the medical practitioner in attendance that she was suffering from scarlet fever. In another case a grocer was summoned for sending his son to school whilst peeling from scarlet fever. The defendant in this case is reported to have talked very loudly about the "rights of the subject." We do not clearly apprehend what is meant by this phrase, but it certainly should not imply the right to expose other persons to a dangerous infectious disease. The Nottingham Town Council have provided hospital accommodation for scarlet fever, and it therefore becomes their duty, as representing the ratepayers, to see that those persons who do not choose to avail themselves of the accommodation provided at the public expense take sufficient care not to expose others to avoidable risks. We think that the Council has been well advised by their medical officer of health in undertaking these prosecutions, and we hope that in London, now that the Notification of Infectious Diseases Act is in operation, similar proceedings will be instituted by local authorities.

THE OPERATIONS IN BURMAH.

THE *London Gazette* of November 15th contains despatches from Sir George White, commanding the Upper Burmah Field Force, respecting the operations in Burmah between March 31st, 1888, and March 31st, 1889. In bringing to notice the names of officers who rendered specially valuable service, Sir George White says: "Surgeon I. P. Doyle, Indian Medical Service (Madras), distinguished himself much by personal courage and care of the sick.

On December 9th, 1888, he was twice wounded. On January 1st, 1889, during the withdrawal from Kan to Gangaw, he again distinguished himself; and it is greatly in consequence of his courage and bearing that the wounded got safely into Gangaw. I commend this officer very specially to the consideration of His Excellency the Commander-in-Chief.....The following officers [among others] have also well earned mention in this despatch for service in the Chin Hills:—Surgeon-Major A. B. Strahan, 44th Goorkha Light Infantry; Surgeon F. A. Rogers, 42nd Goorkha Light Infantry; and Surgeon W. H. B. Robinson, Indian Medical Service, Bengal.....Surgeon C. S. Cronin, Medical Staff, has also earned mention in this despatch by his devotion to duty and care of the wounded.....I have made the gallant conduct of Surgeon J. Crimmin, Indian Medical Service, with the Karenni Field Force, the subject of a special report and recommendation."

THE IMPROVEMENT OF INSANITARY HOUSES.

THE *Daily Telegraph* has been the means of bringing the complex social problem of the housing of the poor again under public notice. As usually happens when a sensation is created on this subject, a number of suggestions are made for the improvement of insanitary areas or unhealthy houses by alterations in the law, some of which we venture to predict will be found impracticable. But we take this occasion to urge an amendment of the law relating to nuisances injurious to health, which is desired by many experienced medical officers of health, and which is probably within the range of practical politics. The amendment we suggest is one that would make the existence of a nuisance injurious to health—when proved in a court of justice—a punishable offence. At present it is not so. Sanitary authorities issue notices for the removal of such nuisances as those arising from foul basement drains, back yards flooded with sewage, filthy waterbutts, defective roofs, etc.; the notices are neglected; the owners are summoned and the cases against them are proved. But there are no penalties for their neglect. The magistrate can make orders, and if his orders are neglected then, and not till then, penalties can be imposed. In the meantime, the proceedings will have extended over several days, sometimes even weeks, and as frequently no attempts are made to remove the nuisances until the proceedings become serious—that is to say, until the magistrate's orders are made—the poor people who live in the houses have to endure a condition of things which they suppose the sanitary authority has power to remedy expeditiously. Now what is needed is a simple amendment of the law which would have the effect of making the neglect of the sanitary authority's notice to remove a nuisance injurious to health an offence punishable by a fine. A penalty of £5 would be sufficient for the purpose; the neglect of the magistrate's order being, of course, punishable by a further fine. If such an amendment in the law could be obtained sanitary officials would be able to do ten times the amount of work they can accomplish at present, and the dwellings of the poor would soon show a corresponding improvement. We commend the subject to the attention of the London County Council.

THE SUPPLY OF POWERFUL DRUGS.

THE censure of a chemist's assistant by a coroner's jury at Stockport for want of proper discrimination in supplying a powerful chemical substance raises a question akin to that discussed last week in our note on the sale of poison. The circumstances of the case were briefly these: A domestic servant, who fancied that she was suffering from neuralgia, was supplied by a chemist's assistant with four packets of antipyrin, each containing 12 grains, and told to take the contents of one every hour and a half. She took one dose, and died the next day; but the cause of death, as deposed to by Dr. Gordon, was a tumour on the brain. In the course of the inquiry, however, the assistant admitted that he had never read the instruction issued by the manufacturers that antipyrin should be supplied only on the order of a medical man, or the warning that its effect upon a weak heart might be dangerous, and it was this carelessness that was the subject of condemnation by the jury. It is true it might be argued that, since the medical evidence was to the effect that the antipyrin was not the cause of death, such an expression of opinion as to the manner of its sale was uncalled for; but the censure will nevertheless be endorsed most heartily by those who understand the subject best. It seems monstrous that the supply of none of the dozen or more powerful chemical compounds that have recently been introduced as antipyretics and hypnotics is safeguarded in any other way than by the fear of consequences after an accident has happened through its misuse. In fact, they may all be supplied indiscriminately and in any quantity without the intervention of medical advice, not only by the qualified chemist and druggist, but by the enterprising grocer or storekeeper. We have reason to believe, however, that in all the better conducted pharmaceutical establishments considerable discretion is exercised in dealing with antipyrin and similar compounds, and we have failed to find any entry corresponding with the name of the person censured in the register of qualified chemists and druggists. In the absence of legislation, it may be hoped that the Pharmaceutical Society will continue to use its influence towards increasing the sense of responsibility in all who have the handling of such powerful substances. We believe that the duty and interests of the pharmacist and the medical man are in accord on this question, and that they can both render useful service to the public by educating it to understand the importance that powerful drugs and chemicals intended for the treatment of disease should be prescribed and dispensed only by persons who have been specially trained to perform the respective duties.

RAILWAY SPINE.

A BERLIN telegram with the above heading, which appeared in the *Standard* of November 20th, contained an account[1] of the case of a Berlin engine-driver who was said to be suffering from a disease of rare occurrence known to German physicians only under the English name of "railway spine." With the greatest bravery and presence of mind the man had been the means of averting a fearful collision, and we read that a terrible excitement had taken possession of him, and that all the feelings of excitement, terror, and responsibility were compressed into the space of a few moments—in the moments which elapsed between his first consciousness of the impending danger and his successful and heroic prevention of the accident. He had no further immediate effects than a violent trembling in his legs; and, after continuing at his work for five days, the symptoms of this railway spine showed themselves in full development. So far, in the account there is no evidence of spinal injury, and the symptoms named are as little suggestive of it. We read that the man is completely prostrated, incapable of exertion, and quite lost to his calling. He has become lean, his gait is slouching and toilsome, and his speech slow and stammering. Digestion, memory, and sleep are seriously affected; there is diminution of nervous sensibility (*sic*) over the whole body, so that he can scarcely feel the prick of a pin which draws blood. The legs, moreover, are benumbed, and, as it were, palsied up to the knee. The only apparent reason, therefore, for calling this a case of railway spine is that his present condition is the result of something which happened to him on a railway, together with the notion, long exploded in this country, that railway injuries are of necessity spinal. The

[1] Taken from the *Berliner klin. Woch.*

explanation of the case is, in reality, very simple. It is a not very uncommon or extraordinary example of a functional neurosis; in other words, of traumatic hysteria originated by profound psychical disturbance. And associated with and underlying this in its present stage is a considerable amount of general nervous depression, such as is often termed neurasthenia. A recognition of these conditions is essential if treatment in the case is to be of any avail. It is, we think, a matter for regret that paragraphs, more or less of a sensational kind, such as that from which we have quoted, should appear in the lay press where no comment can be made upon them, or explanation be given of them, by those who are competent to do so. They are fraught with grievous harm. They increase the apprehension, anxiety, and nervousness of those who have been recently in railway accidents, and who may happen to read them, and indirectly they are in this way likely to cost the railway companies many thousands of pounds. This is no idle statement, but is a fact within our own knowledge on more occasions than one.

LARYNGECTOMY FOR CANCER.

A CASE of complete extirpation of the larynx for medullary cancer has lately been reported by Dr. E. Boccomini, surgeon to the Ospedale Maggiore, of Milan.[1] The patient, a man, aged 54, had been hoarse since August, 1887. In March, 1888, he was examined by the well-known laryngologist, Professor Labus, who pronounced him to be suffering from epithelial cancer of the right side of the larynx (vocal cord and ventricular band). "Purely by way of experiment" a course of iodide of potassium was prescribed, and when the man was admitted to the Ospedale Maggiore on September 27th, 1888, his breathing was so embarrassed that he could not lie down in bed, and sleep was impossible. Tracheotomy was at once performed, and the growth being found to have increased so much as to leave but a little chink at the posterior part of the glottis for the passage of air, it was determined to remove the larynx. The operation was performed on October 25th, the trachea being divided immediately below the cricoid cartilage. The upper cut margin of the anterior wall of the pharynx was stitched to the edges of the skin-wound, and an œsophageal tube passed in and fixed in position. The upper end of the divided trachea was plugged with iodoform gauze (respiration being carried out through the tracheotomy tube), and a dressing of the same material was placed over the wound. The patient showed hardly any sign of shock, and everything went well till the seventh day, when he complained of pain in the chest and epigastrium. This immediately ceased on the œsophageal tube being removed, and it was found that he could swallow milk, concentrated beef-tea, and wine sufficiently well to allow artificial feeding to be dispensed with. On the eighteenth day he was able to swallow solid substances like fried brain, chicken, and bread; on the twenty-seventh the wound was healed, with the exception of a tiny fistula under the hyoid bone, leading into the pharynx. There was no trace of recurrence. Although the patient had now completely recovered, Dr. Boccomini induced him to stay in the hospital, where he could live more comfortably than at home, and at the same time be under constant observation. For some months he remained there in perfect health, eating the ordinary "full diet" with excellent appetite, cleaning and changing the tracheotomy tube for himself, and, though of course voiceless, even managing to speak so as to be intelligible at a little distance. About the middle of February recurrence took place in the neck; dysphagia came on, and the man died exhausted on April 19th, five months and twenty-four days after the operation. Up to the last he breathed through the cannula without difficulty. The disease was proved by microscopic examination to be medullary cancer.

[1] *Gazzetta Medica Lombarda*, October 12th and 19th.

MERCURIAL FLANNEL.

IN the October number of *L'Union Pharmaceutique*, M. P. Carles gives a detailed account of the method of preparing mercurial flannel, an article which appears to be coming into use in France. Its introduction is due to Professor Merget, of Bordeaux, who in his recent thesis for the degree of Doctor of Medicine, shows that when frictions are made with mercurial ointment, the mercury is not absorbed by the healthy skin, and that the metal acts only by the vapours which it spreads, and which are introduced into the system by means of the respiratory passages. The inconveniences attending the use of mercurial applications are well known; they are sometimes difficult to apply, and occasionally they cause cutaneous eruptions and salivation. Professor Merget has proposed to replace them by applications of thick tissues, upon which is fixed an adherent deposit of mercury reduced chemically to an impalpable powder, and placed in conditions most suitable for it to become slowly vaporised. Flannel is the material used for this purpose. It is first treated with a solution of sodium carbonate in order to free it from grease, and thus prepared it is dipped into a saturated solution of mercurous nitrate and afterwards into liquor ammoniæ; this solution precipitates the mercury in the tissues of the flannel as mercurous ammonium. To make use of the mercurial flannel it is sufficient to place a square of 25 centimètres on one side near the respiratory passages. Although the system is thus in direct contact with the mercurial vapours, it is not saturated by them, for they are rapidly eliminated by the renal and intestinal excretions, and thus an equilibrium is maintained. Experience has shown that respiring these vapours every night, and leaving them off during the day, sick people and those in good health support them without the least inconvenience during several months. It is necessary to observe that if the mercurial dust from the flannel be inhaled with the vapours, salivation is rapidly produced. The piece of flannel, therefore, must be enclosed in a bag of some light tissue, so as to prevent the dusting out of the mercurial powder. The flannel thus protected is placed under the patient's head if he sleeps on his side, or upon his chest if he lies upon his back. This mercurial flannel will give sensible vapours of mercury which can be recognised by tests for years. It weakens, however, sensibly every day when in contact with the hot body; it is therefore necessary to renew it about every three weeks. It can also be used as an application to the skin in cutaneous affections due to parasites. For this purpose it is applied in the form of a glove, a sleeve, or bandage.

FATAL RESULT OF SUSPENSION FOR ATAXY.

A CASE of locomotor ataxy, in which suspension was followed by death, was not long ago reported by Dr. C. Borsari, of Modena.[1] The patient, a man aged 45, was in the second stage of the disease, which was complicated by aortic incompetence. After the first suspension, which lasted fifteen minutes, and was carried out "with every precaution and with the help of a well-constructed apparatus," the patient had momentary anæsthesia in the feet; his face became pale, his eyes glassy, and he complained of giddiness and faintness. These symptoms passed off after a while, and the man was able to walk back to his ward. He was afterwards suspended for short periods on alternate days, though the operation was always followed by increase of staggering in the gait, by convulsive movements of the arms and legs, and by pallor and an expression of distress in the countenance. After three or four sittings, however, there was a notable improvement in motor co-ordination. Later on violent vomiting (an entirely new feature in the case), set in, together with a certain amount of pyrexia, which lasted for forty-eight hours. When the temperature fell to normal he was suspended for the eighth time, the

[1] *Rivista Generale Italiana di Clinica Medica*, October 25th.

operation lasting forty seconds and being followed by no untoward effect. Soon afterwards, however, the vomiting became worse, and the man complained of intense pain in the epigastrium. This was speedily followed by delirium with convulsions, ending in coma and death three days after the last suspension. The necropsy confirmed the presence of the aortic disease and the characteristic lesions in the spinal cord; in addition to these there were also found signs of acute exudative leptomeningitis, both cerebral and spinal, the latter being in the dorso-cervical region. There was no indication that the affection of the heart had been in any way aggravated by the suspension; and Dr. Borsari leaves it to be settled by further experience whether the acute inflammatory process was set up by the strain to which the membranes of the spinal nerve roots were subjected during suspension. He points out that, although suspension has been performed thousands of times, no similar accident has yet been recorded.

LEPROSY AT THE CAPE.

In the current number of *Blackwood's Magazine*, the writer of the article in the September number on Leprosy at the Cape, publishes a memorandum in support of the statements which have excited so much attention both in England and South Africa. Already in the October number independent support of the article had been supplied from various sides. In the JOURNAL for September 14th, a correspondent published a statement, if more concise, certainly not less strong, regarding the miserable condition of the unfortunate lepers of Robben Island. An "Old Cape Reporter" writing to *South Africa*, on September 7th, states that the writer in *Blackwood* had in no way overdrawn the picture of the actual state of things, and speaking from knowledge gained by him in 1883, when he visited the island as a shorthand writer to the Select Committee appointed by the Cape Government, he remarked that the state of things existent then was exactly as it was described in the *Blackwood* article. Similar testimony is offered by Dr. J. W. Matthew, a former member of the Cape Parliament, in the *Evening News and Post* for September 2nd. He states that on a visit to the leper establishment at Robben Island he found that the bathroom and kitchen were identical, one place only being provided for the lepers, in which they lived, ate, drank, and slept, the miserable sufferers rolling about in squalid filth, their clothes soaked and smeared with the discharge from their festering sores. The publication of these remarkable statements has very properly excited the inhabitants of Cape Town, who sent a deputation to the Government in order to represent the condition of the establishment in Robben Island. The Premier (Sir Gordon Sprigg) and the ex-Colonial Secretary (Mr. Tudhope), are stated to have declared that the article in *Blackwood* is a gross exaggeration. The *Blackwood* writer refers in reply to the files of Cape papers, of which he had sent copies to the editor of *Blackwood*. The other questions raised, such as whether the Government really have power to retain the lepers compulsorily, whether the lepers themselves were of the lowest class (black people), whether they have a right to wander about the island to fish and amuse themselves in any reasonable way, whether their condition on Robben Island is infinitely superior to that in which they would exist in their own homes—these are questions which after all do not bear on the essential point. The main facts stated by the reviewer, to wit, that the leper buildings are, as they were characterised by Dr. Ross, an officer under the Colonial Government, a disgrace to the country, and literally only fit to be burnt down and laid low, that the most terrible want of cleanliness and ordinary nursing is the constant condition of these wretched people, that the ordinary sanitary appliances and regulations which ought to be used wherever sick people are congregated are not used, are facts which in themselves are so strong a scarcely to require the vivid, detailed, and disgusting picture painted by the writer in *Blackwood's Magazine*. After all it would seem to be to some extent a question of money. In the memorandum the writer states that he has discovered that the Cape Government has for economy's sake been clothing the lepers in cast off lunatics' clothing, that only one leper in three has on an average possessed a single shirt, and that their coats have been fastened in immediate contact with their bodies. Furthermore, that practically they have been without any means of washing except in a small quantity of cold water within small metal basins. There are certain evils for which publicity is sure to bring a remedy. The condition of the unfortunate lepers in Robben Island is one of these. We have no doubt whatever that steps will now be taken by which the unfortunate lepers will be sufficiently well housed, their persons and sores kept clean, nurses provided, and the danger of infection and contamination reduced to a minimum. No Government professing to be civilised can, in the face of such publicity as has been given in *Blackwood's Magazine*, defy the ordinary humane sentiments common to all instructed people by withholding the money and the measures which are necessary to attain this end.

SCOTLAND.

ABERDEEN UNIVERSITY ASSESSORSHIPS.

We understand that the signatures to the requisition asking Dr Angus Fraser to allow himself to be nominated for one of the assessorships now number 570. On the last occasion in which a contest took place, 549 medical graduates voted; so that, already Dr. Fraser has received more promises of support than the total number which voted in the last election. Amongst the other names may be mentioned that of Dr. Bruce, representative in the Medical Council for Scotland; Dr. Mitchell Bruce, London; Professor Cossar Ewart, Edinburgh; Professor Ferrier, London; Sir Wm. Guyer Hunter, M.P., London; Dr. Stephen Mackenzie, London; Sir Arthur Mitchell, LL.D., Edinburgh; Professor Japp Sinclair, Manchester; Dr. James Ross, LL.D., Manchester, etc. We may add that, in Aberdeen itself and surrounding district, the support accorded to Dr. Fraser is practically unanimous.

QUEEN VICTORIA JUBILEE INSTITUTE FOR NURSES: SCOTTISH BRANCH.

The first annual general meeting of the Scottish Branch of the Queen Victoria Jubilee Institute for Nurses was held last week in Edinburgh, under the presidency of Lord Provost Boyd. There was a large and influential attendance, including the Countess of Rosebery, President of the Provisional Committee, the Presidents of the Royal Colleges of Physicians and Surgeons of Edinburgh, the Dean of Faculty, etc. The report showed that the Committee had taken the flat, No. 5, North Charlotte Street, as a temporary home, and had appointed Miss Peter superintendent. She began her work on April 1st with three nurses, and five others had been since added. In addition to hospital, maternity, and district training, the nurses attended a course of lectures on hygiene and on food, and had practical lessons in cooking; one nurse had been engaged by the Kilmarnock Nursing Association for the Sick Poor. Another begins work at Wemyss shortly. A third has undertaken duties under Miss Cowan. in the Fountainbridge District of Edinburgh. The medical officers of the Royal Dispensary, Richmond Street, have arranged for part services of a nurse. The work of nursing has given much satisfaction to both doctors and patients. The nurses give one or more visits daily to the patients, the length varying with the amount of nursing required. The object of the insti-

tute is to afford to the poor the best nursing possible. The wish of the trustees is that none of the money granted by them should be spent on gifts of food or clothing to patients. Recognising the fact that many cases of illness cannot be coped with satisfactorily without warm clothing and food, the Countess of Rosebery inaugurated a Scottish Needlework Guild, to provide clothing and funds for food and medical comforts. It has branches in sixteen Scottish counties. The cases nursed from April 1st to October 31st, 1889, numbered 321; and the visits, 7,517. The total receipts have amounted to £2,360 15s. 9d., and the expenditure to £671 14s., leaving a surplus of £1,689 1s. 9d., which may be regarded as the nucleus of a building fund.

GLASGOW UNIVERSITY ASSESSORSHIPS.

Mr. R. Vary Campbell, Sheriff Guthrie, and Dr. McVail, three candidates for the recently made seats in the Glasgow University Court, held a meeting in Edinburgh this week, when they expressed pronounced views on the urgent necessity that those who are in favour of Scottish University reform should stand together and offer an united opposition to those who had opposed the Bill. Dr. McVail contended that the fundamental doctrine of their opponents was that extra-mural teaching was to be no part of the new University extension movement.

SOCIAL AND SANITARY REFORM IN EDINBURGH.

On Monday afternoon were held the annual meetings of two Edinburgh Societies, which have for their object the physical and moral improvement of the poorer inhabitants of the city. The object of the Social Union of Edinburgh, as expressed by the Chairman, is to create a healthy public opinion on that subject, so as to render it impossible for owners of property to make money out of buildings into which they would not put a prize ox or a prize pig. The Society has now several large properties in the poor districts under its care. Mr. Cooper, burgh engineer, spoke of the valuable assistance which the Union had given to the Public Health Committee in dealing with the insanitary districts of the city. The object of the Social and Sanitary Society is similar, more particularly to see that sanitary regulations are really enforced, or, as Lord Kyllachy, who presided, expressed it, "to wage war with dirt and disease in the community." The Society's report eulogised the energetic action of the Health Committee of the Town Council and its convener, Bailie (Dr.) Russell, the burgh engineer, and the health officer, Dr. Littlejohn. Bailie Russell, in seconding the adoption of the report, mentioned that the town had spent £381,000 in demolishing some of the insanitary dwellings, and yet at this day they had an Act of Parliament so generously drawn in the interests of the owner and builder that the very worst conditions could be reproduced in strict accordance with the Act. The burgh engineer said he regarded the work of the Society as most valuable in respect of the waste places of their city. Its effects upon officialism had been for good repeatedly.

CONTROL OF MILK SUPPLY.

The second lecture of the Edinburgh Health Series was delivered last Saturday by Dr. G. Sims Woodhead on "Milk and Milk Supply." The methods of the Copenhagen Milk Supply Association were described, and Dr. Woodhead argued for a more complete system of control in this country. Some farms within his knowledge were in a disgraceful state, and there was much need for insisting on greater cleanliness. Further, every case of illness on a farm, however slight, ought to be reported to the proper authority. District inspectors of farms should be appointed; experts in veterinary practice and experts in hygiene and sanitation. All cases of disease, whether in the dairy stock or staff, should be reported at once, and under heavy penalties. A careful inspection of the farms should be frequently made—premises, drainage, ventilation, and cattle—and the whole of the apparatus should be tested as regards cleanliness by means of fermentation experiments. The Lord Justice Clerk, who presided, in moving a vote of thanks to the lecturer, said it was evident that other nations were more alive with regard to this important matter. He believed and hoped that those who supplied the milk would themselves come to see that it was not only for the interests of humanity, but for their own commercial interest, that they should help to form the organisation that was necessary.

IRELAND.

TYPHOID FEVER IN DUBLIN.

The outbreak of typhoid fever still continues, but the cases are not appreciably increasing in number. There are now ten officers of the garrison suffering from the disease, but they have been attacked in different barracks. This corresponds with what has been already observed, that the cases do not come from any special quarter. It is fair to state that some fatal cases have occurred in which the disease was undoubtedly contracted in Paris, and that there is apparently an increase of the disorder all over the country.

SIR EDWARD GUINNESS'S GIFT.

Our Dublin correspondent writes: The splendid gift of £50,000 to Dublin and of £200,000 to London by Sir Edward Guinness has created general admiration. The donor, who is a very young man, has thus maintained the best traditions of his name. His father restored the national cathedral of St. Patrick's, and Sir Edward and his brother Lord Ardilaun prepared and presented to Dublin the splendid St. Stephen's Green Park, which as a city garden is unequalled by any similar space in the United Kingdom. The princely gift now made is for the housing of the poorer classes. No better purpose could be served. The conditions of the scheme are wisely drawn, and it is to be hoped that they will be carried out faithfully. The example which Sir Edward Guinness has set will perhaps serve to stimulate others to imitation of it. Whatever helps to improve the condition of the poorer masses helps to raise the character of the nation.

COUNTY CLARE INFIRMARY.

The case of Faris *v.* Hynes came before the Court of Appeal last week. It was an appeal from the decision of the Exchequer Division in making absolute a conditional order for a *quo warranto* to test the validity of the election of Dr. Hynes to the post of surgeon to the County Clare Infirmary, on the ground that the members of Parliament for the county, who voted for Dr. Hynes on the occasion in question, had no legal right to do so, inasmuch as, by the Redistribution Act of 1885, the representation of the county was so altered that the present members could not be said to be representatives of the county, but only of portions of it. A preliminary objection to the hearing of the appeal was made, inasmuch as in the court below, when the court came to the conclusion that the conditional order should be made absolute, Dr. Hynes's counsel stated in open court that his client would acquiesce in the decision which the court pronounced without instituting further proceedings, and would undertake to lodge a disclaimer to the office of surgeon to the Clare Infirmary; further, that the time for entering an appeal had lapsed. The Lord Chancellor, in giving judgment, said that he did not think the appeal was maintainable on the two grounds: first, that it was contrary to the undertaking given at the time it was heard below, and secondly, that it was an interlocutory appeal. The appeal was accordingly struck out with costs.

NOTES
ON
SOME GERMAN UNIVERSITIES.
I.—THE UNIVERSITY OF STRASSBURG.
(Continued.)

Medical Clinic.—The Professor of Medicine.—Diagnosis of Diseases of the Stomach.—Washing Out the Stomach.—Typhoid.—Bathing.—Feeding.—Opium.—Thermometers; Temperature, Pulse, and Respiratory Charts.—Stethoscopes. — Percussion. —Treatment.—Nursing.

THE General Medical Clinic is at present represented by 115 beds on the first floor of part of the old Town Hospital, which has in itself, apart from these beds set aside for the University, 127 medical beds in five wards, 109 surgical in four wards, together with 34 maternity beds. Many of these wards would correspond more to our infirmary wards, the arrangement between the two apparently being that during term time any cases of interest are admitted into the clinical wards, and during vacation the hospital and clinic take the cases as they come in turns.

The clinic itself is at 8 A.M., and consists, as in the surgical, of one or more cases being brought into the theatre and exhibited, that is, examined, demonstrated, and lectured upon. Patients are usually brought in with their beds by means of a very ingenious apparatus designed by Professor Naunyn, which consists of a stout iron frame on wheels connected with a lever; this machine is wheeled under the special bed in the ward, and then by pressing the lever the whole bed is at once raised off the floor and readily wheeled into the theatre. This saves distress to the patient such as would be caused by changing beds. Professor Naunyn, who has recently succeeded Professor Kussmaul, gives most excellent medical lectures on a genuine scientific basis. The following are some of the special points in the wards which struck us:

For the diagnosis of the condition of the digestive tract, such as the size of the stomach and—a point the Professor always lays great stress upon—the relation of tumours in the abdomen to the stomach or other part of the canal, the stomach would be distended with gas by giving acids and alkaline carbonates. At the same time or afterwards the colon is distended with water by means of a continuous enema, given by passing a tube a short way into the rectum, and attaching thereto a soft tube at the end of which is a glass funnel. By pouring water into this, which is raised or lowered at pleasure, very large volumes of water can be safely injected into the intestines. After this procedure tumours which at first were very obscure as to their exact seat are very clearly demonstrated, their exact relation to the stomach or colon being readily defined.

Professor Ewald, in Berlin, adopts what appears to be a still simpler method for diagnosis of the size of the stomach. He passes a soft stomach tube into the organ, attaching to the end of it compression india-rubber balls with a valve, and then slowly pumps air into the stomach. By this means the exact volume of air can be regulated, an advantage unattainable by the method of inflation by carbonic acid, and the air can be allowed at once to escape, if the symptoms require it, by opening the end of the tube. In like manner he also inflates the large and even the small intestine by passing a tube into the rectum, and in the same way pumps air into the gut as required, so that with care the seat of strictures or tumours in any part of the intestine can be ascertained, and of course the connections of tumours are thus clearly made out.

Washing out the stomach in cases of dyspepsia and even of gastric ulcer is very largely done. This is performed by a simple soft tube passed into the stomach, at the upper end of which a glass funnel is attached, the inflow and also the outflow being readily controlled by raising and lowering the funnel, which is held in the hand, and no pumping apparatus is required. The contents of the stomach are then examined microscopically for sarcinæ and bacilli, and chemically for the relation between the amount of hydrochloric acid and pepsin present, etc., great stress being just now laid on these relations as a means of diagnosis. Thus, in some hospitals the contents of stomachs are examined almost as regularly as the contents of the urinary bladder; here a definite meal is usually given at a fixed time previous to the examination.

In puncturing for ascites usually a fairly large trocar is used. The patient is often sat up in a chair; puncture is nearly always performed in one spot, generally the left iliac fossa, and the fluid drawn off within a few minutes.

Gout is decidedly rare in Germany; nor do they appear to get cases of a mixed nature, such as those we speak of as rheumatic gout, where it is only by their reaction to drugs that we can express an opinion as to which of the two diseases is the more prominent.

Cold, in the form of the local application of ice-bags, is very often used, especially in heart cases, and also very largely in pneumonia. The ice-bags are kept in place by being suspended from a cross-bar of iron attached to the head of the bed; in this way the ice-bag is maintained in position without much difficulty.

Sputum and vomit are collected in glass jars, and thus can be readily examined from all sides.

Antipyretics are very rarely used by Professor Naunyn, antipyrin being generally given; antifebrin is considered too uncertain and risky in its action. Bathing is very generally pursued in typhoid cases; the bath is placed by the side of the bed, and there it apparently remains during the progress of the case.

Feeding with solid food is attempted very early in typhoid, and apparently is begun at once with beefsteaks, etc., and without any cautious prelude of rusks, custards, and fish. They appear to have a large percentage of relapses here, something over 30 per cent. we understood. Opium is not given so freely in typhoid as we have been accustomed to see it in London, from the belief that it causes paresis of the muscular walls of the bowels, and so much increases the accumulation of fæces and flatus. This accumulation is apt to give rise to extreme discomfort and danger to the patient, from the distension itself tending to produce rupture of weak points and hæmorrhage; and certainly we did not see cases of such extreme abdominal distension as we have seen in London, nor is the tongue usually so foul and dry.

Opium and morphine are given much more freely in cases of albuminuria than with us; in fact, in some hospitals in Germany the presence of albumen is not considered of itself to in the least contraindicate the use of these drugs.

With regard to thermometers, the Germans are ahead of us, in that they use for clinical purposes the Centigrade scale; but here they introduce confusion by using the Réaumur scale for the atmosphere and for water. Thus a patient with a given temperature Centigrade is placed in a bath of a certain temperature Réaumur, the two bearing no immediately obvious relation.

Very convenient charts, on which the temperature, pulse, and respiration are all represented together, are used. They are arranged as follows: a thick line, which represents the fever limit, is drawn, not through the normal temperature point, 37° C., but through 38° C., by which one understands that all temperature above this is genuine fever, and so allowances are made for idiosyncrasies aud the like. Corresponding to this fever line, the pulse is given at 120, and the respirations at 40. The three curves are readily represented by ink, pencil, and blue crayon. From this chart we can compare at a glance the relations of the three curves much more readily than when there is only a curve for temperature, and the others only represented by figures. A second thick line representing high fever is drawn at 40° C., which also gives pulse 160 and respiration 60. Thus it will be seen that each degree of temperature on the chart is represented by 20 in the pulse rate, and 10 in the respirations, the base of the chart being respiration 0, pulse 40, temperature 34 C°. This chart with slight modifications appears to be the most practicable, as it seems impossible to construct a chart on which the normal figures can be given together on any one line.

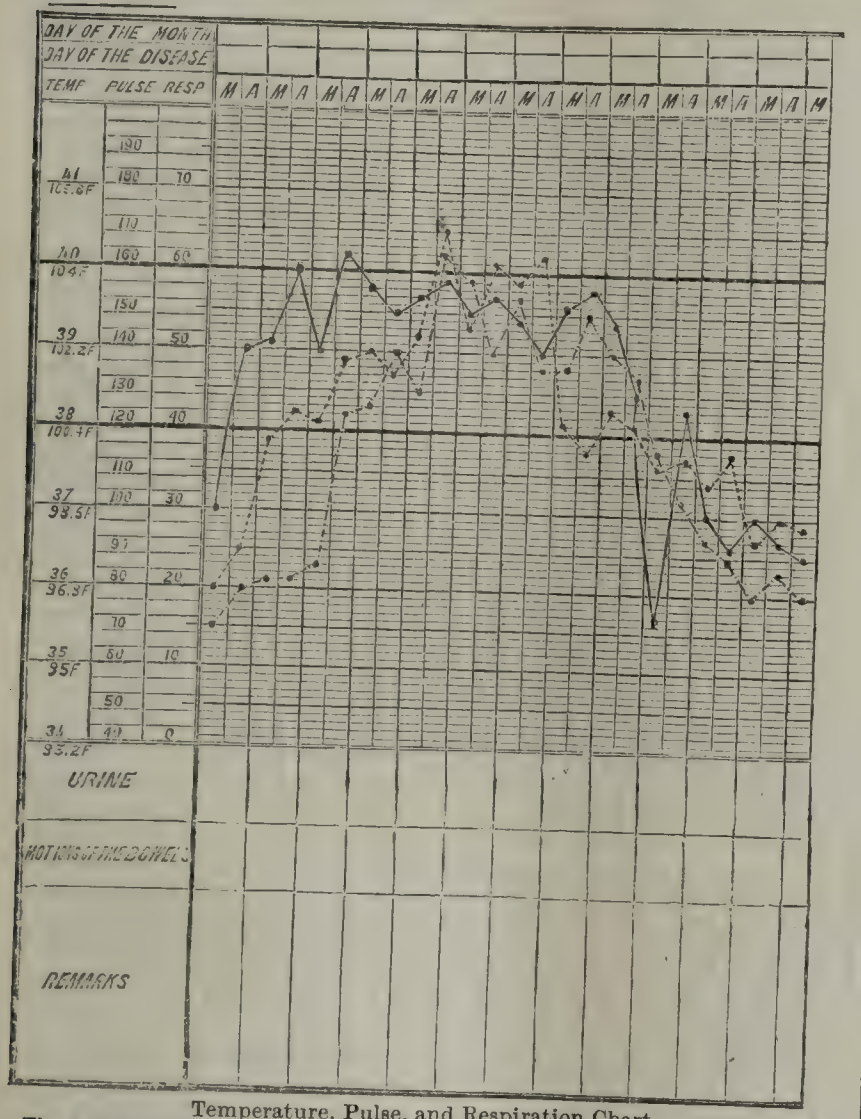
With regard to modifications used elsewhere, Professor Gerhardt in Berlin uses a chart in which, as above, the thick line is drawn at temperature 38° C., and pulse 120, but he prefers a respiration of 50 and not 40; otherwise the chart is the same, the base of his being respiration 10, pulse 40, temperature 34° C.

Along the top of both of these charts two lines are given for dates, the one for the day of the month and the other for the day of the disease.

Wooden stethoscopes are used, the binaural being practically as yet untried; but more frequently than with us the naked ear is applied directly to the chest; even here, however, this is done far less frequently than in Paris, where it is not usual to see a stethoscope used even for the heart, the reason, I suppose, being that a Frenchman invented the stethoscope. As in the case of thermometers, each nation uses that which was invented by the other, and despises that invented by their own countrymen.

Percussion is generally performed by means of a hammer and pleximeter; thus, though to a musical ear and for demonstrating

to a class a sharper and more definitely-toned note is elicited, often much to the discomfort of the patient, that sense of resistance, which to the fingers of an experienced physician tells far more than the mere sound produced, is completely lost. That the pleximeter and hammer may sometimes be of service, especially in percussing for somewhat deeply-seated consolidation, is very probable; but for the general superficial percussion it is a mistake. Thus, for instance, slight enlargements of the liver downwards, which may be readily demonstrated by light percussion with the fingers, are completely lost with the pleximeter, the tympanitic note of the bowel situated beneath it being alone heard. It does not appear to be possible to percuss so slightly and superficially with the hammer as with the fingers. Thus, though well-marked differences can be more readily demonstrated by means of the hammer and pleximeter, slight and superficial ones are often missed.



Temperature, Pulse, and Respiration Chart.
The dark line represents the temperature curve. The line of dashes and dots represents the pulse curve. The dotted line represents the respiratory curve. The English equivalents of the German terms are given.

After all that may fairly be said in favour of German universities and hospitals, and of the much more complete scientific foundation for medical knowledge which is found in them, not only among the professors and teachers, but also among the students, it must be admitted that their treatment of cases is often disappointing. This appears especially in regard to what we consider simple everyday remedies, but which are in many hospitals unrecognised. Thus, for instance, the application of a hot poultice to a part, with the primary object of relieving pain and local distress, is but rarely used, and, in fact, in the surgical wards, practically untried.

So, again, cod-liver oil in cases of phthisis and other chronic constitutional complaints, especially in children, is but very rarely given. We were much struck, also, with the non-administration of alcoholic stimulants (brandy, etc.) in many acute cases, such as pneumonia, typhoid with prostration, where, according to general opinion in England, a few ounces of brandy sustain the pulse and save life in many a bad case. Here, if alcohol were given, it would be in the form of a thin red wine. We believe, however, that even with this method of treatment, the statistics would compare favourably with those of one of our special hospitals. In cases of acute disease (pneumonia, etc.) in young and comparatively healthy subjects, when the pulse is hardly perceptible and running away at a great rate, in most of our wards probably the only, or at least the chief, prescription would be so much brandy every half hour; upon inquiry as to the treatment here, we would be told the name and dose of some drug which very often we had never heard of before, but practically no alcoholic or other stimulant would be mentioned.

The system of nursing here, as we so often see in those hospitals on the Continent where the nursing staff are under the influence of the priests, and not of the medical men, is very rough and untidy. The wards are presided over by sisters in cumbersome uniforms, with heavy long cloth skirts and many voluminous appendages about the head and shoulders, who often appear to be rather absorbed in contemplation than attentive to the patients under their charge. Under these sisters are the so-called sick-nurses, who in their manner of action and appearance correspond very closely to the scrubbers of our hospitals. Nothing is more striking than the difference in the appearance and manner of the nursing staff in other German hospitals, where the priest has been replaced as controller by the medical man, and the ecclesiastical uniforms by neat washing dresses and white aprons. The change has now taken place in most of the hospitals in Berlin, especially we might mention that of Professor von Bergmann, and the magnificent hospital at Friedrichshain, where the appearance of the nursing staff is very similar to that of our own hospitals.

REPORT OF THE ROYAL COMMISSION ON VACCINATION.

In the JOURNAL of November 9th, page 1057, we gave a brief indication of some of the more salient points in the evidence given by Sir John Simon and Dr. William Ogle before the Royal Commission on Vaccination. Dr. R. Thorne Thorne, the Assistant Medical Officer of the Local Government Board, was the third witness examined, and the facts and figures which he laid before the Commissioners will be found very helpful not only to the Commissioners themselves, but to those members of the general public who are desirous of forming a correct and unbiassed judgment as to the influence of vaccination upon the prevalence of small-pox in this country. Referring to the small-pox epidemic of 1870-73, Dr. Thorne called attention to a report prepared in 1874 by the late Dr. Seaton, in which a contrast is drawn between the effect of the vaccination laws in England and in Scotland and in one or two other European countries—a contrast which discloses a much higher death-rate from small-pox in those countries and towns where there was no vaccination law, or where the law was lax, than in those where the law was efficient. It also showed that the claim originally made as to protection for the whole of life from one vaccination was an unsound claim, and that the protection afforded is one limited in its duration. The operation requires to be repeated. Particular attention was directed to the changed incidence of small-pox as regards the mortality at various ages. Dr. Thorne pointed out that the disproportionately large rate of small-pox mortality at ages over five years, which was so marked a feature of the epidemic of 1871-72, was not at that date fully understood; but subsequent study of the Registrar-General's decennial reports, and especially of the London epidemics of 1876-78 and 1880-82, showed that the marked increase of small-pox at ages over five years which had been noticed in the epidemic of 1871 had really been the expression of an alteration in the behaviour of small-pox in this country. Dr. Thorne pointed out that small-pox was formerly specially fatal to children under five, but that, according as children of those ages are now protected by vaccination from attack, so the rates of attack in children have decreased, whilst those in older persons are higher. Inefficiency in the primary vaccination is also doubtless chargeable to a certain extent with this change in the age-incidence of fatal small-pox; and on this point Dr. Thorne was led to condemn very strongly the practice of vaccinating in one place instead of four, which has been very habitual in some parts of the kingdom, especially in London and the col-

liery districts. "You know what the sixpenny doctor in London is, and what he does, and he prevails in London more than anywhere else." Dr. Thorne put in the famous statistics prepared by the late Mr. Marson when in charge of the Small-pox Hospital, showing the different degrees in which persons vaccinated in different ways will be safe against death by small-pox if they should afterwards contract that disease. He also handed in a very instructive table, showing the results of the observation of 10,403 cases of small-pox made by Dr. Gayton, of the Metropolitan Asylums Board, and it confirms very forcibly the earlier observations of Mr. Marson. It shows the fatality per cent. of the attacks amongst those unvaccinated and those having one, two, three, or four good or imperfect vaccination scars, and clearly demonstrates the great superiority of four good vaccination scars.

On the question whether the diminution in small-pox mortality is due rather to the improved sanitary condition of the country than to vaccination, Dr. Thorne is especially qualified to form a correct opinion. That opinion is that such diminution cannot be ascribed to improved sanitation. He considers that the whole body of the evidence relating to vaccination in connection with small-pox goes to bear out the view that it is vaccination in the main that has had to do with the diminution of the small-pox mortality that has been recorded. Insanitary conditions, including sewerage and drainage, do operate for evil upon all persons who are ill, and to that extent tend to prevent recovery. "I should be sorry," observed Dr. Thorne, "to say that overcrowding, either on area or in houses, would not tend during an epidemic to increase it, because it is a poison which is diffused aërially, and overcrowding would tend to increase it in precisely the same way as it would tend to increase scarlet fever, whooping-cough, and measles." He had no knowledge, however, that general insanitary conditions, such as faulty drainage or water supply, have ever produced a single case of small-pox since small-pox has been in existence. Moreover, the special saving of infant life from small-pox has by no means been limited to the well-to-do classes, to those who are well housed, well fed, well clothed; but it has in certain cases been actually greatest amongst the poorer classes who live under inferior sanitary circumstances, but have obtained more efficient vaccination at the public vaccination stations.

One very convincing piece of evidence is afforded by the experience of the nurses and attendants at the Metropolitan Asylums Board small-pox hospitals, seeing that in their case comparison can be made as to liability to small-pox of persons who are living in precisely the same circumstances. An account is given respecting a total of 734 nurses and attendants. Seventy-nine of these had suffered from small-pox before taking service at the hospitals, having to a large extent been patients who, after recovery, elected to take service as nurses. Not one of them contracted small-pox. Of the remaining 655, 645 had not only been vaccinated in infancy, but had also been revaccinated. Not one of them took small-pox. The 10 that remain had, like the others, been vaccinated in infancy, but they had not been revaccinated before entering on their duties at the hospitals. Every one of them contracted small-pox at some time or another of their service. In this case there is a comparatively large number of people living on the same premises, getting the same food, wearing very much the same quality of clothing, having the same water supply, the same sewerage, the same drainage, and the same housing. The small-pox absolutely passed over the 645 who had been revaccinated and deliberately seized upon every one of the 10 who had not been revaccinated. In this respect small-pox differs widely from typhus fever. Striking evidence on this point is quoted from the reports of the health officers of Newcastle and Gateshead, the latter writing during an epidemic in 1882 that "every nurse who has been more than a fortnight in the typhus wards has suffered from typhus. On the other hand, the only officers who took small-pox were two kitchen girls whom I neglected to vaccinate."

Some evidence as to vaccination proceedings in America was given by Dr. John H. Rauch, the Secretary and Executive Officer of the Illinois State Board of Health. He showed that, although vaccination is not actually compulsory in some of the States, yet, when small-pox threatens, vaccinations are enforced in a wholesale fashion which is calculated to startle antivaccinators in this country. After the great fire at Chicago there was great suffering. Upwards of 80,000 inhabitants were rendered homeless, and were provided for in a camp. Small-pox was hovering around, and, therefore, a wholesale vaccination was decided on, and, as the result, 110,000 to 120,000 persons were vaccinated or revaccinated in the camp and neighbourhood. Other instances are related of indirect compulsion being applied in the schools, and also in regard to immigrants, with exceptionally beneficial results. Dr. Rauch considers that "sanitation practically has nothing whatever to do with the spread of small-pox." Vaccination and isolation are, in his opinion, the two important matters to attend to.

The whole report is well worthy of careful study, and we should be glad to find the Stationery Office making such a reduction in the price of the report as will place it within the reach of the public generally.

THE THIRTY-FIRST ANNUAL REPORT OF THE COMMISSIONERS IN LUNACY FOR SCOTLAND.

THIS report deals with the condition and management of lunatics and lunatic asylums in Scotland during the year 1888. At the end of the year there were 11,664 lunatics registered, 1,767 being private patients and 9,897 paupers, exclusive of 57 in the lunatic department of the General Prison, and 233 in training schools for imbecile children. Compared with the number of the previous year, there is an increase of 94 private and 241 pauper patients, total 335. No pauper lunatic was kept in a private asylum; all paupers were in public institutions. The increase in the number of private patients is the largest which has occurred in any year since the institution of the Lunacy Board.

Over and above the number of registered lunatics there were resident in the various asylums 44 persons who had voluntarily entered these institutions for treatment of mental disorder, the total number of these voluntary patients (or boarders, as they are called in England) admitted during the year was 55. We are glad to observe the Scotch Commissioners speak favourably of the admission of these patients. They say: "We have for some years been able to state that nothing has occurred to indicate any difficulty or disadvantage traceable to this class of patients in asylums, and we continue to be of opinion that it is a useful provision of the law which permits persons who desire to place themselves under care in an asylum to do so in a way which is not attended with troublesome or disagreeable forms, but which, nevertheless, affords sufficient guarantee against abuse." There can be no doubt whatever this wise provision is an inestimable boon in very many cases, and we should have been glad to have found a similar expression of opinion in favour of it in the English Commissioners' Report. The principle is a right one, and this has been recognised in the new Lunacy Acts Amendment Act, which in England and Wales extends the power to receive boarders to licensed houses. Hitherto they only could be received into registered hospitals, where the consent of the Commissioners to their reception was not necessary. If the majority of these voluntary patients recover, and if their residence in asylums is shorter than that of certified patients, there can be nothing said against their admission not only into registered hospitals and licensed houses, but also into the county asylums, now that the committees of these institutions will be empowered by the new Act to make proper provision for private patients.

Returning to the Scotch Commissioners' statistics, we find the number of admissions during 1888 shows an increase of 18 private and 98 pauper patients over the number admitted during the previous year. Of the discharges, there were 26 private patients discharged recovered below the number so discharged during the previous year, whilst the pauper patients show an increase of 68. The average death-rate was low, being a little over 7 per cent., calculated upon the average number resident.

We note that the Commissioners lay especial stress upon the advantages attending the systematic discharge of patients upon "statutory probation" (which is equivalent to absence on leave under the English Commissioners). Since their authorisation in 1862 to the close of 1888 the total number of probationary removals has been 3,233, and of these only 592 were replaced in the asylums from which they had been removed. During 1888, 127 patients (private and pauper) were discharged on probation with the sanction of the Commissioners, and this number was exclusive of those discharged for periods not exceeding twenty-eight days by the medical superintendents, who have that power without reference to the Commissioners, and who frequently make use of it. Even assuming that probationary removals (that is, removing

lunatics from asylums to private dwellings) answer well as far as the patients are concerned, and at the rate of payments mentioned below for paupers (namely, 6s. 6d. to 7s. per week), they are a financial success, when we look through the list of asylums, public and private, and poorhouses given in this report, from which the 127 patients so treated during the year 1888 were derived, we find that 125 of them were sent out from thirteen asylums (six of these, in fact, supplied 101), including 1 parochial, 2 private, 5 royal, and 5 district asylums. There were only 2 sent from the 16 poorhouses, and no less than 18 asylums did not discharge a single patient on probation. Of these asylums, 2 were royal, 3 private, 5 parochial, and 8 district asylums.

With regard to the number of pauper lunatics living in private dwellings, which is always a point of the greatest interest in connection with these reports, it appears there were 2,297 so placed, being an increase of only 27 during the year 1888, as compared with the previous year. This increase did not occur in one or two parishes, but was scattered throughout the counties. In six counties, however, there was an appreciable decrease, and the Commissioners say they "continue to press upon the local authorities the advisability of removing patients from asylums when they cease to require detention or have ceased to be in a condition to be benefited by asylum treatment, in some districts the propriety of this course is not so fully recognised as it ought to be." In Dr. Fraser's special report upon this subject he sums up the more prominent advantages which in his experience often follow the transference of pauper lunatics from care in asylums to care in private dwellings as follows: "1, congenial homes and surroundings; 2, increased contentment; 3, improved physical well-being; 4, change for the better in their mental condition; 5, opportunities of becoming self-supporting or of obtaining remunerative employment."

We have carefully considered Dr. Fraser's statements under these headings in favour of what is known as the boarding-out system, and we cannot but admire the enthusiasm of the writer, nor are we disposed to differ from his conclusions; indeed, we think well of them. We give his final paragraph as it stands:

"When a system for providing for a class of pauper insane has the various good features of which I have been writing" (those enumerated above), "it appears to me to be a system which merits extension. It may have its defects and its unsatisfactory features, but these are, in my opinion, neither greater nor more serious than those which are inseparable from every system."

One serious matter to be faced in carrying out this scheme is the cost, and Dr. Lawson, another of the Commissioners, seems to have given the subject much attention. He is of the opinion that the remuneration necessary for the payment of the guardians of the boarded-out lunatics must vary according to the district, and he says: "I have had many opportunities of satisfying myself that guardians receiving 6s. 6d. or 7s. a week for each patient can feed and otherwise treat them well, and still have sufficient profit."

However successful the working of the system may have been so far, we are inclined to think that it will require the Commissioners to maintain their enthusiasm at a fairly high pressure in order that the maintenance of pauper lunatics in private dwellings may continue as successful as it has hitherto been, and that the advantages they claim for the system may become as fully recognised as they wish them to be. Much depends upon the nature of the population of the various districts in which the treatment is carried out. At the annual meeting at Leeds Dr. Hack Tuke read a paper upon the "Future Provision for Pauper Lunatics," and in the discussion which followed, Dr. Yellowlees, the medical superintendent of the Royal Asylum, Gartnavel, near Glasgow (whose opinion is deservedly of great weight on these matters), stated that he "agreed with Dr. Tuke that boarding-out to any great extent was impracticable where the population around was busily and remuneratively engaged. It was not worth their while to take up this new avocation." With Dr. Yellowlees's opinion we quite agree. That many districts are unsuitable for boarding-out insane paupers is evident, and it makes the success which has hitherto attended the efforts of the Commissioners in this direction all the more praiseworthy. It is in itself a high tribute to their energy and earnestness.

Whilst acknowledging that there is ample provision in Scotland for the more opulent classes of private patients, the Commissioners regret that more adequate provision does not exist for persons able to pay from £25 to £50 a year. This leads, in many cases, "to the actual pauperising of many persons who might, under other circumstances, be saved from it. Efforts are frequently made by relatives and friends to keep a patient from being a burden upon the rates if they can thereby save him from the stigma of pauperism. If, however, the patient is forced into the position of pauperism, notwithstanding that these relatives or friends defray all cost of his maintenance, there is no obvious inducement to them to avail themselves of the benefits of the position, as they have to submit to the degradation." The Commissioners think the remedy is in the hands of the managers and directors of the Royal Asylums, who should provide private accommodation for all patients for whom rates of board of not more than £25 a year can be paid.

Some interesting facts are given in reference to "the influence of season upon asylum statistics." They are summarised in Table XIX of Appendix A to the report, which gives the averages of eight years. This table shows that during the months of March, April, May, June, July, and August, the numbers of admissions were above the average, which was 1,699 per month, whilst during January, February, in the spring, and September, October, November, and December, in the autumn and winter, they were below.

The discharges do not show such a regular rise and fall as the admissions. The death-rate is highest in March and lowest in August. The ratio of all lunatics is 28.9 per 10,000 of the population.

SHIP SANITATION.

Some years ago, in consequence of a despatch to the Foreign Office from the British Consul-General of New York, calling attention to the belief there entertained that the spread of small-pox in the United States was largely due to the importation of the disease by emigrants, the Local Government Board ordered an inquiry into the sanitary aspects of emigration and immigration. This inquiry, which was conducted by Dr. F. H. Blaxall, with the assistance of Captain Wilson, chief emigration officer of the Board of Trade, resulted in the publication of a comprehensive report.[1] The report showed that though much had been done for the comfort and convenience of emigrants and transmigrants (emigrants from other countries passing through Great Britain), many sanitary regulations and precautions were persistently violated or neglected. The report contained a series of valuable recommendations, which, so far as can be ascertained, have not generally been carried out by the shipping companies. One of these recommendations was "that infectious hospitals should be provided on the weather deck in the least frequented part of the ship;" and another was "that the surgeons should be instructed to make daily inspection of emigrants during the voyage, and to secure the immediate isolation of cases presenting suspicious symptoms."[2] So far as we are aware, no returns have ever been published showing the proportion of ships in which the first of these recommendations at any rate has been adopted; it is therefore not possible to make any positive statement on the point here. There is reason, however, to believe that it has been very generally neglected. This opinion finds support in the fact that even the best of the shipping companies do not fulfil the spirit even, if they take the trouble to obey the letter, of the clauses of the Merchant Shipping and Passenger Acts with regard to hospitals.

Dr. Blaxall's report states that he found the ship's hospital, as a rule, well placed, well ventilated, and well provided; but adds,[3] "occasionally the key of the hospital was found to be in the hands of the steward—a circumstance which suggested the hospitals being put to other than their legitimate use, and which Captain Wilson, when doing duty at Queenstown, found to be the case in several instances—first-class passengers, ship's officers, stewards, and other members of the crew being accommodated in them in contravention of the Passengers Act (Sec. 24)."

The Cunard Company is generally recognised to occupy a position in the front rank of steamship companies, and if in the magnificent boats which it puts on the Atlantic trade the hospitals are sometimes used to accommodate passengers or crew, it may be safely assumed that in other companies with a lesser reputation at stake matters will not be better. In the face of the provisions of Acts of Parliament, and of the recommendations of sanitary experts, we have been rather surprised to read an order,

[1] Twelfth Annual Report of the Local Government Board, 1882-83. Supplement containing the Report of the Medical Officer for 1882. London: Eyre and Spottiswoode.

[2] *Loc. cit.*, p. 194.

[3] *Loc. cit.*, p. 160.

which a surgeon, formerly employed by the Cunard Company, has stated in a pamphlet[4] recently published was issued to its surgeons by that company. The order as published is in the following terms:

"The hospitals are to be under the surgeon's charge only when occupied by patients, at which time he will be responsible for their cleanliness and proper ventilation. When unoccupied they are to be at the Captain's disposal."

The phrase "at the Captain's disposal" suggests the probability that the irregular practices observed by Captain Wilson at Queenstown have not yet ceased.

If passengers or crew are berthed in the hospital, and if there be no infectious hospital, the isolation of a declared case of infectious disease must be a matter of great difficulty, requiring an appeal to the captain and the clearing of the hospital; much more must such laxness tend to discourage the surgeon from securing "the immediate isolation of cases presenting suspicious symptoms." The Atlantic passage is now so quick that a captain may well argue with himself that neither he nor the company which he serves, not wisely but too well, may suffer anything from the inconvenience and loss directly flowing from the exposure of a whole shipload of people to the infection of measles or small-pox. The voyage will be over and the emigrants scattered through the cities and villages of the United States before the earliest symptoms of measles contracted from a fellow passenger during the Atlantic voyage would be likely to declare themselves.

The appointment of a ship's surgeon in the passenger trade must be sanctioned by the Emigration Officer of the Board of Trade; the certificate of approval is accompanied by certain instructions, of which the following is stated by Dr. Leet to be (for Liverpool) a correct copy:

It is desirable that Surgeons in charge of Passenger Ships should keep a record of any sickness that occurs on the voyage, whether among Saloon Passengers, Emigrants, or Crew, and should report the same to this Office * at the end of the voyage, making special mention of the following particulars:—

Date of commencement of voyage.
Date of termination of voyage.
Date of the commencement of any infectious or contagious diseases, the number of cases, and the number of families affected.
Has the Ship been disinfected?
State the number of deaths and their causes.
Was the ventilation sufficient? if not, state where it was defective.
Were any complaints made by the Emigrants? if so, state what complaints, and what steps were taken in each case.

The report should be addressed as follows:—

O. H. M. S.
The Emigration Officer,
Board of Trade Offices,
Liverpool.

It would seem, however, that the shipping companies do not consider themselves bound to obey the wishes of the Board of Trade in this respect, for Dr. Leet publishes the following:

[*Copy of Cunard Order altering the above.*]

8, Water Street, Liverpool.
Cunard S.S.Co., Limited. 23·9 85.
GENERAL MANAGER'S OFFICE.
The Surgeon S.S. "Gallia."

DEAR SIR,

In future you will please furnish the Emigration Officer with the following particulars, namely:—

Date of commencement of voyage.
Date of termination of voyage.
Date of commencement of any infectious or contagious diseases, the number of cases, and number of families affected.
State the number of deaths and their causes.
Such report to be sent in the Ship's despatch box under cover to me.

Yours truly,
F. W. MASSEY.
pro GENERAL MANAGER.

The omissions from the Board of Trade's order are significant, as is also the different destination assigned to the report. If the suspicion thus raised is unfounded, it behoves the shipping companies to give the necessary explanations.

In conclusion, the opinion may be hazarded that the great steamship companies are following a very short-sighted policy, and that in their own interests they would do well to give greater attention to the observance of hygienic precautions. Quite apart from the business traffic, a large number of persons now take sea voyages in search of health; the public is as yet hardly aware of the serious dangers to health which may be run, and undoubtedly are often run, even on the Atlantic liners, nor of the precarious tenure by which the ship's surgeon holds his office. He is the only sanitary officer which the ship carries; yet he is, it would seem, forbidden to make the reports on sanitary matters to the Board of Trade, required by the regulations of that Board, and is liable to be informed after any voyage that "his services are no longer required." The shipping companies have it in their power to obtain at no sacrifice of material advantages or of dignity a medical service consisting of thoroughly competent, trained, and seasoned men, who, if they were treated with the respect and consideration which they deserved, would be thoroughly loyal and efficient servants, co-operating in every measure designed to increase the comfort and wellbeing of passengers, and thus to further the success and popularity of the great ocean steamships.

[4] *The Ship's Surgeon of To-day.* By Charles Henry Leet, F.R.C.S., M.K.Q.C.P.I., late Surgeon-Major A.M.D., late Surgeon Cunard and White Star ss. Co., etc. Liverpool. (Published by the author at 116, Derby Road, Bootle.) 1889. Dr. Leet is doing good service by drawing attention to the present very unsatisfactory position of ship's surgeons, but there are many things in this pamphlet which we could wish away. We do not propose to enter into the discussion of the author's private grievances against certain of the great steamship companies; the manner in which his career afloat was brought to an end is probably an example of the impatience with which the officials regard anything like criticism of the sanitary arrangements of their ships.

THE EIGHTEENTH ANNUAL REPORT OF THE LOCAL GOVERNMENT BOARD.

THE report which has just been issued by the Local Government Board for the year 1888-89 is a massive volume containing some 740 pages, and a glance at its contents reveals the great variety of the subjects with which this important department has to deal. The Local Government Act, 1888, is of necessity referred to at some length, and an interesting account is given of the various difficulties which had to be overcome in bringing the new arrangements into operation and putting them in proper working order. There is, however, one point which we would have been glad to see more prominently referred to in the report, and that is the power of the new County Councils to appoint medical officers of health to assist them in their supervision of sanitary administration. This matter has a very important bearing upon the public health, and it would have been well if the central authority had pointed out more emphatically the public advantage of having county health officers. Up to the present time very few County Councils have exercised their powers to appoint a medical officer of health.

In that portion of the report which relates to public health and local administration some interesting facts are recorded. It appears that since 1871 the large sum of £41,114,990 has been borrowed by urban and rural sanitary authorities with the sanction of the Board. Of this total upwards of £35,000,000 has been sanctioned for the purpose of sanitary improvements in urban districts, to be executed under the provisions of the Sanitary Acts, the Public Health Act, 1875, and Local Acts and Provisional Orders. The remainder has been sanctioned principally for the execution of sanitary improvements in rural districts or for improvement schemes in urban districts under the Artizans and Labourers Dwellings Improvement Act, 1875. Under this last-named Act £2,343,353 has been sanctioned, mainly for schemes in Birmingham, Wolverhampton, Nottingham, Liverpool, Swansea, Walsall, and Norwich.

As regards canal boats, it would seem that the supervision exercised by local sanitary authorities is increasing, and that the condition of the boats and their occupants has substantially improved in the course of the last few years. The indecent herding together of men, unmarried women, and children in barge cabins has been much diminished, and flagrant cases of this kind are rare, though by no means unknown. The sanitary condition of the boats has also been materially improved. A few outbreaks of scarlatina and other infections on board boats have been reported, but the Board have not been informed of any case in which there has been any spread of the disease.

It is somewhat remarkable to find that in a large number of localities the Adulteration Acts are practically unenforced. In London, in 1888, one sample of food or drugs was analysed for every 551 persons, but in the provinces one for every 1,141 persons. But even in the metropolis the administration of the Acts was by no means uniform; for while in Fulham the proportion was one sample for every 289 persons, in Newington it was one for every 7,190 persons, and while in the Strand district it was one for every 152 persons, in Rotherhithe it was

one for every 2,771 persons. In certain counties and boroughs, comprising altogether about a quarter of the population of the whole of England and Wales, the Acts were practically a dead letter, since only one sample was examined for every 7,864 persons. Within the jurisdictions of the magistrates of the counties of Oxford, Montgomery, and Radnor, and the Isle of Ely, no steps whatever were taken by the administrators of the Acts, and the same may be said of no less than 75 boroughs, some of which, like Plymouth, Oxford, Dover, Gloucester, Tynemouth, Southport, Grimsby, and Scarborough, are of large population. In the case of the smaller boroughs, where the population is under 10,000, the administration of the Sale of Food and Drugs Acts will in future devolve upon the County Councils. It is possible, therefore, that the inhabitants of those towns may hereafter enjoy, in a greater degree than at present, the protection which these Acts are designed to afford.

Another hindrance to the efficiency of these Acts is the inadequacy of the fines imposed by magistrates when convictions have been obtained. In 1,337 prosecutions instituted, fines were imposed amounting in the aggregate to £1,782, besides costs. Out of these, however, there were six fines of £15 each, two of £10 15s., twenty of £10, seven between £5 and £10, and sixty of £5. If these cases, amounting only to 7 per cent. of the whole number, be excluded, the average fine was only 18s. Considering the large profits of adulteration, penalties of this amount cannot be regarded as likely to check the fraud effectually. Various complaints of the leniency of magistrates in this matter have been received by the Local Government Board. In one Metropolitan district where a sample of milk had been reported against, and where the chemists of the Inland Revenue Department had confirmed this verdict, the magistrates imposed a fine of 1s. with 2s. costs. As the actual costs of the proceedings were £3 12s. 2d., it appeared that, while the vendor had escaped with a nominal penalty, the vestry were practically fined £3 9s. 2d. for carrying out their statutory duty. In another case in which the vendor of milk stated that he rarely sold more than a farthing's-worth at a time, the sample taken was found diluted with 15 per cent. of water; but the magistrate considered that 1s. was an adequate fine. On this decision the public analyst remarks that "it is these small portions of milk which are used to fill the bottles of young children, and are often diluted by the parents after the purchase, and thus it is impossible to say how weak the milk becomes before the same is used; but it is not very difficult to understand why the mortality amongst the children of the poor is so great."

The vaccination returns dealt with are not altogether satisfactory; in fact, as stated in the report, the percentage of default is higher than any previously recorded since the Vaccination Act of 1871 came into operation. It is, however, satisfactory to find that, although in Keighley, Leicester, Dewsbury, Luton, Oldham, Banbury, Eastbourne, and some other towns the default is very large, the Vaccination Acts are administered with great success in such important towns as Bolton, Newcastle, Leeds, Sheffield, Manchester, Birmingham, and Liverpool.

The supervision exercised by the inspectors under the Alkali, etc., Works Regulation Act, 1881, appears to have good results. Their reports show that the amount of noxious vapours allowed to escape into the air is steadily diminishing, and the improvement in this respect since the passing of the Act in 1881 has been very considerable.

In his report on the water supply of London, Major-General Scott, the official Water Examiner, gives an interesting forecast of the future requirements of this ever-growing metropolis. The average daily supply per head of the population during the year 1888 for domestic purposes was nearly 24 gallons, a quantity largely in excess of actual use, and suggesting that, as is in fact the case, the waste is very great. The average annual increase of population in the districts of the eight water companies is 149,146, nearly a quarter of this being in the one district of the East London Company. General Scott points out that the water supply of the north and east of London is entering on a critical stage. A few years hence a large additional strain will fall on the supply derivable from wells unless the Thames be still further drawn upon, or unless resort can be had to sources outside the Thames and Lea valley, and thus it becomes of increasing importance whether the wells will long continue to be equal to the growing demands upon them. Sooner or later the whole question of the water supply of London will, by force of circumstances, have to be seriously reviewed.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST.

Six weeks ago we published a short account of the dispute which has arisen at the Royal Hospital for Diseases of the Chest, City Road, owing to the indiscreet conduct of the late Secretary, Mr. Austin. About a year ago, in consequence of information received by the Council of the Hospital, tending to prove that the action of the Secretary had, in certain particulars, been such as seriously to affect the interests of the hospital, a special committee was appointed to consider certain charges brought against the Secretary. Mr. Austin, in concluding his reply, made, or at least implied, a serious charge against the medical staff, by stating that there was an "increasing tendency to make the hospital less a hospital for consumption for the treatment of poor patients recommended by subscribers than a school for the education of the doctors."

The two cases which he quoted in support of the allegation were singularly unfortunate for himself, as was pointed out in editorial articles published in the JOURNAL of October 12th. The one was the case of a child on whom it became necessary to perform tracheotomy, the other a case of aortic aneurysm, in which, after medical treatment had failed to produce any amelioration, Moore's method of treatment by the introduction of a coiled wire was resorted to. This allegation was in a somewhat confused way mixed up with a complaint that too many patients were admitted as emergency cases from the out-patient department, and that too many cases bringing subscribers' in-patient letters were refused admission. At the request of the medical staff, the Council investigated these allegations; and at the conclusion of a prolonged inquiry the Council unanimously recorded "their sense of entire confidence in the members of their medical staff, fully assured that by their kindness and care, no less than by their skill, they have done their utmost to relieve the sufferings of the patients committed to their charge," and expressed their deep "regret that allegations most seriously affecting their character and position should have been so recklessly made by an official holding so important a position at the hospital." At the same time the Council called upon the secretary to resign; this he did in a letter, repeating the serious allegation transcribed above. At a special Court of Governors, held on October 7th, a resolution was adopted requesting the Council to reconsider the resignation of the secretary on the ground that he had acted in good faith. The Council, at a meeting held the same day, declined to alter their decision. A few days later a requisition assigned by twenty-seven governors was received, requiring the convention of another special Court of Governors, which has been summoned for November 27th. We have recapitulated the history of this unfortunate dispute, which threatens the very existence of a useful medical charity, because an important principle is involved. The institution is designed to be a hospital and not an asylum, and there is consequently a rule that "cases of consumption can be admitted only in the early and curable stages, or when complicated with symptoms admitting of relief." Whether a case is or is not suitable for admission can only be decided after medical examination, and a Governor's letter can only be understood as recommending a case as a proper object of charity. Any other interpretation destroys the idea of a hospital, and would certainly not be for the benefit of the sick "poor of the neighbourhood." The late Secretary has entirely failed to make good his charge that there is "an increasing tendency to make the institution less a hospital for the treatment of poor patients recommended by subscribers than a school for the education of the doctors." We would earnestly advise every governor of the hospital to make a careful study of the very temperate statement of facts which has been put forward by the Council. It is much to be desired that there may be a full attendance at the meeting, and that the questions involved may be seriously discussed, with a full appreciation of their far-reaching importance. If the Governors appreciate the real question upon which they will be called upon to record their votes, there ought to be no doubt of the result.

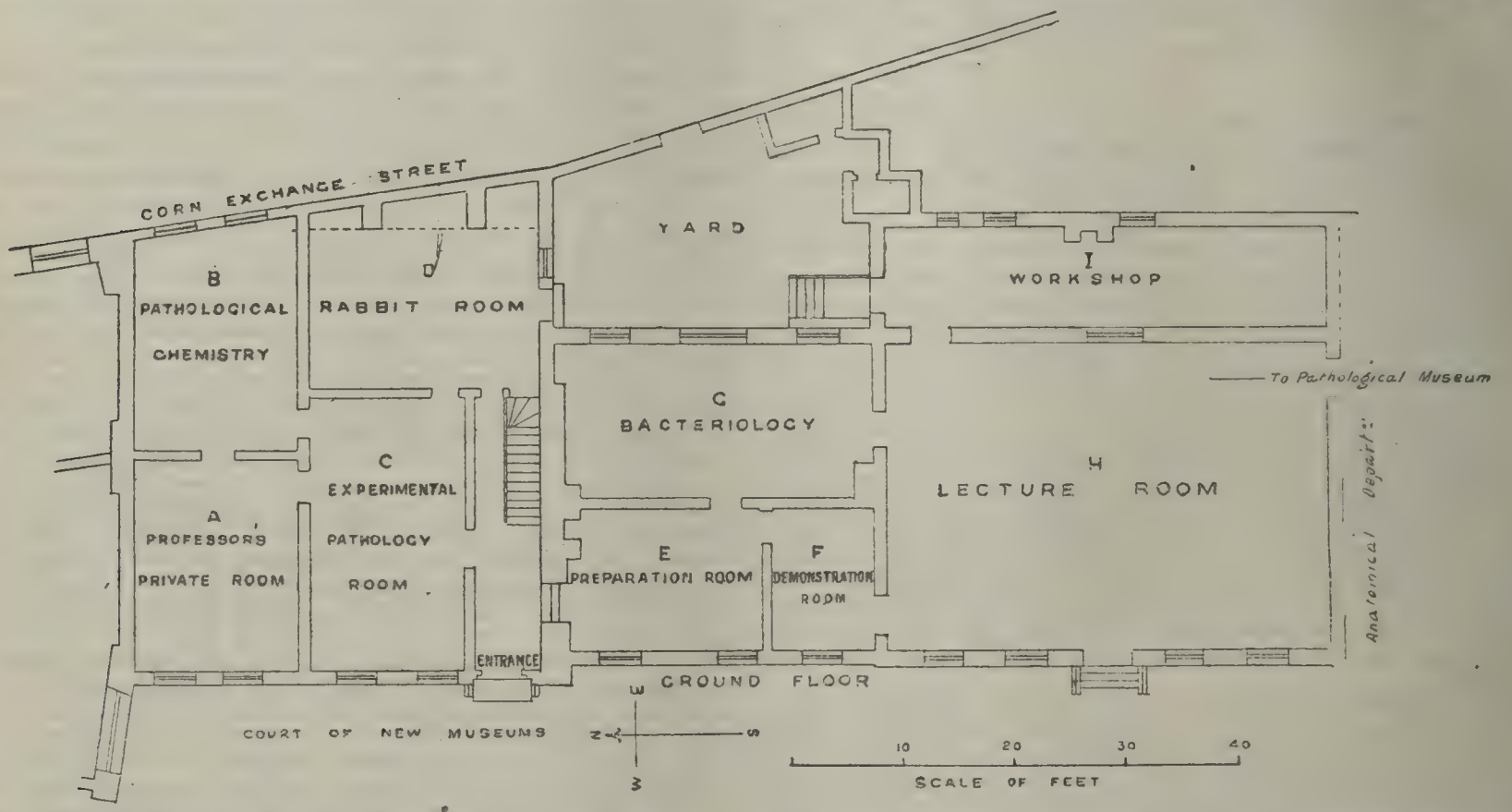
An epidemic of "rhaphania," a convulsive disease supposed to be identical with chronic ergotism, is prevalent in the Wjatka "government" of the Russian Empire. Up to the present, 683 persons have been attacked, of whom 34 have died. The Kasan Medical Society has commissioned Dr. Kondoratski to investigate the outbreak.

THE CAMBRIDGE PATHOLOGICAL LABORATORY.

THIS Laboratory, which has only been handed over to the Professor of Pathology during the summer of the present year, was formerly occupied by Professor Liveing, who vacated it on taking up his quarters in the large new Chemical Laboratory.

The buildings at present occupied by the pathological department are in part very old, and a certain number of structural alterations were necessary before the various rooms could be adapted to the requirements of pathological teaching and research.

The annexed plans of the ground and first floor show the arrangement of the rooms. There is, besides, convenient cellar space, not shown in the plan, which is used for storage and for keeping specimens which are being prepared for the museum.



On the ground floor are nine rooms, distributed as follows:

The room A is Professor Roy's private room; it contains the library of the Laboratory, and cases for some of the more valuable instruments.

The room B, communicating with the rooms A and C, is fitted up for research work in pathological chemistry, having the necessary "stink cupboard," plentiful gas and water taps, and the requisite apparatus and chemicals.

The room C is arranged for investigations in physiological pathology; in it are the usual physiological apparatus, for example, recording instruments, artificial respiration apparatus, interrupting seconds clock, water motor, electrical apparatus, etc.

The room D, which opens into C, into the passage, and into the courtyard, is used for keeping such animals as are required for investigation or teaching.

The small room, E, lying to the right of the entrance, is used as a preparation room for class work. Here are kept the specimens for the morbid histology class. In this room microscopical section-cutting and other servants' work is done.

Opening into it is the small but convenient room F. This is the private room of the demonstrator (Mr. Adami, of Christ's College).

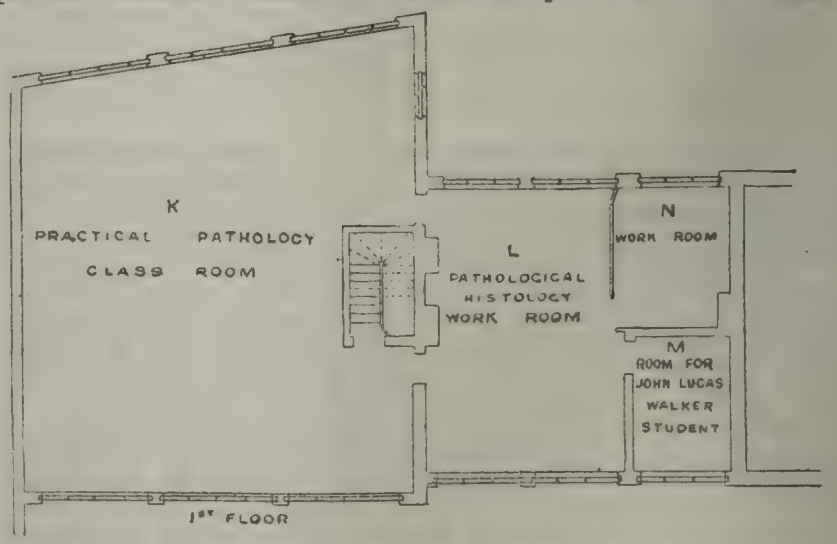
The lecture-room, H, is sufficiently large, and is fairly convenient. It communicates by a window with the long room, I, behind it, from whence specimens for demonstration, etc., can easily be handed in during the lecture. A door at one end of the lecture-room connects it with the museum of pathology, which is not shown in the plan. The pathology museum, it may be remarked, is an extremely useful one. It has been formed mainly by the exertions and in good part at the expense of Professor Humphry.

The long narrow room, I, which at one time constituted the whole of the chemical laboratory of the University, is now made use of as a workshop. It is provided with a joiner's bench, a turning-lathe for wood and metal, a smith's forge, tools of various kinds, etc.

It may be remarked, in passing, that this quaint alchemist's den, with its great domed furnace and arched roof, which one can easily fit up in imagination with a stuffed alligator and a few gigantic alembics and retorts, contrasts strongly with the present palatial chemical laboratory of the University.

Continuing our inspection of the pathological laboratory we enter on the first floor the large demonstration room, K, for the practical pathology class. To those who remember this room when it was used for chemical work it will be difficult to believe that it has not been rebuilt. The whole of the east and west walls have been converted into window space. The increased amount of light thus obtained, with the light from the roof, have changed it into one of the brightest and airiest rooms in the new museums. It is well fitted up for practical class work in morbid histology, bacteriology, and pathological chemistry.

Next to this large room is the morbid histology room L, for private research. This room is extremely well lit, and is fitted



up with microtomes, embedding apparatus, and other utensils employed in histology, as well as with the requisite chemicals and staining materials. Opening into it are two small but extremely convenient rooms for private research. One of them, M, is the

private room assigned to the John Lucas Walker Student in Pathology (Dr. Wm. Hunter, of St. John's College), and here, also, are kept the chemical balances. The second small room, N, is also in use at present by the John Lucas Walker student.

It will be gathered from the above description that pathology has at last found breathing room in Cambridge. The available space, however, does not appear great when it is considered that, besides the teaching, the laboratory is used every term by some five or six persons who are engaged in original research. At present, for example, all the rooms set apart for original investigation are in daily use, and the time does not seem far distant when it will become a question as to how the laboratory space can be increased.

ASSOCIATION INTELLIGENCE.

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members, in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the office.

NOTICE OF QUARTERLY MEETINGS FOR 1890. ELECTION OF MEMBERS.

MEETINGS of the Council will be held on January 15th, April 16th, July 16th, and October 15th, 1890. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting, namely, December 25th, March 27th, June 25th, and September 4th, 1890.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member the by Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No member can be elected by a Branch Council unless his name has been inserted in the circular summoning the meeting at which he seeks election.

FRANCIS FOWKE, *General Secretary.*

NOTICES OF BRANCH MEETINGS intended for insertion in the JOURNAL of the current week should be forwarded, addressed to the Editor, so as to reach the office not later than mid-day Wednesday of that week.

BRANCH MEETINGS TO BE HELD.

SOUTH-EASTERN BRANCH: EAST AND WEST SUSSEX DISTRICTS.—A conjoint meeting of the East and West Sussex Districts of the South-Eastern Branch will be held at the Marine Hotel, Worthing, on Thursday, November 28th, at 3.30 P.M.; Mr. G. B. Collet in the chair. The following papers will be read: Dr. Angel Money, on Nitrate of Pilocarpin and Naphthalin; their Use in Infantile Therapeutics. Dr. Herbert R. Spencer, on Abdominal Palpation in Pregnancy. Gentlemen desiring to make communications to the meeting will kindly send word as soon as possible to the Honorary Secretary, W. AYTON GOSTLING, M.D., Barningham, West Worthing.

STAFFORDSHIRE BRANCH.—The first general meeting of the present session will be held at the North Stafford Hotel, Stoke-on-Trent, on Thursday, November 28th. The President, Mr. Vincent Jackson, will take the chair at 3.30 P.M. —GEO. REID, General Secretary.

BATH AND BRISTOL BRANCH.—A special meeting will be held at the Museum and Library, Bristol, on Wednesday evening, November 27th, at 7.30. W. J. Fyffe, M.D., President. The business of the meeting will be:—1. To elect members. 2. To consider the alterations in the rules. 3. To consider the motions of Dr. Rentoul and Dr. James with reference to the alleged abuse of the out-patient department of hospitals.—E. MARKHAM SKERRITT and R. J. H. SCOTT, Honorary Secretaries, Clifton.

WEST SOMERSET BRANCH.—A clinical meeting will be held at the Taunton and Somerset Hospital on Thursday, December 12th, at 3 P.M. for cases and papers, and a special meeting will be held at the Coffee Hotel, Fore Street, Taunton, on the same day at 5 P.M., to consider Dr. Rentoul's proposals.—W. M. KELLY, M.D., Honorary Secretary.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT.—The next meeting of the above District will be held at the Kent and Canterbury Hospital, Canterbury, on Thursday, November 28th, at 2.45 P.M., Mr. C. H. Schön in the chair. The dinner will take place at the Royal Fountain Hotel at 5.15 P.M. Agenda:—A Clinical Demonstration of Cases in the Hospital by the Staff, after which the following subjects will be taken:—The Dinner Question. Mr. S. Wacher: Three Cases of Septicæmia. Mr. J. E. Schön: An Obscure Surgical Case, with remarks. Dr. Tyson: The Berlin Clinics.—W. J. TYSON, Honorary Secretary, 10, Langhorne Gardens, Folkestone.

CEYLON BRANCH.

AN ordinary meeting of this Branch was held at the Colonial Medical Library on Saturday, May 4th, 1889, present, Drs. Attygalle (Honorary Treasurer), Hallock, Keegel, Kynsey (President-elect), Macdonald, Rockwood, Schokman, Vandort, VanGeyzel (Vice-President), Weniman, Woutersz, and Honorary Secretary. The PRESIDENT-ELECT occupied the chair. The minutes of the ordinary meeting of Saturday, April 6th, were read and confirmed.

Hepatic Abscess.—Dr. ATTYGALLE read a case of hepatic abscess, incision; recovery; by Mr. H. HUYBERTSZ, L.R.C.P., L.R.C.S. and L.M.Edin. A discussion ensued.—The CHAIRMAN said that incision with free drainage was superseding the practice of aspiration in England, and with better results.—Dr. ROCKWOOD was of opinion that in deep-seated and non-pyæmic hepatic abscess aspiration was preferable.—Dr. WOUTERSZ referred to a case in the General Hospital, Colombo, in which, after 10 ounces of pus were once drawn by the aspiration, the patient recovered.

Rupture of Intestine.—Dr. WOUTERSZ, for Mr. AMERASCKERA, read a paper on three cases of rupture of the intestine, under the care of Dr. G. P. Schokman, reported by J. A. Amerasckera, L.C.M.C. A discussion followed.—Dr. ROCKWOOD wished to know whether bruises on the abdominal wall accompanied the intestinal lesions.—Dr. KEEGEL instanced a case of rupture of the spleen following a kick on the abdomen, but with no cognisable mark on the parietes.—The CHAIRMAN drew attention to the fact that most spleens in tropical and malarious regions were diseased, and prone to rupture with even slight injuries. He cited an instance in which the pressure of a crowd sufficed to cause rupture of the spleen.

The HONORARY SECRETARY'S paper, Notes of a Case of Eczema of the Female Breast, of five years' duration, recovery, was read by him. His paper on the Minute Pathological Anatomy of Parangi Eruptions was postponed.

Council Meeting.—At a meeting of the Ceylon Branch, held on May 4th, the following gentlemen were present: Drs. Attygalle (Honorary Treasurer), Hallock, Keegel, Kynsey (President-elect), Macdonald, Rockwood, Schokman, Vandort, VanGeyzel (Vice-President), Weniman, Woutersz, and Honorary Secretary.

On the motion of Dr. ATTYGALLE, seconded by Dr. MACDONALD, Dr. Kynsey was elected Chairman. Minutes of the Council meeting of April 6th, 1889, were read and confirmed, with the exception of Paragraphs 5 and 7, which will have to be submitted to a general meeting, as pointed out by Mr. Keegel in terms of By-law 4 of the local Branch. Resolved that a general meeting be summoned on the requisition of seven members in terms of By-law 9: (*a*) To elect a representative of the Branch to the Council of the parent Association; (*b*) to elect three non-resident members to the Council of the local Branch. Dr. Attygalle's motion, "That steps be now taken to get the transactions of the Branch published," was withdrawn by permission of the Council in view of Dr. Macdonald's motion.—Dr. MACDONALD, in terms of the notice given, moved that all papers read before the Branch be forwarded to the Committee of Management of the *Ceylon Medical Journal*, to be published. In supporting his motion he said that there was no necessity for lengthy remarks. By his motion he simply wished to revert to the practice that obtained before. It had been the procedure hitherto to publish the papers read before the Association in the *Ceylon Medical Journal*, and he saw no reason why the same course which worked so well should not be resorted to.—Dr. VANDORT, while approving of the spirit of the motion, which implied that the Association stood in need of a journal of its own, yet found considerable difficulty in supporting Dr. Macdonald's motion. He saw the necessity for an organ in which not only the papers read but the discussions that ensued should be published. It was difficult to expect free discussions to be published in a journal over which the Association had no control. He would bring forward just one instance in illustration of his contention. When Dr. Asserappa intended to contribute a paper on a crying social question he was warned that quasi-political questions

would not be acceptable to the Association, and he withheld it in consequence, under the advice and pressure of friends who viewed the subject from a purely departmental point of view. Although he (Dr. Vandort) entertained quite a different opinion as to the suitableness of the subject for discussion, Dr. Vandort thought that the Association would likely come into friction with the Committee of Management if the committee exercised its discretionary powers and vetoed any contributions sent. There was no guarantee that every contribution sent by the Association would be invariably acceptable; that so long as the Council of the Association was unrepresented in the management of the journal, the Association should hesitate before committing itself to such a wide measure.—Dr. VANGEYZEL supported Dr. Macdonald's motion, and said that there was no scope in Ceylon for the publication of two separate medical journals.—The CHAIRMAN agreed with the last speaker in thinking that there was no scope for two medical journals; that the Branch should send its papers, as hitherto, to the *Ceylon Medical Journal;* that every consideration would be shown to the contributions from the Association; and that no exception would be taken to any paper unless it contained an attack on Government, in which case alone would it be vetoed: that he himself saw no objections to the publication of any paper that had no political bearing—say, for instance, one on the Contagious Diseases Act. This was a medical question, and, as such, would have been well published in the journal; but as for the publication of the transactions, he added, since the finances of the journal were not in an over-flourishing condition, he would have no objection to the Association paying for the publication of any further matter it desired.—After some further remarks, Dr. Macdonald's motion, amended as follows, was passed: "That all papers read before the Branch be forwarded to the Committee of Management of the *Ceylon Medical Journal*, unless the authors request that the papers read be not sent to the journal for publication."

A special general meeting was held on May 11th, at 1 P.M., in terms of By-laws 9. Present, Drs. Asserappa, Hallock, Macdonald, Schokman, Vanderstraaten (Vice-President), Woutersz, and Honorary Secretary, Dr. VANDERSTRAATEN, in the chair.

Minutes of the ordinary meeting of May 4th were read and confirmed.

Representative on Council of Association.—Dr. ASSERAPPA moved that Dr. Livera be elected representative of the Branch on the Council of the parent Association, and that he be asked to act accordingly. Dr. HALLOCK seconded. Carried.

Non-Resident Members of Branch Council.—Dr. MACDONALD moved that Drs. Dias, Morgan, and Thornhill be elected non-resident members to the Council of the Branch association. This was seconded by Dr. SCHOKMAN, and carried.

Council Meeting.—A meeting of the Council was held on June 1st. Present, the Honourable Dr. P. D. ANTHONISZ (President), in the Chair; Dr. W. R. Kynsey, C.M.G. (President-elect); Drs. J. L. Vanderstraaten and C. W. VanGeyzel (Vice-President); Dr. J. Attygalle (Honorary Treasurer); Drs. J. D. Macdonald and J. Vandersmagt, and Mr. E. N. Schokman (acting Honorary Secretary). Minutes of the meeting of Council held on May 11th, 1889, were read and confirmed.

The Office of President.—The CHAIRMAN said that at the last annual general meeting, when he was kindly re-elected President, he consented to take up the appointment on condition that he be permitted to resign it on the return of Dr. Kynsey from England; he was glad to see Dr. Kynsey here this day, and in terms of his condition he begged to tender his resignation as President of the Ceylon Branch of the British Medical Association.—Dr. KYNSEY said that the members of the Association, entertaining the greatest regard and esteem for the Honourable Dr. Anthonisz, elected him as the first President of the Ceylon Branch of the British Medical Association, and he having so worthily occupied that post of honour, he was glad that Dr. Anthonisz was re-elected President for the current year, as it was a pity that Dr. Anthonisz should resign his appointment. He trusted that Dr. Anthonisz would kindly reconsider his decision, and continue to act as their President at least till the end of the present year. Dr. Kynsey then moved that "the President's resignation be not accepted."—The motion being seconded by Dr. VANGEYZEL, was carried unanimously.—Dr. ANTHONISZ thanked Dr. Kynsey for the kind manner in which he had spoken of him, and said that he would have been pleased to see Dr. Kynsey occupy that honourable position; as it was, however, the wish of the members of the Association that he should continue to be their President, he withdraws his resignation.

An ordinary meeting was held on June 1st. Present: The Hon. Dr. P. D. ANTHONISZ (President) in the chair. Dr. W. R. Kynsey, C.M.G. (President-elect), Drs. J. L. Vanderstraaten and C. W. VanGeyzel (Vice-President), Dr. J. Attygalle (Honorary Treasurer), Drs. J. D. Macdonald and F. Vandersmagt, and Mr. C. N. Schokman (Acting Honorary Secretary).

Fracture of Skull.—Notes of a case of Punctured Fracture of the Skull, by Mr. E. MODDER, Medical Officer at Kegalle, were read by the ACTING HONORARY SECRETARY.—The CHAIRMAN said that it was a rare and interesting case, and that there was no doubt that the excitement caused by the patient walking several miles after the receipt of the injury added to the pressure and increased the irritation.—Dr. KYNSEY said that it was not only a very interesting case, but that it was properly and successfully treated. He was particularly struck with the number of injuries to the head breaking into the frontal sinus, treated successfully without any surgical interference at the General Hospital.

Nuwara Eliya as a Health-Resort.—The ACTING SECRETARY then read a paper entitled Nuwara Eliya as a health-resort, by Mr. HENRY HUYBERTSZ, Medical Officer of Kalutara.—The CHAIRMAN said that there was not the slightest doubt that a periodical change to Nuwara Eliya was very beneficial to health. He remembered the time when he went through the Rambodda Pass there were no Coffee Estates and no bridge at Gampola, consequently the journey to Nuwara Eliya was difficult and expensive. He hoped the water-supply at Nuwara Eliya was good.—Dr. KYNSEY said that at one time it was considered cheaper to go to England than to go and reside at Nuwara Eliya. The water-supply was very good, and there was no chance of its pollution. He was glad that not only Europeans but a large number of the people of the country now resorted to Nuwara Eliya for the benefit of their health.—Dr. VANDERSMAGT said that at the season Nuwara Eliya was quite full, and to get a residence there one had to secure it long before.

The reading of the paper on the Minute Pathological Anatomy of Paragi Eruptions, by Dr. Brito, was postponed to the next meeting.

The meeting terminated with a vote of thanks to the Chairman, proposed by Dr. KYNSEY, and seconded by Dr. ATTYGALLE.

SPECIAL CORRESPONDENCE.

PARIS.

The Water Supply of Paris.—Typhoid Fever and its Treatment.—The Bacillus of Tetanus: the Action of Antiseptics on Tetanus Germs.—Pure Air for Phthisical Patients.—New Facts concerning Ouabaïne and Strophantine.—The Origin of a Febrile Condition.—Treatment of Diphtheria.—A Vaccine for Murrain.—A Mechanical Cure for Sea Sickness.—General News.

THE faulty water supply of Paris is again occupying the attention of medical men. The recent accident at the waterworks which supply part of Paris with Vanne water was fortunately remedied in two days, without any present menace of a typhoid fever epidemic; but the general average of typhoid cases in Paris resulting from the use of impure water is, according to Dr. Ollivier, 1,000 yearly. At a recent meeting of the Hospital Medical Society M. Ollivier stated that he had called the attention of the Seine Sanitary Council to the subject. Eight hundred of the thousand deaths from typhoid could be avoided by improving the water supply of the French capital. River water, says Dr. Ollivier, ought not to be used for ordinary drinking purposes, and considers that it is of the highest importance to use carefully the spring water provided. Unless the economy be enforced he sees no remedy. Providing Paris with fresh sources of spring water will fail to meet the difficulty later on as the population increases. Spring water should only be used for alimentary purposes. With this object in view he proposes a double system of pipes for carrying water into Paris—one, big, for Seine water; another, small, spring water. M. Letulle observed that this system is adopted at all hospitals, with the result that the nurses, servants, etc., notwithstanding strict injunctions to the contrary, draw Seine water for drinking because it "comes

quicker;" besides which, when the supply of spring water is inadequate to meet the demand, Seine water is supplied This year ptisans were made with the Seine water, and it was impossible to do otherwise. The only remedy with regard to hospitals is to provide them all with Chamberland's filters. M. Gérin Roze has them in his wards at the Lariboisière Hospital. M. Chantemesse observed that epidemics have in some instances resulted from the practice of turning on spring water into pipes which have previously carried Seine water into Paris. The impurities left behind are carried along by the spring water, which is thus polluted and dangerous.

M. Juhel Rénoy has recently treated eight typhoid fever patients sent to the hospital from Aubevilliers, where only Seine water can be had. All the patients succumbed quickly. The cold bath treatment was adopted, which M. Gosias, in a paper read before the Society a few minutes previously, said "reduced typhoid fever to a name." According to statistics furnished by MM. Richard Gosias and Juhel Rénoy, the mortality in typhoid fever cases treated by cold baths furnished a death-rate of 4.6, and the usual treatment M. Merklen stated gave 14 and 15 per cent.

MM. Bossano and Steullet have made a series of laboratory experiments to ascertain the action of antiseptic substances on tetanus germs, and conclude from their researches that tetanus is due to the presence of a bacillus which may or may not be associated with other bacilli. A 5 per cent. solution of carbolic acid, chloride of lime, sulphur vapours do not attack them; earth taken from a stable in which an animal died from tetanus can transmit tetanus after the stable has been disinfected. M. Richelot read before the Paris Surgical Society notes forwarded by Locq, house-surgeon at Marseilles, on the infectious origin of tetanus in new-born infants. There was neither encephalopathia nor uræmia. M. Locq took some earth and mud from a stable that was near the hospital, and inoculated guinea-pigs with it; these died four days later on. The pus found in them was used for cultivation fluid; in the cultivation M. Locq detected the presence of a bacillus; other guinea-pigs were inoculated with this, and died. M. Locq argued from this experiment that tetanus is of telluric origin. M. Després objects to this conclusion, and considers M. Locq committed an oversight in not trying to ascertain if the infant with tetanus had not been exposed to the cold.

M. Nicaise, during his stay on the borders of the Mediterranean, made some clinical experiments, from which he concludes that, during the months of December, January, February, and March, bedroom windows may be left open at night provided the temperature be not lower than 8° C. (46° F.); otherwise a fire must be lighted to warm the incoming air, the object being to renew the air and not to oblige phthisical patients to breathe cold air. Outside venetians blinds are useful; they arrest the passage of the air from outwards inwards. M. Nicaise recommends this practice for healthy people.

M. Gley stated before the Biological Society some fresh facts concerning ouabaïne and strophantine. From three to four drops of a 1 per cent. solution anæsthetises the cornea; this condition persists sometimes several hours. M. Gley showed the Society a rabbit of which one eye was completely anæsthetised. Ten times the quantity of cocaine would only produce anæsthesia lasting a shorter time.

M. Roussy, in a paper read before the Academy of Medicine by M. Schutzemberger, states that fever is often the result of soluble non-organic principles, but of microbian origin, being introduced into the animal economy. He has ascertained that injecting into the blood or under the skin water in which different organic matter has been macerated also determines a febrile condition. M. Roussy has isolated the pyrexogenic element, and concludes from the results of his experiments that certain diastasis or zymosis (soluble ferments) have a febrile influence; the water in which the yeast of beer has been macerated is an instance. M. Roussy used the same method as M. Berthelot for obtaining "invertine," and it is possible that the body discovered by M. Roussy is identical with invertine.

A family of two children with their parents fell ill one after the other with diphtheria. The father is a well-known medical man, and adopted Dr. Gaucher's treatment, which is as follows: a tampon of cotton wool steeped in the following solution is applied every two hours inside the throat, pressing slightly on the false membranes: 10 grammes of alcohol, 15 grammes castor oil, 5 grammes carbolic acid. The false membranes become desiccated and roll up; it is then easy to remove them. After they are taken away, the solution need be applied only once a day. Adults during the treatment gargle their throats with a weak solution of boric acid; with children, an irrigator or spray must be used. M. Hertinel slightly modifies this treatment; he uses 25 grammes glycerine, 20 camphor, 5 carbolic acid, and uses a spray of boric acid in weak solution at 15° C. This treatment will soon be discussed at a Paris medical society.

M. Porquier, in his competitive essay for the Barbier prize, describes his researches made with the object of finding a prophylaxis against murrain. M. Nocard, in his report on the essays sent in, said M. Porquier has discovered the means of rendering the virus of murrain innocuous without robbing it of its prophylactic qualities when used for inoculation. In murrain, inoculation is always practised in the tails, to lessen the danger of contamination of healthy herds; ten days after the inoculation, the end of the tail can be excised.

Dr. Bernard, of Cannes, recommends all those who suffer from sea sickness to follow the advice given him by a sailor, that is, as soon as the disagreeable premonitory symptoms are felt the chest should be kept straight and stiff, the shoulders held back in order to allow the thorax to move easily. In this position regular rhythmical inspirations should slowly be taken, and deep enough to fill the lungs with inspired air. Dr. Bernard tested the truth of these directions, and escaped sea sickness; also a number of his fellow passengers.

The Director of the Assistance Publique has changed the name of Hôpital du Midi. Henceforth it will be called Hôpital Ricord.

Professor Arloing, of Lyons, has been gazetted Chevalier de la Légion d'Honneur; Dr. Leloir, professor at Lille, "officier" of the same Order. The banquet given in honour of Dr. Paul Berger being named Chevalier de la Légion d'Honneur must have been as gratifying to him, if not more so, than the honour the Government has accorded him; as to gain the esteem and affection of our fellow men, even when merited, is perhaps as difficult, if not more so, than State honours. However, both fall to the share of Dr. Berger, who richly deserves them.

The marriage of Dr. Daremberg, whose researches on tubercular virus we summarised in our last letter, took place last Tuesday. M. Léon Say and Professor Pasteur acted as witnesses on the part of M. Daremberg.

During September 111 patients have been treated at the Pasteur Institute. Fifteen had been bitten by animals proved by experiments to be mad; fifteen by animals which had been examined by a veterinary surgeon and reported by him to be mad; sixteen by animals supposed to be mad but not proven. A hundred and three of the patients were bitten by dogs, four by cats, two by cows, one by a bull, and one by a pig.

VIENNA.

Induration of the Cervix Uteri in Pregnancy.—Gonorrhœal Vulvitis in Prostitutes.—Pathology and Treatment of Torticollis.—A Cured Case of False Aneurysm of the Radial Artery.—Electrical Œsophagoscope.

At a recent meeting of the Vienna Obstetrico-Gynæcological Society, Professor R. Chrobak reported a case of induration of the cervix with ulceration of its lips. The condition had come on during pregnancy, and the appearances were such as to suggest carcinoma, as there was no evidence of syphilis. Premature delivery was effected four weeks before term, and immediately afterwards all the diseased parts were excised. Recovery took place without reaction. Two years and a half later—the patient in the meanwhile having enjoyed perfect health—an induration, similar to the first one, of the rest of the cervix supervened, again during pregnancy. Miscarriage occurred spontaneously at ten weeks; after which the disease disappeared. Professor Chrobak showed drawings of several sections, in which a very copious small cellular infiltration, with emigration of cells through the walls of the blood vessels, was visible. The cells were also grouped around the blood vessels. As an organised neoplasm and tuberculosis could be with certainty excluded, it remained doubtful whether there was an abundant escape of cells during the fluxion produced by pregnancy, or whether, after all, the disease was of syphilitic origin.

At the recent Dermatological Congress at Prague, Dr. Jacobi, of Breslau, made a communication on the subject of gonorrhœal vulvitis in prostitutes. He opposed Oberländer, who maintains that certain changes of the vaginal mucous membrane in prostitutes are gonorrhœal without having furnished a sufficient proof

of their specific character. Dr. Jacobi believed that these processes were, indeed, very frequently observed in gonorrhœa, like balanitis, but that they had no specific character. Certain ulcerative conditions of the female genitals, which Oberländer considered gonorrhœal, were, in his opinion, traumatic lesions inflicted during coitus, when, after previous ulceration, a certain rigidity of the cicatricial tissue had been left behind. These inflammatory and ulcerative processes were observed only in prostitutes.

Professor Benedikt, of Vienna, has lately dealt with the pathology and treatment of torticollis. Among other cases, he cites the following as of special importance with reference to treatment. A girl, aged 8 years, suffered for two months from severe spastic shortening of the left sterno-mastoid. Both active and passive movements of the head were impaired. Treatment of various kinds had proved useless. Examination revealed acute tenderness, and slight swelling at the point of attachment of the sterno-mastoid to the mastoid process. A subcutaneous injection of a 2 per cent. solution of carbolic acid in the neighbourhood of the diseased part instantly produced a decrease of the tenderness, and this was immediately followed by marked improvement in both the active and passive movements of the head. Five such injections, the application of Volta's battery at four sittings, and brushing with the tincture of iodine made the affection disappear within a week. Judging from other cases, a bilateral, chronic, spastic, paralytic affection would, in all probability, have developed; the prognosis would have been bad. The case had a double interest: first, owing to the rapid success of the treatment, which was chiefly to be attributed to the injections of carbolic acid; and, secondly, because it illustrated the reflex act of a tonic torticollis deriving its origin from the tendon. Professor Benedikt said injections of carbolic acid should be one of the modes of treatment most frequently used in medical practice, as they were indicated in all those cases in which local antiphlogistic treatment was required and where an inflammatory reaction, the result of irritation, such as that owing to distortion, was to be subdued. Tuberculous and syphilitic inflammations could also be favourably influenced by this method. He had previously recorded a case[1] of pronounced tuberculous spondylitis of the cervical part of the vertebral column which was favourably influenced by it. Since then he had had the opportunity of thus treating a case of bilateral fungous gonitis, a case of syphilitic neuritis nodosa, tophus of the side of the forehead, and several of syphilitic periostitis of the tibia in the same way, and with complete success. The other important case cited by Professor Benedikt was the following: A woman, aged 48, had suffered for a year from continual tonic-clonic torticollis, the head being turned round on its vertical axis, with the lower jaw towards the right side, and also round the horizontal axis, with the mesocranium towards the left side. The left sterno-mastoid was hypertrophied, the right one atrophied. Previously there had been pains in the cervical vertebræ, and for about a fortnight in the upper costal vertebræ. The third costal vertebra was sensitive to touch, and there was a slight deviation of the vertebral column at that point. There was tremor of both the hands; the strength of the arms was impaired. The right thenar and antithenar were emaciated. Strict antiphlogistic treatment, combined with absolute rest and the internal and external use of iodine, removed the symptoms of the local irritation of the vertebral column and the symptoms of the myelomeningitis. In six weeks recovery was complete. In order to relieve the torticollis, which made the patient quite unfit for work, galvanisation, faradisation, and franklinisation were tried for four months to no purpose. The use of the "cravat" was equally futile. Professor Benedikt then determined to stretch the left recurrent nerve. The nerve was laid bare at the posterior margin of the sterno-mastoid, and was energetically stretched. The wound healed by first intention in four days. The result was excellent. The intensity of the spasm decreased to a high degree, and the hypertrophy of the left sterno-mastoid muscle disappeared. This immediate result, however, was not the full measure of the success of the operation. Therapeutic agencies, which, formerly, had been without result, now became efficacious. Professor Benedikt had observed a similar result in the case of nerve resection and nerve stretching for tic douloureux. There were numerous instances in which the operation itself had no immediate success, but made those therapeutic procedures efficacious which were not so before. In this case electrical treatment, which had proved useless before the operation, was again resorted to. The electrostatic treatment, particularly, had splendid results. The patient regained the power of working, and only a trace of spasm remained on irritation. The left sterno-mastoid was only a little hypertrophied, and the right one slightly paretic. In conclusion, Professor Benedikt remarked that various forms of torticollis had to be distinguished: (1) chronic and occasional cases; (2) tonic, clonic, and tonic-clonic forms; (3) unilateral spastic and uniformly bilateral spastic forms; (4) cases in which the spasm is limited to some simple muscles, particularly the sterno-mastoid, or those in which various muscles are concerned; (5) particular forms with muscular hypertrophy, which constitute an independent clinical entity.

[1] *Internat. klin. Rundschau*, 1887.

At a recent meeting of the Imperial-Royal Society of Physicians Dr. Hochenegg brought forward a cured case of false aneurysm of the left radial artery. The patient was injured by an iron splinter, which caused arterial hæmorrhage from the left forearm; the bleeding was stopped by compression. The wound healed, but after two months an aneurysm of the radial artery developed, which was operated on by the method of Antyllus. After laying open the sac only the peripheral part of the radial artery could be found; the central conveying part could not be detected. It was not until the sac had been removed that the foreign body and the quite obliterated central part were found. Dr. Hochenegg said the case was of special interest owing to the fact that the artery became entirely separated after the injury, that the central part withdrew and became thrombosed, while the aneurysm developed out of the peripheral part by the way of the collateral circulation. Professor Kundrat was opposed to this view, on the ground that a simple separation of the artery was not sufficient for the formation of an aneurysm. It was probable that inflammation of the wall of the artery had occurred as a consequence of the injury, which, owing to collateral circulation, had led to enlargement. The condition could be elucidated by microscopical examination.

Dr. von Hacker presented to the same Society a woman from whose œsophagus he had succeeded in removing a piece of bone by means of electrical œsophagoscopy. The attempts at extraction in the usual way failed, but the exact situation of the bone could be determined by means of the œsophagoscope.

SWITZERLAND.

Bacterium Coli Commune as a Pathogenic Microbe.—Toxic Effects of Sulphonal.—Lawson Tait's Perineoplasty in Switzerland and Russia.

Dr. Tavel, of Berne, reports a case which seems to prove, first, that surgical wounds can be sometimes infected by pathogenic microbes penetrating into them from the patient's intestinal canal; and, secondly, that the bacterium coli commune—one of the commonest microbes inhabiting the bowels of human beings and the lower animals—possesses certain pathogenic properties. An enormous cystic goître was partly excised, partly enucleated by Professor Th. Kocher. A bacterioscopic examination of a sanguinolent discharge from the drainage tube, undertaken on the second day after the operation, did not reveal any microbes beyond some scanty non-pathogenic epidermoid cocci usually found in the vicinity of the outer end of drainage tubes. For the first two days the patient was fed with egg enemata, which, however, gave rise to an offensive diarrhœa, and accordingly were discontinued after the third day. The wound rapidly healed by first intention, and everything seemed to be going on satisfactorily. On the ninth day the scar became red, and fluctuation was detected beneath it. The swelling was immediately tapped, a quantity of brownish fluid blood escaping. This was found to contain large numbers of a short bacillus which proved to be identical with the bacterium coli commune. A large cavity, with greyish gangrenous walls and a serous, non-purulent discharge, next formed on the site of the removed cyst. The cavity was thoroughly scraped out, but nevertheless it contracted and ultimately healed, though only after many weeks. In order to elucidate the question whether the bacterium found possessed any pathogenic properties, Dr. Tavel carried out a long series of inoculation experiments on rabbits and guinea-pigs (the intestines of which are constantly inhabited by the microbe). Intraperitoneal inoculation in guinea-pigs was invariably followed by the animal's death within twenty-four hours, the peritoneal cavity always showing the presence of the bacteria in pure cultivation. Intravenous injections of the bacilli caused death in a few days; at the necropsy all the organs, including the heart with its blood, were found to teem with live bacilli

coli. The same may be said in regard to subcutaneous inoculation, though some of the animals experimented upon survived for a more prolonged period. It is interesting to note that after a subcutaneous inoculation the cardiac blood contained as numerous bacteria as after intravenous injection, a fact which proves that the bacteria in question can easily penetrate into the systemic circulation, even from a local focus, and probably multiply in the blood. Rabbits were found to be somewhat less sensitive towards the pathogenic action of the bacillus. While admitting that his case is of a relatively rare kind, Dr. Tavel still recommends that the possibility of such a complication of surgical wounds should be borne in mind. This involves the necessity of a most careful attention to the state of the patient's gastro-intestinal tracts both before and after any operation.

Sulphonal appears to be, after all, not so free from all unpleasant accessory effects as it has been said to be. Some months ago Drs. Bornemann[1] and Fischer,[2] pointed out that large doses of the remedy are apt to cause rather severe motor disturbances and drowsiness. Their observations are fully supported by Dr. O. Ullmann,[3] of Kuranstelt, Mammern, who recently met with three cases in which the administration of sulphonal in four or five gramme doses invariably give rise to motor (ataxic) affection of the tongue and limbs, the patient's speech becoming thick and stammering, the gait staggering, all movements jerky and uncertain, etc. In short, the drug caused all the ordinary symptoms of extreme drunkenness without, however, any disorder of the intelligence. The symptoms came on on waking the patients, and subsided in two or three days after discontinuing the drug. Alcoholic stimulants made the symptoms worse. The cardiac action remained normal. Dr. Ullmann adds, however, that he never yet saw any disagreeable effects of the sort when he used the remedy in doses varying from one to three grammes. In such "physiological" doses sulphonal is said to be an excellent hypnotic for nervous insomnia.

Dr. Roux, of Lausanne, warmly recommends restoring ruptured perineum by means of Tait's perineoplastic operation, on the ground of its "astonishing simplicity." He has used it successfully in a dozen cases of partial or total rupture, in every one of which the wound healed by first intention. The operation has already found ardent advocates in Russia. Thus, Dr. I. F. Balandin, of St. Petersburg, recently communicated twenty cases of old perineal rupture (five of them complete) operated on by this method. The wound invariably healed by first intention, the new perineum leaving nothing to be desired. The method proved equally successful in four cases reported by Dr. Voskresensky, of Kiev. Quite recently, Dr. Boleslaw Rodzewicz, of Professor K. F. Slavïansky's clinic, published a short monograph,[4] based on thirty-six consecutive cases, in which he argues that "Lawson Tait's perineoplastic operation undoubtedly constitutes a new era in the history of analogous (flap) methods," and should be "most decidedly preferred to all old perineoplastic procedures." In every one of his patients "the restored perineum fully satisfied all physiological and cosmetic demands."

CORRESPONDENCE.

IS GENERAL PARALYSIS OF THE INSANE A CURABLE DISEASE?

SIR,—Dr. Claye Shaw's case of recovery after trephining in general paralysis is of much interest, and it is to be hoped that its publication in the columns of the JOURNAL will lead to a full and exhaustive discussion on the subject of a disease around which much that is mysterious centres, and in which, especially nowadays, the unexpected so often occurs. For so many years we have been accustomed to look upon general paralysis as an utterly incurable and hopeless form of disease—a disease which has kept up its average duration of life after onset with such wonderful exactitude—that it is difficult to believe in the possibility of any other results than those. Within the last year or two, however, I confess that I have been somewhat staggered in this belief of years, for I have met with two cases, in both of which the mental and physical symptoms were unequivocally those of general paralysis. If, during a residence of nearly thirty years in some of our largest county and other asylums as medical officer, I ever saw a case of general paralysis, these two cases were typically instances of it.

In the first case the exaltation, which was unusually great (those in charge of him were all made dukes and kings and were presented with millions daily), gradually subsided, tremor of the facial muscles, thickness and indistinctness of speech, and unsteadiness of gait all steadily disappeared, and finally the patient was discharged recovered, after consultation with a leading psychologist and a leading physician and neurologist. The case has remained well since.

The second was equally exalted; he was making hundreds of thousands daily, and had command of all the establishment and carriages of a London millionaire, telegrams were sent many times daily ordering these carriages for the use of himself and friends. In this case the physical symptoms went much further; there was retention, requiring the use of the catheter three times daily for weeks; there was inability to swallow, and dirty habits. To the surprise of all around him, myself among the number, who had seen him daily many times taken out of bed, washed, and replaced there, after careful nursing and nourishing, amendment began to take place, and for some time past he has been as well as ever he was. An inquisition determined upon whilst the disease was at its worst was held subsequently, and the patient was pronounced perfectly well and capable of managing his own affairs.—I am, etc.,

JAMES ADAM, M.D.

Harley Street, W.

SIR,—Any suggestion for the alleviation or cure of such a widespread and fatal disease as general paralysis is worthy of full consideration by asylum physicians. The step taken by Dr. Shaw is a bold one, and it will be generally allowed that to justify a new and serious surgical operation three conditions should be observed: (1) the theory of the pathological process which is to be remedied should be unassailable; (2) the mechanical means adopted should clearly be competent to produce the result which is intended; (3) the resulting improvement should be proved to be the indubitable consequence of the procedure adopted.

I cannot see that Dr. Shaw has even partially satisfied these conditions. In the first place, it is extremely doubtful that the "paralyses, attacks of stupidity, loss of power of swallowing, talking, etc.," are "due to fluid pressure." In fact, the probabilities are all the other way; it is most probable that the excess of fluid is a secondary and compensatory process. In the next place, considering the operation as a mere mechanical problem, I fail entirely to see how pressure due to the presence of fluid in the convolutions (I use Dr. Shaw's expression) could be relieved by making a trephine hole in the skull. What would any practitioner think of the proposal to relieve an œdematous limb by excising a circular piece of the cuticle? To compare "brain stretching" to nerve stretching, even were the latter a satisfactory operation, is an idle and misleading analogy. To speak of "giving the brain more space to expand" by making a hole in the skull an inch and a half by three-quarters of an inch is to talk mechanical nonsense. The only way to relieve "pressure due directly to fluid in the convolutions" would be to slice the convolutions as freely as we incise œdematous subcutaneous tissue. Finally, the symptoms which Dr. Shaw regards as cured by the operation are symptoms which frequently disappear of their own accord. I have seen many cases recover as far as Dr. Shaw's patient appears to have done—so far, indeed, that they have had to be discharged. It is, therefore, extremely probable that the favourable symptoms are in no way the result of the treatment, except in so far as the operation might act in the same way as an issue in the neck might have done. Dr. Shaw says "We did not expect any marked improvement in the bulbar symptoms." We need hardly remind an alienist of such experience that the peculiar bulbar symptoms are the cardinal symptoms of general paralysis from a diagnostic point of view, and to talk of curing general paralysis without curing the bulbar symptoms is equal to curing paraplegia without restoring the power of walking. What Dr. Shaw here asserts of the permanence of the bulbar symptoms is a curious commentary on his assertion that "the loss of power of swallowing, talking, etc.," are "directly due to fluid pressure." I hope that Dr. Shaw will publish the final result.—I am, etc.,

GEORGE REVINGTON, M.A., M.D.

Manchester, November 18th.

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[1] *Deut. med. Zeit.* 1888, No. 95.
[2] *Neurol. Cent.*, 1889, No. 7.
[3] *Correspondenz Blatt fuer Schweizer Aerzte*, October 15th, 1889, p. 632.
[4] *St. Petersburg Inaugural Dissertation*, 1889.

QUALIFICATIONS OF PHYSICIANS AND SURGEONS.

SIR,—As regards qualifications for physicians and surgeons of a provincial hospital or infirmary (such as the Derbyshire with its 185 beds), I consider anyone holding the appointment of physician ought not to practise either surgery, midwifery, or pharmacy, but confine himself to the practice of medicine. In respect to the surgeon, the case is different; allowing him to practise, if he please, generally—that is, not to be confined to surgery alone. The qualification of the physician should be M.D. of any constituted University of the United Kingdom, or Fellow or Member of a Royal College of Physicians, practising as a physician. The qualification of surgeon or ophthalmic surgeon should be M.C. of a recognised University of the United Kingdom, or Fellow, or Member, or Licentiate of a Royal College of Surgeons. Every physician and surgeon must be duly registered under the Medical Acts.

In most towns of any size there is scope for a practising physician, but not for a surgeon confining himself to pure surgery. At the Bournemouth Hospital, with about 25 beds, the qualification of physician is only Fellow or Member of a College of Physicians, and in practice solely as a physician—the degree of M.D. of a recognised University being ignored, according to the rules. This rule is regarded as unfair to those possessing the higher qualification.—I am, etc.,

SPENCER SMYTH, M.D.Aberd., L.R.C.P.Lond., F.R.C.S.Eng., L.S.A.Lond.

Bournemouth, November 16th.

SIR,—Permit me to correct an inaccuracy which appeared in the JOURNAL of November 9th, p. 1050, under the heading "Scotch and Irish Graduates in England," with regard to the discussion at the meeting of the Derbyshire General Infirmary in the revised rules relating to the qualifications of physicians and surgeons. I can best make the correction by sending you a copy of the motion proposed by me bearing on the first rule with regard to the qualification of physician.

I quite unintentionally omitted to include in my motion M.B.'s of Edinburgh and M.B.'s of other universities, an omission I desire now to correct. I intended, had time permitted, to prepare an amendment to the second rule relating to the qualification of surgeon, so as to include Masters of Surgery of London and Edinburgh Universities, as well as L.R.C.S.Edin. and L.R.C.S.I.

I also send you copy of the motion proposed at the meeting by Dr. Ogle and seconded by me, suggesting that the rules should be referred to a committee of seven for further revision.

As this question of qualifications is of great importance, not only locally, but as affecting the reputation and management of our public charities throughout the country, I hope you will be able to give us some authoritative opinion on the matter, or to indicate whether it would be a fit subject for discussion at Branch meetings of the British Medical Association.

The gist of the question lies in this, and it naturally amounts to this, Is it fair to encourage a tendency to monopoly in favour of the L.R.C.P.Lond. and M.R.C.S. Eng., which are eligible qualifications according to the rules, by excluding a very large body of medical men holding at least equally good qualifications, that is, M.B. of Edinburgh and of other universities; L.R.C.P.Ed., F., M., and L.K.Q.C.P.Ireland, as well as Masters in Surgery of London and Edinburgh Universities, L.R.C.S.Edinburgh, and L.R.C.S.Ireland?

It seems to me the field of selection should either be widened so as to embrace the excluded qualifications referred to, which surely cannot fairly be considered inferior; or the ground should be consistently narrowed so as to restrict these appointments of honorary medical officers to the higher grade of Fellows of the College of Physicians and Surgeons, as well as Doctors of Medicine and Masters in Surgery of Universities.

A copy of the rules relating to the visiting medical staff appeared in the JOURNAL of November 16th (page 1126). To complete the medical rules, I now send you a copy of two additional rules relating to the House-Surgeon and Assistant House-Surgeon.—I am, etc., J. MURRAY LINDSAY.

Mickleover, Derby, November 19th, 1889.

Revised Rules.—Proposed by Dr. Murray Lindsay, and seconded by Mr. W. W. Winter:—That the first of the revised rules relating to the qualification of physicians be altered so as to include Licentiates of the Royal College of Physicians of Edinburgh, as well as Fellows, Members, or Licentiates of the King's and Queen's College of Physicians in Ireland.

[Not carried (5 voting for it, and a large majority against).]

Proposed by Dr. Ogle, seconded by Dr. Murray Lindsay:—That the rules as revised by the Weekly Board be referred to a committee of seven, for the purpose of further revision, with liberty to obtain additional skilled assistance.

[Not carried (3 voting for it, and a large majority against).]

Qualification of House-Surgeon.—The House-Surgeon must hold qualifications in medicine and surgery, and be registered under the Medical Acts, and must be unmarried, and devote all his time to the duties of his office.

Assistant House-Surgeon.—He shall be appointed by the Weekly Board, and shall reside in the house, and be provided with board, washing, and lodging, and shall receive such salary or remuneration as may be agreed upon from time to time. He must have one or more qualifications, and be duly registered. He shall give such assistance as the House-Surgeon may require, and shall act as his deputy when he is casually absent.

THE PROPOSED HOSPITAL FOR THE INSANE IN LONDON.

SIR,—In the JOURNAL of November 16th you published a notice of the presentation of a report to the London County Council by the Committee appointed by the Council to consider this matter. "Important *vivâ voce* evidence" is stated to have been received from sixteen distinguished members of the profession, but only two of them are known to have asylum administrative experience, namely, Sir James Crichton Browne and Dr. Batty Tuke.

I cannot but think the Committee have looked for "important *vivâ voce* evidence" where it was least likely to be found. I should have been glad to have seen names included in this list which would have been a guarantee that this Committee is working in harmony with the large body of eminent members of the profession who have made lunatic asylum administration their lifelong study.—I am, etc., F.R.C.P.

FALMOUTH AS A HEALTH-RESORT.

SIR,—No observations on this subject can approach completeness without a reference being made to the village of Flushing, which has a population of about 800.

In order that the situation of this place may be understood, I may say that the inner or north side of Falmouth Harbour is divided into two unequal parts by a point of land which runs due east, and is known as Trefusis Point. The summit of this point is about one-third of a mile from the water's edge, and is about 200 feet above the mean sea level. About half a mile from the extreme point, and towards the west in a due southern aspect of the hill, is a small valley wherein is built the village of Flushing, a place remarkable for the mildness of its climate, and protected entirely from the north and east winds. Invalids may here take their wonted exercise in the open air at such times as to do so would be fraught with risk in many less sheltered places. They are thus able to avail themselves of the benefit they seek by leaving their own homes, and many a consumptive has had reason to be thankful that he had been able to spend the winter and spring in Flushing.

This village is situate due north from Falmouth town, from which it is separated by the smaller division of the harbour above referred to, and is distant about a quarter of a mile from a quay, whence communication is carried on by a ferry-boat, which runs every few minutes from morning till night.

Now, with reference to the mildness of the climate of the Falmouth district, it may be said, I think, without fear of contradiction, that the temperature of the air is more equable here than in many other places which are thought so highly of as winter resorts for the invalid, and that no place on the coast line of Great Britain has a juster claim for favourable consideration.

If we refer to the Reports of the Royal Cornwall Polytechnic Society, the Royal Observatory of Greenwich, and of the British Association for the Advancement of Science we shall find that, during several years, the mean temperature at the following places was—

Falmouth	...	January,	44.1	...	February,	45.1
Torquay	...	„	39.8	...	„	43.4
Montpellier	...	„	42.1	...	„	44.8
Pau	...	„	41.2	...	„	43.6

whilst the difference between the hottest and the coldest month was several degrees less at Falmouth than at either of the other places.

The character of the climate of Falmouth and its neighbourhood is emphatically shown by the fact that such a large number of exotics flourish here in the open air. The orange and the citron grow and bear fruit on the garden wall, the blue gum (eucalyptus globulus) grows to the size of many of our forest trees, as if it were in its native climate and soil, the dracæna,

the New Zealand flax, the Chilian and Peruvian escallonias (the E. mærantha is one of our commonest shrubs), the magnolia grandiflora as a standard tree flowers abundantly, and the Chinese fan palms flower abundantly in the open air. This list might be extended very considerably were it necessary for the purposes of proving the mildness and equableness of the climate.

We have very little frost, and snow melts so rapidly that it is rare that we see the streets covered with it. It is true that we have pretty much rain, but the town being built on, and on the sides of, hills the heavy showers soon run down into the sea, whilst the soft rain quickly percolates through the earth.

Geologically the country may be said to consist of granite, from many miles west to within about a mile and a half of Falmouth, from which point to the southern and eastern borders it is mostly of a micaceous slate formation, and is covered with a loose porous earth, which will readily account for the ground drying so quickly after rain has fallen.

I venture to submit the foregoing statements to the profession for their consideration, and have no doubt that when the advantages which Falmouth offers to the invalid are fully realised by the medical adviser, then the sick will, in very many more instances than have been in the past, be spared the expense and the fatigue of a journey abroad, and be directed to seek restoration to health here, where they will not be subjected to such vicissitudes of temperature as if they were sent to Nice or some other such place.—I am, etc.,

Falmouth, October 30th. ARTHUR B. HARRIS, M.D.

ETHER AND CHLOROFORM.

SIR,—The discussion as to the relative merit of these anæsthetics in the JOURNAL is one of great interest and importance to the profession; and although the balance of experience is decidedly in favour of ether, especially in private practice, we may be led to ignore the dangers of ether and the distinct advantages of chloroform in certain suitable cases.

In cases of cardiac disease, where an operation has been necessary, my surgical friends have frequently asked me to administer the anæsthetic, not because of any special knowledge I have in this direction, but because they have not desired the responsibility to rest upon assistants where cardiac disease has been previously recognised. I have usually employed chloroform, as yet, happily for myself and patient, without any accident or appreciable approach to danger. There is much reason to believe that cardiac syncope of a fatal character may be suddenly produced by inhaling air too strongly charged with chloroform, and this, in my opinion, is the great danger to be avoided. In administration of ether there is a distinct advantage in using Clover's inhaler, as the patient inspires his own pre-breathed air charged with ether rendered more volatile by the warm breath, the effect of the pre-breathed air diminishing the hyper-stimulation of the ether. The special dangers of ether are not apparent on the operating table. A serious reaction in some cases follows its administration, and death put down to the shock of operation is not infrequently due to ether. In abdominal operations chloroform is often preferred, but much care is needed in its administration, and it is a great advantage where it is possible, as in London and other large places, to have the services of an expert in anæsthetics, so that the operator may devote his whole time, thought, and energies to the operation.—I am, etc.,

R. G. ALEXANDER, M.A., M.D., F.L.S.,
Halifax. Consulting Physician, Bradford Infirmary.

THE SANITARY STATE OF ROME.

SIR,—Dr. Haddon, without challenging a single statement in my letter, proceeds in terms, characterised neither by excess of courtesy nor even of common fairness, to raise another issue.

Without making any specific charge supported by any facts into which inquiry can be made, he insinuates that the sanitary state of Rome is bad and the water supply contaminated after reaching the city, because, happening to pay a flying visit to Rome last March, he stayed at a hotel the water-closets of which were foul-smelling. What has the insanitary condition of the water-closets of one particular hotel to do with the purity of the general water supply of the city in which it is situated?

Will Dr. Haddon be good enough to name the hotel and indicate the sanitary defects which rendered it probable that the town mains were contaminated through their agency, and inform us from what particular source the water supply came? If he will put his charge in this tangible form I will do what I can to investigate it, although I do not admit its relevancy to the subject matter of my letter. He says that between the aqueduct of a Claudian and a Roman dinner table there are possible sources of contamination. Remains exist of aqueducts made by Appius Claudius and the Emperor Claudius, but Claudian was a poet, and I never heard that he had anything to do with the water supply of ancient Rome.

When a medical man makes a wholesale charge against the water supply of a European capital where many of his country people pass the winter, and ominously warns your readers against drinking water at Rome, he is bound to adduce better evidence than Dr. Haddon has yet shown. I hold no brief to defend bad water-closets or other insanitary arrangements either at Rome or in England, and my letter had no reference to the general sanitation of Rome, which is too wide a subject to be discussed in a letter, but I protest against the levity with which this charge is made.

I have elsewhere pointed out what I considered blunders in house construction which have of late years been made at Rome, particularly the removal of water-closets into the interior of the house; and I regard as the greatest blunder of all the scheme, which is in process of execution, of pouring the sewage into the Tiber below S. Paolo, both as a waste of material which might be utilised, and in view of the possibility that the lands contiguous to the delta of the Tiber may some day be repeopled; but I have no right and no intention to occupy your space with so vast a question as the general sanitary condition of Rome, on which I hope ere long to make a communication to the *Sanitary Record*. Those of your readers, however, who are interested in the subject I could refer to the letters from Rome which you, Sir, the late Dr. Aitken, myself, and others have, during recent years, contributed to the JOURNAL; also to the Report of the Cholera Congress of 1885 (particularly the facts relating to the escape of Rome during the visitation of the preceding year), and to the latest work of Tommasi Crudeli, *Il Clima di Roma* (not yet translated, but published by Loescher in the Corso).

The last sentence of your correspondent's letter seems to indicate that he is ignorant of the fact that in 1881 an international commission of physicians, assisted by a skilled sanitary engineer, did "overhaul" the hotels at Rome, and reported that the eighteen chief hotels then in the city had carried out the recommendations of the commission. No man can guarantee the condition of every hotel or *pension* or lodging in a city with a population, as Rome has, of more than 400,000 inhabitants; but having proved, even to Dr. Haddon's satisfaction, that the Roman water is unexceptional in purity on its arrival at the city, I shall require better and more trustworthy evidence than he adduces before accepting as a proved fact what is at present only a vague insinuation.—I am, etc.,

E. DRUMMOND, M.D., D.P.H.Camb.
Rome.

VALESCURE AS A WINTER HEALTH RESORT.

SIR,—This little known, but charmingly situated *annexe* to the town of St. Raphaël (Dept. Var), France, is rapidly coming to the fore as a winter health resort, not only on account of its climate and scenery, but also because of its nearness to England. It is situated about a mile or a mile and a half from the shores of the Mediterranean, on the southern slopes of the Esterel Mountains, and in the midst of an extensive pine forest. It is essentially a rising place, and although it only began to come into note about eight years ago, yet in that time more than 300 villas have been built in Valescure and St. Raphaël, and are occupied during the winter season chiefly by the English visitors and residents.

Valescure is well protected from that terror of invalids, the mistral, which is the scourge of the Riviera. On the north are the Alpes Maritimes; on the east and north-east the Esterel Mountains, which separate it from Cannes; and on the west the Montagnes des Maures, which separate it from Hyères. All these mountains are covered by thick pine forests. The only wind which is much felt is the north-west wind, or mistral, and this is hardly felt at all in the lower and more sheltered parts of Valescure. The average number of rainy days since the season 1885-86 is: November, 12; December, 6; January, 7; February, 8; March, 9; April, 9; making a total average of 51 wet days during the season. The alteration in temperature before and after sunset is not nearly so marked as in the more sheltered and hotter health resorts, such as Mentone and Cannes; also, the mist which rises

after sunset at Cannes, etc., is almost entirely absent, the air being as clear after as before sunset. As a health resort and place of residence Valescure is eminently suited for those who cannot stand the exciting influences of the larger and more frequented resorts, such as Nice, Monaco, Cannes, etc. Also on the score of expense it bears the palm. Being at a short distance from the sea, it is sufficiently far away to prevent the too powerful action of the sea-air on those who are unable to bear it, although the effects are not entirely lost. The air is that of the sea, but tempered and modified by resinous odours, tonic and sedative at the same time. Added to these advantages there is a mineral spring, with a particularly agreeable taste, containing bicarbonate of soda and lithia; this water is clear, limpid, and is in all respects equal to the waters of Vichy, Vals, Evian, etc., as a table water, and is nearest in composition to the water of Evian.

Valescure is specially suited for those suffering from chronic affections of the chest and throat, affections of the kidneys, heart, and digestive tract, albuminuria, diabetes, cancer, etc.

Amongst the diseases of the chest, those suffering from emphysema, asthma, chronic bronchitis, and laryngitis, will find that a sojourn in Valescure will do a great deal of good. Phthisis in the early stages is greatly retarded in its progress by the pure air laden with the odour of the pine, and patients will gain both in flesh and weight. Chronic pneumonia and pleurisy are also greatly benefited. Gouty and rheumatic patients, as well as those suffering from nervous troubles, receive great benefit from passing the winter months in this delightful climate. As I now write, I have the window open, the sun is shining brightly, not a cloud is to be seen to mar the beauty of the deep blue sky, and the thermometer is 65° F. in the house and 80° F. in the shade out of doors. Roses are in full bloom along the Boulevards, and in fact bloom all the winter; twenty varieties of cistus and narcissus, and twenty-five varieties of orchids are to be found growing; also various kinds of pine (parasol, Aleppo, etc.), palm, mimosa, eucalyptus, orange, lemon, fig, pomegranate, myrtle, olive, jasmine, honeysuckle, cactus, etc., grow in profusion. There is now a rapidly-growing English colony in Valescure, and an English church, with daily services, in St. Raphaël. There are also two good hotels in Valescure and several in St. Raphaël. All trains stop at St. Raphaël, and omnibuses from the various hotels meet all the trains.

As return winter stations, St. Raphaël and Valescure are, *par excellence*, the ones. When the first hot days of April begin in the neighbouring resorts of San Remo, Mentone, Nice, Cannes, etc., invalids who have passed the winter in any of those places feel the need of some change of air before returning to more northerly climes. So, although in the very sheltered health resorts the sun is warmer than may be agreeable, yet in the north the days are not warm enough to allow invalids to return home with impunity, so they wish to rest at some place *en route* where the air is less hot, and more tonic and bracing, and thus allow them to return without danger from the sunny south to the colder north. Valescure and St. Raphaël fulfil these requirements, for, not being so shut in as all the other resorts along the Mediterranean, the heat of the sun is not felt so much or so soon, and invalids will find a pure and tonic atmosphere, with all the charms of the country and the resources of the town.—I am etc.,

HOWARD D. BUSS, M.R.C.S., L.S.A.

Les Violettes, Valescure, St. Raphaël, Var, November 14th.

MEDICO-LEGAL AND MEDICO-ETHICAL.

FEE FOR JOURNEY TO CONSULTANT.

M.D. asks: What would be a fair fee to charge an apparently wealthy patient (house rent about £120 per annum in country, and drives carriage and pair) for going with his young daughter to London by train to meet a specialist in consultation? The distance by rail to London is fifteen miles, and I live two miles from the railway station. I may mention that my usual fee for attending the family, who live within a mile of my house, is 7s. 6d. a visit. I was absent by the journey between four and five hours from my practice in the morning part of the day.

*** If, as we assume, M.D. is a young (comparatively) country practitioner, he will, we think, in the case in question, act wisely in limiting the fee to two guineas, exclusive of railway and cab fares, which latter should be debited as separate items.

VISITS OF COURTESY.

F. L. N.—With reference to the alleged lack of courtesy evinced by the medical men alluded to by our correspondent, we may note that any practitioner who fails to return, with as little delay as may be, the visit of courtesy expected from every newcomer, be he young or old, contravenes the rules of intra-professional etiquette, and, so far, casts a reflection upon himself as a member of a liberal and, generally assumed, gentlemanly profession.

CONSULTANTS AND GENERAL PRACTITIONERS.

DR. J. HAMILTON (Chelsea) writes: "F.R.C.P.E." complains of lack of courtesy because the five general practitioners whose patients he had seen unknown to them did not effusively thank him for writing to them. Were a barrister to see and advise a client, and then write to the known solicitor of such client telling him he had seen a client of his, and what he thought of the case, it is probable he would hear in reply from the solicitor, but the tone of the answer would evidently astonish "F.R.C.P.E." There surely ought not to be one rule for the general practitioner and another for the consultant. If wrong for the humbler man to attend another's patient except in emergency, ought not the exalted "physician and consultant" to decline to see the patient except in consultation? I had such a letter some time ago as "F.R.C.P.E." refers to from "M.D.Lond.," who had visited a patient of mine. I sent no reply, nor have I sent him a patient since.

GENERAL PRACTITIONER writes: Nothing can excuse the discourtesy of which "F.R.C.P.E." complains under this heading in the JOURNAL of November 16th, but I venture to hope that he will not be tempted to discontinue his practice of communicating his opinion of the cases who consult him to the general practitioner direct for fear any case of mine should happen to visit him for the purpose. But, Sir, it is conceivable that even the consultant might derive benefit from his communication with the general practitioner in having his opinion correctly interpreted to the patient's friends. One is constantly asked the meaning of So-and-so's opinion of such-and-such a case, and sometimes this is very difficult to construe from the incorrect manner in which it has been transmitted from patient to friends.

Only recently a patient of mine was taken by a lady with whom she was staying to consult a leading neurologist, who expressed his opinion to the lady that my patient was suffering from "a decided tendency to consumption of the brain, but that she was progressing favourably towards recovery; that there would be danger of a relapse, which must be guarded against." This opinion I was asked to interpret, but was compelled to confess my inability to do so in the absence of any communication on the subject from the consultant. The practice, therefore, is not without its advantage even to the consultant.

FEES IN INSURANCE CASES.

F. J. writes: An assurance office requires an exhaustive medical examination (urinary analysis included) of a proposed assurer, for which they offer a 10s. 6d. fee. Am I justified in declining to make a urinary examination without the usual extra fee? I am advised by the office that all their medical referees undertake this work, and that I am the exception. What is the usual practice?

NAVAL AND MILITARY MEDICAL SERVICES.

"LEVELLING UP."

ADMINISTRATIVE OFFICER (retired) writes: In a recent article on Lord Camperdown's Committee, you advocate brigade-surgeons and deputy surgeons-general being placed on one list with the same rank and title, and with the only difference that the deputy surgeon-general shall be "surgeon-colonel on the Staff, with additional pay, etc."

The Medical Department has much to be grateful to you for, in so warmly advocating their interests, but might it be allowed to differ from you in one or two respects. The above it is feared would be an impolitic and suicidal policy. In a short time it might follow that if the brigade-surgeon is an administrative officer, co-equal with the deputy surgeon-general, or surgeon-colonel drawing extra pay and allowances, why should he not supersede him, and so on with the next grade? This levelling up process is a dangerous element to introduce.

With regard to the argument that he would be available for administrative posts for active service or campaigns, the brigade-surgeon is already available, and in recent years has been frequently employed at such times with temporary additional rank. By all means give the brigade-surgeon an additional step of rank and call him surgeon-colonel; at the same time confer a step of rank to the deputy surgeon-general and call him surgeon brigadier-general. For manifest reasons the principal medical officer of a district should hold a distinct and altogether higher rank than any medical officer serving under him.

Then, in respect to the age clause, you have observed that retirement of surgeons-general at twelve years would materially injure promotion. If the taxpayer's pocket is thus considered, extend the age of retirement to deputy surgeons-general and brigade-surgeons proportionately, or compensate them for loss of promotion. The present retirement scheme, you have remarked, has been carefully drawn up and well considered. It should, therefore, n be interfered with unless, as previously stated, it be remodelled. In certain singular and very exceptionable cases it might be left to the Director-General to recommend the extension of services of surgeons-general, but such cases would or ought to be necessarily few.

MILITARY RANK.

"A CAPTAIN ROYAL SURGEONS" writes: It is evident the medical profession throughout the kingdom are becoming alive to the fact that the question of their status as compared, for instance, with that of engineers, is ripe for

settlement. The army medical officer must be levelled up to the position of the military engineer, not in honorary or compound, but in true military titles in a corps bearing the prefix royal.

REPORT ON RELATIVE RANK.

In reply to "Medical Staff," the report in question necessarily took much labour and a considerable time to arrange and compile. The analysis may be taken as representing the whole of the replies received. On October 12th, we noticed the recent changes in the French army medical service, and, for a full official account of them refer to the *Bulletin du Service de Santé Militaire*, No. 370, March to April, 1889, p. 2041.

UNIFORM.

R.N. takes exception to the tone of some letters lately published on this subject, whether the "plain blue with distinguishing stripes," recommended by an Indian correspondent, be suitable for army medical officers or not; he thinks another correspondent showed doubtful taste in comparing it to that of the "mate of a penny steamboat," seeing it is worn by naval officers of all grades. The plain blue covers many a gallant heart in the navy.

*** R.N. should not take the letters he criticises too seriously. Naval and military uniforms are based upon totally different conceptions of the fitness of things, and, therefore, comparisons between them are useless. We feel sure our correspondents meant no disrespect to either branch, and consider further discussion of the subject unprofitable.

AID SOCIETIES IN WAR.

Referring to the letter of Mr. John Furley in the Journal of November 9th in connection with the St. John Ambulance, "M.D." writes: It is time for the public and profession to ask themselves how far aid societies which, though aiming at supplanting, may not be made the convenient excuse by parsimonious administrators for supplanting the regular army medical service. It is unquestionably true that it is the prospect of calling in the aid of such societies in time of war that enables the authorities to cut down and harass the regular service in time of peace. There are always people with money ready to subscribe, and semi-employed medical men ready to work for such societies; but let the latter remember that while the "doctors" do the work and run the risks, they get little or none of the credit, which goes to the charitable and philanthropic subscribers and organisers.

The aim of these societies is, no doubt, lofty and disinterested, but they tend to foster the already fatal idea that medical services can always be held cheap, or got for nothing. The abuse of aid societies in war is towards the regular army medical service exactly what the abuse of the public hospital system is towards the general practitioner in civil life.

ARMY MEDICAL REORGANISATION.

Croix Rouge sends an elaborate scheme for the reorganisation of the medical department into a royal corps, with divisions and companies, in connection with the great medical schools. We thank him for the same, but fear any such territorial arrangement could not be worked either from a military or civil point of view.

THE NAVY.

Surgeon Andrew Dillon Peyton has been placed on the retired list of his rank, with a gratuity. His commission as Surgeon dated from February 27th, 1882.

Surgeon Justin Foley Donovan, M.D., has been allowed to withdraw, with a gratuity, from Her Majesty's naval service, which he entered March 31st, 1879. In 1882, while Surgeon of Jamaica Hospital, he received the expression of their lordships' great satisfaction at the display of zeal and devotion to duty manifested during the epidemic of yellow fever at Jamaica.

Staff-Surgeon Thomas E. H. Williams has been appointed to the *Sultan*, November 14th.

Staff-Surgeon Matthew Trevan died on November 13th at St. Endellion, Cornwall, aged 47. His commission as Surgeon was dated December 8th, 1868, and that of Staff-Surgeon April 14th, 1877. He retired from the service February 22nd, 1884. He received a vote of thanks from the Stafford House Committee for his services at the Gallipoli Hospital during the Russo-Turkish war in 1877-78.

THE MEDICAL STAFF.

Brigade-Surgeon William Temple, V.C., M.B., has been granted retired pay. His commissions are thus dated: Assistant-Surgeon, November 1st, 1858; Surgeon, March 1st, 1873; Surgeon-Major, October 18th, 1873; and Brigade-Surgeon, April 10th, 1885. He served in Taranaki in the latter end of the New Zealand war of 1860-61, and was present in the skirmish of March 18th. Served also in the Waikato campaign in the war of 1863-65, and was present in the actions of Rangiriri and Rangiawhia (mentioned in despatches, Victoria Cross, medal); together with Lieutenant A. F. Pickard (since deceased), he was awarded the V.C. "for gallant conduct during the assault on the enemy's position at Rangiriri in New Zealand on November 20th, 1863, in exposing their lives to imminent danger in crossing the entrance of the Maori keep at a point upon which the enemy had concentrated their fire, with a view to render assistance to the wounded, and more especially to the late Captain Mercer, of the Royal Artillery. Lieutenant Pickard, it is stated, crossed and recrossed the parapet to procure water for the wounded when none of the men could be induced to perform this service, the space over which he traversed being exposed to a cross fire; and testimony is borne to the calmness displayed by him and Assistant-Surgeon Temple under the trying circumstances in which they were placed."

Surgeon James Rose, who entered the service January 30th, 1886, retired on temporary half-pay on account of ill-health.

Surgeon S. Powell, M.B., who is serving in the Bengal Command, has leave of absence for six months on private affairs.

Surgeon J. W. Bullen, M.D., who is on the Bengal Establishment, is appointed to the civil medical charge of Chunar, *vice* Surgeon J. M. F. Shine, M.D., transferred to Allahabad.

Brigade-Surgeon R. Waters, M.D., who is serving in the Bengal Command, is brought on the Administrative Medical Staff of the army in India, with effect from January 1st, 1889.

INDIAN MEDICAL SERVICE.

Surgeon L. G. Fischer, Bengal Establishment, is appointed to the officiating medical charge of the 4th Native Cavalry, *vice* Surgeon G. T. Mould.

Surgeon J. J. Pratt, Bengal Establishment, officiating civil surgeon, Etawah, is transferred to Minpoorie.

Surgeon C. C. Vaid, Bengal Establishment, officiating civil surgeon, Min poorie, is transferred to Azimghur.

Surgeon F. J. Doyle, Madras Establishment, medical officer to the 1st Infantry, Hyderabad Contingent, has leave of absence for one year on medical certificate.

Surgeons W. S. P. Ricketts, G. W. Jenney, and C. T. Hudson have been brought on the strength of the Bombay Establishment.

Brigade-Surgeon Edward Sexton, M.D., Bombay Establishment, has retired from the service, which he entered as Assistant-Surgeon, February 10th, 1857, becoming Brigade-Surgeon, September 15th, 1886. During the Indian Mutiny in 1857, he was Assistant-Surgeon of H.M.S. *Himalaya*, and was present at the disarming of mutineers at Kidderpore, Bengal. During the China war in 1860, he took part in the suppression of the Taeping rebellion and in the protection of the European settlements at Shanghai (medal with clasp). He also served in the Abyssinian war in 1867-68 in medical charge of the 3rd Depôt Hospital (medal).

Surgeon-Major John Robb, M.D., Bombay Establishment, has also retired from the service. His commission as Assistant-Surgeon is dated October 1st, 1868, and that as Surgeon-Major twelve years therefrom.

THE VOLUNTEERS.

The *London Gazette* of November 15th announces that the services of Surgeon F. W. H. Ramsay, M.D., of the 1st London (City of London) Artillery, are dispensed with. His commission bore date June 13th, 1874.

Acting-Surgeon H. St. Clair-Gray, M.D., 1st Volunteer Battalion Highland Light Infantry (late the 5th Lanarkshire), is promoted to be Surgeon.

Surgeon-Major F. E. Manby, 3rd Volunteer Battalion South Staffordshire Regiment (late the 4th Stafford), is appointed Brigade-Surgeon (ranking as Lieutenant-Colonel) to the Staffordshire Brigade of Infantry Volunteers.

UNIVERSITY INTELLIGENCE.

CAMBRIDGE.

Natural Sciences Tripos.—Alexander Hill, M.D., Master of Downing College, has been appointed Chairman of the Board of Examiners for the Natural Sciences Tripos.

Medical Examinations.—First Examination for M.B. and B.C.:

Tuesday, December 3.	9 A.M. to 12 M. Mechanics and Hydrostatics.
	1.30 to 4.30 P.M. Heat, Electricity, and Optics.
Wednesday, December 4.	9 A.M. to 12 M. Elementary Biology.
	1.30 to 4.30 P.M. Chemistry.
Friday, December 6.	9 A.M. Oral and Practical Examination in Physics.
Monday, December 9.	9 A.M. Oral and Practical Examination in Elementary Biology.
Tuesday, December 10.	9 A.M. Oral and Practical Examination in Chemistry.
Wednesday, December 11.	9 A.M. Oral and Practical Examination in Chemistry.

Second Examination for M.B. and B.C.

Tuesday, December 3.	9 A.M. to 12 M. Physiology.
	1.30 to 4.30 P.M. Anatomy.
Monday, December 9.	9 A.M. Oral and Practical Examination in Physiology.
Tuesday, December 10.	9 A.M. Practical Examination in Anatomy and Oral Examination in Physiology.
Wednesday, December 11.	9 A.M. Oral Examination in Anatomy and in Physiology.
Thursday, December 12.	9 A.M. Practical and Oral Examination in Pharmaceutical Chemistry and Oral Examination in Anatomy.
Friday, December 13.	9 A.M. Practical Examination in Pharmaceutical Chemistry,

Third Examination for M.B. and B.C.: Part I.

Tuesday, December 10.	9 A.M. to 12 M. Principles and Practice of Surgery.
	2 to 4.30 P.M. Midwifery
Friday, December 13.	9 A.M. Oral Examination in Surgery and Operations.
	4 P.M. Oral Examination in Midwifery.
Saturday, December 14.	9 A.M. Oral Examination in Surgery and Midwifery, and Operations.
	11 A.M. Clinical Examination.
Monday, December 16.	11 A.M. Clinical Examination.

Third Examination for M.B. and B.C.: Part II.

Wednesday, December 11.	9 A.M. to 12 M. Pathology.
	2 to 4.30 P.M. Elements of Hygiene.
Thursday, December 12.	9 A.M. to 12 M. Principles and Practice of Physic.
	2 to 4.30 P.M. Medical Jurisprudence.
Monday, December 16.	10 A.M. Clinical Examination.
	2.30 P.M. Therapeutics and Prescriptions, and Oral Examination.
Tuesday, December 17.	10 A.M. Clinical Examination.
	2.30 P.M. Microscopical Specimens, and Oral Examination.
Wednesday, December 18.	9 A.M. Oral Examination.

Examination for M.C.

Friday, December 13.	9 A.M. to 12 M. Pathology and Principles and Practice of Surgery.
	2 to 4 P.M. Essay on Surgical case and Topic relating to Surgery.

Saturday, December 14.	12 M. Oral Examination.
	2.30 P.M. Surgical Operations and Surgical Anatomy.
Monday, December 16.	12 M. Clinical and Oral Examination.

The names of candidates for the Third Examination and for the examination for the degree of M.C. must be sent to the Registrary (through the prælectors of their respective colleges) on or before Wednesday, November 27th; those for the First or Second Examinations on or before Wednesday, November 20th.

Forms on which it is requested that the names may be written will be sent to the prælectors.

The certificates of candidates, accompanied by their postal addresses, must be sent to the Registrary on or before the fifth day before the beginning of the examination for which they are entered.

The fees for each examination must be paid to the Registrary when the certificates are sent in.

Any candidate whose name and certificates have not been sent in and fee paid at the proper time is liable to pay an additional fee of £1 if he be, nevertheless, admitted to the examination.

THE STUDY OF VARIATION.—Mr. Bateson, Fellow of St. John's College, and Balfour Student, proposes, with the approval of the Special Board for Biology and Geology, to give a course of lectures during the Lent Term on the Study of Variation. Persons wishing to attend these lectures are requested to leave their names with the attendant at the Morphological Laboratory during the present term. No fee will be charged.

PLYMOUTH MARINE BIOLOGICAL LABORATORY.—In 1886 the sum of £500 was collected by friends of biology in the medical and natural science departments for the purpose of enabling the University to become a governor of the Marine Biological Association. The laboratory at Plymouth is now ready for occupation, and the special Board of Biology and Geology accordingly recommend: "That the right of nomination to a table at the laboratory of the Marine Biological Association at Plymouth, possessed by the University as a governor of the Association, be for the future delegated to the Special Board for Biology and Geology."

LECTURER IN BOTANY.—The same Board call attention to the inadequacy of the present botanical staff to maintain the high position attained by the department of botany. The Board recommend accordingly: "That an additional University lecturer in botany be appointed at an annual stipend of £100."

LONDON.

M.B. Examination. October, 1889. Pass List.

First Division.

Bowman, Henry Moore	St. Bartholomew's Hospital
Boyce, Robert William	University College
Bristowe, Hubert Carpenter ...	St. Thomas's Hospital
Campbell. Henry Johnstone ...	Guy's Hospital.
Duncan, Percy James ...	Charing Cross Hospital
Fawssett, Frank	St. Thomas's Hospital
Fenwick, William Soltau ...	London Hosp. and Strasburg and Berlin
Hayward, John Arthur	St. Bartholomew's Hospital
Kent, Charles Arthur, B Sc. ...	University College
Kitching, Charles MacGowan...	Guy's Hospital
Macgregor, Joseph Johnston ...	St. Bartholomew's Hospital
Mothersole, Robert Devereux ...	Guy's Hospital
Platt, John Edward	Owens Col. and Manch. Roy. Infirmary
Seville, Charles Frederick ...	Owens Col. and Manch. Roy. Infirmary
Turner, Edgar Olive	University College

Second Division.

Adamson, Horatio George ...	St. Bartholomew's Hospital
Andrews, Launcelot William ...	St. Bartholomew's Hospital
Barker, George Henry, B.Sc. ...	Bristol Medical School
Black, George	Guy's Hospital
Bowman, Richard Oxley ...	Owens Coll. and Manchester R. Infirmary
Brazil, Walter Henry	Owens College
Buist, James Joseph	St. Bartholomew's Hospital
Calder, Frank	Bristol Medical School
Dickinson, Frances May ...	London School of Medicine for Women
Duer, Charles	University College
Dyall, Thomas James	St. Bartholomew's Hospital
Fripp, Alfred Downing	Guy's Hospital
Goodfellow, Thomas Ashton ...	Owens Coll. and Manchester R. Infirmary
Green, Albert	Guy's Hospital
Griffiths, William, B.Sc. ...	Middlesex Hospital
Hamel, Julius	University College
Heath, Alan Jasper	University College
Hensley, Philip Henry	King's College
Hore, Ernest Wickham	University College
Killick, Charles Rowe	London Hospital
Knight, Henry Ernest	St. Bartholomew's Hospital
Knight, Mary A. McCulloch ...	London School of Medicine for Women
Ledward, Milton Prentice ...	Owens College & Manchester Roy. Infirm
Lukis, Charles Pardey	St. Bartholomew's Hospital
Padbury, George John	Guy's Hospital
Paton, Edward Percy	St. Bartholomew's Hospital
Pickard, Ransom	St. Bartholomew's Hospital
Robinson, George Henkell D. ...	St. Bartholomew's Hospital
Rossall, Joseph Crofts	St. Mary's Hospital
Scott, Arnold	Guy's Hospital
Shaw-Mackenzie, John Alex. ...	University College
Snell, Ernest Hugh, B.Sc. ...	Queen's College, Birmingham
Wells, Frank Barber	University College
Williams, John Price	Owens Col. & Manchester Roy. Infirmary
Williams, Robert Edwin ...	Guy's Hospital.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

LONDON COUNTY COUNCIL.

AT the London County Council's weekly meeting at the Guildhall on November 19th, it was reported that Dr. G. B. Longstaff and Captain Verney had resigned their seats on the Asylums Committee. In the report of the Housing of the Working Classes Committee, reference was made to the outbreak of typhus fever in the district of St. Olave, Southwark, reported upon by the Sanitary Committee at the last meeting of the Council. Sard's Rents, which is within the district, was reported to the Committee as an insanitary area on June 12th. The medical officer, having been instructed to investigate the matter, had now reported that the local authority was already proceeding under Torrens's Act for the improvement of the area.

INFECTIOUS DISEASE NOTIFICATION ACT.

SIR,—Permit me to bring under your notice one phase not yet discussed in your columns. I apprehend difficulties must arise in London which will cause trouble and loss of time to our profession in carrying out faithfully the duties incumbent on us under this Act.

Probably every medical man has already received blank forms of certificates stamped and addressed to the medical officer of health of the district in which he resides; but our patients do not all live in one district, and here arises the difficulty, to which in the interest of my medical *confrères* I would call your attention. Among better class patients it will be easy to find out to which district they pay rates, but among the poor I foresee trouble.

The parish authorities of Chelsea have alone realised the difficulties the doctors of the metropolitan area will have to encounter, and have issued to every medical man resident in their district a map of the parish. Till other districts follow their example, and put us in possession of a map showing the boundaries of the different vestries, mistakes and delays must arise.

Might not our certificates be addressed, "Medical Officer of Health, —— Vestry Hall," and leave on the paid parish officials, not on the doctor, the onus of the above reaching the medical authorities with whom he is bound to communicate.

Having no blank forms for I. D. N. A. certificates in our possession, we must, as the case stands at present, for every patient who resides outside the district in which we live who requires such certificate, write out the whole, stamp it, find out to which parish it must be sent, and the private address of the medical officer of health for such parish, all extra work for the 1s. or 2s. 6d. as the case may be, or a 40s. penalty to a busy

GENERAL PRACTITIONER.

DISINFECTION AND THE SPREAD OF INFECTION.

M.R.C.S. writes: In my experience, the process of disinfection as carried out by sanitary authorities appears to be very unsatisfactory. Upon notifying cases of scarlet fever, I find that the course adopted is to carry all bed linen, etc., through the house to the authorities' van, thereby spreading through the house the infection which had hitherto been confined to the sick room, the room itself being disinfected subsequently. He asks if this is the usual course adopted.

CHARGES FOR DEATH CERTIFICATES.

M. asks: Is it legal to charge for a certificate of death where the visits and medicine have been paid for separately?

*** It is assumed that by "certificate of death" our correspondent means the statutory "medical certificate of the cause of death." The Births and Deaths Registration Act of 1874 imposes on all registered medical practitioners the compulsory duty to furnish a certificate stating, to the best of their knowledge and belief, the cause of death of any patient attended by them during his or her last illness. The Act, moreover, while it makes no provision for the payment of any fee for the performance of this duty, renders any person who, without reasonable cause, fails to supply such a certificate liable to a penalty. We believe that the legality of making a charge for this certificate

has never been actually tested in a law court, but there seems to be little doubt that to withhold a certificate on the ground of the non-payment of such a charge would be illegal, and would, at any rate, subject the practitioner to prosecution under the Registration Act.

THE NEW ACT AND FEES FOR VISITING PAUPER LUNATICS.

DR. J. D. writes: On page 918 of the JOURNAL you will find the following extract:—"Where a lunatic pauper is taken charge of by relatives, with an allowance for his maintenance, the district medical officer shall visit and report on him quarterly at a fee of 2s. 6d., in addition to the fee now paid under 16 and 17 Vict., c. 97, s. 66."

Will you kindly inform me whether I may not charge 5s. for each case according to the new Lunacy Act? I already get 2s. 6d. for each case reported, and I imagine by the reading of this extract that the fee for such cases after every visit will be 5s. when the new Act comes into force, which I suppose will be on May 1st, 1890, and not earlier?

*** The provision mentioned does not apply to the cases now visited by our correspondent. It refers to such particular cases as shall, after the "commencement of the Act," be delivered over to the custody of a relative or friend by the committee of visitors of the asylum, on application approved by certain authorities, and for whose maintenance the authority liable therefor shall be paying the sum recommended, under certain restrictions, by the said committee of visitors. Moreover, the extra payment is for an extra report, namely, one to the said committee, to be sent to them within three days after each quarterly visit.

PUBLIC HOUSE URINALS IN PADDINGTON.

MR. MARK H. JUDGE has addressed a letter to the Paddington Vestry, of which he is a member, calling attention to the state of the public urinals in the parish, and asking that some action should be taken upon the report of the Vestry's Special Public Lavatory Committee which was appointed in 1884. According to this report, there are 113 licensed victuallers in Paddington; 40 of these have, in connection with their houses, urinals to which the public have access. Several of these urinals are in most improper places, and conspicuously in the public view. In some cases the windows of the surrounding houses look direct into these urinals. In ten cases they face the public thoroughfare, and are without door or screen of any kind. The majority are without any water-supply for flushing purposes. Many of those which have doors opening from the footway are too small, and some are so badly constructed that the urine overflows on to the public footway. The 73 licensed victuallers at whose houses there is no urinal accommodation outside are supposed to have it inside. Mr. Judge asserts that consequent upon the Vestry having rejected the whole of this report, these urinals remain to this day without any provision of water for flushing purposes, and are altogether a menace alike to the morals and the health of the community.

Quite recently a case of diphtheria in a boy, aged 5 years, the son of a coachman living in a mews, has been attributed to the condition of the public urinal at the back of one of these public houses, which is close to the windows of the rooms occupied by this man's family. Mr. Judge hopes that the vestry will rise to the occasion, and put in force the large powers conferred upon them as a sanitary authority.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns, including London, which have an estimated population of 9,555,406 persons, 5,520 births and 3,353 deaths were registered during the week ending Saturday, November 16th. The annual rate of mortality in these towns, which had been 17.5 and 18.1 per 1,000 in the two preceding weeks, further rose to 18.3 during the week under notice. The rates in the several towns ranged from 11.7 in Birkenhead, 12.1 in Bristol, 13.0 in Hull, and 13.2 in Derby to 24.6 in Newcastle-upon-Tyne, 26.7 in Manchester, 26.8 in Sunderland, and 28.5 in Preston. In the twenty-seven provincial towns the mean death-rate was 19.1 per 1,000, and exceeded by 1.7 the rate recorded in London, which was 17.4 per 1,000. The 3,353 deaths registered during the week under notice in the twenty-eight towns included 72 which were referred to scarlet fever, 70 to measles, 56 to whooping-cough, 54 to diphtheria, 54 to "fever" (principally enteric), 36 to diarrhœa, and not one to small-pox; in all, 342 deaths resulted from these principal zymotic diseases, against 364 and 328 in the two preceding weeks. These 342 deaths were equal to an annual rate of 1.9 per 1,000; in London the zymotic rate was 2.0, while it averaged 1.7 per 1,000 in the twenty-seven provincial towns, and ranged from 0.0 in Brighton and in Huddersfield, and 0.5 in Sheffield, in Birkenhead, and in Derby to 5.0 in Preston, 5.3 in Plymouth, and 6.2 in Sunderland. Measles showed the highest proportional fatality in Bradford, Preston, and Sunderland; scarlet fever in Preston and Plymouth; whooping-cough in Wolverhampton; and "fever" in Bradford, Bolton, and Preston. Of the 54 deaths from diphtheria recorded during the week under notice in the twenty-eight towns, 38 occurred in London, 9 in Salford, and 2 in Manchester. No fatal case of small-pox was registered, either in London or in any of the provincial towns; and no small-pox patients were under treatment in any of the Metropolitan Asylums Hospitals on Saturday, November 16th. These hospitals contained, however, 1,511 scarlet fever patients on the same date, against numbers steadily increasing from 538 to 1,480 in the twenty preceding weeks; 163 cases were admitted during the week, against 130 and 183 in the two previous weeks. The death-rate from diseases of the respiratory organs in London was equal to 3.8 per 1,000, and was considerably below the average.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday, November 16th, 792 births and 509 deaths were registered in the eight principal Scotch towns. The annual rate of mortality in these towns, which had been 20.3 and 19.8 per 1,000 in the two preceding weeks, rose again to 19.9 during the week under notice, and exceeded by 1.6 per 1,000 the mean rate during the same period in the twenty-eight large English towns. Among these Scotch towns the lowest rates were recorded in Leith and Dundee, and the highest in Glasgow and Perth. The 509 deaths in these towns during the week under notice included 64 which were referred to the principal zymotic diseases, equal to an annual rate of 2.5 per 1,000, which was 0.6 above the mean zymotic death-rate during the same period in the twenty-eight English towns. The highest zymotic death-rates were recorded in Glasgow and Paisley. The 232 deaths registered during the week in Glasgow included 10 from whooping-cough, 8 from diarrhœa, 5 from measles, 3 from diphtheria, and 3 from "fever." Four fatal cases of diphtheria were recorded in Paisley and 3 in Edinburgh. The death-rate from diseases of the respiratory organs in these Scotch towns during the week under notice was equal to 5.8 per 1,000, against 3.8 in London.

HOSPITAL AND DISPENSARY MANAGEMENT.

THE NEED FOR HOSPITAL REFORM: MEETING AT BIRMINGHAM.

A LARGE meeting of medical men, resident in Birmingham and the Midlands, was held on Wednesday afternoon at the Midland Institute, Birmingham, to inquire into the question of the abuse of hospitals and to consider a report brought up by a preliminary subcommittee consisting of Messrs. E. Chesshire, H. Eales, E. L. Freer, J. F. Hall-Edwards, A. Loxton, H. Malet, Bennett May, E. Rickards, Robert Saundby, T. Savage, Priestley Smith, and F. Marsh, Honorary Secretary. There were about one hundred persons present.

Dr. W. F. WADE, who presided, sketched the history of the agitation. It was not, he said, an agitation of recent growth. Referring to the memorandum and its bearing on the medical charities and their subscribers in Birmingham, he said the subscribers to the different institutions gave their money in the belief that it was to be devoted to the treatment and relief of proper subjects. To the subscribers to the Hospital Saturday Fund it had a dual interest, inasmuch as they were both givers and receivers. They suffered doubly for every improper case which was treated. It was suggested that many cases were treated at the Birmingham hospitals which were properly parish cases. It was not, he maintained, the duty of the hospitals to cover parish deficiencies; neither was it right that money subscribed for the benefit of the poor should be applied to the alleviation of the rates. The first resolution for the consideration of the meeting would deal with the general question of the existence of the abuses, the second with the best method of dealing with grievances.

The following resolution was proposed by Mr. PRIESTLEY SMITH: "That the statements contained in the report, as to the existence of abuses in hospital management, are deserving of the serious attention of the public and the administrators of medical charities."

Mr. PRIESTLEY SMITH said it had been remarked that the time was not ripe. Yet he would point out that the matter had been before the public some twelve years ago, when the late Mr. Sampson Gamgee was interested in the question. The first point in the memorandum was that the original purpose of the Birmingham medical charities had been widely departed from. He did not think there was a medical man there present who could not prove that relief had been administered under circumstances to which the hospitals were never intended to apply. That meeting, however, was not the place to give evidence. The second was, that as a result of this departure the demands made upon the medical charities were greater than could be adequately met and increased year by year. The hurry in which work was carried out rendered it almost impossible to attend to a patient adequately. The third point was that owing to the increased facilities the hospitals afforded the working classes were becoming improvident.

Dr. MALET (Wolverhampton), in seconding the resolution, said it was morally wrong to do poor people out of what was intended for them, and it was morally wrong for persons to accept what was meant for the poor. As regarded the Hospital Saturday collections, he asked whether the working men did not contribute because they expected some return, whether they did not regard hospital treatment as a right, and whether their contributions were not in many cases compulsory.

Mr. OLIVER PEMBERTON thought there was great need for such an inquiry as that now going on. It was in no sense an inquiry for the benefit of the medical profession. He would make the hospitals free, and he would maintain in an increased and exaggerated form the element of charity that now existed. He would remove entirely that old relic, the ticket system, and he would have the doors of the hospital always open for those who were injured and sick, and required charity. The payment of money for registration was absolutely wrong. People had no right to claim treatment. They had only to come with their poverty, and with their injury and their disease for treatment,

and they would get it. Primarily the poor were robbed, and, secondly, the profession were robbed.

Mr. JORDAN LLOYD said the hospitals were not open for the treatment of the sick poor. They looked after these as ratepayers. A poor person could always obtain a ticket for medical attendance, and at the great infirmary at Spring Hill they could never be refused admittance. He mentioned that out of an expenditure of £8,000 a year at the Queen's Hospital only £300 a year went to the medical profession; and out of an expenditure of £16,000 a year at the General Hospital, under £400 went to the medical staff.

The resolution was carried.

The second resolution, which was proposed by Dr. RICKARDS, and seconded by Mr. ROSS JORDAN, was as follows: "That in the opinion of this meeting the proposed inquiry would be most usefully conducted by means of a conference between representatives of the general and special hospitals, of the General Dispensary, of the Hospital Saturday Committee, of the Board of Guardians, of the existing provident dispensaries, of the Charity Organisation Society, and of the general body of the medical profession."

This was carried.

On the motion of Mr. CHESSHIRE, seconded by Dr. TOTHERICK, an influential Committee was appointed to represent the profession, and to take such steps as may be necessary.

It was proposed by Dr. SAUNDBY, and seconded by Mr. A. CLAY: "That it be an instruction to this committee to appoint a deputation to wait upon the Mayor, and to respectfully request him to arrange for a conference as suggested, or to take such other steps as may seem to him advisable."

On the motion of the Chairman, the following gentlemen were elected to form the committee:—Drs. W. F. Wade, T. Savage, R. Saundby, E. Rickards, T. Richard, A. C. Grinling, H. Malet. A. Harvey, T. W. Thursfield, S. W. Haynes, H. R. Leech, C. W. Marriott, J. H. Joy, H. M. Morgan, T. Nelson, J. P. Jackson, Messrs. O. Pemberton, Gilbert Smith, Priestley Smith, H. G. Barling, E. Chesshire, Augustus F. Clay, H. Bracey, H. Langley Browne, W. Donovan, J. H. Edwards, E. H. Fitzpatrick, E. L. Freer, J Harmar, G. Holloway, Jordan Lloyd, A. Loxton, Bennett May, J. T. J. Morrison, R A. Newton, Lloyd Owen, F. W. Underhill, J. Hallwright, H. Eales, and F. Marsh. Mr. Lawson Tait's name was included, but he declined to serve.

A vote of thanks to the Chairman for presiding, proposed by Dr. THURSFIELD and seconded by Mr. H. M. MORGAN, closed the proceedings.

THE PROPOSED PUBLIC MEDICAL SERVICE.

THE RESOLUTIONS REGARDING OUT-PATIENT HOSPITAL REFORM, ETC.

A SPECIAL meeting of the South London District of the Metropolitan Counties Branch was held at Bethlem Royal Hospital on Wednesday, November 13th, at 8.30 P.M. The chair was taken by Dr. Frederick Taylor, Vice-President of the District. After a few introductory remarks from Dr. TAYLOR, a letter from Dr. Rentoul was read, expressing his regret at inability to attend and open the discussion in answer to the invitation of the District.—The CHAIRMAN then called on Mr. Nelson Hardy to open the discussion.—Mr. NELSON HARDY began by saying that he did not agree with Dr. Rentoul's proposals. He had carefully considered the whole of the correspondence on the subject in the BRITISH MEDICAL JOURNAL, as well as the proposed resolutions of Dr. Rentoul. He discussed the matter under the following heads: 1. Is there abuse of the out-patient department of hospitals such as to demand intervention? 2. Do Dr. Rentoul's proposals provide a sufficient remedy? 3. Is the proposed Medical Service worthy of adoption for its own sake? He read through the proposed resolutions presented to the Leeds meeting, and took them as a basis for his remarks. With regard to the first point, he said that most would agree that there was real and serious abuse in the out-patient departments of hospitals, in spite of some energetic counter statements. He gave figures bearing on the subject, and said that those who believe in the fact of there being abuse could afford to be called crotchet-mongers in the face of such figures. With regard to the second heading, he thought the difficulty was in securing hospital co-operation, and agreed with Dr. Hugh Woods in wishing to see a good scheme for compelling the hospitals to do right. Recommendations to appoint an examining officer and have a wage-limit had often been adopted without effect. He pointed out the varying nature of the opinions expressed on the proposed Medical Service, many being adverse. He thought Dr. Rentoul had not taken sufficiently into consideration the necessity of the out-patient departments as providing material for clinical teaching, and that to abolish them would create a very serious hiatus in medical education. Under the third heading he reviewed the various opinions expressed on the scale of proposed fees. He said he would not go largely into detail, but selected two or three of the fees for criticism. He thought some, at any rate, were absurdly and impossibly low, considering the cost of appliances; for example, the administration of chloroform and the treatment of uterine displacements. He thought the proposed alliance with chemists quite enough to condemn the scheme for most medical men in London. He asked if Dr. Rentoul had forgotten that a Poor-law Medical Service existed, and said there was abundant arrangement for treatment of the poor even if hospital out-patient departments were shut up, for they still had, in addition to the Poor-law Service, dispensaries and general practitioners to go to. He concluded by expressing his opinion that no new organisation was required to enable one medical man to undersell another. He did not propose any resolution, and said that he should not vote on the matter.—Mr. CAMPBELL BOYD proposed for Mr. J. P. HENTSCH, and Dr. OLDFIELD seconded the following resolution: "That this meeting considers Dr. Rentoul's scheme would be impracticable, and that even it practicable it would be disadvantageous to the great bulk of the general practitioners."—Mr. J. P. HENTSCH considered Dr. Rentoul's proposals to be absurd, severely criticising them in detail. He regarded them as introducing another competing body into their midst, which could only result in still further lessening the remuneration of the profession. It was proposed to map out the country into districts, each of which would be handed over to a knot of general practitioners, who would pose before the public as a superior class. The scheme was admittedly imperfect, as it did not provide for those who were too poor to leave home, or for midwifery cases. Dr. Rentoul's suggestion that patients ill at home would send for their service doctor, who could charge his own fee, was simply a temptation to the unsuccessful practitioner to join the scheme for the purpose of taking patients from the more successful men. In short, the Public Medical Service was nothing more than the Provident Dispensary under another form. He thought it unadvisable to add the chemists to the list of our controllers and masters. Dr. Rentoul aimed at: 1. The reform of out-patient departments. 2. Prevention of counter prescribing by chemists. 3. Removal of sixpenny doctors. 4. Reform of our much abused "club practice." Mr. Hentsch thought the hospitals were crowded by people who were able to pay ordinary fees, not those who could not. He did not believe the formation of this service would stop the illegal prescribing of chemists, who defrauded the sixpenny doctors. He said, further, that the abolition of clubs meant their being swallowed up in a medical provident system. He thought the Metropolitan Provident Medical Association had degraded the profession. He implored the meeting not to be deceived by the promoters of the scheme, and urged that medical men should cling together to reform hospital abuse, and rid the profession of pests that had been allowed by our stupidity and short-sighted apathy to enter our preserves.—Mr. BRINDLEY JAMES thought we owed a debt of gratitude to Mr. Nelson Hardy for opening the discussion. He concurred with Dr. Rentoul in proposing that all hospitals should adopt the plan carried out by the London and St. Bartholomew's Hospitals or as followed at Manchester; also as to the advisability of a wage-limit. He also concurred in the proposed formation of a Public Medical Service, but strongly suggested its organisation into two separate branches—the one for those patients who, all the year round, ill or well, would contribute regular periodical payments; the other for the more improvident class who would pay only at the period of sickness. In this second case he suggested the adoption followed by the South Eastern Medical Aid Society. He also suggested, for obvious motives of economy no less than for the avoidance of any official or pauperising impression being conveyed to their minds, that patients should be seen at no special building set apart for the purpose, but at the residence of the practitioners, as considerately as though belonging to a wealthier class. He agreed with Resolution 3. In No. 4 he agreed with Dr. Rentoul respecting friendly societies, etc., provided no interference whatever were induced or implied with any existing friendly, benefit, or other society. He suggested the following payment scale: 1s. per quarter by each member of sound constitution on joining, 1s. 6d. per quarter if of less satisfactory condition at the time; 1s. to be paid if rejected on application for

membership; 1s. for every certificate required for any other society than the Public Medical Service, except certificates required in case of accident where a large amount has been insured for; no charge for prescriptions dispensed; £1 1s. for a multipara confinement; £1 10s. for a primipara or operative confinement. Families in all cases to be taken at a reduced wage limit. He agreed entirely with Resolutions 5 and 6. He thought there would be plenty of patients for general practitioners if out-patient departments were done away with, and that students might be taught by general practitioners. He declined to vote for the resolution before the meeting.—Dr. T. H. CORBYN asked the meeting to object entirely to Dr. Rentoul's scheme. He thought the lay public were very bad collaborators. He referred to his letter of November 2nd in the JOURNAL. He read a letter from Dr. Rentoul which he confessed he had not been able to understand, and criticised the schemes as contradictory and confused. He thought we ought to make use of the Royal Commission just appointed, to prove the necessity of doing away with the general medical and surgical out-patient departments of hospitals. He spoke of the appointments of assistant-physicians and assistant-surgeons as sinecures.—Dr. HUGH WOODS said that obviously there must be an immense difference of opinion on this question, and that Dr. Rentoul had modified his original views. He proposed an amendment: "That this meeting approves of Sections 1, 5, and 6 of Dr. Rentoul's resolutions, also that referring to the management of charities. With regard to Sections 2, 3, and 4, this meeting recommends the appointment of a committee such as that mentioned in Section 3, and thinks that the details alluded to in Sections 2, 3, and 4 should be left to that committee." He agreed that there was a doubt as to the scale of fees, and considered that there ought to be a sort of trades-union of medical men, and that all those patients who could pay should do so. He thought that close restriction of the out-patient departments would improve matters greatly.—Mr. BRINDLEY JAMES seconded the amendment—Dr. OLDFIELD said he had seconded Mr. Campbell Boyd's motion in order to start the discussion. He agreed with Dr. Rentoul's proposals as far as concerned the restriction of the abuse of out-patient departments. He thought patients ought to be recommended for out-patient relief by a letter from a local general practitioner, or else should be refused treatment. He thought Dr. Rentoul's scale of fees impracticable, but that there ought to be an extreme wage limit.—Mr. CAMPBELL BOYD thought it was too easy for people to get into hospitals, and people were demoralised by too much charity, and so would not save money against illness. He thought, if they could not pay, the Poor-law service should take them up.—Dr. FREDERICK TAYLOR agreed that there was some abuse of hospital departments, and said that no one was really adverse to an inquiry or reform of that. He thought that some sides of the matter were not fully known to general practitioners. The numbers reported as receiving out-patient relief were deceptive. He said many people had spent a great deal of money before going to hospital and could not pay more. He assured Dr. Corbyn that seeing out-patients was very far from being a sinecure, and said that out-patient departments were a very valuable means of education to the medical student. He was not sufficiently acquainted with general practice to know whether the Public Medical Service would benefit the general practitioner, and considered that, if the out-patient departments were reformed, there would be no necessity for the service. He called on Mr. Nelson Hardy to reply.—Mr. NELSON HARDY, in reply, said he had little to add. The whole question would be discussed by a Committee of the Association. He did not approve of sixpenny dispensaries. He said the out-patient departments were a valuable addition to education, and Dr. Rentoul's scheme provided no proper substitute for their abolition. He entirely agreed with Dr. Corbyn as to the difficulty in understanding the matter, and thought nothing would be settled if people were always varying their schemes. He congratulated the meeting on the discussion.—The meeting then divided on Dr. Hugh Woods's amendment, which was rejected. The original motion was then put to the vote and carried. A vote of thanks to the chairman was carried by acclamation.

AT a meeting of the Worcestershire and Herefordshire Branch held on November 5th, the following comments on Dr. Rentoul's resolutions were carried unanimously: Resolution 1. This Branch considers that the out-patient departments of our hospitals and other medical charities is generally very largely abused, many persons availing themselves of them who are quite able to pay either their club doctors or to a provident dispensary; and that there should be a wage limit for those who become out-patients as above, and that Dr. Rentoul's figures on this point and the Manchester system of checking abuse are to be approved of. Resolutions 2 and 3. The working classes being already sufficiently supplied with medical and surgical aid by means of provident dispensaries, sick clubs, and the Poor-law Medical Service, such a Public Medical Service as Dr. Rentoul suggests is not needed, and could not be worked. Resolution 4. This Branch agrees with the first, paragraph of this resolution as far as the word "companies," and is strongly of opinion that a combination of medical men all through the country should be formed to enforce the adoption of a wage limit in all clubs, friendly societies and provident dispensaries, and that no member of such combination should be allowed to act as medical officer to any society where such wage limit is not the rule; also, that any medical practitioner who disregards this rule should be discountenanced by the profession. Resolutions 5 and 6 were agreed to.

AT a meeting of the Shropshire and Mid-Wales Branch, held on November 19th, 1889, the following resolution was carried unanimously: "That this Branch view with great pleasure the action of the Charity Organisation Society of London in presenting a petition to the House of Lords praying for an inquiry into the management of medical charities, and earnestly hopes that the inquiry will be extended so as to include the provincial hospitals, dispensaries, and provident clubs, and thereby obtain as complete information as possible upon this important subject; and that copies of this resolution be forwarded to the President of the Council of the British Medical Association and to the JOURNAL for insertion."

AT a meeting of the Council of the South-Eastern Branch on November 15th, 1889, the following resolutions were adopted: "1. Resolved that, in the opinion of this meeting, the proposals of Dr. Rentoul as regards a public medical service are impracticable. 2. Resolved, that it is the opinion of this meeting, that the provincial hospitals and dispensaries should be included in the scope of the inquiry into the management of the medical charities asked for by the Charity Organisation Society of England in their petition to the House of Lords."

DR. ROBERT R. RENTOUL writes: I should like to call the attention of members to the fact that the proposed public medical service is not the only point under discussion. What we have to grasp hold of is, that the out-patient departments of medical charities must be reformed. How? By fixing a "wage limit," and by having an inquiry into the social circumstances of applicants. You allow that wage earners making up to 25s. per week per family are to have the right to go to the hospitals, then I think this is a generous limit. Next, there must be a service by which the eight and a quarter millions of the industrial classes may have efficient medical, surgical, obstetric, and dental treatment, and medicines. How? By having a service which will give such treatment either by the patients making a small immediate payment, or by their joining a provident society. We must not expect too many wage earners to join the provident department, as a great many object to such a plan, just as a considerable number of ourselves would oppose our being compelled to insure against sickness. For such, therefore, we should have a system of immediate payments. If the hospitals co-operate with us, we must adopt some plan of immediate payments, else the patients turned away will not be able to come to the service. It has been said by a few doctors that a public medical service is complicated. It is no more complicated than the practice of that doctor who visits for small fees and gives medicines. We must make some arrangements for midwifery, surgical, medical, and dental treatment. The great fault of the provident dispensaries and clubs is that no arrangement is made, the penny a week being supposed to cover almost all. I think the average mind will easily see that, as in our private work, so in any public scheme, we must have some scale of fees. For my part, I hope every provident dispensary in England will soon pass rules providing for the regulation of the payment of fees for different treatments, and that each one will arrange so that a patient may have his choice as to whether he will pay immediately, or will insure in the provident department. In this way, those of the industrial classes who object to join a provident department will have the power of selecting the plan which they best prefer. Moreover

there is no use in us doctors trying to dictate to the working classes, and saying, "You must insure." Better give them their choice. I wish to suggest the following form for use at the out-patient department of our medical charities, merely adding that no hard and fast or cast-iron rule is intended, each being, to some extent, taken according to its circumstances: Name. Address. Age. Occupation. Name of employer and address. In or out of work. Married or single. In club or clubs, with name. In receipt of sick pay, and how much. In receipt of out-door parish relief. Number of family, and ages. Is your wife or any of your family at present sick? The weekly income from wages is . The weekly income from clubs is . The weekly income from other sources is . The amount earned weekly by my wife is . The amount earned weekly by my unmarried children living with me is . I declare the above statement to be correct (Signature of applicant for treatment). Signature of inspector and date. Any applicant giving wrong answers forfeits all claims to treatment, and renders himself or herself liable to be prosecuted for perjury. P.S.—If the applicant considers that the inspector has not made a just finding, he or she has the right to appeal to the chairman, house governor, or secretary of the medical charity. Some may think this form too strict, but it is not more so than the plan pursued by Poor-law guardians, relieving officers, and other charity authorities. A somewhat modified form should be used by a public medical service. I have before shown how great a financial loss it is to the medical profession—this flinging about of free medical hospital aid to any who like to come and take it. But I wish to call attention to this more closely: 1,179,661 out patients were treated at 130 London medical charities in the twelve months ending 1886. Supposing an inquiry officer found that 50 per cent. of these were ineligible for medical relief, and that thus 589,830 were turned away? Supposing that these 589,830 paid, say, even 6d. per annum, here would be a gain of £14,995 10s. If they each paid 1s. per annum, there would be a gain of £29,990. Naturally this gain to medical men in general would be a great saving to the charities. I hope this statement will let those practitioners who hold hospital appointments note what serious hurt they are working on their brethren. It will also be noted that I am not now speaking of a class of hospital patients who wish themselves to be considered deserving of charitable aid, or of a section who who would wish to be spoken of on Sundays, when the clergy are preaching for funds in aid of the sick poor. All we require is a hearty co-operation between hospital doctors, club doctors, provident dispensary doctors, and general practitioners. If we can gain this, these minor differences and personal considerations being banished, all will work for our own credit as a practical profession, and for the benefit of the medical charities.

Out-patient Departments.

Clubs and Cheap Dispensaries.

Dr. T. H. Corbyn writes to correct the misapprehension that he recommends the abolition of all out-patient departments. He recommends that the general out-patient departments only should be abolished as being superfluous. He believes that the leading consultants would help in this; general practitioners desiring an additional opinion could always send a patient to one of the in-patient physicians or surgeons for advice. A wage limit he thinks inapplicable to large towns. In London there is a population constantly shifting, and in certain trades (painters, plumbers, bricklayers, etc.) earning high wages only for portions of the year. The lay public will have a voice in the questions, for if employers of labour must either subscribe to Dr. Rentoul's provident scheme or increase their workmen's wages, the lay public must ultimately find the money in order to pay the higher wages. The classes for which Dr. Rentoul proposes to provide have already provided for themselves. Dr. Rentoul says that "the very fact that cheap or sixpenny dispensaries flourish proves the necessity of our providing;" but Dr. Corbyn urges that, in fact, the public and the medical profession, impelled by the inexorable laws of supply and demand, have found a solution of the whole question, and have supplied the only link necessary to meet the needs of the wage earner of under 40s. a week with a large family, who does not wish to belong to one of the many insurance or club systems.

Combination among Candidates for Resident Appointments.

L.R.C.P. & S.Ed. suggests that there ought to be some combination among junior practitioners who desire to obtain resident hospital appointments. Under the present system, when a vacancy is advertised, the governors or managers of a hospital receive an enormous number of applications, and are enabled to pay very small salaries. He suggests that the position of candidates would be improved if a committee were appointed with a central office and a secretary, to receive the names of persons anxious to obtain resident hospital appointments. Hospital authorities would then have to apply to this committee, who would select the most suitable candidate, chosen according to the length of time the name had been on the secretary's list, the character of the owner's qualifications, and his special fitness.

LANCASHIRE COUNTY LUNATIC ASYLUM, PRESTWICH.

In the annual report of the Committee of Management of this Asylum for the year ending December 31st last, we find an interesting account of its history. Opened on January 1st, 1851, for 350 patients, under the medical superintendence of Mr. Holland and a staff of forty-one attendants, it now has room for 2,300 patients, who are under the care of Mr. Henry Rooke Ley as medical superintendent, with six assistant medical officers, and 319 attendants and servants. The Committee state that "it has been the aim of successive Committees, with the ready aid of the medical staff, to remove from the asylum all resemblance to a prison or a workhouse, and to give it the character of a hospital where the curative influences of cheerful surroundings and occupations are never overlooked. The asylum is in these respects believed to be second to none in the kingdom, and is also the largest." We know that this is so from personal observation, and we would say in addition that Prestwich is looked upon as the type of what a county asylum should be as regards its management, and that Mr. Ley is acknowledged to be a leader among asylum medical superintendents.

The recovery-rate was high, namely, 42 per cent. upon the admissions. Mr. Ley tells us in his valuable report that "the proportion of patients suffering from organic brain diseases among the admissions have more than doubled within the last twenty years;" that "nearly 25 per cent. of the male admissions of 1888 were cases of general paralysis;" that 6 per cent. among the females admitted suffered also from the same disease; and that in 42 per cent. of the whole male mortality for the year the disease that terminated life was general paralysis. This in a great measure accounts for the somewhat high death-rate of 13 per cent. among the males, as compared with 10 per cent. among the females. One patient committed suicide, but in this case no tendency to suicide was known or suspected. The cost per head for maintenance was 7s. 7d. per week.

BARNWOOD HOUSE HOSPITAL FOR THE INSANE, NEAR GLOUCESTER.

"This hospital continues to retain the confidence of the public, if the number of applicants for admission, many of whom could not be received for want of room, may be taken as a test." Thus runs the initial paragraph of the annual report of the Committee of Management of this institution, and with commendable promptitude they seem to be pushing forward improvements, alterations, and additions, in order that they may to some extent meet the ever-increasing demand for accommodation, but more especially to increase the means for amusement and occupation, and to provide greater comforts for the inmates. "Seventy patients have been treated at rates greatly below the cost of their maintenance, and eleven absolutely gratuitously, the two classes at an estimated cost of about £2,700, exclusive of any charge for rent." Speaking of their well known medical superintendent, the committee say they "are always glad to record their appreciation of the services of Dr. and Mrs. Needham. The large alterations and improvements effected during the year have been suggested by Dr. Needham, and it is to his superintendence that the high character enjoyed by Barnwood House is greatly due." Dr. Needham tells us in his annual report that the number refused admission was largely in excess of the number of patients admitted. The death-rate was very low, only 1.93 per cent., thanks no doubt, to a great extent, to the healthy situation of the hospital and its capital sanitary arrangements. The recovery rate was very high, namely, 65.2 per cent. upon the admissions. The daily average number of patients resident was 153, and there were in addition three boarders. On the subject of mechanical restraint and seclusion, Dr. Needham says: "With a sufficient staff of competent experienced attendants I consider these abnormal expedients to be practically unnecessary.....Both of them are allowable as means of medical treatment under infrequent and exceptional circumstances," but he condemns their use "from mere motives of economy, or to obviate defects in the number and quality of the attendants and nurses." Ample occupations and amusements are

provided, and 115 entertainments have been given during the year for the benefit of the patients.

ST. ANDREW'S HOSPITAL FOR MENTAL DISEASES, NORTHAMPTON.

THE admissions into this important institution during the twelve months ending December 31st last have been considerably less than in any previous year—not that there was any failing off in the number of applications, but owing to the fact that during the greater part of the year every available bed was occupied. The actual number admitted was 48—namely, 25 males and 23 females, 8 of them being readmissions. The total number under treatment was 379—namely, 197 males and 182 females; and there remained at the end of the year 172 males and 161 females, total 333. Thirty-five patients were discharged; 7 males and 12 females were recovered. Excluding transfers, the recovery-rate upon the admissions was 46.36 per cent. The mortality is stated to be the lowest since the hospital was opened, and is given as 3.29 per cent. upon the average number resident.

The Committee of Management state in their report that applications for reduced payments were favourably considered in 15 cases, which raised the number of charity patients to 92. We find that 17 patients received first-class accommodation for twelve months for payments of 25s. per week and under, and 4 were thus treated for varying periods who made no payment at all. Of those who had second-class accommodation, 16 paid nothing, 15 10s. per week and under, and 35 paid 21s. per week and under. Thus while the accommodation in this hospital will compare favourably with any institutions of a similar nature, it is doing a real work of charity, and not only so, but it is a financial success.

INDIA AND THE COLONIES.

INDIA.

DR. A. F. FERGUSON, of the Jamsetjee Jejeebhoy Hospital and Professor of Pathology at the Grant Medical College, has been suffering from a serious attack of blood poisoning, the result of an inoculation accidentally received while performing a *post-mortem* examination at the Jamsetjee Jejeebhoy Hospital. This is the second time within a few months that Dr. Ferguson's pathological zeal has resulted in a serious illness. He is now, we learn, in a fair way towards recovery.

AUSTRALIA.

SANITATION OF SYDNEY.—The New South Wales Parliament has recently authorised the construction of some extensive works in that colony, and the Government are about to proceed with the sewerage of the western suburbs of Sydney, at an estimated cost of £1,817,896, the sewerage of St. Leonard's and other north shore boroughs at a cost of £106,000, and of the borough of Manly at a cost of £34,000. The population of Sydney and suburbs now amounts to nearly 400,000, but the sewers are designed for a prospective population of some 750,000 persons. The Government has commissioned the engineer, Mr. George H. Stayton, M.Inst. C.E., by whom the above works were devised, to inspect and report upon the latest systems of sewage purification and sanitation.

MEDICAL NEWS.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed the First Professional Examination for the diploma of Fellow at a meeting of the Board of Examiners on November 13th, namely:

H. B. Wilkinson and G. T. S. Sichel, Students of Guy's Hospital; J. H. Pringle, of Edinburgh and University College; F. J. Rawlinson, of St. Bartholomew's Hospital; A. A. Parry and J. S. Thomson, of Melbourne; H. Burden, of St. Thomas's Hospital; G. L. Cheatle, of King's College.

Eight candidates were referred.

Passed on November 14th:

H. L. Brownlow and T. L. Paget, of St. Bartholomew's Hospital; C. J. Martin, of St. Thomas's Hospital; and H. Simpson, of Cambridge and St. Thomas's.

Eight candidates were referred.

THE deaths of fourteen infants in London last week were attributed to "overlaying."

THE Bombay Government will, it is said, provide the site and buildings for the Bacteriological Laboratory it is proposed to establish at Poona.

CORK LYING-IN HOSPITAL.—A ball in aid of the funds of this institution was held last week in the Assembly Room, Cork, and was an unqualified success.

THE Municipal Council of Rome has decided to establish a training school for nurses, under the direction of Professor Durante, the well-known surgeon.

DR. MORITZ HAY, of Vienna, has been awarded a gold medal in the Section of Public Health, and a silver medal in that of Medicine, at the Paris Exhibition, for his specimens of vaccine.

FOOD POISONING.—Several cases of food poisoning, one of which has terminated fatally, have recently occurred in the neighbourhood of Carlisle, due, it is thought, to the eating of pork pies.

DURING the first half of the present year, 6,796 persons were vaccinated in the town of Naples and the villages round it. Of these, 6,355 were successful, the result in 3 cases being doubtful, and in 309 *nil.*

AT a special meeting of the governors of the Cardiff Infirmary, it was resolved to erect a special wing for ophthalmic and aural patients at a cost of £8,000; Lords Windsor and Tredegar promised £500 each.

THE Medical Faculty of the University of Würzburg has bestowed on Dr. Augustus Hess, M.R.C.P.Lond., formerly physician to the Eastern Dispensary of the German Hospital, a special diploma commemorating his jubilee.

THE University of Basle is the only one in Switzerland which still refuses to admit women to its medical teaching. A petition has lately been presented to the Dean of the Medical Faculty, praying for the removal of this restriction.

A PUBLIC meeting was held last week at Loughborough to promote the establishment of a convalescent home for both the borough and shire. The meeting culminated in the handsome subscription fund of £1,075.

RENAL SURGERY.—Mr. Bennett May writes: My attention having been directed to Mr. Lawson Tait's table of operations in the JOURNAL of November 16th, in which he credits me with being the medical attendant of one of his cases, I write to say that I have no knowledge of the circumstance.

DR. GEORGE N. STEWART, who, for more than two years, has been senior demonstrator of physiology under Professor Stirling in Owens College, Manchester, has been appointed to a George Henry Lewes studentship. Dr. Stewart's researches, especially on the polarisation phenomena in nerves, are well known to physiologists.

BEQUESTS.—By the will of Miss Anne Hadfield Ray, the Sheffield Public Hospital and Dispensary benefit largely. The amount is not yet determined, but it is anticipated the hospital will get at once about £7,000 or £8,000.—The Dispensary, Stourbridge, has benefited to the extent of £300 under the will of the late Mr. John Cooke.

A GENERAL meeting of members of the British Medical Temperance Association will be held in the rooms of the Medical Society of London, 11, Chandos Street, Cavendish Square, on Tuesday, November 26th, when a report on 279 returns of medical officers of workhouses as to the use or disuse of alcohol therein will be presented.

OCTAVIUS WOOD, of Dewsbury, aged 73, has died from hydrophobia. On October 8th he was bitten through the hand. On November 14th he became ill, the disease rapidly developing, and he succumbed in thirty-five hours. Five other persons were bitten at the same time in the neighbourhood by a strange dog which has given rise to much alarm.

UNIVERSITY OF DORPAT.—Between February 1st and September 1st of the present year, 168 diplomas were conferred by the Medical Faculty. They included 4 of "district practitioner," 30 of Doctor of Medicine, 44 of "medical practitioner," 3 of Master of Pharmacy, 18 of "provisor," (chief assistant to an apothecary) 46 of "chemist's assistant," 14 of dentist," and 9 of "midwife."

LEPROSY.—Dr. Zambaco, of Constantinople, recently informed the Paris Academy of Medicine that, though there are 200 lepers in the Turkish capital, living with their families and in the most unrestrained intercourse with the rest of the population, he had never heard of a single case of contagion. The experience of practitioners in Egypt, Palestine, Cyprus, Crete, Scio, Smyrna, etc., all of which places he had personally visited, confirmed his own with regard to this point.

BURIAL REFORM ASSOCIATION.—At the public conference held on Thursday, November 14th, at the Church House, Westminster, the Bishop of Marlborough in the chair, the following resolution was proposed by Dr. Norman Kerr, seconded by General Lowry, and agreed to unanimously: "That the true principle for the disposal of the dead body lies in providing against its becoming injurious to the living, and that the body, when buried, should be buried simply in a perishable coffin and in suitable and sufficient earth."

MISSION TO MEDICAL STUDENTS.—A Gospel mission to London medical students will be held in Devonshire House, Bishopsgate Street Without, from November 25th to November 30th inclusive. Addresses will be delivered by Mr. H. Grattan Guiness, M.R.C.S., at 8 P.M., refreshments being previously provided at 7.30. The promoters heartily invite all members of the medical profession to be present. The mission appears to be in good hands, and its progress will doubtless be observed with interest by the profession in London.

PROFESSOR EULENBURG.—Professor Albert Eulenburg, of Berlin, celebrated his silver jubilee as a medical teacher on November 11th. He qualified as a Privat-Docens at Greifswald in 1864, and was appointed Ordinary Professor in that University in 1874. This position he resigned in 1882 to settle in Berlin. Professor Eulenburg is favourably known to neurologists throughout the world by his *Lehrbuch der Nervenkrankheiten*, and to general physicians by his *Real-Encyclopädie der gesammten Heilkunde*, the second edition of which will shortly be completed.

INFANTILE MORTALITY.—A comparative study of infant mortality in different European countries has been made by Dr. Fodar, in the *Deutsche med. Wochenschr.*, with the following results: Of 1,000 children born alive, 106.3 die during the first year in Norway, 137.1 in Sweden, 154 in England, 169.1 in France, 217.7 in Prussia, 220.1 in Italy, 254 in Hungary, 258.2 in Austria, 317.1 in Bavaria, and 329.5 in Würtemberg. With regard to Bavaria, there is considerable difference in the infant death-rate in different districts. Thus, in Suabia it reaches the enormous figure of 409 (nearly four times as great as that of Norway), and in Upper Bavaria it is 406, while in the Bavarian palatinate it is only 187. From these statistics, it would appear that the hygiene of infancy is better understood in Norway than elsewhere, and that German nurslings are either particularly delicate or particularly unfortunate in the mode of their bringing up. The difference can hardly be due to climate.

A CASE OF HEREDITARY HOMICIDAL TENDENCY.—At Southwark police court, on November 18th, Charles Pillford, a ship's labourer, was charged on remand with attempting to murder a police-sergeant. It appears the prisoner was ejected from a publichouse on November 9th, and returned immediately and flung two pewter pots at the landlord, who ordered him out a second time. He returned again with a large knife in his hand and made towards the landlord, who retired behind the bar. The next thing the landlord saw was the prisoner making stabs at the police-sergeant with the large knife. The landlord also stated that the prisoner was not drunk, and he had little doubt that but for the intervention of the police-sergeant the accused would have murdered him. The prisoner's mother, who was called as a witness, gave the following extraordinary family history: There was, she said, a mania in the family on her husband's side. Ten years ago her husband's brother was charged at that court with attempting to murder his wife. Nine years ago her husband was there for attempting to kill her. There were seven brothers on her husband's side, and all of them had done something. One brother bought a pistol two days before he died to blow his wife's brains out with. Since her husband was there she had had to get rid of three razors. She had been married twenty-seven years, and during that time hardly a year passed without something like this happening. Two of her husband's brothers committed suicide, and it was all through drink. In answer to the charge the prisoner said he knew nothing about the knife.

THE *Siglo Medico* states that there are more than 700 medical practitioners at Madrid (about 1 to every 700 inhabitants). Our contemporary says that the causes of the present degraded condition of the medical profession in the Peninsula are three: 1, "too many doctors;" 2, "too many doctors;" 3, "too many doctors." For this state of things there is but one remedy, namely, "fewer doctors."

THE ARRAN TRAGEDY: PLEA OF INSANITY.—On behalf of the convict who lies condemned to death for the atrocious murder on Goatfell, Arran, of which some details were given in the JOURNAL of November 16th, a plea of insanity has been advanced. It is stated that a local medical practitioner had occasion, some years ago, to examine Laurie while resident in the Coatbridge district, and came to the conclusion that he was then not altogether responsible for his actions. It is stated that documentary evidence can be produced in support of this view. It seems unfortunate that, if there be any truth in this statement, the matter should have been so long delayed.

THE LATE PROFESSOR EICHWALD.—Professor E. E. Eichwald, of St. Petersburg, died on November 2nd, of cancer of the bladder. He was born at Wilna in 1838, and took his degree at St. Petersburg in 1863. He was physician to the Grand Duchess Helena Paulovna till her death. In 1876, he was appointed Professor of Medical Diagnosis and Therapeutics in the Medico-Chirurgical Academy of St. Petersburg; and in 1883, he was promoted to the chair of Clinical Medicine, with the position of Chief Physician to the Military Hospital. For several years he also gave clinical lectures to female medical students. Eichwald was decidedly a man of light and leading in the medical profession in Russia, and he was the author of many important reforms in medical education, the organisation of "district" medical service, and other matters affecting the status and efficiency of practitioners in his native country.

ADMINISTRATION OF PUBLIC HEALTH IN SCOTLAND.—A circular has been issued by the Board of Supervision, Edinburgh, setting forth their determinations with regard to the administration of the Public Health Act prior to May 15th next, when the powers and duties of the local authorities under that Act shall be transferred to the County Councils. It is provided by the Local Government Act of last session (Section 110) that the "appointed day" for transference shall be May 15th, 1890, "or such other day, earlier or later, as the Secretary for Scotland may appoint;" but under another section the local authority continue to hold office until the 31st of that month. They are now informed that the Public Health Act will be transferred for their administration on the latter date. The Board recall, prior to May 15th, all determination made by them under Section 5 of the Public Health Act.

MEDICAL VACANCIES.

The following Vacancies are announced:

ATKINSON MORLEY'S CONVALESCENT HOSPITAL, Wimbledon.—Resident Medical Officer and Superintendent. Salary, £150, board and residence. Applications by December 4th to the Secretary of St. George's Hospital, W.

GENERAL HOSPITAL FOR SICK CHILDREN, Pendlebury, Manchester.—Junior Resident Medical Officer. Salary, £80 per annum, with board and lodging. Applications by November 27th, to the Chairman of the Medical Board.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway Road, N.—Ophthalmic Surgeon. Applications by November 27th to the Secretary.

HALIFAX INFIRMARY AND DISPENSARY.—Senior House-Surgeon. Salary, £80 per annum, with board, lodging, and washing. Applications by November 26th, to Dr. E. West-Symes, Hope Hall, Halifax.

HALIFAX INFIRMARY AND DISPENSARY.—Assistant House-Surgeon. Salary, £50 per annum, with board, lodging, and washing. Applications by November 26th, to Dr. E. West-Symes, Hope Hall, Halifax.

HOLLOWAY AND NORTH ISLINGTON DISPENSARY. Resident Medical Officer. Salary, £150 per annum, with unfurnished house, etc. Applications by November 26th to C. W. Sawbridge, Esq., Honorary Secretary, 68, Aldermanbury, E.C.

LEEDS BOROUGH HOSPITAL.—Resident Medical Officer. Salary, £150 per annum, with board and residence. Applications, endorsed "Medical Officer, Hospitals," by December 2nd to the Town Clerk.

LEICESTER INFIRMARY AND FEVER HOUSE.—Assistant House-Surgeon. Salary, £80 per annum, with board, lodging, and washing. Applications by November 24th to the Secretary, 24, Friar Lane, Leicester.

LONDON HOSPITAL, Whitechapel Road, E.—Surgical Registrarship. Salary, £100 per annum. Applications by December 2nd to the Secretary.

LONDON TEMPERANCE HOSPITAL, Hampstead Road.—Junior House-Surgeon. Applications by November 23rd to the Secretary.

MIDDLESEX HOSPITAL.—Surgeon-Registrar. Applications by November 29th to the Secretary-Superintendent.

MONKSTOWN HOSPITAL, co. Dublin.—Resident Medical Officer. Salary, £40 per annum, with board, apartments, gas and coal. Appointmen t to be for six months. Applications by December 2nd to the Honorary Secretary. Election on December 14th.

MULLINGAR UNION, KILLUCAN DISPENSARY.—Medical Officer. Salary, £145 per annum and fees. Applications to Mr. Edward King, Honorary Secretary, Edmundstown, Killucan. Election on December 3rd.

NATIONAL SANATORIUM FOR CONSUMPTION AND DISEASES OF THE CHEST, Bournemouth.—Physician. Applications by December 9th to the Secretary.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney Road, E.—Junior House-Surgeon. Salary, £30 for six months. Applications by November 30th to the Secretary, City Office, 27, Clement's Lane, E.C.

NORTH-WEST LONDON HOSPITAL, Kentish Town Road.—Assistant-Physician. Applications by December 10th to the Secretary.

ROYAL HOSPITAL FOR INCURABLES.—Resident Medical Officer. Salary, £70 per annum, with board and furnished apartments. Appointment to be tenable for only two years. Applications to Mr. Thomas Gray, Registrar. Election on November 30th.

ST. GEORGE'S HOSPITAL.—Lecturer on Dental Surgery. Applications by December 8th to the Dean.

ST. MARY'S HOSPITAL MEDICAL SCHOOL.—Demonstrator of Physiology. Salary, £100 per annum. Applications by November 30th to the School Secretary.

SUSSEX COUNTY HOSPITAL.—House-Surgeon. Salary, £120 per annum, with board and lodging. Applications by November 27th, addressed to the Secretary.

WARNEFORD HOSPITAL, Leamington Spa.—House-Surgeon. Salary, £100 per annum, with board, lodging, and washing. Applications by November 26th to the Secretary.

WEST END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM, 73, Welbeck Street, W.—Surgeon. Applications to the Secretary.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—Resident Assistant. Board, lodging, and washing. Applications by December 5th, to the Chairman of the Medical Committee.

WOODSTOCK UNION.—Workhouse Medical Officer. Salary, £35 per annum, with extras. Applications by November 27th to the Clerk to the Guardians.

WOODSTOCK UNION.—District Medical Officer. Salary, £40 per annum, with extras. Applications by November 27th to the Clerk to the Guardians.

MEDICAL APPOINTMENTS.

BEACH, T. B., L.R.C.P., M.R.C.S.Eng., appointed House-Physician to King's College Hospital.

BEALE, P. T. B., M.R.C.S.Eng., L.R.C.P.Lond., L.S.A., appointed House-Surgeon to King's College Hospital.

BERGIN. G. F., M.R.C.S., L.R.C.P., appointed Assistant Physician to the Bristol General Hospital, *vice* H. Hill, M.R.C.S., L.R.C.P., resigned.

BROOM, Robert, B.Sc., M.B., C.M.Glasg., appointed House-Surgeon to the Glasgow Maternity Hospital, *vice* G. Scott Macgregor, M.B., C.M.Edin.

CHEATLE, A. H., M.R.C.S.Eng., L.R.C.P.Lond., appointed Senior House-Surgeon to King's College Hospital.

CLARK, Andrew, F.R.C.S., appointed Surgeon to the Cancer Out-patient Department of the Middlesex Hospital, *vice* Henry Morris, M.B., F.R.C.S., resigned.

DA COSTA, F. X., M.R.C.S., L.R.C.P., appointed Surgical-Registrar to Charing Cross Hospital, *vice* F. O. Stedman, M.D.Lond., resigned.

DONALDSON, W. I., B.A., M.B., B.Ch. (Univ. Dub.), appointed Senior Assistant Medical Officer to the Camberwell House Lunatic Asylum, *vice* Chas. J. Dabbs, M.R.C.S., resigned.

GUNN, F. W., L.R.C.P.Lond., L.S.A., M.R.C.S.Eng., appointed House-Accoucheur to King's College Hospital.

HEWLETT, R. T., L.R.C.P.Lond., M.R.C.S.Eng., appointed Assistant House-Physician to King's College Hospital.

HUNT, A. H. W., M.R.C.S., L.R.C.P., Senior House-Surgeon, Westminster Hospital, appointed House-Surgeon to the Wolverhampton and Staffordshire General Hospital, *vice* J. Harley Gough, resigned.

JONES, Hugh, M.B., C.M. D.P.H.Glasg., appointed House-Surgeon to the Glasgow Maternity Hospital, *vice* Henry L. G. Leask, M.B., C.M.Glasg., resigned.

LANGSTON, John I., L.K.Q.C.P.I., L.M., and L.S.A.Lond., appointed Medical Officer and Public Vaccinator for the No. 3 District of the Hollingbourn Union, *vice* T. S. Hutchinson, deceased.

LOCKWOOD, W., M.B., C.M., appointed Surgeon to the West Bromwich District Hospital, *vice* J. W. Crowther, M.R.C.S.E., L.S.A., resigned.

MACLEOD, Harold Hay Brodie, L.R.C.P.Lond., M.R.C.S.Eng., L.S.A., appointed House-Surgeon to the Salop Infirmary, *vice* J. F. Harries, resigned.

MANBY, E. P., M.B., M.R.C.S., appointed Assistant Medical Officer to the Central London Sick Asylum, *vice* K. A. Matheson, M.B., M.S., resigned.

MILLER, G. V., M.B., C.M., appointed House-Surgeon to the North Riding Infirmary, Middlesbro'-on-Tees, *vice* J. Hinshelwood, M.D., resigned.

PARRY, L. V., L.R.C.P.Edin., L.R.C.S., appointed House-Surgeon to the Flintshire District, *vice* J. O. Jones. L.R.C.P.E., L.R.C.S.E., resigned.

PENNY, J., M.R.C.S.Eng., L.R.C.P.Lond., appointed House-Surgeon to King's College Hospital.

PONSFORD, P. R., M.R.C.S., L.R.C.P., appointed Assistant Medical Officer to South-Eastern Fever Hospital, New Cross, *vice* F. N. Hume, M.R.C.S., resigned.

PRATT, A. A., M.B., C.M., appointed Assistant House-Surgeon to the West Bromwich District Hospital, *vice* A. G. Irvine, resigned.

REES, E. D., L.S.A., L.R.C.P.Lond., appointed Assistant House-Accoucheur to King's College Hospital.

RHODES, H., M.B., C.M., appointed First Assistant House-Surgeon to the Sheffield General Infirmary.

ROBINSON, T., M.R.C.S., L.R.C.P., appointed House-Surgeon to the Sheffield General Infirmary, *vice* W. G. Richardson, M.B., M.R.C.S., resigned.

SHEPPARD, C. E., M.D., B.S., F.R.C.S., appointed Second Chloroformist to the Middlesex Hospital.

SHIELL, Doctor W. J., appointed District Surgeon to Teddie, Cape Colony.

THOMAS, Alfred, appointed Assistant Medical Officer to West Derby Union Cottage Homes, Fazakerley.

WIGHTMAN, H. T., M.R.C.S., L.R.C.P., appointed Second Assistant House-Surgeon to the Sheffield General Infirmary.

WILSON, T. Stacey, M.B., C.M.Edin., M.R.C.P.Lond., etc., appointed Assistant-Physician to the Birmingham General Hospital, *vice* Arthur Foxwell, M.B., M.R.C.P., resigned.

DIARY FOR NEXT WEEK.

MONDAY.

MEDICAL SOCIETY OF LONDON, 8.30 P.M.—Clinical evening, when the following cases will be shown:—Dr. Savill: Myxœdema in a Male. Mr. Hurry Fenwick: Ataxic Bladder Treated by Semi-suspension. Dr. Beevor: Congenital Pemphigus. Mr. Battle: Tuberculosis of the Palate. Mr. Walter Pye: Congenital Deformity of Extremities. Mr. H. Allingham: Cutaneous Eruption for Diagnosis. Dr. Russell: 1, Functional Paraplegia; 2, Disseminated Sclerosis in a Girl, aged 11. Dr. de Havilland Hall: Pulmonary Systolic Murmur (?) Congenital. Mr. Bowreman Jessett: Two Cases of Inguinal Colotomy Operated on by a Novel Method.

TUESDAY.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY, 20, Hanover Square, 8.30 P.M.—Mr. A. W. Mayo Robson: A Case of Cholecystenterostomy.

WEDNESDAY.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, BROMPTON, 4 P.M.—Dr. H. W. G. Mackenzie: On Graves's Disease. Lecture I.

HUNTERIAN SOCIETY, 8 P.M.—Sir Joseph Lister: Two Cases of Long-Standing Dislocation of both Shoulders Treated by Operation; with Remarks on the Antiseptic Treatment of Wounds.

ANATOMICAL SOCIETY OF GREAT BRITAIN AND IRELAND, Board Room of the London Hospital, 4.45 P.M.—Annual general meeting. Specimens.—Drs. W. Shore and Lewis Jones: Specimens illustrating the Structure of the Vertebrate Liver. Dr. H. St. John Brooks: Models illustrating the Topographical Anatomy of the Abdomen. Mr. J. J. Clarke (for H. A. Kidd): Abnormal Pulmonary Valves. Dr. B. Windle: Ununited Epiphyses. Dr. A. M. Patterson: Fractured Cervical Vertebræ. Papers.—Dr. Beer: On the Development of the Sylvian Fissure in the Human Embryo. Dr. D. J. Cunningham: On the Intra-parietal Fissure of the Human Brain. Dr. J. Struthers: On the Preservation of Bodies for Dissection.

ROYAL MICROSCOPICAL SOCIETY, King's College, W.C., 8 P.M.—*Conversazione.*

BRITISH GYNÆCOLOGICAL SOCIETY, 8.30 P.M.—Specimens.—Dr. G. G. Bantock and Dr. R. T. Smith. Papers.—Mr. Lawson Tait: Reply to Some Recent Remarks on Ectopic Gestation. Dr. Benington: On a Case of Lunacy Cured by a Pessary.

THURSDAY.

HARVEIAN SOCIETY OF LONDON, 8.30 P.M.—Mr. J. Knowsley Thornton: The Harveian Lectures on the Surgery of the Kidney. Lecture II.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E., 4.30 P.M.—Dr. Vincent Harris: On Bronchitis: its Varieties and Relations to other Diseases.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the announcement. The first post on Thursday mornings is the latest by which advertisements can be received.

BIRTHS.

DAVIES.—The wife of D. S. Davies, M.B.Lond., a son, on November 17th, at 60, Oakfield Road, Clifton.

MYDDELTON-GAVEY.—On November 15th, at Brooks Hall, Ipswich, the wife of E. H. Myddelton-Gavey, M.R.C.S.Eng., of a daughter.

MARRIAGE.

JONES—MORROW.—October 30th, at St. Stephen's Church, Halifax, Nova Scotia, by the Rev. H. G. Lancaster, Bishop's Chaplain, Guy Carleton Jones, M.R.C.S., son of Honourable A. G. Jones, M.P., to Susan, daughter of the late Robert Morrow, Esq., of Bircham, Halifax.

DEATHS.

BUTLER.—On October 26th or 27th, at Srinagar, Kashmir, Central Asia, Fanny Jane Butler, L.K.Q.C.P.I. and L.M., Medical Missionary C.E.Z.M.S., aged 39, third daughter of Thomas Butler, Esq., of 7, Park Villas, Blackheath, S.E., late Assistant Secretary of the British Museum.

NUNN.—November 16th, at his residence, Teckenham House, near Redditch, Worcestershire, John Robert Nunn, M.R.C.S., L.S.A., aged 29 years.

WELSH.—October 30th, at Hillside, Virginia, U.S.A., Joseph Welsh, Fellow of the Faculty of Physicians and Surgeons, third son of the late William Henry Welsh, M.D., of Eccles, Manchester, and Clones, co. Monaghan Ireland.

OPERATION DAYS AT THE LONDON HOSPITALS.

MONDAY.....10 A.M.: Royal London Ophthalmic.—10.30 A.M.: Royal Free (Ophthalmic Department).—1.30 P.M.: Guy's (Ophthalmic Department); Royal Westminster Ophthalmic.—2 P.M.: Central London Ophthalmic; Hospital for Women; Royal Orthopædic; St. Mark's; London.—2.30 P.M.: Chelsea Hospital for Women.

TUESDAY.....10 A.M.: Royal London Ophthalmic.—1.30 P.M.: Guy's; Royal Westminster Ophthalmic; St. Bartholomew's (Ophthalmic Department); St. Mary's.—2 P.M.: Cancer Hospital, Brompton; Central London Ophthalmic; London; Westminster.—2 30 P.M.: St. Mark's; West London.—4 P.M.: St. Thomas's (Ophthalmic Department).

WEDNESDAY....10 A.M.: National Orthopædic; Royal London Ophthalmic.—11 A.M.: St. Mary's (Orthopædic).—1 P.M.: Middlesex.—1.30 P.M.: Royal Westminster Ophthalmic; St. Bartholomew's; St. Thomas's.—2 P.M.: Central London Ophthalmic; Great Northern Central; London; Royal Free; University College; Westminster.—2.30 P.M.: St. Peter's; Samaritan Free Hospital for Women and Children.—3 to 4 P.M.: King's College.

THURSDAY.....10 A.M.: Royal London Ophthalmic.—1 P.M.: St. George's.—1.30 P.M.: St. Bartholomew's (Ophthalmic Department); Guy's (Ophthalmic Department); Royal Westminster Ophthalmic.—2 P.M.: Central London Ophthalmic; Charing Cross; Hospital for Diseases of the Throat; Hospital for Women; London; University.—2.30 P.M.: Chelsea Hospital for Women; North-West London.

FRIDAY .....9 A.M.: Metropolitan; St. Mary's (Ophthalmic Department).—10 A.M.: Royal London Ophthalmic.—10.30 A.M.: Royal Free (Ophthalmic Department).—1.15 P.M.: St. George's (Ophthalmic Department).—1.30 P.M.: Guy's; Royal Westminster Ophthalmic.—2 P.M.: Central London Ophthalmic; East London Hospital for Children; King's College; London; St. Thomas's (Ophthalmic Department).—2.30 P.M.: West London.

SATURDAY.....9 A.M.: Royal Free (Department for Diseases of Women).—10 A.M.: Royal London Ophthalmic.—1 P.M.: King's College.—1.30 P.M.: Royal Westminster Ophthalmic; St. Bartholomew's; St. Thomas's.—2 P.M.: Cancer Hospital, Brompton; Central London Ophthalmic; Charing Cross; London; Middlesex; Royal Free; University.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 1.30; Skin, M. 1.30; Dental, M. W. F., 9.

CHELSEA HOSPITAL FOR WOMEN.—M. Tu. W. and F., 1.30.

GREAT NORTHERN CENTRAL.—Medical and Surgical, M. Tu. Th. F., 2.30; Obstetric, W., 2.30; Eye, Tu. F., 10; Ear, M. F., 2.30; Diseases of the Skin, W., 2.30; Diseases of the Throat, Th., 2.30; Dental Cases, W., 2.

GUY'S.—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F. 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu. 1; Skin, Tu., 1; Dental, Tu. Th. F., 1.30.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th. S., 1.30; o.p., W. F., 1.30; Eye, M. Th., 1.30; Ophthalmic Department, W., 2; Ear, Th., 2; Skin, F., 1.30; Throat, F., 1.30; Dental, M. Th., 9.30.

LONDON.—Medical, daily, exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p. W. S., 1.30; Eye, Tu. S., 9; Ear, S., 9.30; Skin, Th., 9; Dental, Tu.,9.

MIDDLESEX.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 9.30; o.p., M. F., 9, W. 1.30; Eye, W. S., 9; Ear and Throat, Tu., 9; Skin, Tu., 4, Th. 9.30; Dental, M. W. F., 9.30.

NATIONAL ORTHOPÆDIC.—M. Tu. Th. F., 2.

NORTH-WEST LONDON.—Medical and Surgical, daily, 2; Obstetric, W., 2; Eye, W., 9; Skin, Tu., 2; Dental, F. 9.

ROYAL ORTHOPÆDIC.—Daily, 1.

ROYAL FREE.—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Dental, Th. 9.

ST. BARTHOLOMEW'S.—Medical and Surgical daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, W. Th. S., 2.30; Ear, Tu. F., 2; Skin, F., 1.30; Larynx, F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9.

ST. GEORGE'S.—Medical and Surgical, M. T. F. S., 12; Obstetric, Th. 2; o.p., Eye, W. S. 2; Ear, Tu., 2; Skin, W., 2; Throat, Th., 2; Orthopædic, W., 2; Dental, Tu., S., 9.

ST. MARK'S HOSPITAL.—Fistula and Diseases of Rectum, males, W., 8.45; females, Th., 8.45.

ST. MARY'S.—Medical and Surgical, daily, 1.45, o.p., 1.30; Obstetric, Tu. F., 1.45; Eye, Tu. F. S., 9; Ear, M. Th., 3; Orthopædic, W., 10; Throat, Tu. F., 1.30; Skin, M. Th., 9.30; Electro-therapeutics, Tu. F., 2; Dental, W. S., 9.30; Consultations, M., 2.30; Operations, Tu., 1.30; Ophthalmic Operations, F., 9.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, Tu. F., 2; o.p., W., 1.30; Eye, M. Tu. W. Th., F, 1.30; o.p., daily, except Sat., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Tu. F., 1.30; Children, S., 1.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1.30; Obstetrics, M. Th., 1.30; Tu., W. F., 2; Eye, Tu. F., 2; Ear, M. F., 9; Skin, W., 1.45, S., 9.15; Throat, Th., 1.30; Dental, W., 9.30.

WESTMINSTER.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1; Eye, M. Th., 2.30; Ear, M., 9; Skin, W., 1; Dental, W. S., 9.15.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the office of the JOURNAL, and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Aunual and other Reports, favour us with *Duplicate Copies*.

QUERIES.

A BATCH OF QUERIES.

M.R.C.S. asks: 1. What is the nature and treatment of those anomalous pains which so many middle-aged women suffer from? They generally describe them as "shifting and shooting" from place to place. Although many of the patients have dyspepsia that is not always present.

2. What is the nature of the unilateral swelling of the eyelids which one occasionally meets with? It sometimes comes on during the night, and is often attributed to insect bites.

3. What is the etiology, pathology, and treatment of the acute swelling of the upper lip, often occurring as part of a catarrh, or its only manifestation, and giving to that part a conformation similar to that of a negro?

STRICTURE OF THE BOWEL (?)

NOVICE asks for advice in the following case. A gentleman, aged about 32, has suffered for years from constant alternate contractions and relaxations of the abdominal walls. When the contractions are severe the abdomen sinks in deeply above the umbilicus, causing a tympanitic condition of its lower portion. Each contraction is almost immediately followed by a relaxation, and this again by a pretty rapidly succeeding contraction. The condition is exaggerated when the stomach and bowels are deranged. If on any day he fails to have a motion, or has an insufficient one, there is a great tendency, especially soon after lying down at night, to the supervention of very severe trembling attacks, with difficult breathing, cardiac intermittency, and fulness of head. There is no pain, sickness, or vomiting at any time; no valvular disease of the heart, no syphilitic or malignant history, and no history of enteritis.

ANSWERS.

ASSIZES.—Consult Green's *Pathology* (last edition), and *Recent Essays by various Authors on Bacteria in Relation to Disease*. New Sydenham Society. Selected and edited by W. Watson Cheyne, F.R.C.S. 1876.

DR. ALLFREY.—A like course to that suggested was long since acted on, but the offer was refused.

BOOKS ON DISEASES OF CHILDREN.

EVERGREEN.—Of the books mentioned by our correspondent, that by Dr. Goodhart is a useful epitome, while Dr. Eustace Smith's is a more elaborate work on a large scale. See also the JOURNAL, November 16th, p. 1104 and p. 1161.

THE HOT WATER OPERATION TABLE.

MR. C. B. KEETLEY (Grosvenor Street, W.) writes: Under the above heading in the JOURNAL of November 9th is a letter from Dr. Alexander Duke, strongly, and I think rightly, recommending such a contrivance. The hot water operation table of Julliard, of Geneva, as modified by Socin, of Basle, is described with an illustration in the *Annals of Surgery*, for June, 1888. To those who have not such a table I can recommend the use of one or several circular (that is, ring-shaped) water cushions placed beneath the patient, a blanket intervening. Probably, the square cushions, grooved transversely, would do as well.

"WOODENY."

DR. H. HANDFORD (Nottingham) writes: Please allow me to disclaim coining or using the absurd and tautological word "woodeny" which appears in the otherwise excellent report of my case of myositis which was shown at the last meeting of the Clinical Society. The words "woody," or "wooden" sufficiently express all I wished to convey. Your reporter had unusual difficulties to contend with, as the room was very full, and it was necessary that more than one case should be in the room at the same time, consequently I may have been imperfectly heard.

ASCARIDES.

SURGEON writes: F.R.C.S. should try (1) abstinence as far as possible from meat diet; (2) a salt-spoonful of common salt in water every morning before breakfast; (3) turpentine, ℥ss. to ℥j; inf. quass. conc., ℥ij; aq. ad ℥x. Fluid enema use at night followed by a dose of castor oil in the morning; (4) failing the latter a bougie smeared with mercurial ointment should be occasionally passed up the rectum.

DR. THOMAS FIELDING writes: In a few troublesome cases I have given pulv. calumbæ gr. x ter die in the hope that it might reach the worms better than bitter infusions, and it has answered very well. Has F.R.C.S. read the article in Fagge's *Medicine*?

Books on Tuberculosis.

R. T. asks to be recommended a list of the best books on tuberculosis in all its aspects (pulmonary, meningeal, etc.).

*** The following works will be useful:—*Atlas of the Pathological Anatomy of the Lungs*, by the late Dr. Wilson Fox. Churchill. *Pulmonary Consumption*, by Dr. C. J. B. Williams and Dr. C. Theodore Williams. 2nd edition. Longmans. *Pulmonary Phthisis*, by Dr. Alexander James. Young J. Pentland. The clinical aspects of general tuberculosis and tubercular meningitis in childhood are well treated by Dr. Eustace Smith in his *Clinical Studies of Disease in Children*. Second edition, Churchill. 1887. Recent discoveries as to the bacillus will be found in *Recent Essays by various Authors on Bacteria in Relation to Disease*, Selected and Edited by W. Watson Cheyne, M.B., F.R.C.S., New Sydenham Society, 1876. Art., The Etiology of Tuberculosis, by Dr. Robert Koch, translated by Mr. Stanley Boyd.

Treatment of Venereal Warts.

M.D., U.S.A., writes: In answer to "Licentiate," I would recommend chloroacetic acid as the very best remedy for venereal or any other warts. In fact, it might be considered as a specific. A drop of water added to a quantity of the acid will dissolve it, when it can be easily applied with a camel hair pencil every three or four days. The horny layer should be removed before each application. Three or four applications were, in my hands, the means to remove a coronet of venereal warts a few days ago.

General Practitioner writes to suggest the use of the oleate of mercury, of 10 per cent. strength, in the treatment of venereal warts.

The Licence in Dental Surgery of the Royal College of Surgeons.

T. S.—The important alterations in the regulations relating to the diploma in dental surgery are as follows:—

Instruction in chemistry and materia medica may in future be received, as in the case of the conjoint diploma, before registration as a dental student, as also may the three years' instruction in mechanical dentistry. One course of anatomy only is now required, the extra twenty lectures in the anatomy of the head and neck being abolished. A three months' course of practical physiology has been added, and twelve months' dissections instead of nine months is now required. Students are in addition required to attend the class examinations in all the subjects of the curriculum. In future, those candidates who have passed the first and second professional examination for the conjoint diploma will not be examined in anatomy and physiology for the dental diploma, and those who have passed in surgery for the same diploma will be exempt for re-examination in surgery.

By these alterations it will be evident that the requirements for the first and second professional examinations and those for the dental diploma are practically the same, it will be a pity, therefore, if the dental student does not avail himself of the encouragement given to him to acquire the additional qualifications of M.R.C.S. and L.R.C.P., thus placing himself on an equality with the other specialists in medicine and surgery.

"Medinensis."

Dr. Chas. G. Dalton (Lincoln) writes: I wish to know the meaning and derivation of the word "medinensis" occurring in the name of the "filaria medinensis," or "dracunculus medinensis" (syn. guinea worm). Does the term occur elsewhere in medicine?

*** The termination in "ensis" clearly indicates a locative adjective like Atheniensis, and Medinensis can only mean of Medina. This is one of the holy cities of Arabia, and a great resort of pilgrims, while the western shores of Arabia have been known from time immemorial to be the home of this parasite. Plutarch (*Sympos*, viii, 9) speaks of δρακόντια μικρα which gnawed away men's legs and arms on the coasts of the Red Sea, and which, when touched, withdrew into the muscles, setting up violent inflammation. These can be nothing else than the dracunculus, little dragon, while the French designation, *le ver de Medine*, explains the specific name Medinensis. Indeed, Küchenmeister, rather fantastically, identifies the "fiery serpents" of the Exodus with these worms.

Lectures for Midwives.

Lecturer writes: In reply to "Inquirer" in the Journal of November 2nd, 1889, I beg to inform him that a course of lectures for midwives is now being given at the Midwives Institute and Trained Nurses Club, 15, Buckingham Street, Strand, W.C. The lecturer will be very happy to give, through the Secretary, any information in his power on the subject.

NOTES, LETTERS, ETC.

The Moon Defence Fund.

The following further subscriptions have been received:—

	£	s.	d.
J. Brindley James, M.R.C.S....	1	1	0
John Poland, F.R.C.S.	2	2	0
Wm. Young Martin, M.D., Walkden...	0	10	6
Dr. Deane, Henley-on-Thames	0	10	6

H. W. Roberts, M.R.C.S., Secretary, Wickham Terrace, Lewisham High Road, S.E.

London Medical Students.

Dr. James L. Maxwell, M.D., Hon. Secretary Medical Prayer Union (104, Petherton Road, N.) writes: The Medical Prayer Union, Professor A. Macalister, President, has arranged a Gospel mission for London medical students to take place at Devonshire House, Bishopsgate Street Without, each evening from November 25th to 30th, inclusive, address at 8 P.M. All members of the medical profession are heartily invited to be present. A very representative number of the staffs of the various London medical schools have expressed their entire sympathy with the mission.

Medicinal Treatment of Retention of Urine from Prostatic Enlargement.

Dr. Hugh Woods (Highgate, N.) writes: The treatment of retention of urine from prostatic enlargement by continual catheterisation seems so invariably to have disastrous results in the long run, that such treatment ought, if possible, to be avoided. The surgical treatment of this affection was very fully discussed at the Leeds meeting of the Association. I wish, however, to point out the fact that, in a great many cases, medicinal treatment is quite sufficient to remove the retention of urine which, with many old men, occurs from time to time, as errors of diet or other causes may determine.

I do not now remember who first recommended the use of liquid extract of ergot in these cases, but it has been recommended for prostatic enlargement, and is, in my opinion, deserving of much more extended use for this condition. The mixture which I am in the habit of using contains in each drachm ext. ergot. liquid., m $7\frac{1}{2}$; tinct. belladonnæ and liq. morphinæ āā, m $3\frac{3}{4}$, with magnes. sulph., etc. I have repeatedly found this mixture most efficacious in relieving retention of urine in cases of enlarged prostate, obviating the use of the catheter with its attendant risks, and removing all urgent symptoms for a considerable period. Medical friends of mine who have tried the above mixture have obtained results as good as my own. Probably the ergot is the important remedial agent, but the above formula seems to give the best results. It should be given in 3j doses, or more, in water. The above mixture is prepared by Messrs. Willows, Francis, and Butler, 101, High Holborn, at my suggestion, and I have called it, for sake of convenience, "mistura cystilytica." I certainly think that there is a large class of cases of retention of urine, from enlarged prostate and other causes, in which some such medicinal treatment is decidedly preferable to the use of the catheter or other surgical interference.

Electrolysis.

Dr. Charles Coppinger, M.D., F.R.C.S.I.Dublin (Merrion Street, Dublin) writes: Referring to the communication of Dr. Ephraim Cutter in the Journal of October 19th, allow me to remark that electrolysis can have had little to do with the effect which followed the application of the galvanic current which he made use of. The electromotive force of the element described, namely, a single but large cell of the Grenet type of battery, could not have exceeded two volts. The resistance of the human tissues is very great, and that of a large fibroid tumour would not be less than 500 ohms. According to the well-known law, the current in ampères equals the electromotive force divided by the resistance of the circuit, or $C = \frac{E.\ M.\ F.}{R.}$. The internal resistance of the cell is in this case small, and may be left out of consideration. Assuming, then, the electromotive force as 2 volts and the resistance 500 ohms, the current used would equal $\frac{2}{500}$ ampère, or $\frac{1}{250}$ of an ampère.

The Medical Service of the Leeward Islands.

Juvenis writes: The letter of "Senex" in the Journal of November 9th is alarming. Not long ago we heard complaints about the treatment of medical officers in British Guiana. As a candidate for a colonial appointment, I am anxious to know if the service really presents so many drawbacks as "Senex" refers to. The official paper published by the Colonial Department states that there were no vacancies in the Leeward Islands in 1887 or 1888. This hardly agrees with the statements of your correspondent.

Collapsible Urethral Tube.

Messrs. R. Sumner and Co. (Liverpool) write: Our attention has been called to the fact that the method we advertise for the treatment of gonorrhœa and urethritis by application of ointment to the urethra, with the aid of a collapsible tube, is not exactly new. It appears that so far back as 1880 the use of the collapsible tubes for injecting the urethra was described in the Journal by Mr. C. R. B. Keetley. In introducing our instrument to the medical profession we were entirely ignorant of this; at the same time, we are anxious not to deprive Mr. Keetley of the credit of having devised this admirable method.

Nasal Polypus.

Mr. W. Spencer Watson (Surgeon to the Throat Department of the Great Northern Hospital) writes: I have read Mr. Milligan's letter on "Severe Cases of Nasal Polypus" with much interest. I have no doubt that the cases he describes are similar to some cases that have come under my notice in which the middle and inferior turbinated bodies have been found covered with "petaloid oval growths." I have described several such cases in a paper published in the *Medical Press* of December 19th, 1888, with woodcuts, illustrating the appearance of the turbinated bodies after removal. In the removal of these bodies I have found it very advantageous to employ my "ring knife" as described in the paper referred to.

The Salicylates in Gonorrhœa.

Surgeon-Major R. H. Quill, M.D. (Army Medical Staff) writes: In the Journal for November 16th, Mr. Ryan-Tenison advocates the use of the salicylates in gonorrhœa, and, in support of his advocacy, cites a successful case. This case, we are told, was treated with an injection of potassium permanganate (gr. x ad ℥j), and a mixture of sodium salicylate (gr. xv ad ℥j). Is it not reasonable to inquire to which treatment is the cure to be attributed? To the use of a very strong antiseptic injection, or to the salicylate of sodium mixture? Would it not be well, when testing the action of a particular remedy on a disease, to refrain from using at the same time another remedy?

Erratum.

The President of the Medico-Psychological Association is Dr. Hayes Newington, and not as printed on page 1136 of the Journal of November 16th.

COMMUNICATIONS, LETTERS, etc., have been received from:

Dr. M. Handfield-Jones, London; Dr. C. H. Carter, London; Mr. S. M. Copeman, London; Dr. Barry, Settle; Mr. W. J. Walsham, London; Mr. W. A. Lane, London; Dr. Delépine, London; Mr. W. Anderson, London; Mr. W. Rivington, London; Dr. J. H. Jackson, London; Dr. G. E. Herman, London; Dr. F. Semon, London; Mr. Adams Frost, London; Mr. G. Hartridge, London; Mr. J. Black, London; Dr. H. Airy, Woodbridge; Dr. W. H. Walshe, London; Sir William Bowman, London; Dr. F. T. Roberts, London; Dr. G. Harley, London; J. G. Brown, M.B., Bootle; Dr.

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BOOKS, ETC., RECEIVED.

On the Animal Alkaloids. By Sir William Aitken, Knt., M.D., LL.D., F.R.S. Second Edition. London: H. K. Lewis. 1889.

Injuries and Diseases of Nerves and their Surgical Treatment. By Anthony A. Bowlby, F.R.C.S. London: J. and A. Churchill. 1889.

A Textbook of Human Anatomy. By Alex. Macalister, M.A., M.D., F.R.S. London: Chas. Griffin and Co. 1889.

The Distribution and Duration of Visceral New Growths, being the Bradshaw Lecture. By Norman Moore, M.D. Edinburgh and London: Young J. Pentland. 1889.

Grettir the Outlaw; a Story of Iceland. By S. Baring-Gould. London: Blackie and Son. 1890.

The Hermit Hunter of the Wilds. By Gordon Stables, C.M., M.D., R.N. London: Blackie and Son. 1890.

History of King Alfred the Great of England. By Jacob Abbott. London: Blackie and Son. 1890.

A Warrior King. By J. Evelyn. London: Blackie and Son. 1890.

Afloat at Last. By John C. Hutcheson. London: Blackie and Son. 1890.

A Reference Handbook of the Medical Sciences. Edited by Albert H. Buck, M.D. Vol. VIII. New York: W. Wood and Co. 1889.

1 Box of Christmas Cards received from Messrs. Raphael Tuck and Sons, London.

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British Medical Journal for 1890.

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Adams, William, F.R.C.S., Surgeon Great Northern Hospital.—**Further Observations on the Treatment of Dupuytren's Contraction of the Fingers.**

Allingham, Herbert W., F.R.C.S.—Operations on Internal Piles: An attempt to show which operation should be employed under their varying conditions.

Anderson, McCall, M.D., Professor of Clinical Medicine University of Glasgow, Physician to the Glasgow Western Infirmary.—**Lectures on Clinical Medicine.**

Anderson, William, F.R.C.S., Assistant Surgeon St. Thomas's Hospital.—**Contraction of the Fingers.**

Arnison, W. C., M.D., M.R.C.S., Joint Lecturer on Surgery University of Durham College of Medicine, Senior Surgeon Newcastle Infirmary. **Reports.**

Atkinson, E., M.R.C.S., Surgeon to the Leeds General Infirmary.—**On Transplantation Plastics.**

Atthill, Lombe, M.D., A.B., &c., Consulting Obstetrical Physician Adelaide Hospital; Ex-Master Rotunda Hospital, Dublin.—**Some Papers on Gynæcology.**

Barling, H. Gilbert, M.B., F.R.C.S., Assistant Surgeon Birmingham General Hospital, Professor of Pathology Queen's College, Birmingham.—**On Tumours of the Bladder and on Excision of the Clavicle for Sarcoma.**

Barnes, Robert, M.D., F.R.C.P., Consulting Obstetric Physician to St. George's Hospital.—**Problems in General Pathology elucidated by Clinical Study of Obstetrics and the Diseases of Women.**

Barr, James, M.D., Physician to the Northern Hospital, Liverpool.—**Lectures on Typhoid Fever.**

Barrs, A. G., M.D., M.R.C.P., Senior Assistant Physician to the Leeds General Infirmary.—**Tuberculous Origin of Pleuritic Effusions.**

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Bateman, F., M.D., F.R.C.P., Physician to the Norfolk and Norwich Hospital.

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Bennett, A. Hughes, M.D., F.R.C.P., Physician to Westminster Hospital.—**Electro-Therapeutics. a Review of the Present State of the Medical Treatment by Electricity.**

Black, James, M.B., B.A., F.R.C.S., Aural Surgeon Westminster Hospital.—**On Questions of Aural Surgery.**

Boyd, Stanley, M.B., F.R.C.S., Senior Assistant Surgeon Charing Cross Hospital, and Lecturer on Anatomy in the Medical School.—**Notes on the Bhan Daji Treatment of Leprosy.**

Brailey, W. A., M.A., M.D.Cantab., Assistant Ophthalmic Surgeon to Guy's Hospital, Ophthalmic Surgeon Evelina Hospital.

Brooks, W. T., B.A.Oxon, M.B., Physician, Radcliffe Infirmary; Litchfield Lecturer on Clinical Medicine, University, Oxford.—**Subjects in Clinical Medicine.**

Browne, G. Buckston, M.R.C.S.—On Certain Points in the Surgery of Stone in the Bladder.

Bruce, J. Mitchell, M.D., F.R.C.P., Physician Charing Cross Hospital.—**An Address on Heart Disease in Children.**

Buchanan, George, M.A., M.D., Professor of Clinical Surgery in the University of Glasgow.—**Papers and Cases in Clinical Surgery.**

Burnet, R. W., M.D., Physician to the Great Northern Central Hospital.

Butlin, H. T., F.R.C.S., Assistant Surgeon St. Bartholomew's Hospital.—**Surgical Subjects.**

Buxton, Dudley W., M.D., Demonstrator on Anæsthetics, University College Hospital.—**On Physiological and Practical Bearings of Anæsthetics.**

Cagney, James, M.D., Assistant Physician Electrical Department, St. Mary's Hospital.—**Prognosis in Infantile Paralysis.**

Carter, C. H., B.A., M.D., Physician Hospital for Women.—**Gynæcological Papers.**

Carter, William, M.D., B.Sc., LL.B., F.R.C.P., Professor of Materia Medica University College, Liverpool, Consulting Physician to the Liverpool Eye and Ear Infirmary.—**1. Cases of Suppurative Myocarditis. 2. Cases of Renal Disease treated by Nephrectomy.**

Clark, Andrew, F.R.C.S., Lecturer on and Teacher of Operative Surgery Middlesex Hospital Medical School. Examiner in Surgery Apothecaries' Society.—**Reports of Cases.**

Cleland, John, LL.D., D.Sc., M.D., F.R.S., Professor of Anatomy University of Glasgow.—**The Relations of the Intervertebral Discs to other Structures Anatomically and Pathologically Considered.**

Cooper, Alfred, F.R.C.S., Surgeon to St. Mark's Hospital for Fistula, and to the Lock Hospital.—**On Diseases of the Rectum.**

Copeman, S. Monckton, M.A., M.B., Demonstrator on Morbid Histology, &c., St. Thomas's Hospital.—**On the Pathology of the Blood.**

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Cripps, Harrison, F.R.C.S., Assistant Surgeon to St. Bartholomew's Hospital.—**Contributions on Rectal Surgery.**

Critchett, G. Anderson, M.A., F.R.C.S.Ed., Ophthalmic Surgeon to St. Mary's Hospital, and Lecturer on Ophthalmic Surgery in the Medical School.—**Clinical Notes on Exceptional Ophthalmic Cases.**

Cullimore, D. H., M.D., M.R.C.P.—Sanitary State of some Foreign Health Resorts.

Cullingworth, C. J., M.D., F.R.C.P., Physician and Lecturer on Midwifery and Diseases of Women, St. Thomas's Hospital.—**A Clinical Lecture on Pelvic Hæmatoceles.**

Day, W. H., M.D., Physician to the Samaritan Hospital for Women and Children.

Delépine, Sheridan, M.B., C.M., B.Sc., Lecturer on Pathology, St. George's Hospital.—**On the Etiology of Sarcomatous Tumours.**

Dent, Clinton T., F.R.C.S., Assistant Surgeon to St. George's Hospital, and Lecturer on Practical Surgery in the Medical School.—**1. On a Series of 1,000 Cases of Amputation Performed at St. George's Hospital. 2. Chilling of Wounds and the Use of the Irrigator.**

Doran, Alban, F.R.C.S., Surgeon to the Samaritan Free Hospital.—**Papers on Abdominal Tumours.**

Edington, A., M.B., Lecturer on Bacteriology, and Assistant to Professor of Surgery, Edinburgh University.—**Report on certain Infectious Diseases.**

Edwards, F. Swinford, F.R.C.S., Surgeon to the West London Hospital, and Assistant Surgeon to St. Mark's Hospital.—**Contribution on Rectal and Urinary Surgery.**

Ellis, T. T., M.R.C.S., Consulting Surgeon to the General Infirmary, Gloucester, &c.—**On the Surgical Physiology of the Abdomen and Pelvis.**

Fayrer, Sir Joseph, K.C.S.I., M.D., F.R.S., Physician to the Secretary of State for India in Council.

Fenwick, Bedford, M.D., Assistant Physician to the Hospital for Women, Soho Square.—**Gynæcological Cases.**

Fenwick, E. Hurry, F.R.C.S., Assistant Surgeon to the London Hospital.—**Clinical Notes on Special Points in the Surgery of the Bladder, Prostate and Urethra.**

Ferrier, David, M.D., F.R.C.P., F.R.S., Physician King's College Hospital, and National Hospital for the Paralysed and Epileptic.—**Croonian Lectures.**

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Godson, Clement, M.D., M.R.C.P., Assistant Physician Accoucheur, St. Bartholomew's Hospital.—**Reports of Cases, Obstetrical and Gynæcological.**

Goodhart, James F., M.D., F.R.C.P., Physician and Lecturer on Pathology at Guy's Hospital.—**Clinical Lecture on Albuminuria.**

Halliburton, W. D., M.D., F.C.S., Assistant Professor of Physiology in University College.—**On the Properties of Transudation Fluids.**

Harley, George. M.D., F.R.C.P., F.R.S.—Gout and Diabetes in Relationship to Liver Derangement.

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Hartridge, G., F.R.C.S., Surgeon Royal Westminster Ophthalmic Hospital.—**Ophthalmic Subjects.**

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Hutchinson, Jonathan, F.R.C.S., F.R.S., Consulting Surgeon to the London Hospital, President of the Royal College of Surgeons of England.—**Clinical Lectures.**

Jackson, J. Hughlings, M.D., F.R.C.P., F.R.S., Physician to the London Hospital.—**Lumleian Lectures: On Convulsive Seizures.**

Jacobson, W. H. A., M.A., F.R.C.S., Assistant Surgeon Guy's Hospital.—**1. Tubercular Disease of the Testicle. 2. Cases of Thyroidectomy.**

Jamieson, W. Allan, M.D., C.M., F.R.C.P.E., Extra Physician for Diseases of the Skin Edinburgh Royal Infirmary, Lecturer on Diseases of the Skin Edinburgh School of Medicine, etc.—**Observations on Dermatitis Herpetiformis (Hydroa.)**

Johnson, George, M.D., F.R.S., Emeritus Professor of Clinical Medicine in King's College. —**Paper on Clinical Medicine.**

Jones, M. Handfield, M.D., Physician Accoucheur Out-patient Department, St. Mary's Hospital.—**Morbid Conditions of the Heart determined by Pregnancy.**

Jones, Sydney, F.R.C.S., Senior Surgeon and Lecturer on Surgery, St. Thomas's Hospital. —**Clinical Lectures and Notes on Surgical Cases.**

Juler, Henry, F.R.C.S., Junior Ophthalmic Surgeon to St. Mary's Hospital.—**The Treatment of Strabismus.**

Kidd, Percy, M.A., M.D., F.R.C.P., Assistant Physician and Pathologist, Consumption Hospital, Brompton.

Lane, W. Arbuthnot, M.B., M.S., F.R.C.S., Assistant Surgeon Guy's Hospital.—**On the Treatment of Suppuration of the Mastoid and of Chronic Discharge from the Middle Ear.**

Lewers, A. H. N., M.D., Assistant Obstetric Physician of the London Hospital.—**Cases in Obstetric Medicine and Diseases of Women.**

Luff, Arthur P., M.B., B.Sc., F.C.S., Lecturer on Medical Jurisprudence and Toxicology, St. Mary's Hospital.—**Second Report on the Relation of the Ptomaines, or Animal Alkaloids, to Infectious Fevers.**

MacCormac, Sir William, F.R.C.S., Surgeon St. Thomas's Hospital.—**Cases of Clinical Interest.**

Mackenzie, G. Hunter, M.D., Lecturer on Diseases of the Throat, Edinburgh Medical School. **Some Points in the Diagnosis of Malignant Disease of the Larynx in its Early Stages.**

Mackenzie, Stephen, M.D., F.R.C.P., Physician to the London Hospital, and Lecturer on Medicine in the Medical College.—**1. Clinical Lecture. 2. Reports of Hospital Cases.**

Macnamara, Charles, F.R.C.S., Surgeon to the Westminster Hospital, and to the Royal Westminster Ophthalmic Hospital.—**Clinical Reports of Surgical Cases.**

Mapother, E. D., M.D., formerly Professor of Physiology in the Royal College of Surgeons, Ireland.—**On Mercury in the Treatment of Psoriasis.**

Meldon, A., M.K.Q.C.P., President R.C.S.I. —**Papers on Transfusion, Tetanus, and Lithotomy.**

Mickle, W. J., M.D., F.R.C.P., Lecturer on Mental Diseases University College and Middlesex Hospital College.—**On Some Conditions of Mental Disease.**

Money, Angel, M.D., F.R.C.P., Assistant Physician to University College Hospital and the Children's Hospital, Great Ormond Street.—**1. Treatment of Nocturnal Restlessness in Children. 2. Nitrate of Pilocarpin and Naphthalin in Infantile Therapeutics.**

Moore, Sir William, K.C.I.E., Honorary Physician to the Queen, Honorary Surgeon to the Viceroy of India.—**The Therapeutic Value of Quinine.**

Morgan, J. E., M.A., M.D., Consulting Physician to the Manchester Royal Infirmary.— **Chorea, its Pathology and Treatment.**

Morgan, John H., M.A., F.R.C.S., Surgeon to the Charing Cross Hospital, and to the Hospital for Children, Great Ormond Street.

Murrell, William, M.D., F.R.C.P., Assistant Physician Westminster Hospital.—**On Apomorphine in the Treatment of Chronic Bronchitis and Winter Cough.**

Nunneley, J. A., M.B., M.R.C.S., Senior Ophthalmic and Aural Surgeon Leeds General Dispensary.—**Contributions on Ophthalmic and Aural Subjects.**

Ormsby, L. H., M.D., F.R.C.S.I., Surgeon to the Meath Hospital, Dublin.—**Surgical Lectures.**

Page, Herbert W., M.A., M.B., F.R.C.S., Surgeon to St. Mary's Hospital.—**1. Clinical Notes of Various Cases. 2. Clinical Lecture on Traumatic Hysteria in the Male.**

Parker, Rushton, M.B., B.S., F.R.C.S., Professor of Surgery to University College, Liverpool, Surgeon Liverpool Royal Infirmary.— **Papers on Genito-urinary Diseases, &c.**

Payne, J. F., M.D., F.R.C.P., Physician and Lecturer on Pathological Anatomy, St. Thomas's Hospital.—**Clinical Notes on Diseases of the Skin.**

Philipson, G. H., M.A., M.D., D.C.L., F.R.C.P., Senior Physician to the Royal Infirmary, Newcastle-on-Tyne, Professor of Medicine in the University of Durham.—**Hospital Cases.**

Pitt, G. N., M.A., M.D., Assistant Physician, Physician in Charge of Electrical Department, Guy's Hospital.

Pritchard, Urban, M.D., F.R.C.S., Professor of Aural Surgery in King's College.— **Papers on Otology.**

Purves, W. Laidlaw, M.D., Aural Surgeon to Guy's Hospital, and Ophthalmic and Aural Surgeon to the Hospital for Diseases of the Nervous System.—**Contributions on Ophthalmological and Aural Subjects.**

Reeves, H. A., F.R.C.S.Ed., Senior Assistant Surgeon and Teacher of Practical Surgery London Hospital, Surgeon to the Hospital for Women.—**Contributions on Orthopædic and Gynæcological Surgery.**

Rivington, W., B.A., M.S., F.R.C.S., Surgeon to the London Hospital.—**Cases and other Communications.**

Roberts, Frederick T., M.D., F.R.C.P., Physician and Professor of Clinical Medicine, University College Hospital.—**Contributions in Medicine.**

Roberts, Sir William, M.D., F.R.C.P., F.R.S., Consulting Physician to the Manchester Royal Infirmary.—**On the Prevention and Treatment of Uric Acid Gravel.**

Robson, A. W. Mayo, F.R.C.S., Lecturer on Practical and Operative Surgery, Yorkshire College, Surgeon Leeds General Infirmary.— **Contribution on Abdominal Surgery.**

Sansom, A. E., M.D., F.R.C.P., Physician to the London Hospital.—**Notes on Cardiac Cases.**

Semon, Felix, M.D., F.R.C.P., Assistant Physician, Throat Department St. Thomas's Hospital.—**On Laryngological and Rhinological subjects.**

Sheen, A., M.D., Surgeon to the Glamorgan and Monmouth Infirmary, Cardiff.—**Papers and Notes of Cases.**

Sieveking, Sir Edward, M.D., LL.D., F.R.C.P., Physician in Ordinary to Her Majesty the Queen, and to His Royal Highness the Prince of Wales, President of the Royal Medical and Chirurgical Society.

Skerritt, E. Markham, M.D. Lond., F.R.C.P., Senior Physician to the Bristol General Hospital, and Lecturer on Medicine at the Bristol Medical School.

Smith, R. Shingleton, M.D., B.Sc., F.R.C.P., Senior Physician to the Bristol Royal Infirmary.—**Notes on some cases illustrating the Action of some Diuretics.**

Southam, T. A., M.A., M.B. Oxon, F.R.C.S., Surgeon Manchester Royal Infirmary.— **Notes of Surgical Cases.**

Steavenson, W. E., M.D. Cantab, Physician in Charge of Electrical Department, St. Bartholomew's Hospital.—**On the Therapeutical Uses of Electricity.**

Stewart, T. Grainger, M.D., F.R.C.P.E., Physician in Ordinary to H.M. the Queen, Scotland; Professor of Practice of Physic in University, Edinburgh.—**Clinical Observations.**

Stirling, W., M.D., D.Sc., Professor of Physiology and Histology, Owens College, and Victoria University, Manchester.—**On the Action of Certain Drugs on the Reflex Excitability of the Spinal Cord.**

Stockman, Ralph, M.D., Research Scholar British Medical Association, Demonstrator of Practical Materia Medica and Assistant to Professor of Materia Medica University of Edinburgh.—**On Morphine and its Derivatives, and other contributions.**

Swanzy, H. R., M.A. M.B., F.R.C S.I., Examiner in Ophthalmic Surgery, R.C.S. Ireland: Surgeon National Eye and Ear Infirmary, Dublin. —**On Cataract Extraction.**

Thompson, E. Symes, M.D, F.R.C.P., late Senior Physician to the Hospital for Consumption, Brompton, Gresham Professor of Medicine.—**1. The Bearing of Recent Observations on Embryology and Heredity on Life Assurance. 2. On Climate Selection in Relation to Inherited Tendencies to Disease.**

Thomson, W., M.A., M.D., F.R.C.S.I., Surgeon to the Richmond Hospital, Dublin.— **1. Some Notes on Fractures and Dislocations. 2. Clinical Records from the Richmond Hospital.**

Thornton, J. Knowsley, M.B., C.M., Surgeon to the Samaritan Free Hospital.

Tirard, Nestor, M.D. Lond., F.R.C.P., Professor of Materia Medica and Therapeutics, and Assistant Physician King's College Hospital, Physician to the Evelina Hospital for Sick Children.—**1. Peptonuria and the Fehling Test. 2. Clinical Observations on Cases of Kidney Disease.**

Wade, W. F., B.A., M.B., F.R.C.P., Senior Physician, Birmingham General Hospital. —**Clinical Lecture on Gastric Catarrh.**

Wallace, John, M.D., Professor of Midwitery and Gynæcology, University College; Examiner in Obstetrical Medicine and Gynæcology, Victoria University.—**On Abdominal Surgery.**

Walsham, W. J., M.B., F.R.C.S., Assistant Surgeon St. Bartholomew's Hospital.—**Papers on Orthopædic and Nasal Surgery.**

Walshe, W. H., M.D., LL.D., F.R.C.P., Consulting Physician, University College Hospital.

Warner, Francis, M.D., F.R.C.P., Physician to the London Hospital, and Lecturer on Materia Medica and Therapeutics in the Medical College.—**Scientific Study of Schools and School Children, as a Department of State Medicine.**

Wells, Sir T. Spencer, Bart., F.R.C.S. Surgeon to the Queen's Household, and Consulting Surgeon to the Samaritan Hospital for Women and Children.—**On a Ministry of National Health.**

West, Samuel, M.D., F.R.C.P., Assistant Physician to St. Bartholomew's Hospital, and Physician to the Royal Free Hospital.—**1. Treatment of Empyema by Paracentesis. 2. On the Relationship of Croup and Diphtheria.**

Wherry, G. E., M.A., M.B., M.C.Camb., F.R.C.S., Lecturer on Surgery, University of Cambridge, and Surgeon Addenbrooke's Hospital. —**On Injuries to the Knee-joint.**

White, W. Hale, M.D., F.R.C.P., Senior Assistant Physician and Lecturer on Materia Medica, Guy's Hospital.—**On the Influence of the Central Nervous System upon the Bodily Temperature.**

Windle, B. A., M.A., M.D., Queen's College, Birmingham.—**On the Principles of Teratology.**

Woakes, Edward, M.D., Senior Aural Surgeon and Lecturer on Aural Surgery at the London Hospital.—**The Treatment of Cystic Goitre and some other Cystiform Diseases.**

Wolfenden, R. N., M.D., B.A. Camb.— **On Laryngeal Phthisis.**

Wood, T. Outterson, M.D., F.R.C.P.Ed., Physician to the St. George's and St. James's Dispensary.—**The Treatment of the Insane in Private Asylums.**

INTRODUCTION TO A DISCUSSION ON PLACENTA PRÆVIA.

In the Section of Obstetric Medicine and Gynæcology at the Annual Meeting of the British Medical Association, held in Leeds, August, 1889.

By J. BRAXTON HICKS, M.D.Lond., F.R.C.P.Lond., F.R.S.,
Obstetric Physician and Lecturer to St. Mary's Hospital; Consulting Obstetric Physician to Guy's Hospital.

The collective wisdom of the authorities of this Section having pronounced solemnly the fearful word "Blood," proceeded further to do me the honour of asking me to open a discussion that should, as the result of our combined talents and experience, draw out the plan best calculated to arrest its terrors and to staunch its stream; and then the same authoritative wisdom also thought that it would be helpful to the profession generally if that formidable cause of blood loss—namely, placenta prævia—were the immediate subject of your consideration.

Thus it is that I find myself in this responsible position; and I would ask you kindly to take off some of its weight, the more so as the time allotted me is only fifteen minutes—a very short time to treat of only one case of placenta prævia—and you only ten minutes. As, therefore, all of us must necessarily be brief, I shall confine my remarks to the treatment of this condition, passing over the theories which have been advanced—and will be advanced later on in this Section—to explain the cause and nature of the position, and only very briefly touching on the after-treatment.

And, because I am anxious to present so important a subject free from personal considerations, lest these may be a hindrance to our conclusions, I shall avoid all reference to the authors of the various plans which have one way or other within the last thirty years reduced the death-rate from 30 per cent. to somewhere near 5 per cent. But I may say this much, that the early handling of these cases and the general antiseptic management of midwifery cases, both during and after delivery, can rightly claim to have had much to do with these excellent results. I think we shall all agree:

1. That when the placenta is inserted somewhere within the lower third of the uterus, there is very generally a liability to hæmorrhage. It would be difficult to say that it is absolutely "unavoidable," because I have seen the placental edge a little over the os without the slightest bleeding; and doubtless there are cases of what is called "accidental hæmorrhage," which have occurred with a low insertion of the placenta. But I take it that for practical purposes, when the placenta is inserted about or over the os uteri, hæmorrhage is to be expected before or upon the supervention of labour, whether premature or at full time.

2. I think also most of us will agree that, when once hæmorrhage has declared itself, there is no security for the patient, but that her life is in imminent danger from liability to recurrent bleedings.

3. My experience teaches me, and I think I shall gain your assent to this also, that the relative position of the placenta to the os has no influence on the frequency or quantity of the blood loss. In other words, whether it be marginal insertion or central, the risk is the same.

If you join assent with me so far, I would submit this proposition as a deduction from the foregoing, as a rule of practice, namely:

That as soon as we ascertain the case to be one of placenta prævia, we should make arrangements for terminating the pregnancy at the earliest possible time. I believe also I shall have your assent to this, the importance of this rule having been constantly shown in my practice: as far as possible, we should not leave our patient; certainly not to an indefinite future.

Having accepted this rule, our next consideration is: In what way and by what means we shall accomplish this. Perhaps it will clear the ground if, before we proceed in this direction, we take note of the main points we have to combat. And, first, we desire to prevent further bleeding; secondly, we wish to overcome the resistance the substance of the placenta presents to the passage of the fœtus. But also we cannot in the majority of these cases leave out of consideration the state of anæmia which the patient presents from the hæmorrhage which has already occurred. Sometimes so profound that the smallest movement, even ordinary examination, extinguishes the pulse. Of course, in all cases, it behoves us to carry out our manipulations with as much gentleness as possible—choosing, especially in the severer cases of anæmia, that plan the least disturbing.

Let me consider these points more completely:

1. The bleeding can be stopped by pressure: either by tampon; by the head being pressed down by the uterine efforts, or drawn down by the forceps; or by the leg and breech drawn down if presenting, or made to present by turning.

With regard to the pressure by the tampon, I believe the general consensus in British midwifery is against its use, and with this I am in accord—partly, because, unless perfectly done, and this is difficult, it is of no use; and if perfectly done, it is very distressing to the patient, especially if it be necessary, which it often is, to renew it to avoid septic generation. Still, it has some advantages, because, by distending the roof of the vagina, we also dilate the os, and provoke uterine action. But its action is tedious, and lacks the precision afforded us by the more recent methods.

But the uterine action alone will occasionally suffice to produce sufficient pressure on the inner surface of the placenta to stay bleeding; though it requires the head to be entering the os before it can efficiently do this; so that, if we found the os uteri fully dilated, the placenta marginal, and the membranes tense, we might rupture the membranes, and if the head descended we should not expect further bleeding, and the case may be allowed to end naturally. But, practically speaking, these cases are not the most frequent. If the placenta were mainly over the expanded os when the membranes were ruptured, the head, retarded by the bulk of placenta, would not effectively enter, and then it would be our best plan to press the flap of placenta aside and apply forceps, drawing down the head into the os, retaining it there by gently hanging on to the forceps till the pains were sufficient to expel the head, assisting them by gentle traction.

But it is very possible that we may have no forceps, and for one reason or another the head is unable to enter the os, then we are under the necessity, in order to place our patient in safety, to bring the breech to the os by turning. This can be accomplished by either slowly pushing the hand through the os, seizing the leg, and bringing the breech into the os; or by the combined external and internal version, effecting the same result but in a gentler way. Of course, if the breech present originally, all that will be needful will be to bring down the leg, fixing the breech in the os. The hand should retain hold of the leg, so that the weight of the arm gives pressure sufficient to prevent further bleeding. The great object of these manœuvres is to produce pressure enough to check bleeding, and this pressure need not be much.

In both the employment of the forceps and in turning the action is not for instant delivery; as soon as the os is plugged by head or breech the object is accomplished, a little additional traction as the pains come on sufficing for the delivery, which may be left mainly to Nature. Thus we gain time, valuable to our patient, wherein we can sustain her energies while the circulation is recovering its balance. When the os is fully expanded, the engaging firmly of head or breech is followed in an hour or two by uterine action. Supposing the os is not sufficiently expanded to introduce forceps, or to readily turn, then the os uteri can be expanded by the dilating bags, or in event of our not having them, the os could be gently dilated by the fingers introduced one by one. But if the os be so small as that, then I think the best plan would be to proceed by the combined method of version, as, the leg and breech being of conical form, it assists dilatation, and, as the os expands, it keeps up a corresponding pressure on the bleeding surface, for it has been constantly found in a large number of cases that if very slight traction is kept up just at first, no further bleeding has recurred.

If with all these states of os uteri, particularly if small, the placenta be attached more or less across, it is of much advantage to separate gently the placenta for a forefinger's length; this very distinctly releases the lower portion of the uterus from the restraint caused by the attachment of the placenta, and this is very noticeable if the margin of the placenta be across the os, because the margin is the part most firmly adherent to the uterus. By this separation the flap of the placenta also somewhat retracts, and is pushed aside as the head or breech descends. If the membranes are perfect, then they need not be ruptured till the act of

version; and when this rupture occurs, a still further easement is felt in respect of the rigidity.

Now, with respect to the detachment of the placenta from around the os, it is necessary to make a few remarks.

1. The act of doing it may be attended with severe and continuing hæmorrhage, particularly in central insertion of the placenta. In two cases which occurred to myself with central insertion, I was alarmed at the large flow, and this was only restrained by penetrating the centre of the placenta, performing bipolar version, and bringing the leg through the os, which was so small that scarcely two fingers could enter.

To discuss the source of this bleeding would, I am afraid, take up too much of the time allotted me, and therefore I would call attention to the practical fact that sometimes in detaching the placenta we have severe bleeding, whilst at other times we may not; indeed, these cases are the more frequent, and it has practically been found that a free, bold detachment of the placenta as far as the fingers can reach has the effect in a large number of cases of checking bleeding for a time, and thus we come to another means of restraining bleeding in placenta prævia. But, inasmuch as by this action we have the placenta partially detached, and as our experience tells us that both in "accidental" and in *post-partum* hæmorrhage there is, with partial detachment, liability to floodings, so when we employ this method as one which will give us time by temporarily restraining bleeding whilst the os uteri is dilating and the patient recovering her powers, yet we must treat it as a measure itself requiring supervision. This my experience bears out. In other words, it is imperative that we should be in close attendance on the patient, ready to act should any bleeding of importance occur, the action indicated being, of course, either to bring the head down by forceps or breech by turning. We must also remember, when we detach the placenta, we cut off the fœtus from its aëration to the same amount; and although it may be said that when it comes through the os about the same amount of the placenta will be made useless by pressure, yet it may be rejoined that the effect of the detachment will generally extend many hours longer than that of the pressure. If the placenta be inserted more or less centrally, these considerations do not enter, for the placenta sooner or later must be detached to an extent probably fatal to the child.

I would venture a suggestion here, in order to lessen the bleeding on detaching the placenta, that the finger should keep close to the uterine surface, rather pressing it from the surface of the placenta than the placenta from the uterus. If this plan does not lessen the loss from the maternal side, it may prevent loss from the fœtal villi, which must occur when we lacerate the placenta.

Now there are a certain class of cases, practically the more numerous, in which there has been severe loss and it is necessary to secure the safety of the patient; but where the os is so small that we cannot put in operation the foregoing plans, so also where, although the os uteri be somewhat expanded, we have at hand neither forceps nor dilating bags, or where, in peeling off the placenta, we are confronted with alarming blood-loss—in these cases the only plan we have at command is version by combined internal and external method, and it is in these cases we see its great advantages. But when this method of version is used it must always be understood that it is not the version itself which is the hæmostatic remedy, but that by it we are enabled to bring the fœtal leg or breech down on the placenta from within, and so are able at an earlier date than otherwise possible to stay the flow. It is possible in some case to dilate the os with fingers, and after some time, and with more or less force, to pass the hand through the os and so reach the leg; but I feel quite sure that anyone who has tried the two plans will, without hesitation, pronounce in favour of version by the newer method; and it is interesting to note that, although very little or no uterine action was observed before turning, yet shortly after the leg has been brought in through the os the pains commence and continue, so that labour is accomplished without requiring much assistance from the attendant, often within a couple of hours.

But in selecting our plans for the safety of the mother, we cannot leave out of consideration the preservation of the child so far as possible; and here I think we shall all agree in choosing, where the state of the os, the position of the placenta, and the condition of the mother permit it, delivery by the head as the most likely to secure its safety, that is to say, with a fully expanded os and placenta marginal. But when the os is only large enough for two fingers to pass, and the placenta much across the os or central, the time which elapses before labour is over, and the great reduction of its aëration adds so much to its jeopardy, that the extra risk produced by pressure on its funis as the result of turning is scarcely to be taken into calculation. In either case the death-rate is very high. But if for any reason there has been laceration of the placenta, there will also be laceration of the villi, and in consequence an oozing of blood will be going on, serious to the vitality of the child, if it be free or continuing during long hours, whilst we are waiting for the expansion of the os and pressure of the head, so that risk by pressure on funis after turning, is, I think, pretty evenly balanced in the other mode by the loss of its blood. If after gently detaching the placenta just enough to set free the lower portion of expansion, we quickly bring the leg or breech into the os, all loss from the placenta is checked, as it is at the same time from the maternal vessels. In all cases of labour before the end of the seventh month, and where we know the fœtus to be dead of course the question of preserving the life of the fœtus does not arise.

In those cases where the anæmia is so profound that almost the least movement eclipses the pulse, our difficulties are very great, but whatever we do we must do it with extreme gentleness. Our first object is of course to prevent further loss, while we sustain the powers by restoratives till the circulation recovers its balance. If there be no bleeding, we had better wait, but keeping watch at the bedside in case it return. Should it do so, or when the patient has rallied, we may elect to use forceps or combined version according to circumstances. But as detachment of the placenta may be attended by more or less blood loss, I should not advise this method. But these cases are so formidable, that often before we see them, their fate is sealed, and while we are waiting for the rallying, already coagula in the heart have formed and slowly but surely block the current.

Rules.

I would propose, therefore, the following rules, deduced from the above considerations, for your acceptance:—

1. After diagnosis of placenta prævia is made, we proceed as early as possible to terminate pregnancy.
2. When once we have commenced to act we are to remain by our patient.
3. If the os be fully expanded and placenta marginal, we rupture the membranes and wait to see if the head is soon pushed by the pains into the os.
4. If there be any slowness or hesitation in this respect, then we employ forceps or version.
5. If the os be small and placenta more or less over it the placenta is to be carefully detached from round the os; if no further bleeding occur we may elect to wait an hour or two. Should the os not expand, and if dilating bags are at hand, the os may be dilated. If it appear the forceps can be admitted easily, they may be used; but if not, version by combined external and internal method should be employed, and the os plugged by the leg or breech of fœtus; after this is done the case may be left to Nature, with gentle assistance, as in footling and breech cases.
6. If the os be small, and if we have neither forceps nor dilating bags, then combined version should be resorted to, leaving the rest to Nature, gently assisted.
7. If during any of the above manœuvres sharp bleeding should come, it is best to turn by combined method in order to plug by breech.
8. Where the fœtus is dead, or labour occurs before the end of the seventh month, combined external and internal version is the best method, no force following.

To these I may add the following: If, however, we employ a routine method in all cases, it will be found that the version by combined method, no force following, gives a result as good as, if not better, than any.

After-Treatment.—The after-treatment must be conducted on the modern principles; should oozing occur after the expulsion of the placenta, the swabbing of the lower uterns by styptics will be easy; and inasmuch as the outlet of the uterus is liable more especially to be blocked by adherent clots, it will be wise to irrigate the uterus daily with some antiseptic solution, or insert iodoform pessaries in the vagina, particularly if the irrigation cannot be done.

Dr. Murphy (Sunderland) submitted a table of thirty-eight

cases of placenta prævia, giving brief details of each, which included thirty-two consecutive recoveries; the thirty-third died of septicæmia, and the thirty-eighth was *in articulo mortis* when seen; these two were the only cases that terminated fatally. He urged the danger of permitting pregnancy to continue, and wished to establish a rule "that premature labour should be induced in every case where the placenta presented after the seventh month of pregnancy, and even before then when the bleedings were frequent or serious." He regarded Barnes's bags as the best means of inducing labour, and to fully dilate the cervix, and then generally to perform bipolar version, having at first separated the placenta.—Dr. LOMER (Hamburg) wrote a letter, from which an extract was read by the President to the effect that he (Dr. Lomer) had treated twenty-eight cases of placenta prævia, with one case fatal to the mother. Putting together all the results of German obstetricians, there were 190 cases of placenta prævia treated by Braxton Hicks's method, with but 9 deaths. Dr. Lomer said the rule he recommended was to turn and then wait; to consider the case as being simply one of foot-presentation, in which there was no other reasonable necessity to extract the child than the impatience of the operator. Should hæmorrhage occur in the meantime, then naturally it was right to perform slight traction on the foot in order to make the breech of the child tampon the bleeding parts. This traction ought, however, not to be a "hastened extraction."—Dr. R. BARNES said the treatment must be governed by physiological principles. He must recall attention to the theory that the danger of hæmorrhage depended upon detachment of the placenta growing within the lower zone. This was defined by Barnes's boundary-line, described by him twenty years before German writers discovered it. There was no absolute, constant method of treatment; but the stage and conditions differed, and therefore treatment varied. The first thing was to lessen the bulk of the contents of the uterus, so as to permit of its contraction. 2. To detach placenta from lower zone: this was done by the finger, which, sweeping round, reached exactly as far as the boundary-line; beyond this, the adhering placenta would support the child and give it the best chance of survival. 3. Dilate the cervix: this was best done by Barnes's bags; they dilated gradually, thus minimising risk of septicæmia from bruising or injuring the highly vascular cervix. 4. According to conditions, deliver by forceps or bimanual turning, which here found one of its most valuable applications. The evidence of Dr. Murphy and others was conclusive as to the value of these principles. He would add a word on prevention of placenta prævia. It was apt to recur. What were its causes? The ovum sought growth to healthy endometrium. If the upper part was diseased the ovum would be apt to stretch lower, that is, within the lower zone. Hence one rule, heal endometrium. Dr. Barnes submitted that prophylaxis was an interesting study.—Dr. HARVEY (Calcutta) wished to call attention to two points. One the use of the forceps as a substitute for turning in suitable cases, the other a danger in cases of initial rupture of the membranes, not, so far as he knew, mentioned in English textbooks. It was a curious fact that in the most modern books little or no mention was made of the forceps in connection with placenta prævia. Playfair, even in his last edition, while fully recognising that many cases were unfavourable for turning, had nothing to recommend but delay, while means were taken to restore the patient. Now, in cases where the patient was blanched and exhausted by severe bleeding, and practically in a state of collapse, the mere shock of turning might be fatal. If the forceps could be used they should be used; they caused far less shock than turning, and could often be applied very easily. The other point was the danger of rupturing the membranes early, as routine treatment in every case. This practice was recommended both by Playfair and Barnes, and there was no doubt that in many cases it was absolutely effective and completely stopped the bleeding. In some cases, however, it failed, the bleeding continued, the os was too small to allow of turning, and it was necessary to plug either with Barnes's bags or otherwise. The plug might act perfectly, so far as outward bleeding was concerned, but the blood might accumulate in the uterus, filling up the space previously occupied by the liquor amnii, and seriously endanger the patient. Kuhn and Braun, of Vienna, ridiculed this danger, but it was not imaginary, and he had seen a case in which a mass of clot larger than the placenta was expelled with it. Schroeder considered it so real a danger that he delayed rupturing the membranes till the os was fairly dilated; and the possible danger was, at all events, worth remembering. He thought that it should be generally recognised that no two cases of placenta prævia were precisely alike, and that no plan of treatment was universally applicable. Every method had its advantages and disadvantages, and they should be prepared to treat each case on its own merits, varying the plan of campaign according to the particular circumstances of the case.—Dr. MORE MADDEN thought that the difficulties of treatment of placenta prævia had been greatly overrated. In his own long experience of obstetric practice, in hospital and otherwise, he had tried nearly every suggested method of dealing with these cases, and after all had come back, as the most effectual and reliable, to the old plan—if the patient was near the completion of the term of gestation—of restraining the hæmorrhage by the tampon, the introduction of which was followed by labour, and then effecting delivery by version.—Dr. MURDOCH CAMERON said that, with respect to the first point in the summary by Dr. Hicks, namely, the diagnosis of placenta prævia, there was very little difficulty, as the complication too surely demonstrated itself by suddenly placing the patient's life in danger. The second point, namely, to wait with the patient, was requisite, whilst the treatment would in great measure depend upon the site of the placenta. In marginal cases the treatment might be met by such measures as Dr. Hicks advocated, namely, plugging, rupture of the membranes, and delivery with forceps. In cases of central insertion the speaker always trusted to combined version, and had seldom had any trouble with the dilatation of the os, as usually in those cases the cervix yielded readily to the passage of the child's body.—Dr. WALTER (Manchester) mentioned that his experience was derived from attendance on 23 cases, 20 having occurred in the maternity department of St. Mary's Hospital, and 3 in private practice. To go into the details of all these cases at the present time would be impossible. He would briefly refer to the treatment adopted: in 1 the mode of delivering was by the forceps, in 3 by the natural powers, and in 19 by version. The method of version was the "bimanual method," and he was glad of this opportunity of his expressing his obligation to Dr. Braxton Hicks for the valuable assistance derived from his papers on this subject. Dr. Walter also drew attention to the different mortality that existed according to the class of patients operated upon. In private practice or in hospitals the mortality would always be less than in maternity districts where the patients' houses were far distant from the hospital, and where, consequently, much valuable time was lost before treatment could be adopted. Dr. Walter suggested that it might be advisable in cases of extreme anæmia, where Barnes's bags were not at hand, or even in some cases before the insertion of Barnes's bag, to swab the interior of the cervix from where the placenta had been separated with cotton-wool soaked in vinegar, adopting then whatever treatment the case seemed to require.—Dr. BERRY HART defined (1) the normal site of the placenta. He considered the placenta as normally situated when it lay above the lower uterine segment; (2) placenta prævia. The placenta was prævia when attached in part over the lower uterine segment; (3) accidental hæmorrhage. This was due to pathological separation of the placenta when in its normal site. Dr. Berry Hart showed specimens of placenta prævia and partial abortion.—Dr. BRAXTON HICKS, in reply, thanked the meeting for responding so well to the invitation. In reply to Dr. Harvey, he would point out how easy it was to extemporise a dilating plug from materials always at hand. In a case which occurred to him in consultation, though the hæmorrhage was very severe, and the os would only admit a catheter, he was able to extemporise a plug which effectually dilated, so that the finger could be passed; and whenever they got so far, the placenta, being separated round the os, expanded, and soon would permit the bimanual method of turning to be accomplished. In reply to Dr. Murphy, he especially, in opening the discussion, had endeavoured to avoid talking of anybody's plan, being anxious to bring out the principles on which these cases should be conducted. He had no plan except such as was indicated in his introduction. With regard to Dr. More Madden's advocacy of the plug, he must say that the distress it caused, extending over twenty-four hours, was very much greater than that of following the indications he had pointed out.

THE Brazilian Government has commissioned Dr. José Lourenço de Magalhaes to investigate the subject of the causation and prevalence of *morphea* (leprosy) in the province of San Paulo. Dr. de Magalhaes, who has devoted many years of his life to the study of the disease, is the author of a work on leprosy in Brazil (*A Morphea no Brazil*).

EXPERIMENTAL RESEARCH AS TO THE GENERAL COMPARATIVE ACTION OF THE NATURAL AND ARTIFICIAL SALICYLIC ACIDS, AND THEIR SALTS OF SODIUM.

Read in the Section of Pharmacology and Therapeutics at the Annual Meeting of the British Medical Association held in Leeds, August, 1889.

BY M. CHARTERIS, M.D.,
Professor of Therapeutics in the University of Glasgow,
AND
W. MACLENNAN, M.B., C.M.,

IN commencing the following investigations, specimens of the above *British Pharmacopœia* preparations were obtained from Mr. Morson, of London, so that there could be no dubiety as to their genuine character.[1] The following points were noted as to their physical properties.

1. Natural salicylic acid obtained from salicin by oxidation or from the oil of winter green is seen in acicular crystals having a strong resemblance to strychnine.

2. Artificial salicylic acid obtained by the combination of the elements of carbolic acid and carbonic acid, and subsequent purification, is a white satiny powder in fine silky crystals resembling quinine.

Both are equally soluble in rectified spirit, 20 minims of the spirit dissolving 5 grains of each acid.

Salicylate of sodium (natural) is seen in crystalline plates of a white satiny appearance. Salicylate of sodium (artificial) is seen in small crystalline plates, with a slight pink colour. Both are equally soluble in water.

We elected to commence our experiments with the readily soluble salt, but we resolved to begin tentatively, and watch what might happen.

Salicylate of Sodium (artificial).—On June 1st, 1889, a rabbit weighing 14 oz., strong and healthy, was subjected to the following experiments:[2] Before injecting a solution of sodium-salicylate (strength 1 in 3, 2 grains in 6 minims), the temperature in the rectum was taken, and found to be 100.2° F.; after two hypodermic injections of 3 minims, at intervals of five minutes, there was no action, but the temperature fell to 99.8°. Within an interval of fifteen minutes, the 3-minim injection was repeated twice. Immediately after the last injection the rabbit became excited, and executed a backward and circular or rotatory movement, which gave place to a transient paralysis of the flexors of the hind limbs, so that in attempting a forward movement the animal dragged along on its belly. All this was of a transient character, and as the experiment was not continued further the animal made an excellent recovery, without the development of any other symptom.

On June 4th the experiment was resumed on the same animal, which appeared in every way healthy. The temperature in the rectum before any injection was 101.8°. At intervals of five minutes 3 minims of the solution (1 in 3) were injected hypodermically. Immediately after the fourth injection the circular or rotatory and backward movements were observed, and the same degree of paralysis of the hind limbs, namely, a paresis of the flexors of the hind limbs, which was again of a transient character, not lasting over one minute. Five minutes after the cessation of these symptoms the rectal temperature was taken and found to be 103°. Three more injections were given at short intervals without the production of any abnormal symptom. The total quantity of the artificial salicylate given at that time was 7 grains. The experiment was not pushed further, and the rabbit again recovered quickly and completely.

On June 6th the injections were recommenced, 6 minims being given at each injection, or 2 grains. Immediate backward and circular movement, with spasm of the hind limbs and arching of the back, were observed after the second injection. The spasm of the hind limbs was soon replaced by paralysis of the flexors of the hind limbs. The temperature was 101° before the injection. In half an hour another injection was given; but, as the last seemed to act so strongly and so quickly, the dose was reduced to 4½ minims without producing a renewal of the symptoms. After a lapse of ten minutes a 6-minim injection was given again, with the result of producing the same phenomena previously mentioned, but of transient duration. After an interval of ten minutes a 6-minim injection was given. The symptoms became now very pronounced, the back being arched and the gait stiff and performed with difficulty. Very distinct backward and circular movements followed, replaced by paralysis of flexors of hind limbs, involving dragging of the legs on progressive movement. The rectal temperature was now taken, and found to be 100.6°. For some time the animal seemed dazed and prostrate, but it made a complete and good recovery, the experiment not being continued further on this day. The total amount of artificial salicylate injected was 9½ grains.

On June 8th the experiment was continued, the rabbit being in every way healthy, and the rectal temperature 101°. The injection was begun at 12 minims, or 4 grains, and immediately after the introduction of the first dose there were backward movements, followed by paralysis of flexors of hind limbs, transient in duration. Six minutes afterwards the 12-minim injection was repeated, and again decided symptoms came on—rapid backward and circular movement, with paresis and dragging of the hind limbs. Within the next hour two injections of 12 mimims were administered, and now the paralysis became more pronounced and the prostration progressively more marked. The temperature was found to be 100.6°. Another injection of 6 minims was given, and soon a new symptom set in. As yet only paralysis of the hind limbs had been observed, but now a very distinct paralytic condition of the fore limbs was evinced. On attempting progressive movement the fore limbs, over which the animal had no control, slipped from under it, so that the breast and lower jaw lay upon the table. This paralysis deepened and became more general till there seemed to be entire loss of control over muscular movement. Just before death the paralysis of the fore limbs seemed to be more pronounced than the paralysis of the hind limbs, which appeared in a sense to be passing off. The whole experiment occupied an hour and a half, and the rabbit had in all 18 grains of the artificial salicylate of sodium.

At the same times and dates as the experiments with the artificial salicylate were being conducted, similar doses of the natural salicylate in a watery solution were given hypodermically to another rabbit. The rectal temperature before the experiment was 101.2°, and after receiving 3 grains at intervals of five minutes it fell to 100.6°. At the end of the first day's experiment the rabbit looked seedy, but was otherwise unaffected, and the recovery was complete.

On June 4th, when the experiment was recommenced, 6 grains in all were given, but without eliciting any result. Again the animal recovered completely.

Two days afterwards—namely, on June 6th—the experiment was repeated, but double the quantity was used. The temperature was 101°. After the second injection of 2 grains, the following symptoms were noted—namely, immediate backward movements, stiffness of limbs, arched back, passing off almost at once. The temperature was now found to be 103°. Three successive doses of 6 minims at short intervals were injected without inducing any further phenomena, except that the temperature became reduced to 100.8°. At the end of the experiment 9½ grains in all of the natural salicylate had been given, and the animal made again a complete recovery.

On the 8th, when the experiment was renewed the dose was increased to 12 minims, or 4 grains, at each injection. The first two injections caused nothing more than a slightly spastic condition of the hind limbs of a transient nature but no paralysis. The third injection was followed by slight paresis of the hind limbs and a slight general tremor, which increased until the fourth injection was given. It then became more pronounced, but ultimately passed entirely off.

The rabbit made a perfect recovery, after having had in all 18 grains of the natural salicylate.

On the 4th of July we resolved to test in a more potent manner what result would be obtained by pushing the injections of the natural salicylate beyond what we observed was a lethal dose of the artificial. We took this time another rabbit. At 10 a.m. we injected 12 minims=4 grains, previously having ascertained that the temperature of the rabbit was 101.8°, and from this injection there was no result. At 10.20 a.m. it was repeated, and the animal screamed, and when placed on the table voided a large quantity

[1] The specimens were manufactured by Dr. F. von Heyden Nachfolger, Nadebuel, near Dresden, Germany.

[2] In the subsequent experiments the rabbits weighed in each case 14 oz.

of urine. It then walked with arched back and gingerly steps along the table, but there was no sign of paralysis. At 10.40, the injection was repeated, and again we noticed the same spastic gait, and afterwards slight prostration. At 11 a.m. the prostration following on this injection was more marked, and on taking the temperature we found it had fallen to 99°. At 11.20, no definite symptom was produced by this injection, nor after the three that followed at intervals of twenty minutes. In all 32 grains were given. At 1 p.m. it was noted that the animal, though inclined to rest, could walk easily and take food. Its temperature was now 98°. At 2 p.m. the animal had recovered and was hopping about in a natural manner.

Natural salicylic acid, 5 grains, was dissolved in 20 minims of rectified spirit, and injected into a rabbit through a hypodermic syringe. There was no result, and twenty minutes afterwards the injection was repeated, and at the expiry of an hour from the last injection we noted that "it was eating cabbage, and moving about easily. Urine passed gave characteristic reaction with the perchloride of iron."

Artificial salicylic acid, 5 grains, dissolved in 20 minims of rectified spirit was injected into a rabbit on the same day, and twenty minutes afterwards "it was observed to be slightly seedy, but could take food." The injection was repeated, and ten minutes afterwards it was observed to be very weak about the legs, so weak that when the legs were stretched out it could not recover its position. Succeeding rapidly came flexor paralysis of hind and fore limbs, and subsequently supervened violent convulsions, head arched backwards, and snapping of the jaws.

In an hour and twenty minutes from the first injection death occurred after a very severe convulsion.

Salicin.—On July 2nd, 10 A.M., a grey rabbit was anæsthetised, and 18 grains of salicin in solution in warm water were introduced into the stomach. The temperature was 101.8°; at 10.45 A.M. the temperature was 100.8°, and at 11.15 100.4°. There was no evidence that the animal was affected in any other way by the salicin. An hour and a half after it had been administered a large quantity of urine was passed, which gave the characteristic reaction with the perchloride of iron.

On July 4th, to another rabbit 30 grains of salicin were similarly administered at 11 A.M. At 11.30 the temperature was 100.6°, but there was no sign of the animal being in any way injured. Urine passed two hours after the administration of the salicin gave the reaction with iron.

These experiments prove: 1. That salicin in a dose of 30 grains seems to have no injurious influence on the life of a rabbit of above weight, but that it diminishes the temperature about 1°. 2. That salicylic acid obtained naturally by oxidation of salicin, or from the oil of winter green in 10-grain doses, has also no deleterious effect. 3. That salicylate of sodium obtained from the natural salicylic acid, in 32 grains, is not lethal, but that it causes prostration and lowers the temperature.

On the other hand, it is conclusively demonstrated that: 1. Salicylic acid, artificial, in a 10-grain dose, causes, first, paralysis of flexors; secondly, death by violent convulsions. 2. Salicylate of sodium, artificial, in 18-grain doses, is lethal; in 4-grain doses it causes paralysis of the hind limbs; in 8-grain circular and rotatory movement, with paresis and dragging of the hind limbs; further in 12-grain doses it causes pronounced paralysis of the hind limbs, and marked progressive prostration and that 18 grains cause not merely paralysis of the hind limbs, but a paralytic condition of the fore limbs, and entire loss of control of muscle movements, and death supervenes in a short time.

The deductions from these experiments indicate that artificial salicylic acid and its salt of sodium are dangerous and, in large doses, fatal to animals. While salicin, natural salicylic acid, and its salts of sodium are not. Now, on what does this difference depend? Doubtless on some impurity in the artificial acid, and corroborative evidence, though not yet completed, is afforded by the following letter which we have received from G. G. Henderson, M.A., B.Sc., of the Chemical Laboratory of the University of Glasgow:—

"I find, on examination, that the sample of artificial salicylic acid you left with me is not pure, but contains a small quantity of another acid, which I have no doubt is the cause of the appearances observed after the use of artificial salicylic acid. I attribute the presence of this impurity to the fact that the phenol used in preparing salicylic acid synthetically is not pure, but always contains other substances (cresol, etc.), of some one of which the acid found in salicylic acid is probably a derivative. I had not enough of the impurity to make a further examination of it, but it is certainly not salicylic acid. I should add that no trace of this substance is to be found in natural salicylic acid."

After a very careful analysis, Mr. Henderson isolated the impurity referred to. It was in the form of a buff-coloured powder, and it was found to be more soluble than salicylic acid; 1 grain of it was injected into 20 minims of rectified spirit, and injected into a rabbit weighing 6 lbs., but without any visible effect. After the expiry of half an hour, 2 grains similarly dissolved were injected, and in ten minutes, and without any rotatory movements, the breathing became very rapid, the arteries of the ear were alternately dilated and contracted, and the animal lay prostrate, with its fore and hind legs stretched out. Again, in half an hour, the same quantity—2 grains—was injected, and the prostration became more intense, the respirations lower, and a fine tremor was detected in the muscles of the face. In the course of two hours there was a slow improvement, but never a complete or even partial recovery, and ultimately the rabbit died, after thirty-six hours, being unable during that time to eat anything.

The action of this impurity seems to be of the nature of a slow but certain poison, and the lethal dose is relatively much less than that of salicylic acid. The rabbits in the previous experiments weighed only 14 ounces, and in this case 6 lbs., so that the lethal dose would correspond to about 1 grain for a 1 lb. rabbit.

The obvious conclusions from these experiments are that artificial salicylic acid contains an impurity or impurities, and until this or these can be extracted by the aid of chemistry the internal administration of it or its salt of sodium should be discountenanced. Large and repeated doses of the sodium salt are necessary in the treatment of acute rheumatism, and hence we may account for the restlessness, the confusion, and the delirium sometimes attendant on its use, which have been testified by clinical experience. It is more than probable, too, that the retarded convalescence occurring in some cases of acute rheumatism after the salicylate treatment is due to the great and protracted prostration which the impurity or impurities give rise to. It is to be remembered in connection with these symptoms that prescriptions of the salicylate of sodium are invariably made up, unless otherwise indicated, from the artificial and not the natural salt.

In a further communication we will state the physiological action of the acid from which the impurity has been removed, and also the effect of pure salicylic acid made artificially.

THE INFLUENCE OF OPIUM AND MORPHINE ON URIC ACID CONSIDERED WITH REFERENCE TO THEIR ACTION IN HEALTH AND DISEASE.

Read in the Section of Pharmacology and Therapeutics at the Annual Meeting of the British Medical Association held in Leeds, August, 1889.

BY 'A. HAIG, M.A., M.D.OXON., M.R.C.P.,
Physician to the Royal Hospital for Children and Women, Waterloo Road; Assistant Physician to the Metropolitan Hospital.

As the action of morphine in uræmia and in uræmic and puerperal convulsions has recently been attracting some notice,[1] and as its effect on arterial tension has been previously pointed out by others, I propose in this paper to give the results of my investigations on its influence on the excretion of uric acid.

These results show, I believe, that it causes retention of uric acid, and that the result of this is a fall of arterial tension, the effect being exactly the same whether the retention is produced by opium, by acids, or other substances, so that my results with it completely confirm the previous observations of others.[2]

I shall further bring evidence to show that the effect of morphine on mental depression and other mental states and conditions, as already well known, is the result of its action on uric acid and arterial tension, or is at least the exact parallel of the action of other drugs which affect the excretion of uric acid and arterial tension in the same way, and that it is thus possible to produce what is practically the same result by several drugs. And I shall also point out that the effect of opium and morphine on uric acid and arterial tension may explain the good effects

[1] JOURNAL, i, 1889, 588 and 943; also Debate at Medical Society, April 8th, 1889; see JOURNAL, i, 1889, 837.
[2] *Loc. cit.*; JOURNAL, February, 1889.

they have been observed to produce in uræmia and uræmic and other convulsions.

It will be seen at once how closely connected these subjects are, and how importantly they bear on my previously published work on *Uric Acid as a Cause of Headache, Epilepsy, Mental Depression, and High Arterial Tension*, I shall hope to be able to make abundantly evident.

Some time ago I was much struck by the way in which a good dose of tinct. opii relieved a severe headache in a patient under my care at the Waterloo Road Hospital, suffering from chronic nephritis. After many other more orthodox remedies had been given without avail, the resident medical officer (Dr. Johnson) suggested a dose of opium, and the effect was wonderful.

I then came across the writings of MM. Ball and Jennings,[3] showing that in chronic morphinism, when feelings of misery are present between doses, the pulse tension is high, and that when a new dose of the drug brings ease and comfort, the tension is natural or low. It at once occurred to me that there was here an important parallel between the well-being produced by opium and the well-being which I can produce by acids or other drugs causing retention of uric acid.

In both cases the feelings of well-being are accompanied by a pulse of low tension, and the feelings of misery and depression by one of high tension. For my part I believe that this relation of mental condition to pulse tension is not in any way a coincidence, but I think that the high tension pulse, or the conditions which produce it, are the absolute and essential causes of the mental condition acting through their effect on the cerebral circulation; but I shall return to this point again.[4]

I at once set to work to test the effects of opium and morphine on the excretion of uric acid on arterial tension and mental depression and on the uric acid headache, in which latter trouble its value had previously been noted by some sufferers.

My results show clearly and distinctly that opium and morphine cause retention of uric acid, that during the retention the arterial tension is reduced just as it is when the retention is produced by other drugs, that after the retention, as the effect of the opium passes off, there is a rebound, with an excessive excretion of uric acid, and very marked high tension, these being often accompanied by headache and mental depression, and constituting the unpleasant after-effects of opium already well known.

I am thus able to confirm the observations of MM. Ball and Jennings[5] with regard to arterial tension, and to show that they hold good not only for chronic morphinism, but even for quite small single doses of opium and morphine; and I am led to believe that the seductive feeling of well-being—to obtain which opium is so largely consumed—is due to its effects on the excretion of uric acid and arterial tension, and that the wished-for result may be brought about to a large extent by other drugs; and conversely that the headache and miserable feeling of depression which follow some ten to twelve hours after a dose of opium, and which MM. Ball and Jennings have noted as being accompanied by a high tension pulse, are the result of the passing-out through the blood of the uric acid previously kept back, and that precisely the same results follow the retention and well-being produced by acids, iron, lead, and other drugs, or occur independently of drug action before, during, and after an attack of headache or epilepsy; and the causation of epilepsy by lead is a case in point, the lead retaining a store of uric acid which, when it comes to be swept out, is for a time in excess in the blood, and causes, among other things, the convulsions.

Fig. 1 shows the effect of two doses of one-sixth of a grain of tartrate of morphine on the acidity, uric acid, and urea.

I purposely chose the tartrate so as not to complicate the problem by having a mineral acid present; because I had previously found that opium and morphine raise the acidity, and as I believe their action on the excretion of uric acid and on arterial tension is all the result of the rise of acidity they occasion, I was anxious to try the effect of morphine, apart from a mineral acid, in such a salt as the hydrochlorate or sulphate, even though the amount could be very small.

The result shows, I think, clearly that two doses of one-sixth of a grain of tartrate of morphine were able to cause a very marked rise of acidity which, as urea is falling, is clearly due to the drug, and when the morphine effect passes off on the fourth day acidity falls, even though urea is rising.

I shall have something to say further on as to the way in which opium and morphine raise acidity, and it is only a special application of what I have already said on the matter of acidity in previous papers.

The effect of opium or morphine on acidity is very marked and prompt, and where only one dose is taken the rise and fall are both over in about twelve hours, and as the one nearly balances the other, they show very little in a twenty-four hour chart; but in the experiment in the figure the morphine was specially taken with the object of affecting the alkaline tide of the third day, so as to show as much as possible in a twenty-four hour chart. No doubt, with larger doses continued over twenty-four hours, a larger fluctuation could have been produced, but some of the symptoms might have been inconvenient.

The results also are so constant that one may argue with absolute certainty from the mental well-being and the reduced arterial tension to the raised acidity of the urine and the retention of uric acid. Not that opium any more than other drugs can act in total disregard of the conditions present at the time it is taken, but I shall have to point out presently that it generally of itself controls one of the most potent causes of a fall in acidity—namely, increased peristalsis.

Fig. 2 shows the pulse of the well-being of morphine, in a trace taken two hours and forty minutes after a dose of one-sixth of a grain of the tartrate; and, if anyone will refer to the BRITISH MEDICAL JOURNAL of February 9th, 1889 (Fig. 3), he will see that it very much resembles the pulse of well-being caused by acids, which, indeed, as I have said above, it really is, though in this instance the morphine produced the acid.

Fig. 3 is the trace of a pulse on the morning after a dose of morphine, when the alkaline tide is beginning to wash out the uric acid previously retained, and its excess in the blood is causing high tension, mental depression, and threatening of headache. The trace clearly shows high tension, and is very similar to those previously given in the BRITISH MEDICAL JOURNAL.[6]

I have previously said that some people have found opiates of use in migraine or the uric acid headache, and since I began to experiment with opium I have often used it in slight headaches, and have found it even more effectual and certain than an acid; and, just as with an acid, as the headache and mental depression are passing off, there are marked pricking and shooting pains in the joints, showing, as previously pointed out,[7] that this is one of the places where uric acid is retained; and with a high tension pulse, such as that in Fig. 3, together with its concomitant mental depression and headache, it is a simple matter to replace all these conditions by their opposites by repeating the dose of morphine; and we have here in miniature the vicious circle of chronic morphinism, in which a man is continually driven to repeat the dose to save himself from the evils produced by the previous one.

And now as to the way in which opium and morphine raise acidity. It is well known that opium delays or stops intestinal peristalsis and checks diarrhœa, and in a paper on a case of gout[8] I have pointed out the effect of constipation in raising the acidity of the urine, diminishing the excretion of uric acid, and precipitating an attack of gout; and have suggested that, when peristalsis of the large intestine is hindered in any way, its contents, which have an acid reaction, linger in its pockets, and that, along with the fluid which is then absorbed from the fæces, some of the acid which gives them their reaction passes also into the circulation.

If this be granted, the action of opium and morphine on acidity is simple and easy to understand; and I have already said that I believe their action on acidity explains that on uric acid, and thus again their effect on arterial tension, which in turn controls the cerebral circulation and produces the conditions of mental brightness and well-being or their opposites.

I have previously shown that I can produce all these conditions with an acid, and we see in Fig. 1 how powerfully morphine affects acidity; a further consideration of this factor may explain the somewhat different action of morphine in different people and under slightly different conditions: for it is obvious that if any organic condition prevented the morphine from delaying peristalsis in the large intestine, and causing increased absorption of acid from its contents, its effect in removing a headache or fit of mental depression would be very greatly diminished.

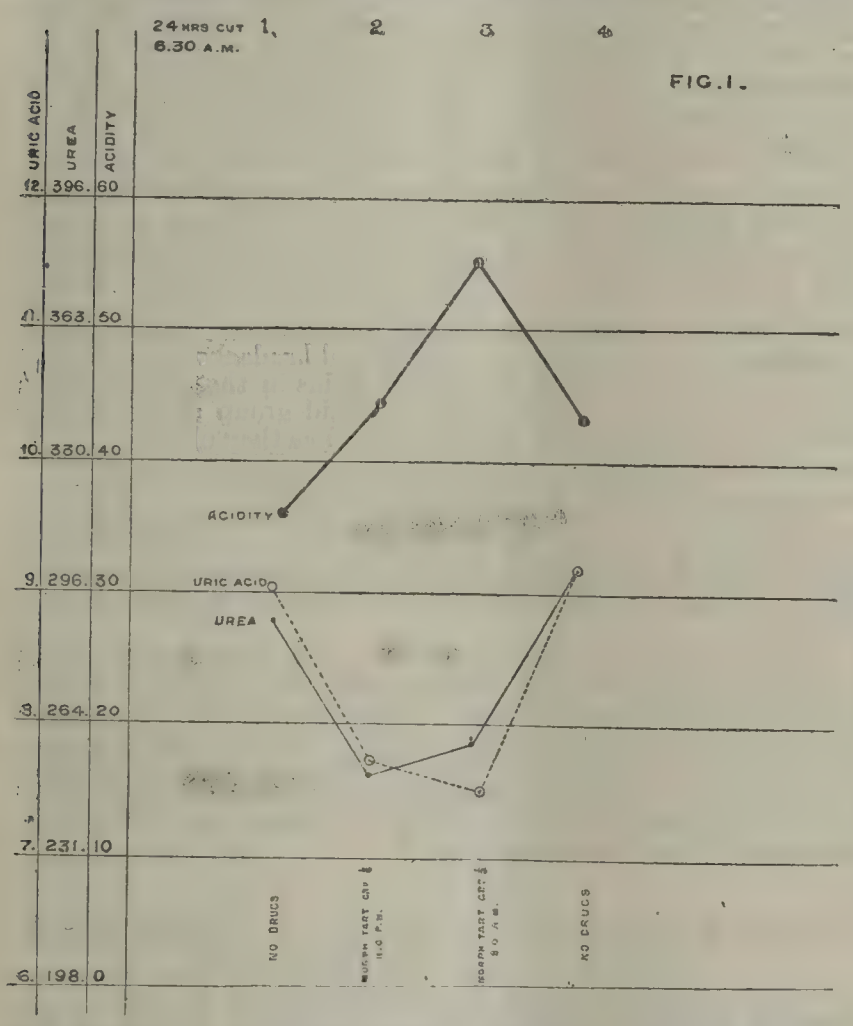
I have further pointed out that increased peristalsis, with

[3] *L'Encephale*, 1887.
[4] See also JOURNAL, February, 1889, and *Practitioner*, November, 1888.
[5] *Loc. cit.*
[6] *Loc. cit.*
[7] JOURNAL, vol. ii, 1888, p. 12.
[8] *St. Bartholomew's Hospital Reports*, vol. xxiv, p. 226.

diminished absorption of food and acid, is an important and frequent cause of a fall of acidity and its results, as headache and mental depression, with their concomitant high tension pulse; hence the common relation of dyspepsia to high tension pulse, mental depression, and headache, and an explanation of the fact that a purge given at the time a sick headache is present often does harm;[9] but the effect of morphine in preventing slight relaxation of the bowels is generally prompt and decided, and, so far as my experience goes, it is a very certain remedy both for headache and mental depression.

The mental brightness and well-being produced by opium is a matter of great interest, and it might seem to anyone unacquainted with what can be done in this way, by means of acids and other drugs which influence the excretion of uric acid, that this condition is peculiar to the drug under discussion, and that it is probably due to its direct action on the cerebrum; but anyone who gets marked results with opium or morphine in driving away mental depression or a headache, or in causing mental brightness and well-being, will, I think, be able to convince himself that he can produce practically identical results with acids, and probably, also, with lead or iron, and some other drugs.

Further, it is quite clear that the people who take opium as a habit do not do so for its soporific or narcotic effects; and Mr. W. J. Moore says: "A telling commentary on the assertion that opium dulls the mental faculties is the practice of the Chinese, who take their opium before business bargaining."[10] And Dr.



Farquharson, in the recent debate in the House of Commons, on the opium traffic, mentioned the fact that Wilberforce always put an opium pill in his mouth before getting up to speak in the House. This statement of Dr. Farquharson's excited some laughter; I suppose because it was considered that Wilberforce found it necessary to dull his susceptibilities before getting up to speak; but my strong impression is that Wilberforce must have been aware of a fact about the use of opium of which his contemporaries and many of their successors were ignorant, and that this same fact is well known to the opium-eating Chinese.

In my experience, opium, far from dulling the mental faculties, renders them sharper and brighter than they would ever be otherwise; the only thing that at all approaches it in this respect being, as I have said, an acid; but an acid may apparently in some cases not be absorbed, or, at least, not quickly, owing to conditions present in the stomach at the time it is taken; or, again, in some people, it rather appears as if an acid causes some gastric irritation, and so possibly prevents its own absorption; so that, of the two, opium is to some extent the more certain cure of headache and mental depression, and the quickest way to mental brightness and well-being.

The mental brilliancy and happy feelings are most marked from two to four hours after a dose, and the pulse tension is then also most reduced (see Fig. 2); an hour or two later the narcotic

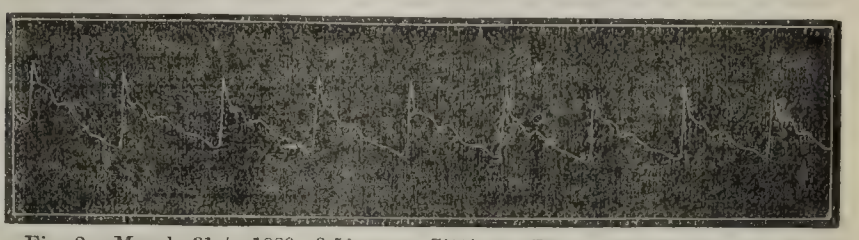


Fig. 2.—March 31st, 1889, 3.50 P.M. Sitting. Pressure, 4 ounces; pulse, 66; tension slight. Well-being of morphine 2 hours 40 minutes after gr. $\frac{1}{6}$ of the tartrate.

action of opium begins to be felt, and if the dose is not repeated, the feelings of well-being become mingled with a certain amount of drowsiness; later still, as eight or twelve hours after the dose and after sleep, if there has been any, comes the rebound with headache, mental depression, and high tension pulse (Fig. 3), all of which can be quickly removed by another dose; and thus the opium circle becomes established, and can only be broken through by bearing the headache and mental depression without repeating the dose; and after some personal experience, I have ceased to wonder that many are unequal to this effort.

If, however, as I have been trying to point out, the mental brightness and well-being are due to the effects of opium on uric acid, and so on pulse tension and cerebral circulation; and if the mental depression and headache are due also to the passing out of the uric acid previously held back, it seems to me that if we can get a drug which will promote the free elimination of uric acid, while at the same time, by affecting its solubility, it prevents its causing symptoms of mental depression and headache, we shall be easily able to break through the opium circle.

And in salicylate of sodium, we have a drug which exactly answers to these requirements; when uric acid is passing out in the opium rebound, it is held in solution by an alkali, and causes symptoms of its presence in the blood; but I have previously pointed out that uric acid, when held in solution by a salicylate, passes freely out in the urine without causing any symptoms.[11] And I should expect, therefore, that the salicylate would effectually break through the opium circle by removing the accumulated uric acid; and, so far as my experience goes, I believe that this is the case.

It may be interesting here to call to mind that nearly all the beverages consumed to any large extent in this country have the same effect on pulse tension that opium or morphine and acids have; thus ale, stout, champagne, sherry, and port are very strongly acid,[12] and do undoubtedly effect all the changes in uric acid excretion and pulse tension that a dose of a mineral acid would, producing at the same time more or less of mental brightness and well-being; and alcohol itself, by dilating the peripheral arterioles, no doubt, has the same effect on the cerebral circulation. Tobacco smoking, again, tends to reduce pulse tension, and produces no doubt in this way the pleasant feelings of calm and well-being, for which it is so highly prized.

Many non-alcoholic beverages in common use, as those made, or supposed to be made, from lemon or lime-juice, have an acidity which, calculated as oxalic acid, is surprisingly high, and have been found by experience to produce the same results; so that I believe that those who resort to any of these beverages obtain practically the same results, namely, the relief of mental depression and causeless worry, and that mental exaltation and well-being is what all are seeking for, not the stupor of alcoholic excess, or the narcotism of large doses of opium; these are so to speak the accidental results of carrying the process too far.

And now to come to the effects of opium and morphine in disease, I cannot but regard it as very important corroboration of my theories of the causation of mental depression and melancholia by uric acid through its effect on pulse tension, and of my above

[9] See *Lancet*, vol. i, 1889, p. 1187.
[10] *Standard*, March 26th, 1889.
[11] *Med. Chi. Trans.*, vol. lxxi, p. 135.
[12] M. D. Thesis, Bale and Sons, 1888, p. 7.

remarks on the influence of opium on these factors, to find that Dr. Ringer has pointed out that a hypodermic injection of morphine is of very great use in some cases of melancholia, and speaks in strong terms of its valuable effects.[13]

In headache, as I have said, opium and morphine act well, though in some patients they cause nausea, or intensify this condition when it is present, and in these cases morphine may have to be given hypodermically, and a hypodermic injection of morphine is recommended by Dr. W. H. Day in the last edition of his work on *Headache*.

With regard to epilepsy, an injection of atropomorphine is advised by Brown-Séquard[14] in cases where there is any warning; and since I noticed the connection of this disease with uric acid,[15] I have several times given acids with the objects of warding off the fits in cases where there was any warning of their approach, and several patients have declared that the fits have been kept off by this means; but there are so many sources of fallacy, that it is not safe to attach any great importance to these statements.

My argument for using an acid was as follows:—An epileptic fit appears to bear the same relation to the excretion of uric acid and mental depression[16] that a headache does, and it is therefore probable that the pulse tension is raised at the time of the fit, though it is difficult or impossible to prove this, as the struggling in the fit tends to remove its signs; if, therefore, there is sufficient warning, one ought to be able, just as in a headache, to diminish or prevent the plus excretion of uric acid, reduce the pulse tension and keep off the fit by giving an acid, and it is interesting to note that atropomorphine has sometimes been found to have this effect, though I suppose the proof that in any given case it has prevented a fit must, as in the case of the acid, rest entirely on the statement of the patient.

With regard to puerperal and uræmic convulsions I stand on less firm ground, but it is certainly an interesting fact that opium, which has been shown to reduce arterial tension, should relieve these convulsions.

If what I have been saying above is correct, and opium reduces pulse tension by its effect on uric acid, we are brought face to face with the question, Are puerperal and uræmic convulsions due to the high tension of uric acid? The answer to this question must depend on the view that is taken of the relation of high arterial tension to nephritis. Is the high tension the result of the nephritis, and only present after the kidney is damaged, or is the high tension present, as contended by the late Dr. Mahomed, for some years before there is any kidney lesion? that is, is it to some extent independent of the condition of the kidney? I have previously pointed out that I am able, by influencing the amount of the uric acid in the circulation, to raise or lower pulse tension at pleasure and to a considerable extent; and I believe that there is little or no difference between the sphygmogram of the high tension thus produced (see Fig. 3), and that of nephritis.

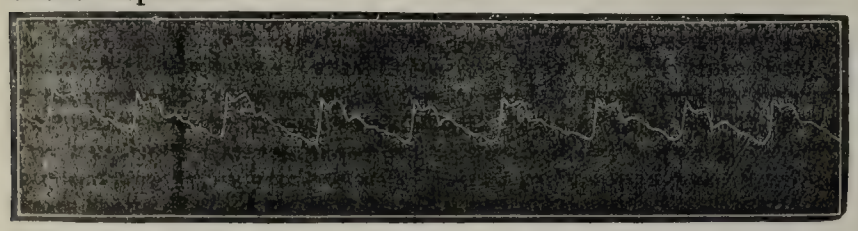


Fig. 3.—May 15th, 1889, 7.30 A.M. Sitting. Pressure, 4 ounces; pulse, 60; tension moderate. Threatening of headache morning after morphine.

Dr. Broadbent, as I have remarked in previous papers, considers that uræmic convulsions are due to high arterial tension affecting the cerebral circulation, and not to a poison acting on the nerve cells; and if this is so, it is obvious that the tension which causes the convulsions must be due to a temporary cause, or a transient exacerbation of tension which is perhaps never quite normal, and it therefore corresponds in every way to the effects of a uric acid storm.

At this point the history of a puerperal convulsion may be of some help to us, for it often comes exactly at a time at which, from our previous knowledge, a uric acid storm might be expected; that is to say, at the end of a time, as I have remarked in a previous paper,[17] of large and active nitrogenous metabolism; the commencement of parturition with pains, vomiting, and inability to take food soon result in a fall of urea and acidity, and the fall of acidity is the signal for a rush of the previously accumulated uric acid into the blood, and so for a marked rise of tension with mental depression, headache, and, possibly, in some cases convulsions, as its signs and results. Again, in cases spoken of as showing chronic high tension of the pulse, my experience would lead me to believe that there are great variations of tension, which, if the pulse is observed only once and at the same hour each day, may, to a large extent, escape notice, though these fluctuations are the possible cause of important symptoms.

My object, however, in this paper is to point out the effect of opium and morphine on acidity, uric acid, and pulse tension, which are of themselves, I believe, very important, and explain a large part of the known effects of these drugs both in health and disease. And it seems to me that if further investigations confirm the value of morphine in these convulsions, and also my explanation of its mode of action, we have here another point from which light may be thrown on the relation of ordinary epilepsy to the excretion of uric acid.

In conclusion, my position with regard to opium and morphine amounts to this. A large number of drugs—iron, lead, the mineral acids and their salts, antipyrin (?) nitro-glycerin(?)—have one effect in common, namely, that of diminishing the excretion of uric acid in the urine, that is, I believe, driving it out of the blood into the liver, spleen, joints, etc. Exactly contemporaneously with the diminished excretion of uric acid due to any of these drugs comes a fall of pulse tension, and a mental condition of brightness and well-being. Uric acid headache or mental depression, if present, are cured, and in their place come pricking and shooting pains in the joints, most marked in those who have previously suffered with gouty arthritis. On the other hand, an alkali, as soda or potash, while increasing the excretion of uric acid, produces symptoms which are the exact reverse of those above mentioned. As these drugs have no obvious properties in common, I have inferred that the results they produce are due to their action on uric acid, which I have pointed out in previous papers. Opium and morphine, as we have seen, diminish the excretion of uric acid, and at the same time reduce pulse tension, cause mental brightness and well-being, cure a uric acid headache, and cause at the same time pricking and shooting pains in the joints; they, therefore, belong to the iron, lead, and acid group of drugs with which their effects exactly correspond, and as they always cause a marked rise of the acidity of the urine, I conclude that their action on uric acid is the result of their action on acidity.

With regard to convulsions, I have pointed out the relation of some cases of epilepsy to the excretion of uric acid.[18] I have now shown that morphine, probably by acting on uric acid, relieves or removes high tension pulse, mental depression, and headache.

It has been noticed that morphine is of much use in certain uræmic and puerperal convulsions which are generally accompanied by a high tension pulse. I now suggest that its curative action in these troubles is also due to its effect on uric acid, and that further investigation may show that these convulsions, like some of those in ordinary epilepsy, have a more important relation to the excretion of uric acid and its effects on pulse tension than has hitherto been suspected.

CASE OF CEREBRAL TUMOUR SUCCESSFULLY REMOVED BY TREPHINING.

Read in the Section of Surgery at the Annual Meeting of the British Medical Association, held in Leeds, August, 1889.

BY RUSHTON PARKER, B.S., F.R.C.S.,
Professor of Surgery in University College, Liverpool; Surgeon to the Liverpool Royal Infirmary.

THIS case occurred in the practice of Dr. Austin Williams, of Liverpool, and was attended also by my colleague, Dr. Glynn, both of whom were present at the operation. The patient is a big, strong man, aged 38. The symptoms observed—long-standing headaches, and latterly mental dulness, followed by almost total paralysis of the left arm and distinct weakness of the left leg—pointed clearly to the probability of an intra-cranial growth of some kind; but the administration of iodide of potassium for three

[13] *Handbook of Therapeutics*, ed. xii, p. 497.
[14] *Quain's Dictionary of Medicine*, p. 450.
[15] *Neurologisches Centralblatt*, March 1st, 1888.
[16] *Neurologisches Centralblatt*, March 1st, 1888, p. 4 of paper.
[17] JOURNAL, February 9th, 1889.
[18] *Neurologisches Centralblatt, loc. cit.*

weeks not having relieved the symptoms, which had, on the contrary, become worse, the state of the case becoming urgent, the operation was performed on February 23rd, 1889.

Dr. Glynn looked for but found no optic neuritis. There could have been no difficulty in localising the tumour in the right Rolandic area by ordinary methods of estimation and measurement outside the head, but any such process was rendered unnecessary by the existence of a puffy swelling of the scalp in front of the right parietal eminence. What this might have to do with the tumour supposed to be inside was quite unknown, for it appeared to be, as it proved, entirely outside, and not attended with perforation, or, in fact, any but the most trifling alteration of the bone. But, situated in the region which must have been chosen, it was accepted as the guide, exposed in the middle of the flap turned down, and found to consist of pericranium, thickened and softened, though retaining its textural continuity, and at the end of the operation was dissected away. The skull was opened with a one-and-a-half-inch trephine, and a rounded tumour the size of a walnut, with a bit of adherent dura mater, was shelled out by breaking through the surrounding brain with the fingers.[1] The flap was attached with very few sutures, and held down by antiseptic padding and a close bandage. In consequence of the rather profuse discharge of serum on the third day, drainage-tubes were then introduced. There later followed pulsation over the hole and suppuration in their track, with increasing uneasiness and a return of paralysis that had almost gone, until by the nineteenth day matters were truly critical. Then, under chloroform, the almost healed flap was turned down again, and found, in the main, healthily united to the brain beneath. This, however, being œdematous and prominent, was sliced off level with the bone, revealing sinuses lined with puriform lymph, which was scraped away and the wound packed. No more bad symptoms of any kind were met with again, and the patient's immediate safety became quickly established. A large fungus, however, resulted, and showed no disposition to subside spontaneously, but was reduced by force on the thirty-second day, and the skin-flap laid down on it, and kept down by a plug of coins folded up in antiseptic gauze under a sheet of tin plate. Six days later the fungus was replaced by a chasm lined with granulating brain. Eventually satisfactory healing occurred, with gradual restoration of the patient's strength, which had become much reduced before the second operation, and remained low while the fungus lasted.

Total paralysis of the arm and much of the leg followed each operation, and lasted a day on the first, but ten days on the second occasion. Gradual improvement in this respect has continued up to the present time. He sat up daily after the thirty-sixth day, but was not soundly healed till the eightieth, by which time he could walk by himself in rather a staggering way. With the arm he was then still rather lame, and could not find or seize objects while his eyes were shut, or distinguish, for instance, a tall hat from a spectacle-case when holding them; but all this slowly improved, and at the end of five months he could turn over the leaves of a book singly pretty well when his eyes were open, though fumbling a good deal when his eyes were shut.

A great benefit owned by him is the total loss of headaches and the dazed feeling and manner that preceded operation. He expresses himself as quite restored to mental vigour and comfort. All traces of paralysis have long left the face, while the strength of the affected limbs has improved with each month, and the tactile discrimination and muscular sense of the arm are now completely restored.

A review of all the circumstances convinces me that the case is one of gumma, and a former medical attendant has since informed me that he treated him, six years ago, with iodide of potassium for a periosteal swelling of the sternum, which got well. The puffy swelling of the pericranium; the thickened, adherent, puckered, and depressed dura mater; and other anatomical features to be mentioned, favour this pathological view, which is supported, I believe, by the absence of optic neuritis as a clinical symptom. Good microscopical slides were kindly made by Mr. W. T. Thomas and by Dr. Glynn; those of the latter including some by a process of Weigert, showing nerve axis cylinders ramifying in the tumour, and proving its infiltrating character. The tumour showed the form of two convolutions on its surface, slightly paler than natural, somewhat prominent and hard (hard enough to prevent, in the trephine hole, pulsation of the exposed brain until the tumour was removed). When cut into it was very like a firm sarcoma—showing microscopically, however, no structure of sarcoma or of any proper tumour, but accumulations of round-cells and free nuclei around the vessels and in a fibrillar basis, alternating with patches of recognisable brain substance containing cortical cells, and with hazy fibrinous areas, indicating caseation. To the naked eye, however, no suggestion of caseation occurred.

On the question of injury, there is no certain history; but I am informed that there has been ample opportunity, the patient having in former years been severely knocked about in accidents of various kinds.

[1] After section of dura mater all round the adhesion, which proved inseparable.

CONSECUTIVE SERIES OF CASES OF ABDOMINAL SECTION.

Read in the Section of Surgery at the Annual Meeting of the British Medical Association, held in Leeds, August, 1889.

By A. W. MAYO ROBSON, F.R.C.S.,

Honorary Surgeon, Leeds General Infirmary; Honorary Consulting Surgeon, Batley Hospital; Lecturer on Practical Surgery in the Yorkshire College of the Victoria University.

My excuse for bringing forward the appended series of cases is, that in these times of specialism and special hospitals, it is necessary that general surgeons, if they wish to retain the name, should prove that they also can perform abdominal sections safely, even in an ordinary hospital.

My cases, which extend over a period of five years, have not been selected in any way, and whenever a patient has been brought suffering from abdominal symptoms, statistics have not been considered, but an operation has been undertaken whenever such was indicated.

Many cases properly coming under abdominal surgery, such as lumbar nephrectomy and nephrotomy, lumbar colotomy, suprapubic cystotomy, typhlitic abscess, etc., where the general peritoneal cavity has not been opened, have not been included in the above list. Knowing how fallible diagnosis is, even with the utmost care, I am guided by the rule, "when in doubt, operate;" since I know that with ordinary skill a simple exploratory operation is not attended with serious risk, even if it be found that further treatment cannot be followed out, and I have more than once completed successfully the removal of a tumour which I commenced as an exploratory operation.

In giving the statistics of my ovariotomies (60 cases with 2 deaths and with 55 consecutive recoveries) I have separated the large tumours from the so-called diseased appendages; not because operation in the latter class of cases is simpler, for as a rule it is attended with very much greater difficulty; but because of the views held by different surgeons on the oft-discussed question of the advisability of operating on them. I do not understand how anyone can doubt the wisdom and justifiability of performing a radical operation in these cases of pyosalpinx, hydrosalpinx, and adherent and diseased ovaries, and thus restoring the patient from a state of invalidism and constant danger to one of health; and fortunately it can be done with slight risk; for instance, in the twenty-nine cases here reported, all the patients recovered.

The ovarian tumours were many of them very formidable cases with multiple adhesions, and some of the tumours were of enormous size, for instance in one case, No. 7, 84 pints of fluid were contained in the cyst. The ages of the patients varied from 15 to 68 years. The two deaths were probably unavoidable, one from intestinal obstruction a week after the operation, the other from exhaustion after the removal of a huge suppurating multilocular tumour adherent to all the surrounding viscera. If, however, another case of intestinal obstruction after ovariotomy comes under my notice, I shall not hesitate to reopen the abdomen and try to remove the cause.

The deaths in the list of operations for myoma ought not to, and I believe would not, happen again in my practice; one occurred from hæmorrhage due to the imperfection of a Koeberlé's *serre-nœud* which the nurse screwed to its utmost in my absence without arresting the bleeding; one from peritonitis after the removal of the appendages, owing to the insanitary condition of the room in which the patient was placed; and another from distension, which I should now quickly remedy by the administration of an aperient, as advised by Mr. Lawson Tait. This I regularly adopt in case of vomiting and distension, by giving a seidlitz powder every few hours, until purging occurs or flatus passes freely. The use of a sedative is very rarely required and is avoided if possible.

In the hepatotomies the wall of the empty sac was stitched to the skin and the cavity drained. In one of these cases a large washhand basin full of hydatids was removed.

The death from acute mania in the third week after nephrectomy was due to the news of the desertion of the patient by her husband being inadvertently communicated to her a few days after the operation. My other nephrectomies have been lumbar, and would therefore not come under abdominal section proper.

The successful gastrostomy was performed by a method described by Mr. Greig Smith in his work on abdominal surgery. It answered most satisfactorily and is not difficult to perform. The patient is now living, and has gained over a stone in weight, not a particle of food having been taken through the mouth since two days before the operation. Deaths after gastrostomy are due rather to the delay in treatment than to the operation itself; for instance, in my fatal case there was absolutely no attempt at union between the two peritoneal surfaces.

A paper on a series of cases of cholecystotomy has been accepted by the London Clinical Society; it is therefore unnecessary to enter into particulars, but it may be well to mention that the single fatal case was one of cancer of the head of the pancreas with persistent jaundice. This had nothing to do with gallstones, but has to be given in the series, as cholecystotomy was performed. In future I should question the advisability of operating in the presence of persistent and long-continued jaundice, which is strongly presumptive of malignant disease.

The case of cholecystenterostomy will be reported in a separate paper. It was performed for a biliary fistula, through which the whole of the bile passed for fifteen months, the patient being now in perfect health.

The four fatal cases of enterotomy for intestinal obstruction were due to shock after prolonged operations. As the result of experience I now, in cases of acute intestinal obstruction, when operation has been decided on, make a small opening for exploration, and, if I cannot quickly find a removable cause, at once bring a loop of distended bowel to the surface and attach it to the skin, opening it either immediately or after hours or days, according to the circumstances. In this way I feel sure we may prevent such a heavy mortality, it being the long operation which kills by shock. Possibly in Senn's operation of "anastomosis by apposition with decalcified bone plates" we have a method of materially shortening the process, and, at the same time, avoiding a fæcal fistula.

The case of enterectomy for gangrenous intussusception, in which four feet of bowel were removed, occupied too much time, and would have been materially shortened, if, instead of employing the Czerny-Lembert sutures, Senn's modification of Jobert's method of enterorrhaphy had been employed.

The tubercular peritonitis cases all recovered from the operation, and were relieved either temporarily or permanently. From what I have seen of laparotomy in such cases, it would seem that cure is most likely to ensue when there is effusion into the peritoneal cavity, and where there is not much matting of the viscera.

Perforative peritonitis, with or without operation, is about equally fatal, and, although the three cases in which I have operated have died, I do not despair of surgery getting infinitely better results than can be obtained by the *laissez-faire* policy; but to succeed, it is necessary to operate early, or as soon as the initial shock has been overcome, and to spend as short a time as possible over the operation. If the perforation can be easily found it should be sutured, but if not lavation and drainage of the peritoneum is the next best procedure. In pelvic abscess, opening and draining through the peritoneum has given good results; but as the British Gynæcological Society has accepted a paper on the subject, it is unnecessary to enter into further details.

In all the hernia operations a radical cure was performed by closing the peritoneum and bringing together the fibrous edges of the hernial aperture. Out of fifty-nine operations, fifty-two recovered, and out of twenty-nine radical cures, one patient was lost, and he died from pulmonary congestion, apparently due to the use of ether as the anæsthetic, the parts concerned in the operation being in perfect condition. I do not think it is too much to say, that death ought never to occur from strangulated hernia if the case be operated on sufficiently early; but even yet it is not uncommon to hear of opiates being given for several days, and taxis being repeated over and over again before relief by operation is sought. It seems to me that in strangulated hernia, opiates should not be given, as they only mask the symptoms, and if moderate taxis under an anæsthetic does not effect reduction, the aid of surgery should be sought at once, within a few hours of the occurrence of the strangulation.

In advising a radical cure of hernia, my rule is, that whenever a hernia in a person of fair health cannot be comfortably kept up by a truss, it should be operated on, and, except in the case of huge herniæ adherent to the sac, the operation is not attended with material risk.

As I am a firm believer in antiseptic surgery, I need scarcely say that all operations are performed with antiseptic precautions, although the spray is not always used, and when employed it is only in the form of a cloud over the field of operation, never as a spray directed into the abdomen.

In washing out the abdomen either hot boracic lotion or water recently boiled, is employed.

Drainage is only employed if the peritoneum have been much soiled, or if there be any fear of oozing from torn adhesions.

For the arrest of hæmorrhage I rely chiefly on sponge pressure within the peritoneal cavity, and on pressure-forceps in the parietes, except in the case of fair-sized vessels, when catgut ligatures are employed.

For healthy adults ether is the usual anæsthetic, but for children and old persons, and for those suffering from any tendency to pulmonary trouble, I prefer the A C.E mixture.

Dry dressings of salufer wool are usually applied, a single layer of gauze moistened with a solution of perchloride of mercury "1 in 2000" being placed immediately over the wound.

The appended table shows at a glance the series of cases to which reference has been made:—

	Recovered.	Died.	Recovered.	Died.	Total.
Ovariotomy for large tumour. One ovary removed, 27; both ovaries removed, 5:					
Cystic	24	2			
Solid	4	0			
Dermoid	2	0			
	30	2			
Ovariotomy for diseased appendages. One ovary removed, 4; both ovaries removed, 25:			59	2	61
Chronic ovaritis with cystic disease and salpingitis	16	0			
Hydrosalpinx	7	0	55 consecutive recoveries.		
Pyosalpinx	6	0			
	29	0			
Myoma of uterus			14	2	16
Hysterectomy, suprapubic			1	1	2
Hepatotomy for hydatids			2	0	2
Nephrectomy, abdominal			0	1	1
Gastrostomy			1	1	2
Cholecystotomy			13	1	14
Cholecystenterostomy			1	0	1
Enterotomy, for intestinal obstruction			10	4	14
Enterectomy			0	1	1
Opening and draining for:					
Tubercular peritonitis			5	0	5
Perforating peritonitis			0	3	3
Traumatic	0	1			
Gastric Ulcer	0	1			
Intestinal ulcer	0	1			
Pelvic abscess			6	0	6
Herniotomy for strangulated hernia			24	6	30
Umbilical	0	2			
Ventral	1	0			
Inguinal	8	4			
Femoral	15	0			
Radical cure of hernia			28	1	29
Umbilical	4	0			
Ventral	2	0			
Inguinal	16	1			
Femoral	6	0			
Exploratory operations			5	3	8
Malignant disease	4	3			
Tubercle	1	0			

BELFAST ROYAL HOSPITAL.—The report presented to the annual meeting of this institution showed that 2,361 intern and 26,580 extern patients had been treated during the year. The mortality rate was 5 per cent. in the medical wards, 2.7 per cent. in the surgical wards, and 4.2 per cent. after operation. Clinical instruction had been given to 212 students during the year. Dr. J. W. T. Smith had resigned his post of staff-physician, and had been succeeded by Dr. J. A. Lindsay. Dr. Strafford Smith had been elected assistant-physician.

SURGICAL MEMORANDA.

TREATMENT OF GONORRHŒA BY MEANS OF SEA WATER INJECTIONS.

DURING the past two months I have treated thirty-two cases of gonorrhœa in this hospital by means of sea water injections, the result being an average duration of disease under treatment of 8.87 days. Each case was kept under observation for about a week after the disease had quite disappeared, in order to ascertain if any return of the discharge occurred. Relapse occurred in one case only.

Complications.—One mild attack of cystitis occurred in a patient who had had a history of cystitis previous to his present attack of gonorrhœa.

Treatment.—Sea water injections undiluted seven or eight times during the twenty-four hours, each injection being retained for a few minutes. Latterly warm sea-water injections have been used.

General Treatment.—Rest, dieting, saline aperients, avoidance of stimulants.

The results have been so satisfactory, as compared with those obtained by other methods of treatment, as to lead me to publish them, with a view to eliciting more extended trial. Should further experience confirm the above results, this would prove a method of treatment peculiarly suited to the naval and military services.

Advantages.—Sea water combines an alkaline and antiseptic, with a tonic action on the mucous membrane. It is cheap and universal, for where sea water is not available "Tidman's sea salt" would probably give nearly as good results. It also suggests itself for the treatment of other mucous membranes such as that of the vagina in vaginal leucorrhœa, etc.

The addition of an astringent would probably give even better results, but nothing was used in the above cases other than sea water.

R. F. O'BRIEN, Surgeon Medical Staff

Station Hospital, Western Heights, Dover.

FRACTURE OF THE CORACOID PROCESS.

A VERY spare man, aged 74, was descending two or three steps with his hands full at the time; he tripped and pitched heavily forwards, his right shoulder impinging with the whole weight of his body against the corner of a doorpost.

I found him with his arm hanging down by his side, and supporting the forearm with the other hand. There was displacement of the coracoid process and marked crepitus, which from his thinness there was no difficulty in eliciting. He was unable to move his arm in the positions influenced by the actions of the short head of the biceps and coraco-brachialis muscles. There was little subsequent effusion. He complained much of the discomfort of the position his arm was kept in, and was not very obedient in carrying out the idea of absolute rest, but it went on well, and he has been able to resume his occupation of writing for many hours of the day, and is regaining in other movements power in the muscles of the shoulder. I believe bony union is taking place. The fall was on September 25th.

On looking over the literature as far as at my command, I find Bryant, in his *Practice of Surgery*, mentions it is a "rare occurrence," and had only met with one case. Christopher Heath, in his *Dictionary of Surgery*, says it is "extremely rare," and caused only by great direct violence. In Neale's *Digest* there is no mention of the accident. The full description and recorded cases in *Hamilton on Fractures* show the interest attached to this accident; and the attenuated state of the patient, in whom all the landmarks were pronounced, afforded an especially good opportunity for diagnosis, and makes the case worthy of record in the JOURNAL.

D. HOADLEY GABB, M.R.C.S., L.S.A.

Hastings.

REMOVING A FOREIGN BODY FROM THE ŒSOPHAGUS WITH A SOFT INDIA-RUBBER TUBE.

ON November 9th I was called to see a child who, I was informed, had swallowed a halfpenny piece. On arriving at the house, I found the child asleep, and suffering from no inconvenience by the presence of the foreign body. Water, when given, was swallowed, but immediately regurgitated, showing the lower part of the œsophagus to be obstructed. I passed a soft india-rubber stomach tube, hoping to push the coin into the stomach. The tube passed easily, but when attempting to withdraw it, it was caught and held rather tightly. I now had the child held leaning well forwards, and rapidly withdrew the tube, which brought the halfpenny up along with it. I explain the fact as follows:—The tube passing down rotated the coin from the horizontal to the vertical position, and on withdrawing it the coin again rotated to the horizontal position, and the edge passed into the soft tube and was held, and the coin withdrawn, aided, no doubt, by the efforts of the child to vomit, and by the upward pressure of some mucus which was expelled from the stomach. The child suffered from the effects in no way afterwards, and but little at the time of the operation.

ALAN BELL, B.A., M.B., B.C.

Bishop Stortford, Herts.

CLINICAL MEMORANDA.

ULCERATIVE COLITIS FOLLOWING MEASLES.

THE following case is of interest in being a well marked example of one of the rarer sequelæ of measles.

J. K., aged 5, a previously healthy child, suffered from measles from February 19th to February 28th, and, except that he had colic and diarrhœa for three days, the case was a favourable one, and recovery apparently complete.

On April 9th, he came back from school complaining of headache, and with a temperature of 103°. Two hours later, diarrhœa with tenesmus set in, with passage of fœtid, blood-stained, flocculent mucus, bile-stained at times. The abdomen became tender, and the recurring attacks of colic severe. In spite of treatment, these symptoms continued till his death on April 28th; on the morning of that day the abdomen was found to be tympanitic and more tender, and in the afternoon he died suddenly.

At the *post-mortem* examination, the colon was distended with gas, and in the splenic flexure adherent to surrounding parts from recent peritonitis. On gentle separation, a perforation was found, but the adhesions had prevented extravasation of fæces. On laying open the colon, the mucous membrane of the cæcum was swollen and congested, while from the hepatic flexure onward it had in a great measure disappeared, leaving the smooth fibres of the muscular coat exposed; in some places the gut was almost entirely denuded of mucous membrane, this being represented by a small reddish-white islet here and there. The mesenteric glands were swollen, but no evidence of tubercle could be found. The liver was normal. No defect was found in the drainage or water supply.

S. WORTHINGTON, M.D.

Woolwich.

THE SURGICAL TREATMENT OF GENERAL PARALYSIS.

I AM much interested to learn from Dr. Claye Shaw's communication to the JOURNAL of November 16th, that benefit resulted from the operation I performed, at his suggestion, on a case of general paralysis of the insane. It is with some diffidence that I venture to express any opinion on the pathology of the disease. It appears to be certain, however, that at *post-mortem* examinations two obviously morbid changes are observed: 1. That the brain substance is diminished. 2. That the amount of fluid is increased.

So far as I have been able to ascertain there is no absolute evidence to show which of these conditions is the prior one, that is to say, whether the brain atrophies from the pressure of the fluid, or whether the fluid collects on account of shrinking of the brain.

The operation I performed was on the former hypothesis, and from the extreme manner in which the dura mater bulged into my wound from the tension of the fluid beneath, it was probably the correct one, for if this fluid was merely a passive collection to fill in a vacuum caused by a shrinking brain, how could this undue pressure be accounted for?

The principle by which benefit was hoped to be obtained was based upon what is observed in the operation of iridectomy in glaucoma. Here, by making a communication between the two chambers the tension in the posterior is relieved by the absorbents of the anterior being able effectually to remove the excess of fluid.

In our operation we conceived that by removing a portion of bone with the corresponding meninges of the brain, not only would the existing fluid be let out by opening the waterproof brain coverings, but that a permanent contact would be established between the secreted fluid and the under-surface of the

scalp flap to the absorbents of which we trusted for its future removal; a hope which appears to have been justified by the result.

I used a one-inch trephine, making the openings two inches apart, but of course there would be no surgical difficulty in making the opening much larger if desirable.

HARRISON CRIPPS, F.R.C.S.,
Assistant Surgeon to St. Bartholomew's Hospital.

THE LONG RECTAL TUBE.

SOME short time ago I was using the long tube in a case of intestinal obstruction, and on endeavouring to complete the connection between it and the brass syringe I found the latter would not work. I fortunately happened to have an ordinary Higginson's enema tube in my bag, and I found to my great gratification that its nozzle fitted well into the brass end of the long tube, and I was enabled to send up the injection with far greater facility than I ever could do with the brass syringe. I have no doubt that this plan has been tried before, but I have never seen it mentioned, and so think it right to put it on record.

It is very much easier to use the long tube in the manner I have named than in the orthodox fashion, as one person can do all, and it is not necessary to have the basin or bowl containing the enema so near the bed as it is when the brass syringe is used. I may state that since first using it I have had several opportunities of again putting it to the test, and I am so pleased with the plan that I intend in the future entirely discarding the brass syringe with all its bulky connections and complicated machinery.

Ederney, co. Fermanagh. GEO. R. LEEPER, M.D.

THERAPEUTIC MEMORANDA.

A CASE OF DIABETES BENEFITED BY PHOSPHORUS.

As new therapeutical results are probably more often the result of chance than of design on the part of the investigator, I may perhaps be held excused in communicating to you what, so far as I know, is a new and somewhat important therapeutical fact; but which, whatever it may be worth, is as certainly not the result of any premeditated design on my part.

A gentleman, aged 60, was brought to me on October 9th by Dr. Williams Jones, of Manchester, who wished my advice as to his patient, who for a long time had been affected somewhat severely with eczema of his face, neck, and upper limbs, including his hands. Dr. Jones had previously consulted two or three other practitioners as to his patient's condition, and informed me that his patient, who had become much worn out from want of sleep, was now willing to do whatever might be required of him. Dr. Jones also informed me that his patient had for long been affected with diabetes, for which he had treated him.

I suggested to Dr. Jones that, in addition to the local remedies which we agreed on, the patient should take phosphorus "perles" for the improvement of the eczema. To this Dr. Jones saw no objection. I accordingly proposed to him that the patient should take one "perle" three times a day for three days; and that, should no nausea result from their use by the end of that time, the dose should then be increased to two "perles" three times a day. Owing to some difficulty in obtaining the "perles," the patient did not commence taking them until Nov. 1st, and, after the expiration of three days, Dr. Jones put his patient on the double dose.

To-day (Nov. 11th) the patient visited me at Dr. Jones's request, and certainly as to his eczema he is nearly quite well, and he tells me that he now enjoys sound sleep at night. Thus much I was quite prepared to hear. But I was a little astonished when he informed me that these were by no means the only benefits that he had derived. He was also greatly better of his diabetes, very suddenly and very markedly so. He says that for the last four or five days he has been far better in this latter respect than he has been for many months. He had been used to being obliged to get out of bed four or five times in the night to pass water; but, for the last four or five days, he had not had any call of the kind at night. The quantity that he passed in the twenty-four hours had for long been a very considerable quantity, but it had suddenly diminished in amount very notably. The urine has until quite recently been very pale in colour, but now it presents a fairly natural degree of colour. He suffered from constant thirst, which he was compelled to assuage frequently. He is now no longer troubled with thirst. He travelled this time from Manchester to London without wanting anything to drink on the journey, and required to get out at Bedford only, to pass water. He assured me that his first journey to me was by no means so free of incidents either as to incomings or outgoings of liquid. He stated that he felt now very much better in health altogether. I requested him to pass water just before he left, but he felt so little inclination that he doubted whether he could. However, he passed about six fluid ounces.

Although I had no reason to doubt Dr. Jones's diagnosis, I thought I would, before writing this note, obtain independent confirmation of the fact that the patient's complaint was beyond doubt diabetes. I accordingly asked my neighbour, Dr. Goodhart, to examine the urine for me. Dr. Goodhart, after remarking that the colour of the urine was somewhat exceptionally good for a diabetic, found that its specific gravity was 1032, and that it contained plenty of sugar and no albumen. He has kindly permitted me to use his name for the purposes of this note so far as concerns these facts respecting the quality of the specimen of urine that I submitted to him.

The quantity of phosphorus that the patient took may be estimated from the basis that each of the "perles" contained one-thirtieth of a grain of phosphorus dissolved in oil. So that, for the first three days of his phosphorus treatment, he took a tenth of a grain a day, and for the remaining seven days he took a fifth of a grain daily. From such experience as I have in the administration of phosphorus internally, I should be disposed to say that he was fairly under the influence of phosphorus; moreover, he has just begun to experience a slight but decided degree of nausea from its use.

In what manner the phosphorus has acted in controlling the diabetes, as it seems to me it unquestionably has acted, I am not prepared to offer any kind of opinion. That the administration of phosphorus acts most decidedly on the liver is well known, because, in undue and over-prolonged doses, phosphorus is capable of producing fatty degeneration of the liver. This circumstance would seem to afford the clue to its marked action in this case in controlling diabetes; but I am not prepared to assert that this is the correct explanation. It is possible that the effect of the phosphorus may be due to its action on the nervous system.

In any case, the circumstance seems to me well worthy of record in the columns of the JOURNAL, because I venture to think that, when the question comes to be sifted by observers more competent than myself, it will be found that phosphorus exerts a very potent action in the control of diabetes.

Weymouth Street, W. BALMANNO SQUIRE, M.B.Lond.

IODIDE OF ETHYL.

I HAVE found iodide of ethyl in 10-minim doses, sprinkled on a handkerchief and then inhaled, extremely beneficial in cases of bronchitis and bronchial catarrh, complicated with Bright's disease and fatty heart with feeble circulation, and especially when the bronchial secretion is viscid and there are urgent symptoms of dyspnœa. About five minutes after the inhalation the patient coughs and expectorates freely, which relieves the distressing dyspnœa. I administered it in a case presenting very severe symptoms of dyspnœa, amounting to complete orthopnœa, in a patient over 60 years of age. The ordinary expectorants—carbonate of ammonia, senega, ipecacuanha, lobelia, squills—combined in full doses, were given with very little effect so far as the acute symptoms were concerned. After two hourly inhalations of the iodide my patient was able to lie in bed and have a five hours' sleep, and I must say after each inhalation there was free expectoration. I trust that readers may be induced from the above notes to prescribe the iodide when they have similar cases to deal with.

ROBERT MAIN, M.D.
Newbury.

RUSSIAN MEDICAL STUDENTS.—In the University of Dorpat the total number of students this semester is 1741. Of these, 799 are students of medicine and 118 of pharmacy. The number of new entries in the medical faculty this year was 41, besides 27 belonging to the pharmaceutical department. At Charkow, the other faculties are almost deserted this year, nearly all the freshmen being medical. At Moscow also, the medical element largely predominates in the new entries. At Kasan, of a total of 140 new entries, 64 are in the faculty of medicine. If that number does not appear very large, it compares favourably with the other faculties, notably with the "historico-philological" one, which can only muster a grand total of 3 students.

REPORTS

ON

MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

ST. MARY'S HOSPITAL, LONDON.

A CASE OF SYPHILITIC FEVER RESEMBLING TERTIAN AGUE.[1]

(By SIDNEY PHILLIPS, M.D.Lond., M.R.C.P., Assistant Physician to the Hospital.)

A. B., aged 27, married in 1879. Six months later her hair fell off, and she suffered from soreness of throat and tongue. In December, 1879, eight months after marriage, a seven months' child was born, living only three days; there followed two miscarriages in the year 1881. In 1883, 1884, 1886, and 1887 healthy living children were born. In May, 1888, another miscarriage occurred. The result of her pregnancies, therefore, was a child born prematurely, two successive miscarriages, four living healthy children, and then another miscarriage. I ascertained, at a later date, that the husband had suffered from a chancre and eruption some months before marriage, but there was no evidence of the wife ever having had a primary sore.

In May, 1888, there commenced attacks of fever, with shivering and sweating. The attacks at first occurred every day, but, after the beginning of August, on alternate days only; on the intervening days she was perfectly well. During her illness spots of erythema nodosum came out occasionally, and she sometimes had headaches and feelings of faintness.

She was treated at home by Mr. J. L. Atkinson, who tells me the case appeared to be one of well-marked ague, and that she took quinine and afterwards salicylate of sodium, but with little effect. After attending as an out-patient for six weeks, she was admitted as an in-patient to St. Mary's Hospital on November 26th, 1888.

On admission, she was somewhat weak and anæmic; nothing abnormal referable to abdominal or respiratory organs; urine free from albumen. She was very intelligent, and there were no signs of organic disease of the nervous system. Pulse 90 per minute; slight systolic *bruit* over apex of heart, which was in normal position. One or two spots of erythema nodosum on the forearms. On alternate days, at about noon, the temperature began to ascend rapidly, reaching a maximum of 104.2° to 101.6°. Each attack was accompanied by a violent shiver, sometimes by a rigor, during which the patient became pinched and blue. A hot stage followed, succeeded by profuse sweating. After reaching its maximum the temperature rapidly fell to, or below, normal, remaining there on the days between the attacks.

Ten days after admission, on December 7th, she was ordered 2-grain doses of sulphate of quinine thrice daily, with an additional 5 grains on the forenoon of the days on which the pyrexial attacks were expected. The effect of the quinine was at first to reduce the rise in temperature to some extent, the maximum being 99° on December 7th, 100.4° on December 9th, 99.6° on December 11th and 13th.

On December 14th, a day which was expected to be non-pyrexial, the temperature rose to 100.4°, but the tertian type of fever was again immediately reverted to, the next rise being on December 16th to 101°. The quinine was then increased to 10 grains on alternate days, the 2-grain doses being still continued thrice daily; this increase did not check the rise in temperature. On the contrary, it reached 101.6° on December 18th, 101.4° on December 20th, and 101° on December 22nd. The rigors and sweats, too, continued, and there was some tenderness over the spleen.

On December 23rd, she was ordered iodide of potassium in 10-grain doses thrice daily. On December 24th, the usual rise occurred, reaching 101.4°; but on December 26th the rise was only to 100°, and it occurred much later in the day than usual. At this period headache and vomiting came on; the headache was severe, felt "all through the head," and there was no local heat or tenderness. The vomiting was severe; the pupils did not alter in size or reaction, and the optic discs were normal in appearance.

On December 28th, the iodide was discontinued, as it was thought possible it had aggravated the symptoms, but the patient did not improve. The headache and vomiting persisted; there were dark areolæ under the eyes, and the patient appeared very ill. The temperature during this period was irregular, owing to administration of antipyrin.

On January 1st she commenced to take one grain of grey powder, with three grains of Dover's powder, three times a day. On January 3rd iodide of potassium in 10-grain doses, thrice daily, was substituted, to which half-drachm doses of liquor hydrargyri bichloridi were added on January 6th. The headache now rapidly diminished, and it and the vomiting soon ceased; after some oscillations on January 6th, 7th, and 8th the temperature fell gradually, reaching the normal on January 10th. The patient became entirely free from rigors or sweats, and rapidly regained strength. She was discharged from the wards on February 4th, and, when I saw her last, six months later, had remained perfectly well, and the cardiac murmur, which was probably hæmic, had passed away.

REMARKS.—This patient for a period of eight months suffered from paroxysms of pyrexia on alternate days, resembling those of malarial fever. Beyond these febrile attacks, the only signs of illness were spots of erythema nodosum, occasional headache, and a faint systolic cardiac murmur. Malarial poisoning, which was suggested by the course of the fever, was excluded by the fact that the patient had never lived out of the west or north-west districts of London, by the long continuance of the pyrexia, and by its resistance to treatment by quinine.

In this abstract, space will not allow of the discussion of the grounds on which the various other causes of intermittent fever may be excluded from the etiology of this case. But from the undoubted evidence that the patient had become infected by syphilis, and from her rapid and complete recovery after many months of illness when subjected to treatment by mercury and iodide, there can be no doubt that the case was one of syphilitic fever. Fever in the course of syphilis is very common, but there are certain points in this case of special interest.

First: Was the pyrexia associated with any local syphilitic lesion? Possibly some intracranial lesion existed, but there was nothing to indicate this except some headache and vomiting, and these symptoms only occurred during a short period, while the fever went on for many months; the headache, too, was widely distributed, without local tenderness or heat, and there was no optic neuritis, no alteration at any time of motor power or sensation, and never any intellectual disturbance. It may have been that the other local symptom—the erythema nodosum—was connected with the pyrexia, but erythema nodosum, apart from syphilis, is not, as far as I am aware, accompanied by intermittent attacks of fever. This case, then, would appear to be an example of syphilitic fever apart from any local lesion; such cases were described by John Hunter, in which the fever, continued or intermittent, arises from constitutional syphilis apart from any local affection, and which are proved to be syphilitic from the patient having suffered from a chancre, and from the fever yielding only to antisyphilitic treatment. Fournier, too,[2] brings forward conclusive evidence that this is so, and, indeed, as he points out, local syphilitic lesions, when they do occur, do not give rise to fever. He writes that in syphilis "les accidents fébriles ne sont pas toujours—tant s'en faut—symptomatiques de troubles fonctionels ou de lésions qui les provoquent et les expliquent; que le plus souvent au contraire la véritable fièvre syphilitique a son existence propre dérivée immédiatement de la diathèse, se produit sans intermédiare, et constitue ainsi une sorte de fièvre essentielle syphilitique."

Secondly: The period of the disease at which the fever occurred. Fever in syphilis commonly appears with the earliest constitutional symptoms, but it is known to occur sometimes at later periods of the disease, though with continually diminishing frequency as the date of infection becomes more distant. Thus Fournier writes: "Commune, chez la femme du moins, dans les premiers mois, ou la première année de l'infection, la fièvre syphilitique devient déjà de moins en moins fréquente dans la seconde année, à mesure qu'on s'éloigne du début de la maladie; elle est rare dans la troisième; au delà on ne l'observe plus que d'une façon presque exceptionelle." Mauriac[3] records a case in which intermittent fever occurred in a syphilitic patient $2\frac{1}{2}$ years after the primary chancre. In the present case it is not possible to fix the exact date when the patient became infected by syphilis, but the history of the hair falling out, the severe sore throat and

[1] Read at the Medical Society of London.

[2] *Leçons sur la Syphilis*, p. 847.

[3] *Lyon Médical*.

tongue, and the termination of her first three pregnancies leave little doubt that she became infected in 1879, and was therefore in the ninth year of her syphilis—a later period in the disease than in any case of which I have been able to find a record of syphilitic fever; and it is interesting to note that the patient showed other signs of a recrudescence of her syphilis about the same time as her fever, in the occurrence of a miscarriage after the birth of four successive healthy children.

Thirdly: The course of the fever resembling that of tertian ague. The fever of syphilis is usually of continued type with no marked rises or falls: in some cases, however, it may become intermittent. Fournier points out that this is commonest in females, that the rises of temperature usually occur every twenty-four hours, always late in the afternoon or evening, and that the attacks of fever may be accompanied by stages of cold heat and sweating like those of ague, though the "three stages of the drama," as he terms them, are usually ill defined, the hot stage being the most prominent. The tertian type of fever which my case assumed is much less common. Fournier and Courteaux both write that they had never seen the fever take this course, though they and other authors agree that it may do so, and Mauriac[4] gives the history of a male patient under his care who exhibited this tertian type of fever with the stages of an ague attack, two years after he had contracted a chancre, and whose fever yielded only to mercurial treatment. In my own case, the tertian type of fever was well marked, and continued for some months; the three stages of cold, heat, and sweating were each well developed, and the resemblance to tertian ague was very striking, being the more marked from the tenderness and slight enlargement of the spleen. This enlargement, though rare in syphilitic fever, has been met with by Schuster and also by Baümber.

In conclusion, the case I report affords an example of the so-called essential syphilitic fever, apart from any local manifestation, and the points of special interest in the case are the long duration of the fever, extending over many months, the late period in the disease at which it occurred, and the peculiar tertian type which the pyrexia assumed. Possibly the record of this case may be of service in the diagnosis and treatment of other cases of intractable fever.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, NOVEMBER 26TH, 1889.

Sir E. H. SIEVEKING, M.D., President, in the Chair.

A Case of Cholecystenterostomy.—Mr. A. W. MAYO ROBSON read this paper. The patient, a married woman, had had abdominal section performed in April, 1887, for pelvic distress, on account of which she had been a confirmed invalid for several years. After the operation, in which a right pyosalpinx was removed, she had been able to resume her work, and had enjoyed excellent health. On January 9th, 1888, she was readmitted to the infirmary suffering from acute peritonitis, with a tumour in the region of the gall bladder. On January 14th laparotomy was performed through the upper part of the right linea semilunaris, and eight ounces of fœtid pus removed from the gall bladder. Exploration of the ducts by finger and probe failed to discover any gall stones. The gall bladder was stitched to the abdominal wound and drained, and the patient made a good recovery, with the exception of having a biliary fistula. Although she retained good health during the fifteen months when the fistula was open and discharging the whole of the bile, her condition was a very miserable one, since no apparatus could be satisfactorily made to catch the overflowing fluid when she was walking about, and her dressings and clothes soon became saturated. On March 2nd, 1889, cholecystenterostomy was performed by reopening the abdomen through the old cicatrix in the right linea semilunaris. The viscera in the neighbourhood were found to be so matted together that it seemed to be impossible to fix the gall bladder to the duodenum, and as the hepatic flexure of the colon was conveniently near, the gall bladder was fixed to it by a double row of chromicised catgut sutures, a free communication being made between the two viscera, and the outer opening (the old fistula) of the gall bladder was stitched up. In order to guard against accident a glass drainage tube was placed in the right kidney pouch, and brought out at the lower end of the wound. The outer surface of the gall bladder evidently gave way to some extent, for bile appeared through the drainage tube within a few days of the operation, followed shortly by a fæcal discharge. The wound granulated, and, after a few weeks, completely healed, the motions towards the end becoming more and more bile-stained, until they became quite normal. The author believed the operation was first proposed by Nussbaum, who suggested its use in cases of irremediable obstruction in the common duct. He believed that the operation had only been done once successfully before the present case, and that by Kappeler in a woman, aged 51. He thought that it had never been previously performed for the cure of a biliary fistula. Since writing his paper the author had had a communication from M. Terrier, of Paris, saying that he had performed the operation successfully in a case of irremediable obstruction of the duct, and another case had also been reported from America.—Dr. GEORGE HARLEY rose, not to make any remarks on the surgical aspect of the case, but on the medical side of the question. There had been vast improvements in the surgery of the biliary organs during the last ten years. The paper suggested that the loss of bile was of small moment; it would have been better to have attached the gall-bladder to the small intestine, though in this case that was perhaps impracticable. The fact of the fæces having assumed the natural colour was no proof that the bile had performed its normal functions. The fact that the woman did not lose flesh did not show that the bile was acting properly, for in dogs in which a biliary fistula had been found there was no wasting, provided a superabundance of food was given. The animals, however, lost flesh if only the usual amount of food was supplied. There was doubt in his mind as to Nussbaum having been the first to advocate this operation, for it was done by Winiwarter in Germany in 1882, and in 1884 Professor Gaston, in Georgia, investigated the matter by a series of experiments on dogs. Similar researches were made in 1886 by Goltz, and a summary of the subject was published in the JOURNAL in 1887.—Mr. KNOWSLEY THORNTON congratulated the author of the paper on his case, though he was himself much opposed to the operation. Gaston had advocated it on a very extensive scale as likely to replace cholecystotomy and cholecystectomy. Only seven months had elapsed since the operation, and it was quite possible that the opening might contract and eventually close. In this case, would it not have been possible to dilate or open up the cystic duct? Three points in particular had been raised by the paper; first, as to the necessity of removing both appendages when one was diseased. He was of opinion that it was better to remove only the diseased organ, as the patient made a more rapid recovery than if both ovaries were swept away. Secondly, that his experience showed that it was safer not to operate during acute peritonitis; and, if it was possible to wait till the case had become subacute or chronic, it was wiser to do so. Mr. Keith agreed with him on this point. Thirdly, that in considering the question of cholecystotomy *versus* cholecystectomy, the recovery in the latter operation was so much more perfect, that he was inclined to think it the better operation.—Dr. FLETCHER LITTLE advocated massage in the treatment of enlarged gall bladders.—Mr. BARKER drew attention to the mode of controlling hæmorrhage by encircling the loop of bowel with an elastic ligature; formerly it was customary to control the bleeding by encircling the gut in two places by ligatures which had just pierced the mesentery. This plan left some of the circulation unimpaired through the isolated loop. Was there any bleeding in Mr. Robson's case when the ligature was taken off?—Mr. GODLEE suggested that it might have been safer not to have closed the opening in the gall bladder till it was certain that the communication between the gall bladder and bowel was patent. In a case under his care, while bile was escaping there was great emaciation and formation of bed sores; these rapidly healed, and the woman gained flesh as soon as the external flow of bile ceased.—Mr. ROBSON, in reply, stated that he tried to dilate the cystic duct, and passed a solid bougie down it till it met with an obstruction; he used as much force as he felt justified in doing, but found the stricture was impassable. If he had succeeded in dilating the stricture, it would probably have been of only temporary use, as contraction would afterwards have occurred. This operation was suggested by Kappeler for gall stones impacted in the common duct. This was an error, for in those cases the stone ought to be either (1) dislodged, (2) crushed *in situ*, or (3) removed by incision, as had been successfully done by Knowsley Thornton. In inflammatory condition of a uterine

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appendage, it was often safer to remove both appendages at once, as the disease often attacked the one left behind, so as to necessitate a second operation at some later date. He was not opposed to operating in certain cases in acute peritonitis, for how seldom was peritonitis a primary disease? It was generally dependent on some cause which might be removed by an operation. He strongly disapproved of massage in these cases, as advocated by Dr. Fletcher Little, and thought such a proceeding extremely dangerous when applied to a distended gall bladder. Careful records had been kept for five months of the bile secreted, and fully a pint and a half had escaped daily. He was inclined to think that bile was chiefly an excretion, and that much of the functions of the bile might be taken up by the pancreatic secretions.

CLINICAL SOCIETY OF LONDON.

FRIDAY, NOVEMBER 22ND, 1889.

CHRISTOPHER HEATH, F.R.C.S., President, in the Chair.

Pyloric Gastric Ulcer, with an Epigastric Systolic Thrill; Death following Hæmatemesis.—Dr. SIDNEY MARTIN related the history of this case. J. M., aged 42, a tall, well-built man, had suffered for eleven months from gastric symptoms, pain after food, constipation, great wasting, and occasional vomiting. On admission into Victoria Park Hospital he had the same symptoms. There was epigastric pulsation over a large area, with a very fine systolic thrill over an area just below the ensiform cartilage. This thrill was constantly present. There was some fulness in the epigastrium, but no expansile pulsation; the stomach was dilated. After two attacks of hæmatemesis, one of fourteen ounces eleven days before death, and the other of eighteen ounces eight days before death, the patient became collapsed and died. Besides slight chronic aortic and mitral valvular disease, and some fibroid degeneration of the kidney, the *post-mortem* examination revealed a pyloric gastric and duodenal ulcer, causing puckering of the pylorus and obstruction of the outlet. The stomach was full of liquid. The epigastric pulsation and the epigastric systolic thrill Dr. Martin explained by the aorta pulsating against the stomach full of liquid, which found a difficult exit through the pylorus. The thrill was compared as to character to the hydatid thrill or fremitus, the pulsation of the aorta in the case under consideration rendering the thrill systolic.—Dr. HADDEN mentioned the case of a young man, between 20 and 30, on whom he had made a *post-mortem* examination. He found an ulcer of the stomach, and, in consequence of cicatrisation near the pylorus, a good deal of narrowing was present, with dilatation and hypertrophy of the walls. He said he would look up the notes of the case, and see whether any thrill had been noticed. He remarked that gastric ulcer extending into the duodenum was rare.—The PRESIDENT observed that it would be interesting to know the connection between gastric ulcer and pulsation in the epigastrium. He himself had noticed a curious association between gastric troubles and marked pulsation of the abdominal aorta. One such case had been sent to him as one of abdominal aneurysm. He alluded to a series of cases of this kind recorded by Dr. Sidney Phillips, in which the most prominent symptoms were (1) gastric disturbance, (2) contracted pupils, (3) melancholy, (4) dry mouth, and (5) pulsating abdominal aorta. He said that no satisfactory explanation was forthcoming of this curious pulsation.—Dr. SIDNEY PHILLIPS said that the frequent association of abdominal pulsation with derangement of the intestinal tract had been noticed and commented upon as far back as last century by Albers.—Dr. BENHAM asked whether the diagnosis of simple ulcer had been confirmed by microscopical examination?—Dr. FRANCIS TAYLOR mentioned a case of acute gastritis associated with abdominal pulsation recurring at stated intervals.—Dr. MACLAGAN said the symptom was usually met with in neurotic subjects. He added that malignant disease of the stomach often existed without this symptom.—Dr. SIDNEY MARTIN, in reply, said he did not insist particularly on the pulsation, but rather on the thrill, to which he had never met any allusion. He had not made sections of the ulcer, but he did not doubt that it was a case of simple gastric ulcer.

Three Cases of Rheumatic Periostitis—Dr. COUTTS and Dr. A. E. GARROD described three cases in which periosteal nodes were developed in the course of attacks of articular rheumatism. The first case was that of a boy, aged 11, who suffered from arthritis, had a mitral regurgitant murmur, and developed successive crops of subcutaneous nodules. He also developed a diffused swelling upon the subcutaneous surface of the right ulna, oblong in shape, with the long diameter in the long axis of the limb. The skin covering the swelling was natural. The swelling measured about one inch by half an inch. The boy was discharged with the swelling still present, some two months after its first appearance. The second patient was a girl, aged 11, who developed a similar swelling in the same situation, in association with arthritis, chorea, subcutaneous nodules, and a mitral murmur. The third patient was a young man, aged 24, who developed a swelling of the same character in the same situation, in the course of an attack of subacute articular rheumatism with arthritis, a nodule upon the right olecranon process, and a mitral systolic murmur. In each of the two last cases the node upon the subcutaneous surface of the ulna disappeared in about three weeks, leaving only perceptible thickening in the situation in which it had been. In none of the cases was there any history of syphilis, congenital or acquired, nor was there any evidence of that disease. Erythema nodosum could be excluded in all of them, the skin covering the nodes being natural. There was little pain, amounting merely to tenderness at first. The literature of rheumatic periostitis was briefly referred to, and the authors stated that they had been unable to find any records of the development of such nodes in the course of unequivocal attacks of rheumatism, although rheumatism was usually mentioned among the causes of periostitis, which was supposed to depend not infrequently upon the rheumatic diathesis. Attention was called to similar position of the nodes in all three cases, and to the presence in all of subcutaneous nodules and signs of cardiac disease.—Dr. MACLAGAN observed that the changes associated with rheumatism began in the structures over the periosteum, the latter being implicated later on.—Dr. ANGEL MONEY mentioned the case of a woman at University College Hospital who had on her left shin patches of periostitis like those described. It ran the course of a rheumatic manifestation, and disappeared in about a fortnight. There was no traumatism in that case, so far as they knew.—Dr. BARLOW said that formerly he had had grave doubts as to the existence of rheumatic periostitis, but since his attention had been called to a case by Dr. Coutts, he had become less sceptical. He mentioned the case of a young adult, aged 18, with very violent rheumatism, and lots of rheumatic nodules and duplicate swellings on the upper end of the ulna, two inches long, constituting true nodes of the ulna. They lasted about three weeks. Unfortunately he did not get the chance of dissecting them, as they disappeared before the patient died.—Mr. BUTLIN said he had seen many of these cases of periostitis associated with rheumatism, and had no idea of its being such a rare affection. He failed to see any reason for supposing that the inflammation began in the structures over the periosteum, and not in the periosteum itself. As far as he could remember there was no aponeurosis over the periosteum on the shin.—Dr. RANKIN, of Tunbridge Wells, said he had never seen such swellings in the position described by the authors of the paper, but he had on three occasions seen them in the head, namely, small nodes occurring in persons complaining of long-standing and severe headache.—The PRESIDENT observed that periostitis occurring in rheumatic people was not necessarily rheumatic periostitis, unless there was an obvious association.—Dr. COUTTS, in reply, said his attention had been called to the rarity of the affection by Mr. Clement Lucas.—Dr. A. GARROD pointed out that the affection was rare in the sense that it was rare in connection with undoubtedly rheumatic manifestations. He mentioned another case in a girl, aged 4, with swellings apparently periosteal on each ulna, the duration of which was very short. There was no heart trouble. He was hardly prepared to admit the influence of strain, though it was not easy to disprove.

Tumour of Infra-orbital Nerve.—Mr. BLAND SUTTON related the details of a case in which a woman was supposed to be suffering from neuralgia due to bad teeth. Subsequently a slight displacement of the eyeball was detected, and a critical examination of the patient led to the diagnosis of a tumour entangling the infra-orbital nerve; the skin supplied by the palpebral, nasal, and labial branches of this nerve was anæsthetic. She suffered agonising pain. On May 15th the anterior wall of the maxilla was removed, and the antrum found occupied by a lobulated tumour. The whole of the maxilla was then removed, and Meckel's ganglion exposed and destroyed by the cautery. An admirable recovery resulted. On subsequent dissection the tumour was found to be a myxoma springing from the infra-orbital nerve, and invading the orbit and antrum.—The PRESIDENT observed that the case showed the advantage of searching for a local cause in neuralgic pain.—Dr. WILBERFORCE SMITH asked whether the teeth were replaced;

and suggested the removal of teeth should not be proceeded with until a dentist had been consulted.—Mr. BUTLIN suggested that the specimens should be referred to a special committee for examination and report.

Case of Ptomaine Poisoning.—Dr. C. SCOTT WATSON read the case of a patient, a strong, florid man, aged 56, who developed severe symptoms of ptomaine poisoning the day following the ingestion of a meal comprising mackerel and salt beef. He had headache, giddiness, anorexia, and staggering gait, and was markedly somnolent. When seen on the second day after the meal his face was flushed, the pupils notably, but not extremely, dilated and fixed. There was no ptosis or squint. The tongue was dry, pulse 116, temperature 97·6°F. There was no sickness. He was ordered a dose of calomel and a placebo. The following day he became acutely delirious, and the breathing became stertorous. The tongue and mouth were very dry, but there was no rash upon the skin. The bowels were not moved, and no urine was passed. On the fourth day he was given another dose of calomel, and later on two drops of croton oil and a hypodermic injection of pilocarpine, without effect. Some hours later he passed a small quantity of urine, not containing sugar or albumen. Late on the fourth day the bowels were moved, but he was still unconscious. The motion was very offensive, frothy, and of a green colour. He slowly recovered, and was convalescent by the seventh day. On the sixth day an attack of gout declared itself in the left foot, and lasted a month. The symptoms were those of poisoning by atropine.—Dr. SIDNEY MARTIN urged that they were not justified in classing as cases of ptomaine poisoning cases in which no ptomaines had been isolated. There was really no evidence of ptomaine poisoning in the case just narrated. On the contrary, ptomaines, which were definite compounds, always gave rise to symptoms the opposite of atropine, and atropine was their antidote.—Dr. ADDINSELL narrated a similar case of poisoning in a man who had eaten the interior part of a mackerel which was not quite fresh. He had a serious illness lasting several months, and subsequently he had developed symptoms of general paralysis of the insane. The same sequence of symptoms had also presented themselves after partaking of sardines.—Dr. MACLAGAN said he should hesitate to ascribe such symptoms to ptomaine poisoning.

MEDICAL SOCIETY OF LONDON.

MONDAY, NOVEMBER 25TH, 1889.

C. THEODORE WILLIAMS, M.D., F.R.C.P., President, in the Chair.

CLINICAL EVENING.

Case of Myxœdema in a Man.—Dr. SAVILE showed a man, aged 45, whose symptoms commenced eight years before with weakness, puffiness of the skin—first in the forehead and eyes and then in the feet—together with unusual sensitiveness to cold. No family history of importance. He had been a great drinker in years past. When admitted into the infirmary on November 1st, 1888, his condition was very characteristic. The thyroid could not be felt. His temperature was usually subnormal. No impairment of sensation, but the reflexes were dulled, and there was general loss of muscular power. Memory was also impaired, but there were no delusions. Special senses normal except the hearing, which had been impaired since twelve years. No albumen in urine.

Case of Ataxic Bladder treated by Semi-suspension.—Mr. HURRY FENWICK showed a man who had developed bladder trouble in October, 1888, commencing by pain and incontinence of urine; he also complained of total loss of sexual desire. For a long time the bladder had to be evacuated by means of a catheter. As the other symptoms of ataxy were present, he tried a modified form of suspension, the patient being directed to hang passively by his arms from a door for a minute morning and evening. After a month and a half of this treatment the patient had so far improved that he believed himself cured, and the bladder symptoms had almost disappeared.—Mr. REGINALD HARRISON mentioned the case of a gentleman who had suffered from ataxy for upwards of two years, and was recommended to try the suspension treatment by Dr. Charcot. After fourteen suspensions in about two months, each lasting from sixty to ninety seconds, all the bladder symptoms had disappeared, and the general condition had so far improved that he had been enabled to take up his official duties.

Case of Chronic Pemphigus.—Dr. BEEVOR showed a girl of 14 who had been the subject of pemphigus since 2 years of age. The nails and the teeth were markedly affected.—Dr. COLCOTT FOX said these cases were less rare than was supposed. He pointed out that the signs which were relied upon to distinguish the specific variety from simple pemphigus were by no means reliable.—Dr. CROCKER confirmed what Dr. Fox had said as to the difficulty of distinguishing between the two varieties, and added that in some cases the eruption had appeared to have a septic origin.

Case of Tuberculosis of the Palate.—Mr. BATTLE gave the history of the case of a married woman shown at the last meeting. There was a patch on the hard palate, extending backwards two inches, the ulceration being raised above the surrounding surface. He had treated it by scraping and the application of lactic acid.—The PRESIDENT observed that, while the soft palate was often affected, the disease was rarer on the hard palate. He said that if they were unable to get the better of the bacillus in such an exposed position, it augured badly for their success when it had to be dealt with in less accessible situations.—Dr. SEMON pointed out that, though they might destroy the local manifestations of tuberculosis, they could not hope to eradicate the disease by local treatment. He observed that the florid coloration of the patches was not in accord with his own experience, the colour usually being markedly pale.—After some remarks from Dr. CAMPBELL, Mr. CLUTTON narrated two cases of his own, and remarked that the colour of the patches varied, according to the period of the disease, from red to pale.—Mr. HARRINGTON SAINSBURY mentioned a case associated with disease of the apices of the lungs which had done well under local treatment.—Mr. BATTLE, in reply, said that there was no specific history, and anti-syphilitic treatment had not brought about any improvement.

Case of Congenital Deformity of the Extremities.—Mr. WALTER PYE showed a child, aged 5, the subject of a curious deformity of the hands and feet. The first and middle digits were absent, and the third and fourth were webbed and joined together. The thumb was fairly well formed. The deformity of the feet was the same. but the great toes were in reality thumbs.

Case of Cutaneous Eruption.—Mr. HERBERT ALLINGHAM brought forward a middle-aged woman, the subject of a curious skin eruption, respecting which he asked the opinion of the Fellows. He suggested that, from appearances it might have been artificially induced.—Drs. CROCKER, COLCOTT FOX, and CAMPBELL agreed that it was probably induced by the application of a liquid caustic.—Mr. ALLINGHAM promised to put the leg up in plaster and report as to the result.

Case of Functional Paraplegia.—Dr. RUSSELL showed a lad, aged 14, the subject of functional paraplegia. It had begun with a headache followed by loss of consciousness. Sensation generally was normal, but there were one or two patches of anæsthesia. The sphincters had never been implicated. The patient had remained in the same condition for some months, but latterly he had begun to improve, and could walk, though with apparent difficulty.

Case of Disseminated Sclerosis.—Dr. RUSSELL also showed a case of disseminated sclerosis in a girl aged 12. There was a doubtful history of a fall three years before followed by prolonged loss of consciousness. The irregular movements had commenced twelve months ago, and were absent when the patient was at rest. There had been several hysterical attacks.

Case of Systolic Murmur (Congenital?).—Dr. F. DE HAVILLAND HALL showed a girl, aged 16, who presented a systolic murmur, loudest behind the second left costal cartilage, and conducted towards the left sterno-clavicular articulation. There was also a systolic thrill. The area of cardiac dulness was increased, and the apex beat was external to the nipple line. The patient was anæmic, and had not yet menstruated. There were no signs of congenital heart disease.—Dr. HALE said he thought that the murmur was hæmic, and suggested brisk purgative followed by a course of iron.

Two Cases of Inguinal Colotomy.—Mr. BOWREMAN JESSETT showed two men upon whom he had performed inguinal colotomy by a novel method, his plan consisting in cutting across the gut and implanting it into the colon. He pointed out the advantages that this method presented over that usually resorted to, and urged more general advantage being taken of this new surgical procedure.—Dr. PURCELL made some remarks on the cases.

Case of Bilateral Paralysis of the Abductors of the Vocal Cords.—Dr. FELIX SEMON brought forward an instance of bilateral para-

lysis of the glottis-openers in a married woman, aged 49, who became aphonic eighteen months ago. After six months she gradually recovered, but as the voice returned she became subject to dyspnœa, exclusively affecting inspiration, sometimes amounting to menacing asphyxia. On examination bilateral paralysis of the glottis-openers was found. Iodide of potassium failed to produce any improvement, and tracheotomy had to be performed; there was nothing to show what was the cause of the paralysis. Dr. Semon suggested that it was a case of complete (?) rheumatic bilateral paralysis of the recurrent laryngeal nerves, and that the adductors had recovered more quickly than the abductors, the latter being, during convalescence, thrown into a state of paralytic contracture, in which they had remained.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

Section of Medicine.

Friday, November 15th, 1889.

Lombe Atthill M.D., President, in the Chair.

Morphinism.—Dr. Foot said morphinism (a word introduced by Levinstein) was, in some parts of Europe, at present almost a matter of fashion; gifts of handsome syringes in silver cases were exchanged on festive occasions, and reciprocal injections of morphine made on favourable opportunities. The subject was one of special interest to medical men, because of the number of their colleagues who had fallen victims to it. Some said this was a just retribution upon those who were responsible for the practice. Dr. Foot thought it more charitable to attribute the habit to (1) the relief of pain, (2) insomnia, (3) melancholia, (4) curiosity, or (5) imitation. Few morphinists were satisfied with less than three grains in the twenty-four hours; many used more than ten times that amount. The probability of a cure might be estimated by attention to the following points: the duration of the habit, the persistence or not of the exciting cause, the physical and nervous constitution of the patient. Relapses were very frequent; successful treatment, unless under the most favourable circumstances, was hardly possible in the patient's home. Emancipation from morphine slavery was unattainable by voluntary effort. The treatment was considered under the heads of the deceptive plan, the substitution plan, the tapering-off plan, and the abrupt withdrawal plan. The two first methods were not to be seriously considered in the treatment of confirmed morphinism. The tapering-off plan involved prolonged misery during the weaning process. The abrupt plan was frequently followed by the dangerous group of *Abstinenz-Symptome.* A modification of the two latter methods might be adopted; the complete withdrawal of the morphine, not abruptly, but in from six to twelve days. The fœtus in utero felt the demorphinisation of the mother, and also when separated by birth from a morphinist mother exhibited reactionary symptoms such as prolonged insomnia. Allusion was made to the occurrence of morphinomania in animals.—Dr. MacSwiney referred to the late Mr. Frank Rynd as the probable introducer of the subcutaneous injection of sedatives, having seen him about 1847 or 1848, in the Meath Hospital, administer a preparation which he had no doubt was an opiate or other sedative by introducing it with an instrument two or three inches long, into the thigh of a man who was suffering from sciatica. As regards treatment, he recalled a case recorded in A. T. Thompson's textbook on *Materia Medica*, a laudanum drinker who, though he was in the habit of taking a wineglassful at a time, was cured by the gradual elimination or deprivation process. A quart bottleful was procured, and for every glass of the drug taken out a glass of water was substituted, with complete success.—Dr. Falkiner mentioned the case of a schoolteacher whom he saw take five ounces of laudanum at a draught, and afterwards gave up the habit.—Dr. Eustace advocated the abrupt and sudden total withdrawal of the drug in morphinism, and of the spirits in alcoholism, as the best and most scientific treatment. As a rule only a partial cure was effected, for sooner or later temptation led to a relapse. From personal experience during illness he knew what terrible suffering was endured from being suddenly deprived of morphine. Speaking generally, since no two persons were alike, whether sane or insane, no set rule could be laid down for treatment, which must be adapted to the particular case.—The President's experience led him to advocate gradually diminishing doses. He knew a medical man who took one-sixth of a grain four or five times in the twenty-four hours, and who had the firmness not to exceed that dose.—Dr. Walter G. Smith said it was difficult, in regarding the action of drugs of a certain class on the higher parts of the nervous system, to restrict consideration to any particular drug, such as morphine, without bringing into consideration also the effects of other drugs of allied action. Thus there were two groups which might be arranged in the ascending scale of action—one, the alkaloids, and the other the members of the fatty series, including chloral, ether, alcohol, etc. Dr. Foot had adverted to this class distinction, indicating that the prolonged use of one of the members of the fatty series was liable to induce general tissue change and lead to death, whereas members of the alkaloid series affected chiefly the higher or psychical, emotional, and intellectual nerve centres, causing death by their action on the respiratory and cardiac centres. With regard to treatment, he did not think any amount of discomfort entailed on the patient was a good reason for objecting to the sudden total withdrawal of the drug.—Dr. James Little thought that Dr. Eustace had sufficiently answered his own recommendation by giving an account of his own sufferings. The plan Dr. Foot had mentioned was the one which he always adopted—namely, the gradual diminution of the drug. He knew of a gentleman who had suffered from stone in the bladder, for which he was relieved by Sir Henry Thompson; but before the operation was undertaken he had suffered terrific agony, and he relieved the pain by hypodermic injections of morphine. This was the beginning of what grew into a habit. At length, however, he cured himself by the process of gradual diminution; he got a two-ounce solution, and whenever he used ten minims he filled up the bottle with distilled water, and he did not feel the smallest discomfort from the gradual reduction process. He had himself adopted the same plan since with men and women, and it had always been successful.—Dr. Foot replied. There were two classes of cases to be considered. Thus, Charcot drew a distinction between what he called morphinism and morphinomania, the former being the state of a person who had recently acquired a taste for morphine, whether from temptation, imitation, curiosity, or for relief of pain; and the latter the condition of mental deterioration only known to exist in those with such a craving, insufferable hunger that destroyed body and soul, they would "jump into hell" to get their morphine. The morphinomaniac, in his periods of satisfaction, would bewail his condition, but would otherwise have no real desire to be cured, and would seize the first opportunity of getting morphine. He must, therefore, accordingly be treated as a lunatic. On the other hand, the morphinist wished to be cured, and would assist in carrying out the graduated or tapering-off plan, which was the advisable treatment in such a case.

MANCHESTER MEDICAL SOCIETY.

Wednesday, November 6th, 1889.

James Ross, LL.D., President, in the Chair.

Syphilitic Disease of Spinal Cord.—Dr. E. S. Reynolds showed three cases of syphilis affecting the spinal cord. The first was one of transverse myelitis (probably due to endarteritis) affecting the origin of about the tenth dorsal nerve. There was spastic paraplegia with slight sensory symptoms more marked on one side, the motor being more marked on the opposite side. The second case was probably a gumma about the region of the fifth lumbar and first sacral nerves, with atrophic paralysis. The third case was one of pachymeningitis, with pains, and atrophic paralysis of the fifth cervical root on the right side, and of the fifth lumbar and first and second sacral nerves on both sides, with atrophic paralysis of the leg and foot muscles.

Nephrectomy.—Mr. Wright showed a patient upon whom he had performed nephrectomy for calculous pyelitis. Nephrotomy had been previously done. A portion of the kidney was left behind, as it was impossible to provide a pedicle without endangering the vena cava.

Cases.—Dr. Hill Griffith showed the following cases: 1. Retinitis Pigmentosa in a girl whose mother and four sisters were similarly affected. 2. Neuro-retinitis of both eyes in a woman with syphilis acquired about eighteen months. 3. Central Patch of Recent Choroido-retinitis in one Eye with Active Pupil and Few Faint Dots on Descemet's Membrane; illustrating author's view in regard to transportation of solid particles from the back of the eye to the cornea through the suspensory ligament. 4. Very Slight Pallor of Discs in a young man of 24, with Recent Failure of Sight, Central Scotoma for Colours and Contracted Fields. The patient smoked heavily, had married recently, and

was in good health. 5. Boy with Normal Central Vision, good colour perception, but extreme peripheral contraction of visual fields, pupils active, fundi normal—a rather common group of symptoms often overlooked.

Specimens of Diseased Heart.—Dr. STEELL showed: 1. A Heart from a patient in whose third left intercostal space, close to the sternum, a soft blowing diastolic murmur had been audible. At the apex of the heart there had been a thumping first sound and a diastolic murmur, altogether different in quality from that heard in the third interspace. Occasionally a presystolic murmur had been heard. There was mitral stenosis but no aortic regurgitation. The murmur in the third left intercostal space was considered to be a murmur of high pressure in the pulmonary artery. 2. A Heart weighing 29 ounces, taken from a small poorly developed lad aged 17, who suffered from aortic regurgitation. There had been a marked diastolic thrill and murmur at the apex. All three aortic valves were altered, no one more than the others. The patient had had rheumatism, and the mitral valves were thickened, but there was no mitral stenosis.

Sarcoma of Fibula.—Mr. JONES mentioned a case of central sarcoma of the head of the fibula in a woman aged 33. Pain and swelling had lasted for nine months. Amputation through the lower third of the thigh was performed, but septic complications arose, and the patient died three weeks after the operation.

CLINICAL SOCIETY OF MANCHESTER.

TUESDAY, NOVEMBER 19TH, 1889.

T. C. RAILTON, M.D., President, in the Chair.

Thyroidectomy.—Dr. BUCKLEY showed a case of Thyroidectomy for cystic bronchocele.

A Case of Rickets with Unusual Deformity.—The PRESIDENT showed a girl, aged 7½, who, in addition to many of the customary deformities, had a remarkable bilateral flattening of the upper two-thirds of the shaft of each humerus, the anterior bicipital ridge projecting almost like a knife edge beneath the skin. The affected portions were also curved, with the convexity forwards from above downwards, the posterior aspects being correspondingly concave. The symptoms of rickets had apparently not shown themselves until after the end of the first dentition. The President suggested the possibility of the flattening and bending being caused by the arms being grasped at that part while the bones were in a softened state.

Radical Cure of Hernia.—Mr. E. STANMORE BISHOP read a paper on this subject. After some remarks as to trusses and the objections to their continuous use, he gave a short sketch of the various operations at present available, and described a modification of the latest, that of Dr. Macewen, which he had used and found satisfactory. It consisted essentially of a novel manipulation of the sac, and was based upon Macewen's principle of reduction of the sac into the interior of the abdomen.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.

WEDNESDAY, NOVEMBER 6TH, 1889.

JOSEPH WHITE, F.R.C.S.ED., President, in the Chair.

Heredity in Disease.—The PRESIDENT read a paper in which he dwelt upon the influence of heredity on the cause and course of disease; and instanced the more marked examples of phthisis, scrofula, syphilis, gout, and cancer, illustrating their hereditary character by cases coming under his own observation and those derived from other sources. He then traced the manifestly hereditary tendency of other diseases, as diabetes, cretinism, hæmophilia, and the large class of neuroses, in which there existed a general susceptibility which led to the occurrence of different forms of nerve disease in members of the same family. The hereditary character of structural defects was illustrated by reference to cases of supernumerary digits, congenital hernia, cleft palate, etc., and allusion was made to the gradual evolution of such conditions. The supposed causes of heredity were discussed, and reference was made to the theories propounded by Darwin, Haeckel, Galton, Weismann, and others; and to the recent researches of Belgian, Swiss, and German physiologists.

Specimens.—Dr. BROOKHOUSE a showed specimen of Aneurysmal Dilatation involving the Aorta, the Innominate and the Right Common Carotid Arteries; the extent of the disease was unusual, with calcareous deposit throughout. There were no external pressure signs during life, but the right pleura was tapped five or six times during the last three months. The patient was a man, aged 70.—Dr. BROOKHOUSE also showed a Left Side Suprarenal Body the seat of Scirrhus. It was removed from a woman, aged 50, admitted into the General Hospital suffering from extreme weakness, prostration, vomiting, and wasting. There was no skin bronzing. —Dr. BOOBBYER (Secretary) showed for Dr. TRUMAN the Uterine Appendages from a case of Chronic Gonorrhœa.

BRIGHTON AND SUSSEX MEDICO-CHIRURGICAL SOCIETY.

THURSDAY, NOVEMBER 7TH, 1889.

E. CRESSWELL BABER, M.B., President, in the Chair.

Disease of the Hip-joint.—Dr. PALEY exhibited a boy in whom Mr. W. Furner had excised the hip-joint, making a posterior incision, leaving the great trochanter muscles intact. The result being excellent.

Cancer of Cervix Uteri.—Dr. WHITTLE placed under the microscope a good section of carcinoma of cervix uteri; he also showed an artistic painting of a caseous gland, and commented upon the mode of growth and development of the disease. He maintained that the specimen showed the futility of any treatment other than excision, which should be performed before the capsule became ruptured. A short discussion followed upon this subject.

Urticaria Pigmentosa.—Dr. MACKEY showed photographs, drawings, and articles illustrating urticaria pigmentosa, and gave an account of the disease as far as is yet known; and Dr. WHITTLE recounted a case of this rare disease that had been under his care.

Nitrous Oxide and Oxygen as an Anæsthetic.—Mr. W. J. STEPHENS read brief notes of his experience in fifty-two administrations of a mixture of nitrous oxide and oxygen as an anæsthetic as compared with nitrous oxide alone. The time taken to produce anæsthesia was longer; there was no cyanosis and no jerky irregular respiration. Muscular relaxation was the index to anæsthesia, which could be maintained from 30 to 68 seconds. An eighth part of oxygen was recommended under 5 lbs. pressure, but the amount required differed in individual cases. Anæmic cases and those with pulmonary and cardiac disease took the mixture well. Sickness occurred in 4 cases only. The drawbacks were the large volume of gas required, and the consequent lack of a portable apparatus. Mr. Stephens promised, at a future date, to report further to the Society upon the subject.

Urethral Stricture.—Dr. PALEY read an analysis of 60 cases of urethral stricture which had been under treatment in the Sussex County Hospital during the last three years and a half. He laid much stress upon gonorrhœa as a cause of stricture, and found that 82.14 per cent. of non-traumatic cases acknowledged to having had gonorrhœa, whereas of 60 males suffering from other complaints to whom the question was put, only 35 per cent. answered in the affirmative. Dr. Paley advocated the use of the time-honoured hot bath and dose of opium in cases of retention of urine in which no instrument could be passed, and, this failing, puncture of the bladder above the pubes and aspiration; the latter operation could be repeated with safety several days in succession. In cases in which the instrument could not be passed, but retention did not exist, he advocated rest in bed for a week on low diet, with saline purgatives, after which an instrument could usually be readily passed. Continuous dilatation with soft catheters was recommended, the instrument which could be easily passed being tied in the bladder, and replaced next day by one of larger size until No. 10, 11, or 12 was reached. The best instruments for this purpose were the French olivary catheters, and when nothing larger could be passed, a fine whalebone bougie, not larger than a bristle, was useful. Forty-four cases were treated by continuous dilatation as described, and all went out passing for themselves catheters of various sizes from 8 to 12. Dr. Paley considered that in these cases, chiefly traumatic ones, which resisted treatment by dilatation, Wheelhouse's operation was the most satisfactory, and mentioned those cases in the list in which the operation had been performed with complete success.—Dr. BLACK quoted statistics from Mr. Bryant's *Surgery* which tended to the conclusion that gonorrhœa did not account for a large proportion of cases of stricture.—Dr. MENZIES warned the Society against celluloid catheters, and related an instance in which one had broken in the bladder.—Dr. WHITTLE advocated simple dilatation in private practice, and noted that the *bistouri caché* was freely used in his student days by Sir Henry Thompson.—Dr. SANDERSON supported Dr. Paley's views as to the great influence of gonorrhœa in the causation of stricture.—Brigade-Surgeon

STAPLES gave his experience in the army of the influence of gonorrhœa in the production of stricture, and advocated stretching the stricture with Civiale's urethrotome in cases where gradual dilatation could not be satisfactorily carried out.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

THURSDAY, NOVEMBER 21ST, 1889.

C. N. GWYNNE, M.D., President, in the Chair.

Cases.—Dr. KEELING showed a case of Partial Amputation of the hand.—Dr. BURGESS showed two cases of Muscular Atrophy. 1. A female, aged 29, had a severe attack of acute atrophic paralysis, at puberty. The deltoid, supra-spinatus and infra-spinatus, biceps, and brachialis anticus muscles were wasted and paralysed on both sides. On the right side there was palsy of the upper pectoralis major, hypertrophy of the upper trapezius, and great looseness of the shoulder-joint. Recent wasting of certain muscles of the left hand was doubtful. There was a loss of power and bulk in the extensors of the right knee and hip. The other case was one of infantile paralysis, in which the triceps and upper pectoralis major were affected, in addition to the group of muscles constituting the "upper-arm type of Erb."

Lumbar Colotomy.—The PRESIDENT read notes of a case where lumbar colotomy was performed for obstruction due to malignant disease of the upper part of the rectum. The patient, a woman, aged 46, had suffered for some months from constipation, alternating with diarrhœa. She complained of flatulent distension of the abdomen and pain. The constipation increased, with much tympanitic distension; colotomy was, therefore, performed in the left lumbar region, on December 3rd, 1886. She was able to return to the duties of her shop, and gained flesh, but still complained more or less of the old pain round the lower region of the abdomen. The artificial anus answered well. Two years after operation she passed blood from the bladder, and for some time this became a constant occurrence. She died on May 19th, 1889. On opening the abdomen, *post mortem*, the bowels were pale and distended with gas, but apparently healthy. At the upper part of the rectum a large, apparently cancerous, mass was found adherent to the spine behind, and to the bladder in front, and completely surrounding the gut. A large fistulous communication was found between the rectum and bladder. Various nodules were discovered in the course of the bowel towards the anus, obviously malignant in character. Several large secondary tumours were found in the liver. Microscopic examination of the primary and secondary tumours showed the nature of the growths to be cylindrical epithelioma.

Ancient Surgery.—Mr. ARTHUR JACKSON read a paper entitled "Ancient Surgery: Is there anything of which it may be said, See this is New?" He alluded to Mr. Watson Cheyne's work on *Antiseptic Surgery*, as showing how much the ancients did in the way of Listerism; but he did not agree with Mr. Cheyne's conclusion that the great surgeons of the sixteenth century (Paracelsus, Paré, De la Croix, and Fallopius) obtained the success they did with their antiseptics "more as the result of chance than from any glimpse of the true principles which were at work." Mr. Cheyne had referred to Paré having ascribed atmospheric influence upon wounds not so much to the air itself as to miasms contained in it, which Mr. Jackson thought was getting pretty near the present theory of putrefaction. Mr. Teale, in his Address on Surgery at the Leeds meeting of the British Medical Association, had alluded particularly to certain advances which had been made in surgical methods in recent times, such as the treatment of a wounded artery by double ligature and division of the vessel between, the substitution of Lister's sounds for older methods in the treatment of stricture, the emancipation from red tape rules of drainage, peritoneal stitching, etc. Celsus, who lived about the commencement of the Christian era, recommended ligature of a wounded artery in two places and its division between. Galen, in the second century, advised digital compression, and, if that failed, to seize the artery with a hook and twist it moderately, in some cases to cut the artery across and let it retract, in others to ligature it or to apply the actual cautery. How all this practical knowledge came to be lost it was difficult to say; it was astonishing to read Paré's protest against the actual cautery for the arrest of hæmorrhage, and to think that as recently as 1830 it was used for that purpose after amputation at the Sheffield General Infirmary, and that even at Guy's Hospital it was not discarded till after the middle of the last century. Mr. Jackson instanced the suturing of divided tendons, and less frequently divided nerves, as practised by Galen and his contemporaries. In reference to drainage, he quoted the writings of Thomas Gale, surgeon to Henry VIII, describing the hollow "tentes" used, which were of soft linen, cotton wool, silver, and copper, bigger at one end than the other for fear they should slip into deep wounds. They were first dipped into precipitate of mercury mixed with oil of roses. Stitching the edges of the peritoneum together, the drainage of the peritoneal cavity, the application of heat in the shape of hot wine to the bowels, were mentioned by Galen, Celsus, and Paré. Tapping for hydrocephalus, the radical cure of an enterocele by tying the sac and cutting off all below the ligature, the tapping of the chest for empyema and the use of injections, the use of catheters resembling Lister's sounds, artificial ears, noses, eyes, limbs, and a "platter" for the roof of the mouth after the effects of the "Spanish sicknesse," were among the numerous list quoted by Mr. Jackson of surgical methods known in the seventeenth century, and many of them as early as the tenth century. He also quoted a long list of instruments which were as common then as now, of much the same character, and founded on the same ideas as in the present day. In conclusion he said that he did not wish to run down the surgery of the present day, or to minimise the labours of those whom we knew and admired, but he thought that if we had an opportunity of realising the work done centuries ago we and our generation would benefit greatly.—The PRESIDENT, Dr. MARTIN, Mr. JAMES, Dr. LAW, Dr. PORTER, Mr. KNIGHT, and Dr. BURGESS, took part in the discussion.

REVIEWS AND NOTICES.

A PRACTICAL TREATISE ON MATERIA MEDICA AND THERAPEUTICS. By ROBERTS BARTHOLOW, M.A., M.D., LL.D., Professor of Materia Medica, etc., in the Jefferson Medical College of Philadelphia, etc. Seventh Edition revised and enlarged London: H. K. Lewis. 1889.

BARTHOLOW'S *Therapeutics* is now a well-known work. It is, as its title states, a "practical" treatise intended for the use of practitioners of medicine; but it is also of service to the advanced student, since he can obtain from its study all the practical facts relating to the treatment of disease.

Dr. Bartholow's treatise does not deal solely with drugs; the author, indeed, rightly considers therapeutics from a much wider standpoint. We find, therefore, that a succinct but exceedingly useful account is given of the composition of different foods, and of the elementary principles of diet in both health and disease; and also that the subject of electricity is considered. There is not much to find fault with in the account of articles of diet, but we are surprised to find that "fibrin (true muscle)" is placed as one of the constituents of mutton, and that "fibrin" is mentioned as an important constituent of fish. The term "fibrin" was at one time applied to th chief albuminoid constituents of flesh, but it has long been given up by physiological chemists, and the term is now confined to the non-corpuscular portion of blood clot. It is perhaps a small matter, but it is not uncommon to find that students (and even practitioners) are apt to confuse the myosin of muscle with the fibrin of blood clot, calling both bodies by the same name.

Dr. Bartholow arranges therapeutic agents in groups, which, although not recognised by all therapeutists, yet have a certain advantage in the learning of the subject. Thus we find groups of "agents producing destructive metamorphosis or increasing waste," and "remedies used to destroy microbes, etc.;" "agents to modify the functions of organs," or of the nervous system, etc., and so on. We repeat that the arrangement has a certain practical advantage in enabling the student to group any drug which is usually employed to affect a particular part of the system. But it also has a disadvantage, since the grouping does not sufficiently bring out the fact that one drug may act on many parts, and that —a fact well known to practical men—a drug may not in a particular instance produce its usual action, owing to one of its minor effects being emphasised; this last result forms a part of what is somewhat vaguely called idiosyncrasy. To give an example from Dr. Bartholow's book, salol, antipyrin, and antifebrin are classed under antiseptics; they undoubtedly have such an action, but they are chiefly used as antipyretics, and at present pharmacologists are not warranted in saying that an antipyretic action of a drug is dependent on its antiseptic effect; in fact, from

recent additions to our knowledge of fever, we know that there is no necessary interdependence between the two modes of action.

Some classes of drugs admit of useful grouping, such as "remedies acting on the gastro-intestinal canal," "anthelmintics," and "urogenital remedies." In no case, however, does Dr. Bartholow's system of classification fail more evidently than in the grouping of cardiac remedies. Digitalis, strophanthus, convallaria, and other drugs of this class are placed under "agents exciting the functional activity of the spinal cord and sympathetic." This gives a totally erroneous idea of the action of digitalis and its congeners. Although our knowledge as to their action is not complete, one fact is certain, namely, that they act partly on the muscular tissue of the heart itself.

Although we have taken exception to Dr. Bartholow's classification of drugs we have almost unstinted praise to give to the subject-matter of his work. Great pains have evidently been taken, by a judicious selection of the numerous papers now published on therapeutical subjects, to bring the work up to the most recent knowledge. The main facts relating to the most recently introduced antiseptics, antipyretics, and hypnotics are stated clearly and succinctly. It is satisfactory to see that Dr. Bartholow strongly condemns the indiscriminate use of wine of coca, which is unfortunately becoming common with the public. These solutions of cocaine in wine are, as Dr. Bartholow points out, now lavishly advertised, and their indiscriminate use can only lead to another class of disease for medical men to treat—in the future they will have to deal with cases, not only of morphinism and chloralism but also of cocainism. The use of such "pick-me-ups" ought to be strongly deprecated by all practitioners.

Among minor points it is noticeable that caffeine is not mentioned as a remedy for asthma, and that the treatment of snake-bite by ammonia injections is still mentioned as not settled, although it was considered to be conclusively decided by the Australian Snake Commission, if not by the experiments of Fontana a century or more ago.

In conclusion, the present edition of Dr. Bartholow's treatise will, no doubt, meet with the same welcome reception the other editions have experienced. It may be confidently recommended to the serious study of practitioners and students.

Die Krankheiten der Nase und des Nasenrachenraumes nebst einer Abhandlung über Elektrolyse für Specialisten, Chirurgen, und Praktische Aerzte. Von Dr. Rudolph Voltolini, Professor an der Königlichen Universität zu Breslau. (The Diseases of the Nose and Naso-pharynx, etc. By Dr. Rudolph Voltolini). Breslau: E. Morgenstein. 1888.

This, the last large work of its lamented author, will remain as a monument of his industry, his devotion to science, and of his readiness, in spite of his three score years and ten, to accept and develop new theories and new modes of practice.

The book consists of five parts, the first containing remarks on the anatomy, physiology, and what the author terms the psychology of the nose. The second, devoted to examination of the nose and pharynx, contains a good deal of what has already appeared in the author's valuable work on *Rhinoscopy*. He makes some interesting observations on the corpus adiposum malæ, and figures two cases in which it was enlarged in association with naso-pharyngeal tumours. To the author, as is well known, is due the merit of having insisted on the importance of drawing forward the palate with a hook in practising posterior rhinoscopy. Retraction of the palate, which formerly could often only be accomplished after practice, can now be done at once by means of cocaine.

Part III, which extends to 270 pages, contains a description of the various diseases of the exterior of the nose and of the nasal cavities. We notice that the author treats deflections of the cartilaginous septum by applications of the galvanic cautery to the convexity, the applications being repeated at intervals of from four to eight days. He has never had occasion to perforate the septum. The author lays great stress, in cases of epistaxis, on the careful examination of the cartilaginous septum, with a view to cauterisation at a dull red heat of the bleeding spot which is often found in this position. There are some interesting remarks on perforating ulcer of the septum, which the author looks on as a hæmorrhagic ulcer, and in nowise connected with syphilis or ozæna. He treats it by touching the edges with the galvanic cautery. In secondary and tertiary syphilis of the nose and throat the author recommends mercurial inunction carried out with special precautions.

In Part IV we find a description of the various diseases of the naso-pharyngeal cavity. Adenoid vegetations the author operates on only with the galvanic cautery, the electrode being introduced either through the nose or the mouth. The interesting chapter on naso-pharyngeal tumours has been written by Dr. H. Bensch, and in it the author expresses a wish that the earliest, and hitherto unknown, stages of these growths were studied and recorded by specialists. He urges the importance of these cases being treated by rhinologists rather than by general surgeons.

Part V is devoted to the subject of electrolysis in general, and in particular to the author's improvements in instruments (especially an electrolytic snare and forceps), and to the treatment of naso-pharyngeal tumours by this method. An appendix contains remarks on the examination of the nose, naso-pharynx, mouth, and neighbouring parts by means of transmitted light with incandescent lamps of various sizes. The work terminates with two good chromo-lithographs of the naso-pharynx as seen by posterior rhinoscopy (with the aid of a palate hook), a second plate illustrating the effect of electrolysis as shown on damp litmus paper; and, thirdly, a stereoscopic slide illustrative of the pharyngeal tonsil in the dead subject.

There is a certain amount of repetition in the book, and extracts from other authors are perhaps too frequent and full, but the work has a distinct individuality of its own, and on almost every page bears evidence of the author's large experience and practical knowledge of the subject. May the good work which Voltolini has done in rhinology encourage others to labour honestly and perseveringly in the same field.

First Aid to the Injured. St. John Ambulance Association, being the Ambulance Department of the Grand Priory of the Order of the Hospital of St. John of Jerusalem in England. Report of the Central Executive Committee, June 24th, 1889.

The eleventh annual report of the St. John Ambulance Association for the year 1888-89 shows no falling off in the work accomplished by this popular institution, but, as in each previous year, there has been a steady increase in the number of its adherents, and at the same time new channels of usefulness have been opened up. During the twelve months 14,754 certificates have been given to men who have passed an examination in first aid, and 6,738 have been similarly awarded to women, as well as 2,725 for an examination in nursing. This is an increase of more than 2,000 certificates on the previous year, and a grand total of 170,000 since the Association was established. The Mines Regulation Act still continues to exert a beneficial influence in stimulating those who are engaged in the management and working of mines to make themselves proficient in first aid and in the use of means of transport for the injured. In this respect, perhaps, the greatest activity has been displayed at Middlesbrough-on-Tees and throughout the Cleveland district, where, in January last, nearly 1,000 certificated pupils gave a demonstration of ambulance work, and were inspected by the President of the Association, His Royal Highness the Prince of Wales, who was accompanied by Her Royal Highness the Princess of Wales. In addition to numerous centres which have been opened in the United Kingdom, good work has been done in Ceylon and in the Island of Formosa.

Within the year a new departure has been made in the formation of an ambulance brigade, the object of which is to bring the various corps scattered throughout the country into touch with each other and with the headquarters of the Association in London, and thus by system and uniformity to give greater stability and permanence to this special branch of work, which has already produced excellent results in every locality where an ambulance corps exists. In London, the uniform of the St. John's Gate division of the metropolitan corps is becoming quite familiar to the public, as on every occasion where large masses of people are drawn together there are found the ambulances working with the metropolitan and city police. Only a few days ago, on Lord Mayor's day, at Charing Cross, on the Thames Embankment, and in the Strand, we saw groups of these useful men busily occupied at their beneficent work. When looking on five helpless invalids lying on stretchers at one "refuge," two of whom had to be taken away in ambulance carriages, we wondered what happened to the weak and disabled on similar occasions in the days before such a

useful institution existed. And it is not only at such times that these men are at the service of the public, but scattered over the metropolis and also in many towns in the provinces are permanent ambulance stations where assistance for the sick and wounded, and proper means of transport, can always be gratuitously obtained.

Another useful branch of the work is the Invalid Transport Corps, for the conveyance of sick and injured patients (infectious cases excepted). This has now been established for five years, and during the last twelve months 380 journeys with invalids have been undertaken, as against 331 in the preceding year; of these, seventy-seven journeys were in the provinces and six upon the Continent of Europe.

The members of the medical profession continue to give their patronage and support to the Association, and to this fact is chiefly due the successful development of all its branches. The physician or surgeon who has an intimate knowledge of it must admit that his interests are daily served more and more by this institution. At the hospitals it is acknowledged that patients are now more carefully handled and brought in than they were before, owing to the instruction which has been so widely spread through the instrumentality of first aid classes. And if any testimony were needed to the great advantage of such a transport corps as that to which we have just referred, it is to be found in the fact that so many of the medical profession have availed themselves of its services, when they themselves have unfortunately been prostrated by sickness or accident.

On the other hand, we are glad to be able to add that since the St. John Ambulance Association was made a department of the Order of St. John, the services of several of the chief supporters of the Association in the medical profession have received Royal recognition, and they have been made Honorary Associates of the Grand Priory of the Hospital of St. John of Jerusalem in England, with the right to wear the distinctive decoration of this Order.

NOTES ON BOOKS.

Bourne's Handy Assurance Manual, 1889-90. By WILLIAM BOURNE, F.S.S. (Liverpool: W. Bourne. London: John Heywood).—In this yearly volume, which is commendably free from technicalities, information is given likely to be useful to the ordinary reader anxious to effect an insurance on his life, and to the student of the many interesting phases of life assurance work. To the former it affords an opportunity of exercising an intelligent option on a very important financial matter, giving a ready means of judging as to the position, recent progress, and comparative security of the various offices, together with a clear statement of the percentage withdrawn from the premium income for management expenses—an item that is receiving increased attention, and certainly deserves more than it even now obtains. To the student and expert in such matters the book affords good materials for a more extended and critical examination, and presents some notable groupings of facts and figures. Some of the latter convey a good idea of the magnitude and national importance of life assurance work. From these it appears that the eighty-four chief offices doing ordinary business (three being American and one colonial) have total insurances in force of over £600,000,000, with life and annuity funds of more than £220,000,000, and an annual life insurance premium income of over £26,000,000. From this there is an annual increase of about £10,000,000 which must be invested, and doubtless exercises a tangible influence on the interest-earning power of capital. The expenses of management reach nearly £4,900,000, or a charge equal to 18.47 per cent. of the premium income.

New Verse in Old Vesture. By JOHN CAMERON GRANT. (London: E. W. Allen. 1889.)—A pretty volume of ballads, rondels, glozes, triolets, and virelais, but how came it hither? What have we to do with such vanities? True, there is a ballade of "Heart Sickness" in the volume, wherein "the poisoned breath of the Flesh" is referred to, and there are "Songs of the Drowned" and "Hymns of the Poisoned," but as they have only the remotest interest for the students of forensic medicine, we have some doubt whether or not the volume was sent to our office in mistake. "A Chaunt Royal on Sleep or Death" seemed to promise some medical interest at the outset, as it was somewhat suggestive of the action of a new hypnotic under which the patient lay, "drowsed and dreamful, though in wild unrest;" it ought to have referred to a dose of sulphonal, but we could not quite make the symptoms tally. In truth, the work seduced us for an hour or two from graver thoughts; perhaps it was intended to waft a strain of music over our musings on "the whence and why;" if so we are grateful to the author, who sings as thoughtfully as he sings melodiously. Mr. Grant undoubtedly possesses a great power of poetic "form," which is a gift not always found in conjunction with the higher poetic insight.

Bayley's Pocket-book for Pharmacists. (London: E. and T. N. Spon.)—This is a very comprehensive work; it will be found of service to the British and American pharmacist, as he can obtain from its pages information upon a great variety of subjects having a direct bearing upon his daily work. Among the chief heads of information are materia medica of official and unofficial drugs; pharmacy, including both the *British* and *United States Pharmacopœias:* a glossary of Latin and medical terms; tables of boiling and melting points and solubilities; analyses of chemicals, alkaloids, calculi, urine, etc.; weights and measures; and a number of useful recipes. The book is in a very compact handy form, and is brought up to date, the only omissions which we have noticed are salol, paraldehyde, homatropine, and chloralamide.

The Tale of Eyam: a Story of the Plague in Derbyshire; and other Poems. By an OLD BLUE. (London: Simpkin, Marshall and Co. 1888).—The village of Eyam in Derbyshire was desolated by the plague in 1666. For twelve months, from September 1665, to the autumn of 1666, the ravages of the awful pest were so terrible that only one-sixth of the inhabitants were left to tell the story. The villagers solemnly agreed, at the time of "the visitation," that on no account would they pass beyond a boundary line drawn round the village; food was brought to several points by those outside, and placed upon the ground. In the middle of a field at the back of the village are seven stones to the memory of seven members of one family carried off on seven successive days; the author of the poem which tells the story of the pest says:

> Long may these stones be left, sad proof to all
> Of how our brave men died in that past age.

The picture of utter helplessness in presence of such a calamity is painted by the author in vivid colours. In that age, under such terrible circumstances, a brave man had but to stand still and die; he knew nothing of the origin or the nature of his enemy. How could he fight "the foul and unsurpassed pestilence," of which he knew nothing but that its dart was certainly fatal? Let those who say that medicine has not kept pace with other branches of science read this piteous tale, and compare our attitude now in presence of dire disease with that of the poor folk at Eyam, who built a wall round the spot on which they had but helplessly to perish. The author speaks of the pestilence and "its hellborn brood;" and, again, of firebolts from "heaven's reeking nostrils." Such poetic phraseology aptly exemplifies the mental attitude of men who lived in the infancy of modern science, when in the plague (*plaga*—a blow) they saw the angry stroke of offended Deity, and recognised the "scourge" of God in what we know to be only the scourge of filth.

Coloured Analytical Tables. By H. WILSON HAKE, Ph.D., F.I.C., F.C.S. (London: G. Philip and Son. 1889.)—The object of these tables is to provide vivid illustrations of the colours of various precipitates and reactions of the commoner metallic salts. The following are some points which require revision on the part of the author. In the "Directions for Procedure," through some unaccountable oversight, no mention is made of water as a possible solvent for the substance under examination, the first solvent directed being dilute hydrochloric acid. In addition to the loss of the immensely important knowledge of the solubility or insolubility of the original solid in water, the student would find himself much puzzled if the salt under examination happened to be mercurous nitrate, lead nitrate, or silver nitrate. No mention is made of the different colours possessed by borax beads in the oxidising and reducing flames respectively. The colours of precipitates, etc., are in most cases accurate, and the author is to be congratulated upon the ingenuity of his idea, namely, the tinctorial illustration of chemical reactions.

GENERAL COUNCIL
OF
MEDICAL EDUCATION AND REGISTRATION.

WINTER SESSION 1889.

Tuesday, November 26th.

JOHN MARSHALL, Esq., F.R.C.S., F.R.S., President, in the Chair.

New Members.—Dr. William Selby Church took his seat as representative of the University of Oxford, and Dr. Donald MacAlister as representative of the University of Cambridge.

President's Address.—The PRESIDENT then delivered his address. After expressions of regret at the loss sustained by the Council in the person of Dr. Chambers and by the resignation of Dr. Humphry, and of welcome to their successors, he mentioned that the Secretary of War had admitted the claim of recently-made Licentiates of the Society of Apothecaries of London to compete for service in the army and navy on the same terms as other registered practitioners. Alluding to the question of English practitioners in Switzerland, he observed that, during a visit to the Engadine this autumn he was called on to listen to accounts of the well-known grievance complained of by the holders of British medical qualifications engaged in practice amongst their own countrymen and countrywomen in Switzerland. For from this natural and sometimes imperative duty, when difference of language existed, they were prohibited, unless they had passed examinations suited admirably, no doubt, for native requirements, but not adapted to the purposes of an English-speaking physician or surgeon practising solely amongst English-speaking invalids. He had been informed that even the renewal of special local licences, already granted temporarily, with an understanding of annual renewal, had been delayed so long as almost to imply a refusal, But a decision on this question rested entirely with Swiss medical authorities; and he hoped that sooner or later the undesirableness of their action, in the interests of their own country, would lead them to redress this grievance as regarded English-speaking visitors and their medical attendants. He said it was obvious that the principle of reciprocity imported into the Medical Act of 1886 met at present with no response in foreign countries; but it was hard to have to admit that foreign members of the profession, who were responsible for this matter in their capacity of local sanitary authorities, should oppose obstacles, as he was informed they did, to the granting of a limited number of special licences, and this contrary to the wishes not only of their numerous and profitable visitors, but, as he understood, of the hotel-keepers and tradespeople, and likewise of the central and communal authorities. From recent information, he added that in France, also, permission for English or other foreigners to practise amongst their respective compatriots was apparently to be made the subject of special vigilance. He then passed in review the work before the Council, which included several cases under the penal clauses, matters in connection with the sanitary diplomas and the right of the Council to frame certain regulations in relation thereto, and two separate applications concerning the examination and registration of midwives and nurses. He observed that it might be desirable to assist the applicants in their respective views, though the Council would, he suggested, do well to define then the limits of its co-operation. He trusted that, with careful economy of time, sufficient opportunity would be given for clearing off some portion of their responsibilities connected with the consideration of certain practical questions relating to education and examinations. But feeling strongly, as he had always done, the need of a two-fold separation of their important work, as usefully assignable to their autumn and spring sessions respectively, he hoped that on that occasion especially urgent points only might be brought before them for discussion and decision. He said it was not yet certain whether—and if so, to what extent—the London County Council would be able to grant opportunities for the clinical study of the subject of insanity within the asylums under their control; nor could they yet foresee the acquisition of the abundant means which would one day be at the disposal of the various schools of medicine, in special hospitals, and in public infirmaries and dispensaries for practical teaching of other special or common diseases. But movements of that kind were in the air; and, although the general powers of the Medical Council were practically—and perhaps wisely—limited to those of visitation, inspection, report, and the issuing of recommendations, or, in case of need, the duty of making representations to the Privy Council, yet the indirect influence of the resolutions of the Council regarding medical education and examinations was being more and more widely acknowledged. They must not, however, shut their eyes to the fact that the qualifying bodies, and also the teaching schools, were, at the present day, active in the spontaneous suggestion and adoption of attainable improvements, checked frequently, and often solely, by considerations as to their practicability, or the possibility of their general adoption. The Council of the Royal College of Surgeons of England, as one of the co-authorities in the Conjoint Examining Board in that division of the kingdom, had expressed an opinion in favour of a five years' curriculum of study, which would give an opportunity for introducing a most important extension of the time to be devoted to the clinical study of all classes of disease. The Royal College of Physicians of London had submitted this subject to a special committee. The proposal involved many important considerations, and certain objections had already been made in regard to it; but the movement in its favour had begun, and it was not difficult to foresee its ultimate adoption in the future in some shape or other. He reminded them, lastly, that the duty of the Council, in regard to their visitations and the inspections particularly indicated in the Medical Act of 1886, ought not to be silently passed by. It was, perhaps, beyond his province to say much on that subject, but he ventured to suggest that it might be carefully considered whether, for the moment, a single inspector might not be appointed to make such occasional visits as, after a perusal of the last Reports, and after consultation with the President and the Chairman of the Examination Committee, he might consider useful, and to report to the Council his results and opinions, in time for their next session. In relation to this subject it was desirable to bear in mind that an inspector, under the Act, was required essentially to report whether any specific examination was, in his opinion, "sufficient" or "insufficient;" and it might reasonably be submitted, that as no case of positive insufficiency had been brought to the notice of the Council, an elaborate and minute inquiry was, at the present time, unnecessary and inexpedient.

Dr. QUAIN moved a vote of thanks to the President for his address, and requested him to allow it to appear in the minutes. He took occasion to remark upon the very excellent work done by the Medical Defence Union in Birmingham in recovering penalties against persons for the unlawful assumption of medical titles, under Section 40 of the Medical Act. Penalties had been recovered to the amount of £114, of which £87 had been reimbursed to the prosecutors for expenses.

Finance.—After the transaction of certain formal business, the report of the Executive Committee in regard to the proposed limitation of expenditure connected with the session of Council came on for consideration.

Sir WILLIAM TURNER, who proposed the adoption of the report, said they hoped to receive legal advice as to how they might diminish the duration of the sittings of the Council in relation to cases of discipline.

Dr. LEISHMAN discussed the question of remuneration, and finally proposed as an amendment, that "the matter be referred back to the committee to consider what sum might be appropriated to the Council for the payment of members."

Dr. TUKE seconded the amendment, which was put to the vote and lost. The original motion for the adoption of the report was then agreed to.

Proceedings in Penal Laws.—On the motion of Mr. WHEELHOUSE the report of the Executive Committee in regard to the penal powers of the Medical Council and the medical authorities, to the effect "That no further legislation be sought at present, but that the Council's legal advisers be requested to frame certain regulations suggested by them, with a view to facilitate the Council's proceedings in penal cases," was adopted.

Diplomas in Sanitary Science.—Certain communications in regard to the recognition of diplomas in sanitary science were referred to the Education Committee to report to the Council during the present session. Some discussion ensued as to the coming into force of the new regulations of the Council in respect to the registration of these diplomas, in order to allow of the various bodies being communicated with.

Sir JOHN SIMON said that if any suspension were deemed necessary it should only be with regard to points in dispute, and

ought not to be made general. The consideration of several other motions bearing on these diplomas was postponed.

Application for Restitution to "Register."—An appeal for restoration to the *Medical Register* from one "registered as L.K.Q.C.P.I., L.M., L.R.C.S.I.," whose name and qualifications were erased in consequence of his name having been removed from the lists of licentiates of the King and Queen's College of Physicians in Ireland and of the Royal College of Surgeons in Ireland was considered after strangers had been ordered to withdraw. On their readmission it was understood that the further consideration of this appeal had been deferred in order to obtain legal opinion as to the proper form of procedure.

Reports on the Examination and Education Committees.—The reports were received, and ordered to be entered on the minutes.

Dr. KIDD moved: "That the Committee of Management of Examinations conducted by the College of Physicians and Surgeons of London be requested to define by whom and where 'instruction' is to be given in the following subjects—chemistry, materia medica, pharmacy, practical pharmacy, and practical chemistry." Dr. Kidd observed that no trouble appeared to be taken to ascertain the status of the persons communicating knowledge in these subjects, or of their ability to impart such instruction. With reference to these certificates of instruction which were accepted, he had heard of one student certifying to the instruction of another, and he had heard of an instance in which a certificate was signed by a gentleman's coachman. He maintained that the Conjoint Board accepted sham certificates, and this fact did not increase confidence in the character of the examination itself. He observed that the Council only authorised professional study which should not have commenced more than fifteen days before registration, and he contended that the permission given by the Board to receive instruction on these subjects before joining a medical school was not in accordance with their rules.

Mr. MACNAMARA, who seconded the motion, said the Colleges owed it to themselves to give the explanation demanded.

Dr. MITCHELL BANKS said that certain bodies, like the colleges of the Victoria University, had been to great expense in providing the necessary apparatus for teaching these subjects, and they naturally felt somewhat injured at the extreme laxity of the Conjoint Board in this matter. He said that the certificates accepted by the Conjoint Board of London would not be accepted elsewhere, and he thought that the Colleges should take more trouble to ensure that persons who delivered lectures and taught chemistry and materia medica were fully qualified for their work.

Dr. WILKS thought the question was *ultra vires*, and he urged that students at the time of learning chemistry were not, properly speaking, medical students at all.

Sir JOHN SIMON suggested that they touched the corner of a very important subject, and he thought it had better be referred to the Education Committee to deal with the matter on a larger basis. He could understand that examining bodies might content themselves with examining, and dispense with certificates of study, but where these were required care should be taken to make sure that they were *bonâ fide*. Personally he did not see why materia medica and botany should not be learnt without lectures.

Sir DYCE DUCKWORTH said the question certainly related to medical students proper. He admitted that the Conjoint Board did not define who should give certificates with repect to chemistry, etc. Personally he had great faith in training, but the present system was the outcome of a method inaugurated by the University of London. He pointed out that if the Conjoint Board exhibited a laxity in this respect it did so in very good company, that in the University of Oxford, for example, instruction in chemistry might be obtained anywhere, and this was also the case elsewhere. He urged that Dr. Kidd had been too severe in saying that the examination in chemistry of the Conjoint Board was a trifling matter. On the contrary, the standard in that respect was high. He said undoubtedly that some students presented certificates of instruction in materia medica and chemistry and pharmacy from doctors to whom they had been apprenticed, and he asked what examining Board would venture to refuse such certificates. He had no doubt that if the Council were to pass the resolution to the effect that certificates should be more closely looked to, the Colleges would promptly see to it. He agreed that some better evidence of training should be afforded than these certificates.

Dr. STRUTHERS asked the Council to have mercy upon the Education Committee, especially in a matter which properly belonged to the Council. He pointed out that the regulations required that the certificate should be given by a medical man or a registered chemist, and he failed to see why such a certificate should not be sufficient. He observed that Charles Darwin had alluded to the 100 lectures which he had had to attend in materia medica as the most dreadful infliction of his life. He suggested that Dr. Kidd should write direct to the Colleges and ask for the information.

Dr. KIDD said that his object was to protest against the recognition of sham certificates.

The PRESIDENT said the motion was directed, not against the system adopted by the Colleges, but against misapplication of it. He noted that the only case of a sham certificate adduced by Dr. Kidd emanated from Ireland. He urged that this liberty, in the matter of chemical instruction, extended to the younger men was valuable as relieving the curriculum. They would be only too pleased to receive information as to certificates obtained from incompetent or improper sources. He deprecated, however, such a motion as that proposed by Dr. Kidd, and suggested that the Colleges should be left to exercise their discretion in the matter.

The motion was put to the vote, and carried by 9 to 5, the majority of the members abstaining from voting.

The Registration of Midwives.—Several communications which had passed between Mr. Pease, M.P., and the President, in regard to the registration of midwives, were received and ordered to be entered in the minutes, as also a memorandum submitted to the Council by the British Nurses' Association.

At the request of Sir WALTER FOSTER, the motion standing in his name in relation to this subject was postponed.

The PRESIDENT thought that the Council could hardly accept the duty of supervising the proposed registers, though they might be quite willing to help in any less onerous way.

Sir JOHN SIMON thought that before addressing the Government on the subject, they ought to have a very clear notion of what the Council was prepared to do in the matter, also what was meant by the "registration of midwives." Such a scheme might be practical if left to the County Councils to carry out, under regulations to be approved by the Council, but the persons whom it was proposed to register did not belong to a class to enable them to bear the expense of national registration. He rather doubted whether it was within their province to address the Government on the subject at all, and he did not at present see his way to do anything in the matter. The relations of the Council to the question would necessarily be within very narrow limits, even if they had anything to do with the matter.

Memorial from the Licentiates of the Society of Apothecaries of London.—Mr. BRUDENELL CARTER presented a memorial addressed to the Council by 148 licentiates of the Apothecaries' Society of London, requesting the Council to accord them such title or titles as would convey to everyone the increased scientific status conferred by the recent Medical Acts. The title of L.S.A. being the same as that which was granted when there was no examination in surgery, and when the regulations of the Medical Amendments Act were not in force, he said that he had consented to present the memorial, although he did not feel convinced that the Council would yield to it, nor could the Society of Apothecaries grant the title asked for; he thought, however, that there was a real grievance founded on the ignorance of the public, and he thought that this might be dissipated to some extent by giving publicity to the matter. He observed that it was clearly not within the power of the Council to confer medical titles, nor within that of the Society of Apothecaries to alter their title. He pointed out that the question could only arise in regard to the younger men during the interval between registration and the appearance of their names on the *Register*; and he thought that the case would be met by adding to the certificate of registration the explanation which the Council had already ordered to be printed in the *Register* in relation to the threefold nature of all qualifications registered since July 1st, 1887.

Permission was given to Mr. Carter to bring forward a motion to this effect, which was seconded by Sir WALTER FOSTER, on the understanding that it was to be a permanent addition to the certificate of registration. This was then agreed to.

Medical Certificates of the Cause of Death.—Mr. GLOVER brought forward two motions to provide for the verification of medical certificates of the cause of death. The first was to the effect that "The Treasury be memorialised to issue annually to every registrar of births and deaths a copy of the *Medical Register*, in order that the registrar may be enabled to ascertain whether the person certifying the cause of death is a registered medical practitioner." Dr. Glover observed that the resolution did not

require much argument to justify its being brought forward. Registrars of deaths were not officially in possession of copies of the *Medical Register*, so that, when a certificate of death was brought to them, they had no means of ascertaining whether the person signing was or was not registered. He read a letter which he had received on the subject from Dr. Bateman, who was connected with the Medical Defence Union, to which Dr. Quain had alluded in such terms of merited commendation. Dr. Bateman pointed out that the registrars, when applied to for a book of certificates, had no means of ascertaining whether the applicant was registered, and that anyone presenting or sending a card with Dr. So-and-so upon it would be at once supplied with the forms asked for. He urged, moreover, that it was at least as necessary for registrars to be supplied with a copy of the *Register* as for officers of the courts of law. Dr. Bateman's letter went on to say (though this bore rather upon the motion which was to follow) that it would be of great advantage if death certificates were paged and numbered consecutively, as in cheque books, so that, when necessary, they could be traced back to their source. Moreover, by numbering them, forms which had been lost or stolen might be prevented from passing into wrong hands. At present, it was quite possible for an unqualified man to practise in the neighbourhood of any medical man, using his name on certificates without anybody knowing how he had obtained them. Dr. Glover said the only question that arose was what the Medical Council had to do with the distribution of the *Medical Register*, but he urged that they had a great deal to do with the proper use of the *Register*, and the profession would be grateful to the Council if they would move the Treasury in the matter.

Mr. Brudenell Carter seconded the motion.

Mr. Teale confirmed the arguments used, and Sir William Turner asked if any estimate had been made as to the number that would be required.

Sir John Simon said that there were under 3,000 registrars in England, besides those in Scotland and Ireland.

Sir Walter Foster urged that the cost of the innovation was a matter of little importance, and he thought the motion should be passed for the purpose of protecting the public and the profession against unqualified practice. He suggested that it would be a very good thing if in the public offices in every district the register of properly qualified medical men were available, so that the public might know who were and who were not qualified. He promised to support the matter when brought before the Chancellor of the Exchequer.

After a few remarks by Dr. Quain, the President, and Sir John Simon as to the form in which the *Register* might be issued for this purpose, the motion was agreed to.

Dr. Glover then brought forward his second motion on the same subject: "That the Registrar-General be memorialised by this Council to cause the forms of certificates of the cause of death to be numbered, and to instruct registrars in issuing them to applicants to ascertain that the said applicants are registered practitioners, and to keep a memorandum of the numbers of the certificates given to each applicant respectively." Dr. Glover urged that the Council ought to encourage the Registrar-General to enable these certificates to be traced, and he felt sure the Registrar-General would be glad to help the Council in getting the reform carried out.

The motion was seconded by Sir Walter Foster, and agreed to.

A discussion followed as as to how the representations should be made to the Treasury and the Registrar-General respectively, and it was ultimately resolved that a deputation, consisting of the President and the mover and seconder of the resolution, be requested to bring the matter before them.

The Council then adjourned.

Wednesday, November 27th.

Case of James Camac Smyth.—James Camac Smyth (registered on August 9th 1879, as Lic. R. Coll. Phys. Edin., Lic. R. Coll. Surg. Edin., 1879), appeared before the Council at 2 o'clock, accompanied by his solicitor, Mr. Edward Shirley Finnigan. Mr. Farrer, Solicitor to the Council, attended, and Mr. Muir Mackenzie was also present as Legal Assessor, to advise the Council in regard to the case of Mr. James Camac Smyth. Mr. Farrer, the Council's Solicitor, stated to the Council the facts of the case and the charge alleged against Mr. Smyth. Mr. Finnigan then addressed the Council in answer to the charges, reading for the purpose a statement of defence on behalf of Mr. Camac Smith. Strangers having, by order of the Council, withdrawn, the Council deliberated *in camerâ*. Strangers—including Mr. Smyth and Mr. Finnigan—having been readmitted, the President communicated to them the resolution of the Council: "That the Registrar be not directed to remove the name of Mr. James Camac Smyth from the *Medical Register*."

The Case of Joseph Frederick Leeson.—The next case was that of Joseph Frederick Leeson, who had been summoned to appear before the Council to answer the following charge as formulated by the Council's solicitor, "for that he, being a registered medical practitioner, acts as cover of, or by his presence, advice, and assistance, enables one Cornelius Bennett Harness, an unqualified person, to carry on the business or profession of a medical electrician, and to practise as if he were duly qualified under the style of 'The Medical Battery Company Limited,' and 'The Electropathic and Zander Institute,' at 52, Oxford Street, London, W., the said Cornelius Bennett Harness publicly advertising himself as 'The Medical Battery Company's Consulting Medical Electrician.'" The case was brought forward by Mr. W. H. Martin, solicitor, on behalf of the Medical Defence Union, the defendant being represented by Mr. R. Furber, solicitor. The evidence for the prosecution comprised a statutory declaration by Mr. W. P. Wilson, J.P., of Hertford. In the month of August, 1887, this gentleman went to the premises of the Medical Battery Company, in Oxford Street, in consequence of an advertisement in the *Standard* relating to electric belts for the cure of sciatica. He had asked to see Mr. Harness, and saw a person whom he thought to be Mr. Harness, but who, he had subsequently ascertained, was one of his assistants. He told this person that he was suffering from sciatica, and asked for one of the guinea belts. He was told that that would be no good, but that for a sum of £25 he could be cured. He was told that the treatment would take a month. He offered to pay ten guineas for the month's treatment, with another ten guineas if a cure resulted. He was then taken to a room and introduced to the company's physician, who was Mr. Leeson. Mr. Leeson pointed out to him several different kinds of batteries and belts, naming the prices, presumably for the purpose of sale. Mr. Leeson suggested an application of the battery at once, to which he assented, and Mr. Leeson then examined his heart. After the application of the battery, he was induced to take a belt for five guineas, for which he afterwards sent a cheque. He subsequently received an account for two guineas from the Battery Company for consultation with their physician, under threat of proceedings in the County Court. He then wrote a letter to the *Medical Press* on the subject, his letter appearing in the number of November 16th, 1887, on which there were some editorial comments in the same number inviting Mr. Leeson to give some explanation of his conduct. A summons was subsequently issued, and the case came on for hearing on December 16th, 1887. Mr. Leeson attended on behalf of the Medical Battery Company, and gave evidence in support of the plaintiff's case. He described himself as the medical officer of the Medical Battery Company. A judgment was given in Mr. Wilson's favour with costs against the company, and some very strong observations were made by the judge on such a charge being made when the advertisement stated that the consultations were free. Mr. Martin also produced another statutory declaration as to Mr. Leeson's still occupying the same position. Copies of the documents were served upon the defendant, and, in answer to facts alleged, Mr. Leeson sent a letter (which he read), in which he (Mr. Leeson) denied that he had been guilty of any unprofessional conduct by "covering" or otherwise, and maintaining that his position was that of consulting physician to the Medical Battery Company, such position being analogous to that of medical officers to insurance companies and friendly societies. He denied that he enabled Mr. Harness to carry on the business of a medical electrician, or to practise as if he were duly qualified. He urged, moreover, that the clause of the Medical Act, under which proceedings were taken, did not apply to a case of this kind, and he maintained that this was not a *bonâ fide* complaint, since the facts complained of took place two years ago. He denied any responsibility for the claim made upon Mr. Wilson, the particulars of which were drawn up in error by someone in the office. He said he was a Licentiate of the Royal College of Physicians of London, and had been summoned before that body to answer a charge of contravening their regulations by associating himself with a trading company. The result was that the College decided to cancel the existing regula-

tions so as to allow of their licentiates being appointed medical officers to a trading company. He said that Mr. Harness had made a special study of the treatment of diseases by means of electrical appliances, massage, inhalations, etc., and had degrees, though he did not make use of them. He said that he himself had made electro-therapeutics a special study, and when he was appointed to the company he found skilled officers and masseuses, who had been trained and certified by Dr. Stretch Dowse and others, and with him were associated two well known French medical electricians, Dr. Vigouroux and Professor Loreau. He said that, although a limited liability company, it was essentially a private one, and had been established purely in the interests of science; nevertheless it was necessary to make it a commercial success in order to furnish the means of continuing their investigations. Last year they had spent £10,000 in acquiring the Zander Institute, and the company were now opening a post-graduate school for the instruction of the English faculty in electrical science. He concluded by expressing his hope that he had cleared himself from this flimsy, stale, and contemptible charge. In addition to this letter a statutory declaration had been filed by Mr. Harness, bearing upon Mr. Leeson's position with regard to the company, and denying that he (Mr. Harness) had ever represented himself as being a physician, surgeon, or apothecary.

Mr. MARTIN pointed out that Mr. Leeson's letter was not a statutory declaration. Athough he (Mr. Leeson) denied any responsibility for the claim against Mr. Wilson he had gone to support it. He said it was drawn up in error, but he did not appear to have discovered that till later on, and no attempt was made to amend the claim. Mr. Martin then discussed the points in Mr. Leeson's letter *seriatim*, pointing out that there was no evidence as to any particular person having committed the error of claim and the absence in Mr. Harness's declaration as to the capacity in which he himself was engaged. He put in certain advertisements, from which he read extracts tending to show that Mr. Harness had held himself out as a duly qualified practitioner.

Mr. FURBER, on behalf of Mr. Leeson, objected to these advertisements being admitted as evidence.

The objection was overruled by advice of the Council's legal advisers.

The name of Dr. Steavenson having been mentioned in connection with these advertisements, Sir DYCE DUCKWORTH pointed out that a most unwarrantable use had been made of his name, to his very great annoyance, and he had published a disclaimer.

Mr. MARTIN added some remarks on the tactics adopted by Mr. Harness on his acquiring the Zander Institute.

In reply to a question by Mr. MUIR MACKENZIE, the Council's legal assessor, Dr. BATEMAN stated that the pamphlets, etc., had been received by him during the present year on his applying for them by letter.

In reply to questions by various members of the Council, Mr. LEESON stated that he was unaware when he went to Court that the charge to Mr. Wilson was for consultation, but he knew that the advertisement of "free consultation" was the defence put forward. Neither he nor Mr. Harness applied for leave to amend. When he said that Mr. Harness had degrees, he alluded to his being an M.D. of America (of Philadelphia), and he held degrees in medical electricity. He was not aware that the charter had been withdrawn from the so-called University of Philadelphia for issuing bogus degrees. He had stopped the issue of the pamphlets which had been put in as evidence fifteen months ago, and they were now only given when specially asked for. He was not a member of the company, he was their physician at a salary, he attended there every day. People saw Mr. Harness to arrange about the fees, which would be according to the means of the applicant, from one guinea to a hundred. He himself had nothing to do with the fees. He held the same position as that of a consulting physician to a hospital, he had his consulting room, and Mr. Harness and the others had theirs. He did not as a rule prescribe anything but electricity, but he had once or twice given prescriptions. Asked what was the distinction between himself and Mr. Harness, he said that Mr. Harness was not qualified, and he was. He said that Mr. Harness did not practise, but gave electrical advice; they claimed to cure ruptures by electricity, for which purposes they had trusses and electrical belts. When patients sent in the forms containing a history of their symptoms, Mr. Harness signed the letter of advice. These letters of advice only came before him if there was any necessity for it in intricate cases, otherwise Mr. Harness or the others might prescribe. Vigouroux and Loreau were qualified men—that is, in France; they would, of course, be unqualified practitioners here. He had resigned his position at the Medical Battery Company when summoned before the College of Physicians, but had resumed it when the College had abrogated the rule forbidding the association of their licentiates with a trading company. Mr. Harness's American diploma was hung up in his (Mr. Harness's) consulting room, where patients could see it; but he did not consider that that would lead persons to suppose that he was a duly qualified medical man. Persons who asked for Mr. Harness personally were shown into Mr. Harness.

Mr. FURBER said that, if it was the wish of the Council, Mr. Harness would attend to give evidence.

The PRESIDENT said that Mr. Furber was at liberty to call Mr. Harness to attend as a witness if he thought proper, but the Council expressed no opinion on the subject.

The further consideration of this case was then adjourned, it being understood that Mr. Furber proposed to call Mr. Harness.

Thursday, November 28th.

THE Council had under consideration the case of Mr. Alexander Lindsay, whose name was directed to be restored to the *Register*.

The case of Mr. Leeson was further continued, and Mr. Harness gave evidence. Mr. Furber addressed the Council on behalf of Mr. Leeson. Mr. Martin made some remarks on behalf of the Medical Defence Union. The Council deliberated in private, and, strangers having been readmitted, the PRESIDENT, addressing himself to Mr. Leeson, said that he had to communicate to him that the Council had, after long deliberation of his case, come to the conclusion that he had committed the offence charged against him secondly, that the offence, in the opinion of the Council, constituted infamous conduct in a professional respect; and, lastly, that the Registrar had been directed to erase his name from the *Medical Register*.

[A fuller report will be published next week.]

ROYAL HOSPITAL FOR DISEASES OF THE CHEST.

A SPECIAL court of Governors of this hospital was held at Cannon Street Hotel on Thursday afternoon. There was a very large attendance. On the motion of Lord CHARLES BRUCE, Sir JAMES WHITEHEAD took the chair. The Council submitted for consideration the statement which was epitomised in the last number of the JOURNAL, p. 1181. While letters of apology were being read several interruptions occurred, owing to demands that the meeting should be adjourned owing to the great pressure on space.—The CHAIRMAN said that up to the time he read the statement he had been under the impression that the Secretary had, to some extent, been hardly dealt with. But, after all that had taken place, it would be absolutely impossible to reinstate Mr. Austin, nor did he seek reappointment. He suggested, in the interest of peace, that there should be a conference between those who supported the action of the Secre- and the representatives of the Council.—Mr. G. BERRY expressed himself willing, in the interests of the institution, to support such a resolution.—The Earl of DERBY, who was received with cheers, said that having read the printed documents he had formed the opinion that the Council had no option but to do what they had done, as there could be no charge more serious and no imputation more mischievous than that which had been made against the staff. The Secretary had entirely failed to substantiate the allegations he had made. Lord Derby concluded by moving: "That this meeting expresses its confidence in the Council."—Mr. JONATHAN HUTCHINSON, F.R.S., in seconding the resolution, announced that he was perfectly impartial on the question. If medical men were to cease from what some called "experiments," there would be an entire end of progress in medicine. He was quite certain that the staff of the hospital would resign in the event of an adverse resolution, and that no medical men in London would take office with this Secretary.—The motion of confidence in the Council was then carried by an overwhelming majority.—Mr. G. BERRY moved: "That in the future interests of the hospital the Council be recommended to confer with six gentlemen appointed by the twenty-seven signatories to the requisition calling this meeting."—The Rev. N. J. DEVEREUX seconded, and the motion was carried with about a dozen dissentients.—A vote of thanks to the Chairman was then carried.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1889.

SUBSCRIPTIONS to the Association for 1889 became due on January 1st; and notice is hereby given, in accordance with by-law 5, that Branch Secretaries' subscription-accounts close on October 31st, and all unpaid subscriptions must be forwarded, after that date, to the General Secretary, 429, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, NOVEMBER 30TH, 1889.

DIFFICULTIES FOR DOCTORS.

IT was, perhaps, hardly to be expected that our unfriendly critics would let slip such a favourable opportunity as that which has recently been afforded them of creating "difficulties for doctors." For half a century or more members of our profession have been making use of their opportunities to learn as much as possible about the channels through which infectious diseases may be spread. As each fresh discovery has been made, they have freely given their knowledge to the public, and they have not only advised measures calculated to prevent infection, but they have personally, and often with considerable self-sacrifice, done all in their power to limit its spread. Surely our profession may claim to have done the lion's share in the work of obstructing and narrowing the channels of infection, a work which the recent enactment is intended still further to promote. Now, forsooth, because its members are not always proclaiming the measures which they think it necessary to take for the safety of others, they are accused by their enemies of selfish neglect.

It is, of course, possible that members of our profession in the discharge of their duties, public or private, may become carriers of infection, though we think it probable that many of the cases of infection formerly credited to the doctor were due to other, and at that time unrecognised, agencies. Thus, before Sir William Jenner had made clear to us the clinical and etiological differences between typhus and enteric fevers, many cases of the latter disease (which, as we now know, spreads in a very different way from the former), were accounted for on the supposition that the doctor was a possible carrier of infection. So, again, the doctor has no doubt been thought of in connection with cases of scarlet fever and small-pox, which must have owed their origin to infective milk, or may have been caused by the distant atmospheric dissemination of the particular contagia.

It would be difficult to calculate the amount of risk that people incur from the visits of doctors, but it is probably less than that incurred in travelling by public conveyances, where people are often unconsciously brought in contact with infection. Still there is some risk, and it must be guarded against. This, we believe, is done as a rule both scrupulously and effectively. Because medical men do not proclaim the precautions they think it necessary to take for the safety of others, it is absurd and wrong to infer that they take no precautions. How often has it happened that deep offence has been given by a practitioner who, when sent for to a lying-in case, has preferred to send his assistant without fully explaining why he does not himself attend? Are not such cases of apparent neglect to obey an urgent summons often easily accounted for by those who understand the need for caution, and also reticence, on the part of a trusted medical adviser, where the safety and welfare of a patient are concerned?

But, it is urged, there should be some law of the Colleges by which the practice of doctors may be regulated. It is said that if the medical profession lays down rules for the guidance of other people, it should also lay down rules for its own guidance. Now those who argue in this way probably overlook an essential difference between the two cases, namely, that of the public and that of the profession. In the one laws are made for the uninstructed; in the other it is proposed they should be made for the instructed. The absence of special knowledge in the one class of persons, and its presence in the other, makes an essential difference between the two classes.

All cases of infectious disease are not equally infective. The infectivity direct or mediate varies, and is dependent not only on the character and stage of the disease, but upon a number of circumstances with which the instructed individual is alone acquainted. It would obviously therefore be very difficult, we had almost said impossible, for the Colleges to lay down hard-and-fast rules for the guidance of their members. But the subject which we have here touched on is one which is present in the minds of those who guide their councils, and of this palpable evidence exists in the regulations recently drafted for medical students who may be admitted to infectious hospitals or wards. We feel sure that the public generally has sufficient confidence in the leaders of our profession to leave to their decision questions which it is impossible to discuss, adequately or justly, in the columns of a daily paper. We publish in another column extracts from communications which we have received from various classes of medical men highly qualified to speak by experience in consulting as well as in general practice.

THE REPORT OF LORD CAMPERDOWN'S COMMITTEE.

V.

WE have received a number of communications, some concurring with, and others dissenting from, our leading articles commenting on the recommendations of the late Committee. This was, of course, to be expected; for it is known that, with practical unanimity on a few, there is considerable divergence of opinion on many of the recommendations.

We aimed in our articles more at submitting analytical comments than pressing concrete views; for we fear that, while the report of the Committee may ameliorate or tide over, it will not settle the wants or just demands of the medical service. Nothing will apparently do that but the granting of complete departmental autonomy, and real military status and titles to the officers. This seems the only solution consistent with modern military organisation, a fact already grasped in France, and about to be acted on in Russia; it is not over-

looked even in the German army, in which, the spirit of Junkerism and caste, although rampant, is not allowed to override sound military considerations. Many of our correspondents have pointed out that the recent more autonomous and military reorganisation of the Commissariat, Ordnance, and Pay Departments, as being steps in the right direction, must lead to a similar reorganisation in the Medical Department. It cannot and will not consent to lag behind, but must be levelled up. This point will, however, have to be fought out; for the military prejudice against conceding genuine army status to the Medical Department is so strong that nothing but the sheer force of outside public opinion will probably overcome it. But such opinion wants educating, and is of slow growth in this country, and may even not move without some such breakdown as occurred in the Crimea.

While finality must be kept in view, and strenuously fought for, forward movements of all kinds must not be despised or neglected; where, therefore, the recommendations of the Committee are in advance, they should we think, be accepted and made the most of.

A correspondent of wide experience, and in present touch with the authorities, sends us some comments which, we believe, represent the views of a large number of medical officers. He thinks that while compound titles will assuredly not satisfy a large number, they will define and express the relative rank of the holder, and should, therefore, be tentatively accepted as a step towards pure military titles; instead of surgeon-captain he would prefer captain and surgeon. He thinks there should only be one examination for promotion to surgeon-major, which should include military law and organisation, and take place between the tenth and twelfth years of service. Administrative capacity depends less upon book knowledge than on personal qualities, which ought to be well gauged during twenty or thirty years' executive service. He is against the extension of age service proposed for surgeons-general, except in special cases, and is, so far, probably anticipating the outcome of the recommendation, for we hear the actuaries have reported against the extension on the score that it will really involve additional expense. He thinks the new voluntary retirement rule of three years in any rank should not be applied retrospectively to any officer now serving above the rank of surgeon. He favours the proposal to amalgamate the brigade-surgeons and deputy surgeons-general into one list, but points out that it would give rise to present financial difficulties. To meet these he would divide districts and charges into first and second class, like the district commands in India, the former to be held by seniors on the present pay of deputies, and the latter to be held by juniors at the present, or slightly increased, pay of brigade-surgeons. He would attach a surgeon to each regiment for five years, but not until he had undergone at least a year's training with his own department in a large station hospital. We would go somewhat further than this, and would not attach him until he acquired the rank of captain, if the first three years are to be spent in subaltern rank.

Passing to Mr. Bartley's dissent, our correspondent avers that that gentleman betrays either singular ignorance of the conditions of service in our army, or is very uncandid in his criticisms. In his dissent he conveniently forgets that pensions are but deferred pay, and in the medical department are coupled with a liability to be recalled to service up to a comparatively advanced age; even as it is, a considerable number of the so-called non-effectives are actually employed to the great financial advantage of the Government. It should also be remembered that while the retired list has increased in recent years, the active list has sunk from 1,100 to 800 officers.

In regard to the dissent of the three, where Mr. Bartley's name again figures, our correspondent points out that their retrograde proposal, to deprive medical officers of the limited command they possess over hospital establishments, is so utterly contrary to all modern advances in military organisation, both in our own and in foreign armies, as to demonstrate their unfitness to take an unprejudiced view of the matter.

Our chief object in this controversy, we would remind correspondents, is to let all the light possible into the subjects discussed, because we feel that the Medical Department has nothing to fear from honest criticism. Its contentions are good and legitimate, and as common sense prevails so will military prejudice, which tenaciously endeavours to prevent or limit sound medical organisation, recede and disappear.

ANATOMY AND EXAMINATIONS THEREIN.

The disposition recently shown by the Council of the Royal College of Surgeons to accede to the proposal of the General Medical Council to increase the curriculum to five years is an event of importance. The time at present required is about four years, so that it will be necessary to determine how the additional year shall be utilised; it will be debated whether the whole should be given to medicine and surgery, or a part to the preliminary subjects. Whatever may be the solution of this question, there are certain directions in which the present scope and mode of conducting examinations in anatomy require to be modified.

We may, in the first place, recall one or two elementary truths which have a bearing upon the subject. We may assume that the object of this part of a student's curriculum is not to make an anatomist, but to afford a certain kind of training, and to teach a sufficiency for the practice of medicine and surgery. That which is taught and learnt is, we regret to say, determined, not by the teacher or student, but by the examiner and by the style of the examination. With regard to the first of these propositions, it may be further remarked that examiners who are specialists in a certain branch of knowledge are very prone to examine as if the student ought to know the whole of their particular speciality. Moreover, they seem to forget that different kinds of knowledge are of very different value. This is so much the case with anatomy that, whilst it would be exceedingly hard to tell of what value some facts could be to anyone but a specialist, it is very easy indeed to say that others are absolutely essential. We have before us a great many examination papers from a number of sources, and we find questions asked upon the metacarpal bones, the minute anatomy of the cerebellum, the relations of muscles, the fibula, the particular ribs, and the like. Questions upon topographical anatomy are almost entirely absent.

Now whilst admitting that in learning all the grooves and excrescences upon a rib the faculties receive a training, we

maintain that such things as the topography of the heart, liver, spleen, kidneys, brain, and great organs generally, are infinitely more important. The last branch of knowledge is the working capital of a lifetime; the former the adornment for an examination, put off hastily as soon as the ordeal is passed. As for the training which accrues from the study of minute anatomy, it can be obtained just as well in other directions. It is notorious that after the usual anatomical examinations have been passed, the topography of the body has still to be learnt, and learnt at a time when attention has to be given to other equally important subjects. The textbooks which are used in preparing for the various examinations are a commentary upon their nature. Some of them contain no allusion whatever to the topography of the structures of which they treat, and others merely mention it in a casual and unimpressive way. It will be said that in acquiring a knowledge of the sort of anatomy required by the present examinations manipulative dexterity is acquired. Without doubt it is; but would not the investigation of the muscles, vessels, and nerves be sufficient for this without invoking the minute anatomy of the carpal bones? Next, whilst fully allowing the great importance of the acquisition of manipulative dexterity, we ask what steps are taken to ascertain that it has ever been acquired. At some of the university examinations the candidate is called upon to show his skill in dissection, but this trial is the exception rather than the rule.

So far we have been speaking of the ordinary qualifying examinations, but if we turn to the higher examinations we find the same state of things. It is the custom to speak of these as honours examinations, and therefore conclude that their style and scope are less open to criticism. But it is not to be forgotten that many of them are made a *sine quâ non* for appointments, and are therefore far from being purely honours examinations. However this may be, it seems strange that those who present themselves for the first examination for the Fellowship of the Royal College of Surgeons, and who it is assumed will ultimately be called upon to display considerable manipulative training, do not have their possession of such dexterity tested. In other respects these examinations seem admirably calculated to discover the candidate's knowledge of what is usually called "pure human anatomy." It is also the custom to introduce into some of these examinations questions bearing upon morphology and embryology. Anything which makes anatomy more scientific is to be applauded. But we note that those subjects are asked in rather an arbitrary way. At one time a question on the morphology of the ligaments of the spine is asked, or a question in embryology, and at another both those subjects are passed over in silence. This is obviously likely to lead to disappointments, and is a fault which could easily be remedied. Further, morphology and embryology make rapid advances, and knowledge seems often to be required which cannot be obtained from ordinary sources. It would be hard to say how far students should be sent to special monographs and papers, and perhaps it would be fairer if these particular branches of anatomy were scheduled. We cannot help thinking that the absence of this has something to do with the recent extraordinary number of rejections at the first fellowship examination of the Royal College of Surgeons. However, in this instance other factors are involved, and we have many complaints of the length of the papers, the shortness of the time given to them, and the extreme mental fatigue caused by having to write both papers on the same day, with only a short interval.

For the reason already given it is not enough to say that this is an honours examination, and may be taken or left; men who wish for the higher surgical appointments are compelled to present themselves for it, and would do so with greater confidence if it were improved in the direction which we have indicated. But it is with the pass examinations that we are mainly concerned, and here we think that a great deal more of topographical anatomy might well be introduced. This might be done, not by giving additional time, but by curtailing minutiæ which, to say the least, are of doubtful utility.

THE new wing of the Dover Hospital, which was built as a Jubilee memorial at a cost of £3,000, has just been opened.

THE Duke of Westminster has, as in years past, paid over to the funds of the Chester General Infirmary the sum of £500, being a portion of the money received from visitors to Eaton Hall during the past summer.

A GENERAL meeting of the Metropolitan Counties Branch has been arranged for Thursday, December 12th, to discuss the subject of hospital abuse in connection with Dr. Rentoul's resolutions.

DR. R. DOUGLAS POWELL will open a discussion at the Medical Society on Monday, December 9th, "On the Diagnosis and Treatment of Aneurysms of the Arch of the Aorta." A subsequent clinical meeting (December 26th) will be devoted chiefly to the exhibition of cases of aortic aneurysm.

THE need for a searching inquiry into the sanitary condition of the Royal Naval College at Portsmouth seems to be indicated by the occurrence of the death from typhoid fever of Sub-Lieutenant Tilley, who occupied the cabin of the late Lieutenant Wilbraham, who recently died from the same disease.

THE Royal Commission on Vaccination held a meeting on Wednesday, November 20th, Lord Herschell presiding. Dr. Thorne Thorne, assistant medical officer to the Local Government Board, was examined at considerable length as to the administration of the Vaccination Acts, this being the second stage of the labours of the Commission. They also took evidence as to lymph, Mr. A. B. Farn, examiner of lymph, and Dr. Cory, director of the animal vaccine station, Lamb's Conduit Street, giving evidence at considerable length. It is stated that the labours of the Commission are likely to extend over a further period of twelve months.

VACCINATION,

MR. STANLEY, in his letter addressed from Kafurro, speaks of a small-pox epidemic having broke out among the Manyema and their followers, the mortality of which was terrible. "Our Zanzibaris," says Mr. Stanley, "escaped this pest, however, owing to the vaccination they had undergone on board the *Madura*." Will the opponents of vaccination contend that it was nothing

more than a coincidence that the unvaccinated portion of the African explorer's band of followers was attacked by fatal small-pox, whilst the vaccinated portion, although living apparently in the midst of the infection and in the same unwholesome conditions, escaped the disease?

THE MUZZLING ORDER.

ELSEWHERE we give an account of a meeting summoned by a body calling itself the Dog Owners' Protection Association to protest against the present muzzling regulations. The muzzling regulations were, unfortunately, allowed to lapse as soon as no further case was reported—that is, in Dec., 1887; since then the disease has steadily increased. Thus, in 1887, the police killed 27 dogs proved to be rabid, and that year 2 human beings died; in 1888, 49 dogs and 3 human beings died; and the figures rose in the present year (to November) to 109 dogs and 7 human beings. As this rise was foreseen by the possessors of the higher strains of dogs in the country, these gentlemen, strongly supported by the dog owning and dog-breeding press—the *Field*, the *Stock-Keeper*, and the *Fanciers' Gazette*, etc.—aided by the Society for the Prevention of Hydrophobia, urged upon the Government the reintroduction of muzzling to prevent the increase of the disease. As everyone knows, the epidemic has already been arrested. One case only of rabies in dogs is reported as occuring in the last week. The authorities stated in August that they would keep the muzzle on till at least the end of the year. Its opponents, therefore, determined to hold an open meeting, and to pass a resolution asking Mr. Chaplin not to renew the order. The result of that meeting was very contrary to their wishes. Six-sevenths of the audience declared themselves satisfied with the excellent results achieved by the muzzle, and asked for its continuance until the disease was finally eradicated. It is to be hoped that we may hear no more of this illogical opposition to a beneficial regulation.

SURGEON PARKE, M.S.

IN the interesting letters from Mr. H. M. Stanley published this week a very high tribute is paid to the unselfish services rendered by the surgeon to the expedition. He writes: "At this time" (when Emin Pasha had finally made up his mind to return, and the transportation of the Egyptians from Wadelai had actually commenced) "the hardest-worked man in the expedition was our surgeon. Ever since leaving Fort Bodo in December Surgeon Parke attended over 100 sick daily. There were all kinds of complaints, but the most numerous, and those who gave the most trouble, were those who suffered from ulcers. So largely had these drained our medicine chests that the surgeon had nothing left for their disease but pure carbolic acid and permanganate of potash. Nevertheless, there were some wonderful recoveries during the halt of Stairs's column on the Ituri river in January. The surgeon's 'devotion'—there is not a fitter word for it—his regular attention to all the minor details of his duties, and his undoubted skill enabled me to turn out 280 able-bodied men by April 1st, sound in vital organs and limbs, and free from all blemish; whereas on February 1st it would have been difficult to have mustered 200 men in the ranks fit for service. I do not think I ever met a doctor who so loved his 'cases.' To him they were all 'interesting,' despite the odours emitted and the painfully qualmish scenes. I consider this expedition in nothing happier than in the possession of an unrivalled physician and surgeon, Dr. T. H. Parke, of the A.M.D." Surgeon Thomas Heazle Parke, on whom these high encomiums are passed, was a student of the School of the Royal College of Surgeons of Ireland, and holds diplomas from the Royal Colleges of Physicians and Surgeons in Ireland. He entered the Service in February, 1881, and served in the Egyptian War of 1882, receiving the medal and Khedive's star. He also served with the Nile Expedition of 1884-5, and was present in the action of Abu Klea and in the reconnaissance to Metammeh, for which he received two clasps.

STIMULANTS IN WORKHOUSES.

IN a recent issue we referred to an important inquiry into the opinion of Poor-law medical officers on the effects of the very remarkably decreased consumption of intoxicants in workhouses. The inquiry arose in this wise: The Chichester Board of Guardians were desirous that their charge for alcoholic liquors should be decreased, and communicated with their medical officer on the subject. He was anxious to know the effect of the diminished use in other unions, and a circular was sent to the various medical officers in England and Wales asking for replies to three questions. The first query was as to the circumstances under which alcoholic drinks were allowed. Of the 244 who replied, 75 per cent. allowed alcoholics only to the sick, 8 per cent. to the aged and infirm, 12 per cent. to the aged and for extra work, and 5 per cent. never gave any. The second query was as to how the health of the inmates who received no liquor was affected; 203 replied, 73 reporting that the health was improved, 125 that there was no difference in it, 2 that it was worse, and 3 that the sick were worse. In the third question the reporters were asked if the lives of paupers had been shortened, even by a few months; 223 responded, 19 that life has been prolonged, 160 that it has not been shortened, these two groups making over 80 per cent. of the replies; 29, or 13 per cent., are of opinion that life has been shortened, 15 (or 7 per cent.) that the lives of the sick have been shortened. It is satisfactory to learn that the great preponderance of this body of skilled opinion pronounces the withdrawal of alcoholic beverages to have been unattended by injury to the life and health of the pauper inmates, while the comfort and good order of all have been unmistakably increased.

THE RECONSTRUCTION OF THE UNIVERSITY OF LONDON.

BRIEF reference was made last week to a report on the reconstruction of the University of London, which was adopted at the last meeting of the Senate. As the action thus taken may be o great importance in its bearing on the question of degrees for London medical students, it may be as well to indicate somewhat more fully what we believe will be found to be the main new features of this new scheme, so far as it affects the medical faculty. The scheme, we anticipate, will be found to follow very closely that propounded by the Royal Commission, over which Lord Selborne presided. For instance, it will be proposed to reconstitute the Senate; the Fellows nominated by the Crown and elected by convocation would together constitute rather more than a moiety; nearly one-third would be elected by the Faculties; the remainder would be made up of the representatives of the Royal College of Physicians of London, the Royal College of Surgeons of England, the Council of Legal Education, the Incorporated Law Society, and University and King's Colleges. The most important innovation, however, is the proposal to give special privileges to constituent colleges, and the principle has been recognised that any institution giving instruction, even in only one faculty, would be eligible to become a constituent college provided that the instruction it gave in that faculty were adequate. This would of course admit all properly appointed medical schools. The powers given to constituent colleges would include the election of representatives to form the various faculties; and these faculties would have an important place in the life of the University, inasmuch as they would have the privilege of appointing, as has been already noted, members to represent them on the Senate, and also members of the several boards of studies. A still more striking

innovation, however, has, we understand, been proposed by this scheme, this is, to admit as matriculated students of the University students of constituent colleges who fulfil certain conditions. One of these conditions, which would require a student to pass an examination in the subjects of the matriculation examination within the colleges, will not be objected to, but the other, which would require him to have previously spent a year in attending lectures at the college, is sure to encounter much opposition. It certainly seems to be opposed to the idea of matriculation, and to the whole tendency of the modern movement which has, for instance, given special privileges to students passing the Cambridge Higher Local examination. The complaint that the preliminary scientific examination of the University forms a barrier of undue difficulty will probably be met by proposing to accept the examinations of the Conjoint Board in the subjects of that examination. As to the later examinations, we believe that no definite proposal has yet been made, probably owing to the conviction that this part of the scheme can only be settled after conference with the representatives of the two Royal Colleges.

MEAT POISON.

A NUMBER of cases of illness have occurred in West Retford, the cause of which has been distinctly traced to the eating of pickled pork. Four families, including about a dozen persons, have been affected. From authentic particulars which have reached us, we learn that the symptoms, which consisted in the main of sickness and diarrhœa, were similar in all cases, but in some more violent than in others. In nearly all the cases, Dr. Pritchard informs us, there was great pain in the head and body, and fever, followed in two or three days by stiffness in back of the neck. In one family the husband, wife, and one child were affected, but the other child, who did not partake, showed no such symptoms. In a second, the three inmates of the house, all of whom ate some of the souse, were affected in a like way. In a third, husband and wife, servant girl and apprentice all suffered, the latter rather alarmingly. In a fourth, the head of the household only was affected. Dr. Pritchard says there is no evidence of the pigs being diseased, as several persons partook of the pork and did not suffer. To all appearance the flesh looked healthy, both to the naked eye and under the microscope. It is curious, he points out, that a mould of brawn, said to have been made from the same pork, was eaten and produced no bad symptoms; and in one house, where five persons partook of it, four were affected and one did not suffer in the least. This looks as if the poison had crept into the brawn in the process of making. The matter is now being further investigated by the medical department of the Local Government Board.

THE SUPPRESSION OF QUACKERY.

ONE method of suppressing an evil is sometimes to license it, and this is the plan which is adopted in some of the western cities in the United States. The following regulations are in force in, at any rate, one important city: Any person shall be regarded as practising medicine within the meaning of this Act who shall profess publicly to be a physician, and to prescribe for the sick, or who shall append to his name the letters M.D. Any itinerant vendor of any drug, nostrum, ointment, or appliance of any kind intended for the treatment of injury or disease, or who shall by writing or printing, or any other method publicly profess to cure or treat disease, injuries, or deformities by any drug, nostrum, manipulation, or expedient, shall pay to the State a licence of 100 dollars per month, to be collected as provided for by law, as all other licences are now collected, and any person violating the provisions of this section shall be deemed guilty of a misdemeanour, and upon conviction thereof shall be punished by a fine not to exceed 500 dollars, or by imprisonment in the county jail not to exceed six months, or by both such fine and imprisonment. Any person practising medicine or surgery in this State without complying with the provisions of this Act shall be guilty of a misdemeanour, and be punished by a fine of not less than 50 dollars, nor more than 500 dollars, or by imprisonment in the county jail for a period of not less than 30 days, nor more than 365 days, or by both such fine and imprisonment for each and every offence. In one sense this no doubt is a form of protection for a particular class, and as such is distasteful to our ideas, but it is at the same time a very real protection to the public, safeguarding them against ignorant and impudent pretenders, and in this sense is much to be commended.

SOMNAL AND PHENYLURETHAN.

IN the *Zeitschrift des Apotheker-Vereines* of November 10th, 1889, is a notice of a new hypnotic introduced by Herr Radlauer, of Berlin, to which he has given the name of somnal. This body is formed by the union of chloral, alcohol, and urethan; it is a true chemical combination, and differs from the already known compound chloralurethan by the addition of $C_2 H_4$. It occurs in clear colourless crystals, which have a slightly bitter taste, and are very soluble in water and alcohol. It is given in 2-gramme doses, and in half an hour after its administration a sound natural sleep is produced, which lasts from six to eight hours, and the patient experiences no unpleasant effects upon awakening. It does not derange the digestion, and has no influence upon the pulse or temperature. In fact, it combines the excellent qualities of chloral and urethan without any of their unpleasant effects. It is already in use in the hospitals of Berlin and Moscow, and appears to have given satisfaction. In the same journal is also a note upon a new antipyretic, antirheumatic, and analgesic, which has been introduced to the notice of the Turin Academy of Medicine by Professor Guaconnini, under the name of phenylurethan. It is a product derived from the aromatic group of carbon compounds; it is a white crystalline powder, insoluble in water, but very easily dissolved by concentrated alcohol. According to the professor, this phenylurethan is an energetic and safe antipyretic, while at the same time it operates in a pleasant manner. In doses of 0.5 gramme it produces a fall of temperature from one to three degrees, which lasts nine to twelve hours. It acts in a similar manner as other antipyretics in effecting the lowering of the temperature, but it has a special action upon the skin, producing profuse sweating. The temperature is lowered in twenty to forty minutes after the administration, and no unpleasant results follow. Phenylurethan is also asserted to be a safe and powerful remedy for chronic articular rheumatism; it relieves the pain and reduces the swelling of the joint. To produce this effect, a greater dose than 0.5 gramme is not required.

BABY-FARMING.

DURING the last week two cases of baby-farming have been brought to light, and in both instances it was stated that the children were the offspring of women of some position in life. In the first case, at Southport, the baby-farmer was charged under the Act for the Prevention of Cruelty to Children. It was stated in evidence that last June she had three illegitimate children in her charge, two being daughters of a lady of considerable means, and the other the son of the same lady's servant. Two of the children had died, and had been buried; the other was extremely emaciated. The woman, before the magistrate, stated that the mother asked her to let the infants die. She was remanded, and an application is to be made to have the bodies exhumed. A good deal of mystery attached to the other case, which was said to be the illegitimate child of a domestic servant, but the mother was believed to be a person in a good position. She came from the country to be confined in Kennington Lane. The infant was taken to a baby-farm kept by a Mrs. Short, at 56, Bloomfield

Street, Bromley, where it shortly died. Mr. Wynne Baxter, who held the inquest on it, stated that he had that week held an inquest on another infant that died in this baby-farm, and the woman stated that she had at the present time two more children in her charge. She was registered when living at Poplar and Romford, but, like others in this trade, she avoided the authorities by moving from place to place. It would be advisable for the County Council of London or Kent, in whichever district Bromley is included, to look after Mrs. Short, and inquire into the practice of the monthly nurse who, it would seem, supplies Mrs. Short with babies for her farm.

MATRONS AT FEVER HOSPITALS.

DR. BRIDGES, of the Local Government Board, has lately addressed Sir E. Galsworthy, Chairman of the Metropolitan Asylums Board, on the qualifications of matrons at fever hospitals. Dr. Bridges lays down three principles bearing on the government and discipline of the nursing staff of the general hospitals, as well as the Poor-law infirmaries of London, which, he says, are all but universally recognised by the authorities as essential to hospital management. They are as follows:

1. A trained nursing staff should be placed, both in the wards of the hospital and, when off duty, under the superintendence of a highly qualified officer of their own sex. 2. Their subordination to such an officer need not, and in practice does not, in any way interfere with their implicit obedience to the directions of the medical staff in the treatment of the patients. 3. Subordination to a matron is never willingly conceded by a nursing staff unless the matron herself possesses the skill and experience of a nurse. When this is not the case, the nurses may, no doubt, comply with such orders as she may give for their behaviour when off duty; but she will not have that moral ascendency over them which is so essential to the training and discipline of a well-ordered staff.

It is known that the members of the Asylums Board are considering the expediency of admitting students of medicine to their hospitals. There is every reason to expect that before long these hospitals will cease to be closed to those who desire to gain practical knowledge in a class of diseases with which, as general practitioners, they will have much to do. It is, therefore, more than ever necessary that the nursing staff should be under a system of government and discipline at least as good as that which obtains in the general hospitals of London. We think that the letter of Dr. Bridges is specially opportune, and we trust that, when the subject is discussed by the Board, due weight will be given to his opinions, for his experience in the nursing administration of infirmaries and hospitals is unique.

SACCHARIN IN CYSTITIS.

SACCHARIN, which has a strong acid reaction, and is secreted unchanged by the kidneys, is strongly recommended by Dr. Andrew H. Smith [1] in the treatment of cystitis. He was led to use it by the expectation that it would render the urine acid, but its favourable action may be in part due to its antiseptic quality. The dose used was a "few grains three times a day;" this was given to a boy with transverse myelitis; his urine, which was drawn off with the catheter, was ammoniacal and very offensive. After the administration of saccharin was commenced the reaction of the urine became acid, the offensive odour disappeared, the bladder irritability was diminished, and the formation of pus decreased.

THE CURE OF EPILEPSY.

SOME two or three years ago a committee was appointed by the Neurological Society of New York to investigate the method of curing epilepsy and chorea advocated by Dr. George T. Stevens He had made a very interesting communication to the Society, in which he claimed that a large number of cases of epilepsy, chorea and even some cases of insanity, were dependent upon a want of parallelism between the eyes in the vertical plane, and could be cured by an operation upon the superior and inferior recti. The committee had reported a considerable number of instances in which improvement occurred, but not a single case of cure. Dr. Stevens protests against the report of the committee as being premature, and maintains that the inquiry has not been properly conducted. The report is likely to be discussed at length by the Society.

[1] *New York Medical Record*, November 16th, p. 541.

PROFESSOR HUMPHRY ON MEDICAL EDUCATION.

SPEAKING at the recent opening of the new hall of Cavendish College, Cambridge, Professor Humphry, in proposing the toast of "The Visitors," related some passages from his own personal experience. It was well known that not many affluent persons aspired to the medical profession, being aware that the work was always hard and the remuneration commonly low. In his own case the family resources were strained to send his elder brother to Cambridge. He himself could not be allowed that advantage. At the age of 16 he was taken from school and placed as an apprentice for three years to a surgeon at Norwich. The time thus spent proved most valuable; but, like many other good things, the apprentice system had passed away, and the question thus arose, What was to be done with students in the interval between the time when school life might well terminate and the time when regular professional study might well be entered upon? Now, Cavendish College seemed to solve this difficulty. Entering the College at 16 or 17, the student might continue his general education and commence his preliminary professional studies and at the same time enjoy the advantages of university association and training, and ultimately obtain the university degrees. His own experience was that, among all the members of his class in lecture and at Addenbrooke's Hospital, none were more diligent, or more intelligent, than the students of Cavendish College. One who had commenced his professional education there had recently been elected Professor of Physiology at Dundee; another had just passed the examinations in medicine and surgery and in State medicine at an earlier period, he believed, than had hitherto been done. Moreover, in the medical examinations the Cavendish students had acquitted themselves as well as those of other colleges. The distance of the College from the centre of the university was felt by some as a disadvantage; but this was counterbalanced by the salubrity of its position.

EXECUTION BY ELECTRICITY.

THE first convict condemned to be put to death by electricity in the State of New York has appealed against his sentence, on the ground that the law was unconstitutional. The Constitution of the United States provides against cruel and inhuman punishment. The County Judge held that the law was constitutional, on the ground that he had no judicial knowledge that the punishment of death by electricity was cruel and unusual. The case will now be heard by the Court of Appeal. Meanwhile, about a dozen persons are confined in various gaols awaiting trial for murder, who will not be tried until the Appeal Court gives its decision, for the Attorney-General is in a curious dilemma. The new execution law enacted that, after the beginning of 1889, a crime punishable by death must be punished by the lethal electric current; if this law were held to be unconstitutional, then any person sentenced under it would escape punishment altogether. Accidental death from coming in contact with wires carrying the powerful electric currents now used for lighting and other purposes are becoming more frequent. In New York two men were thus killed within three days, and the Mayor was compelled by the force of public opinion to issue a peremptory order that all

dangerous wires should be removed. Hitherto all or nearly all the men killed have been employed in manipulating the electric light wires themselves, but the last man thus killed was in the employment of a telegraph company; he was engaged in repairing some telegraph wires attached to a pole on which there was no electric light wire, and it is supposed that the wires of an illuminating company, imperfectly insulated, must have been in contact with the telegraph wires.

THE DRAINAGE AND VENTILATION OF OUR PUBLIC BUILDINGS.

From time to time Members of Parliament have loudly complained of the smells and foul atmosphere of the House of Commons. At the dinner recently given by the Plumbers' Company, the President of the Local Government Board declared himself to be powerless to enforce a remedy for a state of things which, according to his own account, greatly needs improvement. Similar complaints have lately come from another quarter, which we may describe as influential. On Monday last Lord Justice Bowen and Lord Justice Fry made some very strong observations on the systematic administration of foul air to the courts. The Court of Appeal has had to suspend its sittings in consequence of the indisposition of one of the learned judges, which, we believe, is attributed to the foul air of the court. We trust that the Government will at once cause an official report to be made on the drainage and ventilation of our law courts and other public buildings which are outside the control of local authorities, and about which serious complaints are made. Such a report should be prepared by very highly competent persons, and it appears to us that a small committee of independent experts might be appointed for the purpose. But while advocating this course, we desire to point out that what is needed, even more than the remedy of existing evils in the construction and arrangement of our public buildings, is their prevention in the future. At present we have no adequate security that other public buildings may not be erected with faults of construction and workmanship which at the present day ought never to be permitted.

FORCIBLE FLEXION IN LOCOMOTOR ATAXY.

Dr. P. Bonuzzi has recently suggested forcible flexion of the spine as a substitute for suspension in locomotor ataxy.[1] From experiments made on the dead body he concludes that in suspension the relations of the spinal cord to the vertebral column are somewhat altered, the former being displaced upwards to the extent of from 3 to 4 millimètres, while the vertebral column is lengthened to the extent of from $1\frac{1}{2}$ to 3 centimètres. This elongation, however, is more apparent than real, consisting as it does more in the separation of the spinous processes than of the bodies of the vertebræ. The roots of the nerves, though displaced to a certain extent, do not seem to be appreciably stretched, with the exception of the cauda equina, but there is an increase in the tension of the cerebro-spinal fluid. The body as a whole is lengthened during suspension to the extent of from 2 to 3 centimètres. Dr. Bonuzzi thinks the good effect of suspension depends on the traction which is thereby applied to the cauda equina, and through it to the whole spinal cord. He maintains that the same effects are produced in a more marked degree by forcible forward flexion of the body with the knees pressed up on the abdomen. By experiments on the dead body Dr. Bonuzzi claims to have proved that in this way a needle run into the spinal cord (the vertebral canal having first been laid open) was drawn downwards for a distance of from 8 to 12 millimètres, the cord being at the same time made thinner and more resistant, and the cauda equina very tense. The apparent lengthening of the vertebral column was from 6 to 14 centimètres. When the body was forcibly bent forward there was a large outflow of venous blood from the opening in the vertebral canal, showing, according to Dr. Bonuzzi, that there was great pressure on the venous plexuses of the cord. The method has as yet been tried only once on the living subject. The patient was a woman who had suffered from ataxy for nine years, all the characteristic features of the disease being strongly marked. Flexion was kept up at first for half a minute, the length of time being gradually increased to three minutes. The sittings took place on alternate days, and the manœuvre was carried out two or three times on each occasion. After three sittings there was marked improvement, and after eight the symptoms almost entirely disappeared. The woman could walk about and attend to her household duties; she was able to carry a pail of water from room to room, a thing she had not been able to do for three years, and she could stand with her eyes shut for half a minute without falling. Knee-jerk did not return, but otherwise the improvement was progressive and permanent. The method has, at any rate, the method of simplicity, as no apparatus is required beyond a towel loosely twisted round the ankles, by which the lowe extremities are pulled up while the patient is lying on his back.

[1] Congress of the Italian Medical Association held at Padua, September, 1889.

THE DRESSING-ROOMS OF THEATRES.

The dark, dirty, and unventilated condition of the dressing-rooms of many theatres—more especially the provincial ones—has recently been the subject of complaint in a morning newspaper. There is reason to believe that the recent deaths from enteric fever of one or two actors touring in the provinces may not be unconnected with the insanitary condition of the rooms in which they "change" or "make up" before appearing on the stage. The direct connection of the waste-pipes from lavatory basins with drains or soil-pipes is often a ready means of laying on sewer air to these parts of the theatre, and the absence of any proper means of introducing fresh air and the near proximity of water-closets in dark unventilated corners help to intensify the evil. Already very much has been done for the comfort and safety of the audiences in theatres, and in London, under the stringent regulations of the County Council, even the oldest and worst-designed theatres will perforce become safe and commodious; but the companies—the actors and actresses—have been left to take care of themselves, and in all that pertains to their accommodation are practically at the mercy of the proprietors or management. It is no doubt often a matter of extreme difficulty, in the old style of theatres, to effect the structural alterations that will convert the dingy boxes of dressing-rooms into comfortable apartments, and the space at command for this purpose in the stage portion is usually very inadequate; still, much could be done to improve unhealthy conditions by trapping and disconnecting waste-pipes, and by ventilating drains and soil-pipes. Some means can always be found to improve the drainage of such places, and the question of expense should not be allowed to stand in the way of removing a source of ill-health from the workers in a profesison which is, under the most favourable circumstances, arduous and exhausting.

THE SANITARY STATE OF OUR BOARD SCHOOLS.

The need for the independent inspection of public buildings, especially with regard to drainage, either by the authority of the Government or that of a central sanitary board, is well exemplified by the recent discoveries of the disgraceful condition of some of our Board schools. At some of the schools in London it is reported that there have been numerous cases of infectious sore throat, and it cannot be doubted that drainage defects such as those which have been discovered at some of the comparatively newly-erected schools are fruitful causes of this and other kinds of illness. It is questionable whether the policy of "accepting

the most favourable price" is always to be commended on public grounds. But if such a policy is pursued, it necessitates the employment of very superior and entirely independent officers to test the work of the contractors. Faulty arrangements and bad workmanship in the construction of our public buildings are, in the end, most costly to those who pay rates and taxes, for they lead to a great deal of preventable illness, and eventually necessitate the expenditure of very heavy sums of public money for the remedy of evils which, in the existing state of our knowledge, it is quite possible to prevent entirely.

CANING ON THE HEAD AT SCHOOL.

CORPORAL punishment in school is sometimes necessary to the maintenance of discipline, and, when duly administered without display of passion, it has frequently been supported by legal decisions against the charge of assault. To strike a boy on the head with a cane, however, is most reprehensible; such an act on the part of any teacher displays a want of self-control, an absence of the dignity of a true teacher, and a callousness to the serious results which may follow. In a case recently reported in a daily paper, it is said that a boy, aged 11, complained to his mother that his head hurt him where his master at school had struck him with his cane. A doctor was called in, and said the child was suffering from congestion of the brain; eventually blood-poisoning set in, and the boy died. No account is given of an inquest being held, as should have been done, if in the doctor's opinion death was caused or hastened by a blow on the head. Speaking on the facts as stated, we take the opportunity to urge the utter impropriety of striking any child on the head. The dangers are well known; a box on the ear may rupture the tympanic membrane; a blow, though insufficient to fracture the skull, may set up inflammation, and other evils may result. The trunk and legs are the parts most suitable for the purposes of disciplinary castigation. It is to be hoped that such cases do not often occur; when a blow is given on the head the teacher may well be held responsible for any evils which follow.

PROSECUTION OF SLUM OWNERS.

A SOMEWHAT novel method of procedure against the owners of insanitary property has recently been tried in East London. At several of the police courts summonses have been applied for on behalf of private persons acting as the complainants. This they are enabled to do by Section 13 of the Nuisances Removal and Diseases Prevention Act, 1860 (23 and 24 Vict., Cap. 77), which provides that "upon complaint before a justice of the peace by any inhabitant of any parish or place of the existence of any nuisance on any private premises in the same parish or place," such justice shall issue a summons upon the owner or occupier of the premises in question, and inquire into such complaint and act in relation thereto, as if the complaint were made by the local authority. The magistrates before whom these cases have appeared seem to be quite willing to exercise the very considerable powers with which they are invested; and in one case the magistrate consented to amend the summons which was technically bad, as the complainant was not an inhabitant of the parish in which the nuisance existed, and inserted instead the name of one of the occupiers of the house, who was called as a witness. There seems, indeed, to be no better method of calling attention to the disgraceful condition of some London slums than to prosecute the owners of the filthy and rotten tenements which serve as dwellings for the lowest and poorest classes. If the vestries will not take the matter in hand, philanthropy, in the person of private individuals or charitable societies, must step in to fill the gap. It may happen that the unfortunate tenants of the implicated houses gain little or no benefit from the action taken on their behalf, for if the nuisance proved to exist is such as to render the house unfit for human habitation, the magistrate can make an order to close it, the effect of which is, of course, merely to displace the tenants, who probably crowd into other tenements equally bad, or even worse than those they have left. Still, this is no reason for leaving things in *statu quo*. The crusade should be carried on until the dens that now serve as human resting places are no longer to be found, when the slum dwellers—who are now as a rule content with their wretched surroundings—will be compelled to alter their habits and mode of life to the extent necessary to make them acceptable tenants of improved dwellings. The question of rent is as nothing when compared with the necessity for acquiring cleanly and decent habits. It is a mistake to suppose that the slums are cheap; they are often dearer than the same accommodation to be found in better class houses or model dwellings. The degraded classes swarm into the slums for the licence and liberty of action which they can obtain only there. To destroy London's rookeries, and to erect cheap but decent dwellings on the cleared areas, is the only way to effect that social amelioration and moral elevation that all who know anything of the lowest stratum of society see to be so greatly needed. The necessity for such measures appears now to be recognised even by the London vestries, which some few years ago, according to the Report of the Royal Commission on the Housing of the Working Classes, were notoriously lax in tolerating insanitary dwellings. For example, the St. Pancras Vestry, in reporting to the County Council on insanitary houses and neglect of landlords, declares that it is expedient ruthlessly to order the demolition of buildings, whenever they had been allowed by owners, lessees, sub-lessees, sub-sub-lessees, house farmers, and other "sweaters," to become unfit for habitation. "It would be a drastic remedy," so reads the report, "but not undeserved after the continual warnings of twenty-one years." There is one other aspect of this question that deserves notice. The hearing of these cases in police courts occupies time, which is necessarily withdrawn from the consideration of the ordinary routine work of the court. The local authorities have before now complained of the delay and expense that arise from conducting prosecutions in police courts, owing to the crowded state of the business. It is a matter for the serious consideration of those who are engaged in drafting the Bill for consolidating and amending metropolitan sanitary law whether special courts should not be constituted for hearing nuisance and sanitary cases, presided over by men versed equally in sanitary science and law, and by whose decisions litigants would be content to abide, instead of, as now, appealing from magisterial decisions, and dragging cases from court to court. It is surely time that sanitary and criminal law should be definitely separated from each other, and no longer dispensed from the same fount of justice.

THE EARLY DIAGNOSIS OF INFECTIOUS DISEASES.

AN action for damages, which are laid at £10,000, has been brought by a young man against the city of Philadelphia under rather peculiar circumstances. He was admitted into the Municipal Hospital under the impression that he was suffering from small-pox, and was placed in a ward with small-pox patients. An hour and a half after admission he was seen by the surgeon-in-chief, who seems to have then had some doubts about the nature of the rash. On the following day, however, there was no longer any doubt that the man was suffering from measles and not small-pox. No facilities, it would appear, existed for isolating him from the small-pox patients, though it may be doubted whether such isolation would have been of any use after so many hours' exposure. He was vaccinated without result. He subsequently developed hæmorrhagic small-pox, which was followed by extensive paralysis; altogether he was in the hospital over four months. He founds his claim for heavy damages on the ground

that he was crippled for life. The case illustrates very well a difficulty in which medical officers of fever hospitals are often placed; thus, to quote only two recent instances, Dr. R. D. R. Sweeting, in his report on the Western Hospital of the Metropolitan Asylums Board for 1887, states that 21 cases of measles (and rötheln) had been admitted during the year, 13 certified as scarlet fever and 8 as enteric fever; again, Dr. R. A. Birdwood, in his report on the Small-pox Hospital Ships for 1888, states that 4 patients, not suffering from small-pox, had been admitted on mistaken diagnoses; the diseases they were actually suffering from were scarlatina, syphilis, eczema, and ecthyma. It is needless to multiply instances, especially as a good deal has recently been written on the subject in this country in connection with the question of defective practical education. There is, no doubt, however, that the early diagnosis in some cases is more difficult than some who have taken part in this controversy have been disposed to admit, and that mistakes are occasionally made by the most experienced. Of the truth of this, an examination of the statistics of the London Fever Hospital would, we believe, afford indisputable evidence. Probably, if the Metropolitan Asylums Board were to admit measles, a still larger number of mistakes would have to be chronicled.

REGISTERED PLUMBERS.

THE movement for the education, examination, and registration of plumbers, which took origin in this Association at the Liverpool meeting, and was subsequently taken up by the National Health Society, and is now being ably worked at the instance of Mr. W. R. E. Coles, by the Plumbers' Company, has achieved considerable proportions, and promises to arrive at the position of a recognised reform, subject to legislative sanction. The general principles on which the movement is based are well known and highly approved by the great body of medical men, inasmuch as it aims at providing a class of plumbers who shall have been duly educated, specially examined, and entered upon the register which will certify their fitness for good work, and from which they can be removed if due cause be shown. At a largely attended dinner given by the Plumbers' Company in Fishmongers' Hall this week, the mayors of a great number of provincial towns were present, testifying to the success with which the movement has been organised throughout Great Britain. The Lord Mayor of London, the President of the Local Government Board, Sir Hugh Owen, Sir Douglas Galton, the President of the Society of Architects, Mr. Mundella, Sir Philip Magnus, and a great number of other eminent practical authorities attended. Among the medical men present were Sir Spencer Wells, Dr. Bridgwater (President of the Council of the British Medical Association), Mr. Ernest Hart (the father of the scheme of examination and registration), and Dr. Ewart (Chairman of the Sanitary Committee, Brighton). In the report of the progress made, the Chairman stated that twenty-six counties are now covered by the organisation, and the hope was expressed that the system of registration, which was now voluntary, would, at a later date, receive legislative sanction and extended powers, in order that all plumbers might come under its operation. Mr. Ritchie expressed a favourable opinion both of the work done and of the prospects of parliamentary assent to the completion of Mr. Hart's original scheme by creating a parliamentary register and examining boards acting under the sanction of an Act of Parliament, with power to remove unworthy persons from the registers ultimately formed. The banquet, which was attended by nearly three hundred persons, was a very brilliant one, and the universal approval with which the project is now received augurs well for its ultimate complete success, which can hardly fail to be attended with considerable public benefit. Great credit is due to Mr. Coles for the tact, ability, and devotion which he has shown in creating the extensive voluntary organisation which now exists, and which is already producing excellent results. The Plumbers' Company have shown wisdom, liberality, and largeness of view in the wide extension which they have given to the movement, and in the tact and good sense with which every difficulty has been met thus far, and every obstacle overcome. No one in future need employ a plumber who cannot show his certificate of registration. This may be a useful hint to medical men as householders and sanitary advisers, as well as to health officers, sanitary inspectors, and architects. A bad plumber is one of the worst enemies of mankind; a good plumber is a valuable and useful servant of sanitation. The recent disclosures of the infamous plumbing of some of the schools of the London School Board, and the sad results that have followed; Mr. Ritchie's painful confession that he was unable at present to secure even decent sanitation in the rooms which he occupies in the House of Commons owing to bad plumbing; Mr. Mundella's reference to the Foreign Office and India Office, which, after an expenditure of £250,000 on the building, were found to be uninhabitable from the badness of the drainage and sanitary apparatus, and to require a further outlay of £40,000 to set these difficulties right, are so many instances of the shocking neglect of architects of the principles of sanitary construction, and of the small attention paid by these gentlemen either to drainage, plumbing, or ventilation. The Secretary of the Society of Architects made a curiously feeble apology for his body. In this direction, possibly, the lesson may not be lost.

LARVÆ OF FLIES IN THE NASAL FOSSÆ.

AN interesting example of this accident, which is not uncommon in tropical countries, has recently been reported by Dr. Joaquin L. Jacobsen, of Havana.[1] A labourer, aged 27, was admitted to the Civic Hospital of that city, suffering from very offensive discharge from the nose, with intense itching and burning in the part, which had lasted for two months. He had several times noticed on blowing his nose that the mucus contained living maggots, and on one occasion a small blue fly had come out of his nose. His voice was thick and nasal, so as to make his speech scarcely intelligible. The mucous membrane lining the nasal fossæ was bathed in pus, uniformly congested and ulcerated here and there. There was an irregular perforation, one centimètre and a half in diameter, in the arch of the palate, making a wide communication between the nasal passages and the mouth. The edges were sharp cut and covered with pus. The treatment consisted at first of irrigation three times a day with carbolised water (1 per cent.); after the second day irrigations of benzine were used twice a day, but from the fifth day onwards, when all the larvæ had been got rid of, only the carbolised water was employed. Some of the larvæ were expelled on the third, and the remainder, amounting to about twenty, on the following day. The larvæ were those of the *lucilia hominivora* (Coquerel), which is the most common species of fly in Cuba. The teeming fly seeking for some suitable place to deposit its ova makes choice for that purpose of the nostrils of someone lying asleep in the open air. It is said that the presence of ozæna or of a foul smell of any kind is a powerful attraction to the fly. Dr. Jacobsen states that his colleague, Dr. Raimundo Menocal, had sixteen cases of the kind between 1879 and 1883, all in convicts working and taking their midday *siesta* in the fields. Other cases had come under the notice of Drs. Quesada, Mendez, and Castañeda. The symptoms were excessive irritation within the nasal fossæ, epistaxis, œdema, perforation of the dorsum of the nose and occasionally perforation of the palate. In one of Dr. Menocal's cases, death occurred after four days from acute encephalitis. At the necropsy the interior of the nose was ulcerated, the septum was destroyed at its upper part, the cribriform plate of the ethmoid was perforated, there

[1] *Revista de Ciencias Medicas*, October 5th.

was meningitis of the base, and a large abscess in the brain, occupying almost the whole of the anterior lobes. In another case observed by Dr. Quesada, the patient died with well-marked cerebral symptoms. In the West Indies, where larvæ in the nose and in the ear are tolerably frequent, the insufflation of calomel is regarded as a specific, and in Mexico, where possibly more cases occur than anywhere else, the injection of pure chloroform is the remedy most relied on.

SALPINGOSTOMY.

Dr. Skutsch has practised a new gynæcological operation. Since the introduction and general diffusion of salpingotomy as an operation recognised and justifiable, at least, in prudently selected cases, many have suggested that at least an attempt might be made to save the diseased tube after opening its occluded cavity and freeing it from adhesions. Practice has shown that the danger of meddling with the affected parts in such a manner, and then closing the abdominal wound, is fraught with risk. Dr. Skutsch proceeds in a systematic manner to conservative ends, or, at least, did so in one case. The patient was sterile and aged 28. She suffered from pelvic pains, and it is stated Dr. Skutsch diagnosed obstruction and dilatation of both tubes. This diagnosis was confirmed by abdominal section. A Pravaz syringe was employed in order to puncture each tube and ascertain its contents. As clear yellow serum was drawn away the operator determined to save the tubes. An oval piece, about one square centimètre in size, was cut out of the outer end of each tube, and the mucous and serous coats united by fine silk sutures around the border of the hole thus formed. A sound was then easily passed from the tube into the uterine cavity on both sides. The patient made a good recovery, and was relieved of her pains, but a long after-history is not given. Dr. Skutsch calls this proceeding "salpingostomy." In some cases of pyosalpinx it would be advisable, he thinks, to sew the ends of the tubes to the abdominal wound, to open them and allow them to discharge pus externally. When the discharge ceased to be purulent the tubes might be freed from their artificial attachments and replaced in the pelvis. Dr. Skutsch's paper was read before the congress of the German Gynæcological Society in June.

VARICOCELE IN THE FEMALE.

The profession is becoming more and more scientific, and this fact applies especially to gynæcology. To speak of "irritable womb" or "spinal irritation" as explanatory of obscure pelvic symptoms was once considered rational, but the man who would employ such phraseology in these days would be branded as a quack. The speciality in question is now more frequently charged with over-zeal in radical operations than accused of veiling ignorance in mystery. Nevertheless, what ignorance once did may be initiated by superficial scientific knowledge. Much pathological and anatomical work has been carried on during the past twenty years in the province of gynæcology. The good results of such work are well known, but it has likewise led to fallacies. A love of homology, a prime factor in science, has been sometimes misapplied in clinical and pathological matters. A study of the opinions of certain authors on varicocele in the female will show the truth of this source of error. Dwelling upon the fact that the ovarian and spermatic plexuses are homologous, some writers have endeavoured to make out the existence of a varicocele in woman almost identical with the well-known disease which bears that name in man. Love of homology has caused them to overlook the great difference between the ovaries deep in the pelvic cavity and the testicles pendent and external to the trunk. Dr. H. C. Coe, of New York, has treated the subject in an able manner. He has shown that, even when it exists, varicosity of the ovarian plexus cannot be compared with the same affection of the homologous structures in man, nor can the subjective symptoms, lumbar pain, etc., of varicocele in the male be held to imply the same disease in woman. The commonest forms of uterine and ovarian disturbance often give rise to precisely the same painful or disagreeable sensations as are experienced by men subject to varicosity of the veins of the spermatic cord, yet the ovarian veins are by no means necessarily dilated.

PLASTIC OPERATION ON A CANCEROUS LOWER LIP.

Dr. Tripier some years ago recommended that, after the removal of an epithelioma of the lower lip, a plastic operation should be performed to avoid deformity as much as possible. This operation consisted in dissecting up a bridge of mucous membrane, and fixing it by suture over the raw surface left after removal of the cancer. Dr. Imbert, in a communication on the subject in the *Revue de Chirurgie*, states that, since 1883, this plastic operation has been performed forty-six times. In the first and second the bridge of mucous membrane sloughed, in two others local recurrence of the cancer, before the parts had healed, spoilt the operation. The remaining forty-two healed well. In twenty-four of these cases the disease had involved only the free border of the lower lip; in eight, one of the commissures was involved, and covered by the bridge. In ten a cutaneous flap was also made, after a plan recommended by Langenbeck, Volkmann, and Trélat.

THE ANGLE OF THE NECK OF THE FEMUR.

In textbooks on human anatomy we are taught that the angle formed by the neck of the femur with the shaft becomes lessened as years advance, the level of the head of the bone being consequently lowered. Professor Humphry has shown that this theory is inaccurate. After careful observations, recorded in the *Journal of Anatomy and Physiology*, he has come to the conclusion that the angle formed by the neck of the thigh bone with the shaft varies considerably in different persons at any given period of life. It is smaller in short than in long bones, and it is also most likely to be small when the pelvis is wide; the combination of these two conditions rendering it usually smaller in women than in men. The angle decreases during the period of growth, but after growth has been completed it does not usually undergo any change, even if life be continued to extreme old age. Some change may take place in exceptional cases, but as a rule the angle remains the same from the adult period till death, at whatever age death may occur. If, during growth, the limb be relieved of the weight of the body, as in the bedridden state, in paralysis, or in a stump, the angle of the neck with the shaft usually retains the open form of early life, or may even become wider. Professor Humphry's conclusions will interest the surgeon, and must never be overlooked in cases where the age of a subject at death has to be estimated by examination of the thigh bone.

ADHERENT OMENTUM.

Several authorities have observed that in the course of operations for the removal of the uterine appendages the omental adhesions are often found to be very extensive and troublesome. The omentum may adhere to the parietes, the bladder, the intestines, the uterus, or the appendages. In rare cases it draws the tube and ovary upwards high out of the pelvic cavity. As a rule, however, the omentum is drawn downwards by its adhesions, pulling after it the transverse colon, the stomach, and the coils of small intestine to which it adheres. This condition cannot fail to cause much local trouble. Certain operators have found that, after very careful removal of inflamed ovaries and cystic tubes, the surrounding parts being disturbed as little as possible, the patients often suffer as much pain and discomfort after convalescence as

before the operation. On the other hand, in similar cases where the ovaries and tubes are found too adherent to neighbouring structures to allow of removal without great risk, the patient is often permanently cured of the pain and gastric and intestinal trouble for which she sought relief. The "exploratory operation" has proved a cure, not by the faith of the patient who feels sure that an operation will cure her, but by the breaking down of troublesome omental adhesions. In the *Hospitals-Tidende*, 1889, Dr. Howitz describes a case of strongly adherent omentum, with displacement of the stomach and intestines, as described above. The patient had been treated for gastric ulcer, also for "the womb;" pessaries had been applied, and douching and massage of the hypogastrium practised in vain. Dr. Howitz carefully liberated the omental adhesions, so that the displaced viscera returned to their normal positions. All the pain and discomfort from which the patient had so long suffered rapidly disappeared.

PERIODIC GASTRORRHŒA.

DR. STEINBERG, in the *Proceedings of the Russian Medical Society of Warsaw*, gives an account of a remarkable case of periodic gastrorrhœa occurring in a military officer, aged 45. The patient was suddenly seized with a series of attacks of violent vomiting coming on every forty to sixty minutes, each attack being preceded by severe nausea and headache, which symptoms disappeared immediately after the contents of the stomach had been rejected. The vomit consisted of a greenish watery fluid, containing 0.17 to 0.21 per cent. of free hydrochloric acid and a very little mucus, but no traces of food. There was no abdominal pain nor tenderness. On inquiry it was found that the patient had been subject to attacks of this nature at long intervals for several years. There were signs of lesion of the posterior columns of the cord, but these were limited to Westphal's and Romberg's phenomena, and there was no ataxy; thus the diagnosis was made of periodic gastrorrhœa in a tabetic subject rather than that of gastric crisis in an ataxic subject.

THE BACTERIOLOGY OF COMMON WARTS.

DR. KÜHNEMANN[1] has found in sections of warts (*verruca vulgaris*) a bacillus which is always present in the prickle layer. It has distinctive qualities as regards its capacity for colour, and is found both between and in the cells. Its form is that of exceedingly delicate slender rods, the thickness bearing the proportion to the length of one to six. It is seldom found in the skin surrounding the warts, and is found most plentifully when the wart is recent. Dr. Kühnemann considers that the existence of a bacillus which is always present in warts and is never found in any other tissue explains many facts connected with the pathology of these little tumours. He promises further details regarding experiments on man and animals.

SCOTLAND.

DR. R. MILNE MURRAY has been appointed to the post of Junior Assistant Physician to the Edinburgh Royal Maternity Hospital, in succession to Dr. D. Berry Hart, who has been appointed physician.

THE ARRAN MURDER.

THE Secretary of State for Scotland has appointed Sir Arthur Mitchell, Dr. Yellowlees, and Professor Gairdner, to inquire into the mental condition of Laurie, at present under sentence of death at Greenock, and to report. These gentlemen have visited the convict, and they have taken pains to have all possible evidence on the particular point in question laid before them. As we go to press, we learn that the convict has been respited.

[1] *Monatshefte f. prakt. Dermatolog.*, vol. ix, p. 17.

THE MEDICO-PSYCHOLOGICAL ASSOCIATION.

A QUARTERLY meeting of the Medico-Psychological Association of Great Britain and Ireland was held in the Hall of the Royal College of Physicians, in Edinburgh, on November 14th, Dr. Yellowlees in the chair. Dr. Campbell Clark showed the plans of the new Lanark District Asylum. Dr. Urquhart read notes on a case of Cerebral Tumour, with remarks by Dr. Byrom Bramwell. Dr. Mackenzie (Morpeth) read a paper on Sulphonal. There was a full attendance of members, and the discussion elicited by the papers read were exhaustive and interesting.

THE ROYAL MEDICAL SOCIETY.

THE 153rd session of the Royal Medical Society is in progress, and excellent reports have been received of its continued prosperity In connection with the foundation of the Students' Union a fear had been expressed that the old society might suffer. It is premature to express a decided opinion, but the state of the Society this session seems to justify the surmise that the Union will only play the part of helpmeet towards the common end of increased intercourse of a less formal character among men who are working at medicine about the same time. The following gentlemen have been elected office-bearers for the ensuing year:—*Presidents:* Mr. W. G. W. Sanders, M.B., C.M.; Mr. A. L. Turner, M.B., C.M.; Mr. James Ritchie, M.A., M.B., C.M.; Mr. R. O. Adamson, M.B., C.M. *Secretaries:* Mr. R. D. Rudolph, M.B., C.M.; Mr. James Middlemass, M.B., C.M. *Chairman of Finance Committee:* Mr. George C. Cathcart. *Curator of Library Committee:* Mr. C. D. Sutherland. *Chairman of Museum Committee:* Mr. H. G. Hine. *Editor of Transactions:* Mr. R. E. Horseley.

NERVE EXHAUSTION IN WOMEN.

THE third of the present series of Edinburgh Health Lectures was delivered last Saturday by Dr. D. Berry Hart, on "Nerve Exhaustion in Women." The President of the Royal College of Physicians of Edinburgh presided. Dr. Berry Hart maintained that nerve exhaustion in women was much more common in this country than was supposed. It was likely to become more prevalent if women pushed on, as they were in the opinion of many rightly doing, to the work hitherto exclusively belonging to men. In discussing the question it was not enough to prove that what men did women could do as well. It must be seen that in the attempt the bodily constitution of women did not suffer. The causes of nervous exhaustion were, in general, overwork of the brain, as in prolonged mental effort; neglect of recreation or change of employment, curtailment of sleep, the giving of undue prominence to the worries of life. In the modern system of girls education these evils were increased. Prolonged undue strain of the brain and neglect of the body were crying evils. The lecturer urged that in all girls' schools the periods of school study should not exceed four or five hours, and that there should be an interval of one hour at least for outdoor recreation. There should be a recreation field for girls as for boys, and some effort should be made to reduce the amount of home preparation. While everyone should have work to do, in whatever sphere, each one should work within her strength. Hand in hand with mental culture must go bodily culture if disaster were to be avoided.

GLASGOW CORPORATION AND THE NOTIFICATION OF INFECTIOUS DISEASE.

THE Glasgow Town Council, sitting as the local authority, has decided to adopt the Infectious Diseases (Notification) Act, 1889, in accordance with the recommendation of the Health Committee and Dr. J. B. Russell, the medical officer of health.

WEST OF SCOTLAND SANITARY ASSOCIATION.

THIS Association has reached the end of the eighth year of its existence, and is gradually succeeding in commending itself to the public. Its membership has reached 433, 226 having been added during the year, while the public confidence in the engineering staff is shown by the Association being asked to inspect and report upon a number of well known public buildings and offices, not only in regard to drainage, but in regard to ventilation, water supply, etc. There is still a large annual number of resignations, many members evidently being under the impression that if they have been members for one year and have had their houses examined and put into good order they have obtained all the benefits the Association can give. They do not yet seem to realise the necessity for continual watchfulness to guard against sanitary defects.

GLASGOW PHILOSOPHICAL SOCIETY.

THE annual general meeting of this Society was held on November 20th, the retiring President, Dr. J. B. Russell, in the chair. The report of the Council stated that the membership numbered 649, of whom 16 were honorary members, 10 were corresponding members, and 623 were ordinary members. The library now contains 10,667 volumes. Dr. Russell then resigned his office, his three years' term having expired, and nominated as his successor Professor J. G. McKendrick, F.R.S. The nomination was unanimously agreed to, and Dr. McKendrick, in taking the chair, spoke of the usefulness of the Society in a city such as Glasgow to all who were interested in the general progress of science, and who were desirous of acquiring knowledge from all sources. He was sure there was still a large number of gentlemen who might well become members, and he asked the present members and the Council to endeavour to increase the membership during the next few years. Mr. James T. Bottomley and Dr. W. G. Blackie were appointed vice-presidents; Professor Dittmar was appointed president of the chemical section; Professor John Cleland, F.R.S. of the biological section; Sir William Thomson of the mathematical and physical section; Professor Jebb, Cambridge, o the philological section; Dr. Thomas Muir of the geographical section; Mr. Charles Gairdner of the economic science section; and Mr. Honeyman of the sanitary and social economy section.

IRELAND.

THE Dublin Corporation have adopted the Infectious Diseases (Notification) Act.

TYPHOID FEVER IN DUBLIN.

THE virulence of the outbreak of typhoid fever is abating. The type of the disease is mild, and the mortality has not been large.

ZYMOTIC DISEASES IN CORK.

DURING the three months ending October, if contrasted with the corresponding quarter of the five foregoing years, the number of cases of typhus fever average lower, of typhoid fever considerably lower, while scarlatina has increased and, it is believed, seems likely to spread. Fortunately, during the past three years, the time that this disease began to show itself was just as the long vacation was commencing in the schools, and the fact of the schools being closed prevented the disease from making any headway. This year, however, the disease is appearing somewhat later, and several cases have occurred that could be traced as originating from schools, showing clearly the urgent necessity that parents and school authorities should not allow children to attend school from infected houses.

NOTES
ON
SOME GERMAN UNIVERSITIES.

BY WALTER K. SIBLEY, M.B.CAMB.

I.—THE UNIVERSITY OF STRASSBURG.

(Continued.)

Medical Students: Method of Study, Hospital and Ward Work, Lectures.—The Professors and the Students.—Assistants.—Bacteriology.—Vacation Courses.

A LARGE proportion of the medical students in Strassburg, now numbering over 400, are senior men. A student in Germany generally divides up his curriculum among two or more universities, and in this way he is enabled to work at each subject under the professor of his choice, provided he has money enough to be able to travel from one university to another. Thus a student may enter first at Heidelberg, and spend a few terms of merry student life in this most picturesque of European university towns; then when he settles down to work, he will come on to Strassburg, where the town itself presents but few attractions, but where he meets with men of a more serious turn of mind. It is not that there are no senior men in Heidelberg, but the large proportion are very young. In my opinion a German student realises the responsibilities of life at a relatively earlier period in his studies than an English student; but whatever may be said in favour of this opinion, he sadly lacks that "go" which characterises our own men, and after doing the many hours' work expected of him he is quite contented to spend the rest of the day sitting smoking, and drinking beer. Genuine sports are almost unknown, but of course those belonging to students' corps indulge in fencing and duelling, and after receiving the orthodox scar across the left cheek, have a photograph taken in a position to show it to the greatest advantage; but this distinction does not come to all. The students work more in the daytime and less at night than ours do; thus lectures commence comparatively early; in the winter the clinic begins at 8 A.M., and in the summer in many universities it commences at 6 A.M. daily; our own students find 9 A.M. early enough. This early work is entirely a matter of habit; so unless a student is working up for an examination (of which he has only two, unless he takes the M.D., when he has a third), he but rarely reads in the evenings. These he spends drinking beer, in the *cafés* in winter, and in summer in the numerous beer gardens, where he discusses with his friends many subjects of diverse interest, far more often talking over medical topics than is usual among our students in their hours of relaxation.

The professors make all their hospital visits in the morning, the afternoons being devoted to lectures and laboratory work, of which latter many students do many hours daily, quite apart from the set routine of the courses they are attending.

A German student, unless he is "amanuensis" (clerk or dresser, which post is not compulsory, and generally lasts one month, but may last longer), practically goes rarely into the wards of the hospital; he sees isolated cases in the clinic once, or occasionally twice, and that is all; he does not, as a rule, observe the condition of patients from day to day, or appreciate the changes in treatment from time to time, according to the condition and progress of the disease. In this way it is quite possible for a student to present himself in some universities for his final examination without ever having been inside the wards. The theory of medicine he learns perfectly in the daily clinic, but in the practice he has but little experience. Of course he attends classes on auscultation and percussion, and sometimes attends and sees patients in the out-patient department, where he accustoms himself to physical examination; but the daily observation of patients by the bedside is looked upon as a luxury to be indulged in by the few who become amanuenses or qualified assistants. On the professor's daily visit round the wards he is usually only accompanied by his assistants and any visitors who happen to be about. It is not that the professor never takes the students themselves into the wards, for occasionally the clinic is held in the ward instead of in the theatre, and then several special cases are shown; but then the whole crowd of students come, so that it is very hard to see or hear anything. The like, though in a more marked degree, applies to the surgical wards, which are here

looked upon by the students as almost holy ground, to be trodden only by the feet of the professor, his assistants, and any other qualified men who may be about. We noticed that the student was not taught to cultivate his sense of touch to the same extent as in our hospitals; the application of the hands to the chest to elicit and appreciate differences of vocal vibration, etc., is not done as a matter of regular routine in the examination of patients. I believe this all follows from the excessive use of the hammer and pleximeter instead of the fingers in percussion, and the consequent tendency to substitute artificial means for natural ones.

To many of the lectures and courses the students come half an hour before time to get a front place, bringing with them books and papers, which they read till the professor comes in. When he appears there is no vulgar applauding, nor is there talking and joking during the lecture, nor did we notice students sleeping or reading books on other subjects to "kill the time," as may not rarely be observed in our metropolitan medical schools. Here the students attend the courses simply to learn and gain knowledge, and not to get "signed up," in order to be qualified to attempt some examination. Moreover, the professor lectures on his subject because he is interested and well informed in it, and not because, being a good anatomist, he has received a lectureship in botany.

The professors spend much time apart from their regular courses in working and giving individual attention to the students in the laboratory; so we might say that the chief demonstrator in the laboratory, as now in some of our own universities, is the professor himself. He often does little or no work for himself during term time, reserving all the special work he has in hand for the vacation. It follows from this that the professor is not assumed to be infallible, as he sometimes is at home; for he often learns much from discussions with the students, and is not ashamed to acknowledge it. This was certainly the case with the great master of pathology, Cohnheim, who, when convinced of the fallacy of some published theory at the hands of a simple student, would renounce it completely and publicly. Thus, though the professor in theory lives in a different sphere of thought from his pupils he, nevertheless, in the body dwells and lives with them.

Having distinguished himself as a student and obtained his qualification, the medical man may apply for the post of assistant (that is, house-surgeon or house-physician) to one of the professors. These appointments are given by the professors to whom the application is made, and are more or less indefinite in their duration. Thus an assistant may only hold the post for a few months, but generally he continues for some years, even as many as six or ten; in fact, he remains until he has obtained a better appointment or goes into practice. While assistant every facility is given to him for doing original work, as all the hospitals, and, in Berlin, most of the policlinics or dispensaries, are provided with a well fitted-up laboratory, most of them having complete bacteriological apparatus. Thus, during the time of his work in the hospital, the assistant may be carrying out some original research either in chemistry or in bacteriology. I believe that in all our great London schools for the education of students, and for the advancement of that part of science of which we, as Englishmen, are so proud, there are but three which even profess to have attached to them any bacteriological apparatus, or which offer any means whatever for the future British medical man to attempt to understand something of what he hears of the results of experimental research in other countries. Of these three only one has any organised system of instruction connected with it, and this was practically started and worked by a private person apart from the hospital staff.

In the larger German medical schools between sessions they have vacation courses for doctors in practice (our post-graduate courses which are now being established are of the same nature). These courses occur several times a week, and last for a month to six weeks; they are chiefly attended in the special branches, such as diseases of the skin, eye, ear, and so on. To these courses medical men of all nations come, together with several German doctors; in fact, most Germans attend several of the special courses at intervals during their professional career in order to keep up their work. Often quite senior men still attend; thus, in one course we lately attended in Berlin, a medical man of over 80 years was frequently present.

At a meeting of the Lurgan Dispensary Committee, the salary of Dr. Rowlett, medical officer of Lurgan No. 2 Dispensary District, was increased by £10 yearly.

THE CARRIAGE OF INFECTION.

An eminent hospital physician writes to us as follows on the subject of the alleged carriage of infection by medical men to their patients: I should say that no medical man having to visit a case of scarlet fever two or three times a day, or even once daily, ought also to attend confinements. Where a general practitioner has a partner or partners, a distribution of duties can easily be made; but in my opinion a single-handed practitioner should be held firmly to the same rule, and, after explaining fully the circumstances of the case to his patients, should relinquish one or other form of attendance. I suppose that scarlet fever is most dangerous of all diseases of the kind in this aspect, but the rule would apply also to most of the exanthemata, to erysipelas, and to other forms of septicæmia.

But we have not only to consider the carrying of infection for which personal contact is necessary; it is quite possible that a medical man attending an infectious case may carry the germs with him to other persons. While a medical man is attending a single patient in a room of 2,000 or 3,000 cubic feet capacity, the danger does not seem to me very great. His stay in the room is not generally long, and his contact with the patient may be almost limited to the feeling of the pulse. Even under these circumstances, it is right that he should carefully wash his hands in some antiseptic liquid, and, should he have used his thermometer or stethoscope, should treat them in the same way. He should leave his hat outside the room with his gloves, and if he happen to be wearing a great coat he should not take it off. After leaving the house he should not go into a close carriage unless he keep all the windows open, and he should court in every way exposure to the air for ten minutes or a quarter of an hour before going to another house. It is to be added that, if he be a wise man, he will already have ordered free use in the sick room of volatile disinfectants. When the patient has to be visited in a small room, often ill ventilated, in a crowded house, with unskilled nursing, matters take a very different aspect. Here I am decidedly of opinion that some such arrangement as suggested by Mrs. Priestley would be very valuable. But the arrangement is, after all, not easily carried out, and I should hope that before long such cases would be transferred, in towns at least, to proper hospitals. In the country, I should think that Mrs. Priestley's advice would be readily applicable. This leads on to the treatment and study of disease in the fever hospitals. I believe that very considerable care is exercised by the officials of such hospitals, partly by change of dress and partly by use of disinfectants for the prevention of the spread of infection. Lastly, I should like to observe that in hospitals there is great need of making regulations to avert the dangers of septicæmic infection. Dressers, for example, ought not to make or assist in *post-mortem* examinations while they are on duty; still less should obstetric clerks or other persons liable to attend confinements; and, as Dr. Cullingworth has well pointed out, a complete use of antiseptic measures in obstetrics would, as in surgery generally, reduce dangers to a very low value.

A physician of great special experience in such matters writes: Although it cannot be denied that it is possible for a medical man under some circumstances to convey infection from one patient to another, the risk of this taking place is, if ordinary precautions be taken, almost *nil*. This is clearly shown by the experience at the London Fever Hospital, where the resident medical officer in the discharge of his duties is constantly passing from the scarlatina department to the other departments for measles, typhoid, diphtheria, etc., and yet it has never been found that he transfers these different contagia, although he would be much more likely to do so than an ordinary practitioner, inasmuch as the poison is necessarily more concentrated in a fever ward than in a room where only one patient is treated, supposing there is ordinary care about the ventilation. The medical attendant is not, as a rule, brought into sufficiently close and prolonged connection with his patient for his clothes to receive any very large amount of the contagion, and a short exposure to the open air is generally sufficient to disinfect him. Nurses, no doubt, whose clothes from

prolonged and close contact with the patient become saturated, as it were, with the poison, may readily convey infection. The only precautions taken by the physicians to the fever hospital—and a long experience has shown them to be quite sufficient—are to wear a special outer garment and cap in the wards, but even this is not done by the resident medical officer.

For all ordinary purposes washing the hands in a disinfecting solution and a short exposure to the fresh air will, I am sure, sufficiently disinfect the practitioner, though it is advisable that he should change his coat, and he ought, as far as possible, to visit his infectious cases last.

In the case of small-pox, however, where the poison is present in a liquid form and may possibly get smeared on the clothes, a change of clothes is necessary.

A GENERAL practitioner of known ability and experience writes:—1. As to conveyance of infection, I have never during my many years of practice been able to trace any case of scarlet fever due to infection carried by myself. It is my strong impression that it is not often conveyed in this way, except perhaps to puerperal women, but of this I have no personal experience.

2. As to precautions, I should do my very utmost to get out of attending a case of scarlet fever or erysipelas, while likely to be called to confinement cases. I have repeatedly refused to attend scarlet fever for this reason. While in attendance I keep a long mackintosh at the house, and change my coat for it before going into the sick room. I have not yet availed myself of a mackintosh cap, but think it would be an excellent addition. I touch the case as little as possible, and if I have to auscultate, I wash the end of the stethoscope afterwards. I used to have my patients rubbed with thymolised vaseline, but have given it up of late years. Before leaving the room I wash my hands in a strongish solution (1 in 30) of carbolic acid, or corrosive sublimate (1 in 1,000). As far as possible I see scarlet fever patients at the end of my round, and open the brougham windows.

ALDER SMITH, M.B., F.R.C.S. (Medical Officer, Christ's Hospital) writes: I have thought for many years that sufficient care is not taken by some medical men while attending scarlet fever cases. I spoke strongly on this subject at the International Health Exhibition in July, 1884, in my paper on "The Preventive Treatment of Infectious Diseases in Public Schools," as you will see by the following extract:—

"Again, as of course the doctor's clothing can carry infection as well as that of other people, too much caution cannot be exercised by him. I am strongly of opinion that he ought to keep a large mackintosh just outside the entrance to the fever ward, near some volatile disinfectant, and place it over his clothes before he enters. Then, on leaving he should thoroughly wash in disinfectants; while, if there be occasion to remain long in the ward, the face, head, and boots may be efficiently disinfected by using a steam carbolic acid spray."

The Medical Officers of Schools' Association in issuing their *Code of Rules for the Prevention of Infectious Diseases in Schools*[1] practically adopted my paper, and on page 18, section xvii (2), you will find the mackintosh mentioned.

My plan in private practice during the last twenty years has been to take a large mackintosh to the infected house, after the visit diagnosing the case (scarlet fever is but rarely communicated to others on the first day of the rash: *vide* my paper, pp. 9 and 10), to keep it near and outside the sheet—soaked in a disinfectant, and cutting off the patient from the rest of the house—to put it on before entering the infected room and to wash the hands thoroughly in a disinfectant after taking the coat off outside the disinfecting sheet. I do not see that greater precautions can be taken than this in private practice, but I do not think medical men ought to go direct to another patient. Fever cases should be seen last, if possible, and a walk in the open air afterwards is decidedly better than a ride in a close carriage. I have always felt it my duty, in attending fever outside Christ's Hospital, to take all precautions possible, and I have never—to my knowledge—conveyed fever from one patient to another.

Again, I should not attend a confinement if I had seen a fever case the same day. I have always refused to go, and have asked another medical man to attend for me.

I do not see how medical men with a large practice and many cases of fever can take the precaution of having a mackintosh at each infected house, as I advise; but no doubt it would be the safest plan. I meet with men who ridicule these precautions, and say they have attended fever cases and midwifery together for twenty-five years, and yet have not had puerperal fever; but you can see what I advised at the "Healtheries" by the above extract, and I have not altered my opinion or the precautions I take. If everything is to be done in the future to prevent the spread of scarlet fever, doctors attending such cases will have to be very careful, and to wear a mackintosh in the room, as I advised in 1884.

[1] Published by Churchill and Co.

THE MUZZLING ORDER.

ON November 25th a meeting was held at the Westminster Palace Hotel, summoned by the Dog Owners' Protection Association for the purpose of discussing a resolution in favour of the abandonment of muzzling. The Society for the Prevention of Hydrophobia considered it therefore necessary to issue a circular setting forth the objects of the meeting, and calling on all those who had the extinction of rabies at heart to attend and support an amendment antagonistic to the purpose of the meeting. This appeal was very warmly responded to, and the room was completely filled by a large crowd, among whom were a considerable number of medical students.

The Bishop of ELY, who presided, read from the circular issued by the Society for the Prevention of Hydrophobia, and complained that the assertion therein made, namely, that the meeting was organised by anti-vivisectors and anti-muzzlers, was both untrue in itself and prejudicial to the fair discussion of the resolutions proposed, which might thus not impossibly be rejected upon a false issue. His lordship then proceeded to give statistics as to the value of muzzling in Berlin, showing that, after the introduction of the muzzle, rabies had rapidly and markedly decreased during many years, but rose again by 1868, though to nothing like the height of the pre-muzzling figures.

Mr. CANDY then moved a resolution against the continuation of muzzling. He said that the arguments brought forward by Professor Horsley at the Mansion House deduced from the statistics of 1885-6 (when the muzzle was applied and the disease was stamped out), were quite beside the question, as no muzzling order had ever been issued in London before the present year. He also stated that the muzzle was a cruelty to dogs, as it prevented their picking up scraps in the streets.

Mr. HOUGHTON seconded the resolution.

Professor HORSLEY then moved an amendment: "That inasmuch as the orders for the muzzling of dogs have been most successful both at home and abroad, this meeting hopes the regulations will be continued in force until the disease is entirely eradicated from this country." In answer to the complaint of the Chairman that the meeting had been unfairly described as organised by "anti-vivisectionists and anti-muzzlers," he contended that as both the mover of the resolution and many of the organising committee were prominent anti-vivisectionists, the description was no misrepresentation. He showed that in 1885-6 there was, speaking in strictly legal phraseology, no muzzling *order*, but that, in fact, the magistrates, having decided to comply with the then regulations that dogs must be either muzzled or led, the dog-owners, in 99 per cent. of the cases, applied the muzzle, with the happy result that the disease was for the time eradicated. He further showed that in the Berlin statistics quoted by the Bishop, the rise of hydrophobia (after the first fall) during the muzzling period was due to the fact that the authorities, by their own admission, had then become rather lax in the administration of the muzzling order, and by reading out the rest of the statistics for the years after 1868, he proved that from the time of its stringent reinforcement up to the year 1886, rabies had disappeared in Berlin. He then proved that the House of Lords' Committee, Sir Charles Warren, and M. Pasteur had all expressed their entire faith in the efficacy of the muzzle as the surest means of preventing and stamping out the disease in England, while the Berlin veterinary authorities, in reporting to their Government on the subject, had strongly advised its continued application, in view of the complete immunity from hydrophobia which it had secured in Berlin.

Dr. SIDNEY TURNER, a leading dog-owner, then seconded the resolution, expressing his belief that the public spirit of genuine English sportsmen and dog-owners would be found strong enough to cause them to defer their own convenience to the general good.

Surgeon-General GORDON gave some explanations of his evidence before the committee, and asserted, amid interruptions, that in his opinion hydrophobia and tetanus were indistinguishable. Disturbance also attended Mr. Horsley's speech and the mention of M. Pasteur's name.

Mr. Horsley's amendment was put and carried by an overwhelming majority.

ASSOCIATION INTELLIGENCE.

NOTICE OF QUARTERLY MEETINGS FOR 1890. ELECTION OF MEMBERS.

MEETINGS of the Council will be held on January 15th, April 16th, July 16th, and October 15th, 1890. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting, namely, December 25th, March 27th, June 25th, and September 4th, 1890.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member the by Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No member can be elected by a Branch Council unless his name has been inserted in the circular summoning the meeting at which he seeks election.

FRANCIS FOWKE, *General Secretary.*

NOTICES OF BRANCH MEETINGS intended for insertion in the JOURNAL of the current week should be forwarded, addressed to the Editor, so as to reach the office not later than mid-day Wednesday of that week.

BRANCH MEETINGS TO BE HELD.

WEST SOMERSET BRANCH.—A clinical meeting will be held at the Taunton and Somerset Hospital on Thursday, December 12th, at 3 P.M. for cases and papers, and a special meeting will be held at the Coffee Hotel, Fore Street, Taunton, on the same day at 5 P.M., to consider Dr. Rentoul's proposals.—W. M. KELLY, M.D., Honorary Secretary.

LANCASHIRE AND CHESHIRE BRANCH.—A special general meeting, to consider Dr. Rentoul's and Dr. Brindley James's proposition and to discuss the whole subject, will be held at the Medical Institution, Hope Street, Liverpool, on Wednesday, December 11th, at 4 P.M.—CHARLES E. GLASCOTT, M.D., General Secretary, 23, St. John Street, Manchester.

METROPOLITAN COUNTIES BRANCH: EAST LONDON AND SOUTH ESSEX DISTRICT.—The next meeting will be held, by the kind invitation of the Medical Superintendent, at the Mile End Infirmary, Bancroft Road, on Thursday, December 19th, at 8.30 P.M. The evening will be devoted to a demonstration by Dr. Robinson, of several interesting cases at present in the infirmary.—J. W. HUNT, Honorary Secretary, 101, Queen's Road, Dalston.

BORDER COUNTIES BRANCH.—The next meeting of this Branch will be held at the County Hotel, Carlisle, on Friday, December 20th, at 6 P.M. Supper at 9 P.M. Members desirous of reading papers kindly communicate with JAMES ALTHAM, Honorary Secretary, Penrith.

METROPOLITAN COUNTIES BRANCH; HERTFORDSHIRE DISTRICT.

Proposed Public Medical Service.—At a meeting of this Branch on November 21st a discussion took place, which is given at page 1252.

New Members.—The following gentlemen were elected members of the District: Eustace H. Lipscomb, M.B., B.C.Cantab.; Arthur John Hubbard, M.D.Durham.

Infectious Diseases Notification Act.—The discussion on Infectious Diseases (Notification) Act, 1889, was postponed, as Dr. Brett, who was to have opened the discussion, was obliged to leave the meeting in order to keep an important engagement.

Vote of Thanks.—The meeting terminated with a cordial vote of thanks to the CHAIRMAN.

SOUTH WESTERN BRANCH.

A MEETING of this Branch was held at the Plymouth Eye Infirmary on November 20th.

Proposed Medical Service.—A discussion took place on this subject, which is reported on page 1251.

Cases.—Mr. WADE (Chudleigh) read notes of a case of Unusual Irregularity of Dentition (illustrated by photograph), in which, with the permanent teeth, two supplementary incisors of large size appeared behind the central incisors.—Mr. J. ELLIOT SQUARE (Plymouth) showed a number of interesting laryngeal and ophthalmic cases, including case of Paralysis of Vocal Cord, case of Papilloma of Vocal Cord, case of Irideremia, 2 cases of Cholesterin in the Vitreous, 2 cases of Pseudo-Glioma, with beautifully mounted specimens.

SOUTH EASTERN BRANCH; WEST KENT DISTRICT.

A MEETING of the above District was held at the West Kent General Hospital, Maidstone, on November 21st, Dr. WHITE in the chair.

Next Meeting.—It was unanimously decided that the next meeting be held at Gravesend in the spring of 1890, and that Dr. Firth be requested to preside on the occasion.

Letter of Condolence.—It was resolved that a letter of condolence be sent to the widow of Mr. T. S. Hutchinson, of Newington, Kent.

Communications.—The following papers were read and discussed:—Dr. ADAM: A few remarks upon some of the more important changes which will be effected by the Lunacy Acts Amendment Act, 1889.—Mr. F. TREVES: The Treatment of Prolapse of the Rectum.

Dinner.—Seventeen members subsequently dined at the Star Hotel.

JAMAICA BRANCH.

A GENERAL meeting was held on July 31st, the PRESIDENT in the chair. Present: Messrs. F. H. Saunders (President), Phillippo, Gayleard, Plaxton, Strachan, Da Costa, Clarke, and Bronstorph.

Preliminary Business.—The minutes of the last meeting (May 29th) were read, confirmed, and signed by the President.—The SECRETARY read a letter from Mrs. Madden in reply to the letter of the Branch of condolence in her bereavement.—The SECRETARY announced that Mr. Fowke, the Secretary of the Association, had written informing the Branch that in future no postage on the JOURNAL would be required of the members of Colonial Branches.—Mr. GAYLEARD proposed and Dr. PHILLIPPO seconded a vote of condolence with the family of their late colleague, Dr. Thomas Clarke. The meeting agreed unanimously. The late Dr. Clarke was the first President of the Branch, a learned, courteous, and dignified man, worthily filling the chair.

Acquired Talipes Calcaneus cured by Operation.—Dr. W. H. W. STRACHAN showed the patient, who had received an injury to the front ankle-joint two years and a half ago, resulting in a large ulcer. On admission there was a dense cicatrix in front of the ankle-joint and instep, adherent in many places to the subjacent bone; the extensor tendons were atrophied, matted together, and contracted. Result: Extreme form of (acquired) talipes calcaneus; the angle formed by the foot axis with the leg axis was about 40 degrees; the patient walked with great difficulty on the heel. The operation consisted in dividing all the tendons, dissecting the cicatrix off the bone and other tissues where adherent to them, and then dividing the cicatrix just opposite the ankle-joint by a V-shaped incision, the apex of the V lying on the instep. The anterior ligament of the ankle-joint was laid bare and some of its fibres divided, but the joint was not opened. The foot was then brought into its normal position. The immediate result was the formation of a large roughly diamond-shaped raw surface, which was left to granulate up. This it did most satisfactorily. Skin-grafting was successfully performed on several occasions and aided in the cutification of the surface. The general health was, of course, cared for. Attention was called to the two lessons taught by the operation and its results, namely, (1) that one can fearlessly leave very large surfaces to granulate up under antiseptic precautions; and (2) that powdered boric acid is an antiseptic dressing of the utmost value, which has the further recommendation of being non-poisonous.

On the Fevers of the West Indies and their Treatment during the Present Century.—The Hon. J. C. PHILLIPPO read a paper on this subject. Especial reference was made to the works of Bancroft, Arnold, and Chisholm. Dr. Bancroft, Gulstonian Lecturer in 1806 and 1807, fought against the idea of contagion and infection in these fevers. He showed how they prevailed in the most virulent form in Spain, New York, Philadelphia, Providence, N.J., and traced their source to malaria arising from the swamps, lagoons, and dirty localities. Dr. Arnold, in his work on fevers,

published in 1840, distinctly stated that contagion had no part in contributing to the mortality of the fatal fever. He also showed an intimate acquaintance with the value of the thermometer as a means of diagnosis. Having first put some forty individuals in classes of ten each from among the farm labourers, house servants, tradesmen, and employers of labour, he arrived at 98.19° F. as the mean temperature in health at various times of the day. He then proceeded to use it in fevers, when he found the temperature, according to the violence of the disease, from 100° to 110°. It was not at all uncommon to find it at 106° and 107°, gradually decreasing and ending in a favourable crisis, but he was of opinion that a long continuance over 105°, reaching to 110°, was a most unfavourable symptom, denoting a condition in which all treatment was useless. Bancroft and Arnold were both in favour of blood-letting, taking away as much as 16 ounces in the twenty-four hours, and the same quantity on the second day of fever, following up with calomel in small doses as a purgative; but there were many others who went in largely for mercury, insisting that mercurial saturation, pushed to salivation, was a certain cure; 500 grains in a few days was not at all unusual, and 600 to 700 grains were sometimes administered with fatal effects. Dr. Phillippo then referred to the changes in treatment during the last thirty years; to the administration of salines, liq. ammon. acetatis, antiseptics such as hyposulphite of soda and quinine, strychnine, pilocarpine, hot and cold baths, vapour baths, antipyrin, antifebrin, carbolic acid with salicylate of soda, and, lastly, perchloride of mercury, in the malarious forms of all classes, and concluded with a statement of his belief in the non-contagion and non-infection of these fevers, excepting by the intervention of fomites.

SPECIAL CORRESPONDENCE.

PARIS.

Pambolano, a new Febrifuge.—Arsenical Treatment of Lymphadenoma.—The Dangers of Sulphonal.—An Anencephalous Monster.—School Myopia.—Suture of Tendon.—General News.

MM. J. VALUDE and Villejean send a short paper to the Paris Academy of Medicine on a febrifuge known in Mexico as "pambolano." The root is broken up and used in doses of 60 grammes. It is administered in the form of a decoction or a tincture prepared with a mixture of water and alcohol; this is dropped into a tisane. The 60 grammes are taken in the course of twenty-four hours. One entire dose generally checks the fever: but in those exceptional cases where it fails, a second dose taken forty-eight hours after the first is, according to MM. Valude and Villejean, a certain antidote.

At the discussion at the Paris Academy of Medicine, M. Reclus read notes on eight cases of cervical lymphadenoma treated by large doses of arsenic. The initial dose given was 10 drops of Fowler's solution, which was given daily, gradually increased; interstitial injections were also given every two days. The sclution was mixed with an equal quantity of water, and the dose gradually increased to 20 drops. Three patients thus treated were cured; three died rapidly; with the two others the treatment had to be discontinued. M. Berger stated that he had often seen in Dolbeau's wards examples of relapse after removing glands, and personally had always found internal arsenical treatment joined to interstitial injections satisfactory. In three cases, one exhibited great improvement, the other two patients died. M. Terrier is also in favour of arsenical treatment of lymphadenoma when limited to internal treatment. He condemns the practice of interstitial injections, and prefers making an incision, which he deems necessary in order to be certain of arriving at a true diagnosis.

Dr. E. Marandon de Montyel, médecin-en-chef at the Seine Asylum for the Insane, has clinically tested the effect of sulphonal in treating his patients, and concludes that sulphonal is an energetic hypnotic but a dangerous one, inasmuch as its secondary effects are always painful, often serious, and sometimes dangerous.

M. Guéniot, at a recent meeting of the Academy of Medicine, showed to its members an anencephalous infant born at the Maternity the previous night; it drew one breath and then died. The formation of an amniotic band, on a level with the mouth, had made a clean section of the upper maxillary and malar bones. M. Guéniot added that it was a breech presentation. During pregnancy there was an absence of *ballottement*, a symptom M. Tarnier considers to be indicative of cephalic malformation.

M. Motais calls attention to the alarming increase of myopia in French schools, which he says will continue to increase if the authorities, who ought to realise proposed reforms, rest content with their simple proposal. School myopia, Dr. Motais stated at the Paris Academy of Medicine, is not a question of either race or heredity. The present hygienic defects in schools and colleges develop myopia in the pupils, which may hereafter reappear in their children as hereditary myopia. Among other reforms, he urges that the eyes of the pupils in schools and colleges should be regularly examined at stated intervals, also that the hours of study should be fewer.

M. Périer, at a meeting of the Surgical Society, showed an anatomical preparation which demonstrated that thorough union had taken place after suturing the tendon of the biceps muscle. The patient operated on died in a medical ward a year after the operation. The necropsy furnished M. Périer with the opportunity of studying the result of the suture, placed a year ago; catgut was used. There was not the slightest adhesion of the muscle to the sheath.

Professor Verneuil gave last week his inaugural address at the Hôtel Dieu Hospital. His pupils, past and present, were eager to do honour to his *début* as clinical lecturer on surgery at the most important French hospital. The audience was so numerous that the lecture theatre was overcrowded; many had to be content with standing room in the doorways, and the late comers in the corridors. M. Verneuil concluded his lecture by thanking his pupils for the testimony of esteem their presence gave him, adding it requires some strength of mind to "honour a setting sun" (il faut du courage pour saluer le soleil couchant). The subject chosen by M. Verneuil was The Important Relation of General Pathology and Micro-biology to Surgical Studies.

The discussions at the Paris Academy of Medicine and the Seine Council of Public Health, on the transmission of infection by means of badly cleansed instruments, has resulted in the Council passing certain prohibitory measures. Dr. Lancereaux and other members of the Academy are also on the Council of Public Health. At the meetings of both these bodies they pointed out how dentists' instruments could spread disease, and Dr. Lancereaux quoted an American dentist who records a case of tuberculosis which had been transmitted by a dentist's forceps. Brushes and combs can evidently become vehicles of disease. The discussions on this subject have been so often repeated that the Parisian hairdressers and barbers have become both indignant and anxious. In order to calm the public mind and protect their trades from injury, they have held meetings to counteract the effect produced by the mass of facts brought forward in the discussion at the Academy of Medicine and Seine Council of Public Health. One over-zealous hairdresser declared that the accusations levelled at the "instruments" of their calling were unfounded, and urged as proof "that he used them for himself." This assertion apparently has not reassured the Seine Council, which has passed the following resolutions: Barbers and hairdressers are to be taught in what consists the danger of contagion with regard to their trade. They are directed to ask their customers to bring their own combs, brushes, and razors. In order to guard against danger resulting from the non-observance of this injunction, all combs and brushes are to be cleansed with soap and water and bran; all steel instruments to be immersed in boiling water, and afterwards disinfected with a special solution of carbolic acid. In schools, pupils are to be provided with separate combs and brushes, and to be strictly forbidden to exchange hats. Dr. Lancereaux is appointed by the Council to draw up special directions for dentists to be observed by them in disinfecting their instruments.

Madame Bouisson, on the occasion of the next centenary of the Montpelier University, offers two prizes—one of £240, another of £160—for the best memoir of the life and works of Bouisson. Those who wish to compete can obtain from Madame Bouisson, 27, Grand Rue, Montpelier, the necessary documents. Candidates for the prize should forward their essays, written in the French language, to the Dean of the Montpelier Faculty of Medicine, accompanied by a sealed envelope containing a motto. Both the address and name of the candidates must be withheld.

Medical subjects are apparently as attractive to the lay public as are tales of love and intrigue. Not long ago a theatrical re-

sentation attracted thousands because the heroine died in strict accordance with medical truths. The principal incident in the *Bûcheronne*, by M. Charles Edmond, is one of a medical character. A young girl, in order to save her lover's life, consents to have blood drawn from her veins to be transfused into his. Curiously enough, the incident now represented on the boards of the Théâtre Français has occurred six times among the obscure staff of that theatre, but under less dramatic circumstances. M. Dupuit, an *employé* of the Théâtre Français, has given his blood for transfusion into three women and three men. He thus did all he could to save the lives of six people, and succeeded in saving three; each operation lasted, on an average, from five to six minutes; from 150 to 165 grammes of blood were withdrawn. Dupuit was advised to take a cab home, but he preferred "walking, in order to have a better appetite for breakfast." It is three years ago since M. Dupuit parted with his blood for his suffering fellow-creatures; his health is perfectly good. He has been awarded a gold medal.

A recent and rather to be regretted incident in a distinguished scientific career has been ingeniously and irreverently utilised to amuse the Paris theatre-going public. Two patriarchs, longing for a renewal of their past, seek the benefit of the "elixir of youth," but are overdosed, and revert to babyhood instead of adolescence. They are received with much applause when they make their appearance on the stage drawn in a perambulator, dressed as babies sucking milk from a bottle.

M. Yves Guyot, Minister of Public Works, will present to the Chamber of Deputies a Bill for the improvement of the Paris water supply by bringing Avre water into the city.

The death is announced of Dr. Quesneville, who had reached his 80th year. He was the founder of the *Moniteur Scientifique*. During fifty years he continued to edit it. It was his intention to resign his post as editor at the end of this year. Dr. Quesneville was the first to point out the therapeutic utility of ethyl iodide, also of some iron preparations.

LIVERPOOL.

Dr. Davidson on Vertigo.—Diabetes with Lipæmia.—Extreme Anæmia.—Recent Appointments.

THE Pathology and Treatment of Vertigo formed the subject of an interesting paper read by Dr. Davidson at a recent meeting of the Medical Institution. The writer showed that vertigo might arise from interference either with the centre of equilibration in the cerebro-spinal axis or with the sensory or motor paths connected with it. Trifling disturbances of the organs of sight and hearing might cause vertigo when there was instability of the nerve centre, either constitutionally or from some temporary cause, and to effect a cure it was necessary to remove both the peripheral and the central disturbance. Dr. Gowers had laid down in his book on *Diseases of the Nervous System* that ocular vertigo was rare, but included in that term only cases depending on irregularities of the muscles of the eye. Dr. Davidson's own experience led him to endorse the view of Dr. Stevens, of America, that errors of refraction were frequently the cause of giddiness, headache, neuralgia, and other functional nerve disturbances, either alone or when combined with other causes, such as biliousness. He had found such cases frequently cured by wearing properly fitting glasses. An unequal error in the two eyes appeared especially liable to set up vertigo, probably by giving contradictory impressions to the brain. Mr. Edgar Browne had suggested to him that vertigo was more frequently connected with myopic astigmatism and headache with hypermetropic astigmatism. It was important to remember that the cause of vertigo was frequently multiple. The writer concluded by describing a case of agoraphobia, a condition which was a form of vertigo, probably ocular, which he had lately seen in consultation. A lady, aged 42, otherwise strong and healthy, on going into a church, a circus, or a crowded room became faint and giddy; objects seemed to swim about, and she would fall did she not immediately come out. No defect of eye or ear could be detected. In the treatment of vertigo generally, besides the removal of the cause, the bromides were of great value by diminishing the irritability of the nerve centres.

Dr. Glynn described a case of diabetes with lipæmia at the same meeting. The patient, who was a lad, died comatose. The blood contained a quantity of fatty granules, so small as only to appear as minute particles when seen under an inch and a half oil immersion lens. A sample of the blood shown in a test-tube, when allowed to stand, presented a pale supernatant layer, consisting principally of fat, and comprising about one-fourth of the entire fluid.

Dr. Bradshaw showed a woman, aged 35, the subject of extreme anæmia. The blood was sensibly pale to the naked eye, and the hæmocytometer showed that the corpuscles were only 20 per cent. of the normal. They were also irregular in form, but the white corpuscles were not increased. The only evidence of organic disease was a very localised presystolic murmur near the apex of the heart. The spleen was not enlarged, and the bones were not tender. Iron had been tried without any benefit.

Dr. Peter Davidson, senior physician to the Infirmary for Children, has been elected lecturer on diseases of children in the school of medicine in succession to Dr. Gee, resigned. Dr. A. Barron, professor of pathology, has been appointed honorary physician to the Bootle Borough Hospital.

The election of an honorary surgeon to the Royal Southern Hospital, to succeed Mr. F. T. Paul, is fixed to take place on December 5th. It is generally understood that Mr. Robert Jones, F.R.C.S.Ed., surgeon to the Stanley Hospital, is the only candidate in the field.

BIRMINGHAM.

Unfounded Charge against a Medical Man.—Queen's College and Durham University.

MR. CUTHBERT, of Selly Oak, was tried at the Worcester Assizes, November 21st, on a charge of attempting to procure abortion by supplying ergot to a nurse named Murphy. The prosecutrix, in her evidence, stated that prisoner had sent her the ergot. She admitted that she passed under the name of Graham at the Selly Oak Workhouse, in consequence of having had a child in 1885. In cross-examination she denied having lived with a man named Graham, but acknowledged to having taken that name; she had given a wrong age, and had stated untruthfully that she was a widow. She did not deny that she had a child at Clapham, where she was visited by a man named Prentice. The prosecuting counsel stated that he would have to rely in the main on the uncorroborated statement of Murphy, and asked his lordship if he thought it well for him to proceed. The judge said the prosecutrix had told lies, and if the jury thought that what she said could not be relied on, the case had better finish at once. Mr. Cuthbert was immediately acquitted. [Murphy has since been found insane, and transferred to a lunatic asylum.]

A deputation from the Council of Queen's College went to Newcastle-on-Tyne last week to confer with the medical faculty of the University of Durham on the proposed affiliation of the College with the University. The scheme was initiated by Professor Windle and Mr. Lawson Tait, with the purpose of providing the students of the Birmingham School with a fair degree in medicine without the necessity of residence away from Queen's College. The deputation was received very cordially, and there is a good prospect of the affiliation being realised. The Council has decided to found another entrance scholarship, to be called an open scholarship, in general English subjects, classics, and biology; those scholarships at present existing are all more or less restricted.

MANCHESTER.

Hospital Saturday and Sunday Fund.—Memorial to the late Dr. Joule.—Extension of Owens College Medical Buildings.

THE annual meeting in support of the Hospital Sunday and Saturday Fund was held this week. The Hospital Sunday account was £4,636 against £4,559 last year, and the corresponding sums for the Hospital Saturday Fund were £3,536 and £3,432 respectively; with interest, the total sum raised this year was £8,210. A noteworthy fact is that the Hospital Saturday contributions have been rising year by year. The Committee think that the time has come to abolish the "recommend" system. During the last twenty years, by this Hospital Saturday and Sunday scheme, no less a sum than £146,437 has been raised.

In the last issue of the JOURNAL it was mentioned that it was proposed to raise some monument to the memory of the late Dr. Joule. At a largely attended public meeting held on November 25th the following motion was passed: "That this meeting desires to mark its deep sense of the benefits conferred on mankind for all time, as well as of the great honour which has accrued to

this district, by the scientific work of the late James Prescott Joule, by the erection of a durable memorial of him in Manchester, in the form of a white marble statue." A committee was appointed to raise by public subscription a sufficient sum to carry the resolution into effect.

It is stated that the Council of Owens College contemplate the erection immediately of a very substantial addition to the buildings of the Medical School. Already the number of students has increased so much that the new laboratories which were opened only a few years ago are found to be too small. As the school is distinguished by the facilities which it offers for practical instruction of all kinds, and by the thorough equipment of its laboratories, the Council are acting wisely in at once proceeding to increase the accommodation to meet the increased demand made by the increase in the number of students, as well as by the extension of practical laboratory instruction. We understand that it is proposed to erect new pathological and physiological laboratories on a site adjoining the present Medical School buildings; so that, within a couple of years or so, we may confidently look forward to the possession by Manchester of the finest physiological and pathological laboratories in this country.

SHEFFIELD.

New Sanitary Bill for Sheffield.—Miss Ray's Bequests.—The Rotherham Guardians and their Medical Officer.

THE corporation are promoting an extensive Bill in Parliament. It is proposed, among other things, to give increased power to the medical officer of health, as to infectious disease, to oblige milk dealers to give when required information as to the source of their supply, and those engaged in washing, etc., to provide lists of those for whom they wash or mangle. It contains provisions as to water-closets, ashpits, and many other matters connected with the health of the borough.

In a former letter it was mentioned that, through the death of Miss Ray, the medical charities had lost a valued friend. The contents of her will recently made public show how keen was her interest in all things relating to the profession of which her father had been a well-known member, and how generously she has remembered them in her bequests. Besides many charitable bequests outside the medical ones, she has left £1,000 to the General Infirmary, and the residue of the moneys bequeathable to charities, subject to certain conditions, is given to the Public Hospital Dispensary, making, it is estimated, a sum of £7,000 to £8,000, which will be increased later on. The British Medical Benevolent Fund receives £1,000, and to the West Riding Medical Charitable Society—in the good work of which during her life she took a most warm interest, and was a subscriber to its funds—she leaves £1,000. Among the other generous extra-medical legacies may be mentioned £1,000 to the Society for Bettering the Condition of the Poor in Sheffield.

The Rotherham guardians have decided on obtaining a loan of £22,000 for enlarging the workhouse. Among the proposed additions are new isolation wards and the infectious hospital is to be enlarged. It appeared at the meeting at which the enlargement was mentioned that Dr. Hardwicke, the medical officer of the workhouse, had very properly inquired of the Local Government Board whether he was expected to attend professionally without extra charge some cases of typhoid fever which had been sent into the house by the rural sanitary authority. They were not paupers, as £1 per week was being paid to the guardians during their stay in the fever hospital. The matter was hardly met by the guardians deciding that the patients had been admitted by the relieving officer as paupers.

CORRESPONDENCE.

A DISCLAIMER.

SIR,—As my name appeared in last week's *Truth* connected with a very disgusting subject, I must ask you to allow me to state the facts of the case for the information of my professional brethren.

Towards the end of last year, Mrs. Smith (of whom I knew nothing) brought her daughter to me for advice about a tumour of the lower jaw. She said she was a widow, keeping a small school, and I therefore took no fees; and when, early in this year, an operation became necessary, I admitted the girl into University College Hospital. Mrs. Smith one day mentioned that she was going to reprint her prospectus, and said it would be of great service to her if I would allow my name to go among her references, as they were almost entirely Clifton people. I rather demurred, as I knew so little of her, but was persuaded by reading the list, which included clergymen I knew personally, and more than one well known and highly esteemed member of the medical profession. I took the precaution, however, of writing to a lady at Clifton to make inquiries about Mrs. Smith, which proved quite satisfactory.

In the course of last summer an old patient wrote to me to say that "a friend had been advised to place her daughter with Mrs. Smith," and seeing my name she would be glad to know my opinion of her. I wrote to say that I knew nothing of Mrs. Smith's surroundings, as I had never been at Clifton, but that she seemed to me a pleasant person, and that I had had a good report from a lady to whom I had written.

I heard nothing more, but I now learn from Mrs. Smith's own letter that the pupil in question was the daughter of my patient, who, being a lawyer, is quite able to take care of his child's interests. As regards the so-called *modus operandi*, I can only express my disgust that any woman could write such offensive details of a treatment of which I entirely disapprove.—I am, etc.,

Cavendish Square. CHRISTOPHER HEATH.

BRITISH PRACTITIONERS IN FRANCE.

SIR,—A communication has been received by this College from the Foreign Office which appears of so much importance, and so seriously concerns the medical profession, and the welfare of a large number of English people who flock to the South of France for winter quarters, that I am desired by the President and Fellows to request that you will be so good as to give it that publicity among members of the profession which the columns of the JOURNAL are so well able to afford. The communication in substance is as follows:

M. Fallières, the Minister of Public Instruction, has informed the English Ambassador in Paris, with respect to English medical men who may be seeking authority from the French Government to practise their profession in France, or to obtain certain facilities for taking a French degree which would confer the right to do so, that it will not be possible in future for his department to give the same favourable consideration to applications of this kind as has hitherto been accorded them, whether received directly by the Minister or through the British embassy, and that the applications will be refused unless in instances presenting very exceptional claims.

The principal reason for this important change, the Minister states to be, that the great majority of such applicants are desirous of settling in those winter health resorts where English people most abound, and that he is informed by the local authorities that these places are already crowded with English practitioners to an extent which is prejudicial alike to French and English interests.

A further reason is given is that, there being a draft law before the Chambers, tending to modify the existing regulations with regard to the practice of medicine in France, the Government feel that great discretion is needed in granting fresh permissions to practise under the old conditions.—I am, etc.,

EDWARD LIVEING, M.D., Registrar.

Royal College of Physicians, London, S.W.

THE LATE DR. CHARLES BLAND RADCLIFFE.

SIR,—It may be of interest to your readers to know that a committee has been formed for the purpose of founding a *pension* for the incurable in memory of the late Dr. Radcliffe, and in connection with the National Hospital for the Paralysed and Epileptic in Queen Square, Bloomsbury, with which institution Dr. Radcliffe's name has been long and honourably associated. Donations will be received by Lady Taunton, honorary treasurer of the fund, and may be addressed to her at the hospital.—I am, etc.,

M. L. PARKER, Hon. Sec.

Brunswick Gardens, Campden Hill, W.

GLASGOW UNIVERSITY ASSESSORS.

SIR,—Our attention has been called to a paragraph in the JOURNAL of November 23rd, in reference to the Glasgow University Assessorships. In that paragraph it is stated that "Dr. Mc-

Vail contended that the fundamental doctrine of their opponents was that extra-mural teaching was to be no part of the new University extension movement." We think it right to state that so far is this from being the case that Dr. Hector Cameron, one of the "opponents" referred to, is himself an extra-mural teacher, and that a large number of the extra-mural teachers in Glasgow and elsewhere are members of the committee supporting the candidature of Dr. Hector Cameron, Sir John Cuthbertson, and Mr. Hannay.—We are, etc.,

GEO. S. MIDDLETON, M.D.,
JAMES NESS, LL.B.,
Honorary Secretaries of the Committee supporting the candidature of Dr. Hector Cameron, Sir John Cuthbertson, and Mr. Hannay.

Glasgow, November 26th.

TREATMENT OF CANCER BY ELECTRICITY.

SIR,—Mr. John Marshall, in his masterly lecture on cancer, courteously mentioned my method of treatment by electricity, but he spoke of "requisite repeated applications of electricity." My further experience teaches me that, usually, a repetition of the application is unnecessary, and that one operation will cause atrophy of the growth. My first patient was under treatment for a little over three weeks in August, 1888, but since then it has not been necessary to repeat the application. The majority of my cases have been those in which the knife had failed, or in which the disease had progressed too far for the knife. With most of these I have had to operate more than once, simply because there was so much growth that it could not all be treated at one operation.

The theory that cancer is probably due to an escape of healthy cells from the control of the nervous system was brought forward by me in my first paper in the JOURNAL of April 27th last, and my method of treatment was based on this hypothesis,—I am, etc.,

J. INGLIS PARSONS, M.D.

Collingham Place.

LECTURESHIPS AND SCIENTIFIC GRANTS.

SIR,—Every institution is useful in its day and is liable to linger on till its utility is, to say the least, much impaired. The frequency with which announcements of certain annual or biennial lectures appear in the weekly "Diary," must cause your readers to reflect. The lecture, like the university, is no longer a great necessity in medical education and progress. Once when text-books were few, and systematic teaching unorganised, students and practitioners flocked to hear courses of lectures by two or three celebrities in London schools. Conditions have changed since those days. Courses of lectures at the medical schools are still necessary, but they are less valued by teachers than demonstrations. Addresses at medical societies and at periodical assemblies of bodies like the Association, are still of current value; they are expected, they are called for, and are at the least useful summaries of the annual progress of medical science. There are lectures of another type, however, which are of more questionable value. Thus an amateur votary of science may bequeath a sum to a medical corporation for an annual lecture on some special disease; say tubercle. Perhaps the founder of the lectureship has lost a relative through some form of that affection and entertains a vague idea that the step he has taken may aid somehow towards the mitigation or extirpation of tubercle. The lectureship is never thoroughly satisfactory; an experienced authority cannot be found every year, nor is there enough discovered every twelve months to render a yearly lecture really valuable. This applies to any pathological subject. A lecturer has to be selected, and he is generally some general physician or surgeon chosen in relation to some movable appointment which he holds at the time, or has recently vacated. This task often proves an incubus. He may know little about tubercle, and the lecture is almost certain to be "got up" and padded. It is but on rare occasions that the lecture is a fine spontaneous and original oration made up in the course of recent research conducted by the lecturer, himself an expert. I do not wish to disparage the past and coming lectures of certain distinguished members of the profession; indeed, as it happens, two lectures which are given this autumn, at the College of Surgeons, are in very good hands. Nevertheless we all must feel that lectures of this kind are getting out of date. A lecture of the type in question should not be given oftener than every five years. The selection of a lecturer should be made with extreme care, an expert being invited after due deliberation. Even under such a system, however well it would work, the subject of the lecture would not be so well promoted as by the more modern method of scientific grants. The judicious expenditure of money in research is far more satisfactory than its expenditure in fees for an annual routine lectureship.—I am, etc. F.R.C.S.

THE PRACTICAL ELEMENT IN MEDICAL EDUCATION.

SIR,—I will thank you to allow me to add a contribution to the discussion on the above. The visitors of the Medical Council, themselves the creatures of the existing order of things, have been obliged to admit again and again the defective practical training of the students trained under the present belecturing system.

2. The Medical Council have been obliged to confess that the system is defective, and, when asked to throw open the entire clinical field of these kingdoms, and establish a modified system of apprenticeship, elected to throw open a department which notoriously had been previously at the service of students—namely, the out-patient department of clinical hospitals.

True, in reply to my memorial to the Privy Council, they held out expectations to that body that they would utilise those unused clinical stores, but they have not utilised them, and I say they never intended to utilise them, because it would clash with their own personal interests.

Dr. Gairdner, who holds a brief for the belecturing folk, takes for his leading argument "the alleged superior thoroughness of the lecturing or present system over Mr. Wheelhouse's modified apprenticeship one." Now there is no one so ignorant as not to be aware of the kind of thoroughness which is to be seen in the out-patient department of our hospitals, where patients are turned out at so many hundred per hour after a glance, and with a scrap on which is written "Mist. expect." or "Mist. cathart.," etc.

Of a truth this is a nice school in which to acquire thoroughness, and yet it is in this school that our Governing Body tells us we are to learn it. I repeat that it tells us that it is in it that we are to acquire it, for both the Council and their visitors have admitted that the machinery heretofore open to students has failed to supply it, and that it is in this additional (?) field that the desideratum is to be sought and found. What do your advocates for thoroughness say to this? I have quoted the opinions of the Medical Council and of its visitors because they are those of Balaam prophesying in spite of himself, but the columns of the medical papers teem with the testimonies of practitioners on the same subject. I have collected a good number of them in my two Carmichael Essays. It is taken for granted by the interested advocates of the present system that for students to commence by addressing themselves to facts is not at all so useful for the mind as to begin by addressing themselves to theory. When they advanced this pet doctrine as so much of a truism, I wonder if they ever made themselves acquainted with the fact that some of the greatest scientists of the world hold the very opposite view. As I have elsewhere said: "Mr. Buckle says: 'That to suppose that we should be acquainted with theory before handling facts is not only practically dangerous, but logically false.' Thus an apprentice might very well strap a sprained ankle, without having the least idea of the physiology of absorption, or of the anatomy of the absorbents; and the same apprentice would confessedly do the strapping better than the learned theorist, who, while well up in the anatomy and physiology of the parts, had never had an opportunity or a sufficient number of opportunities to make his hand familiar with the strapping. The best science teaching confessedly consists in bringing the pupil's mind into direct contact with facts, and simultaneously supplying him with, not the theory, so far as it may be known, on which these facts are based, but with just as much direction and hint as will enable him to investigate the theory for himself. Huxley, in his lecture on scientific education, enforces the same lesson. 'The pupil's training,' he says, 'should be real; the mind should be brought into direct relation with facts.' 'We may, in fact,' says another author, 'either commence with general propositions, and work downward to the facts they represent, or upward from the facts to the general propositions; and a decided preference is given for commencing with the concrete and practical when the student belongs to a calling, like that of medicine, which deals mainly with the concrete and practical.' There can be no doubt that, under the old system of apprenticeship, men were too often handed over to masters who employed them as mere drudges, discharging duties which were almost menial in their nature; and that the time spent was absurdly long. Masters of this description turned out pupils whose

prior contact with facts was of a kind that left them but little inclination or capacity for the subsequent theoretic *éclaircissement*, and they were made, and remained, mechanics and drudges to the end of their days. Does it follow that a revival of apprenticeship necessarily implies a revival of this kind of thing? We hold that it does not, and that a student may enjoy all the advantage of a buffer between the discipline of boyhood and the freedom of adult age, in the person of a master, before being thrust into the perfervid waters of metropolitan life."[1]

The proposal to apprentice young men for a year to a practitioner after they have finished at a medical school is rank nonsense, for the simple reason that the licence of the present system renders them utterly unfit for the obedience and submissiveness which tutelage would require. Moreover, the utter want of reverence which the prairie wildness of the existing system engenders would make these presuming youths unbearable to any master. Indeed, their intolerable self-conceit shuts out from their minds even the faintest conception of their own shortcomings. I was myself a grinder for many years, and I can readily recall to mind the numbers who went to ruin under the prairie system, and who would have been saved had they been broken in under the reins of a master.

I have had still other experience since then, and this enables me to say, and that very positively too, that we would not hear of the breakdown of so many doctors as we do if in their earlier years they had been brought up under a stricter *régime* than that which the present keen school competition for the *corpus vile* of the medical student renders possible.

To conclude, this whole matter is of such vital importance to the public and to the profession that I do hope you will allow ample room for discussing it.—I am, etc., THOMAS LAFFAN.

MEDICO-LEGAL AND MEDICO-ETHICAL.

ANATOMY.—We are not aware of any statutory law forbidding chemists or others from selling to the public the articles referred to.

THE TITLE OF DR.

ENQUIRER.—Legally there is nothing to prevent a person holding the qualification of L.S.A. from styling himself "Dr." on his visiting cards, although it is questionable whether he would be well advised to make use of a courtesy title which discourtesy may at any time refuse.

RECOVERY OF FEES EARNED BY ASSISTANTS.

MEDICUS writes: Can my assistant (who is an M.R.C.S.Eng., L.R.C.P.Lond., L.S.A.Lond., also duly registered) recover for me in the county court for that portion of professional attendance, including medicine and visits, made by him on a patient disputing payment of account? The other portion of the account is made up by my own attendance and visits on the same patient.

*** The question cannot be definitely answered; it would be necessary to know with whom the patient made the contract.

FEES IN INSURANCE CASES.

F.R.C.P. writes to point out that for an assurance of £100 for life at the age of 30, the premium amounts to about £2. If the assurance company has to pay £1 1s. for the examination, and possibly 10 per cent. on the £2 to the agent for obtaining the assurance, the amount remaining to the company is absurdly small. If assurance for sums of £250 and under are to be effected, it will only be possible if the medical examiners are willing to accept 10s. 6d. This is no a bad remuneration for work occupying about half an hour.

*** We shall be glad to know what is the usual custom.

SIMILARITY OF NAME.

W.G., GLASGOW.—Notwithstanding the similarity of name, our correspondent cannot well, we think, be confounded with the author of the professionally derogatory handbill in question, seeing that the address of the latter is distinctly printed thereon. To offer, however, any editorial comment on the laboured effusion of the would-be-thought philosophic writer would be a useless expenditure of time and labour, inasmuch as he would seem to be insensible to aught else than self-laudation, otherwise we opine that the criticism which appeared in the JOURNAL of October 12th, on a kindred production of the same author, would have had some restraining influence.

With reference to "W.G.'s" suggested appeal to the authorities of their common University, we see no valid objection; indeed, such a step, if it leads to an enforcement of its disciplinary laws, would probably be the most effective check.

A SENSITIVE M.D.

F.H.W. writes: In a private conversation with a fellow practitioner who is M.D.Brux., is it in any way discourteous to address him as "Mr." So-and-So instead of "Dr." So-and-So? I was rather astonished at being taken to task for so doing inadvertently.

*** Although from the (ungiven) date of the degree in question it may be unregisterable in the United Kingdom, we should be loth to withhold from its possessor the title of "Dr."

[1] *Carmichael Prize Essay*, 1887.

THE LETTER OF THE LAW.

M.R.C.S.Eng.—A M.R.C.S.Eng. (or F.R.C.S.Irel.) registered before the passing of the Medical Act, 1886, in respect of such qualification only, is entitled to practise surgery and midwifery, and also medicine, in a surgical case, but, according to a strict interpretation of the law, not the ordinary practice of medicine.

UNDERBIDDING: A BAD EXAMPLE.

R. and V., partners, are the medical officers of a Court of Foresters, with which they have been connected over twenty years without complaint. The annual payment per member was raised on the application of R. and V. two years ago from 4s. to 5s. J. and A., also partners, came to reside in the neighbourhood six months ago. A. becomes an honorary member of the court, and attends the meetings. At the last one he is asked by one of his supporters whether he and his partner will, if elected, attend the members for 4s., and replies, "Certainly; he never heard of its being anything else."

This being brought to the notice of R. and V. (who are officially asked if they will continue medical officers at the reduced rate) the following correspondence takes place:—

"DEAR MR. A.,—We are informed that you have authorised some members of the Court of Foresters at ——— to propose you and your partner as medical officers to the court in opposition to ourselves, and at a lower rate of remuneration.

"Will you be good enough to inform us at your early convenience whether this is so?"—Yours faithfully, R. AND V."

"DEAR MESSRS. R. AND V.,—We have received your note of November 12th, referring to the Foresters' Society. It is not our intention to answer queries which we consider you have no right to put, and at the same time we reserve to ourselves the right of acting on all occasions according to our own judgment.—We remain, yours faithfully, "J. AND A."

"Messrs. R. and V. beg to acknowledge the receipt of Messrs. J. and A.'s letter of yesterday's date, and to express their surprise and regret at the tone of it."

Are not J. and A. guilty of a gross breach of professional etiquette in endeavouring to supplant R. and V. at all, and an even grosser one in underbidding them? And after the correspondence will not R. and V. be justified in refusing any further intercourse with them?

Are there not numerous instances of benefit clubs paying their medical officers more than 4s. per member per annum?

*** In seeking to supplant, and more especially by such questionable means as "underbidding the medical officers of a court of Foresters with which they have been connected for over twenty years without complaint," Messrs. J. and A. undoubtedly not only contravened the true ethics of the profession, but failed in their moral duty to do unto others as they would wish to be done by.

With regard to Messrs. R. and V.'s future attitude towards the firm in question, although we cannot advise them to cultivate a friendly understanding therewith, we would nevertheless suggest—hard though the lesson be—that their course of action should be governed by the principle embodied in the ethical motto, "Bear and forbear."

We may further note, in reply to their third question, that it is within our knowledge that a considerable number of clubs pay their medical officers 5s. per member per annum, being at the rate of somewhat less than 1¼d. per week, for less than which sum we would earnestly counsel young practitioners to decline acceptance of the irksome and ill-paid office.

NAVAL AND MILITARY MEDICAL SERVICES.

REJECTION FOR PHYSICAL DEFECTS.

D.G. is informed that such defects as varix and varicocele in candidates for commissions turn entirely on the question of degree; they would not disqualify if existing only to a moderate extent, and without complication.

EMPLOYMENT OF RETIRED OFFICERS ABROAD.

"RETIRED" urges the employment of retired officers abroad as a true method of increasing the amount of home service on the Active List, especially as not a few retired officers with colonial ties are quite ready to accept such employment. It is not the employment of limited numbers on the Retired List at home which would seriously affect the Active List, but the indiscriminate employment of civil surgeons and those connected with the auxiliary forces.

FORESHADOWED CHANGES.

F.H.W. wries: Stress must be put on the following points: the age increase for surgeon-generals and the three years' qualification for pension will shut out certain deputies absolutely, and adversely, though variably, affect the promotion of all brigade-surgeons. The general effect would be an increase of four to five years' service for pension. Will this top-blocking of promotion conduce to efficiency? Certainly not. The effect will be the exodus of every man who can at twenty years' service; all the stimulus to self-culture will be taken away, and the dead level of professional mediocrity maintained through the absence of all prospects of advancement.

First-class professional men should pause before they adopted a career in the army so full of change and uncertainty, and offering so little inducement for competition and ability.

THE NAVY.

MR. DAVID HUEY has been appointed Surgeon and Agent at Port Ballintree.

THE MEDICAL STAFF.

DEPUTY SURGEON-GENERAL THOMAS TARRANT, M.D., is promoted to be Surgeon-General, ranking as Major-General, *vice* W. S. Murray, M.B., granted

retired pay. Surgeon-General Tarrant entered the service as Assistant-Surgeon June 16th, 1854; became Surgeon July 10th, 1866; Surgeon-Major March 1st, 1873; Brigade-Surgeon November 27th, 1879; and Deputy Surgeon-General June 1st, 1883. He served in the Eastern campaign of 1854-55 (medal with clasp for Sebastopol, and Turkish medal); in the Indian campaign of 1857-58, including the battle of Cawnpore, action of Kalee Nuddee, and affair of Kunkur (medal); and in South Africa as Senior Medical Officer in Wood's Force from June to September, 1878; afterwards in the Zulu war of 1879, in Pearson's Column till March, 1879; and then with the Ekowe relieving force, being present at the engagement at Gingindhlovu (mentioned in despatches). He was afterwards Principal Medical Officer of the 1st Division from its formation until its dissolution (medal with clasp).

Brigade-Surgeon THOMAS WALSH is promoted to be Deputy Surgeon-General, ranking as Colonel, *vice* T. Tarrant, M.D. His previous commissions are dated: Assistant-Surgeon May 15th, 1858; Surgeon March 1st, 1873; Surgeon-Major April 1st, 1873; and Brigade-Surgeon July 16th, 1884. He was engaged in the Jowaki Afreedee Expedition in 1877-78 (medal with clasp); in the Afghan war in 1879-80, and was Senior Medical Officer to the force under Brigadier-General Charles Gough during the advance on Cabul in December, 1879 (mentioned in despatches, medal with clasp); and in the Egyptian war of 1882 as Sanitary Officer of the 1st Division, and was present in the engagement at Tel-el-Mahuta, at the action at Kassasin (September 9th), and at the battle of Tel-el-Kebir (medal with clasp and Khedive's star).

Surgeon-Major W. D. WILSON, M.B., is promoted to be Brigade-Surgeon, ranking as Lieutentant-Colonel, *vice* T. Walsh. His previous commissions bear dates: Assistant Surgeon October 1st, 1867; Surgeon March 1st, 1873; and Surgeon-Major October 1st, 1879. He served in the Afghan war of 1878-80 (medal); in the Egyptian war in 1882 (medal and Khedive's star); and in the Soudan Expedition under Sir Gerald Graham in 1884 as Principal Medical Officer of the Infantry Brigade, being present in the engagements at El Teb and Temai (mentioned in despatches, promoted Surgeon-Major with relative rank of Lieutenant-Colonel, two clasps, and Khedive's star).

Surgeon-Major O. F. MOLLOY has leave of absence prior to embarkation for service in India.

The following changes have taken place recently in the Belfast district:—Surgeon J. WATSON, M.D., from Belfast to Bengal; Surgeon E. BUTT, from Falcarragh to Bengal; Surgeon J. M'Laughlin, from Holywood to Belfast; and Surgeon S. G. ALLEN, from Belfast to Dunfanaghy.

THE VOLUNTEERS.

THE undermentioned gentlemen have resigned their commissions:—Acting-Surgeon R. S. F. BARNES, M.D., 3rd Middlesex Artillery (appointment dated February 26th, 1887); Surgeon A. D. L. NAPIER, 1st Haddington Artillery (February 1st, 1889); Surgeon W. P. MEARS, M.D., Tynemouth Artillery, Western Division Royal Artillery (December 20th, 1884); Acting-Surgeon F. C. MEARS, M.B., Tynemouth Artillery, Western Division Royal Artillery (January 10th, 1885); Surgeon J. B. GRANGER, M.B., 1st Lanarkshire Engineers, Fortress and Railway Forces (February 1st, 1889); Suegeon E. M. LITTLE, 6th Middlesex (February 1st, 1889).

Acting-Surgeon W. A. HUNT, 2nd Volunteer Brigade, Somerset Light Infantry (late the 2nd Somerset) has resigned his commission, bearing date January 22nd, 1879; he is permitted to retain his rank and uniform.

Surgeon-Major (ranking as Lieutenant-Colonel) T. N. DEAN, 4th Volunteer Battalion, Manchester Regiment (late the 16th Lancashire), has also resigned his commission, with permission to retain his rank and uniform. His Surgeon's commission dated from August 3rd, 1861; that of Surgeon-Major, from February 1st, 1889.

Acting-Surgeon J. M. HARPER, 1st Volunteer Battalion Somerset Light Infantry (late the 1st Somerset) is promoted to be Surgeon.

The undermentioned gentlemen are appointed Acting-Surgeons to the corps specified: HUGH JONES ROBERTS, 2nd Volunteer Battalion Royal Welsh Fusiliers (late the 1st Flint and Carnarvon); WILLIAM STUART PALM, M.B., 6th Volunteer Battalion Royal Highlanders (late the 1st Fife); ARTHUR R. F. EVERSHED, 20th Middlesex (Artists'); JOHN GRANT, M.B., Maidstone Division of the Volunteer Medical Staff Corps; DAVID THOMAS KEY, 1st London Artillery (City of London); and HUMPHRY JOHN WHEELER, M.B., 1st Bucks.

Surgeon W. HAINING, M.D., 1st Cheshire and Carnarvon, is promoted to be Surgeon-Major ranking as Major.

Surgeon O. GRANT, M.B., from the 1st Inverness Artillery, is appointed Surgeon to the 1st Volunteer Battalion, Cameron Highlanders (late the 1st Invernesshire).

Surgeon F. MATHESON, M.D., 7th Middlesex (London Scottish), is promoted to be Surgeon-Major, ranking as Major.

UNIVERSITY INTELLIGENCE.

OXFORD.

APPOINTMENT OF EXAMINERS.—Examiners for the first M.B. examination:—Organic Chemistry: Mr. Odling M.A., Waynflete Professor of Chemistry; Human Anatomy: Sir W. Turner, M.B.Lond., A. Thomson, M.A.; Physiology: J. S. Burdon-Sanderson, M.A., W. Stirling, M.D.Edin., Professor of Physiology in Owens College. Examiners for the second M.B. examination: Medicine: J. S. Bristowe, M.D.Lond.; Surgery: Sir W. Stokes, M.D.Dublin, Mr. Bruce Clarke, M.B., Pembroke College; Midwifery: F. H. Champneys, M.D., Brasenose College; Materia Medica: T. Lauder Brunton, M.D.Edin.; Pathology: S. J. Sharkey, M.D., Jesus College.

LONDON.

THE following is the result of the Examination for Honours in Medicine at the degree of M.B.:

First Class.—C. M. G. Kitching, Guy's Hospital and R. Pickard, St. Bartholomew's Hospital, equal (Gold Medal); W. S. Fenwick, London Hospital, Strassburg and Berlin; M. P. Ledward, Owens College; and J. E. Platt, Owens College.

Second Class.—J. A. Hayward, St. Bartholomew's Hospital; H. M. Bowman, St. Bartholomew's Hospital, and P. J. Duncan, Charing Cross Hospital, equal; R. D. Mothersole, Guy's Hospital, C. F. Seville, Owens College, and E. O. Turner, University College, London, equal; C. P. Lukis, St. Bartholomew's Hospital.

Third Class.—E. P. Paton, St. Bartholomew's Hospital; E. H. Snell, Queen's College, Birmingham; J. J. Macgregor, St. Bartholomew's Hospital.

HOSPITAL AND DISPENSARY MANAGEMENT.

THE PROPOSED PUBLIC MEDICAL SERVICE.

FIRST MEETING OF THE COMMITTEE.

THE first meeting of the Committee appointed by the Council of the British Medical Association, to consider Dr. Rentoul's resolutions submitted to the annual general meeting at Leeds, was held at the Offices of the Association, on November 27th. There were present:—Mr. Wickham Barnes, Mr. George Brown, Dr. Crowe (Worcester), Dr. Major Greenwood, Mr. Ernest Hart, Mr. Nelson Hardy, Dr. Holman (Treasurer of the Association), Dr. Henty, Mr. Brindley James, Dr. Rentoul (Liverpool), Sir Spencer Wells, and Dr. Hugh Woods.

The replies from the Branches and members were printed and circulated.

It was proposed by Dr. HOLMAN, and seconded by Mr. ERNEST HART, that Dr. Rentoul take the chair.

Letters of apology for non-attendance were received from Dr. Bridgwater and Dr. Brierley.

Mr. FOWKE (General Secretary of the British Medical Association) reported that a letter had been received from the Lord President of the Council, acknowledging the receipt of the copy of resolutions forwarded to him, and a letter from the Charity Organisation Society, stating that the special committee of that Society having charge of the question of the better organisation of the medical charities in the metropolis had had under consideration the resolution adopted at the annual meeting of the British Medical Association, and was of opinion that, in the interest of the reform itself, it would be best if the two committees worked separately but in co-operation. The committee of the British Medical Association would represent distinctly medical and professional interests; the committee of the Charity Organisation Society would represent the more general charitable interest in the question; and the evidence of the two committees, separately submitted to a Select Committee of Inquiry or Royal Commission, would, it was thought, have more weight than joint action in such a matter. Organised co-operation between the two committees was very desirable, and, with the view of promoting an interchange of information, they had instructed Mr. Montefiore to hold himself in readiness to attend any meeting of the subcommittee of the British Medical Association, should that be desired. Attention was called to the fact that the work of the Charity Organisation Society was confined to the metropolis.

It was proposed by Mr. GEORGE BROWN, and seconded by Mr. NELSON HARDY, that the above communications be entered on the minutes, and that the letter be acknowledged.

The replies from the Branches were received.

Mr. FOWKE reported that 150 replies had up to the present time been received in response to the circulars issued in the JOURNAL of November 9th, pages 65-6 of the advertisements.

Mr. BROWN had pleasure in proposing Sir Spencer Wells as permanent Chairman, and Mr. Ernest Hart as Vice-chairman of the committee.

Mr. NELSON HARDY said he was sure that every member of the committee felt that, if they could secure Sir Spencer Wells as their chairman, it would be an immense advantage, not only because he had necessarily devoted a great deal of attention to the subject in connection with provident dispensaries, but because at the present time it was of the utmost importance that they should have someone who would carry weight with the hospital men of London, and there was no one whose name would carry more weight than Sir Spencer Wells.

Mr. ERNEST HART expressed himself unable to accept the post of Vice-chairman.

Sir SPENCER WELLS thought there were circumstances which stood in the way of his accepting the permanent chairmanship. He ultimately however accepted the post; and, on the proposal of

Mr. BRINDLEY JAMES, took the chair now vacated by Dr. Rentoul.

Mr. ERNEST HART, in proposing Dr. Rentoul as acting Vice-chairman, urged that he should have the responsibility and authority in the debate on the best means of carrying out his proposals, or of remedying by any method the abuses to which he had called attention.

Mr. NELSON HARDY proposed, as an amendment, that Mr. Wickham Barnes be Vice-chairman, and Dr. Rentoul, Secretary.

Mr. ERNEST HART pointed out that the secretarial work of this committee could be more efficiently done by the General Secretary of the Association, as was the case with most of the other committees.

Mr. NELSON HARDY withdrew his amendment, and Dr. Rentoul's appointment as Vice-chairman was unanimously carried.

Mr. GEORGE BROWN expressed himself dissatisfied with the resolutions which had been sent in by the Branches, inasmuch as, with the exception of one or two, they made no suggestions. He dwelt upon the importance of the work before them, which, he said, was the most important reference which had ever been made to the Association, and it was their duty to grapple with it with a very firm hand.

Mr. ERNEST HART proposed: "That the replies from the Branches and meetings, with any others that come in up to January 15th, 1890, shall be circulated to the members of the Committee, and that the Chairman and Vice-chairman be requested, as soon as convenient thereafter, to draft a report for submission to the Council of the Association, with conclusions based on these materials, and that such report be circulated to the Committee in print ten days at least before its next summoned meeting."

On the suggestion of Mr. BROWN, it was decided to call the meeting together before drafting the report, and the resolution, modified as follows, was adopted: "That the replies from the Branches and members, with any others that might come in up to January 15th, shall be printed and circulated as quickly as possible afterwards to the members of the Committee, and a meeting of the Committee called within fourteen days after that date."

MEETING OF BRANCHES.

AT a meeting of the Preston members of the Lancashire and Cheshire Branch of the British Medical Association, held in Preston on November 21st, it was unanimously carried: "That this meeting, having carefully considered Dr. Rentoul's scheme for a Public Medical Service, records its conviction that it is unnecessary to the country at large, and specially injurious to those medical men who reside in towns where the working classes predominate, as it would reduce to the level of club patients the more thrifty and industrious, still leaving the improvident and unthrifty to be medically provided for gratuitously."

AT a special meeting of the South-East Hants District of the Southern Branch, held on November 21st, 1889, to consider Dr. Rentoul's resolutions *re* hospital and dispensary management, Mr. W. F. BROOK in the chair, and thirty-five members being present, the following resolutions were passed:—1. Proposed by Dr. BLACKMAN, seconded by Dr. F. LORD: "That this meeting agrees with the proposal contained in Resolution 1, with regard to the wage limit of patients eligible for treatment in hospitals; but would suggest this addition: That any patient in receipt of wages in excess of the wage limit therein mentioned should be admitted for treatment in hospital on the recommendation of the medical attendant." 2. Proposed by Dr. BLACKMAN, seconded by Dr. F. LORD: "That this meeting disagrees entirely with Resolutions 2 and 3, and believes that wage earners who are making up to 45s. per week per family, and single persons up to 30s. per week, are already provided for satisfactorily by the medical practitioner; and that the formation of a Public Medical Service by the medical profession is quite uncalled for." 3. Proposed by Dr. BLACKMAN, seconded by Dr. GUILLEMARD: "That this meeting adopts the suggestions contained in Resolution 4, and is strongly in favour of a sliding scale of payments in friendly societies and tontines, but that the question of raising the medical fees paid by contract can only be carried out by establishing a medical ethical association comprising the whole medical profession." 4. Proposed by Dr. LORD, seconded by Mr. F. WAY: "That this meeting agrees with Resolution 5 in respect to the Poor-law infirmaries, namely, that these should be available for the clinical instruction of students, and also that these should be open to the medical practitioners of the neighbourhood for study and research.

A SPECIAL meeting of the Southampton District of the Southern Branch was held at 1, Grosvenor Square, Southampton, on November 22nd, at 5 P.M., to consider the resolutions of Dr. Rentoul. Dr. BEAUMONT occupied the chair. The following resolutions were adopted:—1. Proposed by Dr. BUCKELL, seconded by Dr. THOMAS: "That there is an abuse of the out-patient department of our medical charities, and some reform in its administration is necessary." Carried *nem. con.*—2. Proposed by Dr. GRIFFIN, seconded by Mr. KEELE: "That instead of individual medical practitioners seeking an interview with the managers of our medical charities in the various towns, the Council of the British Medical Association should communicate with them as to who are eligible for out-patient medical aid, pointing out to them the abuses connected with the present system, and requesting them to remedy the same." Carried.—3. Dr. GRIFFIN proposed and Dr. BUCKELL seconded: "That the proposed Public Medical Service is impracticable." Carried *nem. con.*—4. Dr. LAKE stated his belief that the wage element was only a small factor in the case, and with regret proposed: "That the fourth paragraph in Dr. Rentoul's resolution was impracticable in large towns." This was seconded by Dr. TREND, and carried *nem. con.*—5. Paragraph 5, with reference to utilising the great resources of the Poor-law infirmaries and various fever hospitals for clinical instruction, on the motion of Dr. CHAMBERLAIN, seconded by Dr. ARCHER, was carried unanimously.—A vote of thanks to the Chairman concluded the meeting.

A MEETING of the South-Western Branch of the British Medical Association was held on November 20th at the Plymouth Eye Infirmary for the consideration of Dr. Rentoul's resolutions regarding the reform of the out-patient departments of medical charities. The chair was occupied by Mr. W. PEARSE (St. Tudye), the President.—Dr. P. MAURY DEAS (Honorary Secretary) submitted the resolutions of the Leeds meeting of the Association, which had been passed, "recognising the fact that there is an abuse of the out-patient department of our medical charities." Dr. Rentoul's resolutions were considered *seriatim*. On the first paragraph, particulars of the Manchester system were read by the Honorary Secretary stating that cases on first applying were not excluded from the hospitals, but the Provident Society by means of inspectors made inquiry as to the social condition of applicants, and a "poverty scale" was adopted. At the London Hospital a waiting-hall inspector was appointed; no one was refused first treatment. At St. Bartholomew's Hospital an inqniry officer was appointed.—Dr. RICHARDSON (Torquay), speaking from hospital and dispensary experience, was of opinion that nine-tenths of the poor could pay something, and the remaining tenth ought to be treated by the Poor-law. He considered that they ought to call attention to the imposition practised by people coming to the hospitals who could afford to pay; and to the attendance on long, and often tedious and difficult cases in the cottages of the poor, when the remuneration of medical men did not in many cases exceed that of the bootblack who stood at the corner of the street. He was satisfied that there was no hope of receiving fees from the poor, and the only means by which medical men could expect remuneration was by means of weekly, monthly, or quarterly dispensary payments. He submitted the following proposals: 1. That one or more dispensaries be established in all places; that the management consist of a Committee formed of one-third of the medical staff, one-third of medical men unattached to the dispensary, and one-third of the public. 2. That 5s. per annum be paid by each member over 12, and half-a-crown under that age; and where there are more than four children in a family the others be treated gratis. 3. That although no wage limit be exercised, yet no one who can pay in the ordinary way shall be allowed to benefit by the dispensary, and each case shall be brought before the Committee and dealt with. 4. That the rent, taxes, drugs, dispensary, etc., be paid for by voluntary subscription. 5. That all the money received from the patients be paid to the medical men attached, in proportion to the number of patients attended. 6. That every medical man in the district be allowed to serve on the staff. In his opinion the wage limit was the most difficult question they had to decide upon. He was strongly of opinion that no wage limit should be enforced, but each case treated on its merits. He considered that people should be called on to pay what they

could afford, that the medical man should receive not a large fee, but one which, in the aggregate, would mean something to the young beginner. A man starting in practice might attend 1,000 poor people without losing a great deal of time, and if there were in that number 350 adults and 650 under 12, that would mean, at the scale he proposed, £168 a year—which might be earned in the afternoon, leaving the morning free for private practice. He would make all hospitals into provident dispensaries, except those for special cases.—Mr. SQUARE (Plymouth) was of opinion that they would find great difficulty in dealing with that matter, owing to the want of cohesion among medical men; there would further be the difficulty of securing the co-operation of those connected with hospital management. There would be extreme difficulty about working a committee to control admissions, and the appointment of an inspector seemed the only plan that could be adopted. In their own hospital they could not afford to pay an inspector. They decided to treat every accident, but if the patient was supposed to be one who could pay he was told to go to his own medical man for further treatment. He considered that the first resolution gave them a basis of treatment.—Mr. WADE (Chudleigh) concurred with the last speaker as to the want of cohesion in the profession. They could not form themselves into a combination for trade purposes, but they could stimulate in the profession a feeling which had never yet existed. Dr. Richardson's proposition for a father, mother, and four children would amount to £1 a year—certainly more than very many in country places would be able to pay. It would be a mistake to have the same rule as to wages applied to all parts of the country. The resolution referred to 25s. and 20s. a week, but in many districts of Devonshire a man was considered to be earning good wages if he got from 12s. to 15s. a week. He would like to see, however, some such system as Dr. Richardson proposed carried out, because it would stimulate in people a spirit of independence which they did not possess at present.—Dr. ALDRIDGE (Plympton) mentioned that there was, in connection with the Plymouth Public Dispensary, a provident dispensary, which did not, however, flourish very greatly on account of the establishment of a large Medical Association in connection with the clubs of the town. The dispensary excluded servants and persons in receipt of parochial relief, but only too often servants immediately after leaving their places obtained a dispensary paper.—Mr. ROLSTON (Stoke) was of opinion that there was scarcely so much difference between the ability of working men in the town and country to pay the same amount as appeared at first sight. The working classes had more expenses in the town than in the country.—The HON. SECRETARY proposed the following resolution: "That this meeting approves of the principle of Resolution No. 1, but is of opinion that the minimum rate of wages suggested would be found too high in many districts, and that the wage limit must vary in different parts of the country."—Mr. SQUARE seconded, remarking that he did not think they could legislate as to the wage limit; the point must be settled by those who had to deal with the matter in different parts of the country. It must not be forgotten that many hospitals had a Hospital Saturday, and the working men who contributed once a year from 2d. to 6d. considered that they really had a claim on the hospital.—On the proposition of Mr. RENDLE, "and rural districts" was added to Resolution No. 1, after the words "towns and cities." The resolution was carried *nem. con.*—The second paragraph was then considered.—Mr. WADE thought that they would do well to omit any limit as to wages from the resolution, because if people were mean enough to take advantage of a system of charitable medical relief they would do so.—Mr. RENDLE held, however, that the wages question ought not to be eliminated from the resolution. Although liable to abuse in large centres, he did not think there would be any difficulty in the matter with the majority of practitioners.—Dr. ALDRIDGE said that a scheme of that kind would be of very great advantage in a town like Plymouth, provided with so many dispensaries, if something were done in the way of consolidation which would be equivalent to a Public Medical Service.—Mr. SQUARE, referring to the last sentence in the resolution, asked who would initiate the matter? That was the essential difficulty.—On the proposition of Mr. RICHARDSON, it was agreed that the reference to the scheme published on June 22nd should be omitted.—Mr. WADE proposed that they should agree to the resolution in the following form: "In order, etc., this meeting resolves that it is desirable that a Public Medical Service be established with as little delay as possible." This would leave out any reference to the wage limit.—Dr. ALDRIDGE seconded, and the resolution was carried unanimously.—The third paragraph was then considered. The HON. SECRETARY, replying to a remark of Dr. Richardson's, said he took it that they were not forming an executive body, but expressing an opinion. As Resolution No. 2 had affirmed that a Public Medical Service should be established, it was desirable to draw up rules, and they had merely to help the Council in coming to a decision. After some discussion, the first sentence of the resolution was agreed to as far as the words "provident system."—The meeting next deliberated on the fourth paragraph. The HON. SECRETARY remarked that the resolution went a great deal too much into detail. He proposed its adoption down to the words "resolution 3."—Upon the fifth paragraph, Mr. SQUARE said he was greatly in favour of the rule, for he had noticed that many of the younger medical men of the present day could not diagnose eruptive fevers, and what was proposed would meet the difficulty to a very large extent. Dr. RICHARDSON seconded, and the resolution was carried unanimously.—The sixth paragraph of the series was agreed to without discussion, namely, "That the Council and JOURNAL of the Association help in every legitimate way to bring the above resolutions to a successful issue."—The meeting also approved of the suggestion that the proposed inquiry into the management of the metropolitan medical charities should be extended so as to include the provincial hospitals and dispensaries.

A MEETING of the Hertfordshire District of the Metropolitan Counties Branch was held in the Council Chamber of the Town Hall, St. Albans, on November 21st.—The chair was taken by Dr. BRETT, Vice-President of the District.—The meeting was called at the request of the Council of the Metropolitan Counties Branch for the purpose of discussing Dr. Rentoul's resolutions as presented to the annual meeting of the Association at Leeds in August last.—The discussion was opened by the HON. SECRETARY, who spoke on the chief points of interest connected with the agitation.—Dr. BRETT put forward the following resolution, viz.: "That as applied to Hertfordshire Dr. Rentoul's scheme for a Public Medical Service is not applicable."—This was seconded by Mr. MOWATT.—Mr. FISHER proposed as an amendment: "That each section of the resolution be considered separately."—This was seconded by Dr. STEELE and adopted.—The voting on the amendment was as follows: The meeting was in favour of sections I, IV, V, and VI; sections II and III were lost.—When speaking on the resolutions, Mr. FISHER urged the necessity of combination amongst medical practitioners.—This was generally recognised as being most essential, but the HON. SECRETARY reminded the meeting of a sad result of such in the neighbouring town of Luton, where the clubs had amalgamated. They then advertised in the medical journals for a doctor to reside in the town to take the work of these clubs. A doctor came and took up the work, the result being that the medical gentlemen of that town were out of pocket something like £800 to £1,000 a year, and it was said, moreover, that the new-comer was looked upon as a regular hero by his patients.—Mr. J. TREGELLES FOX (Hertford) submitted that the "wage limit" system gave no true criterion of the ability to pay in individual cases, though by it a true average of the abuse rate might no doubt be obtained; that it would often be impossible and always invidious to ascertain and enforce; and that it was too mechanical a means of solution of these human problems. Whilst warmly sympathising with the endeavour to rectify the abuse of medical charities and to secure more adequate remuneration for medical services, more especially those rendered to wage earners, he thought that the British Medical Association itself might gradually attain these objects without the disadvantages involved in starting another huge organisation. There were he thought three principles to be borne in mind. First, that all medical men everywhere should co-operate, each maintaining his independence, but recognising that there was really no occasion for the proverbial jealousies of the profession, and that nothing was gained by beating one another down. Rightly considering the interests of their patients, themselves and one another, they would find that the true interests of all in the profession, general practitioners, consultants, and hospital staff, were in unison. The second principle to strive for was that all doctors should as a rule claim adequate remuneration. There was too much false charity in "gratis" work, etc. Let any who would "go for less" or nothing consider whether they were not depriving a brother of a fee, and perhaps pauperising the patient

as well; and let the medical officers of hospitals, etc., demand payment for services now "honorary," and thus come into closer sympathy with their brethren. Those who desired and could afford to might subscribe to the charities or help the poor around them in many other ways. The third principle to keep in view was that embodied in the term "medical ethics," those canons of courtesy, mutual forbearance, and help, which, if acted upon, would remove much of the present competition, and which he believed could only be securely founded on the high motives of the Christian religion, which he trusted they all professed. With this ideal before them, might not the British Medical Association carry on to a successful issue the crusade for hospital reform, not merely by wage limits, but by enlisting the cordial help of the medical staff, whose services should be paid, and their voice in the government of the hospitals better recognised, the governors also being more careful in the bestowal of letters of recommendation? Then the unfair competition of the out-patient departments being removed, let the Association take up the subject of medical ethics, adopting a code, and giving point to it by sending down recommendations for its practical carrying out, encouraging neighbouring practitioners to meet together for local concerted action as to fees, etc., and the promotion of brotherly feeling. He believed they would be more likely to succeed, if slowly yet more surely, by working for these ends on the lines of the present British Medical Association than by starting a new organisation which could not be suitable for the various circumstances of different places, and which could hardly effect anything without a universal strike for the new fees throughout the profession.—Drs. HUGH WOODS, BLAKE, STEELE, HUBBARD, FISHER, and the HONORARY SECRETARY also took part in the discussion.—Dr. TREGELLES FOX proposed the following resolution, namely: "That this meeting warmly approves of the object of Dr. Rentoul's efforts to lessen the abuse of medical charities, and to secure more adequate payment for medical services, more especially those rendered to the wage-earning class."—This was seconded by Dr. STEELE, and carried unanimously.—Proposed also by Dr. FOX: "That the desired ends are likely to be attained without the formation of any new organisation."—Seconded by the HONORARY SECRETARY, but was lost.

MEETING AT CARDIFF.

AT a recent meeting of the Cardiff Medical Society, under the presidency of Dr. A. SHEEN, the abuse of out-patient departments and provident dispensaries was discussed, and it was resolved that the managing committees of the Cardiff Infirmary and of the Provident Dispensary should be asked to meet representatives from the Society for the purpose of discussing the question of abuse in both institutions, and of devising some plan to arrest the abuse.

MEETING AT MANCHESTER.

AT a meeting of practitioners held in Manchester on November 19th, the following modification of Dr. Rentoul's resolutions was unanimously adopted:—1. That medical practitioners and the managers of our medical charities in the various towns and cities meet together and decide who are eligible for out-patient medical aid, and that the Manchester system of checking abuse, or that used at the London and St. Bartholomew's Hospitals, be put into force, but that preference be given to the plan used in Manchester. 2. Expunged. 3 and 4. That having secured hospital co-operation, the Association appoint a Committee, composed of two representatives elected by each Branch, and that this Committee draw up a series of rules and scales of fees on the principle of wage limit, and that existing clubs and other provident schemes for administering medical and surgical relief be recommended to co-operate and adopt such rules, and thus ensure a thorough and general reform. 5. That this meeting—recognising the fact that there are a great number of beds in the Poor-law infirmaries (there being no less than 12,000 in twenty-five metropolitan Poor-law infirmaries) and many in the various fever hospitals at present unused for the clinical teaching of students—desire to express their regret that the Poor-law infirmaries and fever hospitals are not open for the clinical instruction of medical students, and hope that the various authorities will direct their attention to the removal of the present restrictions, so that the educational standard may be improved. 6. That the Council of the Association continue to help in every legitimate way to bring the above resolutions to a successful issue. The meeting also agreed that to refuse admission forthwith to all applicants at our medical charities who are able to pay any fees (except first aid only, in case of accident) is no injustice to the working classes, there being ample provision of skilled advice obtainable at very moderate charges, of private practitioners and existing clubs and provident dispensaries.

MEETING AT COVENTRY.

ON November 22nd a meeting of medical men of Coventry and district was held at the Coventry and Warwickshire Hospital, chiefly to discuss Dr. Rentoul's scheme. The proposals of Dr. Rentoul had special interest, perhaps, to Coventry, as more than 20,000 persons—on whom no wage limit is imposed—out of a total population of not more than 50,000 belong to the local Provident Dispensary at a cost of one penny a week for each person. Dr. MILNER MOORE presided, and twelve other medical men were present.

After some preliminary remarks by the Chairman, Dr. HAIR said this matter had long been before the profession, and four years ago he attended a meeting at the Society of Arts, presided over by Sir Andrew Clark. The question was, How this present state of things could be remedied? Dr. Rentoul's system was certainly complicated, but he had modified the original proposal. Apparently the scheme had reference to towns only. Dr. Hair expressed the opinion that, in the matter of "wage limit," Dr. Rentoul went too far in the direction of liability. Some of the fees proposed by Dr. Rentoul were too low, and in the provident dispensaries already established the pay bore very poor relation to the amount of work done.

The CHAIRMAN reminded the meeting that the opinion of the profession was desired on Dr. Rentoul's scheme. The discussion which followed had a very direct bearing on the Coventry Provident Dispensary and its influence on the general medical practice of the city.

Dr. LYNES said Dr. Rentoul's proposals would be dictated by a true and proper sense of the evil that existed, but they were extremely elaborate, and open to very great objections on various points. Many of the proposals would be, he held, entirely unworkable. They might be desirable, but they could not be carried out in the present state of society. Working people would not pay a separate fee for prescriptions, nor accept the money of honorary subscribers in the proposed public medical service with its accompanying outside influence. No doubt persons did get attendance at hospitals who could afford to pay medical fees, but he did not think it applied to the middle towns, where people were pretty generally known. In Coventry he did not think it would be possible now to establish a public medical service on the lines proposed. He concluded by moving: "That this meeting of medical practitioners in and around Coventry, while approving of the main issues of the resolution proposed by Dr. Rentoul, and about to be discussed by the Committee of the Council of the British Medical Association on the 27th November, consider that many of the details require further thought, and, in some cases, amendment."

Dr. PHILLIPS seconded, and the resolution was carried unanimously.

Dr. HAIGH moved, and Mr. MALDEN seconded, the second resolution, which was also passed:—"That while measures are being taken to purge the hospital out-patient departments of abuse, it ss at the same time essential that all provident dispensaries should have a wage limit for members, as there are at present large numbers admitted who should not receive medical aid for the very small annual subscription of 4s. 4d."

A Committee was appointed to consider the matter of public medical service, with special reference to local circumstances.

NEED FOR CO-OPERATION.

A Medical Union.

MR. H. B. PULLEN-BURRY (Liphook, Surrey) writes on the need for co-operation, and urges the formation of a Medical Union embracing all medical men of all grades and specialities. The general lines which he suggests are: division of the whole country into districts, and of the districts into areas or practices; a Council for each district, appointing practitioners to each area, assessing and collecting all charges, and paying an annual stipend to the practitioners.

GENERAL HOSPITALS.

Their Large Expenditure.

DR. HUGH WOODS (Highgate) urges that the defenders of the present management of hospitals are in this dilemma: if the hospitals are really treating the vast numbers apparently indicated

by their returns, then they are pauperising the community; if the returns are deceptive, and the hospitals are not really treating one-third of the whole population as out-patients and one-fortieth as in-patients, then the capitation cost, very high under the former alternative, becomes, under this, exorbitant in the highest degree.

The Sick Poor.

Existing Provision for their Treatment.

Dr. A. Sheen (Surgeon to the Cardiff Infirmary and Cardiff Workhouse Hospital) expresses the opinion that with a well-managed infirmary and well-managed provident dispensary cordially co-operating, all the requirements of the necessitous sick poor are fairly met. The Poor-law Medical Service supplies the needs of the pauper class, and no pauper ought to be admissible as an out-patient to a hospital except for a consultation. No patient presenting a subscriber's ticket should be refused a first attendance, but if inquiry showed the patient to be ineligible he should be discharged. The wage limit would be a guide to acceptance or refusal, but Dr. Sheen points out the difficulties attending its too rigid application, for example, of the two following cases the second is more entitled to hospital relief: 1. Man and wife; earnings 25s. a week; wife ill. 2. Man and wife and six children; earnings 30s. a week; husband ill. Still, as a rule, no person ought to be eligible for hospital relief if, in the case of a married man, he is earning 25s. a week, or a single man 20s. Members of clubs with medical attendance not to be eligible, except in accident or sudden emergency. The hospitals, on refusing a patient as ineligible, should direct him to the provident dispensary. A strict wage limit should be adopted by this dispensary, and only departed from after the case had been carefully examined by the committee. Dr. Sheen considers the subscriptions now required by the provident dispensaries too low; and that Dr. Rentoul's scheme, in its relation to the profession, merely applies a similar system to people with still higher wages. It would not benefit the whole profession if the medical staff were restricted. In an ordinary-sized town a large proportion of the income of all the medical men is derived from the working classes, and most of these, earning 30s. to 40s., can pay the small fees ordinarily charged. Dr. Rentoul's proposed service would take away this class, and those practitioners who were not admitted on the staff of the Service would be driven into competition with it, and so there would ultimately be a further reduction of medical fees. In clubs, or in departments of clubs, arranging for medical attendance there ought to be a wage limit, for it is monstrous that a man earning £500 a year should be able to obtain through a club medical attendance at the ordinary club fee. Dr. Sheen expresses cordial agreement with paragraphs 4 and 5 of Dr. Rentoul's resolutions.

Mr. Vincent Jackson's Address.

The Need of a Public Medical Service.

Dr. John T. Faulkner (Stretford, near Manchester) strongly recommends every one to read Mr. Vincent Jackson's address published in the Journal of November 17th, page 1118. He is in favour of a Public Medical Service, with branches in every district, treating both those who can pay a small fee and those who cannot pay at all, the latter being paid for by a special rate, which he thinks would probably be less than the School Board rate.

A Provident Medical Service.

The Question of Funds.

Dr. Frederick H. Alderson (Hammersmith) thinks that even those who cannot accept Dr. Rentoul's proposed service as planned by him will feel grateful to him for the time and trouble he has expended. He believes it quite possible to establish a Provident Medical Service; it might be necessary that its funds should be augmented by the State or by public subscription. Every registered medical practitioner who had been in practice three years should have the privilege of joining the Service, and the poor would thus have a large body of responsible medical men from whom to select, and would not, as now, be left at the mercy of the neophyte, the charlatan, or the farmer of a number of cheap dispensaries managed by unqualified assistants. Dr. Alderson generally approves the sliding scale of fees suggested by Dr. J. S. Belcher, in the Journal of November 17th, page 1129.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

GUARDIANS, LOCAL GOVERNMENT BOARD, AND MEDICAL OFFICER.

Mr. A. Stokes, whose previous treatment by the guardians of the Oundle Union was described in the Journal of December 5th, 1885, January 30th and February 13th, 1886, and which reflected no credit on them as a public body, is again engaged in conflict with the same board. It appears that Mr. Stokes, not having held office in the Oundle Union for several years past, was recently induced to offer himself as a candidate for a vacant district medical appointment, which was advertised as such by direction of the guardians, it being stated in the advertisement, dated August 3rd, 1889, that on the following September 5th they would proceed to the appointment of a district medical officer, duly qualified, according to the orders of the Local Government Board, and that the appointment would be subject to the sanction of that Board.

Mr. Stokes was elected to the vacancy, and by an official letter to him from the clerk to the guardians, dated September 7th, 1889, informed of his election, and that his duties would commence on the 30th of the same month. It subsequently came to Mr. Stokes's knowledge that this appointment was to be for a year only, and that previous to his re-election for a second year's service, the salary would probably be reduced. Mr. Stokes therefore refused to sign that part of the agreement which had reference to the temporary tenure of office, and applied to the Local Government Board to insist upon his appointment being made a permanent one. He grounded this request upon his being fully qualified, being resident in the district for which he had been appointed medical officer, and there having been no reference whatever to a temporary appointment in the Board's advertisement.

The Local Government Board then inquired of the guardians "their reasons for proposing to limit the appointment for a period of one year," and the guardians in reply stated that in any instance they object to making permanent appointments, and that in this case Mr. Stokes had been appointed in accordance with the terms of the advertisement.

The result has been that the Local Government Board have since sanctioned the temporary appointment, but have informed the guardians that at the expiration of the year, if they reappoint Mr. Stokes, it must be for a permanency, thus giving the board of guardians the opportunity of declining to reappoint him unless he accepts a lower salary.

Mr. Stokes now writes to ask us whether, taking into consideration the actual wording of the official advertisement, and likewise the official letter received by him from the clerk, he is not legally entitled to hold the appointment permanently in spite of the decision of the Local Government Board.

We consider Mr. Stokes, having been appointed in accordance with the terms of the advertisement, in which the general orders of the Local Government Board were referred to, though not in reference to the duration of the appointment, was really elected for life, and we much regret to find that the Local Government Board should not have taken this view of the case, and thereby ignored its own orders. We do not consider Mr. Stokes is compelled to sign an agreement to accept office for one year. He can act as district medical officer without an agreement, as some others do, and, though not holding ourselves called upon to advise on difficult points of law, think the best course for Mr. Stokes to take will be to perform the duties of the office for the current year, and then previous to its expiration, and before any further appointment is made by the guardians, to apply to the proper court for an injunction to prohibit them from making any further appointment, he being in office, and claiming the right to continue so, in accordance with the general orders of the Local Government Board, there being, so far as we are able to see, no "special circumstances" to render a temporary appointment necessary or even advisable, which no doubt could have been properly made if any such special circumstances had existed to require it.

We do not hesitate to assert that if Mr. Stokes's temporary appointment is in accordance with law, it is not in accordance with

equity; on the other hand, had the appointment been made permanent, the act would have been both legal and equitable.

Article 6. General order, May 25th, 1857, under which we suppose the Local Government Board claims the power to sanction Mr. Stokes's appointment as a temporary one, is as follows: "Provided that nothing herein contained shall prevent the guardians in any case of emergency, or under any special circumstances, from appointing one or more medical officers to act temporarily for such time and upon such terms as the Poor-law Board shall approve."

Any doubtful meaning of this 6th Article is removed by a circular letter from the Poor-law Board, Whitehall, dated June 6th, 1857, in which appears the following:

"The 6th Article contains a saving clause similar to that which was in Article 3 of the former orders, and is intended to meet the case of temporary appointments of medical officers in cases of emergency."

HEALTH OF ENGLISH TOWNS.

During the week ending Saturday, November 23rd, 5,603 births and 3,334 deaths were registered in twenty-eight of the largest English towns, including London, which have an estimated population of 9,555,406 persons. The annual rate of mortality, which had been 18.1 and 18.3 per 1,000 in the two preceding weeks, declined to 18.2 during the week under notice. The rates in the several towns ranged from 8.6 in Brighton, 10.6 in Cardiff, 15.4 in Oldham, and 16.3 in Birkenhead to 24.7 in Manchester, 26.0 in Sunderland, 26.9 in Newcastle-upon-Tyne, and 30.7 in Plymouth. The mean death-rate in the twenty-seven provincial towns was 19.6 per 1,000, and exceeded by 3.1 the rate recorded in London, which was only 16.5 per 1,000. The 3,334 deaths registered during the week under notice in the twenty-eight towns included 353 which were referred to the principal zymotic diseases, against 325 and 342 in the two preceding weeks; of these, 74 resulted from measles, 72 from scarlet fever, 61 from whooping-cough, 55 from "fever" (principally enteric), 50 from diphtheria, 40 from diarrhœa, and 1 from small-pox. These 353 deaths were equal to an annual rate of 1.9 per 1,000; in London the zymotic death-rate was 1.8, while it averaged 2.0 per 1,000 in the twenty-seven provincial towns, and ranged from 0.0 in Brighton and in Derby, and 0.4 in Portsmouth and in Oldham to 3.8 in Salford, 4.7 in Blackburn, 7.0 in Sunderland, and 10.0 in Plymouth. Measles caused the highest proportional fatality in Nottingham, Blackburn, Wolverhampton, and Sunderland; scarlet fever in Salford, Liverpool, Sheffield, Blackburn, and Plymouth; whooping-cough in Hull, Newcastle-upon-Tyne, and Wolverhampton; and "fever" in Hull. The 50 deaths from diphtheria recorded during the week under notice in the twenty-eight towns included 30 in London, 5 in Salford, 2 in Manchester, 2 in Plymouth, 2 in Halifax, 2 in Sheffield, and 2 in Newcastle-upon-Tyne. Small-pox caused 1 death in Liverpool, but not one in any other of the twenty-eight large towns; and only 1 small-pox patient was under treatment in the Metropolitan Asylums Hospitals on Saturday, November 23rd. These hospitals contained 1,543 scarlet fever patients on the same date, against numbers increasing from 538 to 1,511 in the twenty-one preceding weeks; 147 cases were admitted during the week, against 183 and 163 in the two previous weeks. The death-rate from diseases of the respiratory organs in London was equal to 3.9 per 1,000, and was considerably below the average.

HEALTH OF SCOTCH TOWNS.

In the eight principal Scotch towns, 730 births and 527 deaths were registered during the week ending Saturday, November 23rd. The annual rate of mortality in these towns, which had been 19.8 and 19.9 per 1,000 in the two preceding weeks, further rose to 20.6 during the week under notice, and exceeded by 2.4 per 1,000 the mean rate during the same period in the twenty-eight large English towns. Among these Scotch towns the lowest rates were recorded in Dundee and Leith, and the highest in Aberdeen and Glasgow. The 527 deaths in these towns during the week under notice included 53 which were referred to the principal zymotic diseases, equal to an annual rate of 2.1 per 1,000, which slightly exceeded the mean zymotic death-rate during the same period in the twenty-eight English towns. The highest zymotic death-rates were recorded in Paisley and Leith. The 243 deaths registered during the week under notice in Glasgow included 5 from whooping-cough, 4 from scarlet fever, 4 from measles, 3 from diphtheria, and 3 from "fever." Three fatal cases of diphtheria were recorded in Edinburgh, and 3 of scarlet fever in Leith. The death-rate from diseases of the respiratory organs in these Scotch towns during the week under notice was equal to 5.3 per 1,000, against 3.9 in London.

HEALTH OF IRISH TOWNS.

In the sixteen principal town districts of Ireland the deaths registered during the week ending Saturday, November 16th, were equal to an annual rate of 24.5 per 1,000. The lowest rates were recorded in Dundalk and Kilkenny, and the highest in Limerick and Belfast. The death-rate from the principal zymotic diseases averaged 2.1 per 1,000. The 178 deaths registered in Dublin during the week under notice were equal to an annual rate of 26.3 per 1,000 (against 27.3 and 24.5 in the two preceding weeks), the rate for the same period being only 17.4 in London and 20.7 in Edinburgh. These 178 deaths included 14 which resulted from the principal zymotic diseases (equal to an annual rate of 2.1 per 1,000), of which 7 were referred to different forms of "fever," 2 to measles, and 2 to whooping-cough.

During the week ending Saturday, November 23rd, the deaths registered in the sixteen principal town districts of Ireland were equal to an annual rate of 24.2 per 1,000. The lowest rates were recorded in Kilkenny and Wexford, and the highest in Belfast and Lurgan. The death-rate from the principal zymotic diseases in these towns averaged 1.9 per 1,000. The 164 deaths registered in Dublin during the week under notice were equal to an annual rate of 24.2 per 1,000 (against 24.5 and 26.3 in the two preceding weeks), the rate for the same period being only 16.5 in London, and 20.3 in Edinburgh. These 164 deaths included 9 which resulted from the principal zymotic diseases (equal to an annual rate of 1.3 per 1,000), of which 6 were referred to different forms of "fever."

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Newcastle-upon-Tyne (Population 159,003).—*Scarlet Fever Outbreak, Related to Milk Supply.*—As regards the statistics of disease and death during 1888, Mr. Henry E. Armstrong's annual report is eminently satisfactory. The general rate of mortality (20.5 per 1,000) is the lowest of which there is any record, the nearest to it being that of 1881 (21.7). The deaths from the zymotic class of diseases were only two-fifths of the number in the previous year. The improvement in this class, though greatest under the heads of measles and diarrhœa, was also large as regards fevers of all kinds and whooping-cough. Diphtheria is the only disease of this division in which the mortality equals that of the previous year. The rate of infant mortality is more than 22 per cent. below that of the previous year, and has never been so low. Small-pox was entirely absent from the city, and there was a greatly diminished prevalence of scarlet fever. Two outbreaks of this disease were of special interest, as being connected with the supply of milk from particular dairies. The first, in January, was small and of mild type; the second, more widespread in its character, presented many features of importance, notably the comparatively remote source of infection, and the remarkable connection proved between cases and the milk supply. There was no sign of disease in the cows, the dairy and cowhouses were clean and wholesome, but the children of a non-resident servant of the dairy had sore throats, though without any sign of skin eruption or ailment. The man was at once prohibited from coming near the premises or taking part in the business, and after due consideration the sale of the milk was for a time discontinued. The accounts of the several cases correspond exactly with the throat appearances of the children of the dairy-helper already referred to. Every one of the signs and appearances of the throat without skin-rash are such as are commonly met with in typical cases of scarlet fever. In the outbreak under report, different members of a family have also had the same form of a sore throat, some with rash and some without. From all Mr. Armstrong saw and gathered from the medical practitioners concerned, he has no hesitation in stating that the disease from which the children of the dairyman suffered was the same as that from which the consumers of the milk suffered; but he could come to no definite conclusion as to whether the mischief was done by one delivery of milk or by several. Mr. Armstrong includes in his report a very interesting account of the City Hospital for Infectious Diseases.

Portsmouth (Population, 139,575).—*Improvement in Public Health.*—Dr. Mumby reports that during 1888 there was a marked improvement in the public health, which was shown by a large decrease in the number of cases of infectious diseases and a corresponding decrease in the deaths caused by these diseases. Climatic conditions will, to a certain extent, account for the fewer deaths from zymotic causes, the absence of heat during the year affecting largely the diarrhœa mortality; but each of the other six principal diseases shows a marked falling off when compared with the average for the ten preceding years. Small-pox caused no death in the borough during the year 1888. There was an epidemic of measles in town during the latter part of the year. Scarlet fever was also prevalent. Twenty-five per cent. of the cases were removed to the Infectious Diseases Hospital, a great improvement on any previous year; in 1887 9 per cent. only were removed. Particulars are given of the action taken by Dr. Mumby to trace the cause of the early outbreak of the disease. Whooping-cough was the cause of death of 26 children in 1888, 21 of whom died in the first quarter of the year, 4 in the second, and 1 in the third. Diphtheria was responsible for 17 deaths, just half the average for the previous ten years. Typhus fever was again absent from the causes of death in Portsmouth, neither was any case of it reported during the year. Twenty-seven deaths were registered as being due to enteric and continued fevers, this number being just one-third of the decennial average, and less than for any year Dr. Mumby could find recorded. The total death-rate from all causes was 18.72, which is lower than the average for the preceding ten years, and for any individual year of those years except 1883 and 1879. The retrospect for the year 1888 must therefore be considered satisfactory, both as to its general death-rate and the death-rate from zymotic or preventable diseases.

BRADFORD (Population, 229,721).—*Difficulties connected with Construction of Smal.-Pox Hospital.*—Dr. James McLintock's first report is mainly statistical, and the result of other people's experience rather than his own, he having taken up office late in the year 1888. It is generally of a satisfactory character, the death-rate being as low as 17.1 per 1,000, the lowest recorded during the last twenty years. The seven chief infectious diseases showed a considerable falling off in mortality, the actual number of deaths being much less than in either 1886 or 1887, and the death-rate consequently more favourable, 1.6 per 1,000. The large number of deaths from consumption (408) is a matter for Dr. McLintock's serious consideration, and one to which he will probably direct some attention. Other noteworthy points are the large mortality from diseases affecting the organs of respiration (824), and from diseases of the nervous system (697). The authorities in Bradford have evinced a special anxiety to provide their town with a proper hospital for the treatment of small-pox, but they have not received from the Local Government Board the assistance which they very reasonably expected. The Central Board have done good service in demonstrating the dangers to the public attending the treatment of a number of small-pox patients in hospitals in thickly populated localities; but they have not proceeded further, or shown the principles upon which small-pox hospitals may safely be constructed. Such advice could only be given after actual experiments with various kinds of buildings; but although the necessary experiments might involve a large expense the question is a national one, and should be undertaken by the Government at the cost of the nation. The Local Government Board are fully competent to undertake the task, and it is to be hoped that in the public interest they will ere long do so.

MAIDSTONE (Population, 32,384).—*Diphtheria and its Causes.*—In Mr. M. A. Adams's excellent report for 1888, the chief points to be observed in the mortality tables are that there was an excess of deaths from zymotic diseases, but that from all other causes the rates were below the average. The most important and serious item in the death register of the year is the mortality from diphtheria, and Mr. Adams considers this subject at some length. He is of opinion that, somehow or other, scarlet fever, and perhaps measles, are associated with this disease, and that a continued prevalence of either of the former prepares the way for the latter. "It is possible," he says, "that the specific organism of diphtheria is favoured in its growth by the presence of the excretions of the organisms productive of scarlet fever or measles. Analogy shows this to be reasonable, just as the acetous, lactic, or butyric ferment may follow upon, and be favoured by, a foregoing saccharine fermentation, so it may some day be found out that the specific diseases to which the human body is liable are in some measure interdependent and subject to control one by another, so that difference of type and even order of sequence in the occurrence of epidemics may some day be explained. But whatever mystery surrounds the origin or primary cause, the proximate cause is almost invariably associated with bad sanitary surroundings, especially bad drainage." This conviction seems to be confirmed by the uniform result of the removal of such defects. The actual number of deaths from zymotic diseases during the year was 72, equal to a rate of 2.19 per 1,000. The general death-rate was 14.10 per 1,000, which, compared with the rate for England and Wales, 17.8, must be considered a satisfactory return.

MEDICAL NEWS.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—Fellowship Examinations. The following gentlemen, having passed the necessary examinations, have been admitted by the President Fellows of the College:

R. . . L. C. Corbett, Surgeon-Major M.S., M.D., Mast. Surg., 1867, Queen's University; J. Keatley, Surgeon, M.S., L.R.C.S.I., 1885, L.K.Q.C.P.I., 1885; W. H. Steele, Surgeon-Major, M.S., L.R.C.S.I., 1865, M.B., 1866, M.D., 1871, University Dublin.

The President and Council have unanimously elected Mr. George F. Blake Registrar of the College, in the room of Mr. Brennen, deceased.

THE number of students in the medical faculty of the Russian University of Helsingfors is 133, of whom two are women.

THE Belgian Government has recently raised the subsidy granted by it to the Patriotic League against drunkenness from 500 francs (£20) to 5,000 francs (£200).

A HYGIENIC Institute is about to be established in the University of Heidelberg. It will be under the direction of Professor Knauff.

IT is said that no fewer than 400 doctors of medicine recently applied for the appointment of medical officer to a sick club in Berlin.

DR. BARTELS, of 12-13, Karlsbad, Berlin, W., has been appointed Treasurer of the Tenth International Congress to be held at Berlin next year.

MEDICAL MAGISTRATE.—The Lord Chancellor has added the name of Mr. B. A. Daniell, L.R.C.P., etc. (London), to the Commission of the Peace for the borough of Aberavon.

THE students of the University of Rostock recently held a torch-light procession in honour of Professor von Zehender, who resigned the chair of ophthalmology at the beginning of the present semester in consequence of age.

Dr. BRAMANN, first assistant in Professor von Bergmann's clinic at Berlin, who performed tracheotomy on the late Emperor Frederick the Third, has declined to accept a "call" to Greifswald as Extraordinary Professor of Surgery.

IT is stated that an epidemic of typhoid fever of a somewhat serious character has broken out at the Stock Exchange. Typhoid fever also appears to be very prevalent just now in country houses.

DR. HANS VIRCHOW, *Privatdocent* in the University of Berlin, and Prosector in the Anatomical Institute, has been raised to the rank of Professor Extraordinarius. Dr. Hans Virchow is a son of the celebrated pathologist.

BY a recent order of the Russian Medical Department, antifebrin and phenacetin are placed in the category of drugs which chemists are forbidden to sell unless prescribed by a medical man. Antipyrin and cocaine had already been placed in the same list.

A LARGE lunatic asylum at Blackfoot, Idaho, has been entirely destroyed by fire. Although the most strenuous efforts were made to rescue the unfortunate inmates, eight perished before they could be brought to a place of safety.

CHOLERA is said to be increasing in Kermanshah, and is still prevalent in Khorremabad and Hamadan and the intermediate districts. The epidemic is spreading in an easterly direction.

DURING the official year 1888-9, the number of candidates who passed the Prussian State examination and received the licence to practise medicine was 504. Of these, 183 obtained the mark "sufficient," 305 that of "good," and 16 that of "very good."

THE following have decided to adopt the Infectious Diseases (Notification) Act: The Colchester Rural Sanitary Authority, the Redruth Local Board, the Barnsley Union Rural Sanitary Authority, the Chilvers Coton Local Board, and the Toxteth Park Local Board.

A CONGRESS of Russian pharmacists was held at St. Petersburg on October 21st. The principal question discussed was the reform of pharmaceutical education in Russia. In connection with the congress there was an exhibition, consisting mainly of Russian products.

IT is stated that the Hungarian Minister of Justice is about to introduce into the House of Deputies a Bill for the creation of a Senate of Medical Jurists .This body is to consist of fifteen permanent members, who will be paid a salary, and whose duty it will be to draw up a report on all medico-legal cases.

SWEATING OF THE FEET.—The result of extensive experiments in the German army as to the best treatment for excessive sweating of the feet has been to prove the great superiority of chromic acid over all other applications. Of 18,000 cases in which chromic acid was used, 42 per cent. were reported "cured," 50 per cent. "improved," and only 8 per cent. "unrelieved." The feet are first bathed, and, after being thoroughly dried, a 5 per cent. solution of the acid is applied with a brush. Two or three applications suffice, as a rule, but the treatment has sometimes to be repeated after a fortnight.

At the Ophthalmological Congress recently held at Heidelberg, the Graefe Prize was awarded to Professor Deutschmann, of Hamburg, for his essay on Ophthalmia Migratoria. Dr. Uhthoff, *Privatdocent* in the University of Berlin, received an honourable mention for his work on the Influence of Chronic Alcoholism on the Visual Organs of Man.

Quackery in Brazil.—On October 19th the late Brazilian Minister of Justice sent a circular to all presidents of provinces, directing them to institute criminal proceedings (*proceder criminalmente*) against all persons practising medicine without legal title. It is to be hoped that in this point the new Republic will show itself as enlightened as the Imperial Government which it has supplanted.

A chair of Ophthalmology was recently created in the Medical Faculty of Lisbon, to which Dr. Caetano Antonio Claudio Julio Raymundo da Gama Pinto has just been appointed, with Dr. F. J. R. Mayer as *Chef de Clinique*. The latter gentleman is a German, and is said to hold no Portuguese diploma. The *Correio Medico* denounces his appointment as an insult to the medical profession of Portugal, and calls loudly for the protection of native practitioners.

Presentation.—An interesting presentation recently took place at the County Asylum, Lancaster. Dr. Harding, who has for five years been one of the medical officers to the asylum, and who is about to leave the institution consequent upon his appointment as assistant medical officer at the Berry Wood Asylum, Northampton, was presented by the officers and staff with a combination liqueur stand and an etching, as a token of their personal regard.

University of Innsbrück.—A new anatomical institute was opened in the University of Innsbrück on November 12th. The Austrian Minister of Education, Dr. von Gautsch, and a number of military and official notabilities were present. An address on the history of the Chair of Anatomy at Innsbrück, which was founded more than 200 years ago, was delivered by Dr. Joseph Öllacher, Professor of Histology and Embryology. The new Professor of Anatomy, Dr. William Roux, who lately occupied the corresponding chair at Breslau, also delivered an address.

Renal Surgery.—Mr. Lawson Tait writes to say that the name of the patient mentioned in his list of nephrotomies, on page 1086 of the Journal, was Ellen Gooch, aged 25. She first noticed pain in the side in January, 1887, and found a sandy sediment passing in the urine. She went to the Queen's Hospital in March, was admitted under Mr. May, and had an incision made in the left side and two drainage tubes inserted. The treatment was ineffectual. She came under Mr. Tait's care at the Women's Hospital, and was admitted in February, 1889, and on the 7th of that month Mr. Tait performed an operation, the results of which are already extremely satisfactory.

The Continental Anglo-American Medical Society.—The following Executive Committee has been appointed: Dr. Hon. Alan Herbert (chairman), 18, Rue Duphot, Paris; Dr. Faure Miller, 28, Rue Matignon, Paris; Dr. John Chapman, 224, Rue de Rivoli, Paris; Dr. E. Dupuy, 53, Avenue Montaigne, Paris; Dr. Barnard, 34, Rue Washington, Paris; Dr. Thomas Linn (honorary secretary), 16, Rue de la Paix, Paris; Dr. Philip Frank, Rue Hermann, Cannes; Dr. J. Edmonston Charles, Via S. Nicolo da Tolentino, Rome; Dr. St. Clair Thompson, 1, Via del Moro, Florence. The next meeting and dinner is called for Monday, October 6th, 1890, when the dates of future meetings will be decided.

Prizes.—The Spanish Medico-Chirurgical Academy offers prizes for the best essays on the following subjects: 1. Modern Discoveries in Physics applied to Medicine: have they advanced the Science of Diagnosis? 2. Limits of the Expectant Method and the Therapeutic Value of Hygiene in Chronic Diseases of the Stomach. Each prize will consist of 250 pesetas (£10), with the title of Corresponding Member of the Academy. Essays may be written in Spanish, Portuguese, French, Italian, English, or German. Each essay must bear a motto, the name and address of the author being sent in a separate sealed envelope. All essays must be in the hands of the Secretary (Montera, 22, *bajo*, Madrid), on or before September 15th, 1890.

Cholera in the Philippine Islands.—The *Siglo Medico* says that between August, 1888, and July, 1889, 60,385 persons died of cholera in the Philippine Islands. The statistics being official are pretty sure not to err on the side of excess. This appalling mortality, instead of creating alarm, appears to be regarded with fatalistic indifference by the authorities as well as the people. No measures are taken to check the ravages of the disease. The people (to quote the words of the official account) "being now familiarised with the constant presence of the disease, the epidemic and contagious nature of which has disappeared, go calmly about their ordinary business without troubling themselves about the cholera, which, after all, is nothing more than one of the various maladies of the country, and is not so fatal as malaria and its various manifestations."

Pasteurism in Brazil.—Statistics recently published by our Brazilian contemporary, the *Revista Medica de S. Paulo*, state that the first antirabic inoculation carried out in Brazil was performed at Rio de Janeiro on February 9th, 1888. Between that date and August 14th, 1889, 342 persons had presented themselves at the institute. Of these, 135 had been bitten by dogs quite free from disease, 14 had not been bitten at all, and 37 did not put in an appearance after the first visit. From the remaining 156 who underwent the treatment, the director of the institute, Senhor Ferreira dos Santos, eliminates 6 more—namely, 5 who, having been slightly bitten by dogs as to which there were not strong grounds of suspicion, did not complete the course, and one who, having been severely bitten on the head, died of hydrophobia during treatment. In this last case, however, the patient had failed to attend ten times in twenty-three days. Three children who were badly bitten by the same dog are still quite well, more than a year having now elapsed from the date of the injury. In 141 cases the bites were inflicted by dogs, in 15 by cats. The condition of the animal was ascertained in 19 cases by positive results following inoculation of its medulla, or by the disease declaring itself in animals bitten at the same time; in 67 by the animal showing unequivocal signs of the disease; and in 70 by its exhibiting "very suspicious" symptoms. Of the 150 cases in which the treatment was thoroughly carried out, only one died—a mortality of 0.66 per cent.

MEDICAL VACANCIES.

The following Vacancies are announced:

ATKINSON MORLEY'S CONVALESCENT HOSPITAL, Wimbledon.—Resident Medical Officer and Superintendent. Salary, £150, board and residence. Applications by December 4th to the Secretary of St. George's Hospital, W.

JOINT COUNTIES ASYLUM, Carmarthen.—Junior Assistant Medical Officer. Salary, £100 per annum, with board, apartments, etc. Applications by December 3rd to the Medical Superintendent.

LEEDS BOROUGH HOSPITAL.—Resident Medical Officer. Salary, £150 per annum, with board and residence. Applications, endorsed "Medical Officer, Hospitals," by December 2nd to the Town Clerk.

LONDON HOSPITAL, Whitechapel Road, E.—Surgical Registrarship. Salary, £100 per annum. Applications by December 2nd to the Secretary.

MILLER HOSPITAL AND ROYAL KENT DISPENSARY.—Junior Resident Medical Officer. Salary, £30 per annum, with board, etc. Applications by December 13th to the Honorary Secretary.

MONKSTOWN HOSPITAL, co. Dublin.—Resident Medical Officer. Salary, £40 per annum, with board, apartments, gas and coal. Appointment to be for six months. Applications by December 2nd to the Honorary Secretary. Election on December 14th.

MULLINGAR UNION, KILLUCAN DISPENSARY.—Medical Officer. Salary, £145 per annum and fees. Applications to Mr. Edward King, Honorary Secretary, Edmundstown, Killucan. Election on December 3rd.

NATIONAL SANATORIUM FOR CONSUMPTION AND DISEASES OF THE CHEST, Bournemouth.—Physician. Applications by December 9th to the Secretary.

NORTH-WEST LONDON HOSPITAL, Kentish Town Road.—Assistant-Physician. Applications by December 10th to the Secretary.

OLDHAM INFIRMARY.—House-Surgeon. Salary, £80 per annum, with board and lodging. Applications by December 6th to the Honorary Secretary.

ROYAL HOSPITAL FOR INCURABLES.—Resident Medical Officer. Salary, £70 per annum, with board and furnished apartments. Appointment to be tenable for only two years. Applications to Mr. Thomas Gray, Registrar. Election on November 30th.

ST. GEORGE'S HOSPITAL.—Lecturer on Dental Surgery. Applications by December 8th to the Dean.

ST. MARY'S HOSPITAL MEDICAL SCHOOL.—Demonstrator of Physiology. Salary, £100 per annum. Applications by November 30th to the School Secretary.

WEST END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM, 73, Welbeck Street, W.—Surgeon. Applications to the Secretary.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—Resident Assistant. Board, lodging, and washing. Applications by December 5th, to the Chairman of the Medical Committee.

YORK COUNTY HOSPITAL.—Assistant House-Surgeon. Salary, £40 per annum, with board and residence. Applications by December 7th to the Secretary.

MEDICAL APPOINTMENTS.

CALLOWAY, James, M.A., M.B., M.R.C.P., appointed Demonstrator of Materia Medica at the London Hospital Medical College.

CHAPLIN, T. H. A., M.B., appointed Resident Medical Officer to the City of London Hospital for Diseases of the Chest, *vice* R. Courteen, M.B., M.R.C.S.E., resigned.

COLLIER, Joseph, M.B., F.R.C.S., appointed Surgical Registrar to the Manchester Infirmary, *vice* Dr. Thorburn.

CONNOR, William G., L.R.C.S.I., L. and L.M. K.Q.C.P.I., appointed Medical Officer and Public Vaccinator to the Earl Soham District, Plimsgate Union, and Bedfield District of the Hoxne Union.

IDDON, W. H., M.B., appointed Assistant Medical Officer to the Manchester Infirmary, *vice* Dr. Clegg, resigned.

KILLEEN, T. R., L.R.C.S., L.K.Q.C.P.I., appointed Medical Officer for the Killaniv Dispensary District, and Medical Officer of Health for Ennis Union, *vice* P. W. Dillon, M.D., resigned.

LANGSTON, John J., L.K.Q.C.P.I., L.M., L.S.A.Lond., appointed Certifying Factory Surgeon to the Rainham District.

LEA, A. W. W., M.R.C.S., L.R.C.P., appointed House-Surgeon to the Manchester Infirmary.

PINKERTON, R. L, M.B., appointed House-Physician to the City of London Hospital for Diseases of the Chest.

RAINSFORD, Henry M., L.K.Q.C.P., L.R.C.S.I., L.M., appointed Assistant Colonial Surgeon to the Gold Coast Colony.

REES, John Milsom, M.R.C.S., L.R.C.P. (St. Bartholomew's), appointed Junior Resident Medical Officer to the North-West London Hospital.

SAUNDERS, A. M., M.A., M.B., C.M., D.P.H.Aberdeen, appointed Medical Officer to the Birsay, Harray, and Sandwick Medical Aid Association, Orkney.

SHIELL, Doctor W. J., appointed District Surgeon to Peddie, Cape Colony.

SMART, A., M.R.C.S.E., appointed Medical Officer and Public Vaccinator to the Maidstone Union, *vice* A. A. Doyle, L.K.Q.C.P.I., resigned.

SMITH, Herbert, M.R.C.S.Eng., L.R.C.P.Edin., appointed Honorary Medical Officer to Jersey Infirmary and General Dispensary, *vice* F. A. Hyne, M.R.C.S., L.S.A., resigned.

SPICER, W. T. Holmes, M.A., M.B.Cantab., F.R.C.S., appointed Ophthalmic Surgeon to the Victoria Hospital for Sick Children, *vice* W. Adams Frost, F.R.C.S., resigned.

THORBURN, W., appointed Assistant Surgeon to the Manchester Infirmary.

WHEELER, W. A., appointed House-Surgeon to Belfast Royal Hospital, *vice* Dr. H. L. Mackisack, resigned.

WHITE, E. R., M.R.C.S.E., L.R.C.P., appointed Resident Medical Officer to the Public Dispensary, Clare Market, *vice* H. P. Ward, M.R.C.S.E., resigned.

WILSON, Alexander, reappointed Administrator of Anæsthetics to the Manchester Infirmary.

DIARY FOR NEXT WEEK.

MONDAY.

ODONTOLOGICAL SOCIETY OF GREAT BRITAIN, 8 P.M.—Messrs. J. Ackery and W. B. Paterson: On a case of Fracture of Superior Maxillæ. Mr. E. Lloyd Williams: On a case of Sarcoma of Upper Jaw. Mr. G. Cunningham: On a Dermoid Cyst containing Teeth. Also communications by Messrs. C. S. Tomes, F.R.S., and D. Hepburn.

MEDICAL SOCIETY OF LONDON, 8.30 P.M.—Mr. Bruce Clarke: Four Years' Experience of Electrolysis in Stricture of the Urethra. Dr. Lewers: Some points in the Diagnosis of certain Ovarian Tumours of the Uterus, with Notes of an Illustrative Case.

TUESDAY.

PATHOLOGICAL SOCIETY OF LONDON (20, Hanover Square), 8.30 P.M.—Dr. Ormerod: Gummata of Pons Varolii. Mr. Roger Williams: So-called Diffuse Lipoma. Mr. Bland Sutton with Dr. Gordon Brodie: Adenomata (erosions) of Os Uteri in Macaque Monkeys. Dr. Hale White: Ruptured Mitral Valve. Mr. Golding Bird: Cases of Saccular Aneurysmal Dilatation of Veins. Mr. Hurry Fenwick: Unusual Bladder Growths. Dr. Hadden; 1. Small Cyst of Cerebellum. 2. Cast of Œsophagus Expelled during Life. Card Specimens:—Dr. Ormerod: Tubercular Disease of Pancreas. Dr. Hawkins: 1. Malignant Endocarditis. 2. Aortic Stenosis of Twenty-Four Years' Duration. Dr. Hadden: Spontaneous Fracture of Gall-Stones.

WEDNESDAY.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, BROMPTON, 4 P.M.—Dr. H. W. G. Mackenzie: On Graves's Disease. Lecture II.

OBSTETRICAL SOCIETY OF LONDON, 54, Berners Street, 8 P.M.—Specimens will be shown by Mr. Bland Sutton and others. Dr. Braxton Hicks: Case of Inversion of the Uterus. Mr. Alban Doran: On Closure of the Ostium in Inflammation and Allied Diseases of the Fallopian Tubes. Mr. H. C. Hodges: 1. Notes of a case of Hæmatemesis in a Newly-born Child. 2. Note of a Case of Monstrosity.

THURSDAY.

HARVEIAN SOCIETY OF LONDON, 8.30 P.M.—Mr. J. Knowsley Thornton: On the Surgery of the Kidney. Lecture III.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, 5 P.M.—Mr. T. Bryant: The Bradshaw Lecture on Colotomy Lumbar and Iliac, with special reference to the Choice of Operation.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E., 4.30 P.M.—Dr. Vincent Harris: On the Treatment of Bronchitis.

FRIDAY.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY, West London Hospital, 8 P.M.—Pathological Specimens:—Mr. Percy Dunn: 1. Impacted Calculi in Urinary Bladder. 2. Tumour of the Thyroid (Mr. Bruce Clarke's case). 3. Gangrene of the Lung. 4. Scirrhus of the Breast, and others. Mr. Mark will exhibit drawings illustrating some of Mr. Bruce Clarke's cases. Mr. Edwards: A Case of Distension of Abdominal Veins. Papers:—Mr. Bruce Clarke: His Surgical Practice at the West London Hospital during the past Nine Years. Mr. Hurry Fenwick: An Unusual Case of Bladder Growth.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the announcement. The first post on Thursday mornings is the latest by which advertisements can be received.

MARRIAGES.

BARBOUR—BROWN.—At St. Leonard's, Edinburgh, on the 27th inst., by the Rev. Alex. Whyte, D.D., and the Rev. R. W. Barbour, M.A., Alexander Hugh Freeland Barbour, M.D., to Margaret Nelson, eldest daughter of the late Hon. George Brown, of Toronto, Canada.

LARDER—SHERE.—November 19th, at St. Saviour's Church, Bath, by the Rev. J. A. Jacob, vicar, Herbert Larder, M.R.C.S., L.S.A., Medical Superintendent Whitechapel Infirmary, London, to Mary, eldest daughter of the late Thomas Shere, Esq., of Berwick St. John, Wilts.

MCNALLY—COKE.—November 5th, at St. George's Cathedral, Madras, by the Venerable Archdeacon Brown, Surgeon-Major Christopher J. McNally, M.D., son of the late C. McNally, Esq., solicitor, of Dublin, to Hester Marion, daughter of W. S. Coke, Esq., D.L., of Brookhill Hall, Derbyshire.

NORTHCOTE—WELLS.—On the 21st of November, at Christ Church, Catshill Bromsgrove, by the Rev. J. W. H. Carr, Vicar of St. Mary's, Hull, step father of the bridegroom, assisted by the Rev. J. Kidd, Vicar of the parish Augustus Beauchamp Northcote, M.B.Edin., eldest son of the late Augustus Beauchamp Northcote, M.A. Oxford, to Lilian Florence, eldest daughter of Thomas Wells, of Fockbury, Bromsgrove.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 1.30; Skin, M. 1.30; Dental, M. W. F., 9.

CHELSEA HOSPITAL FOR WOMEN.—M. Tu. W. and F., 1.30.

GREAT NORTHERN CENTRAL.—Medical and Surgical, M. Tu. Th. F., 2.30; Obstetric, W., 2.30; Eye, Tu. F., 10; Ear, M. F., 2.30; Diseases of the Skin, W., 2.30; Diseases of the Throat, Th., 2.30; Dental Cases, W., 2.

GUY'S.—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F. 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu. 1; Skin, Tu., 1; Dental, Tu. Th. F., 1.30.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th. S., 1.30; o.p., W. F., 1.30; Eye, M. Th., 1.30; Ophthalmic Department, W., 2; Ear, Th., 2; Skin, F., 1.30; Throat, F., 1.30; Dental, M. Th., 9.30.

LONDON.—Medical, daily, exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p. W. S., 1.30; Eye, Tu. S., 9; Ear, S., 9.30; Skin, Th., 9; Dental, Tu., 9.

MIDDLESEX.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 9.30; o.p., M. F., 9, W. 1.30; Eye, W. S., 9; Ear and Throat, Tu., 9; Skin, Tu., 4, Th. 9.30; Dental, M. W. F., 9.30.

NATIONAL ORTHOPÆDIC.—M. Tu. Th. F., 2.

NORTH-WEST LONDON.—Medical and Surgical, daily, 2; Obstetric, W., 2; Eye, W., 9; Skin, Tu., 2; Dental, F. 9.

ROYAL ORTHOPÆDIC.—Daily, 1.

ROYAL FREE.—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Dental, Th. 9.

ST. BARTHOLOMEW'S.—Medical and Surgical daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, W. Th. S., 2.30; Ear, Tu. F., 2; Skin, F., 1.30; Larynx, F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9.

ST. GEORGE'S.—Medical and Surgical, M. T. F. S., 12; Obstetric, Th. 2; o.p., Eye, W. S. 2; Ear, Tu., 2; Skin, W., 2; Throat, Th., 2; Orthopædic, W., 2; Dental, Tu., S., 9.

ST. MARK'S HOSPITAL.—Fistula and Diseases of Rectum, males, W., 8.45; females, Th., 8.45.

ST. MARY'S.—Medical and Surgical, daily, 1.45, o.p., 1.30; Obstetric, Tu. F., 1.45; Eye, Tu. F. S., 9; Ear, M. Th., 3; Orthopædic, W., 10; Throat, Tu. F., 1.30; Skin, M. Th., 9.30; Electro-therapeutics, Tu. F., 2; Dental, W. S., 9.30; Consultations, M., 2.30; Operations, Tu., 1.30; Ophthalmic Operations, F., 9.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, Tu. F., 2; o.p., W., 1.30; Eye, M. Tu. W. Th., F. 1.30; o.p., daily, except Sat., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Tu. F., 1.30; Children, S., 1.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1.30; Obstetrics, M. Th., 1.30; Tu., W. F., 2; Eye, Tu. F., 2; Ear, M. F., 9; Skin, W., 1.45, S., 9.15; Throat, Th., 1.30; Dental, W., 9.30.

WESTMINSTER.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1; Eye, M. Th., 2.30; Ear, M., 9; Skin, W., 1; Dental, W. S., 9.15.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the office of the JOURNAL, and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

QUERIES.

G. M. DARTNELL inquires as to the climate, etc., of the island of Paentellaria.

FRANCE should apply to the Secretary of the French Embassy, Albert Gate House, Hyde Park.

HYDRIODIC ACID IN CHRONIC BRONCHITIS.

A MEMBER asks what is the dose of hydriodic acid, and how it is best administered in chronic bronchitis?

TREATMENT OF MASTURBATION.

M.D. writes: Could any of your readers inform me the best treatment for masturbation in a boy, aged 7? Circumcision was performed in infancy for prolonged prepuce. The patient is a bright, intelligent child, and appears quite healthy in every respect, but has been lately noticed to practice masturbation at night. He has an erection of the penis at the time. He sleeps in a room with his parents, and has never been at a boarding school.

ANSWERS.

A MEMBER.—There are several "Pontifical Colleges" in Rome, but none of them, so far as we know, grant degrees in medicine. The University of Rome is the only institution in the Eternal City which confers medical degrees entitling the holder to practise in Italy.

PRACTITIONER.—1. Skene Keith's *Introduction to the Treatment of Disease by Galvanism;* De Watteville's *Practical Introduction to Medical Electricity*, 2nd edition. 2. *Anæsthetics: their Uses and Administration*, by Dr. D. W. Buxton; London: H. K. Lewis.

PEPTONES AND THE GASTRIC JUICE.

IN reply to a Member who asks about the recent literature on peptones and the gastric acids, the following will be found useful:—For peptones: Kühne and Chitttenden, "Ueber Albumosen," *Zeits. f. Biologie*, vol. xx, and other papers in succeeding volumes; Hofmeister, *Arch. f. exper. Path. u. Phar.*, vols, xix and xx, 1885; Von Ott, *Dubois-Reymond's Archiv.*, 1883; Popoff and Brinck, *Zeits. f. Biologie*, 1889. Most of the literature on gastric acids is summarised in Ewald's *Klinik der Verdauungs-Krankheiten*, 2nd edition, vol. i, page 72, *et. seq.*

SPONGE-GRAFTING.

A MEMBER asks for details of the operation of sponge-grafting in a case of chronic ulcer.

*** The treatment of chronic ulcer by sponge-grafting consists in applying to the ulcerated surface, and in maintaining in contact with this by gentle pressure with an antiseptic bandage a thin layer of sponge prepared in the following manner: the sponge is first deprived of its silicious and calcareous salts by being steeped for a few hours in dilute nitro-hydrochloric acid (1 in 10) then, after it has been washed in dilute ammonia of potash, it is kept for use in a 5 per cent. solution of carbolic acid. Sponge-grafting in the treatment of ulcer has very often failed to give any good results. According to Dr. Macewen, of Glasgow, who has carefully experimented on this as on other methods of grafting, the contact of the sponge does not hasten the healing of the sore, and, in some instances, distinctly retards it.

TREATMENT OF VENEREAL WARTS.

P.S. writes: "Licentiate" will find the following powder, used twice daily and left on the wart, remove the growth in a few days; I have often used it: ℞ Pulv. sabinæ recent. cupri subacet., āā 3j, M.ft. pulv. It is an old remedy, but very effectual. Salicylic acid also rapidly removes them when applied in powder.

M.D. writes: I have had a case exactly like "Licentiate's" recently, in a patient with (recovering) acute spinal myelitis. Ung. hydrargyri smeared on the warts cured him in two or three weeks, after failure of argent. nitras, iodoform, etc. But men who write these queries ought when or before doing so, as the case may be, to do one of three things: (1) consult Ringer, Neale's *Digest* and textbooks; or (2) consult their neighbours and friends, either formally or informally; or (3) explain the circumstances—for example, poverty of patient, failure of consultations—under which they give us the trouble of answering them.

NOTES, LETTERS, ETC.

THE SALICYLATES IN GONORRHŒA.

MR. E. H. RYAN-TENISON (Bexhill-on-Sea), writes: In answer to Surgeon-Major R. H. Quill's very courteous suggestion in the JOURNAL of November 23rd, may I be allowed to state: The potassium permanganate injection was given for purposes of cleanliness only; it has little effect on the gonococcus. Had I intended to rely on an injection I should have used silver nitrate, which is fatal to the gonococcus, being superior to thallin in this respect, although the experiments of Schultz, Pisenti, and Dr. Kreis (in the *Correspondenz für Schweizer Aerzte*, 1887) seem to be to the contrary. The salicylates render the urine antiseptic by their change into salicyluric acid, and it (the urine) thus acts as a constant antiseptic irrigant of the diseased mucous membrane of the urethra. In future I shall try the salicylates alone.

THE SO-CALLED MUSSÆNDA COFFEE.

ATTENTION has been directed to a product that was exhibited in the Réunion Court of the Paris Exhibition, as a substitute for coffee. It was represented to consist of the seeds of an undescribed species of *Mussænda*, which the exhibitor named "*M. borbonica*." The seeds bore only a slight superficial resemblance to coffee berries, being flatter, and further distinguished by carrying on both surfaces a series of deeply-marked radiating lines. Some colour was given to the claim that they should be considered a substitute for coffee by the allegation made in a formal memoir published in the *Bulletin* of the Paris Société d'Acclimation, that a chemical analysis of the unroasted seed had shown that they contained from 0.3 to 0.5 per cent. of caffeine. An examination of the seeds at Kew, however, revealed the fact that they were not derived from a species of *Mussænda* or any other rubiaceous genus, but were the product of *Gærtnera vaginata*, belonging to the Loganiaceæ. This made the statement that they contained caffeine the more remarkable, since, although there would be nothing surprising in that alkaloid occurring in a rubiaceous plant, it would not be expected in one of the Loganiaceæ. The subject was, therefore referred for chemical investigation to the Research Laboratory of the Pharmaceutical Society, and at the last evening meeting of the Society Professor Dunstan reported that both caffeine and theobromine are certainly absent from the seeds. Since a plant belonging to the Loganiaceæ might possibly contain strychnine or brucine, both these alkaloids were also searched for, but neither was found. A suggestion was made that the reference of the plant to the genus *Mussænda* was the result of imperfect botanical knowledge, since there are points of resemblance; but that will not account for the definite and misleading statement that the seeds contained caffeine.

"EVILS OF DISPENSING:" CHARGE FOR SKILL, NOT MIXTURES.

DR. R. H. S. CARPENTER (London) writes: "Eboracensis" states in the JOURNAL of November 16th that "the English custom of charging for each bottle of medicine is attributable to the fact that L.S.A.'s were, before the Medical Act of 1858, only entitled to charge for physic." There has been very much written lately in the medical papers concerning medical titles and the privileges of apothecaries, which is nothing less than absolute nonsense, a fair specimen of which is the above assertion. The fact is that long before the Act of 1858 was even thought of the apothecaries had established their right to recover their charges for attendance as well as for medicines. In the case of Handey *v.* Henson, tried before Chief Justice Lord Tenterden in 1829, the plaintiff, an apothecary, recovered his charges for medicines, and 2s. 6d. for each attendance, which his lordship thought to be a "very moderate" charge.

HUMAN MILK OF LOW TEMPERATURE.

DR. G. F. INGLOTT, D.M.O. (Malta) writes: Cases of hysteria present such difficulties of treatment and diagnosis that it may be well to place the following on record.

On September 29th, 1885, Mrs. M. came to my consulting room stating that her child, six months old, refused since ten days ago to take her right breast. After inquiry I found that the patient, aged 35, and strong in constitution, had suffered at the age of 20 years from severe hysterical fits of convulsive and non-convulsive form, which lasted for a long time. Her menses commenced at the age of 15, recurred regularly every month and were rather profuse, lasting about eight days each time. She had seven children, of whom six were alive and of good constitution. As to her parents' history, I could only gather that her mother died of cancer of the uterus. There was no history of syphilis in the family.

On examining the milk I was highly surprised in finding it as cold as iced water. I was much interested in the case, and, after careful consideration, I came to the conclusion that it was a nervous phenomenon due to the hysterical state of the woman. I prescribed, therefore, one drachm of bromide of potassium daily in a decoction of cinchona bark, and a mixture with camphor and valerian. After ten days' treatment the milk acquired its normal temperature, and the child began to suck the breast again.

MALIGNANT DISEASE OF THE LARYNX.

MR. JAS. GRIERSON BROWN, M.B. (Bootle) writes: The final stage of the following case may be interesting to various practitioners in this country and in Montreal.

Captain F. P., of the Dominion Line, while engaged in saving life in mid-Atlantic in the year 1888, caught a severe cold. His principal symptoms were persistent hoarseness and cough, and, after treatment in Montreal and in Liverpool for some eight months, he came under my care on May 6th. He was then complaining of spasmodic cough, hoarseness, pain in his throat, and difficulty in swallowing; everything had to be minced, and it gave him pain to swallow. There was an enlarged gland under the chin on the right side of the middle line. On laryngoscopic examination, a papillated pedunculated growth was seen to spring from behind the epiglottis, having an attachment from the angle of the thyroid cartilage; it interfered with the view of the cords. There was some infiltration of the arytæno-epiglottidean folds, ulceration, and a fœtid odour of breath. He proceeded, by my advice, to London the next day, where the growth was removed on May 9th, and a piece from the left side of the larynx on the 16th; tracheotomy became necessary, and he returned home on July 17th.

Under gradually increasing doses of liq. arsenicalis he got stouter and stronger; the glands on the right side of the neck got smaller; the pains up the side of the head and over the clavicle and scapula became easier until the third week in August, when he began to troubled with vomiting, and

the growth filled up the upper part of his larynx, depriving him of even the power of whispering. The arsenic was reduced, and finally omitted in the second week of September. The glands on the right side of the neck suppurated, and were incised, and then paralysis of the right arm, which had existed for a few days, was relieved partially. The tissues over the larynx and the left side also became inflamed and infiltrated, the base of the tongue swollen, and the difficulty in opening the mouth, owing to the hardness of the parts under the chin, made swallowing difficult and painful. He was troubled by persistent vomiting during the last three or four weeks of his life, which nothing seemed to be able to allay. He got gradually weaker, the fœtid odour from the trachea and a sinus on the right side was exceedingly distressing, and he died on October 18th, living for nearly five months after the tracheotomy. Durham's No. 3 cannula suited him very well, causing very little irritation.

Epilepsy after Vaccination.

Dr. W. F. MacDonogh (Twickenham, S.W.) writes: The thanks of the whole profession are greatly due to Mr. E. Climson Greenwood, who has so disinterestedly taken the trouble to inquire into an alleged case of epilepsy after vaccination. During the past two years and a half I have attended K. H.'s family, also K. H. for a short time, and then suggested his attending a hospital, where he went under Dr. Althaus's care.

Mr. Greenwood's history of the case is correct, and though I always had the vaccination cause of the fits dinned into my ears, I attributed it in my own mind to other causes.

COMMUNICATIONS, LETTERS, etc., have been received from:

Mr. H. B. Pullin-Burry, Liphook; Mr. Neligan, Wimbledon; Mr. J. Nethersole, Farnborough; Mr. A. W. Hall, London; Messrs. Allen and Hanbury, London; Mr. M. H. Bulteel, Plymouth; Dr. J. F. W. Silk, London; Common Sense; Mr. W. Woodward, Bodmin; The Levico Springs Company, London; Dr. W. Hunter, Cambridge; Dr. C. M. Chadwick, Leeds; Dr. Hollis, Brighton; Mr. H. C. Wilkins, Coventry; A. Bell, M.B., Bishop Stortford; Mr. N. A. Powell, Toronto; Mr. W. Adams Frost, London; Dr. W. P. Northrup, New York; Mr. Lawson Tait, Birmingham; Mr. J. P. Wagstaffe, Tunbridge Wells; Dr. S. Worthington, Woolwich; Messrs. Dulau and Co., London; Mr. W. Johnson Smith, London; Mr. J. E. Garner, Preston; Dr. W. Marcet, Wimbledon; Mr. J. Mack, London; Dr. W. F. Wade, Birmingham; Mr. G. Bate, Plymouth; Dr. Balding, Royston; A Member; Dr. P. M. Braidwood, Shirehampton; Mr. W. F. B. Eadon, Hambrook; X.; Dr. W. Walter, Manchester; Dr. T. O. Wood, London; Mr. C. T. Dent, London; Dr. H. Barnes, Carlisle; Dr. M. 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Rendle, London; Mr. H. C. Wilkins, Coventry; Mr. J. Cantlie, Hong Kong; Dr. W. Robertson, Jesmond; Surgeon A. E. Tate, Bangalore; Mr. J. Poland, London; Mr. A. Barrett, London; J. C. M.; Dr. J. Jamieson, Melbourne; Mr. C. E. Penfold, York; Falkland; Dr. R. G. Alexander, Halifax; Our Manchester Correspondent; Mr. S. Dodson, Farnworth; Mr. T. Unicume, Headcorn; A Subscriber; Assistant; M.R.C.S.; Dr. H. O'Neill, Belfast; Our Birmingham Correspondent; Malta; Dr. Augustus Waller, London; The Secretary of the Sanitary Institute, London; Mr. J. H. Neale, Leicester; Our Liverpool Correspondent; Mr. C. G. Dalton, Lincoln; Dr. G. S. Middleton, Glasgow; Mr. J. Ness, Glasgow; Mr. R. T. Williams, Port Talbot; Dr. W. H. Broadbent, London; Mr. A. E. Legat, Sunderland; Mr. G. F. Sydenham, Dulverton; Mr. A. H. Todd, Dublin; Surgeon J. D. Moir, London; Late R.N.; Dr. M. Thomson, Bradford-on-Avon; J. W. B.; Dr. T. Cranstoun Charles, London; Dr. Norman Kerr, London; Dr. J. B. Haycraft, Edinburgh; Dr. R. P. Smith, London; Messrs. Cantrell and Cochrane, London; Dr. R. W. Savage, London; Dr. R. Mitchell, London; Mr. A. Lubb, Huddersfield; T. G. H.; Dr. H. Waldo, Clifton; The Dean of the Medical Department of King's College, London; Mr. W. B. Hemsley, London; Mr. H. W. Roberts, Lewisham; Dr. W. Cholmeley, London; etc.

BOOKS, ETC., RECEIVED.

A Guide to District Nurses. By Mrs. Dacre Craven. London: Macmillan and Co. 1889.

The Drink Question; its Social and Medical Aspects. By Dr. Kate Mitchell. London: Swan Sonnenschein and Co. 1889.

Pathological Anatomy of Diseases. By Norman Moore, M.D. London: J. and A. Churchill. 1889.

The Treatment of Internal Derangements of the Knee-Joint by Operation. By Herbert William Allingham, F.R.C.S. London: J. and A. Churchill. 1889.

Three Diaries for 1890 from Messrs. Cassell and Co., London.

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A DISCUSSION
ON
FOODS FOR INVALIDS AND INFANTS.

In the Section of Pharmacology and Therapeutics at the Annual Meeting of the British Medical Association, held in Leeds, August, 1889.

I.—I. BURNEY YEO, M.D., F.R.C.P.,
Physician to King's College Hospital, and Professor of Clinical Therapeutics in King's College, London.

In accepting the invitation you were so good as to address to me, that I should open a discussion in this important Section on the subject of foods for invalids and infants, I felt that you had asked me to deal with an unusually wide and comprehensive, although undoubtedly a most interesting and practical, subject, and one which is very intimately associated with recent progress in therapeutics.

The subject is, however, so large, and extends over such a very wide field, both of observation and experiment, that I must ask you to allow me to remain strictly within my *rôle* of "introducer," and to content myself with pointing out a few topics which appear to me to be especially suitable for discussion in this Section, adding here and there a few observations of my own with the view of stimulating or provoking further expressions of opinion from those who may be able to throw more light on the questions involved than I am.

The connection between invalids and infants may not appear to some minds to be a very close one, and if I had had my own choice in this matter, I might perhaps have been disposed to "drop the infant," for my acquaintance with infancy is entirely uninterested and impartial, and is not complicated by claims of ownership. But if I cannot claim that direct and intimate association with the state of infancy which so many of you are, no doubt, able to, I may, perhaps, for that very reason, be able to take a more calm and dispassionate view of its wants and its weaknesses.

There is, however, this very important connection between invalids and infants—namely, that they are commonly dependent on others for the provision or selection of their food, and it is for this reason, I presume, that we are invited to consider their food wants together.

And, first, with regard to the feeding of invalids, I would suggest that we should consider chiefly the foods most suitable to be given in acute febrile diseases; for if we allow ourselves to wander into the question of the dietetics of chronic disease, including such questions as the diet most appropriate in diabetes, albuminuria, uricæmia, phthisis, scrofula, anæmia, diseases of the digestive organs, of the heart, etc., we shall be overwhelmed with the magnitude of our subject.

Food in Acute Disease.

We all remember the remarkable words of the late Dr. Graves, of Dublin; "Lest when I am gone you may be at a loss for an epitaph for me, let me give you one in three words, 'He fed fevers.'" Since the time when these pregnant words were uttered there has been little inclination displayed by physicians in this country to go back to the starving methods of some of Graves's distinguished predecessors or contemporaries. Yet it can hardly be doubted that the conclusion arrived at by some of the older physicians that the free administration of food in fever occasionally intensified the febrile process, rested on some basis of practical observation; and we do not, in the present day, altogether lack occasions of observing that the indiscreet administration of food in acute diseases, food unsuitable either in quality or quantity, is distinctly injurious.

No one can be more willing than I am to recognise the necessity and importance of administering a sufficiency of food to febrile patients, especially with the object of lessening or compensating for that tendency to destruction of tissue, which is one of the most serious consequences of fever; but I am at the same time convinced that, especially in large public institutions where patients are nursed *en bloc*, the free administration of food and alcoholic stimulants is far too much a matter of routine, and sometimes partakes more of predetermination than discrimination. I have seen a nurse, a competent but very firm lady nurse, stand with teeth set and lower jaw advanced, and every firm outline of her muscular frame breathing forth unyielding determination, over a fever patient, and forcibly thrusting down his throat, an easy conqueror in this unequal struggle, the detested hourly "feed" of black beef-tea, mixed with cheap port wine (for what public institution ever uses anything but cheap port?). The poor fevered lips and parched tongue are craving all the time for "a cup of cold water," which is denied them, either because the patient is not sufficiently conscious of his wants to ask for it, or because "the doctor has not ordered it."

I would plead, then, for more discrimination and less of routine in the feeding of fever patients, and I would suggest for consideration the fact that food undigested only serves to intensify the febrile process and adds to the distress of the patient, and that in administering condensed solutions of nitrogenous extractives we may incur the danger of adding to the already large accumulation of nitrogenous waste in the blood. I would also put this question to the medical officers of hospitals: Are you satisfied that those cheap and common qualities of wines and spirits, almost universally used in such institutions, a single glass of which many of us here in sound health would wisely fear to take, are you satisfied that they do not also injuriously affect the fever patient, who, moreover, may have been entirely unhabituated before the attack to the use of such beverages?

We feed fevers, and we are undoubtedly right in so doing. Bauer and Künstle appear to have established, by careful observations on the diet of typhoid patients, the fact that a due "supply of albuminous food to a fever patient" effects a saving of albumen in the body, "for though the excretion of nitrogen is increased, the loss of the same element from the system is reduced." But do we not sometimes overfeed fevers, and use less discrimination than is desirable in the kinds of food we administer?

It has appeared to me that we may formulate two chief rules which should guide us in the feeding of cases of acute disease: 1. Endeavour to utilise food to the greatest extent that is safe and possible for the purpose of checking the waste of tissue which is associated with the febrile process. 2. Be careful to administer no food that cannot be readily absorbed and assimilated. Do not overlook the fact that the functions of the digestive organs are gravely impaired during fever, and, therefore, if we give food which the patient is unable to assimilate, this undigested food will decompose in the stomach and intestines, and cause much local irritation and augment the pyrexial movement.

I have been accustomed to teach, and I submit that teaching to your criticism, that in acute and short typical febrile attacks, such, for instance, as one of acute croupous pneumonia of average severity and running an average course, we should not manifest any anxiety as to the taking of much food, unless in the aged and feeble, for by forcing the consumption of a considerable quantity of food in such cases, in the absence of all appetite, and with obvious febrile derangement of the digestive organs, we do more harm than good.

There is a general consent amongst all authorities that, owing to the interruption of normal gastric digestion in fever, all food should be given in the fluid form, that is, in a form that can be readily and immediately absorbed, that it should be given in small quantities and at short intervals. The two kinds of fluid food most commonly used in cases of acute disease are, first, milk, and, secondly, beef-tea, and under the latter denomination I would ask to be allowed to include all fluid meat extracts, broths, soups, meat juices, etc. The consideration of both these forms of food will probably yield some suitable topics for discussion.

The very great convenience of milk as a food has, I think, acted, in a certain sense, as a snare, for there is a tendency, especially with nurses, to think no evil of that which is so handy, requires no preparation, and gives so little trouble. But the great drawback to the use of milk in acute disease is the fact that, although a fluid food out of the body, it becomes a solid food in the stomach or intestine. No doubt it is an excellent food in all cases in which it is well tolerated and quickly digested and absorbed, but there are many cases in which it is not so, and when these happen to be cases of typhoid fever very serious injury may be done the patient if this peculiarity is not observed. I have seen several cases of typhoid in which the administration of milk has not appeared to cause any gastric disturbances, but yet has produced great intestinal irritation, and the motions have been largely composed of firm milk curd. One of the reasons why milk so

frequently disagrees with patients is that it is given in too concentrated a form and in too great quantity.

Sir Henry Thompson has called attention to the absurd custom, now so prevalent, of using milk as if it were a simple beverage, and to drink it, like water, with quantities of solid meat and other food. Why should we hesitate to dilute the milk we give to fever patients? They require water, pure water, in much larger quantity than they usually get, and yet we hesitate to mix water with the milk we give them. Their digestive powers are excessively feeble, and yet we will give them concentrated foods! When we wish to rely on milk as a food in acute disease we should give it in small quantities at a time at short intervals, mixed with water, or, better, with an alkaline water, such as Vichy or Apollinaris. I am accustomed in hospital practice to prescribe powders, each containing 20 grains of bicarbonate of soda and 20 grains of common salt, and to direct that one such powder should be added to every pint of milk, and this is to be diluted, when administered, with an equal quantity of water. Two ounces of milk and two ounces of an alkaline water every hour (and a fever patient requires a drink every hour) will give the patient two pints and a half of milk a day. I am, of course, thinking of cases in which the digestion of milk is difficult.

Greater use ought also to be made of whey in those cases in which milk is not digested readily. I have often used it in private practice and in hospital with great advantage. It can be prepared in a pleasant form by boiling a pint of milk with two or three teaspoonfuls of lemon-juice, and a few fragments of lemon-peel for the sake of flavour; if the curd be well broken up, then strained through muslin, and all the fluid pressed well out of the curd, much of the cream and some of the finely-coagulated casein will pass into the whey, which will thus become a fairly nutritive fluid. If necessary, it can be made more nutritious by the addition of meat juice. Or if an egg be whipped up with twice as much boiling water, added slowly, and then strained, a fluid will be obtained holding in suspension a considerable quantity of albumen coagulated in fine particles, and this may be added to whey (or to beef-tea), thus supplying the defective albuminate.

I must not dwell longer, however, on milk. I merely make these suggestions with the view of eliciting further observations. I will ask you at the same time to consider the use of "butter-milk" as an invalid food, not so largely used in this country as in Germany, but calculated, I believe, to be of service in many cases of gastric difficulty. It is highly acid from the presence of lactic acid, and it contains the casein of milk in a very finely divided form. I have known dyspeptic patients live upon it in comfort for considerable periods at a time, taking only a little thin water biscuit besides.

Another form of fluid food very extensively used in cases of acute disease is "beef-tea;" this term is usually applied to very strong extracts of beef, and this fluid is generally estimated in exact proportion to its concentration. Why, I have never been quite able to understand. As I have already said, a patient with pyrexia requires and should be given much water; why not give him some of that water with his beef extract? The intense dislike of beef-tea which many patients manifest is especially directed to this very concentrated form. It is mere slavery to routine—mere want of resource—that has perpetuated the invalid's sad restriction to milk and beef-tea. Conceive the dread monotony of a six or seven weeks' limitation to these two articles of diet. Now there are many forms of meat infusion or meat extracts that can be rendered very palatable by suitable care in preparation, infinitely better adapted to serve as foods in pyrexial cases than strong beef tea. Well-made mutton, veal, and chicken broths, to which some well-strained oatmeal or barley gruel can be occasionally added, make excellent invalid foods. They contain in a dilute form the same constituents, and, with the additions I have named, even more nutritive alimentary principles than beef-tea. But clear soups—*consommés*—are exceedingly agreeable, readily absorbable, and stimulating foods, and they usually contain some vegetable juices and salts which greatly add to their food value.

Sir William Jenner some time ago directed the attention of the profession to the remarkable oversight so frequently practised in the feeding of cases of fever, of the omission of vegetable juices from their dietary. It is quite easy to obtain the juice of fresh boiled vegetables and savoury herbs, and to add it to these clear animal soups. "Fruit soups" are used in Germany, and are made by boiling fresh or dried fruits with water, expressing the juice and straining.

I am not one of those who think ill of beef-tea as an invalid food, but I object to making either beef-tea or milk the universal invalid food, and I see no reason why we should desire to use such very concentrated beef-teas, when we know that fever patients need so much water. I regard beef-tea as an excellent stimulant and restorative as it contains very little, if any, albuminates in solution. But it contains gelatin, which is very readily digested, and appears to serve as an "albumen-sparing" food in the body, as well as saline and stimulating extractives.

I was greatly surprised a short time ago on being told by a hospital sister, that in the hospital she nursed in they were forbidden to put any salt into the food of the typhoid patients. Surely this was a very unwise regulation. If chloride of sodium is so important in health, may it not be quite as important in disease?

Dr. Lauder Brunton has hinted, in one of his suggestive papers, that beef-tea may occasionally contain peptones, which by passing directly into the general circulation act as poisons; and he asks the question "whether beef-tea may not very frequently be actually injurious, and whether the products of muscular waste which constitute the chief portion of beef-tea or beef-essence may not under certain circumstances be actually poisonous?" I leave you to answer this question, contenting myself with remarking that I have never yet encountered a case of "beef-tea poisoning." And this brings me to another consideration, and that is the administration of peptonised or predigested foods to invalids. I must leave this large subject mainly in your hands, or I should have to occupy far too much of the time available for this discussion. I will simply remind you that it has been authoritatively suggested that "digestive ferments," and "artificially digested foods" "may be edged tools and capable of doing harm as well as good." But with you, sir, to direct us in a subject you have made so peculiarly your own, we can scarcely go wrong.

Food for Infants.

I will now pass on to the second part of the subject I have undertaken to introduce for discussion, namely, "the food of infants." "Fortunate is the babe," says an American physician, Dr. Louis Starr, of Philadelphia, "that in our day of advanced civilisation and city living, can draw from the breast of a robust mother an abundant supply of pure, health-giving, tissue-forming food," and with that expression of opinion I am sure we all agree. But the sacred maternal instinct seems to be losing its hold on the modern woman, and a great number of the women of the present day, if they fail in their attempts to evade the accident of maternity, shrink still more from the duty of nourishing their offspring. We can, I fear, do little more than protest and warn. The mother failing then, either from inability or disinclination, to suckle her infant, we fall back on the "wet nurse" as the next best resource. I need not refer to the necessary physical and moral qualities of a wet nurse; I will only ask why so many authors should be agreed that a wet nurse ought to be a "brunette"? They state that her milk is richer than that of a "blonde," but that may not always be an advantage, and certainly dark women are much more prone than fair ones to attacks of headache and "biliousness."

A question however of some importance is the extent to which the food of the nurse is capable of influencing the health of the child? It is said to be especially capable of influencing the quantity of fat in the milk, and Zaleski has pointed out that milk containing an undue proportion of fat is prejudicial to the infant. A highly nitrogenised diet, he found, caused a marked increase in the fat, while it reduced the proportion of sugar, and had little effect on the other constituents. Alcohol had the same effect. He insists that wet nurses are usually over-fed with butcher's meat, ale and porter; that they take too little exercise, and that their health is liable to suffer from a rich and over-albuminous diet, more particularly as they have probably been underfed in their antecedent life. He cites a case in which he found as much as six per cent. of fat in the milk, while the suckling infant was always ailing. The nurse had been a poor girl, and her whole course of life had been changed on becoming a wet nurse; her own child's health also suffered. An immediate return to her former mode of life was attended with the best results.

Most authorities are agreed as to the date at which food other than milk may wisely be introduced into the infant's dietary. Farinaceous food ought never to be given before the fourth month, and better not until after the seventh or eighth, when the teeth and salivary glands begin to be developed. It has been suggested that some preparation of entire wheat flour should be given at this period (Chapman's), containing the outer part of the grain,

and therefore the necessary mineral substances. Any of the many malted foods may be usefully introduced at this period (Liebig's, Mellin's, Benger's, Savory and Moore's, Nestlé's, etc.). Between the tenth and twelfth months breast feeding may be gradually suspended, but milk should still form the staple article of diet up to eighteen months. At this date a little meat may be wisely introduced in the solid form, to furnish some employment to the masticating organs, which by this time are ready for some exercise.

I need not enter into the ordinary well-known details of the judicious feeding of infants in an assembly like this. I will, however, put before you one or two considerations in connection with the substitutes for breast milk when this cannot be provided. The American author I have already quoted, and who has contributed a very full and able article on the "Dietetics of Infancy and Childhood" to Sajous's *Annual of the Universal Medical Sciences*, vol. iv, 1888, makes a remarkable statement which some of you may be disposed to criticise. He says: "There can be no doubt—though the statement is a bold one, and seemingly contrary to Nature—that, taking the average, infants properly brought up by hand are better developed and enjoy more perfect health than those completely breast fed. Of course there is no artificial food equal to the natural—the sound breast milk of a robust woman—and a child fed upon this must thrive if other circumstances are favourable. Unfortunately the woman who has sufficient health and strength to furnish an abundant supply of good milk during the ten or twelve months of normal lactation is unique in our day, and the great bulk of those who do nurse children grow pale, thin, and feeble, and give milk which, though sufficient in quantity to fill the suckling's stomach and satisfy the cravings of hunger, does not contain enough pabulum to meet the demands of nutrition. Such mothers always complain that their children are puny, peevish, and always ailing, and wonder why their neighbours' babies fed upon the bottle are so round, jolly, and healthy. The explanation lies in the simple fact that good cow's milk is better than bad breast milk." This, of course, applies to American mothers. I hope our English mothers are not in quite so bad a plight.

The chief difficulty in supplying a suitable substitute for human milk appears to depend not so much on differences in the quantity of the different constituents but on differences in quality, especially in the quality of the albuminate; for human milk varies considerably in its composition, according to food, period of lactation, and other circumstances. The nitrogenous constituents have been found to vary from 4.86 to 0.85 per cent. The fats and salts also vary greatly, so that the maximum has been found to be three times as much as the minimum. The sugar is the least variable, and gives nearly a uniform standard of 7 per cent.

The most important difference between human milk and cow's milk—upon which on account of its cheapness and abundance we are compelled chiefly to rely—is that the nitrogenous constituents are differently affected by coagulating agents.

According to König, the total amount of albuminoids in cow's milk coagulable by acids is far greater—perhaps four times greater—than the non-coagulable portion. In human milk the reverse is the case, and the non-coagulable portion exceeds—is perhaps twice as great as—the coagulable part. Again, with rennet, cow's milk coagulates into large firm masses; human milk forms a light loose curd; and the same occurs in the stomach. Asses' milk and goat's milk resemble human milk in forming a loose flocculent curd.

All artificial foods should, like human milk, clot in fine flakes, therefore cow's milk has to be modified by preparation, in its chemical composition and physical properties, to make it a fit substitute for human milk. To do this we have to (1) dilute with water, in order to bring the proportion of casein down to the proper level; (2) to add cream, in order to bring the proportion of fat up to the proper level, and (3) to add sugar of milk, in order to bring the proportion of sugar up to the proper level.

Sugar of milk is generally recommended for the latter object, as cane sugar tends to set up acetous fermentation. Ashby and Wright, however, have failed to satisfy themselves that milk sugar is, in any way, superior to cane sugar, while they complain that it is expensive, and tends to pass into lactic acid. Probably with a healthy infant, whose digestive organs are acting healthily, there is no objection to the use of cane sugar. Then, to prevent the formation of firm indigestible curd two methods have been recommended; one is to add an alkali, such as lime water or carbonate of soda; the other is to add some mucilaginous thickening substance, which may, as it were, get between the particles of casein and prevent their clotting together into firm curd. For this purpose barley jelly, solution of gelatin, or the addition of a certain proportion of one of the prepared foods has been recommended.

The use of condensed milk is another debateable point. It has the advantage of keeping better than cow's milk, and it is said to be more readily digested by young infants, and they appear to thrive on it. Some authorities, on the contrary, maintain that is a delusion, caused by the fact that "condensed" milk is largely diluted with water, and cow's milk not sufficiently diluted; that the infants appear to thrive because condensed milk has a large proportion of added sugar, which makes fat. It therefore makes large babies and counteracts the tendency to constipation; but that it does not contain enough nutrient substances to supply the wants of a growing infant.

"Infants fed upon condensed milk," says Dr. Louis Starr, "though fat are pale, lethargic, and flabby; although large are far from strong; have little power to resist disease; cut their teeth late, and are very likely to drift into rickets before the end of the first year." He considers it never safe to bring up children solely on this food; it should be only used occasionally for convenience, as when travelling, etc.

Ashby and Wright doubt the value of the evidence brought against condensed milk; they have seen many unquestionably healthy children brought up on it from birth. It is undoubtedly convenient; it does not readily turn sour, and it may, they think, be substituted with good effect for fresh cow's milk, when the latter disagrees and causes vomiting, or when cows are being fed on turnips or other watery food, or in hot weather when milk is apt to turn sour. The deficiency in casein may be supplied by the addition of a little white of egg or raw meat juice, and the addition of a little cream will supply any deficiency in fat.

Predigested foods are of great value in certain troublesome cases—partially peptonised foods—the process being arrested before any distinctly bitter taste has been developed. They should not, however, be continued longer than is necessary, as the digestive organs no doubt require to be exercised in order to be heathily developed, as is the case with all the other organs of the body. An almost indefinite time might be occupied in entering into the details of this extensive subject, but I do not think it desirable that I should occupy, as introducer of this subject, more of the time of the Section. I will simply sum up the points to which I have thought it useful that your attention should be directed. They are these:—

1. Feeding in acute disease.—Is there not a tendency to overfeeding in these cases, and to the administration of too concentrated forms of food? Do we not give too little water? too little vegetable juices? too little saline matter?

2. What are the relative advantages and disadvantages of milk and beef-tea as foods in acute disease? May not both be advantageously and occasionally replaced by other forms of fluid food?

3. Are there any real dangers attending the use of concentrated beef-tea, of administering poisonous peptones?

4. What are the value and scope of the digestive ferments and predigestive foods in the invalid's dietary?

Then with regard to the food of infants, I have called attention:

1. To the modern difficulties attending breast feeding.

2. To the feeding of the wet nurse, and to the influence of food on the quality of her milk.

3. To the assertion that hand-fed infants prosper better than breast-fed children.

4. To the suggested substitutes for mother's milk, and the differences of opinion as to the value of condensed milk.

Many of you may be prepared to deal with other matters in connection with the subject set down for discussion. Pray remember that I have only acted the part of an introducer; it is for you to improve the acquaintanceship in whatever manner may appear to you profitable.

II.—SIDNEY MARTIN, M.D.,

Assistant Physician to the Hospital for Consumption, Victoria Park; Research Scholar of the British Medical Association.

To the healthy man, a dietary containing a certain proportion of albuminoids, fat, carbohydrates, salts, and water is necessary to preserve that balance of the body functions which we call health.

Definite rules have been laid down for such a dietary, which are true within certain limits. The healthy individual digests and assimilates his food without trouble, or even any knowledge of the processes which are taking place. In disease, one of the most important modes of treatment is the means of getting food digested, absorbed, and assimilated, so, as it is often expressed, that "the strength of the patient may be kept up;" and on the foods we supply, in the majority of cases, depends our success in the combating of disease.

Scientific rules might be laid down for feeding by artificial foods, if we were thoroughly conversant with all the pathological and anatomical changes occurring in functional and organic disease of the organs of digestion. But our knowledge is by no means complete in this respect, so that artificial feeding is, to a great extent, empirical. In disease, for example, food may not be absorbed, that is, it may not be chemically acted upon by the digestive fluids, or, even if acted upon, absorption may be difficult and deficient. These results may occur from disease (organic and functional) in the digestive tract itself and its accessory glands, or the tract may be affected secondarily to a general condition, such as Bright's disease and gout, in a manner at present but imperfectly understood from a pathological standpoint. We are, owing to the laborious researches of late years, getting a clear idea of the changes taking place in the stomach in various pathological conditions, especially as to the deficiency of hydrochloric acid and of pepsin in individual diseases. Such results have been obtained by actual experimentation, and will give in time a clear indication for treatment; but we are still greatly ignorant of the pathology of absorption, both in the stomach and intestine; and our ignorance is, no doubt, chiefly due to the fact that we have to make a deduction from the symptoms of the patient. Our knowledge, too, of the activity of the pancreas in different diseases is almost *nil;* and considering it as one of the most important glands concerned in digestion, it must be evident what a great gap there is in our scientific knowledge of the defective digestion of food, for it is in many cases only a guess that food is defectively digested. Take, again, the liver; the bile is a most important aid to digestion, and yet we are but little cognisant of its pathological deficiencies.

I might sum up what I have tried to indicate, and that is, there are three physiological factors we must consider in any given case of artificial feeding: 1, the chemical changes in digestion; 2, the absorption of the digestive products, a "vital" act; 3, the mechanism or movement of the hollow viscera, œsophagus, stomach, and intestines.

It is to our knowledge of the changes in one or more of these functions that we look for a scientific indication for the treatment by artificial food or otherwise. It is, for example, harmful to keep on pouring food, artificial or otherwise, into the stomach when the organ cannot get rid of its contents through the pylorus with physiological ease, through defective peristalsis—atony, as it may be called. It is not rational, moreover, to give artificial foods when the digestive juices are physiologically active but the mechanism is chiefly at fault. I wish, however, to speak more particularly of the chemical aspect of artificial feeding, as to discourse on the whole subject would occupy much more time than is allotted to me.

We might summarise artificial feeding in disease by saying that we enable the body to assimilate food by administering the end-products of digestion. Thus we give peptones, as they are considered the end-products of the digestion of proteids; we give oil in emulsion, as that is the form in which it is chiefly absorbed; and, to complete the list, we ought to give maltose, as that is the end-product of the digestion of starch, and I may say that I think that the administration of maltose as an artificial food has been greatly neglected. In many cases it is, no doubt, a valuable help in treatment by artificial feeding.

Peptones.—I shall speak, in the first place, of peptones. These are administered in so-called peptone preparations and in pancreatised or partly digested food. The composition of the commercial peptones varies greatly. They seem mostly to be prepared by digestion with pepsin and hydrochloric acid. Some are whitish yellow amorphous powders, such as Witte's peptone and Grübler's peptone, consisting almost completely of peptic albumoses, and with only a small quantity of true peptone; other preparations form a thick, moist, yellowish-brown mass, with no trace of true peptone, such as Kemmerich's and Koch's preparation, or they form a syrupy liquid containing only a small proportion of peptone, but with an aroma of cooked meat, and rich in stimulating extractives. I need not go into the details of any more of these preparations. There is no doubt from Kühne's observations—which I can confirm from my own experiments—that most of the proteid substances in commercial peptones consist, not of true peptone, as the physiological chemist understands the body, but of albumoses, which are the immediate precursors of peptone in digestion in the stomach. And I may at this point state that the administration of albumoses as artificial food may have the advantage of giving the stomach some work to do, owing to the necessity of their being changed into peptone by the gastric juice. This can only be considered an advantage if the peptone formed in the stomach from proteid food is the form in which that proteid food is absorbed into the system. On this point I will make a few remarks.

Looking at digestion in the stomach from a broad point of view, it may be said that the heterogeneous proteids taken in as food have to be transformed by pepsin and hydrochloric acid into soluble bodies—albumoses and peptones—which are capable of being assimilated by the animal organism. Such heterogeneous proteids are usually in the form of the coagulated myosin of meat, the casein of milk, and the partly coagulated gluten of bread; with all the large class of vegetable albumoses, which I have described elsewhere, and which differ from the animal varieties, rendering it probable that they must undergo some change before assimilation by the human organism. Definite knowledge on this particular point is, however, at present wanting.

Considering that this change of insoluble proteid food into soluble albumoses and peptone does take place in the stomach, we must, *a priori*, assume that albumoses and peptones are the form in which such nitrogenous food is taken up by the organism. And more than this, it has been accepted by most physiologists that peptone, the end-product of gastric digestion, is the particular form in which proteid food is assimilated. At present, however, this has not been proved, for the substances used in feeding experiments, under the name "peptone," have been shown not to be peptone, but albumoses. The practical results are, however, the same; and it is more a point for the physiological chemist to determine than the practising physician. And to prevent confusion, I will refer to the mixture of albumoses and peptone simply as "peptone," meaning by that term the soluble products of gastric digestion. Brücke denies that proteid food is absorbed as peptones; he stands alone, so far as I know, in this opinion. The well-known experiments of Plósz and Maly seem to indicate that peptones given to dogs had the same nutritive value as the ordinary proteids of the food. One experiment of these observers I may be allowed to quote. They fed a dog for eighteen days on altogether, 560 grammes of gastric peptones, 309 grammes of fat, and 422 grammes of sugar, and found at the end of the experimental period, that the animal had gained 3·75 per cent. in weight. To speak more fully, peptones, during this short period, had preserved the nitrogen balance, and had maintained the animal in health. In more prolonged feeding, however, the results are not so good. Thus, Voit fed rats with peptones, fat, and carbohydrates for seven months, and found that at the end of that time they succumbed. He, therefore, concluded that for prolonged feeding peptones did not possess the nutritive value of the ordinary proteids of food.

There are several considerations which may aid in the explanation of Voit's results.

1. Kühne's researches have tended to show that peptones formed in the stomach are of two kinds, one of which is capable of being split up by the pancreatic juice into leucin and tyrosin, crystalline, nitrogenous bodies, while the other does not undergo this change. Leucin and tyrosin have, as far as we know at present, no nutritive value as nitrogenous food.

2. During natural digestion in man, there is at no time a large quantity of peptone in the stomach, such as we get during artificial peptic digestion in a beaker. This observation, which has lately been insisted upon by a German observer, I can confirm from my experiments (hitherto unpublished) in a case of gastric fistula a few years ago.

It seems to mean that the peptone which is formed during digestion is absorbed soon after formation, or passed in solution through the pylorus, and this we would consider the natural course of events.

Now if a large quantity of peptones were given it is quite rational to suppose that much of it would be unabsorbed quickly, and thus much of it would pass into the duodenum, and there be acted upon by the pancreatic juice. The trypsin would split some

of it into leucin and tyrosin, and thus render it useless as nitrogenous food. In this way it is imaginable that much of the peptones given as food may not really be of any nutritive value, and an explanation is thus possible of the results of prolonged feeding with them.

I think it is well worth while having these points in view when we are feeding our patients with peptones. The effect of the pancreatic juice is, of course, prevented by administering the food per rectum, and I need not go into detail as to the value of this mode of administration. The facts I have brought before you also constitute a plea for partially peptonised food, since a large quantity of peptone would not in this case be administered.

The peptone formed by the pancreas differs in some respects from that formed by the stomach, so that Kühne calls it tryptone, being formed by trypsin. There are, however, not only slight chemical differences between the gastric and pancreatic peptone, but there seems also to be a nutritive difference, To explain this point I must refer to some of the changes which peptones are supposed to undergo during absorption.

The first fact I will mention is a striking one. Peptones are, so to speak, a foreign body in the organism. They are found in the stomach and intestines, which are morphologically outside the body, but they are not found in the tissues of the body, nor in the lymph, nor in the venous blood. A very small quantity has been stated to be present in the arterial blood, but this is doubtful. They are found in pathological conditions of the tissues. If absorbed during internal digestion, therefore, they must undergo some change between the cavity of the stomach and intestine and the tissues of the body. Hofmeister has shown that they undergo this change in the mucous membrane of the intestine, and that the process is dependent on the vitality of the mucous membrane. Von Ott, a few years ago, demonstrated that the body into which peptones were changed by the mucous membrane was serum-albumin. Finally, only this year, two ladies, Fräulein Popoff and Brinck, have confirmed von Ott's experiments and extended them. The nutritive value of peptones was tested by seeing whether they could sustain the activity of the frog's heart when supplied to it as a nutrient fluid. It was found that a solution of peptone formed by pepsin could not do this, unless it had previously been exposed to the influence of the mucous membrane of the stomach or small intestine. With peptone formed by the pancreas the result is different, for it did not act as a nutrient substance to the frog's heart either before or after exposure to the influence of the mucous membrane. These results are made clear by supposing that the mucous membrane transforms the peptones formed by pepsin into serum-albumin, while it does not act in a similar manner to pancreatic peptone (tryptone), Whether this is the exact explanation of the point remains yet to be seen; and further investigations are, I believe now progressing. But if this great nutritive difference between pepsin peptone and trypsin peptone is confirmed, we are a distinct step onwards in getting a clearer view of our ideas on artificial feeding.

Fats.—I have not much to say on artificial feeding with fats. To be of service to the organism neutral fats must be given, as soaps and fatty acids do not appear to have the nutritive value of neutral fats, which are the compounds of glycerine with fatty acids. One point I may mention, and it is an interesting one. In some cases of digestive disorder in children, the great part of the fat taken as food seems to pass away in the fæces in the form of insoluble lime soaps, being thus not absorbed in the usual manner as neutral fat. An explanation of this has been offered. There is a deficiency of hydrochloric acid in the gastric juice, so that the lime salts of the food are not dissolved and absorbed; these lime salts, therefore, fix on to the fatty acids, and are excreted as insoluble lime soaps. We must, then, with this large excretion of lime soaps, imagine a great breaking up in the intestine of neutral fats into fatty acids and glycerine, which would occur through the influence of bacteria. In adults, too, the fat seems to be, in certain cases, unassimilated, and to pass out of the body as insoluble soaps. Thus, in an obscure case, in which the chief symptoms were great wasting and colourless motions, and in which there was no evidence of organic disease, I found a great quantity of insoluble soaps in the fæces. There were no carbohydrates passed in the fæces, and only a trace of peptone. The conclusion was, therefore, that for some reason undetermined the fat was not assimilated in the intestine. The patient was cut off fats and given carbohydrates, with the result that he increased greatly in weight. It may be said that there are two points in feeding with fat in disease: 1, to give the most assimilable form; 2, in certain cases to cut them out of the diet, or substitute carbohydrates.

Carbohydrates.—The form in which the healthy man takes his carbohydrate is starch, or starch partially converted into dextrin and sugar, as occurs in bread. In disease we are accustomed to give "maltine," with the idea of the contained malt diastase increasing the digestion of the starch taken as food. Many maltine preparations contain no malt diastase, but are chiefly so much sugar. If we wish to give an active malt diastase, it is best to make a "mash," as the brewers say, that is, grind up some malt with water, and keep it in a warm place for a few hours, afterwards straining. If we wish to give carbohydrates in an assimilable form, it is best to administer pure maltose, which can now be obtained from the manufacturers.

Mineral Foods are as important to the organism as those just discussed. As my time is limited, I can only mention to you the importance of the administration of lime salts in the diseases of children, and the importance of the regulation of water-drinking in certain cases of dyspepsia. Some people suffer from drinking too little water, others from drinking irregularly; these are habits which, if corrected, will produce a marked amelioration of certain symptoms from which dyspeptics suffer.

Dr. MAPOTHER said he had intended to discuss the dietaries in cases of some chronic diseases, but, accepting the limitation put by Dr. Yeo, he would speak as to infant feeding only. He urged the exclusion of starch during the earlier months, as from deficiency of salivary and pancreatic ferments it passed into the intestines in a jelly-like indiffusible state, which would only excite irritation and obstruct absorption. Amongst the poor in cities breast-feeding was becoming obsolete. For instance, in Liverpool it had been ascertained that of 463 infants under six months who had died of diarrhœa only twenty-three had been thus nourished. Well-beaten egg was an emulsion like milk, the proteid and fat in each not being dissolved but finely subdivided and suspended in a form most suitable for the action of the gastric and pancreatic juices. On the Continent egg albumen was often rendered far more soluble by the addition of an alkali. He had prescribed for children of over one year an Eastern food known as *Salep misree*, obtained from a bulb of the orchis tribe, which could be readily cultivated in this country. Added to soups or made into blancmange it was very agreeable, and the irritable stomach met with in gouty dyspepsia and in some surgical cases would retain it when all other foods were rejected. After the first year that very cheap food, lentil flour, was most valuable, its vegetable casein being a fit substitute for that in milk. In the older seeds the cellulose was lignified and less digestible. It contained very high proportions of the salts which harden bones, and in many children developing rickets and with the frequent concomitant eczema he had seen rapid improvement under its use. In such cases, also, phosphate of soda could be used most advantageously like common salt. Starchy foods, which contained little lime, and which readily produced lactic acid, were not advisable in the dietary of the rachitic. Cane sugar was not acted on till it met the invertin in the intestines; but the sugars of fruits were at once absorbed, while their vegetable acids stimulated the salivary glands.—Dr. H. RADCLIFFE CROCKER desired to call attention to a point not noticed by other speakers; that was to the injurious effect of the administration of starch food to children, not only in early infancy but at a later age, whenever chronic gastro-intestinal catarrh was present. This had been pointed out by Dr. Eustace Smith long ago, but had not received the attention its practical importance deserved. As long as the use of undigested starch was persisted in it was practically impossible to cure the patient. A moderate amount might, however, be given, if first mixed with maltine. With regard to condensed milk, it might often be given with advantage in the first few weeks of life, when the child could not be suckled, but after that should be avoided, except sometimes in a hot summer or when persistent diarrhœa was present and ordinary milk could not be digested in any form.—Dr. HUGH WOODS thought that much harm was done by the administration of concentrated meat extracts and beef-tea during the height of acute fevers. At those times the tissues were undergoing a process of destruction, and attempts to build them up were useless for a time. The only effect of such a diet was to throw additional work on overburdened kidneys. Both in the case of invalids and infants as much harm was done by overfeeding as by unwise feeding. Children attacked by indigestion became thinner and the mother or nurse, alarmed, increased the quantity of food,

and thereby increased the mischief. Condensed milk was often preferable to the cow's milk obtainable in towns. At all events, it was a matter of opinion, and condensed milk ought not to be condemned in the harsh terms often used. He had seen many children thrive very well on it until other articles of diet could be added.—Dr. DAWSON WILLIAMS agreed with previous speakers that the indiscriminate condemnation of condensed milk was a mistake; in large towns, during the prevalence of summer diarrhœa, the use of condensed milk was a valuable prophylactic, and it was well to have resort to it under other circumstances if the milk supply was under suspicion. Referring to infants' foods, he observed that in this country barley water, or some other starchy infusion, had long been recommended, as a diluent for cow's milk, in preparing the infant's bottle. The custom had arisen owing to a belief that the curds formed from such a mixture were finer and more easily digested. Dr. T. Rotch, of Boston, had recently published some experimental evidence tending to prove that this prevalent idea was mistaken. Dr. Dawson Williams had made a number of experiments on various infant's foods digested with artificial gastric juice, which had convinced him that the curd formed in the presence of starchy diluents under these circumstances was really finer, but it seemed probable that digestion proceeded less rapidly. He referred to the fact that after the first three or four months of lactation the quantity of milk secreted by a nursing woman in good health appeared to be increased, and expressed the opinion that this ought to be borne in mind in arranging the diet of hand-fed infants. The general custom seemed to be not to increase the quantity but the density of the fluid foods given after the age of 3 or 4 months.—Dr. JAMES MCNAUGHT pointed out that he had made a number of experiments with regard to the coagulation of milk alone and when diluted with water and different farinaceous substances, which were published in the *Medical Chronicle* of two years ago. It was necessary, in making experiments of that kind, to employ a very active and well prepared gastric juice, in which the rennet ferment was satisfactorily extracted, otherwise errors were likely to arise, and the experiments of different observers were liable to produce different results. He found that the really tenacious clot which gave trouble to the digestive organs was produced not by the acid of the stomach, as was often supposed, but by the rennet ferment. Farinaceous substances certainly lessened the tenacity and increased the digestibility of the coagula formed in the stomach, and were not themselves productive of the injurious results frequently attributed to them.—The PRESIDENT (Sir William Roberts) said that Dr. Yeo had spoken with such perfect good sense that he had nothing to say except that he agreed with him in all his recommendations. The subject of bread had been touched upon, and he wished to make a remark on this matter. Brown bread—bread containing the husk or bran of the grain—had been a good deal pushed into notice. This kind of bread was a pleasant variety for occasional use, and it also, like oatmeal, had a certain power of promoting the activity of the bowels. For these purposes brown bread had long been used: but of late more had been claimed for it. It was said that fine flour was inferior in nutritive value to coarse flour containing the bran, and it was alleged that we ought to retain the bran in some form or other in order to improve the quality of our bread; that bran contained more mineral matter, especially more phosphate, and that the loss of these by the use of fine flour was the cause of rickets, bad teeth, weak bones, and the imaginary general degeneracy of the race. There was, or recently had been, a society in existence with the high sounding title of the Bread Reform League, to purge this economic error. These attempts to make bread a more complete food were, he believed, all a mistake. Men did not live by bread alone, but supplemented its deficiencies by using other articles with it—milk, meat, fish, poultry, butter, eggs, cooked vegetables, salads, etc. Bread could not be made, even approximately, a complete food by adding the bran to it. It would still be all too poor in mineral matters, of which it would only contain 2 per cent. of the dry substance if every particle of the bran were retained in it, whereas meat, fish, milk, and vegetables, contained 5 to 6 or more per cent. of mineral matters (including the precious phosphates) in proportion to the totality of their dry substance. The real function of bread in our dietary was to furnish in as digestible a form as possible a supply of farinaceous matters and a vegetable proteid; and for this purpose bread made from fine flour was the best for ordinary use. The proper destiny of the bran was now, as it was 2,000 years ago, to feed the swine. There was no loss, but real economy, in this, for not only did the bran come up again in the more digestible form of pork and bacon, but it had been shown that fine white bread was by far more completely absorbed than coarse bread, in regard not only to its starchy ingredients, but even in regard to its proteid and mineral constituents.—Dr. BURNEY YEO said in reply he was glad to find that the observations he had made in introducing this subject met with such general acceptance, especially with regard to the dilution of food for febrile cases. He thought Dr. Sidney Martin's observations on the physiology of food digestion and absorption most interesting and important. He, like Dr. Mapother, had been struck with the excellent fluid, highly albuminous food, to be obtained, as he had suggested, from beating up egg with hot water and straining. He thought Dr. Radcliffe Crocker's objection to the use of starches in chronic intestinal catarrh might be greatly due to the habit of mixing milk with starch food in these cases. He had found arrowroot made with water very well digested in such cases. He emphasised Dr. Woods's caution as to the dangers of over feeding in the acute renal complications of scarlet fever. The President's remarks on the modern tendency to eat coarse bran-containing breads were in entire accord with his own observations.

A CONTRIBUTION TO THE SUBJECT OF BRONCHIAL PNEUMONIA (NON-PHTHISICAL) IN THE ADULT LUNG:

WITH TWO ILLUSTRATIVE CASES AND A TABLE.

Presented to the Section of Medicine at the Annual Meeting of the British Medical Association held in Leeds, August, 1889.

BY THOMAS E. SATTERTHWAITE, M.D.,

Professor of Pathology and General Medicine in the New York Post-Graduate Medical School and Hospital.

IT is the purpose of my paper to discuss a topic that has been involved in much obscurity. So far as I know, bronchial pneumonia[1] in the adult lung has never been the subject of systematic description. It is not that medical men have ignored the existence of this adult variety, but rather that the few cases which have been published are scattered or fragmentary. My position will be made more apparent, when I quote from an article recently published by a distinguished fellow-countryman.[2] When treating of the general topic of bronchial pneumonia, he says: "There is strong reason to believe that the frequency with which adults are attacked [with bronchial pneumonia, T. E. S.] has been greatly under-estimated, in consequence of the failure on the part of the profession at large to clearly recognise this affection;" and, he continues, "while it is probable that the more severe and widely disseminated pneumonias of catarrhal type are commonly recognised nowadays, it appears undoubted that in very many instances of apparently mild sickness, of acute or subacute character, which are regarded as simple febrile colds or as the result of malaria, the true condition is one of circumscribed catarrhal pneumonia [bronchial or lobular pneumonia, T. E. S.], which, while threatening no immediate danger to life, will, if neglected, leave lesions of grave significance."

Since, however, the author quoted discusses the topic of bronchial pneumonia as taken from the combined standpoint of infantile and adult life, I have thought it would be interesting for the profession to consider these conditions apart, since I believe they are entitled to separate classification, both for anatomical and clinical reasons; and my experience for more than twenty years of continuous hospital service has furnished me with sufficient material bearing on the subject to make it appear desirable that I should lay it before the profession; especially as I hope that it will stimulate others to elaborate the matter more fully.

It may be correctly affirmed, paradoxical as it may at first appear, that bronchial pneumonia of the adult is first seen about the fifth year of life. At this time the lung has usually reached its full period of development, though not of growth; and hence all cases of bronchial pneumonia, not embolic in character, falling between the age of five and the limits of life naturally range themselves under this heading.

It may also appear somewhat singular that this variety of disease

[1] Bronchial pneumonia, as described in this paper, is not to be confounded with pulmonary phthisis of any form whatever.

[2] Dr. William Pepper, in an article on Catarrhal Pneumonia, *System of Med.* vol. iii, p. 353.

has heretofore received so little attention, for it is true that we find scant mention of it in our best manuals of pathology or pathological anatomy;[3] in fact, I have only found one in which it has received a separate classification. This author,[4] an American, has given a description of "disseminated" pneumonia as produced by pressure on the trachea or bronchi, and states that in such cases he found:—1. Intra-alveolar inflammation; 2. Collapse of air vesicles in groups; 3. Interstitial inflammation.

It is interesting, however, to note that isolated examples of the disease have crept at various times into our literature. Thus Aetius,[5] of Amida, the great physician who flourished about the end of the fifth century, was perhaps the first to mention it. Under the caption, "De ea quae pleuritis esse putatur, quum tamen non est," he says: "Crude mucous and tenacious humours are generated in the body which sometimes discharge themselves into the cavity of the chest, and also into the lung;" and, he adds, "in such cases the respiration is not rendered difficult by pain, as is otherwise so commonly the case, but rather by obstruction of the air-passages through secretions;" and, further, "If they (the patients) are attacked by fever, it is very slight, the patients having little thirst. The pulse is slow, very small, and quite sluggish, altogether the opposite to what we usually find." This is, indeed, an imperfect description, but plainly shows that Aetius had seen such cases, although he does not really distinguish the disease sharply from bronchitis, and does not class it as a pneumonia; for, in another paragraph,[6] entitled De Peripneumonicis,[7] which contains a description of acute lobar pneumonia, he does not allude to it.

Something over a century later, Sydenham, the "English Hippocrates," described it clinically under the head of "bastard peripneumonia," detailing certain features of a pneumonic inflammation that can only apply to a pneumonia of adult life, propagated along the avenues of the bronchi. "This form of lung disease," he says, "attacks by preference the stout and fat, and those who have been addicted to spirituous liquors;" and, in another place, he writes that "the matter which has excited the cough grows gross, blocks up the passages to the lungs, and preys upon the whole mass of the blood in the shape of fever.[8] Now, bronchial pneumonia, as I understand it, is the only form of pneumonia that enters the lung parenchyma through the extension of a bronchial catarrh; and it is quite common in alcoholic patients, as in others of deficient vital force.

In the succeeding century, we find the views that had originated with the great English physician were sustained and extended by Boerhaave and his pupil, Van Swieten, and in the latter's *Commentaries*, section 867, vol. viii, the name "bastard" or "spurious peripneumonia" is retained.

Boerhaave is credited with saying that this form of pneumonia happens most frequently in "old people and such as are phlegmatic, of a cold habit and afflicted with catarrhs and colds;" that "by its deluding lenity at first destroys those who scarce thought themselves ill, for, beginning with a slight weariness, weakness, and prostration of almost all the faculties of the mind, and with a shortness of breath and oppression of the breast, it excites such gentle commotions that there is hardly any sign of heat or fever that warn one of the danger," etc.

The affection, according to the same authority, is due to running, injury, getting drunk, feasting, etc., which, it is true, may be secondary factors in the causation of the disease.

Morgagni,[9] who wrote in 1760, does not appear to have ever seen a case, though he may have known of the infantile form, for he has written of a child, 14 days old, that died on the eighth day of a pneumonia, *post-mortem* examination revealing certain "black spots" in the posterior part of the lungs, that were possibly due to bronchial pneumonia.

There can be no doubt, however, that Andral knew of it, for in his *Clinique Médicale*, p. 357, after recording a case of bronchitis in a man aged 60, he continues as follows: "A few days only before entering the hospital the cough became much more frequent and more intense, the difficulty of breathing increased, and fever was ushered in. When we saw this patient for the first time we thought him attacked merely with simple exacerbation of the bronchitis; in fact the expectoration indicated nothing else. It consisted of a clear glairy mucus, marked by opaque streaks. Auscultation detected in all parts of the chest a very loud mucous *râle*. The sonorousness of the thoracic parietes was everywhere equal. Pulse was very frequent, skin hot. On the following day the respiration seemed to be more free, pulse less frequent. But the following days the dyspnœa reappeared and went on increasing. The chest, when percussed, ceased to sound beneath the right clavicle and in the level of the inferior angle of the left scapula. Catarrhal expectoration still continued, mucous *râles* louder, orthopnœa, asphyxia, and death." "*Post mortem*: Mixture of red and grey hepatisation of a small portion of the lower lobe of the left lung; general redness of the bronchi, which were filled with mucus."

"This case," he continues, "is an instance of what would formerly have been called suffocating catarrh [capillary bronchitis T. E. S.]. The cause of all the bad symptoms and of death lay in the inflammation of the pulmonary parenchyma, but the symptoms characteristic of this inflammation were so little marked that without percussion nothing would have been recognised during life but simple bronchitis. The expectoration remained catarrhal; the *râle* occasioned by the accumulation of mucus in the bronchi prevented us from detecting by auscultation the state of the pulmonary parenchyma. Hence," Andral deduces, "in old persons affected with chronic bronchitis the appearance of an unusual dyspnœa and of fever very often indicates a greater or less inflammation of the pulmonary parenchyma."

Andral also instances other patients that had bronchial pneumonia in conjunction with phthisis, hepatitis, enteritis, and smallpox. In several of these he did not detect the disease during life, because the symptoms of pulmonary trouble were so slight.[10]

Laennec also knew of bronchial pneumonia under the name of suffocative catarrh, but found it rare in adults.[11]

Now it is interesting to observe (from a historical point of view, at least) that in a late edition of Rilliet and Barthez[12] it was shown that capillary bronchitis and broncho-pneumonia are the same thing (p. 497), or rather that *pneumonie lobulaire generalisée* is the successor of capillary bronchitis. Previously (about 1825) Lanoix[13], and shortly after several of the French school[14] noted the similarity between the pneumonia of children and of the aged; but otherwise the contributions of the present century have been meagre enough, and I have but to add a very small number of names. Thus Frank[15] seems to have known it as the *peripneumonie fausse* of old people. Wilks,[16] of Guy's Hospital, reported one case, and the late lamented Fagge described it theoretically, though it is not clear in my mind that he had seen a genuine case.

I regret exceedingly that I have not at my command a greater number of facts upon which to base conclusions, but the twenty cases that furnish the basis of this paper represent a continuous and personal study of pneumonia, and I feel, therefore, that they are worthy of being put on record. Each of the cases will be found in the table at the end of this article, and though several are incomplete in matters of importance, yet, taken together, the data are instructive from several points of view, revealing the fact that we are dealing with a type of pneumonia that merits separate consideration. This becomes at once apparent when we observe the age at which it occurs. Contrary to the statement of almost all well-known writers, bronchial pneumonia (excluding now all cases under 5 years of age), is most common in the middle and later periods of life, chiefly between the fourth and sixth decades.

According to my figures, males largely preponderate. On this point I differ from Jürgensen, who finds that sex has no influence on catarrhal pneumonia. Males preponderated in nineteen of my cases in the proportion of twelve to seven. This ratio may not have any significance, however, but it is interesting at the same

[3] Cornil and Ranvier, *Path. Hist.*, Phila., 1880, p. 414. Coats, *Man. of Path.*, Phila., 1883. Zeigler, *Path. Anat.*, New York, 1887, s. 610.

[4] Delafield, *Studies in Path. Anat.*, vol. i, p. 71, New York, 1888.

[5] Aetius. *Tetrabiblion* II, Sermo iv, cap. 66. Lugdun. 1549. This book is to be seen in the library of the New York Hospital. (Translation by Jürgensen.)

[6] *Op. cit.*, cap. 68.

[7] The term "peri," when used as a prefix, means acute or severe, as explained by Celsus, when he says: "A compagine corporis ad viscera transeundum est; et imprimis ad pulmonem veniendum. Ex quo vehemens et acutus morbus oritur, quem Περιπνευμονιαν Græci vocant. Lib. quart., cap. vii. [This book is in my own possession. T. E. S.]

[8] *Works of Sydenham*, vol. i, p. 251. London, 1848.

[9] Morgagni. *The Seats and Causes of Diseases*, 205, 15, London, 1769.

[10] *Clinique Méd.*, London, 1836. (English translation).

[11] *Diseases of the Chest*, N. Y., 1830, p. 86.

[12] *Maladies des Enfants*, Paris, 1853.

[13] It is but proper to state that Lanoix's article (*Essai sur la Pneumonie des Enfants comparée à celle des Vieillards*, Paris, 1825) was based upon a study of only three cases.

[14] Weiss in Gerhardt's *Handbuch der Kinderkrankheiten*, p. 731.

[15] *Méd. Prat.*, vol. i, p. 188, Paris, 1842.

[16] *Guy's Hosp. Reports*, 1865.

time to observe that this preponderance of the male sex is found in every type of pneumonia.

In considering the etiology of this disease we do well to study its antecedent conditions; but, before doing so, let us note that the season of the year has an important bearing on its origin; thus, between October and June 60 per cent. of my cases occurred. It is, therefore, a disease of the autumn, winter, and spring months most particularly. On this point I am glad to agree with most writers. Singularly enough, occupation, whether outdoor or indoor, was apparently an important matter. Thus in 67 per cent. it occurred in persons who were leading an outdoor life. It may be noted that in acute lobar pneumonia there is no such disproportion, and that in embolic pneumonia the reverse ratio holds good. In this respect, again, there is evidence that the disease we are now considering has a distinct place in the categories of pneumonia.

In my twenty cases I found, in all but two, antecedent conditions that aid somewhat in our comprehension of the disease. The most important of these were as follows: in one, pericarditis with effusion; in two, fibrinous pericarditis; in two, blows on the chest; in two, blows on the head with meningitis; in two, bronchitis; in one, thoracic aneurysm; in one, resuscitation from drowning; in one, typhoid fever; in two, diphtheria; in one, measles; in one, phthisis; in five, alcoholism.

Now, starting from the well-grounded assumption that infantile bronchial pneumonia depends for its cause upon a bronchitis, we may conclude that a similar condition in the adult lung will be capable of causing a similar pathological condition. But in infantile bronchial pneumonia we reason that inflammation of the parenchyma follows immediately upon occlusion of the ultimate bronchioles by a swollen mucous membrane, or irritating matter detained at those points. In other words, there is obstruction of a certain number of the bronchial tubes. And yet this state of things may be found in pericarditis with effusion, aneurysm, after resuscitation from drowning, and in phthisis sometimes, mechanical pressure from retained substances in all these cases being sufficient to excite bronchial pneumonia. Indeed, of this condition we have experimental proof. Another class of cases may be due to feeble respiratory efforts, for we know that collapse of the lung may be produced in like manner; or rather, we know that atelectasis in the newly-born, which is a parallel condition with collapse of the lung, will be permanent unless the infant be compelled to breathe lustily. Now collapse of the lung, we have reason to believe, is the forerunner often, if not always, of broncho-pneumonia. Such feeble respiration exists in states of advanced alcoholism and chronic nervous affections, and in typhoid fever. Or, it is fair to suppose that it may originate simply as an extension of some systemic disease, such as measles or diphtheria, the antecedent affection being in these cases a bronchitis.

Finally, bronchial pneumonia in the adult may develop by direct extension of an inflammatory process. Thus, I have seen two cases develop from fractured ribs, where the injury, though severe, was attended by no septic symptoms. At this point I will mention that Fagge's cases, so far as his description of them goes, were perhaps not true cases of lobular bronchial pneumonia; that is, according to my present classification. Thus he speaks of a young woman who developed bronchial pneumonia eight days after a miscarriage, and died in ten days. Such a case should be, it is reasonable to suppose, one of embolic pneumonia. Of course it is not always easy, even with all the evidence at hand, to classify each individual case. Fagge tells of another instance of bronchial pneumonia in an old syphilitic, who, he supposes, contracted the disease by inspiring the foul discharges of an ozæna. If this were a real case of pneumonia and not lung syphilis the pneumonia might have been termed inspiratory or pythogenic and yet be a bronchial pneumonia. At this point it is proper to explain that the bronchial pneumonias of the aged may very reasonably be imputed, as has been done, to the inspiration of bronchial secretions, if the patients have suffered from bronchial catarrh, and under the same heading may be classed some recorded examples of what has been termed "Buffalo pneumonia," a disease produced by the inhalation of dust among the shovellers and scoopers of the great grain elevators of the city of Buffalo.[17] It has also been held that heart disease is a cause of pneumonia, but precisely in what way has not, I think, been clearly shown. That it may occur, as I have indicated, through pressure in pericarditis is not so difficult to understand, or that it can be a contributing cause or factor in weak or fatty heart is easily understood; but it must be remembered that, as a rule, organic diseases of the heart produce either an embolic or an interstitial pneumonia.

In taking up the morbid anatomy of bronchial pneumonia in the adult lung it is indispensable to consider briefly a number of allied topics, among which are tracheitis, bronchitis (general and capillary), pulmonary collapse, œdema, bronchiectasis and emphysema, interstitial pneumonia, pleurisy, abscess or gangrene, and phthisis, one or more of which may have its part in the production of the adult form of bronchial pneumonia as in the infantile, which latter relation I have shown elsewhere.[18]

In some cases the origin of the disease can be traced to some inflammatory condition of the upper air passages, just as in children. There is, to be sure, less activity in the symptoms, and the glandular implication is less because the glands are now not so large and active in their functions; but, in exceptional cases, the origin and development of the disease may have essentially the same character. But there is always all the difference that arises from the alteration in the structure of the lungs at these different periods of life, for, at the time when the lung is fully developed, namely, in the fifth year, we have a right to class its diseases among those of adult life; and besides, bronchial pneumonia now finds results that previous diseases have established in the lung. Thus, it is to be presumed that the sequel to old attacks of pneumonia, but especially of pleurisy and bronchitis, have established here and there bronchiectatic foci, and it is from these especially that the disease may most easily spread by the processes I have already hinted at, namely, by the blocking of the tubes, and later, by the inspiration of bronchial matters.

At first we may have collapse of the lung, a condition corresponding at its commencement with the fœtal state, when as yet the lung has not been aërated. The *rationale* of this pathological process has often been described. A little pellet of mucus or muco-pus, or secretion of some sort, or a foreign particle. is adherent near the bifurcation of a bronchial passage. At each expiration it passes further into the large tube; at each inspiration it passes back until obstruction takes place. Thus, by a succession of respiratory movements, a lobule or group of lobules is pumped dry of air. But even if the plug does not move with inspiration, the oxygen and other gases are absorbed in obedience to the law of the diffusion of gases; consequently there is a falling in of the walls of the lobule or lobules, and now there is pressure from the circumambient vessels with a necessary transudation of their liquid or solid contents, and more or less alteration of the pre-existing cellular elements of the vesicles.

This constitutes the first stage of this form of pneumonia. I may add here that the first stage of lobular pneumonia and collapse of the lung are indistinguishable, pathologically.

In the second stage there is more or less complete consolidation of each lobule implicated, so that it becomes comparatively firm and dense, though usually less so than in lobar pneumonia. The colour is now deep red. But the deposit does not differ so much in kind from that seen in the other or "croupous" form. It is rather in degree that we see a difference, and herein I think many of us have been led away under the influence of Continental authorities. In recognising the "fibrinous" character of acute lobar pneumonia we have been disposed to think that therein was a distinguishing mark. Let us at once dispossess ourselves of this erroneous idea. Bronchial pneumonia may be, and often is, fibrinous. If we want pathological criteria we can find them in this, namely, in the one, the bronchial, there is a comparative excess of liquid and corpuscular elements over the fibrinous; in the other, the lobar, a comparative excess of the fibrinous over the other solid and the liquid elements. The solid contents are altered blood, epithelial corpuscles, pus, fibrin, and perhaps granular matter; air and fluid are usually entirely absent. This subject has been treated of *in extenso* at another place.[19]

In the second and third stages of pneumonia the process is very easily identified on the *post-mortem* table. We have here to distinguish chiefly from lung syphilis and lung infarction; or, to be more exact, to exclude gummy tumour and embolism. In the former instance we should have the syphilitic history of the patient, and the deposit should be nodular and encapsulated. In the latter we find the characteristic phenomena of infarction, easily detected by the experienced pathologist, even if the history of the case be defective. I may add, parenthetically, that the diffuse interstitial pneumonia of syphilis (white pneumonia) is

[17] *Buffalo Med. and Surg. Journal*, December, 1879,

[18] *Virginia Medical Monthly*, June, 1889.

[19] *Virginia Medical Monthly*, June, 1889.

A Table Showing the Phenomena of Lobular Bronchial Pneumonia in the Adult Lung.

No.	Age.	Sex.	Month.	Locality of sease.	Extent of Disease.	Antecedent Affection.	Coincident Affections.	Supposed or Apparent Causation.	Duration.	Auscultatory Signs.	Sputum.	Pulse Respiration.	Pain in Side.	Urinary Symptoms.	Nervous Phenomena.	Abscess or Gangrene.	Cause of Death.	Range of Temperature.	Place of Record.	Initials.	Remarks.
1	—	M.	Oct.	Bilateral	⅓ of each lung	Phthisis	Phthisis	Inspiration of morbid matter	—	—	—	—	—	—	—	—	—	—	Path. Reg., 1, p. 21	E. W.	A case of inspiratory pneumonia.
2	55	F.	Feb.	Left	Upper lobe	Extensive pericardial effusion	See preceding column	Pericardial effusion	3 days	Regular signs present	—	Pulse, 128-152	Present	Albumen 20 per cent.	—	—	Heart failure	—	Path. Reg., 1, p. 99	C. K.	—
3	48	M.	Sept.	,,	Lower lobe	Fibrous pericarditis, chr. diffused nephritis	,,	Pericarditis	—	—	—	—	—	—	—	—	—	—	Path. Reg., 1, p. 152	I. F.	—
4	27	M.	Dec.	Right	,,	Emphysema, injury to chest, meningitis	,,	Blows upon the chest	15 days	Regular signs present	Rusty	—	Present	—	Delirium	Gangrene	Septicæmia	Not above 102° F.	Path. Reg., 3, p. 58	P. D.	A typhoid pneumonia.
5	27	M.	,,	Bilateral	—	Fracture of ribs	,,	Injury to chest	4 days	,,	—	—	—	—	Delirium	—	Pulmonary hæmorrhage	—	Path. Reg., 3, p. 152	C. K.	—
6	32	M.	Mar.	Right	Base	Alcoholism	—	—	—	—	—	—	—	Granular casts	—	—	Heart failure	Highest temp., 104	Path. Reg., 3, p. 517	J. B.	—
7	69	F.	Oct.	Left	Lower lobe	Thoracic aneurysm	See preceding column	Rupture of aneurysm	30 days	Regular signs present	Bloody	Pulse, 100-130	Present	None	—	—	Internal hæmorrhage	,,	Path. Reg., 4-1-48	E. D.	—
8	35	M.	June	Bilateral	—	Cirrhosis of liver	—	—	4 days	Dyspnœa, bronchial breathing	—	Pulse, 135	—	Chlorides present	—	—	Heart failure	Highest temp., 105	Path. Reg., 4, p. 84	S. H.	—
9	42	M.	,,	,,	Disseminated	Chronic diffused nephritis, alcoholism	Resuscitation from drowning	Inspiration of foreign matter	5 days	Regular signs present	Rusty	Pulse, 120; resp., 52	—	Albumen 15 per cent., casts	Delirium, stupor	Tendency to gangrene	Heart failure	Highest temp., 108.7	Path. Reg., 4, p. 160	H. C.	A case of inspiratory pneumonia.
10	36	M.	,,	,,	,,	Malaria, typhoid fever	See preceding column	Typhoid fever	6 days	Dulness and bronchial breathing	Bloody	Pulse, 120	—	—	Delirium	—	Heart failure	Highest temp., 108.75	Path. Reg., 4, p. 196	E. R.	—
11	53	M.	Aug.	,,	,,	Meningitis, locomotor ataxia, endocarditis	,,	Bronchitis	2 days	Mucous *râles*, dulness	—	Pulse, 130; resp., 40	—	—	Delirium	—	—	Highest temp., 105.5	Path. Reg., 4, p. 204	H. H.	—
12	78	F.	,,	,,	,,	Pericarditis bronchitis	,,	,,	10 days	Crepitant and subcrepitant bronchvesic	None	Resp., 42	Present	Albumen	Delirium	—	—	Highest temp., 105.4	Path. Reg., 4, p. 258	M. C.	"Pneumonia in the aged."
13	6	M.	Feb.	Right	Lower lobe	Diphtheria	,,	Diphtheria	—	Ordinary physical signs	—	Pulse, 95	—	,,	–	—	Heart failure	Highest temp., 100	Path. Reg., 1, p. 160	—	Patient of Dr. J. Lewis Smith.
14	—	F.	May	Bilateral	—	Measles, bronchitis	,,	Measles	—	Not detected	Purulent	—	—	—	—	Gangrene right mid. lobe	Septicæmia	—	Med. Case, B. 1, p. 115	B.	A child about 7 years old.
15	—	F.	Mar.	,,	Disseminated	Diphtheria, fatty heart	,,	Bronchial diphtheria, bronchitis	A few days	Those of bronchitis	—	—	—	—	—	—	—	Highest temp., 105	Path. A. & P., p. 84	H.	A lady about 50.
16	67	F.	Sept.	,,	Lower lobe	Alcoholism chr. Bright's, cirrhosis, fatty heart	,,	Respiratory weakness	—	Regular signs	—	—	—	Albumen	—	—	—	—	N. Y. Postgrad, 1, p. 16	D.	—
17	—	—	Jan.	,,	Disseminated	—	—	—	4 days	—	—	—	—	—	—	—	—	—	Path. Reg., 2, p. 62	—	A young child.
18	29	M.	July	,,	Lower lobes	Injury to head	Meningitis	–	—	—	—	—	—	Albumen 7 per cent.	Convulsions	—	Heart failure	Highest temp., 103	Pres. Hosp. Path. Reg, 4, p. 272	J. H.	—
19	50	M.	Nov.	—	—	Alcoholism	—	Respiratory weakness	7 days	Cough, dyspnœa	Bloody	—	Present	—	—	—	—	—	Postgrad C.B.1., p. 23	G. V.	—
20	—	F.	Feb.	—	—	—	—	—	—	Cough	—	Pulse, 120; resp., 24	—	—	—	—	—	—	H. & P. Reports, p. 58	M. D.	—

quite unlike any form of lobular pneumonia in its pathological characters.

In lobular pneumonia the lesion is usually somewhat elevated above the surface of the surrounding lung tissue. In size each deposit may not be larger than a hazel nut; it is seldom as large as a pullet's egg, though, if the attack has been protracted, the several diseased foci may become amalgamated, so that half a lung or even more will be involved.

The duration of an attack is governed almost wholly by the antecedent disease. Lobar pneumonia, when uncomplicated, terminates invariably within two weeks, usually in much less time. Lobular pneumonia, whether in the adult or infantile form, is extremely variable in its duration. It may last a few days only or a month, possibly longer, because it is apt to be characterised by a series of invasions. After a certain length of time chronic pulmonary changes are inevitable, such chiefly as interstitial fibrinous deposits, bronchiectasis and emphysema, which will inflict more or less permanent damage. For each pneumonic deposit is at first the centre of a zone of congestion and œdema, while a sort of compensatory emphysema of the vesicular variety is sure to be established in order to make room for the inspired air that has been defrauded of space. But this form of emphysema presumably disappears when the distension has not been too complete, and when the primary disease has yielded. And indeed, there is reason to suppose that the entire lung will return to its original condition in cases of not too protracted a character, for we know that in acute lobar pneumonia, even when pleurisy has been a marked feature, complete resolution may occur with entire absorption of the exudation, whether fluid or fibrinous. Unfortunately lobular pneumonia is a disease that attacks individuals whose strength has already been undermined by the primary affection. Hence it is not surprising that resolution should be delayed, even if partial destruction or, at least, alteration of the lung does not occur. And hence, too, it is not remarkable that the lung is liable to suppurative or gangrenous change about as frequently as in secondary lobar pneumonia (10 per cent.). We have also a right to expect a sort of lung cirrhosis[20] in severe cases.

With these vital changes incident to a long-protracted malady we should expect that miliary tuberculosis would be readily initiated. This does not, however, appear to be the result, although in the lobular pneumonia of the infant lung we have been told that suppuration changes are often coincident with the development of phthisis. This special topic requires, however, new and careful study, and I think that the pathology of the future will show that in this respect we have been greatly in error. There is no reason to suppose that the products of the inflammation may not become cheesy. When abscess or gangrene occurs the suppurating matter may be expelled by the bronchi, or by bursting through the pulmonary pleura we may have an empyema, or possibly a pyo-pneumothorax.

At any rate, very soon after the pulmonary disease touches the pleura we shall have pleurisy, which will progress coincidently with the pulmonary disease, and regress also with it. It is therefore always in such cases a secondary affection. Now, this contemporaneous occurrence of bronchitis and pleurisy, affections that clinically are often seen in unison, invites the question whether or not we did not have a lobular pneumonia to establish a bond of connection between the two. A study of our clinical and pathological records will indicate that this surmise is correct. The physical signs of pneumonia have simply eluded us. How often does the diagnosis of "a patch of pleurisy the size of a five-franc piece" or "of a silver dollar" represent in reality a bronchial pneumonia?

The disease is often confined to a few lobules, or groups of lobules, and seldom involves half a lung, as I have already said, though as a rule both lungs are attacked (in about 70 per cent.). Where a single lung is involved it is the right or left indifferently, but when both are attacked, the inferior lobes, or the posterior portions of the lungs, suffer the most.

I have already alluded to the attendant morbid conditions that I have found associated with lobular pneumonia in the adult.

From the foregoing it will be seen that the physical signs may be uncertain; in fact, an ordinary examination may fail to reveal them, though a finely crepitant *râle* is sometimes heard in the first stage, and yet we may have to provoke a fit of coughing in order to produce it. In the second and third stages there may be dulness on percussion if the condensed area be large or if the focus be near the surface of the lung. If it is small or centrally located there will be difficulty in detecting it. In those cases where there has been a preceding bronchitis, acute or chronic, or where there has been an exposure to the inspiration of solid matters, such as dust in unusual quantities or foul matter of any sort, we shall have our attention directed to the probable seat of the affection by more or less dyspnœa, with mild suffocative attacks and short cough, with, perhaps, temporary arrest of the secretion; generally there will be a sudden rise of temperature and pulse, but not necessarily a chill. Pain in the side was noted in one quarter of my cases.

Again, it will help in the diagnosis to know that the disease is usually symmetrical, and that there will be scattered foci of disease chiefly in the posterior and inferior portions of the chest.

We may remember that the temperature, pulse, and respiration will all be abnormally high, and, though the pulse may be as low as 100, it is more apt to rise above 120. I have known it to reach 158.

Expectoration may be bloody, rusty, or purulent, or all three in any one case. In a very small number of instances there may be no expectoration. In something less than half (40 per cent.) I have found abnormal urinary signs, such as indicated functional or organic renal lesions. In a little less than half there were abnormal nervous phenomena, such as delirium, convulsions, or coma. The temperature was found to average 104.7°, a little less than in acute lobar pneumonia, a little more than that in secondary lobar pneumonia. It may even in this form run very high, and in one instance at death it reached 108.75°. If, however, we realise that the regular physical signs were found in about 55 per cent, there is some encouragement in believing that a diagnosis can usually be made. Pathological data alone give little clue to a knowledge of the duration of the disease. Nor do clinical data help us always, for reasons that we have already seen.

In studying the determining cause of death we have a complicated problem, quite unlike that of acute lobar pneumonia. For we have an underlying affection that is sapping the very springs of life, and which very possibly may be in itself the actual cause of death. Who can say in diphtheritic pneumonia whether it is the pneumonia that kills; or in an extensive pericarditis, with an effusion embarrassing the heart's action, whether death takes place at the heart or in the lungs. Sometimes it will be certain that the pneumonia is not concerned primarily in the cause of death, which may be plainly due to sepsis, possibly to uræmia. But with all that can be said on these points, I am of opinion that death is usually due to heart failure, though I find myself on this point in opposition to so brilliant a writer as Jürgensen.

First in order of causes comes sepsis. Least of all in order of importance stands uræmia.

From a review of the natural history of lobular pneumonia it will now appear that the treatment involves questions of by no means so simple a character as those in acute lobar pneumonia, lung syphilis, or pulmonary embolism.

If, for example, we have to do with a pneumonia in the weak and aged, possibly even in a phthisical patient, following upon a bronchitis acute or chronic, we must realise that there is a chance of checking the disease by subjugation of the bronchitis or by such a fortification of the system that the minute bronchioles and bronchi will reject their natural secretion, and with it the altered matters held by them in suspension. By successfully treating these indications, collapse of the lobules will be obviated, and a step successfully made in [resisting the inroads of the attacking disease. So in any case of obstructed bronchi, whether it be from the causes mentioned, from the bursting of an abscess, the escape of food into the air tubes, as in cancer of the œsophagus or larynx, our aim should be to stimulate respiratory action, so that the foreign matter may be expelled as speedily as possible.

Again, if the pneumonia can be referred to an antecedent or concurrent disease, it should be considered whether or not the primary affection can not be made tractable. If a pericarditis with effusion pressing on the bronchi, it would obviously be the proper treatment to endeavour by appropriate means to remove the fluid.

On the other hand, where the lung has sustained a mechanical injury, as in the case where a portion of rib had been driven into the lung, operative surgical treatment is plainly indicated. If, again, there is danger of extension of the disease from a diphtheritic bronchitis, it is plain that all human means should be resorted to to prevent its extension to the finer tubes. But prophylaxis having failed, or the disease having attained a seat in the

[20] This has been alluded to by Jürgensen.

lung, it is well established, I think, that it will go through its regular stages, and in their regular order. Now, of course, the plan of treatment is not essentially different from that of lobar pneumonia, except that there is less need of the active energetic treatment pursued in such cases, because the area of lung involved will be smaller, and because the disease is less sthenic in character. The patient should remain in a temperature that is absolutely uniform, and not far from 70°. A certain degree of moisture will enable him to respire with more ease and with less pain. If sepsis is present the air may be charged with some disinfectant, and for this purpose I have employed listerine very advantageously. Ipecacuanha has no sphere in the pneumonia of adults, if used as an emetic, but as a sialogogue it has desirable qualities, though I use it less than formerly. Chiefly do I depend upon the muriate and carbonate of ammonia suspended in a mucilaginous liquid. I am inclined to think ammonia has a larger field for use than alcoholics, and for two reasons. The first is that it can be employed with advantage for a longer time continuously; and, secondly, because it has a positively favourable action upon the renal secretion, which is a matter to be considered in every form of pneumonia. In addition, I always use the oil silk jacket lined with ordinary cotton wadding, and I keep it in place during the continuance of the disease. The patient is now bathed constantly in perspiration, and there is no likelihood of his taking cold. The bronchitis, if present, is likewise improved.

In some instances I use poultices, which can easily be slipped in under the oil silk. They are to be renewed every four to six hours. A moderate use of calomel in 1-20 grain doses repeated every two or three hours I find an excellent remedy to relieve congestion of the liver and deplete the engorged lung. In uræmic cases we cannot be too prompt in detecting its early symptoms so as to direct our efforts vigorously in that quarter. In some cardiac cases digitalis or some heart stimulant may be imperatively necessary. I am inclined to think that under these circumstances digitalis continues to be our safest and most efficient remedy if administered with caution, and only when necessary.

The following are illustrative cases:—

Bronchial Pneumonia in Connection with Alcoholic Cirrhosis and Abdominal Dropsy.

Case I.—S. C., carpenter, 35 years of age, was admitted into the Presbyterian Hospital in January of 1886. He had previously suffered from varioloid, intermittent and yellow fevers, and had contracted syphilis five years before admission, and was in addition a confirmed victim of the tobacco and alcoholic habits.

Symptoms pointing to thoracic aneurysm, the patient was put upon Tufnell's treatment. At the end of a month it was thought best to order a regular diet, as symptoms of weakness became apparent. Two weeks later a chill occurred without apparent cause. It lasted thirty minutes, the temperature rising suddenly to 103° F., and an hour later to 105° F. The fever was at first reduced by antipyrin in 30-grain doses. On the second day the temperature rose to 105° F., but was this time reduced to 102° F. by antipyrin (grains xv) in repeated doses with thallin (grains iv). The patient then began to expectorate blood, and on the same day bronchial breathing was detected in the left lower lobe. The patient died on the fourth day of his pneumonia, and apparently of heart failure. At the *post-mortem* examination it was found that the heart was somewhat hypertrophied and that its cavities were dilated. Weight of organ 15 ounces. The aorta and large vessels were quite free from apparent disease. Both lungs were firmly bound down by old pleuritic adhesions, and were congested and œdematous, the right weighing 30 ounces; the left, 27. Both lungs contained areas of lobular pneumonia consolidations. The liver was enlarged, cirrhotic, and pigmented. The peritoneal sac contained a large amount of serous fluid. Here there was a case of alcoholic cirrhosis with abdominal dropsy, where the cause of death was due to bronchial pneumonia. To be sure the patient had gone through many of the phases of constitutional syphilis, but none of its lesions were detected at the necropsy. In such an instance what produced the pneumonia? An answer will only be conjectural.

Broncho-Pneumonia in Connection with Diphtheria.

Case II.—The following case is interesting as showing how broncho-pneumonia may be the final lesion in diphtheria. In March, of 1887, I made a *post-mortem* examination in the presence of Drs. J. E. Janvrin, E. H. Peaselee, W. H. Porter, and C. E. Billington, on the body of a lady who had been suffering for about a week with diphtheria, taken presumably from the grandchild that she had been nursing. She died suddenly with suffocative symptoms, and the following lesions were found. In the trachea from immediately below the thyroid cartilage to the smallest divisions of the bronchi, a membranous exudation, diphtheritic in character. It was thick and tolerably adherent to the mucous membrane, forming a veritable cast of the tubes. No membrane in the buccal or nasal cavities, or in the larynx. Here there was one of those very rare examples of truly diphtheritic bronchitis. The lungs both right and left were studded with zones of bronchial pneumonia in the stage of red hepatisation. The heart was enlarged, fatty, and dilated. These areas were so small and so scattered, that they could hardly have been detected by physical signs. The pneumonia in this case might not have been a very serious affair, had there not been fatty heart, and profound blood infection from the diphtheria.

THE HISTOLOGY OF BRIGHT'S DISEASE.

Read in the Section of Pathology and Physiology at the Annual Meeting of the British Medical Association, held in Leeds, August, 1889.

By GEORGE F. CROOKE, M.D.,
Physician for Out-Patients to the Queen's Hospital, Birmingham, and lately Pathologist to the General Hospital, Birmingham.

The material examined consists in considerably over a hundred individual cases of nephritis of all forms, and represents the work of ten or twelve years; but the subject of the paper includes only Bright's disease proper; all the suppurative and other forms of kidney mischief, due to local causes, are purposely excluded.

The examples of acute nephritis number sixty, of which only three were instances of an idiopathic affection, the rest being associated with other diseases mostly of a specific febrile nature.

While rejecting the term parenchymatous in Virchow's strict meaning of it, I am disposed to retain it for those cases where the parenchymatous changes undoubtedly predominate. Interstitial changes are undoubtedly also present, but in so slight amount that they might in places easily be overlooked. I have met with a number of such cases where the parenchymatous changes constituted the main anatomical features. I quite subscribe to Cohnheim's classical dictum that glomerular changes alone may be responsible for the cardinal symptoms of Bright's disease, and in a few cases these changes may be so prominent and extensive that the nephritis merits the title of acute glomerular nephritis.

The term acute diffuse nephritis I apply to those cases of nephritis where the parenchyma, the stroma, and the vascular apparatus are almost equally affected, and the extent of the changes indicates the intensity of the inflammation. Cases of acute nephritis of a hæmorrhagic or septic character usually show these changes.

Then there are cases where the stroma is principally affected by a round-celled infiltration, and these I term acute interstitial nephritis. Cases have been described by Dr. Coats (our President), by Biermer, Wagner, Klein, myself, and others in scarlatina.

Coming, now, to chronic nephritis, I take the large white kidney first. As regards its histogenesis, it develops as a chronic nephritis usually in connection with diseases of a subfebrile nature, such as phthisis and chronic suppuration, and it is in these examples that amyloid changes are found associated with the parenchymatous.

Regarding the relation of the two, I coincide with the view recently expressed by Dr. Saundby in his book, that the two processes are concomitant or co-ordinate, and traceable to the same cause. In other words, so far as my observation leads me, the extent of the amyloid changes found in some of these cases is so slight in comparison to the extent and intensity of the parenchymatous, that the two cannot be regarded in the relation of cause and effect. This view has been more recently expressed by Orth in the first part of his second volume on *Pathological Anatomy*. Cases, however, are met with where the organ of the chronic parenchymatous nephritis is distinctly traceable to an acute attack, or to the effects of, perhaps, several intervening attacks. Other noteworthy histological features in cases of subacute or chronic parenchymatous nephritis are the glomerular and interstitial changes present, which have previously attracted the atten-

tion of pathologists. In my series there are quite gradations in the transition from the large to the small, white, contracted, granular kidney. Examples of a chronic interstitial and glomerular nephritis developing from an acute attack are demonstrated in scarlatina. In a proportion of cases, varying in the experience of different pathologists, the kidney changes are secondary to generalised vascular changes, such as the gouty and the arterio-sclerotic kidney of advancing age; the primary changes are of a chronic inflammatory nature, and limited to the blood vessels and stroma around them; the secondary are degenerative, affecting the glomeruli and parenchyma. In such cases the cardio-vascular changes are primary, and the kidney changes secondary, while in other cases of chronic nephritis, such as the chronic parenchymatous interstitial forms, they are secondary to the disease of the kidney itself.

These cases are the only link disconnected, as it were, from the chain of evidence of the unity in the histogenesis of nephritis as a substantive disease of the kidney. Kidneys the seat of slight interstitial changes of vascular origin, as above referred to, are very prone to intercurrent acute exacerbations; and I have seen three cases where the fatal issue occurred during the acute stage. The kidneys were by no means enlarged.

Regarding the vascular and glomerular changes in Bright's disease, in acute nephritis they are active and proliferative in character, and found in the muscular coat and adventitia of the small arteries, and in the glomeruli, mostly in or amongst the vascular tufts themselves, and in acute interstitial nephritis around Bowman's capsule. In subacute and chronic cases they are found mostly within the capsules in the form of an exudation which compresses or strangles the capillary tufts, or in more chronic cases the latter undergo hyaline degeneration, the intracapsular exudation undergoes organisation, and the tufts gradually become incorporated with the fibro-nucleated thickening of the capsule, constituting the so-called hyaline fibroid or myxomatous degeneration of the glomeruli. Such a degeneration is eminently productive, and not necrotic in character, and expresses a descent from a higher to a lower type of structure. Lastly, we must always bear in mind and carefully distinguish between the productive and degenerative changes in considering the pathology of nephritis in general.

ABSTRACT OF

THE BOWMAN LECTURE

ON

THE PATHOGENY OF CONVERGENT AND DIVERGENT STRABISMUS.

Delivered before the Ophthalmological Society of the United Kingdom.

By Professor EDMUND HANSEN GRUT,
Of the University of Copenhagen.

In endeavouring to understand the origin and true nature of squint, it is of importance to have as definite knowledge as possible concerning the "position of rest" of the eyeballs in emmetropia, and the different kinds of ametropia. The position assumed by a normal eye which is occluded by the hand, while the patient fixes a distant object, is the anatomical position of rest, and is, in the lecturer's opinion, one of slight divergence. The occluded eye may not, however, assume its anatomical position of rest, but may, as a result of habit, remain in the functional position of rest, even though its powers are for the time suspended. This functional position of rest is that which the eyeball assumes in consequence of the desire for distinct vision, and is in emmetropic eyes one of parallelism.

Professor Grut gave the following definitions of his views of the nature of strabismus: 1. Convergent squint originates in, and is maintained as the result of, an innervation which induces in the internal recti a contraction exceeding in amount that which is necessary. When this temporary innervation is temporarily or permanently suspended, the squint disappears. 2. Divergent squint is the expression of a relaxation of convergence innervation, which permits of the eye assuming its anatomical position of rest. It can therefore, in the absence of any paresis or abnormal position of the muscle, only arise when the anatomical position of rest is a divergent one. Thus divergent is the direct antithesis of convergent squint in its mode of origin, as well as in its direction.

Habit and exercise play an important part in the production of the normal movements and positions of the eyes; and their influence in the production of the abnormal positions of squinting eyes is also considerable. The absolute concomitancy of lateral and convergence movements of an occluded eye, to which the ordinary stimuli (fusion of images, etc.) are wanting, is a proof of the power of habit.

Permanent convergent strabismus is capable of explanation by assuming a considerable displacement inwards of the functional position of rest in consequence of the habit of continuous excessive convergence, which prevents complete relaxation of the internal recti. In periodic convergent squint the anatomical position of rest is one of unusual divergence; the squint which occurs on accommodative efforts moves the functional position of rest inwards, so that it nearly coincides with the position of parallelism of the optic axes, and hence, except during strong accommodation, no squint is evident. The necessity for frequent or continuous convergence develops a habit of convergence which cannot be given up; internal squint is, therefore, in a sense a habit, but one which has arisen in the interests of vision, and from which the individual is unable to free himself. Of all conditions inducing this excessive convergence, hypermetropia is undoubtedly that most frequently met with,

In divergent strabismus there is no shortening or contraction of the externi, no innervation leading to excessive action on their part. The condition arises from complete relaxation of the interni, owing to which the functional position of rest gives way to the anatomical position of rest. If the latter is one of parallelism, no absolute divergence will occur. Cessation of convergence does not cause absolute divergence any more than the impossibility of simultaneous divergence (the normal condition) gives rise to convergence. This difference in the pathogenesis of divergent and convergent squint is well shown in the effect of tenotomy upon the two conditions. If divergent strabismus, like its antithesis, were due to increased contraction of the muscle, division of the tendon should give as great an effect as is generally obtained from tenotomy of the internal rectus.

The lecturer concluded with a careful criticism of the various theories which have been brought forward to explain the pathogenesis of convergent and divergent strabismus.

COINCIDENT DEFECTS IN CHILDREN IN ASSOCIATION WITH MENTAL DULNESS, NERVE DEFECTS, AND LOW NUTRITION.

Read in the Section of Diseases of Children, at the Annual Meeting of the British Medical Association held in Leeds, August, 1889.

By FRANCIS WARNER, M.D.Lond., F.R.C.P.,
Physician to the London Hospital.

The object of this paper is to direct attention to the frequency of duplicate defects when the development of a child is abnormal, and the frequent coincidence of mental dulness, nerve defects, and low nutrition.

In 1882 I published[1] 23 cases of gross defects in development, imbeciles and idiots being generally passed over in this group. Among 11 cases of congenital defect of the heart, one had cleft palate, one malformation of hands, one a malformed ear, and three had defects of brain from birth. In two other cases of cleft palate, the head was very small. A case of web fingers showed cerebral deficiency; two intra-uterine amputations (?) showed no known defects. A case of jaundice from birth had double hydrocele. The remaining six cases did not present gross coincident defects; thus 10 cases out of the 23 cases presented obvious coincident defects, the brain being defective in six cases (that is six in 23 cases); it appears then that the brain is often coincidently defective.

I would suggest that it is necessary in a case where some defect in development is found, carefully to examine the heart and the

[1] *Medical Times and Gazette*, January, 1882.

TABLE N.—*Showing Binary Combinations of Defects.*

Total of Cases presenting each Sign Respectively.		Cranial Abnormalities.	Palate Defects.	Ear Defects.	Epicanthic fold.	Other Defects.	Condition not in Combination.	
Cranial Abnormalities.	B. G. T.	B. G. T.	B. G. T.	B. G. T.	B. G. T.	B. G. T.	Cranial Abnormalities.	B. G. T.
In 10 public elementary schools ...	82 37 119		18 8 26	11 1 12	2 2 4	2 5 7	In 10 public elementary schools ...	62 25 87
,, 4 special schools	84 28 112	×	*24 5 29*	*12 0 12*	*2 0 2*	*10 1 11*	,, *4 special schools*	*29 17 46*
	166 65 231							91 42 133
Palate Defective.							Palate Defective.	
,, 10 public elementary schools ...	35 18 53	18 8 26		6 0 6	4 5 9	2 0 2	,, 10 public elementary schools ...	11 7 18
,, 4 special schools	42 22 64	*24 5 29*	×	*10 0 10*	*3 0 3*	*8 5 13*	,, *4 special schools*	*11 13 24*
	77 40 117							22 20 42
Ears Defective.							Ears Defective.	
,, 10 public elementary schools ...	36 13 49	11 1 12	6 0 6		4 3 7	4 0 4	,, 10 public elementary schools ...	19 8 27
,, 4 special schools	28 4 32	*12 0 12*	*10 0 10*	×	*2 0 2*	*5 0 5*	,, *4 special schools*	*9 4 13*
	64 17 81							28 12 40
Epicanthic fold.							Epicanthic fold.	
,, 10 public elementary schools ...	24 19 43	2 5 4	4 5 9	4 3 7		5 0 5	,, 10 public elementary schools ...	13 11 24
,, 4 special schools	13 2 15	*2 0 2*	*3 0 3*	*2 0 2*	×	*3 0 3*	,, *4 special schools*	*6 2 8*
	37 21 58							19 13 32
Other Defects than those above.							Other Defects than those above.	
,, 10 public elementary schools ...	37 10 47	2 5 7	2 0 2	4 0 4	5 0 5		,, 10 public elementary schools ...	11 5 16
,, 4 special schools	20 6 26	*10 1 11*	*8 5 13*	*5 0 5*	*3 0 3*	×	,, *4 special schools*	*12 1 13*
	57 16 73							23 6 29

TABLE M.—*Conditions of Defective Development in Relation to Low Nutrition, Mental Dulness, and Nerve Defects.*

—	Low Nutrition.		Mental Dulness.		Nerve Defects.	
	B.	G.	B.	G.	B.	G.
Total of cases presenting some defects of development, including cranial abnormalities, palate, ears, epicanthus, and other defects (not including squint) boys, 274; girls, 125; total, 399	62	40	86	39	101	44
Cranial defects alone, not in combination	22	12	33	11	31	12
Palate defective alone	6	3	5	12	9	3
Ears defective alone...	5	4	8	3	11	4
Epicanthic folds alone	1	5	3	1	1	2
The 73 cases with defects other than those mentioned presented...	10	4	18	4	23	4
Cases of Binary Defects.						
Defects of cranium and palate	12	4	12	4	20	7
,, ,, ,, ears	6	0	11	0	12	0
,, ,, ,, epicanthic folds	—		1	0	3	2
,, ,, ,, other defects than those mentioned	5	3	6	2	6	2
,, palate and ears	2	0	7	0	6	0
,, ,, ,, epicanthic folds	1	0	2	2	4	2
,, ,, ,, other defects	0	1	4	2	5	2
,, ears and epicanthus	1	1	3	2	3	0
,, ,, other defects	2	0	5	0	1	0
	B.	G.				
Cases of Triple defects.	24	7	11	6	14	2	11	6
The palate was examined in 459 cases:								
It was found normal in	265	77	—		—		—	
,, ,, abnormal in	77	40	—		—		—	
Defects of palate:								
Arched, narrow, high, or vaulted ...	68	37	29	13	22	20	29	16
V-shaped, not included above	6	2						
Of the flat type	3	1						
	77	40						
Defects of ears:								
Symmetrical	37	13	12	2	13	2	15	3
Asymmetrical	27	4	5	2	11	2	9	2
	64	17						
Epicanthic folds:								
Symmetrical or double	27	17	5	4	9	6	6	3
Single or most marked on one side ...	10	4	1	1	1	0	1	0
	37	21						

brain, and particularly to watch the conditions of cerebral and mental development as the child grows up, and see that the circumstances, both hygienic and educational, are appropriate; in all such cases the family history needs to be carefully worked out.

These remarks apply not only to such gross cases as those referred to above, but also to lesser degrees of defective development as illustrated by tables given above. In connection with the work of a committee appointed by the Section of Psychology 1888, I had occasion to examine 5,344 children,[2] in London schools; in many cases I had the advantage of co-operation with Dr. Hack, Tuke and Dr. Fletcher Beach. As shown in the report published,[3] notes were taken of 809 cases, and of these visible defects of the body were seen in 399 cases; 274 boys, 125 girls. As some evidence in support of my general proposition, I have analysed this group of cases, and arranged the divisions so as to show their alliances with mental dulness, nerve defects, and low nutrition.

The facts given in these tables seem to strengthen the inference drawn from my earlier collection of cases of gross visible defects of the body, namely, that coincidence of defects in the development of the body is common, and that in such cases the power of brain-function is apt to be low and defective likewise. The suggestion as to practice in these cases is, that when visible defects in development of the body are seen, we should watch the signs of nutrition and growth of brain-power with some anxiety, and attend with great care, not only to the general hygienic conditions, but also to the physical and mental education.

[2] 5,344 children; 2,794 boys, 2,550 girls.
[3] JOURNAL, July 27th, 1889.

THE OPERATIVE TREATMENT OF TUBERCULAR DISEASE OF THE KNEE-JOINT.[1]

BY WILLIAM THOMSON, F.R.C.S.I.,
Surgeon to the Richmond Hospital, Dublin; General Secretary to the Royal Academy of Medicine in Ireland.

THE more general methods of dealing with tuberculosis of the knee-joint, whether of the synovial membrane or of the osseous parts, are not satisfactory. Everyone here knows from experience how he has tried remedy after remedy short of operation, and the weary waiting that he has had for a cure that seldom comes. I do not wish to assert that cases of cure do not occur; but, so far as my own experience goes, tuberculous synovitis is next to an irrecoverable condition, at least among the poor, with whom hospital surgeons have most to do. The surroundings of their homes, the necessities of their mode of life, the impossibility of carrying out the ordinary treatment of rest, good air, nutritious food, etc., supply us with a number of cases which we have come to look upon as hopeless in the sense of saving the joint, or even of saving the limb with a stiff knee. That statement I make not only as the experience of myself, but I believe I may say of my colleagues also.

The knowledge that tuberculosis is a distinctly infective process; that its tendency is not only to invade neighbouring structures, but to produce distant deposits, makes it necessary that our treatment should be of a character to remove the source from which the mischief spreads. In the case of the young we are

[1] Read in the Section of Surgery of the Royal Academy of Medicine in Ireland,

dealing with a class of patients in whom the pathological processes partake of the activity which is going on in all the tissues. There is, therefore, the greater need of decision at a period early enough to give hope of eradicating the disease. Whether the starting point be in the bone or in the synovial membrane, the process of invasion is equally certain. The disease spreads from bone to synovial membrane, or from synovial membrane to bone. Not only so, but the extra-articular structures are also attacked, and not infrequently become involved in the general destruction.

Having, then, for our object the thorough removal of all reachable diseased parts, and the saving of the limb, I do not hesitate to say that excision of the joint is the operation which gives the best prospect of success. The remedy may appear to be a severe one, but, as in all other cases, the operation has in these days become comparatively safe.

It may not be uninteresting to refer to the first knee excision which was performed in this city. A writer in the *Lancet*, vol. vi, 1825, p. 29, describes the operation as done by Crampton:

"We happened to be present some time back at one of those scenes of scientific butchery at the Meath Hospital. The patient was a female; the complaint, if we recollect rightly, open scrofula of the knee-joint. A great concourse assembled to witness the operation; it was quite a gala day with the dissectors—a festival, seemingly, held in honour of the virtues of *steel*. It was the first time, we believe, that the removal of the knee-joint was attempted here. We earnestly hope it will be the last. The operator, of course, accomplished his purpose with his usual dexterity. But could he have beheld, as we did, the contorted countenances of the spectators, the knife would have fallen from his hand, never to be used where it was not more imperiously indicated. To be present was to be indeed a torture. One man vented his feelings in a wink; a second in a hem; a third overcame his sympathies in a forced fit of laughter;.....all, to be sure, admired, but all disapproved.....We saw this poor creature a long time after endeavouring to drag her limb with her by means of sundry wooden contrivances.....Let it be called by whatever name the sanguinary desperadoes of the profession choose, but we shall never be cheated out of our judgment, or fear to expose such practice when it falls under our observation."

Even thirty-one years (1856) afterwards we find Mr. Syme inveighing against the "vehement and persevering efforts which have lately been made to force into fashion two operations which are bloody and formidable," one being excision of the knee, and the other excision of the hip-joint.

All this is but a further illustration of how surgery has progressed since then. Fergusson in London, and Butcher in Dublin, by their successes, placed the operation upon sure ground, and we no longer look upon it either as bloody or terribly fatal. My own experience extends to seventeen cases, in which I have removed the joint for various causes in patients ranging from $4\frac{1}{2}$ to 39 years, and in no case has a life been lost. In two, which were done some years ago, I had subsequently to amputate, but I have not seen this necessity arise in the last thirty cases in our hospital since we adopted the methods of fixation which we now employ.

Mr. Thornley Stoker has already brought before the Academy the plan of fixing the divided bones by silver dowels, and he now uses them in all cases; their advantages are very great, and I attribute much of our later rapid recoveries to them. It is unnecessary to describe them here; but I may be permitted to refer to the simple splint which I have now used for nine years in these cases.

In my earlier cases I employed Dr. Heron Watson's method; and in the JOURNAL of January 28th, 1882, I gave the reasons which induced me to adopt a simple modification of his splint. I found that a slip of strong hoop iron in front, with a loop over the wound, and a similar slip behind, allowed the plaster bandage to fit closely to the limb, and prevented painful movement of the bones. It was my habit to fix the splint with ordinary bandages for the first twenty-four hours, so as to permit the opening up of the wound in case of hæmorrhage, and then at the first dressing to apply the plaster-of-paris. A little experience showed me that the limb rested easily, and was firmly held by the ordinary bandage which, including the hoop-iron splint, could be closely applied to the limb. I then determined to try a case without any plaster whatever, and for some years I have not used plaster-of-paris at all. My colleagues observe the same practice, and it has been uniformly satisfactory.

The splint I now use is made of strong hoop iron about an inch and a half wide. It is easily bent into any shape, and it is usually prepared by my resident pupil. The posterior splint is plain, and extends from the gluteal fold to the foot. At the tendo Achillis it must be bent downwards, so as to avoid pressure, and the continuation is brought up along the sole of the foot. It gives greater support, and enables us to bandage and fit the foot to it. The anterior splint extends from the groin over the thigh, is then shaped into a roomy loop, so as to give space for dressing, and is continued downwards towards the foot, being finally shaped to lie easily upon the instep. These splints are carefully padded beforehand, and the wadding is fixed in position by a spiral bandage. The wound dressing should be applied in front, and then be carried down on either side as far as necessary. The splints are then adapted, and are fixed by an ordinary bandage, and if this is properly employed it will not be necessary to readjust it for some weeks. The last thing done is to pack the popliteal space on either side with iodoform wool, taking care, of course, that the drainage tube delivers all fluids into antiseptic dressing. When the patient has been removed to bed the leg is swung from a strong cradle. Two turns of an ordinary bandage are passed through the loop and fixed to a bar in the cradle above, and another bandage is passed under the splint just under the ankle, and also fixed to a bar in the cradle. This permits the patient to make some movement if necessary, and, as I have already said, he is usually able to sit up in bed on the third or fourth day with a bed-rest, suffering no discomfort.

Several other plans of dealing with tuberculosis of the knee-joint by operation have been advocated. Injections and free destruction of the membrane by the actual cautery have each had their followers. The latest recommendation is that we should practise erasion of the diseased parts and gouging if necessary. The arguments in favour of this treatment are many; some of them are excellent in theory; but the results, thus far, are exceedingly unsatisfactory.

The principal advantages claimed for this operation instead of excision are these: first, that the movements of the joint may be preserved; secondly, that there is no subsequent shortening.

With regard to the first claim, I have to observe that all surgeons would be glad if they could secure movement in the joint. But movement is a very relative term, and we should like to have it defined strictly. There may be motion that is rather a disadvantage than otherwise, or we may have motion that is next door to fixity. Just let us remember what is done in these cases of so-called erasion. The whole of the synovial membrane is to be removed, diseased bone is to be gouged away, loose cartilages are to be clipped off, and, in a word, all diseased tissues are to be eradicated. Of course the operation may not be so extensive as this; but still I ask, If all that I have mentioned is done, may we reasonably expect a movable joint, and if so, what is the use of the beautiful arrangements that exist in our knee when they may be all removed without practically interfering with its function?

But the cases we read of show that the claim is after all based on very insufficient grounds, and that in practice it is not a desirable end to aim at. It has been found that there is a very great tendency to flexion of the limb, even so far off as a year after operation. We know that we have to guard against this even in cases of excision in young children. And therefore we are not surprised to learn, that as the result of experience this claim of movement is being gradually abandoned, and ankylosis is being sought for.

But why should it be attained in this roundabout fashion? Can it be secured as quickly between the articular surfaces of the bones, kept in fixed position, as between two level freshly-divided surfaces? Certainly not. It is, of course, said on the other side that we ought not to remove parts which are not diseased. That has only a certain element of truth about it, which may mislead us. I have seen cases in which, with cartilages looking perfectly healthy, we have found, on section of the bones, isolated necroses or nests of tuberculous matter. Now these are just the cases which the thorough-going eraser would regard as typically good for his method; yet, if the sections had not been made, we should have shut up the disease we wished to get rid of.

The second claim—that shortening does not occur—does not demand much examination. Those who urge it as a late danger in excision seem to forget that it sometimes occurs in cases where no operation of any kind has been attempted; and, therefore, it cannot be necessarily the result of excision. Of course, the

amount to be removed in one bone section simply depends upon the extent of the disease. We try to avoid any encroachment upon the epiphysary line, but we must do it if the disease brings us there. Our object is to save the patient's limb; and if we have to do that at the expense of much shortening, we cannot help it. But my own experience has not been of this kind; and I believe it will be found that this misfortune is ideal in the great majority of cases.

I believe that once we determine upon cutting open a knee-joint in general tuberculosis of the synovial membrane, we had better go the whole way, and perform the ordinary excision. The operation is, I maintain, safer and more satisfactory in its general results than erasion. My own hospital experience, and as far as it extends to the practice of my colleagues, is a mortality of one in over fifty successive cases. That leaves little to be desired; and I am satisfied that the patients who have been submitted to excision of the joint have on the whole been better treated than if they had undergone exploratory incisions and tentative scrapings at the hands of a surgeon.

ON DISEASE PREVENTION.[1]

By STANLEY HAYNES, M.D.,
President of the Worcestershire and Herefordshire Branch.

I HAVE thought a few notes on disease prevention as influenced by medical politics might be acceptable for your kind consideration, and it is with this hope that I venture to solicit your patient attention and forbearance for a few minutes.

County Councils.—My chief reason for bringing this subject forward now is because I believe that if we combine, as by means of this and other Branches of the British Medical Association, to endeavour to influence the County Councils, created by the new Act, in the direction of public health there seems, now and in the near future, to be a very favourable opportunity of exerting our knowledge and strength to some beneficial purpose. For instance, the Branches might request County Councils to recommend the District Councils to amalgamate in the appointment of medical officers of health; and the continuance of the faulty system of each local board and sanitary authority appointing its own separate health officer should be discountenanced, as by a County Council intimating that it would instruct auditors of district accounts to disallow the salaries except for sufficiently combined areas: this would soon cause combination of districts and the appointment of skilled medical officers of health for large districts; they should receive good incomes (beginning at £600 per annum, with allowances for expenses) and be prohibited from private or other practice. It is gratifying to observe that many medical men have been nominated for election on the County Councils, on which they will do much to advance State medicine and the interests of our profession in public work. Let us wish them all success in their candidatures. The medical members of County Councils could bring forward, among many other measures, the desirability of having a Minister of Health in the Cabinet, and the fixity of tenure for medical officers of health.

Disease Notification.—The compulsory notification of diseases has, with few exceptions, been so satisfactory that this seems one of the matters we should endeavour to extend. I am one of those who consider this notification, when made by medical men, should be rewarded by fees paid by local authorities, and that the penal clauses adopted by some towns (and very curiously acquiesced in by their practitioners) are uncalled for, are derogatory to the dignity of our profession, and calculated to arouse opposition against such publication of illnesses. Such notification should be made by the householder.

Inherited Disorders.—Hereditary tendencies to disease and crime and alcoholism should be repressed as far as possible. The strict fulfilment of the Inebriates Act would do something to lessen drunkenness, idiocy, insanity, epilepsy, and other neuroses in the next generation. So far as we can we should discourage the marriage of persons with histories of cancer, consumption, syphilis, and alcoholism. Convicts should be detained in penal servitude during the full terms of their sentences, in order that they might have fewer opportunities of transmitting criminal propensities: the cost of this to the taxpayers would be minimised by the adoption of the beneficent industrial system in successful operation in the Indian and Burmese convict service.

[1] Abstract of a Presidential Address read before the Worcestershire and Herefordshire Branch of the British Medical Association, at Malvern.

Vaccination.—Vaccination and revaccination should be compulsory and enforced. The recent memorandum issued by the Local Government Board on revaccination is an important authoritative indication of the value of this procedure, and it is to be hoped both the public and vaccinators will avail themselves of the facilities rendered by this salutary action of our Government.

Inebriety.—One of the pressing wants of the community in the prevention of disease is compulsory power to place inebriates, of all classes, in homes provided for their reception and superintended by physicians. These homes, for the middle and lower classes at least, should be industrial. The Inebriates Act lately passed is a slight improvement on the Habitual Drunkards Act (chiefly, in name) but, while thankful for small mercies, we should regard it as only an instalment towards wiser legislation, because it does not go far enough. Some of our colonies and the United States Government are far ahead of us in regard to this legislation. Power is wanted here for the isolation of inebriates for twelve months as a minimum: no appearance before a magistrate should be necessary, but notices of admission, in writing, should be posted, within twenty-four hours, to the Clerk of the Peace and to the chairman of a visiting committee of magistrates, three of whom should visit each inebriate so segregated. Grocers' licences to sell intoxicating drinks should be revoked, and it should be penal for any grocer or unlicensed tradesman to give such drinks to any customer or servant of a customer.

Leprosy.—Leprosy has attacked some of the populations of Queensland and Natal. Those and any other countries under British rule should have power to separate those afflicted with the disease, some interesting notes on the spread of which in Spain appeared in the JOURNAL of January 12th, 1889. Norway and Hawaii have set us brilliant examples in this respect with great success. As an example of the ignorance prevailing concerning the contagiousness of leprosy, it may be mentioned that last year an action was brought—happily it failed—against the head master of one of the largest schools in Scotland, because he had refused to receive a boy suffering from that disease.

Venereal Diseases.—Those conversant with the state of our ports and of our troops in India can, unfortunately, give too ample evidences concerning the alarming increase of venereal disorders resultant on the suppression of the Contagious Diseases Act, the medical men testifying to the type as well as the frequency of such maladies, while the police know how prostitution has increased, and how young girls—that is, from 12 to 15—who, while the Act was in operation, were kept off the streets, are now found on them, as before the enactment.

Coroners.—Coroners should be selected from medical men only, and be prohibited from practice, their districts being made sufficiently large to furnish adequate salaries. This is one of the topics on which our profession could appeal to the County Councils.

Cremation.—Cremation (on which Sir Henry Thompson wrote in the *Contemporary Review* in 1874, and the first lecture on which by a medical man was, I believe, delivered by myself—in 1876) is gaining ground rapidly amongst the educated and thinking portion of the community; but we are far behind some of our European neighbours and transatlantic cousins in resorting to this healthful mode of disposing of the dead. This is a reproach under which we should not be satisfied to rest. Some very necessary attention to cremation has lately been given at Glasgow, while an urgent need for the process has been revealed in Edinburgh. At Glasgow it is calculated the actual incineration would be completed in half an hour, at a cost of 2s. only each body; at present the ratepayers are paying 13s. 11d. for each pauper interment. A hundred persons have joined a Cremation Society in Glasgow; it is to be expected this enlightened undertaking will be speedily followed by other centres of population, in consequence of the horrible revelations recently made in connection with burial. Incineration of corpses is as necessary for the lessening of human disease as for the prevention of maladies in our cattle; its extension and general adoption would, besides diminishing the spread of many kinds of illness, prevent the serious risks to health now incurred by mourners, ministers, and others assisting at funerals. Burial in brick or stone graves should be absolutely prohibited by the Home Office, while medical practitioners should do all they can to cause the substitution of quickly perishable coffins in place of the massive ones now too frequently used, when cremation is impracticable.

Isolation of Infectious Diseases.—The JOURNAL of April 30th,

1870, p. 439, prominently called attention, by a leading article, to the importance of establishing "isolation homes" for patients suffering from infectious fevers. As I deem this paper would be incomplete without some slight mention of epidemic diseases, I propose to conclude, with your permission, with the reading a letter of mine published in the JOURNAL of May 28th, 1870, p. 564. [This letter was then read.]

CLINICAL MEMORANDA.

TREATMENT OF SCARLET FEVER BY THE BINIODIDE OF MERCURY.

R. K., aged 9, began on September 30th with sore throat and fever. Summoned on the following day, in the evening, I found him suffering from scarlatina anginosa, and the rash well marked. I gave the following mixture: Sol. hyd. bichlor ℥vj; pot. iod. gr. xv; sp. am. co. ℥j; syrup. ℥ss; aq. ad ℥vi; ℥ss secundis horis. Throat to be sprayed every four hours with 1 in 2,000 biniodide in sodic iodide.

October 2nd. Rash fully out; restless, sleepless, and very feverish.

October 6th. The following note made: The rash became less and less marked each day, until now there is no trace of it. Healthy granulation of the ulcerated tonsils. Pharyngeal glandular swelling externally decreasing. Bowels moved once each day. Temperature normal. The rest of the family occupied the same room.

October 9th. Medicine changed to iron and chlorate of potash with biniodide in one-sixteenth grain powders three times a day.

S. A., aged 3, began with scarlatinal throat but no rash, furred tongue, vomiting, and feverishness, and was treated as for quinsy.

October 10th. S., aged 5, began with high fever (102°) and rash all over the body. Ordered the following: Sol. hyd. bichlor. ℥ss; pot. iod. gr. viii; sp. am. co. ℥ss; syrup. ℥iii; aq. ad ℥iss; ℥j secundis horis.

October 11th. S. passed a bad night. Objects to the spray. Temperature 102.7°. Throat much inflamed and covered with exudation. The application of a 1 in 500 solution of biniodide by laryngeal wire-handled camel's hair brush, to the throat, ordered three times a day, the father undertaking to see to it. S. A.'s case, now one of well-marked fever with rash, and treated similarly.

October 13th. J., aged 10, began with high fever, sore throat and rash. Had same mixture as R. Tonsils and pharynx much inflamed and covered with exuded lymph.

October 14th. All doing well except J., who began with purging in the night. The mixture was at once stopped, and the liquor ferri perchlor. fort. in 2½ minim doses ordered, in glycerine and water, every 1½ or 2 hours, and the biniodide in one-sixteenth grain powders three times a day.

October 15th. J.'s diarrhœa was rapidly cured by the iron. Each case had throat-painting, with the 1 in 500 every four hours. S.'s skin quite free from rash. Temperature 99°. Sleeps and eats well.

October 16th. S.'s temperature 99°. J. improving. S. A. to get up.

On the 11th, M., aged 2 years, had inflamed throat, and took five or six doses of the biniodide mixture; but no rash ever showed itself, so little notice was taken of the child.

October 20th. J.'s temperature normal.

October 24th. R., having passed the twenty-second day without kidney symptoms, may be considered free from the danger of any sequelæ. The slightest scurfy desquamation noticeable, and that chiefly affecting the fingers and toes.

October 28th. S., after severe earache and swelling under the ear, had a discharge of matter from the left ear.

On the 30th I was called in, and prescribed the 1 in 2,000 lotion to be dropped in, and the mixture with ammonio-citrate of iron to be taken three times a day for the pain remaining. M., who had no throat-painting, was now suffering from a large abscess in the neck. Poultices were applied and it was incised on November 6th, a large quantity of pus being evacuated. It healed in ten days with carbolic ointment.

REMARKS.—All four cases had the temperature reduced to the normal in six days, and were convalescent on the seventh. None had dropsy. In one, not at first "throat painted," the disease caused otitis by extension along the Eustachian tube. The only case of cervical abscess was one in which there had been no local application made. In one, J.'s, urgent purging came on within twenty-four hours, and the throat lesion was noticed to be pharyngeal rather than tonsillar. This was immediately checked by iron frequently given. As regards infection, I have since found that by painting the throat with the 1 in 500 solution every four hours, the disease is prevented from spreading. Desquamation in all was merely scurfy and chiefly affected the fingers and toes.

Accrington. C. R. ILLINGWORTH, M.D., M.R.C.S.

SURGICAL MEMORANDA.

SYNOSTOSIS OF THE RIBS IN EMPYEMA.

SYNOSTOSIS of the ribs in empyema is not, I think, so uncommon as Mr. Pye believes, nor is it a mere coincidence. In my experience, I should go so far as to say it is not uncommon to find bridges of bone uniting adjacent ribs in cases where a drainage tube has been long worn. When resection of one or more ribs has been performed without removal of the periosteum and surrounding soft parts, the bone being merely shelled out, I have found subsequently that the gap has been filled up by a definite bony shield, a more extreme but similar condition.

St. John Street, Manchester. G. A. WRIGHT.

THERAPEUTIC MEMORANDA.

EUCALYPTUS IN CANCER.

I LATELY had a case of cancer of the breast in which the ulcerating surface was about 8 inches by 6. The odour from the discharge was most sickening and offensive, and it was made worse by the odour of the carbolic acid which they were using. No one could remain in the room long with the patient on account of the intolerable smell. The carbolic acid was stopped, and the eucalyptus disinfectant used. The wound was sprayed with it, as also the lint with which it was dressed; tenax was wetted with it and placed under the wound to catch the discharge, and, by the use of a spray diffuser, the air of the room was filled with the fragrant odour of the eucalyptus. All offensive smell at once ceased, and there was only the smell of an ordinary suppurating surface.

In a case of cancer of the sigmoid flexure where the discharge was frequent and very offensive, the injection of a small quantity of eucalyptus emulsion twice a day stopped the offensive odour, and checked the frequency of the discharges. And in a case of cancer of the neck of the uterus, the offensive smell was stopped, the discharge lessened in quantity, and the tendency to hæmorrhage diminished. J. BRENDON CURGENVEN.

Bayswater.

REPORTS

ON

MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

STAMFORD INFIRMARY.

SHORT NOTES ON RINGWORM: TRANSMISSION FROM COWS.[1]

(Under the care of Dr. W. NEWMAN.)

F. F., a male, aged 56, was admitted on February 22nd, 1881. He had on the chin a hard swelling extending on each side of the symphysis for fully two inches in length and about an inch and a half in depth. It was raised about a quarter of an inch above the level of the skin, somewhat reddened, boggy to the touch, and discharging pus from several small points. About the middle there was an island of perfectly sound skin. On the right cheek also there was a small hard tumour, over which the skin was red and tender to the touch. There was no enlargement of glands.

He was a farm labourer, in good health; he had had charge of cattle lately; among the herd several had had ringworm severely. He was quite certain that sixteen days ago (day named) he had no swelling on or beneath the chin, for on that day he was able to shave as usual. Ten days ago he was unable to shave from the

[1] Read before the Midland Branch of the British Medical Association.

presence of a painful swelling beneath the chin. After being very sore for a few days, this swelling commenced to discharge a week ago. Carbolic acid (2 parts) and glycerine (1 part) was introduced on a probe through the numerous discharging points, and carbolic acid lotion (1 in 100) was constantly applied. Many loose hairs were removed. These showed under the microscope characteristic mycelium and spores of trichophyton.

On February 26th the local thickening had much diminished, and the discharge had lessened.

On March 15th he was very much better. Carbolic oil (1 in 20) was ordered to be smeared on frequently.

On April 14th there was still some thickening about the skin, and he was ordered ung. hydr. nitratis ℥ii; adipis ℥ss.

On May 20th his son, M. K., who had also been attending these cattle, came with a well-marked patch of tinea circinata on the right cheek. Both father and son before long were quite well.

REMARKS.—These notes are a fair illustration of a set of cases of which two or three come under notice each year. They are marked by an especial severity of local inflammatory processes, and by a rapid development of the special parasitic growths, both in hair and surrounding tissues, far outweighing the more usual ringworm of the skin or scalp, that is, as derived from the human subject. Practical farmers, who look upon ringworm in young cattle as a matter of not the slightest importance, and believe, many of them, that it always disappears in the summer when the cattle go out to grass, tell me that cases in the cowmen and labourers are far more common than is generally supposed. The men are in the habit of treating such spots, and successfully, by the ordinary sheep ointment—coarsely made ung. hydrarg. fort. Once, as direct result of contact with calves showing ringworm, I saw a boy literally covered with almost innumerable patches of tinea circinata and suffering much from local irritation, and I cannot but conclude that many cases, especially in country practice, owe their origin to the occurrence of disease among one or other of the lower animals. In a marked instance, affecting almost simultaneously some five or six children, it was traced to the favourite and much-nursed cat. The classic work on skin diseases by the late Dr. Tilbury Fox (I have before me the third edition, 1873) gives a very complete account of these cases. In the *St. Bartholomew's Hospital Reports* for 1871 is also a careful paper by Dr. Tuckwell on the same subject. Dr. Tuckwell reports the graphic description of a boy under his care: "They gets the stuff from the calves on their jacket-sleeves, and then they gets a nursing of the babies, and the babies gets the ringworm." May I venture to point the moral of these and parallel cases, and urge that no case of ringworm can be diagnosed or treated with absolute accuracy without continual resort to the microscope? More than one instance I have known to be looked upon as epithelioma, while several others have dragged their slow length along for need of active and carefully employed parasiticides.

REPORTS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF LONDON.

TUESDAY, DECEMBER 3RD, 1889.

W. H. DICKINSON, M.D., F.R.C.P., President, in the Chair.

Gummata of Pons Varolii.—Dr. ORMEROD exhibited a pons, cut into transverse slices, which showed numerous patches of disease irregularly scattered through its substance. One of them occupied the position of the right sixth nucleus and its neighbourhood. It became visible in the floor of the fourth ventricle as a distinct tumour in the place of the eminentia teres on that side. The pons was also seen to be generally enlarged. The microscopical examination of the tumours showed them to be probably gummata. The patient, who was under Dr. Gee in St. Bartholomew's Hospital, had left-sided numbness and motor paresis followed by paralysis of the conjugate movements of the eyes to the right. Subsequently there was loss of all lateral movements of the eyes, paralysis of the lower part of the face and of the muscles of articulation, so that the condition simulated glosso-labial pharyngeal palsy; general paralysis of the limbs; deafness. There was no optic neuritis. He died a year after the onset of symptoms. The points of interest in the case were: The absence of optic neuritis, the correspondence of the early ocular symptoms with the lesion of the sixth nucleus, the occurrence of gummata deep in the nerve substance, and the fatal issue in spite of anti-syphilitic treatment. Dr. WEST asked what were the other evidences of syphilis in the patient.—Dr. ORMEROD said that syphilis was denied entirely by the patient, and that no other syphilitic lesions could be found at the *post-mortem* examination.—The specimen was then referred to the Morbid Growths Committee.

So-called Diffuse Lipoma.—Mr. ROGER WILLIAMS showed a living specimen with numerous large fatty growths, and read a paper on the condition, in which he said that the knowledge about this disease was comparatively recent, and referred to the first description of the condition by Sir Benjamin Brodie in 1846, and mentioned the later literature. He then described four fresh cases. The patient exhibited was a man, aged 40, with enormous diffuse fatty swellings of the whole of the neck, and numerous other symmetrical fatty masses on the trunk and extremities. He was in good health, and the condition had existed for twelve years. The three other cases were also adult males. In one the condition was similar to that in the man exhibited, but less marked. This person had been a great beer and spirit drinker. The masses were successfully removed by operation. In the two other cases the condition was but slightly marked, and confined to the trunk. The author said that he had collected records of thirty-one cases, and that he had made a complete summary of them all, from which he drew the following conclusions: that prolonged indulgence in alcohol was the chief factor in causing the disease in those predisposed to it, and that the condition was allied to excessive obesity rather than to any form of neoplasm. He then compared this condition with such diseases as excessive obesity, diffuse lipoma, pseudo-lipome sous-claviculaire (Verneuil), sporadic cretinism, myxœdema, multiple lipomas, single acquired lipoma, and congenital lipoma. He remarked that fat was normally unevenly distributed throughout the body, and referred to the abnormal development of fat in certain regions of the body in the Bosje men and women. Analogous diseases were met with in fibrous tissue (for example, molluscum fibrosum) and osseous tissues (for example, leontiasis ossea).

Adenomata (Erosions) of Os Uteri in Macague Monkeys.—Messrs. BLAND SUTTON and GORDON BRODIE made the following communication:—For some time past they had been accumulating material for an investigation of cancer, especially in connection with the uterus. It appeared that uterine cancer, though so terribly common in the human female, was scarcely known in other mammals, and was hardly known to veterinary surgeons. This induced them to commence the investigation by a study of the cervix uteri in monkeys in order to ascertain if any anatomical conditions existed favouring the development of cancer in the human female. A few years ago one of them exhibited before the Society a series of specimens, which demonstrated that monkeys (macaques and baboons) which were living in confinement in this country were liable to uterine flexions. Subsequently evidence was given before the Gynæcological Society that macaques and baboons menstruated after the same fashion as human females. The inquiry was followed up, and it was found that the menstrual period in these monkeys was very variable. In some it lasted a longer time than in others, whilst now and then a monkey appeared in an almost chronic state of menstruation. In many the menstrual period was followed by profuse leucorrhœa. Normally, the discharge of blood would last from one to two days, but the redness of the less hairy parts persisted as long as a week. The average interval between each menstrual period was difficult to fix with accuracy, as it varied from a month to six weeks, or even longer. It was a safe inference when a monkey menstruated two, three, or even four times a month, each attack lasting three or more days, followed by leucorrhœa, that it was a case of metrorrhagia. During the past summer a macaque was particularly watched. The metrorrhagia and leucorrhœa became so profuse as to render it unfit for exhibition, and, being of small money value, the monkey was killed. The uterus was removed before the parts had lost their tissue life. The uterus was acutely retroflexed, the cervix greatly enlarged, the os patulous, and a florid-looking mass projected from it, identical in appearance with what it was the fashion to call in gynæcology an erosion. After hardening the parts, sections were prepared for the microscope in such a way as to include the parts about the os externum, the cervical canal, and portio vaginalis. Under a low power the mass protruding from the os, as well as a polypoid mass some distance up the canal, resembled a cervical adenoma, and was in structure identical with the glandular tissue held to be characteristic of erosions in women, the acini being apparently lined by columnar epithelium. Many of the most typical acini were filled with a singular ap-

parently homogeneous material. Under higher powers and with careful illumination the supposed columnar cells were seen to be club-shaped, and, in favourable sections, the supposed glandular crypts turned out to be rosettes fringed with clubs characteristic of actinomyces. The clubs varied somewhat in shape; many of them fringed the rosettes with the greatest regularity. In other places they appeared in "banana-like bunches," especially when stained with fuchsin. The clubs which surrounded the rosettes stained with difficulty. In some places a cluster of clubs had been cut transversely; in such a characteristic mosaic was produced. They could not detect the filaments, but this was owing to their want of skill in staining methods; but numbers of granular bodies presented themselves in various parts of the section. Thus far the microscopic characters were consonant with actinomycosis. On critically examining the centre of the rosettes some rounded bodies were seen, mostly in association with clumps of epithelioid-looking cells. These, when examined, turned out to be cysticerci with heads and necks retracted. Whether their presence in the midst of the rosettes was accidental or otherwise would require further elucidation. As far as they had examined the sections these cysticerci appeared to stand in some causative relation to the rosettes. Although they wished at first to limit this preliminary statement to facts connected with monkeys, they could not refrain from observing that they had detected similar appearances in erosions from the human cervix uteri, and in a case of cancer of the cervix. They mentioned that Dr. John Williams, in his *Lectures on Cancer of the Uterus*. Plate XIV, Fig. 1, had depicted as appearing, under a high power, cancer cells; but they thought that these columnar cells were identical with their clubs, and that the peculiar clump of cells in his drawing was identical with that seen in their monkeys in association with the cysticerci. Again, in Mr. Harrison Cripps's beautiful drawings, which illustrated his paper on Adenoid Cancer of the Rectum in vol. xxxii of their *Transactions*, they found accurately-delineated rosettes and clubs of great beauty. Many of these exquisite drawings, representing the microscopic character of rectal cancer, represented equally the lesions found in monkeys and the erosions of women. They thought it right to mention these things to show how wide a field was opened up in regard to cancer of the uterus and alimentary canal, and hoped thus to incite the Society to help in the investigation by appointing a committee to carry it out.—Mr. D'ARCY POWER asked what powers of the microscope were used to examine the growths.—Mr. BRODIE answered that ¼ inch and ⅛ inch objectives had been used. He then said that several epithelioid cells appeared to intrude themselves between the growth and the uterine tissues, but that the appearances were on the surface of the specimen, and might be parasitic, and that no reference could be made as to their nature at present.—Mr. ROGER WILLIAMS asked whether there was any evidence of cancer in the specimens, to which Mr. SUTTON replied in the negative.—Dr. DICKINSON suggested that the proposal to form a special subcommittee of the Society be referred to the Council for decision.

Ruptured Mitral Valve.—Dr. HALE WHITE showed a specimen in which the chordæ tendineæ from the aortic cusp of the mitral valve had ruptured. The patient was a male, aged 19, who had had rheumatic fever some years previously. One day, when following his ordinary occupation, he was so suddenly taken with shortness of breath that he had to go home to bed. The dyspnœa increased until his admission to the hospital. He was then found to have an aortic to-and-fro murmur and a loud mitral systolic murmur; at the apex there was well-marked systolic thrill; the heart was considerably dilated. Digitalis always reduced the frequency of the pulse by a few beats for a quarter of an hour after administration, but it soon became as rapid as before the drug was given. The points of interest about the case were that the chordæ tendinæ ruptured suddenly in a man who was able to do his work, that there was a systolic thrill, and that digitalis was almost powerless.—The PRESIDENT asked whether the chordæ tendineæ of both cusps were ruptured, and recalled a case in which a man, apparently in perfect health, under the strain of lifting a heavy weight, became suddenly collapsed, and when brought into hospital was found to have a very loud systolic murmur. Rupture of the chordæ was diagnosed, and, the man dying shortly afterwards, the diagnosis was confirmed, as the chordæ of both cusps were found broken.—Dr. WEST asked how long the patient had been in the hospital, as he noticed an erosion just above the valve, which had probably been caused by the ruptured cords.—Dr. HALE WHITE said that the patient had been in the hospital six weeks, and did not come in till three weeks after the accident.

Cases of Saccular Aneurysmal Dilatation of Veins.—Mr. GOLDING-BIRD showed a specimen of aneurysmal saccular swelling from the external jugular vein of a man aged 27. He had had it all his life, and had till lately been able to distend it on making an expiratory effort; he could also empty it temporarily on compression. When removed by operation, it was found to be a saccular dilatation of one spot of the outer wall of the vein, about three inches below the jaw, and it contained recent non-laminated blood-clot. It was fully the size of a hen's egg. Two other apparently similar cases were referred to. In one a venous saccular swelling was removed from the palm of the hand; in the other a tumour of the neck existed as in the first case, and with almost an identical history, but the patient, an old woman, declined operation. The tumour submitted to the meeting was contrasted with those pseudo-sacculations common in varicose veins, and which more or less involved both walls of the affected vessel; and some remarks were offered upon swellings of the neck capable of dilatation by the patient's own effort.—Mr. BENNETT said that Mr. Golding-Bird's first specimen was interesting on account of the size of the tumour, but that they were not very uncommon. He then related the case of a girl where the sac was attached to the internal jugular vein. He had watched the child for nine years, and although the sac increased with the growth of the child, yet it had caused no inconvenience. He also referred to a similar case in a man. In both cases the patient was able to fill the sac by expiring deeply and then holding the breath. These cases generally occurred about the neck, were commonly congenital, and in most cases other evidences of venous eccentricities could be found. He then showed a photograph of a sacculated tumour attached to the long saphenous vein. Some of these dilatations were of traumatic origin, and he had seen three such cases in the palm of the hand which were spoken of as blood cysts, and one of these had been thought to be malignant, but had not returned after removal many years ago. These dilatations as a rule caused no inconvenience, but a clot might form in them and they occasionally suppurated. He thought it advisable to omit the term aneurysmal, because these swellings were generally congenital malformations, whereas "aneurysm" was applied to gradually produced pathological processes.—Mr. GOLDING-BIRD replied that he had only used the term aneurysmal as a descriptive term, without in any way implying any causative meaning to the term.

Unusual Bladder Growths.—Mr. HURRY FENWICK brought forward three specimens of cancer of the bladder, which illustrated three very unusual phases of that disease. The first one demonstrated the extreme rapidity of growth which vesical carcinoma may sometimes assume. The growth, which occupied the entire middle zone of the bladder, had been proved by means of the electric cystoscope to have grown in little more than four weeks. The patient had been previously operated upon by the suprapubic method, and a single, lightly-pedunculated carcinomatous growth completely removed. The second specimen, which was obtained by Dr. Hughes Davies from a diabetic patient who had been cystoscoped, was an example of circum-ureteral cancer. It was contended that the growth had been seen first on the mucous membrane of the trigone of the bladder, that it had penetrated the external wall, crept along the right ureter, and had increased until its volume equalled the size of a fist. This circum-ureteral cancer was very rare. There was a similar specimen in Westminster Hospital Museum. The third specimen was a good example of the multiplication of cancer in the bladder by inoculation (contact carcinoma). Two isolated masses of growth had been found, one springing from the anterior wall and embracing a smaller knot, arising from the posterior. Mr. Fenwick said that he had introduced the subject of contact carcinoma at the Society the session before last, and now submitted this specimen as an additional example of this condition.

Card Specimens.—Dr. ORMEROD: Tubercular Disease of the Pancreas.—Dr. HAWKINS: 1. Malignant Endocarditis. 2. Aortic Stenosis of twenty-four years' duration.—Dr. HADDEN: Spontaneous Fracture of Gall-Stones.

MEDICAL SOCIETY OF LONDON.

MONDAY, DECEMBER 2ND, 1889.

C. THEODORE WILLIAMS, M.D., F.R.C.P., President, in the Chair.

Four Years' Experience in Cases of Stricture of the Urethra treated by Electrolysis, with a Record of Fifty Cases.—Mr. BRUCE CLARKE read a paper on this subject. After stating

that it was more than four years since he had first had his attention directed to this method of treatment, Mr. Bruce Clarke began by calling attention to the exact method to be employed, and pointed out how extremely necessary it was that the surgeon should be master of his apparatus. Electricity was a dangerous remedy in unskilful hands. He went on to show that the process was not in reality a destructive one. It consisted in modifying and softening the cicatrices by which the strictures were produced, a fact which could be witnessed by anyone who would take the trouble thus to treat a stricture of the urethral orifice. The necessity for the use of a galvanometer and the variety of conditions to which electrolysis were applicable were next referred to as an additional examples of the varied capacity, for good or for evil, of the electric current. The instruments and the methods of using them were fully explained, the instruments themselves being handed round for inspection. Mr. Bruce Clarke then pointed to the table of fifty cases, and proceeded to discuss certain other points in connection with electrolysis. Some of the cases could not, he thought, be explained merely on the theory of absorption. He mentioned one case, in which an ulcer was present, where electrolysis produced a rapid cure. He cited instances to show that just as it had been shown that a rectal stricture might begin by spasm of the muscular fibres, so urethral stricture could, and often did, begin in a similar fashion, an irritable ulcer being the starting point. The caustic alkali, liberated by the negative pole of the battery, cured the ulcer, and thus relieved the muscular spasm, whilst if it failed to cure the ulcer it might, in rare cases, aggravate it, and so intensify the stricture. Some instances of this kind were related. Of the fifty cases, twenty-three were known to be well after periods varying from one and a half to three years, and in two cases no relapse had taken place after four years, whilst only nine were known to have required subsequent treatment.—Mr. REGINALD HARRISON said that his experience of treating stricture by means of electrolysis was not great, but what he did know of it was not in favour of the method. He said that the author had treated the question in a straightforward and impartial way without bias, and his contribution therefore could not fail to be of value. He had seen a number of cases which had been submitted to electrolysis in this country and in America, but none of them had increased his regard for this plan of dealing with stricture of the urethra. The amount of thickening that had taken place in these cases was very considerable, though whether this was incidental to the stricture or to the treatment employed he was not prepared to say. He had never met with a patient who expressed unbounded confidence in the treatment, and the results, so far as he had been enabled to observe them, were not of a nature to encourage him to extend its use. He much preferred gradual dilatation, and he had had no reason to complain of want of success by this method.—Mr. HURRY FENWICK alluded to his own experience of stricture of the urethra, and said that in twenty cases in which he had tried the electrolytic treatment, they were all considerably worse after than before the treatment. Thinking his plan might be faulty, he had applied to Dr. Steavenson for advice and counsel, but without any improvement in the results obtained. He pointed out that the treatment was by no means devoid of danger, and he quoted instances in which the electrode had been pushed into the rectum, etc. He also mentioned one case in which the fatal result was attributed to this method. He said that only certain forms of stricture were amenable to electrolysis, namely, those in the deeper parts of the urethra associated with spasm. He concluded with the remark of an American practitioner "that the brilliant results said to have been obtained by electrolysis of stricture depended upon the credulity of the patient and the ingenuousness of the practitioner, or possibly upon some fortuitous act of providence upon which it would not be safe to count."—Mr. LOCKWOOD asked the author whether he adopted the precaution of relieving the more anterior strictures before dealing with those further in. He suggested that much still remained to be worked out in the morbid anatomy of these deep-seated strictures, specimens of which were wanting in our museums, which only contained typical and therefore very severe cases.—Dr. ROUTH asked what pole had been used to the stricture. He stated as a matter within his own experience that the negative pole had for effect to dilate the uterus, while the positive pole tended rather to contract it. He suggested that a want of precise knowledge in this respect might possibly explain the difference in the results obtained.—Mr. BRUCE CLARKE, in reply, said it was evident from the remarks that had been made that the method of treatment had not been favourably received in England. He insisted upon the great attention to technical details which was necessary to ensure satisfactory results, and he was disposed to attribute most of the unsuccesses to want of knowledge or want of the requisite attention. He had himself met with cases in which the results mentioned by Mr. Harrison after electrolysis were present, but were evidently due to clumsy treatment. Even skilled men were apt by oversight to use the wrong pole or too strong a current, and these accidents were much more likely to happen in untrained hands. The dangers alluded to by Mr. Fenwick were the same as in using a silver catheter, and reflected rather upon the operator than upon the method. Moreover, the method was only applicable to certain cases. He would have been glad to know how far these strictures began as spasmodic strictures. He said that he always used the negative pole with a strength of from 5 to 10 milliampères.

Some Points in the Diagnosis of certain Ovarian Tumours from Fibroid Tumours of the Uterus.—Dr. LEWERS narrated a case illustrating the points to be attended to in distinguishing between ovarian tumours and fibroid tumours of the uterus. He summed up these points as follows: first, the history; when the history was of short duration the presumption was in favour of the tumour being ovarian. The patient whose case he had read was not markedly anæmic, and since fibroid tumours of the uterus usually determined exhausting hæmorrhages, this fact pointed also to the tumour being ovarian rather than uterine. The cervix projected normally into the vagina. and was not deflected from the proper situation. Moreover, when tilted, the movement was that of a normal uterus. Then the depth of the uterus was only three inches, all of which signs were indicative of the non-implication of the uterus. Lastly, the tumour had soft points which, if due to softening of a fibroid, would have determined severe symptoms *sui generis*. He pointed out that the chance of a given ovarian tumour being malignant was directly in proportion to the amount of solid matter entering into its structure; hence the importance of an early diagnosis of their true nature.—Dr. ROUTH asked whether any murmur was present over the tumour, a fact which would be in favour of a diagnosis of fibroid.—Dr. BEDFORD FENWICK denied that fibroid tumours were necessarily of long growth, and he added that he had met with plenty of instances in which fibroid tumours nearly filling the uterus had failed to cause any discomfort. He urged, too, that in a great many instances fibroid tumours were present without giving rise to hæmorrhage.—Dr. LEWERS, in reply, admitted that in some cases the history was apparently of short duration, and that hæmorrhage was occasionally absent. Nevertheless, he maintained that the rule was all the other way. No one sign was of great value taken alone, but collectively their significance was very great.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF SURGERY.

OPENING MEETING.

FRIDAY, NOVEMBER 8TH, 1889.

The President, AUSTIN MELDON, President of the Royal College of Surgeons, Ireland, in the Chair.

President's Address.—The PRESIDENT delivered an address on general subjects of surgical practice, giving scope for progress.

Operative Treatment of Tubercular Disease of the Knee-joint.—Mr. THOMSON read a paper which is published at page 1273.—Mr. TOBIN said it was important to determine whether an operation should be performed at once in every case diagnosed as tubercular synovitis, or whether it would be desirable to wait till the bones were attacked, or still longer, till suppuration had set in. For his own part, he would wait longer than Mr. Thomson seemed to approve, having regard to the fact that by the use of Thomas's splint, complete rest, and change of air, he had seen great cures effected. Moreover, he did not see that a resected knee had much advantage over an amputated leg supported by the modern improved artificial appliances. In illustration, he had asked a man at Netley, who had lost a leg, what they gave him for it, and the brave fellow cheerfully replied: "Eighteenpence a day, and I would gladly give the other at the same price!" Indeed, could the test be applied of a cricket match between eleven who had undergone amputation and eleven upon whom excision had been performed, taking eleven ordinary as distinguished from selected cases of excision, he would bet his last penny on the eleven with the amputated legs. However, as regards the method of excision,

he could not speak too highly of Mr. Thomson's operations, but he differed from him on the advisability of early operation. He had tried Mr. Stoker's pegs, but in the cases in which he used them they gave little or no fixation. He sometimes found that while a straight limb was obtained for three or four years it afterwards got crooked.—Sir WILLIAM STOKES endorsed Mr. Thomson's views as to the superiority of excision of the knee over the operation of erasion or arthrectomy. As to the time of operation, it was impossible to lay down a rule, but speaking from his own tolerably large experience of the operation, he held that as soon as the surgeon satisfied himself he had to deal with tuberculous disease of the joint, the earlier the operation was performed the better.—Mr. J. K. BARTON, referring to the question raised by Mr. Tobin of the general advisability of the operation, mentioned the case of a housemaid upon whom excision had been performed, and who discharged her duties a whole year without her mistress being aware that there had been anything the matter with her, while he submitted that had she suffered amputation the mistress could not possibly have remained ignorant of the fact.—Mr. LENTAIGNE concurred with Sir William Stokes, that excision was the best treatment for tubercular disease of the knee-joint, and ought to be performed as soon as the disease was recognised; and if the limb became crooked afterwards it was the fault either of the surgeon or the patient and very often of both. In some cases erasion would be of no value, but the procedure was as yet on its trial—Mr. BENNETT questioned the dictum that excision was the proper treatment once the diagnosis was tubercular disease, and contended that Mr. Thomson had not committed himself to such a proposition once, he admitted that he dealt with excision in reference to hospital patients, and not the treatment of patients of the upper classes. Indeed Mr. Holmes's challenge had never been accepted as to any case of excision having been done in private practice.—Mr. THOMSON: I had one.—After some remarks by Mr. SWAN, Mr. FRANKS took up Mr. Holmes's challenge, and said he had himself operated by excision for tubercular disease of the joint in the case of a female patient with success, as Mr. Swan and Mr. Barton could testify. Patients could not be kept in hospitals for years awaiting the result of spontaneous cure, when probably as good a result could be had in a few months. Comparing tubercular disease of the knee-joint with tubercular disease of the lung, it was notorious that, as regards spontaneous cure, many got well from a trip to France, or the Mauritius, or elsewhere, while cases of phthisis among the poor also got well in Dublin hospitals, but the chances of the poor under such conditions were small as compared with those of the rich, who could afford good diet and foreign travel.—Mr. THORNLEY STOKER held that whereas excision was an operation of established repute, that of erasion was still on its trial. For the past two years he had been watching to get a suitable case of erasion, but in every instance where he commenced the operation he had been obliged to complete it by carrying out excision. As regards the time to operate, he had frequently had cause to regret delay, but he had never had cause to regret the premature performance of the operation, nor had he seen such a case in the practice of his colleagues. —Mr. CORLEY submitted that when the surgeon recognised pulpy thickening of the knee-joint, as it was called in the nomenclature of Sir Benjamin Brodie's day, palliative or medical treatment was worthless, and the sooner the patient got the chance of a good limb by operative procedure the better. It was impossible to tell whether a bone was diseased or not until the surgeon cut it. He did not think amputation and excision could be compared, not to speak of the enormous mortality attending amputation of the thigh. Neither could erasion and excision be compared, as being intended for different conditions. He had seen cases in private treated in the expectant way turn out well, especially one case, but the treatment occupied seven years—Mr. WHEELER held that where excision was necessary it could be done early. The bones should be always cut. In his experience it was only in children that the excised joints bent. He had himself performed the operation of excision of the knee-joint in two private cases, and now one of the patients was able to walk nine miles at a stretch.—Mr. THOMSON replied.

SUNDERLAND AND NORTH DURHAM MEDICAL SOCIETY.

THURSDAY, NOVEMBER 21ST, 1889.

T. F. HOPGOOD, M.R.C.S., President, in the Chair.

New Members.—Drs. R. Collie, T. B. Martin, I. G. Modlin (Sunderland), and C. N. Lovely (Whitburn) were elected members of the Society.

President's Address.—The PRESIDENT delivered an address on the usefulness of medical societies generally, and alluded to several subjects which might be discussed with advantage by the members of their own Society.—A vote of thanks was afterwards passed to the President for his able address.

Case.—Mr. BLUMER showed a patient suffering from Spring Conjunctivis in which the paving-stone-like granulations on the eyelids characteristic of the disease were well seen. The complaint was frequently mistaken for trachoma.

Specimens, etc.—Dr. DRINKWATER exhibited a Cast which he had removed from the Auditory Canal of a patient. It consisted almost entirely of epidermic scales, and measured an inch and a quarter in length.—Dr. BUCK, of New York, was inclined to regard the disease as a distinct one, though acknowledging that it might have some connection with eczema.—Dr. DRINKWATER also showed drawings of a Tumour of Vocal Cord, and a new Galvano-Cautery.—Dr. MORGAN showed (1) a Parovarian Cyst; (2) a Multilocular Ovarian Cyst; (3) the Liver and Uterus and Appendages from a case of Fæcal Fistula following Salpingotomy.—The PRESIDENT showed an Ovum in a case of Abortion with Diseased Placenta.

Papers.—Dr. BRADY read an interesting paper on Some Varieties of Epilepsy, and a discussion followed.—Dr. SQUANCE read a paper on the Periods of Incubation of Infectious Disease.—Remarks were made by the PRESIDENT, Mr. MORGAN, and Dr. DRINKWATER.

ANATOMICAL SOCIETY OF GREAT BRITAIN AND IRELAND.

THE annual general meeting of this Society was held on Wednesday, November 27th, at 4.30 P.M., at the London Hospital, and was well attended.

Committee of Management.—At the Council meeting the following were elected to form the committee of management: Professor G. B. Howes, John Langton, William Anderson, Arthur Thomson, Bland Sutton, and C. B. Lockwood.

Specimens, etc.—Dr. SHORE and Dr. LEWIS JONES showed a series of Histological specimens in which the tubular structure of the vertebrate liver was traced up from the invertebrate tubular liver. These gentlemen maintained that the human liver was a tubular gland.—Dr. H. ST. JOHN BROOKS showed models illustrating the Topography of the Abdomen, and Mr. J. J. CLARKE a specimen in which the Pulmonary Artery had four valves.—Professor BERTRAM WINDLE showed a large series which he maintained proved that the three separated portions of the acromion, coracoid, and internal condyle were ununited epiphyses and not fractures. The main evidence for this belief was that the separated parts were always symmetrical and there was no callus, but an intervening layer of cartilage.—Mr. POLAND spoke against this view, and maintained that the condition was due to fracture.—Professor A. M. PATERSON next showed a Cervical Spine which had been fractured through the neural arch of the axis by judicial suspension.—Two papers upon the Brain were read, one by Dr. BEER, of Vienna, and the other by Professor CUNNINGHAM. The last-named author dealt with the intraparietal fissure and fissure of Rolando. The first-named was described as being usually a T-shaped furrow, the top of the T being parallel to the fissure of Rolando, and sometimes opening into it. By rearrangement of the three limbs of the T any of the varieties of the intraparietal fissure could be formed.—This paper gave rise to some discussion, and Mr. LOCKWOOD showed a cast of a Brain in which the fissure of Rolando was single above and opened into the longitudinal fissure; further down it bifurcated and enclosed a convolution, and afterwards the two limbs opened separately into the fissure of Sylvius. This gentleman remarked that Professor Cunningham's paper only partially explained this strange anomaly, and said that it was becoming clearer that not only did the cerebral convolutions differ amongst themselves more than any structures in the body, but they also differed with regard to their relation to the skull.—Professor THANE also made some remarks, and Mr. MAKINS raised the question of the great anastomotic vein; but there was an evident disposition to treat the existence of that vessel with scepticism.

DEATH FROM ETHER.—A death during ether inhalation is recorded by the *Boston Medical and Surgical Journal*. The patient was a male, and the anæsthetic was given preliminary to an operation on the throat; the man was also suffering from cystic degeneration of the kidneys.

REVIEWS AND NOTICES.

L'Œuvre de C. J. Davaine, Membre de l'Académie de Médecine et de la Société de Biologie. Paris: J. B. Baillière et Fils. 1889.

From a study of recent English literature on bacteriology and allied subjects it might appear that, with the exception of work done by Pasteur and his school, comparatively little has been achieved by modern French workers. The Germans, in fact, appear to have monopolised the attention of British readers, especially those of the younger generation. Under these circumstances, *The Work of C. J. Davaine*, comes at an extremely opportune moment, reminding us, as it does, that even in modern times there were brave men before Agamemnon. The record of the life work of Davaine now before us is full of interest to general readers and thinkers, but for biologists of all classes it will have have an especial attraction, as, in the working out of the problems with which he set himself to deal were involved the very fundamentals of much of the work that has been done in physiology and pathology during the last decade and a half.

The life of Davaine is one continuous record of work done, of difficulties overcome, and of apparent failures in experimentation being converted into successes. His name will, in the history of medicine, be associated principally with charbon and septicæmia, but in many branches of science and in several fields of thought he has left the impress of the activity of his vigorous and subtle mind, and the mark of the ingenuity of his inventive faculties.

From the year 1850, when Davaine discovered the bacterium associated with charbon, until 1863, when he, as the result of an elaborate series of experiments, definitely associated it with that disease, we have a record of continuous work and thought, and although this first discovery is now but some thirty-nine years old, one cannot but marvel at the enormous fields for observation and research that have been opened up, and at the important results that have been obtained as a direct outcome of that discovery.

In this work, as would be expected from what has already appeared in separate form, the first 300 pages are devoted to a consideration of charbon and septicæmia. The papers reprinted are arranged chronologically, commencing in 1865 and ending in 1881, or the year before Davaine's death. These are followed by his observations on the parasite of "smut" or "blight" in wheat, a subject in which he took the very greatest interest. This began in 1856, and there can be little doubt that it is to the elaborate researches in plant pathology in which Davaine engaged that he owed much of the success of his investigations in animal pathology and parasitism. He himself declares that the work so done was of immense value to him. Not only had he docile subjects with which to work, but, when working with vegetable parasites, the possibility of inoculation of fruits, etc., with special fungi, soon became evident to him; the great value of this method being (as Sir James Paget also observed) that he was able to carry on his investigations without having to deal with such complications as blood and lymph circulation, nervous systems and the like. Here we have really the first examples of pure cultivations on solid media, without which modern bacteriology could have made comparatively little progress.

The papers on parasitism and microbism are full of interest and suggestiveness. They deal with the whole question of parasitism, both animal and vegetable, and all are marked by the same keen observation, logical deduction, and powers of demonstration, arrangement, and classification.

The third and fourth series of papers comprising the remainder of the book, pp. 579 to 858, are devoted to memoirs on anatomy and physiology, and on anomalies and monstrosities.

These researches were all carried out at a comparatively early part of his career, but they bear the same stamp of individuality and originality that characterises his later work. The observations on the alterations in the shape of the white blood corpuscles were certainly the first that had been made in France, as they are dated 1850. The results of his elaborate researches on the reproduction of oysters, first published in 1852, form one of the most readable chapters in the book, and the observations here recorded form a basis on which most of the American and British researches on the same subject have since been founded. Then, again, his memoir on the Anomalies of the Ovum, and on Monsters and Monstrosity, the first communicated to the Société de Biologie in 1860, and the second contributed as an article to the *Dictionnaire Encyclopédique des Sciences Médicales*, are both written with care, after much thorough sifting of facts and observations, and most careful consideration of the work of others in the same regions.

After perusal of this work, the reader will do well again to turn to the appreciative notice of Davaine's life and work contributed by Professor A. Laboulbène, a few notes from which we may give for the sake of our readers, as these will enable them to realise much more readily than through any description of the book that we can give the importance of the record of the work contributed by Davaine.

Casimir Joseph Davaine was born at St. Amand-les-Eaux (Nord) on March 19th, 1812. In 1830 he commenced to study medicine in Paris, and in 1835 he entered Rayer's wards in La Charité. This association with Rayer appears to have had more influence on his life and scientific studies than anything else, except, perhaps, his collaboration during the earlier part of his career with Claude Bernard.

In 1837 he was awarded the degree of M.D. for his thesis on *Hæmatocele of the Tunica Vaginalis Testis*, a work which may still be consulted with advantage by both surgeons and pathologists. He continued to work away quietly until 1849, when he was appointed Keeper of the Archives of the then recently founded Société de Biologie, and in the list of his papers that appeared in the first volume of the publications of that society we have ample evidence of his indomitable perseverance and great powers of accurate observation. They were no fewer than twelve in number, and it is curious to observe how these early papers give the keynote to his later work on monstrosities, embryology, and pathology In 1852 he received recognition from the Académie des Sciences for his "Recherches sur la Paralysie des Deux Nerfs de la Septième Paire;" in 1854 he was awarded the prize in experimental physiology for his "Recherches sur la Génération des Huîtres;" and in 1855 the Cross of the Legion of Honour was conferred upon him. Paper after paper followed in quick succession, and in 1860 his "Traité des Entozoaires et des Maladies Vermineuses de l'Homme et des Animaux Domestiques" gave evidence of the activity of his work on this important subject.

Davaine's name will always be most intimately associated with his later studies on vegetable parasitism; but these earlier studies were useful in the way of preparing his mind for the still greater work that he was to achieve. We might go further and say that only a mind trained as his had been could have interpreted correctly his observations on charbon. His experiments on larval forms and the effects upon them of cold and heat paved the way for his experiments on micro-organisms, spore formation, and the resistance offered by spores to the action of germicides.

His next important work on such parasites was published in 1864, when, recording his experiments with rhabdites aceti, he cut away much of the ground on which the theory of spontaneous generation had been founded. It was in the years previous to this, however, that his world-renowned paper, entitled "Recherches sur les Infusoires du Sang dans la Maladie Connue sous le Nom de Sang de Rate," appeared in the *Comptes Rendus de l'Académie des Sciences* and in the *Mémoires de la Société de Biologie.* This was really an epoch-making paper, and, along with that in which he gave the results of the examination of cases of malignant pustule in the following year, may be looked upon as the first real attempt to demonstrate the connection between the bacillus anthracis and the diseases of which he was writing. He was, indeed, so far successful that, except for the later cultivation of the organisms outside the body and the production of the disease by means of the inoculation of pure cultivations, Davaine left no proof wanting.

At this period he was led to perform a number of experiments to prove that Laplat and Jaillard's contradictions of his results were due entirely to misconception, and that they were dealing with a condition which could not be produced by the inoculation of true charbon virus, and the numerous papers published about this time show how sound his earlier conclusions must have been. He described the "bactéridies" of charbon as totally devoid of movement in the blood, and carefully distinguished them from putrefactive bacteria. He showed how the putrefactive bacteria could by their presence and activity diminish the virulence of the charbon bacteria, and could in turn produce a septic condition of quite a different character. He demonstrated that the "vibriones" are vegetable and not animal, and recognised the fact that the environment, mode of nutrition, and products of excretion of the organism had a most marked influence in

modifying its activity and virulence. He did not, however, believe in inoculation of the fœtus *in utero*, but he came to the conclusion that certain animals were much more susceptible to the disease than others. He was of the opinion that malignant pustule, malignant œdema, and charbon were all due to the presence of the same organisms in animals or man, and that one could pass on the analogous disease to the other. In fact, he initiated the whole theory of contagion from animals to man and *vice versâ*, and opened up the immense and fertile field of comparative pathology.

In 1868 this work was followed up by papers on malignant pustule, and in 1869 his "Expériences ayant pour But de Prouver que les Bactéries constituent seules le Virus Charbonneux."[1] He nearly completed his proof by the ingenious method of mixing a drop of virulent blood with a large quantity of water; the bacteria fell to the bottom; a portion of this sediment inoculated produced the disease in susceptible animals, whilst the supernatant fluid had no deleterious effect. Pasteur, as we know, afterwards attained the same results by a process of filtration. Up to this time, so active had Davaine been, that it is recorded that he had already examined the blood of 600 animals supposed to be affected with the disease *sang de rate*.

Until the Franco-Prussian war broke out he continued to work at charbon, first in relation to the effect of larger and smaller doses of the bacilli on the time between the inoculation and the death of the animal; and, secondly, on the transmission of the virus and the disease by flies. He also worked at small-pox and vaccine virus about this period.

Even during the time that he was acting as an ambulance surgeon during the war, his active brain and pen were engaged, not in physical scientific research, but in the drawing up and casting of a philosophical work, *Les Eléments du Bonheur*, from which may be gathered much of the philosophy that guided him in all his dealings with science and the world. After peace was declared, however, he recommenced his favourite work, and undertook a series of researches on the effect of germicides on charbon virus, with what results is seen in his work, and in much of the literature that has more recently been published.

In regard to septic poisoning it has already been observed that in 1869 his experiments on fresh and putrefying blood laid the foundation for his subsequent theories on the subject. He pointed out that Laplat and Jaillard had induced septic poisoning, in the general sense in which he used the term, and not anthrax; and he thus laid the foundation for Lister's, Burdon Sanderson's, Koch's, and the Pathological Society Committee's more accurate observations and reports. He demonstrated the fact that putrid virus becomes more virulent after injection into a living animal, or by incubating at the body temperature in blood, and he distinguished between mere putrefactive poisoning and true septic poisoning. He experimented on the effect of temperature on septicæmia, and laid a solid basis of fact and observation on which future epidemiologists might build.

All this and more is found in the book before us, and anyone who is fortunate enough to obtain a copy will be amply repaid by his perusal of one of the most complete and interesting life records that has appeared for some time. It is work, work, work all the way through, but the record of the work serves also to describe the man. The Société de Biologie may well be proud of such a member and France of such a son.

A Handbook of Surgical Pathology, for the Use of Students in the Museum of St. Bartholomew's Hospital. Second Edition By W. J. Walsham, M.B., F.R.C.S., assisted by D'Arcy Power, M.A., M.B. Oxon., F.R.C.S. London: Baillière, Tindall and Cox. 1890.

In this revised edition we have the very satisfactory result of an endeavour to utilise to the utmost possible degree for purposes of surgical teaching the contents of one of the richest and best arranged of our hospital museums. The difficulty always liable to prevent the lasting success of such an undertaking, which at first was intended simply as a guide to the pathological collection of St. Bartholomew's Hospital, has in this instance been energetically and successfully overcome. The original edition of 1878 having been rendered somewhat obsolete through recent advances in pathological science, through the frequent addition of new specimens to the museum, and through the necessary renumbering and recataloguing of its ever-increasing contents, Mr. Walsham decided on bringing out an improved edition, in the preparation of which he was able to obtain the assistance of Mr. D'Arcy Power, one of the former able and energetic curators mentioned in the preface as having of late years helped to render the St. Bartholomew's Museum "one of the largest and most complete collections of surgical pathology in the world." Much has been done by addition of new matter and by careful revision of the original edition to improve this work, which in its present form may be recommended not only as an able commentary on the contents of a large pathological museum, but also as a useful introduction to the study of surgical pathology. Whilst in its original form those affections only were dealt with which could then be illustrated by specimens at St. Bartholomew's, Mr. Walsham's work in its later issue has been rendered more complete by the addition of matter relating to specimens that have been subsequently acquired, and of descriptions of some rare morbid conditions not as yet illustrated in this museum. The descriptions of the different pathological processes and conditions are terse and simple, and at the same time clear and sufficiently full for the needs of the student. The sections devoted to the subjects of bone and joint diseases, of injuries of the head, and of hernia, are particularly good, and show that every effort has been made to present in this edition the latest results of pathological investigation.

Nouveaux Éléments de Pathologie et de Clinique Chirurgicales. Par F. Gross, Professeur de Clinique Chirurgicale a la Faculté de Médecine de Nancy, J. Rohmer et A. Vautrin, Professeurs Agrégés a la Faculté de Médecine de Nancy. Tome Premier. Paris: Librairie J. B. Baillière et Fils. 1890.

This is the first instalment of a work which Professor Gross, of Nancy, has for many years proposed to bring out, with the view of its taking a place between the simple manual and the complete treatise on surgery. Although this first part, which consists of 866 closely printed pages, deals only with diseases and injuries of the head, it is proposed to complete the work in three volumes. This recent addition to the literature of general surgery promises to be a complete one, as more than one-third of the present volume is devoted to diseases of the ear and eye, which subjects have been taken in hand by Professor Rohmer. The other portions of the volume deal with injuries and surgical affections of the cranium and its contents, and of the face, nose, and oral cavity. Some of the chapters seem to be long and diffuse, whilst others fail to deal so fully with their special subjects as might be expected by English readers. This, however, may be due to the fact that in France, as elsewhere abroad, more interest is taken in other subjects than in those attracting at the same time much of the attention of surgeons in this country. Questions relating to surgical pathology and to treatment are fully and very ably discussed, though rather at the expense, we are inclined to think, of instruction in symptomatology and the results of clinical observation. The volume has been edited in a very liberal spirit, and very frequent reference is made to the views and teaching of surgeons in this and other countries, which, when compared with those of the great teachers in France are very fairly criticised. We hope soon to be able to congratulate Professor Gross and his colleagues on the completion of a work which promises to be very suitable both to the purposes and to the means of the student, and also to serve, equally with larger and more costly treatises, in maintaining the excellence of French textbooks on general surgery.

Annual of the Universal Medical Sciences. Volumes I to V. F. A. Davis: Philadelphia, New York, and London. 1889.

This very valuable yearly report of the progress of medicine and its collateral sciences throughout the world is a work of very great magnitude and high importance. It is edited by Dr. C. E. Sajous, assisted, it is stated, by seventy associate editors, whose names are given, making up a learned and most weighty list. The editorial staff includes also a number of assistants, entitled corresponding editors, and a remarkable cosmopolitan list of contributors. Their joint labours have combined to produce a series of volumes in which the current progress throughout the world, in respect to all the branches of medical science, is very adequately represented. The general arrangements of the book are ingenious and complete, having regard to thoroughness and to facility of bibliographical reference. It is obviously impossible to give anything in the nature of a review of a book which in itself

[1] *Comptes Rendus*, fifth series, xi, p. 88, February 27th, 1869.

consists of a great series of brief abstracts, but we may heartily commend the enterprise and skill with which this important serial is conducted, and while commending it we may express our best wishes for its continued success.

OUTLINES OF THE CLINICAL CHEMISTRY OF URINE. By C. A. MACMUNN, M.A., M.D. London: J. and A. Churchill.

THIS book contains a brief and fairly accurate account of the chemistry of urine in health and disease. The author has endeavoured—and, we think, with a considerable amount of success—to give such information as will enable an intelligent practitioner to perform an analysis of urine for himself; and he has, at the same time, supplied an account of some of the recent advances made in the subject. The post-graduate lectures delivered by Dr. MACMUNN in the early part of this year at the Birmingham Medical Institute form the basis of the present work. Although written by a man who, as he says himself, is engaged in general practice, we have no hesitation in stating it to be a most satisfactory presentment in abstract of our present knowledge of the subject, and we have no doubt that even physicians and surgeons not engaged in general practice might derive considerable advantage from its perusal.

The first chapter, which treats of the general structure and physiology of the kidney, is, we think, at the present day, with such a wealth of able treatises as there are on histology and physiology, rather a work of supererogation. The general characters of normal human urine, its constituents, the estimation of urea, uric acid, and allied products are all very well given in the next three chapters.

We might here direct the author's attention to a very ingenious method of M. Gautrelet's, referred to by us in a review of his recent book,[1] in which, by means of what he calls a "uroazotimètre," a volumetric determination can readily be made of urea, uric acid, and kreatinin by three successive experiments. We have been experimenting with it lately, and are well satisfied with the results obtained. The aromatic bodies are treated briefly in chapter vi. As we might expect, the colouring matters of urine are well discussed by Dr. MacMunn, but we cannot say he has yet resolved the difficulties that surround this complicated subject. The eighth chapter deals with the inorganic constituents of urine and their qualitative and quantitative tests.

Dr. MacMunn refers briefly to the conditions known under the names of physiological and functional albuminurias, and then details some of the more important of the albumin tests. The cold nitric acid test, applied after Heller's method, does not apparently find favour in his eyes. In this we must differ with him, for in a very extended experience in albumin testing we have found Heller's test one of the most reliable; accordingly, we object very strongly to his statement that "in cases where only small quantities (of albumen) are present it is liable to several fallacies, so much so that it is now but little used." For ordinary practical purposes we think the proximate estimation of albumen by Esbach's tubes of much value; but for more accurate determinations we can speak favourably of Zahor's densimetric method.[2] Schaumann's modification we have also tried, but we agree with Dr. MacMunn that it does not seem to us to possess any decided advantage over the ordinary gravimetric process. The article on peptones is full and clear, but why has the author omitted any reference in it to Dr. Johnson's picric acid test, which we consider a most useful and valuable one? The treatment also of blood, bile, and sugar in urine is very satisfactory. The presence of acetone and diacetic acid in urine receives attention; and the questions as to their indications are referred to. We have frequently noticed acetone in the urine ourselves under very different conditions, and we certainly agree with Dr. Saundby that it is frequently found in diabetic urine, even in favourable cases, while, on the other hand, diacetonuria indicates a dangerous condition. Useful chapters on urinary deposits and calculi, and the detection of drugs and poisons in the urine complete Dr. MacMunn's treatise.

A few misprints occur throughout this work, as "mephrozymase" on page 140, and "phenyl-glucazone" on page 187, but they are very few indeed.

As we have already stated, the book is well worthy of attentive perusal by those who wish to obtain some clear ideas as to our present knowledge of the subjects of which it treats, and who object to be compelled to attain this by the laborious perusal of large monographs and original articles.

[1] JOURNAL, September 28th, page 723.
[2] See JOURNAL, Report on Med. Chemistry, Dec. 29th, 1888.

NOTES ON BOOKS.

Provision for the Insane Poor of Yorkshire. By D. HACK TUKE, M.D., F.R.C.P., LL.D. (Churchill.)—This is a reprint of Dr. Hack Tuke's address as President of the Section of Psychology, at Leeds in August last, together with a paper read by him at the meeting upon the future provision to be made for pauper lunatics. The author deals with the subject in his usual painstaking, careful manner, and with microscopic exactness. He gives the history of the Yorkshire asylums, and treats of the various conditions under which the insane poor should be provided for in the future. The boarding-out system, the providing of workhouse accommodation, the county and borough asylums, and their construction, are all fully discussed, and the conclusions at which the writer arrives are clearly summarised, and at greater length than in the original paper. The work is also supplemented with voluminous statistical tables, the result of immense labour. We join with Dr. Hack Tuke in his expression of regret that so few of our annual asylum reports contain either ground plan or elevation of the asylums. They would prove extremely useful. In this respect the American reports are far ahead of ours. We look upon this work as one of great value to all connected with the care and treatment of the insane poor, and especially we should think to the members of the County Asylum Committee who have recently come new to their work.

Archives of Surgery. Parts I and II. By JONATHAN HUTCHINSON, F.R.S. (London: J. and A. Churchill.)—These are the first two numbers of a quarterly publication of the hitherto unused papers of the author, which are to be completed in three years, and are well illustrated. But why are they not simply Mr. Hutchinson's archives, for they are limited to his work alone, and probably will be? The papers, as might be expected, are of great interest, and an uncompleted one on intestinal obstruction is a strong argument for manipulation and inversion of the patient and shaking him in preference to early laparotomy. Others on a great variety of subjects are written in the author's best style. An original feature of the *Archives* is a series of papers on the canons of surgery, schemata of treatment, general therapeutics, and a catechism of surgery, the latter being a number of examination questions on surgical subjects with short answers appended; and this catechism is to be continued apparently in each number, the subjects being taken without any particular order. These will no doubt be attractive to senior students, and are very practical, though they naturally represent the author's particular views on some of the subjects. Everyone will be glad to see the papers turned to so good an account and rendered useful, will recognise the indefatigable care and thoroughness which the author has shown, and will at the same time enjoy the suggestive and clearly-argued opinions, which constitute a charm in his original writings.

Mémoires et Bulletins de la Société de Médicine et de Chirurgie de Bordeaux, Année 1888. (Paris: G. Masson. Bordeaux: Féret et Fils. 1889.)—This volume of reports of the proceedings of the Bordeaux Medico-Chirurgical Society differs in two respects from the volumes of *Transactions* issued by medical societies in this country. In the first place it contains a complete account of the work of the Society, that is to say, the full text of all the papers, and adequate reports of the remarks made by the speakers in the discussions. In the second place it has an index so imperfect that it is difficult to find any particular paper or speaker's name which may be required. This is a common fault in French books and serials, and it is strange that the national love for clear arrangement and lucid statement should not have already led to its correction. We must also mention with regret the absence of drawings. Among the memoirs are many of practical value. We may note especially papers by MM. Négrié and Dumur, on antipyrin in chorea; by M. Négrié, on congenital syphilitic hydrocephalus: by M. R. Saint-Philippe, on the treatment of infants prematurely born by the *couveuse*, combined with alimentation by the œsophageal or nasal tube, as well as the reports of a large number of interesting cases. Bound up with the *Bulletin* is a prize essay by Dr. Maurice Rivière, on puerperal eclampsia, which may be the subject of a separate notice.

GENERAL COUNCIL
OF
MEDICAL EDUCATION AND REGISTRATION.

WINTER SESSION 1889.

Thursday, November 28th.

JOHN MARSHALL, Esq., F.R.C.S., F.R.S., President, in the Chair.

Case of Mr. Alexander Lindsay.—The first business of the Council was the consideration of an appeal for restoration to the *Medical Register* from Alexander Lindsay (registered as M.D. 1883, M.S. 1884, M.A.O. 1885, R.U.I.), whose name and qualifications were erased on November 28th, 1888, by order of the Council, in respect of the act of "covering." The petitioner (who was present) pointed out that his connection with the person to whom he had acted as "cover" only commenced in January, 1888, and terminated in the month of October following, and that in the interim the person in question had presented himself for examination at the Society of Apothecaries in August, 1888; and promised that, if his name were restored, he would endeavour to conduct his practice with the strictest propriety, and with a due regard to the interests of the profession and of the public. To his appeal was appended a memorial from five out of seven medical men practising in Burslem, praying the Council to accede to the appeal of the petitioner, together with other memorials (*a*) from residents in Burslem and district, signed by the member of Parliament for the borough, the mayor, the town clerk, three aldermen, two magistrates, six solicitors, eight clergymen, and 665 other inhabitants; (*b*) from residents at Norton-in-the-Moors, signed by one clergyman and sixty-eight other inhabitants; (*c*) from residents at Milton, signed by 117 inhabitants.

After a statement by Mr. WADDY, Q.C., M.P., on behalf of the petitioner, the Council proceeded to deliberate *in camerâ*, and strangers were ordered to withdraw.

On their readmission, the PRESIDENT announced to Dr. Lindsay that it was the pleasure of the Council to order his name to be restored to the *Register*.

Appeal for Restoration to "Register."—A report of the Executive Committee recommending that the appeal of Mr. W. E. Robson to have his name restored to the *Medical Register* be granted was received and entered upon the minutes.

Report of Education Committee.—On the motion of Dr. STRUTHERS, the report of the Education Committee, subject to corrections, was received and entered on the minutes.

Executive Committee.—On the motion of Dr. GLOVER, an alteration in the standing orders was agreed to, modifying the power of the Executive Committee to fill vacancies in its body after the issue of a summons for a general meeting of the Council.

Case of Mr. Leeson.—The consideration of the case of Mr. Leeson, adjourned from Wednesday, was then resumed, the first witness being Mr. Harness, of the Medical Battery Company, who was called by Mr. Leeson to testify to his (Leeson's) connection with the Company. Mr. HARNESS made an attempt to address the Council, but he was reminded that he was only present to be examined by his own and the plaintiff's legal adviser.

In reply to Mr. MARTIN, Mr. HARNESS said he was not present at the hearing of the action against Mr. Willson. Mr. Leeson did not represent the company in that action—at least, not with his knowledge and consent. As a matter of fact, he (Leeson) did appear, but it was a mistake. The result of the trial was not communicated to him until a long time afterwards. He admitted writing a letter in reply to that signed "P. H." in the *Medical Press*, threatening legal proceedings unless an ample apology were made. He admitted, too, that, although no such apology had been tendered, no proceedings had been taken against the editor of the *Medical Press*. He had come to the conclusion that it was too trivial a matter. Questioned as to the diplomas which he held, according to the evidence of Mr. Leeson, he declined to reply on the ground of irrelevancy. He denied that Mr. Leeson acted as a cover to him; he did not require to be "covered." He did not practise as a medical man but as an electrician. Mr. Leeson was simply the consulting physician to the company. He (Harness) treated persons who came to him when he thought proper to do so, but only electrically. In his opinion, that did not constitute "medical practice." In reply to further questions relating to his degrees, he said he understood the bearing of the questions, and that was why he repudiated the American degree. He did not need a medical degree.

At the conclusion of Mr. Harness's examination, Mr. FURBER addressed the Council on behalf of Mr. Leeson. He maintained that the proper course would have been to issue a summons against Mr. Harness before a magistrate, and not, in the first instance, to attack Mr. Leeson. He urged that a good deal of prejudice existed against Mr. Harness, and that an attempt had been made to bring this to bear on Mr. Leeson. He maintained that many of the pamphlets admitted as evidence had been written before Mr. Leeson had joined the company, and ought, therefore, to have been excluded. He observed that no one had asked Mr. Harness the crucial question as to whether or not he practised as a medical man. He claimed that since the alteration in the rules of the College of Physicians Mr. Leeson's position was quite unassailable, and he appealed to the Council to say so.

After a few remarks by Mr. MARTIN on behalf of the Medical Defence Union, the case was closed, and the Council proceeded to deliberate thereupon, strangers being ordered to withdraw.

On the readmission of strangers (including Mr. Leeson), the PRESIDENT announced that, in the opinion of the Council, he (Mr. Leeson) was guilty of the offence charged against him, which offence constituted "infamous conduct" in a professional respect, and his name had, therefore, been ordered to be erased from the *Register*.

Applications for Restitutions to "Register."—The appeal of Stephen Joseph Daly, whose name and qualification were erased on November 30th, 1888, in respect of the act of "covering," then came on for consideration. A letter was read from the appellant, who was unable to attend personally in support of his petition on account of ill-health, and another from his brother in reply to the demand of the Registrar, made at the direction of the President, for information as to what Mr. Daly had been doing since the removal of his name from the *Register*. It appeared that Mr. Daly had been engaged in medical studies in Paris for the greater part of the time. The applicant's letter was accompanied by fourteen testimonials in regard to hospital appointments given to him by six London, and eight provincial, medical practitioners. Some discussion took place, in the course of which strangers were ordered to withdraw while the Council deliberated on the case *in camerâ*.

On the readmission of strangers, the PRESIDENT announced that it had been decided to restore Mr. Daly's name to the *Register*.

An application from James McCully for restoration to the *Register* was referred to the Executive Committee.

Inspection of Examinations for Sanitary Diplomas.—In the absence of Sir WILLIAM TURNER, Dr. HERON WATSON moved: "That it be referred to the Executive Committee to consider the question of providing for the inspection of the examinations for diplomas in sanitary science, the amount of the fee to be paid for the registration of such diplomas, the fund (to be kept separate) into which those fees should be paid, and the application of this fund to the payment of such inspections, and that the Committee report during the present session of the Council." He pointed out that the small fee of five shillings now charged for the registration of additional titles was quite insufficient in respect of the diplomas in sanitary science. He said that a sanitary diploma was not a mere additional title, but added a large and very considerable function. The registration had to be done with a certain amount of circumspection in order to ascertain that the diploma had been granted conformably with the regulations of the Council. Further, considering the very important bearing of these diplomas, he held that inspection of the examinations was indispensable, and no funds were at present available for that purpose.

Dr. STRUTHERS recalled that he had insisted a year ago on the necessity for providing for the inspection of these examinations, and he agreed that it would only be fair that an additional fee should be charged to cover the expense of such inspections. He, therefore, seconded the motion, which was agreed to.

Friday, November 29th.

Addendum to the "Pharmacopœia."—After the transaction of some formal business, the report of the Pharmacopœia Committee was brought forward by Dr. QUAIN for adoption. On the recommendation of the Committee it was agreed to prepare and issue an addendum to the *Pharmacopœia* of 1885, this addendum to be prepared by Dr. Attfield, under the direction of the Chairman of the Committee, Dr. Quain, Sir Dyce Duckworth, and Mr. Carter,

with the understanding that no new remedies were to be introduced into it except such as have met with general approval. The addendum will be issued in the course of next year. Provision having been made for proofs to be sent to the members of the Committee before the May meeting of the Council, the report was adopted.

Registration of Midwives.—Sir JOHN SIMON moved: "That, if the Local Government Board, or any other department of Her Majesty's Government, were constituted controlling authority in relation to local arrangements made under statute for the licensing and registration of midwives, the Medical Council would, if the Government Department so wished, be willing to advise as to the general rules of education, examination, and discipline, which ought to be established in the matter; but the Council would not be able to discharge, and would, therefore, not be prepared to undertake, any duties of detail as to the registration of midwives, or as to the local arrangements for licensing and controlling them." He pointed out that as far back as 1877 he had been chairman of a committee on the Medical Acts Amendment Bill when certain resolutions were passed in relation to the registration of midwives. In 1882 there had been a further reference on the subject to a committee of which the President was chairman, and they came to the conclusion that there was a great lack of provision for dealing with midwives. In 1877, the Council was of opinion that it was desirable to abide by the following article, namely: "That means of legal sanction might be provided for giving credentials of competency to midwives, and that the lives of women in labour should, as far as practicable, be protected against the unskilful." In the opinion of the Council it was not necessary that a central register of midwives should be kept up, and that the duty of registration should devolve upon the authorities for each district. Having defined the position of the Council in the past, he urged that they ought to make up their minds as to how far they would go in the matter. He pointed out that of late years the duties devolving upon the Council had been largely added to, to such an extent, indeed, that any further addition was quite out of the question.

Sir WALTER FOSTER seconded the resolution. He observed that it was a scandal to our civilisation that incompetent persons should be permitted to imperil the lives of poor women at so critical a time. To obviate this danger he said it would be necessary that midwives should be educated and kept under surveillance. He admitted that some objection might be taken to this plan on the ground of the authorities in whose hands the matter was to be left; but no special local authority had been mentioned. It was certain that the Local Government Board would have to arrange for some local means of carrying out such a measure. He thought there was a distinct advantage in having the matter a local one, for it would then become a matter of general notoriety whether such and such a person was or was not possessed of the necessary qualifications.

Dr. ATTHILL said that from his very long connection with the Rotunda Hospital he had some practical acquaintance with the subject under discussion. He observed that it was there very difficult to get a good class of women to take up this department, and that, notwithstanding the great care that was taken to educate them, and the immense experience that was available, it was very hard to get a good midwife. Some of them turned out fairly well, but the majority were imbued with silly ideas and prejudices which it was next to impossible to get out of them. If that were the case in an institution as well equipped as the Rotunda, he asked what was likely to be the case in the country districts, and he thought that in any attempt to reduce the system to practice in England the difficulties would be immense.

Mr. BRUDENELL CARTER pointed out that there were two rival institutions in London covering the same ground, one of which was largely under the control of medical men, and the other was not. He suggested that the Council should frame the resolution so as to leave an open door allowing of the local arrangements which might or might not be desirable. He therefore moved the following reading as an amendment: "That if the Local Government Board, or any other department of Her Majesty's Government, were constituted controlling authority in relation to any arrangements made under statute or charter for the licensing and registration of midwives, or of midwives and nurses, the Medical Council would, if the Government department so wished, be willing to advise as to the general rules of education, examination, and discipline which ought to be established in the matter; but the Council would not be able to discharge, and would, therefore, not be prepared to undertake, any duties of detail as to the registration of midwives and nurses, or as to the arrangements necessary for licensing and controlling them."

This was seconded by Dr. MACALISTER.

Sir JOHN SIMON thought the two subjects had better be kept distinct He observed that the subject of midwives was ripe for legislation and had been forced upon their attention—which was hardly the case in respect of the nurses. He declined, therefore, to accept the modifications proposed by Mr. Carter.

Dr. ATTHILL suggested that the expression "midwife and nurse tender" should be used, as otherwise persons licensed as midwives would look upon themselves as practitioners.

Dr. GLOVER objected to the form of the resolution, particularly that part of it which provided for the carrying out of the measure being confided to the Local Government Board, because it would presumably throw the matter into the hands of the medical officer of health. He reminded the Council that on former occasions they had resolved to address themselves to the Home Secretary. He said that he was therefore prepared to move as an amendment "that the Council, consistently with repeated previous representations to the Government, is again prepared to urge upon the Government the necessity for legislation for the registration of midwives, and the Council would, if the Government so wish, etc."

Sir JOHN SIMON urged that the Local Government Board was the proper body to see to the matter, whether the Council liked it or not. He thought that the introduction of the nurses would embarrass their action.

Dr. LEISHMAN spoke highly of the services rendered by the various voluntary bodies that had taken up the training of nurses. Personally he did not care how the motion was framed, but he agreed that by including nurses they were adding to the difficulties. The great difficulty was as to the source of the certificates which the nurses would be required to obtain.

Mr. BRUDENELL CARTER urged that the introduction of the nurses did not engage them to anything, whereas if they left them out it might be years before another opportunity would occur of remedying the omission. He contended that the question of the registration of midwives had not been brought before them more authoritatively than had the question of the nurses, and he observed that the certification and registration of nurses was known to have the sanction of many persons of high social position, even of the highest in the land.

Dr. MACALISTER seconded Mr. Carter's proposed modifications, and suggested that the Council ought to be very wary in this matter so as not to seem to support one of the two bodies hinted at while rejecting the appeal of the other. He would support, therefore, giving an answer which should cover both cases.

Some further discussion took place, in the course of which Mr. CARTER insisted upon his proposals being put to the vote, which was accordingly done, and his amendment was lost.

Sir JOHN SIMON consented to leave out the reference to the Local Government Board, whereupon Dr. GLOVER, with the permission of the Council, waived his proposed amendment.

The motion, as amended, was then agreed to.

It was then moved by Sir JOHN SIMON, seconded by Sir WALTER FOSTER, and agreed to, "That the President be authorised to inform Mr. Pease that the Council regards with much regret the absence of proper public provision for the certification of competent midwives, and believes that the want of such provision is conducive to a large amount of suffering and danger to life among lying-in women of the lower classes; also to call his attention to various resolutions of the Council bearing on this subject, including the one above mentioned."

Sir WALTER FOSTER then moved: "That this Council regards the absence of public provision for the education and supervision of midwives as productive of a large amount of grave suffering and fatal disease among the poorer classes, and urges upon the Government the importance of passing into law some measure for the education and registration of midwives." He admitted that the substance of this resolution was largely included in that which had just been passed, but he would not like the proceedings of that day to pass without fresh representations being made to the Government on the subject.

The motion was seconded by Dr. GLOVER, who thought the previous resolutions would be incomplete without this further step.

The motion was agreed to, it being understood that the President of the Council would make the necessary representation to the Government.

Diplomas in State Medicine.—With the permission of the Council Dr. STRUTHERS brought forward the report of the Education Committee in regard to diplomas in State medicine, on the remit of the Council. The report stated, in regard to the Victoria University, that the conditions under which the diploma was asked for were not in accordance with the resolutions of the Council; secondly, that the sanitary diploma of the Royal College of Surgeons of Edinburgh was "deserving of recognition;" lastly, "the Committee find that, so far as they have been reported to the Council, the regulations of the following licensing bodies are in conformity with the resolutions of the Council of June 1st, 1889:—The University of Cambridge, the Royal College of Physicians of Edinburgh, the Royal College of Surgeons of Edinburgh, the Faculty of Physicians and Surgeons of Glasgow. The Committee find that the regulations of the following licensing bodies are not yet in conformity with the resolutions of the Council of June 1st, 1889, and which will come into force on January 1st, 1890:—The Conjoint Board of the Royal College of Physicians of London and the Royal College of Surgeons of England, the University of Oxford, the University of Durham, the University of London, the University of Edinburgh, the University of Glasgow, the University of Aberdeen, the King and Queen's College of Physicians in Ireland, the University of Dublin, the Royal University of Ireland, the Royal College of Surgeons in Ireland." He reminded the Council of the importance of the question before them. He said that the duty of the Committee had been confined to ascertaining which bodies had conformed with the requirements of the Council and which had not. Many of the bodies had replied that they were about to do so, but some were not. He regretted to see that some of the Scotch universities had raised certain difficulties in regard thereto, though he would not go so far as to say that this was quite unexpected. He assured the Council that whatever they did they would not satisfy Scotch professors, who had their own little interests to look after. In Scotland they wanted the special courses to be included in the student's ordinary curriculum, whereas the Council had decided that this was not to be. He urged that special privileges were attached to the diploma, and therefore that special study should be insisted upon to obtain it. He concluded by advising the Council not to pay any attention to the objections from Scotland, and moved the adoption of the report.

The motion was seconded by Mr. WHEELHOUSE, as a member of the Education Committee.

In reply to questions from various members as to the reasons for their respective bodies being reported not in conformity with the regulations of the Council, Dr. STRUTHERS pointed out that their inclusion in the list did not involve any condemnation, but merely that, so far, the regulations had not been complied with.

Dr. WILKS said that the authorities of the University of London believed that they had complied with the regulations.

Dr. BATTY TUKE pointed out that the University of London, by permitting candidates to have acquired their instruction in outdoor sanitary work under any other than the medical officer of health of a large urban or country district, had departed from the regulation of the Council. The University, in fact, was willing to accept certificates "from the holder of any public health office directly or indirectly subject to the control of any State department." This might mean no more than the parish doctor.

Dr. CHURCH said that in respect of the University of Oxford the delay had arisen from the fact that certain formalities had to be complied with before any alterations could be introduced into the regulations. Owing to the notice from the Council arriving during the long vacation, they had not yet had time to carry the matter through. He added that it would be impossible for the University authorities to pass a statute before the end of the year. He suggested that the date should be altered to January 1st, 1891.

Sir DYCE DUCKWORTH said that the management of the Joint Board had considered it desirable to adopt the regulations specified, but had decided first to take legal opinion as to the competency of the Council to impose such restrictions.

Sir JOHN BANKS said that the Royal University of Ireland asked for a little time to adopt the regulations, but the University of Dublin was quite ready in all respects.

The PRESIDENT pointed out that even if certain bodies were not able to conform before the end of the year, it would be sufficient if they did so before the date of their next examination.

A long discussion followed on the wording of the report, several paragraphs of which were adopted.

Sir WILLIAM TURNER said the University of Edinburgh had led the way in instituting a system of education and examination in public health years before the Medical Act of 1886. He claimed, therefore, that they ought not to be placed in the same position as other bodies which had subsequently undertaken that duty. The proposed extension of the ordinary medical curriculum to five years instead of four would, under the rule for diplomas in State medicine, make it six years before the student could obtain them. He urged that if an additional year were put on to the curriculum the student would have ample time to get up his chemistry at least during six months of that time. He therefore asked the Council to reconsider the matter. Passing on to discuss the question as to how the student was to obtain his practical instruction, he urged that they were not in possession of any evidence that the medical officers of health would undertake the duties thus devolving upon them, and he mentioned incidentally that Dr. Russell, the medical officer of health for Glasgow, had declared his present inability to do so. The result would be to send the student to some distant part of the country for that purpose. He asserted that the rule had been agreed to without due consideration; moreover, the time allowed to the bodies to make the necessary arrangements had been far too short. They had had a long experience of the system now at work in Edinburgh, and they had found it very satisfactory. He therefore moved: "That the Council modify Rule *c* of the resolutions passed on June 1st, 1889, in regard to diplomas in State medicine, so as to permit the six months' course of practical instruction in a laboratory to be taken either before or after obtaining a registrable qualification."

Mr. MACNAMARA supported Sir William Turner's motion, though he claimed priority for the Royal College of Surgeons in Ireland in the matter of instituting instruction in hygiene. He thought that there would be ample time for the course of chemistry in a five years' curriculum. He pointed out that while it might be possible for a man to do the outdoor sanitary work while occupying some position in the country, that was not the case with the practical chemistry.

Mr. WHEELHOUSE observed that the Education Committee had decided that an additional year was necessary, on the ground that there was not time at present for the student to acquire a sound knowledge on general medical subjects, and it would be absurd to take away half that additional year for a special purpose. If, having his diploma, the student wished to take up public health, let him do so subsequently.

Dr. KIDD urged that the resolution had been aimed at the abuse of the power to grant these diplomas, and he thought that a man had plenty to do in the four years without taking up a special subject. Moreover, the value of the special course to him would depend upon his previously acquired professional knowledge.

Sir JOHN SIMON said Sir William Turner's motion cut away the most fundamental part of the resolutions in relation to this special qualification. The result would either be an injustice to the special education in sanitary science, or an injustice to medical education. He trusted the Council would not relax the rules.

Sir WILLIAM TURNER asked the permission of the Council to add to his motion the following paragraph: "Provided that the student to whom the privilege of taking his laboratory instruction before registration is granted has spent an additional year in medical study and passes his examination in practical chemistry before he enters the public health laboratory."

Sir JOHN BANKS spoke in favour of Sir William Turner's motion, and Mr. MITCHELL BANKS, Mr. BRUDENELL CARTER, Dr. HERON WATSON, Dr. TUKE, and Sir WALTER FOSTER against it.

The amended motion was then put to the vote and was negatived by 16 to 10, after votes had been taken *nominatim*.

The further consideration of the report was adjourned.

Saturday, November 30th.

On a motion from the Chair, it was resolved, in accordance with a report of the Executive Committee, "that the Registrar be directed to restore the name of Mr. William Edward Robson to the *Medical Register*."

Diplomas in State Medicine.—On the motion of Mr. WHEELHOUSE, it was agreed that clause (*a*) of paragraph (*f*) of the Council's resolutions of June 1st, 1889, be amended so as to read as follows: "to medical practitioners registered *or entitled to be registered* on or before January 1st, 1890."

It was then moved by Dr. STRUTHERS, seconded by Mr. WHEELHOUSE, and agreed to: "That the two concluding paragraphs of the Education Committee's report be adopted in the following

form:—'A considerable number of the above licensing bodies have expressed their attention to bring their regulations and procedure into conformity with the resolutions of the Council, and it appears to the Committee that the only course open to the Council is to instruct the Registrar not to register any diploma in State medicine conferred after January 1st, 1890, unless the said diploma be granted under conditions in conformity with the resolutions of the Council. The Committee further recommend that the Registrar be instructed to request the various licensing bodies to transmit, before the first examination held by them in 1890, to the General Medical Council, their regulations for the diploma in State medicine, with particular reference to any changes that may have been recently made in view of the resolutions of the General Medical Council of June 1st, 1889.'"

The report as a whole was then adopted.

Sir WILLIAM TURNER asked whether the regulations for the registration of diplomas in public health should not be brought into accord with those for the registration of medical and dental students, and he moved a resolution with this object.

Dr. QUAIN seconded the motion, which he thought might be the means of preventing a good deal of hardship.

Dr. MACALISTER, while he agreed that it might be desirable to admit to registration the late comers, observed that Sir William Turner's motion would, in effect, render it possible for the Branch Councils to annul any and every rule. He would suggest that the dispensing power, if granted at all, should be limited to cases of mere delay, and not extended to cases where the fundamental regulations had not been complied with.

Dr. KIDD suggested that it would be better to say that the rules should not apply to any students who commenced their studies before January 1st, 1890.

Dr. STRUTHERS said that the dispensing power, if granted at all, ought to be vested in the Executive Committee, certainly not in the Branch Councils. He objected most strongly to any further extension of time. He would propose: "That the Executive Committee shall have power to provide for certain exceptions."

Sir WILLIAM TURNER consented to modify his motion in accordance with the suggestion.

Mr. CARTER said that if they permitted these diplomas to be obtained without adequate knowledge they would be betraying the trust that had been placed in their hands.

The PRESIDENT said that the bodies had received notice last June, and they had had ample time to adapt themselves to the new regulations. He thought that it would be an inadvisable thing to leave such delicate powers in the hands of the Committee, involving a decision as to the action of the examining bodies.

The amended motion of Sir William Turner, "That the Executive Committee shall have power to admit exceptions in special cases to the rules regulating the diplomas in sanitary science, and to report the same to the General Council," was then carried by 13 votes to 11.

After some discussion on points of order, Dr. Atthill was permitted to move that the Council take into consideration the communications addressed to it by the representatives of the medical authorities in Ireland in reference to the diplomas in State medicine. This having been agreed to, Dr. ATTHILL pointed out that Ireland was peculiarly situated, in that there were only four towns of over 50,000 inhabitants; and that therefore the great majority of officers of health would be men who would not be able to comply with the requirements of the Council. He asked where students in sanitary science were to obtain their instruction. He said that the effect of the regulation would be to deprive Ireland of the power of granting diplomas in State medicine. He therefore asked the Council to modify the rule so far as it applied to Ireland. He concluded by moving: "That as the Council have not at present any means of knowing how far medical officers of health would be able or willing to impart the necessary instruction in conformity with the requirements of the Council, that the resolution of the Council marked (*d*) be not at present insisted upon, though they remain as an item in the programme."

Mr. TEALE said the object was apparently less the supply of medical officers of health for Ireland so much as their manufacture for England.

Dr. CAMERON pointed out that the effect of the motion would be to make Clause *b* permissive, and he thought it was an extraordinary thing to try and alter a resolution carried only last May. He said, however, that the rule as to study would be utterly impracticable in some places—Glasgow, for example; and he urged that the Council had taken this very important step without ascertaining whether the medical officers of health would be able and willing to take up these duties; and, lastly, whether the local authorities would permit him to do so even were he willing.

After some remarks on the subject by Dr. WILKS, and Sir JOHN SIMON, the motion was put to the vote, and was carried.

Inspection of Examinations for Diplomas in Sanitary Science.—The report of the Executive Committee on a special remit bearing on the inspection of the examinations for diplomas in sanitary science, and the fees to be paid for the registration thereof, came on for adoption. It was as follows: "*a.* That the opinion of counsel be obtained as to whether the General Council possesses the power to inspect the examinations in sanitary science, so that the General Council may be satisfied that these diplomas deserve recognition in the *Medical Register*. *b.* That, in case the opinion should be in the affirmative, the Executive Committee recommend that they should be empowered by the General Council to report to the Council how a system of inspection should be carried out. *c.* That, subject to the institution of a system of inspection, the fee for the registration of sanitary diplomas be not less than three pounds. *d.* That these fees be paid into the account of the General Council. *e.* That the fund thus created be available for the expenses of any inspection of examinations for diplomas in sanitary science which the Council may hereafter institute." Paragraphs *a* and *b* were adopted, but in paragraph *c*, after some discussion, the sum of three pounds was deleted, and replaced by "such as the Council may hereafter decide."

Dr. MACALISTER wanted it to be made clear whether this increased fee would apply to persons who were in possession of registrable diplomas on the appointed day, but had neglected to register.

Sir WILLIAM TURNER pointed out that the fee was conditional on a system of inspection being instituted, and could not therefore be enforced until after February at the earliest.

Sir WALTER FOSTER regarded the fee suggested as excessive. He thought £1 would be ample.

Paragraphs *c* and *d* were then agreed to, the amount of the fee, however, being left undetermined.

With reference to paragraph *e*, Dr. HERON WATSON asked what would be done if, having undertaken to institute a system of inspection, the funds proved to be inadequate. Would the general funds of the Council become liable? [It was pointed out from the CHAIR that only the special fund was liable.]

Paragraph *e* was then agreed to, and the report as amended was adopted as a whole.

Sir WALTER FOSTER proposed that the standing orders be suspended until the completion of the business before the Council.

Dr. PETTIGREW observed that there were several matters of the greatest importance coming on for discussion, and he did not think it would be possible to do this during the afternoon.

Sir WILLIAM TURNER gave notice that when the report of the Education Committee had been received and entered in the minutes, he should propose that its consideration be postponed until the May meeting.

Dr. CAMERON said that if the report of the Committee were not adopted, they would be unable to present any report in May at all. Everything hinged upon the fact whether the curriculum was to consist of four years or five.

Sir WALTER FOSTER urged that they would not be in a position to give any opinion about the length of the curriculum until they knew what was going to be done in reference to the question of preliminary education.

The PRESIDENT pointed out that under no circumstances could such a grave question be decided at that meeting. He suggested that a short preliminary report should be brought up on the subject.

Dr. HERON WATSON seconded the motion.

The Council then agreed to the suspension of the standing orders to allow of the completion of the business before the Council.

Report of Education Committee.—Dr. STRUTHERS then brought up the following second interim report of the Education Committee, which was received and entered upon the minutes:—"The Education Committee hope to be able to complete their report in regard to preliminary and professional education for the next meeting of the Council. Meantime the Committee report that they are unanimous in thinking it desirable that steps should be taken by the Council to fix the period of study to be five years. The Committee, while strongly of opinion that the number of systematic lectures in certain subjects of medical education

should be reduced, are not prepared to recommend the method of effecting such reduction till the Medical Council has expressed its mind on the suggestion for an extension of the period of study to five years."

Sir WILLIAM TURNER then moved that the consideration of this report be deferred until the May meeting of the Council. This was seconded by Dr. MACALISTER and agreed to.

Dr. GLOVER proposed that the report should constitute the first business at the May meeting.

Registration of Trained Nurses.—Mr. BRUDENELL CARTER moved: "That this Council regards with regret the absence of any public provision for the education and registration of trained nurses, and wishes to urge upon Her Majesty's Government the importance of establishing some organisation by which such provision might be made." Mr. Carter said that this motion was intended as a reply to the memorial from the British Nurses' Association; he alluded to the disadvantage arising to the public from the impossibility of knowing whether women who were described as certificated nurses were in reality so or not, and he dilated upon the necessity for enabling the public to discriminate. He said that a voluntary association was prepared to take the matter up, and was at the present time engaged in endeavouring to obtain a Royal Charter for that purpose.

The motion was seconded by Dr. MACALISTER.

After some discussion, the preceding motion was withdrawn in favour of one by Sir JOHN SIMON, "that in the opinion of the Council it would be much to the advantage of the public, and particularly would be of much service to practitioners of medicine and surgery, that facilities, usable under proper guarantees in all parts of the United Kingdom, should be given by Act of Parliament or otherwise for the authoritative certification of competent trained nurses, who, when certified, should be subject to common rules of discipline; but that it does not appear to be within the province of the Council to propose legislation or other action for the object referred to, nor has the Council had any opportunity to consider in detail the means by which the object might best be obtained, and that under these circumstances the Council cannot give any opinion on the particular questions asked of it in paragraph 6 of the memorandum of the British Nurses' Association."

This motion was seconded by Dr. MACALISTER, and agreed to.

On the motion of Sir DYCE DUCKWORTH, an interim report of the Examination Committee to the effect that they were unable to present their report on the Inspectors' Reports and on Dr. Glover's proposals with regard to the practical element in medical education until May next, was received and entered in the minutes.

This concluded the business before the Council, which then adjourned.

REPORTS AND ANALYSES

AND

DESCRIPTIONS OF NEW INVENTIONS

IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

NEW SAFETY DRIVING REIN.

MR. W. H. SERJEANT (31, Moorgate Street, E.C.) writes In consequence of numerous applications for rings and various parts of the new safety rein which you noticed amongst new inventions in the JOURNAL of November 23rd, I should be much obliged if you would inform your readers that it is a patent rein, and can only be supplied entire.

DR. WALTER WYKE SMITH (Wimborne) writes: Under the above heading I see a drawing and description of a plan which claims many advantages over the usual manner of communication between the horse and his driver. I thought of an almost identical arrangement many years ago for an inveterate puller, with a hard one sided mouth, and found it excellent under claim No. 1. Under No. 2 it is not only useless, but actually caused rearing. No. 3 the same as No. 1. No. 4, it has no curative effect in shying, nor could it have in buckjumping, in which vicious action the horse begins by putting his head down. As a matter of fact, it greatly increases the danger of throwing a horse down, and is useless going down hill, or to help him in case of a stumble, as the whole and sole effect of it is to pull his head down.

Finally, I would give *Punch's* well-known advice to those about to marry to those who think of using this system, and say "don't. I may add that I have kept horses over twenty years, and have been upon and behind them for forty, and am, therefore, pretty well acquainted with their tricks and their manners.

DR. T. W. A. NAPIER (Egremont, Cheshire) writes: Ten years ago, to counteract the stargazing and bolting proclivities of a thoroughbred mare I broke to harness, I conceived the idea of attaching the reins to the buckles of the tugs instead of to the bit. This is virtually the same principle as that of "the 'invention' perfected by Mr. Serjeant in conjunction with Dr. Arthur Northcott," the further extension of the ends of the reins to the crupper being, in my experience, of no practical good whatever. I found the arrangement, in combination with a martingale, answer my purpose very well, but without the last named it was of little good. It will certainly stop most runaways, or, rather, will prevent them from starting on a bolt, but I cannot see what influence it can possibly have either on jibbing or kicking. It will not prevent rearing any more than will a martingale, and here I may say I believe both martingale and strapped back reins add to the danger of a horse falling back once he is on his hind legs. I, unfortunately, have been the victim of such an accident more than once. A severe bit is certainly not required with the apparatus, on account of the enormous power it gives the driver; in fact, a double ring snaffle is the only bit it can be safely applied to (not a Liverpool, as depicted in your sketch). Moreover, it can only be used with safety by a driver possessing good light hands. The medical profession's average coachman will find it very awkward at first, and a source of, rather than a preservative from, danger.

The advantages claimed as to its help in saving strain on the hindquarters, in pulling upon asphalte, etc., are nonsensical, amounting as the assertion does to this, that the weight of the horse's body is supported by his mouth! As to the simplicity and grace of the appliance, that is, of course, a matter of opinion; personally, I found it a source of much bewilderment every time my mare was put to by a friend's groom, or a livery stable ostler; while if it does anything to alter the way the horse carries his tail, it can only do so by making him bear the weight of it on his jaw. Its most fatal condemnation, however, is the fact that if a horse harnessed in this way should stumble, the effort on his driver's part to assist him will assuredly bring him on his knees. This is not a theoretical objection on my part, but the outcome of a somewhat unhappy experience.

If anyone wishes to try this method, he can get his own saddler to add about four feet to the length of each rein without specially sending to Brown's Harness Factory, 17, Great Quebec Street, Montagu Square, W.

I apologise for the length of this letter, which is merely a plain statement of facts made without prejudice or ill-feeling.

ADULTERATED SACCHARIN.

WE are indebted to Mr. Rupert Chicken, F.R.C.S., of Nottingham, for a small specimen of so-called "prepared saccharin." Mr. Chicken informs us that this preparation is "largely sold in the form of tabloids," and that he obtained it "from a patient who, in spite of the most careful treatment, still passes a large quantity of sugar."

We have examined the specimen referred to, and find that it is chiefly composed of ordinary sugar. The amount of the adulterant is so great that one is, at first sight, disposed to believe that there must have been an error in the preparation of the substance. Fahlberg's saccharin, as is well known, is a coal-tar product, and differs entirely in chemical composition and constitution and in physiological action from the carbohydrates. Weight for weight, saccharin costs enormously more than sugar, but its "sweetening power" is also enormously greater. It is generally admitted that its use, in the very small quantities necessary, is unattended by any deleterious effects; and it has accordingly been largely employed for the sweetening of foods intended for diabetics. There can be no doubt, moreover, that there is a very wide field for its application in pharmacy. The great difference in cost between saccharin and sugar is, no doubt, at the bottom of what may justly be described as a particularly cruel fraud, one which, in fact, affords a striking example of that commercial morality which allows no consideration whatever, not merely of elementary honesty, but even of common humanity, to stand in the way of gain. The label sent with the specimen we have examined, and which, we presume, was affixed to the packet containing the tabloids, contains the following: "Prepared Saccharin (Dr. Fahlberg's) or sugar substitute, takes the place of sugar for all sweetening purposes, and especially in the case of persons to whom the use of sugar is forbidden or undesirable. It has proved an inestimable boon to sufferers from diabetes, Bright's disease, and other kidney affections," etc. The label also bears the name of a "drug company," who describe themselves further as "cash price dispensing chemists."

Where the processes of analysis required are such as can easily and accurately be applied by medical men, we agree with Mr. Chicken in thinking that "medical men having diabetics under their care should examine the druggist's wares as well as the patient's urine." In any case, in view of the fact that he has brought to our notice, it is very obvious that such examinations may be urgently required, but they should, of course, be carried out under circumstances which will not admit of error, on account of their serious nature, and the risk that there is of making wrongful accusations. It is greatly to be regretted that through the culpable negligence of local "authorities," the Sale of Food and Drugs Act is applied to so limited an extent as to allow of the widespread sale of a sophisticated preparation of the kind. If the substance has been knowingly and wilfully palmed off as genuine saccharin, the conduct of the persons concerned is beyond comment, and the public have a right to expect that such a proceeding should be followed by exposure and by punishment, and that the punishment should be swift and heavy.

BYNO-HYPOPHOSPHITES.

MESSRS. ALLEN AND HANBURYS write to us in reference to our report upon byno-hypophosphites that, from the wording, it would appear that acid has been added to ensure the solution of the alkaloids. That was not the intended meaning. The specimen sent for examination was found to be acid. It should perhaps have been added in our report that this acidity was due, no doubt, to the extract of malt, which, as is well known, is always acid to test paper.

CLOSING OF THE LIBRARY OF THE ROYAL COLLEGE OF SURGEONS.—In consequence of alterations to be made in the electric light apparatus, the Library of the Royal College of Surgeons will be closed at 3 P.M. on Tuesday next, December 10th.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1889.

SUBSCRIPTIONS to the Association for 1889 became due on January 1st; and notice is hereby given, in accordance with by-law 5, that Branch Secretaries' subscription-accounts close on October 31st, and all unpaid subscriptions must be forwarded, after that date, to the General Secretary, 429, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, DECEMBER 7TH, 1889.

THE GAPS IN MEDICAL EDUCATION.

THOSE who supported the entry of elective members into the General Medical Council have been fully justified in their policy, if any justification were needed, by the enlightened and energetic action of the first representatives chosen by the general profession under the new Act. This has been well exhibited in their exposure of the unpractical nature of modern medical education and qualifying tests. The Council, since its first formation in 1858, has done its best to fix a standard of examination satisfactory to the university professors and corporation lecturers, of which it is mainly composed. But it has in great measure ignored the requirements and suggestions of the general practitioners, the result being that at the end of thirty years the complaint has become general that the men educated to satisfy its requirements are not well acquainted with the practical departments of their profession.

Among the strictures and suggestions of the elective members of the Council on these subjects none has been more forcible than a speech delivered by Dr. Glover at the Council Board on May 29th of the present year, now republished in the form of *A Statement*,[1] which we advise our readers to procure and read.

One of the most important practical duties of the young practitioner is to prescribe drugs for his patient's ailments, and one would imagine that the art of prescribing would form an important part of any qualifying examination for general practice. But Dr. Glover assures us that this is not the case. In the important final examination of the Conjoint Board for England, for example, only four out of twelve written questions even partially concern themselves with this department, while in the oral and clinical parts of the examination it is scarcely referred to at all.

In those cases where therapeutical and posological knowledge are to some extent tested, the results obtained are by no means satisfactory or reassuring, although the standard of excellence required is a low one. The badness of the Latin in which prescriptions are couched is a curious commentary on the efficiency of the preliminary examinations in arts. Even in the University of Cambridge, "the prescriptions, so far as they were given in Latin, were often very inaccurate." At the London University we are informed that many instances "could be given of the depths to which ignorance in Latin could go." Unfortunately, too, the practical knowledge of candidates is little superior to their scholarship. "In Edinburgh University the prescriptions given are bad." "In Glasgow they are not satisfactory." Curiously far from satisfactory we should say, if the Glasgow prescription given is any fair specimen of its class.[2]

It will be noticed that this specimen has every possible fault, except one, which a prescription could exhibit; its Latin is bad, its dosage is dangerously incorrect, and its preparation is impossible. And so with most of the other examining universities and corporations. In Dr. Glover's own pregnant words:—"At the very best these reports (of the visitors) show that in the art of prescribing, in which I should include not Latinity only or chiefly, but the faculty of injuring or benefiting one's patient, the candidates are practically unexamined by the great body to which we look with great confidence and respect in England—the Conjoint Board of the two Colleges—and the peeps which we are allowed to have into the prescribing and therapeutical notions of candidates in other examining bodies show that this branch of medical knowledge is neglected in favour of more recondite, but perhaps less useful, knowledge."

On the equally or still more important subject of diagnosis, the examining bodies seem less open to censure. The General Medical Council has insisted upon clinical tests at all qualifying examinations, but Dr. Glover shows us how contracted the range of these clinical examinations really is, and that the class of disease which the student is trained at his hospital to recognise, and on which he is examined, forms a very small percentage of those he has to meet, distinguish, and cope with in actual practice.

While Dr. West, for instance, assures us[3] that children form one-third at least of the ordinary practitioner's patients, and that the diseases to which they are subject have many peculiarities and are unusually fatal, many of the examining bodies ignore children's diseases altogether in testing the knowledge of candidates for medical qualifications. While Sir Wm. Aitken tells us[4] that about 25 per cent. of all deaths in Great Britain are caused by the so-called zymotic diseases, patients suffering from this class of illness are excluded from the general hospitals where the education of students is carried on, nor are they used as material for the clinical examinations of the various qualifying bodies. The consequence of this neglect of instruction being that the newly qualified practitioner is ignorant on the subject of fevers, and only learns through the bitter experience of his patients and himself their nature and diagnosis. In one striking experience quoted by Dr. Glover—that of a provincial medical officer of health to a large town—only 58 per cent. of the cases of small-pox reported to him by the various qualified practitioners of his district proved to be the disease represented. The instance, perhaps, proves too much, unless it can be shown that the 42 per cent. of mistakes were all committed by the newly fledged; but it is true that mental diseases, ophthalmic cases, skin diseases, gynæcological cases, as well as many forms of ordinary acute illness, are also neglected from an examina-

[1] London: Baillière, Tindall and Cox.

[2] "℞ Extracti Filix Mas liquidi ℥ss;
Aquæ ad ℥j; M. Sig. The draught."

[3] *Diseases of Infancy and Childhood*. Sixth edit., page 1.

[4] *Science and Prac. of Med*. Sixth edit., vol. i, page 354.

tion standpoint, and there seem many reasons to believe that, from an educational point of view, they are little more considered.

Examinations are no doubt necessary for testing the fitness of men to undertake a monopoly of the care of other men's lives and health; but, like everything else, unless due thought be taken for the weakness of the material with which they are to deal, they will do harm as well as good. It is too much the habit of men preparing themselves or others for an examination to consider the passing it successfully as an end, and not a mere test of the excellence of previous preparation. When the scope of an examination is limited and the subjects undertaken few, we may be quite sure that the preparation for passing it will be conducted on equally contracted lines. At present nearly the whole of the clinical cases given in medical examinations are chronic cases, principally diseases of the lungs and heart; so that the student has no necessity to go outside the walls of his own hospital in search of objects of study in order to satisfy the test he expects to encounter. It is only when he has obtained his licence to practise, and finds out, as all young practitioners must, that his diploma is no order on fortune, but only a permission to earn a living if he can, and that the examination of public opinion has still to be passed, whose certificates can only be procured by answering, passably at least, the questions put to him by disease and death, that he finds how illusory his educational preparation has been, how inefficient the test of his knowledge to which he has been subjected. Surely, as Dr. Glover says, "it is the duty of the General Medical Council to see that such defects in medical education as are now brought to light are duly noted and remedied."

What alterations in education and examination are needed it is scarcely in the province of outside medical opinion to indicate at present. It is, however, our duty by public speeches, by resolutions, by written articles, by representative meetings, to show that the practical training and testing of the medical practitioner of the future is lamentably deficient. It is for the General Medical Council to formulate a policy—whether of apprenticeship, of prolonged attendance at hospitals, both general and special, or of wider practical training under present conditions—whereby the existing defects may be remedied.

EPIDEMIC INFLUENZA.

THE telegrams from St. Petersburg announcing the existence there of an epidemic affecting a large proportion of the population, probably describe—some doubts to the contrary notwithstanding—an outbreak of true epidemic influenza. It is so long since there has been a well-marked general epidemic of the disease in this country that it may be well to recall some of the characters of this, in many respects the most typical of epidemic diseases.

Influenza is of all epidemic diseases that which attacks the largest number of people within a given short time; some of the stories of the majority of individuals in large populations being almost simultaneously attacked are almost incredible, but the sober estimate of the late Dr. Peacock was that more than one-quarter of the whole population of London suffered during the epidemic of 1847-48; in Paris at that period the proportion was said to be nearer a half. At one time it was supposed that influenza always travelled across Europe from east to west, and, though this has been proved to be very far from invariable, still it is a fact that in several of the great pandemics the disease has been first heard of in Russia; hence it was at one time known in Italy as the German disease, in Germany as the Russian pest, and curiously enough in Russia as the Chinese disease, owing probably to the fact that the outbreak there in 1831 had been preceded by a prevalence of the disease in the previous year in China. The theory which has again been given currency in the telegrams from St. Petersburg that epidemic influenza is a forerunner of cholera need only be mentioned in order that it may be condemned as utterly unfounded. There has been cholera this autumn in Persia, and it may spread into Southern Russia and become even widely extended; but experience of former epidemics has abundantly proved that there is no kind of causal connection. In fact, in nearly every instance in which epidemics of the two diseases have been coincident the influenza has begun after and ended long before the cholera epidemic. If we are forbidden to speak of any coincidence of natural events, we are at least, as Gluge has well said, debarred from applying to it any other term.

The rapidity with which the disease affects one great tract of of country after another is so great that Hirsch has been tempted to say of the great pandemics of 1833 and 1837 that many countries were "smitten by the disease as if at one blow." Thus in the first of these years it overspread Russia in January and February; in March it appeared in Poland, Bohemia, Northern Germany, Denmark, Egypt, and Syria; in April it began to prevail in Austria, Hungary, France, Great Britain, and Ireland; Tyrol, Dalmatia, and Italy suffered in May, the Netherlands in June, and so on. Not only is the epidemic rapid in attaining its maximum, but the symptoms are sudden in their onset; the impression which this suddenness has made on the popular mind is evidenced by some of the names which have been applied to it; thus in parts of Germany it has been called *Blitz-catarrh* (lightning cold), and in France *la grippe*, a word derived from, or closely related to, the verb *gripper*, which signifies to snatch, and is the equivalent in *argot* for our slang "to nab."

The severity of epidemics has varied a good deal, but, as a rule, influenza is a mild disease with a low mortality. The estimated mortality in the epidemic of 1837, which was of a severer type than any other of which statistics exist, was only 2 per cent. The symptoms are, in the majority of cases, those with which everyone is familiar under the name of "a common cold," but in an aggravated form. In severe cases there is sharp fever lasting four or five days, or even longer, and generally accompanied not only by the usual symptoms of coryza, but by very marked nervous depression, which may even amount to stupor or delirium. In other cases, gastro-intestinal catarrh is a prominent symptom. The most common complication (if, indeed, it may be so called) is bronchitis, to which catarrhal pneumonia may be superadded, or pulmonary œdema or collapse. To these pulmonary lesions, which are most often observed in the very young or the old and feeble, most of the deaths recorded have been attributed.

A very interesting fact with regard to epidemic influenza is

that its prevalence in the human race has often been coincident with the prevalence of a similar disease among domestic animals—dogs, cats, cows, and especially horses. In the horse it commences suddenly with sneezing, followed by rigors, fever, bronchitis, and a short dry cough. Many horses may be attacked simultaneously, or almost so, so that in a few days all the horses in a large town, or even throughout an extensive tract of country, may be incapacitated. We read, for instance, of one of the American epizoötics, that "its appearance in a city was followed by the withdrawal of horses and mules from the streets, until the busiest thoroughfares assumed the stillness of the Sabbath."

That this specific influenza of the horse is identical with the human disease which bears the same name cannot be positively affirmed, but the probability of identity is very great. Loew seems to have been the first to point out this coincidence, which he had observed during the epidemic which swept over Europe from Iceland to Sicily, and from Russia to Spain in 1729-30. In 1758, Dr. Robert Whytt was struck by the fact that an epidemic of influenza in Great Britain was accompanied by a similar disease in horses, and observations pointing in the same direction were subsequently made by Huzard, Gluge, d'Arboval, and many others.

In 1872, there was a widespread outbreak among horses in the United States, followed, early in 1873, by a universal prevalence of the disease among the people of North America. Dr. James C. Wilson, of Philadelphia, during the prevalence of the disease in Canada and the Eastern States in 1880, observed in several localities that "the horses were first affected, the dogs next, and after the lapse of some weeks, as the animals were recovering, the disease became epidemic; but those persons who took care of horses, and were much in contact with them, neither suffered earlier nor more severely than others not so exposed.[1]" It is, interesting, therefore, to learn that influenza has been prevalent among horses in this country during the last six weeks, and that recently the epizoötic has attained such large proportions that the price of cartage has gone up in the coal and other markets.

The etiology of epidemic influenza bristles with difficulties; we may, however, at once dismiss the idea that it has anything to do with climate, weather, or season; this is proved by very numerous facts, but only one need be mentioned here, namely, that in 1837 it prevailed at the same time, and consequently at exactly opposite seasons, in the northern and the southern hemispheres, in midwinter in England, and in midsummer at the Cape of Good Hope. That epidemic influenza is a specific infective disease, produced, therefore, by a uniform and specific cause, can hardly be disputed, and is, indeed, admitted by Professor Hirsch, who refuses to believe that it spreads by contagion, and entirely rejects the theory of a *contagium vivum*. Sir Thomas Watson, however, who saw the disease in the great epidemic of 1847-48, believed that the instances in which influenza had been observed to break out in a town in those houses first at which travellers from infected localities had lodged were too numerous to be mere coincidences. Modern bacteriology has even provided the theory of contagion with a specific micrococcus, which was described by Dr. Siefert, of Würzburg, a few years ago; he found the "influenza-cocci" in the expectoration from all cases of influenza, but not in that from ordinary bronchial catarrh. Transmission by human intercourse, however, will with difficulty serve to explain all the facts; thus Dr. Jones, of Philadelphia, writing in 1826, before the age of railways and steamboats, says:[2] "This epidemic affects a whole region in the space of a week, nay, a whole continent as large as North America, together with all the West Indies, in the course of a few weeks, while the inhabitants could not within so short a time have had any communication or intercourse whatever across such a vast extent of country." A remarkable epidemic on board the French frigate *Duguay-Trouin*, described by Dr. Chaumezière, is also difficult to explain on the theory of human transmission. The epidemic broke out four days after the frigate had sailed from Gorée, in Senegambia, where not a trace of the epidemic had shown itself; while another ship of war which had left Gorée two days earlier arrived at Brest without having had a single case of influenza on board. That the specific cause is, as a rule, carried in the air is highly probable, and we may be content to speak of it as a miasm, if, to quote Professor Hirsch, "we remember that nothing more is expressed thereby than that which the physicians of the sixteenth and seventeenth centuries called a 'fouling of the air,' and that, in setting up a name in the place of an obscure conception, we do not bring ourselves by that means a single step nearer to a knowledge of the cause of the disease."

[1] Pepper's *System of Medicine*, vol. i, p. 859.

[2] Quoted by Hirsch, *Handbook of Geographical and Historical Pathology*. Translated by Dr. Creighton for the New Sydenham Society.

THE DWELLINGS OF THE LABOURING CLASSES.

ONCE more the important and pressing question of the housing of the working classes is asserting its claim to a share of public attention, and most opportunely Mr. Ritchie, as President of the Local Government Board, has shown his interest in the question and his determination to use his influence and whatever powers he possesses in promoting the much-needed improvement.

In the circulars which we print at page 1299 he has shown why there is so much cause for complaint as to the condition of the dwellings of the poor and how that cause can be removed. His comments constitute a grave indictment against a considerable proportion of our local bodies.

Mr. Ritchie's recapitulation of the various comprehensive, though somewhat complicated, statutory provisions relating to the subject, and his strong expression of opinion as to the neglect of sanitary authorities to put them in force, are in accord with the opinion expressed some four years ago by the Royal Commissioners on the Housing of the Working Classes, that there has been "failure in administration rather than in legislation, although the latter is no doubt capable of improvement."

Looking at the state of affairs in the metropolis, we find that in some districts the action of energetic health officers has secured—often after much opposition—useful action on the part of the vestries and district boards; but in other metropolitan localities the various sanitary Acts are very imperfectly administered. No doubt the proper remedy for this evil will be the reform which is contemplated in the constitution of

the local bodies themselves. The present methods of electing the vestries and district boards of London are entirely out of date, and the sooner the long-promised reform of metropolitan vestrydom is brought about the sooner will sanitary administration be put on a satisfactory footing.

In the meantime, much good would result from a more systematic adoption of the recommendation of the Royal Commission on the Housing of the Working Classes. The Commissioners expressed their opinion that motive power was specially required, and that probably there could be no stronger motive power than public opinion. With the view of bringing specially under public attention the sanitary condition of the different districts in the metropolis they recommended that "the Secretary of State should be empowered to appoint one or more competent persons for the purpose of inquiring as to the immediate sanitary requirements of each district, having regard to the several powers entrusted to the local authority, whether the Metropolitan Board of Works or the vestry or district board; that the local authority should be empowered to nominate members of their own body to act with the officers so appointed; and that the reports of such inquiries should be transmitted to the local authorities and should also be laid before Parliament." In making this suggestion the Royal Commissioners seem to have had in contemplation some direct and independent interference on the part of the Government. Yet, only three or four inquiries have been held in pursuance of the recommendation, and they were undertaken in consequence of urgent representations from the Mansion House Council on the Dwellings of the People. Not a single inquiry has been initiated by the Secretary of State. The Home Secretary has no staff of experts for making such inquiries, and it is regrettable that the powers of the Home Office in this matter have not been transferred to the Local Government Board, whose Medical Department is well qualified to deal with the matter.

It is also very necessary that the local arrangements for sanitary inspection should be increased. The Royal Commissioners already referred to pointed out that inspection, to be effectual, must be performed by an adequate and qualified staff; but they also pointed out that in Islington and St. Pancras there was only one inspector to nearly 60,000 persons; in Greenwich, one to 65,000; in Bermondsey, one to 86,000; and in Mile End one to 105,000. This inadequacy of the local arrangements was borne out by the recent report of the Government inspectors, on the sanitary requirements of Bethnal Green and Rotherhithe, and in these cases the habitual hesitation of local authorities to increase their inspecting staff was very clearly evidenced.

There are undoubtedly many important amendments of the law required, but in the present case that is not a valid excuse for allowing the existing statutory provisions to remain in abeyance.

THE Governor of Bombay in Council has appointed Dr. K. N. Bahadurji, M.D., B.S.Lond., Gaekwar Professor of Clinical Medicine and Pharmacology in the Grant Medical College, Bombay.

IN the discussion on the Diagnosis and Treatment of Aortic Aneurysms to be opened on Monday, December 9th, by Dr. Douglas Powell, at the Medical Society, Sir Andrew Clark, Dr. Quain, Dr. Broadbent, Dr. Mitchell Bruce, Dr. C. Theodore Williams, Dr. Goodhart, and Dr. J. K. Fowler will be among the speakers.

THE Contagious Diseases (Animals) Act Executive Committee of the London County Council report that during the last twelve months 109 dogs have been found to be rabid, as against 27 in 1887 and 49 in 1888. The number of deaths from hydrophobia has been 7 in 1889 (to October 30th) as against 2 in 1887 and 3 in 1888.

DR. BANCROFT, Sen., of Concord, N.H., formerly superintendent of the State Insane Asylum, was recently seized with hemiplegia while conducting the meeting in Boston of the New England Psychological Society, of which he is President. Towards its close he noticed that his left side was becoming gradually disabled. With a singular fortitude under the circumstances, he continued his duties as presiding officer, rising to make some concluding remarks, though leaning heavily against the table for support, and even putting the motion to adjourn after he had been assisted into his chair. We are glad to learn from the *Boston Medical and Surgical Journal* that this courageous gentleman is making good progress towards recovery.

HOUSING OF THE WORKING CLASSES.

IT is stated that it is the intention of Her Majesty's Government to consolidate all the Acts of Parliament dealing with the housing of the working classes into one single Act in order to facilitate their application by local authorities. The work of consolidation is at present being carried out, and it is hoped that it will be finished before the opening of Parliament. Such a measure is much called for.

A FATAL GAME.

THERE seems to be at last some hope that football players will adopt and enforce rules which will do something to minimise the present dangers of that game. No fresh evidence was required to convince reasonable men that some reforms and restrictions are necessary; but unfortunately the reports of football matches are, as a matter of fact, continually affording fresh evidence. Last week two serious accidents occurred: on November 30th a man playing for Shipley had his leg broken, and on November 25th a student, aged 22, in the Hants Diocesan Training College, sustained a fracture of the spine in a scrimmage. The unfortunate young man died shortly afterwards, and the coroner's jury returned a verdict of "Accidental Death." No time ought to be lost in framing the new rules, by which it is hoped that such accidents may be rendered impossible in future.

THE SUPPLY OF SURGICAL APPLIANCES.

THE extent of the useful work which is being done by the Charity Organisation Society in the provision of surgical apparatus for such out-patients of the metropolitan hospitals as, for various reasons, cannot be sufficiently relieved by the hospitals themselves, is shown by a statement published this week bearing the signatures of five hospital surgeons. From this it is seen that during the last five years about 5,500 appliances of various descriptions have been supplied to poor persons whose circumstances have been fully investigated, and who, in not a few instances, have themselves contributed towards the cost of their instruments. The plan upon which the instruments are provided is found very satisfactory. The appliance is ordered on the instructions of the surgeon by whom the case is being treated at a hospital or elsewhere; and on completion it is fitted on the patient in the surgeon's presence, and no instrument is paid for until the surgeon has certified to its entire suitability. There is thus, the

signatories observe, the utmost guarantee that it fits and meets the needs of the case. Their experience shows that the instruments are supplied without any unnecessary delay, and they express the earnest hope that funds may be forthcoming with which to maintain the work.

AN ADDENDUM TO THE "BRITISH PHARMACOPŒIA."

As will be seen by the report of the recent session of the General Medical Council, the *Pharmacopœia* Committee has been authorised to prepare and publish an addendum to the last edition of the *Pharmacopœia*. We understand that it will be drawn up on the same lines as those followed in the preparation of the Addendum to the *Pharmacopœia* of 1867. It will contain only remedies of undoubted value, which have come into general use since the publication of the last edition of the *Pharmacopœia* in 1885. No doubt, as on previous occasions, inquiries will be addressed to the medical corporations and to the Pharmaceutical Society. We may venture to express the hope that the last named body may, on the present occasion, show a disposition to give to the *Pharmacopœia* Committee all the assistance which it is in its power to render.

THE UNIVERSITY OF LONDON.

THE report of the Senate on the reconstruction of the University has this week been forwarded to the Royal Colleges of Physicians and Surgeons, and to other public educational bodies interested therein, and it is hoped that the proposed amended Charter of the University may be considered by Convocation at its meeting on Tuesday, January 21st. In order that this may be done, the effort is being made to hasten its completion at an early date; and, if possible, a copy will be issued to each member of Convocation some time before the meeting, so that the scheme may be well considered beforehand, and a vote for its acceptance or rejection be thus taken at the meeting in question.

THE HOSPITAL SATURDAY FUND.

AT the monthly meeting of the delegates of the Hospital Saturday Fund, held on November 30th, Sir James Whitehead in the chair, it was resolved: "That this meeting of delegates instructs the Distribution Committee to make no grant to St. John's Hospital for Diseases of the Skin, until an examination of the accounts has been made by a public auditor nominated by the Board, and his reply has been submitted to and considered by the Board." After a discussion, in which Sir James Whitehead, Colonel Charles Mercier, Alderman Gould, and others took part, it was agreed that such an auditor should be appointed, and that the details should be subsequently arranged by the Office Committee of the Hospital Saturday Fund. At the same meeting the delegates agreed to distribute the sum of £12,000 among the various hospitals and dispensaries at the close of the year, the amount last year being £10,000.

COLOUR-BLINDNESS IN THE MERCANTILE MARINE.

THE report on colour-tests in the British mercantile marine for the year ending May, 1889, gives a detailed account of the mistakes made by the candidates who were rejected on account of defective colour-vision. We wish we could say that we have the least confidence in the accuracy of the results of these examinations. It is stated that the mode of conducting the colour-test examination is fully described in the report for the year 1887. We have that report before us, and we commented on it at the time it was issued. We pointed out then, and we repeat the statement, although it is perfectly futile to do so, that the tests employed are defective, since they may cause men with faulty colour-vision to escape detection, and may lead to the rejection of others, who are not colour-blind, from nervousness or ignorance of the names of colours. That this latter accident may occur is evident from the fact that candidates rejected as being colour-blind sometimes pass subsequently. It is admitted on all hands that colour-blindness is incurable, therefore such must either have been wrongly rejected at first or wrongly passed afterwards. The test consists in naming the colours of certain cards and of coloured glasses in a lantern. It is considered unsatisfactory by the examiners to the Board of Trade to call a pink card "red;" it would be interesting to know how many seafaring men would call it by any other name. It seems to be forgotten that uneducated persons are often entirely ignorant of the names of any but the primary colours. Some of the candidates seem to have heard that this particular card must not be called red, and, never having heard of pink, they hazard wild guesses at the colour. Why cannot the Board of Trade adopt some test which is known to be efficient? and why cannot men be examined earlier in their career? It does seem rather hard that a man who has been over thirty years at sea should be told that he is no longer serviceable because he is colour-blind when he has had the defect all his life.

HOSPITAL ABUSE IN BIRMINGHAM.

FOLLOWING up the recent meeting reported in our pages, a deputation, headed by Dr. Wade, president-elect of the British Medical Association, and including Mr. Lawson Tait, Mr. Marsh (hon. secretary), Mr. E. Chesshire, Mr. Herbert Bracy, Mr. Newton, Mr. H. Eales, and Mr. Hall Edwards, waited upon the Mayor to suggest that he should summon a conference of representatives of (1) the medical profession, (2) the hospital charities, and (3) from lay bodies such as the Hospital Saturday Fund, the Board of Guardians, the lay administrators of the large hospitals, of the special hospitals, and a few other representative persons, to meet to take evidence as to the existing defects in the administration of hospital relief, and suggest remedies. The Mayor (Mr. Clayton) said that in the report of the Charity Organisation Society for 1887-8 it was stated that one-half of the people that obtained gratuitous relief in medical charities were able to pay a fee. It would be necessary, however, that nothing should be done which would increase the number of persons placed on the parochial relief list. He had no doubt that the subject was one which required investigation, and proposed to call a conference on January 15th, 1890.

A CURE FOR OVERCROWDING IN THE MEDICAL PROFESSION.

THE position of medicne man to a tribe of American Indians, though an office of considerable honour and some emolument, is not free from serious responsibility. The Swinomish Indians, of Washington Territory, having for some time suffered from an epidemic, solemnly tried their medicine man, Big Bob Sattoo, for that he being responsible by virtue of his office for the health of the tribe had permitted, or had not prevented, the epidemic. He was condemned to death, and the sentence was carried out by four Indians selected for the purpose. These four men have since been arrested, and will be tried for murder. The *Worcester Spy*, from which the *Boston Medical and Surgical Journal* quotes this story, ventures the opinion that "if doctors in civilised communities were held to so strict responsibility as these Indians exact of their medicine man, their profession would not probably be crowded."

THE PENAL POWERS OF THE GENERAL MEDICAL COUNCIL.

IT is understood that the case of Partridge *v.* the General Medical Council will probably be heard before Christmas; the plaintiff claims large damages for the removal of his name from the *Register*. It may be remembered that the Court decided that the name had been on the first occasion erased from the *Register* in a

manner which was, legally speaking, improper. It is stated that Mr. Leeson, whose name was erased from the *Medical Register* last week, is about to apply for an injunction to restrain the Council from publishing the minutes of their proceedings in his case. Some months ago it was announced that the legal advisers of the Council had drafted a Bill for improving and simplifying the procedure and defining the Council's powers in penal cases. This draft Bill was, we understand, again considered at the meeting of the Executive Committee on November 25th, but it is not probable that it will now be proceeded with, as further consideration has shown that the statutory powers already possessed by the Council are sufficient to enable it to make arrangements by which the desired ends will be attained.

THE LONDON SCHOOL OF DENTAL SURGERY.

THE annual dinner of the staff and past and present students of the Dental Hospital of London and London School of Dental Surgery was held at the Holborn Restaurant on November 30th, under the presidency of Mr. Christopher Heath. After the usual loyal and patriotic toasts Mr. J. S. Turner gave the toast of the "Dental Hospital of London and Staff," to which Mr. Woodhouse responded. Mr. Morton Smale acknowledged the toast of "The London School of Dental Surgery," observing that, while he agreed with Mr. Turner as to the good likely to accrue to the dentists from the increased curriculum, he hoped yet to see the day when all dental students, like all medical students, would not only have the same curriculum, but would also have to pass the first and second professional examinations for the conjoint diploma. The reports and statements made indicated the great usefulness of the institution.

MEAT POISONING.

SINCE attention has been directed to the frequency with which serious poisons are developed in meat by processes of incomplete putrefaction, cases of meat poisoning are frequently reported and become the subject of public inquiry. It does not appear, however, that the increasing knowledge has as yet succeeded either in instilling due caution into the minds of the ignorant householder or of the careless vendor; and the question is ripe for decision whether some further penalties should not be imposed to prevent such occurrences, of which the frequency is now fully demonstrated. Several cases of poisoning have lately occurred at Carlisle, due, it is thought, to the eating of diseased pork in meat pies, and there were strong suspicions that one death which has occurred was due to this cause. Last week there was reported from Oldham the poisoning of a family of five persons through eating bad liver, contained in a stew which had been left standing since November 22nd, and then given to a charwoman. Some of those who partook of this meal are said to be still in a critical condition. An inquest was held on November 28th at West Bromwich on the body of a child aged 4 years, who, it was stated in the evidence, had partaken of some of the scrapings of empty meat tins, and who was proved to have died of irritant poisoning.

BOGUS MEDICAL COLLEGES.

IT is reported from Portsmouth, U.S.A., that a bogus college of medicine has been formed there, similar in management to, and larger in extent than, the Druid College, of Maine, a full exposure of which was made some years ago. This latest chartered institution is the Trinity University of Medicine and Surgery, having nominal headquarters at Bennington, Vt. Any person desiring to buy a diploma covering both medicine and surgery may have a choice of the following institutions, all of which exist merely on paper: University of Cincinnati, Montreal Medical College, New York State Medical College, University of New Hampshire, Trinity University of Medicine and Surgery. The price of these bogus diplomas varies from 60 dollars to 300 dollars.

EXHIBITION OF NURSING UNIFORMS.

AN exhibition of nursing uniforms, representing those adopted by upwards of a hundred nursing organisations and institutions in Great Britain, will be held in the Board Room, Charing Cross Hospital, on Monday and Tuesday next. Various costumes will be shown on miniature figures of regulation size. The whole of the dresses have been made by nurses. The show is likely to be a very pretty as well as an interesting one, and it is proposed to permanently preserve the exhibits for the purpose of reference. The exhibition has been organised by the *Hospital*, and has been in preparation for many months.

FOUND DEAD IN BED.

How much more sensible it would be and certainly much more true if juries would content themselves, in the useless inquests which are so frequently held on the bodies of young infants, with a simple statement that the infant was found dead, instead of the everlasting "death from natural causes," which ninety-nine cases out of a hundred, it is no exaggeration to say, is simply false. The latest instance that has come under our notice differs in no respect from the numerous cases that we have from time to time commented upon. An infant of a fortnight old is found dead one morning; the doctor who had attended the mother in her confinement is called in, and very properly declines to give a certificate; the coroner holds an inquest, and a neighbour gives it as her opinion that the child died from convulsions; and forthwith, we might say incontinently, the jury return a verdict of death from natural causes. Such inquests as this are, we say deliberately, direct incitements to child murder on the part of bad women; and so long as coroners are allowed to hold inquests which are only inquests in name, and which do not in the slightest degree contribute to ascertaining the probable cause of death, so long shall we continue to hear of the deaths of infants at an age where there is no natural cause for death.

TYPHUS FEVER AND THE OPERATION OF THE NOTIFICATION ACT.

WE are from time to time reminded by the reports of medical officers of health that, in spite of modern sanitary improvements, typhus fever still prevails in the metropolis, in Liverpool, and in other populous urban districts of England. The recently-issued report of Mr. Vacher, the able and experienced medical officer for Birkenhead, is specially interesting, as indicating some of the difficulties attending the operation of the Notification (Infectious Diseases) Act, which it is necessary the public should understand. The number of cases of typhus reported in Birkenhead during the last three years has been forty. But Mr. Vacher does not think that this number represents the sum of the cases which occurred during these three years; though, he adds, "there is no reason to believe there were any cases deliberately concealed, because typhus fever is a disease which usually creates so much alarm that friends and neighbours of the patient are always ready to report it when they recognise it." Mr. Vacher, in his report, goes on to make the following interesting and important remarks: "There is evidence that cases of typhus fever, perhaps not rarely, escape being reported through their not being recognised as such, but regarded as acute inflammation of the lungs or brain, etc. The sanitary authority consequently does not always receive information of the critical cases of an outbreak. The weak point in our armour of defence against typhus is the great difficulty of recognising the disease in its early stage. For twelve days or a

fortnight after the subject has been infected he remains to all intents and purposes in absolute health; and even after the fever has begun it may be a week before the characteristic eruption makes it appearance. Thus it happens that medical advice is probably not sought till some risk of infection has been incurred; and when a practitioner is called in he is naturally unwilling to certify 'typhus' till the spots begin to appear and show what the disease is. It may therefore often happen that no notice of a case is received till the disease is so far advanced that transfer of the patient to hospital becomes impracticable. Under the circumstances it is a cause for wonder, as well as congratulation, that typhus fever has been so successfully dealt with in recent years, and that it is so rarely suffered to spread." Mr. Vacher's valuable observations afford additional illustration—if such is needed—of the necessity for giving students practical instruction in the diagnosis of fevers; though, even in the case of well-informed medical practitioners, there are, as Mr. Vacher points out, practical difficulties attending the early notification of some of the infectious fevers with which it is important that sanitary authorities, as representing the public, should be made fully acquainted.

FEEDING THE HUNGRY CHILDREN.

As the weather gets colder ill-fed children suffer much. It is said by a committee appointed to inquire, through the teachers, that 43,000 inadequately fed children are attending the Board schools of London, and many more must be in attendance at voluntary schools. This is depressing for those who think of the condition of poor neighbours, and the effects of starvation in stunting growth and development, and rendering practically useless the expensive education now provided. Still, the large number of cases to be dealt with should neither paralyse organised effort nor lead to an unwise feeding of all the poor. A strong effort is being made to organise the various voluntary associations to economise methods of procedure; and it is not proposed that the School Board should act in its official capacity, or further tax ratepayers. The School Board Children's Free Dinner Association have now a seven years' experience, and are asking further aid. In this work it is highly desirable that a self-supporting system be followed, as has been successfully carried out in several places. It would doubtless be a great boon if free buildings could be erected for the supply of meals near the schools, and plant might be provided; but, unless the cost of food and cooking is covered by the children's pence, the plan is, after all, but giving doles and bribes for school attendance—a plan sure to be followed by an ever-increasing mass of poverty. Voluntary assistance by ladies in dispensing the food is a humanising agency, but free gift of food undoubtedly tends to pauperise the parents. In some districts, where there are Schools of Cookery, preparation of food costs nothing. In Vienna, "cooking kitchens" on a self-supporting basis have existed and extended during seventeen years, with a money turnover of £40,000 last year. To provide dinners for school children on a commercial basis would be a truly philanthropic work, tending to improve our child-population.

LIBELLING A POOR-LAW MEDICAL OFFICER.

Mr. Inglis Mason, surgeon, of Sudbury, in Suffolk, has successfully vindicated himself against charges of heartless and cruel conduct brought against him by a local paper. The *Sudbury Echo* charged him with neglect of the poor as medical officer of the district in three cases. In all three the writer of the series of articles complained of had apparently relied upon *ex parte* statements from the aggrieved persons, without taking the trouble to make the very slight investigation which would have shown them to be groundless. In defending the action for libel which Mr. Mason had brought, the defendant acknowledged in court that he was misinformed as to the facts, but nevertheless he does not appear to have tendered any apology. In the third instance he pleaded justification. The charge was that Mr. Mason had declined to attend, without a fee, or the order of the relieving officers, the child of a woman who was shown to be living with a weaver, earning not less than 20s. a week, who had a few days before the woman's application received the sum of 57s., and who was therefore in a much better position than the majority of the inhabitants and the union, where the average wages of the labourers ran from 10s. to 12s. a week. He was living in a house for which he paid 10s. a month. To describe the conduct of Mr. Mason in such a case as "parsimonious and heartless," which were the words used in the libel, complained of, was obviously wrong and unjust, both in fact and in principle. The summing up of the judge, Mr. Justice Cave, put all the facts in a very clear light, and the jury returned a verdict without retiring to deliberate. Strangely enough, it appears to us, the damages were assessed at £20, the defendant escaping thus lightly on the grounds that there was no evidence of personal malice or vindictiveness, and that exemplary damages were not called for. On the other hand, it is manifest that such an attack upon the character of a medical man, so carelessly initiated and carried on with so much bitterness of language, would under ordinary circumstances be calculated to do an infinity of harm. Possibly the jury may have considered that Mr. Mason's character stood too high in the neighbourhood to be seriously injured by gratuitous insults of the kind, and they may not have assessed the influence of the local journal in question at a very high value. In any case, Mr. Mason may be congratulated on having vindicated his character, and having taught a lesson which, it may be hoped, will spread beyond his neighbourhood, and may prevent careless and cruel attacks of the kind upon medical men in the performance of their arduous and ill-paid duties in general practice. The generosity of the profession and the extent to which it is often abused are proverbial. and it is well that any attacks of this kind made on *ex parte* statements of an incorrect nature, should be corrected and punished.

AN "INDIAN OCULIST."

The case of Polmear *v.* Abdlkrem presents several features of importance and interest. The facts are comparatively simple. The defendant was one of a class well known in India, who go about from place to place performing an operation for cataract which bears some resemblance to couching. These persons are itinerant quacks, exactly on the same footing as those frequently met with at country fairs in this country, the only difference being that a wholesome fear of the law in the mind of the performer and perhaps a little less credulity on the part of the victims usually leads these latter to steer clear of any operative proceedings. The defendant settled in Redruth, in Cornwall, together with an assistant, who is also an Indian, opened several branch establishments, and issued advertisements stating that he was an Indian eye doctor, and that he performed cures without operation. Among other patients, a certain Mrs. Polmear applied to him. He told her that she had cataract, applied blisters to the temple, for which he charged a sovereign, and attended her for a time at a charge of ten shillings a week; he then said an operation was necessary, and accordingly he operated on October 6th. There was no dispute as to the proceeding adopted—it was described by the defendant, and by a Dr. David Williams, who was present, and of whose part in the proceedings we shall have something to say presently. It consisted in making a puncture with a lancet in the ciliary region, and then in the introduction of a bent wire, the end of which passed over the edge of the lens, so that it was visible in the anterior chamber (we quote Dr. Williams); the lens was then

hooked back into the vitreous. Certain charms were then performed, also in the presence of Dr. Williams, M.R.C.P. Among these the passing of burning coals before the patient's face, and the application of a brick to her head figured prominently. We have said that the nature of the operation was not disputed, but it should be added that although Dr. Williams stated upon oath that the ciliary body was not wounded, yet according to his description, which is most detailed, the ciliary body could not have escaped injury. Dr. Williams's further statement that the operation is one which might be with advantage introduced into practice in this country is obviously founded upon ignorance. Severe inflammation followed, and the eye was lost. That this was the direct result of the operation there seems to be no doubt, although the defendant and his friend, Dr. David Williams, attributed it to the patient's own indiscretion, and considered that the eye was not lost. The evidence on this point was overwhelming. Mr. Square, of Plymouth, Mr. Helm, and others gave positive evidence on both these points, against which Dr. David Williams's opinion, nothwithstanding his peculiar views on surgery, weighed as nothing. As only about a month had elapsed when proceedings were commenced, it is extremely probable that the patient will lose her other eye from sympathetic inflammation, but she preferred taking steps at once, probably thinking it not unlikely that Mr. Abdlkrem would shortly change his residence. Accordingly she only claimed £50 damages, and after a prolonged and patient hearing of the case before Judge Morgan Howard, Q.C., she has been awarded the full amount. The facts, therefore, as far as the plaintiff and defendant are concerned, are plain enough, and not of very general interest, but there are certain minor points which wear a very different aspect. The defendant produced a document in Hindustani which he said was a diploma from the Medical College at Lahore. Everyone who knows anything about Indian affairs is aware that an official document of this kind is never printed in the vernacular alone. It would have been interesting to have known what the contents of this valuable document really were, but that will never transpire, for the medicine-man, finding that there was a prospect of its being interpreted, sent it to India "to be translated by a friend." To anyone who knows the real status of these itinerant quacks in India, even among the natives themselves, it is amusing to hear a learned judge gravely speaking of him as following the "Indian school of surgery," and of the operative proceeding of couching still being practised by that school. It is much the same as if we were to speak of a village blacksmith who sets a broken leg as "following the practice of the rural school of surgery." We are, however, but little concerned with the opinions of the judicial bench on these points, but we, in certain other points have a special interest for the profession. We would like, for instance, to know how it is that a Member of the Royal College of Physicians, and a Doctor of Medicine of St. Andrews University, and a Member of the Royal College of Surgeons directly countenances an advertising quack, by being present, not, be it understood, by accident, but by arrangement, at operations and charms performed by him. We shall be glad to know what steps these various bodies and the General Medical Council intend to take to express their disapproval of such proceedings.

AMBULANCES FOR INFECTIOUS DISEASES.

On November 30th the Metropolitan Asylums Board had under consideration the report of its Ambulance Committee, upon Section 6 of the Poor Law Act, 1889. The section referred to empowers the Board to allow its carriages to be made use of for the conveyance of persons suffering from "dangerous infectious disorders" to places other than the Board's hospitals. The Board has wisely resolved to avail itself of this power at once. The charge to be made for the use of each conveyance is fixed at 5s for the present; but discretionary power is conferred on the Ambulance Committee to remit the charge for such conveyance when they deem it is expedient in the interest of the public health. The Committee is further authorised to convey persons under exceptional circumstances to or from places outside the Metropolitan area, and to make an extra charge for doing so. The Committee is also entrusted with the duty of framing such regulations as may be necessary to give effect to the several decisions arrived at by the Board. The important step which the Board has thus taken marks a new era in a part of the sanitary administration of the metropolis which has hitherto been very defective. The practice of using public conveyances for the infectious sick entails considerable danger to the public; and there are many practical difficulties in securing the disinfection of vehicles which have been so used. By placing its ambulances at the service of the public, the Metropolitan Asylums Board has adopted an enlightened policy, and is establishing a further claim to be considered a central sanitary authority for London. In framing of the regulations necessary to give effect to the decisions of the Board, several medical points will need consideration, and we trust therefore that the Ambulance Committee will seek the aesistance of a competent medical adviser to aid them in their deliberations.

ICHTHYOSIS IN AN INFANT.

Dr. Róna[1] describes an interesting case in which ichthyosis developed in an infant a few days after birth. The disease appeared in discrete reddish spots, which after a few weeks became larger, and then the epidermis began to exfoliate. By the end of the second month the disease had so far advanced that the whole skin had a shining appearance, with constant desquamation. Rhagades developed in the skin, the lips became like parchment, and there finally developed swellings in the skin, which discharged pus. The child died in the fourth month. Róna considers that the disease developed simultaneously in the papillary layer and in the epidermis, and it was only after some time that the hyperæmia and infiltration of the affected parts of the skin became less evident. A second child of the same parents was seen by Dr. Róna when she was eleven years old, and in her the disease is stated to have been developed in the third month. The description of this patient shows the disease to have been present in a highly developed form. In the eighteenth month of this child's life the effect of the disease had been to prevent development and seriously to impair the health.

RUPTURE OF UTERUS; EXTRACTION OF FŒTUS SIX WEEKS LATER.

Dr. St. Braun, of Cracow, describes this interesting case in the *Przegad Lekarskich.* A woman, aged 38, the mother of nine children, the youngest three years old, became pregnant. The fœtal movements ceased for six weeks and for two weeks before admission into hospital fœtid pus discharged from the vagina and umbilicus. There was much debility, but no collapse nor hæmorrhage. A weight seemed to roll about in the abdomen when the patient moved. Diagnosis was very difficult; circumscribed peritonitis, or extra-uterine pregnancy with suppuration of the sac and discharge through the navel and vagina was suspected. Abdominal section was performed and a well-developed, macerated, fœtus, covered with pus, was discovered free in the peritoneal cavity. The patient lived some time but ultimately sank from exhaustion. Spontaneous rupture of the uterus had taken place from some unknown cause during the second half of pregnancy. The fœtus had escaped into the peritoneal cavity, died, and set up suppurative peritonitis. At the necropsy it was found that one intra-peritoneal abscess had burst through the umbilicus, the other

[1] *Archiv f. Dermatologie u. Syphilis.*

had entered the fœtal membranes, caused suppuration of the placenta and discharge of pus into the cervix and vagina. The bladder and renal pelves had become inflamed. The latter complication is in itself sufficient to account for death. Had it not occurred the recovery of the patient would have been highly probable.

HYDROXYLAMINE IN PSORIASIS.

In the *Archiv für Dermatologie und Syphilis*, 1889, Heft ii, there is a paper by Dr. Fabry, on the Treatment of Psoriasis by *Hydroxylaminum Muriaticum*. Binz had previously pointed out that theoretically hydroxylaminum might be used as a substitute in dermatology for pyrogallic acid and chrysarobin. Experiments have been made by Dr. Doutrelepont, of Bonn, from which it appears that this drug has a very direct and special action in psoriasis. Unlike chrysarobin, it does not stain linen. On the other hand, by reason of its poisonous and irritating qualities, it requires to be used with considerable caution. It is interesting to note that what is apparently an important addition has been made to the so-called "reducing" substances which recent years have seen introduced into dermatological practice, but in the meanwhile it will probably be safer to allow this particular drug to be made the subject of cautious experiments by dermatologists whose training and opportunities offer special advantages for experiments of the kind. It is not long since anthrarobin was strongly recommended for a similar purpose, but it soon became evident that on account of its irritating qualities considerable caution required to be used in its employment. We do not therefore hope to see this latest addition introduced immediately into common use. Doutrelepont's experiments were made with very weak solutions, notwithstanding which in some cases the irritation produced was very considerable.

SPURIOUS PREGNANCY AND LABOUR.

Dr. Metzlar, of Leyden, has recently described, in a Dutch journal of obstetrics, an interesting case of this remarkable morbid condition. A woman, aged 41, applied, on July 1st, 1888, at a Leyden hospital for attendance at her next labour, due she stated in September. Dr. Metzlar was called in on October 27th, the patient declaring that labour pains had set in. Thus, as has been observed in other cases, the delusion continued after the normal term, according to the woman's own reckoning, had passed. The abdomen was much distended and universally tympanitic and no tumour nor enlarged uterus could be felt. Then it was found that the catamenia had never ceased throughout the course of the suspected pregnancy. The abdominal walls and the breasts had recently enlarged through fat. There was very marked lordosis. Under anæsthesia the arching forwards of the lumbar spine and the abdominal distension disappeared. As the patient recovered consciousness the lordosis slowly returned. Dr. Mètzlar also noticed that the patient made very deep inspirations followed by very shallow expirations and the abdomen steadily distended. Neither laxatives nor hypnotism had any effect in diminishing the size of the phantom tumour.

ABDOMINAL SECTION WITH SERIOUS COMPLICATIONS.

Dr. Walzberg, of Minden, has enjoyed remarkable experience in some cases of abdominal section under his care. A woman with an ovarian tumour was attacked by typhoid fever and the cyst suppurated during convalescence. There was much rise of temperature and the cyst was tapped, as the patient seemed too ill for ovariotomy. Convalescence was slow and the operation was successfully performed before the bad effects of the fever had subsided. Four months after the ovariotomy, the patient died of cancer of the liver. Another patient subject to ovarian cyst was tapped; fever, jaundice, and pleurisy were the result. Dr. Walzburg attributed these complications to escape of some of the fluid into the peritoneal cavity. After ovariotomy the patient made a good recovery. In one remarkable case, subacute anterior poliomyelitis occurred two months after the patient had been discharged from hospital on her recovery from extra-peritoneal hysterectory for fibroid. The spinal disease slowly subsided. In the last of the cases recorded by Dr. Walzberg,[1] an abdominal cyst was tapped for diagnostic purposes. The fluid thus extracted was believed to be ovarian. Operation was performed and the cyst proved to be hydatid. The first puncture was detected and the cyst was laid open around that spot. Its edges were sewn to the abdominal wound, washed out with a solution of chloride of zinc, and drained, with satisfactory results.

SCOTLAND.

THE NEW MEMBERS OF THE EDINBURGH UNIVERSITY COURT.

In accordance with the terms of the recently passed Universities Act, a meeting of the General Council of Edinburgh University was held on November 29th, for the appointment of three additional assessors to represent the Council in the Enlarged University Court. Dr. Heron Watson, the present Assessor of the Council continues in office without re-election. In the election of the other three, effect was given to the feeling expressed in the Journal some weeks ago that a stronger representation of the General Council might be obtained than that afforded by the names submitted through the Association of the Council. The name of Mr. W. Scott Dalgleish was dropped, and that of the Lord Justice Clerk (Lord Kingsburgh) substituted, with the result that the finding of the Council was unanimous. On the motion of Sheriff Comrie Thompson, seconded by Dr. Joseph Bell, the Council appointed Dr. John Duncan President of the Royal College of Surgeons, Mr. Thomas McKie Advocate, and the Right Honourable John A. Macdonald Lord Justice Clerk. At a recent meeting of the Senatus Academicus, the four assessors of the Senatus were elected, viz.: Professor A. Campbell Fraser (re-elected), Rev. Professor Taylor, Professor Sir William Turner, and Professor A. Crum Brown.

THE PRODUCTION OF CARBONATE OF LIME FORMATIONS IN SEA WATER.

A paper of much interest in relation to the formation of carbonate of lime in sea water was communicated to the Royal Society of Edinburgh at its first meeting on December 2nd by Dr. John Murray and Mr. Robert Irvine. It was pointed out that lime-secreting organisms predominated in the warmest and saltest waters of the ocean. In the shallow and warm waters near the shore, for instance, they found large quantities of organisms secreting carbonate of lime shells, but as they went to deeper and colder waters there was a scantier development of these. Some of the more delicate shells were found at comparatively great depths, and at depths of 3,000 or 4,000 fathoms none at all were found. The explanation of this might be that in sinking down to the ocean depths the shells were dissolved by the action of the water, and before they reached the greatest depths the more delicate shells had completely disappeared.

ABERDEEN UNIVERSITY ASSESSORSHIPS.

At a meeting of the University Council, held in Marischal College on Wednesday, November 27th, the three following gentlemen were unanimously elected as assessors to the University Court—namely, Mr. Edmond, Dr. Angus Fraser, and Dr. Dey. Mr. Edmond

[1] *Berl. klin. Woch.*, No. 50, 1888.

represents the legal interests, Dr. Angus Fraser the medical, while Dr. Dey, late rector of the Grammar School, Old Aberdeen, was the nominee of the school teachers.

ABERDEEN UNIVERSITY V. THE HOME SECRETARY.

An experienced correspondent writes: Mr. Matthews is a clever lawyer, and an experienced man of the world, but he has not been successful as a politician, and his failure seems to me to be due not only to some inherent defects of manner, but to a loose and rambling manner of speech which blunts the edge of argument and blurs the clear points of a case in a mist of unnecessary words. His somewhat free-and-easy method of dealing with facts has lately brought him into troubled relations with the University of Aberdeen, and a singularly lame apology has just wound up a controversy which threatened at one time to become serious. It seems that, when speaking at Birmingham not long ago, the Home Secretary used these words: "He thought they should think seriously before those who set store on higher education in this country proceeded to multiply establishments in which degrees were scattered broadcast, as they were at Aberdeen and Glasgow, to persons whose distinction, from a scientific point of view, was not of the very first order. The matter would not be lost sight of by him." Smarting under censure so wanton and undeserved, the Senatus Academicus of Aberdeen instructed Principal Geddes to remonstrate against serious allegations "calculated to bring discredit upon and injury to the University." Mr. Matthews was at first inclined to treat the matter very lightly, but after considerable delay an explanation was received to the effect that the speech "was merely part of a conversational discussion, not intended for publicity; that the report was neither full nor accurate, and that he did not intend to cast any reflection upon the manner in which at the present time degrees are conferred by the University of Aberdeen." The Principal, in a conspicuously calm and dignified reply, accepted the explanation, and closed a discussion out of which he at all events has come with flying colours. But we may venture to point out, before we follow his example, that the sting of a false and calumnious statement is not removed by its being made in private, and that, if an unauthorised publication is made in a garbled form, it is surely the duty of the speaker to put himself right with those whom he had attacked by some voluntary process of amplification or retractation. Mr. Matthews does not appear to have done this, and his unprovoked sneer at two ancient seats of learning would have been allowed to go on poisoning the public mind, had it not been for the prompt action of Aberdeen.

PROFESSOR HAMILTON AHD PLEURO-PNEUMONIA.

A short time ago Professor Hamilton met the local authority of the county in Aberdeen, and explained his views on pleuro-pneumonia. He naturally took advantage of so favourable an opportunity to plead for the establishment of an experimental station, where inoculation could be practised according to modern methods and many obscure points in the nature of the disease cleared up. The cost of apparatus and plant would be about £700, and between £500 and £600 would be needed annually for a few years; and although this would be a heavy expense to face single-handed, the difficulty might be met by combination among several adjoining counties. Of course, before a start can be made in this direction legislative sanction must allow diseased cattle to escape the poleaxe from time to time, and to be kept alive for purposes of scientific research. We understand that Mr. Chaplin will be questioned on the subject after Parliament meets, and we hope that he will signalise his accession to office by a favourable reply, and, when the coast is clear legally, we further venture to hope that something practical may be done. The marked interest shown by Mr. Edmond and his colleagues in the new and lucid statement laid before them by the professor leads us to hope that, as Aberbeenshire has suffered most severely from the scourge, she may yet derive some consolation by being the first to find the remedy.

IRELAND.

BELFAST MEDICAL STUDENTS' ASSOCIATION.

The inaugural meeting of this association was held at the Queen's College on November 22nd. A vote of thanks having been passed to the outgoing president, Dr. O'Neill, the following office-bearers were elected for the ensuing session:—*President:* Dr. H. L. Mackisack. *Vice-Presidents:* Dr. McQuitty and Dr. Campbell. *Treasurer:* Mr. A. Fullerton. *Secretary:* Mr. H. T. Heron, B.A. *Committee:* Messrs. A. B. Mitchell, A. G. Robb, Whitaker, I. T. Morrow, B.A.; W. J. Woods, I. Colville, B.A.; R. J. Tonkin, Robert Campbell, B.A.; R. K. Brown, B.A.; and R. I. Collier.

THE ENTRIES AT DUBLIN SCHOOLS.

The number of dissectors at the medical schools for the present session has just been made known by the Anatomical Committee. The conjoined schools of the College of Surgeons, the Carmichael, and the Ledwich show 290, and head the list, as might be expected. Trinity comes second with 234, and the school in connection with the Catholic University College shows 119. Trinity has slightly fallen and the Catholic school has slightly risen. The numbers in the new united schools are much under the total which was returned from the separate schools last year. Altogether there is a falling off of nearly 150 in the dissecting class when compared with the returns of 1888-89. These numbers do not, of course, represent the number of medical students in Dublin, as a large proportion are not dissectors. The total class probably numbers about 800 students.

THE ULSTER MEDICAL SOCIETY.

At the opening meeting of this Society, the outgoing President Dr. Burden, delivered a brief address, and a vote of thanks was, upon the motion of Professor Dill, seconded by Dr. Byers, passed to him for his services during the year. The President-elect, Dr. Andrew McConnell, then took the chair, and delivered an eloquent and impressive address upon his experience as medical officer to the Belfast Workhouse Infirmary, dealing especially with the subjects of syphilis and delirium tremens. A vote of thanks was heartily passed to him upon the motion of Professor Cuming, seconded by Dr. Whitla. The Society then took up the question of the notification of infectious disease, it being understood that the Corporation contemplated the application of the Act to Belfast. After a lengthy discussion, which brought out the existence of considerable divergence of views, the subject was adjourned until the next meeting. Dr. Lindsay presented a report of the special committee appointed to reorganise the library, which showed that a large number of new and standard works had been purchased, the by-laws amended, and that a new catalogue was in course of preparation. The Society held its annual dinner on November 26th in the Royal Avenue Hotel, Dr. McConnell in the chair. The proceedings were of a very enjoyable character, the speeches being short and pithy, and some excellent songs being provided by Drs. Mackenzie, McCaw, Lewers, and Leslie. The office-bearers of the Society for the present session are as follows:—*President:* Dr. Andrew McConnell. *Vice-Presidents:* Dr. Dempsey and Dr. Kevin. *Council:* Dr. Whitla, Dr. Lindsay, Dr. Byers, Professor Dill, Dr. Calwell, Dr. Bigger. *Honorary Librarian:* Dr. Strafford Smith. *Pathological Secretary:* Professor Sinclair. *Honorary Treasurer:* Dr. O'Neill. *Honorary Secretary:* Dr. McCaw.

DWELLINGS OF THE LABOURING CLASSES.

THE President of the Local Government Board has issued important circulars on this subject to the various sanitary authorities throughout the country. The one addressed to the metropolitan vestries and district boards is as follows:—

Local Government Board, Whitehall, December 2nd, 1889.

Sir,—The Local Government Board have had under their consideration the great and pressing question of the housing of the labouring classes. They cannot avoid the conclusion that a large number of the working population of this country are at present housed in tenements which are either unfit for human habitation or in such a condition as to be distinctly prejudicial to the health of the inmates. There can be no doubt of the gravity of the evils which result from the insanitary condition of the dwellings of the poor, or of the ability of the local authorities, by a strenuous and judicious exercise of the powers which the Legislature has conferred on them for this purpose, to effect a very material improvement in the present condition of these dwellings. The Board deem it right, therefore, again to bring specially under the attention of the local authorities of the metropolis the duties which are imposed on them by the Housing of the Working Classes Act, 1885, and the large powers which they possess under the Nuisances Removal Acts and other statutes in relation to this matter.

Section 7 of the Housing of the Working Classes Act, 1885, which was enacted in accordance with a recommendation contained in the Report of the Royal Commission on the Housing of the Working Classes, expressly declares that it shall be the duty of every local authority entrusted with the execution of laws relating to public health and local government to put in force from time to time, as occasion may arise, the powers with which they are invested, so as to secure the proper sanitary condition of all premises within the area under their control.

Since the date of their first constitution in 1855, the metropolitan vestries and district boards have had the power of taking summary proceedings for the closing of houses unfit for human habitation, and for the abatement of overcrowding in any house in their districts. Section 134 of the Metropolis Management Act, 1855, made every vestry and district board under that Act the local authority to execute the Nuisances Removal Act, 1855; and section 20 of the Sanitary Act, 1866, expressly declared that it should be the duty of the local authority to make from time to time, either by themselves or by their officers, inspection of their district with a view to ascertain what nuisances exist calling for abatement, and to enforce the provisions of the Act of 1855, and of the other Nuisances Removal Acts, for the purpose of securing the abatement of nuisances. Similar powers and duties have devolved on the Commissioners of Sewers of the City of London and the Woolwich Local Board of Health. The word "nuisance" includes "any premises in such a state as to be a nuisance or injurious to health," and "any house or part of a house so overcrowded as to be dangerous or prejudicial to the health of the inmates." If, after notice from a local authority, a nuisance is not abated, or if, after notice, it is discontinued, but is, in the opinion of the local authority, likely to recur on the same premises, it is their duty to institute proceedings before justices. The justices are empowered by their order to require the person on whom the order is made to do such works and acts as are necessary to abate the nuisance complained of. If they consider that the same or a similar nuisance is likely to recur, they may further prohibit its recurrence, and direct the execution of the works necessary to prevent such recurrence; and if, in their judgment, the nuisance is such as to render the house unfit for human habitation, they may prohibit its being used for that purpose until it is rendered fit for habitation, and in that case the house may not be let or inhabited until, by a further order, the justices have declared that it is habitable.

As regards overcrowding, in cases where a house is inhabited by more than one family, section 29 of the Nuisances Removal Act, 1855, provides that whenever the medical officer of health shall certify to the local authority that any house is so overcrowded as to be dangerous or prejudicial to the health of the inhabitants, and the inhabitants shall consist of more than one family, the local authorities shall cause proceedings to be taken before the justices to abate such overcrowding, and the justices shall thereupon make such order as they may think fit, and the person permitting such overcrowding shall forfeit a sum not exceeding 40s. Where two convictions in respect of the overcrowding of the same premises are obtained within a period of three months, whether the persons convicted are or are not the same, the justices are empowered by section 36 of the Sanitary Act, 1866, to order the closing of the house for such time as they may deem necessary.

The above provisions have been found in practice to afford a simple and comparatively inexpensive means of procedure by which the local authority can, in gross cases of sanitary neglect, compel landlords either to make their houses fit for human habitation or to close them, and by which the overcrowding of houses in such a manner as to be dangerous or prejudicial to the health of the inmates can be prevented.

These powers, however, are by no means the only ones which have been conferred on the local authority by the Legislature with a view to enabling them to improve the sanitary condition of the houses of the working classes.

Under the Artisans' Dwellings Acts, 1868 to 1885, usually known as Torrens's Acts, the local authority are enabled not only to secure the improvement or demolition of houses which are "in a condition or state dangerous to health, so as to be unfit for human habitation," but also to deal with any "obstructive building," that is, a building which, although not in itself unfit for human habitation, is so situated that, by reason of its proximity to other buildings, it stops ventilation, or otherwise makes or conduces to make such other buildings to be in a condition unfit for human habitation, or prevents proper measures from being carried into effect for remedying the evils complained of in respect of such other buildings.

Under these Acts it is the duty of the medical officer of health to report in writing to the local authority any premises in the district coming under either of the above descriptions; and the local authority are required to refer this report to a surveyor or engineer for the purpose of ascertaining, in the case of any house alleged to be unfit for human habitation, whether the causes of the evils complained of can be remedied by structural alterations and improvements, or whether the premises ought to be demolished. In the case of a building reported to be an "obstructive building," the surveyor or engineer is to make a report to the local authority as to the report of the medical officer of health, and state what in his opinion will be the probable cost of acquiring the lands on which the building is erected, and of pulling down the building. In the former case, if the surveyor or engineer reports that the evils complained of can be remedied by structural alterations or improvements, the local authority may require the owner to execute them, and, on default, they may order the closing or the demolition of the premises, or may themselves execute the necessary works at the expense of the owner. On the other hand, if the report of the engineer or surveyor is to the effect that the premises should be demolished, they may order the demolition of the premises, and, on default of the owner, may themselves take down and remove them. In the case of an "obstructive building," the reports of the medical officer of health and of the surveyor or engineer must be taken into consideration by the local authority, and if the authority decide to adopt them, they may require the demolition of the building. In that event, if the owner elects to retain the site, they must pay compensation for the demolition; otherwise they may themselves purchase the site.

Where the evils caused by insanitary dwellings in any area are such that they cannot be remedied otherwise than by the demolition of so many houses belonging to different owners, that a complete scheme of rearrangement and reconstruction of the streets and houses is necessary, large powers are conferred on the City of London, on the Commissioners of Sewers, and in the remainder of the metropolis on the County Council of London, for the carrying out of an improvement scheme for the unhealthy area under the Artisans' and Labourers' Dwellings Improvement Acts, 1875 to 1885, commonly known as Cross's Acts. In any parish or district in the metropolis outside the City of London in which such a scheme is necessary, it is the duty of the medical officer of health of the vestry or the district board to bring the facts of the case to the notice of the County Council, by means of an official representation under Section 3 of the Artisans' and Labourers' Dwellings Improvement Act, 1875.

In addition to these powers, Section 35 of the Sanitary Act, 1866, as amended by Section 47 of the Sanitary Law Amendment Act, 1874, which enactments were put in force by the Local Government Board in December, 1883, in all the districts of the metropolis in which they were not previously in operation, enables the local authorities of the metropolis to make regulations enforceable by penalties for the registration and inspection of houses let in lodgings or occupied by members of more than one family, for the prevention of overcrowding therein, and for securing their being kept in a clean and wholesome state.

It will be seen from the above statement that the local authorities have been empowered to take the necessary proceedings to prevent any premises in their district unfit for human habitation from being inhabited; to prevent any house in their district from being overcrowded in such a manner as to be prejudicial to the health of the inmates; and to secure the demolition or improvement of buildings which are either themselves unfit for human habitation, or which, by reason of their situation, are the cause of other buildings being rendered insanitary. These large powers have been entrusted to the local authority, in order that they may be exercised for the protection of the poor, who are unable themselves, for the most part, to enforce the observance of the laws relating to public health by their landlords. I have most urgently to impress on the local authority the grave responsibility which they incur if they neglect the duty, which has been cast upon them by the Legislature, of taking the necessary steps to ensure that the law in relation to each of the above matters shall be duly enforced in their district.

I am, Sir, your obedient servant,

CHAS. T. RITCHIE.

The circular addressed to the urban sanitary authorities throughout the country is in much the same terms as those of the metropolitan circular, except that the provisions of the Public Health Act, 1875, take the place of those of the Sanitary Act, 1866, and the Nuisances Removal Acts. There are, however, the following additional remarks:

"By the Labouring Classes Lodging Houses Acts, 1851 to 1885, which may be adopted by any urban sanitary authority for their district, in accordance with Section 10 of the Public Health Act, 1875, urban sanitary authorities are empowered, themselves, to provide 'lodging houses for the labouring classes,' which expression is to be deemed to include separate houses or cottages for the labouring classes, whether containing one or several tenements. With this object they may purchase or rent land, and on such land erect buildings suitable for lodging houses for the labouring classes, and convert any buildings into lodging houses for those classes; and may alter, enlarge, repair, and improve the buildings, and may fit up, furnish, and supply them with the requisite furniture, fittings, and conveniences. They may also contract for the purchase or lease of any lodging houses for the labouring classes in their district, and may appropriate the houses to the purposes of the Acts, with such additions or alterations as they deem necessary."

The circular to the rural sanitary authorities is very similar, except that it contains no reference to the Artisans Dwellings Acts, the Artisans' and Labourers' Dwellings Improvement Acts, or the Labouring Classes Lodging Houses Acts, which are not in force in rural districts.

ACTION UNDER THE NEW LUNACY ACT.

IN the following report of the case in which action was recently brought in the Queen's Bench Division, in which a medical man was the defendant on account of a certificate of insanity signed by him, under which the plaintiff had been sent to and retained in a lunatic asylum. According to the report, the plaintiff sued for damages for the defendant's alleged negligence as a medical man, and for alleged neglect and wrongful

certification as to the plaintiff's insanity. In defence, a summons was issued to show cause why the action should not be stayed under the section of the new Lunacy Act, which is to the effect that a person who signs or carries out such a certificate under the Act, or has done so before the passing of the Act, or who does anything in pursuance of the Act, shall not be liable to any civil or criminal proceedings, whether on the ground of want of jurisdiction or on any other ground, if such person has acted in good faith and with reasonable care. And if any proceedings are taken against any person for signing or carrying out, or doing any act with a view to sign or carry out, any such.....certificate .....or for doing anything in pursuance of the Act, such proceedings may, upon summary application to the High Court of Justice or a judge thereof, be stayed, upon such terms as to costs and otherwise as the court or judge may think fit, if the court or judge is satisfied that there is no reasonable ground for alleging want of good faith or reasonable care; this provision coming into force immediately after the passing of the Act.

Payment of costs by the plaintiff was also asked.

The judge interpreted the Act as throwing upon the defendant the onus of satisfying him that there was not reasonable ground for alleging want of good faith and reasonable care; and, according to the report, after a prolonged argument and contest the judge expressed himself as being satisfied in that sense, and stayed further proceedings, but would not give the medical defendant his costs against the plaintiff unless the plaintiff appealed, which it appears the plaintiff has not done.

Although it is a vast improvement on the former state of the law, one must feel a little disappointed with what appears to be the practical working of the protective section (of the Act) above referred to, and supposed to be the new palladium for medical men signing certificates of insanity, and intended to do away with the oppressive and grievously unfair state of things hitherto existent with regard to medical men placed on their defence by litigious persons who are, or who have been, insane. The staying of proceedings—if one may draw conclusions from the first case—is much less summary in operation than had been expected, and by translation to another arena the contest is only partially obviated. And, in the case forming the foundation for these remarks, although satisfying the judge that there was no want of good faith or reasonable care in giving his certificate, the medical defendant suffers loss in being left to pay the costs incurred in being placed on his defence by the plaintiff. Medical men had entertained hope of better things.

THE action of Toogood *v.* Wilkes, since it is the first case which has arisen under the 12th Section of the Lunacy Acts Amendment Act, 1889 (52 and 53 Vic. Cap. 41) which section came into operation immediately after the passing of the Act (August 26th, 1889), although the Act itself does not come into operation until May 1st, 1890.

According to the particulars forwarded to us the action was brought by a Mr. William Toogood of Southampton in the Queen's Bench Division against Mr. W. D. Wilkes, a medical man of Salisbury, to recover damages for "injury to the plaintiff from the defendant's negligence as a medical man, and for damages for injury to the plaintiff by reason of the defendant having negligently and wrongfully signed a certificate of the plaintiff's insanity, whereby he was detained in a lunatic asylum."

Acting for the defendant as soon as possible and before a statement of claim was delivered, the solicitor for the defendant (Mr. George Smith) issued a summons under the above-named section 12 of the Lunacy Acts Amendment Act, 1889 (52 and 53 Vic. Cap. 41), to show cause why the action should not be stayed, and asked for payment of costs to the plaintiff.

The summons was returnable on November 4th before one of the masters, but was referred to the judge, and was ultimately heard by Mr. Justice Field on Friday, November 15th, and again on November 18th, and after arguments lasting from 2.30 until 4 P.M., his lordship made an order staying the action. He had read every one of the affidavits filed, but they were in nearly every instance again fully discussed, the judge at the outset stated (having at the previous hearing given a contrary opinion) that on further considering the Act of Parliament he had come to the conclusion that the onus was upon the defendant to satisfy him that there was not reasonable ground for alleging want of good faith, or reasonable care. Mr. McLeod, therefore, on behalf of the defendant, opened the case, and, after hearing the arguments on both sides, the judge, in giving his decision, went fully into the facts of the case, holding that the defendant had made out to his satisfaction that there was no want of good faith or reasonable care on the part of the defendant in giving his certificate.

On the defendant's counsel applying for costs, Mr. Justice Field asked counsel for the plaintiff if he was going to appeal, and he said that if his client took his (counsel's) advice he would not appeal, but that he (counsel) could not give any undertaking. The judge thereupon reserved the costs, intimating that if the order made would be the means of restoring peace between the parties, he would give no costs, but that if the plaintiff appealed, he would give the defendant his costs.

No notice of appeal had been given on Tuesday, November 26th, when the time for appealing expired.

CARRIAGE OF INFECTION.

A GENERAL PRACTITIONER (Scotland) writes: If a country practitioner were to stop attendance on confinements every time he had scarlet fever in his practice, his confinements would soon become an infinitesimal quantity—not simply from scarlet fever being a tolerably frequent disease, but on account of the difficulty in making known in a professional manner that his attendance on scarlet fever cases had ceased, when he was again free of them, and proposed again to attend confinements.

I have had a large general practice for years, and never had occasion to note that an outbreak of scarlet fever had any influence on the safety of my confinement cases. My practice has for at least five years presented no cases whatever of any feverish or septic symptoms after confinements. I do not say this in a bragging but in a truly thankful spirit. During this time I must have attended many dozens of scarlet fever cases. I never take any further precautions than those which I have always been (of late years) in the habit of taking at all confinements, without exception:—

(1) The use for the hands, before touching the woman who is in labour, of a solution of 1 to 1,000 corrosive sublimate. This I keep by me during the labour, and use from time to time to wash my hands. The first time I use it I use a good nailbrush along with it, thoroughly brushing the solution into all the irregularities of the fingers, hands, and nails.

(2) For the purpose of vaginal examination I use carbolic vaseline 1 to 20.

(3) If it has been necessary to introduce the hand into the uterus for any purpose—which, with skilful management, will be exceedingly seldom—I inject with a Higginson's syringe a weak corrosive sublimate solution.

I feel confident from my own experience that if those who had during the day been in contact with scarlet fever or putrid sores or ulcers would carry out these simple directions puerperal fever and various minor febrile conditions of the puerperium would cease to trouble them.

MR. J. BRENDON CURGENVEN writes: The letters lately published in the *Times* tend to create a greater scare than already exists in the public mind on the subject of infection, and a word or two of reassurance might be advisable. At the present time if a man with a family of young children should have one laid up with scarlet fever he and all his family are put in quarantine for six weeks or two months, and in some cases he is not allowed to go to his work unless he separates himself from his family for that time or sends his child to the hospital. In speaking of "infectious doctors" the writers alluded to the cases treated at home. There may be some risk of conveying the infection of scarlet fever if the precaution of disinfection be neglected; but with proper attention to ventilation and disinfection that risk is very slight. During thirty-three years of general practice I have not known of one single case in which infection has been so conveyed. I have had a family of eight children, and none of them have had scarlet fever, while their other infectious ailments were all derived from other sources than from their infectious (!) father.

In connection with this subject I wish to again direct the attenof the profession to the method of disinfection by inunction that I have practised with the eucalyptus disinfectant, as described in the JOURNAL of October 26th and November 23rd, whereby the patient is so completely disinfected that other children may sit by the bedside with impunity, and the doctor can safely visit his patient and handle him as much as is necessary without attaching the slightest germ of infection to carry away with him. I consider this mode of disinfection as an important gain in the treat-

ment of infectious diseases, especially scarlet fever, and am exceedingly surprised that only one medical man out of 13,000 that are supposed to read the JOURNAL wrote to me on the subject.

The "General Practitioner" in your JOURNAL of November 30th says he had "his patients rubbed with thymolised vaseline, but had given it up of late years." Vaseline, lard, lanolin, or fixed oils are all inadmissible as vehicles for the disinfectant; they interfere with transpiration, are a great discomfort to the patient, and the lard and oil soon become rancid. That which I have used is entirely volatile, being composed of essential oils, thymol, etc. It imparts a warm and pleasant feeling to the skin, and by its evaporation it keeps the patient in an atmosphere of disinfectant so strong as to destroy all infection proceeding from his skin or mucous membranes. All disinfectants in solution in water, and those that are not volatile, are alike useless for inunction.

SOUTH KENSINGTON writes: I endorse what all your correspondents said last week. In treating scarlet fever, I always insist on having a highly skilled nurse, so that, except when there are complications, I rarely visit the patient after the first few days more than once a week. I always have the patients oiled in the day and washed clean in the evening, and I keep them in bed, however well they are, from four to five weeks. I am certain that I have never conveyed the disease myself, and I attend as little midwifery as possible if I have a case on hand.

A COUNTRY PRACTITIONER writes: *Apropos* of the conveyance of scarlet fever by medical men, discussed in your last number, I would like to say that, though I am not in the habit of taking any very elaborate precautions myself, I can conscientiously say that there is no evidence that I have ever been the medium of conveying the infection in any instance. I do not think that in private practice I have ever had more than one scarlet fever case on hand at the same time, save once when three members of one family all fell ill within a few days of each other after exposure to a known and common source of infection. I make such cases the last on my round; if compelled to alter this rule, the visit is treated as the last of a round. I do not see the patients oftener or for a longer time than is absolutely necessary, and during the visit always wear a smooth-surfaced overcoat; at the end of the visit hands and instruments, such as stethoscope, thermometer, etc., are washed with soap and some disinfectant, and, if not driving in an open carriage, I have a short walk on quitting the house. I avoid seeing young persons and children after such a visit. My scarlet fever patients are "oiled." After seeing such cases I do no surgical or gynæcological work until after a complete change of clothing, including boots, and a thorough disinfectant cleansing of face, neck, hands, and arms. I have never had a case of puerperal fever nor, in private practice, one of erysipelas after operation, not much to boast of in my kind of practice perhaps, but a tribute to efficient cleanliness as far as it goes.

THE GILBERT CLUB.

AT the inaugural meeting of the Gilbert Club the chair was taken by Sir WILLIAM THOMSON, F.R.S., President of the Institution of Electrical Engineers, and amongst those present were: Sir Frederick J. Bramwell, F.R.S.; Dr. B. W. Richardson, F.R.S.; Professor D. E. Hughes, F.R.S.; Professor John Perry, F.R.S.; Professor George Forbes, F.R.S.; Mr. Latimer Clark, F.R.S.; Mr. G. J. Symons, F.R.S.; Dr. Atkinson, F.R.S.; Mr. H. Trueman Wood; Dr. Laver; Mr. J. Lane; Professor Silvanus P. Thompson, D.Sc., Honorary Secretary; and Mr. Conrad W. Cooke, Honorary Secretary.

Professor SILVANUS THOMPSON explained that what the club proposed to do was to commemorate the tercentenary of William Gilbert and his work and to do honour to him by reproducing in English the great work which began the science of electricity, and concluded by passing a resolution formally inaugurating the club.

Dr. B. W. RICHARDSON, in seconding the resolution, and speaking as an old student of Gilbert and the author of a memoir of him, said he did not know that English science could do better than recognise that distinguished man, the contemporary of Harvey, of Shakespeare, and of Bacon. Gilbert was physician to Queen Elizabeth, and so bewitched her by his kindness and solicitude that he was the only person living to whom she left a legacy. His style of writing betrayed the philosopher in every page. His glory was that he went entirely upon experimental research, in which he really preceded Bacon. We had no more illustrious man in all our history of science than William Gilbert.

It was resolved: "That all proposals for membership be referred for the present to the council, hereafter to be chosen, for selection, up to the number of 200 in all."

Sir William Thomson was unanimously elected President of the club, and the following Vice-Presidents were elected: Mr. Jonathan Hutchinson, President of the Royal College of Surgeons; Dr. Benjamin Ward Richardson; Lord Rayleigh; Dr. Henry Laver, of Colchester; Professor Reinold, President of the Physical Society; and Professor Hughes. The following gentlemen were elected to serve on the Committee: Mr. Lant Carpenter, Professor Ferguson, Sir Philip Magnus, Professor Rücker, Professor Foster, and Professor Forbes. Mr. Latimer Clark was elected Treasurer, and Mr. Conrad W. Cooke, Mr. Raphael Meldola, and Professor Silvanus P. Thompson, Honorary Secretaries.

ASSOCIATION INTELLIGENCE.

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members, in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the office.

NOTICE OF QUARTERLY MEETINGS FOR 1890. ELECTION OF MEMBERS.

MEETINGS of the Council will be held on January 15th, April 16th, July 16th, and October 15th, 1890. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting, namely, December 25th, March 27th, June 25th, and September 4th, 1890.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No member can be elected by a Branch Council unless his name has been inserted in the circular summoning the meeting at which he seeks election.

FRANCIS FOWKE, *General Secretary.*

NOTICES OF BRANCH MEETINGS intended for insertion in the JOURNAL of the current week should be forwarded, addressed to the Editor, so as to reach the office not later than mid-day Wednesday of that week.

BRANCH MEETINGS TO BE HELD.

WEST SOMERSET BRANCH.—A clinical meeting will be held at the Taunton and Somerset Hospital on Thursday, December 12th, at 3 P.M. for cases and papers, and a special meeting will be held at the Coffee Hotel, Fore Street, Taunton, on the same day at 5 P.M., to consider Dr. Rentoul's proposals.—W. M. KELLY, M.D., Honorary Secretary.

LANCASHIRE AND CHESHIRE BRANCH.—A special general meeting, to consider Dr. Rentoul's and Dr. Brindley James's proposition and to discuss the whole subject, will be held at the Medical Institution, Hope Street, Liverpool, on Wednesday, December 11th, at 4 P.M.—CHARLES E. GLASCOTT, M.D., General Secretary, 23, St. John Street, Manchester.

METROPOLITAN COUNTIES BRANCH.—A general meeting of this Branch will be held on Thursday, December 12th, at 5 P.M. at the School of Mines.—Mr. NOBLE SMITH, Secretary, 24, Queen Anne Street, W.

METROPOLITAN COUNTIES BRANCH: EAST LONDON AND SOUTH ESSEX DISTRICT.—The next meeting will be held, by the kind invitation of the Medical Superintendent, at the Mile End Infirmary, Bancroft Road, on Thursday, December 19th, at 8.30 P.M. The evening will be devoted to a demonstration by Dr. Robinson, of several interesting cases at present in the infirmary.—J. W. HUNT, Honorary Secretary, 101, Queen's Road, Dalston.

METROPOLITAN COUNTIES BRANCH: WESTERN DISTRICT.—A meeting of the above District will be held in the Library of St. Mary's Hospital, Paddington, on Saturday, December 21st, at 8.30 P.M. The chair will be taken by the President of the Branch. W. B. Cheadle, M.D.Cantab., F.R.C.P.Lond., Physician to and Lecturer on Medicine at the Hospital, will give an address in Medicine, with clinical demonstrations on interesting cases. A. Quarry Silcock, M.D., B.S.Lond., Surgeon to the Hospital, will give a brief address in Surgery, illustrated by clinical demonstrations. Mr. Silcock will show cases of Acromegaly, Hyperostosis of Cranial Bones, Traumatic Meningocele, Frontal Exostosis, and others of surgical interest. He will also demonstrate specimens from a fatal case of Parasitism by Psorospermiæ in man. Mr. Crabb will show pathological specimens.

BORDER COUNTIES BRANCH.—The next meeting of this Branch will be held at the County Hotel, Carlisle, on Friday, December 20th, at 6 P.M. Supper at 9 P.M. Members desirous of reading papers kindly communicate with JAMES ALTHAM, Honorary Secretary, Penrith.

METROPOLITAN COUNTIES BRANCH: EAST LONDON AND SOUTH ESSEX DISTRICT.

ONE of the most successful meetings ever held in this district took place at Brooke House, Upper Clapton (by the kind invitation of Dr. Adams) on November 21st. Nearly forty members were present.

Skin Diseases.—After the usual formal business Dr. STEPHEN MACKENZIE gave a demonstration of about sixteen most interesting cases showing various forms of skin diseases. His cases and remarks were followed with the greatest interest by the large number of members present, and at the conclusion a very hearty vote of thanks was proposed and warmly endorsed by all present.

SHROPSHIRE AND MID-WALES BRANCH.

A SPECIAL general meeting of this Branch was held at the Salop Infirmary on Tuesday, November 19th. Fourteen members of the Branch were present, the PRESIDENT (Mr. H. G. Rope) in the chair. Mr. ROPE, in the course of a few introductory remarks, stated the reason for the calling of the meeting, and read the notice from the General Secretary.—Letters from Dr. Packer and Mr. Macartney, and a telegram from Mr. E. E. King, expressing regret for their absence, were read.—The following gentlemen were proposed by Mr. J. A. BRATTON and seconded by Mr. ROPE, as members of the Branch, and unanimously elected:—Dr. J. Lytle, Shrewsbury; Messrs. E. B. Ormerod (Craven Arms), H. R. O. Sankey (Boreatton Park, Baschurch), E. E. King (Ludlow), G. Walker (Shrewsbury), and Dr. H. Barnett (Church Stretton).—Some letters received by the Honorary Secretary from Dr. Rentoul were next read.

Public Medical Service.—The discussion on this subject was introduced by Mr. CURETON. A report of it will be found at page 1309.

A vote of thanks to Mr. Rope, the President, was proposed by Mr. CURETON and seconded by Mr. BRATTON, and unanimously carried.—Mr. ROPE having briefly expressed his thanks, the meeting was dissolved.

SPECIAL CORRESPONDENCE.

PARIS.

Salol in Gonorrhœa.—Grafting Eyelids.—Rectal Prolapsus.—Cancer of the Stomach.—Icterus with Rupture of the Gall-bladder.—General News.

DR. DREYFOUS has treated seven cases of gonorrhœa with salol. The doses varied from 5, 7, to 8 grammes. The discharge was less abundant. In a recent case, in which gonorrhœa appeared some time before seeking advice, Dr. Dreyfous obtained a complete cure in a few days. M. Dreyfous has tested the effect of salol administered alone, and in other instances he has given it simultaneously with copaiba and cubebs in order to hasten the cure. He recommends the use of salol to surgeons who operate on the urinary organs; it renders urine aseptic, which is thus innocuous when in contact with raw surfaces. Aseptic and antiseptic conditions result from giving salol internally.

Dr. Tripier, of Lyons, sends to the Academy of Sciences a short paper on A Surgical Method of Restoring the Eyelids. When it is a question of the lower eyelid he dissects a tongue of skin from the suborbital region, taking care neither to dissect muscles nor nerves. The strip of skin thus free he places on the raw surface of the lower eyelid, which becomes grafted on it, and constitutes an eyelid. To form the upper eyelid a strip of skin is dissected in the supraorbital region and fixed in the space which the eyelid should occupy. The photographs shown at the meeting indicated that the patients thus operated on could open and shut their eyes. The disfigurement resulting from absence of eyelids is considerably modified.

At the Paris Surgical Society M. Nélaton read notes on two cases of rectal prolapsus. Both patients were mothers of a large family; the prolapsed portion measured 11 centimètres in each case. One of the patients had been operated on by M. Périer, and on the twentieth day after the operation left the hospital apparently cured. A month later on, M. Nélaton saw her in a dangerous state. Whilst making an effort she ruptured the perineum, from which protruded 25 centimètres of the large intestine. These M. Nélaton excised, and sutured the end to the neighbouring skin, and obtained a normal anus. The patient was completely cured. The other patient had been treated in every way but surgically. In this case there was not rupture of the perineum; the protruding intestinal portion was removed; in the preceding case 11 c.m. protruded and 25 were excised. Both patients recovered, but in the former case the cure remained stable, whereas in the latter prolapsus occurred six months after the patient had been operated on. M. Nélaton concludes from these two cases that the enormous weight of the intestines, which is unsupported, is probably the cause of rectal prolapsus, not the non-resistance of the perineum. He suggests excising as much of the large intestines as can be drawn down.

A short time since, M. Debove had in his wards a young man, aged 18, attacked with cancer of the stomach. His health had always been good, when suddenly he was subject to copious hæmatemesis. He was treated at the Hôtel Dieu Hospital, for ulcer of the stomach, and was put on milk diet. He left the hospital in apparently good health. Two months subsequently hæmatemesis again occurred, and was treated by M. Debove, who was unable to control it. It became more and more frequent; the patient became anæmic and cachectic, ascites appeared, and the patient died in a state of syncope. At the necropsy a superficial cancerous growth was observed extending over a surface about as large as the palm of the hand; the surface of the cancer was ulcerated.

At a meeting of the Paris Medical Hospital Society, M. Hayem read notes of a case of icterus with rupture of the gall-bladder, in a child 1 month old, which was hæmatophilic. The necropsy showed that there was rupture of the gall-bladder, without obstruction of the common bile duct: bile was diffused in the peritoneum, but there was neither suppurating peritonitis nor absorption of the bile by the lymphatics. M. Hayem observed that this case was interesting inasmuch as it indicated that hæmorrhage in icterus resulted from the direct action of bile. M. Féréol drew attention to the absence of acute peritonitis, proving that the incursion of bile into the peritoneum does not always produce it.

M. Dastre has made a series of experiments concerning chloroform. He states that methylic chloride, a mixture of chloroform and methylic alcohol, such as is prepared in England, contains 70 parts of chloroform to 30 of methylic alcohol, and that of M. Regnaud, 80 of chloroform and 20 of alcohol. When this mixture is used and the necessary precautions observed which determine the quantity administered, the exact quantity inhaled by the patient is known; the tension of the gas which reaches the lung is inferior to that of chloroform used as a sole agent, which, he adds, is the secret of the success obtained by Sir Spencer Wells and M. Le Fort.

M. Ollivier, in his report on epidemics read before the Academy of Medicine, recommended mercuric chloride, in the form of Van Swieten's solution, for treating cholera.

M. Constantin Paul, in a report on mineral water stations, commented on the danger incurred in the inhalation rooms, in consequence of the accumulation of carbonic acid in the atmosphere; also from the sputa deposited and not removed quickly enough.

The pseudo-syphilitic epidemic which broke out at the end of July at Motte-aux-Bois, consequent on vaccinating the children of that village, has completely disappeared. M. Hervieux made a careful inspection on the 17th of November, and a few days ago stated, before the Academy of Medicine, that all the patients were cured and in thoroughly good health, therefore the transmission of syphilitic virus, by means of the vaccine used, does not seem probable, as in that case secondary symptoms would be manifested. The vaccine punctures have all left healthy cicatrices. The child which furnished the vaccine was cured without presenting any

secondary symptoms; the treatment adopted was local dressings. A young mother who was infected from her child took, during eight days, mercurous iodide pills. M. Vidal remembers that a similar epidemic broke out at Eberfeld. At a future meeting he will furnish the particulars.

Dr. Magitot, in a letter to the *Temps*, urged that red phosphorus only should be used in manufacturing lucifer matches. Dr. David, member of the Chamber of Deputies, has formulated this proposition in the Chamber, which was passed unanimously. It remains to be seen whether Government will take active measures to carry out the reform recommended by Dr. Magitot.

Dr. Guyot writes to the *Connaissances Médicales* to propose that dispensing chemists should write on the little label the names of the drugs and active principles contained in the prescribed medicine; also that in every druggist's shop the following prohibition should be placed in a conspicuous place: "It is forbidden to speak to the dispenser."

M. Guyon will be appointed to a new chair of Diseases of the Urinary Organs. This chair is created for the purpose of providing clinical teaching. The lectures hitherto given by M. Guyon will be undertaken by an *agrégé* in surgery. It is believed that another clinical chair will also be founded at the Trousseau Hospital, to be filled by M. Lannelongue, who will also be replaced in his present course of lectures by an *agrégé*.

The following doctors are members of Parliament: MM. Amagat, Bizarelli, Bourgeois (Vendée), Clémenceau, Chassaing, Chautemps, Chevandier, Clech, Cosmao-Dumenez, David (Alpes-Maritimes), Bellestable, Desprès, Dron, Ducoudray, Ferrol, Froin (Alcée), Gacon, Guillemaut, Grisez, Haynaut, Herbet, Isoard, Labrousse, Lanessan (de), Langlet, Le Borgne, Legludic, Mahy (de), Mandeville, Marmottan, Merlou, Méry (Paulin), Michou, Naquet, Quintaâ, Rey (Lot), Reybert, Raspail (Camille), Signard, Theulier, Thomas, Turigny, Vacher, Vachery, Vernhes, Viger. M. Peytral, ex-Minister of Finance and present Deputy, was a chemist. MM. Bourdeville, Duval, Lacote, and Leconte, sitting members of the Chamber of Deputies, are also chemists. M. Payot, also a Deputy, is a veterinary surgeon. In the Upper House or Senate medicine and science are also well represented.

A water barometer is now placed in the physical laboratory of Tour St. Jacques; parallel to this water barometer M. Jaubert has fixed a glycerine registering barometer, 10 metres high, which will register the faintest variation in atmospheric pressure. There were a great many difficulties attending the fixing of the water barometer; six months of fruitless attempts have eventually ended in success.

Two butchers, at Bourges, intentionally sold decomposed meat to a regiment stationed there. A soldier named Fournier died in consequence of eating it. On another occasion bad meat was substituted for good after it had been inspected. For these offences one of the vendors was condemned to one year's imprisonment and to pay a fine of £20, the other to eight months' imprisonment and £2 fine. Last May fourteen people exhibited symptoms of poisoning after eating. The vendors have recently been tried and sentenced to a month's imprisonment and £2 fine.

A prize of 1,000 francs (£40) is offered by the Prefect of the Seine for the best essay on the organisation of outdoor relief, medical treatment, dispensaries for the Paris poor. All nations can compete.

The medical staff of the International Exhibition, whilst it was being built, consisted of MM. Morzard, Daudieu, Helme, Pompon, and Jamet. Shortly after the opening twenty-seven more medical men were added. The entire staff were divided into three brigades; each brigade was directed by a principal, and was on duty at the medical stations of the Exhibition. Every month they changed stations.

BERLIN.

Death of Professor von Volkmann, of Halle.

On Thursday, November 28th, Richard von Volkmann, the illustrious surgeon of Halle, died at Jena, in the "clinicum" of his friend Binswanger. He held a leading place among the surgeons not only of Germany but of Europe. He had witnessed and taken part in the development of modern surgery from its beginning forty years ago to its present flourishing condition. During his student days Simpson introduced chloroform into medical practice, and about the same time Langenbeck and Stromeyer laid the foundation of modern military surgery in the war of Schleswig-Holstein. The routine practice of amputation in nearly every case of fracture of one of the extremities was then first abolished by the introduction of excision of the joints. Langenbeck gave directions to the German surgeons to preserve as much as possible of the wounded limb, even if the time of cure were very protracted.

Volkmann followed in the footsteps of these great masters through his whole life. His researches on the treatment of joint-disease and his method of permanent extension form the basis of his reputation as a surgeon. He was one of the first to accept the doctrines of Lister, and to his enthusiastic advocacy it was largely due that the theory and practice of surgical antisepsis were so quickly and so universally adopted in Germany. Volkmann not only accepted Lister's teaching, but he simplified the details of the method in several important particulars.

Though Volkmann's favourite province of professional activity was the surgery of bones and joints, his scientific interest was by no means confined thereto. He investigated and wrote on erysipelas and lupus and on malignant tumours, especially cancer. He was working at the latter subject in the last few weeks of his life. His vast experience made his opinion valued by all practical surgeons, and the part he took every year in the debates at the Surgical Congress at Berlin always contributed greatly to the success of these meetings.

Volkmann was exceedingly skilful and elegant as an operator; he was fertile in resource and a great inventor of new procedures. His pupils idolised him, for he was not only a teacher who joined the greatest elegance with the highest clearness of diction, but he was up till his death the students' sincere and warm-hearted friend.

In spite of his high rank in society and in the hierarchy of science, he remained a *Bursch* to the last. In Halle many amusing stories are current about Volkmann's good humour. In the midst of his overwhelming professional work he found time to gain the laurel wreath of a poet. His *Träumereien an französischen Kaminen*—tales which he sent home to his children during his sojourn in France in 1870 and 1871—were published under the pseudonym "Richard Leander," and had a great success. His *Lieder aus dem Saalethal* added to his literary reputation, and many of his fairy tales, told in the first instance to his own little ones, found their way to the hearts of German children.

In Volkmann Halle has lost its chief medical attraction, the German army one of its foremost surgeons, and the art of surgery one of its most brilliant exponents.

GLASGOW.

Glasgow University General Council Assessorships.—Dr. Allan and the Teaching of the Subject of Epidemic Disease.—The Home Secretary on Degrees of Glasgow and Aberdeen Universities.—Glasgow University Senate and Assessors to the University Court.—Dr. Russell on Sanitation and Social Economics.

There is to be a fight in Glasgow over the election of assessors to the University Court, and that is not surprising if it be true, as is confidently stated, that the committee acting for Dr. Cameron, Sir John Neilson Cuthbertson, and Mr. Hannay have over 1,600 pledges for their support. It is not likely that the committee will look anxiously at a compromise when victory all along the line seems assured. Perhaps also it is well that the contest should be fought out to the end, once and for all. It will show the relative strength of both parties, and perhaps will save time and trouble and needless wrangling in the future; but if the vote at the meeting of the University Council, held on November 27th, for the nomination of the additional assessors means anything, the party by whom Mr. Vary Campbell, Sheriff Guthrie, and Dr. McVail are put forward is about to be sadly beaten. Dr. Cameron received 128 votes, Sir J. N. Cuthbertson 122, Mr. David Hannay (lately Clerk to the Council) 120, while Sheriff Guthrie had 81, Mr. Vary Campbell 78, and Dr. McVail only 66. Of course these numbers represent only a fraction of the number that will vote in the poll which has been demanded, and give no indication of what the result will be, but it looks ominous for the last three candidates. The proposal for a compromise, which came from the University Council Association two days before the Council meeting, was not completely rejected by the committee acting for the other side. That committee would, it appears, have been quite willing to avoid a contest by dropping one of their candidates and adopting one of the University Council Association candidates, but they were not indifferent as to the particular candi-

date to be adopted. An additional condition proposed by the Association that, in the event of a vacancy before the next election, they should have the privilege of nominating the candidate, and that both sides should be pledged to support him, was entirely unacceptable to the Committee acting for Dr. Cameron and his two associates, and so negotiations were broken off. The possibility of such a vacancy is not remote, for it is believed to be quite likely that Dr. Cochrane Patrick, the present assessor, will resign soon after the new Court is elected, and the Council of the Association would thus, almost from the outset, have two of its candidates in the Court.

In connection with the teaching of the subject of fevers in the University, an unfortunate circumstance has arisen. Dr. Allan, of Belvidere Fever Hospital, has for many years conducted a *clinique* at the hospital, and for several years has also conducted a class at the University at Professor Gairdner's request in his class room. Last year no fewer than 40 students attended, and the course was much appreciated. On the appointment of the staff to St. Mungo's College, Dr. Allan was offered, and accepted, the lectureship on fevers, the lectures to be given at Belvidere. Subsequently Dr. Allan withdrew from this position, indicating that, owing to certain difficulties in his way, he had decided not to give any course on the subject at all. It has been hinted that pressure was brought to bear upon Dr. Allan to induce him to resign his lectureship at St. Mungo's College, and that Dr. Allan, finding himself between two fires—the University on one side, it is presumed, and St. Mungo's College on the other—threw up the whole thing. Professor Gairdner has written to the papers to say, in the most emphatic way, that if jealousies have been the cause of this state of affairs, in such feelings the University authorities have had no part whatever, and are entirely blameless in the matter. Dr. McVail writes that Dr. Allan withdrew his name, being led to understand that he would not get the sanction of the Town Council to assume the position at St. Mungo's College, and that on being assured that he had nothing of this sort to fear, he indicated that pressure had been brought to bear upon him from quite other quarters "to part him from St. Mungo." Meanwhile, Dr. Allan remains silent. It is clear that the medical students of Glasgow ought not to be deprived of instruction in epidemic disease because of "professional jealousy" of whatever kind. There is a suggestion of weakness in Dr. Allan's silence, coupled with his attitude. If the actual facts of the case were definitely stated, as Dr. Allan alone can state them, there is little doubt public opinion would promptly cut the Gordian knot.

The Home Secretary has been put into a corner, first by the University of Aberdeen and subsequently by the University of Glasgow, for some disparaging remarks made at Birmingham on October 17th, in reference to the degrees granted by these universities. Both universities have asked him to point out on what grounds he had formed the opinion expressed. Mr. Secretary Matthews lamely replies that his remarks were not intended for publicity; that the newspaper reports do not appear to give a full or accurate statement of what he said; and that in any case he does not desire to be understood as casting any reflection on the manner in which at the present time degrees are conferred by these universities.

The Senate of Glasgow University have elected Sheriff Berry, LL.D., Professor Leishman, M.D., and Professor Stewart, D.D., as their assessors to the University Court.

Dr. James B. Russell, the medical officer of health, gave his retiring presidential address to the Philosophical Society on November 6th last, and the address has now been published. It is entitled "Sanitation and Social Economics: An Object Lesson." It deals with one only of the twenty-four districts into which Glasgow is divided for statistical purposes, District 14, Bridgegate and Wynds, the worst district in the city, and is a companion study to his last year's address, "On the Ticketed Houses of Glasgow." It is a startling picture of the sanitary, social, and moral condition of a part of the population of Glasgow situated in the very heart of the city, occupying only 0.57 per cent (35 acres) of the total area of the city, inhabited by 1.29 per cent, of the total population. These are some of the facts: "It contains 51 per cent. of the ticketed houses of Glasgow, 43 of the total (99) common lodging-houses; in it there are 232 deaths to 218 births, that is, a death-rate of 32.45 per 1,000 per annum, and a birth-rate of 30.49; the death-rate of children under one year is 239 per 1,000; 25 per cent. of the children are illegitimate; of the 32.45 deaths per 1,000 zymotic disease, consumption, and acute disease of the lungs account for 19.44; 18.5 per cent. of all the deaths are uncertified. Of those who died 29.7 per cent. died in public institutions, that is, of the fatal cases nearly 30 per cent. were treated at the expense of the rates or of charity; 37 per cent. of those who died were interred at the expense of the rates; of the children born, 10 per cent. were at the cost of charity or the rates, 45 per cent. were attended at their birth by the doctors and nurses of the Maternity Hospital, at the homes of the mothers; 50 per cent. of the children were vaccinated at the cost of the ratepayers or the charitable; and a total of 16,529 visits were paid in the district by the officials of the sanitary department. The district furnishes the greater part of the work of the Central Police Court, and it would be safer to fall asleep at the foot of a tree in Central Africa than at the foot of a lamppost in the Bridgegate." As regards the payment of rates in the district, 57 per cent. of the householders paid nothing of their municipal rates, and 56 per cent. paid nothing of their poor and school rate, in one block of the district taken as a sample; and of course the amount of their unpaid rates fall as a burden on the rest of the community. In this small area there are forty-three premises licensed for the sale of drink, paying a total rental of £5,167 2s., and 104 premises where food is sold, making a total rental of £4,944 12s. This district seems to spend as much on drink as on food. Dr. Russell goes on to say that he has selected this district because in it there are "in greatest intensity the same kind of insanitary conditions associated with disease, death, crime, pauperism, neglect of social obligations, as you find in all the unhealthy areas and tenements of the city. Wherever you find these insanitary conditions you may foretell that a similar investigation will disclose in proportional degree the same associated social characteristics. There you find a people unhealthy, reckless, spendthrift of their own and the public money, contributing little or nothing to the public purse, tinged more or less with immorality and crime." Such people "are living all up and down the city, and you are now bearing the full burden of their obligations. You cannot get rid of it while such places and such people exist. No thought among the many which this inquiry has called up in my mind has so deeply been impressed upon me as the various, often circuitous, but always certain paths by which, as society is now constituted, these people requisition your material resources. They cling to you as the garment steeped in the poisoned blood of Nessus clung to and consumed the living body of Hercules. If you will not pay, in the shape of improvement rates, for the removal and reconstruction of their unwholesome dwellings, you must not only pay their rates, but expend your rates upon them. If you object to pay for the prevention of their disease, you must pay for the treatment of their sick, and you must at least bury their dead. After their poverty has exhausted the provisions of the law, it seizes hold of the skirts of your benevolence, and will not let them go until it receives a dole."

CORRESPONDENCE.

TREATMENT OF CANCER BY ELECTRICITY.

SIR,—I am pleased to find that Dr. Inglis Parson has reason to think that his operation may be effected at fewer sittings than I supposed, or even at a single sitting.

I am quite satisfied that he has been before me in publishing the opinion that cancer cells escape the control of the nervous system, for I have never published any of my views on cancer. But that these latter are entirely independent and, more than that, may turn out to be incorrect, is what I am equally ready to maintain.

I will explain my views, and the processes by which I arrived at them, in a note to the Morton Lecture, when this is published,
—I am, etc.,
JOHN MARSHALL.

Savile Row, W., December 2nd.

GLASGOW UNIVERSITY ASSESSORS.

SIR,—Mr. Ness and Dr. Middleton, in a letter to you last week, objected to a statement of mine made at a public meeting of the graduates to the effect that the candidates selected by the University Club would not extend extra-mural teaching in the University.

In reply I desire to say that (1) the three candidates, Dr. Hector C. Cameron, Sir John Neilson Cuthbertson, and Mr. Hannay were selected by the University Club, a body consisting of about 200

members; (2) that this Club concerns itself with university politics, and does not approve of the extension of the University by extra-mural teaching; (3) that the Committee issued to the members of the Club a circular asking support for their nominees, on the ground that they would endeavour to carry out reform on the lines of the Club.

The opposing candidates, Mr. Sheriff Guthrie, LL.D., Mr. Vary Campbell, LL.B., and myself, would, on the contrary, support the extension of the University by extra-mural teaching; would also support the affiliation of colleges, so as to increase the importance of the University, and raise it as far as possible to a position analogous to that of the great English universities; and would further endeavour so to alter the constitution of the examining boards that in no faculty should men be examined mainly by their own teachers, who have a personal interest in maintaining classes too large to be efficiently taught.—I am, etc.,

Glasgow, December 3rd. D. C. McVAIL.

THE EPIDEMIC OF INFLUENZA IN EASTERN EUROPE.

SIR,—The following notes of the epidemic at present rife, not only in this part of Russia, but apparently over the whole of Eastern Europe, may, I think, be of interest.

It seems to have made its appearance in an epidemic form in St. Petersburg some ten or twelve days ago, though many sporadic cases undoubtedly occurred earlier. It is frequently spoken of in the lay papers as influenza, but the typical symptoms of this disease are far more frequently absent than present, and the only features in common are the rapid course, the extremely rapid spread, and the frontal headache, the great running at the nose and eyes being absent in all the cases that I have seen.

The two most prominent symptoms in the present epidemic are those of high temperature and great frontal headache, accompanied in many cases by pain in the eyeballs, and in all by foul tongue and breath, constipation, and general *malaise*. The onset is rapid, the temperature running up at once to 39°, 40° C., or even higher. The pulse in those cases I have seen is not raised proportionately with the temperature. In some cases there are added the symptoms of catarrh of the nose and frontal sinuses, in others there are sore throat and catarrh of the deeper air passages, and in many there are vague rheumatic pains about the back, shoulders, and limbs. The duration is short, averaging from three to five days, though sometimes prolonged to six or eight days, or even longer, and convalescence is rapid.

The same epidemic is, I am told, prevalent throughout the interior of Russia, and as it is rife in Constantinople and in Athens, it would seem that the whole of Eastern Europe is at present under its influence. In St. Petersburg and Cronstadt the numbers attacked have assumed alarming proportions, many institutions being practically at a standstill from the whole staff being attacked at the same time. Many manufactories and schools have had to close their doors, and whole regiments are said to be down with it. High and low, old and young, are all equally liable; the Emperor and many members of the Imperial family have suffered. The hospitals are full to overflowing; nor are the members of our own profession spared from its influence, nearly the whole staff of some of the hospitals being simultaneously attacked.

The autumn here has been exceptionally mild and prolonged, and this has possibly had much to do with the spread of the miasm, and it would be interesting to know if similar conditions of weather have prevailed in Athens and Constantinople. Great fears are expressed of the present outbreak being followed by a more serious one, such as cholera, but it is difficult to see any scientific ground for such an apprehension.—I am, etc.,

FRANK G. CLEMOW, M.B.

St. Petersburg, November 15th (27th), 1889.

GENERAL MEDICAL COUNCIL.

SIR,—In the report of the proceedings of the Council, in the JOURNAL of November 30th, in reference to the motion brought forward by me as to the regulations of the Committee of Management of the Conjoint Examinations of the Colleges of Physicians and Surgeons of England, you give an inaccurate statement made by the President, but omit to give my correction and his withdrawal of the statement.

The question before the Council was in reference to the examination rules by which candidates are required to produce evidence of "instruction" in certain subjects, but not stating by whom, or where, this "instruction" is to be given.

To show that these certificates are utterly valueless, I quoted, from the correspondence that had been placed in my hands, a case in which certificates given to one student by another were declared by the Secretary of the Committee "to meet the requirements of the Board." By a strange oversight the President of the Council spoke of these certificates as "sham certificates emanating from Ireland." You report these words, but do not give my correction of the statement or the President's withdrawal of the words. Instead of sham certificates they were real certificates sent in, with due notice, to test the very lax and imperfect system of the Conjoint Board of England, to which, as the direct representative of the profession in Ireland, I thought necessary to draw the attention of the Council. Your correction of this error in your report will oblige.—I am, etc., GEORGE H. KIDD.

Merrion Square, Dublin, December 3rd.

THE SPREAD OF LEPROSY.

SIR,—In a lecture delivered by Sir William Moore, K.C.I.E., before the Hospitals Association, he states, "The Rev. Mr. Wright, Rector of Grantham, had written a pamphlet expressing a fear that leprosy would be imported into this country, and again become a common disease." I presume Sir William alludes to me; although I am not the Rector of Grantham, and I never wrote a pamphlet on leprosy.

I have recently published a volume,[1] not giving my opinion of the disease and its working, for such opinion would be worthless; but I have in that volume gathered together important conclusions arrived at by leading leprists, who have spent years of labour in the treatment and study of the disease. They one and all agree, that, unless care be taken, it is quite possible that leprosy may revisit England, as it has of late so violently revisited Spain. Sir William Moore will therefore excuse me if instead of saying with him that the danger is *nil*, I prefer to his the judgment of such heroes in the study and treament of leprosy as Vandyke Carter, Munro, Arning, Hillis, Besnier, Leloir, Hansen, Bechtinger, Blanc, Hellat, Paulsen, Heidenstam, etc., who, I repeat, with one voice proclaim that leprosy may, and probably will, if there be negligence, again assail countries which once were highly leprous, but now are clean. Nor will the learned lecturer, I hope, deem me presumptuous, if, after years of study of the story of leprosy and its doings—after long and untiring correspondence with those who live with and labour for lepers, I still maintain that "Every case of leprosy in England should be duly reported and registered, and inquired into, and a watchful eye kept as to the doings of the disease. If it return not to its old haunts, well; but if there be any sign of such return, then active precautions should be speedily taken, that the plague may be stayed."—I am, etc.,

December 2nd. H. P. WRIGHT, M.A., Rector of Greatham.

THE PRACTICAL ELEMENT IN MEDICAL EDUCATION.

SIR,—I think that a more liberal and, where possible, a university education is desirable for medical training, and no less necessary is the practical part so warmly advocated by Mr. Brindley James, who has been unfortunate in meeting practitioners who possibly have neglected their opportunities of practical instruction, which are afforded to most students during their career, if they will only avail themselves of them.

After the completion of university or college life I think that every young practitioner should endeavour to obtain the position of junior house-surgeon, or house-physician, at some hospital, and his duties and opportunities of work there will, more than anything else, fit him for the responsibilities of his future private practice.

I can thoroughly recommend every practitioner to read and digest Dr. Allbutt's thoughtful address. The advice which he gives, if followed, would be beneficial to us all, however we may practise. It would tend to remove petty jealousies, which make our profession so trying at times, and promote good feeling and fellowship amongst us, to our great advantage and to that of the entire community. It is but due to Dr. Clifford Allbutt to bear testimony to the fact that in his address the views and rules which he inculcates, and which should guide our professional life, he throughout a long, honourable, and successful career strictly adhered to in his relations with his professional brethren. His loss to the provinces is serious, but his bright example, no less than his precepts, will long be remembered.—I am, etc.,

REGINALD G. ALEXANDER, M.A., M.D., F.L.S.,
Consulting Physician, Bradford Infirmary.

Halifax, October 23rd.

[1] *Leprosy an Imperial Danger*, by H. P. Wright, M.A,

A NOVEL METHOD OF PERFORMING INGUINAL COLOTOMY.

SIR,—In the report of the operation for inguinal colotomy which I described at the Medical Society on Monday, November 25th, it is said: "Mr. Jessett showed two men upon whom he had performed inguinal colotomy by a novel method, his plan consisting in cutting across the gut and implanting it into the colon." As this is incorrect, I will ask you kindly to insert an account of the operation I brought before the Society, which is as follows:

The patient should be kept entirely on liquid diet for a week prior to the operation, and the rectum washed out as far as possible every morning, the bowels being kept freely opened by means of castor oil or a saline aperient.

Operation: The abdomen being opened by an incision in the usual position, a small flat sponge with a long string attached to it is introduced into the cavity to prevent protrusion of the small intestines and omentum. The index finger of the left hand is then passed backwards along the line of the pelvis until it reaches the sacro-iliac synchondrosis, when the descending colon will be felt dipping into the pelvis; the finger is then passed over the colon, and a portion of the sigmoid flexure hooked up into the wound, and as long a loop as possible withdrawn through the opening. A band of india-rubber is now to be passed through the meso-colon and fastened tolerably firmly round the intestine as high up as possible to prevent the escape of fæces when the intestine is divided. The wound is next packed with sponges, to each of which a long string should be attached, and the loop of intestine is surrounded with carbolised cotton-wool.

The intestine is now cut across with scissors about three inches from its upper end and the contents evacuated, and if necessary washed out with carbolised warm water. All bleeding points being secured, the divided end of the lower segment is to be invaginated and a few catgut sutures passed through the serous and muscular coats, to retain the invaginated part. This portion of the flexure is then allowed to drop back into the abdominal cavity.

The divided end of the upper portion of intestine is next invaginated and secured in place by means of a few catgut sutures, and the india-rubber band removed. All the sponges and wool packing can now be withdrawn and the parts thoroughly washed and the parietal wound closed in the usual manner, care however being taken that the suture just above the intestine should pass through its serous and muscular coats, and the suture below is made to pass through the meso-colon. Two fine silk sutures also are to be passed through the muscular and serous coats of the intestine and the abdominal parietes on each side so as to thoroughly secure it from slipping.

Finally the spur of intestine, about three inches long, which is left protruding from the wound is packed carefully round with thymol gauze, the whole covered with a thick pad of cotton wool and a many-tailed bandage lightly applied.

The dressing should not be disturbed for three, four or five days, unless symptoms of oppression or strangulation should occur. This has not been the case in any of my operations, neither is it to be anticipated owing to the bowels having been cleared out before the operation, and the patient being kept exclusively to spoon diet for three or four days prior to the operation.

On the fourth or fifth day the spur may be cut away on a level with the skin, all bleeding points secured and the wound dressed with eucalyptus or boracic ointment. The advantages claimed for the operation are:

1. The diseased portion of bowel situated in the rectum is completely shut off from the upper segment, therefore there can be no leakage of fæcal matter over the ulcerated surface.

2. The lower portion of bowel being invaginated and returned into the abdominal cavity, there can be no prolapse of the mucous membrane from it.

3. The upper portion of intestine being divided so closely to its origin there is not so much danger of prolapse from it.—I am, etc.,

FREDK. B. JESSETT.

Upper Wimpole Street.

DURING the academic year 1888-9, 376 persons obtained the licence to practise medicine in Bavaria; of these, 147 "passed" at Munich, 177 at Würzburg, and 52 at Erlangen. Seventeen persons obtained legal qualifications as dentists, 26 as veterinary surgeons, and 157 as pharmacists.

MEDICO-LEGAL AND MEDICO-ETHICAL.

DENTISTS AND SURGEONS.

TUNBRIDGE WELLS.—If an L.R.C.P.Lond. and M.R.C.S.Eng. is registered under the Medical Act, there is, we think, nothing to prevent him styling himself dentist, or surgeon dentist, and practising accordingly.

FOREIGN DEGREES.

A. B. C.—1. As the Medical Act of 1886 has not yet been made to apply to Canada or the United States, a qualification obtained in either of those countries does not entitle the holder to be registered under the Medical Act or to practise in this country. 2. Neither can he legally give a medical certificate as required by the Births and Deaths Registration Act. If the titles are used without specifying the countries in which they were obtained, a question might arise under Section 40 of the Medical Act, 1858. 3. We cannot express any opinion as to the relative merits of foreign degrees.

MEDICAL DEFENCE UNION.

DAVIS *v.* GREAT WESTERN RAILWAY PROVIDENT SOCIETY.

THIS was an action brought by the Medical Defence Union, on behalf of Dr. Davis, of Llantrissant, against the Great Western Railway Provident Society for illegal dismissal. The case was tried in the local county court some months ago, and the learned judge awarded the plaintiff £40 damages, with costs. The defendants appealed. The Medical Defence Union determined to allow the appeal rather than reduce the damages, and the case was heard in the Queen's Bench Division of the High Court of Justice on November 6th. Without calling upon the counsel for Mr. Davis, their lordships dismissed the appeal with costs.

NAVAL AND MILITARY MEDICAL SERVICES.

THE DEPRECIATION OF THE RUPEE.

SURGEON M.S. writes: In the JOURNAL of November 9th a statement is given of the pay of surgeons in India. It is not generally known that the rupee is now only worth 1s. 4½d., and the value of silver is not likely to increase. When it is considered that most surgeons go to India for five years shortly after they join the service, the majority of them can draw only the minimum rate of Indian pay—namely, 317r. 8a. a month.

THE VICTORIA CROSS.

LATE R.N. writes: I notice your account of how Brigade-Surgeon Temple won the Victoria Cross in company with Lieutenant Pickard. I believe I am right in saying that a naval surgeon, now holding a high appointment in Malta, was not only present with these gallant officers on the attack on Rangiriri, but was the first to cross the Maori parapet and the last to leave. Why did he not receive the Victoria Cross? Was it because he was a so-called "non-combatant?" Such cases of unrewarded heroism are not easily forgotten.

SURGEONS-GENERAL AND AGE.

COMMON SENSE writes: I contend that considerably before 62 the great majority of surgeons-general are quite unfit for active service, as witness recent campaigns. In Egypt in 1882 Deputy Surgeon-General Hanbury, and 1884-5, Deputy Surgeon-General O'Nial, were the principal medical officers, both with temporary rank of Surgeon-General, showing that officers of that rank were considered necessary, though none were available. Why should this have been? Let Tables 13 and 14 of Lord Camperdown's Report explain: Through professional wear and tear in unhealthy climates the medical officer at 62 is, as a rule, much more played out than his combatant brother of the same age. Yet no old general officer would be employed on active service nowadays; then why a worn-out medical officer? Is administrative discredit and disaster courted? No doubt there is difficulty in manipulating the rank, as at present constituted, where men do not get the step until close on age of retirement. But this should be met, not by an increased age extension, but by a rigid system of selection of officers with sufficient physical and mental "go" in them. In the higher ranks of the medical department the groove of dead level seniority has seldom been departed from; but if the same system had been applied in the combatant branch, where would all our younger generals, from Wolseley to Brackenbury, have been? If mere dead level seniority is maintained in the Medical Department, it must continue the poor service it is. It was the late Sir William Muir's pet idea to bring younger men into the administration of the department, but that still seems far off from realisation. In our next big war deputies and brigade-surgeons will at once be pushed to the front. It is certainly not the fault of the surgeons-general that they are unfit for active service, but of the system which keeps them from the rank until old and worn out, and which would simply be aggravated by an extension of the age retirement.

X writes: Rumour has it that the Surgeon-General, Medical Staff, in India, is to be granted an extension until 62 years of age. Should such extension be indiscriminately granted, I trust you will raise your voice against the injustice which would follow to the senior medical officers of the army. Through the introduction of a new rule the promotion prospects of these officers will simply be blasted, and a gross injustice inflicted if they are not compensated. The extended age retirement would not lessen the non-effective vote or benefit the taxpayer, but would force a number of comparatively young officers, deprived of all prospects of advancement, into early and, to them, premature retirement.

THE COMMISSION.

COTOPAXI writes: A most uneasy feeling is spreading throughout India from reports received that Mr. Stanhope will ignore the recommendations which would raise and advance the department, and give effect to those designed to lower and humiliate it. Apart from the injustice involved, let politicians

remember the medical profession have votes, and are getting a little tired of being played fast and loose with.

*** We feel every confidence that Mr. Stanhope will not allow himself to be swayed by unworthy advice or motives.

THE NAVY.

THE following appointments have been made at the Admiralty:—ROBERT H. NICHOLSON, Surgeon, to the *Swallow*, November 29th; WILLIAM H. O'MERA, Surgeon, to the *Hercules*, November 29th; R. BENTHAM, Staff-Surgeon, to the *Cordelia;* C. JAMES, Staff-Surgeon, to the *Caroline;* J. A. M'ADAM, Staff-Surgeon, to the *Neptune;* W. HAYES, Surgeon, to the *Cordelia;* B. C. E. F. GUNN, Surgeon, to the *Alacrity;* J. H. ACHESON, Surgeon, to the *Rattlesnake.*

Fleet-Surgeon ANDREW GRAHAM, M.D., F.R.G.S., died in London on December 1st, aged 72. He entered the service as Surgeon November 19th, 1838; and became Staff-Surgeon, July 27th, 1847; and Fleet-Surgeon June 22nd, 1864. He retired April 1st, 1870.

THE MEDICAL STAFF.

DEPUTY SURGEON-GENERAL WILLIAM CATTELL has been placed on retired pay. His commissions are thus dated:—Assistant-Surgeon, March 28th, 1854; Surgeon, July 12th, 1864; Surgeon-Major, March 1st, 1873; Brigade-Surgeon, November 27th, 1879; and Deputy Surgeon-General, March 12th, 1882. He served in the Eastern campaign of 1854-55 with the 5th Dragoon Guards, including the battles of Balaklava, Inkerman, and Tchernaya, and the siege of Sebastopol (medal with three clasps, Sardinian and Turkish medals). He was also in the Afghan war in 1878-79, and was present at the attack and capture of Ali Musjid, and in the engagement at Futtehabad (medal and clasp).

Surgeon-Major W. W. TOMLINSON is promoted to be Brigade-Surgeon, *vice* J. Robinson, retired. His previous commissions bear date:—Assistant-Surgeon, September 30th, 1864; Surgeon, March 1st, 1873; and Surgeon-Major, September 30th, 1876. He was engaged in the Egyptian war of 1882, and was at the battle of Tel-el-Kebir (medal and clasp, and Khedive's bronze star).

Surgeon-Major W. S. M. PRICE is also promoted to be Brigade-Surgeon, *vice* W. Temple, M.B., V.C., retired. His previous commissions are contemporaneous with those of Brigade-Surgeon Tomlinson. Brigade-Surgeon Price served in the Afghan war of 1878-80, and took part in the operations in the Bazar Valley, including the engagement at Deh Sarakh (medal). He was also with the Nile expedition in 1884-85 with the Korti Field Hospital (medal with clasp, and Khedive's star).

Surgeon-Major A. L. BROWNE, M.D., who is serving in the Bombay command, is posted to general duty in the Sind district.

INDIAN MEDICAL SERVICE.

THE services of Brigade-Surgeon R. GRAY, M.B., Bengal Establishment, officiating Inspector-General of Hospitals, Punjab, are replaced at the disposal of the Government of the Punjab.

Surgeon J. G. JORDAN, Bengal Establishment, is appointed to the officiating medical charge of the 4th Native Infantry, *vice* Surgeon J. M. Macnamara, M.D., deceased.

Surgeon H. FOOKS, Bengal Establishment, is transferred from the permanent medical charge of the 1st Sikh Infantry, to the officiating medical charge of the 2nd Battalion 2nd Goorkhas, as a temporary measure to accompany the battalion on field service, *vice* Surgeon-Major W. R. Murphy. The appointment is made solely in the interests of the public service, and Surgeon Fooks will retain his permanent appointment.

Surgeon D. G. CRAWFORD, M.B., officiating Civil Surgeon of Backergunge, is appointed to act as Civil Surgeon of Midnapore.

Surgeon W. H. QUICKE, Bombay Establishment, is appointed to the medical charge of the 3rd Light Cavalry, *vice* Surgeon-Major G. E. E. Burroughs, transferred.

Surgeon-Major G. E. E. BURROUGHS, Bombay Establishment, is appointed to the medical charge of the 21st Native Infantry (Marine Battalion), *vice* Brigade-Surgeon E. Sexton, M.D., retired.

Surgeon-Major G. HENDERSON, M.D., Bengal Establishment, has retired from the service, which he entered as Assistant-Surgeon, July 27th, 1859.

Surgeon A. COLEMAN, Bengal Establishment, from the officiating medical charge of the 12th Khelat-i-Ghilzai Regiment, is appointed to the officiating medical charge of the 43rd Goorkha Light Infantry, *vice* Surgeon-Major F. W. Wright, M.D., D.S.O.

Surgeon-Major C. J. W. MEADOWS, Bengal Establishment, officiating Civil Surgeon of Dacca, is allowed leave for three months.

JAMES SHAW, F.R.C.S., late Principal Inspector of the Madras Medical Service, died at Anerley, on the 1st instant, at the age of 80.

THE VOLUNTEERS.

JOHN GRANT, M.B. and C.M.Edin., is appointed Acting-Surgeon to the Maidstone Division of the Volunteer Medical Staff Corps.

OBITUARY.

CHARLES ROTHWELL, J.P., M.R.C.S.E., L.S.A.

WE have to record the death of Mr. Rothwell, a member of our Association, which occurred on November 20th. Mr. Rothwell was born in Bolton, Lancashire, in the year 1827, the son of a chemist and druggist in the then large village of Bolton-le-Moors. He received his general education in his native town, partly at a private school and largely at home. He received his medical training as an apprentice to a leading local practitioner, and completed his medical studies at King's College, London, where he was a distinguished student. Later on at the College of Surgeons' examination he stood at the head of the list. He also took the L.S.A. He is described as being intelligent, studious, and of a bright disposition. A partnership with his old principal offering, he settled in his native town. From 1858 to 1870 Mr. Rothwell carried on single-handed an extensive practice, the hard work incidental to which however soon told upon his naturally delicate constitution, and he found himself compelled to renounce all professional work, and for ten years he retired from practice. During those ten years, spent partly in Southport and partly in Heaton-Mersey, his literary activity was greatest.

In the *Manchester Examiner and Times* and other papers, under the *nom de plume* of "Adam Chester," were published most of his dialect and other poems.

In 1879, with health partly restored, he returned to Bolton and gradually resumed his professional labours.

A correspondent to whom he was personally well known writes: "His tongue and pen have always been ready to advocate a good cause, whether as a temperance lecturer or as an essayist on sociological subjects. His style was always trenchant and thoughtful. Under a manner peculiarly his own beat a warm heart that felt for and sympathised with the sufferer, whether struck down by fell disease, or buffeted by fortune. His name will long live in the hearts of the many who have benefited either by his advice or by his purse. His giving was of the kind that did not allow the right hand to know what the left hand did. The death of his wife, after a short illness, over twelve months ago, was a great blow. That, and a naturally weak heart, made weaker by overwork, helped to account for his sudden collapse when cellulitis of the right arm and shoulder set in. He was taken ill on November 15th and he died on the 20th."

HENRY JAMES WOLFENDEN JOHNSTONE, F.R.C.S.

THE death is announced of Mr. Henry James Wolfenden Johnstone, F.R.C.S. The *Times*, to which he was at one time a contributor, gives the following particulars of his career:

"The deceased gentleman, who was born in 1808, was the eldest son of Dr. Johnstone, physician-in-ordinary to King William IV. He was educated at Westminster School, and at St. George's Hospital, where he subsequently became house-surgeon and teacher of anatomy. He had at one time a large practice, and was a frequent contributor to the medical press, and was joint editor with his father of the *Medico-Chirurgical Review*. At the early age of 40, however, his health broke down from frequent attacks of suppressed gout, and he retired from practice. He resided in France during the memorable years 1848-50, and learned to take a keen personal interest in French politics, an interest which gave rise to a circumstance probably unique in the history of journalism. At the time of the *Coup d'Etat*, when advanced Liberals in England held very strong views of the conduct of Louis Napoleon, there appeared in our columns, beginning on December 20th, 1851, a series of letters, remarkable for their powerful invective, exposing and condemning Napoleon's Imperial designs. These were published with the signature of 'An Englishman,' and attracted much attention at the time, their authorship being currently attributed to a variety of eminent persons. It was always believed by his family that Mr. Johnstone was the author of these letters; but, as regards the general public, he jealously and successfully preserved his anonymity. We believe, indeed, that Mr. Johnstone never disclosed his name even in offering his letters for publication, and that the conductors of this journal, breaking a well-established rule, accepted contributions which, though unauthenticated by name and address, were characterised by obvious good faith, evident knowledge, and brilliant style. In recent years Mr. Johnstone, after a brief interval of resumed practice, resided at Ramsgate, and took part only in local affairs."

MISS F. J. BUTLER, L.K.Q.C.P.I., MEDICAL MISSIONARY.

WE regret to have to announce the death of Miss Fanny Butler, which took place at Srinagar, Kashmir, on October 26th, after a short illness.

Miss Butler received her medical education at the London School of Medicine for Women, Henrietta (now Handel) Street, Brunswick Square, obtaining, in August, 1877, one of the "Ernest Hart scholarships."

Soon after becoming qualified she went to Jubbulpore, Central Provinces, India, then to Calcutta, and afterwards to Bhagalpore, Bengal, under the auspices of the Church of England Zenana Missionary Society. At these places she laboured alone under considerable difficulties for more than six years. Her health suffered from the stress of work and climate. Returning to

Europe in 1887 she spent four months of her furlough in medical study in Vienna.

In 1888 she was appointed to start a hospital for women in Kashmir. Her death took place at the age of 39, after a year and a half of active earnest work in her new sphere. Already she had gained the confidence medically of large numbers of the women of Srinagar, and had inaugurated an important and promising work. She will be missed by many who were attached to her on account of her high ability and professional enthusiasm, tempered by humility and deep piety.

UNIVERSITY INTELLIGENCE.

CAMBRIDGE.

DEGREES CONFERRED.—At the congregation on Thursday, November 21st, the following degrees were conferred:—*M.B.:* Frank Hodson Bromhead, B.A., Jesus College (*Thesis:* Tonsillitis and Pharyngitis and their connection with the Rheumatic State); Basil de Beauvoir Carey, B.A., Emmanuel College (*Thesis:* On Pleurisy).

ADDITIONAL EXAMINERS.—In consequence of the large number of candidates for the third M.B. and B.C examinations in December, Dr. C. H. Ralfe, of Gonville and Caius College, has been appointed an additional examiner in Medicine, and Mr. H. W. Page, M.C., of Christ's College, an additional examiner in Surgery.

BOARDS AND SYNDICATES.—Francis Darwin, M.B., Fellow of Christ's College, is appointed a Syndic of the Botanic Garden; Professor Latham and Dr. D. MacAlister, State Medicine Syndics; and Dr. D. MacAlister a member of the Medical Board.

LONDON.

THE result of the examination for honours in Forensic Medicine at the M.B. examination is as follows:—

First Class.—H. M, Bowman, St. Bartholomew's Hospital (Scholarship and Gold Medal); J. E. Platt, Owens College (Gold Medal); J. J. Macgregor, St. Bartholomew's Hospital; R. Pickard, St. Bartholomew's Hospital; H. J. Campbell, Guy's Hospital.

Second Class.—R. O. Bowman, Owens College; Mary A. McL. Knight, London School of Medicine for Women; W. H. Brazil, Owens College.

Third Class.—E. H. Snell, Queen's College, Birmingham; E. P. Paton, St. Bartholomew's Hospital; J. P. Williams, Owens College; C. F. Seville, Owens College; R. D. Mothersole, Guy's Hospital.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

A CLERICAL VACCINATOR.

A CURIOUS adventure was noted last week at the Leighton Board of Guardians when the vaccination officer laid before the meeting a certificate of the vaccination of a child received from Mr. T. Duck, of Eaton Bray. The document was signed by Mr. Duck, who, in an accompanying letter, stated that he had no objection to vaccination, but was fully conscious of the dangers usually incurred, and therefore had procured his own lymph; that the Rev. J. H. Doe, vicar of the parish, had vaccinated the child, and he presumed that he had, on presenting his child at the public vaccinator's station in his parish, complied with the law. Dr. Sandell said that if the child had been brought to the station he had not seen or examined it. If the Board wished it he would see the child, and, if the operation had been successfully performed, he would certify accordingly. The Board advised that this course should be taken.

SANITARY PLUMBING.

A DRAFT scheme has been prepared by the Parliamentary agents of the Plumbers' Company, providing by legistative enactment for the creation of a "General Council of Education and Registration," with branch councils for England, Wales, Scotland, and Ireland, the general council being composed of, in addition to representatives of the company, representatives of the plumbers of the various metropolitan and provincial centres (elected on the principle of a wide trade vote), and representatives of the Royal Institute of British Architects, the Surveyors' Institution, the Institution of Civil Engineers, the Society of Medical Officers of Health, and other sanitary bodies; representatives of the Durham College of Science, the Robert Gordon College, the Nottingham University, the Yorkshire College, the Manchester Technical School, and other bodies concerned in the advancement of technical education. In order to give full effect to the registration system and duly protect the public, it is proposed that deputed powers should also be given to the local councils, under proper safeguards.

WHICH UNION?

MR. JOSEPH TUCKER asks if, on the order of a relieving officer, he attends a pauper residing in his district, but belonging to and receiving relief from another union, he is not entitled to charge the guardians of one of the unions, and, if so, which board is he to sue for such medical attendance?

*** This entirely depends on the terms of the engagement, of which nothing is said. He has probably undertaken to give medical attendance to "all paupers resident in the district;" in such case, any belonging to another union would be entitled to his services on the usual order being given for him to attend.

DATE OF RESIGNATION.

FREEMASON asks whether it is not a fact that the resignation of a Poor-law medical officer does not take place till a month after its date, and if he were to resign his appointment on a certain day, would he not have to perform the duties of the office by himself or deputy for a month afterwards?

*** Our correspondent confuses the notice of intended resignation with actual resignation. It is usual for a Poor-law officer to give one month's notice of his intention to resign (and this is frequently made compulsory by agreement); the resignation is supposed to follow in due course. In the meantime, the holder of the appointment is responsible for the proper performance of all duties, and, of course, receives salary till he ceases to act.

NOTIFICATION (INFECTIOUS DISEASES) ACT, 1889.

T. G. H. writes: I wish to ask your opinion of the action of our medical officer of health. Having received the certificate of notification, he proceeds to the house, generally accompanied by a liveried subordinate, enters the bedroom, and makes a thorough examination of the patient. He indicates the line of treatment which he thinks ought to be pursued by asking such leading questions as, "Have you had your throat burnt?" etc. It is pretty safe to predict that if all medical officers of health are thus to examine the patient, verify the diagnosis, and sketch the mode of treatment, the working of the Act will be attended with a good deal of friction. By-and-by, doubtful cases, not running a normal course, will arise, and then who is to decide? I can find nothing in the Act which authorises the medical officer of health thus to constitute himself a medical referee; he should confine himself to the sanitary condition of the premises; if he did this no exception would be taken by patients or medical attendants. Some patients of mine the other morning were very much agitated and indignant at thus having the privacy of the sick chamber intruded upon by officialism.

*** This statement amounts to a very serious charge against the medical officer of health of the district, and it is obviously one for inquiry. The proper course is for the gentleman who writes this letter to make complaint formally to the vestry, or, if he prefers it, to the Local Government Board, who would write to the vestry and ask them to inquire into the matter. The case is one of great public importance, but complaint, with particulars, should be formally made.

THE METROPOLIS AND THE PUBLIC HEALTH ACT.

E. C. writes: Are you not in error in supposing that a magistrate cannot inflict a fine upon a person responsible for a nuisance unless his (the magistrate's) order for its abatement has been disobeyed? You will see that Section 96, Public Health Act, gives to the court of summary jurisdiction to which complaint has been made by a sanitary authority, power to inflict a penalty of £5 with costs, in addition to making the order for the abatement of the nuisance.

*** Our correspondent has overlooked the fact that the Public Health Act does not apply to the metropolis. The powers of the Public Health Act exceed those under the Nuisances Removal Act. But what we contend for is something in advance of the powers of either Act.

MEDICAL OFFICERS AND COUNTY COUNCILLORS IN SCOTLAND.

C. C. writes: Is a parochial medical officer and medical officer of health eligible for election as a county councillor in Scotland?

*** The Scotch Local Government Act of this year, following the English Municipal Corporations Act, 1882, disqualifies for membership of a County Council persons who hold any office of profit under or are interested in any contract or employment with, by, or on behalf of the Council or any Committee mentioned in the Act. Section 17 transfers the administration of the laws relating to public health (including, we presume, the appointment and pay of medical officers) to district committees constituted under the Act. It would seem, therefore, that the position of medical officers in Scotland is different from that of their brethren in England, and that in Scotland they are not eligible to be elected or be members of a County Council while holding such appointments anywhere in the county.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns, including London, which have an estimated population of 9,555,406 persons, 5,167 births and 3,477 deaths were registered during the week ending Saturday, November 30th. The

annual rate of mortality in these towns, which had been 18.3 and 18.2 per 1,000 in the two preceding weeks, rose again to 19.0 during the week under notice. The rates in the several towns ranged from 11.6 in Norwich, 13.7 in Portsmouth, 14.1 in Huddersfield, and 14.6 in Leicester to 25.1 in Hull, 27.4 in Manchester, 30.3 in Sunderland, and 32.0 in Plymouth. In the twenty-seven provincial towns the mean death-rate was 20.3 per 1,000, and exceeded by 3.9 the rate recorded in London, which was 17.4 per 1,000. The 3,477 deaths registered during the week under notice in the twenty-eight towns included 85 which were referred to whooping-cough, 63 to scarlet fever, 61 to measles, 51 to diphtheria, 46 to "fever" (principally enteric), 37 to diarrhœa, and not one to small-pox; in all, 343 deaths resulted from these principal zymotic diseases, against numbers increasing from 325 to 353 in the three preceding weeks. These 343 deaths were equal to an annual rate of 1.9 per 1,000; in London the zymotic death-rate was 1.7, while it averaged 2.0 per 1,000 in the twenty-seven provincial towns, and ranged from 0.0 in Norwich, in Blackburn, and in Huddersfield to 3.6 in Bolton, 6.0 in Plymouth, and 6.2 in Sunderland. Measles showed the highest proportional fatality in Nottingham and Sunderland; scarlet fever in Sheffield, Bolton, and Plymouth; whooping-cough in Leeds and Hull; and "fever" in Leeds, Brighton, and Cardiff. Of the 51 deaths from diphtheria recorded during the week under notice in the twenty-eight towns, 33 occurred in London, 6 in Salford, 3 in Plymouth, 2 in Liverpool, and 2 in Newcastle-upon-Tyne. No fatal case of small-pox was registered either in London or in any of the provincial towns; and only one small-pox patient was under treatment in the Metropolitan Asylums Hospitals on Saturday, November 30th. These hospitals contained 1,569 scarlet fever patients on the same date, against numbers increasing from 538 to 1,522 in the twenty-two preceding weeks; 122 cases were admitted during the week, against 183, 163, and 147 in the three previous weeks. The death-rate from diseases of the respiratory organs in London was equal to 4.1 per 1,000, and was considerably below the average.

HEALTH OF SCOTCH TOWNS.

During the week ending Saturday, November 30th, 794 births and 536 deaths were registered in the eight principal Scotch towns. The annual rate of mortality in these towns, which had increased from 19.8 to 20.6 per 1,000 in the three preceding weeks, further rose to 21.0 during the week under notice, and exceeded by 2.0 per 1,000 the mean rate during the same period in the twenty-eight large English towns. The lowest rates were recorded in Dundee and Perth, and the highest in Glasgow and Aberdeen. The 536 deaths registered in these towns during the week included 80 which were referred to the principal zymotic diseases, equal to an annual rate of 3.2 per 1,000, which exceeded by 1.3 the mean zymotic death-rate during the same period in the large English towns. The highest zymotic death-rates were recorded in Edinburgh and Leith. The 229 deaths registered in Glasgow during the week under notice included 6 from scarlet fever, 5 from measles, 4 from diphtheria, and 3 from whooping-cough. Thirteen fatal cases of measles and 4 of "fever," were recorded in Edinburgh, and 5 deaths were referred to scarlet fever in Leith. The death-rate from diseases of the respiratory organs in these towns was equal to 4.7 per 1,000, against 4.1 in London.

HEALTH OF IRISH TOWNS.

In the sixteen principal town districts of Ireland the deaths registered during the week ending Saturday, November 30th, were equal to an annual rate of 26.6 per 1,000. The lowest rates were recorded in Newry and Lurgan, and the highest in Sligo and Kilkenny. The death-rate from the principal zymotic diseases averaged 3.6 per 1,000. The 194 deaths registered in Dublin during the week under notice were equal to an annual rate of 28.7 per 1,000 (against 26 3 and 24.2 in the two preceding weeks), the rate for the same period being only 17.4 in London and 22.0 in Edinburgh. These 194 deaths included 26 which resulted from the principal zymotic diseases (equal to an annual rate of 38 per 1,000), of which 11 were referred to "fever" (principally enteric), 5 to whooping-cough, and 4 to measles.

HOSPITAL AND DISPENSARY MANAGEMENT.

THE PROPOSED PUBLIC MEDICAL SERVICE.

At a meeting of the Shropshire and Mid-Wales Branch, held on November 19th, Mr. Cureton read a paper on the Proposed Public Medical Service. He said that he had been requested to open a discussion on Dr. Rentoul's scheme for a proposed public medical service. Although he feared that he had nothing new to state with regard to the scheme that had not already appeared in the columns of the Journal, yet any remarks he might make would probably lead to discussion. He said Dr. Rentoul defined the service as having for its object the providing of medical treatment for those wage earners who were making from 20s. to 45s. per week, on their making small immediate payments. He then went on to describe in detail the various proposals of the scheme, and remarked that Dr. Rentoul specially solicited hospital co-operation, though in no way connected with the service scheme, which was to be strictly self-supporting. The hospital committees, by fixing a scale of wage limit, and thus refusing treatment to those above this limit, would compel such patients to apply to the service. As to the question of existing provident dispensaries, at any rate of the one in the town of Shrewsbury, Mr. Cureton affirmed that, as an old medical officer of that institution, he could speak from experience, and he maintained that the circumstances of the patients treated were not gone into with sufficient care, and that many patients who were well able to pay for medical advice were treated there, and yet these patients had charitable collections annually made for them in the streets and churches. In these days when working men gave small donations to the hospital funds they were apt to look on treatment as their right, instead of regarding it as charity, which it really was. Another great mistake was that in provident dispensaries the children were treated for the same or even for less remuneration than adults. This was entirely wrong, for all medical men knew that children were much more liable to sickness and required much more attention than adults. He stated that Dr. Rentoul remarked that if the profession did not combine and demand a fair price for their work, either co-operative societies would take the matter up, or else the Government would step in and compel medical men to give their services for a fixed fee. A very important meeting had been lately held at Birmingham, and the report of a committee considered. This report pointed out the great need of medical reform, also how the original purpose of our medical charities had been departed from, and how the charities were abused; how medical men in giving treatment to many hospital patients were not performing an act of charity, but simply pauperising well-to-do people. In conclusion, Mr. Cureton stated that he believed Dr. Collins, of Oxford, struck the keynote of the question when he stated that the adoption of some moderate rather than sweeping measures were needed, such as a general system of careful supervision and the introduction of a wage limit. He (the speaker) was sure that this would meet the approval of all medical men, and that though Shrewsbury might not yet be ripe for the wholesale adoption of Dr. Rentoul's scheme, still if some scheme of supervision and wage limit could be adopted, it would be to the everlasting benefit of the profession and also of the general public.

Dr. Gwynn regretted that so small a roomful were present. He attributed it to the fact that the scheme was more applicable to large towns than to a town the size of Shrewsbury. He then spoke of the way that the Whitchurch Dispensary was managed, and entered into details concerning that institution. He referred to the difficulty of obtaining co-operation for any scheme such as Dr. Rentoul's, and strongly agreed with Mr. Cureton in his remarks as to the inadequacy of pay with regard to children in provident dispensaries.

Mr. Kendall remarked that this matter affected everyone in the United Kingdom. He maintained that there were a certain class of persons who would go to the cheapest source (whatever it might be) to get medical advice. He feared that, should Dr. Rentoul's scheme come into operation, it would drive such people into provident clubs, where the abuse was much greater than in hospitals or dispensaries. He affirmed that the whole matter hinged on the unity of medical men. The great question was, How was this to be obtained? He then drew a parallel with regard to that great order which underlay so many of our great institutions—namely, Freemasonry, and hoped that some plan might be devised on the lines of that great system. He remarked that Dr. Rentoul's was the first scheme of the kind that had been brought before medical men, and that if it could be made to include medical clubs he would most heartily support it.

Dr. Bowen Davies considered that no really practicable scheme had yet been advanced. He suggested the appointment of an inspector, and remarked that the reason of all this agitation was the overstocked condition of the profession. He advocated making entrance into it more difficult.

Mr. Humphreys said that he was very glad that the subject had been brought up, as there was much need of reform. He affirmed that all the charities in the town were abused, and the provident clubs were worse than all. He considered that the position was not yet definite enough to be discussed in detail, but that he would move the following resolution:—"That this meeting views with great pleasure the action of the Charity Organisation Society of London in presenting a petition to the House of Lords praying for an inquiry into the management of medical charities, and earnestly hopes that this inquiry will be extended so as to include provincial hospitals, dispensaries, and provident clubs."

Mr. Nelson Edwards seconded the motion, and alluded to the abuse of the Salop Dispensary.

The President in submitting the resolution to the meeting stated that all medical men were agreed that there were serious abuses to redress. The motion was carried unanimously.

At a meeting of the East and West Sussex Districts of the South-Eastern Branch at Worthing, on November 28th, the question of the abuse of out-patient departments was discussed.

It was proposed by Mr. T. Jenner Verrall, of Brighton,

seconded by Mr. FRANK PARISH, of Worthing, and carried unanimously: "That this meeting recognises the abuse of the out-patient department of all hospitals, provincial as well as metropolitan, and therefore hopes that the inquiry into the working of London hospitals will be extended to include the provincial also."

The Honorary Secretary was desired to send a copy of this resolution to Lord Sandhurst.

DR. ROBERT R. RENTOUL (Liverpool) writes: In the *Lancet* of November 23rd there is a letter from Dr. Thomas Harris, Assistant Physician to the Manchester Royal Infirmary, in which he suggests that the "wage limit" used in deciding who are eligible for out-patient treatment should be changed from 20s. and 25s. to 15s. per single person, and 21s. for man and wife, and 2s. for each child. That is, supposing a family composed of man and wife and eight children, making together 37s. a week, all these should be eligible for out-patient treatment. For my part, I think this is a valuable suggestion, and I would willingly adopt it. As to the special meeting of the South London District to discuss the resolutions, I will, with your permission, answer a few points, so as to aid those other Branches which have not yet discussed them.

1. As regards the scale of fees for provident dispensaries and a public medical service, I have suggested a scale, but let me add that the details of the scheme can be readily altered if only doctors will offer suggestions. It is easier to destroy than construct, however.

2. There is no fear of any hospital inquiry into the social status of applicants lessening the supply of clinical material. Twelve thousand beds lie idle at the twenty-five Poor-law infirmaries, not to mention the Poor-law dispensaries and fever hospitals.

3. As regards securing the help of the chemists to dispense, this is only following out the plan adopted by many doctors holding club appointments, a prescription being dispensed for 4½d. However, if some wish to do their own dispensing, well and good; but if others do not, then let them have their choice. Of course, in country districts doctors must dispense.

4. I have proposed no new organisation. Sir Spencer Wells has told me that a public medical service was proposed as early as 1854.

5. As to handing over districts to a small body of doctors, I have no objection to every man who has been on the *Medical Register* for two years being appointed.

6. My proposals do include provision for home visits and confinement cases.

7. I cannot see how my proposals would swallow up clubs. Is it likely the Foresters, Oddfellows, Hearts of Oak and other societies will pay extra if they can help? The fact that the scale of fees proposed is higher than theirs protects club doctors.

8. Dr. Brindley James has caught the true meaning of my proposals when he says that the country should have a public medical service with two branches, one an insurance, and the other giving treatment for immediate payments. It would be a splendid achievement if we doctors could draw up a good working scheme applicable to all England. Let us sink petty trade jealousies and try.

9. I have no objection to doctors treating service patients at their house, but I want to preserve the public character of the scheme. Although Dr. Brindley James has drawn up a scale of charges for clubs, he does not seem to have mentioned a "wage limit" in connection with such societies. This is a most important point, for there is no use in reforming medical charities if we leave other avenues open to gross abuse.

10. I have no objection to a patient being recommended by a doctor for hospital treatment, provided the applicant conform to the "wage limit." In fact, it would be well if such recommendation were not confined to any one body, a fine being levied on all who recommend ineligible cases.

11. I have never suggested that the out-patient departments should be abolished.

12. There is no doubt that great abuses exist in the management of the branches of the Metropolitan Provident Medical Association. These abuses will remain as long as doctors are silly and foolish enough to permit their continuance. The Provident Committee would, I am sure, be only too willing to receive a deputation of doctors on the subject.

In conclusion, may I say that when men who work cheap dispensaries engage unqualified assistants, and cut down, by a base and low competition, club remuneration to as low a figure as 2s. 6d. per annum per member, they might be a little more sparing in their sweeping denunciations? Two ends we have to work for—hospital out-patient reform, and a service which will give the industrial classes fair treatment for a fair fee. These are the two planks in our platform. The details must be arrived at by working on the principle that "gif gaf makes good friends."

COMPETITION V. CO-OPERATION.

The Club System.—Prescribing Chemist.

A GENERAL PRACTITIONER, who writes from an experience of more than a quarter of a century, most of it spent in a large provincial town where there is a general infirmary, a large provident dispensary, several small private dispensaries, a flourishing medical institute with three medical officers, and numerous clubs, while admitting that abuses exist in all institutions of these classes, believes that they have been grossly exaggerated. He thinks the out-patient departments of the general hospitals are necessary adjuncts of the wards for in-patients. He questions whether the unanimity and co-operation sought for are possible of attainment. A certain amount of competition he regards as inevitable and wholesome. The different interests at stake are so numerous, so conflicting, and so strong, that this alone raises an insuperable difficulty to the carrying out of such a scheme as that proposed. If it were attempted it would, in his opinion, tend to increase and not lessen the want of harmony already existing. In some instances medical men as they rise in the profession increase their fees, but he regrets that this good practice is not universally followed. He believes that the amount of discontent has been greatly exaggerated, and that general practitioners throughout the country have as many social, intellectual, and material advantages as any in the same station of life. He considers the club system a good one, but in need of reform; ten or twenty years ago even a large club was content with only one doctor, now it will have three or four, and the small pittances they receive are often reduced by the mean and sharp practices of the club officials. He thinks there ought to be a minimum fee, each doctor being at liberty to exercise his own judgment in charging beyond this. In clubs containing many small tradesmen the best plan is to fix the annual payments somewhat higher, giving each member the right to select his own medical attendant, who would send in his charges as for a private patient, the club paying the bill.

To endeavour to secure the help of the chemists would, he considers, be highly objectionable; he is not convinced that to dispense his own prescriptions is derogatory, and believes that the giving up of the practice has been a most suicidal policy, tending to make the chemists rich at the expense of the medical profession.

THE NEED FOR COMBINATION.

The Injurious Effect of Medical Aid Societies.

MR. W. MOORE (surgeon, Stourport) expresses the opinion that far more injury has been caused to the general practitioners by the combination of the working and lower middle classes to form medical aid societies than by the abuse of hospitals. The usual payment by members of these societies is 4s. a year for an adult and 2s. for a child. For this the skilled artisans, well-to-do publicans, and other tradespeople and farmers, who used to pay reasonable fees, are provided with medical and surgical attendance and drugs. A medical officer, usually a stranger to the district, is appointed at a salary of £150 to £300 a year. Many private practitioners are thus seriously crippled and driven into starting cheap weekly clubs. The only remedy would be a general combination, for he doubts whether the general adoption of the Manchester system at all hospitals, though it might minimise the abuse of the charities, would really benefit the general practitioner, who would still have to compete with provident dispensaries and medical aid associations, with lax rules as to the admission of members.

A NEW EYE INSTITUTION FOR CHESHIRE.

AT the final public meeting held at Altrincham on Thursday, November 28th, it was unanimously decided "that an eye hospital bearing the title of the Altrincham and District Eye Institution" be opened. The institution is intended to cover the wide area and large population known as Mid-Cheshire. At present no beds will be attached, there being an excellent small general hospital in the town avail-

able under certain restrictions. Dr. P. H. Mules, late Surgeon to the Manchester Royal Eye Hospital, has been elected Medical Officer.

THE DERBYSHIRE COUNTY LUNATIC ASYLUM AT MICKLEOVER.

THE annual report of Dr. Murray Lindsay, the medical superintendent of the asylum, is as usual full of information upon the many details of management, and the Committee state they consider it to be so exhaustive as to all matters relating to the present condition and management of the asylum that they have but little to say. Patients to the number of 159 were admitted during the year 1888, 80 of whom were males and 79 females; the total number under care was 610, and there remained at the end the year 435 patients on the books, namely, 225 men and 210 women. Young idiots still continue to be sent to the asylum. This is to be regretted; and in the near future we hope to see special provision made for the care and treatment of the idiot children of every county apart from the county asylums. Patients to the number of 101 were discharged, and the recovery rate, exclusive of cases transferred from other asylums and calculated upon the number of admissions, was 43.91 per cent.

The high death-rate, namely, 16.29 per cent., calculated upon the daily average number resident during the year (as suggested in this JOURNAL in September 3rd, 1887), is said to be chiefly attributable to the extremely unfavourable character of the cases admitted. Pulmonary consumption, general paralysis, and maniacal exhaustion, within a short time of admission, are the chief causes given. Twelve died within a month of admission; several within a few days.

Dr. Murray Lindsay enters at some length into the question of pensions for asylum officials, and publishes the following resolution, passed by his Committee: "That in the opinion of the Committee it is desirable that all existing officers of asylums should be assured the right to a pension on a scale not lower than that provided by the rules relating to Her Majesty's Civil Service." Dr. Murray Lindsay's labours in the cause of pensions for asylum officers are worthy of every recognition, and we agree with his statement that asylum officials have anxious and trying duties to perform, not unattended with personal danger, which give them claims to special consideration with regard to pensions.

With reference to the cost for the maintenance of pauper lunatics, he says: "A very low maintenance-rate requires careful scrutiny, should be viewed with suspicion, and is not in my opinion a thing to be commended or to boast of. The insane require a generous diet and liberal treatment, and it should ever be borne in mind that an asylum is a hospital for the insane which should not be allowed to assume the character of a second-rate workhouse." The cost per head for the maintenance of the patients in this asylum is 7s. 9½d. per week.

KENT COUNTY ASYLUM, CHARTHAM, NEAR CANTERBURY.

THE Commissioners in Lunacy at their last statutory inspection state: "We are glad to be able to report that this asylum which we have carefully inspected, continues to be maintained in a satisfactory condition. The wards are clean and bright, the beds and bedding well attended to, and the sanitary state of the buildings good." The total number of patients under care during the year 1888 was 904. There were 128 admitted, 60 discharged, and 88 died. The daily average number resident was 764. The recovery rate was 45.7 upon the admissions, and the proportion of deaths to the daily average number resident was 11.5 per cent.

Dr. Spencer, in his annual report, tells us that "the health of the patients generally during the year was good, but the presence of a large number of aged and infirm persons made the death-rate higher than the average." Two female patients were pregnant on admission, one made a satisfactory recovery from her mental illness, and left the asylum six weeks after her accouchement; the other remains hopelessly insane, and fortunately the child was stillborn. One patient died suddenly whilst at dinner; an inquest was held, and the verdict of the jury was death from suffocation and syncope.

The usual occupations and amusements have been provided for the patients, and with regard to the latter the Commissioners in their report state, "in the provision of amusements we have nothing but praise. The large number of programmes of entertainments given since the last visit, which have been laid before us is evidence that much thought and attention are bestowed upon this subject, and we are glad to find that cricket and outdoor sports are largely practised."

We are glad to be able to congratulate Dr. Spencer and all connected with this admirably conducted institution upon the failure of the attempt to sell it to the London County Council.

INDIA AND THE COLONIES.

INDIA.

REPORT ON THE SANITARY ADMINISTRATION OF THE PUNJAB FOR THE YEAR 1888.

THE chief diseases were, as usual, cholera, small-pox, fever, bowel complaints, and injuries; 14,938 deaths from cholera were registered during the year 1888, compared with 8,804 in 1887. The epidemic of the year under notice was the severest since 1867. The greatest mortality from the disease took place during the months of June, July, August, and September, being the season of the year when organic matter in the soil is undergoing rapid chemical change, heat and moisture being added factors during this period. The people in the district of Shahpur believed that the disease was introduced from Kashmir, where it prevailed. The researches of the Sanitary Commissioner show that the disease spread from Shahpur as a centre. It is a curious fact that in this epidemic the chief towns enjoyed immunity from the disease; and even in those towns, fifteen in number, attacked, the slight incidence of the disease was very remarkable; the Sanitary Commissioner attributes this to improved sanitation. In Lahore, with its large population, only four deaths from cholera took place in the city, a fact justly, as we believe, set to the credit of the pure water with which Lahore is now supplied. This belief is well supported by what is recorded of Rawal Pindi, where the people who suffered most from cholera were those who drank water from a stream known as the Kapie Nulla, exposed to pollution; while those who drank the pure water from the twelve standposts which deliver the Rawal water practically escaped. This is of all facts the one most full of hope for the people of India.

In 1888 small-pox caused 16,938 deaths, being 556 more than in 1887, indicating a death-rate of 0.90 per 1,000. The Commissioner refers to the preference given by the people to inoculation over vaccination, on the ground that the children who have been vaccinated often take the disease severely, while those who have been inoculated, as a rule, rarely suffer a second time. The result of this preference is that inoculation keeps alive and diffuses the variolous poison, and its "effect is to increase and not diminish the mortality among the unprotected; the mortality of natural small-pox being seldom below 20 per cent., and often greatly exceeds that amount." The simple truth is that vaccinators in India are natives of a class not to be depended upon. As the Commissioner says: "to swell these returns, they enter every case as successful, whatever be the character of the vesicle. Over and over again have I found, on inspection, numbers of children covered with cutaneous disease, or suffering from diarrhœa, whose arms were one large ulcer as the result of the operations;" and he truly adds that spurious vaccination only brings discredit on the measure. The Sanitary Commissioner (Surgeon-Major Roe, F.R.C.S.) insists on the fact that vaccination is contraindicated when certain diseases are present, such as diarrhœa and such cutaneous diseases as herpes, eczema, eruptions behind the ears, on the neck, or in the groins are present. The remedy for all this is clearly a superior, and better instructed, and better paid class of vaccinators, and as much strict inspection as possible. All this means money, the great obstacle to the progress of sanitation in India. Surgeon-Major Roe thinks animal lymph vaccination is growing in popularity, and will in time supersede vaccination from arm to arm; the people being most averse to allowing their children to be used as vaccinifers.

This is a very valuable report, doing great credit to the zeal and diligence of the reporter.

JOHN DODDS PRICE, surgeon, was indicted at the Leicester Assizes on Saturday, for administering a noxious drug to a young lady to whom he was engaged. Letters showed that an intimacy had taken place and that drugs had been administered. The girl has since been removed to a lunatic asylum. The prisoner was found not guilty, and Mr. Justice Wills, in discharging him, said it was the only safe verdict possible.

MEDICAL NEWS.

SOCIETY OF APOTHECARIES OF LONDON.—The following candidates, having passed the Qualifying Examination in Medicine, Surgery, and Midwifery, have received certificates entitling them to practise in the same, and have been admitted as Licentiates of the Society on November 20th, 1889:

Gilpin, Frank, Middlesex Hospital.
Heywood, Charles Christopher, St. Thomas's Hospital.
Jones, Evan, Middlesex Hospital.
Lowsley, Lionel Dewe, St. Bartholomew's Hospital.
Ramsden, Herbert, Owens College, Manchester.

THE Government of Victoria is about to establish a retreat for inebriates.

DR. GABRIEL LÓPEZ PEREDA, Professor of Clinical Medicine in the University of Madrid, died on November 26th.

THE West Highland Railway have appointed Dr. Miller, of the Belford Hospital, Fort William, medical officer on that part of the line extending to the county march.

SIR RICHARD WEBSTER, Q.C., M.P., Attorney-General, has accepted the office of a vice-president to the Dental Hospital of London, Leicester Square.

AT Nordhausen, in Prussian Saxony, the municipal authorities, at the suggestion of the *Physikus*, or district medical officer, have issued an order that barbers and hairdressers must disinfect their "instruments" each time they have been used.

BRITISH NURSES' ASSOCIATION.—The second annual *conversazione* of this association will be held this day (Friday), at 9 P.M., at the Princes' Hall and in the Galleries of the Institute of Painters in Water Colours, Piccadilly.

MR. D. B. BALDING, F.R.C.S., J.P. for Cambridgeshire, has been appointed one of the justices of the county to make orders for detention of private lunatics, in accordance with Sec. 10, Lunacy Act, 1889.

HOMICIDE BY FIREARMS.—Mr. Justice Wills, in opening the Notts Winter Assizes on Tuesday, expressed himself in favour of a short Act making it an offence punishable by fine to carry loaded firearms without reasonable excuse for doing so.

PRESENTATION.—On November 21st, the nurses and officers of the Lambeth Infirmary presented Dr. Grosvenor Shaw, the assistant medical officer, with a very handsome cut glass and plate sideboard piece, in token of their regard and high appreciation of his services.

BEQUESTS.—By the will of the Right Hon. Charlotte Scott, Vicountess Ossington, of Ossington, near Newark, sums of £1,000 each are bequeathed to the Society for the Support and Education of the Indigent Deaf-and-Dumb and to the Charing Cross Hospital.

CANING ON THE HEAD AT SCHOOL.—With reference to a paragraph, under this title, which appeared in the JOURNAL of November 30th, we are requested to state that the death of the boy there referred to was to be attributed to typhoid fever, and not to the blows on the head.

THE LATE SURGEON J. HEATH, A.M.S.—Surgeon-Major Mackinnon has handed over to Miss Robinson, Soldiers' Institute, Portsmouth, £35 14s. 7d., being the amount collected for the purpose of placing a tablet to the memory of the late Surgeon J. Heath, A.M.S., from some of his brother officers of the Burmah Field Force. [This intention has been anticipated by his relatives, and, as there are tablets in Netley military chapel, and at Arklow, county Wicklow, his native place, the relations desire that the sum should be devoted to some charitable object. Mr. Mackinnon hopes that this course will be approved by the subscribers.]

RENAL SURGERY.—Mr. Bennett May writes: Ellen Gooch was admitted into the Queen's Hospital on April 15th, 1888 (not 1887), under the care of Dr. Carter, who diagnosed a large retro-peritoneal abscess, apparently consecutive to post-partum mischief, and asked me to see the case in consultation. There was no evidence of kidney disease. An operation was decided on and performed, which, so far from being ineffectual, undoubtedly saved her life and placed her in a state of comparative comfort. I have seen her to-day, and her condition is now almost precisely the same as when discharged from hospital in September, 1888. Mr. Tait's own statement shows that she was not under my care in January, 1889, and therefore I think he is not entitled to credit me with being her medical attendant at that time, and in a sense which conveys an erroneous impression to the reader.

EDINBURGH HOSPITAL AND DISPENSARY FOR WOMEN AND CHILDREN.—The annual general meeting of those interested in the Edinburgh Hospital and Dispensary for Women and Children was held last week. Dr. Jex-Blake submitted the medical report, from which it appeared that 210 patients had been treated during the year. Of this number, 164 were provident patients, paying a small subscription. Twenty-five patients had been treated in the hospital. Dr. Littlejohn, in moving the adoption of the report, emphasised the desirability of women attending to women's ailments. Further, women were likely to be of service in the suitable regulation of children's diet.

ROYAL SOCIETY OF EDINBURGH.—The following office-bearers of the Royal Society of Edinburgh were appointed at the statutory meeting on the 25th ultimo: *President:* Sir William Thomson. *Vice-Presidents:* His Grace the Duke of Argyll, The Right Hon. Lord Moncrieff, Professor Sir Douglas Maclagan, M.D., Hon. Lord M'Laren, Rev. Professor Flint, D.D., Professor Chrystal, Dr. Thomas Muir, Sir Arthur Mitchell, M.D. *General Secretary.* Professor Tait. *Ordinary Secretaries:* Professor Sir William Turner, Professor Crum Brown. *Library Curator:* Dr. Alexander Buchan. *Council:* Dr. T. Batty Tuke, Professor Bower, Dr. G. Sims Woodhead, Mr. Robert Cox, Professor Bayley Balfour, Professor Ewing, Professor Jack, Professor James Geikie, Dr. W. H. Perkin, Mr. A. Beatson Bell, the Right Hon. Lord Kingsburgh, and Dr. John Murray.

ALLEGED POISONING FROM WATER GAS.—Further evidence has been given as to the rumoured series of disasters at the Leeds Forge, believed to be due to the escape of water gas, and consequent poisoning by carbonic oxide. The further evidence is to the effect that there was an escape of this highly poisonous gas owing to an accident; and similar evidence appears to be forthcoming as to the circumstances of the sudden poisoning of the seven surgeons who were in attendance at the *post-mortem* examination, The insidious dangers of carbonic oxide, which is the chief product, are only too well known. Further comment, however, must be deferred until the full facts of the case are elicited, with the evidence of experts to whom the matter has been referred.

CHEMISTS AND THE PATENT MEDICINE ACTS.—At a recent meeting of the chemists and druggists trading in Northumberland and Durham, held at Newcastle, the following resolution was adopted: "That steps be taken to secure exemption from medicine duty for all preparations made according to the formula of any British or foreign *Pharmacopœia*, and described and sold as such, and all medicines for which there is not claimed either exclusive right of, or secret process to their manufacture." It was decided to forward a memorial in accordance with the resolution to the Pharmaceutical Society, and also to memorialise the Board of Trade that, seeing the uncertainty of the interpretation of the Act, they should give a caution prior to proceeding to impose any penalty for an infringement of the Acts.

ORPHAN HOMES OF SCOTLAND.—The eighteenth annual meeting in connection with the Orphan Homes of Scotland and Destitute Children's Home Mission, or, to call the homes by their popular name, Quarrier's Homes, was held on November 20th. The bare record of what Mr. Quarrier succeeds in doing in a year is of a most remarkable character. The homes are situated near Bridge of Weir, the buildings having been erected, part by part, as money was forthcoming, and now representing a total sum of £100,000. Through these homes, during the past year, a total of 1,103 destitute children has passed. Besides these, 564 children have been provided with a night's shelter. Of the children, 250, both boys and girls, were during the year despatched to Canada. Altogether, since the emigration scheme was started, 3,000 children have been so sent, and of these not $2\frac{1}{2}$ per cent. have failed to fulfil the expectations of their rescuers. The expenditure necessitated by all this work has been met by voluntary gifts of money to the amount of £17,179, besides large quantities of clothing and provisions. Not satisfied with what he is now able to do, Mr. Quarrier seeks to add to his homes additional buildings, at a cost of £20,000, to enable him to accommodate 1,200 additional children; and, to judge by the past, there is little doubt he will obtain his desire.

ANATOMICAL SOCIETY OF GREAT BRITAIN AND IRELAND.—The following have been elected office-bearers for the ensuing year:—*President:* G. Murray Humphry, M.D., F.R.S. *Vice-Presidents:* Sir William Turner, M.B., F.R.S.; Daniel John Cunningham, M.D.; George Dancer Thane. *Treasurer:* Charles Stewart. *Secretaries:* W. P. Herringham, M.D. (England); H. St. John Brooks, M.D. (Ireland); John Yule Mackay, M.D. (Scotland). *Council:* William Anderson; John T. Charles, M.D.; John Curnow, M.D; J. N. C. Davies-Colley; John Cleland, M.D., F.R.S.; Rickman J. Godlee; G. B. Howes; David Hepburn, M.D.; John Langton; Charles Barrett Lockwood; Alexander Macalister, M.D., F.R.S.; A. M. Paterson, M.D.; Thomas Pickering Pick; J. Bland Sutton; John Struthers, M.D.; Johnson Symington, M.D.; Frederick Treves; Bertram Windle, M.D.; Arthur Thomson, M.B.; and Alfred H. Young, M.B.

STUDENTS' RESIDENCES.—The success of the students' residences at Wadham House, Toynbee Hall, E, and the want of space to accommodate all who wish to reside there, has suggested the foundation of another students' house on the same lines. Part of a house in the immediate neighbourhood is being adapted to the purpose, and will be ready before Christmas. The object is to provide the social and intellectual life of a college for students and others whose days are occupied in business. Every student will have his private room and there will be a common dining room, and eventually a reading room and class rooms. Every effort will be made to bring the charges down to, if not below, the level of those at Wadham House—namely, 7s. per week for furnished room, use of common room, and service. It will be possible to include board and lodging (exclusive of mid-day meals) for 15s. The internal affairs of the house will be, to a large extent, managed by a committee of residents. Each student will have a latch key. It is hoped that students will be able to take full advantages of the classes, library, etc., at Toynbee Hall, and gain much of the best side of college life. Further inquiries should be made of the Rev. S. A. Barnett, or Mr. B. King, Toynbee Hall, 28, Commercial Street, London, E.

COLLEGE OF MEDICINE FOR CHINESE.—At a meeting of the Senate held on Saturday, October 12th, 1889, the Dean (Mr. James Cantlie, M.A., M.B., F.R.C.S., read the following letter from His Excellency Li Hung Chang, in reply to a communication sent to his excellency for his becoming patron to the College:—"To the Authorities of the Hong Kong College of Medicine for Chinese. Gentlemen,—I am in receipt of your letter informing me that I have had the honour of being elected patron of your College. I also thank you for your desire to perpetuate my name on your College walls. I wish every success to your benevolent design. I learn that there are between twenty and thirty students in the College studying medicine, and consider it most proper that they should also pay attention to the sister subject of chemistry, and understand how to compound and how to analyse, thus insuring greater accuracy in the diagnosis of disease and the preparation of remedies. I remark that your countrymen devote themselves to practical research, and base their scientific principles on the results of investigations, thus differing from those who rest content with theories. The happy results which ever attend the treatment of disease on scientific principles are evidence of the advantage to be derived from the constant study of anatomy and chemistry and the consequent illumination of the dark path of knowledge. The Tientsin Hospital is a brilliant example of the advantage which Western science has over Chinese medical practice. There is no doubt that when your admirable project is achieved it will be appreciated and imitated, and that it will, through your students, be a blessing to China. Trusting that you will prosecute your scheme with unflagging energy, and wishing you my compliments, I subscribe myself on the accompanying card, LI HUNG CHANG." Six students passed the second professional examination in physiology (three in honours), and two the first professional in physiology.

MEDICAL VACANCIES.

The following Vacancies are announced:

BLACKBURN AND EAST LANCASHIRE INFIRMARY.—Junior House-Surgeon. Salary, £50 per annum. Applications by December 17th to Joseph Eastwood.

CANCER HOSPITAL, Fulham Road.—Assistant Anæsthetist. Applications by December 9th to the Secretary.

DONCASTER GENERAL INFIRMARY AND DISPENSARY.—House-Surgeon. Salary, £100 per annum, with board and residence. Applications by December 20th to W. Clark.

GORDON HOSPITAL FOR FISTULA, etc., 278, Vauxhall Bridge Road, S.W.—Anæsthetist. Applications by December 21st to N. S. Hincks.

GRANTHAM FRIENDLY AND TRADE SOCIETIES' MEDICAL INSTITUTION.—Resident Medical Officer. Salary, £150 per annum, with fees, residence, etc. Applications by December 16th to Mr. F. Hullott, Grantham.

KING'S COLLEGE HOSPITAL.—Assistant Physician and Assistant Accoucheur. Applications to J. W. Cunningham.

KING'S COLLEGE HOSPITAL.—Assistant Surgeon. Applications to J. W Cunningham.

LONDON THROAT HOSPITAL, Great Portland Street.—House-Surgeon Salary, £50 per annum. Applications by December 20th to A. B. Woakes, Honorary Secretary.

MILLER HOSPITAL AND ROYAL KENT DISPENSARY.—Junior Resident Medical Officer. Salary, £30 per annum, with board, etc. Applications by December 13th to the Honorary Secretary.

NATIONAL SANATORIUM FOR CONSUMPTION AND DISEASES OF THE CHEST, Bournemouth.—Physician. Applications by December 9th to the Secretary.

NORTH-WEST LONDON HOSPITAL, Kentish Town Road.—Assistant-Physician. Applications by December 10th to the Secretary.

ST. GEORGE'S HOSPITAL.—Lecturer on Dental Surgery. Applications by December 8th to the Dean.

ST. PANCRAS AND NORTHERN DISPENSARY.—Resident Medical Officer. Salary, £105, per annum, with residence and attendance. Applications to H. P. Bodkin, 23, Gordon Street, Gordon Square, W.C.

YORK COUNTY HOSPITAL.—Assistant House-Surgeon. Salary, £40 per annum, with board and residence. Applications by December 7th to the Secretary.

YORK DISPENSARY.—Resident Medical Officer. Salary, £130 per annum, with apartments, coals, and gas. Applications by December 17th to S. W. North, 84, Micklegate, York.

MEDICAL APPOINTMENTS.

ABBOTT, F. C., L.R.C.P., M.R.C.S. (Extension), appointed Resident House-Physician to St. Thomas's Hospital.

ANSON, G. E., M.A., M.B., B.C.Cantab., L.R.C.P., M.R.C.S., appointed Resident Accoucheur to St. Thomas's Hospital.

BETTES, F. B., L.R.C.P.Lond., M.R.C.S., Resident Obstetric Assistant, appointed Junior House-Surgeon to the Westminster Hospital.

BOYCOTT, A. N., L.R.C.P., M.R.C.S. (Extension), appointed House-Surgeon to St. Thomas's Hospital.

CAUDWELL, A. H., M.B., C.M., appointed Medical Officer to the Woodstock Union Workhouse and No. 1 District of Woodstock, *vice* A. H. Mair, M.B., C.M., resigned.

COWEN, T. P., L.R.C.P., M.R.C.S., appointed Assistant House-Surgeon to St. Thomas's Hospital.

DE JERSEY, W. B., L.R.C.P., M.R.C.S. (Extension), appointed Assistant House-Physician to St. Thomas's Hospital.

DICKSON, T. H., L.R.C.P., M.R.C.S., appointed Clinical Assistant in the Special Department for Diseases of the Throat, St. Thomas's Hospital.

FORWARD, F. E., L.R.C.P., M.R.C.S., appointed Resident House-Physician to St. Thomas's Hospital.

HARRISON, H. L., M.B., M.R.C.S., appointed Assistant House-Surgeon to the Leicester Infirmary and Fever House, *vice* G. W. Roll, appointed House-Surgeon.

HUGHES, A. E. P., L.R.C.P., M.R.C.S., appointed Clinical Assistant in the Special Department for Diseases of the Eye of Thomas's Hospital.

HULBERT, H. H., L.R.C.P., M.R.C.S. (Extension), appointed House-Surgeon to St. Thomas's Hospital.

JONES, H. S., F.R.C.S., L.S.A., appointed Clinical Assistant in the Special Department for Diseases of the Skin of St. Thomas's Hospital.

KEIFFENHEIM, L. W., appointed House-Physician to the Hospital for Consumption, *vice* Dr. Canney, resigned.

LAKE, R., L.R.C.P., M.R.C.S. (Extension), appointed Clinical Assistant in the Special Department for Diseases of the Ear, St. Thomas's Hospital.

LAMBERT, T. W., L.R.C.P., M.R.C.S. (Extension), appointed Clinical Assistant in the Special Department for Diseases of the Skin of St. Thomas's Hospital.

LAWS, W. G., M.B. C.M.Edin. (Extension), appointed Clinical Assistant in the Special Department for Diseases of the Eye of St. Thomas's Hospital.

MACLURE, Herbert, appointed House-Physician to the Hospital for Consumption, Brompton, *vice* Dr. Matthews, resigned.

MILTON, F. R. S., L.R.C.P., M.R.C.S. (Extension), appointed House-Surgeon to St. Thomas's Hospital.

NEALE, J. Headley, M.B.Edin., M.R.C.P.Lond, late Assistant Physician, appointed Honorary Physician to the Leicester Infirmary and Fever House, *vice* Dr. Blunt, deceased.

OGLE, C. J., appointed Surgeon to the Gordon Hospital for Fistula, etc., 278, Vauxhall Bridge Road, S.W., *vice* Mr. Benton, deceased.

OSBURN, H. B., L.R.C.P., M.R.C.S., appointed Senior Obstetric Clerk to St. Thomas's Hospital.

SPENCER, M. H., M.A., M.B., B.C.Cantab., L.R.C.P., M.R.C.S. (Extension appointed Non-Resident House-Physician to St. Thomas's Hospital.

STABB, A. F., L.R.C.P., M.R.C.S., appointed Assistant House-Surgeon to St. Thomas's Hospital.

TOLLER, S. G., L.R.C.P., M.R.C.S., appointed Clinical Assistant in the Special Department for Diseases of the Throat, St. Thomas's Hospital.

TURNEY, H. G., M.A., M.B., B.Ch.Oxon., L.R.C.P., M.R.C.S. (Extension), appointed House-Surgeon to St. Thomas's Hospital.

WICKHAM, G. H., L.R.C.P., M.R.C.S., appointed Clinical Assistant in the Special Department for Diseases of the Ear, St. Thomas's Hospital.

DIARY FOR NEXT WEEK.

MONDAY.

MEDICAL SOCIETY OF LONDON, 8.30 P.M.—Dr. Douglas Powell will open a discussion on the Diagnosis and Treatment of Aneurysm of the Aorta.

TUESDAY.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY, 20, Hanover Square, 8.30 P.M.—Arthur E. Nevins, F.R.C.S.Edin.: (1) On the Frequent Association of Heart Disease, especially Mitral Stenosis, with Diseases of the Pelvic Viscera in Women. Edward Roughton, F.R.C.S.: On Blood Tumours (angeiomata and angeiosarcomata) of Bone.

ANTHROPOLOGICAL INSTITUTE OF GREAT BRITAIN AND IRELAND, 3, Hanover Square, W., 8.30 P.M.—Mr. Edward Beardmore: The Natives of Mowat, Daudai, New Guinea (communicated by Professor A. C. Haddon). Mr. S. B. J. Skertchly, F.G.S.: Fire-Making in North Borneo. Dr. H. Rink: On the Origin of the Eskimo.

WEDNESDAY.

ROYAL MICROSCOPICAL SOCIETY (King's College, W.C.), 8 P.M.—Mr. A. W. Bennett: On the Freshwater Algæ and Schizophyceæ of Hampshire and Devon.

THE SANITARY INSTITUTE (Parkes Museum, 74A, Margaret Street, Regent Street, W.), 8 P.M.—Mr. W. Santo Crimp: The Disposal of Sewage.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, BROMPTON, 4 P.M.—Mr. R. J. Godlee: On Abscess of the Liver, and Notes of some Surgical Chest Cases. Lecture I.

HUNTERIAN SOCIETY, 8 P.M.—Pathological evening. Dr. Fowler: Papillomatous Growth of Uvula. Mr. Rivington: (1) Sarcoma of Foot; (2) Exostosis. Mr. Openshaw: Malformed Uterus. Dr. Davies: (1) Sarcoma of Lung; (2) Sarcoma of Kidney. Mr. Bidwell: (1) Acute Necrosis of the Atlas; (2) Abscess of Sternum and Liver, from a Case of Pyæmia. Mr. Poland: Carcinoma of the Sigmoid Flexure.

BRITISH GYNÆCOLOGICAL SOCIETY, 8.30 P.M. Council, 8 P.M.—Discussion on papers. Mr. Lawson Tait: A reply to Some Recent Observations on Ectopic Gestation. Dr. Benington: A Case of Lunacy Cured by the Use of a Pessary. Mr. Bowreman Jessett: The Surgical Treatment of Cancer of the Uterus. Specimens will be shown.

THURSDAY.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST (Victoria Park, E.), 4.30 P.M.—Dr. Clifford Beale: On Laryngeal Affections in Phthisical Persons.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM, 8.30 P.M.—Patients and Card Specimens at 8 P.M. Mr. Treacher Collins: Microscopical Sections of Lens, with Epithelium on the Inner Surface of the Capsule, and showing other peculiar structural changes. Mr. Jessop: (1) Aniridia with Dislocation of Lens; (2) Punctate Appearance of Anterior Capsule of Lens; (3) Vacuoles in Lens. Mr. J. Tatham Thompson: Note on a Case of Hereditary Tendency to Cataract in Early Childhood. Mr. Tweedy: On the Operative Treatment (1) of Cicatricial Ectropion of the Lower Lid, (2) of Symblepharon. Mr. Hill Griffith: A Case of Primary Tuberculosis of the Iris. Mr. C. Wray (introduced): On a Form of Conjunctivitis. Mr. Spencer Watson: Osteoma of the Infra-superciliary Region.

FRIDAY.

CLINICAL SOCIETY, 20, Hanover Square, 8 P.M.—Living Specimens:—Dr. Percy Fleming: Acromegaly. Mr. Silcock: Acromegaly. Mr. Kenneth Campbell: Acromegaly. Mr. C. Symonds: Two Cases in which the Thyroid Cysts have been Removed, one of them showing Ocular Sympathetic Paralysis. Mr. W. G. Spencer: Charcot's Disease of Shoulder-Joint attended by Suppuration. Mr. J. H. Morgan: (1) Inflamed Nævus of Leg, with Subcutaneous Hæmorrhages. (2) Tumour of the Frontal Bone in a Boy. Papers, at 9 P.M.: Mr. C. Symonds: Nine Cases of Thyroid Cysts and Adenomata Treated by Excision. Mr. W. H. Battle: Case in which a Diffuse Aneurysm developed in the Calf of the Leg, Simulating Abscess; recovery after removal of parts of the Popliteal and Tibial Arteries. Mr. W. G. Spencer: Case of Traumatic Aneurysm following a Fracture, Dislocation of the Spine in the Dorso-lumbar Region, and presumably connected with the Lumbar Arteries.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the announcement. The first post on Thursday mornings is the latest by which advertisements can be received.

MARRIAGE.

ORD—MERCER.—On November 26th, at Holy Trinity, Bournemouth, by the Rev. Canon Eliot, William Theophilus Ord, M.R.C.S.Eng., L.R.C.P.Lond., of Halesowen, Worcester, to Elizabeth Louisa, daughter of Major A. H. H. Mercer, formerly of the 60th Rifles, of Lee, Blackheath.

DEATH.

TEIXEIRA.—On November 29th, 1888, at Georgetown, Demerara, Nell, the beloved wife of Dr. Joâs Teixeira, and second daughter of John Hudson, of The Green, Stratford, Essex.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 1.30; Skin, M. 1.30; Dental, M. W. F., 9.

CHELSEA HOSPITAL FOR WOMEN.—M. Tu. W. and F., 1.30.

GREAT NORTHERN CENTRAL.—Medical and Surgical, M. Tu. Th. F., 2.30; Obstetric, W., 2.30; Eye, Tu. F., 10; Ear, M. F., 2.30; Diseases of the Skin, W., 2.30; Diseases of the Throat, Th., 2.30; Dental Cases, W., 2.

GUY'S.—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F. 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu. 1; Skin, Tu., 1; Dental, Tu. Th. F., 1.30.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th. S., 1.30; o.p., W. F., 1.30; Eye, M. Th., 1.30; Ophthalmic Department, W., 2; Ear, Th., 2; Skin, F., 1.30; Throat, F., 1.30; Dental, M. Th., 9.30.

LONDON.—Medical, daily, exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p. W. S., 1.30; Eye, Tu. S., 9; Ear, S., 9.30; Skin, Th., 9; Dental, Tu., 9.

MIDDLESEX.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 9.30; o.p., M. F., 9, W. 1.30; Eye, W. S., 9; Ear and Throat, Tu., 9; Skin, Tu., 4, Th. 9.30; Dental, M. W. F., 9.30.

NATIONAL ORTHOPÆDIC.—M. Tu. Th. F., 2.

NORTH-WEST LONDON.—Medical and Surgical, daily, 2; Obstetric, W., 2; Eye, W., 9; Skin, Tu., 2; Dental, F. 9.

ROYAL ORTHOPÆDIC.—Daily, 1.

ROYAL FREE.—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Dental, Th. 9.

ST. BARTHOLOMEW'S.—Medical and Surgical daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, W. Th. S., 2.30; Ear, Tu. F., 2; Skin, F., 1.30; Larynx, F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9.

ST. GEORGE'S.—Medical and Surgical, M. T. F. S., 12; Obstetric, Th. 2; o.p., Eye, W. S. 2; Ear, Tu., 2; Skin, W., 2; Throat, Th., 2; Orthopædic, W., 2; Dental, Tu., S., 9.

ST. MARK'S HOSPITAL.—Fistula and Diseases of Rectum, males, W., 8.45; females, Th., 8.45.

ST. MARY'S.—Medical and Surgical, daily, 1.45, o.p., 1.30; Obstetric, Tu. F., 1.45; Eye, Tu. F. S., 9; Ear, M. Th., 3; Orthopædic, W., 10; Throat, Tu. F., 1.30; Skin, M. Th., 9.30; Electro-therapeutics, Tu. F., 2; Dental, W. S., 9.30; Consultations, M., 2.30; Operations, Tu., 1.30; Ophthalmic Operations, F., 9.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, Tu. F., 2; o.p., W., 1.30; Eye, M. Tu. W. Th., F. 1.30; o.p., daily, except Sat., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Tu. F., 1.30; Children, S., 1.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1.30; Obstetrics, M. Th., 1.30; Tu., W. F., 2; Eye, Tu. F., 2; Ear, M. F., 9; Skin, W., 1.45, S., 9.15; Throat, Th., 1.30; Dental, W., 9.30.

WESTMINSTER.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1; Eye, M. Th., 2.30; Ear, M., 9; Skin, W., 1; Dental, W. S., 9.15.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the office of the JOURNAL, and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

QUERIES.

CANARIES OR MADEIRA?

A MEMBER, who is giving up practice in consequence of ill-health, would be glad to hear particulars as to the best means of getting to the Madeira or Canary Islands, and the average cost of living; also which of the two groups is preferable. What would be the probable cost for six months with wife, child, and servant? Are small private houses easily attainable?

ANSWERS.

PERLEXED might refer to any good text-book of medicine, as, for, instance, Dr. Bristowe's.

Treatment of Masturbation.

M.R.C.P.Lond. writes: There is a plan of treatment apparently little known, but completely successful, in cases like that referred to—namely, those in which the habit is a nocturnal one. A "cage" is carefully fitted over the genitals by an instrument maker, and kept in place by straps, which are secured by small locks. In the case of children the parent keeps the key, and, if needful, unfastens the apparatus for micturition late at night. There is no practical inconvenience except that the apparatus is somewhat expensive. Its use should not be discontinued too soon, for the bad habit is a tenacious one. It is equally useful for older youths or men who unwillingly find themselves overpowered at night. Such persons must, at bedtime, place the key in a drawer or other place away from the bedside; then, before it can be used, the temptation will have passed. I have for many years advised this apparatus in suitable cases with entire success.

Mr. C. Roberts, F.R.C.S. (London) writes: I cannot answer "M.D.'s" question on this subject, but I should like to call attention to the fact that circumcision does not prevent this vice in children as is generally supposed, especially outside the profession. I have frequently had occasion to refuse to perform circumcision for this purpose, as I believe it is more likely to prompt than to prevent the evil complained of by exposing the delicate glans to irritation of the dress from which the prepuce, in its natural state, protects it. I have had two cases like "M.D.'s" in which circumcision was performed for long contracted prepuces; and it would be well for surgeons to be quite sure they are on safe ground before proceeding to mutilate healthily formed children for so problematical a result. Surely a structure which is so persistent, and whose development is always on the side of excess rather than deficiency, has some useful function to perform, and should not be sacrificed without good cause.

It is usual to attribute the ceremony of circumcision among the Jews to a sanitary origin, but I think it is much more probable it was of the nature of a sacrifice, the prepuce being the easiest, and, indeed, the only part of the body of an infant which could be removed with safety. It is quite possible it is remotely connected with phallic worship, which is common enough at the present day in India and other parts of Asia. Of course, it is practised by other races than the Jews—some African tribes—who are not far advanced in sanitary knowledge.

Albuminous Urine not Coagulable in Presence of Acetic Acid.

Novus writes: The existence of this form of urine appears to have been first brought to notice by M. Marsault,[1] who states that, having to examine a urine which was faintly acid, and which gave, with nitric acid, an abundant precipitate, and also the ordinary characters of an albuminous urine with other reagents, it, however, presented a remarkable singularity, for when it was heated without the previous addition of acetic acid, it formed a voluminous coagulum insoluble in nitric acid, which was evidently albumen, but on warming after the addition of a small quantity of acetic acid, there was not the slightest appearance of precipitate. The next observer to give a note of this peculiarity was M. Languepin,[2] who says that he had occasion to examine a urine which presented the anomaly noticed by M. Marsault. This urine was of a pale colour, slightly acid, and frothed when shaken; heat alone produced an abundant coagulum soluble in acetic acid. If the urine was acidified with a small quantity of acetic acid before warming no precipitate was formed. Nitric acid and ferrocyanide of potassium also gave precipitates in this urine, and sugar was present.

M. Patein[3] attributes this fact, or this anomaly, if it can be so called, to the presence of a particular albumen other than that of serum-albumen and globulin; he also states that it is less rare than is generally supposed. The following is the method he gives for the separation of it. The urine is boiled with a few drops of acetic acid, after that it is filtered, and in the filtered liquid, which contains only this particular variety of albumen, nitric acid is added, and the coagulation is completed by boiling. M. Boymond, in his article upon Trichloracetic Acid as a Test for Albumen in Urine,[4] states that he has had occasion several times to examine urine presenting the same phenomenon, and that trichloracetic acid can replace nitric acid in the separation process indicated by M. Patein.

Prison Medical Service.

General Practitioner.—1. Medical officers to prisons in England and Wales are practically appointed by Sir Edmund du Cane, the Chairman of the Prisons Board, in Ireland by the Hon. Charles F. Bourke, and in Scotland by Andrew B. Bell, Esq., the last two being Chairmen of the respective Boards. It is usual, in the larger prisons, for the medical officer to have gained special experience as assistant surgeon in a prison, but this is not absolutely necessary. 2. A man may be married or single, and age is not specified. A registered double qualification is required, but practically no importance attaches to the special college or university whence such is obtained. 3. Any further details may be obtained from Mr. Joseph, private secretary to Chairman of Prisons Board, Home Office, Whitehall, or from similar officials in Scotland and Ireland.

NOTES, LETTERS, ETC.

We are requested by the Medical Defence Union to acknowledge the receipt of ten guineas from Sir Andrew Clark towards the funds of the Union.

The Carriage of Infection.

Dr. A. D. Macdonald (Liverpool) writes: In November, 1886, I was attending a considerable number of cases of scarlet fever, and also those of midwifery as usual. Particularly, on the evening of November 13th, I confined a lady who had not previously suffered from the disease. On starting I felt a little sore throat, and to this were added chills and *malaise* while with the patient and sitting for three-quarters of an hour at her bedside. Next morning I showed the rash distinctly, and subsequently desquamated freely. Mother and child remained free from infection, as did also the other cases of confinement. Here, then, was a finger, in which scarlatinal germs were developing, inserted into a parturient's vagina, and breathing going on through an infected throat in close proximity, without successful fresh cultivation of the disease germs. My hands were disinfected with solution of iodine.

I would not reason from the particular to the general; but I think the above life-incident shows how exaggerated the fear of, and precautions against, our lowly enemies' attack on a puerpera may frequently be. The pestilence walketh in our darkness just yet; necessary ignorance of microbial habits at one time led to too few, but now possibly to too many precautions. Each germ breeds true, and time will come when the habits and tricks of the micro-organismal race will be equally well known and acted on as if they were as high in the life scale as the deadly cobra or stealthy fierce jaguar. We are still largely in a state of theory.

Malingerers' Fever.

Mr. T. Unicume, M.R.C.S., L.R.C.P. (Headcorn) writes: I had thought the "increase of temperature" was due to a condensation of the breath moisture in the interstices of the blanket, when the heat, latent before, of necessity becomes sensible, and declares itself by a rise in the thermometer. I thought, too, this had been pointed out ever so many years ago by a leader in our profession at that time resident in Manchester. If, however, I am mistaken in all this, I shall much regret to have troubled you.

Natural and Artificial Salicylates of Sodium.

Mr. Wm. Martindale (London) writes: I beg to make a correction regarding the use of the above as mentioned by Drs. Charteris and Maclennan in the Journal of November 30th, p. 1209. They state "prescriptions of the salicylate of sodium are invariably made up, unless otherwise indicated, from the artificial and not the natural salt." The reverse is the rule with all good dispensing establishments in London. Nevertheless, I may mention that of late the better qualities of the so-called artificial product have very much improved, so as to be hardly distinguished from the salt of the natural acid.

Messrs. Squire and Sons (London) write: In the article "Experimental Research as to the Comparative Action of Natural and Artificial Salicylic Acids and their Salts," by Professor Charteris and Mr. Maclennan, p. 1209 of the Journal of November 30th, it is stated "that prescriptions of the salicylate of sodium are invariably made up, unless otherwise indicated, from the artificial and not the natural salt." We beg to state that the reverse is the custom in our house; the natural salicylic acid and its sodium salt are always used in dispensing prescriptions unless the artificial is specially ordered.

The Late Mr. Haynes Walton.

Dr. W. Cholmeley (London) writes: In your somewhat brief obituary o Mr. Haynes Walton there are, it seems to me, one or two mistakes. By his first wife Mr. Haynes Walton had ten children, and of these four died from diphtheria, and only two sons and one daughter survived their father. By his second wife there was no issue. You say that Mr. Haynes Walton edited "Operative Surgery in Druitt's well-known work." That is, I think, a mistake; no part of that work is called "Operative Surgery;" but more than 100 pages are devoted to the operations of surgery, and I believe that part of the book was, like the rest, written by Druitt himself. In the preface to the tenth edition of his book, in 1870, he says: "The chapters on the surgical operations were most carefully rewritten about fifteen years ago, and new engravings made, from a series of operations on the dead body, under the superintendence of that dextrous surgeon, my staunch friend, Haynes Walton. These have been subjected anew to the most searching revision by my friend, John Wood." No doubt Mr. Walton carefully revised the article in question in the ninth edition of the book, and would have gladly helped his friend again could he have spared the time; but Druitt was very ill in 1870, and Professor John Wood carefully revised the whole work; and, again, when Druitt was bringing out his eleventh edition in 1877, after expressing his thanks to many of those who helped him, he said "the labour and responsibility of revising the later two-thirds of the work were undertaken by my old and tried friend, Professor John Wood, of King's College Hospital."

False Teeth and Neuralgia.

Mr. T. Carlyle Beatty, jun., F.R.C.S. and L.R.C.P.Edin., L.S.A. (Seaham) writes: I have seen no reply to Mr. N. Stephenson's letter on "False Teeth and Neuralgia," which appeared in the Journal of November 3rd, and I feel I cannot let his remarks on the modern system of dentistry pass altogether unnoticed. If after the crown of a tooth is removed the remains of the pulp left in the stump are allowed gradually to decay, a minute abscess is formed at the apex of the dental canal, which may continue to discharge through the canal into the mouth as long as the stump exists. This discharge, at the same time, causes more or less rapid decay of the stump, and is one of the chief causes of the offensive breath of those who wear false teeth, and is without doubt a fruitful source of neuralgia. An irritable or inflammatory state of the gums, which is usually attributed to pressure of the plate, is also frequently due to this cause. This condition may exist without pain and without consciousness of the discharge, and may therefore be unsuspected as a cause of dental troubles or dyspepsia.

If, on the other hand, after the removal of the crown the contents of the dental canal remaining in the root are destroyed, and the canal is fitted with gold, further decay is prevented, and the sanitary condition of the mouth remains unaffected. A hole may then be drilled in the gold fitting, and a pivoted tooth adjusted, which is removable at will, the pivot consisting of a piece of strong wire split down the centre, the two halves of which when pressed together fit the socket, and their tendency to expand keeps the tooth fixed when placed in position. There is no plate to cause various troubles from pressure, and which is, moreover, a common source of dyspepsia, from its tendency to retain particles of decomposed food. To a few disinfected stumps a whole set of teeth may by this method be fixed without a plate, or with the smallest plate possible, for two stumps at some distance apart may be made to carry the intervening false teeth. It is unpardonable in these days to nip off the crown of a tooth and then to leave the root without proper treatment. If this is not done at once it will afterwards require at least six weeks for its accomplishment, for if the root is filled before the dental abscess is healed, a more extensive abscess will supervene, with toothache or neuralgia, requiring probably extraction of the stump for its cure.

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[1] *Bulletin du Syndicat des Pharmaciens de Loir-et-Cher*, 1887.
[2] *Bulletin de la Société de Pharmacie de Bordeaux*, October, 1888.
[3] *Comptes Rendus Acad. Sc.* and *Répertoire de Pharmacie*, September, 1889.
[4] *Répertoire de Pharmacie*, October 10th, 1889.

I hope Mr. Stephenson is mistaken in considering it to be the custom of English dentists to immovably fix false teeth into roots. Such a method is unnecessary, and cannot be too strongly condemned.

THE MOON DEFENCE FUND.

THE following further subscriptions have been received:

Dr. Porter	1	1	0
James F. Goodhart, M.D., 25, Weymouth Street	2	2	0
W. Cock, M.R.C.S., 108, Queen's Road	1	1	0
Dr. R. Denison Pedley, 18, Railway Approach, London Brdg.	1	1	0

H. W. Roberts, Secretary, Wickham Terrace, Lewisham High Road.

ERRATA.—The Secretary, Chairman of Museum Committee, and Editor of *Transactions* of the Edinburgh Royal Medical Society, are Messrs. Rudolf, Huie, and Horsley respectively, and not as stated in the JOURNAL of November 30th. —The title of Dr. Charles Warden's paper, read at a meeting of the Midland Society, should be "On Parosphresia and Parageusia," and not as reported in the JOURNAL of November 23rd, p. 1160.

COMMUNICATIONS, LETTERS, etc., have been received from:

Mr. F. B. Betts, London; T. W. A. Napier, M.B., Egremont; Dr. G. F. Crooke, Birmingham; Dr. J. Grant, Maidstone; Mr. M. Brockbank, Settle; Mr. Curgenven, London; Dr. Bowles, Folkestone; Mr. C. T. Kingzett, London; Messrs. Skeffington and Co., London; Mr. J. K. Thornton, London; Mr. J. Ringwood, Kells; Mr. Adams Frost, London; Dr. J. Althaus, London; Mr. C. J. Symonds, London; Mr. C. S. Bruce, Chiswick; Dr. E. Seaton, London; Messrs. Wodderspoon and Co., London; Mr. W. J. S. Ladell, London; Mr. T. P. Thomson, Shrewsbury; Dr. Symes Thompson, London; Messrs. Squire and Sons, London; Mr. F. Barnett, London; Mr. T. J. Dyke, Merthyr Tydfil; Dr. F. Beach, Dartford; Mr. J. L. Spires, Newcastle-on-Tyne; Dr. C. Macfie, Bolton; Dr. Hale White, London; Surgeon S. C. Philson, Cheltenham; Mr. W. W. Wagstaffe, Sevenoaks; The Secretary of the Clerical, Medical, and General Life Assurance Society, London; F. T. King, M.B., Seacliff, New Zealand; Surgeon-Major H. W. A. Mackinnon, Ramsgate; Dr. D. Powell, London; Tell; Dr. Rentoul, Liverpool; Our Vienna Correspondent; Mr. D. Harrisson, Liverpool; Dr. S. Lockie, Carlisle; Dr. W. S. Lang, Edinburgh; Dr. C. J. Lewis, Birmingham; Mr. E. E. Leech, Great Yarmouth; Mr. G. Smith, Salisbury; Dr. Marcet, Wimbledon; Mr. R. S. Miller, London; Sir Henry Thompson, London; Dr. Dreschfeld, Manchester; Sir E. Sieveking, London; Mr. H. Herbert, Oldbury; *British Mercantile Gazette*, London; Mr. J. F. Pink, London; Dr. Lewers, London; Mr. D. B. Balding, Royston; Mr. T. H. S. Pullin, Sidmouth; Mr. R. R. Leeper, Glasnevin; Novus; Dr. T. Harris, Manchester; Mr. N. P. Bebbs, Ashby-de-la-Zouch; Dr. W. Smith, London; Mr. H. C. Pope, London; Mr. C. Macnamara, London; Dr. Ward Cousins, Southsea; Dr. R. Saundby, Birmingham; Mr. F. B. Jessett, London; Mr. G. R. C. Russell, Kirkwall; Mr. R. Donald, Edinburgh; Mr. T. B. Carlyon, Redruth; Dr. L. Williams, Sidmouth; Mr. C. Roberts, London; Mr. W. Martindale, London; Mr. W. E. Scott, London; Dr. A. B. 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Alsop, Glasgow; Physician; Mr. J. M. Johnson, Liverpool; Mrs. Skinner, Winchelsea; F. J. Baildon, M.B., Southport; Dr. L. Parkes, London; Eczema; Dr. C. Golding-Bird, London; etc.

BOOKS, ETC., RECEIVED.

Clinical Lectures on the Diseases of Women. By J. Matthews Duncan, A.M., M.D. Fourth edition. London: J. and A. Churchill. 1889.

A Practical Treatise on Diseases in Children. By Eustace Smith, M.D. Second edition. London: J. and A. Churchill. 1889.

The Evil that has been said of Doctors. By S. J. Wilkoski. R. Clarke and Co.

Medicine in the Middle Ages. By T. C. Minor, M.D., Cincinnati. R. Clarke and Co.

Clinical Lectures on Some Obscure Diseases of the Abdomen. By Samuel Fenwick, M.D. London: J. and A. Churchill. 1889.

A Wave of Brain-Power. By Sir Gilbert Campbell. London: Ward, Lock, and Co. 1889.

Physiology of Bodily Exercise. By Fernand Lagrange, M.D. London: Kegan Paul, Trench, and Co. 1889.

Skeffington and Son, London:—

Stories Jolly, Stories New, Stories Strange, and Stories True.
Pepin, the Dancing Bear. By K. S. Macquoid.
Seed, Flower, Fruit. By Maggie Symington.

The Religious Tract Society, London:—

Two Pocket Books.
The Brook and its Banks. By the Rev. J. G. Wood, M.A., with many illustrations.
The Child's Companion and Juvenile.
Our Little Dots.
English Pictures. By the Rev. Samuel Manning, LL.D., and the Rev. S. G. Green, D.D.
Russian Pictures. By Thomas Mitchell, C.B.
The Girl's Own Out-door Book. Edited by Charles Peters.
The Girl's Own Paper.
The Leisure Hour.
The Sunday at Home.
The Boy's Own Annual.

Diaries. From Griffith, Farran, and Co., London.

Diaries. From W. Collins and Co., London.

Cassell and Co., London:—

The Magazine of Art for 1889.
The Master of Ballantrae. By Robert Louis Stevenson.
Family Magazine; illustrated.
Polly: A New-Fashioned Girl. By L. T. Meade.

Griffith, Farran, and Co., London:—

Some Other People. By Alice Weber.
Our Sunday Book: or Reading and Pictures.
The Baby's Museum, or Mother Goose's Nursery Gems. By "Uncle Charlie."
A Ring of Rhymes. By E. L. Shute.

Ward, Lock, and Co., London:—

The Mids of the *Rattlesnake*. By Arthur Lee Knight.

Blackie and Son, London:—

Laugh and Learn. By Jennett Humphreys.

T. Fisher Unwin, London:—

The Butterfly. By John Stuttard.
Daddy Jake, the Runaway. By "Uncle Remus," Joel Chandler Harris.

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NOTICE.—Advertisers are requested to observe that it is contrary to the Post Office Regulations to receive at Post-Offices letters addressed to initials only.

A DISCUSSION
ON
CHRONIC TUBERCULAR DISEASE OF THE SEROUS MEMBRANES.

In the Section of Medicine at the Annual Meeting of the British Medical Association, held in Leeds, August, 1889.

I.—R. DOUGLAS POWELL, M.D., F.R.C.P.,
Physician Extraordinary to the Queen; Physician to the Middlesex Hospital and Consulting Physician to the Hospital for Consumption, Brompton.

In introducing the discussion, Dr. Douglas Powell alluded to his subject as one of arbitrary limits, including cases not acute, in which the disease was in the first instance limited to one serous membrane, spreading perhaps to others chiefly through lymphatic paths; in which the fever, low in range, was of remittent or irregularly intermittent type, the intervals of apyrexia being often long; in which the constitutional state was that common in tuberculous subjects, of the erethic type, with quickened pulse, harsh dry skin, wasting body, and associated with these phenomena were the local signs and symptoms of the disease. Tubercular disease of serous membranes was rarely primary; if general, a perhaps forgotten mass of old tubercle was usually in the background; if local, there was commonly precedent disease of the subjacent or neighbouring organ. Dr. Powell accepted as satisfactory the views—as he interpreted them—of Mr. Barker, who admitted the tubercle poison as disseminated in the blood current, and on the other hand accepted the necessity of a receptivity or preparedness of tissue of more or less embryonic conformation in young people, the embryonic type in adults being represented by the young cells of plastic exudations. Dr. Powell was inclined, however, to attach more importance to activity of growth and function in certain parts at certain ages as rendering them liable to strain or lesion, and so vulnerable to the onslaught of tubercle in those hereditarily or by evil conditions of life predisposed. Tubercular meningitis as a chronic disease was in his experience almost unknown. Tubercular pleurisy was by itself, as shown by *post-mortem* statistics, a rare disease. Was it so rarely met with clinically? It was well known that pleurisy commonly preceded phthisis, but were not such cases of pleurisy in the first instance tubercular, and indeed secondary to present tubercle in the lung? He was increasingly inclined to think so, and related two cases illustrative of his experience. In one of these cases, the clinical history, suggesting possibly old tubercular lesion, was corroborated by the discovery by Dr. Wethered of elastic tissue encrusted with lime salts in the sputum. There were no clinical rules of very precise application for the recognition of early cases of tubercular serous effusion; the insidious onset and symptomatology, the preceding symptoms, the duration, and the possible affection of other membranes were in point. Dry pleurisy at the apex should be always regarded with much suspicion. Dr. Burney Yeo had described three interesting cases of apex pleurisy in young people attended with peculiar hard coughs, and in one with some stained mucous sputum, all of which got well; what was Dr. Yeo's experience of the future of such cases? It was difficult to recognise slight pulmonary change, especially in the presence of effusion. Examination of sputum, if any, would help, but a continuing slight febrile action and a persistently quickened pulse were of much importance, a secondary rise of temperature after the third week of a pleurisy being (excluding empyema) very significant. The appearance of the fluid was not characteristic, it was mostly clear, sometimes smoky or blood-stained or opalescent, not often purulent, excluding cases of perforation. Examination of the fluid for tubercle bacilli had proved unsatisfactory, the organism not having been found in many cases whose tubercular nature was otherwise demonstrated. Dr. Powell related a case in which after several failures bacilli had been found in certain tiny flecks of an otherwise clear effusion. This experience, and that of a case some years ago, in which, after failing to find bacilli in the pus of an empyema, plenty had been discovered in a drop removed on the point of a probe from the pleural surface, led him to believe that the bacilli chiefly germinated in contact with the pleural surface, and were not to be found free in the effusion, except in minute flecks or sheddings from that surface. Cultivation and inoculation experiments were also at present not to be trusted in diagnosis. The case he related was also one in which rapid absorption and recovery had ensued, although the effusion was distinctly tubercular. He thought he had observed many such cases. What was their future? With the practical rest brought about by adhesion, and in the absence of fresh pabulum, the bacilli became extinct or dormant, and the tubercle underwent fibroid degeneration, so that indefinite quiescence might be hoped for. The disease might recur in another membrane or in the lung, but not necessarily in the same lung. Phthisis advanced by a succession of attacks, and any temporary lull might become permanent quiescence. Caseation was comparatively rare in serous membrane tubercle.

In chronic tubercle of the peritoneum with similar constitutional symptoms we observed colic pains, intestinal flatulence, irregular or relaxed bowels, enlarging abdomen with impaired resilience and elasticity, and a doughy resistance and movement *en masse* under palpation, significant of intestinal adhesion, slight tenderness, and sometimes peritoneal friction sound. The effusion often proceeded to ascites, and in some cases after a time the physical signs became remarkably altered, the resonant intestines being held back to the flanks. In those cases, as in one recently under Dr. Powell's care, and one recorded by Sir S. Wells, the diagnosis from ovarian cyst was often very difficult. The fluid might be absorbed and the patient recover, as not infrequently happened; or in what might be regarded as the third stage, signs and symptoms arising from contractile deformity of the omentum and mesentery ensued; masses and bands were to be felt resembling cancerous masses, contortions, irregular peristalsis, obstruction, partial or complete, due to constriction by or entanglement around the contracting and thickened bands occurred. Dr. Powell here related a case in point, and remarked that the contractile character was an important feature of chronic tubercle, especially so in the comparatively free abdominal folds of the peritoneum. In other cases perforation of the intestine and localised abscesses, perhaps pointing through the abdominal wall, occurred. Dr. Fenwick had found ulceration of the intestines recorded in only eight of his forty-seven collected cases. Dr Powell thought that ulceration or tubercular disease of some, often a pelvic, organ was more usually present. He remarked on the fact that had been noted of the shutting off of pelvic peritonitis from the general peritoneum, and concluded this part of his subject by alluding to the insidious and often obscure incidence of the disease, the great importance in diagnosis of watching temperature and pulse in association with slight abdominal symptoms. He had seen two early cases diagnosed and treated for neurasthenia. Pericarditis, joint tubercle, and tubercular testis were alluded to. In discussing the treatment, Dr. Powell alluded to the scanty growth and feeble vitality of serous membrane tubercle, and the tendency to obsolescence. The dangers were from inflammatory damage to subjacent organs, and from contortions and strangulations of vital parts; in other cases from perforations and suppurations. Nothing at present known would cure tubercle, the bacillus would cheerfully withstand antiseptics in doses beyond the toleration of its host. Mercury was the most hopeful antiseptic, but reducing vitality reduced also the patient's resisting powers. The securing of mechanical rest to joint, chest, or abdomen was very important in combination with good hygiene.

The utility of operative measures as a routine treatment of tubercular joints was still a matter of debate. Anything like complete aspiration in tubercular pleurisy was attended with danger of active tuberculosis, whilst such effusions were, he had shown, very amenable to ordinary measures. Free incision and drainage might in some cases come to be advocated as affording rest rather than strain to the pleura.

On the question of opening the abdomen we were collecting experience, and in forming a judgment it should be remembered:—1. That many cases had a favourable issue under careful treatment. 2. That the tubercle could not be removed by operation, arrest and obsolescence being all that could be looked for. 3. That the successful cases hitherto met with were cases, he believed, like that of Sir Spencer Wells, in which the peritoneum had inadvertently been opened in non-suppurative cases. 4. The cases most needing surgical help were those analogous to empyema, in which, however, the presence of perforations and intestinal ulceration often rendered such treatment of doubtful utility. The matter was one for very useful discussion and new experience.

II.—H. HANDFORD, M.D., M.R.C.P.,
Physician to the Nottingham General Hospital.

DR. HANDFORD agreed with Dr. Powell that we had no direct treatment which would injuriously affect the tubercle bacillus. The latter produced changes which were closely analogous to, and in many instances indistinguishable from, those of active mycosis and of syphilis. It was those changes which must be treated on their merits independently of the bacillus itself. Sufficient importance had not been given to the very varied course which tubercle ran in the different lower animals. As a general rule, it tended to be a more localised affection in the animal feeders than in the vegetable. There was much reason to think that something of the same kind was true in the human subject. Dr. Handford had seen cases of peritonitis, diagnosed as tubercular both clinically and microscopically (but without the discovery of the bacillus), which had been cured—at any rate for the time being—by laparotomy, both when the fluid was serous and when it was purulent. But he doubted whether those cases of tubercular peritonitis where a caseous affection of the omentum and mesenteric glands, without any great effusion of fluid, was the prominent feature, would be benefited by abdominal section. Dr. Handford had frequently contemplated making an incision into the pleura in cases of serous effusion, but he had not yet had the courage to do so, though he thought that in some cases it would be the best treatment.

III.—I. BURNEY YEO, M.D., F.R.C.P.,
Physician to King's College Hospital.

DR. YEO said he would confine his remarks to one point, namely, the occurrence of dry apical pleurisies, which he believed were not tubercular, but, in fact, rheumatic. Those cases presented many of the physical signs which were relied upon in the diagnosis of tubercular affections of the apex, but others were wanting; especially he referred to the absence of bacilli in the sputa and the absence of hectic fever. He had observed those cases some years before he realised their true nature; but of late years he had been struck by their association with other rheumatic affections, and as occurring in the rheumatic constitution. These cases also ran a different course from cases of tubercular apex affections. They recovered completely with appropriate treatment, and went often to swell the list of cases of cured phthisis. They were especially amenable to anti-rheumatic treatment. The symptoms frequently passed away with counter-irritations by blisterings or by iodine and the internal use of iodide of potassium. He called attention to the physiological and anatomical analogy between the serous and synovial membranes. He believed there was also a pathological analogy, and just as the synovial membranes were very prone to rheumatic affections, so were the serous membranes, and especially the apical portions of the pleura. Dr. Yeo agreed with Dr. Powell as to the undesirability of hastily puncturing the chest in tubercular pleuritic effusions. He thought Dr. Powell was in error in regarding antiseptic agents as useless in the treatment of tubercular processes. He believed they were very unequal in their efficacy in different instances, and he considered this to be, to a great extent, due to the different qualities of individual tissues, because he was not disposed to look for any direct action on the bacillus, but rather on the tissues which were being invaded.

IV.—T. CHURTON, M.D.,
Physician to the Leeds General Infirmary.

DR. CHURTON wished to obtain information which would enable the question to be answered, Ought we to incise the chest and the abdomen whenever inflammatory fluid is present? Most cases of pleurisy with effusion apparently recovered, but phthisis followed quickly in some of them; possibly, therefore, these cases, though apparently simple, were tubercular. Peritonitis, apparently tubercular, also often recovered; as an example, he mentioned the case of a man who had this disease two years ago, and still remained in good working health. Was this patient placed at any prospective disadvantage by the fact that he had not had the peritoneal fluid drawn off by incision and drainage, the process of cure being by this method, according to some reports, considerably shortened? Cases of this kind should, when possible, be kept under observation for several years.

V.—W. H. BROADBENT, M.D., F.R.C.P.,
Physician to St. Mary's Hospital.

DR. BROADBENT said he had not had the advantage of hearing Dr. Powell's paper in consequence of attendance at another Section, and had not expected to be called upon to speak. He had, however, read an abstract, and was in complete agreement with Dr. Powell on all important points. He would only bring before the Section his experience on the question of opening the abdomen in tubercular peritonitis. He had had this done in several cases, but had not seen the successful results which had now so often been obtained. In all cases, however, the operation had been attended with decided relief, and in all but one he considered that the patient's life had been prolonged. Most of the cases had been such that there was no possibility of cure by any means. The general impression left on his mind from the effects of opening the abdomen in tubercular peritonitis was that tubercle was a very vulnerable organism if it could be got at, and that the reason why tubercular disease was not amenable to treatment was that the organism could not be reached by remedies introduced into the system by the mouth or by inhalation. He had tried and carefully watched the effects of so-called antiseptic treatment of phthisis, but beyond the improvement seen from other lines of treatment he had been unable to recognise any good results. If we brought to the observation of the effects of any treatment an expectant attitude of mind, there would always be sufficient improvement to permit of a favourable opinion being formed.

VI.—C. H. GAGE BROWN, M.D.

DR. GAGE BROWN was interested to hear Dr. D. Powell's remarks on the ushering in of phthisis by pleurisy. Pleurisy was undoubtedly often a first sign at the apex, but, in his own somewhat lengthened experience, and doubtless also in the experience of some others who had been long in practice, cases had occurred of pleurisy at the base preceding phthisis at the apex, and not necessarily at the apex of the lung of the same side as the pleurisy. An apparently healthy person may be attacked with pleurisy at the base, which does not appear in any severe form. It yields to treatment, and seems to get well. A few months elapse; another summons comes to attend the case, and this time it bears evidence of tubercular deposit in one or other apex. *Post-mortem* examinations in some of these have not shown any deposit of tubercle on the pleura at the base, nor the deposit of tubercle on the substance of the lung at the base, but the presence of these bands evidences a pre-existent pleurisy. He could not offer an explanation of these facts.

VII.—C. R. DRYSDALE, M.D.
Senior Physician to the Metropolitan Free Hospital.

DR. DRYSDALE said he had been greatly instructed by the address of Dr. D. Powell, whilst agreeing with him that bacilli were hardly ever found in pleural effusions connected with tuberculosis, except in the rarest cases, and that thus a valuable diagnostic symptom was absent. Although quite acknowledging the important remark made by Dr. Powell as to the vulnerability of children in the case of joint affections of a tubercular nature, he would like to ask the question, Is not the whole human race vulnerable as regards the subcutaneous injection of the bacillus of tubercle? He asked this question again. It had been answered in the negative by some distinguished physicians he had interrogated, yet his own experiments of twenty years previously on rabbits, at the North London Consumption Hospital, had led him to think that even the healthiest person would become tubercular if subcutaneously injected with tubercular products. With regard to treatment, he thought but little action could be done in tuberculosis of serous cavities by means of incision, mercury, or iodine. His only hope as to the cure of tuberculosis lay in the possible extension of M. Pasteur's process of mitigation of germs. It was by no means impossible that what that discoverer had done for rabies might be extended to tuberculosis, which at present was the *opprobrium medicorum*.

VIII.—ROBERT SAUNDBY, M.D., F.R.C.P.,
Physician to the Birmingham General Hospital.

DR. SAUNDBY expressed his gratitude to Dr. Douglas Powell for the careful way in which he had brought forward this subject. He desired to restrict his remarks to one or two points which had been referred to in the paper by subsequent speakers. Thickening

of the pleura was an expression often used in a somewhat vague way, and the idea that seemed to be in most people's mind was that the pleura was thickened by the formation of a mass of new material between the parietal and visceral pleural surfaces. He pointed out that the lymph so deposited had very little to do with the subsequent formation of cartilaginous tissue, which was, for the most part, due to collapse of the superficial layers of air cells, and their fibroid degeneration. He agreed with Dr. Powell in his estimate of the value of so-called antiseptic treatment of tubercle. Until surgeons could show that they could successfully treat a tubercular affection of a synovial membrane, which was accessible to every kind of local treatment, there was no reasonable ground for thinking that these means, given by the mouth or inhaled air, in vapour or spray, could be effective. He protested against the suggestion of Dr. Churton, that the chest should be incised in simple pleurisy, and denied that there was any analogy for thinking that such an operation would prevent the occurrence of tuberculosis. With reference to the remarks of Dr. Drysdale, he wished to recall the words of Virchow, who, in his address at the Medical Congress in 1881, said that the recent discoveries of specific micro-organisms brought into greater prominence than ever the old doctrine of predisposition.

IX.—F. IMLACH, M.D.,
Liverpool.

Dr. Imlach had been much interested in Dr. Powell's observations on cases of tuberculous peritonitis in which no primary lesion of any abdominal or pelvic organ could be found. Either the primary lesion had become obsolescent, and was without clinical importance, or there was none. In such cases abdominal section with washing out and drainage resulted in an apparent cure, as he had found in five instances. In these the tuberculous nodules of the peritoneum were previously unsuspected. But when there was tuberculous ulcer of the intestines surgery seemed to be of little service, and when the lungs or liver were affected, of none at all. He had watched the progress of one of his five cases for four years, and there had been no return of the disease.

X.—JULIUS DRESCHFELD, M.D, F.R.C.P.,
Professor of Pathology, Victoria University, Manchester; Physician to the Manchester Royal Infirmary.

Dr. Dreschfeld said he was led to draw attention only to one or two points of pathology which might explain the peculiar behaviour of cases of tuberculous peritonitis as regards prognosis. When a tuberculous peritoneum was examined tubercle bacilli were often found to be absent. In such cases the spores were present but no bacilli. Such a condition was found also in so-called healed phthisis, where no bacilli were found, but where inoculation in animals with particles of the caseous nodule produced typical tuberculosis, etc., and it might be assumed that a very similar condition occurred in peritoneal tuberculosis, and that many of these cases might recover when the spores did not develop further, or they might, when a particular predisposing cause arose, spring into activity and produce acute tuberculosis or general tubercular disease.

The President (Dr. J. E. Eddison) commented on various points that had been raised during the discussion, and Dr. Powell replied.

NOTES OF A CASE OF TREPHINING FOR OLD DEPRESSED FRACTURE OF THE SKULL: RECOVERY.

By GEORGE BUCHANAN, A.M., M.D., LL.D.,
Professor of Clinical Surgery in the University of Glasgow.

The following case is a good example of the beneficial effects which may follow removal of pressure from a localised spot of the brain, even long after the injury received. The notes of the case are by Dr. Dunlop, of Thornhill, who sent the patient to me and took charge of him after the operation.

P. M., aged 33, a railway surface man, received a compound fracture of the skull by his head coming in contact with a bolt projecting from a bridge under which a train was passing, he being at the time standing in one of the wagons. The seat of injury was the occipital bone, near its upper angle, about an inch or more to one side. He was stunned by the blow, and was taken in an unconscious state to Dumfries Infirmary, and remained so for three days. Eight days afterwards he was conveyed home, and was, as far as can be ascertained, fairly well for six weeks, when he again became unconscious and was confined to bed for three months. At that time he complained of great pain in the top of his head. The headaches were sometimes so severe that they were accompanied by fever and sometimes delirium. Blisters were frequently applied to the nape of the neck. He recovered sufficiently to allow of his going about his ordinary occupation; married, and lived comfortably in a little cottage some miles from Thornhill.

Six years ago, the pains in the head again became worse, and symptoms of gastric derangement showed themselves. The pain was not uninterrupted, but came on occasionally with great severity, completely unfitting him for all duty, and causing indigestion and inability to take food.

In April, 1889, he called on me, and I found at the seat of the old injury a manifest but very slight depression in the skull. From this point he declared that the pain always arose, and felt as if shooting all round his head. I told him that the only hope of recovery was the removal of a piece of bone from the site of the old injury; but that the result could only be problematical, and the operation not devoid of danger.

During the summer he went for change of air to the sea coast, but not finding any improvement, but rather an increase of pain, he determined to have the operation performed. I did this on July 29th at his house near Thornhill, with the assistance of Dr. Dunlop and my son.

The head being shaved, the cicatrix of the old wound on the scalp was seen at a point about an inch and a half from the superior angle of the occipital bone to the left side. A crucial incision having been made over this spot, and the flaps retracted, I could see and feel the edge of the old fracture, with a depression about an eighth of an inch. I applied a trephine, and removed a disc of bone the size of a shilling, and had the satisfaction of finding I had got the bit which had been pressing inwards. There were no starred or rough edges. Whatever had been was smoothed away; but there was a projection inwards, something like a bone button—making the skull in that part two or three times thicker than normal, and the thickness pressing in on the membranes. There was no abnormal appearance on the membranes. I stitched the points of the flaps together, and applied a simple dressing of alembroth gauze and cotton. The wound healed by first intention. Dr. Dunlop only changed the dressing two or three times, and the patient made an excellent recovery.

The headaches have entirely disappeared (December, 1889), his appetite and digestion are both good, and he feels himself "a new man," as he expresses it.

NOTES OF A LECTURE ON SOME FORMS OF RETINAL PIGMENTATION.

Delivered at the Royal Westminster Ophthalmic Hospital,

By W. ADAMS FROST, F.R.C.S.,
Surgeon to the Hospital.

I do not propose here to deal at all exhaustively with the subject of pigmentation of the retina, but merely to illustrate some forms in which it occurs, which appear to me to be in some degree typical of their kind. It is, I believe, generally admitted that in all cases in which pigment is found in the anterior layers of the retina, its source is the layer of hexagonal pigmented cells which is now considered to form the deepest layer of that membrane. The most common cause of pigmentation of the retina is undoubtedly choroiditis, and although it must be considered an established fact that the pigment layer is histologically a part of the retina, yet clinically it is much more intimately associated with the choroid, participating, as it does, very readily in affections of this membrane,

and often escaping in affections of the retina—not even accompanying it when it becomes detached from the choroid.

It is a curious feature about pathological pigmentation of the anterior layers of the retina that it is always associated, sooner or later, with de-pigmentation of the layer that normally contains pigment; to what extent these two processes are correlated as cause and effect I will not now consider.

I propose to consider some cases of retinal pigmentation which have at any rate this in common, that they are not secondary to choroiditis. Examples of these are given in the accompanying lithographic plate.

Fig. 1 is an illustration of one form in which pigmentation of the retina may occur as a physiological peculiarity. The pigment is arranged in groups, each being formed by an aggregation of small black dots varying from two to six in number. These groups are scattered over a wedge-shaped area, having its apex at the optic disc, and its sides formed by the inferior nasal and inferior temporal vessels. The painting was made from a child who had normal vision, the visual field was not taken. I have seen another very similar case[1] in which the individual groups were larger but fewer in number; in this case the fundus-red was rather darker than usual. The subject was a boy, aged 13. There was total hypermetropia of 2.75 D.; the vision was normal. A case very similar to these is figured in Wecker and Jaeger's *Atlas* (Fig. 76) under the title "New Formation of Pigment." In this also vision was normal.

There can be no doubt that these are examples simply of a physiological peculiarity analogous to that which occasionally causes one sector of the iris to present a pigmentation which is in contrast with the remainder.

For the opportunity of obtaining drawings of this and of many other physiological peculiarities of the fundus I am indebted to Mr. S. Stephenson, at the time that he was assistant medical officer at the South Lambeth schools.

Figs. 2 and 3 are examples of retinitis pigmentosa in an early and a late stage respectively. The name of this disease is in such general use that it would be idle to attempt to change it, yet in many respects it is misleading; for in the first place the disease is much more of a degenerative than of an inflammatory type; in the second place, pigmentation of the retina occurs in other conditions; and in the third, in many cases which must certainly be included under the title, retinal pigment is present in quite an insignificant amount (as in Fig. 3). The name, however, is comparatively unimportant as long as it is by general consent taken to refer to a definite clinical entity, of which the subjective symptoms are night-blindness and a gradual diminution of the visual field with retention of fair central vision, the whole running an eminently chronic course, extending over many years. At the same time there are the characteristic objective signs to be seen with the ophthalmoscope, namely, pigmentation of the superficial layers of the retina, the sheaths of the vessels being frequently involved, and atrophy of the pigment layer of the retina, which allows the choroidal vessels to become visible.

Now, the term "retinitis pigmentosa" tends to exalt the value of the one factor in the disease at the expense of the other. Even some of our best textbooks are not free from ambiguity as to the value that is to be attributed to atrophy of the pigment layers as a symptom in this disease. Thus, in Dr. Berry's *Diseases of the Eye*, page 162, we find that "typical cases of retinitis pigmentosa are quite different from the variety following severe syphilitic choroiditis, and are easily recognised by the delicate shapes of the pigment deposited in the retina, its relation to the vessels, and the absence often of any disappearance of the pigment in the hexagonal cells;" but, on page 275, we find that in true retinitis pigmentosa "there is usually a conspicuous defect in the pigment of the hexagonal cells, which allows the choroidal vessels with their pigmented interspaces to come into view."

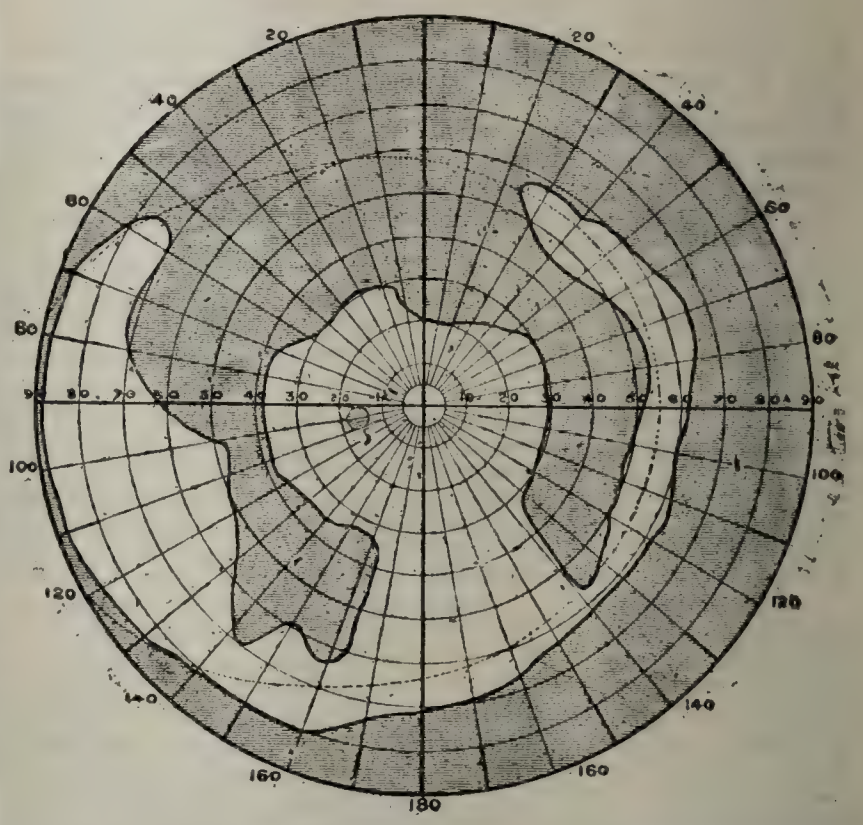
I do not think sufficient stress has been laid by writers upon the fact that, as the disease progresses, the affected area becomes more extensive, but no proportionate increase takes place in the amount of pigment in the area of the fundus first affected. My own impression is—although I should like to see more cases before forming a positive opinion on the point—that the pigmentation diminishes in the later stages of the disease, and from the cases I have seen I should consider that Figs. 2 and 3 may be taken as fairly typical examples of the early and late stages of the disease.

[1] These and other allied conditions were illustrated by lantern slides projected on a screen.

Fig. 2 is a painting from the left eye of a girl, A. M., aged 23. She is the third of five children; the others being stated to be free from any affection of the eyes. One brother and one sister were seen by me, and their eyes were normal in all respects. The parents are both living, and stated to be in good health; they are not blood relations. The patient herself is anæmic, but otherwise is in good health. There are no signs of inherited syphilis, and no history or likelihood of the disease having been acquired.

In January, 1887, the patient first noticed that the sight of the left eye was not as good as it had hitherto been; she did not notice that the defect was greater at night. An attack of conjunctivitis appears to have directed her attention to the eye. Since then the patient thinks that the sight has gradually deteriorated; but this seems to be due rather to continued contraction of the visual field than to any actual lowering of the visual acuity.

She was first seen by me in February, 1888, at St. George's Hospital. The vision was then, in both eyes, 6-12ths, improved by 0.50 D to 6-9ths. The visual field in the right eye was practically normal; in the left it was at first thought to be contracted concentrically to about 20°, except below. A subsequent examination showed this was a mistake, and that beyond this central field, and separated from it, except below, by a blind area, was a peripheral band of functionally active retina (see chart);



in fact, the condition was analogous to the ring scotomata occasionally seen in this disease, but the ring was incomplete below, while above its breadth caused it to reach beyond the confines of the normal field. The light-sense was found to be very defective. With Förster's photometer, but with a different illumination and and test object than used by him, the right eye required an aperture having a diameter 14 millimètres and the left 20 millimètres, while the average of 10 normal eyes gave 3 millimètres as the minimum aperture required. With the ophthalmoscope the right eye showed a few streaks of pigment at the extreme periphery; the discs and vessels were normal. In the left eye the appearances were those depicted (Fig. 1). It will be seen that there is a considerable amount of pigment in the peripheral parts of the retina, and that this is made up of fine dots, which, by giving off processes that anastomose with others, form a network over the affected portion. It will also be seen that the pigment layer of the retina is atrophied in places, so that the choroidal vessels are visible, but the pigmentation is a more prominent feature of this case than the atrophy of the pigment layer. The retinal vessels are somewhat diminished in size, and the disc has a peculiar dull dirty hue. The drawing was not made till July, 1888, but no appreciable change had taken place in the appearances since the patient was first seen.

The vision during the whole time has fluctuated somewhat, without any obvious cause. At the last visit, on April 4th, 1889,

TO ILLUSTRATE THE PAPER BY MR. ADAMS FROST ON SOME FORMS OF RETINAL PIGMENTATION.



1.



2.



3.



4.

A.W. Head del.

EXAMPLES OF RETINAL PIGMENTATION.

it was still 6-9ths, but on October 3rd, 1888, at the hospital, it was noted as being 6-18ths, and the next day it was only 6-36ths when tested at my house; the illumination on the latter occasion was certainly not worse than on the former. The visual field has been tested several times, but no appreciable variation has been found.

Fig. 3 illustrates a much later stage of retinitis pigmentosa. It is from the left eye of J. D., aged 35. When I first saw him on August 19th, 1885, vision had been failing very gradually for ten years; the defect was at first only noticed at night, and it has always been much worse then. In 1879 he attended the Royal London Ophthalmic Hospital for iritis; it does not appear that the fundus was examined at that time; and unless the patient had mentioned that he suffered from night-blindness, the ophthalmoscope, of course, would not have been used. The attack was evidently a very slight and transient one. It is interesting to note that the vision was then tested and noted as being 20-70ths, improved by −2 D to 20-20ths (that is, approximately, 6-24ths and 6-6ths).

When first seen by me the vision of each eye with −2 D was 6-9ths; since then it has very slowly got worse, with slight fluctuations; and on November 16th, 1889, it was 6-18ths. The patient has for several years taken iron, sometimes leaving it off for a few months; he is an intelligent man, and holds a very strong opinion that his vision is better while taking the iron. I have not been able, however, to satisfy myself of the accuracy of this belief.

The visual fields have also undergone a slow but steady contraction while the patient has been under observation. In 1885 that of the right eye had a radius of 20° upwards, and 22° downwards, 25° outwards, and 10° inwards. The left eye 18° upwards, 35° downwards, and 20° to each aside. On November 16th, 1889, the right field measured had a radius of 10° in all directions, while the left was the same, except that it was prolonged outwards to 20°.

The ophthalmoscopic appearances have not appreciably altered since he first attended; in several respects they differ considerably from those seen in the preceding case. The pigment is comparatively scanty, but its arrangement is characteristic; it is most abundant at the periphery, but it approaches nearer to the centre than in the preceding case. It consists of dots and lines, from which fine processes are given off, these, in places, anastomosing with other processes, form an irregular network; the pigment evidently lies quite in the superficial layers, and in one place follows a retinal vein as if lying within its sheath. The atrophy of the pigment layer, on the other hand, is more extensive, and reaches right up to the optic disc. The latter also shows atrophic changes, and the retinal vessels are diminished in size.

Fig. 4 differs at first sight greatly from the preceding cases. The most striking feature about it is the enormous number of choroidal vessels that are visible, owing to the atrophy of the pigment layer of the retina. The atrophic process has also extended to the capillary layer of the choroid, with the result that, except in a few places where this layer remains intact, the normal red groundwork has given place to a dirty brown. The choroidal vessels also near the disc appear to have undergone morbid changes which have rendered their walls white and opaque. There is but little pigment, but what there is is arranged much as that in typical retinitis pigmentosa.

The drawing was made from the right eye of E. S., aged 55, at present a workhouse inmate. At the age of 21 he enlisted; he served in India for about twelve years, and left the army in 1871. A year later his sight began to fail; at first the defect was only noticed at dusk, but there has since been a gradual deterioration of vision, although the defect has always been much greater at night. Notwithstanding the extensive changes in the fundus at the time the painting was made, central vision with this eye was three letters of 6-12ths in ordinary daylight; at night-time he was as helpless as a blind man. The visual field was contracted to about 20° in all directions, conditions which correspond with the freedom of the region of the yellow spot from disease. In the left eye the changes were very similar, but a little more advanced vision being reduced to hand-reflex.

A case that is almost identical with this has been recorded, and figured by Mr. Stanford Morton in the *Transactions of the Ophthalmological Society*, vol. v. In this case the central vision was normal at the time the drawing was made, but the visual field was much contracted. When I saw the patient fifteen months later, the vision was 6-18ths, but it probably varied.

It seems to me that these cases are strictly analogous to true retinitis pigmentosa, or, at any rate, that it would be well to place them in this category till we obtain fuller knowledge. The clinical symptoms are identical, and the difference is chiefly in the greater prominence of the atrophic changes and the comparative insignificance of the pigmentation, but these are differences in degree and not in kind, and are possibly to be accounted for by the late appearance of the disease. I should provisionally look upon these cases as examples of senile retinitis pigmentosa, of course using the term "senile" merely in a relative sense.

FALMOUTH AS A HEALTH RESORT.

By Sir EDWARD H. SIEVEKING, M.D., LL.D., F.R.C.P.,
Physician in Ordinary to the Queen.

The previous communications which I have made on the subject of Falmouth as a health resort, and which were found deserving of publication in the Journal, did not contain any satisfactory data of a scientific character, but merely reflected the strong impression which a prolonged visit to the locality, and such an examination of its features as I was able to make, had produced upon me. No literature on the subject appeared to exist, and even a search in the British Museum, although I enjoyed all the assistance which the superintendent of the reading room could give me, failed to supply me with the desired data. I have recently, however, been placed in communication with Mr. Edward Kitto, the superintendent of the observatory at Falmouth, and he has most liberally and kindly sent me the details and tables, with which I trust your readers will fill up the vacuum which I regretted to leave in my former communications. All that follows is to be accepted on the authority of Mr. Edward Kitto.

The first table sent me by Mr. Kitto gives the mean temperature and humidity for eighteen years, starting from 1871.

Mean Monthly and Yearly Temperature and Humidity for Eighteen Years—1871 to 1888

Month.	Mean Temperature of Air.	Mean Daily Range of Temperature.	Mean Humidity of Air. Complete Saturation = 100.
January	43.6°	6.6°	86
February	44.1°	6.4°	85
March	44.2°	7.4°	82
April	47.2°	8.7°	82
May	51.7°	10.0°	79
June	57.2°	10.3°	79
July	60.1°	10.3°	81
August	60.3°	9.6°	83
September	56.8°	8.4°	84
October	51.8°	7.6°	83
November	47.5°	6.9°	83
December	44.3°	6.6°	84

From this table it appears that the annual mean temperature is 50.7°, the mean daily range of temperature 8.3°, and the mean humidity 83.

The following table, giving the rainfall, begins with the year 1872, as the self recording rain gauge from which the returns are taken, was not set up until April, 1871.

Mean Monthly and Yearly Rainfall at Falmouth for Seventeen Years—1872 to 1888.

Month.	Mean Rainfall in Inches.	Mean Number of Rainy Days.
January	5.279	19.6
February	4.304	17.8
March	3.367	17.2
April	2.908	14.3
May	2.309	13.1
June	2.760	14.3
July	3.409	18.3
August	3.512	13.9
September	4.380	17.9
October	5.570	20.2
November...	6.075	22.3
December	5.494	21.9
Annual	49.358	—
Monthly means...	4.113	17.6

The rainfall is, as clearly shown in the last table, considerable, but owing to the character of the geological formation all round Falmouth, it is remarkable how soon the roads and paths dry up, a point of great importance to invalids or holiday makers, and Mr. Kitto confirms my previously recorded impression by stating that there is an almost entire absence of dense fog. To this he adds that the inhabitants of Falmouth experience more bright sunshine throughout the year than almost any other place in the kingdom.

The following table will enable your readers to judge for themselves how far Mr. Kitto's opinion is justified.

Mean Monthly and Yearly Amount of Bright Sunshine Recorded at Falmouth for Eight Years—1881 to 1888.

Month.	Mean Amount of Bright Sunshine in Hours.	Mean Number of Days with Bright Sunshine.
January	46.6	17.5
February	71.3	20.5
March	130.8	25.8
April	174.1	27.1
May	223.4	28.8
June	238.1	26.6
July	215.6	29.3
August	206.8	29.2
September	145.6	27.0
October	112.5	25.3
November	70.9	20.0
December...	57.8	20.1
Mean	141.1	24.8

In a letter addressed by Mr. Kitto to the *Falmouth and Penryn Times* in January of the present year, he states that during the last eight years the mean annual number of hours of bright sunshine recorded at the Falmouth Observatory was 1693.6 hours, the most sunny of these years being 1887 with 2074.3, and the least bright year, 1884, with 1534.5 sunny hours. To those who wish to escape from the summer heat of other localities, for those who require an equable climate during the cold that prevails in the winter months, Falmouth offers attractions not readily found elsewhere. May the Falmouthians soon recognise this fundamental fact, and add those features and facilities which are essential for the invalid. If this is done no prophet is required to foretell the reputation which Falmouth will enjoy in the estimation of the medical profession. But even the medical profession will fail to render Falmouth popular so long as the expedition and punctuality of the railway communication cannot be relied upon.

A CASE OF LORETA'S OPERATION FOR DILATATION OF THE PYLORIC ORIFICE OF THE STOMACH.

By WILLIAM GARDNER, M.D., C.M.Glas.,
Lecturer on Surgery, Adelaide University; Senior Surgeon to Adelaide Hospital.

The following case is recorded, not because I deem it to be of any value as an isolated instance of success, but because it is the first published example in the Australian colonies of a procedure highly recommended in similar conditions by Professor Loreta, of Bologna, who performed his first operation in September, 1882. A full account of this was published in the British Medical Journal, February 21st, 1885, by Mr. Holmes. On April 26th, 1884, a short account of Professor Loreta's ninth operation, which was for contraction of the cardiac orifice, is given. The operation has also been practised by a few other Italian surgeons, and in two cases by Dr. Burney, of New York, notes of which are to be found in the *New York Medical Journal* of January 16th, 1886. So far as I know, the remote results of these operations have not yet been published, and the value of the operation is still *sub judice*. The immediate results of the published cases have been excellent. The operation is suitable for cases of simple cicatricial or fibrous narrowing of the pylorus, or the cardia, or lower end of the œsophagus. The narrowing in simple cases is due to hypertrophy of the inorganic muscular fibre, and over-distension of this is the object to be aimed at, and the result is said to be as good as in cases of over-distension for fibrous stricture of the rectum. Reasoning from analogy, every surgeon would be disposed to say that the good result would only be a temporary one, as is certainly the case in all true strictures of the urethra. This is the great point which has yet to be settled, and I offer my first case as an encouragement to others to perform the operation, and note carefully the immediate and also the remote result. In this way, and in this way only, can the permanent value of the procedure be estimated.

The patient upon whom I operated was sent to me by my friend, Dr. Baly, of Yorketown, with a note stating that she had long suffered from pyloric obstruction, and that he considered the case a suitable one for trying Loreta's operation. Every form of treatment had been tried by him for months, and, after consultation with my colleagues, I determined to make the attempt; and, as the evident thickening of the pylorus might turn out to be malignant, I made every preparation for performing pylorectomy, should it be deemed necessary. For the same reason, I made use of a transverse incision, such as Billroth recommends for pylorectomy, and I found this quite convenient for the other operation.

J. H., was admitted to Dorcas Ward on July 15th, suffering from stricture of the pylorus.

History.—Patient complains of sickness and pains in the region of her stomach. When she takes anything it usually lies on her stomach and makes her feel very sick. She has been troubled with indigestion off and on for several years, but during the last three months it has got very much worse, and patient finds her strength failing. As a rule she vomits every other day, and generally in the evening. Sometimes, however, she goes for four or five days without being sick, and then vomits up over a chamber full. The pains across the upper part of her abdomen are of a shooting character, and made their first appearance about three months ago. They are very much worse just before vomiting, on account of the distension of the stomach with gas, which has then occurred. The pains increase in proportion to the amount of flatulence present. Previous health has been good, as is also the family history. Has been married twenty-four years, and has had nine children, the youngest of which is 5 years old. Climacteric three years ago.

Present Condition.—The stomach is of variable size, but distinctly enlarged, and on some days its outline can be traced on the abdominal walls. To the right of the median line, and just above the umbilicus, may be felt a lump about the size of a walnut, which moves up and down with the movement of respiration. The vomited matter is of a yeasty character, very acid, and contains sarcinæ in abundance. Urine is acid, and contains neither sugar nor albumen. Professor Rennie kindly examined the vomited matters, and reports just a trace of free hydrochloric acid.

July 19th. Complains of a boring pain in her stomach. Fairchild's peptonising powders; pil. opii. gr. i, bis die.

July 30th. Patient anæsthetised, and stomach washed out with five pints of the lotion. The tumour could be felt readily on each of these occasions.

August 4th. Patient has been on milk diet, and has not been sick since first washed. To have milk, baked apples, etc.

August 6th. Patient sick this evening and last night.

August 7th. Patient vomited again this evening.

August 11th. Patient partially anæsthetised, and stomach washed out.

The Operation.—On August 12th, 1888, the patient having been placed under the influence of ether, Dr. Gardner performed the following operation:—(The stomach was thoroughly washed out with a boric acid solution). A transverse incision, about 4 inches long, was made in the epigastric region, and the skin, muscles, and fascia, down to the peritoneum, were rapidly divided. All bleeding points were ligatured with wallaby tendons, and the application of hot sponges for a few minutes effectually stopped the oozing before the peritoneum was opened. Although no tumour could be recognised in the neighbourhood of the pylorus, the walls of that part of the stomach were very hard and greatly thickened. A portion of the viscus was then drawn out through the opening in the abdominal parietes without difficulty, as no adhesions were present. After the extruded part had been carefully surrounded with hot sponges, an opening 1 inch long, running in the long axis of the organ, was made with scissors, through which the operator inserted the forefinger of his right hand. On examining the pyloric orifice he found it almost completely closed, and it was with some difficulty that a No. 6 gum elastic male catheter was made to pass through it. After patiently boring with the right forefinger, the passage was gradually opened up,

the forefinger eventually being passed with ease from the stomach into the duodenum. The hæmorrhage was very slight indeed, and the interior of the stomach having been cleansed immediately before the operation no difficulty was experienced with the stomach contents. The wound in the gastric wall was brought together with great accuracy and in a most satisfactory manner by means of Gussenbauer's sutures, which were introduced with specially curved needles, and an interval of about 2 millimètres allowed between each. Fine silk was employed. All the stitches were placed in position before any were tied. The wound in the abdominal wall was closed in the usual manner.

August 12th (evening). Patient complaining of pain since the operation; no vomiting. Enemata of milk ℥iiss, and brandy ℥ss every eight hours; enemata of port wine every eight hours ℥iij; strychninæ gr. ¼, glycerini ℥ij, aq. ad ℥ij. 15 drops = ⅓₀ gr. hypodermically every four hours.

August 13th. Patient slept very little during the night; wind troublesome; passed 10½ ounces of urine at 2 A.M. Temperature 100°, pulse 125. Enema of soap and water; no vomiting.

August 14th, Patient slept well during the night; passed flatus *per rectum*, and found great relief; no vomiting.

August 15th. Bowels not open; has passed flatus; there is no abdominal distension, but complains still of flatulence; there is some pain in her stomach.

August 16th. Very restless during the night; still complains of flatulence; no vomiting. A teaspoonful of gruel every two hours.

August 17th. Slept very well during the night; still passing flatus *per rectum*, causing pain; no vomiting after giving gruel; one stitch removed. 6.15 P.M. Patient comfortable. Supp. morph. gr. ¼; mitte iij every six hours; enemata of brandy and milk; one teaspoonful of rump steak every four hours; give 10 drops of ac. hydrochlor. dil. a quarter of an hour before, and then gr. iij of pepsin immediately afterwards.

August 18th. Complains of very little pain; still much flatus passing *per rectum*; bowels moved at 3.30 P.M.; no vomiting. A teaspoonful of milk and two teaspoonfuls of lime water every four hours alternately with the beef; enemata of milk every four hours; injection of strych. twice daily gr. ⅓₀.

August 19th. Wounds dressed; a little discharge; stitches removed.

August 20th. Wound dressed; looking well; there is a little inflammatory hardening about the wound; enema of soap and water, and bowels moved well.

August 21st. Omit raw meat—give chops and fish instead, and also bread and butter; enemata every six hours only.

August 23rd. No vomiting; complains of pain in her right side.

August 24th. There is a little discharge from the centre of the wound. Liq. strych. ♏iij, aq. ad ℥j, s. o. s. ante cibos.

August 28th. The edges of wound are uniting fairly well; the skin is a little inverted at the edge; still inflammatory hardening about the wound.

August 29th. Patient complains of pain in her stomach; no vomiting; food does not cause her trouble.

August 30th. Still has crampy pains in her stomach at night; relieved last night by some warm water and brandy; scarcely any discharge from the wound.

September 7th. Patient says that "she feels fine;" never feels sick, but nearly every night she has pains of a burning character about her stomach.

She eats bread and butter, eggs, toast, cake, mutton, beef, custard, and drinks milk and cocoa; she does not take pudding, vegetables, or tea. The temperature rose above 100° on only one occasion. For the short notes of the case I am indebted to my dresser, Mr. Verco, and the account of the operation was written for me by Dr. Giles, who assisted.

On December 24th, 1888, Dr. Baly, at my request, kindly sent me the following note after examining the patient:—

"Patient looks and feels perfectly well, and has evidently gained flesh in a marked degree—weight 7 st. 10 lbs. (weight before operation not known, but Mrs. H. thinks she must have gained a stone). Has never vomited since the operation, and has had no pain since leaving the hospital. Is able to eat ordinary diet without inconvenience, but has felt somewhat uneasy after eating beef, cabbage, or rich cake. Can eat mutton, poultry, fish, and farinaceous puddings, and drinks tea three or four times a week. No flatulence, heartburn, or eructations now after food; bowels regular; ate green peas several times during the season without any bad effect.

"*Examination.*—Abdomen well covered, instead of appearing a mere envelope of skin as it did before operation; skin over site of operation freely movable; some induration still to be felt in the region of the pylorus.....Gastric resonance not increased upwards or to the left." He adds: "You will recollect, of course, that before the operation even a little milk used to caused Mrs. H. great agony."

I have quoted Dr. Baly's words, although not intended by him for publication, as I am anxious not to interpolate in this account any bias of my own in favour of the operation. In conclusion, I must say that, in my opinion, this case warrants me in recommending any surgeons who have the chance to give the operation a fair trial, and publish their results both immediate and remote, for only in this way can we arrive at a satisfactory conclusion.

I have since performed this operation (May 22nd, 1889) on a patient who has been a sufferer for years from pyloric stenosis. He had made a perfect recovery from the operation, and whereas before the operation he had to wash out the stomach daily, he has not since had an attack of vomiting, and has not had any necessity to use the stomach tube. As sufficient time has not yet elapsed to enable me to form an opinion as to the ultimate result, I reserve the notes of the case for a future communication. Mr. Treves's interesting paper in the JOURNAL of May 18th, 1889, gives only two recorded cases in Great Britain, and I send mine as a further contribution to this department of surgery.

ON A CASE OF DIGITAL EXPLORATION OF THE PYLORUS (LORETA'S METHOD), WITH REMARKS ON THE RELATION OF GASTRIC ULCERATION TO PYLORIC STENOSIS.

BY C. J. BOND, F.R.C.S.,
Surgeon to the Leicester Infirmary.

ALTHOUGH the present case cannot be included under the heading of Loreta's operation, yet as the stomach was opened with the object of digitally dilating the pylorus, if necessary, I have thought it better to describe the case under the above heading, in order that it may be compared with other cases in which dilatation has been fully carried out. There have been, as far as I can ascertain, two successful cases of Loreta's operation reported in this country, one by Mr. Hagyard, and one by Mr. F. Treves, both of which recovered and remained well two years and one year after the operation respectively; in neither of these cases is any mention made of any ulceration or abnormal condition of the pylorus beyond the contraction and the adhesions. The following is the history of the present case.

E. R., aged 42, married, eight children, a previously healthy, temperate woman, with a good family history. Her present illness commenced five years ago, with frequent attacks of vomiting; these lasted three months, when she became pregnant, and was well and free from sickness until ten months after the confinement. She then weaned the child, and about this time the vomiting recommenced, and has continued more or less to the present time, and the patient has kept her bed for the last six months. She is very emaciated, weighs 5st. 8lbs., and vomits every two or three days two or three pints of yeasty fluid, which contains free acid. Between the attacks of sickness she eats well and feels pretty well, with the exception of at times violent epigastric pain. There is a distinct hard swelling to be felt in the epigastrium a little to the right of the middle line.

The stomach having been previously washed out two days and, again two hours before operation, the viscus was exposed by a 4-inch median incision nearly over the swelling; the liver then came into view, and below its edge the thickened nodular mass, which was the pylorus adherent to the liver and to the pancreas. The stomach was now drawn out of the wound, and by inverting its coats with the forefinger the projecting thickened ring of the pylorus could be distinctly made out. A short incision was made into the stomach parallel to, and midway between, the curvatures, and about 3 inches from the pylorus, and a large quantity of fluid was drawn off, and the forefinger introduced. The pyloric ring was felt to project somewhat into the stomach cavity; it felt, however, hard but smooth, and easily admitted the forefinger. On the posterior wall of the stomach was a hard nodular surface,

feeling like malignant disease, but which proved to be the surface of the pancreas exposed by ulceration (see photograph). After passing the finger well through the pylorus, I decided to close the stomach wound. This was done by a fine silk Lembert's suture with a reinforcing row outside the first.

Convalescence was uncomplicated by any sickness, rise of temperature, or any other complication. The patient was fed for the first three days on nutrient enemata, then on peptonised food, and took solid food on the tenth day. She was a little sick (8 ounces) on the thirteenth day, but got up on the fifteenth day, and gradually improved. She was sick twice only in December, and was discharged on January 1st, her weight at that date being 6 st. 5 lbs., or a gain of 9 lbs. since the operation. She still suffered at times, however, from epigastric pain. After her discharge from the hospital she continued well for three or four months, though there was occasional and slight sickness, and she walked out of doors. She then, as she expressed it, began to suffer from the scanty supply of poor and indigestible food, and the pain and vomiting gradually returned, and she died from exhaustion after an attack of diarrhœa on September 20th, eleven months after operation.



Cavity of stomach laid open, showing the projecting ring of the pylorus, A A, and the ulcerated surfaces. A, pylorus; B, ulcerated areas.

Post-mortem Examination.—This showed an absence of disease in any organ except the stomach. This organ was much dilated, and lay almost entirely to the left of the mid line; stretching from the cicatrix on the abdominal wall to the anterior surface of the stomach was a thin old adhesion. The pylorus was much thickened, and adherent to the under surface of the liver, and to the pancreas posteriorly. On opening the stomach, no sign of the incision in its walls could be seen, and, apart from the dilatation, the cardiac end appeared healthy; the ring of the pylorus was found as described at the operation, smooth, but tough and inexpansible, but easily admitting the forefinger, and projecting like the lips of the os uteri into the stomach cavity. The greater portion of the wall of the stomach in its immediate neighbourhood was ulcerated away, exposing the pancreas posteriorly and the liver in front, to both of which the stomach is very firmly adherent all round, so that there has been no extravasation.

REMARKS.—There can be no doubt, I think, that the roughened surfaces felt at the operation and suggestive of malignant disease were the ulcerated areas in which the rough surface of the pancreas could be felt; in fact, the stomach presented a threefold lesion (1) a hardening and loss of expansibility with some contraction of the pylorus, with firm adhesions to neighbouring parts; (2) extensive ulceration of the wall of the stomach of a non-malignant kind in the neighbourhood of the pylorus; (3) great dilatation of the general stomach cavity.

Now it appears to me that these three conditions have a causal relationship to each other, and I would place the ulceration first, this leading to adhesions and then to chronic spasm, and eventual rigidity of the pylorus, this leading in its turn to the dilatation of the stomach; in fact, the condition of the pylorus may be compared to the chronic spasm of the sphincter ani when irritated by an ulcer of the mucous membrane just within the rectum. Moreover, it seems likely that beyond mere constriction of the pylorus in cases which have been treated by Loreta's method, ulceration in its neighbourhood has an important share, for in the history of chronic illness which such patients give, a vicious circle has been established, the ulceration leading to constriction, and the pyloric constriction again preventing the healing of the ulceration. It is not easy to understand how real pyloric stricture comes about in the absence of any cause of irritation, such as the presence of an ulcerated surface, and the conditions found in this case, and verified by *post-mortem* examination, especially the degree and stages to which the different lesions had respectively arrived strongly supports, I think, this view. If this be so, the probable presence of ulceration, either recent or healed, should lead to care in extreme dilatation of the pylorus in cases of Loreta's operation.

That great relief was afforded in this case is shown by the decrease in vomiting and pain, and by the increase in weight; it is not so easy to explain how the good result was brought about. Although the finger was passed through the pylorus, no force was used to dilate it. Whether any nerve filaments irritated by the ulceration were divided by the incision in the stomach wall, and so set at rest, or whether the pleating in of the walls of the stomach (which was considerable at the operation) helped to temporarily lessen the dilatation, must be a matter of conjecture. Dr. Ord has suggested that the prevention of apposition of the opposing gastric surfaces in the empty stomach in ulceration is an important cause of pain of an epigastric character, and this may have been present before operation in this case.

I would, however, suggest that moderate digital dilatation of the pylorus should be practised in cases of extensive chronic ulceration of the stomach with dilatation, even where there is not extreme pyloric stenosis, with a view of curing the ulceration by setting the pylorus at rest, and Professor Loreta's operation may thus have beneficial results in a further class of cases.

NOTE ON CHARCOT'S JOINT DISEASE.

BY RICHARD R. LEEPER, L.R.C.S., L.K.Q.C.P.I.
Ex-Demonstrator of Anatomy, Royal College of Surgeons, Ireland.

As Charcot's disease is a somewhat rare affection, I have thought that the following case, together with the few remarks suggested by the study of the causation of the deformities which accompany it, may be of interest to the profession.

A. B., aged 45. Patient was suffering from ataxy for twelve years. Illness was produced by a fall from a horse. No hereditary history of nervous disease. During the course of his malady he presented all the characteristic symptoms. The Argyll-Robertson pupil, the lightning pains, and peculiar gait were followed in due course by gastric crises, cystitis, complete loss of reflexes and cutaneous sensibility. Bedsores developed towards the end of his illness, and he died from exhaustion. For some weeks before his death he lost the perception of all but sweet taste, and refused all food which had not been sweetened. This phenomenon might be explained upon the supposition that the hypoglossal nerve was unaffected by the sclerotic changes. Unfortunately, it was impossible to examine the brain and spinal cord, as consent for such examination could not be obtained. The principal feature of interest, however, lay in the well-marked bone lesions which occurred during the later stages of the disease. About four years before the termination of the illness the joints of the feet and hands commenced to show traces of disease. There was no effusion into any of those affected, and but two of the finger-joints showed any inflammatory action; in these pus formed under the flexor tendons covering the joint. The pus was evacuated, the incision causing no pain, and the wounds healed. All the metacarpo-phalangeal joints became subsequently

enlarged and ankylosed. Owing to the bony enlargements, the same changes occurred in the feet, resulting in ankylosis of the tarsal joints. A small perforating ulcer formed at the head of the metatarsal bone of the left great toe. The sinus of this ulcer did not penetrate to the joint. It was successfully treated by paring away the indurated cuticle, thereby exposing the sinus, which was swabbed out with creasote and plugged with iodoform. The destructive process was arrested, and the sinus eventually dried up. In addition to the joints of the hands and feet, that of the left shoulder became affected; in this joint the destructive changes were best marked. Two years before death its movements were first observed to be limited. No pain was ever complained of in the joint, and no effusion ever took place either within or around it; it rapidly and painlessly underwent disorganisation. The bones occupied a position somewhat similar to that observed in a subglenoid dislocation.

Fig. 1, taken from a photograph of the joint with some of the

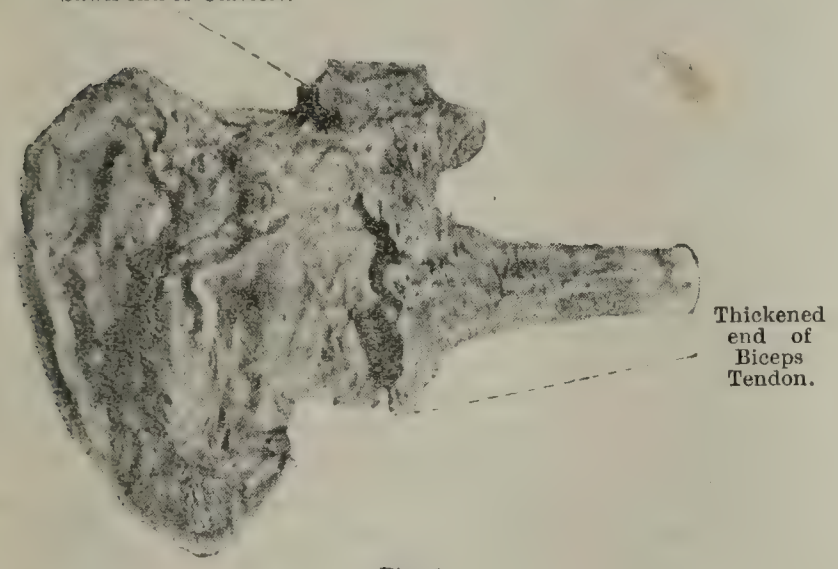


Fig. 1.

muscles still attached, shows the condition of affairs. The head of the humerus lay in the subscapular fossa, which was deepened for its reception. It was covered by a dense capsule composed of the subscapularis and part of the teres muscles, and strengthened by osseous and cartilaginous tissue. Fig. 2 shows the posterior view

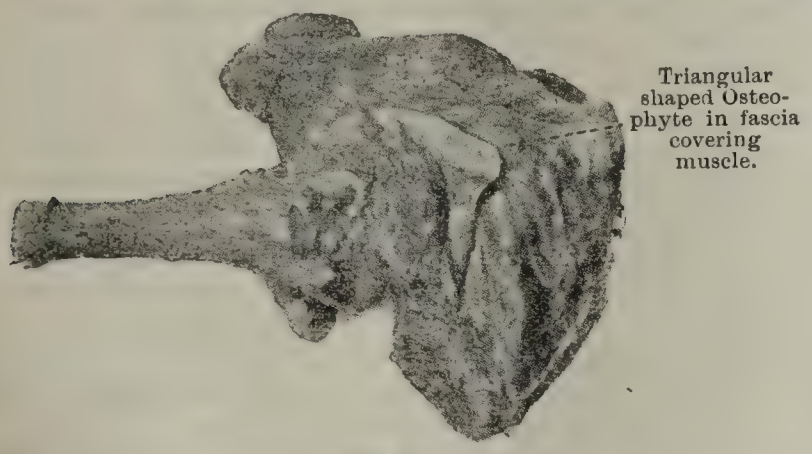


Fig. 2.

of the joint, with a triangular-shaped osteophyte formed in the fascia covering the infraspinatus muscle. Upon opening the joint by a circular incision through the capsule, about two drachms of blood-stained serum escaped. The synovial membrane was thickened and infiltrated with fat; over the sharp bony points it had entirely disappeared. The biceps tendon was completely eroded, its external attachment to the capsular ligament enabling it to assist in flexing the limb. (See Fig. 1.) All the ligaments were greatly relaxed, and I fancy the dislocation was produced in the first instance either by the weight of limb or by mere muscular action. There were a number of fatty and fibro-calcareous nodules attached to the synovial membrane and the bones. Those nodules, with an external fatty covering and a central calcareous nucleus, were the most numerous; several are seen upon the eroded end of the bone. Three large osteophytes are shown in Fig. 3 sur-

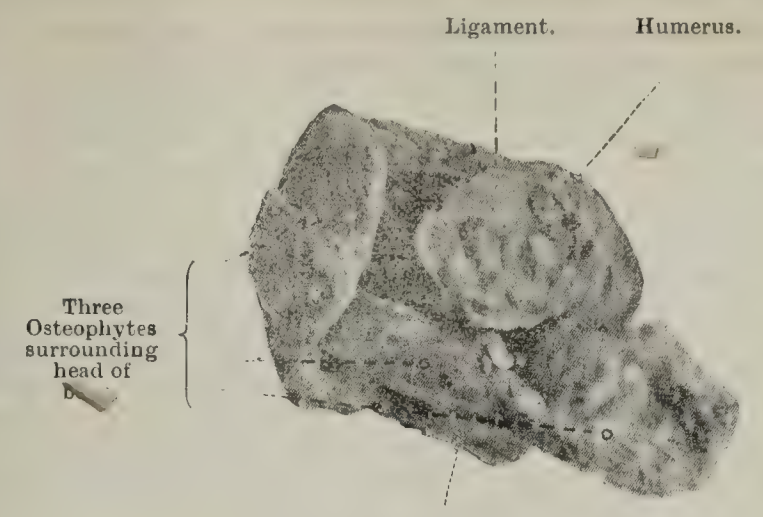


Fig. 3.

rounding the head, or rather the upper extremity, of the shaft of the bone. One is evidently the separated head itself; the others are new formations. They are connected by the thickened capsule, out of which they have been partially dissected. The diseased scapula is well shown in Fig. 4. There are several bony

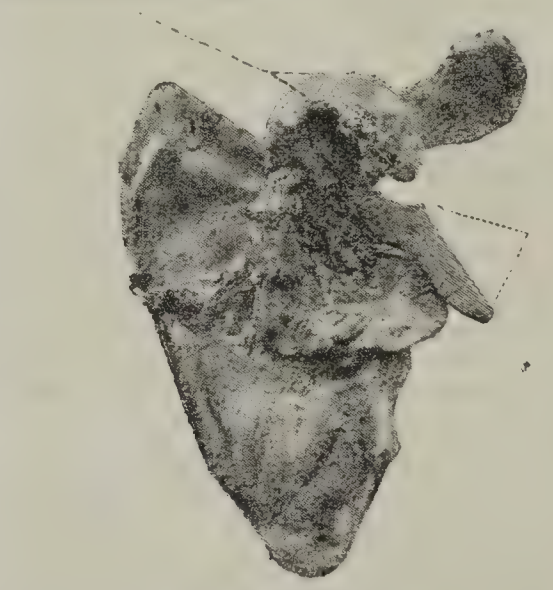


Fig. 4.

masses developed in connection with its processes. One is seen springing from the tip of the coracoid process; this measures two inches in length, and had the short tendon of biceps inserted into it. Another new formation springs from the bone beneath the glenoid cavity, which also measures two inches, and had the long tendon of triceps attached. The nutritive foramina in the spine were enormously enlarged, and so increased in number that, had the patient lived, the process would have become detached from the body of the bone. The nutritive vessels were very small, and lay imbedded in fatty masses, filling up the enlarged nutritive canals. The suprascapular nerve was much softened, and lay in a bony groove in the supraspinous fossa. It expanded in this situation, and its filaments were ultimately lost in the fibrous tissue connecting the osteophytic processes of the joint.

Peripheral nerve degeneration, the result of spinal cord disease, by cutting off the normal trophic influence travelling along the nervous paths, has been looked upon as the cause of these osseous lesions by their first describer. Waller has fairly proved that the trophic centre for the sensory root of cerebro-spinal nerves is not situated within the cord itself, as in the case of the anterior nerves, but within the ganglia placed upon the posterior nerve roots. Degeneration of these ganglia and their contained trophic centre is presumably more likely to occur in posterior sclerosis of the cord than in other spinal diseases. Now, if we believe that the normal trophic influence travels by a sensory rather than by a motor path, some explanation of the comparatively frequent occurrence of osseous lesions in ataxy may be

obtained. Nasse has found that section of nerves supplying bones has caused a diminution of all the osseous constituents with an increase of fat. These changes are similar to those occurring in the case here described, with the exception of the formation of the osteophytic processes. These formations are, of course, mainly the separated bony processes of the joints, but some are entirely new productions (see Fig. 2).

I have thought that in cases of nervous degenerative disease the normal phosphatic excretions are increased in quantity, and are prevented from leaving the system by the cystic disease so commonly accompanying these affections. These phosphates may consequently be reabsorbed from the urinary organs, and deposited as phosphates of lime or magnesia in the fatty, softened, and degenerating tissues affected by trophic disturbances. This explanation is, however, unsatisfactory when applied to those cases in which the osseous lesions occur before the vesical complications. In these cases there appears to be less bony formation than in those cases where Charcot's disease appears as a late phenomenon, the bones being absorbed and softened without the formation of osteophytes.

CHLORALAMIDE AS A HYPNOTIC.

By W. HALE WHITE, M.D., F.R.C.P.,
Senior Assistant-Physician to, and Lecturer on Materia Medica and Therapeutics at, Guy's Hospital.

In his exhaustive account[1] of many of the new hypnotics, Professor Leech says of chloralamide that the observations upon it are so far few in number. I have recently given it to twenty patients suffering from various illnesses, in all of whom insomnia was a troublesome symptom. Brief notes are appended. It will be seen that the drug produced comfortable sleep in all the patients except two; one of these was suffering from delirium connected with cerebral hæmorrhage, and the other was admitted with rheumatic fever complicated by delirium tremens and salicylic poisoning. Both these patients died shortly after admission. It is noteworthy that some of the other patients were suffering from extremely painful diseases, and yet chloralamide produced sleep; thus a woman who had a thoracic aneurysm preferred it to morphine, and another patient who had carcinoma of the stomach also slept better with chloralamide than with morphine. The patient with carcinoma of the liver suffered intense pain, yet she dozed comfortably after chloralamide. The man suffering from cerebral softening who was quieted by the drug is also a striking case. Probably the house-physicians, sisters, and nurses are the best judges of hypnotics, as they see the patients frequently during the night. They all tell me that those who take chloralamide sleep well and comfortably after it, and the sisters of the three wards in which I have used it tell me that the patients sleep better after chloralamide than after any of the hypnotics which have been introduced during the last few years. My own experience, and what the patients themselves tell me certainly agree with this. In none of the twenty patients to whom I have given it—and many of them have taken several doses—have any effects followed that can be looked upon as contra-indications to its use. Never have I observed any depressing results, nor has headache followed its use. The time which elapses between its administration and the commencement of sleep varies between a quarter of an hour and two or three hours. If it is given in the evening, when once asleep the patient usually sleeps quietly till morning. Some writers have stated that occasionally after a dose in the evening the patient does not go to sleep till the next morning, and that he remains asleep all the day. This was so with one of my patients; but it must be remembered that, as the drug is feebly soluble in water—20 grains take five hours to dissolve in 2 ounces of water—it is often given as a powder with some milk. It was administered in this way to my patient who slept the next day, and I should think that some of these cases of delayed action were due to delayed absorption. Now I always prescribe it with spirit; 20 grains will dissolve in 1 drachm of rectified spirit in fifteen minutes, and water may be added to this solution without reprecipitating the drug. A good way of giving it is to tell the patient to dissolve it in a little brandy, add water to his liking, and drink it shortly before going to bed. If given in milk, not only is it insoluble, but it is difficult to swallow, for it sticks to the sides and bottom of the glass. The taste is slightly bitter, but by no means disagreeable. It should never be prescribed with alkalies, for they decompose it, nor should hot water be mixed with it, for it decomposes at 148° F. For an adult, 20 to 60 grains—the exact amount depending upon the cause of the insomnia—is the dose; usually 30 grains will suffice. It has the advantage over sulphonal that it is only half the price, and it has the great advantage over paraldehyde that it has no nasty smell or taste, nor is it difficult to dissolve.

The few cases which have been published quite bear out the cases recorded here. It would seem that in chloralamide we have a safe hypnotic, which hardly ever has any depressing effects, which does not produce indigestion, and very rarely gives rise to any unpleasant results. We do not of course yet know what harm may result from its prolonged use. References to those authors who have studied the chemistry and physiological action of the drug will be found recorded by Leech, Paterson,[2] and in a leading article in the *Therapeutic Gazette* for September, 1889. Rabow[3] considers 45 grains of chloralamide to be equivalent to 30 grains of chloral. Chloralamide has been used successfully as an enema by Peiper.[4]

Case I.—Typhoid. A girl aged 4½. Very irritable and fretful, often keeps the other patients awake by her crying; 5 or 10 gr. of chloralamide always sent her to sleep a quarter of an hour after taking it. She slept quietly for many hours. She took it frequently for a fortnight.

Case II.—Sarcoma of last rib, growing extensively into the tissues and organs around. A middle-aged man. He suffered intense pain, but 30 or 40 gr. of chloralamide always gave him sleep, often for the whole night. It relieved him as much as, or even more than, morphine.

Case III.—Cerebral hæmorrhage with noisy delirium. An adult man. 30 gr. of chloralamide did not relieve the delirium.

Case IV.—Thoracic aneurysm; a woman. She suffered great pain. Before the introduction of chloralamide she was treated with injections of morphine. For the last month of her life she had many doses of 30 gr. or 40 gr. of chloralamide. She always slept well after it, and she said she preferred it to morphine.

Case V.—Subacute nephritis. A woman aged 27. Slept well and comfortably after a dose of 30 gr.

Case VI.—Mitral regurgitation, pericarditis. A boy aged 12. Slept all night after a dose of 5 gr.

Case VII.—Mitral regurgitation and albuminuria. A man aged 40. 30 gr. made him sleep well and comfortably.

Case VIII.—Extreme ascites, probably due to cirrhosis. An elderly man much troubled with insomnia. 50 gr. made him sleep well and comfortably.

Case IX.—Carcinoma of the liver. A woman aged 38. She suffered extreme pain, but 30 gr. of chloralamide caused her to sleep well and doze in comfort.

Case X.—Erysipelas. A middle-aged woman. 30 gr. always made her sleep comfortably.

Case XI.—Rheumatic fever. A boy aged 10. 15 gr. every four hours gave him quiet sleep, although he suffered much pain.

Case XII.—Rheumatic fever, delirium tremens, salicylate poisoning. A man aged 40; died a few hours after admission. ℥i of chloralamide had no effect upon him.

Case XIII.—Brachial monoplegia, probably due to embolism and cerebral softening. An old man, who was very noisy and delirious. 30 gr. always quieted him and produced sleep lasting some hours.

Case XIV.—Mitral disease. A middle-aged woman. 30 gr. always produced sleep.

Case XV.—Carcinoma of the pylorus. A woman aged 56. 30 gr. always produced sleep better than morphine.

Case XVI.—Chronic eczema. A man aged 40. 30 gr. caused comfortable sleep.

Case XVII.—Mitral regurgitation and floating kidney. A woman aged 50. 30 gr. produced sleep, although the floating kidney caused much pain.

Case XVIII.—Spastic paraplegia. A woman aged 56. 20 gr. caused comfortable sleep.

Case XIX.—Phthisis, aortic disease, saturnine paralysis. A man aged 65. 20 gr. always produced sleep, but it took twelve hours to act, so that if the medicine were given in the evening the patient did not sleep during the night, but he slept all the next day.

Case XX.—Mitral regurgitation. An adult man. A severe case. 30 gr. produced comfortable sleep.

[1] Journal, November 2nd, 1889, p. 969.

[2] *Lancet*, October 26th, 1889.

[3] *Centralblatt für Nervenheilkunde*, August 1st, 1889.

[4] *Deutsch. med. Woch.*, August 8th, 1889.

A SERIES OF TWENTY-FIVE COMPLETED OVARIOTOMIES.

By ALBAN DORAN, F.R.C.S.,
Surgeon to the Samaritan Free Hospital.

NOTWITHSTANDING all that has been written concerning ovariotomy, there is yet more to be learnt about the subject. Between April, 1877, when I became assistant-surgeon to the Samaritan Hospital, and October, 1889, I witnessed no less than 1,050 abdominal sections. I assisted in person at over half those operations, after clinical examination of nearly every patient, in Dr. Bantock's wards. Yet, spite of that experience, which cannot be reckoned as limited, I should be sorry to speak too positively on any of the contested points relating to ovariotomy and allied procedures.

Practice of the operation, a searching investigation into every detail of nursing and after-treatment, and a close study of the records and statistical tables of experienced operators, are the chief agents in effecting progress. The cause of death in fatal cases must, whenever possible, be faithfully recorded. Every operator tends to put his trust in a system; he must find out how the system fails in every bad case, and must admit, if necessary, that the system may have been the cause of death. He must avoid a natural tendency to argue, on mere logical grounds, that his colleagues' fatal cases are due to his colleagues' respective systems, and that his own are to be explained by purely accidental circumstances for which his system and himself are in no way to blame. On the other hand, the less experienced operator must not take for granted that the success of a senior is due, as that senior may honestly believe and maintain, to his system. The senior's brilliant results must depend, to a great extent, on his skill and experience, rather than on preference for the spray, or discarding of antiseptics, or treatment of peritonitis by opium or by purgatives. A few years ago, in the course of a discussion on the claims of eminent rivals, at the Royal Medical and Chirurgical Society, Mr. Savory observed that there was only one thing common to both claimants. Their last cases were more successful than their first. This showed that success depended on the man rather than on his system.

In my own practice I have taken what has been sent to me; some of the cases were easy, some difficult, I made no selection. To give full details of every case would be an impossibility. Yet since ovariotomy depends, perhaps, more upon matters of detail and care in after-treatment than any other operation, I have thought it advisable to append to the table a series of notes on matters of interest respecting each case. I regret that one important and indeed essential factor, the efficacy of the nurse, cannot be estimated in statistical records.

The expression "a simple ovariotomy," is a relative term. Thus Case 5 was "simple" as regards manipulation, but the previous tapping was, in itself, a complication. Case 9 was "simple," in the same respect, but it involved clinical and pathological features not to be overlooked. Case 11 was a good example of the impossibility of making sure about the simplicity or difficulty of an operation beforehand. The presence of part of a cyst in the pelvis displacing the uterus forwards often indicates pelvic adhesions or absence of the pedicle. It turned out that there were no adhesions, and that the pedicle was of fair length and easy to secure. Other cases, such as 20, may be absolutely simple, excepting that some unusual complication may compel the operator to depart from simplicity in one particular detail.

Cases 1 to 13 were performed under spray with strict Listerian precautions. In the remainder, carbolic acid was not used, the instruments were kept in trays containing hot water, and the operation carried out on Dr. Bantock's principles. The peritoneum was flushed with warm water in two cases where abdominal structures had been subjected to much handling or solid matter diffused over the peritoneal cavity. In Cases 14, 15, 16, 17, 18, 19, 20, 21 and 25 no alcohol, nutrient enemata, nor opium were administered. The routine employment of these therapeutic agents is inadvisable. Alcohol is useful in some cases of extreme exhaustion; opium is occasionally of value, as in Case 22, where spontaneous diarrhœa set in during the first week and threatened to weaken the patient; opium likewise aids in the retention of nutrient enemata. The value of these enemata is much disputed by specialists. They are certainly required in cases where the patient is old or weak, or exhausted by a long operation. It is equally certain that careless management of enemata on the part of the nurse may cause grave complications. The necessary precautions are well known but not always followed out.

CASE I.—A typical case of dermoid cyst; it formed a small tumour, often very painful when it rolled about, or during an attack of coughing. The right ovary was reduced to a shell, lined internally with integument, and stuffed with hair and grease; the pedicle was twisted and atrophied, reduced to a fibrous cord like a large nerve.[1]

CASE II.—This case gave me some anxiety, as she was exposed to draught on the morning before operation, and a slight attack of bronchitis developed during convalescence from the operation. She was a healthy spare old woman. Pedicle short, very near the large intestine.

CASE III.—The operation was troublesome owing to the extreme softness of the very multilocular tumour, which had to be broken down freely. The pedicle was broad and short, close to the sigmoid flexure.

CASE IV.—The large dermoid tumour contained soft masses mixed with fine spicules of bone, and looking very malignant,[2] but Dr. Ilott informs me that the patient was free from any symptom of recurrence in July, 1889.

CASE V.—The patient was a cachectic, overworked needlewoman. She passed scanty concentrated urine for many months before operation.[3] She was tapped in August, 1883. On admission, December 20th, 1883, she looked very ill, and passed but little urine. I tapped her again, removing thirty-one pints of ovarian fluid. Her health then rapidly improved, the secretion of urine increased, and nine days later I operated. Convalescence was rapid. Here I may note that, as a rule, tapping is to be avoided, but in this case it proved beneficial. The uterus bore three small spherical interstitial fibro-myomata.

CASE VI.—This patient had suffered from two severe attacks of abdominal pain after the appearance of the tumour. She had been prudently kept at rest by her medical attendant during these attacks, and hence was very probably saved from adhesive peritonitis.

CASE VII.—The pedicle was short and broad. In securing the vessels in the outer part (a precaution absolutely necessary under the circumstances) a vein was wounded. I therefore passed a ligature lower down and tied the vessels. The pedicle was then transfixed in its middle portion and tied.

CASE VIII.—The patient had been tapped four times in four years. For a year before operation she suffered from rheumatic gout, which caused great spinal deformity. The adhesions to the parietes and brim of the pelvis gave me much trouble. She was a very ill-nourished sickly-looking woman, yet convalescence was uninterrupted.

CASE IX.—The tumour was completely separated from its normal pelvic connections; its supply of blood was maintained by omental and mesenteric adhesions. The outer end of the Fallopian tube lay on the uppermost part of the tumour.[4] The patient first noticed the tumour during pregnancy a year before operation. No trace of any appendages lay on the corresponding (left) side of the uterus. As the pelvis is left almost untouched during operation, cases of this kind usually make a rapid recovery, with no disagreeable pelvic symptoms.

CASE X.—The patient had three violent attacks of vomiting and abdominal pain within a few weeks of the operation. The cyst wall was inflamed, the peritoneum deeply injected, and the pedicle very long and twisted twice. This explained the acute symptoms. There were no adhesions.

CASE XI.—The cyst bulged freely into Douglas's pouch, displacing the uterus forwards, but there were no pelvic adhesions. Œdema of left leg for two days during the third week; the left foot had swollen four years previously. More will be said on this subject in relation to Case XXV.

CASE XII.—In this case the patient was 63 years old. The menopause occurred thirteen years before the appearance of the tumour. For about six months before operation metrorrhagia took place at intervals of from two to four weeks. The pedicle was very broad. The opposite (right) ovary was atrophied. Metrorrhagia, rather free, came on eighteen hours after the opera-

[1] Preserved, Museum Royal College of Surgeons, No. 4,552*a*. See also *Trans. Obst. Soc.*, vol. xxiv, 1882, p. 133.
[2] See *Tumours of the Ovary*, p. 89.
[3] I have given evidence as to the damage caused to the kidneys by ovarian tumours in *Tumours of the Ovary*, p. 152.
[4] Preserved, Museum Royal College of Surgeons, Path. Sec., No. 4,55(*c*

Table of Ovariotomies.

No.	Place.	Date of Operation.	Medical Attendant.	Age.	Condition and Number of Children.	Length of Incision.	Adhesions.	Ovary Removed.*	Weight of Tumour and Amount of Fluid Contents.	Highest Temperature.	Immediate Result.	Subsequent History.
1	Nursing Home	April, 1882		32	M., 5	4 ins.	None	L. and R.	—	101.2° E. I	Recovered	Well in 1889.
2	Samaritan Hospital	Jan., 1883	—	59	M., 1	3 ins.	,,	R.	1 lb. 9 ozs. 16 pints	100.6° E. I	,,	Well in Sept., 1884.
3	Nursing Home	July, 1883	Mr. Carr Roberts	32	S.	,,	,,	L.	6 lbs. 11 ozs. 11 pints	100.6° E. II	,,	Well in 1888.
4	Samaritan Hospital	Oct., 1883	Dr. Ilott, Bromley	17	S.	About 3 ins.	,,	R.	3 lbs. 3 ozs. 16 pints	101.6° E. I	,,	Well in 1889.
5	,,	Dec., 1883	—	48	S.	3½ ins.	Parietal, at old tapping puncture	L. and R.	2 lbs. 10 ozs. 13 pints	100.0° E. II	,,	,,
6	,,	March, 1884	Mr. M. J. Anderson	46	M., 6	,,	None	L.	2 lbs. 11 ozs. 7 pints	100.6° E. I	,,	Well in 1886.
7	,,	Oct., 1885	—	23	S.	About 3 ins.	,,	L.	3 lbs. 18 pints	99.8° E. I	,,	Married 1888, well in May, 1889.
8	,,	Jan., 1886	Dr. Kisch	47	S.	5 ins.	Univeral parietal, strong omental and pelvic. Papillomatous cyst	L.	11 ozs. 14 pints	100.0° E. II	,,	Well one year later.
9	,,	May, 1886	Mr. Stott, Colney Hatch	29	M., 7	About 3 ins.	Intimate parietal omental and mesenteric. No true pedicle	L.	—	99.2° M. III	,,	Quite well following summer.
10	Nursing Home	June, 1886	Dr. W. S. A. Griffith	53	W., 4	2½ ins.	None	R.	1 lb. 12 ozs. 8 pints	100.0° E. I	,,	Well in Jan., 1887.
11	,,	July, 1886	Dr. S. Barker, Brighton	46	S.	3 ins.	Parietal	L.	14 pints	100.6° E. II	,,	Well in summer 1888.
12	Samaritan Hospital	Oct., 1886	Dr. Jardine, Richmond	63	W., 0	2¾ ins.	None	L.	1 lb. 2 ozs. 22 pints	99.4° E. II	,,	Well in June, 1887.
13	Nursing Home	March, 1887	Mr. Thomas, Swaffham	49	M., 5	3 ins.	,,	L.	2 lbs. 4 ozs. 20 pints	102.2° E. II	,,	Well in Aug., 1888.
14	Samaritan Hospital	Sept. 30, 1887	—	42	S.	1⅜ in.	Strong parietal	L.	15 ozs. 22 pints	100.0° E. II	,,	—
15	,,	Oct. 1, 1887	—	30	M., 1	2 ins.	None	L.	3½ oz. 7 pints	98.8° E. I	,,	Child born Dec., 1888.
16	Nursing Home	Oct. 20, 1887	—	24	S.	1½ in.	None, broad ligament cyst	L.	16 pints	100.4° E. II	,,	—
17	Samaritan Hospital	Dec. 7, 1887	Dr. Rowe, Margate	59	S.	2 ins.	Parietal, pelvic, and omental	R. and L. fused into one cyst	5 ozs. 4½ pints	100.4° E. I	,,	Well in spring of 1888.
18	,,	Feb. 23, 1888	Dr. Day, Mr. P. Aldrich	33	M., 5	2½ ins.	Parietal and omental	L.	13 ozs. 17½ pints	99.2° E. I	,,	—
19	,,	July 20, 1888	Mr. Butlin	22	S.	3 ins.	None	R. and L.	R., 2 lbs. 9 ozs. 14 pints L., 1¼ ozs.	100.4° E. I	,,	Well in summer 1889.
20	,,	Jan. 25, 1889	Dr. Day	26	M., 3	Nearly 6 ins.	Omental	R.	2 lbs. 11 ozs. 6 pints of greasy matter	101.2° E. I	,,	—
21	,,	March 30, 1889	Dr. Rutherfoord	52	M., 8	5 ins.	None	R.	3 lbs. (solid sarcoma)	101.0° M. IV	,,	Well in Nov., 1889.
22	,,	May 4, 1889	Dr. Waugh, Toddington	32	W., 1	6 ins.	Parietal, omental, appendices epiploicæ	R. and L.	16 lbs. 4 ozs. (solid tumour of right ovarian ligament)	103.0° E. I	,,	Well in Nov., 1889.
23	,,	June 6, 1889	Sir Spencer Wells	50	M., 0	3 ins.	None	R.	12 ozs. 3 pints	101.2° E. I	,,	Well in Nov., 1889.
24	,,	July 22, 1889	Mr. Beckett, Ely; Sir Spencer Wells	33	M., 1	6 ins.	Omental, parietal, very close in each flank	R.	6 lbs. 2 ozs. about 12 pints	105.4° 5 hrs. before death	Died, 12th day	Died of suppurative peritonitis.
25	,,	Oct. 15, 1889	Mr. Simpson, Worthing	36	M., 1	3 ins.	None	R.	14 ozs. 13 pints	100.4° E. II	Recovered	—

Incomplete Ovariotomy.

1	Samaritan Hospital	Dec. 16, 1884	Mr. Lammiman, Tunbridge Wells	47	M., 0	5 ins.	Universal	?	—	102.0° E. II	Recovered	Lived for seven months after operation.

* The letter placed first in this column, when R. and L. come together, indicates the side on which the larger tumour developed.

tion, and continued for three days; during that period the temperature never exceeded 99.4° F.

CASE XIII.—The tumour was sessile. It burrowed between the folds of the broad ligament, and touched the left side of the uterus. Its capsule was in close relation to the large intestine. I enucleated the lower part of the tumour, and transfixed the tissues of the broad ligament close to the uterus. The ligature slipped, and I was compelled to apply another ligature, which included a portion of the cornu of the uterus. The edges of the capsule, after the tumour was cut away, were sewn up. On the night of the eleventh day the patient was seized with dyspnœa and violent palpitations. Dr. J. F. Goodhart, who kindly auscultated the patient, reported "a grating first sound, no thrill on palpation. Hæmic systolic murmur at apex diffused over præcordial area from nipple to sternum and upwards to level of third left rib, inaudible posteriorly and in axilla." The patient had made no previous mention of any cardiac complication, although she had suffered from severe attacks of palpitation for twenty-seven years. The legs were œdematous before operation, the urine free from albumen. There was no bad symptom during anæsthesia, and convalescence was rapid.

CASE XIV.—The pedicle was twisted and obstructed, the cyst being nourished chiefly through an intimate parietal adhesion. Legs œdematous before operation, with large varicose veins, some of which became plugged on the ninth day, but no trouble ensued.

CASE XV.—The pedicle was rather short, otherwise the case was extremely simple.

CASE XVI.—A large thin-walled broad-ligament or "parovarian" cyst. The capsule was closely related at its base to a coil of

intestine. She had been tapped three years before at a general hospital.

Case xvii.—The adhesions, which solely nourished the tumour, gave much trouble. The uterus was twisted, so that its right cornu was displaced backwards, and the tube, twisted and atrophied, formed a pedicle to the tumour. A white ligamentous band ran from the left side of the uterus to the tumour, representing the left tube, ovarian ligament, and broad ligament atrophied. This case was an instance of the fusion of two cystic ovaries, with subsequent twisting of one pedicle and atrophy of the other.

Case xviii.—There had been an attack of inflammation of the cyst in June 1887; the cyst wall was dull and adherent to the parietes and omentum.

Case xix.—After removing the right tumour, which formed a very multilocular cyst, I examined the left ovary, which lay at the bottom of Douglas's pouch. It was about two inches in long diameter and converted into a single cyst. After removal, I found that it was stuffed with hair and sebaceous matter. The pedicle was not twisted, otherwise this case strongly resembled No. 1. The patient has grown very stout since the removal of the ovaries.

Case xx.—A long incision had to be made in this case, as a large flat bony plate lay behind the anterior part of the cyst-wall with its long axis transverse. The cyst was also full of greasy fluid which I feared to spill into the peritoneal cavity.

Case xxi.—The tumour, before operation, felt like a pedunculated subperitoneal uterine fibroid. It was oval and very heavy for its size.

Case xxii.—A full account of this remarkable case of solid tumour of the ovarian ligament appeared in the Journal, June 8th, 1889, p. 1287.

Case xxiii.—This case is instructive as illustrating the danger of delay in performing ovariotomy. The patient declined operation six months earlier. I found a considerable amount of ascitic fluid in the abdominal cavity. A mass of papillomatous outgrowths perforated the cyst wall, filling up the aperture which they made. Had the patient waited two or three months longer, the operation would have been very difficult and dangerous.

Case xxiv.—The patient had three attacks of peritonitis with inflammation of the cyst wall, in the winter and spring of 1889. Mr. Beckett, of Ely, wrote: "Her pulse before she left home, July 18th, 1889, was about 120, and her temperature became nearly normal at the time of her leaving. Before that it was 102°, with great tenderness over the region of the left ovary." There was some difficulty in flushing the peritoneum thoroughly, and the process caused considerable shock. The drainage tube was removed on the fourth day, as under a drachm of almost clear, scentless fluid collected in six hours. The temperature never fell below 100°, nor the pulse below 108, throughout. There were symptoms of obstruction of the small intestine on the sixth and seventh day; a swelling, resonant on percussion, forming in the lower part of the abdomen, whilst there was no evidence of distended colon. By the aid of white mixture and castor oil a pale motion was passed on the seventh day, with temporary improvement. Delirium and suppression of urine set in forty-eight hours before death. A pool of pus was found lying on the surface of the intestines about the level of the track of the drainage tube. I believe that some clot, or semi-solid cyst contents were left behind and decomposed. The process of flushing requires great care, for the water must be neither too hot nor too cold, and when adhesions are universal and involve structures high in the abdomen, the water must be allowed to flow freely in that direction. This case was in broken health at the time of operation, and perhaps the presence of a small amount of morbid material in the peritoneal cavity was sufficient to turn the scale against her. In this respect it resembled Case 23, in a paper by Dr. Bantock, published in the Journal, vol. i, 1879, p. 767. "Liver became adherent to raw parietes, shutting in a small quantity of bloody serum; drainage of pelvis perfect." In that case the cyst had suppurated; in mine it had repeatedly become inflamed; its wall was dull, and strongly adherent to the parietes and omentum.

Case xxv.—This case presented no difficulties at the operation. Unfortunately the patient put her foot to the ground when she was placed on the sofa for the first time, a fortnight after the operation. The left calf became swollen through plugging of a vein, and a swelling appeared in Scarpa's triangle, which did not subside for over a week. This complication, far more frequent than many records might lead us to suppose, is generally observed in "simple" cases, where the patient often eludes the vigilance of the nurse or where the nurse herself is careless, or inexperienced.

In the case of incomplete ovariotomy, the patient had been under the care of Mr. Lammiman, of Tunbridge Wells, for about a year. A cyst developed and then ruptured, so that on examination under chloroform no trace of any tumour could be felt. A few months later, after an attack of pleurisy, a cyst could again be detected; it descended into Douglas's pouch, and the patient showed signs of malignant disease. The tumour was multilocular, and filled with sarcomatous material. It adhered intimately to the intestines and parietal peritoneum. I cleared the loculi, which had been opened, of their solid contents, packed them with iodoform wool, and stitched the opening in the main cyst wall to the margins of the lower part of the abdominal wound.

Next day the patient appeared to be sinking. I introduced a drainage tube into the tumour, and washed out the cavity every two or three hours for several days. At length the patient recovered for a time, and enjoyed relative comfort for a few months. She died on June 14th, 1885, seven months after the operation. This is an instructive case, showing that after an incomplete ovariotomy, where malignant disease is discovered, the patient may, with care, be saved from death as a result of the operation.

TALIPES EQUINO-VARUS IN THE ADULT: TWO SUCCESSFUL CASES OF DOUBLE OPERATION BY EXCISION OF A PORTION OF THE TARSUS: DAVIES-COLLEY'S OPERATION: SEQUEL.

By F. R. FAIRBANK, M.D., F.S.A.,
Surgeon to the General Infirmary, Doncaster.

It was well pointed out by Mr. Edward Lund, in his address as President of the Surgical Section of the meeting of the British Medical Association at Manchester, that operations which appear successful at the time do not necessarily give ultimate good results. "The after-history of surgical cases" alone determines their real success. In the Journal for October 27th, 1888, a report of two cases of double tarsectomy appears under the above heading. I now after a further lapse of time, add a few words by way of sequel, and give illustrations of one of the cases.

The operations were somewhat modified from Mr. Davies-Colley's description as given in Erichsen's *Surgery*, 8th edition. I commenced by dividing the tendo Achillis, and in the later operations I made an incision on each side of the foot, and found with this it was much easier to remove the divided bones of the tarsus than with only one incision. The feet were put up at a right angle at once, and there is very firm union of the divided tendo Achillis, in each case.



Fig. 1.—Talipes Equino-varus.

The second of my cases, J. F., aged 41, was operated upon in the month of April, 1887, for his left foot, and in November for his right. The distortion of his feet was extreme, as shown in Fig. 1, which is from casts preserved in the Doncaster Infirmary. He was able to put only the outside of the toes to the ground. Boots had been modified for him until the bootmaker

gave up further efforts, and he remained a cripple hardly able to get about.



Fig. 2.—After Tarsectomy.

Fig. 2 shows the feet at the present time; they are shorter than natural, but form a perfect support. There is bony union between the divided tarsal bones. This figure is on a larger scale than No. 1.



This full length figure shows my patient as he walked to the photographer's. He was not "posed," but merely told to "stand at ease." He has his boots made slightly longer than his feet, and stuffs the toes with soft materials, the soles being strong. This arrangement adds not only to the appearance, but also to the usefulness of his feet. He can walk perfectly easily and well, and now he is able to work at the pit's mouth as a labourer, and earns 16s. a week.

The first of my cases, J. D., has also proved a success; his knees naturally slightly knocked, so that he is not quite so active as J. F., but he can walk several miles without fatigue or pain, and gets his living by hawking small goods, pushing a hand-cart before him. One of his feet (the left) is more flexible than the right. From this I removed more bone, and there is not bony union; he speaks of this foot as the better of the two, though there is bony union in the right. The latter, he says, pains him occasionally after much walking. This, I believe, is due to faulty boots. He came in the first instance, asking to have both feet taken off, as they were in the way, and he thought he could do better without them.

The result in each case is satisfactory.

SURGICAL MEMORANDA.

VENEREAL TOXÆMIA.

THE above title has been chosen in order to indicate a condition closely similar—in fact, identical—in its clinical manifestations to what has been described as gonorrhœal rheumatism or pyæmia, urethral toxæmia, blennorrhagic arthritis, etc.; but in the case about to be shortly described there was no affection of the urethra.

The patient, M. H., aged 24, a male, was seen first by me on September 25th, 1889. He was unable to retract the prepuce completely, and there was a thick purulent discharge coming from under it. The left ankle was extended, painful, and swollen. The swelling was chiefly in the tissues around the joint, and on the dorsum of the foot there was much œdema. Temperature, 103 4° F.

On September 26th the right knee-joint was greatly swollen and distended, with synovial effusion. On retracting the prepuce, there were seen two phagedænic ulcers behind the corona glandis, eating somewhat deeply into the glans, but no discharge from the urethra nor pain on micturition. The case ran a course which may be shortly described as what was formerly called gonorrhœal rheumatism in a healthy young man; but the urethra was at no time affected, nor was there any history of a former gonorrhœa.

I use the term toxæmia as being more general than pyæmia, and wish to record the case as showing that a pyæmic or toxæmic condition resembling acute or subacute rheumatic arthritis may result from the absorption of morbid products in venereal cases, although the parts affected may be altogether outside of the urethra. So far as I can discover the fact has hitherto been unrecorded.

W. SCOTT LANG, M.D., F.R.C.S.E.,
Lecturer on Surgery, Edinburgh School of Medicine.

ADVENTURES OF A NEEDLE.

GUNNER S., 18, "reported sick" on the morning of October 21st, 1889, saying that "he had a bone in his leg." On examination, a hard substance was felt beneath the skin of the right leg, on its external aspect, about its middle third. On making a small incision, a large needle, measuring 3⅛ inches in length, was easily withdrawn. The needle was perfect as to its eye and point, but somewhat corroded.

The patient had previously followed the trade of a portmanteau maker, and the needle was such as is generally used in that handicraft. His statement is that about last Christmas he was employed at his calling, when his fellow-workmen played him a trick by boring a hole in the bottom of the chair he worked in, and placing the needle point upwards in the hole, in such a manner that by means of a string it could be jerked upwards into the victim's buttocks. This they did so successfully that the needle penetrated the tissues, and the string slipping off, it entirely disappeared in the gluteal muscle, leaving the subject of this practical joke in ignorance that the needle was retained in his flesh.

The patient stated that he suffered much pain in the right hip and leg for about six weeks after, and was unable to work, and again in February, when probably the needle was passing the

knee joint, but he recovered completely, and was able to enlist in the Royal Artillery on August 29th. He passed his drill, and performed all his duties till he felt some foreign substance beneath the skin of his leg, a few days previous to October 21st.

It is difficult to imagine how this large and pointed instrument passed so innocuously from the gluteal region down the thigh, and over, or under, the knee, and made its way to the surface of the middle of the leg.

T. Y. BAKER, Brigade Surgeon, A.M.D.

The Barracks, Sunderland.

THE USE OF LARGE GRAFTS FROM AMPUTATED LIMBS.

As this method of grafting, so far as I know, does not seem to have been much, if at all, in use, I send a note of the two cases in which I first employed the plan. Since then I have about twice had occasion to make use of these large grafts, and always with success. A little special care is required. The speediest plan is to shave off the skin with a razor, taking of course the rete Malpighii only. In the first instance I cut out a square of skin, laid it on a piece of hot lint and dissected off the subcutaneous tissue. The grafts must be kept in lint wrung out of weak carbolic during the transit from the amputated limb to the ward, unless of course the patient be near to this. I found that an interval of fifteen to twenty minutes between the amputation and the application of the grafts did not interfere with success. It is difficult to keep such large grafts in position; the corners must be held down while the dressing is laid over it, and pressure with the hand steadily maintained until the bandage is applied. If the skin curl up or wrinkle pus gets beneath and failure will result. In this way one of my dressers failed in an attempt recently. The plan offers a rapid method of closing large wounds, and, as the first case shows, gives a more secure covering than the other method.

CASE I.—G. J., aged 32, came under my care with a chronic ulcer of leg, of fourteen years' duration. It measured 5 inches in the vertical direction, and reached half way round the leg. A healthy granulating surface having formed, two large grafts taken from an amputated foot were applied on December 19th, 1882; one measured 1 in. × $\frac{3}{4}$ in. and the other 2 in. × $\frac{3}{8}$ in. The spray was used, as the ulcer had been dressed under its use. The grafts were covered by gutta-percha tissues smeared with carbolic oil (1–10) and carefully padded with wool over the boracic acid lint dressing. Two days later, on exposing the ulcer, both grafts were slightly discoloured in parts, but were firmly attached. The wound had made rapid progress in the two days. Both grafts took in their entirety, and rapid healing followed. Some year or more later this patient returned, the ulcer having broken down except where the grafts existed; the skin here remained as two broad bands.

CASE II.—J. A., aged 15, was admitted for a large wound after burn of the arm. On December 19th, 1882, a graft removed from an amputated thigh, measuring 2 in. long, $\frac{1}{2}$ in. at base, and $\frac{3}{8}$ in. at apex, was applied. On December 29th the whole graft was firmly attached; one spot black in centre, which does not appear to involve the entire thickness. Rapid progress in healing resulted. He was readmitted in February 1883, the ulcer still unhealed. On March 9th, 1883, four grafts were applied from the inner side of an amputated foot; they were shaved off with a razor, and measured 1 in. × $\frac{1}{4}$ in., $\frac{3}{4}$ in. × $\frac{1}{2}$ in., $\frac{1}{2}$ in. × $\frac{1}{4}$ in., and $\frac{3}{4}$ in. × $\frac{1}{2}$ in. When discharged on June 1st, 1883, the wound measured $2\frac{1}{4}$ in. × $1\frac{1}{4}$, while on admission it measured about 11 in. × 3 in.

Weymouth Street, W. CHARTERS J. SYMONDS.

THE TREATMENT OF SEVERE CASES OF NASAL POLYPUS.

IN the JOURNAL of November 16th is a paragraph under the above heading, by Mr. Milligan, of Northampton, in which he states, first, that "he can remember two or more cases of nasal polypus which have resisted repeated attacks of the snare and forceps, another crop beginning to grow as soon as the former is removed," and secondly, he recommends for treatment the forcible wrenching away with serrated forceps of the "superior" and middle turbinate bones.

Now, first, I always teach, and is it not generally insisted on in the writings of other specialists on the subject, that removal of the growth is only a preliminary step in the treatment of the disease, the essence of which consists in the thorough application of the galvano-cautery to the spot from which the polypus springs? I think that if Mr. Milligan will in the future give this a trial he will not find so many cases resist treatment, and will not have to resort to the extreme measures he refers to.

Secondly, surely Mr. Milligan has made a mistake when he says he wrenches away the "superior" turbinate bone! This bone is small, and invisible by anterior rhinoscopy, and I certainly have never before heard of its removal for nasal polypi, these growths usually being grouped about the middle bone. I never recommend even the removal of the middle bone, which, like the superior, is a process of the ethmoid, unless it is rendered absolutely necessary by necrosis or excessive hypertrophy, and in these cases I would suggest to Mr. Milligan that he should give the snare a trial; it answers every purpose, and avoids all the risks run by the forcible use of forceps.

WM. R. H. STEWART,
Aural Surgeon Great Northern Central Hospital.

ACCIDENTAL BONE-GRAFTING.

MR. T., when in India twenty-two years ago, was killing a wounded hare in the usual way by striking it on the back of the neck with the side of his hand; after doing so he noticed a cut over the little finger-joint, which soon healed, leaving a small "lump" under the skin. This gave no trouble till two months ago, when he was shaken rather warmly by the hand by a friend, and since then the lump has been painful. Last week he asked me to remove it, as he thought it must be a piece of stone. I applied a 12 per cent. solution of cocaine, cut down on it, and removed what proved to be the spinous process of a vertebra, evidently from the hare. The bone was living and healthy, having formed a sort of arthrodial joint on the base of the first phalanx of the little finger.

W. WATSON-PIKE, F.R.C.S.I.,
Curragh Camp. Surgeon A.M.S.

FRACTURE OF CORACOID PROCESS.

IN the JOURNAL of December 7th reference is made to a case of fracture of the coracoid process, and as the accident is so very rare, I will briefly describe a similar case that occurred in my practice a few months ago. The subject of it was a blacksmith, a a very muscular man, who received a severe kick from a horse on the point of the shoulder while in the act of shoeing him. His symptoms were inability to raise or rotate the arm, which hung by his side; great pain on pressure referable to the point of the shoulder, and on manipulation crepitus could be distinctly heard over the coracoid process, which was displaced and movable. Treatment consisted in perfect rest, strapping the arm to the side, and the use of a sling; this resulted in complete bony union. The arm is now quite strong, and he is able to work without any inconvenience.

ROSSLEWIN MORGAN, M.D.

Ballyfeard.

TERATOLOGICAL MEMORANDA.

CASE OF DOUBLE MONSTROSITY.

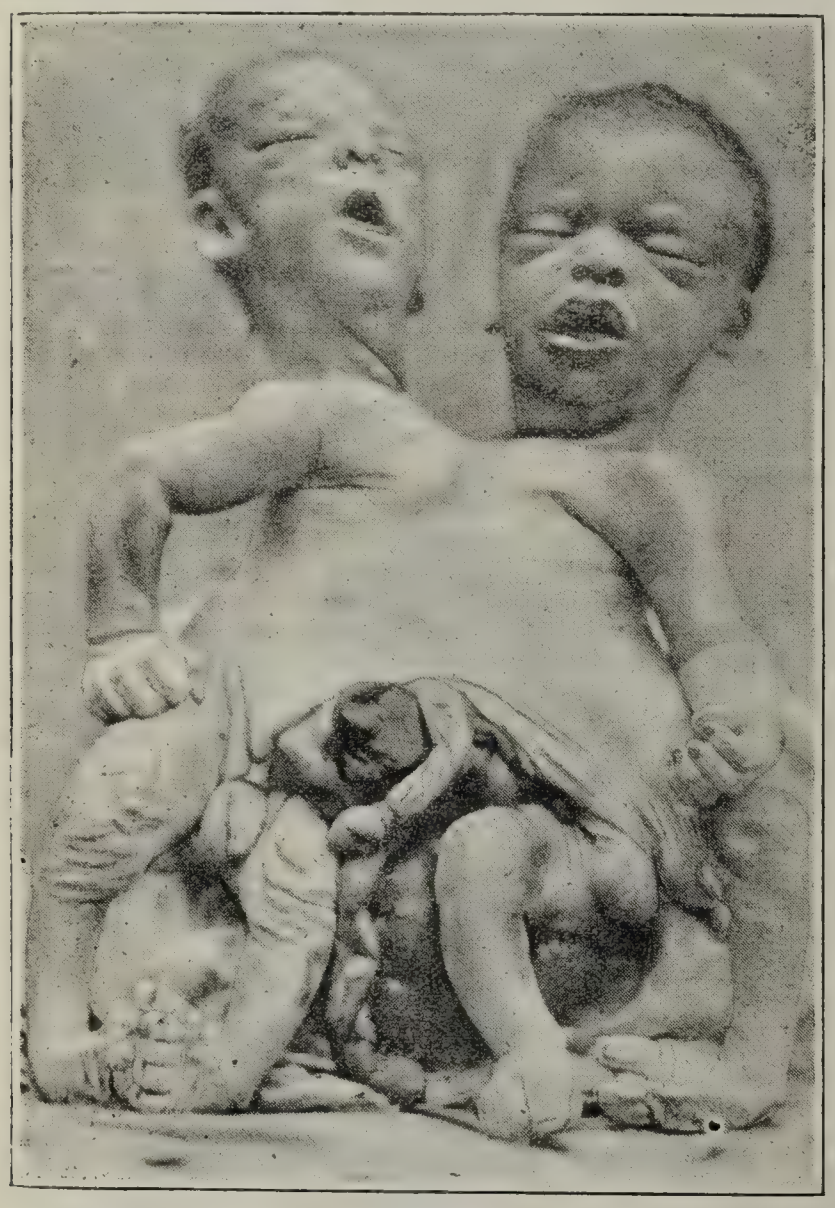
I WAS called to a woman in labour on January 28th at 11.30 P.M., and on arrival found the os well dilated and the head descending in the first cranial position, and as this was the woman's fourth confinement I did not expect to be long detained. After a short interval the head was born naturally, and I still thought everything was going on well, though what struck me as rather peculiar was the fact that, as soon as the head was born, it deliberately turned its face forwards, as though objecting to the fæcal odour of the anal region.

I then endeavoured to assist the shoulders down, but found them unyielding, which caused me to bring down first one arm and then the other; I now used considerable force, but without effect. On introducing my left hand into the uterus, expecting to find a large spina bifida, I made examination as far as the thighs, but could find nothing abnormal. I then by abdominal palpation thought I could make out another child.

At this time, being considerably puzzled as to the exact nature of the case, I sent for my partner, Dr. Davis, who kindly came and assisted me. We then gave chloroform and made a more complete examination, arriving at the conclusion that we had to deal with a case of double monstrosity. We then decided that we should be justified in using a considerable amount of force to endeavour to bring down the breech. I accordingly introduced my hand, and grasping the buttocks of the child, with one finger

inserted in the anus (of child), drew down the breech, at the same time disembowelling it, as shown in the photograph. I then tried to turn the second child, but could not manage it on account of the firm union with the first child. Dr. Davis then succeeded in drawing down the second child's head, and so accomplished the delivery. Had he been unable to do this I intended severing the two and then turning.

The placenta was single but large, and was without difficulty delivered. The umbilical cord was single until it came within about four inches of the monstrosity, where it bifurcated, one portion being quite rudimentary as compared with the other, showing that the placental circulation was carried on through a single cord to both children.



I am indebted to my friend, Dr. Percy Blumer, for the excellent photograph, which he took great pains to obtain under very unfavourable circumstances. The monstrosity is a complete sternopagus, each child being a well-developed male. Three of the feet are deformed with talipes varus, the fourth is normal. I notice in Dr. Tinley's case a similar condition exists. The woman was within about three weeks of her expected time, this being her fourth confinement. She was twenty-eight years old, and, though there had twice occurred in members of her family twin pregnancies, there was no history of any deformity. She made a very fair though somewhat tedious recovery.

H. Shapter Robinson, L.R.C.P.Ed., M.R.C.S.Eng.
Monkwearmouth.

CLINICAL MEMORANDA.

ARTHRITIC HÆMOPTYSIS.

The amount of interest which Sir A. Clark's paper has elicited induces me to mention a case of undoubted "arthritic hæmoptysis," which puzzled me a good deal at the time.

About six weeks ago I was summoned to an old man, aged 74, who had brought up about 8 ounces of blood. On questioning him I found that for the last two years he had had periodical attacks of hæmoptysis, and that he had suffered from bronchitis for the last three winters. He voluntarily told me that he had been a great sufferer from rheumatism, and forthwith showed me several joints hopelessly crippled.

I examined him most carefully, and could only find the typical signs of bronchitis and emphysema, there not being the slightest evidence of cardiac or tubercular mischief. I ordered him a purge with a mixture containing pot. iodid, valerian, and senega. He quickly recovered, and I did not hear anything of him until last Tuesday morning, when I was again summoned, having brought up this time about 4 ounces or rather more of blood. He was again treated with a purge and a mixture containing pot. iodid., ammon. carb., and senega. He is now quite well.

Previous to reading Sir A. Clark's paper I attributed the hæmoptysis to violent and excessive coughing, causing rupture of the terminal branches of the bronchial blood vessels.

Nottingham. Frederic C. Wood.

GLYCOSURIA.

I would like to cite, briefly, a few instances that have come under my notice, both of the co-existence of glycosuria and heart disease, and of the occasional appearance of sugar in the urine of women who suddenly stop lactation.

I have now under my care three cases of intermittent glycosuria in persons of advanced years, and in each instance there is a strongly marked aortic obstructive *bruit*, while in two of the three repeated attacks of somewhat ill-marked angina occur. In two other cases I note symptoms of that innutrition of the cardiac fibre to which Dr. Ord refers, the heart's impulse being very poor, the pulse small and irregular, and attacks of cardiac dyspnœa being frequent. I recognise, if I may so, the accuracy of the lines with which Dr. Ord has drawn the outline of many cases of glycosuria.

As to the appearance of glycosuria among women who are going through the process of weaning, that also I have witnessed, but only when there has been pyrexia. The Journal of April 11th, 1885, contains a short clinical note on the subject. In numerous instances I have examined the urine of women, in health, who have been weaning their babies, but, under such circumstances, sugar has been invariably absent.

Broadstairs. Thos. F. Raven.

ACUTE ECZEMA FROM RHUS TOXICODENDRON, OR THE POISON TREE SUMACH.

The rhus toxicodendron becoming more widely distributed in English gardens, it may be of use to mention the drawbacks to its appearance. For the last five summers a family, consisting of father, mother, two daughters and a son, and visitors, have together, or in turns, been repeatedly attacked by acute eczema. It begins either in hand or in eyelids, the latter spot no doubt being irritated by the poison carried to them by the fingers, and forms sago grain pimples, which soon begin to exude serum, and to form crusts, causing also a general swelling of the part attacked, the inside of the thighs and the neighbouring parts, and the face, ears, and neck are also attacked and swollen as with erysipelas. Great debility, depression of spirits, and prostation accompany and follow each attack. The attacks at the time were ascribed to bad drains, arsenic in papers, curtains, and carpets, and everything was tested at great trouble and expense, but all to no purpose. They are now clearly proved to have been due to the rhus.

To be brief, then, the points noticed have been the brown stain produced by the juice of the leaves. Some persons show a greater susceptibility to the poison than others. Contact with the plant does not appear to be necessary, but merely standing in its neighbourhood may be followed by an attack, which lasts from ten to fourteen days. The poison is much more powerful in summer than in winter. Fred. N. Brown, M.R.C.S.E., etc.

Pirbright, Surrey.

THERAPEUTIC MEMORANDA.

THE TREATMENT OF A COMMON COLD, Etc.

I was about to state that nasal catarrh can be effectually treated by salicylic acid used as snuff, until I was anticipated in this

matter by Dr. Philpots, in the JOURNAL of November 16th. I may, however, even now say that for years past I have treated this affection by a combination of salicylic acid, tannic acid, and subnitrate of bismuth used locally in the manner indicated. Salicylic acid, parts 4; tannic acid, parts 6; bismuth subnitrate, parts 90; by weight, 100. Such combinations in a dry form, as alluded to, will also now and then be found to be the best mode of treating certain forms of localised gleet, vaginal leucorrhœa, otorrhœa, etc.

JAMES MACMUNN.

Crouch End.

LOCAL TREATMENT OF DIPHTHERIA.

DIPHTHERIA at the present time seems to be rather active in many districts, and I therefore think it a good opportunity to lay before you the claims of the sulphur treatment, which by many has come into a certain amount of disrepute. I use the sublimated sulphur, and by three methods; to the third, however, I am inclined to give by far the greatest credit.

1. By means of a tube blow a portion, say half a drachm, of sulphur over as much as can be covered of the diphtheritic membrane.

2. Gargle with a solution of the sublimed sulphur, or, if preferred, with sulphurous acid mixture.

3. By the inhalation of the fumes of burning sulphur. I recommend that the first means should be used twice a day, night and morning, and that the two latter ones every two hours.

Now I claim for the latter that no fungus can possibly exist under the fumes of burning sulphur, and that its action is to completely shrivel up the diphtheritic membrane, putting to death the micrococci as fast as they are formed, the membrane eventually peeling off, leaving a healthy healing surface.

I trust these remarks may be of service to some of your readers in causing them to persevere with the sulphur treatment, which I am afraid, in many cases, when tried is discarded too soon. So far, I myself am quite satisfied with its results.

Birmingham. ALFRED STANLEY.

SULPHONAL.

IN the discussion on Recently Introduced Hypnotics and Analgesics, reported in the JOURNAL of November 2nd, great stress is laid on the fact that sulphonal, although in other respects one of the most useful of sleep producers, has the disadvantage of being only slightly soluble, and therefore slow in its action and not easily administered. I have found that the ordinary dose (from 20 to 40 grains) can be readily dissolved in a cupful of hot tea or coffee, preferably the latter, and that no precipitation occurs till the temperature is below the body heat. Probably, therefore, if given in this menstruum the sulphonal will be absorbed in the liquid state, and thus act more quickly; more especially as it has been shown by Professor Kast that the presence of peptones hinders precipitation. Even if precipitation does occur the powder is then in a much finer state of division than can be obtained by mechanical means, and the rapidity of absorption should be proportionately greater.

This method will also be found useful in nervous cases where, as often happens, the patient refuses or objects to take medicine. In these cases sulphonal is often of the greatest service, and its tastelessness gives a great advantage over paraldehyde and most of the other soporifics. In a severe case of melancholia I used it more or less constantly for a period of five months, at one time giving it every night for four weeks in doses of 30 or 40 grains without any ill effects. Most of the other remedies had been previously tried, large doses of chloral, bromide of potash, cannabis indica, urethane, paraldehyde (in 2-drachm doses), etc., having no appreciable effect, while a third of a grain of morphine, given subcutaneously on one or two occasions, only increased the excitement. In this case it was found that the sulphonal, given as a powder, acted more quickly when finely ground than when given in a coarser state, usually taking from an hour to an hour and a a half to produce its effect. The torpor and lassitude referred to as usually following the night's sleep I found could be got rid of by careful gradation of the dose. So far from any bad effects occurring, the patient's appetite invariably improved when the drug was started afresh, this being probably the result of the marked diminution of mental pain while awake, and of the sound sleep produced at night. There was practically no habituation, the dose merely having to be increased or diminished as the disease progressed, and no cumulative effect was produced, even by repeated doses of 40 grains. This case may also be of value as showing the safety with which sulphonal may be given in suitable cases for prolonged periods.

C. J. MORTON, M.B.

Edinburgh.

REPORTS

ON

MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND AND THE COLONIES.

MANCHESTER ROYAL INFIRMARY.

EXCISION OF THE SCAPULA FOR A SARCOMATOUS TUMOUR.

(Under the care of Mr. SOUTHAM.)

H. S., aged 14, was admitted on June 7th, 1889, on account of a swelling of the right shoulder-blade, which had been accidentally discovered by his parents only a few days previously; up to that time he had enjoyed excellent health, following his occupation as farm labourer, and having suffered no pain or inconvenience whatever, in fact being quite unaware that there was anything the matter with his shoulder.

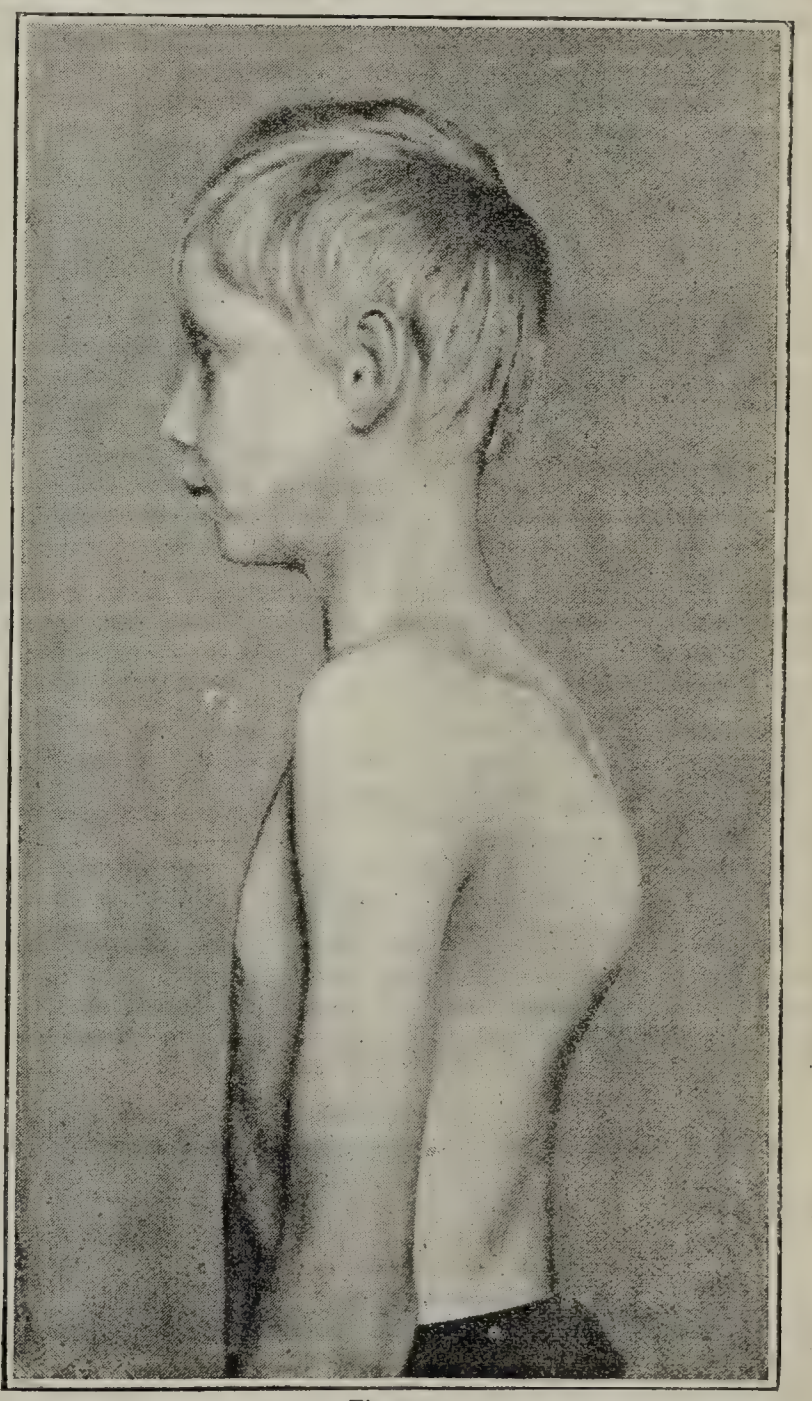


Figure A.

On examination a large, well-defined, smooth, semi-elastic tumour was found involving the whole of the subspinous fossa of

the scapula, causing a considerable prominence in this situation (Figure A); it was unattended by any pain, and was not tender upon pressure. The overlying skin was normal in colour and non-adherent to the tumour. The scapula, to which the growth was as yet confined, moved freely on the subjacent parts. As the tumour was evidently of a malignant (probably sarcomatous) nature, and springing from the bone, it was determined to remove it together with the scapula, as the patient's general condition was good, and no evidence of secondary growths in any part of the body could be detected.

On June 14th the scapula was removed by a T-shaped incision, one limb running along its vertebral border, the other being carried at right angles to it along the spine and acromion. Skin flaps were reflected until the whole of the dorsal surface of the scapula was completely exposed, and the muscles attached to its vertebral, axillary, and upper borders were then divided in the order mentioned, the vessels being secured as they were cut across. After sawing through the tips of the acromion and coracoid processes, and dividing the capsular ligament and its remaining connections, the scapula, together with the tumour, came away. The skin-flaps were then brought together with silver sutures, a drainage tube being left in the wound.

Examination of the tumour showed it to be a pure round-celled sarcoma, springing from and limited to the subspinous fossa of the scapula; beyond some superficial erosion of the surface of the bone beneath, there was no destruction of the osseous tissue, the growth being apparently subperiosteal in its origin.

The operation was well borne by the patient, and the after-course of the case, as regards the wound itself, was very satisfactory, though healing was somewhat retarded by a little sloughing of the margins of the horizontal incision, and by the formation of a small abscess at its outer angle over the head of the humerus. On the ninth day he began to complain of numbness, with loss of power in his legs, and on the following morning it was noticed that his water and motions were passed quite involuntarily. A few days subsequently an undue projection of the spines of several of the middle dorsal vertebræ was observed, and this gradually became more marked, until a distinct angular curvature was produced in this situation; at the same time the loss of motion and sensation in the lower extremities became complete. The patient remained in this condition until the beginning of August, when preparations were being made for removing him home, the wound having almost healed, and he was commencing to use his arm. On the evening of August 9th, however, his respiration suddenly became much embarrassed; the following morning it was almost entirely diaphragmatic, and it was also noticed that the spinal curvature had become much more marked. The breathing became shallower and weaker, and he died apparently from a gradual process of asphyxia the same evening, just eight weeks after the operation. At the necropsy the bodies of the sixth, seventh, and eighth dorsal vertebræ were found to be extensively destroyed, owing to infiltration with a secondary growth, which was of soft consistence and encroached upon the spinal canal, compressing but not involving the cord. Secondary deposits were also present in the liver, lungs, and pleuræ.

REMARKS.—The case is interesting on account of the very rapid course it ran, only nine weeks elapsing from the time the tumour was first observed until death took place, and it is doubtful whether life was at all prolonged by the operation, from the effects of which the patient had, however, quite recovered. It illustrates well the extreme malignancy of periosteal sarcomata of the scapula, especially when the growth is of the round-celled variety and when it occurs at an early period of life.

MANCHESTER CLINICAL HOSPITAL FOR WOMEN AND CHILDREN.

REMOVAL OF THE SCAPULA, TOGETHER WITH HALF THE CLAVICLE AND THE ENTIRE UPPER EXTREMITY, FOR A SARCOMATOUS TUMOUR.

(Under the care of Mr. SOUTHAM.)

M. S., aged 11, was admitted on August 20th, 1889, with the following history: The previous May she sustained a fall on her right shoulder; for about six weeks after the injury she continually felt slight pain in the part, and at the end of this period a small swelling was observed, which rapidly increased in size.

On admission a large, smooth, rounded tumour was found occupying the region of the right scapula, completely obliterating all the bony prominences; it also involved the posterior aspect of the upper part of the arm and filled the axilla, reaching up in front almost as high as the clavicle (Figure B). It was of firm



Figure B.

consistence, and slightly tender on pressure. The overlying skin was unaffected, and the scapula, together with the tumour, moved freely on the subjacent parts. She was unable to raise the arm from the side, any attempt at movement causing pain. As the tumour was evidently of a sarcomatous nature it was resolved to remove the scapula and entire upper extremity, the extension of the growth into the axilla rendering it impossible to preserve the arm.

The operation was performed on August 25th. An incision, commencing about two inches above the acromion, was carried vertically downwards over the outer aspect of the shoulder and then completely round the upper part of the arm (as in the "oval" amputation at the shoulder-joint). From the lower part of the oval a vertical incision was prolonged along the axillary border of the scapula as far as its inferior angle. Skin-flaps were then reflected forwards and backwards until both surfaces of the tumour were freely exposed. The outer half of the clavicle was next resected, and, the pectorals having been divided, the axillary artery was ligatured close to its origin. The muscles attached to the axillary, vertebral, and upper borders of the scapula were then divided in the order named, and after separating the remaining connections of the bone, it came away with the arm. A quantity of redundant skin having been removed, the margins of the wound were brought together with silver sutures, a horse-hair drainage

being inserted. Very little blood was lost during the operation, which lasted exactly fifty minutes.

Examination of the tumour showed it to be a round-celled sarcoma, probably originating beneath the periosteum of the subspinous fossa (where the swelling was first observed), and thence spreading, infiltrating the osseous tissue, which was completely destroyed in places, and afterwards involving the anterior as well as the posterior surface of the entire bone.



Figure C.

For some hours after the operation the patient suffered severely from shock, the pulse being very feeble and fluttering, but towards evening she rallied, and afterwards all went on very satisfactorily. On the twelfth day she was able to sit up on a couch, and on the fifteenth day the sutures were removed from the wound, which was almost healed. Though still remaining in a weak condition she had recovered from the effects of the operation, and was able to leave the hospital at the end of the sixth week.

REMARKS.—Judging by the result in the previous case the prognosis is not very favourable in this patient, for the growth was not only of the same malignant nature, but it was in addition much more advanced at the time of operation. It is therefore very probable that she will, sooner or later, succumb with a recurrence of the disease in some internal organ. The case is a good illustration of the condition which has been described as "acute traumatic malignancy," the tumour developing at the seat of a previous injury.

DR. LONGSTAFF, of Wandsworth, who gave a reading room, built at a cost of £2,000, to the Public Library of that district, has now generously offered to subscribe another £2 000 towards the outstanding debt of £4,000, provide l a similar s ım be raised before the end of March.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, DECEMBER 10TH, 1889.

Sir E. H. SIEVEKING, M.D., President, in the Chair.

On the Frequent Association of Heart Disease, especially Mitral Stenosis, with Diseases of the Pelvic Viscera, in Women.—Mr. ARTHUR E. NEVINS called attention to (1) The frequency of the association between heart disease and lesions of the pelvic viscera in women; (2) the great predominance of mitral stenosis over all other cardiac lesions in such cases, and the fact that the symptoms were easily everlooked unless a thorough and careful examination of the circulatory system was undertaken, the patients generally suffering from pelvic troubles for some considerable time before any symptoms obviously referable to the cardiac lesion developed; (3) an attempt to classify the lesions of the pelvic viscera in relation to the frequency of their coincidence with heart disease; (4) the diagnostic importance in many cases of disease of the pelvic viscera, of a knowledge of the soundness, or otherwise, of the heart. The observations recorded referred to 552 consecutive cases admitted into the Hospital for Diseases of Women, Soho Square. Out of these cases 133 had been omitted as having no bearing on the subject in hand, some of them being cases of cancer of the breast, others of renal disease, and so on. Among the 419 remaining cases, 111 patients (=26½ per cent.) were found to have symptoms of organic disease of the heart, and, with only one exception, it was always the mitral orifice and valve that was affected. Of these 111 cases 93 (=84 per cent.) were suffering from mitral stenosis, 29 (=26 per cent.) from mitral regurgitation, and of these 11 (=10 per cent.) from mitral stenosis and regurgitation combined. In the following table all the patients comprised in the series were classified according to the diseases from which they were suffering; the sequence of these groups of cases depended upon the percentage of heart disease discovered in each. In the table the same patient was often enumerated more than once, as, for instance, a patient suffering from chronic enlargement and inflammation of the womb and also from granular erosion of the cervix appeared under both these headings; the aggregate numbers therefore considerably exceeded the total given above.—Dr. BARNES considered the paper to be full of interest, but thought it was impossible to bring out its points in discussion. It was an illustration of the solidarity of medicine, and proved the hopelessness of looking at only one organ of the body. While it was difficult at times to say which was the original disease, he contended that cardiac lesions often

Table of Diseases of the Pelvic Viscera noted among 419 Patients, arranged according to the frequency with which Co-existent Heart Disease was discovered.

Disease.	No. of Cases.	Cases of Heart Disease.				
		Pure Mitral Stenosis.	Pure Mitral Regurgitation.	Mitral Stenosis and Regurgitation Combined.	Totals.	Percentages.
Granular erosion of cervix uteri	33	12	3	3	18	55
Prolapsed ovaries	7	3	0	0	3	43
Hæmorrhage	31	6	5	2	13	42
Versions	58	16	4	6	22	38
Laceration of cervix	46	10	6	1	17	37
Inflammation of uterus	71	21	2	1	24	34
Pelvic cellulitis and peritonitis	52	11	3	1	15	29
Cysts of broad ligament	11	3	0	0	3	27
Conical cervix and stenosis	26	5	0	1	6	23
Disease of uterine appendages	10	1	0	1	2	20
Prolapse of uterus	19	0	2	1	3	16
Fibroids of uterus	39	4	0	0	4	10
Caruncles, vaginal and urethral	54	5	0	0	5	9
Malignant disease of uterus	24	1	1	0	2	8
Uterine polypi	18	0	0	1	1	6
Ovarian cysts	29	1	0	0	1	3
Debility	14	12	1	1	14	—

followed on uterine disease.—Dr. DOUGLAS POWELL drew attention to the frequency with which mitral stenosis was associated with congestion of other organs. Menorrhagia was a common sequel. These cases might fairly be attributed to the general condition of the circulation. On looking through tables prepared by the author, he noticed that mitral stenosis was met with nearly twice as often in conjunction with the "congestive lesions" as in the other morbid conditions.—Dr. WILLIAM DUNCAN said he would be interested to know how often heart disease was associated with ordinary cases not of pelvic origin. He could not believe that erosion and lacerations of the cervix, cysts of the broad ligament, etc., were other than coincidences. In some cases of hæmorrhages and inflammations, heart disease played an important part, but it must not be considered as a cause of these morbid conditions.—Dr. ROUTH commented on the relation of morbid states of the pelvic organs to the general system. He agreed with the older French physicians, that when erosion of the cervix was met with, generally a granular condition of the pharynx was found, both dependent on the circulatory system.—Dr. HERMAN was astonished that so many of the cases were said to be due to mitral stenosis rather than to mitral regurgitation. It would be interesting to examine a large number of cases of heart disease, and to find out how many had uterine disease. He was investigating this subject himself, but had not as yet enough cases to be able to draw any conclusion.—Dr. FREDERICK TAYLOR traversed the statement that so many of the cases were due to mitral stenosis: a great sign of stenosis was the presystolic murmur, and the author found this in only a small proportion of cases; this was unusual. He thought that Mr. Nevins's case would be more strong if the evidence on which the diagnosis had been made was given. He doubted whether in a series of women with mitral stenosis many would be found who had pelvic trouble.—Dr. SEYMOUR TAYLOR was interested in the paper as one on pelvic disease associated with cardiac disease. He hoped at an early date to show how often not only pelvic disease but also abdominal visceral lesions in both sexes were associated with a weak condition of the walls of the heart or even gross valvular disease.—Mr. NEVINS stated the reasons he had for considering most of the cardiac lesions to be due to mitral stenosis. He had not at first intended to say that it was the chief lesion.

On Blood Tumours (Angeiomata and Angeiosarcomata) of Bone.—Mr. EDWARD ROUGHTON read this paper, the object of which was to elucidate the nature of those tumours which were occasionally found in the interior of the bones, and which, on dissection, were found to consist almost entirely of blood. These tumours had hitherto been considered to be always of a malignant nature. It was shown that although some—perhaps most—of them were malignant some were only semi-malignant and others quite innocent in nature. This fact was illustrated by the following series of cases arranged in order of malignancy: (1) Max Oberst's case, a highly-malignant endosteal sarcoma; (2) Dupuytren's case, arrested for seven years by tying the main artery of the limb; (3) Roux's case, permanently cured by tying the main artery; (4) Lagout's case, similar to the preceding; (5) the case of L. C. (related by the author), in which the growth was arrested by simple incision; (6) Macdonell's case, cured by the pressure of an elastic stocking. It was argued that these tumours consisted essentially of blood vessels, which, being imperfectly developed, were unable to contain blood, and so burst and destroyed the tissue in which they were contained. The author thought that these blood vessels were developed from the myeloid cells of red bone marrow, and that the more embryonic they were the more malignant the tumour in which they were situated. In the innocent blood tumour of bone the vessels were more highly developed but still too weak to contain blood. When the vessels attained sufficient maturity to admit of no extravasation the tumour ceased to have the characters of a blood tumour and was, in fact, a pure angeioma. Such tumours, although more common in other parts, had been several times met with in bones. With regard to the treatment of these tumours it was suggested that they should be incised, and if found to contain little or no solid matter allowed to granulate up. If after incision the tumour continued to grow, free removal of the diseased part should be practised.—Dr. MAGUIRE narrated a series of examinations of pulsating bone tumours which he made at Manchester. In one instance he was able to trace the actual development of the muscle cells in the walls of the blood vessels into sarcomatous cells. Sometimes a vessel could be traced into a space in the tumour, which was filled with blood; no sarcomatous tissue might be met with, as it often existed only on the edge of the growth. For this reason he thought it dangerous to trust only to an incision, as the real nature of the case might thus be overlooked.—Mr. HOLMES agreed with Mr. Roughton that the proper course to adopt was to cut into the tumour and evacuate all tissue likely to bleed. If anything like sarcoma was met with, then amputation should be performed; otherwise it was right to wait and give the patient the benefit of the doubt. Dr. Mapother's case was one of pure and simple angeioma in the substance of the bone. He thought the original diagnosis of the French surgeons was based on error, and that their cases were endosteal or periosteal sarcomata. Dupuytren's and Roux's cases were difficult to explain, but without any doubt simple vascular tumours of bone of a perfectly innocent nature were occasionally met with.—Dr. MAPOTHER stated that his patient was in good health, and living in New Zealand. It was thirty years since the operation. He stated that, in the late Dr. Macdonnell's case, the successful issue was more due to prolonged rest and the fibrinous condition of the blood rather than to the use of the elastic stocking.—Mr. HAWARD commented on the various forms these tumours took, and criticised the possibility of making a correct diagnosis by a simple incision.—Mr. ROUGHTON, in reply, defended the preliminary incision, and showed a specimen from the museum of St. Bartholomew's Hospital illustrating his case.

MEDICAL SOCIETY OF LONDON.

MONDAY, DECEMBER 9TH, 1889.

C. THEODORE WILLIAMS, M.D., F.R.C.P., President, in the Chair.

On the Diagnosis and Treatment of Aneurysm of the Aorta.—Dr. R. DOUGLAS POWELL opened a discussion on the subject of the diagnosis and treatment of aneurysm of the aorta. Although the anatomical description of aneurysm still included the fusiform and sacculated varieties, yet, clinically, all the features of aneurysm were grouped about the sacculated form, and in regard to clinical signs and treatment, the fusiform variety merged into the form of heart disease, with which it was associated, and to treat it seriously as aneurysm was but to damage the prospects of the patient. In this respect the diagnosis between the two varieties was important. In the fusiform variety the signs were—with rare exceptions—manifested about the commencement of the vessel, no pressure signs were observed, and death occurred, not by rupture or compression of vital parts, but from cardiac failure, angina, or syncope; the treatment was that appropriate to the heart condition. The essential phenomena of the—clinically—true or sacculated aneurysm were: First, those of pressure tumour signs; secondly, those indicative that the tumour was a vessel tumour, a diverticulum from the vessel. To attach primary importance to the signs of arterial disease or disturbance without sufficient inquiry for those of tumour was to invite error in diagnosis. This view was illustrated by reference to cases of vasomotor paresis of the aorta, causing pulsation thrill and murmurs of aortic regurgitant disease with locomotory impulse of the vessel of uncovered aorta from retracted fibroid lung, giving pulsation and murmurs resembling aneurysm. Still more common were cases of pulsation of the abdominal aorta, often the most difficult to recognise from aneurysm. In all these cases, however, although the signs of vessel disorder or disease were abundant, those of tumour causing localised pressure were, on sufficiently careful examination, found to be absent, and in their absence the diagnosis of aneurysm could not be substantiated. Dr. Powell referred to three cases of abdominal aortic pulsation mistaken for aneurysm, seen in quick succession, in two of which there was associated mobility of the kidneys. In some cases the administration of chloroform was quite necessary in order to explore the aorta with sufficient completeness. A systolic murmur when heard over a localised area remote from the heart was of value in diagnosis, but in about half the cases of aneurysm which presented themselves no murmur was present, and in a portion of the remainder the murmur heard was by no means the most important sign present. A diastolic murmur was of great diagnostic value, for it furnished distinct evidence of intra-arterial disease, and if therefore associated with the pressure signs of tumour, the aneurysmal nature of that tumour was almost demonstrated. Thrill was a comparatively rare sign in true aneurysm, a common one in spurious aneurysm and in simple dilatation of the vessel. Dr. Powell grouped the pressure signs of aneurysm as affecting the parietes, the viscera, the nerves, sympathetic and

pneumogastric, the air tubes, the œsophagus, the vessels, and observed that they were common to aneurysmal and other tumours, aneurysmal pressure symptoms exhibiting, however, more inconstancy than those of solid growths; the history and build of the patient and the superadded signs symptomatic of vessel disease completed the diagnosis. Some of these signs he had already alluded to; he would however especially mention a systolic jog often appreciable to the ear through the medium of a rigid stethoscope, and, of greater importance, the diastolic shock sound in many cases could be similarly appreciated. This, like the preceding, required the rigid stethoscope to be well made out, and certain conditions were necessary for the presence of the second shock sound: first, the aneurysm must be situated about the arch of the aorta; secondly, the aneurysm must be sacculated; and, thirdly, there must be no serious aortic incompetence. Dr. Powell discussed the mechanism of this sound, and observed that it was often present in the absence of other signs, and when well marked was absolutely diagnostic of aneurysm, differentiating in many cases most usefully from other tumours. He regarded the laryngoscope as both of direct and supplementary service in diagnosis, but regarded the sphygmograph as of little use except as a recording instrument. Dr. Powell regarded Tufnell's method of treatment as most valuable when it could be well carried out, and especially in cases of abdominal aneurysm and of sacs pressing deeply upon vital parts; also in congested aneurysm when a venesection might sometimes be employed first with advantage. Tufnell's method (1) diminished the cardiac beats, and therefore the aneurysmal distensions, by many thousands daily; (2) it reduced blood volume, and was said to inspissate and render more fibrinous the blood; (3) it reduced blood pressure, slowed the current through the aneurysm, and so favoured conditions for clotting from the periphery. He regarded this clotting as not wholly a mechanical process, but believed that in the stagnating current the white corpuscles made for the periphery, and, perhaps, carried with them that coagulating principle, lecithin, which the late Dr. Wooldridge had described as especially associated with them. Dr. Powell condemned the wire and galvano-puncture treatment of aneurysm as causing clotting of the wrong sort and in the wrong place, that was, in the centre rather than from the circumference of the aneurysm, but in certain cases severe symptoms had been relieved by them. He thought possibly in external sacs Wooldridge's extract of lecithin might be injected, with great caution however. Time did not permit him to allude to other incidental methods of treatment, which would, he trusted, come out in discussion. He concluded by proposing the following questions for solution, namely: 1. Was fusiform aneurysm to be regarded and clinically treated as aneurysm? 2. What was the relative importance of pressure signs and ausculatory phenomena in the diagnosis of aneurysm? 3. What was the diagnostic value of the diastolic "shock" sound? 4. Was it only heard in aortic cases affecting the arch? 5. Should the Tufnell treatment be employed continuously or intermittently? 6. Should iodide of potassium be given in association with the Tufnell treatment? 7. Was any information forthcoming as to the value of the fatty diet in aneurysm? 8. What prospect was there of utilising the coagulating powers of lecithin? 9. As to the value of ligature in the treatment of thoracic aneurysm. And, lastly, as to the value of the galvano-puncture and iron wire treatment.—Dr. BROADBENT said that with regard to the pressure signs and evidence of disturbance of the circulation, he agreed with the author that the former were more important in diagnostic purposes, with this qualification, that the pressure signs depended very much upon the situation of the aneurysm. Aneurysm of the ascending aorta might attain a considerable size, and yet produce very little pressure upon neighbouring parts, owing to its natural mobility. So much was this the case that he was sometimes in the habit of alluding to this form as the aneurysm of physical signs, while aneurysm of the arch proper, or of the descending part, was rather an aneurysm of symptoms. He said that a murmur was rather the exception than the rule. One of the most valuable signs, independently of this, was the diastolic shock, either audible or perceptible to the hand. Passing on to the question of treatment, he agreed that fusiform aneurysm was not amenable to any treatment; the only thing was to lower the general intra-arterial pressure, enjoining rest if otherwise necessary, but not with the idea of promoting a cure. He had nothing to add with respect to the Tufnell treatment, but his own experience with iodide of potassium was that it produced striking effects in promoting consolidation within the sac. He mentioned an instance which came under his notice many years ago, when he was house-physician to St. Mary's Hospital. In that case rest and careful dieting had been carried out for months without any beneficial result, but consolidation promptly took place when iodide of potassium was administered. That was an experience many times repeated within his own observation. He observed that the condition of the patient would not, as a rule, permit of large doses of iodide of potassium being given while carrying out the Tufnell treatment. His explanation of the action of iodide of potassium was that it virtually effected the same thing as the Tufnell treatment, draining off the fluid by the kidney and so inspissating the blood. He mentioned the case of a woman who had remained in St. Mary's Hospital for upwards of two years; iodide of potassium had been tried in the first instance without effect, and they were reduced to watching the aneurysm gradually increase in size. Later on it occurred to him that the cases in which the iodide of potassium did most good were those in which there was a large sac with a small mouth, and he decided once more to give the iodide a trial, this time with complete success. He concurred in Dr. Powell's views as to the use of iron wire, but with regard to galvano-puncture he related an interesting case of left subclavian aneurysm, in which consolidation had been twice effected by this means, but on both occasions the clot had subsequently broken down. The aneurysm was ultimately completely cured by simple pressure with the shot-bag. He only resorted to bleeding when there was pain, but the relief was then very striking. Alluding to Dr. Sibson's plan of treatment by ergot, he said it unquestionably diminished the size of the tumour, though this was not due to its specific action on the muscular fibre in the sac wall, since he had never been able to discover any there, though he had carefully examined the sac walls in a number of cases.—Dr. ORD referred to a paper which he had read on this subject before the Society some years ago. He said that in a certain number of cases of aneurysm of the thoracic aorta the first indications were from the circulation. He insisted on the diagnostic value of local signs—pulsation, murmur, thrill, shock, dulness, undue pulsation, etc.—and said he looked to the pressure symptoms to complete the diagnosis. He pointed out the liability to error in cases where the lung was withdrawn from the front of the vessels, giving rise to pulsation and thrill, also in cases where a tumour intervened between the aorta and the chest wall. He mentioned cases in which the diagnosis had thus been rendered difficult. He agreed with Dr. Powell in what he had said in reference to the murmur, and as to the relative bearings of sacculated and fusiform aneurysm, also as to the diagnostic value of the diastolic shock, whatever its explanation might be. He contended, however, that the shock could be heard as well with a flexible as with a solid stethoscope. He agreed that the diagnosis of abdominal aneurysm was often very difficult, but he said that in most cases, by careful palpation, it was possible to determine whether the aorta was pulsating in its whole length and, in the case of a localised tumour, whether or not it was expansile. With reference to treatment, he had found Tufnell's method very beneficial, but he generally associated it with iodide of potassium, whether there was a history of syphilis or not. He mentioned the case of a patient of his who, seven years ago, had been successfully treated by means of six months' Tufnell treatment, and who had remained well ever since. He confirmed all that Dr. Broadbent had said with regard to the ergot treatment, and agreed in his explanation of the action of that drug. He especially called attention to the relief obtained in cases exhibiting pressure symptoms by the administration of ergot, due to reduction in the size of the tumour, of which he quoted several instances. The dose given by Dr. Sibson was 20 minims of the liquid extract with 20 drops of spirits of chloroform to cover the nauseating tendency of the former. His experience of galvano-puncture led him to believe that it did not necessarily give rise to consolidation *en masse*, and he mentioned a case in which a laminated collection of fibrinous matter half an inch deep was found *post mortem* on the sac wall, and this was thickest where he had introduced the negative electrode.—Dr. BRISTOWE confined his remarks to treatment, in reference to which he said he was somewhat of a pessimist. He thought that drugs at most afforded a passing relief. *Post-mortem* experience seemed to point to the fact that the permanently cured cases, that is, those in which the sac was thoroughly filled with clot, were cases in which aneurysm had not been suspected during life, and in which the patient had been bed-ridden and dying for weeks from something else. He admitted that this was rather in favour of the Tufnell treatment,

since the effect was to bring about a similar condition of things. He had no faith in treatment by wire or by galvano-puncture. In regard to the case mentioned in which galvano-puncture had apparently inaugurated a cure, he did not think that there was sufficient evidence *post mortem* (for the patient died) that the aneurysm was in course of cure. He had no faith in the iodide of potassium treatment either, and though the drug had been administered to his patients by his house-physicians, who believed in it, he had never witnessed any decided beneficial result from it. In the cases alluded to by Dr. Broadbent in which consolidation was said to have taken place, he urged that as no *post-mortem* examination had been made there was no evidence as to the nature of the consolidation. He mentioned a case of large aneurysm of the ascending arch in which many methods of treatment, including that by iodide of potassium, had been tried, with the result of causing apparent consolidation, but when the patient died, which he did shortly after, they found that the aneurysm did not contain any clot at all. He was unable to give any explanation of the shrivelling of the sac. Patients with aneurysm were benefited by rest, diet, and generally by measures which reduced the intra-arterial blood pressure. He suggested, however, that it was open to question as to whether it was worth while rendering these patients useless members of society for the sake of a problematical prolongation of life for a few weeks or months, and he thought, on the whole, that it was preferable to allow them to carry on their usual avocations even if they died a little sooner, though this did not necessarily follow. He alluded to the cases of Dr. Murchison and Dr. Hilton Fagge, both of whom, though they suspected they were suffering from aneurysm, continued to work to the last. Many persons went on with their work, and for many years retained their health fairly well in spite of the presence of an aneurysm. A man working at the Edinburgh Infirmary had been known to have an aneurysm of the aorta for ten years past and was still alive, and a patient of his own had continued at work for the last three years with occasional treatment when the symptoms were severe. He urged that these patients were happier thus than if they had been kept in bed all that time. He observed that, while in sacculated aneurysm the main object was to get a firm clot within the sac, in fusiform aneurysm it was just the contrary; such a condition, if brought about, was distinctly prejudicial to the patient's prospects of life.

The discussion was then adjourned till Monday next, December 16th, which (clinical) evening would be devoted to the exhibition of cases of aneurysm.

OBSTETRICAL SOCIETY OF LONDON.

WEDNESDAY, DECEMBER 4TH, 1889.

A. L. GALABIN, M.D., President, in the Chair.

Specimens.—Dr. W. DUNCAN: (1) Abscess of Ovary, Hæmatosalpinx and Pyosalpinx; Subperitoneal Myomata; (2) Hydrosalpinx; (3) Myoma of Uterus, Abscess of Ovary.—Dr. J. PHILLIPS: Distended Tubes, Hæmatoliths from Ovarian Cyst.—Dr. AUST LAWRENCE: Sponge Tents.—Mr. J. BLAND SUTTON: (1) Lock of Hair 30 inches long from a Dermoid Cyst; (2) Dermoid of Ovary showing immunity of the Paroöphoron; (3) Ovarian Cyst, partly adenoma and partly dermoid; (4) Tubo-ovarian Cyst.

A Case of Inversio Uteri: Reduction: Recovery.—Dr. BRAXTON HICKS read notes of a case where a primipara, aged 26, was delivered, as it seemed at the time, naturally. Free hæmorrhage followed, the placenta came away without assistance, and the patient did well till the third day, when, during an attempt at micturition, something came down and appeared externally. Efforts to reduce the mass, which proved to be an inverted uterus, by simple manual pressure, proved unavailing, even under chloroform. The cervical portion was firmly contracted and resisted pressure. Dr. Hicks at length pressed a speculum, with an obturator, against the inverted fundus, which was thereby cupped. After steady gentle pressure the fundus could be felt gradually distending the cervical portion. The hand, placed externally, made counterpressure on the now enlarging ring of the cervix; at the end of ten minutes the greater part of the uterus was restored. The speculum was then withdrawn, and the obturator from a larger speculum introduced, so as to give more room at the point of flexion. A minute later Dr. Hicks found the uterus in its normal condition. The first speculum and obturator were then introduced, and left for a few hours within the cavity in order to prevent relapse. No bleeding occurred during or after reduction, and the patient made a good recovery. Dr. Hicks dwelt upon the opinions of Drs. M'Clintock, Aveling, Lusk, and Barnes. He gave full reasons why, in this case, fundal reposition, condemned by many authorities, proved successful when carried out in the manner indicated in his paper.—Dr. HORROCKS asked if the uterus was completely inverted, or whether a small portion of the cervix remained in place. If completely inverted, the "fundal method" of replacement might be better than the other, and there would not be the same objection to the method, because the thickness passing through the inverted os would not be greater than in the ordinary method of restoring the uterus.—Dr. W. S. A. GRIFFITH noticed that the case was reported as "spontaneous" inversion. He asked if any Fellow of the Society had himself actually witnessed inversion of the uterus, occurring in connection with the third stage of labour, under circumstances which could be called absolutely "spontaneous."

On Closure of the Ostium in Inflammation, and Allied Diseases of the Fallopian Tube.—The author, Mr. ALBAN DORAN, in this communication dwelt on the frequency of closure of the ostium in salpingitis; but the obstruction was often temporary. Obstruction of the uterine end was due to swelling of the mucous membrane or to the development of "Chiari's bodies" from that membrane. Permanent closure of the tube was almost synonymous with closure of the ostium. Salpingitis and perimetritis were the causes of closure of the ostium. Three essential factors in relation to the subject were considered at length: (1) the nature of the ostium and its fimbriæ; (2) the nature and varieties of salpingitis, and also of perimetritis as far as it affected the tube; (3) the precise manner in which the ostium was closed in perimetritis and salpingitis. In adhesive perimetritis the fimbriæ of the tube were bound down by bands, which thus obstructed the ostium. In salpingitis the ostium was obstructed, incompletely at first, by the swelling of the mucous membrane which involved the fimbriæ; but permanently in bad cases by great infiltration of the submucous tissue and middle coat which swelled over the ostium, and covered in the fimbriæ. The perimetritic and salpingitic varieties of closure of the ostium, often blended, were demonstrated by specimens and diagrams. The question of timely conservative operations on obstructed non-suppurating tubes was discussed. Dr. Skutsch's "salpingostomy," where a small piece of the tube was excised, appeared to be a promising step in that direction.—Dr. HORROCKS noted how often orifices in the body were the seat of disease; the ostium was no exception. He thought that it must be difficult to distinguish salpingitic from perimetritic closure of the tube.—Dr. RUTHERFOORD noted the relation between certain tubo-ovarian cysts and chronic tubal disease, which Mr. Doran had already indicated in other monographs.—Mr. DORAN replied that two specimens exhibited that evening were very pure examples of perimetritic and salpingitic closure of the ostium respectively. He maintained his theory that tubo-ovarian cysts were often the result of cystic degeneration of uterine appendages after long-standing inflammation. He admitted, however, that tubo-ovarian cysts might be congenital malformations in rare instances, as Dr. Griffith and Mr. Sutton had endeavoured to prove.

Notes of a Case of Monstrosity.—These notes were read by Dr. H. C. HODGES, of Watton, Herts. The patient was a primipara, aged 27. There was a large quantity of liquor amnii, and when the membranes were ruptured the presentation was hard to diagnose. The face appeared to present, and a soft pedunculated tumour appeared to lie behind the frontal bone. The forceps would not hold. On delivering the head, the tumour—evidently a brain sac—was ruptured. The fœtus proved to be an anencephalous monster. The vertebral column appeared to be malformed; the coccyx curved backwards, forming a short tail, having hair on its tough integumental covering. There was ectopia of the viscera. The fœtus was a female.

Notes of a Case of Hæmatemesis in a Newly-born Infant.—This paper was also read by Mr. HODGES. The child was born at 5 A.M., on April 23rd, 1888, after a natural and easy labour. At 11 A.M. the physician was summoned in haste, as the child "had hæmorrhage." The child was found blanched, with a very faint pulse. All the surrounding clothes were saturated with blood, which the child had vomited. The child was put to the breast, without result, and was troubled with constant hiccough. It was kept quiet, and ten minims of hazeline were given every two hours. At 5.30 P.M. a tablespoonful of blood-stained mucus was vomited, and later on a copious evacuation containing blood was

passed. The case was complicated by serous discharge from the left ear, with subconjunctival hæmorrhage and intense strabismus of the left eye; but within a few days convalescence set in, and the child was perfectly free from all the described symptoms at the end of a month, and has remained well ever since. Mr. Hodges dwelt on the recovery of the child after the loss of a large quantity of blood, and on the value of hazeline. The discharge from the ear, strabismus, and also partial facial paralysis which was noticed in the course of the case, but which soon disappeared, all seemed to indicate injury to the base of the skull, perhaps actual fracture, involving laceration of blood vessels. This, coupled with the bright colour of the blood, made it probable that hæmorrhage had arisen not in the stomach, but in the posterior part of the pharynx or its neighbourhood, the blood being swallowed and afterwards vomited. In a case described by West, hæmorrhage occurred into the arachnoid, causing apoplexy. Other cases of hæmatemesis in the newborn child might have arisen from a similar cause.—Dr. W. S. A. GRIFFITH described a case where hæmorrhage from the vagina occurred in a newborn eight months' child. Death resulted from an independent cause; the uterus and vagina were found full of blood. The opportunities for investigating the causes of hæmorrhages in infants were very scanty.—Dr. DAKIN believed that these hæmorrhages were an expression of a general condition which had been called "hæmophilia neonatorum." This condition, however, was not, strictly speaking, hæmophilia. It seldom or ever set in before the fifth or sixth day, so that in Mr. Hodges's case, although the labour was easy, the cause of hæmorrhage was most likely traumatic. Dr. Dakin recalled a case of copious vomiting where the child was free from pallor. He discovered a fissure at the base of the mother's nipple. On attempting to draw the breast through a glass shield, blood issued freely from the fissure. This possible source of blood should be borne in mind in similar cases.—Dr. HERBERT SPENCER believed in Mr. Hodges's theory, and had several times observed fractures of the base of the skull causing hæmorrhage beneath the periosteum.—Dr. C. H. F. ROUTH, on the other hand, believed that the hæmorrhage was due to injury of the delicate buccal mucous membrane. He had seen bleeding from the mouth in two premature twins; the mother had encouraged them to suck. In cases of this kind the infant should be fed on raw beef juice or milk.

January Meeting.—The PRESIDENT, in conclusion, notified that the next meeting would be held on Wednesday, January 8th, 1890

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF OBSTETRICS.

OPENING MEETING, FRIDAY, NOVEMBER 22ND, 1889.

S. R. MASON, M.B., President, in the Chair.

Exhibitions.—Dr. W. J. SMYLY exhibited two Ovaries and Tubes which he removed from a woman who was subject to perimetritis.—Dr. SMYLY also exhibited a Suppurating Ovary. The patient had been for some months discharging pus through the bladder and rectum, and large quantities of blood clots through the rectum. The only course open to him was to open the abdomen and stitch the opening of the cyst to the abdominal wall, to which it was adherent. The omentum was adherent to the front of the bladder and to the tumour, so that he could not draw the latter upwards. He therefore tied the omentum in two parts and divided it. Still it was firmly adherent to the front of the tumour, and when he proceeded to separate them pus began to ooze from the tumour. He then put one of Lawson Tait's small trochars into the tumour, but nothing came from it. He put his finger into the hole from which pus was coming and discovered a tunnel leading into the rectum and another towards the bladder. The structure of the tumour was peculiar, the part of the cyst which he first came upon being formed of lymph. He stitched the hole he had made in the abdominal wall and put in a drainage tube. The woman was not relieved by the operation, and died next day. He believed the cyst to be a suppurating ovary, not so much from its character as because, at the *post-mortem* examination, Dr. Bagot failed to find the second ovary.—Mr. O'CALLAGHAN exhibited a Fibromyoma and a small Ovarian Tumour.—Dr. M'MORDIE exhibited Enlarged and Cystic Ovaries removed for pain and hæmorrhage. The patient, aged 36, had a large fibroid uterus cavity measuring 6½ inches; suffered from profuse menstruation, which had become constant, and very severe pelvic pain. An attempt to enucleate the fibroid after dilating the uterus was abandoned as hopeless. Hæmorrhage still continuing, abdominal section was performed. Both ovaries were found diseased—the right one as large as an orange and adherent—and were removed, as the pain was thought to be ovarian, and removal would not only cure that but stop the hæmorrhage. The termination of the case was not satisfactory. A low form of peritonitis set in, and she died on the fifth day. She had been very intemperate. Query—Did the disease of the ovaries precede or follow the development of the fibroids?—Dr. WILLIAM BAGOT exhibited a small Ovarian Tumour of a tubercular character, and Decidua from a case of Ruptured Ectopic Gestation.—Dr. A. J. SMITH showed a small Ovarian Tumour.

President's Address.—The PRESIDENT delivered the inaugural address, in which he reviewed the work done by this Section of the Academy during the previous session, and alluded to a great number of the advances that had been made in this branch of the profession since his student days.

Effects of the Electric Current when applied to the Female Pelvic Organs.—Dr. M'MORDIE read a paper on this subject. The facts adduced and proved by Apostoli and others were very few, and he thought that any ascertained effect of the electric current passing through any organ, either in physical change or physiological action, was worthy of being recorded. He made a series of experiments as to the effect produced by the continuous current from a one-celled battery on uterine hæmorrhage—one pole attached to a uterine sound in the uterus, and the other to a flat conducting surface placed over the fundus. When the current passed from ten to twenty minutes, two effects were produced—the os externum, if small, dilated, and in a large proportion of the cases where the females were healthy, the sexual orgasm was produced; it had no effect on the hæmorrhage. Dr. M'Mordie thought the electric current had got credit for helping the extrusion of fibroids, which he believed to have been only a coincidence; he mentioned the case of a lady who was sent to him who had a tumour for two years, which might easily have been mistaken for a fibroid, but turned out to be an accumulation of fæces. Had electricity been used it might have gained the credit of dissipating the tumour.—Dr. DOYLE said he had a case under his care of an unmarried lady who suffered from severe hæmorrhages. He sent her to Dr. Playfair, who applied Apostoli's treatment, with a current of from thirty to forty milliampères, and the result was to cause a cessation of the hæmorrhages and to enable the patient to gain strength, which enabled him to operate on the tumour.—Dr. W. J. SMYLY said they had to regard electrical treatment from three points of view. First, had it been more successful than the other modes of treatment previously in use? secondly, was it safer than they were? and, thirdly, was it a simple or a complicated process? So far as he had read, the mortality in electrical treatment had been greater than in the other methods. Even Dr. Playfair was not able to adduce at the last meeting of the British Medical Association a single successful case. As regarded the third point, electrical treatment was very complicated, involved an expensive apparatus, and further, required a special education in electricity.—Mr. O'CALLAGHAN said cases were mentioned at Leeds in which hæmorrhage was stopped by the electrical treatment, but when the treatment was stopped the hæmorrhage came on again.—The PRESIDENT said that in estimating the value of treatment by electricity it should be borne in mind that there were two classes of tumours to be considered. First, there was intra-uterine myoma, which could be curetted and treated otherwise by surgical means. But there was another class of fibroids not so amenable to treatment—namely, large, solid fibroids, grown to such an extent as to press on the viscera and bladder. In cases of that kind any operation was exceedingly dangerous. He held that by the use of electricity for some time the bulk of such tumours could be considerably diminished.—Dr. M'MORDIE, in reply, said it would require the experience of years to form a sound opinion as to the value of Apostoli's treatment.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

WEDNESDAY, NOVEMBER 20TH, 1889.

Professor A. R. SIMPSON, M.D., President, in the Chair.

Instantaneous Cure of Facial Neuralgia, Odontalgia, and Allied Neuroses.—Dr. GEORGE LESLIE (Falkirk) gave the details of thirty or forty cases of facial and other neuralgia, cephalalgia, odontalgia, etc., which had been cured, in most instances instantaneously, by insufflation of powdered common salt through the anterior nares.

The salt was either "snuffed" or blown up the nostrils. He had been unsuccessful in only two cases; both of these were cases of old standing, which had been treated frequently by morphine injections. In one of them excision of the nerve had been practised.

Treatment of Gangrenous Bowel in Strangulated Hernia.—Mr. FRANCIS CAIRD read a paper on this subject, suggesting the invagination of the doubtful piece of gut, and stitching the edges of the serous aspect of the healthy bowel together, thus producing a continuous tube, into which the unhealthy gut projected. The after-history of the invaginated gut was similar to that which often ensued in intussusception—detachment and removal *per vias naturales*—and little contraction resulted. He had tested the method practically, with complete success in one case, and with partial success in another.

HUNTERIAN SOCIETY.

CLINICAL EVENING.

WEDNESDAY, NOVEMBER 13TH, 1889.

R. CLEMENT LUCAS, B.S., F.R.C.S., President, in the Chair.

Cases.—Dr. PORT showed a Case of Facial Hemiatrophy in a girl aged 17. The atrophy began at the age of 8, and was not entirely restricted to the face and hands; a full description of the case (by Jessop and Browne) was to be found in the *St. Bartholomew's Hospital Reports* of 1882.—Dr. TURNER showed a girl, aged 5, with Atrophy of the right side of the Tongue, paralysis of soft palate and larynx, causing difficulty in swallowing fluids, and feebleness of cough, and loss of power in right arm, which was half an inch less in the girth of the forearm at the elbow than the left, and atrophy of both optic discs, advanced in the right eye, the sight of which was nearly lost. The symptoms dated from a series of right-sided epileptiform attacks which commenced six weeks after an attack of scarlatina, in February, 1886, and occurred daily for two months. At first there was general paralysis of all the limbs, which were weak, in August 1888, when the child first came under observation at the North-Eastern Hospital for Children; since then the legs and the left arm had greatly improved, and the right arm also to some extent. The condition of the tongue was much the same in August, 1888, as at present. The knee-jerks were absent. There was evidence of syphilitic inheritance in the family history, and it was thought that the symptoms were due to some specific meningeal lesion at the base of the brain, involving the ninth and portion of the eighth cranial nerves on the right side. Reference was made to a case of hemiatrophy of the tongue, shown at the Clinical Society by Dr. Thomas Barlow, and recorded in Volume xxii of their *Transactions*.—Mr. POLLOCK showed, for the PRESIDENT, a child, aged 14, with Multiple Exostoses. They were over forty in number, mostly situated about the ends of the long bones, but not confined to them. Those in the lower extremities were noticed soon after birth; in the upper extremities about three months ago. —Mr. MACILWAINE read, for the PRESIDENT, notes of a similar case with numerous Exostoses on the long bones of the extremities. They occurred in a boy aged 18, and had been growing for five years, about eight of them had been removed by operation. Well-developed bursæ were found over each—Dr. F. J. SMITH showed two cases. 1. A Case of Progressive Muscular Atrophy in a man aged 33. The disease had begun when he was 18, and he had been under observation almost continuously ever since. The symptoms were exceedingly well marked and perfectly typical, with the exception that pains in the abdomen had been a more or less prominent feature since the beginning. The record of the last fifteen years consisted simply in alternate conditions of improvement and relapse, the patient being admitted to hospital unable to feed himself from weakness of the arms, under good feeding and rest in bed he would recover sufficiently to be discharged, until another relapse set in. A sister had died from the same disease. 2. A Case of Idiopathic Tetanus in a man aged 24. The symptoms had been gradual in onset, a fortnight elapsing before well marked opisthotonos was present. The interest of the case chiefly lay in the powerlessness of chloral hydrate to affect the disease when hypodermic injections of morphine immediately produced amelioration of the symptoms, and a cure in the course of twelve or fourteen days. The patient was quite well except for pains in the arms on waking in the morning.—Mr. JOHN POLAND showed a case of Comminuted Fracture of the Patella successfully treated by wiring. The patient, a drayman, aged 29, fell a distance of thirty feet from the window of a brewery, his left knee coming in contact with the stone pavement. His fall, however, was broken before he reached the ground. Considerable swelling about the joint, from hæmorrhage, obscured the precise condition of the fractured patella. At the time of the operation it seemed at first impossible to bring the fragments of the bone together, on account of the extensive comminution, the wide separation of the fragments, and the difficulty in immediately recognising the proper position of the various pieces. The way in which this had been accomplished by means of pure silver wire sutures (of small size) was indicated on a diagram. The patella then moved as a whole. The joint was syringed out with a strong solution of carbolic acid. The torn extensor tendon and capsule were firmly united over and at the sides of the patella. The wound was dressed (antiseptically) on the second day, and subsequently at intervals of four and three days for four weeks, when it was almost healed. The temperature rose to 101° F. on the second day, after that remained normal, with the exception of the sixth day, when it reached 100° F. The patient was discharged from the hospital at the end of eight weeks, with a plaster-of-paris splint. Six weeks afterwards a small sinus formed, through which one of the wires was readily removed, the rest remained in position. The patient could now (at the end of twelve months) walk well without the aid of a stick or support of any kind, and flex his knee to some extent.—Dr. A. T. DAVIES showed a case of Xeroderma. R. D., aged 55, general dealer, subject to winter cough for four years, had noticed since birth an almost universal dryness of the skin of his body. This condition was seen to be most marked on the extensor surfaces, approaching in character to icthyosis, especially on the arms and back of the thighs: elsewhere this condition of skin was more that of xeroderma. The face and genitals were free from this condition.—Mr. COTMAN showed a case of Pityriasis Pilaris. The patient was a boy aged 9 years, who had measles four months ago; following this a roughness of the skin came on, which developed into pityriasis pilaris of a rather exaggerated form.—The PRESIDENT, Drs. TURNER, FOWLER, HINGSTON FOX, and A. G. CARPENTER; Messrs. RIVINGTON. POLAND, WARNER, LANGTON HEWER, and BROWNFIELD, took part in the discussion.

SOUTH-EAST HANTS DISTRICT OF THE SOUTHERN BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

THURSDAY, NOVEMBER 14th, 1889.

W. F. BROOK, M.R.C.S., President, in the Chair.

Acute Osteitis.—Dr. LLOYD OWEN exhibited a specimen of necrosis of the entire humerus, removed from a boy aged 14. Early and free incisions were made down to the bone, but amputation of the shoulder-joint had to be resorted to.—Mr. ROYSTON PIKE also showed a specimen of acute necrosis involving the upper half of the femur. The patient was admitted into the Royal Portsmouth Hospital in a very weak condition, and amputation at the hip-joint had been recently performed.

Epithelioma of Tongue.—Mr. RUNDLE showed the specimen and the patient, a man aged 55, from whom he had removed the right half of the tongue, seven months previously. There was no return of the disease. He thought the rapid recovery was due to the use of iodoform dissolved in tinct. benzoin comp., which was used as a dressing.

Spindle-Celled Sarcoma of Chest Wall.—Mr. RUNDLE showed the patient, a woman, aged 28. The first tumour, springing from intermuscular fascia below the right breast, was removed in February, 1888, having then been present about six months. It recurred in the neighbourhood of the former growth, and was removed in May, 1889. At this time the tumour was the size of a child's head, and the skin over it was destroyed by ulceration. A further recurrence had taken place within the last month. There was not any secondary enlargement of absorbent glands. Examined microscopically, the tumour was found to consist of multinucleated oval cells in a homogeneous matrix.

Popliteal Aneurysm.—Mr. RUNDLE showed a naval pensioner, aged 49, in whom he ligatured the femoral artery on September 26th, 1888. He had seen a good deal of foreign service, but the medical history was good. There was no evidence of syphilis. At the time of ligature a pulsating swelling, the size of a walnut, existed in the right popliteal space, which had been noticed two months before admission. He complained of pain in the leg, due probably to pressure on the popliteal nerve. The veins of the leg were much enlarged. His recovery was retarded by a gangrenous sore on the leg. Now a firm, hard lump was to be felt in the popliteal space.

Melanotic Sarcoma of the Submaxillary Gland.—The growth was removed by Dr. WARD COUSINS at the Royal Portsmouth Hospital. Nine months before the operation the right eyeball had been excised for melanotic sarcoma.—Dr. F. J. DRIVER exhibited sections of the tumour.

Perforation of the Intestine twenty-three days after Herniotomy.—Dr. WARD COUSINS remarked that it was very unusual for fatal perforation to occur at so late a date after operation. The patient was a woman of 60 years of age, and symptoms of strangulation had existed four days before her admission to the hospital. When the intestine was exposed it was very adherent around the neck of the sac and required careful manipulation, but otherwise its condition appeared favourable for recovery. The wound healed by first intention, and she was just about to return home when the fatal accident took place. At the necropsy a very small perforation was found in the piece of the small intestine which had been strangulated; and it was situated close to the mesenteric attachment. It was only slightly adherent to the abdominal wall.

Case of Gastrostomy.—Dr. WARD COUSINS read short notes of the case. The operation was performed for complete œsophageal obstruction. The day after the operation the patient swallowed liquid nourishment freely, and continued to do so for nearly a week. The stomach was opened on the sixth day, and the poor woman improved considerably for several weeks. She died rather suddenly two months and a half after the operation. At the necropsy the lower part of the œsophagus was found to be a mass of malignant ulceration, with secondary deposits in the liver and mesentery. The specimen was exhibited.

Radical Cure of Hernia.—Dr. WARD COUSINS submitted six children for examination. All the operations had been successfully performed nearly two years. The ages of the patients ranged between two and eight years.

Specimens.—By Mr. RUNDLE: 1. Calculus removed by Rapid Dilatation of Urethra from a Woman, without subsequent Incontinence; 2. Calculus which lodged in Membranous Portion of Urethra, causing Retention; 3. Neck of Wine Bottle removed from Ischio-Rectal Fossa; also Photographs of Case of Genu Valgum treated by Macewen's Operation, and of Epithelioma of Concha of Ear, where there had been no recurrence twelve months after removal.—By Dr. WARD COUSINS: 1. Intussusception of the Ilium removed from an Infant after Death; 2. Salivary Calculus removed from Wharton's Duct; 3. Periosteal Sarcoma of Tibia.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

PATHOLOGICAL AND CLINICAL SECTION.

FRIDAY, NOVEMBER 29TH, 1889.

H. W. LANGLEY BROWNE, F.R.C.S.Ed., President, in the Chair.

Enlargement of Kidney.—Dr. FOXWELL showed a girl, aged 12, with an enlargement of the left kidney. The swelling varied from time to time, the increase in size occurring acutely with tenderness and pyrexia, but there was no clearly marked alteration in the amount or nature of the urine. This secretion varied in specific gravity from 1010 to 1015, was acid, and contained a small quantity of pus constantly, but rarely any blood. The child looked very delicate, and had during the past six months been frequently laid up with attacks of abdominal pain. The diagnosis lay between pelvic calculus and strumous kidney, to the latter of which Dr. Foxwell inclined.

Pyæmia after Rape.—Dr. A. S. UNDERHILL read notes of a case where death had resulted from pyæmia after an attempt at rape. The victim, aged 14, suffered severely from shock, and the starting point of the septic condition appeared to be a laceration of the fourchette. This was followed by metritis and plugging of the right iliac veins, by repeated rigors, by secondary deposits, and by death at the end of three weeks.

Cholecystotomy.—The subject of the operation, an American surgeon, gave details of his symptoms. He had his first attack of biliary colic in 1883, and his second in 1886, the pain being mainly in the epigastrium; subsequently the attacks were much more frequent, at times occurring thrice daily. Shaking movements induced the paroxysms, which were not associated with rigors, or much elevation of temperature, but were usually followed by jaundice, bilious urine, and pale stools. The gall-bladder was not at any time felt to be distended, but was often exquisitely tender. The operation was performed by Mr. Lawson Tait. A vertical incision, four inches long, was made directly over the gall-bladder, which was almost entirely hidden by the liver. The bladder was stitched to the parietal wound, and over a hundred stones extracted. On the fifth day the stitches were removed, on the eleventh day the patient was out of doors, and on the fourteenth day only a small fistula was left, from which a small quantity of bile-stained mucus exuded.

Cancer of Sigmoid Flexure.—The PRESIDENT showed a specimen, removed *post mortem* from a patient, aged 62, who had suffered from acute intestinal obstruction forty years before, and again sixteen years ago, and since the last attack had been frequently subject to fæcal retention. On June 27th, 1889, he had an attack of subacute peritonitis. This was followed by persistent sickness, which lasted until death, on August 31st. The vomited matter contained blood, and the motions, which were generally passed twice a day, also contained altered blood. *Post-mortem* examination showed numerous adhesions in the neighbourhood of the stomach, some of which obstructed the cystic duct, the gall-bladder being distended. There were several ulcers in the stomach, and at the site of the deepest the organ was adherent to the colon. The sigmoid flexure was the seat of a columnar adeno-carcinoma. The upper four inches of the rectum were greatly narrowed, this being due, apparently, to imperfect development.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.

WEDNESDAY, NOVEMBER 20TH, 1889.

JOSEPH WHITE, F.R.C.S.Ed., President, in the Chair.

Paper.—Dr. G. ELDER read a paper on a case of Extra-Uterine Gestation successfully treated by Abdominal Section.

Specimens.—Dr. ELDER showed the following specimens: (1) Papillomatous Ovarian Cyst; (2) Ovarian Cystoma removed from the Pelvic Cavity, where it had become fixed by inflammatory adhesions; (3) Parovarian Cyst; (4) Specimens illustrating various degrees of Salpingo-Oöphoritis, from six patients on whom abdominal section had been performed; (5) Fœtus from a case of Extra-uterine Gestation. All the above patients made a good recovery.

Pig Typhoid.—Dr. BOOBBYER showed the cæcum and part of the large intestine of a pig, recently slaughtered for swine fever (also known as red soldier, hog cholera, swine plague, and purples). He drew attention to the characteristic ulceration over lymphatic patches, together with isolated points of ulceration affecting solitary glands. After citing some cases suggesting an incubation period of about fourteen days, he briefly described the symptoms, and pointed to the more or less close parallelism between these and those of human enteric fever, including a marked tendency to lung complication from the outset. In conclusion, however, he said that the recent epidemic in the borough supported by strong negative evidence the opinion of most authorities on the subject, that the disease is pathologically distinct from human typhoid, for no single case of the latter had occurred among the large number of people having charge of infected swine.

Mechanism of Labour.—Mr. W. G. EARLE read a paper on this subject. In the process of the birth of the head, in ordinary vertex presentations, it was usually stated that the occiput became fixed beneath the pubic arch, then that extension took place until the chin was born. In other words, that the chin revolved round the occiput as its centre of revolution. From observation, he thought that what happened was that the head advanced *en masse*, that the occiput and neck glided round the pubic arch, but, since extension took place at the same time, the forehead moved more rapidly. This movement of the whole head allowed the chin to describe a less wide sweep than it would were the occiput fixed, and was directly aided by the pressure of the perineum. Since the shape of the head corresponded to the contour of the pelvic cavity as it descended from the plane of the inlet through successive planes to that of the outlet, its shape must become moulded by imperceptible degrees to the varying outline of each plane as it met it. If the head was hurried through, as in forceps extractions, before such modifications had had time to be effected, the head, when it reached the outlet, would more or less retain the shape given to it by the contour of the brim; therefore, the back of the head, which in the latter plane filled the broad sweep of the ileo-pectineal line, would not at its lower position at the plane of outlet fill the smaller curve formed by the pubes at this plane. Consequently, as the head emerged from the pelvis, the occiput, not being able to fit up so high beneath the pubic arch, passed

beneath the rami, at a lower position, where the span was broader. Meanwhile the intervening space might be seen to be gradually occupied by the prolapsing vaginal mucous membrane. To compensate for this backward displacement of the head more room was required from the perineum behind, that structure being to a like degree endangered, and thus the great frequency of lacerations in forceps extractions might be in part accounted for.

REVIEWS AND NOTICES.

HINTS TO TRAVELLERS, SCIENTIFIC AND GENERAL. Edited for the Council of the Royal Geographical Society. By DOUGLAS W. FRESHFIELD, Hon. Sec. R.G.S., and Captain W. J. L. WHARTON, R.N., F.R.S, Hydrographer to the Admiralty. Sixth Edition, revised and enlarged. London: Royal Geographical Society.

As long ago as 1854 the Council of the Royal Geographical Society published the first edition of this work. Ten years later a revised edition was required, and the subsequent success of the volume has rendered four editions necessary during the last twenty-five years, each of which has been an improvement on the preceding. In the present edition no material alteration in the character of the book has been made, but such corrections as time and the progress of science and discovery rendered necessary, and such additions as experience suggests may be of use, have been added. The various sections have been revised and enlarged in most cases, and in others rewritten. The work is now divided into ten sections; (1) Preliminary Hints; (2) Hints on outfit, including notes on water and mountain travel; (3) Medical Hints; (4) Surveying and Astronomical observations; (5) Photography; (6) Meteorology and Climate; (7) Geology; (8) Natural History; (9) Anthropology; (10) Industry and Commerce. While the whole work is exceedingly interesting and instructive, we propose to confine our remarks to those portions more or less connected with medicine and its allied sciences, namely sections 3, 6, 8, and 9. Medical Hints are written by Surgeon-Major G. E. Dobson, M.D., F.R.S., whose widely extended travels in tropical and temperate climates particularly qualify him as an authority on this sujbect. Dr. Dobson, proceeding on the principle that prevention is better than cure, begins by laying down general rules for the preservation of health while on the move. He points out the necessity of always maintaining the surface of the body at an equable temperature. With this view, flannel should be worn next the skin day and night, though in very warm climates shirts made of a mixture of silk and wool may be preferred. Where the temperature is cold, he recommends two or more woollen shirts to be worn instead of a single thick one, as being more effectual and more convenient. Careful directions are given to travellers in tropical countries for the protection of the head and spine against the effects of the sun, and he inculcates the fact, apt to be overlooked by the inexperienced, that the level rays of the sun at morn or eve are often more dangerous than the vertical. Caution is given against venturing out of doors in the tropics, especially in malarious regions, till the sun has risen; and the prophylactic effect of mosquito curtains, against malaria during the hours of sleep is also noted. His observations on eating and drinking in the tropics are noteworthy. Meat, as an article of diet, should be used with moderation, and never oftener than twice in twenty-four hours. He especially condemns the practice of heavy luncheons, while temperance in the use of spirituous liquors is strongly recommended. There are occasions when the use of alcohol is imperative. The depressing effects of a tropical climate are often shown by a general lassitude, a feeble and intermitting pulse, and a sense of sinking in the region of the heart. When such symptoms occur, the use of pure spirit (whisky or brandy) in small quantities, copiously diluted, acts like a charm, and may be regarded as a true medicine, to be used, however, with caution. The habitual use of alcohol is not recommended, for to be effective it should be employed only when absolutely necessary. Whisky and brandy and the best brands of champagne are the only forms of alcoholic drinks which should be used. Meat and all kinds of vegetables should be thoroughly cooked, and drinking water boiled and filtered. Travellers are recommended not to yield to the sensations of thirst, especially during active exercise. The use of small doses of quinine when travelling in malarious districts is advocated. A series of simple rules and directions for the recognition and treatment of disease is given, which will prove most useful to persons out of the reach of medical aid. The chapter concludes with a list of medicines which it is desirable the traveller's medicine box should contain, and the doses of each.

The section on Meteorology and Climate is written by Mr. H. F. Blanford, F.R.S., whose directions are very minute, and, if followed, will give much information that will be of value from a medical point of view in determining the suitability of various places as health resorts for invalids. The instruments necessary for making these observations being few and inexpensive, valuable observations might be made by medical men stationed in various parts of the world with the aid of the directions given.

Section 8 on Natural History, includes botany as well as zoology, and is edited by Mr. H. W. Bates. Directions are given for collecting and preserving specimens, both of animal and vegetable kingdoms. Though the instructions on preserving the skins of birds will be useful, we are glad to see that travellers are strongly recommended to send home the whole animal, so as to enable its anatomy to be studied as well as its external parts. The author of the section has been fortunate in obtaining special paragraphs on the preparation of skeletons of animals, by Professor W. H. Flower; on reptiles and fishes, by Mr. Salvin; on land and fresh-water mollusca, by Lieut.-Col. Godwin Austin; and on botanical collecting, by Mr. J. Ball, which add much to its value.

The section on Anthropology is written by Dr. E. B. Tylor, F.R.S.; chapters are also added by Mr. A. W. Franks, C.B., F.R.S.; Mr. J. G. Frazer; Mr. H. H. Johnston; Mr. Francis Galton, F.R.S.; and Mr. A. P. Maudsley, on special objects connected with this subject. Dr. Tylor divides his subjects under the following heads: physical characters, language, arts and sciences, society, religion, mythology, and customs; hints are here given which will serve to draw attention to interesting points which might otherwise be overlooked. In treating of the physical characters we think much more information might have been given in the same space which would have enabled the traveller to have made definite inquiries had the directions been specific instead of general in their character. Reliance has been placed on the existence of a small manual entitled *Notes and Queries on Anthropology* (Stanford: Cockspur Street) to supply details as to the mode of investigation. To a certain extent the deficiencies noted in Dr. Tylor's portion are made up for in the chapters by Messrs. Franks and Frazer, which are devoted to questions of a physical and ethnographical nature. The chapter by Mr. Johnston is of an extremely practical character; the following sentences from that author's chapter deserve to be taken to heart by everyone desirous of making anthroplogical research: "In collecting facts about anthropology, whatever you do avoid vagueness. It is better to describe one custom, one style of architecture, one individual's body, one religious ceremony with minuteness, even to the neglect of everything else (from the want of time) than to lay before us on your return a series of vague general remarks that the scientific anthropologist will toss aside in disdain." Mr. Francis Galton adds directions for obtaining statistics of strength, stature, keenness of eyesight, and other physical characters, in cases where these cannot be ascertained by actual measurements. To ascertain the strength, he tests the number of persons who are able to lift packages of various weights, recording the number of those who fail or succeed; the required results of the observations can be deduced by the help of some tables appended.

We strongly recommend the work to the attention of medical men in, or about to proceed to, foreign lands, as containing much information which will be valuable to them. Its portability is a further recommendation not to be overlooked.

HANDBOOK OF HOSPITAL PRACTICE AND PHYSICAL DIAGNOSIS. By CHRISTOPHER J. NIXON, M.D., LL.D., etc. London: J. and A. Churchill. 1889.

PROFESSOR NIXON'S book owes its title to the action of the combined Royal Colleges of Physicians and Surgeons in Ireland, who have introduced an examination on "hospital practice," including physical diagnosis and minor surgery, for students at the expiration of the second year of study. As a textbook for this examination, Professor Nixon has issued the admirable work before us. The book is, however, greatly beyond the requirements of a minor examination. It will be found a useful work of reference for practitioners, and moreover it contains many original observations of the author, which give it an increased value. It has clearly been Dr. Nixon's intention to provide for the student a work,

which, while containing all that he at present needs, should be his constant companion during his future practice.

At the end of the book is a scheme for reporting a case, and the order of observation therein recommended is that adopted in the arrangement of the book. All the morbid appearances seen by the student in the ordinary course of examining a patient are described and explained. First we have an introduction, in which we find a description of the facies of disease, and accounts of diathesis and decubitus. These are points frequently neglected by students, and yet of the utmost importance as guides to a line of further inquiry. The various features of disease are here described in great completeness, though succinctly. Temperature and its variations and the different forms of pulse and conditions of tongue are next introduced. It is to be noticed, in connection with the two latter subjects, that the author adds an account of the characters of pulse and tongue, which are associated with several of the most important diseases. Some of these descriptions will scarcely meet with general acceptance by other observers, although doubtless they represent the author's views. Thus, it will not be generally admitted that the pulse of cirrhotic Bright's disease is hard, tense, and "bounding," nor is that of anæmia usually "small." The succeeding section on the appearances of the skin in disease, omitting the so-called skin-diseases, is full of useful information, clearly the outcome of great clinical experience.

After this introduction, the respiratory, circulatory, digestive, and urinary systems are treated of in order, the nervous system being left to a future publication. In describing the examination of the chest the usual order is adopted and calls for no comment. The characters of the sputum, and the methods required for its examination, are herein described. The chapters upon the organs of circulation are most complete, and contain a summary of the physiology of the heart beat and heart sounds. Dr. Nixon adopts the auriculo-systolic view of the production of the mitral presystolic murmur, and shows that ventricular suction is the potent influence in producing the mitral diastolic murmur. A series of plates is given, illustrating clearly the various murmurs and modified sounds met with in mitral stenosis.

In connection with the functional pulmonary systolic murmur a lengthy and argumentative account is given of its conditions of production, introducing the author's own observations. This is somewhat out of place in a student's book, but is very interesting. Dr. Nixon believes that this murmur is produced by a twist or constriction at the root of the pulmonary artery, due to non-filling of the pulmonary capillaries and consequent lowering of arterial tension in, and probably shortening of, the pulmonary trunk. The so-called aortic systolic murmur of anæmia is believed to be usually produced at the tricuspid orifice. The differentiating characters of endo- and exocardiac murmurs are excellently contrasted. Functional murmurs generally receive special attention in these chapters; not even minor matters are omitted, as is shown by the introduction of the observations of Parrot and of Friedreich on the presystolic, double, and diastolic venous murmurs, which are, to say the least, very rare.

The chapters on the examination of the abdominal organs are similarly complete and accurate. The work is concluded by a glossary of medical terms, an unusual feature in such a book, but one which will be found of great utility. May we point out, in reference to the definition of *pulsus paradoxus* herein given, that the inequality of this pulse concerns its volume not its frequency, as is described here, and that the abnormality is produced by inspiration?

The book is well and carefully written; the descriptions and directions are nowhere obscure; it is full of information, and we heartily recommend it.

KLINIK DER VERDAUUNGSKRANKHEITEN. Von Dr. C. A. EWALD. II. DIE KRANKHEITEN DES MAGENS. Zweite Auflage. Berlin: August Hirschwald. 1889.

THE first edition of Professor EWALD'S book on *Diseases of the Stomach*, which has already been reviewed in these columns, was exhausted in nine months, and a second edition, now before us, was called for. The interest taken in Germany in the scientific study of digestive disorders is evidenced by the considerable number of original papers which have appeared in even the short interval which has elapsed between the issues of the author's two editions. These researches he has criticised and incorporated into the new edition, making his work the most complete which has yet appeared upon the clinical side of his subject.

The author states that his observations do not bear out the views recently expressed by Schreiber, that the secretion of an acid fluid by the stomach is a continuous process. He shows that no free hydrochloric acid is present unless the stomach be reflexly excited by the presence of food in the mouth. The author still maintains that the best tests for free hydrochloric acid in the stomach are tropæolin and Günzburg's reagent phloroglucin-vanillin.

To the present edition is added a full consideration of the atrophy of the mucous membrane of the stomach which follows chronic catarrh. The author shows that it is impossible for the intestines to perform the whole of the digestive task when the stomach is entirely disabled. They may do so for a time, but serious deterioration of the health must ensue. This may take the form of pernicious anæmia, many cases diagnosed as this being primarily of gastric origin. Dr. Ewald, however, does not assert that all cases of pernicious anæmia are due to this cause.

The accounts of the clinical aspects of the various stomach diseases have been somewhat amplified, and the literary reviews have been made more complete.

THE INFLUENCE OF THE COLD BATH TREATMENT ON THE HOSPITAL MORTALITY OF TYPHOID. By F. W. E. HARE, M.B., M.R.C.S.E. Brisbane: Pole Outridge and Co. 1889.

IN this short pamphlet, reprinted from the *Australasian Medical Gazette* for July, 1889, Dr. HARE, resident medical officer at Brisbane Hospital, advocates the "systematic treatment" of typhoid by cold bathing. Systematic treatment is differently interpreted by different authors, and we should have been glad to have been told whether patients were subjected to the treatment according to thermometric indications alone, or according to their general or local treatment. That some sort of selection was practised would appear from the statement that, in eight cases, "the treatment was deemed inapplicable." The want of this information materially affects criticism, and detracts from the benefit from Dr. Hare's experience, which might be gained by others wishing to give this treatment a trial.

The author finds, as might be expected, that the local dangers of typhoid fever—such as perforation, peritonitis, intestinal hæmorrhage—are less influenced by the cold bath treatment than deaths from causes common to all fevers—toxæmia, asthenia, pneumonia, coma, etc.; hyperpyrexia is not mentioned. The mortality from pneumonia especially seems to have most remarkably diminished from this method of treatment.

Dr. Hare gives statistics showing that, whereas the mortality in 1886 at Brisbane Hospital was 14.6 per cent., after the cold bath was used it fell to 11.3 per cent. in 1887 and to 6.8 per cent. in 1888. During the same period the mortality in the Prince Alfred Hospital and in the Sydney Hospital remained with little alteration the same as that in 1886.

In the Coast Hospital, though the cold bath was apparently not used, the mortality fell from 14 per cent. in 1866 to 6.2 per cent. in 1888—a reduction almost exactly equal to that which occurred at Brisbane, where the bath treatment was employed. Dr. Hare brings forward reasons to account for this reduction; one of them is that more children were under treatment at the Coast Hospital than in the Brisbane Hospital, whereby the mortality was reduced. But he does not show that the number of children under treatment in 1888 was greater than in 1886, and, unless this was so, the reduction in mortality at the Coast Hospital is not accounted for. Again, Dr. Hare urges that as "the journey to the Coast Hospital is very injurious to typhoid fever patients in the advanced stage of the disease, the majority of these are sent to the city hospitals." But, if this journey is so injurious to the severe cases, it can hardly fail to be to some extent an unfavourable preparation for the less severe cases that are subjected to it before entering the Coast Hospital.

Reviewing all the circumstances given by Dr. Hare, one cannot but be struck by the fall in mortality at the Coast Hospital, where the cold bath was not used, simultaneously with that at the Brisbane Hospital where it was; and, from knowledge of the course of typhoid fever in older countries than the Australian colonies, we are justified in attaching some importance to other conditions than treatment alone in influencing the mortality of the successive outbreaks. But the authorities at both the Brisbane and the Coast Hospitals are to be congratulated upon the marked decline in the death-rate of their patients from the dis-

ease, so disastrous in its results in almost every part of the world.

LEPROSY A COMMUNICABLE DISEASE. By C. N. MACNAMARA, Surgeon to the Westminster Hospital, etc. Second Edition. London: J. and A. Churchill. 1889.

THE first edition of this pamphlet was published in Calcutta in 1866, and was suggested by the well-known Report of the Royal College of Physicians of London. Recent events have caused an unusual degree of attention to be given to the leprosy question in its various phases, and Mr. MACNAMARA has rightly considered that it would be useful to republish a second edition in which references to recent observations might be incorporated. He believes that leprosy is communicable in the sense in which typhoid fever, cholera, tuberculosis, and, to some extent, hydrophobia, may be considered communicable, whilst he admits that it does not spread by contagion in the ordinary sense of the term.

As might be expected from a work originally published in Calcutta, there is valuable information regarding the prevalence and appearances of the disease in India, whilst interesting extracts, mostly derived from Sir James Simpson's well-known article, regarding what may be termed the antiquarian side of the question, are appropriately introduced. The Report of the College of Physicians is also put under contribution, and more particularly as regards the reports sent from India, and some of the most salient points are noted. Dr. Wise's remark, collected from the report, "that he had never seen or heard of a case of leprosy in a pure European," unfortunately no longer holds good.

From the facts communicated to the College by the Indian practitioners, Mr. Macnamara inferred that a large proportion of the civil servants in India believe from personal observation that leprosy is communicable, and that the instances which he had taken from the Report could only be so explained.

The recent facts connected with the Sandwich Islands, namely, the successful case of inoculation and the rapidity of the spread of the disease, are duly referred to. A long letter from Honolulu, addressed by Dr. Hillebrand to Mr. Macnamara as long ago as February 3rd, 1866, puts the early history of the spread of the disease very clearly. Dr. Hillebrand, who had lived and practised medicine in the Sandwich Islands since 1851, states in his letter that leprosy was unknown there before 1859, and that the closest scrutiny could not trace it further back than 1852 or, at the latest, 1848. At the date of his letter the number of lepers was 230 out of a population of 67,000 natives. Archdeacon Wright's *Leprosy an Imperial Danger* is quoted with reference to the cases at Prince Edward's Island, which have been referred to in more or less detail in most recent papers on the disease.

THE STORY OF BOSTON: A STUDY OF INDEPENDENCY. By ARTHUR GILMOUR, M.A. New York and London: G. P. Putnam's, Sons. 1889.

THE object of the author of this book has been well set forth in his preface as an endeavour to tell what were the inspiring motives and the real lives of the fathers of Boston, and of those who laboured and suffered by their sides. Herein is revealed to us "the vigorous struggle by strong men for a century and a half against a powerful monarchy, and the fruits of a discipline of debate and conflict in the development of a typical American civilisation." These earnest men who founded Boston had no considerable interests, except those connected with politics and religion; all their mental energies were directed to these subjects. For them art, music, letters and science were unworthy of serious attention, such matters are for men of peace and leisure. Nations have their birth throes, and eight score years must pass before the Fathers of New England would find time to cultivate the tastes and follow the pursuits which in our day absorb the attention of intelligent men. As we look at the portraits of Winthrop, Saltonstall, Mather, and the other nation-builders with which Mr. GILMOUR has enriched his pages, we see that we are indeed far enough removed from this dilletante age of ours, wherein "the hub of the universe" finds time and inclination to be "transcendental," and to cultivate "the higher poetry." These stern, grim Puritans meant business, as they said, "they were men of character, men of religion, men who pray over what they do," and they look all that. Here we see the strange sternness and strength akin to the Anglo-Saxon mind, with its deep gloom and abiding melancholy, founding a great western world across the Atlantic, as the same powerful characteristics helped to form the English nation in the fifth and sixth centuries of our era. It was a thousand years and more since our fathers left their original home in the Cimbrian peninsula and the adjacent portion of the mainland to pour over Britain; but neither their long sojourn in the soft, rich, southern lands of England, nor the cross of Franco-Norman blood had served to crush out the ambitious enterprise steeled by ceaseless struggle with the sea and incessant war amongst themselves, which had first led them to our shores. Not alone the spirit of enterprise, but that of resistance to religious tyranny settled the vast lands of the New World, and it is interesting to trace in the story so admirably told by Mr. Gilmour, the persistence of the characteristics of the heroes of the epics of Beowulf, Widsith, and Cynwulf undimmed by the lapse of a thousand years. The seed of such fathers was not fitted for material or intellectual fetters, and as the various political and ecclesiastical oppressions one after another crushed down the English soul, they sailed for a land, which, as Emerson said, God had hidden of old time in the West, but which he uncovered when its need had been pressed home to men "by tyrants great and tyrants small." Here the men who found their liberty won their independence, and shook off the British rule, as our author tells in his chapter on "Boston opposes a Tax." It is a sad reflection upon the motives and principles of the emigrants that the liberty which they demanded from tyrannical kings they were most unwilling to extend to those who dissented from themselves. The story of the banning of Ann Hutchinson and the persecutions of the Boston Quakers remind us of the remark of a great Nonconformist preacher, who once said that every sect save his own had been a persecuting sect—then after a pause, and while his audience was congratulating itself on its superior enlightenment, he added, "and we have never yet had our opportunity!" The story of Boston is full of interest, and should be read with pride by every true Englishman. The work is beautifully printed, and contains a number of excellent maps and plans, besides many engravings from old and scarce documents.

NOTES ON BOOKS.

The Electric Illumination of the Bladder and Urethra. By E. HURRY FENWICK, F.R.C.S. Second Edition. (J. and A. Churchill. 1889.)—The subject treated of in this work has attracted considerable attention, and Mr. Fenwick is, without doubt, its chief exponent in this country. A second edition in so short a time after the first is not a matter of surprise, but rather one of congratulation, for the author has been able to add a good deal of valuable information from his own experience, and to incorporate recent suggestive and practical papers which have appeared in this and other journals from his own pen. Some examples are given of photographic delineation of bladder affections, but these are not a success. The modelling of growths, with the aid of the views obtained by use of the electric cystoscope. promises well, but no doubt this will depend mainly on the expertness and reliability of the operator, and more will have to be done in this direction. We have before remarked the very use of the instrument requires special experience, and will probably be limited to a few, but it is quite possible that it may prove of value in physiological as well as pathological research. The surgery of the bladder has made such rapid strides in the last few years, that the knowledge of this work becomes a necessity to every scientific and progressive surgeon. We notice that Mr. Fenwick does not speak favourably of any of the attempts to modify the cystoscope so as to give the means of washing out the bladder without removing the instrument, and this seems to us a very desirable advance. The language used is clear, and the work forms a handsome volume of over 250 pages, well printed and well illustrated. So much acrimony has been shown in the counter-claims of Nitze and Leiter to the invention of various parts of the electric cystoscope, that it is pleasant to find Mr. Fenwick keep clear of an unworthy dispute. His object has been to give a good account of what can be done by means of the instrument, and he has certainly succeeded. His hopes of soon being able to catheterise the ureters by the aid of the electric light seems likely of fulfilment if we can accept the glowing accounts recently reported of Dr. Poirier at the Académie des Sciences.

Suggestions to Mothers on the Management of their Children. By a Mother. Revised throughout by a Physician. Second Edition. (J. and A. Churchill. 1889.)—We are glad to see that this sensible little work has reached a second edition. It is clearly and simply written, and appears to convey the kind of information which will be of real use to an intelligent woman. Too many works of this class err by saying too little about general principles of hygiene and feeding, and too much about drugs, which are at best dangerous tools in untrained hands. From these faults this book is entirely free.

Leprosy as a Cause of Blindness. By C. FRED. POLLOCK, M.D., F.R.C.S.E., F.R.S.E. (Churchill. 1889.)—This small monograph deals with a well-defined portion of a large subject. Dr. Pollock visited the leper hospitals in Norway and has utilised the opportunities afforded him by giving short descriptions of the condition of the eyes of lepers in which these organs were affected. No fewer than forty-one cases are thus described. The destructive processes through which the eyes were passing or had passed were in many instances peculiar to leprosy, but in others the secondary changes were such as might have resulted from some other cause, although in these cases they were due to leprosy. The processes in leprosy which lead to blindness are commonly symmetrical, the disease of the eyeball being largely ciliary in its origin. Dr. Pollock has done his work very thoroughly, and his descriptions cannot fail to be of great utility to all students of the disease, whose object it is to obtain accurate information regarding the modes in which it produces its effects within the eyeball.

Hepatitis and Hepatic Abscess; their Etiology, Diagnosis, and Treatment. By G. HARRISON YOUNGE, Surgeon, Army Medical Staff. (London: J. W. Dunks and Co.)—This author is not satisfied with anything that has been written on the etiology of this, one of the most common and fatal diseases of the tropics, of India more particularly. It appears to us that the author underrates the effect of intemperance in food and drink; more particularly the inordinate consumption of nitrogenous food by Englishmen in India, and apparently makes light of the intimate relations between multiple abscess of the liver, the result of septic absorption in dysenteric ulceration of the large intestine. The author attributes hepatitis and hepatic abscess to "hepatic exhaustion followed by congestion." We cannot think, after a candid consideration of the arguments by which this theory is supported, that our knowledge of hepatitis is much advanced by it. The treatment by free drainage is very well described, and the author speaks favourably of Professor Maclean's treatment of acute hepatitis by the local abstraction of blood by aspiration, which he has successfully used in a considerable number of cases. Although we are unable to think that Mr. Harrison Younge has added much to our knowledge of the etiology of hepatitis, we consider that the practical part of his treatise contains safe and useful advice to young practitioners.

DIARIES AND ALMANACKS FOR 1890.

THE lack of novelty which characterises the diaries for the new year may be an indication that in their present very various forms and sizes every requirement is fulfilled, and no particular improvement called for. Their variety is certainly excellent.

One of the best medical diaries is that known as Letts's Medical Diary, now published by Cassell and Co., in whose hands it has vastly improved. It gives a good deal of information likely to be of use to general practitioners, including lists of professional fees, poisons, and antidotes, spirometry, therapeutical equivalents, weight and measurement, saturation, dosage, and other tables, etc. Ample space is given for the entry of daily visits, accouchements, vaccinations, etc., adequate to meet the requirements of a large practice. The printing and paper are exceptionally good, and the volume well bound in "tuck" form. This diary is also issued in smaller bulk, with less space for daily visits (to suit smaller practices), and also without the leather binding.

Messrs. Griffith and Farran, of Charing Cross Road, send a useful series of diaries, almanacks, calendars, including Pettitt's Octavo Diary, interleaved, 1s.; Pettitt's No. 6 Foolscap 8vo. Diary, in cloth, handy for desk or pocket, to be had with or without cash columns; Pettitt's 1s. Folio Scribbling Diary, interleaved with blotting, a week on a page; and Blackwood's 1s. Scribbling Diary and 8vo. Diary (the former has the advantage of having the calendar printed on the outside of the cover); Pettitt's Remembrancer and Dial of Daies are useful calendars; The Week is a weekly engagement indicator in block form, a week on a page.

Messrs. Collins and Co. issue their well known series of pocket and desk diaries, with sea-green tinted paper, as being less trying to the eyes. They include a 1s. Scribbling Diary, folio size, a week at an opening; Portable, Compact, and Gem Diaries, all in flexible cloth bindings, and neatly got up; the Gem has the advantage of fitting the waistcoat pocket. There is also their useful Tablet Diary for hanging up, or for the desk.

Smith's excellent Physician's and Surgeon's Visiting List, with diary, almanack, and book of engagements for 1890, published by Hazel, Watson, and Viney, is now in its forty-fourth year. It is full of useful, condensed, and well-arranged information.

The Chemist's and Druggist's Diary, 1890, is a quarto interleaved diary, with a large body of information useful to those for whom it is intended, and for medical practitioners especially interested in pharmacology.

The Religious Tract Society issue their usual excellent Pocket-books for the Young, with Scripture texts.

GIFT BOOKS FOR CHRISTMAS.

IN accordance with our annual custom we give a short note on the Christmas books of the year which have been forwarded for notice, and which are suitable for seasonable gifts to the libraries of hospitals, public institutions, and in private families. The books of this year which have been so sent are not only of excellent literary quality, but are very tastefully bound. For the most part they are produced at surprisingly low prices considering the excellence of style of production and abundance of illustrations. It will, for the purpose in view, be useful that the prices be appended.

The first batch of books we have to notice comes from the Religious Tract Society. Their *Russian Pictures drawn with Pen and Pencil*, by Thomas Mitchell, C.B. (8s.), is an imperial octavo volume, prettily bound, and written by the best possible authority on the subject, seeing the writer was the author of Murray's *Handbook for Russia, Poland, and Finland.* It has three maps and 124 illustrations, and from beginning to end is full of interesting information and copiously illustrated. A similar book, entitled *English Pictures* (8s.), is from the pen of the Rev. Samuel Manning, LL.D., and the Rev. S. G. Green, D.D. It is a new edition revised. The number of English people who really know their own country is comparatively few. This volume recalls, by the aid of pen and pencil, many beautiful English scenes. Ample use is made of the biographical associations which these scenes awaken to recall the memories of great and good Englishmen, who have trodden these familiar paths and made memorable these picturesque spots. *The Brook and its Banks* (6s.) is one of the last books from the accomplished pen of the Rev. J. G. Wood. A few chapters have already appeared in serial form. The complete work is in every way worthy of the author's reputation, and, as the editor justly says, is "worked out with all the vivacity of style and copiousness of anecdote and personal experience for which Mr. Wood is justly noted." The reader is conducted along the banks of an English brook, and taught in the pleasantest of ways how to discover and observe the many living creatures who either live in the water or along the banks. It is full of excellent illustrations. *The Girl's Own Annual* (8s.) is the annual volume of the *Girl's Own Paper.* It is full of good articles on the most varied subjects by authorities such as Sir Robert Ball, F.R.S., and Professor Thiselton Dyer. It has 823 large octavo pages, with varied and amusing matter. The *Boy's Own Annual* (8s.) is in the same way the annual volume of the *Boy's Own Paper*, which retains its traditions and popularity. *The Girls' Own Outdoor Book*, edited by the experienced hand of Mr. Charles Peters (8s.) has over 180 illustrations. It is full of articles, by most competent authorities, giving practical help to girls on matters relating to outdoor occupation and recreation, and will enable every girl how best to improve her general health by some outdoor occupation, whether it be tennis, riding, swimming, boating, skating, shell collecting, or study of natural history, and of gardening. The first article is a very successful one by "Medicus" on "Exercise and How to Benefit by it." It winds up with a capital series of articles on "Our Country Flowers," and "Bird Life throughout the Year," and on "Nick-nacks from Natural Objects." Shopping, marketing, cooking, and the rearing of fowls are not forgotten in this book, although very often such things are omitted in the education of girls. *Sunday at Home* (6s.), the annual volume of the well-

known familiar magazine for Sabbath reading issued by this Society, is, as usual, distinguished by its beautiful coloured pictures and woodcuts. The matter is serious without being heavy, and its chromo-lithographs deserve very high praise. *The Leisure Hour* (6s.) includes the volume formed of the numbers of that admirable magazine from January to October. The frontispiece is a reproduction of a charming plate by Frank Dadd, and there are few who could not find in it a pleasing occupation for spare half-hours for many a month to come. Two new books for very young children are the *Child's Companion and Juvenile Instructor* (2s. 6d.) and *Our Little Dots* (2s.), a volume for little girls and boys, with a great store of pretty pictures and stories.

From Messrs. Cassell and Co. we have *The Master of Ballantrae*, by Robert Louis Stevenson (5s.), a masterpiece of that brilliant writer—a story of breathless interest. It has already reached its fourteenth thousand, and it is destined to take a place as a classic in the literature of English romance. *Cassell's Family Magazine* (9s.) is a solid volume of 800 pages of the most varied material by excellent hands, and abounding in good woodcuts. *The Magazine of Art* (price 16s.), published by Cassell and Co., has taken its place in the front rank of art periodicals. The frontispiece, after Meissonier, is a delightful piece of art work. Mr. Wedmore's criticisms on the art exhibitions of the year—the delicious reproductions from Sir Frederick Leighton, Rembrandt, Menzel, Daubigny, and Millet—give to the volume a high permanent value for the library.

Messrs. Blackie and Son send a characteristic series of good story books for the new year. That indefatigable and always welcome purveyor for boys, Mr. G. A. Henty, issues a tale of Waterloo, entitled *One of the 28th* (5s.), in which, although it is a book of adventure in which a boy plays as usual the principal part, a woman is the real heroine. The book is intended to show, among other things, that the male sex have not always the monopoly of courage. *With Lee in Virginia* (6s.), by the same author, is, as its title indicates, a stirring story of the American civil war. It is well told, full of bright adventure, and will teach boys a good deal of the history of the great scene with which it deals, without boring them with too much detail. The binding is exceedingly tasteful, and a great improvement upon those usually seen. Dr. Gordon Stables produces a story *The Hermit Hunter of the Wilds* (2s. 6d.), which is crammed with strange adventures and natural history details. *A Warrior King* (2s.), by J. Evelyn, is a story of a boy's adventures in Africa, hardly so well illustrated as might have been desired. *Laugh and Learn* (3s. 6d.), is a very easy book, and intended to be the easiest book of nursery lessons and nursing games, by Jennett Humphreys. It is profusely illustrated by engravings. *Grettir the Outlaw*, an Icelandic story, by S. Baring-Gould (6s.), touches on a higher strain, and puts the story of the familiar old Saga of Grettir the Strong into picturesque words. The illustrations are excellent. The book is one which we can strongly recommend. The author of *Mehalah* never fails to interest as well as instruct his readers, when he chooses to take up the latter branch of the work. *Afloat at Last* (3s. 6d.) is a sailor boy's log of his life at sea, by J. C. Hutcheson, very lively and full of orthodox adventures, having six full-page illustrations by W. H. Overend.

Messrs. Skeffington and Sons send us some dainty little books, one of which is *Stories Jolly, Stories New, Stories Strange and Stories True* (5s.), a series of new and original tales for boys and girls from 6 to 14 years of age, by well known authors, among whom are Baring-Gould, Manville Fenn, G. A. Henty, and Charlotte Yonge. *Seed, Flower, Fruit* (3s. 6d.) is an allegorical title of a religious book concerning lofty thoughts, true ideas, and beautiful facts, which are the good flower seeds indicating the title. *Pepin, the Dancing Bear* (2s. 6d.), by Katharine S. Macquoid, is a pretty story, having a few excellent illustrations by Percy Macquoid, whose talent is well known.

Messrs. Ward, Lock and Co. send *The Mids of the "Rattlesnake,"* by A. L. Knight (2s. 6d.), a story of no great merit, and of which neither the mechanical production nor the illustrations deserve much recommendation. *The Wave of Brain-Power* is a shilling shock of the most trashy description.

Messrs. Griffith, Farran, and Co., send a pretty little *Baby's Museum* (2s. 6d.), *A Ring of Rhymes* (3s. 6d.), with delightfully coloured pictures, for very young children, and *Our Sunday Book of Reading and Pictures* (3s. 6d.) *Some Other People*, by Alice Weber (3s. 6d.), is remarkable for the great profusion of soft pictorial illustrations in the modern style, in which the process (reproduction of original drawings) are made to rival their originals in pictorial effect. Many of these drawings have almost the qualities of original sketches in sepia. It is a singularly pretty little book.

Messrs. Macmillan and Co. send *Tom Brown's Schooldays* (3s. 6d.) in one volume, with illustrations by Arthur Hughes and Sidney Prior Hall, which retains, and probably will retain, for many years to come, its perennial freshness and reputation as the delight, honour, and national textbook of our English lads. *The Scouring of the White Horse* (3s. 6d.) is issued by the same publisher, crown octavo, in a new edition (eleventh thousand), and with it "The Ashen Faggot," a tale for Christmas, both by the author of *Tom Brown's Schooldays*, with quaint and imaginative illustrations peculiar to the genius of Richard Doyle. This is a thoroughly wholesome and delightful Christmas book. The same publishers send a new and cheap edition of the ever-popular *Tom Brown at Oxford* (3s. 6d.), with capital illustrations by S. P. Hall. *A Year with the Birds*, by W. Warde Fowler (3s. 6d.), author of *Tales of the Birds*, has reached its third edition. An early walk and a peaceful study of the birds is a delightful occupation, both for children and grown-up people, and to teach our children before they leave home some of the simplest and most obvious lessons of natural history is to give them warm sympathies in the fine taste which will stand them in good stead through all their lives. A chapter has been added on Alpine birds to this volume, and there are few that will not find in it a delightful companion, whether in the study or in their rambles. *Mr. Isaacs* (3s. 6d.), a tale of modern India, first published in 1882, made the reputation of Mr. F. Marion Crawford, and is still notable for its power of characterisation with the interesting claims which it affords on theosophy in the country in which it took rise. A one-volume edition of the delightful tale of *Cressy*, by Bret Harte (3s. 6d.), has all the characteristics of his original genius and curious local colouring. Messrs. Macmillan issue for children a capital story book, *The Rectory Children*, by Mrs. Molesworth (4s. 6d.), illustrated by one of our deftest art craftsmen, Mr. Walter Crane, and the dainty thin quarto of music, verse, and delicate fanciful-coloured illustration, for grown-up children, entitled *Flowers of Paradise* (6s.), the music, verse, and illustrations by Reginald Francis Hallward. The latter is a highly artistic volume, with great originality and beauty of design, every page of which is a charming study in drawing and colouring.

Mr. T. Fisher Unwin sends a very handsome American tale book, *Daddy Jake the Runaway* (6s.), in large quarto, by Uncle Remus, the benefactor for many years of the young folks of both hemispheres. consisting of short stories told after dark on the picturesque humanity of the old plantation life. Uncle Remus is, of course, a tale-telling negro of the Uncle Tom stamp. *The Butterfly* (1s.), by John Stuttard, is a little booklet which will be helpful to students in this department of popular entomology.

CHRISTMAS CARDS.

MESSRS. RAPHAEL TUCK AND CO., Coleman Street, E.C., issue this year a brilliant and varied series of Christmas and New Year cards and illustrated booklets; they include cards humorous and cards shaped, cards monochrome, cards coloured, embossed cards and flat, iridescent series, private cards, gem panels, Mizpah cards, rustic, frosted, and folding series, rainbow gold, jewel cards, crayons, and booklets. The poetry is edited by Helen Marion Burnside, and the prices range, for an immense assortment of cards, from 1d., 3d., or 6d., up to one guinea. The variety of cheap cards is surprising, the results being contained in six bulky volumes, which include 3,000 and more new designs. One of the prettiest year booklets is *The Jackdaw of Rheims*, in which the illustrations are so fascinating that the artist is unwise not to have signed them. In their way they are masterpieces.

ABERDEEN MEDICO-CHIRURGICAL SOCIETY.—The annual meeting of the Aberdeen Medico-Chirurgical Society was held in the hall of the Society on Thursday, November 21st, when the following office-bearers were elected for the ensuing year: *President:* Dr. Smith Shand; *Vice-President:* Dr. Robert J. Garden; *Secretary:* Dr. George M. Edmond; *Treasurer:* Dr. John Gordon; *Librarian:* Dr. Thomas B. Gibson; *Council:* Dr. Angus Fraser, Dr. Rodger, Dr. Booth, Dr. Gibson, and Dr. W. H. Williamson. The Treasurer's report showed that the finances were in a healthy and flourishing condition. This year being the centenary of the Society, it has been resolved to celebrate the event by a dinner in the hall of the Society, to which representative guests are to be invited. The dinner will take place this day (Saturday).

REPORTS AND ANALYSES

AND

DESCRIPTIONS OF NEW INVENTIONS

IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

A MEDICAL POCKET-LAMP.

Dr. Gärtner, of Vienna, has invented a pocket-lamp for the use of general practitioners as well as specialists. The apparatus, when in the form necessary for carrying about (see Fig. 1),

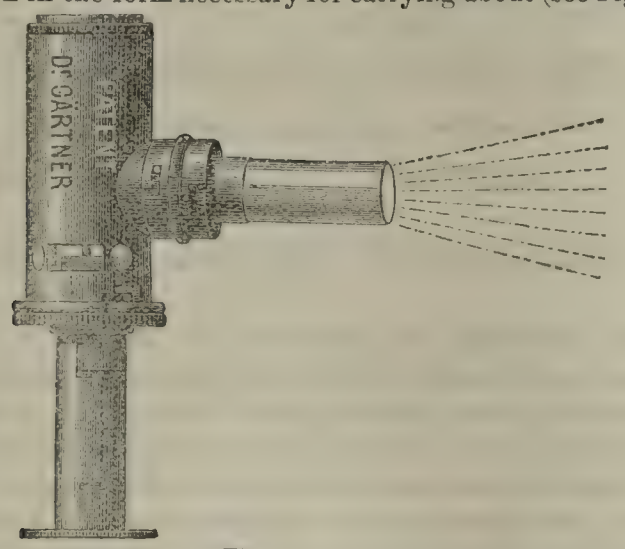
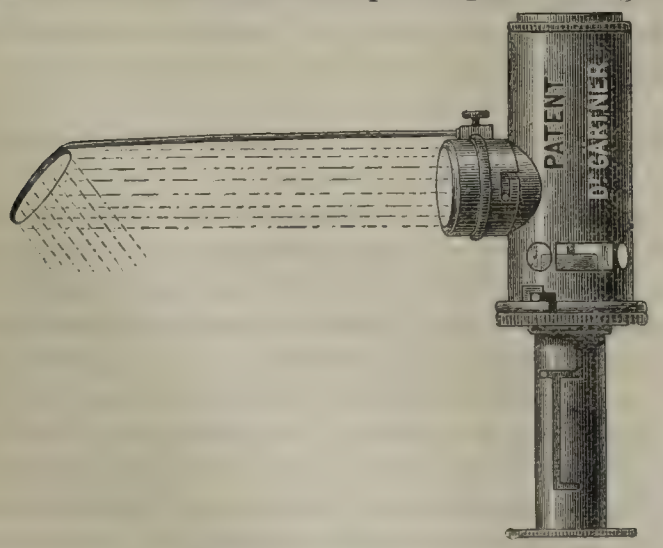


Fig. 1.

is a cylinder 17 centimètres long, with a diameter of 3 centimètres. It consists of a candle chamber (Fig. 1) constructed after the fashion of a coach-lamp, and contains a spring for the displacement of the candle. The candle-chamber, at the same time, serves as a handle, which can be lengthened out like a pocket telescope. Close to the candle-chamber is attached the body of the lamp. This is provided at the lower part with holes for the passage of air. Opposite to the part of the flame which gives out the brightest light there is a round fenestra in the front wall of the body of the lamp, into which a glass cylinder of the length of 10 centimètres may be inserted by means of the connecting piece. The candle-chamber is connected with the body of the lamp by means of a heat-isolator; thus the handle of the lamp never becomes hot, and, at the same time, the candle is protected against the influence of a too high temperature. The glass cylinder also remains quite cold, so that the physician as well as the patient is protected against being burned. The body of the lamp itself is provided with two walls, the space between these being filled with asbestos. When the lamp is used for ten minutes this part of it does not become too hot. When examining the larynx a lens is inserted into the fenestra of the lamp in the place of the glass cylinder.



How to Use the Lamp.

1. *Lighting Material.*—Any good stearine candle can be used. Candles with a high melting point are the most convenient, as they do not drop off. Pieces 3 centimètres long are employed.

2. *Lighting of the Lamp.*—The screw which shuts off the body of the lamp from the candle chamber is lifted and the candle is lighted, and as soon as it burns steadily the wick is arranged in the proper way, so that the flame is in the centre. The upper part of the lamp is placed in position.

3. *The Lamp as a Speculum Oris.*—For the examination of the oral and pharyngeal cavities the glass cylinder is introduced into the opening of the lamp. In most cases it is sufficient, in order to produce good illumination of all parts of the mouth, to introduce the end of the same into the oral cavity. In order to illuminate certain parts of the mouth particularly well the whole glass cylinder may safely be introduced into the mouth. When using the lamp it should be placed in a vertical position, while the glass cylinder is kept in a horizontal position.

4. *The Apparatus as an Eye Speculum.*—The arrangement is exactly the same as for the illumination of the oral cavity. For specialists who use it only for ophthalmological purposes, the lamp is supplied with a thicker glass cylinder. The light of the lamp contains but few heat rays, and, therefore, blinds and irritates the eye much less than the light which is concentrated by means of a lens. The illumination is, however, quite as intense. At the end of the glass cylinder a lens of a short focal distance for magnifying the image can be attached.

5. *The Use of the Lamp in Gynæcology.*—For illuminating the parts to be seen through the vaginal "speculum," the lamp is supplied with a slightly crooked staff of glass.

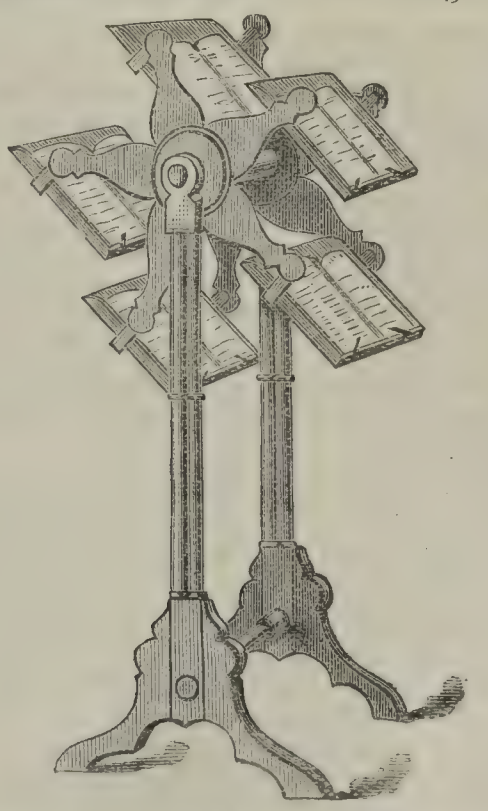
6. *Illumination of the Nasal Cavity and the Auditory Apparatus*—The straight or crooked staff of glass is introduced into one of the two nostrils, and the nasal septum is thus illuminated. Through the free nostril the corresponding part of the nasal cavity may be seen in its anterior aspect. The membrana tympani may be illuminated in a similar way.

7. *The Lamp as a Laryngoscope.*—A collective lens is fixed in the anterior opening of the body of the lamp in the place of the glass cylinder; the lens is supplied with an opening through which the handle of the laryngeal speculum can be introduced. The handle is fixed by means of a screw.

The apparatus is constructed by Alois Schwarz, optician, of Vienna.

REVOLVING READING AND REFERENCE STAND.

The revolving reading and reference stand, of which Dr. Ladell is the inventor, admirably fulfils the purpose for which it is designed—namely, that of affording to persons engaged in literary and other work easy means of reference to a number of books at the same time. The invention, as will be seen from the illustration, consists of a number of desks hung from the sides



between a series of projecting arms, which are attached to an axle which revolves on a stand. The desks are hung in such a

manner that they maintain the same angle as the arms are turned on their axle, so that one desk after the other can be brought to the front in an easy position to read from or view. It is claimed for this stand that it can be used with equal advantage either sitting, standing, or reclining in an easy chair, and can be arranged for an invalid to use either on a sofa or in bed; it can also be made, if required, with a writing-desk attachment to facilitate the taking of notes, etc. The stand can, when not otherwise required, be used for exhibiting photos, drawings, etc. It is an exceedingly simple and ingenious invention of great convenience. The manufacturers are Messrs. Williams and Jacoby, 99, Dean Street, Soho, London, W.

ROYAL COLLEGE OF SURGEONS.

An ordinary Council was held at the College on Thursday, December 12th, when the minutes of the last meeting were read and confirmed.

Reports from the Committees on matters relating to the extension of the Examination Hall were received, and adopted subject to the approval of the Royal College of Physicians.

A recommendation from the Nomination Committee was carried, to the effect that the annual election of Examiners in Elementary Anatomy, Elementary Physiology, Anatomy, Physiology, and Midwifery, for the diplomas of Fellow and Member respectively, shall in future take place at the ordinary meeting of the Council in June, on a report from that Committee to be presented at that meeting, and that the Examiners in those subjects now elected shall be appointed for six months, and be subject to re-election in June next.

The election of three members of the Court of Examiners resulted in the appointment of Messrs. Langton, Pick, and Owen.

The following gentlemen have been elected examiners for the ensuing six months, namely:—First Examination: Elementary Anatomy: Charles A. Ballance, A. Hensman, W. Arbuthnot Lane, C. B. Lockwood, and C. Stonham. Elementary Physiology: J. R. Bradford and W. G. Spenser. Second Examination: Anatomy: W. Anderson, J. N. C. Davies-Colley, F. H. Marsh, and G. D. Thane. Physiology, C. H. Golding-Bird, V. D. Harris, and B. T. Lowne. Third Examination: Midwifery, W. Duncan, M.D.; W. S. A. Griffith, M.B.; P. Horrocks, M.D.; and J. B. Potter, M.D. First Professional Examination Fellowship: Anatomy, W. H. Bennett, W. B. Clarke, A. P. Gould, G. H. Makins, and F. Treves. Physiology, C. H. Golding-Bird, B. T. Lowne, D'Arcy Power, and G. F. Yeo.

The two vacancies in the Board of Examiners in Dental Surgery were filled by the election of Messrs. Langton and Pick.

A letter was read from Mr. John Marshall, President of the General Medical Council, reporting the proceedings of that Council at their late session. The thanks of the Council were tendered to Mr. John Marshall for his efficient services as representative of the College on the General Medical Council.

A letter was received from Mr. Arthur Milman, Registrar, forwarding, by direction of the Senate of the University of London, copies of the scheme approved by the Senate for the reconstitution of that University on the general lines indicated by the report of the University for London Commission, inquiring if the College would concur in the proposal that its President should be an *ex-officio* member of the Senate, and inviting any observations and suggestions upon the details of the scheme which this College might think fit to make.

Mr. Milman's letter and the accompanying scheme were referred to the Committee of delegates of this College to consider the same, and to report thereon to the Council previous to any conference thereon with the delegates of the Royal College of Physicians.

A letter was read from Dr. Richard Quain, the Chairman of the Pharmacopœial Committee of the General Medical Council, requesting the assistance of the Council towards the publication of an addendum to the *British Pharmacopœia* by forwarding a list of such new remedies as they might consider desirable to introduce into the addendum. Messrs. Lund, Hill, Sibley, and Howse were elected as a Committee for this purpose.

A letter was received from Mr. Wilde, forwarding a copy of the Statement of Claim delivered by the plaintiffs in the action Steele *v.* Savory, and reporting that no time will be lost in preparing statement of defence.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1889.

Subscriptions to the Association for 1889 became due on January 1st; and notice is hereby given, in accordance with by-law 5, that Branch Secretaries' subscription-accounts close on October 31st, and all unpaid subscriptions must be forwarded, after that date, to the General Secretary, 429, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, DECEMBER 14th, 1889.

THE BRITISH MEDICAL ASSOCIATION, 1889-90.

When publishing our programme for 1890, it is natural and usual to look back over the past year and to consider the work already laid out for the next. The public, scientific, and professional work achieved, commenced, and carried on by the Association during the last year yields much cause of congratulation and opens prospects of great promise. In many great questions it has powerfully forwarded the cause of education; it has protected the interests and furthered the welfare of large classes of the profession; it has maintained and liberally aided the progress of medical science; it has been active and potent in modifying legislation so as to relieve medical men engaged in arduous tasks, such as the treatment of lunacy and the sanitary service of the country, from excessive responsibilities and unjustly precarious tenure of office; it has seen the views, which the Journal advanced, of medical examinations and degrees for English students sanctioned by the Royal Commission for which it called, and adopted by the great University which previously rejected them; it has seen the War Office Committee which it was instrumental in obtaining for the consideration of the grievances of army medical officers decide in favour of the justice of those complaints, and recommend a scheme for the redressal of those grievances. The record for 1889 is a great one, worthy of the British Medical Association, and of the powerful and multitudinous body of medical men who are gathered together in their thousands to make up its roll-call.

Progress and Reform of Medical Education and Examinations.

In the matter of medical education the letter of Mr. Macnamara, which we publish on another page, recalls the programme of progress which, on the proposition of the Metropolitan Counties Branch, the Council of the Association adopted in 1879, appointing a Special Committee of the Association to promote it; and it will be seen how largely it has been adopted, and what yet remains to be done. The desiderata lie chiefly in the improvement of the practical element of education and in the simplification of the costly chaos of qualifications which at present leaves so many students without the kind of title which the world most respects and which is elsewhere attainable on equitable terms. We pointed out the weak points of the too exclusively devised scheme of the two London colleges;

the Royal Commission for which we asked was appointed; they have endorsed in every particular the views which we put forward, and, thanks to the timely and sensible concession of the London University and to the constructive skill of some of its leaders, a scheme for a combined teaching and examining university is in course of being drafted on a basis which will, there is reason to hope, afford a good ground for a satisfactory negotiation between the Universities, Colleges, and schools; it will confer a great boon on English students, especially on those who qualify in the metropolis, by relieving them from an unjust disability under which they have long suffered. In one other respect the recommendations of the Committee of the Metropolitan Branch may well be carried practically further forward, if necessary, by the reappointment of the Committee, and that is a consideration from the students' and practitioners' point of view of the present character of examinations and the difficulties which are experienced in giving to them a sufficiently careful and temperately searching and practical character. Examinations are of course devised and carried out by examiners, but they are only one party to a very important transaction, and it is perhaps only part of their common human nature that they are too apt to consider their own side of the question. It may be a paradox, but none the less one which it is well to bear in mind, that the obstacle to successful examinations is sometimes the eminence of the examiners. If the time which an examiner has to give to his work and the frequency with which he can carry it on were not, as they often are, very strictly limited by personal considerations and the pressure of other more lucrative employment than that of a pursuit which gives at most only £500 a year—sometimes much less—we should hear less of the crushing of a vast number of students between the mill-stones at considerable intervals during the year, and with a somewhat hurried and very limited programme. If students and practitioners were to be heard in the matter, they might think that the most eminent and busiest of practitioners could often not easily devise, and carry out unaided, adequate, moderate, and searching practical examinations partly, at least, from other preoccupations, and partly from the limitations imposed by their special sphere of experience and their inadequate daily familiarity with the needs of general practice. However this may be, it is clear that further prominence needs to be given to the practical element both in education and in examination, and that collegiate examiners might suffer no disadvantage by comparing notes with others of more recent experience as students, and of less exalted professional position, but wider experience in the needs and exigencies of everyday practice. That is a kind of conference which the committees of the British Medical Association are peculiarly well fitted to bring about and to carry through satisfactorily on a good representative basis.

Improvements in Lunacy Legislation.

The great services to the profession rendered by the Parliamentary Bills Committee in the modification of many oppressive details originally included, but subsequently eliminated, from the Lunacy Acts Amendment Bill of last session, are very generally recognised. In one respect, however, one of the most important precautions, namely, the requirement that the medical man should be able to plead as an *a priori* answer to any action that he had acted *bonâ fide*, has suffered in value by reason of the decision of Mr. Justice Field, throwing the onus of proof on the defendant instead of on the plaintiff. We do not know whether that decision can be allowed to remain as final. There will be no appeal in the case in which it was given (the plaintiff having been defeated), but it may be advisable that opportunity should be taken of obtaining the decision of a higher court if good legal advice should show that the dictum might be reversed by a higher court. On this subject no doubt the Parliamentary Bills Committee of the Association will take the best obtainable advice, and will act as it is advised for the protection of the material and moral interests of the profession at large. In doing so, it will fulfil one of its most useful functions.

The Sanitary Service: Tenure of Medical Officers.

The profession of Scotland has already thanked the British Medical Association, acting in concert with the sanitary associations of Scotland, for introducing into the Local Government Act of Scotland two provisions of vast importance which are wanting in the Local Government Acts of England, the one which makes it compulsory on every County Council to appoint a medical officer, and the other which gives the medical officers of Scotland the protection involved in a tenure which makes them not removable by the local Councils unless for good reason shown, and such as satisfies the central authority after both sides have been heard. They hold their office, in fact, on the same tenure as the Poor-law medical officers in England. Unfortunately, medical officers of health in England are elected on shorter terms, and hold their office subject only to the goodwill of the local councils. Further efforts will be made (not for the first time) to remedy this defect in the tenure of office for English medical officers, but former efforts have, unhappily, been so often defeated, that the prospect is not very hopeful in this country.

Grants in Aid of Scientific Medical Researches.

Looking at the work of the Association in connection with science, it is satisfactory to know that the aid which it has given during the year by grants to scientific investigators and by scholarships has been on a larger and more liberal scale than on any previous date. Upwards of £800 has been granted to researchers in various departments of medical knowledge, and a further grant of £200 has been made to the newly appointed Therapeutic Committee, as a first grant, together with a special donation contributed on the recommendation of the Scientific Grants Committee to the Pasteur Institute Mansion House Fund. As we go to press the Pasteur Committee, founded at the Mansion House, is meeting in the Offices of the Association and a powerful committee has been formed which has the concurrence of representative scientific authorities with the object of taking steps for the establishment of a Bacteriological Laboratory in this country, which shall in some respects rival the Pasteur Institute of Paris, and those similar institutions which exist so abundantly, and with such fruitful results to preventive medicine and to humanity in many great cities of the Continent, and even in Russia and South America.

The New Library and Reading Rooms.

This year, also, has seen the practical development of the Library and Reading Rooms of the British Medical Association, organised for the use and benefit of its members. The library is housed in spacious apartments, well fitted for the purpose. Suitable grants have been made for the comfortable, convenient furniture of the place, and the accommodation and classification of the books. During the past year 450 volumes have been presented to the library, and a series of important works of reference, foreign and British, have been procured at a cost of nearly £300, granted by the Council of the Association, and the books already on the shelves number over 2,000. Among the latest and most important additions are the whole series of the *Dictionnaire Encyclopédique des Sciences Medicales*, and of the *Jahrbücher* of Schmidt and Canstatt. At the close of this year the library will be found to have attained considerable completeness as a library of reference, considering its recent institution. It is well known that a nucleus such as this, duly fostered, tends to attract to itself donations from living donors, and legacies, of valuable special collections and important individual works which the possessors are willing to place in a position of public usefulness. The liberality shown by many members of the Association, in presenting their own works and in making gifts from their libraries, has already indicated that this hope and anticipation are not likely to be disappointed.

Possibilities of a Lending Library.

One way of making such a library fulfil its largest purposes of usefulness is by the institution of a system by which certain parts of it are available for home study by a loan, on a judiciously instituted system. Such a plan cannot usefully come into operation at first, and will always require to be carefully watched, but we see no reason why a duly guarded system of lending books should not be instituted at no distant date, and thus the library placed in a position of rendering the utmost possible service to a large number of members scattered over Great Britain, desirous of consulting important books which they have no opportunity of adding to their own libraries. A system of the kind is being prepared for consideration, but it would probably be premature for some little time to come to attempt to bring it into operation. The library needs to be consolidated and extended by gift and purchase before it can usefully fulfil the double purpose indicated. Before much time has passed it may, however, be hoped that the reading rooms, library, and lending library of the British Medical Association may be one of its most useful features, and one of which it may be most proud, as conferring a great boon on its members without any additional strain upon their purses, and without calling for any extra subscription.

The Army Medical Service.

One matter in which the Association has most usefully exercised its influence through the Parliamentary Bills Committee has been a successful demand for a serious inquiry by the War Office and the Government into the unsatisfactory position of the army medical officers who, by a mere stroke of the pen, and apparently at the inconsiderate caprice of some thoughtless officials, were deprived of their honorary rank, and by that circumstance, and not less so by the reckless manner in which it was carried out, lost much of their social status in the army, and were clearly shown that their position in the military hierarchy was rapidly becoming untenable. The position taken up by the Parliamentary Bills Committee in the matter was for a long time seriously contested, but after the fullest investigation their report on the subject was admitted to have such serious grounds and to aim at results so reasonable, that the Government gave way so far as to appoint a Special Commission to inquire into the matter, presided over by Lord Camperdown. On this commission sat Dr. Balfour and Mr. Macnamara, two medical officers appointed, at the request of the Government, by the Colleges of Surgeons and Physicians, and the result was the issue of a report, which has affirmed the reality of the grievance alleged, and has recommended some considerable concessions with a view of, in part at least, remedying them. Unfortunately, there has been so much delay on the part of the Secretary of State for War in announcing his decision, and there has been so steady a refusal to produce the evidence given before the Commission, which has been held back up to this date, that it is not surprising that very disquieting rumours are in circulation as to the higher influences and strong prejudices which are aiming at nullifying the work of that Committee. We refuse to believe, however, until facts shall demonstrate the result, that Mr. Stanhope will not in the end loyally give effect to the very moderate and even inadequate recommendations which that Committee has formulated. Such continued delay, however, must produce natural distrust and disquietude in the civil as well as the military professions, and we cannot but think that the publication of the evidence and the announcement of the decision of the Secretary of State had better not be much longer deferred.

Regulation of Midwives: the Draft Bill of the Association.

The regulation, education, and registration of midwives, a subject which the Association has for several years discussed and ripened with the assent of successive Presidents of the Local Government Board and of the Privy Council, and with the concurrence of the Obstetrical Society and of the General Medical Council, until it took form in a Bill, which was drafted by the Parliamentary Bills Committee, and which had the approval of the highest medical and governmental authorities, was laid to rest by the avowed inability of the Government to attend to any of these minor subjects until greater political subjects were cleared out of the way. It has, however, once more been happily pushed into prominence, and although we by no means concur in the suggestion that the case of midwives should be assimilated to and dealt with as part of the case of the ordinary hospital nurse, who stands on altogether a different footing, still, we are glad that it should have been once more discussed by the General Medical Council, and that a favourable decision has been arrived at. It is curious to note how particularly oblivious the august body seems to have been of the stage at which the question had long since arrived, and of the official *imprimatur* which they had already on a former occasion given to the Bill of the Parliamentary Bills Committee of the British Medical Association

when forwarded to them from the Privy Council. In another page will be found a brief summary of the subject, and an excellent letter by Dr. Aveling, which puts forward the facts in a correct statement. At any rate, it will now be advisable once more to attempt Parliamentary action, and this no doubt will take place at an early part of the session.

The Abuse of Relief in Hospitals, Clubs, and Dispensaries.

Two other questions affecting general medical interests will be prominent in the work of the Association in the next year, having been considerably advanced by the resolutions of the Association at the annual meeting at Leeds, and the mass of correspondence on the subject which has appeared in our pages. The first is the reform of hospital abuse, and the consideration of the best means of carrying out some general and well-considered movement to abate them, whether on the basis put forward by Dr. Rentoul in our pages and at the meeting, or in some other shape. A special committee has been appointed by the Council of the Association, for collecting and methodising the information obtained, under the presidency of Sir Spencer Wells, and with the assistance of many general practitioners who have given great attention to the subject. In Birmingham, which has always taken an active and intelligent lead in this matter, a special town meeting has been organised, of which we shall hear more shortly. It is satisfactory that the next meeting of the Association will be held in Birmingham, where there exists, perhaps, a greater mass of practical information on this subject, and a larger number of sagacious and experienced men well trained to the study, than any other city that could be named. It will undoubtedly form a leading topic at the next annual meeting, which promises to present so many features of great scientific and public interest.

Representation of the Members of the Royal College of Surgeons of England.

The question whether the Members of the Royal College of Surgeons, a body of some 12,000 to 15,000, should or should not equitably receive a share in the representation and influence in the Council of the College, which has been much debated in our columns, and has for many years been a leading topic in the councils of the Association from the date of its earliest formation, was once more resolved in the affirmative, after discussion at many of the Branches, by a vote at the annual meeting which was passed without one dissentient. This principle has been affirmed now successfully of late years by a petition signed by 5,000 Members of the College and by resolutions passed at the annual meetings of the College summoned by the President and Council in its Theatre. Lord Randolph Churchill has charge, it is announced, of a draft Bill to which nearly all the medical members in the House have, it is also stated, intimated their intention to give their support. Meantime, the Parliamentary Bills Committee has been charged by the general meeting of the Association with the duty of assisting as it can to bring the issue raised to a favourable solution in the sense indicated. Such things are not always to be done suddenly or without patient endeavour, but the history of the similar movement in respect to the General Medical Council, which met with even a more angry opposition and more closely reasoned objections from men of great eminence examined before Committees of the House of Commons and a Royal Commission, shows that the principle of the enlargement of the basis of representation of public institutions of the kind is one which Parliament is disposed to consider in a favourable sense.

The Direct Representation of the Profession on the General Medical Council.

The excellent results of the latter movement are so generally acknowledged, that they will help to point the moral in favour of that which is in course. One of the English direct representatives in the General Medical Council is chairman of its Business Committee, another a member of its Executive Committee, and a third is taking a most active part in the ripening of the question of the practical element in medical education. All of them have additional weight from the mandate which carries them into the Council, and from the representative position which they occupy. It may be worth while to consider, however, whether their means of communication with their constituents are at present adequate, and whether it would not be desirable to devise some means by which they, like other popular representatives, should, annually at least, find some means of communicating with those constituents, explaining to them what have been the principles on which they have acted during the year, what the work which they have done in the Council, and what their desires and views in the future. It is only by such real and actual contact with their constituents that representative members acquire all the force and potency which belong to the reality of their position. And although the scattered nature of the constituency in this case offers some difficulties in respect to the carrying out of such plan it probably does not pass human ingenuity to devise some suitable middle course. This also is a fit subject for the consideration of the Association, which called the system of direct representation into existence.

The Programme of the "Journal."

Finally we may point, in respect to the coming year, with satisfaction to the programme which is issued in another page. It will be seen that the contents of the forthcoming volumes are not likely to be less attractive than those which have secured to us the unrivalled and unequalled body of readers throughout the civilised world of which the British Medical Journal may boast as being greatly in excess of that enjoyed by any medical journal ever published in the United Kingdom. We hope that the continuously increasing value of the Journal as a means of communication between the scattered members of the profession throughout the world may aid to knit together the whole profession in bonds of unity and strength, to increase the spread of scientific knowledge, and to multiply the powerful efforts which the profession in every country is making, not only to advance knowledge and to alleviate the sufferings of humanity, but to aid principles of good government and to prevent the inroads of disease.

The Imperial and Colonial Branches of the Association.

The invaluable work of many of our distant Branches, such as the Adelaide and South Australia; Bermuda; British Guiana; Colombo, Ceylon; Griqualand West; Halifax, Nova Scotia; Jamaica; Malta and Mediterranean;

Melbourne and Victoria; South Indian and Madras; Sydney and New South Wales Branches, has been briefly recorded in our pages from time to time. The removal of all extra rates for postage of the JOURNAL to our colonial and foreign members involved a large sacrifice of income (not less than £600 a year), but testifies to the interest felt by the Central Association in the prosperity and extension of numbers of foreign and colonial members. It is a substantial boon, which, we have reason to believe, is highly appreciated. It will be remembered that in many instances they have been able to exert most direct important influence, not only in carrying approved legislation and in defeating mischievous measures, but also in advancing medical and surgical knowledge, and in rendering great services to preventive medicine in the respective colonies in which they are situated.

THE FUTURE OF THE ASSOCIATION.

The extent and development in number of these colonial Branches, and the great number of army and naval medical officers scattered throughout the world, who are to the extent, we believe, of nearly four-fifths of the whole service members of the Association and readers of the JOURNAL, ensures a wide dispersal throughout the surface of the globe, and wherever the English language is read of the new knowledge brought to light in these pages, and of the schemes of medical, social, and professional reform which are ventilated and discussed there. There has been an unflagging and astonishing increase in the numbers of the Association during the last few years. That increase seems destined to continue to an extent which certainly could hardly have been predicted some years ago until the British Medical Association shall by its Branches, its unattached members, and the widespread readers of its JOURNAL, become a universal means of communication between the members of the medical profession in every English-speaking country, and wherever English-speaking men reside.

DR. PAVY has generously supplied the funds required for the construction of a gymnasium beneath the court yard of the New College at Guy's Hospital.

THE publication of the important address on the Operative Treatment of Dislocation of the Shoulder, delivered by Sir Joseph Lister before the Hunterian Society on November 27th, is unavoidably postponed, pending the completion of certain further investigations on which Sir Joseph is at present engaged.

WE regret to have to record the death of Surgeon-Major Shirley Deakin, which occurred at Jhelum from enteric fever. The deceased officer was born in 1849. His commission of surgeon dated from September, 1873; he was promoted to the rank of surgeon-major in 1885.

THE Royal Commission on the Vaccination Acts resumed its sittings on Wednesday; Lord Herschell presiding. Dr. Creighton was under examination throughout the day. We are informed that copies of Professor Crookshank's work on the *History and Pathology of Vaccination* were presented to the Commissioners.

WE are glad to learn that the Bill entitled "The Foreign and Colonial Medical Practitioners' Law, 1889," which we recently referred to as being introduced into the Legislative Council of Jamaica by an elected member, Mr. Bourke, has been thrown out. We pointed out immediately on receiving the draft Bill that it was one intended to destroy any guarantee whatever that the person professing to hold medical diplomas held such diplomas as to certify to any skill or knowledge in the treatment of disease such as should be required under the Registration Act. The Bill was sprung so suddenly upon the medical profession in the island that in forwarding us a copy of the Bill, on which we commented, it was not possible to furnish us with any details of the manner or grounds of its introduction. We learn, however, by the same letter which announces the withdrawal of the Bill that the Jamaica Branch of the British Medical Association took immediate and prompt action, and that they were able to show at short notice such good grounds against this preposterous proposed legislation, that for some time, at least, it may be hoped the attempt will not be renewed.

LONDON STREET AMBULANCE.

THE Hospitals Association has completed its arrangements for the establishment and maintenance of a complete and effective ambulance service for the metropolis, and is now awaiting the result of a trial in actual work in London of a number of ambulances of two selected patterns by the various authorities who are co-operating with the Association in the movement. London has been mapped out into districts, ample accommodation for ambulance stations admirably situated has been placed at the disposal of the Association, and, as soon as the above trial is completed, the work of ambulancing London will be rapidly proceeded with.

DANGERS OF CERVICO-AXILLARY SUSPENSION.

M. LAUDE, of Bordeaux, has recently called attention to the dangers of cervico-axillary suspension. His warning is emphasised by a fatal issue lately reported from Modena. The existence of danger can hardly be doubted, and in the present state of knowledge concerning the *modus medendi* of suspension the risk should be carefully weighed. M. Laude proposes to use merely the headpiece of Sayre's apparatus connected with weights moving over a pulley. In this way he has stretched the neck 15 to 20 millimètres, an elongation of 7 to 10 millimètres persisting after the operation. Both the fact and the figures should be accepted with caution. The measurement is along the spine only, and does not necessarily imply anything further. It is impossible to be sure in a given case that such measurement is made under like conditions before and after suspension. It will differ within broad limits according to the degree of flexion or extension of the neck. At the same time, it is evidently safer to add weights at discretion than to throw the entire body at once upon the ligaments. But if it be borne in mind that the essential changes of locomotor ataxy are not, as a rule, to be found in the cervical part of the cord, and that they cannot be assumed to be present when the lower limbs alone are affected, there will remain a proportion of cases in which the practitioner will prudently abstain from measures directed against the position of the cervical vertebræ. In other instances, M. Laude's proceeding may be thought worth a trial.

A NATIONAL LEPROSY FUND.

IT is announced that His Royal Highness the Prince of Wales intends to take the chair at a subscription dinner at the Hôtel Métropole on January 13th, for the purpose of appealing for public aid in the promotion of a National Leprosy Fund. It is proposed that the interest arising from such fund should be devoted to the medical treatment and care of indigent lepers in the British Empire, and that a sum of money be set apart and placed under the control of trustees for the endowment of two studentships, one student to make the United Kingdom and the remainder of Europe his field of investigation, and the other to

go abroad and study the disease in India, China, the colonies, and elsewhere. The Duke of Norfolk, the Duke of Fife, the Archbishop of Canterbury, Cardinal Manning, the Lord Mayor, Lord Rothschild, Sir Andrew Clark (President of the Royal College of Physicians), Mr. Jonathan Hutchinson, F.R.S. (President of the Royal College of Surgeons), Sir James Paget, Sir Henry Acland, Sir Prescott Hewitt, Sir Joseph Fayrer, Sir Lyon Playfair, Sir Charles Russell, Sir Frederick Leighton, Sir George Paget, Sir Henry Thompson, Sir Edward Sieveking, Sir E. Saunders, and other noblemen and gentlemen have intimated their intention to support His Royal Highness at the dinner.

MEDICAL SELF-HELP.

It will be seen from the summary statement which we publish in another column that the roll of members of the Medical Sickness, Annuity, and Life Assurance Society now numbers more than 1,000, who have thus, in a measure, insured themselves against the loss or inconvenience, not to say distress, often arising from accident, sickness, and temporary or life-long disablement from illness and disease. Although little more than five years in active work, it has a reserve of about £37,000, and the first quinquennial valuation shows a balance of profit of upwards of £6,000. This is the property of the members, since the Society is wholly mutual and unencumbered with share capital. About 140 of the members have had occasion to make claims for disabling illness during the year. Considering that all these gentlemen joined in sound health during the last six years, this is a striking commentary on the liability to sickness and accident which besets the youngest and strongest amongst us. The total management expenses of the Society are less than 5 per cent. of the income, an altogether unprecedented record, the average of insurance societies being over 18 per cent., including the old and well-established societies, whose expenses are necessarily less than in the earlier years of such organisations. The Society is wholly mutual, and managed by an honorary elected Council of medical men selected by the members. Such a brilliant and useful result affords ground for congratulation. The Society offer all the means of securing a provision which few can afford to neglect, with due regard to the uncertainties of life, and the desirability of maintaining, under any circumstances, their independence and self-respect.

THE IMPROVEMENT OF INSANITARY HOUSES.

We print elsewhere a letter from Dr. Ashby, the experienced medical officer of health for Reading, on the above subject. Dr. Ashby remarks on the inequality of the law with respect to the removal of nuisances injurious to health within and outside the metropolis. London, whose very poor most need protection from sanitary evils, has even less power to cope with those evils than the authorities of provincial towns. There, as Dr. Ashby points out, it is legally possible for magistrates to fine an owner of property upon whose premises there is proved to exist a nuisance injurious to health, "unremoved after due notice from the sanitary authority." This power is conferred on the magistrates by the Public Health Act, 1875, the provisions of which do not apply to the metropolis, which is still under the provisions of the old Nuisances Removal Act. If the London vestries had conferred upon them even the same powers as those possessed by the authority for Reading something would be gained. But we contend for a great deal more than this. Public opinion has rapidly advanced of late years on all questions connected with the housing of the poor, and we believe that it would be more in accordance with the existing state of public opinion if the powers of our sanitary authorities and courts of summary jurisdiction were placed much higher than those conferred by the Public Health Act, which was passed fourteen years ago. We think that owners of houses, upon whose property there are proved to exist "unremoved nuisances," such as those we have described in the JOURNAL of November 23rd, should necessarily incur penalties by their neglect. Thus offenders of this class should be placed more nearly on the same footing as persons who offer for sale bad meat, stinking fish, or rotten fruit. It is not likely that an alteration or strengthening of the law, such as that we contend for, would meet with support from politicians whose interests are identified with those of the owners of house property. But it has frequently been observed by medical officers of health of great experience that the removal of nuisances is, on the whole, the best way of effecting an improvement in the houses of the poor, and, at the same time, conferring a benefit on the public health. We are sure that any measure calculated to facilitate this important work would receive the support of all disinterested persons.

THE REGISTRAR-GENERAL'S ANNUAL REPORT.

The last report of the Registrar-General just issued, dealing with the vital and mortal statistics of England and Wales during last year, is certainly an encouraging one to all interested in sanitary progress and in the health of the country generally. From a statistical point of view the year was remarkable in many respects: its marriage and birth-rates were, with one exception, the lowest on record, while its death-rate was only 17.8 per 1,000 living and much below any recorded since the establishment of civil registration in 1837. The country had last year hardly commenced to recover from the general depression which began in 1874, and the marriage-rate showed no improvement upon the very low rate recorded in 1887. The mean age of the persons who married during 1888 differed but slightly from that which has prevailed in recent years; the marriages of minors, however, showed a further satisfactory decline, although more than 6 per cent. of the males who married, and 20 per cent. of the females, were minors. The proportion of illegitimate births was lower than in any preceding year; and it is worthy of note that, although the marriage-rate has declined for many years, and with it the legitimate birth-rate, the illegitimate birth-rate has also persistently declined. Perhaps the most satisfactory feature of the present report is that the death-rate of the country was far lower last year than in any year on record. During the past eight years of the current decennium the death-rate has been lower in each year than any recorded prior to 1881, which implies that more than half a million of persons were living at the end of 1888 whose deaths would have been recorded during the eight years 1881-88, had the rate of mortality been equal to that which prevailed during the preceding ten years. The English death-rate compares most favourably with those of other European countries, in only one of which was the mortality lower than in England. With regard to mortality at different ages, it may be observed that, although the death-rate showed a decline at almost every age, yet the principal diminution was in the earlier stages of life. The effect of sanitary measures has been more marked in the reduction of the death-rate in the urban than in the rural districts of England; both have fallen, but the urban rate considerably more than the rural rate, for, while in past years the urban death-rate exceeded the rural death-rate by nearly 25 per cent., the excess during the year under notice did not exceed 10 per cent.

TEA AND STIMULANTS.

It is a great misfortune that the popular name for a person who abstains from all alcoholic liquors is *teatotaller*; the term has fostered the idea that tea is a harmless beverage; and it is no doubt true that the moderate use of well-made and not very strong tea is less harmful than the habitual resort to any other stimulant. When, however, tea drinking ceases to be

the amusement of the leisure moments of a busy afternoon, and is resorted to in large quantities and strong infusions as a means of stimulating the flagging energies to accomplish the allotted task, then distinct danger commences. A breakdown may ensue in more than one way; not infrequently the stimulus which tea in time fails to give is sought in alcohol, and the atonic flatulent dyspepsia which the astringent decoction made by long drawing induces helps to drive the victim to seek a temporary relief in spirits, sal volatile, or even eau de Cologne, which is at first dropped on sugar, and finally drunk out of a wineglass. In other cases, ladies especially, relief is sought from morphine and in a predisposed person the morphine habit is established with extraordinary rapidity. It has been said that as long as a person takes stimulants simply for their taste he is comparatively safe, but as soon as he begins to drink for the effect, then he is running into danger. This is perhaps to state the case for stimulants rather too favourably, but if the rule were adhered to we should have fewer cases of educated people sliding into habits of secret intemperance or into morphinomania.

COMPARATIVE PATHOLOGY.

Sir John Thorold reported, at the monthly meeting of the Council of the Royal Agricultural Society of England, held on December 11th, that the Veterinary Committee, conscious of the necessity of the work of scientific investigation into the diseases of animals being carried on continuously, had resolved to recommend that, instead of giving their customary grant to the Royal Veterinary College for general purposes in connection with cattle pathology the society should make an annual grant of £500 for the establishment of a chair of Comparative Pathology and Bacteriology at the Royal Veterinary College, subject to the College undertaking as before to investigate any outbreaks of disease amongst animals that may be reported by members of the Society, and to defray the expenses of such investigations when considered necessary or advisable, and of the existing veterinary privileges of members being continued as at present. This recommendation was adopted by the Council.

THE PREVENTION OF RABIES.

An interesting lecture on this subject was delivered by Dr. Ruffer before the Society of Arts on December 4th. Sir Joseph Lister was in the chair, and, in introducing the lecturer, spoke in the highest terms of M. Pasteur's work, and bore testimony to his kindness of heart and his special tenderness towards suffering, whether in man or in the lower animals. Dr. Ruffer's address was a masterly summary of the whole subject of rabies, its treatment and its prevention. Reference was made to several cases published in the *Annales de l'Institut Pasteur* since the appearance of his paper in the Journal, in which two or more persons having been bitten by the same dog, those who were inoculated remained well, and those who did not undergo the treatment died of hydrophobia. Among the most remarkable of these cases were the following: On June 1st and 2nd, 1889, eight persons from Vaucluse were bitten by the same dog. Six of them submitted themselves to the antirabic treatment, and are now quite well. Two declined to be inoculated, and both died of rabies, one on July 1st and the other on July 2nd. Pierre Butte and his wife were licked by a rabid dog on open wounds. The wife declined to be inoculated, and died of rabies. Butte, on the other hand, was inoculated, and is now quite well. Dr. Ruffer also quoted a letter which he had received from Professor Babes, of Bucharest, giving particulars as to the results of the Pasteur treatment in that city. From May 1st to August 1st, 244 persons were inoculated, after having been bitten by rabid domestic animals. The mortality among these persons was *nil*. On the other hand, 39 persons bitten by the same rabid animals declined to undergo treatment, and four of these, at least, have been certified as having died of rabies. Thirty-four persons were badly bitten by wolves on the hand and were inoculated, and of these three died of rabies. On the other hand, every one of the persons who refused to undergo treatment after having been bitten by the same wolves as those before-mentioned has died of rabies, as have 180 head of cattle bitten by the same animals. The following facts were given on the authority of Dr. Högyes: Between November 1st, 1885, and the end of June, 1888, 532 human beings were officially registered in Hungary as having been bitten by rabid animals. Sixty-two of these persons were inoculated, and not one has died of rabies. On the other hand, of the 470 persons who were not inoculated, 44 at least have been certified as having died of rabies. After Dr. Ruffer had concluded his address, Dr. Fleming, Professor Ray Lankester, Professor Horsley, and Mr. Adami, of Cambridge, spoke strongly in support of the views which he had expressed.

THE COOKERY OF THE POOR.

Our well-known correspondent, "The Doctor in the Kitchen," writes to us: A faculty of social science has, it is stated, been instituted at the University of Brussels, and Professor Berger, a Belgian authority in chemistry, has given a course of lectures on alimentary chemistry. In the first of them, he came to the academic conclusion that it was possible to determine with precision the quantity of nutritive elements indispensable for the reparation of the power of a working man, and consequently the amount of money necessary for purchasing this quantity, and that therefore when the other primary wants of a working man were determined in the same way, the minimum of salary could be fixed with scientific accuracy. Questions of taste, digestibility, and prejudice are, however, apt to be ignored in calculations of this kind; so that, although of value as a basis of information, they are far from having the practical use which their authors ascribe to them. The knowledge of the housewife and of the cook, and a familiar acquaintance with the habits and surroundings and tastes of the labouring classes, are necessary to give reality to such calculations. An excellent example of what may be done in this way is furnished in the able and interesting chapters on the subject in the popular little handbook of domestic economy issued by Messrs. Cassell and Co., and largely used in Board schools, entitled *The Making of the Home*, written by Mrs. Barnett, of St. Jude's, Whitechapel. The same subject is treated with great technical knowledge and power of sympathetic feeling for the poor in her chapter on "Our National Defences" in the joint essays by herself and the Rev. S. A. Barnett, in the well-known collection of essays entitled *Practicable Socialism*. The subject is one in which medical men, skilled as they are in the physiology of food, and accustomed to deal with the poor both in family life and in public institutions, might give great aid. That which our working classes greatly need is instruction in the art of braising, or slowly stewing at a low heat combinations of meat scraps and of vegetables. Anything more toothsome and nutritious than the vintagers' *pot au feu*, which I lately tasted in the Medoc during the gathering of the grapes, cannot well be imagined. It was so delicious that a supply of it was ordered into the Chateau for midday lunch, and it was voted by acclamation worthy of a *cordon bleu*. It was made with leg of beef, onions, carrots, cabbage, and the like, and poured smoking into bowls over slices of thin bread. What a lesson it conveyed to our managers of soup kitchens, and what a meal for our harvesters!

THE NEUROLOGICAL SOCIETY.

At the next meeting of the Neurological Society, to be held on Thursday, December 19th, at the National Hospital, Queen Square,

Mr. James Sully is, we see, announced to give an address on the psycho-physical process in attention. The subject is one of much difficulty and interest, and also of much practical importance. We understand Mr. Sully will deal with the psychology of attention and with the psycho-physical experiments bearing on it. He will discuss the nervous process in attention and its relation to motor innervation; and, lastly, he will deal with habitual directions of attention and interest, and the practical bearings of the subject.

PURE AIR IN CHURCHES.

PROBABLY all churchgoers have at one time or another experienced the irresistible tendency to drowsiness or somnolence that begins to be felt about the beginning of the sermon, and is only finally dissipated on quitting the church for the open air. Many people are inclined to assume rather hastily that pulpit oratory is to be held accountable for the creation of the soporific influences of the hour; but medical men and others who have considered the subject must be aware that, in nine cases out of ten, it is the closeness and heat of the atmosphere, and not the length of the sermon that is at fault. Because churches are, as a rule, large and roomy edifices, architects assume that ventilation is unneeded, and vicars and rectors are content to hold the same belief, although they are even greater sufferers by the foul state of the atmosphere than the congregation. Clergyman's sore throat, hoarseness, and voicelessness are directly induced by the constant and continued efforts of speech in a heated and relaxing atmosphere, and the faculties of the congregation are dulled and blunted by the same cause. Church windows are not made to open; and, even if they were, unless the entering air is directed upwards to a considerable height, it falls upon the heads of the congregation, and complaints of draughts are made to the churchwardens, which promptly secure the closing of the windows. Most churches are heated by stoves or hot water coils, but in very few cases is there any arrangement for admitting fresh air to come into contact with the heated surfaces of pipes or stoves before passing into the church. Exhaust ventilators in the roof are practically unknown in churches; consequently, the foul and heated air never escapes, and after service as the heated air cools it descends, and a fresh congregation rebreathes the used air of its predecessors. In this respect churches are even worse off than theatres, where the cubic space per head is far less, for all theatres have sunlight burners in the roof of the auditorium, which act very efficiently as exits for foul air. Although different systems commend themselves to different persons, we are inclined to advocate, in winter, the admission of fresh air warmed by contact with hot water coils beneath gratings in the floor, and numerous exhaust ventilators in the roof provided with rings of gas jets to keep up the temperature of the escaping air. In summer fresh air should be admitted by revolving panes in the windows so as to secure an upward direction, the exhaust ventilators being also kept in action. If places of worship were adequately ventilated, "church headache" would soon become as little known as "theatre headache" now is, thanks to the regulations that the latter places of amusement are now subjected to.

THE PAINS OF MUSIC.

A GOOD many Londoners will await with much interest the decision of a case which was before Mr. Justice Chitty on December 6th. The owners of some flats in Westminster applied for an interim injunction restraining one of their tenants from playing a piano, violoncello, or any other musical instrument so as to annoy any of the plaintiffs' other tenants. It was stated that the son of the defendant, who occupied one of the flats, desired to become a professional musician, and practised on the violoncello from eight in the morning till ten at night, with certain intervals, when he practised on the piano, and a daughter and her governess also played on the piano. Such perseverance as this young man's appears to indicate a real liking for music, but how many hapless girls, without any ear for music, are daily condemned to spend weary hours in acquiring an art which they will hasten to abandon when liberated from parental control. It is a wearisome penance to the children themselves, wasting their energies, and tending to produce a condition of nervous irritability. In a crowded city the habit of practising scales and exercises for hours at a time is, we venture to say, without using the term in a legal sense, a nuisance to everybody within earshot. It has, however, even more serious consequence, for we have but too often to note how the quiet and repose so much needed in sickness is destroyed by the slavish adherence to this antiquated fashion.

THE PLEA OF INSANITY IN CASES OF VIOLENT ASSAULT.

IT is unfortunately a matter of common knowledge that violent assaults are frequently committed by persons who are suffering from some form of mental disease, and who at the time are "not responsible for their actions," while the number of cases in which insanity is nowadays pleaded as an excuse for acts of violence afford ample matter for serious reflection. Every now and then, and apparently with increasing frequency, some such case is reported in the daily press, and we recently drew attention in the JOURNAL to a case in which strong hereditary homicidal tendency existed. In that instance a man was accused of attempting to stab a policeman with a large knife. In answer to the charge the prisoner said he "knew nothing about the knife," and he was stated to have been sober at the time. Another case of assault of a similar nature was recently reported in the *Times*. It was that of a youth, aged 16, who was accused of unlawfully cutting and wounding a man by stabbing him with a knife. When taken into custody, he admitted the offence and produced the knife. Evidence was brought forward to prove that the prisoner was a patient at the National Hospital for Epilepsy, that his was a bad case, and that at times it was believed he was not responsible for his actions. That he knew the nature and consequences of his act in the present instance, however, would appear to be proved by his conduct at the time. The facts bearing on the case are briefly as follows:—The prosecutor saw the prisoner beating a little boy in the street, and took hold of him to prevent him. The prisoner then threw himself down and kicked him, and the prosecutor struck him on the ear, when he again kicked, and then, getting up, drew a knife, opened it, and said to the prosecutor, "I'll hang for you," at the same time making blows at him with a knife, and stabbing him in two places. Dr. Hughlings Jackson, in his work on *Post-Epileptic States*, says: "I believe I may assume that the majority of alienist physicians admit that suddenly occurring, temporary, abnormal, elaborate actions, during unconsciousness in epileptics (and it is with such cases only that I deal) are in most instances preceded by a fit." In this case, however, there is no evidence of an epileptic seizure, of unconsciousness, or of the prisoner being in the post-epileptic state. We can understand in such cases as the first one quoted that the violent act complained of might have been committed whilst the prisoner was in a condition of unconsciousness, even although there is no evidence to show that he was an epileptic; but in the second case we should hesitate to admit, because the prisoner may be subject to epileptic seizures, and at such time he is not responsible for his actions, that in the periods between his fits, that is, at the time when he is presumed to be responsible, he should be permitted to commit violent and dangerous assaults, and then be held to be irresponsible. It appears to us that the proper course to adopt with regard to epileptics who at times exhibit violent and dangerous symptoms, would be to send them to an asylum before

mischief is done, and not to wait until a violent assault or a murder has been committed, and then plead insanity as an excuse. Asylum physicians are only too well aware how difficult epileptics are to deal with, and how unreliable they are, even when under skilled supervision; and we would therefore urge the advisability of the early removal to asylums of patients who are said to be dangerous to others at times, where they may have that skilled care and treatment which only such institutions can afford.

THE EPIDEMIC OF INFLUENZA.

THE epidemic of influenza appears to have made a considerable stride westward during the past week; it has diminished in St. Petersburg and Central Russia, but has become more prevalent in the Baltic, Polish, and southern districts. It is reported that in Warsaw and Sebastopol more than one-half of the clerks in the business offices were absent. At the manufacturing town of Lodz, in Poland, a large proportion of the inhabitants have been taken ill. A considerable number of cases are stated to have occurred in Berlin, but the report that the epidemic is prevalent in Vienna is denied by the medical officer of the Board of Health in that city, who states that only a few sporadic cases have occurred. On December 10th cases were first noticed in Paris. In London and many of the southern and western suburbs there appears to have been during the past week an unusual prevalence of illness, which can only be called influenza. Although there can hardly be said to be an epidemic in this country, and the recent severe and changeable weather may be considered to account for these numerous cases, still their appearance is not without significance, which is increased by the fact mentioned last week that there has been, for the last month or more, a serious epidemic of influenza among horses. We may point out that considerable doubt still exists as to the mode in which influenza spreads, and that observations upon this point would be valuable. In particular, it would be interesting to determine the interval of time which elapses between exposure to a person suffering from the disease and the appearance of the first symptoms in the person exposed. As the disease is often ushered in by shivering, sometimes amounting to an actual rigor, with rapid rise of temperature, the incubation period might possibly be ascertained at the beginning of an epidemic with precision.

DR. W. H. GASKELL, F.R.S.

ONE of the Royal medals of the Royal Society was formally presented to Dr. W. H. Gaskell, of Cambridge, on St. Andrew's Day. Dr. Gaskell's researches on the constitution of the nervous system are of the deepest morphological interest. His earlier studies on the composition of segmental nerves showed that each of these consists of (1) sensory or afferent fibres; (2) of large white medullated fibres for the supply of the muscles of the somatopleure, dorsal and ventral; (3) of small white medullated fibres for the visceral muscles; and (4) of grey fibres passing to ganglia, whose fibres supply the viscera and vessels. In connection with these he was led to examine the relations of root-ganglia to "vagrant" ganglia, and to investigate the segmental values of the several cranial nerves, and the nature of the several ganglia connected with them. In the course of this research he discovered the rudiments of the degenerated root-ganglia of the third and fourth nerves, thus establishing their independent segmental character. The consideration of the segmental positions of the several cranial nerve-roots led to a careful examination of the nerve-centres, in the course of which he determined the independence of the central canal of the cord as a tube continuous from the blastopore, and traceable through the fourth and third ventricles to a rudimental canal passing through the *tuber cinereum* to the vicinity of the pituitary body, the floor of the stomodæum. Dr. Gaskell has discussed, in his recent memoir, the relations of this canal, and considers that it is homologous with the digestive canal of the higher arthropods While some of his deductions are not in accordance with current morphological views, they have the great merit of consistency, and his theory affords a coherent explanation of a large number of otherwise unintelligible structures. Thus, the *locus niger*, a mass of degenerated nerve-cells, is exactly in the place where, on this hypothesis, the stomato-gastric ganglia should be, and the choroid plexuses are the degenerated and corrugated walls of the disused gastric cavities. Whether or not we accept as final his interpretation of the facts, we cannot but admire the patience, ingenuity, and skill with which Dr. Gaskell has carried on this long and laborious investigation, the merits of which have been so justly recognised by the Royal Society. There are still many lacunæ in the history of the nervous and digestive systems of vertebrates, especially with regard to the mode of origin of the secondary digestive canal and the vagus nerve. Dr. Gaskell has promised to deal with these, as far as they are illustrated by his specimens, in a future memoir.

RAILWAY SERVANTS' EYESIGHT.

WE note with much pleasure a letter from Mr. Clement Stretton (consulting engineer to the Associated Society of Drivers and Firemen) in the *Times*, for although we cannot agree with many statements made therein, we cordially endorse his main argument, namely: "It is absolutely essential, in the interests of the companies, the public, and the men, that no man should be employed in the working of the traffic unless he possesses sight enabling him to see trains and signals at the necessary distances." Further, that it is most unfair and most dangerous that the test should ever be carried out by "chief clerks and others who have no experience." In the concluding paragraph Mr. Stretton says that "the testing of eyesight being a special scientific matter, the engine-drivers and firemen consider that the only proper person to make the test is an expert." So far all is well, and we trust that the charges contained in the letter of gross ignorance, or culpable carelessness, in carrying out the tests, will attract attention of the authorities, and that the abuses will be promptly remedied. When, however, Mr. Stretton comes to deal with the nature of test to be employed, he seems not only to have forgotten that he is dealing with "a special scientific matter," but also to have lost sight of the practical aspects of the question, for not content with the demand that the test should be made by an "expert surgeon," he insists that each man is to be "taken upon the line, and required to see the actual signals at 100, 500, 1,000 yards, or any other practical distances. Let the tests be made with lamps by night, and signals by day, also in the time between daylight and dusk, also when it is fine and when it rains;" but why stop here? why not wait for a day when it snows? and why not test again under all these conditions when travelling at all speeds up to seventy miles an hour? Taking, however, Mr. Stretton's suggestions as they stand, we would ask him how long he supposes the testing of each man would occupy, and how many men are to be tested? We shall then be in a position to see how many "expert surgeons" will have to be employed, and at what cost, for the remuneration of those who are to spend their time on the line in the wet will be a serious item; perhaps we would have wet-testers and dry-testers, the latter being a higher rank. If, however, such a test as this were actually practicable, there would be no necessity to have an expert to carry it out. It is because it is impossible to make these so-called practical tests under the conditions that may arise in practice that scientific tests have to be substituted. Mr. Stretton considers that the counting of dots at certain distances and the sorting of coloured wools are tests "of no value whatever," and "prove nothing," and states that "many railway servants when they have failed in the wool-test obtain instructions from persons serving in the Berlin-wool shops after which they pass the test

without "any trouble." If such is really the case, the test has been most improperly carried out. It is a fact, established beyond doubt, that Holmgren's wool-test, properly conducted, is perfectly efficient, and that the failures to pass it are due to defective colour-sense, which no amount of instruction can remedy, and not, as suggested, to ignorance. As regards the principle of the "dot test," we would advise Mr. Stretton to study any elementary treatise on the function of vision before he exposes his ignorance. It must be obvious to anyone who considers the subject that the so-called "practical" tests are so cumbersome that they are impossible of application to large bodies of men. If they are to be used at all, some modification of them might be reserved for cases which have failed to pass the ordinary tests as a means of convincing the sceptical of the accuracy of these.

SCOTLAND.

THE MEDICAL EDUCATION OF WOMEN AT EDINBURGH.

THERE seems every reason to believe that the whole subject of the medical education of women in Scotland will shortly come up for revision. Without entering on debatable ground, the division in the Edinburgh camp is the best evidence in favour of the desirability of this. The "disruption" from the Edinburgh School of Medicine for Women has been more considerable than we were led to believe at first. It is now stated that there are fourteen ladies in attendance at the newly-instituted classes, as against twenty-two in connection with the older institution. There is further reason for believing that the former number would have been larger had the announcement of the establishment of these classes been made earlier. Public interest has been roused afresh in connection with the subject, while it is not unlikely that the relation of the University to the medical education of women will come prominently before the Universities Commission. It is well known, of course, that several university professors are in full sympathy with every move in favour of the extension of university privileges to women.

THE EDINBURGH SOCIETIES.

OUR Edinburgh correspondent writes: Seldom in the recent history of the Edinburgh societies has there been greater sign of active life. So far as the session has gone the attendances have been better than for several sessions past; and this in spite of the fact that within comparatively recent times two new societies have been inaugurated. When the Pathological Club was commenced some two years ago the fear was expressed that its existence and work would damage the Medico-Chirurgical Society. This fear has proved groundless, and probably the latter society has been stimulated to fresh vigour through the influence of the younger club. More recently the Scottish Microscopical Society has appeared upon the scenes, but its presence has in no sense injured any of the more strictly medical societies or the ancient Royal Society. There can be no question that a factor of considerable importance in this happy culmination is to be found in the recently-founded laboratory of the Royal College of Physicians of Edinburgh.

ARTISTIC CHARITY.

TAKING advantage of the magnificent decoration of the immense Waverley Market, Edinburgh, in connection with the Balfour demonstrations, an influential Committee organised a grand musical *conversazione* in the market, on the night following, with a collection in aid of the funds of two most deserving medical charities—the Gilmerton Convalescent Homes. The result was a splendid success, the assembled company numbering, it is estimated, between 8,000 and 9,000 persons. Between the two parts of an admirable programme, the Rev. Dr. MacGregor, of St. Cuthbert's Parish, made a stirring appeal on behalf of the charities. Music, he said—divine music—had ever been the solace of suffering. A great public charity for the alleviation of suffering had often had great musical genius as its handmaid and its help; but he ventured to think that at least north of the Tweed, never had the two had so splendid a hall or so large and brilliant an assemblage on which to manifest their united charms than they had that night. It was a magnificent gathering and a noble object. In the two great convalescent homes—whose claims stood almost next to those of the Royal Infirmary and the Sick Children's Hospital—working men and poor children were helped to complete recovery when they left their sick beds. Sick men of the working classes obtained there what they could not often get, and without which many of them would otherwise die. At the close of the evening, it was announced that the handsome sum of £1,022 18s. 8½d. had been subscribed, as the result of this special appeal.

MEDICAL ATTENDANCE AT THE EDINBURGH SCHOOL.

THE attendance at the Edinburgh Medical School is reported to be this winter in some departments larger than ever. This applies both to the university and the extra-mural side. Apparently one of the causes for the increased numbers is the growing tendency which prevails in favour of a five years' course. So long as the official curriculum extends to four years only and the tendency referred to increases, the necessary result will be an apparent numerical increase in the total number of students. On November 30th, the matriculated students of medicine in attendance at university classes numbered 1,656—a figure distinctly above that recorded for the corresponding date last year. For the same date the returns from the other faculties are reported as follows: arts, 909; law, 456; divinity, 112.

ENTRIES AT GLASGOW UNIVERSITY.

THE total number of matriculated students at Glasgow University numbers this winter 2,041, as against 2,010 last year. The increase is not due to a greater number of ordinary students, but to an exceptionally large attendance at the evening classes of naval architecture, on account of which a very small matriculation fee is charged. As a matter of fact, the three chief faculties of arts, medicine, and law show each a slight decline on last year; thus the medical students are, all over, fewer in number by 11, the total this year being 683; in arts the total is 961, only 6 fewer than last year; in law the students number 184, against 191 last year. In the Faculty of Medicine 384 attend the anatomy classes, 144 the physiology classes, 307 attend the systematic surgery class, and 153 the systematic class of practice of medicine, the largest number for many years; in the class of therapeutics there are 137, and in midwifery 134. In short, there are as yet no signs that the rival medical schools are making any headway against the University. This can hardly be expected, however, until by affiliation of these institutions their classes come to qualify for the degree.

GLASGOW UNIVERSITY STUDENTS' UNION BAZAAR.

FOLLOWING the example set by Edinburgh students, the students of Glasgow University have organised a bazaar in order to raise funds to provide for the annual maintenance of the Union Buildings. These buildings were erected at a cost of £5,000 by Dr. J. McIntyre, a student of Glasgow fifty years ago, and provide admirable accommodation for meetings of societies, for dining rooms, etc. But in the present straitened circumstances of the Univer-

sity there are no available resources for the proper upkeep of the buildings. Hence the resort to a bazaar, and for four days this month (18th, 19th, 20th, and 21st) the Bute Hall, reserved for the solemnity of graduation and public worship, and sacred to the oratory of the Chancellor or Principal or of some distinguished guest, like the Duke of Argyll, or to the prelections of a scholar like Max Müller, will be converted into a huge shop for the sale of needlework and knick-knackery of every description. Ten thousand pounds worth of goods, it is said, have been collected, and to ensure the good humour of those who are expected to pay £15,000 for the pleasure of taking them away, the attractions of concerts, comedies, comediettas, *café chantant*, and waxworks are provided; and, lest honest wheedling should not prevail, conjuring and palmistry will not be absent. The halls of the University are to be transformed. To ensure success much is being sacrificed. The students' reading room has already been closed, the chapel service on Sunday has been discontinued; and it is needless to say the students are themselves sacrificing their studies in a most self-denying manner. The bazaar is to be opened on Wednesday, 18th inst., at 12 noon, by the Chancellor, Earl Stair, and Principal Caird.

GLASGOW UNIVERSITY COUNCIL ASSOCIATION.

THE annual meeting of this Association was held under the presidency of Mr. J. G. A. Baird, M.P., on December 6th. The report of the Association was published some time ago, and was noted in the JOURNAL at the time. The Association is waiting for the work of the Commissioners to begin; and it was agreed at the meeting to instruct the Committee to prepare evidence to be laid before the Scottish University Commissioners, and in that way to represent the views of the Association in the matter of university reform.

GLASGOW UNIVERSITY ASSISTANTS' ASSOCIATION.

THE assistants of Glasgow University have formed themselves into an association for the purpose of laying before the University Commissioners a statement of their position, status, and duties in the University. They are preparing to lead evidence on the subject, and to offer suggestions for improving the present unsatisfactory state of affairs, so far as they are concerned. The Edinburgh University Assistants' Club did some useful work during the passing of the Universities Bill, and may take similar steps now. In any case an effort will be made to get the assistants in all the Scottish Universities to co-operate to the same end. The Glasgow Association has already reason to believe that they will be granted a *locus standi* before the Commission.

GLASGOW UNIVERSITY SETTLEMENT.

THE students of Glasgow University are attempting to found a residential settlement similar on a small scale to the London East End University settlement and to one established in Edinburgh. It is situated in Possil Road, in a densely-populated district. A building has been secured, one of the "flats" being fitted up with accommodation for fifteen students as boarders. The cost of alterations has been £550, much of which has yet to be raised; but apart from this the "settlement" is expected to be self supporting. It was opened at the end of last month only, and already eight students have taken up residence.

THE ABERDEEN MEDICO-CHIRURGICAL SOCIETY.

AT the monthly meeting of the society, held on December 5th, Dr. Garden described a case of excision of the uterus by the suprapubic method. The patient, a multipara, aged 24, suffered from a well-defined epithelioma of the uterus, which was mostly confined to the cervix. The operation, which was successful, offered little trouble, the hæmorrhage was slight and the patient made an satisfactory recovery. The uterus was shown to the members. Dr. Mackenzie Davidson detailed a case of sarcoma of the eyeball and orbit, and showed several beautiful specimens of kindred tumours. Dr. Alexander MacGregor described an interesting case of abscess of the temporo-sphenoidal lobe, with purulent meningitis, and exhibited a cast of the specimen.

THE GIFFORD LECTURES AT ABERDEEN.

THE first of the series of Gifford Lectures on Natural Religion was given on Friday, December 6th, in the hall of Marischal College, by Dr. Edward B. Tylor, D.C.L., F.R.S., Reader in Anthropology in the University of Oxford. These lectures are free to the students, members of council, and officials of the University; also to the general public on the payment of a certain small fee. Principal Geddes introduced the lecturer to his audience, which crowded every part of the hall. Dr. Tylor, after a few introductory remarks, proceeded to open the road into anthropology. He defined it as consisting of three main branches—1, as to race; 2, as to language; and, 3, as to civilisation, and in an interesting manner he illustrated his meaning. He treated of the antiquity of man, and showed the need for a long chronology to explain the developments that have taken place. He gave a graphic account of a negroid race that came into view last century in Tasmania, describing how he came to associate a stone implement preserved in the museum of Taunton, in Somersetshire, with like implements used by the Tasmanians for cutting wood. He pointed out that these Tasmanians were palæolithic, like the men of the Mammoth Age, and were even, in some respects, at a lower stage of the stone-making art. The lecture was illustrated by diagrams and models, and at the close Dr. Tylor gave a practical illustration of the mode of manufacture of the stone implements referred to in his lecture.

IRELAND.

SIR JOHN BANKS attended at Windsor last week and received the honour of K.C.B.

WE regret to announce the death of Dr. McNab, Professor of Botany in the Royal College of Science, Dublin.

SIR WILLIAM STOKES has been appointed Examiner in Surgery in the University of Oxford.

TYPHOID fever continues very prevalent in Belfast, but the mortality is, happily, rather light.

DR. FRANCIS T. HEUSTON has been appointed Professor of Anatomy in the Royal College of Surgeons in Ireland.

AT the last meeting of the Committee of the Royal Medical Benevolent Fund of Ireland Deputy Surgeon-General King was appointed Honorary Treasurer in room of Mr. W. Thomson, resigned.

THE Right Hon. Viscount Monck, Lieutenant of the County and City of Dublin, has appointed Dr. Austin Meldon, J.P., President of the Royal College of Surgeons, Ireland, to be a Deputy Lieutenant of the city of Dublin.

THE Local Government Board for Ireland have recently issued a circular to the sanitary authorities where the Notification of Infectious Diseases Act applies. The provisions of the Act are specified, and it is pointed out that the medical attendant of a patient suffering from an infectious disease is liable to a fine of

40s. if he fails to forward the necessary certificate forthwith to the medical officer of health.

PRACTICAL CHEMISTRY.

THE Council of the College of Surgeons, Ireland, has directed that lectures in practical chemistry may be taken during the winter months in place of the summer session as heretofore. This arrangement will allow candidates to present themselves in April instead of July for examination.

ENTRIES AT THE BELFAST MEDICAL SCHOOL.

THERE is a large increase this year in the number of students entering for the first-year medical classes at Queen's College. The number of students in attendance at the Belfast Royal Hospital this session also shows a considerable increase upon recent years.

THE LATE DR. JAMESON DWYER.

WE regret to state that Dr. Jameson Dwyer, the resident medical officer of the Cork District Asylum, died on December 4th. He had been ill for some time, and it is understood that he suffered from cancer of the stomach. He was a comparatively young man. He had held his appointment for about three years, having been promoted from a similar position in Mullingar.

DUBLIN ORTHOPÆDIC HOSPITAL.

THE annual meeting of this hospital was held on Monday, December 9th. The report showed that 121 intern patients had been treated during the year, and that no death had occurred. Thirty-eight beds are available, and the committee heartily praise the labours of the staff, Messrs. Iwan, Cranny, and Chance. The hospital is in the happy condition of being free from any debt.

CORK UNION WORKHOUSE.

COLONEL SPAIGHT, Local Government Board Inspector, in his recent half yearly report on the condition of this workhouse, makes various suggestions to remedy its present overcrowded state. The expense of the alterations recommended will be under £200, and he believes they will relieve all existing pressure, and provide ample room in the hospitals. As these matters alluded to by him are many of them of the utmost importance, and the overcrowded part of the establishment is both inconvenient and dangerous, he strongly urges the guardians to give them their immediate consideration, and not refer it to a committee, that it may not meet with the fate of his last report, dated June 3rd last, which has not yet been considered by the guardians.

INSPECTOR IN LUNACY.

DR. HATCHELL has, we understand, definitively resigned his position as one of the inspectors in lunacy. He has held his office for a considerable number of years, and has retired owing to failing health. Some time ago it was understood that the Government intended to place this department under the Local Government Board. During the summer a commission of inquiry, composed of Sir Arthur Mitchell, Dr. Maccabe, and Mr. R. A. W. Holmes, C.B., was appointed to report on the subject. It is assumed that the report was not favourable to the proposed change. At all events, several candidates are looking for the vacancy which, it is believed, will be filled very shortly.

TYPHOID FEVER IN DUBLIN.

THE outbreak of typhoid fever does not increase. It is not possible to state how many cases have occurred, there being no notification of disease outside the hospitals. This drawback will, however, shortly be removed, as the Corporation has decided to apply the Act to the city. As has already been stated, there is no doubt that a number of the fatal cases acquired the disease in Paris. That the outbreak does not depend upon any special local cause is shown by the fact that typhoid is prevalent in other large towns at the present time. At the last meeting of the Public Health Committee, Dr. Charles Cameron reported that during the week ending November 23rd, 1889, there were registered in the Dublin registration area 164 deaths, being 41 below the number for the corresponding week in the previous ten years. The death-rate was 23.5 per 1,000 persons living, the rate in the city being 24.6. During the first forty-seven weeks of the present year the death-rate was 3.4 below the mean rate in the corresponding period of the previous ten years. The zymotic death-rate in the whole area was only 1.3 per 1,000. The rate in the city was only 1.2 per 1,000. During the week ending November 30th there were registered in the city districts the deaths from zymotic diseases of 26 persons, as against 10 in the corresponding week last year.

MEDICAL WITNESSES.

AT the Munster Winter Assizes on Monday last, counsel applied to Judge Murphy that the medical witnesses should be allowed an amount beyond that granted by the Treasury, which was totally inadequate to defray the expenses of the witnesses, on account of the long distances they had to come, and the high prices charged for accommodation. The judge said this matter had been brought before his colleagues last year, and it had been decided that the rules laid down by the Treasury should be strictly adhered to. He suggested that an application should be made to the Treasury. Of course, everyone knows what the result of such an application would be. The Treasury officials do not know the circumstances of any particular case or district, and they lay down inflexible rules which they imagine will suit all claims. There is no doubt that great hardship is inflicted upon medical men in this matter. They are required to travel long distances, they lose their home income, they are put to all sorts of inconvenience, and they are rewarded with a miserable fee. This is a subject upon which the profession should take united and energetic action. As a body they are at least as intelligent and learned as lawyers, who always manage to take care of their own interests; and they should be as well remunerated when services are rendered in criminal cases.

A UNIVERSITY EXTENSION SCHEME FOR BELFAST.

AN influential committee, including the Mayor of Belfast, Mr. C. C. Connor, M.A., and the President of Queen's College, Dr. Thomas Hamilton, has been formed for the purpose of promoting a scheme of higher education for Belfast analogous to that which has been adopted in so many of the larger English towns under the auspices of Oxford, Cambridge, and London Universities. It is proposed to give short courses at a small fee upon selected subjects, such as would be likely to prove interesting and advantageous to the large numbers of young men and young women who are unable to pursue a regular collegiate curriculum, but are nevertheless anxious to participate in the advantages of higher education. The lectures will probably take place at the Queen's College. The scheme meets with general sympathy and approval in Belfast.

SUICIDE IN SLIGO LUNATIC ASYLUM.—A man named Moffett, who had been for a short time confined as a dangerous lunatic, recently committed suicide. He went to the lavatory, where there is a short chain attached to a water pipe, with which he made a noose, and, having slipped his head into it, hung himself. The coroner's jury exonerated the asylum officials from all blame.

THE ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION, 1890.

Owing to the somewhat late period in the year at which the invitation to hold the annual meeting of the Association in Birmingham was received and accepted, the arrangements are not yet so complete as in former years, but a large general committee and all the necessary subcommittees have been formed, and the use of the requisite public buildings has been obtained.

Since the last meeting of the Association in Birmingham very great changes have taken place there. The town has become a city, and this change of name is well borne out by the vast improvements that have been effected. A magnificent new street has been driven right through the centre of the city, which is now lined by handsome shops and public buildings. Among the new public buildings in the centre of the town, the most noteworthy are the Council House, the Mason Science College, the Art Gallery, the nearly completed Victoria Law Courts, the Medical Institute, the School of Art, the Eye Hospital, the Skin and Lock Hospital, and the Parish Offices.

In its medical institutions great progress has been made. The General Hospital has been enlarged by the addition of two new wards, a nurses' home, and a new pathological department; while the Jaffray Suburban Hospital of fifty beds, as a portion of the same institution, may be reckoned as an addition of so much accommodation for the in-patients of the General Hospital. The Queen's Hospital has only recently spent £10,000 upon enlarging its ward accommodation, building a new pathological department, and improving its sanitary arrangements. The Eye Hospital has been entirely rebuilt upon a new site, and now affords accommodation for seventy in-patients. It is in every respect an admirably equipped institution. The Orthopædic Hospital has been recently enlarged and improved. The Ear and Throat Hospital occupies new premises, but these are not sufficient for its expansion, and it is now in contemplation to erect a suitable building. The Women's Hospital has removed to a new in-patient department at Spark Hill, while the out-patient work is done at a new building in the centre of the town. The Children's Hospital has been enlarged by the addition of another wing, while the Skin and Lock Hospital, founded in 1880, has had built for it a handsome structure with accomodation for in- and out-patients. The Medical Institute was founded in 1874, but the present building was opened for use in 1880. It contains a handsome hall for meetings, a reading room, and a library of upwards of 12,000 volumes. The Mason Science College, though not a medical institution, is a very important adjunct to the Medical School of Birmingham, as it is here that the medical students obtain their preliminary scientific training. It was founded by Sir Josiah Mason, who opened it in 1880. The Queen's College has recently been enabled to make substantial additions to, and improvements in, its teaching accommodation, and the museum especially has been greatly enlarged and improved.

For the purposes of the meeting the Town Hall, Mason Science College, Queen's College, and Midland Institute are so conveniently grouped together that it will be possible to obtain every accommodation required without going further than across the street. In addition to these facilities for the work of the meeting, it is hoped that abundant means will be found to provide for the entertainment and amusement of visitors. Besides the usual evening entertainments, numerous excursions will be planned to the many places of interest in the neighbourhood, and it is certain that a hearty welcome will be given to visitors availing themselves of this opportunity of visiting Stratford, Kenilworth, Warwick, Leamington, Coventry, Worcester, Droitwich, Dudley, etc. Arrangements will be made to obtain facilities for visitors to see the new Poor-law infirmary (which is a splendid example of what such a building ought to be), the new lunatic asylum at Rubery Hill, the borough asylum, and the various museums, factories, and other places of interest.

MEDICAL SELF HELP.

A Statement and Letters.

During the current year the Medical Sickness, Annuity, and Life Assurance Society has experienced a continuation of the progress and success which it has enjoyed from the outset, and which repeats itself in a manner that, if monotonous, must be very gratifying to its members, and especially so to the officers and committees whose honorary efforts have tended in a large degree to bring about this satisfactory result. In mere numbers there has been a considerable increase—about 10 per cent. The Society has now over 1,000 members, and since its formation over 1,200 proposals have been received. The finances have grown to an even larger extent, the reserves having increased by more than 25 per cent. By the close of the year the capital will probably have reached £37,000, which is wholly the property of the members for the purposes of the Society, and is not swelled or eaten into by any shareholders' or outside capital. Thus, as there are no dividends to be paid, any profit resulting from success must ultimately come to those by whom the premiums have been paid. But, after all, the mere rapid accumulation of funds is rather a test of the soundness and security of such an organisation than a measure of its true usefulness. This, however, has been fully proved by the year's work of the Sickness Fund, which certainly deserves attention. During the period the number of members claiming sickness pay will certainly reach and probably exceed 140, while the total sickness experienced will fall little (if any) short of 700 weeks. This involves an expenditure of over £2,300 paid to the members during the year under that head alone, in amounts varying from £2 2s. to £120. The causes of claim are interesting, and go to show how general the risk of disablement must be among even the healthy members of the medical profession, and how advisable it is for all, especially the young, to make provision. Among the more noteworthy are sixteen cases of accident (which is recognised and paid for by the Society as "sickness"), and six of fever; there have been six cases of severe lung disease (two fatal), twenty-seven of bronchitis and slighter forms of affection of the throat and air passages, twelve of rheumatism, and six of nervous breakdown. One member suffering from locomotor ataxy and another from chronic myelitis have been in receipt of sickness pay during the whole of the year. The remainder of the cases are of a slight and varied character, including one of treatment at the Pasteur Institute for the bite of a dog.

The Life Assurance Fund has made steady progress, and one claim of £200 has been paid on the sudden death of one of the younger members who had joined in perfect health less than three years previously. At the general meeting held at Leeds in August last, a new feature was introduced into the Annuity branch, giving the members a further option, under which, provided the selection be made within one year of joining, a single payment can be received at the age of 65 in place of the annuity. The rate of this is £75 for each £10 of annuity, and thus a sum of £375 may be had in place of the annuity of £50 per annum—proof, at all events, of the large value of this class of assurance to those who reach the age of 65. During the year the Society has been valued for the first time, the work being undertaken by Mr. F. G. P. Neison, the recognised actuarial authority on statistics of sickness. He pronounces the result to be extremely satisfactory, there being a profit margin of assets over liabilities

of £6,449, which is the exclusive property of and is placed to the credit of the members. The Society has now been in existence nearly six years. It is doing a great work, and its usefulness cannot be too widely known. It enables young and old to make provision against the financial calamities of sickness, disablement, accidents, chronic disease, and death. Full information as to the work of the Society, with proposal forms and copies of the last annual and valuation reports can be obtained, free of cost, on application to the Secretary, Mr. C. J. Radley, 26, Wynne Road, Brixton, London, S.W.

*** A concrete individual statement is often more interesting than a general statement. The following extracts, which have been placed before us from letters received this autumn, illustrate the satisfaction which individuals have found from the success of their efforts at self-help and wise provision:—

One Member writes: I wish to express my thanks for the great consideration shown me during my long and trying illness. Owing to my eyes being the part attacked, I was often unable to write myself. As one of the original members, I can hardly express the benefit I have derived from the Society, not only in money, which was substantial, but also in relieving, to a certain extent, my anxieties and difficulties. When I had the misfortune to contract the purulent ophthalmia, I could hardly have been more unfortunately situated, my resources being drained by heavy outlay, so that my balance at the bank was nearly exhausted, and but for the weekly payment I should have had to borrow at once to pay daily expenses. Under all the circumstances, the club has been of quite unspeakable value to me, and I have been pointing the moral—myself the text—to possible insurers, in and out of season, for the last six months.

P.S.—I am still waiting to be fitted with an eye, but hope to get over to Wales as recommended next week for a more bracing air.

Another writes: I commenced work this morning, and enclose the receipt for cheque sent. I am much better, and must express my great gratitude to the Society for the most valuable and prompt help it has afforded me. Without its aid I could not possibly have taken the change I did, and without such a change I must certainly have died in no short distance. It has been the means of my overcoming and ousting a wretched disease, and I again beg to express my extreme gratitude for its timely help.

SCIENTIFIC GRANTS COMMITTEE.

At the meeting of the Scientific Grants Committee on October 15th Dr. Sidney Martin was re-elected one of the two research scholars of the British Medical Association for the year 1889-90, and further grants were made to complete the sum available for the present year. The following is a complete list of scientific grants which have been made by the Council of the Association upon the recommendation of the Scientific Grants Committee, amounting to a total of £503 3s.:

	£	s.	d.
Ballance, Mr. C. A., for continuing an investigation into the Pathology of Cancer	20	0	0
Hadden, Dr. W. B., for defraying expenses incurred in experiments on the Course of Motor Tracts, Brain, and Spinal Cord of Monkeys (being balance of unexpended grant last year)	9	3	0
Haldane, Dr. J. S., Oxford, for the purchase of apparatus required in the carrying out of the Chemical Analyses connected with his Calorimetrical Work	31	0	0
Halliburton, Dr. W. D., an investigation of Various Pathological Fluids, Transudations, and the like	30	0	0
Haycraft, Dr. J. B., Aberdeen, in aid of two researches: the Chemico-Physical Character of Certain Proteids, and another which deals with the question of Capillary Hæmorrhage	10	0	0
Luff, Dr. A. P., London, to continue an investigation to determine the Connection (if any) of the Ptomaines or Animal Alkaloids with Infectious Fevers	20	0	0
Reid, E. W., Esq., M.B., St. Mary's Hospital, continuation of an Investigation to Determine to what Extent the Vitality of the various Epithelia covering the Cavities of the Body Influences the Absorption of Different Substances, and to Observe the Effects of various Drugs tending to Exalt or Depress the Irritability of Protoplasm upon the Power of Absorption of these Cavities, the Vascular Factor being excluded	20	0	0
White, Dr. W Hale, for investigating the Rise of Temperature produced by Lesions of the Central Nervous System	40	0	0
Bayliss, W. M., Esq., Experiments on the Pancreatic Secretion with a View to Discovering the Nerves presiding over it, and to Ascertain the Nature of the Inhibition stated to occur during Vomiting, and on Stimulation of the Central End of the Vagus or other Sensory Nerve	10	0	0
Cheyne, W. Watson, M.B., for continuing some work on Diseases of Bones and the purchase of a Microtome for cutting large and complete Sections	40	0	0
Delépine, Sheridan, M.B., in aid of a research on the Meanings of the "Cardio-pneumatic" Movement, and on the Modifications of that Movement in Disease	40	0	0
Edington, Dr. A., Edinburgh, (I) a critical re-investigation into the Blood of Scarlatinal Patients at as early a date as opportunity affords. (2) A consideration of the (1) Changes produced in the Blood by the Action of Micro-organisms, 1, Pathogenic, 2, Non-pathogenic. (II) The Origin of the Red Blood Corpuscles in the Adult. (III) The Origin of the Pus from the Cell Elements (*a*) of the Blood, 1, Direct; 2, Indirect; (*b*) of the Tissues. (IV) The Part played by Involuntary Processes in the Tissue Cells with regard to Tumour Formation. (V) A Consideration of the Relationship of certain Micro-organisms to Tumour Formation ...	40	0	0
France, E. P., Esq., University College, W.C., the Tracing Out of Degenerations following Artificial and Carefully-localised Lesions in the Monkey's Brain	40	0	0
Maguire, Dr. R., London, in aid of a Research upon the Excretion of Potash Salts and Phosphates in Disease...	20	0	0
McWilliam, Dr. J. A., Aberdeen, to Investigate the Action of Ether and certain other Drugs upon the Vascular System in a New Way, which will Afford a Simultaneous Record of the Changes occurring in (1) the Auricles, (2) the Ventricles, (3) the Arterial System as Tested by the Sphygmograph, and (4) the Arterial System as Indicated by Blood Pressure	25	0	0
Mott, Frederick Walker, M.D., Harrow-on-the-Hill, to Investigate (1) Whether the Muscles of Adduction and Abduction of the Vocal Cords are Represented in the Cortex Cerebri by distinct localised Centres; (2) also to Ascertain that the Adductor Muscles, which are connected with Phonation, are much more Represented in the Cortex than the Abductor, thus explaining hysterical cramp of the glottis, the epileptic cry, laryngismus stridulus, and other functional disturbances of the brain associated with spasm of the glottis	20	0	0
Bradford, Dr. J. Rose, University College, some Experiments on the Action of the Cortex Cerebri on the Vasomotor System	15	0	0
Mr. Hankin, (1) to Investigate the Nature of an Albumose that has been Obtained from Anthrax Cultures under Certain Conditions, which has been already found to Possess Highly-interesting Poisonous Properties; (2) to Find Out whether the Changes in the Suprarenal Capsule that have been Noticed in Animals poisoned with this Albumose are or are not Causally Connected with its Injection; (3) to Find Out whether the Difference between Virulent and Attenuated Anthrax Depends on the Power that the Former has of Producing a Ferment, Evidence having been found of the Existence of this Power in Virulent Anthrax, and no such Evidence with the Attenuated Bacilli	50	0	0
Ashdown, Dr. H. H., continued Research upon Absorption from the Bladder...	10	0	0
Kirk, Dr. Robert, Partick, Glasgow, (1) for a Research on Alcaptonuria with Special Reference to the Oxidation of Uroleucic Acid and Analogous Substances, as Gallic Acid, in the Blood, and the Detection of such Oxidation Products, if any, in the Urine; (2) on the Distinction between Albumen and Mucin in the Urine, and some other Points n Connection with Proteids in that Fluid... ...	10	0	0

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.

A MORE than usual amount of general interest has been manifested in the election of office-bearers of the Royal College of Physicians of Edinburgh, in view of the early session at Edinburgh of the Commissioners under the Universities (Scotland) Act. It was even feared that an attempt might be made to oppose the election of the prospective president. From the list which we subjoin, containing the result of the election on Thursday, December 5th, it will be seen that this fear was practically groundless. We are informed that Professor Grainger Stewart was returned unanimously. There can be little doubt as to the practical wisdom of this step. From the eminent position Dr. Grainger Stewart has attained in the profession, not merely in Scotland and the United Kingdom, but also in America and on the Continent, and particularly in view of present issues, from his long connection with, and knowledge of, the Edinburgh School of Medicine, no man could more fittingly have been selected for the Presidentship.

It has, moreover, been most frankly stated by Dr. Grainger Stewart that in filling the President's chair his endeavour will be to consider all questions affecting the interests of the Royal College from the point of view of the College, and by word and deed to advance its rightful interests in so far as lies in his power. The fact of their President's occupancy of a University chair—more especially the chair of Practice of Medicine—must, on mature consideration, be construed by the Fellows as a happy coincidence under existing conditions. The Royal College of Physicians of Edinburgh is to be congratulated on having available one so thoroughly worthy of maintaining the best traditions of the presidential office.

Of the six gentlemen who have been appointed to the Council, four have already held office, and their return by the Fellows after varying periods of trial is the best testimony to the high esteem in which their services are held. Dr. Robert Peel Ritchie, after a

long term of office as treasurer, was promoted to the presidential chair in 1887. During the two years of his occupancy of this office Dr. Ritchie has largely increased the amount of the College's indebtedness to him, and it was no formal compliment when Professor Grainger Stewart nominated him Vice-President, and the Fellows included him in the list of Councillors. The fresh names added to the Council—Drs. Affleck and Sibbald—are accompanied by the best credentials of tried experience on the questions of medical education and politics, and of prudence and practical sagacity in their discussion.

The most ardent friends of the extra-mural division of the Edinburgh School of Medicine must recognise that its interests have not been overlooked by the Fellows, seeing that four of the Councillors have been closely related to the school for a long period of years, while one of the highest feathers in the President's cap is the fact that he was the most successful of extra-mural teachers at a time when the difficulties of the school were immeasurably greater than at present.

The following is the list of office-bearers:

Dr. Thomas Grainger Stewart, *President.*

Council.

Dr. George William Balfour	Dr. John Batty Tuke
Dr. Robert Peel Ritchie	Dr. James O. Affleck
Dr. David James Brackenridge	Dr. John Sibbald

Dr. Robert Peel Ritchie, *Vice-President.*

Examiners.

Dr. Douglas	Dr. Bramwell
Dr. Keiller	Dr. Gibson
Dr. G. W. Balfour	Dr. Croom
Dr. R. Peel Ritchie	Dr. Hart
Sir D. Maclagan	Dr. Russell
Dr. Muirhead	Dr. Gray
Dr. Brackenridge	Dr. Bruce
Dr. T. A. G. Balfour	Dr. Milne Murray
Dr. Wyllie	Dr. Noel Paton
Dr. Andrew	Dr. Stockman
Dr. Batty Tuke	Mr. William Lees, M.A.
Dr. Carmichael	Sir Arthur Mitchell
Dr. Affleck	Dr. Henry D. Littlejohn
Dr. Jamieson	Dr. Charles Hunter Stewart.
Dr. James	

Dr. Peter A. Young, *Treasurer.*
Dr. George Alexander Gibson, *Secretary.*
Dr. George W. Balfour, *Librarian.*
Dr. Thomas A. G. Balfour, *Curator of Museum.*
Dr. John Batty Tuke, *Curator of Laboratory of Research.*
Dr. George A. Gibson, *Registrar of Applicants for the Licence.*
Dr. German Sims Woodhead, *Superintendent of Laboratory.*
Mr. Christopher Douglas, W.S., *Clerk.*
Mr. John Wilson Brodie, C.A., *Auditor.*
Mr. John Mathieson Shaw, *Under Librarian.*
John Broome, *Officer.*

Representative of the College on the General Medical Council,
Dr. John Batty Tuke.

Representatives of the College on the Committee of Triple Qualification,
Dr. Peddie and Dr. George W. Balfour.

THE EDUCATION AND REGISTRATION OF MIDWIVES.

Those who are interested in the amelioration of the present condition of our midwives will be glad to see that the General Medical Council has again had its attention directed to the subject. The result has been the passing of two resolutions to the effect (1) that public safety demands from Government the passing into law of some measure to enforce the education, licensing, and registration of midwives; (2) that the Council would be willing to advise as to the general rules of education, examination, and discipline, but that it would not undertake the duties of licensing, controlling, and registering midwives. This is very well as far as it goes, but the Council might have agreed to more practical and useful resolutions had its members acquainted themselves more fully with what had already been done by various bodies, and more especially by the Parliamentary Bills Committee of this Association. The history of the attempts to improve midwives is a very long one. It dates from 1547, when Andrew Boorde complained of the "unexpert mydwife" of his day, and urged the necessity of her being properly educated. Since that time more than twenty proposals with the same object have been published, including a notable one made in 1615 by Dr. Peter Chamberlin "that some order might be settled by the State for the instruction and civil government of midwives."

The present movement for the education and registration of midwives began about twenty years since, and had its initiative with the midwives themselves. In 1870 the Obstetrical Society of London appointed a Board for the examination of midwives, but it was only intended as a tentative expedient, for it is manifestly not the work of a scientific society, and the diploma granted has no legal value. The fees paid for it, however, bring into the Society a net annual income of £100. It would be a graceful act of the Society if this money were employed towards securing for midwives a legal status. In 1873 Dr. James H. Aveling read a paper before the Metropolitan Branch of this Association upon the necessity of educating, licensing, and registering midwives, at the conclusion of which the following resolution was carried: "That the Council be requested to appoint a Midwifery Committee to inquire into and report upon the best means of instructing and registering midwives." From that time the Association, through its Parliamentary Bills Committee, has spared no trouble in examining, and has lost no opportunity in forwarding every practical scheme for the amelioration of midwives. It has held numerous meetings at which all matters connected with the subject have been fully discussed. It has sought and carefully considered the opinions of midwives, of Fellows of the Obstetrical Society, and of all interested. It has sent deputations to the Lord President of the Privy Council urging the necessity for immediate action; and after having threshed the subject well out for ten years, it, in 1883, had a Bill drafted based upon Clause 23, relating to midwives, of the Bill to amend the Medical Act introduced by the Duke of Gordon in 1858, and upon a scheme proposed by the Obstetrical Society, at the same time giving due regard to the opinions expressed by Government and the General Medical Council. The provisions of this Bill were very carefully revised by a special committee composed of the following gentlemen: Mr. Ernest Hart (Chairman), Dr. Robert Barnes, Dr. Grigg, Mr. Nelson Hardy, Dr. C. Holman, Mr. Sibley, Dr. Quain, Dr. Priestley, Dr. Playfair, and Dr. J. H. Aveling. A copy of the Bill was sent to the Lord President, and he forwarded it to the General Medical Council, who approved of its general objects and returned it with a favourable report to the Government.

It is much to be regretted that in the recent debate of the Medical Council no reference was made to this Bill, for in it provision is made for carrying out in detail the duties which the Council declines to undertake. In the Bill, arrangements are made for the education, licensing and registration of midwives by a Midwifery Board, which it is proposed should be appointed by a Branch Council of the General Medical Council. It would be useful to know whether the General Council were willing to appoint such a Branch Council for the purposes of the Act; and it would have materially assisted in passing the Bill if its general purport and machinery had been approved and recommended to the Government for adoption.

If the General Medical Council wishes to assist in protecting the public from the deathful work of ignorant midwives, it must do more than pass, as it has done at intervals for the last twelve years, such resolutions as the following: "That means of legal sanction might be provided for giving credentials of competency to midwives, and that the lives of women in labour should, as far as practicable, be protected against the unskilled." It is undoubtedly true, as that most eminent medical statesman, Sir John Simon, so recently stated to the Council, that "the subject of midwives was ripe for legislation." It has been ripe for many years; yet, owing to the present inability of the House of Commons to get through the work demanded of it, this important question is in the slough of legislative stagnation, from which no power save a widely spread expression of opinion and a strong popular movement can possibly extricate it. How is this to be aroused? The following figures, which may be accepted as approximately correct, ought to be sufficient. The deaths in childbirth among women attended by skilled midwives amounts to only 1 in 600; the average loss of life in childbed is 3 in 600. Who is responsible for two-thirds of the deaths taking place outside the practice of skilled midwives? It cannot rest with medical men, but with ignorant midwives. In England and Wales, 4,500 women perish annually in childbirth. By the employment of trained midwives this mortality might be reduced to 1,500, effecting a saving each year of 3,000 valuable lives. As the deaths of

these women occur one by one, at various times and divers places, little notice is taken of the hideous mortality. Were all these mothers to die at one moment, in one place, how different would be the effect on the public, and how soon Parliament would be forced to pass the much needed Act.

THE MANSION HOUSE PASTEUR COMMITTEE.

A MEETING of the Pasteur Institute Mansion House Fund was held at the offices of the British Medical Association, 429, Strand, on Thursday, December 5th. The following gentlemen were present:—Sir James Whitehead, Sir Spencer Wells, Sir James Crichton Browne, Sir Henry Roscoe, Dr. Bridgwater, Mr. Ernest Hart, Dr. Fleming, Professor Victor Horsley, Dr. Holman, Mr. Everett Millais, Professor Penberthy, Professor Roy, Dr. Sidney Turner, Dr. Ruffer.

Mr. ERNEST HART proposed, and Professor HORSLEY seconded:—"That the following gentlemen be added to the list of the General Committee: Dr. Bridgwater, Mr. Walter Gilbey, Dr. Holman, Mr. Jonathan Hutchinson, Professor Huxley, Mr. Lee, Professor Roy, Dr. Donald MacAlister, Sir Jacob Wilson." This was carried unanimously.

A report was presented by Professor ROY and Dr. RUFFER, from the Special Committee previously appointed, recommending that steps be taken for the formation of a Bacteriological Institute, on a basis of which the details were suggested in outline.

Sir JAMES CRICHTON BROWNE moved, and Professor PENBERTHY seconded:—"That the report now presented be adopted." This was carried *nem. con.*

Sir JAMES CRICHTON BROWNE moved, and Professor PENBERTHY seconded:—"That the Mansion House Committee of the Pasteur Institute Fund, having received and adopted the report of the Subcommittee appointed to consider the establishment of a Bacteriological Institute of Preventive Medicine in connection with the University of Cambridge, constitutes itself a committee to give practical effect to the recommendations contained in that report." This was carried unanimously.

The following gentlemen were appointed an Acting Committee, to give practical effect to the recommendations contained in the Subcommittee's report:—Sir James Whitehead, Sir Andrew Clark, Sir Joseph Lister, Sir Spencer Wells, Sir Henry Roscoe, Sir James Crichton Browne, Sir Jacob Wilson, Dr. Bridgwater, Dr. Fleming, Mr. Ernest Hart, Dr. Holman, Professor Horsley, Professor Huxley, Mr. Hutchinson, Mr. Lee, Mr. Everett Millais, Dr. MacAlister, Professor Penberthy, Professor Roy, Mr. Walter Gilbey, and Dr. Ruffer. This was carried unanimously.

THE INFLUENZA EPIDEMIC OF 1889.

THE extension westward of the epidemic, anticipated in our previous article, has already occurred. It has reached Constantinople, Athens, and more recently Vienna, Berlin, and Paris. In Stockholm it is severe.

Influenza has shown a tendency in the past to disappear for thirty or forty years and then burst out afresh. We have not had an epidemic here since 1847; it is therefore somewhat overdue. As a rule it has been preceded by a similar malady among horses: for instance in 1688 the cavalry horses encamped at the Curragh were affected several weeks before the influenza or "short fever" appeared among the troops and civil population. In 1732–3 the horses were universally attacked with a running of the nose and cough. In 1743 the epidemic spread first amongst the deer; then the horses were affected—many died. In 1775 horses and dogs were affected in August and September; but the epidemic did not attack men till October.

The present epidemic among horses has now lasted for at least six weeks, and has spread largely in London, affecting mainly the large stables, one firm of carriers having 100 horses affected at the same time. Horses in small stables generally escape, whilst those in large ones suffer most severely.

As the horses are already affected it behoves us to prepare by adopting every invigorating means in our power to withstand the evil when it attacks ourselves.

In the *Annals of Influenza*, by Dr. Theophilus Thompson, F.R.S., the standard work on the subject, from which recent writers, both in the medical and general press, have culled their information, some most suggestive hints are given as to the cause of the disease which, viewed in the light of modern bacteriological science, are little less than prophetic. Writing in 1851 the author adduced evidence in support of the opinion that these epidemics are produced by vegetable germs borne on the wings of the wind. He invited special attention to the disturbed condition of vegetable and animal life repeatedly recorded during influenza years. Peculiar seasons are shown to recur in cycles; these cycles are associated with recurring developments in the lower forms of life, and with consequent disordered conditions of the health of man. "Is it unreasonable to imagine that some fluctuations in the health of man may have reference to stages in the condition of some of the despised and even invisible classes of the lower creation?"

Epidemic prevalence may, in accordance with Pasteur's hypothesis, be connected with special conditions of oxidation, etc., suited for the extensive development of an organism usually prevalent only in a sporadic form, just as in South Africa the country is covered every eight or ten years with a flower sparsely, if at all, seen during the interval. The plants, indeed, are present, but are unnoticed because the flower does not come to perfection; so the anthrax bacillus can only produce its spores when the temperature is suited to its full development.

When the attention of bacteriologists is concentrated on the influenza epidemic (and we learn that in Professor Sackers's laboratory at Vienna investigations are already being made), the clear light of modern science will be thrown on its precise condition, It may possibly appear that, in its passage through the lower animals the virus gains its power of influencing for evil the human subject. The poison of hydrophobia increases in virulence in passing from dog to rabbit, and so on, but loses its virulence in passing through the monkey, so perhaps some animal may be found to play the monkey for us as regards influenza.

We must not, however, indulge in such surmises. Those who help to put together the "puzzle of life," and to show the exact relations which exist between the germs of disease and the conditions of the environment which determine their growth and destruction, will indeed be the world's benefactors.

LIST OF AUTHORS AND OTHERS WHO HAVE PRESENTED BOOKS TO THE LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

FOURTH LIST.

The following books have been presented by their respective Authors.

ANDERSON (Professor McCall). A Treatise on the Diseases of the Heart. 1887.
BARNES (Robert) and BARNES (Fancourt). Obstetric Medicine and Surgery. 2 vols. 1885.
BLANDFORD (G. F.). Insanity and its Treatment. 3rd edition. 1884.
BRAMWELL (Byrom). Diseases of the Heart. 1884.
DICKINSON (W. H.). On Renal and Urinary Affections. 3 vols. Vol. I, Diabetes. 1887. Vol. II, Albuminuria. 1887. Vol. III, Miscellaneous Affections of the Kidneys and Urine. 1888.
DUCKWORTH (Sir Dyce). A Treatise on Gout. 1889.
FENWICK (E. H.). Electric Illumination of the Bladder and Urethra. 2nd edition. 1889.
HARLEY (George). Albuminuria, with and without Dropsy. 1866.
——— Diabetes; its various Forms and different Treatments. 1866.
——— Diseases of the Liver (a Treatise on). 1883.
——— Extrusion of Gall-stones by Digital Manipulation. 1889.
——— Histological Demonstrations. Edited by G. T. Brown. 1876.
——— On Sounding for Gall-stones. 1884.
HOLMES (T.) and HULKE (J. W.). A System of Surgery by various Authors 3 vols. 3rd edition. 1883.
HUMPHRY (Professor G. M.). The Human Foot and the Human Hand. 1861.
——— Observations on Myology, 1872.
——— A Treatise on the Human Skeleton. 1858.
HUSSEY (E. L.). Coroner's Report, Oxford. 1888.
——— Extracts from various Authors. 1883.
——— In Accidents and at other Times. 1889.
——— Occasional Papers. I and II. 1882, 1887.
MANCHÉ (Surg.-Maj. L.). L'Ottalmologia. 1885.
MARSHALL (J. Milnes). The Frog; an Introduction to Anatomy, Histology, and Embryology. 1888.
——— Studies from the Biological Laboratories of Owens College, Manchester. 1886.
MOORE (Sir William). Diseases of India. 1886.
——— Family Medicine for India. 1889.
——— Health Resorts for Tropical Invalids. 1881.
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NEUROLOGY AT THE INTERNATIONAL MEDICAL CONGRESS.—The following will probably be the subjects submitted for discussion in the Section of Neurology at the tenth International Medical Congress at Berlin: 1. Surgery of the Brain and Spinal Cord; 2. Traumatic Psychoses and Neuroses; 3. The Relation of Syphilis to Diseases of the Central Nervous System.

SURGICAL AID SOCIETY.—A successful record of useful work is afforded by the report of the Surgical Aid Society, submitted at the annual meeting, presided over by the Lord Mayor on December 6th; 3,162 men, 4,229 women, and 1,356 children, or a total of 8,747 patients, were assisted by the Society.

ASSOCIATION INTELLIGENCE.

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members, in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the office.

NOTICE OF QUARTERLY MEETINGS FOR 1890. ELECTION OF MEMBERS.

MEETINGS of the Council will be held on January 15th, April 16th, July 16th, and October 15th, 1890. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting, namely, December 25th, March 27th, June 25th, and September 4th, 1890.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No member can be elected by a Branch Council unless his name has been inserted in the circular summoning the meeting at which he seeks election.

FRANCIS FOWKE, *General Secretary.*

NOTICES OF BRANCH MEETINGS intended for insertion in the JOURNAL of the current week should be forwarded, addressed to the Editor, so as to reach the office not later than mid-day Wednesday of that week.

BRANCH MEETINGS TO BE HELD.

METROPOLITAN COUNTIES BRANCH: EAST LONDON AND SOUTH ESSEX DISTRICT.—The next meeting will be held, by the kind invitation of the Medical Superintendent, at the Mile End Infirmary, Bancroft Road, on Thursday, December 19th, at 8.30 P.M. The evening will be devoted to a demonstration by Dr. Robinson, of several interesting cases at present in the infirmary.—J. W. HUNT, Honorary Secretary, 101, Queen's Road, Dalston.

METROPOLITAN COUNTIES BRANCH: WESTERN DISTRICT.—A meeting of the above District will be held in the Library of St. Mary's Hospital, Paddington, on Saturday, December 21st, at 8.30 P.M. The chair will be taken by the President of the Branch. Dr. W. B. Cheadle will exhibit and give a brief demonstration of the following cases: Transposition of Viscera; Myxœdema; Cretinism; Rheumatic Nodules in Chorea and Heart Disease; Two Cases of Hepatic Ascites, in which recovery has taken place under repeated tappings and the administration of iodide of potass. Mr. A. Q. Silcock, Surgeon to the Hospital, will give a brief address in Surgery, and will show cases of Acromegaly, Hyperostosis of Cranial Bones, Traumatic Meningocele, Frontal Exostosis, and others of surgical interest. He will also demonstrate specimens from a fatal case of Parasitism by Psorospermiæ in man. Mr. Crowle, F.R.C.S., will show pathological specimens.

BORDER COUNTIES BRANCH.—The next meeting of this Branch will be held at the County Hotel, Carlisle, on Friday, December 20th, at 6 P.M. Supper at 9 P.M. Members desirous of reading papers kindly communicate with JAMES ALTHAM, Honorary Secretary, Penrith.

ABERDEEN, BANFF, AND KINCARDINE BRANCH.—An ordinary general meeting of this Branch will be held in 198, Union Street, Aberdeen, on Wednesday, December 18th, at 8 P.M. Business:—Minutes, etc. Dr. Ogilvie Will: Unusual Case of Strangulated Hernia. Dr. McKenzie Davidson: The Telephone applied to aid in the Detection of Bullets and pieces of Metal in the Body. Dr. Gibb: Note on a Case of Accidental Injury. Dr. Mackenzie Booth: Suggested Improvements in the Aberdeen General Dispensary as a place of clinical teaching. —ROBERT JOHN GARDEN, J. MACKENZIE BOOTH, Honorary Secretaries.

SOUTH-EASTERN BRANCH: EAST AND WEST SUSSEX DISTRICTS.

A CONJOINT meeting of these Districts was held at the Marine Hotel, Worthing, on November 28th. The chair was taken, in the unavoidable absence of Mr. G. B. Collet, by Mr. W. S. SIMPSON.

Next Meeting.—It was decided that the next meeting of the West Sussex District should be a conjoint one with East Sussex, to be held at Brighton in March.

Pilocarpine and Naphthaline in Infantile Therapeutics.—Dr. ANGEL MONEY advocated the use of sweating and non-sweating doses of nitrate of pilocarpine in cases of fits of various kinds, whether fits of the mental, motor, vasomotor, sensory, or trophic centres. He had had some, but by no means a large, success in severe cases of fits associated with organic disease. Naphthaline had been used as a deodorant; it was valueless or almost valueless in cases in which ulceration and sloughing were going on. He advocated the dry method of treating vaginal discharge in infants and children, whether scrofulous or not. Intestinal antiseptic irrigation every day for a month was spoken of as greatly benefiting a chronic catarrhal colitis associated or not with worms.

Intussusception.—Mr. T. JENNER VERRALL, of Brighton, read the notes of a case of intussusception, showing how the intussusception was reduced by one finger in the rectum and the other hand upon the abdomen, the reduction being immediately followed by the passage of a fæcal motion, and pointing out how valuable in very young children was exploration of the abdomen by means of the finger in the rectum.

Abdominal Palpation in Pregnancy.—Dr. HERBERT R. SPENCER read a paper on this subject. He said advantage should be taken of the thinnest parts of the abdominal wall, namely, the linea semilunaris, the linea alba (especially in multiparæ), and the umbilical region. In early pregnancy, when deep pressure had to be made, he had sometimes found it useful to examine with superposed hands. He said that the normal unimpregnated fundus uteri, while lying below the pelvic brim, lay, and could often be felt, at a height of $2\frac{1}{4}$ inches or more above the top of the pubic bone; that there was no period of pregnancy at which the fundus could not under favourable circumstances be felt above the pubes by abdominal palpation alone; that its increased size could be made out at the eighth week of gestation, and sometimes as early as the sixth week. He wished, however, particularly to direct attention to the advantage to be derived from abdominal palpation in late pregnancy and in labour. The outline of the uterus having been determined by palpation (which was more reliable than percussion), the surface should be explored, the contraction under manipulation and any movement of the child noticed, the round ligaments felt as two soft cords passing downwards at the sides of the front of the uterus, the pulsating uterine arteries, and sometimes the uterine thrill at the side of the lower segment. Abdominal ballottement was best obtained from the fifth to the eighth month, but could sometimes be detected in the latter part of the first half of pregnancy, by placing the two hands at the sides of the lower segment and giving, with the left fingers, a pushing movement to the uterus, at the same time rhythmically depressing the fingers of the right hand at the rate of four or five times a second; the course of the fœtus from left to right, being suddenly checked by the fingers of the right hand, gives rise to a very distinct sensation. The characters of the head (of which the nose and ear could sometimes be felt) and its flexion as determined by the method of Pinard, of the breech, back, and limbs, were then detailed. Dr. Spencer also described—he believed for the first time—the characters of the child's loin—a U-shaped hollow, of which the "limbs" were formed of thigh and chest, the "bow" by the anterior corner of the iliac crest and the loin: it was of value in the diagnosis of the exact position of the child's body. Dr. Spencer then described the way in which the placenta could be felt (at least when prævia) by abdominal palpation, as detailed by him in a paper read before the Obstetrical Society, and he also mentioned three cases in which he had felt the cord coiled round the child's back. He concluded by urging the importance of a careful systematic abdominal examination of every case of late pregnancy and labour.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT.

A MEETING of this District was held at the Kent and Canterbury Hospital, Canterbury, on Thursday, November 28th; Mr. C. H. SCHÖN in the chair.

Next Meeting.—It was decided that the next meeting should be held at Dover in March, 1890; Mr. Long was elected chairman.

The Dinner Question.—It was unanimously agreed by the members present that, for the next twelve months, a tea be provided instead of a dinner as heretofore after the meeting.

Cases.—A clinical demonstration of cases in the hospital took place at 2 45 to 3.45—Dr. GOGARTY showing cases of Paraplegia; Athetosis; three cases of Typhoid; Enuresis treated successfully

by large doses of Belladonna, given just before bedtime; and a case of Simple Ascites.—Mr. WHITEHEAD REID showed a case of Epithelioma of the back of the hand in an old man; a case of Genu Valgum in a young girl, upon whom he had performed Macewen's operation; and a case of Removal of Simple Cyst in the neck of a young woman.—Mr. GREASLEY exhibited a case of Large Sarcomatous Tumour of the back of the Shoulder.—Mr. F. WACHER showed a woman in whom he had removed entirely both breasts for Scirrhus. After the demonstration, Mr. WACHER showed and read full notes of an interesting case of Cirsoid Aneurysm of the Scalp in a man, aged 26.—Mr. J. E. SCHÖN showed a woman, aged 23, with a tumour growing from the posterior and upper part of the leg; the growth was generally thought to be enchondromatous.

Papers.—Dr. TYSON read a paper on the Berlin Clinics, describing a personal visit to that city, with remarks upon what he saw.—Dr. T. EASTES narrated a case which he had just seen, namely, that of a newly-born infant, which he had rescued from a state of asphyxia by means of catheterising the larynx, and afterwards performing artificial respiration.

BATH AND BRISTOL BRANCH.

A SPECIAL meeting of this Branch was held on Wednesday evening, November 27th, at the Museum and Library, Bristol, W. JOHNSTONE FYFFE, M.D., President, in the chair. There were also present fifty-four members and two visitors.

New Members.—The following gentlemen were elected: E. Biddlecombe, M.R.C.S., L.R.C.P., Bath; F. Lace, M.R.C.S., L.R.C.P., Bath; A. M. Gray, M.R.C.S., L.R.C.P., Keynsham; W. Bourne, M.D., Clifton. [G. Hardyman, M.B., was elected a member at the special meeting on December 5th.]

Alterations in Rules.—The following alterations in the rules of the Branch were proposed by Dr. MARSHALL and seconded by Dr. SWAYNE: 1. In Rule VI, to omit the words "one-third of whom shall retire annually, by rotation, eligible for re-election," and substitute "one-fourth of whom shall retire annually, by rotation, who shall not be eligible for re-election for that year." To this Dr. CROSSMAN proposed and Dr. MARKHAM SKERRITT seconded the following amendment: "To add to the present rule, unaltered, the following words, 'The President, upon his retirement from office, shall become Vice-President for life and *ex officio* member of Council,'" and Dr. HARRISON proposed and Dr. HARPER seconded an amendment, substituting in Dr. Marshall's resotion the words "one-sixth" for the words "one-fourth." On a division both the amendments were lost, and the original resolution was carried. 2. To alter Rule VII, to read thus: "That the meetings of the Branch shall consist of not less than six ordinary meetings, one or two of which shall be for discussion of special subjects to be chosen by the Council. These ordinary meetings shall be held in Bath on the last Wednesdays of November, February, and April, and in Bristol on the last Wednesdays of October, January, and March, subject to the discretion of the Council. The annual meeting, and any additional ordinary and special meetings, shall be held at such time and place as shall be fixed by the Council." To this the following amendments were proposed: (*a*) By Mr. R. S. FOWLER, seconded by Dr. SHINGLETON SMITH: "That the ordinary meetings of the Branch be held on the last Wednesdays of October, November, January, February, March, and April alternately at Bath and Bristol." (*b*) By Dr. ELLIOTT, seconded by Dr. GOODRIDGE: "That the meetings of this Branch shall consist of not less than eight ordinary meetings, one or more of which shall be for discussion of special subjects to be chosen by the Council. These ordinary meetings shall be held in Bath on the last Thursdays of November, February, April, and June, and in Bristol on the last Wednesdays of October, January, March, and May, subject to the discretion of the Council. The annual meeting shall be held in July, and at such place as shall be fixed by the Council." On division the first amendment was carried, and when put as a substantive resolution was also carried. 3. New Rule VII*. "The General Council shall meet before the first ordinary meeting of the session, and previous to the annual meeting, and at such other times as called by the President, or on a requisition addressed to him by three members of the Council." The resolution was carried. 4. In Rule VIII, to omit the words "the communications being read in the order in which notice has been received by the secretaries." This resolution was negatived.—The following gentlemen joined in the discussion on these resolutions: Drs. STEWART, BURDER, BONVILLE FOX, BEDDOE, BRABAZON, AUST LAWRENCE, LONG FOX, HINTON, and MARKHAM SKERRITT, and Messrs. EWENS, GRIFFITHS, CROSS, and SCOTT.

METROPOLITAN COUNTIES BRANCH: SOUTH LONDON DISTRICT.

A MEETING was held at Lambeth Infirmary on Wednesday, December 4th; Dr. FREDERICK TAYLOR, Vice-President of the District, in the chair.

New Member.—Dr. T. B. Hyslop, Bethlem Hospital, was elected a member of the Branch.

Cases.—The following cases were shown by Dr. LLOYD, Superintendent of Lambeth Infirmary: 1. Recovery without a bad symptom from Rupture of Abdominal Wall through the Scar of an old Operation for Hernia, with Protrusion of sixteen inches of Intestine. The occurrence took place during coughing. [Mr. JACOBSON narrated a similar case.] 2. Puerperal Insanity following Puerperal Eclampsia. 3. Congenital Ichthyosis under treatment with Lanolin and Salicylic Acid. 4. Myxœdema. The case was previously shown at the Clinical Society in 1881. No marked physical change since, but now delusions of poisoning and occasional albuminuria are present. 5. Suppurating Glands in the Neck and Necrosis of Sternum in an old Woman.

Precancerous Condition in Epithelioma of Tongue.—Mr. JACOBSON read a paper on the precancerous stage of epithelioma of the tongue, and the importance of recognising it. He remarked on the extreme gravity of this stage, the increasing frequency of tongue cancer, and its probable relation to syphilis. This stage was frequently overlooked and time lost in dallying with drugs and caustics. The chief varieties of the precancerous stage were leucoma, persistent chronic glossitis with hypertrophy and sulci, ichthyosis of the tongue, bald tongue, warts (especially those of syphilitic origin) on the posterior third of the tongue, fissures, cracks, and ulcers. He recommended microscopic examination of the epithelium by scraping the tongue after the application of a 5 per cent. solution of cocaine, and referred to the importance in diagnosis of persisting induration or excoriation, the character of the pain, commencing fixity of the tongue, and glandular enlargement. He said that waiting for the last three of these would only sign the patient's death certificate. He illustrated his paper by a patient from whom he had removed half the tongue with scissors, and also showed drawings from cases of his own and from Butlin's work. He insisted on the importance of early operation.—Dr. LLOYD asked as to definite facts respecting the relationship of pipe smoking to tongue cancer.—Mr. GOLDING-BIRD could not agree entirely with Mr. Jacobson, and thought his conclusions too sweeping. The conditions he mentioned above were not always precancerous, and the rest of the tongue was often normal when there was localised epithelioma. He agreed as to the importance of leucoma and ichthyosis. A persistently white tongue was more often due to syphilis than smoking. All cases when first seen were more or less inflamed, and needed pot. iod. for three weeks. Many of the deviations in cells described by Butlin as pathological were within normal limits.—Mr. ANDERSON said in the majority of cases there was no history of syphilis, and named a case in a young single woman who was a virgin. He agreed with Mr. Golding-Bird as to the microscopical appearances, and had found "bird's-nests" on scraping normal tongues. In removing half the tongue it was important not to cross the middle line and interfere with the genio-hyo-glossus of the opposite side.—Mr. LEWIS LEWIS asked if the effect of smoking was due to the drug or the mode of use.—Mr. CAMPBELL BOYD asked whether the disease were common among sailors.—Mr. GOLDING-BIRD asked whether ladies in the harems of Constantinople who smoked cigarettes suffered from tongue cancer.—Dr. FREDERICK TAYLOR asked as to the tendency of these lesions to recover spontaneously, and whether cancer of the tongue was more common in tobacco countries.—Mr. JACOBSON allowed that the shape of normal cell might vary, but the general type was important. In precancerous ulcers healthy cells were few and the tailed ones numerous. He did not mean that all these conditions became cancerous: but if a man had leucoma he was not safe from cancer. Epithelioma of the tongue was common among miners and Manchester operatives. He had no experience of the ladies in harems in Constantinople, but cancer of the tongue was common in that city and due to syphilis. Cigarettes were pernicious for a man with tongue disease, because always at hand; he thought if women took to cigarette smoking cancer of the tongue would increase among them.

Vote of Thanks.—The proceedings closed with a vote of thanks to Dr. Lloyd for the use of the room.

ABERDEEN, BANFF, AND KINCARDINE BRANCH.

A MEETING of this Branch was held at 198, Union Street, Aberdeen, on Wednesday, November 20th, Dr. OGILVIE WILL, President-elect, in the chair.

Minutes and New Member.—The minutes of the last meeting having been read and approved, Dr. George Davidson (Portlethen) was balloted for and admitted a member of the Branch.

Amputation of Nose.—Dr. OGILVIE WILL showed a man aged 52, whose nose he had entirely removed a few days previously on account of carcinoma. When admitted to hospital, the whole nose to within three-quarters of an inch of the nostril was swollen, hard, and livid, with a uniformly smooth surface, except where ulcerated, and with a sharply-defined border. About the centre of the tumour there was a deep ulcer covered with bright red granulations which bled freely. The skin was not movable over the growth, and was much thinned. The alæ of the nose were much broadened, and there was some bloody discharge from the nostrils. The patient suffered considerably from severe pain, worst at night. He was first put on large doses of iodide of potassium without apparent effect. A slice of the tumour was then removed and examined microscopically, when the original diagnosis (of carcinoma) was confirmed. The operation consisted in plugging the nares, and then removing the nose by a circular sweep with a scalpel. Some projecting bony parts were then removed by means of a bone forceps, the soft parts were scraped with a Volkmann's spoon, and the resulting cavity was plugged with boracic lint. The subsequent progress was eminently satisfactory, the wound granulating speedily, and the resulting deformity was not nearly so marked as might have been anticipated.

Injury to Elbow-joint.—Dr. GEORGE ROSE read notes of several cases of Hutchinson's injury to the elbow-joint in children, in which the injury resulted from slipping up of the orbicularis ligament over the head of the radius, and was remedied by pronation and flexion of the joint.

Cases, Specimens, etc.—Dr. MACKENZIE BOOTH showed a patient who had been incapacitated for work by deafness resulting from bilateral purulent tympanitis, but who, by the use of Yearsley's pellet, had been enabled to pursue his ordinary avocation and engage in telephonic communication.—Professor OGSTON exhibited Dr. Ward Cousins's Artificial Drumheads. Professor Ogston also showed Methoff's Hygroscope and explained its *modus operandi*.—Dr. HALL showed a large Calculus which he had removed from a boy, aged 15, by lateral lithotomy after lithotrity had failed. The calculus, which weighed an ounce and a quarter, was of the mulberry variety and walnut-shaped. Dr. Hall also exhibited for Dr. WILSON, of Huntley, a large uric acid calculus weighing an ounce removed *post mortem* from the bladder of a man aged 90; also small phosphatic calculus removed by him from the meatus urinarius of a young man, which had caused retention of urine for twenty-four hours. After its extraction two pints of urine were passed.

SPECIAL CORRESPONDENCE.

PARIS.

Section of Social Economy.—The Parasite of Aphthæ.—The Development of Pathogenic Microbes in Normal and Abnormal Serum.—The Cause of Strabismus.—The Ocular Condition in Hypnotism.—Successful Laparotomy for Gunshot Wound.—Comparative Strength of Digitalin in Different Counties—Treatment of Hæmoptysis by Ipecacuanha and Antimony.—General News.

IT is officially announced here that the Cross of the Legion of Honour, with the grade of Chevalier, has been conferred on Mr. Ernest Hart, in recognition of his services to France, especially as President of the Social Science Committee in the recent International Exhibition. It is hoped that suitable recognition will also be made of the services of Dr. Louis Parkes, who acted as the very efficient Honorary Secretary in organising this section, which has proved so interesting that the French Government have resolved to establish a permanent Museum of Social Economy, which of course includes hygiene, education, public sanitation, and other cognate subjects. M. Léon Say, the eminent President for France of the Section, has appealed to English exhibitors to allow as many of their exhibits as possible to remain in the permanent museum. It is hoped that a large proportion of the exhibitors will comply with this request, if not in form, in substance, by leaving either their exhibits or by forwarding equivalent models and books.

MM. Linossier and Roux are making a series of researches on apthæ (oïdium albicans of Robin, saccharomyces albicans] of Van Tieghem), and concludes, from those accomplished up to the present time, that the form of nourishment exercises the principal influence on the development of this parasite; the more chemically complex is its nourishment, the more filaments are formed which lengthen out and become thin.

MM. Charrin and Roger have studied the development of pathogenic microbes in serum taken from healthy, diseased, and vaccinated animals. In serum taken from a rabbit suffering from acute disease, the pyocyanic bacillus developed less abundantly than in normal serum; the difference was most evident during the hours that immediately followed mixing the bacilli with the serum.

M. Parinaud, in a paper read before the Academy of Sciences, stated that the theory that strabismus results from the unequal length of two muscles with antagonistic movement is erroneous. There are many causes operating to produce strabismus, but the immediate one, Dr. Parinaud asserts, is disturbed innervation. In converging strabismus innervation is over-stimulated; in diverging strabismus there is insufficient stimulus.

MM. Luys and Bacchi have examined by the ophthalmoscope the fundus of the eye in a series of hypnotised subjects. In the cataleptic condition there is hyperæmia of the retina, the papillæ of the optic nerve are rosy, the iris is excessively dilated and insensible to the influence of light. In a state of somnambulism there is less hyperæmia of the retina, the iris is also influenced by its contact with light.

M. Jalaquier has performed laparotomy successfully on a woman who shot herself in the abdomen. This is the second instance in this country of laparotomy being successfully performed in a case of wound from firearms. M. Vaslin achieved the first success. M. Jalaquier is the only surgeon who has succeeded in a hospital ward.

M. G. Bardet, in a note sent to the Academy of Sciences on the comparative activity of different forms of digitalin, amorphous and crystallised, stated that crystallised digitalin and amorphous digitalin, prepared according to the French code or pharmacopœia, are soluble in chloroform, they are of equal strength, and their effects are similar. French digitalin and German digitalin are soluble in water and insoluble in chloroform, they are twenty or thirty-five times less energetic than the digitalin of the code; also possibly the action on the heart may not be precisely similar to that of the French digitalin (digitalene). The German digitaline, or crystallised digitaline, is insoluble in chloroform, its strength varies in each sample; and is three, sometimes four times, less energetic than the code digitaline.

M. Vidal recommends treating pulmonary hæmoptysis in phthisical patients with ipecacuanha and antimony, or kermes (oxydum stibii sulphuratum rubrum), in small doses every ten minutes; if this does not completely arrest the hæmoptysis, M. Vidal counsels applying Gunod's cupping glasses or ligating a limb. When fever is present, two grammes of ergot of rye and one gramme of sulphate of quinine divided in four doses, to be taken every three hours, M. Vidal has found successful, but condemns the use of iron or arsenic, generally considered good in treating hæmorrhage.

The discussion on the prophylaxis of tuberculosis continues at the Academy of Medicine. M. Hardy spoke lengthily, and concluded by saying he deplored in the name of humanity the publicity given to the precautions which should be observed with phthisical patients, and he could but, with pain, regard them as pariahs to be shunned. If the counsel of some "ultra-contagionist" doctors be followed, it is greatly to be feared that the patients will be deserted, or, at the least, be deprived of a great part of the care they need. Dr. Cornil, in a subsequent meeting in which the same subject was talked over, observed that the much-dreaded publicity exists, and the terrible disturbance of the public, which was prophesied, has not come to pass. M. Trasbot contended that the bovine origin of tuberculosis is not so clearly

demonstrated as many supposed it to be. Boiled milk and cooked meat, even if they be of tuberculous origin, are harmless. M. Nocard cited the case of a veterinary surgeon at Weimar who had wounded his hand whilst making the *post-mortem* examination of a tuberculous cow, and died two months afterwards of tuberculosis. M. Trasbot observed that it was a case of infection from inoculation, and not from ingestion of diseased meat.

M. Vidal renewed the discussion concerning the pseudo-syphilitic epidemic at Motte-aux-Bois, but M. Besnier wisely observed that, as the instruments used for removing the vaccine cannot be examined, it is impossible to come to any conclusion.

LIVERPOOL.

Distal Ligature for Aneurysm in the Neck.—Death of a Nonagenarian Clergyman.—Appointment of Surgeon to the Royal Southern Hospital.

MR. F. T. PAUL has recently treated a large aneurysm in the neck by the method of distal ligature. The patient, a woman aged 42, had a pulsating tumour, the size of a large orange, under the lower part of the right sterno-mastoid, and apparently extending into the thorax. The subclavian artery was tied, and as the common carotid was involved in the disease, ligatures were applied to the internal and external carotids. The wounds healed by first intention, but no improvement took place in the tumour, which became perceptibly larger in a few days. Accordingly, a week after the first operation, about two yards of thick carbolised catgut were introduced into the sac through a cannula. The tumour consolidated somewhat, but continued to grow, the skin became dusky, and rupture took place externally on the tenth day after the first operation. The *post-mortem* examination showed dilatation of the arch of the aorta, which was atheromatous and gave off a large sacculated aneurysm, which extended up the innominate artery in front of the subclavian and common carotid. Mr. Paul is disposed to think that some success may be hoped for in such cases from the introduction of carbolised catgut in the first instance while there is a stream of healthy blood flowing through the tumour. The stagnant blood that is present after ligature cannot be expected to yield a firm clot.

The death is announced of the Ven. Archdeacon Jones, of Waterloo, who had entered on his ninety-ninth year, and was said to be the oldest clergyman of the Church of England. He took orders in 1815, and was throughout the whole of his long career actively engaged in ecclesiastical duties, and was Archdeacon of Liverpool until three years before his death. In 1883, in his ninety-first year, he fell and fractured his leg, and for some days a fatal result was apprehended, but he rallied, and, though never afterwards able to walk without assistance, he continued to enjoy wonderful health and vigour. He retained his faculties till the last.

Mr. Robert Jones, F.R.C.S.Ed., has been elected Honorary Surgeon to the Royal Southern Hospital.

NEWCASTLE-UPON-TYNE.

The Infirmary.—College of Medicine.—December Examinations for Degrees.—Affiliation Scheme with Birmingham.

AT the quarterly meeting of the Governors of the infirmary, the Chairman gave the following summary of a fortnight's work in the surgical wards:—Three cases of ovariotomy, two doing well, one succumbed from obstinate vomiting; abdominal section for obstruction, doing well; excision of the uterus, *per vaginam*, doing well; excision of uterus for cancer; primary amputation of leg for compound fracture, with subsequent secondary hæmorrhage, doing well; two operations for the radical cure of hernia; excision of elbow; two excisions of breast; removal of large lipoma of back; tracheotomy; excision of lower portion of rectum; two amputations above knee for disease of the joint; two excisions of tongue; a case of bone grafting for ununited fracture; amputation at ankle-joint; extraction of bullet after gunshot injury, besides the usual run of cases which occur in all large general institutions. Such a record is one of which any hospital might be proud, but the district around Newcastle is one which, for some reason or other, is especially prolific in surgical cases of interest, and the number of surgeons is not few who have expressed envy at the material which the staff of the infirmary have for demonstration to their students.

A meeting of old students and graduates of the University of Durham (in the faculty of medicine) was held in the Council Room of the new college on November 21st to consider the desirability of opening a subscription list to assist the members of the college staff in paying off the debt which at present exists on the new buildings. Dr. Mantle and Dr. Fielden are the secretaries to the fund, and they announced that they had received signatures to the extent of nearly £300. About £6,000 is now required to pay off the debt on the present building, but considerably more is required to complete the college in accordance with the architect's plans, which include a residential hall for students, a commencement with which has not yet been made. I understand it is the intention of the members of the college staff to contribute a very large sum towards the scheme, and it is confidently expected that old students will materially help them in their desire to make the new college as complete as possible.

The December examinations for degrees in medicine were held last week; Dr. Coupland and Mr. Bellamy were the foreign examiners in medicine and surgery. The questions, with the exception of one or two in the medicine paper, seemed to give satisfaction to the majority of the students in for examination; the papers were, however, only such as any good average student could manage, and the fact that three were classed in honours should be sufficient answer to the dissatisfied ones. Fifty candidates came up for examination, and of these only thirteen or fourteen failed to satisfy the examiners. The majority of the candidates were much above the average, and many of them already possessed good qualifications. The Durham degrees seem to be increasing in popularity.

Nothing definite has yet been settled with regard to the affiliation scheme with Birmingham. A deputation from the latter place waited upon the council of the Medical College, and presented a formal request for affiliation, which will eventually be considered by the Senate of the University. Opinions are much divided as to the success of the scheme or otherwise.

SHEFFIELD.

An Itinerant Practitioner.—Students' Dinner and Debating Society.—Hospital Dramas.—Death from Chloral.

THE man who, under the name of "Sequah," has created a sensation in other towns, is visiting Sheffield. His gilded coach and horses attract a good deal of attention, but there is reason to question whether his "cures" are exciting the same interest as has been the case elsewhere. The well-known vicar of an important parish is reported to have been on his platform, and to have taken a good deal of interest in his proceedings. This has been much commented on in medical circles. The testimonials also, which occupy space in the daily press, and which cover hoardings, are largely drawn from ministers of various denominations in different parts of the country, who testify to the efficacy of his medicines, "Prairie Flower," etc. The support rendered by such men, who from their education should at least know that medical knowledge is only derived by training and study, and does not come by instinct, is calculated greatly to encourage unqualified practice.

The annual dinner of past and present students of the Medical School was recently held. It was well attended, and a most enjoyable evening was spent. In addition to old and present students, several members of the teaching staffs of the school and hospitals were present. The chair was occupied by Mr. E. Birks, Treasurer of the School and Lecturer on Botany. Mr. A. Jackson and Mr. Snell replied to the toast of the lecturers of the school and staffs of the hospitals. The meetings of the Students' Debating Society have recommenced, and there is evidence of their being carried on with a good deal of vigour.

The nurses of the Public Hospital and Dispensary recently gave an entertainment, with *tableaux vivants*, etc., in aid of the new building fund. They were aided by several ladies interested in the hospital, and as a result £63 10s. was added to the funds. A dramatic performance—a fairy play—has been also announced in aid of the funds of the Children's Hospital.

The death has been announced of a neighbouring practitioner under peculiarly sad circumstances. Dr. Casson had only been in Worksop between four and five years. From the evidence at the inquest he appeared to have suffered severely from neuralgia, to relieve which he is reported to have taken chloral and other drugs. On December 1st he suffered acutely, and went into his surgery, where later he was found by his son unconscious. Before him was a book, which he had been reading, and which he had turned face downwards. The efforts of his medical friends, who were soon at his side, were unavailing. The jury came to the

conclusion that death had resulted from misadventure by taking a dose of morphine to relieve neuralgic pains. He was but 39 years of age.

GLASGOW.

Purification of the Clyde.—Glasgow Social Union.—Glasgow Western Infirmary.—Victoria Infirmary.

An excellent opportunity has arisen in Glasgow for treating a portion of the sewage of the city by one or other of the various methods that have been from time to time proposed before discharging it into the river. The present sewerage system in the east end of the town requires very extensive alteration, because of the operations of the railway companies, who have undertaken to provide extended facilities for rapid transit between one part of the city and another. The underground tunnelling, indeed, necessitates a complete rearrangement of the sewerage of that part of the city, which means an area of $3\frac{1}{4}$ square miles, having a population of 168,000. It is proposed to deal with the whole sewage of this part of the city by conveying it to vacant ground in the neighbourhood in the possession of the Corporation, and subjecting it there to deodorisation and precipitation before discharging it into the river. The cost of the experiment would not fall heavily upon the citizens, since by the Acts of Parliament the railway companies are required to make good whatever injury is done to the present sewers by their operations, but also to provide such new sewers as may be considered necessary, including outfall sewers of adequate capacity. The municipal authorities are disposed to consider the present opportunity as an advantageous one for making an experiment at a minimum of cost.

A Union has been formed in Glasgow for the purpose of promoting co-operation between the various associations engaged in social work among the poor of the city. Among the problems which the Union will attempt to do something to solve is that of healthy dwellings for even the poorest. For this purpose they will co-operate with the municipal and sanitary authorities, and undertake the management of property. They will also use various measures for informing the people on the subjects of hygiene, food, and cookery, and endeavour to get sufficient open spaces set apart in all densely-populated areas for rest and recreation. The Union has started under the most promising auspices, being supported by a large number of the most prominent and influential citizens; and instead of any jealousy arising between this Union and other similar pre-existing institutions, applications for affiliation of the latter institutions are the rule. In connection with the question of the housing of the poor, one of the prominent members of the Union, Mr. William Smart, M.A., addressed a meeting of the Philosophical Society on December 4th, under the presidency of Professor McKendrick, M.D. His address was based chiefly on the results of a personal investigation into the operations of the chief companies engaged in London in providing improved dwellings for the industrial classes. He showed that these companies had proved that rooms could be provided of a healthy kind at an average rent of under 2s. 6d. per week, including rates and taxes, and yet a return of 5 per cent. on the invested capital be secured, that single rooms could be rented at 1s. 6d. to 2s. per week, and 4 per cent. be yielded on the capital. From many similar facts Mr. Smart argued that the problem of housing the poor could be solved without recourse to charity and without burdening the ratepayers.

The fifteenth annual report of the Glasgow Western Infirmary has been published. The indoor patients have increased, in comparison with the previous year, by 96, being this year 4,073, but the dispensary patients show a diminution of 940, their number being this year 12,266. The average daily number of indoor patients was 371.17, their average period of residence 36.61 days, and the average cost per patient £5 2s. $5\frac{1}{4}$d. The cost of each bed fully occupied was £51 1s. 2d., as against £47 16s. $10\frac{1}{2}$d. the previous years. The number of patients treated to a termination during the year was 3,700. The death-rate was 8·54 per cent. of all cases so treated, the total deaths being 316. But of these 76 died within 48 hours after admission, and, deducting them, the death-rate becomes 6.48 per cent. The ordinary income amounted to £15,874 10s. 2d., which sum the ordinary expenditure exceeded by £3,076 13s. 8d., but the extraordinary income (legacies, etc.) amounted to £12,681 5s. 1d., so that on the total income a balance of £6,492 is carried to the stock account. The ordinary income shows this year an increase over that of last year, chiefly owing to an increase of over £300 in contributions from public works.

The work is so far advanced towards the completion of the Victoria University that it is expected to be opened for the reception of patients next month. Only one of the pavilions has meanwhile been erected, but the whole administrative block is completed, as well as an entrance lodge, laundry, and mortuary. Accommodation is provided for eighty patients, there being a male and female ward for both medical and surgical cases, a children's ward, and private wards in which patients able to pay can be accommodated. To secure all this accommodation some of the rooms of the administrative block are meanwhile to be used for patients. The principal wards, corridors, and staircases are lighted by electricity. The Governors have announced in the advertising columns of the newspapers that they are about to appoint a visiting physician and surgeon. Dr. Donald Mackintosh, formerly at the Glasgow Eye Infirmary, and subsequently senior assistant at Belvidere Fever Hospital, has been appointed resident medical superintendent. The building fund has now reached a total of over £34,000, and £284 has been contributed to the maintenance fund.

CORRESPONDENCE.

THE PRACTICAL ELEMENT IN MEDICAL EDUCATION.

Sir,—The communications which have for some weeks past appeared in the Journal regarding medical education remind me of a report on this subject, drawn up some ten years ago by a Committee of the General and Branch Councils, which was received and adopted by the Association. As chairman of the committee, I can testify to the great interest the profession took in our work, which was much strengthened by the help afforded us by Professor Humphry, Dr. Clifford Allbutt, and other members of the committee; our report was the outcome of action initiated by Sir Andrew Clark, who at the time (1879) was President of the Metropolitan Branch of the Association. At the end of the report we gave a summary of the subjects which seemed specially to demand the attention of the various medical authorities regarding defects in our system of medical education. It may be well now to revert to this document, and to inquire how far our work has been successful in improving defects which, ten years ago, existed in our medical curriculum.

The first of our recommendations was as follows:

"1. That the preliminary examination of intending medical students should include a knowledge of English, arithmetic, and of Latin and mathematics up to a definite standard; and that before being allowed to enter his name in the *Register* of the General Medical Council the student should produce certificates of proficiency in physics and inorganic chemistry; and that these preliminary examinations should no longer be conducted by medical corporations."

This recommendation was complied with, and carried into effect in December, 1881, by the Royal College of Surgeons, who in that year handed over the work of the preliminary examination of intending medical students to the College of Preceptors.

Our second recommendation was as follows:

"2. That provision should be made for compelling students, before the commencement of their second year, to pass an examination in their first year's studies; these examinations might be conducted by recognised school authorities under the supervision of the General Medical Council."

In December, 1884, the Royal College of Surgeons appointed examiners in elementary anatomy and physiology.

Our third recommendation was to the effect:

"3. That the course of study and the examinations of our universities in anatomy and physiology (under the supervision of the General Medical Council) should be accepted by the Conjoined Board as sufficient evidence of proficiency in these subjects. This rule would not prevent students at their final examination having to afford satisfactory proof of knowledge in physiology and anatomy, as applied to the principles and practice of medicine and surgery."

This recommendation has been carried into effect under the by-laws of the Royal College of Surgeons of 1885.

"4. That composition fees at the several medical schools be discouraged. Before a student is allowed to go up for his final examination, he must produce more satisfactory evidence than is at present furnished by his teachers, of attendance on hospital prac-

tice. That every student should produce evidence of having efficiently performed the work of clinical clerk and dresser."

This recommendation has, during the last few months, been to some extent acceded to by the Royal College of Surgeons, in that the College has directed that candidates for the final examination shall produce evidence of having performed the duties of clinical clerk and dresser to indoor patients; students have now also to produce certificates as to their having performed operations on the dead body.

"5. That no student should be admitted for his final examination until he has completed his fourth year of medical study, and not until the expiration of three years from the time of passing his first professional examination, and two years from the time of passing his second examination."

This recommendation has been carried into effect under the conjoint scheme of examination.

Beyond these recommendations, the majority of the Committee appointed by the Association to consider the subject of medical education made the following proposals:

"6. That before a student receives his licence to practice he should produce a certificate of having studied for six months with a general practitioner, or in a public institution, where he has personal charge of patients at their own homes.

"7. That it is essential to the success of any scheme devised for the improvement of medical education that a Conjoined Board of Examiners be appointed in each division of the United Kingdom. To these boards must be delegated the power of conducting the final professional examination of medical students; certificates granted by the Conjoined Board should alone entitle the recipient to a licence to practise medicine, surgery, and midwifery.

"8. That to effect the object above referred to, it is necessary to modify the constitution of the General Medical Council and to endow it with the responsibility and real powers of a 'Council of Medical Education.'"

The observations to be found in the body of the report, bearing on the above recommendations, are well worthy the careful perusal of those interested in this subject; practically, however, with the exception of No. 6, the objects aimed at by the Association ten years ago as regards improvement in the curriculum of medical students have been conceded by our medical authorities; this fact should encourage us to persevere in our efforts in this direction, and to endeavour to complete our work by striving to modify the various examinations, especially the final examination, which our students have to pass before receiving a licence to practise. Few who are competent to give an opinion on the subject will be disposed to deny that education, so far as it is applied to the training of the intellectual faculties at the present day, depends largely on the nature of our examination. We may prolong our medical curriculum to five or any number of years, to the advantage doubtless of our teachers, but not to our students, unless at the end of their career they are obliged to pass through thorough and efficient tests as to their fitness to commence the work of their profession. If such tests are rightly applied, the results of the examination will be equitable, and I for one see no reason why they should not be enforced; and then the less we trammel our medical students with regulations as to attendance on various courses of lectures the better for them and for the profession. The object of our sixth recommendation, which has not been carried into effect, was in this direction; and the subject should, in my opinion, occupy the attention of the Association, together with the efficiency or otherwise of our final examinations in medicine and surgery in their various branches.—I am, etc.,

Grosvenor Street. N. C. MACNAMARA.

MIDWIVES AND NURSES.

SIR,—If working at it for thirty-two years gives one a right to speak upon a subject, I claim that privilege. For so many years I have been endeavouring to impress upon the public the unsatisfactory condition of our midwives, and the necessity which existed for amending it. I have been constantly associated with midwives, and know their thoughts and wishes. Of nurses, in comparison, I know little, but I look upon them with the greatest respect and admiration, fully acknowledging the usefulness and dignity of their calling.

My present object is to record the antipathy with which I regard an attempt which is being made to class midwives and nurses together. A midwife practises upon her own responsibility, without the aid or interference of any medical man. She is selected and engaged by the patient, and is under the control of no hospital or institution. A nurse is usually chosen by the medical attendant, or application is made to a hospital or institution for a nurse specially suited to attend the case, the heads of the nurses at those hospitals and institutions being responsible for the moral character and capability of the nurses supplied. A nurse's duty is to carry out the instructions of the medical man, to keep him informed of any changes which may take place in the patient, and to apply to him when in doubt or difficulty.

When the question of educating and registering midwives was brought before the General Medical Council, during its recent sitting, an attempt was made to class together nurses with midwives, but the members would not have it, and Sir John Simon expressed the opinions of the majority when he said: "He wished to give every possible assistance to the nursing movement, but it was entirely separate from the question of the education and registration of midwives." Those midwives with whom I am acquainted strenuously oppose being classed with nurses, and they also object to being trammelled by the hard-and-fast clauses of a Royal Charter. Although they have been working for years at the subject, they know that the details and machinery of their scheme are not so perfect that they could be accepted and determined with such accuracy as to render the necessity for future alteration impossible. A Royal Charter is a strait-jacket from the tight provisions of which there is no escape.

Everyone must approve the association of nurses for the purposes of increasing their efficiency and improving their position, but are not some of them now rushing, with feminine impetuosity and impatience, to the winning post without having first gone over the course? Unable to wait for legal registration, they now propose to register themselves, but such a method of registration would be useless. To be of any avail, a register must be protected by a legal enactment. The general public do not consult registers. When they know a person cannot legally assume a certain title, they accept him, or her, who employs it as having a right to do so, believing that those who are entitled to use it will take care it is not adopted by individuals having no equal claim to its appropriation. It is certainly very discreet of these nurses to class themselves with midwives, for they know that women attending labours are nearer the goal of registration than themselves, and they naturally hope to pass as sisters when the registration portal is open. If, however, nurses wish to obtain legal registration they must mature their own scheme, and trust to their own good cause to help them through, for it is useless their attempting to reach their end by hanging on to the skirts of midwives. The nurses to whom I have alluded seem to think that if they could only succeed in laying their egg in the midwife's nest it would be hatched without further trouble.—I am, etc.,

JAMES H. AVELING.

Upper Wimpole Street, December 9th.

TOOGOOD *v.* WILKES.

SIR,—Naturally the above action, in which I was the defendant, being the first in which the value of the twelfth and thirteenth sections of the new Lunacy Act Amendment Act has been put to the test, has been commented on by the leading medical journals. I feel that this is but an instalment of what is due to us as a profession, if we are to do our duty fearlessly and honestly to society. Gradually for many years we have become increasingly a certificating profession. We have to give certificates of stillbirth, successful vaccination, of health to all the public services, public companies, schools, benefit clubs, attendances on juries, sanitation, infectious diseases, lunacy, and death. In all except lunacy, if our certificates are properly given, we hear no more about them. But in my case, although I had obeyed the lunacy laws, it is open to any litigious patient, at his discharge from an asylum, with the aid of solicitors willing to undertake such cases, to accuse me of negligence and wrong in signing a certificate of lunacy, and this without any previous inquiry into the truth of it. Such solicitor, shielding himself under the claim of privilege, may accuse me without cause, whilst if I were to do to him in his profession I believe that I should lay myself open to an action for libel or slander.

The Commissioners of Lunacy, who are both barristers and physicians appointed by the public to watch over the insane, are not appealed to, though every certificate goes before them for acceptance, and confirmation when they visit the asylums. The visiting magistrates, and their medical visitor, like the Commis-

sioners, are all bound to secrecy and, unless served with a subpœna to give evidence at the trial, cannot and do not help you; and, in my case, where affidavits were in evidence, I could not get any assistance from those whose evidence as public officers should be available.

It is the wish of every high-minded medical man that the public should be carefully protected, but it is equally a duty that the medical profession should be protected also, and we are not. Why should I have to go through the worry, annoyance, and I expect much expense, when I am helping society in its troubles to the best of my ability, spending as I did three hours from my home about the patient, being more than an hour with him, and receiving a guinea for my services?

Salisbury, a city with about 18,000 inhabitants, has, from early in the present century, had two large private asylums. Patients are sent from many of the neighbouring counties, and now and then a patient may be brought urgently with no certificates, or with one, and may be, as in my case, with one of the two invalid. The medical men resident in Salisbury are thus often called upon to see and examine such patients, and thus experience more of lunacy in their practice than in many a larger city.

The practical bearing of this action will be that the seniors of our profession who have been careful during their lives for the day when they have to retire, and those who have other means must decline to sign any certificates, leaving the public to lose the benefit of their experience and practice.—I am, etc.,

Salisbury, December 9th. W. D. WILKES.

THE TWELTH SECTION OF THE NEW LUNACY ACT.

SIR,—I am afraid that there can be little legal doubt as to the correctness of the view taken by Mr. Justice Field in the case of Toogood *v.* Wilkes, reported in the JOURNAL of December 7th. The judge clearly thought that the application being by the defendant for extraordinary action by the judge—namely, a stay of proceedings—the onus lay on the defendant to prove grounds for such stay.

Costs are always at the discretion of the Court, and Mr. Justice Field evidently wished by his decision on costs (conditionally) to deter the plaintiff from proceedings which might have entailed costs on the defendant which the plaintiff might not be able to pay; by so doing he, in reality, acted for the probable benefit of the defendant. The Twelfth Section, in fact, does not afford so complete a protection to a medical practitioner acting *bonâ fide* as might at first sight appear, though in many cases it will doubtless operate to protect him to a very considerable extent from incurring excessive costs.—I am, etc., LEX.

THE SPREAD OF LEPROSY.

SIR,—The Rev. H. P. Wright, M.A., in his letter in the JOURNAL of December 7th, objecting to my views of leprosy, informs us that he is Rector of Greatham, not Grantham, as printed in my lecture. I apologise for the mistake.

Further, the Rev. Mr. Wright writes: "Sir William Moore will therefore excuse me if, instead of saying with him that the danger" (of leprosy becoming common in this country) "is *nil*, I prefer to his the judgment of heroes in the study and treatment of leprosy," whom the Rev. Mr. Wright names. As told above, I will certainly excuse Mr. Wright, especially as I do not profess to be a leprosy hero! Now what I did say in my lecture is this: "I do not desire to appear before you as enunciating *dicta ex cathedrâ*. For in these days of scientific progress he would be rash who confidently asserted or denied anything. I desire, however, to give my own impressions with regard to leprosy.....I have, during a prolonged service in the East, always been interested in the subject, and especially during the last few years, as head of the Indian Medical Department in Western India.....have considered it necessary to give great attention to it.....Of course, what has happened may happen again in this country, but I for one regard the danger of leprosy becoming common in Great Britain as infinitesimal, if not actually *nil*." And I gave reasons at length which I now briefly epitomise: 1. Leprosy never was so common in Great Britain as has been supposed, many other maladies having been treated as leprosy. 2. Our sanitary arrangements, although not perfection, are infinitely better than when leprosy prevailed in England. 3. Persons would not marry lepers in this country. 4. Nor willingly associate with lepers. 5. The intensity of leprosy corresponds with climatic heat. 6. And with bad sanitary conditions. 7. Even in India the ratio of lepers to population does not exceed 0.8 per cent.

Then the Rev. Mr. Wright "hopes the learned lecturer" (this appears an afterthought, as learning is rather ignored above) "will not deem him presumptuous if he still maintains that every case of leprosy in England should be duly reported, registered, and inquired into, and a watchful eye kept as to the doings of the disease." Certainly I do not deem him presumptuous. Moreover, I fully agree with him that, if practicable, such a sanitary regulation should be enforced. I remarked in my lecture that the Rev. Mr. Wright need not have taken the trouble to announce that at last it had been proved, by the experiment on a criminal at Honolulu, that leprosy was contagious; because it had been long known that such was the case, under certain circumstances. Further, I spoke in favour of the establishment of a leper ward in London, as proposed by H.R.H. the Prince of Wales. But, as remarked in the conclusion of my lecture, "I feel most confidence in the diminution of leprosy in India, and in the prevention of leprosy in this country, from the influence and progress of sanitation in the most extended sense of the term, in which I include the cleansing generally of villages, and towns, drainage, ventilation, good water supply, the cheapening of salt, the prevention of scarcity, opposition to imprudent marriages, and measures for the prevention of specific disease."—I am, etc.,

W. J. MOORE,
Late Surgeon-General with the Government of Bombay.
Portland Place.

NAVAL AND MILITARY MEDICAL SERVICES.

HART-MACNAMARA TESTIMONIAL FUND.

THE *Indian Medical Gazette* has the following among its service notes, which we are requested to reproduce in our columns:

"It is proposed to present testimonials to Mr. Ernest Hart and Mr. C. Macnamara, as a slight return for their labours on behalf of the two medical services.

"It is unnecessary to allude to Mr. Hart's exertions on behalf of the medical services for many years past, both in the JOURNAL and on the Council (*sic*) of the British Medical Association.

"Mr. Macnamara, formerly of the Indian Medical Service, as a member of the Parliamentary Commission that has lately sat on the pay, status, etc. of the medical department of the army and navy, has rendered invaluable service, sparing no time or trouble, and eliciting evidence of the most valuable nature from the witnesses who were examined by the Commission.

"It is proposed to raise a subscription among the officers of both services in India for the purpose of presenting a piece of Indian-made silver plate, suitably inscribed, to each of these gentlemen. The following medical officers have consented to form a committee: *Bengal:* Brigade-Surgeons R. Waters, T. Maunsell, Skey-Muir, and R. W. Davies; *Bombay:* Brigade-Surgeon A. Allan; *Madras:* Brigade-Surgeon F. Howard. With Brigade-Surgeon J. B. Hamilton (officiating Deputy Surgeon-General), as honorary secretary.

"It is calculated that a subscription of Rs. 6 from field officers and Rs. 3 from surgeons will yield a sufficient sum to give each gentleman a handsome piece of Indian plate (duty paid), but subscriptions of a greater or less amount will be most welcome.

"Individual subscriptions can be paid into the Delhi and London Bank, Lucknow, to the 'Hart-Macnamara Testimonial Fund,' either by cheque or P.O.O., or, if more convenient, collections can be made locally and forwarded to the bank with a list of the subscriber's names."

M.S.—The matter was dealt with more than a year ago, and is now out of date.

THE NAVY.

THE following appointments have been made at the Admiralty:—DUNCAN ROBERT MACDONALD to be Surgeon and Agent at Redheugh, December 5th; THOMAS BOLSTER, Fleet-Surgeon, to the *Camperdown*, December 19th; ALBERT C. QUEELY, Staff-Surgeon, to the *Euphrates*, December 19th; EDWARD B. TOWNSEND, Surgeon, to the *Camperdown*, December 19th; ROBERT HAY, Fleet-Surgeon, to Haslar Hospital, temporarily, December 21st; Deputy Inspector-General A. TURNBULL, M.D., to Plymouth Hospital, January 1st; H. F. NORBURY, M.D., C.B., to the Medical Department, Admiralty, January 1st; J. L. SWEETNAM, M.D., Staff-Surgeon, to Nankin, December 19th.

ARMY MEDICAL RESERVE.

SURGEON-MAJOR A. D. L. NAPIER, M.D., has resigned his commission, which was dated August 15th, 1888.

Acting-Surgeon J. J. A. V. C. RAYE, 1st City of London Artillery Volunteers, is promoted to be Surgeon, ranking as Captain.

INDIAN MEDICAL SERVICE.

SURGEON-MAJOR GEORGE THOMSON, M.B., Bengal Establishment, is promoted to be Brigade-Surgeon. He entered the service as Assistant-Surgeon, October 2nd, 1865, and became Surgeon-Major twelve years thereafter. He was engaged in the Afghan war in 1878-79, and was mentioned in despatches for his services.

The following promotions of Surgeons to be Surgeons-Major, already announced in the JOURNAL, have received the approval of Her Majesty:—Bengal: S. J. THOMSON, R. N. CAMPBELL, E. S. BRANDER, F. C. CHATTERJEE, G. A. EMERSON. Madras: C. H. BENNETT, M.D.; W. H. THORNHILL, M.D.; M. E. REPORTER, Bombay: R. MANSER. H. ADEY, A. W. F. STREET, D.S.O.; H. P. JERVIS, D. C. DAVIDSON, J. C. H. PEACOCKE, K. S. NARIMAN, A. F. SARGENT.

Surgeon G. JAMESON, M.B., Bengal Establishment, has passed the examination in Bengal, by the higher standard.

Surgeon-General E. G. BALFOUR, late of the Madras Establishment, died at Gloucester Terrace, Hyde Park on the 8th instant, at the age of 76. He entered the service as Assistant-Surgeon, June 2nd, 1836, and rose to be Surgeon-General, August 15th, 1871; he retired, June 30th, 1877.

THE VOLUNTEERS.

MR. GEORGE F. A. ENGLAND, M.B., is appointed Acting-Surgeon to the Hampshire Yeomanry (Carabiniers).

Acting-Surgeon J. J. A. V. C. RAYE, 1st London (City of London) Artillery, is promoted to be Surgeon.

Surgeon E. F. HALL, M.D., 2nd Lancashire (the St. Helens) Engineers, is promoted to be Surgeon-Major, ranking as Major.

Mr. THOMAS MILNE, M.D., is appointed Acting-Surgeon to the 7th Volunteer Battalion, Argyle and Sutherland Highlanders (late the 1st Clackmannan and Kinross).

LOSS OF TEETH.

M.A. is informed that loss of teeth, unless excessive, would not disqualify a candidate for the Army Medical Staff; all such disqualifications are questions of degree.

THE BURMAH GAZETTE.

CRITIC writes: The following is compiled from the *London Gazette* of November 12th, 1889:

"*Promotions and Decorations for Operations in Burmah.*

	Combatants.	Medical.
C.B.	3	None
D.S.O.	9	1
Promotions	10	None."

Nice treatment for a profession of "dignity and eminence!" Promotion of medical officers for service in the field has practically ceased. The object in every branch but the medical seems to be to bring young men of ability to the top of the tree. Why the exception? Is vigour of mind and body less needed in the medical than combatant branches?

MUST BE A CORPS.

CORPS writes: While thanking you for supporting the views so popular in the Medical Staff, you do not appear to fully appreciate the fundamental difference between a corps and a department. The key to the whole question is, make a corps, and other grievances must necessarily disappear. Discussion on hybrid titles, which are merely departmental and electro-plate, are simply unprofitable. The university degree of M.D. enables the possessor, if a junior surgeon, to take rank at a royal *levée* before a surgeon-general. Such is the ruling of the highest authorities on rank and precedence, and shows the utter want of value of departmental medico-military titles; doctors are just considered as civilian camp followers. A corps formation would alter all that.

THE NEW SIXTY-TWO YEARS RULE.

M.S. points out that to extend the age of surgeons-general to 62 for retirement would simply dish about one-third of the deputies and one-half of the brigade-surgeons in the matter of promotion. Surely such a prospect would prove a premium on inefficiency and discontent. In no other branch of the service are administrative officers allowed to exceed five years' tenure of appointment, yet in the medical, men can and do hold these appointments double and treble that period. Reform is urgently needed here, and will be best initiated by amalgamating the deputies' and brigade-surgeons' lists; these staff appointments could then only be held for five years, as in other branches. It is certain the present anomaly cannot last.

MEDICO-LEGAL AND MEDICO-ETHICAL.

DR. JNO. E.—In reply to our correspondent's note of inquiry, we would remark that, in consequence of the severe indisposition of the gentleman who has on previous occasions effectively aided us in like complicated important matters, and to whom we deemed it judicious to refer the subject in question, our comments thereon have been unavoidably delayed.

UNDERBIDDING: A BAD EXAMPLE.

MEMBER writes: I have read in your JOURNAL of November 30th the sad story of R. and V.'s treatment at the hands of J. and A. in connection with the appointment of medical officers to court of Foresters. It is only another instance of the prevailing spirit of the age so far as the medical profession is concerned. Only the other day, in my own immediate district, a medical *confrère*, who had held a similar appointment, was "underbid" in a similar manner. It is all very well to prescribe "Bear and forbear," but until some notice is taken of such conduct in high places, and a court of judgment passes sentence upon men who can so disgrace themselves and their profession, such a state of affairs will not only continue, but its practice will most certainly increase. There is little or no etiquette in the profession nowadays, unless it be in the large towns, and then it is at best but a sickly plant. In country districts and in the provinces all is fish that comes into the net, "underbidding" is considered no sin, and "poaching" has become a virtuous necessity.

The only consolation I can offer R. and V. is that they are not the first, nor will they be the last who have been "underbid." My advice to them is, henceforth, to give Messrs. J. and A. a wide berth, and to decline for the future to have converse or communication with them.

H. W. F. writes: Having been a club doctor for upwards of twenty years, during which time I have been frequently annoyed in a like manner to R. and V. I would strongly urge them to resist any attempt to reduce the rate of payment per member. Considering the class of people who now find their way into clubs, 5s. per member is the lowest rate at which they can be properly attended with any reasonable hope of profit. If R. and V. agree to accept the reduction, what is to prevent J. and A. offering to take it for 3s. at the next annual election? R. and V. will be supported by all right thinking members of the club, and ought to have no difficulty in getting a sufficient number of their friends to be present at the time of election to secure a majority.

J. W. J. writes: With reference to the article, "Underbidding: a Bad Example," I, as the senior partner of the firm of J. and A., beg to state that we distinctly refused some weeks ago to accept the Foresters' club at a lower rate of remuneration.

*** While we willingly accord insertion to Mr. J.'s disclaiming note on the subject of "underbidding" referred to in the JOURNAL of November 30th, it would, in our opinion, have been more satisfactory if the firm in question had, in their curt acknowledgment of Messrs. R. and V.'s communication of November 12th, clearly notified, instead of withholding, their "distinct refusal to accept the Foresters' club at a lower rate of remuneration," and thereby have enabled the old medical officers to successfully resist the intimated reduction of the member's annual subscription from 5s. to 4s., consequent, no doubt, on the attitude assumed by Messrs. R. and A. in the matter.

We deem it well, moreover, in the general interest of the profession, to remark that, by the pernicious practice of "underbidding" and such like acts, fostered by the jealous dissensions which, unhappily, more or less pervade our ranks, the public are led to decry and underrate the profession of medicine.

DOWNWARD COMPETITION.

C. H.—Assuming that the statement furnished relative to the line of action adopted by Dr. W. be a fair representation of the facts, there can, in our opinion, be no reasonable doubt but that the latter, in lending himself to the design of "B.," a dissatisfied well-to-do club patient, to oust the former from various clubs in the district, and while offering to accept the appointment of medical officer thereto—though living at a distance of five miles—expressed his willingness to defray the cost of telegrams deemed necessary to expedite his attendance, evinced an ungenerous spirit inimical to the true interests of the profession and of self. Moreover, that the head of an established firm should, without just cause or necessity, subsequently open a surgery within two doors of the local practitioner's residence, and place an assistant in the village, indicates a regrettable intent which can scarcely fail to, sooner or later, recoil upon himself, for we have it on indisputable authority that "whatsoever a man soweth that shall he also reap." At the same time we would counsel our correspondent to pursue the even tenour of his course, and, difficult though the effort be, to abstain from all harsh comments on the proceedings.

LIBELLING A MEDICAL PRACTITIONER.

AT the recent Manchester Assizes, Jane Boston pleaded guilty to having unlawfully written and published a false, scandalous, and defamatory libel concerning Thomas Henry Pinder, M.R.C.S.Eng., L.S.A., of Alexander Road, Manchester. From the evidence adduced, it appeared that some time in 1884 the prisoner sent for Mr. Pinder in the ordinary way as a patient. She was a dressmaker, and in a poor state of health; and Mr. Pinder not only attended her without charge, but induced other medical men of high reputation to prescribe for and assist her, as she was very poor. No impropriety was suggested by the prisoner at this time, but ultimately she entered the infirmary, and while there, under other medical treatment, she had been influenced by other women, and induced to make false charges of impropriety against Mr. Pinder. These were contained in letters addressed to a lady patient and another medical man. The prosecutor attributed the libels to the disordered imagination of the prisoner. The judge, who said it had been made clear in the sight of all men that the imputations were absolutely false, sentenced the prisoner to imprisonment for one month with hard labour, and to enter into her own recognisances to be of good behaviour in the sum of £50.

FEES IN INSURANCE CASES.

M.B. writes: In the letter of "F.R.C.P.," on page 1249 of the JOURNAL of November 30th, the argument of the assurance companies is fairly stated; but I should like to point out:

1. That the companies exact the same report when the policy is for £100 as when it is for £1,000.

2. That while they try to reduce the fee when the policy is small, by no office that I am acquainted with is a larger fee than £1 1s. offered when the policy is large.

My own practice is to examine proposers only on the understanding that the fee shall be £1 1s. irrespective of the amount of the policy. My profit and loss account stands thus: gainer, £15 15s.; loser, £1 1s. One of the two cases I did not examine I could not have recommended for acceptance; but

he was accepted after examination in a neighbouring town, and died within two years.

I should also refer "F.R.C.P." to a letter of mine in the JOURNAL for May 6th, 1882.

UNION APPOINTMENTS.

T. P. T. writes: 1. A. sells his practice to B. The union appointment is freely advertised. C. (along with others) applies for it, and obtains the appointment by a large majority. Has C. acted rightly by so doing? Also, 2. If there is sufficient scope, and a large number of the patients going elsewhere, is C. acting rightly in starting private practice a mile or more away from B.? Also, 3. C. pays a courtesy visit to B., to tell him he intends practising in the neighbourhood. Has C. a grievance because B. ignores his visit, and fails to return the call?

*** Under the circumstances narrated our correspondent was fully justified in accepting the union appointment referred to, and also "in starting in private practice" in the district; on doing which we may observe that the obligation would devolve upon him to pay, with as little delay as possible, a visit of courtesy to every duly qualified legitimate practitioner resident within a reasonable distance of his own abode, and announce his intention to practise in the locality. For a reply to his third question, we would refer him to the answer given to "F. L. N." in the JOURNAL of November 23rd, p. 1190, column 1.

UNIVERSITY INTELLIGENCE.

CAMBRIDGE.

HIGH SCHOOL, NOTTINGHAM.—The Council of the Senate have appointed Mr. W. B. Ransom, M.A., Fellow of Trinity College (First Class Natural Sciences Tripos (Physiology), 1883), and now a student of medicine, to be a representative governor of the High School, Nottingham.

WORTS TRAVELLING SCHOLAR.—Mr. J. G. Frazer, M.A., Fellow of Trinity College, and well known as an anthropologist, has received a grant of £100 from the Worts Fund to enable him to pursue in Greece his researches in archæology and ethnology.

MCGILL UNIVERSITY, MONTREAL.—Sir Donald A. Smith, LL.D. of Cambridge, and a member of St. John's College, who, in conjunction with Sir George Stephen, in 1887, gave half a million dollars to endow the Victoria Hospital, of Montreal, with a view to the improvement of the medical school of McGill University, has been appointed Chancellor of that University.

CLOTHWORKERS' EXHIBITION.—The Clothworkers' Company announce that an exhibition of fifty guineas a year for three years will be awarded, by means of the Oxford and Cambridge Schools Examination next July, to a non-collegiate student of Oxford or Cambridge who intends to pursue the study of physical science. The conditions of tenure, etc., may be learned on application to the Censor of Non-collegiate Students, Cambridge.

AFFILIATION OF INDIAN COLLEGES.—Twenty-seven Indian colleges, affiliated up to the B.A. standard to the University of Calcutta, are proposed for admission as colleges affiliated to the University of Cambridge. Students from these colleges who have satisfied certain conditions are exempted from the previous examination, and need reside only two years instead of three before becoming candidates for an Honours Tripos.

NEWALL TELESCOPE.—The syndicate appointed to consider the probable cost of erecting and working the great telescope bequeathed to the University by Mr. R. S. Newall, of Gateshead, report that a capital sum of £2,225, and an annual expenditure of £400, will be necessary. It is proposed that the instrument shall be chiefly devoted to research in spectroscopy and stellar physics. In the present impoverished state of the University chest it is difficult to see whence this expense is to be met. An excellent opening for munificence is afforded to any benefactor who has the interest of these important and growing sciences at heart.

BOARD OF BIOLOGY AND GEOLOGY.—Dr. W. H. Gaskell, Fellow of Trinity Hall and Royal Medallist of the Royal Society, has been elected an additional member of the Special Board for Biology and Geology.

DEGREES.—At the Congregation on Thursday, December 5th, the following medical degrees were conferred:—M.D.: George Edward Anson, M.A., of Trinity College (Thesis: That there is abundant proof that childbed fevers are highly contagious, and, like surgical fevers, with which they are analogous, if not identical, can be entirely avoided by a strict system of antisepsis); Josiah Ernest Viney, M.B., M.A., of Downing College (Thesis: Anæmia). M.B.:—Arthur Edward Kelsey, B.A., Trinity College (Thesis: Acute Pneumonia). B.C.:—Dr. G. E. Anson and Mr. A. E. Kelsey. The handsome M.B. gown and hood recently sanctioned were worn, for the first time in the Senate House, by Mr. Viney in being presented by Sir George Paget for his doctor's degree. It attracted much attention.

DURHAM.

FACULTY OF MEDICINE.—At Convocation held on Tuesday, December 10th, 1889, the following were recommended for the degree of Doctor of Medicine for practitioners of fifteen years' standing:

P. G. Bell, L.R.C.S., L.R.C.P.Edin.; W. H. Causton, M.R.C.S., L.S.A.; G. W. Joseph, M.R.C.S., L.S.A.; G. Middlemiss, L.R.C.P.Ed., L.F.P.S. Glas.; W. R. Pike, M.R.C.S., L.S.A.; G. G. S. Taylor, M.R.C.S., L.K.Q.C.P.I.; W. H. Thompson, L.R.C.P., L.R.C.S.Ed.; E. J. Tulk-Hart, M.R.C.S., L.S.A.

The following were recommended for the degree of M.D.:

H. A. Bredin, M.B., M.R.C.S., L.S.A.; A. S. Brewis, M.B., B.S., M.R.C.S., L.S.A.; G. Gantby, M.B., B.S.; E. L. Hickey, M.B., M.R.C.S., L.S.A.; T. E. Honey, M.B., M.R.C.S., L.R.C.P.Lond.; S. Lodge, M.B., B.S.; J. E. Nihill, M.B., M.R.C.S., L.R.C.P.Lond.; J. E. Panton, M.B., M.R.C.S.; L. Raby, M.B., M.R.C.S., L.S.A.; A. E. Richardson, M.B., M.R.C.S.; L. Wilde, M.B., M.R.C.S., L.R.C.P., L.S.A.

The following were recommended for the degree of Bachelor in Medicine (M.B.):

Second Class Honours.—T. W. Gibbard, M.R.C.S., L.S.A., King's College; R. H. Shaw, College of Medicine, Newcastle-on-Tyne; J. Arnott, College of Medicine, Newcastle-on-Tyne.

Pass List.—A. P. Arnold, College of Medicine, Newcastle-on-Tyne; W. J. Burleigh Robinson, London Hospital; B. Cox, College of Medicine, Newcastle-on-Tyne; G. B. S. Darter, St. Thomas's Hospital; E. W. Diver, University College; W. A. Hatton, London Hospital; R. G. P. Lansdown, Guy's Hospital; A. E. Martin, London Hospital; W. E. Peacock, College of Medicine, Newcastle-on-Tyne; C. W. E. Toller, M.R.C.S., L.R.C.P., St. Bartholomew's Hospital; A. C. Waters, M.R.C.S., L.S.A., London Hospital; R. J. Williams, London Hospital.

The following were recommended for the degree of Bachelor in Surgery (B.S.):

A. P. Arnold, College of Medicine, Newcastle-on-Tyne; J. Arnott, College of Medicine, Newcastle-on-Tyne; G. B. S. Darter, St. Thomas's Hospital; N. Faichnie, M.B., University College; C. M. Hardy, M.B., College of Medicine, Newcastle-on-Tyne; R. G. P. Lansdown, Guy's Hospital; W. E. Peacock, College of Medicine; R. H. Shaw, College of Medicine, Newcastle-on-Tyne; A. C. Waters, M.R.C.S., L.S.A., London Hospital; T. Watts, M.B., Owens College, Manchester.

INDIA AND THE COLONIES.

INDIA.

SANITATION IN BENGAL.—The twenty-first annual report of the Sanitary Commissioner for Bengal for 1888 is drawn up by Surgeon-Major W. H. Gregg, M.B., M.R.C.P. This officer is the worthy successor of Dr. Liddendale. Surgeon-Major Gregg, we are glad to observe, has the Cambridge diploma of public health, a fact, we have no doubt, which influenced the authorities in appointing him to his responsible office. We think the appointment more than justified by the "able, concise, and careful report, for the useful circulars which he has addressed to municipalities on the leading questions of sanitation, and the good work which he has accomplished during the year," this being the highly appreciative judgment of the Lieutenant-Governor of Bengal, as expressed by the Secretary to the Government of Bengal. The publication of the "circulars" above referred to is a most useful addition to the value of the report. Not content with insisting in general terms on the necessity of "pure water supply," of "drainage," and the "conservancy" of towns, the sanitary commissioner has addressed practical "circulars" to the various municipal authorities on the above important subjects, which, if attended to, cannot fail to be of great service in promoting sanitation. We commend this practice to the other sanitary commissioners of India. Even when the newly-appointed municipal authorities of India are willing to act and to second the efforts of the Government to promote the health of the community and stay the lamentable loss of life from preventable causes, they need guidance, and this in the "circulars" is given by one who speaks to them with authority. There is another useful novelty in this, Dr. Gregg's first, report, which is favourably commented on by the Secretary to the Government, namely, a series of diagrams showing the prevalence of cholera during every month of the year for the last fifteen years. From this it appears (1) that the year 1888 compares favourably with nine out of the fourteen years with which it is compared; (2) that as a rule the province is comparatively free from cholera during the earlier months of the year, and that when in some years it does prevail in January and February, it is a continuation of the disease which was de-

veloped in intensity at the end of the preceding year; (3) that the disease prevails with much severity in the hot weather before the rains set in; (4) that there is a comparative lull during the rains; and (5) that it appears again in the cold weather, but not to the same extent as in the hot weather.

OBITUARY.

ROBERT IRVINE, Deputy Inspector-General, R.N. (retired).

WE have received the following particulars of the life of Deputy Inspector-General Robert Irvine, whose death we noticed in our issue of November 9th. He died at his residence, St. Margaret's, Twickenham, on November 3rd, aged 65, after an illness of a year and a half. He had seen much and distinguished service during the thirty-two years he held Her Majesty's commission. His first appointment in 1848 was to H.M. brig *Pilot* on the China Station. In 1852 he was appointed to the *Cumberland* (West India Squadron), being afterwards present in the same ship at the bombardment of Bomarsund, when he formed one of the first landing party (Baltic medal). During the Crimean War he was attached to Therapia Hospital (Crimean medal and clasp, and Turkish medal). After the conclusion of peace, he served in H.M.S. *Esk* on the China Station (Chinese medal, Canton clasp). His last appointment was to the *Castor*, drill ship of Naval Reserves, North Shields, from which he finally retired in August, 1880. Of a handsome and commanding presence, coupled with a genial and amiable disposition, he was universally liked, and it can be truthfully stated he never made an enemy either in or out of the service, and but for his innate modesty, which prevented him from pressing his claims, would no doubt have been more officially honoured.

EDWARD GREEN BALFOUR, Surgeon-General.

SURGEON-GENERAL EDWARD GREEN BALFOUR, whose death at the age of 78 we have to announce, was one of the most eminent officers of the Madras Medical Establishment; and very few men of any department of the public service in India could show a longer and more sterling record of public usefulness. He was in India altogether forty-two years, from 1834 to 1876; and after being in charge of native and European troops of all branches, and in both the Madras and Bombay armies, and Staff-Surgeon at Ahmednugger in the Deccan, and Bellary in the ceded districts, he served from 1862 to 1870 in the administrative grade of the Madras Medical Staff, as Deputy Surgeon-General, in Burmah and the Straits Settlements, and the Andamans, in the ceded districts, in the Mysore division, and for four years with the Hyderabad subsidiary force and Hyderabad contingent. From 1871 to 1876 inclusive, he was, as Surgeon-General, the head of the Madras Medical Department. For many years he was political agent at the Court of the Nawab of the Carnatic, and also paymaster of the Carnatic stipends, and from 1858 to 1861 he was commissioner for investigating the debts of the Nawab. In 1850 he founded the Government Central Museum at Madras, and in 1856 commenced the collection of animals which formed the nucleus of the Madras Zoological Gardens in the People's Park. In 1866 he instituted the Mysore Museum. He was secretary to the Madras Central Committee for the Great Exhibition of 1851, for the Paris Exhibitions of 1855 and 1868, for the International Exhibition of London in 1862, and the Vienna Exhibition of 1873. He wrote largely on Indian economic subjects, and translated several English medical and scientific works into Hindustani, and published a volume of selections from the Persian and Indian poets, in whose writings he was deeply read. His great work, however, was his *Cyclopædia of India and Southern Asia*, in the preparation of the second editien of which, in 1885, his outlay was lavish and ungrudging. But so widely had its usefulness become known since the appearance of the first edition, that the whole expenditure on it was recouped within two years. It is a book indispensable to all who are in any practical way interested in India, and will long remain a monument of his large experience, his varied accomplishments, his indomitable industry, and his vast reading.

Surgeon-General Balfour was a brother to Sir George Balfour, K.C.B., and M.P. for Kincardineshire, and a nephew of Joseph Hume.

HOSPITAL AND DISPENSARY MANAGEMENT.

THE PROPOSED PUBLIC MEDICAL SERVICE.

A SPECIAL meeting of the Bath and Bristol Branch was held at the Museum and Library, Bristol, on Thursday evening, December 5th, to consider Dr. Rentoul's resolutions respecting the alleged abuse of the out-patient department of hospitals. Present: W. JOHNSTONE FYFFE, President (in the chair), twenty-four members, and two visitors.—The following resolution was proposed by Dr. GOODRIDGE, and seconded by Dr. BROOM: "That this meeting of the Bath and Bristol Branch of the British Medical Association, recognising the great and prevalent abuse of the out-patient department of medical charities, and having had its attention drawn to the scheme proposed by Dr. Rentoul, of Liverpool, for rectifying the same, is of opinion that the first step towards the attainment of this end should be a thorough and impartial inquiry into the subject by a Royal Commission, and that such inquiry should include within its scope both metropolitan and provincial medical charities."—To this the following amendments were proposed: (1) Proposed by Mr. GRIFFITHS, and seconded by Dr. BROOM: "That in the opinion of this meeting the scheme of Dr. Rentoul is uncalled for, in the face of the small amount of abuse existing in the out-patient department of general hospitals." (2) Proposed by Dr. BEDDOE, and seconded by Dr. STEWART: "That while recognising the prevalence of a wide-spread belief in the existence of abuse in the out-patient departments of public hospitals, this meeting is, nevertheless, of opinion that Dr. Rentoul's scheme is unworkable."—On a division, the second amendment was carried. It was then put as a substantive motion, and carried.—The following gentlemen took part in the prolonged discussion of this question: The PRESIDENT, Drs. GOODRIDGE, BROOM, BOURNE, TIVY, STEWART, ELLIOTT, MILLARD, HAILES, MARKHAM SKERRITT, CLARKE, BEDDOE, and WATSON WILLIAMS; and Messrs. LANSDOWN, DOBSON, GRIFFITHS, and BUSH.

AT a meeting of the Staffordshire Branch of the British Medical Association held at Stoke-on-Trent on November 28th, the six resolutions regarding the abuse of the out-patient department of our medical charities passed at the meeting of the Association held at Leeds on August 16th, 1889, were discussed. The following gentlemen took part in the discussion:—Mr. MORGAN, Mr. FOLKER, Mr. ALCOCK, Dr. E. T. TYLECOTE, Mr. WOLFENDEN, and Dr. HIND, and the following resolutions regarding each of the resolutions in question were agreed upon by the meeting:—

1. That the members present agree with the resolution in the main, but consider that the "wage limit" is too high.
2. That the members present do not agree with this resolution.
3. That in the face of the objection to resolution No. 2, this falls to the ground.
4. That although there are some good points in this resolution, this meeting considers that, in the main, it is impractical.
5. That the members present entirely agree with this resolution.
6. That the members present agree with this resolution so far as is indicated in the above five resolutions.

A MEETING of the Manchester Medico-Ethical Association was held on November 29th, to consider the resolutions of Dr. Rentoul, the President, Dr. WAHLTUCH, in the chair. There was a large and representative attendance of general practitioners, and surgeons and physicians of the Manchester Royal Infirmary, the Salford Royal Hospital, the Stockport Infirmary, the Royal Eye Hospital, the Southern Hospital, the Clinical Hospital, Saint Mary's Hospital, and the Hulme, Chorlton-upon-Medlock, and several Provident Dispensaries.

The Honorary Secretary, Dr. COLLINS, opened the discussion, and introduced Dr. RENTOUL, who stated that he came to the meeting to explain his proposals to do away with the existing hospital abuse, and that he would answer any questions put to him.

Dr. THOMAS HARRIS (Manchester Royal Infirmary) reviewed the Manchester system of investigation into the circumstances of the applicants for relief at the medical out-patients' department of the Manchester Royal Infirmary: First, the great majority of patients are treated by the assistant physicians the first time. Secondly, the clerk makes strict inquiries into the circumstances of each applicant, and in a few days each applicant is visited by an inspector of the Provident Society. If the applicant, being unmarried, is in receipt of over 12s. per week, or, when married, receives over 18s. and 1s. 6d. for each child per week, his card is withdrawn, and he

is recommended to join a Provident Dispensary. In the Provident Dispensary the applicant must make four weekly payments, or an immediate payment of 5s., before treatment is commenced; but during these four weeks he receives treatment at the Manchester Royal Infirmary free of charge. Dr. Harris considered there was little or no abuse of the out-patient medical department. He proposed that the wage limit should be raised to 15s. and 20s. per week for unmarried and married applicants respectively.

Mr. WILLIAM THORBURN, F.R.C.S. (assistant surgeon, Manchester Royal Infirmary), corroborated Dr. Harris's statement as to the absence of abuse in the surgical department. He was emphatically of opinion that the surgeons and physicians should not take part in the system of checking.

Dr. HILL GRIFFITH stated that there was no wage limit in use at the Royal Eye Hospital. If the applicant was able to pay a consultant's fee of 21s. he was referred to one of the hospital staff.

Mr. H. LUND said that careful investigation proved that the applicants at the Salford Royal Hospital were in receipt of an average weekly income of 11s. only.

Dr. A. M. EDGE supported this statement, and affirmed that there was little or no abuse in the out-patient department.

Drs. BURY and WALTER admitted that in special hospitals there were flagrant cases of abuse occurring frequently.

Professor SINCLAIR maintained that there was vastly less abuse in the hospitals, both special and general, than there was in the provident dispensaries; that he had an extended experience of the provident dispensary system, and that nothing could be worse than that system. He believed Dr. Rentoul's propositions would greatly extend it. The present difficulties arose from overcrowding of the profession.

It was proposed by Dr. T. HARRIS, seconded by Dr. COLLINS, and carried unanimously: "That this meeting recognises the existence of hospital abuse, and that medical practitioners and the managers of our medical charities in the various towns and cities meet together and decide who are eligible for out-patient medical aid. Further, that either the Manchester system of checking an abuse, or that tried at the London and St. Bartholomew's Hospitals be put into force, but that preference be given to the plan adopted in Manchester."

It was proposed by Professor SINCLAIR, seconded by Dr. NICHOL, and carried unanimously: "That no public medical service which may be dominated by lay members of committees can possibly succeed in supplying permanently medical relief to the working classes of our cities."

These resolutions were confirmed by the Committee at a meeting held on December 6th, 1889; and it was resolved: "That this meeting desires to express its regret that the Poor-law infirmaries and fever hospitals are not open for the clinical instruction of medical students, and hopes that the various authorities will direct their attention to the removal of the present restrictions, so that the educational standard may be improved."

The Committee ordered that a full report of the proceedings of the Association should be forwarded to the Editor of the JOURNAL for publication.

PUBLIC HEALTH

AND

POOR-LAW MEDICAL SERVICES.

THE COST OF NOTIFICATION.

DR. T. J. DYKE, M.O.H. (Merthyr) writes: "The Merthyr Tydfil Sanitary Authorities, urban and rural, are desirous, before adopting the Act for the Notification of Infectious Diseases, to learn what have been the expenses incurred in towns where compulsory notification has been for some years past required.

"As an authentic epitome of the average annual percentage of charges (per 1,000 of the population) for medical fees, and for other expenses, would be of great assistance to health officers in introducing the new Act to the local authorities, I would ask is it possible to have a list of some five or six towns in which provisions similar to those of this new Act have been carried out, and the annual average charges in each town?"

It is difficult, in some cases almost impossible, to calculate the cost involved in the Compulsory Notification of Infectious Diseases, seeing that it will depend upon the number of infectious cases, and be greatly influenced by outbreaks of disease. If these facts be borne in mind, the following table may be found interesting. The year selected is 1886.

Name of Town.	Population, 1881.	Approximate Total Cost in 1886.	Cost per 1,000 of Population.	Number of Cases Notified during Year.						
				Small-Pox.	Typhus Fever.	Enteric Fever.	Continued Fever.	Scarlet Fever.	Diphtheria.	Erysipelas.
		£	s. d.							
Barrow-in-Furness	50,000	35	14 (	—	—	—	110	141	23	—
Bradford (Yorks) ...	224,500	250	22 (	3	—	159	—	1,118	46	—
Dewsbury	33,000	40	24 (	—	—	11	87	217	—	—
Heywood	25,000	8	6 (	4	—	27	—	8	—	—
Jarrow	30,000	21	14 (	—	2	22	—	94	19	—
Leicester	143,000	270	38 (	1	—	141	—	817	51	260
Nottingham ...	240,000	75	6 (	12	—	317	—	351	68	—
Portsmouth ...	137,900	220	32 (	7	—	1,250	—	343	230	—
Reading	50,000	20	8 (	1	—	20	—	236	11	—
Sunderland ...	130,000	60	9 (	—	40	107	49	328	22	—

LIST OF AUTHORITIES WHO HAVE ADOPTED THE INFECTIOUS DISEASE (NOTIFICATION) ACT.

WITHIN the next few weeks more than half the population of England and Wales will be subject to the compulsory notification of certain infectious diseases. By the Infectious Disease (Notification) Act of last session, it was provided that any local sanitary authority outside the metropolis may, if they think fit, adopt the Act, and thereby impose upon householders and medical men the duty of notifying the occurrence of cases of "small-pox, cholera, diphtheria, membranous croup, erysipelas, the disease known as scarlatina or scarlet fever, and the fevers known by any of the following names: typhus, typhoid, enteric, relapsing, continued, or puerperal." The Act has already been adopted by the following local authorities:

Urban.—Abingdon, Altrincham, Ambleside, Appleby, Ashton-in-Makerfield, Aspull, Bakewell, Baldock, Balsall Heath, Bangor, Barking, Barton, Beckenham, Bedford, Belper, Benwell, Bexhill, Bexley, Bishop Stortford, Bodmin, Bollington, Boston, Bournemouth, Bowness, Brentford, Broadstairs, Bromley, Broughton, Budleigh Salterton, Burgess Hill, Buxton, Cambridge, Cardiff, Carshalton, Castleford, Chatham, Cheadle, Chesterton, Chilvers Cotson, Chiswick, Chorley, Church, Cirencester, Cleckheaton, Clevedon, Cockermouth, Colwyn Bay, Conway, Compton Gifford, Colchester, Coventry, Crumpsall, Dalton, Darlington, Devonport, Dorking, Dover, Dwygyfylchi, Ealing, Eastbourne, East Grinstead, East Ham, East Retford, Egremont, Ely, Enfield, Epsom, Erith, Eston, Exeter, Eye, Falmouth, Finchley, Folkestone, Garston, Gillingham, Glastonbury, Gorton, Great Crosby, Great Yarmouth, Halstead, Harborne, Harrow, Hayward's Heath, Heanor, Hebden Bridge, Hereford, Herne Bay, Hertford, Heston and Isleworth, Hexham, Higher Bebington, Hoole, Horncastle, Hornsey, Horwich, Houghton-le-Spring, Hurst, Huyton, Ilfracombe, Ince, Keighley, Kenilworth, Kettering, Kidderminster, Kirkby Lonsdale, Liskeard, Little Woolton, Lorner Bebington, Lymm, Malvern, Malvern Link, Mansfield, Mansfield Woodhouse, March, Market Harborough, Melksham, Middlesbrough, Millom, Milton, Morecambe, Mountain Ash, Nantwich, Neath, Newark, Newton Heath, Newton-in-Makerfield, Normanby, North Bierley, Northfleet, Nuneaton, Openshaw, Ormskirk, Paignton, Penrith, Penzance, Plymouth, Pontypridd, Queenborough, Radcliffe, Redruth, Richmond (Surrey), Rishton, Rochdale, Rochester, Runcorn, Saffron Walden, St. Austell, St. Helens, Salcombe, Sale, Saltley, Selby, Sheerness, Sheffield, Shepton Mallet, Shipley, Sittingbourne, Skipton, Sleaford, Scothill Nether, Southend, Southgate, South Gosforth, Southport, South Stockton, Spalding, Standish, Street, Sutton Coldfield, Swadlincote, Swinton and Pendlebury, Tamworth, Taunton, Teignmouth, Tenterden, Tettenhall, Todmorden, Tonbridge, Totnes, Tottenham, Toxteth Park, Tredegar, Trowbridge, Truro, Tunbridge Wells, Turton, Twickenham, Tynemouth, Ulverston, Upholland, Uxbridge, Walker, Wallasey, Waltham Holy Cross, Warley, Waterloo-with-Seaforth, Wavertree, Wellingborough, West Hartlepool, Weston-super-Mare, Whitley and Monkseaton, Widnes, Wimbledon, Windermere, Winsford, Withington, Wolverhampton, Wombwell, Worcester, Wrexham.

Rural.—Abingdon, Alresford, Altrincham, Amersham, Anglesey, Ashford (East), Aston, Banbury, Barnet, Barnsley, Barton Regis, Basford, Basingstoke, Bedford, Biggleswade, Billesdon, Blandford, Bolton, Brackley, Bradfield, Bridge, Bridgnorth, Bromley, Buckingham, Burnley, Caistor, Cannock, Carnarvon, Castle Ward, Caxton and Harington, Cheadle, Chertsey, Chesterton, Chippenham, Chorley, Christchurch, Cirencester, Cockermouth, Conway, Cosford, Coventry, Cranbrook, Croydon, Darlington, Daventry, Deepwade, Doncaster, Dore, Dorking, Dover, Drayton, Droxford, Dunmow, Durham, Eastbourne, East Grinstead, East Retford, Eastry, Elham, Epsom, Eton, Evesham, Fareham, Faversham, Faringdon, Foleshill, Frome, Garstang, St. Germans, Grantham, Guilteross, Hailsham, Halstead, Hambledon, Hartismere, Hartlepool, Hartley Wintney, Haverfordwest, Hay, Hendon, Henley, Hertford, Hexham, Hollingbourn, Horncastle, Houghton-le-Spring, Howden, Hoxne, Hungerford, Hunslet, Hursley, Keighley, Kendal, Kettering, Kingsbridge, King's Norton, Kingston-on-Thames, Lichfield, Lincoln, Louth, Ludlow, Lutterworth, Macclesfield, Maldon, Malling, Mansfield, Martley, Mere, Meriden, Midhurst, Milton, Monmouth, Neath, Newent, Newhaven, Newmarket, Northwich, Oakham, Okehampton, Orsett, Pateley Bridge, Penrith, Peterborough, Pocklington, Potterspury,

Prescot, Reigate, Ross, Rugby, Runcorn, Scarborough, Selby, Settle, Sevenoaks, Shardlow, Sheppey, Shepton Mallet, Shifnal, Skipton, Sleaford, Solihull, Southam, South Stoneham, Spalding, Spilsby, Stafford, Stamford, Stratford-on-Avon, Strood, Sunderland, Swansea, Tadcaster, Tamworth, Tarvin, Taunton, Tendring, Tenterden, Thakeham, Thame, Thanet, Thingoe, Thirsk, Thornbury, Totnes, Truro, Ulverstone, Uppingham, Uxbridge, Wakefield, Walsall Ware, Wellingborough, Wellington (Salop), Welwyn, West Ward, Wetherley, Whitehaven, Isle of Wight, Winchester, Wirral, Worcester, Wortley, and Wrexham.

The aggregate population of these districts is about six millions. The Act came into force in the whole of the metropolis at the end of October last, and thereby brought upwards of four millions of people under its operation, whilst by separate local Acts the system of compulsory notification had already been in force in fifty-nine large towns, with an aggregate population of nearly four millions.

POOR-LAW MEDICAL OFFICERS' ASSOCIATION.

At a meeting of the Council held at their rooms, 3, Bolt Court, Fleet Street, on December 3rd, Mr. A. Stokes, district medical officer of the Oundle Union, attended and fully explained his case to the Council. He was privately advised as to his future action. It was decided to give further consideration to this case at the next meeting. In reference to the case of Mr. C. G. Read, late medical officer of the Hoxne Union, it was unanimously resolved: "That this Council, having fully considered the case of Mr. C. G. Read, of Stradbrooke, especially in reference to his long services as medical officer in the Hoxne Union, deeply regret to hear that the Board of Guardians of that Union should have declined to exercise their powers to award him superannuation allowance on retirement from office, and that a copy of this resolution, signed by the Chairman of this Council, be forwarded to the Chairman of the Hoxne Board of Guardians with a request that he will order it to be read at the next meeting of that Board."

The above resolution was read at a meeting of the Hoxne Board of Guardians on December 10th.

EARL SPENCER ON THE REPORTS OF LOCAL GOVERNMENT BOARD INQUIRIES.

Earl Spencer, speaking at a meeting of the Brixworth Board of Guardians recently, strongly censured the action of the Local Government Board in its delay in sending out reports. In August an outbreak of diphtheria occurred at East Haddon, and many people died. An inspector visited the village in September, but no report had yet been received, and this delay his lordship considered most serious and deplorable. The local authorities were most anxious to deal with the outbreak, but they were completely paralysed owing to the absence of the report. It was a sad reflection on centralised government for an authority to wait from the middle of September onwards for a report, and these delays furnished the strongest arguments against a central government in London. As Chairman of the County Council he was not anxious to assume fresh duties, but he ventured to say that if they had had to deal with the matter they would have brought commonsense to bear, and not have paralysed the action of the local authorities.

VACCINATION IN IRELAND.

During the third quarter of the year 25,526 persons were successfully vaccinated, while in 3,058 cases the operation was postponed, and 50 children were reported as insusceptible of vaccination. The deaths of 1,490 unvaccinated children under three months old were registered during the quarter, making a total of 30,124 children with regard to whom particulars as to vaccination were ascertained.

HINTS FOR MEDICAL OFFICERS OF HEALTH.

In a little publication just issued Dr. Spottiswoode Cameron, formerly medical officer of health for Huddersfield, and now for the County Borough of Leeds, gives some valuable hints, gained by an experience of twelve years, which should be very useful to sanitary authorities about to adopt compulsory notification powers. In this pamphlet Dr. Cameron points out that there must always be a considerable number of cases of infectious disease about the exact nature of which there is a certain amount of legitimate doubt. "Medical men," he says, "will naturally hesitate, some more, some less, according to constitution, about reporting these contagious cases, and the length of their delay, in not a few instances, will be lessened or increased by the amount of their confidence in the judgment, tact, and considerateness of the medical officer of health. If the latter is a fussy official, who, with perhaps little or no practical acquaintance with medical work, without perhaps any personally acquired knowledge of the insidious commencements of those very diseases which have so distinct a *facies* when seen later on in the wards of a hospital, insists upon an early and definite diagnosis from the medical attendant, on pain of presenting the latter before his patients as a man ignorant of the signs of the diseases he has to deal with, such a one may expect very little friendly help from the practitioner in those doubtful and difficult cases where from first to last the facts on which a diagnosis has to be based are few and indefinite. And yet it is just these doubtful and indefinite cases that are too often the *fons et origo* of an outbreak of infectious disease."

THE IMPROVEMENT OF INSANITARY HOUSES.

Sir,—On page 1172 of the Journal of December 7th, in an annotation on "The Improvement of Insanitary Houses," you state that a nuisance, when proved in a court of justice, is not a punishable offence, and you urge an amendment of the law relating to nuisances which should have the effect of making the neglect of a sanitary authority's notice to remove a nuisance an offence punishable by a fine not exceeding £5, the neglect of the magistrate's order being punishable by a further fine.

Permit to point out that, while the laws dealing with nuisances within the metropolis are as you state, it is otherwise in the rest of England, where the Public Health Act, 1875, is in force, and has replaced, consolidated, and in some respects amended, the laws relating to public health which were previously in force in the whole of England, as they still are in the metropolis.

Section 96 of the Act of 1875 enables a court of summary jurisdiction not only to make an order requiring compliance with the requisitions of a notice of a sanitary authority, but also to impose a penalty, not exceeding £5, on the person on whom the order is made, whilst Section 98 of the same Act provides a penalty for a contravention of an order of the court.—I am, etc.,

Reading, November 30th. Alfred Ashby.

THE ASSOCIATION OF PUBLIC SANITARY INSPECTORS OF GREAT BRITAIN.

Mr. Hugh Alexander (Chairman of the Association of Public Sanitary Inspectors) writes: If it were possible for you to publish my address on the Sanitary Institute, to which you refer in your issue of November 16th, and of which I enclose herewith a copy, I would be quite content to be judged thereby, as the address supplies full reasons for the resolution which was adopted at the meeting, and which you say was unreasonable. If that may not be, I shall be very glad if you will be good enough to permit me to say, in reply to the observation, that the suggestion of the Council for the improvement of the Sanitary Institute's examination "must be decided on general grounds of public expediency, as well as merely in the interests of the inspectors," that it is far more in the interests of the public health than in the individual interests of inspectors holding office that the Sanitary Institute should cease to admit to its examinations any candidate for its certificate of fitness for the position of sanitary inspector, unless such candidate can give satisfactory proof of practical experience in building operations, and, in addition, be in possession of a first class certificate of the Science and Art Department in building construction. What measure of "public expediency" is promoted or upheld by the examinations as at present conducted can best be estimated by the fact, that they have overstocked the market, and that every vacancy, however poorly paid, is competed for by numbers of poor men holding the Institute's certificate—soldiers, policemen, postmen, confectioners, etc.—who are positively without any other qualification than that they have attended a course of lectures, and been sufficiently coached to obtain the certificate of the Sanitary Institute. The Council of the Association are not ungrateful to the Institute, and to the great men, its members, who have done so much for the advancement of sanitary science, but we owe no debt of gratitude to those whose influence, for whatever reason, is exerted in retarding a reform unquestionably of the greatest importance to the interests of the public health.

GRANTS TO PUBLIC VACCINATORS.

Public Vaccinator asks if the formation of the new County Councils makes any and what difference to the grants usually given to public vaccinators?

*** We referred to this matter some weeks ago.[1] We understand that the delay which has this year occurred in paying the awards gained by public vaccinators for successful vaccination has been due to difficulties that arose in connection with the apportionment of the payments between the several counties. These payments will in future, as the result of the provisions of the Local Government Act, 1888, be made, not direct from the Imperial Exchequer, but by the County Councils, on the certificate of the Local Government Board, out of the new Exchequer Contribution Account, to which the sums received by the Councils in respect of the duties on local taxation licences and the probate duty grant are carried. We believe that the process of certifying and paying is now going on, and doubtless there will not again be such delay as has occurred this year.

[1] Journal, October 26th, p. 939.

MEDICAL NEWS.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having passed the necessary examinations, were, at an ordinary meeting of the Council on December 12th, admitted Fellows of the College, namely:

Perry, Francis Frederic, L.R.C.P.Lond., Brookdale, Teddington Diploma of Member, dated August 1st, 1876
Morton, Charles Alexander, L.R.C.P.Lond., Zetland Road, Bristol, November 17th, 1881
Mortimer, John Desmond Ernest, L.S.A., Warwick Street, Earl's Court Road, January 20th, 1882
Swain, James, M.B.Lond., Royal Infirmary, Bristol, November 14th, 1883
Crowle, Thomas Henry Rickard, 3, Campden Hill Road, Jan. 24th, 1884
Murray, Robert William, L.R.C.P.Lond., 35, Huskisson Street, Liverpool, April 28th, 1884
M'Lachlan, John, M.B.Edin., 30, Lothian St., Edinburgh, July 24th, 1885
Larkin, Frederic Charles, L.S.A., 29, Bedford St., Liverpool, Oct. 23rd, 1885
Jones, Arthur Meyrick, M.B.Durh., Wellow Vicarage, Romsey, Oct. 30th, 1885
Permewan, Wm., M.D.Lond., 56, Vauxhall Rd., Liverpool, July 22nd, 1886
Pennell, Geo. Herbert, L.R.C.P.Lond., Heavitree Pk., Exeter, Aug. 2nd, 1888
Galloway, James, M.B.Aberd., 42, New Street, E. (not a Member)

Two candidates who have not yet attained the legal age (25 years) will receive their diplomas at a future meeting of the Council.

Twenty-four candidates were referred.

The following gentleman, having passed the necessary examination at a previous meeting of the Court of Examiners, and having attained the legal age (25 yars) was also admitted a Fellow of the College:

Ashworth, Percy, L.R.C.P.Lond., Higher Crumpsall, Manchester, August 4th, 1887.

The following gentleman, having passed the necessary examination, was at the same meeting of the Council admitted a Member of the College:

Gilpin, Frank, L.S.A., Charlton House, Pershore, near Worcester.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.—At a special examination for the diploma in State medicine, held on Monday, Tuesday, and Wednesday, November 25th, 26th, and 27th, 1889, the diploma was granted to

J. H. Poland, M.R.C.S.Eng., 1877.

The following Licentiate in Medicine of the College, having complied with the by-laws relating to Membership, pursuant to the provisions of the Supplemental Charter of Victoria, dated December 12th, 1878, has been duly enrolled a Member of the College:

A. Croly, *Lic. Med.*, 1875, Greenfield House, Rathfarnham, Co. Dublin.

A SOCIETY of Naturalists and Physicians has been established at Tomsk (Western Siberia).

DR. MATTHEW JAMES TURNBULL, of Coldstream, has been placed on the new Commission of the Peace for Berwickshire.

DR. THOMAS FINLAY, late medical officer of Gweedore Dispensary, died recently at Dalkey, Co. Dublin, aged 33, after a very protracted illness.

CORK ASYLUM.—The Government has sanctioned the expenditure of £28,428 upon certain improvement works in connection with this institution.

DR. A. BAGINSKY has been appointed medical director of the new Hospital for Sick Children, in the north of Berlin, which is to be opened in January next.

AT the annual general meeting of the Metropolitan Hospital Sunday Fund, held on Wednesday last, June 8th was fixed for Hospital Sunday next year.

MR. H. W. PAGE, Surgeon to St. Mary's Hospital, has been appointed an additional examiner for this term, for surgical degrees, at the University of Cambridge.

DRS. José Esteban Lorenzo, and José Esteban Sanchez, professors of clinical surgery and clinical medicine respectively in the University of Salamanca, have been decorated with the Commandership of the Order of Christ.

AN INDIAN OCULIST.—Dr. D. W. Williams writes that he proposes to forward a statement of facts for publication in the next issue of the JOURNAL which will, he says, materially modify the view expressed last week in the article headed "An Indian Oculist," on page 1295.

THE interesting Exhibition of Hospital Nurses' Uniforms, organised by the *Hospital*, and held in the Board Room of Charing Cross Hospital, included the work of nurses belonging to more than 100 organisations. The models, for the most part, appeared to be dressed in blue and grey serge, striped cotton, hollands and similar fabrics, while the Sisters favoured black and blue cashmere. The minor equipments of a nurse were duly represented. A series of prizes were distributed.

THE COOMBE HOSPITAL, DUBLIN.—At the annual meeting of this hospital, a satisfactory report was given of the work done during the year under the master, Dr. S. R. Mason. The Lord Mayor was among the speakers, and referred to the promised legislation regarding Dublin hospital grants. He expressed his belief that this particular hospital would benefit by the threatened changes, but he did not indicate how the benefit would accrue.

RENAL SURGERY.—Mr. Lawson Tait writes: Mr. May tells us that he operated on the patient for a retro-peritoneal abscess. What he did not recognise, and consequently did not treat, was the fact that the perinephric abscess was only the superficial expression of deep renal mischief. When he says that she is now in almost precisely the same condition that she was in September, 1888, he is clearly ignorant of the fact that I opened and drained a large abscess of the kidney, and that she is now recovering from that, a very different thing from a retro-peritoneal abscess.

BRITISH NURSES' ASSOCIATION.—The second annual *conversazione* in connection with the British Nurses' Association took place in the Princes' Hall, and in the galleries of the Institute of Painters in Water Colours, Piccadilly, on December 6th. Besides other guests, over 1,000 nurses were present from various parts of England, Ireland, and Scotland, as well as the metropolis, each wearing the uniform of the institution to which they belonged. The guests were received in the galleries of the Institute by Sir Dyce Duckworth (vice-chairman of the Executive Committee), Mr. Pick, and Miss Thorold. The picture galleries were brilliantly illuminated for the inspection of the very choice works of art. A concert was given in the Princes' Hall for the entertainment of the company.

VITAL STATISTICS OF MADRID.—To judge from statistics recently published Madrid can hardly be considered to be in a flourishing condition as regards either the vitality or the morals of its inhabitants. During the first six months of the present year there were only 8,880 births to 10,062 deaths, the latter thus exceeding the former by 1,182. As the city has not been devastated by any epidemic—apart from the lung disease and diphtheria which may be said to be endemic there—this state of things, which a Spanish contemporary justly calls "alarming," would seem to be due to a deficiency of births rather than to any particular excess in the death-rate. The figures we have quoted certainly suggest that marriage is a failure in Madrid, a conclusion which is further enforced by the fact that of the 8,880 births no fewer than 2,253, or nearly 25 per cent. were illegitimate. It is a curious illustration of the proverb about extremes meeting, to find the capital of Catholic Spain disputing with certain districts of Calvinistic Scotland the "bad eminence" of the highest extra-matrimonial birth-rate in the civilised world.

CHOLERA.—The latest information as to the continued progress of cholera in Persia and Mesopotamia shows a situation of some gravity as a possible menace to the extension of the epidemic to Central Europe. The latest information from Dr. Gabuzzi, of Constantinople, dated November 27th (*Journal d'Hygiène*, December 5th), is as follows: The cholera has reached Mosul; thus the whole plain watered by the Tigris and Euphrates is invaded by the epidemic, and the epidemic will continue its march towards the south and towards the seaboard of Syria, if the winter season and abundant snows do not, by interrupting communications, play the part which is so unsuccessfully attempted by the inadequate sanitary and military cordons. Mosul is a city in direct communication with Aleppo and Damascus, but separated by the desert. It is probable that the cholera, passing through Erzeroum and Trebizond, may make its appearance on the seaboard of the Black Sea, and thence menace Europe. Moreover, information as to cholera in Persia, transmitted by two telegrams from Kermanshah, and Teheran, announces that the epidemic continues to rage at Hamadan. From Hamadan to Teheran, from Teheran to Reshd, on the Caspian Sea communications are easy. Further, if, as it is stated, cholera is making ravages in Bokhara, from that side also the epidemic may menace Central Europe by way of Batoum.

MEDICAL VACANCIES.

The following Vacancies are announced:

BLACKBURN AND EAST LANCASHIRE INFIRMARY.—Junior House-Surgeon. Salary, £50 per annum. Applications by December 17th to Joseph Eastwood.

CHELMSFORD UNION.—Medical Officer and Public Vaccinator. Salary, £140 and fees. Applications by December 31st to W. W. Duffield.

CHELTENHAM GENERAL HOSPITAL.—House-Surgeon, Salary, £80 per annum, with board and apartments. Applications by December 26th to Lieutenant-Colonel Croker-King.

CHELSEA HOSPITAL FOR WOMEN, Fulham Road.—Assistant-Physician. Applications by December 23rd to the Acting Secretary.

DERBYSHIRE GENERAL INFIRMARY.—Resident Assistant House-Surgeon. Bonus, £10. with board and washing. Applications by December 31st to the House-Surgeon.

DONCASTER GENERAL INFIRMARY AND DISPENSARY.—House-Surgeon. Salary, £100 per annum, with board and residence. Applications by December 20th to W. Clark.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell, E.—House-Surgeon. Board and lodging. Applications by January 9th to the Secretary.

GENERAL HOSPITAL, Birmingham.—Two Assistant House-Surgeons. Board, lodging, and washing. Applications by December 28th to the House Governor.

GENERAL INFIRMARY, Northampton.—House-Surgeon. Salary, £125, with board and lodging. Applications by December 23rd to the Secretary.

GORDON HOSPITAL FOR FISTULA, etc., 278, Vauxhall Bridge Road, S.W.—Anæsthetist. Applications by December 21st to N. S. Hincks.

GRANTHAM FRIENDLY AND TRADE SOCIETIES' MEDICAL INSTITUTION.—Resident Medical Officer. Salary, £150 per annum, with fees, residence, etc. Applications by December 16th to Mr. F. Hullott, Grantham.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway Road.—Surgeon. Applications by December 27th to the Secretary.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street.—Surgical Registrar. Salary, £40. Applications by December 31st to the Secretary.

LEEDS GENERAL INFIRMARY.—Resident Ophthalmic Officer. Appointment for six months. Honorarium, £50, with board and lodging. Applications by December 23rd to Mr. W. H. Brown, 19, Queen Street, Leeds.

LIVERPOOL NORTHERN HOSPITAL.—House-Surgeon. Salary, £100 per annum, with board and lodging. Applications by December 27th to the Chairman of the Committee.

LIVERPOOL NORTHERN HOSPITAL.—Assistant House-Surgeon. Salary, £70 per annum, with board and lodging. Applications by December 27th to the Chairman of the Committee.

LONDON THROAT HOSPITAL, Great Portland Street.—House-Surgeon. Salary, £50 per annum. Applications by December 20th to A. B. Woakes, Honorary Secretary.

MANCHESTER ROYAL INFIRMARY (MONSALL FEVER HOSPITAL).—Assistant Medical Officer. Salary, £100 per annum, with board and residence. Applications by December 21st to the Chairman of the Board.

MERCER'S HOSPITAL, Dublin.—Physician. Applications by January 7th to A. McGucken, Esq., Registrar.

MIDDLESEX HOSPITAL.—Pathologist and Curator of the Museum. Applications by December 20th to the Secretary-Superintendent.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, King William Street, Strand.—Clinical Assistants. Applications by December 31st to the Secretary.

ST. PANCRAS AND NORTHERN DISPENSARY.—Resident Medical Officer. Salary, £105, per annum, with residence and attendance. Applications to H. P. Bodkin, 23, Gordon Street, Gordon Square, W.C.

VICTORIA HOSPITAL FOR SICK CHILDREN, Chelsea, S.W.—House-Physician. Salary, £50, with board and lodging. Applications by January 4th to the Secretary.

VICTORIA HOSPITAL FOR SICK CHILDREN, Chelsea, S.W.—House-Surgeon. Salary, £50, with board and lodging. Applications by January 4th to the Secretary.

WEST LONDON HOSPITAL, Hammersmith Road, W.—House-Physician.—Board and lodging. Applications by December 26th to the Secretary-Superintendent.

WEST LONDON HOSPITAL, Hammersmith Road, W.—House-Surgeon.—Board and lodging. Applications by December 26th to the Secretary-Superintendent.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—Two Honorary Gynæcologists. Applications by December 30th to Chairman Weekly Board.

YORK DISPENSARY.—Resident Medical Officer. Salary, £130 per annum, with apartments, coals, and gas. Applications by December 17th to S. W North, 84, Micklegate, York.

MEDICAL APPOINTMENTS.

BAILDON, Francis J., M.B., C.M., appointed Honorary Medical Officer to the Southport Infirmary, *vice* Dr. A. Jones, resigned.

BEVAN, Richard, D.P.H. and L.R.C.P.Lond., M.R.C.S., L.S.A., appointed Medical Officer of Health to the Borough of New Romney, Kent.

BOOTH, F., M.B., C.M.Aber., appointed Medical Officer of Health of St. Anns-on-the-Sea, Lancashire.

BOWMAN, R. O., M.B.Lond., M.R.C.S., L.R.C.P., appointed Junior Resident Medical Officer to the General Hospital for Sick Children, Pendlebury, Manchester.

BROOKS, R. P., M.R.C.S.Eng., L.R.C.P.Lond., L.S.A.Lond., appointed Resident Medical Officer to the Tower Hamlets Dispensary, *vice* M. C. Corner, L.S.A., resigned.

CHEPMELL, C., M.D.Brux., M.R.C.S.Eng., L.R.C.P.& S.Ed., L.F.P.S.Glasg., appointed Surgeon to the London Brighton and South Coast Railway Provident Society.

CLARKSON, A., M.B., C.M., appointed Demonstrator in Physiology to Owens College, Manchester, *vice* A. F. S. Kent, resigned.

GIRLING, C. J., M.R.C.S., L.R.C.P.Lond., appointed Assistant House-Surgeon to the Halifax Infirmary and Dispensary, *vice* A. Robertson, M.B., C.M.Edin., resigned.

HUDSON, C. L., F.R.C.S., L.R.C.P., appointed Surgical Registrar to the Middlesex Hospital, *vice* W. R. Williams, F.R.C.S., L.R.C.P., resigned.

IDDON, W. H., M.B.Lond., M.R.C.S., appointed Assistant Medical Officer to the Royal Infirmary, Manchester.

LEA, Arnold W. W., M.R.C.S., L.R.C.P.Lond., appointed House-Surgeon to the Manchester Royal Infirmary.

LEWIS, Christopher J., M.D. (late Assistant-Surgeon), appointed Honorary Surgeon to the Ear and Throat Hospital, Birmingham.

LYNCH, G. W. A., B.A., M.B., B.C.Cantab., M.R.C.S.E., L.R.C.P.L., appointed a District Medical Officer in Fiji.

MACDONALD, J. A., M.D., M.Ch., B.A.O., Royal University of Ireland, appointed Honorary Physician to the Taunton and Somerset Hospital, *vice* Dr. Alford, resigned.

MACKENZIE, M. B., M.D., elected Medical Officer of Lisburn Union.

SMITH, Telford, B.A., M.D., B Ch. Univ. Dub., L.M. Rotunda Hospital, appointed Assistant Resident Medical Officer to the Royal Albert Asylum, Lancaster, *vice* F. W. Nielsen, M.A., M.R C.S., resigned.

WEBB, Helen, M.B.Lond., L.S.A., late Clinical Assistant at the Eastern Hospitals, appointed Assistant Medical Officer.

WILLIAMS, E. Leader, appointed Senior Resident Medical Officer to the General Hospital for Sick Children, Pendlebury, Manchester.

WOODYATT, J. F., M.R.C.S., L.R.C.P.Lond., appointed Senior House-Surgeon to Halifax Infirmary and Dispensary, *vice* W. W. Chamberlain, M.B., C.M.Edin., resigned.

DIARY FOR NEXT WEEK.

MONDAY.

MEDICAL SOCIETY OF LONDON, 8.30 P.M.—The discussion on Dr. Douglas Powell's paper will be continued, and Cases of Aneurysm of the Aorta will be shown by Dr. Douglas Powell, Dr. de Havilland Hall, Dr. Mitchell Bruce, Dr. Fowler, Dr. Seymour Taylor, and Dr. Maguire.

TUESDAY.

PATHOLOGICAL SOCIETY OF LONDON (20, Hanover Square), 8.30 P.M.—Dr. Hadden: Cyst of Cerebellum. Dr. Gulliver: Simple Cyst of Cerebellum. Mr. W. S. Colman: Cerebellar Tumour. Mr. Barling: Cancer of Breast following Eczema. Mr. Bland Sutton: Psorospermiæ in Ureter. Mr. Silcock: Parasitism by Psorospermiæ. Dr. Delépine: Psorospermiæ in Rabbit's Liver. Dr. Hunter: Pathology of Duodenitis after Burns. Dr. Hale White: Intussusception of Jejunum in Adult due to a Polypus. Card Specimens.—Dr. Hadden: Cyst of Œsophagus expelled during Life. Mr. Spencer: (1) Cystic Kidney from a Horse; (2) Sebaceous Horn on a Mouse.

WEDNESDAY.

ROYAL METEOROLOGICAL SOCIETY, 25, Great George Street, Westminster, 7 P.M.—Mr. W. H. Dines: (1) Report of the Wind Force Committee on the Factor of the Kew Pattern Robinson Anemometer; (2) On Testing Anemometers. Mr. G. J. Symons: On the Rainfall of the Riviera. Mr Edward Mawley: Report on the Phenological Observations for 1889.

HOSPITALS ASSOCIATION, Governors' Court Room, Guy's Hospital, 8 P.M.—Mr. A. Wynter Blyth: On Disinfection, Hospital and Domestic.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, BROMPTON, 4 P.M.—Mr. R. J. Godlee: On Abscess of the Liver, and Notes of some Surgical Chest Cases. Lecture II.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the announcement. The first post on Thursday mornings is the latest by which advertisements can be received.

BIRTH.

WADE.—October 14th, at Newcastle, Jamaica, the wife of Surgeon G. A. Wade, M.B., Medical Staff, of a son (Ernest Wentworth).

MARRIAGES.

BATEMAN—GARROD.—On the 11th instant, at St. Mary's, Bathwick, by Rev. Preb. Coleman, Vicar of Cheddar, assisted by Rev. J. S. Barrett, Frederic John Brownfield Bateman, L.R.C.S., L.R.C.P.Ed., eldest son of Frederic Bateman, M.D., F.R.C.P., Norwich, to Mary Stuart, eldest daughter of the late Charles William Garrod, Solicitor, of Wells, Somerset.

GRENFELL—BETTELEY.—December 7th, at St. James's, Gunnersbury, by the Rev. A. Whitfield, Henry Osborne Grenfell, L.R.C.P., etc., Park Road, Southend, to Florence Elizabeth, only daughter of the late William Betteley, Esq.

MOORE—MOORE.—October 11th, at St. Paul's Church, Rockhampton, Queensland, by the Rev. John Hunt, John Irwin Moore, L.R.C.S.I., L. & L.M. K.Q.C.P.I., Springsure, to Susan, daughter of Thomas C. Moore, Grosvenor Square, Dublin.

VINCENT—BROWN.—On December 5th, at St. Mary's Church, Bryanston Square, St. Marylebone, by the Rev. Canon Leigh, George Vincent, M.D., C.M.Aberd., M.R.C.S.Eng., D.P.H.Camb., of Ipswich, to Mary, youngest daughter of the late James Brown, Esq., Stow, Downham, Norfolk.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the office of the JOURNAL, and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

QUERIES.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* JOURNAL *are devoted, will be found under their respective headings.*

FALKLAND asks to be recommended a good book on domestic medicine suitable for colonists.

M.D. and C.M. wishes to know of a home or hospital for gentleman, aged 57 (sole income a pension of 15s. a week), who suffers from heart disease with a consolidation of one lung, neither, however, causing urgent symptoms; is almost bedridden; does not require much nursing at present.

THE TREATMENT OF OBESITY.

MR. W. TOWERS-SMITH (Chancery Lane, W.C.) writes: I have read an interesting book, *Food for the Fat*, by Dr. E. N. Davies, of Sherborne. I shall be greatly obliged if I may, through the JOURNAL, ask Dr. Davies a few questions. 1. For what period he orders patients to continue his diet tables? 2. What is the loss in weight and abdominal girth he obtains, say, in six months by his treatment? 3. What is the weight and girth of the cases he has treated?

Many of the tempting dishes set forth are to be prepared with cream, butter, bread-crumbs, etc.; cream is also ordered with tea and coffee. Does Dr. Davies maintain these are proper food for fat people anxious to be reduced? Last year and this you published some cases of obesity I had treated. Dr. Davies characterised my treatment as Spartan and needlessly severe. I admit experience has taught me that I can get as good results by a less stringent diet card; but I maintain that my system is safe, sure, and permanent, provided sugar and beer are forbidden for all time.

One of my many successful cases may prove interesting, and serve a useful purpose by eliciting from Dr. Davies how long he would take to obtain a similar result.

August 15th, 1889. Male, aged 50; height, 6 ft. 2 in.; weight, 21 stones 4 lbs.; abdominal girth, 58¼ in. November 20th. Weight, 17 stones 8 lbs.; abdominal girth, 43½ in. The patient writes saying, "I never felt so fit and well in all my life."

I venture to suggest Dr. Davies's pleasant diet tables will prove of value to very moderately obese people: but in cases averaging 18 to 20 stones the results would be very long in completion, and would not prove durable. Many members of the profession are now dealing with obesity which, if not an actual disease, tends to shorten life; and any further information Dr. Davies can give, besides answering my queries, will be probably much appreciated.

ANSWERS.

PHYSICIAN wishes to know of a private Catholic asylum in England where a girl, middle class, can be received for treatment.

*** St. George's Retreat, Burgess Hill, Sussex. Medical Superintendent, Dr. Gasquet.

A SUBSCRIBER (Bognor).—We should say it was purely a matter of contract whether a purchaser should reside in the vendor's house during an introduction to a practice, and whether such lodging (without board) should be given free.

STUDENT.—The work which you mention is sufficient for the conjoint "final" examination, provided that you possess a fair knowledge of pathology and surgical anatomy.

PREVENTION OF CONTAGIOUS DISEASES IN SCHOOLS.

G. P.—An excellent *Code for the Prevention of Infectious and Contagious Diseases in Schools* is issued under that title by J. and A. Churchill. It includes a series of resolutions passed by the Medical Officers of Schools Association on January 7th, 1885. It has passed through two editions, and nearly 2,000 copies have been sold, so that it has been pretty generally diffused, and has no doubt had a useful influence.

CANARIES OR MADEIRA?

DR. DAVID T. WYLIE (Mountfield, Streatham S.W.) writes: In reply to the query of "Member" in the JOURNAL of December 7th, about Canaries or Madeira, I beg to say that the African Steamship Company, 31, James Street, Liverpool, issues return tickets to any of the islands named for £15 (available for one year). "Member" will find the ships of above company satisfactory in every way. I think that Orotava in Teneriffe is the best place to stay. Next to Orotava, Las Palmas, Grand Canary.

Personally I do not like Madeira; and I find that many other persons who have gone there agree with me. I may add that the best hotel accommodation in any of the islands is at Madeira. The charge at Reid's (the best) is about £12 per month for one person (adult), exclusive of wines. The charges at the hotels in all the other islands vary from 6s. to 8s. per day. But I have no doubt that "Member" could come to a special arrangement, particularly as he is going to stop for six months. I can recommend Reid's hotels in Funchal, Madeira; the International, in Orotava, Teneriffe; the International, in Santa Cruz, Teneriffe; Ormney's Hotel, Las Palmas, Grand Canary. I do not know of my own knowledge if "Member" could easily get a small private house to hire, but I believe he would have very little difficulty in doing so. The probable cost for six months of "Member's" party would be between £180 and £220, according to circumstances, age of child, etc., for hotel charges only (exclusive of wines, etc.); but "Member" will find a lot of other expenses arise if he wishes to enjoy himself.

MR. ALFRED A. AUSTIN, L.R.C.S.I. (Birmingham) writes: I would advise the Canaries for the following reasons: It will cost less; the air is dry, and not so relaxing. You can enjoy carriage exercise in Grand Canary; you cannot in Madeira, on account of the roads. You can always leave Grand Canary at a few hours' notice for either Teneriffe or Palma, which are only five hours' journey by steamer. Madeira is 380 miles from any other island. Private houses can be got at Grand Canary. The probable cost for six months would be about £160.

The cheapest and best means of getting there would be by the British and African Steam Navigation Company's steamers, 14, Castle Street, Liverpool, sailing every Saturday, and calling at Madeira, Teneriffe, and Grand Canary. Return tickets, available for one year, only cost £15 each; for a party of four there are some reductions made. This ticket will allow you to break your journey at any of the islands.

ACADEMIC COSTUME.

M.B. asks what is considered the strict etiquette in the case of a university graduate (medical) assisting in superintending the local examinations of Cambridge or Oxford as regards "hood and gown." Is it considered right or necessary that the hood and gown should be worn on these occasions?

*** We understand that the instructions to presiding examiners prescribe the wearing of cap, gown, and hood.

NOTES, LETTERS, ETC.

BRITISH MEDICAL BENEVOLENT FUND.

MR. EDWARD EAST (16, Upper Berkeley Street, W.), the Honorary Secretary of the above fund, begs for contributions in the shape of warm wraps or underclothing. He is daily receiving applications, and is unable to answer them, as he has no store in hand for men, women, or children. The advent of cold weather increases the applications, and Mr. East will be most thankful to receive parcels at once.

ROARING IN HORSES.

F.R.C.V.S. writes: A paragraph appeared in the JOURNAL of November 16th, under the title of "The Cure of Roaring in Horses," which is somewhat calculated to mislead the public. To the best of my belief, the operation of laryngotomy has never been announced as "an infallible cure" anywhere, or by anyone, for the very simple reason that the certain success of this or any other operation, either upon man or beast, cannot possibly be guaranteed. The statement that "the operation has already been discontinued in the army" is scarcely in accordance with facts, as I understand that it not only is being, but is to be, continued.

Your contributor is correct in remarking that "there can be no doubt a good many roarers were decidedly benefited by the operation," and surely this is the best of all reasons why it should be continued, at all events until it has been proved to be an absolute failure.

THE NECK OF THE FEMUR IN OLD AGE.

MR. F. L. NICHOLLS (Fulbourn) writes: In reference to the investigations of Professor Humphry with regard to the position of the neck of the femur in old people, the following extract from Druitt's *Vade Mecum*, page 259, of the eleventh edition (1878), may be of some interest: "It is sometimes stated that the neck of the femur is commonly shortened in old persons, and sunk from the oblique to the horizontal direction; but it is doubtful whether this is the case, except when the joint has been affected with chronic rheumatic arthritis."

PYRMONT AS A HEALTH RESORT.

DR. FRANCIS E. CLARKE, M.K.Q.C.P.I. (Boyle) writes: It seems to me a pity that this charming little place and its unsurpassed waters should not be better known and more largely resorted to by British physicians when sending patients abroad. Situated within a short distance by rail from Hanover, it is easily accessible, and, with its picturesque scenery, beautifully wooded hillsides, and pretty little park, it is a remarkably cheery spot for a holiday, while a good band enlivens the scene, and a well-supplied reading room enables one to pass the time most pleasantly within earshot of the music. The springs are principally chalybeate, charged with free and partly combined carbonic acid gas, and most valuable in cases of anæmia and other low constitutional conditions. There is also a powerful saline spring (chloride of sodium) principally prescribed in rheumatic cases. At both there are well-appointed baths heated by steam. Some two years ago I spent a month at Pyrmont, and was greatly struck with the very marked results I saw obtainable by a course of its baths and waters. It is very largely frequented by German invalids, and I think it only requires to be better known by English physicians or English people travelling in pursuit of health to become as fashionable a health-resort for them, or perhaps more so, than Schwalbach, the waters of which are very analogous to those of Pyrmont. It also enjoys to a large extent the inestimable advantage of a bracing and invigorating climate.

The Lunacy Acts Amendment Act.

Letters from Mr. Cookson and "Old Member" no doubt represent the natural disappointment of many at the outcome of the first case under Section 12 of the Lunacy Acts Amendment Act. We doubt whether the strictures expressed on the judge who tried the case by an "Old Member" are justified. We dealt with the whole matter last week, and again this week, and it will have further attention. There is no doubt that, even under the decision referred to, the new Act is a great advance on the old state of things in respect to the certifying of medical men.

Some Points in Medical Education.

Dr. L. Kidd, of Enniskillen, calls attention to the high rate of failures at the recent conjoint examination in Dublin, more than half of those presenting themselves having been rejected. As this result cannot be attributed to the difficulty of the tests, the fault must lie with the candidates. The remedy for this state of things is, according to Dr. Kidd, to be found in raising the standard of preliminary education, and the extension of the course of study to five years. The professional examination should also be made more strict. Idle or incapable students should be stopped at the very outset of their career, and if the General Medical Council proposes to make alterations in the curriculum, it is to be hoped they will begin with the Preliminary Examination. Some of the subjects now ranking as "professional," such as botany, chemistry, and physics, might with advantage be included in the Preliminary Examination. Every student should have finished with anatomy, physiology, and materia medica at the end of his second year, and then have three years for pathology and hospital work in all its special departments. He should serve as dresser and clinical clerk for at least six months; the number of fever cases to be "written up" should be increased. In this way more practical knowledge and skill would be acquired than by a year's pupilage with a general practitioner whose practice could not afford the same variety of work as a hospital. The out-patient work should be carried on at a different hour from the indoor visits. In conclusion, Dr. Kidd thinks the Dublin hospitals would be much improved if compulsory retirement after twenty years' service were introduced, and purchase of staff appointments were abolished.

Income Tax Abatements.

The Income Tax Repayment Agency (25, Colville Terrace, London, W.) write: The Thirty-second Report of the Commissioners of Inland Revenue, just issued, again bears testimony to the success of our efforts in educating taxpayers in the mode of claiming abatement when their income is under £400. The report deals with the fiscal year ended March 31st 1888. During that year the number of persons who got abatement was close upon 470,000, an increase of 7,680 upon the previous year, which already showed an increase of 13,580 on the year before. We take credit to ourselves for the greater part of this increase of upwards of 21,000 successful claimants in two years, for it exactly coincides with the appearance of Mr. Chapman's book, *Income Tax: How to Get it Refunded*, giving two successful claimants to each copy of the book issued.

Passing from the number of claimants to the amount abated, we find in the report that it was 52 millions sterling, an increase of more than £560,000 over the previous year, which already showed an increase of £1,011,000 on the year before, in all, considerably more than a million and a half in two years.

Nor is this all, for in 1887-8 close upon 24,000 persons got refunds amounting to £103,000, whilst the previous year 23,000 got refunds amounting to £106,000. The reason of the decrease in the amount being due to the income tax being 7d. instead of 8d. The result of the allowance of £120 is that nearly 500,000 persons obtain relief on nearly 56 millions sterling. A less satisfactory feature, and one which gainsays the statement that no extra pressure has been put on the taxpayers, is that the gross assessments were increased by nearly six millions and three quarters, and the net assessments by more than four millions and a half; this probably because the previous year had shown a decrease of half a million in gross assessments, and nearly four millions in net assessments. It was only by greatly increasing existing assessments all round that such an enormous increase could be obtained in so bad a year as 1887-8, when agricultural and trade depression was at its height.

COMMUNICATIONS, LETTERS, etc., have been received from:

Dr. G. E. Shuttleworth, Lancaster; Mr. E. Cresswell Baber, Brighton; M.B.; Mr. M. Smale, London; Dr. T. Williams, London; Mr. B. May, Birmingham; Dr. D. C. McVail, Glasgow; Messrs. Lynch and Co., London; Messrs. Blackie and Sons, London; Mr. P. Giles, Brobury; G. W. A. Lynch, M.B., London; Mr. G. Robinson, Bedford; H. W. F.; Mr. R. Bevan, Lydd; Dr. F. Marsh, Birmingham; Mr. W. W. Wagstaffe, Sevenoaks; Mr. E. H. Ryan-Tenison, Bexhill-on-Sea; Dr. C. Skinner, Harpurhey; Mr. M. J. Halton, Leeds; Dr. C. J. Tabor, Carn Brea; Mr. H. C. Burdett, London; Dr. J. A. Macdonald, Taunton; Dr. G. H. Kidd, Dublin; Dr. J. MacLintock, Bradford; Mr. C. T. Dent, London; Dr. D. Hebra, Vienna; Dr. M. Skerritt, Bristol; Dr. F. Payne, London; Dr. O. Wood, London; Messrs. Hildesheimer and Faulkner, London; Dr. D. R. Paterson, Cardiff; Mr. P. Michelli, London; Mr. J. Housley, Retford; F.R.C.S.Ed.; Member; Dr. G. A. Rae, Devonport; Our Newcastle Correspondent; Mr. H. Smith, Northampton; Mrs. M. D. Askwith, Ramsgate; Mr. P. B. Bentlif, Jersey; The Secretary of the Northern Hospital, Liverpool; Mr. J. Baker, Buxton; Mr. A. Wiglesworth, Liverpool; Mr. G. E. Bloxam, Neath; Mr. R. L. Caunter, Bamwell; Our Liverpool Correspondent; Pyramids; Mr. E. Higgins Evans, London; Mr. T. P. Worthington, Blackpool; Our Paris Correspondent; Medical Staff; Mr. W. V. Dixon, Wakefield; Health; Mr. Lawson Tait, Birmingham; Dr. R. T. Smith, London; Dr. J. Little, Dublin; Mr. J. H. Battersby, Rotherham; A. Ford, M.B., Waterford; Mr. P. Newell, Ipswich; Our Birmingham Correspondent; Mr. W. Marriott, London; The Secretary of the University of Cambridge; R. C. Benington, M.B., Newcastle-on-Tyne; Mr. J. F. Craig, Birmingham; Surgeon-Major H. Cookson, Salisbury; Medicus Hibernicus; Sir Thomas Crawford, Blackheath; Dr. J. A. Anderson, London; Mr. F. Moore, Cavan; Inscius; Dr. J. M. Booth, Aberdeen; Mr. E. Stanmore Bishop, Manchester; Mr. E. Hurry Fenwick, London; Mr. J. Gairdner, Crieff; Mr. Wm. Anderson, London; Mr. C. E. R. Robbs, Gravesend; Dr. R. P. Smith, London; Mr. A. H. Benson, Dublin; Mr. Adams Frost, London; Dr. L. Tuckey, London; Mr. D. T. Wylie, Streatham; Dr. Turle, North Finchley; Mr. C. B. Lockwood, London; Dr. G. Reid, Stafford; Sir E. Sieveking, London; Dr. J. W. Moore, Dublin; Mr. A. J. McLean, Chatham; Rev. F. Lawrence, York; Dr. F. E. Clarke, Boyle; M.S.; Mr. R. R. Leeper, Glasnevin; Mr. H. Page, London; Dr. L. Parkes, London; The Editor of *Piccadilly*, London; Mr. W. Towers-Smith, London; Dr. T. Williams, London; Mr. T. Corbett, Kingston-on-Thames; Mr. F. Ward, Sheffield; The President and Council of University College, London; Mr. F. N. Brown, Pirbright; Mr. W. Haughton, London; Dr. Halliburton, London; Mr. R. W. Branthwaite, Kickmansworth; Messrs. Ward, Lock and Co., London; Mr. A. M. Sheild, London; Rev. H. P. Wright, Greatham; Dr. C. W. Hayward, Liverpool; Lord Balfour of Burleigh, London; Dr. Abercrombie, London; Dr. S. Saunders, London; Dr. T. Edridge-Green, London; Professor Grainger Stewart, Edinburgh; Mr. W. Thomson, Dublin; Mr. H. V. Dixon, Wakefield; Mr. J. G. Thomas, Aberdare; Mr. W. Inglis Mason, Sudbury; Mr. J. Macready, London; Mr. W. F. Jebb, London; Mr. C. Macnamara, London; Dr. E. S. Thompson, London; Mr. R. Hicks, Ramsgate; An Old Member; Sir Joseph Lister, Bart., London; Mr. R. Frogley, Homerton; E. Kingsbury, M.B., Blackpool; The Secretary of the Sheffield Medico-Chrirurgical Society; Dr. Steele, London; Mr. H. Fox, Newcastle-on-Tyne; Mr. T. Ryan, London; Mr. T. Jenner Verrall, Brighton; Medicus; Mr. H. B. Pullin Burry, Liphook; Dr. Adams, Liphook; Mr. E. J. E. Risk, Gravesend; Mr. F. B. Jones, Leicester; Dr. R. Morgan, Kinsale; Dr. Norman Kerr, London; Dr. F. Smith, Cheltenham; Major Christie, London; Mr. A. Hope, London; Dr. J. W. Lane, Milford Haven; Mr. J. Hadley, London; Dr. T. C. Nesham, Newcastle-on-Tyne; Mr. W. Digby, London; Messrs. Caldwell, Muir and Caldwell, London; Dr. C. R. Illingworth, Accrington; Messrs. F. Ward and Co., Sheffield; M.D.Brux.; Surgeon R. W. Barnes, Poona; Surgeon-Major R. D. Hodson, Poona; Mr. R. Black, Brighton; Dr. F. H. Collier, Manchester; Dr. Balding, Royston; Professor Crookshank, London; Regimental Medical Officer; Dr. Willoughby, London; Mr. E. A. White, Wolverhampton; Dr. Mickle, London; Mr. A. A. Austin, Birmingham; D. Carmichael, M.B., Peterhead; Mr. T. Blair, Leeds; Mr. R. G. Patteson, Dublin; X. Y. Z.; Mr. W. D. Wilkes, Salisbury; Messrs. Burns and Oates, London; Dr. G. Herschell, London; Dr. A. Ruffer, London; Dr. Rentoul, Liverpool; C. H. Taylor, M.B., Derby; Dr. F. Bateman, Norwich; Dr. Edwardes, London; Mr. G. Davison, London; Messrs. Macmillan and Co., London; Dr. Rutherfoord, London; Our Vienna Correspondent; etc.

BOOKS, ETC., RECEIVED.

Physiology of Bodily Exercise. By Fernand Lagrange, M.D. London: Kegan Paul, Trench and Co. 1889.

The Chemists and Druggists' Diary for 1890.

Profitable Fruit-Growing. By John Wright, F.R.H.S. London: E. H. May. 1889.

Modern Cyclopædia of Universal Information. By Charles Annandale, M.A., LL.D. London: Blackie and Son. 1890.

Messrs. Macmillan and Co.:

Tom Brown at Oxford. By the Author of Tom Brown's Schooldays.
The Rectory Children. By Mrs. Molesworth.
A Year with the Birds. By W. Warde Fowler.
The Manx Witch, and Other Poems. By T. E. Brown.

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CLINICAL REMARKS
ON
TRANSIENT GLYCOSURIA OF NEUROTIC ORIGIN.

By JAMES F. GOODHART, M.D., F.R.C.P.,
Physician to Guy's Hospital.

We often hear nowadays of the albuminuria that is not due to disease of the kidneys, so much so that one would almost believe that it is quite a common occurrence. Whether it be so or not is not my purpose now to discuss, but I often wonder when reading papers on this just now fashionable topic that so little is said about the glycosuria which is not diabetes, which in my experience is certainly a commoner disorder of the urine. No doubt this is greatly due to the fact that such cases have been frequently described, and textbooks state quite correctly that overwork, care, and anxiety are frequently attended with saccharine urine. But for our present purpose the frequency of a disease or of a symptom is that which most entitles it to the attention and commands the interest of a meeting such as this; and therefore it is that I have put a few cases of this sort together for your consideration. I had thought that glycosuria, when transient, was supposed to be associated with, or in some way dependent upon, the gouty diathesis, but several cases within recent memory that have come before me have not been, so far as I could ascertain, in the least gouty, and they were, on the other hand, all of them either in markedly neurotic people or associated with overwork or worry.

The notes, I am sorry to say, are but fragmentary. The first case was a man, aged 57. His family history was unimpeachable, and he himself was free from gout or rheumatism. He would not allow himself to be a nervous man. All that could be got from him was that he had been working very hard with his brain of late, and that he had had lumbago. His urine when examined was found to contain a good deal of sugar, but he had no polyuria.

In my room he passed urine of specific gravity 1024, containing sugar 6 grains to the ounce. He was put on a moderately restricted diet, with half a grain of codeia three times a day, and an occasional dose of Carlsbad, and he was sent for a holiday. The sugar quickly disappeared from the urine, and he has remained quite well ever since.

The second case was that of a man, aged 38, a healthy man, but decidedly excitable, and described by his family as excessively nervous. It is a little difficult to say in what this nervousness consists except that he is over-anxious as regards little ailments in his family, and is mildly mercurial in temperament; and he is one of the most persistent and copious producers of phosphatic urine that I have known. One sister is decidedly neurotic, and there is apparently a strong cancerous tendency in the family, his mother and two brothers having died of it—two of cancer of the liver and one of cancer of the œsophagus.

It was after the death of one of his relatives that he came to me, looking worn and anxious, with pains in various parts of his limbs, but with no definite ailment; he was out of sorts, and felt uneasy about himself. I believe he fancied that he might be going off like his mother and brothers. I made him pass some urine, and found it of specific gravity 1026, and the colour of Pavy's fluid was at once destroyed by boiling. I cheered him up, told him to take a tonic of strychnine, quinine, and iron, and sent him off. Another examination four days later still gave the sugar reaction, but a week later the specific gravity was 1018, and the urine was natural. I have seen this patient several times since, and his urine has always been free from sugar, although it is frequently phosphatic.

Another case is that of a man aged 48. His father lived to 94, but had gout for many years. His elder brother had an attack of "nervousness," which sounds suspiciously suggestive of downright insanity. One relative died of diabetes, but I was unable to push questions in that direction lest the fears of the patient should be aroused. He has a largish family, and rents from the Emerald Isle to feed the items on. He came to me in a deplorably wrecked state of nerves, trembling all over, and half sobbing as he detailed his varied feelings. He told me that he was always nervous, but that now he was especially knocked down by having lost his senior in a bank, whom he had known intimately for many years, had been closely associated with in his work for some time, and upon whom—as being a stronger mind—he had in great measure leaned. His urine was specific gravity 1022, contained lithates in excess, but also a good deal of sugar. He had no thirst, and no polyuria. I gave him some quinine, strychnine, and hydrobromic acid, reassured him, and told him to take a holiday. A week later the urine was 1022; it still contained a good deal of sugar. Three days later the specific gravity was 1020. Four days later specific gravity 1024, and a good deal of sugar; and then it finally disappeared. I have seen him many times since, and have examined his urine at least ten or a dozen times, and he has remained quite well.

Another man, aged 49, an exceedingly well-informed man, and holding a leading and very anxious position in the political world of one of our colonies, in addition to all the worry involved in holding office in a Colonial Parliament, had had a lot of domestic anxiety as well, and some six or nine months before I saw him he had consulted his usual medical attendant for a distressing pain across the lower part of the abdomen, and a frequent inclination to micturate, although he would pass very little urine at a time. He had also had much constipation, which was unusual to him. He was a healthy-looking man, somewhat anxious about himself, but feeling all the better already for the rest and change of the voyage over to England. Before he started the sugar had been copious, the specific gravity 1035 and 1040, but the quantity natural. His urine was now 1026, and contained 31 grammes per litre. The next day there was none; the next day a trace; the next none again; and so on. The feature of the case was the irregular appearance of the sugar. I made sixty examinations in the course of seven or eight weeks, and sugar was absent in thirty-six specimens. There had been none, when I saw him last, for several days, and only a trace for some days before that. He never had any polyuria, and the specific gravity averaged about 1024 or 1025. He was dieted to some extent—not very rigidly—and codeia and nux vomica, half a grain of each, given three times a day. Some urgent business called him home again unexpectedly, and I have not heard of him since; whether he is thoroughly well or not I do not know.

Another case is that of a man of 48, who had rheumatic fever when 18 or 19. He has never had gout. He has lived well. He is of decidedly neurotic type, fond of riding and driving, and he goes at a breakneck pace regardless of consequences, which have been grief to him more than once; but if anything happens to him either in business or pleasure his nerve tone collapses, and he becomes cowed and depressed quite beyond recognition. I wish it were possible to convey to your mind's eye the picture of the two sides of this man, big, jovial, bouncing when he is well; slouching, drawling, despondent, limp in mind and body when he is glycosuric. I had seen him once or twice with bad boils, but never with glycosuria, till one day he came saying that he had been quite knocked over by worry in business, and he quite looked it. If ever there was a dog with his tail between his legs it was he, and then. He had had an attack of pain in his side, which had suggested that he was suffering from gall stone; and Dr. Duncan's is the first note I have, that the urine contained sugar. His urine was at that time specific gravity 1025, and abnormally acid.

And perhaps here I may digress for a minute, to say a word about this attack of hepatic colic, as there is a point of special interest about it in this way. The resulting swelling was very persistent, and to palpation there was an ugly, hard, rather irregular swelling, more like a projecting tight-laced liver than anything else, which, with some history of cancer in the family, made us for the time somewhat uneasy. But it slowly subsided. What the exact state of affairs is in such a case it is not altogether easy to say; it was certainly much harder and more irregular than one is accustomed to ascribe to any acute congestion. His abdomen was not in such a condition as could allow us to suppose that we came down directly upon a gall stone, but I suppose that some local inflammation, plus gall stone and local swelling of the liver adjacent, do, by their combination, sometimes lead to the production of a mass such as is difficult to distinguish at once from a cancerous one. The practical point is that such cases are not very uncommon. I remember seeing an old lady with my friend, Mr. Roots, of Kingston, two or three years ago, who had a

very large hard mass in her abdomen, which had come on in the same way, with a severe colic and more jaundice in that case, and whose age justified the strong suspicion of cancer. The swelling entirely disappeared.

In another case, a lady of between 60 and 70, the medical man positively and unhesitatingly committed himself to cancer to the friends. I remember it well, because I had no doubt, in that case, that the lump was gall bladder. Still it will serve to show the difficulty that exists sometimes, for that was six or seven years ago, and the lady is, I believe, still alive. And quite recently I have had a man in Guy's, sent up by my friend, Mr. Coles. I will only say that his age, his history, his appearance, and the characteristics of the lump all combined to make me fear the existence of cancer. He had a severe attack of pain a short time ago, passed a lot of gall stones, and is, I believe, now in a fair way to get well.

But to return. Our patient was fed on a light diet, had an injection of morphine at first, and then, I think, a little opium and belladonna given him, and, subsequently, a tonic of dilute mineral acid and bark. He speedily pulled together again, and the sugar disappeared.

I have seen that man twice again since then with a similar history of worry—too much work and too little recreation; and combined, I think it must be admitted, with some irregularity of living, although he is certainly not a drinker. On each occasion he has been thoroughly out of condition, and his urine has contained sugar, but he has had none of the characteristic symptoms of diabetes. The second attack he quickly got well of by a tonic and rest; the third he is passing through now.

A gentleman, aged 59, whose mother had nerves, and who had done a great deal of hard head work in a responsible position, suddenly about ten years ago became melancholic. The state of his urine is not known, but he says that his attack then was quite like later ones. He was sent away at this time to Wales; while there he was little better, to his thinking, and suddenly, on his way back in the train, as he describes it, "the veil lifted." He was quite well, and so remained for ten years. In 1887, he was attacked in precisely the same way. From being a high-spirited, cultivated man, who made friends with all whom he met, be became despondent, morose, and irritable, and wasted rapidly. He had no inordinate thirst, had a dryish tongue, a little frequency of micturition during the day, but none at night. His urine was found to contain sugar in quantity. He was dieted and had medicine, and went abroad under medical supervision; but he returned not appreciably better; and again, after he had been a short while at home, the cloud lifted, the sugar left his urine, and he was perfectly well.

Last year he had a third attack of exactly the same kind, and again, after about eight weeks of mental wretchedness and glycosuria, the two conditions departed, leaving him bright and jovial as before. He was dieted to some, but not very rigid, extent, and treated by quinine and strychnine, and rest from all mental labour.

A somewhat similar case in an older man was one that I saw once with Mr. Stokes, of Lee, last year. He was an old man of 75, who for three years had been seen, on and off, with attacks of mental depression and glycosuria. In these attacks he not only became depressed, but also drowsy, languid, with dry tongue, and the sugar in the urine increased to a considerable quantity. It never was altogether absent, but was only slight at times. In this case, in addition to the sugar, there was at the time of my visit a copious deposit of uric acid also, so that, although there was no history of gout or lithæmia, it seemed likely that it belonged to this class of cases, if the two may be distinguished.

Of two other cases I have still more fragmentary notes. I saw each case but once: A solicitor, aged 58, in large city business, and who had had much worry of late, was brought to me for glycosuria. He had been seen by Dr. Hilton Fagge several years before, and sugar found in the urine. He had had no symptoms of diabetes, save some little dryness of the mouth. There had never been anything unusual in the quantity of urine passed. His urine had been examined from time to time, and now and again sugar had appeared. But for two years there had not been anything more than a trace until lately, when it had reappeared under stress of work. He was made to rest and his diet restricted somewhat, and when I saw him his urine was of specific gravity 1022, and quite normal. It should be said that he had never had gout, nor was there any in the family; but he was a full-faced, flushed-looking man, and he was accustomed to his port on "birthdays," and I unfortunately did not ask him how often these came. He was advised to get more rest, to live upon a moderate diet, and I think he had some salicylate of soda, and he remains well.

Another case was also a solicitor, a young man. He had been sitting up late at night, drinking strong tea, and by these means had knocked his nerves up completely. He became afraid of meeting anyone; a sudden noise would startle him, and make him quake, and palpitation of the heart was no infrequent occurrence. Three weeks before I saw him he had a bad attack of quinsy, and his medical man examined his urine and said it contained a good deal of sugar. He had no other symptoms of diabetes, although perhaps he does pass a full quantity of urine, and is always thirsty. He told me also that he thought he had passed sugar in his urine on one other occasion, and that then also it was in the course of a quinsy, to which he was prone. By the time I saw him the urine was quite natural. He was enjoined to keep himself warm, to be moderate in the consumption of sugars, starches, and tea, and in smoking, and for the rest to consider himself a sound man.

The last case I only narrate to show how necessary is a routine examination of the urine. A man of 36 was brought to me by Mr. Gibson, of Aldershot; he was very neurotic, and had had a sunstroke, or what the patient called one; but I should judge it was a simple fit of giddiness, and he had never been well since. He had suffered from all sorts of subjective sensations and erratic pains. He had slowly improved on a tonic, until he had the misfortune to fall through a trap-door some ten or twelve feet, which naturally produced a very severe shock, and he had never recovered from this. I could make out nothing decisive; he was depressed in manner and slow in speech, and all his reflexes were exaggerated. His nervous system was evidently decrepit, but that was all that one could say. His urine had been examined shortly before and found natural, so that there did not seem much to be learnt in this direction, and I was just on the point of dismissing him, when he asked to be allowed to empty his bladder. As the urine was there I examined it, and found a quantity of sugar. He has been moderately dieted, and has taken a tonic, and the sugar slowly disappeared from his urine and he is now quite free.

These cases seem to me to be of interest from one or two points of view. In the first place their chief features are, that the glycosuria occurs in a particular type of subject, and after worry or overwork, and the sugar is temporary, even though it may recur again and again in the same individual. It has been considered, as I have said, that these cases are of "gouty" nature, and upon the basis of intimate and exhaustive study of the physiological chemistry of uric acid and glycogen, Dr. Latham has suggested a very helpful treatment by the salicylates and benzoic acid; whereby the waste products are diverted to other formations, more easily disposed of, and sugar ceases to be found in the urine.

But we may allow all this, and there is yet room for the contention that gout, and its relative glycosuria if you like, owe their being to something further back in the economy than a simple repletion with waste products. We all know that there is many a case of gout engendered straight out of anxiety, and there is many a case of gout too which no amount of dieting or drugging will eradicate; although perhaps this may be in part due to the fact that the chemist cannot make his kettle boil.

Rut it may be gathered from cases such as I have mentioned, that glycosuria is often a nerve storm, or paroxysmal neurosis, if you like that way of putting it better, and I should certainly be much inclined to go with Dr. Latham, and think that in all probability there is some truth in his contention, because there is a strong resemblance between the glycosuric storm and the storm of uric acid, which is a well-known feature of disease in some individuals, and no doubt too, the two phenomena sometimes appear together or alternate, as at any rate in one of the cases I have given. The interest of this as regards glycosuria, for my present purpose, is this; that being so, it comes thereby into line with other so-called functional maladies, and by so doing the neurotic origin of diabetes derives strong confirmation. I have in former times done something in conjunction with Dr. Frederick Taylor, to combat the statement that definite lesions can be found in the central nervous system in diabetes. I believe that the objections advanced against that assertion still hold good; and that no one has yet seen the lesion which causes diabetes. Nevertheless I do not doubt that the disease is owing, perhaps not always, but in a great majority of cases, to faulty action of the nervous centres, and I believe mostly of the central nervous system, although we cannot see the lesion. That this is so is all but sufficiently plain

from what is well known as regards confirmed diabetes and its hereditariness; the fact that many cases attribute the onset to prolonged or heart-breaking anxiety; that some are the direct outcome of injuries to the nervous centre; that anon it follows acute and nerve-depressing illness, such as diphtheria. But this position is, I think, still further advanced and strengthened when transient glycosuria is brought into the same view, because the evidence is rendered much more complete. Transient glycosuria and the persistent form, or diabetes, then become part and parcel of one process, corresponding closely in these two features of remission and duration, with other maladies or states with which we are quite familiar, and whose neurotic origin no one would question.

For instance, I see their parallel in the simple heart-beating that is an everyday occurrence in the hundred and one excitements of life, and in that persistent rapidity of pulse occasionally seen in aortic and other cardiac affections, which is one of the most distressing and intractable complaints which we are called upon to treat. Again, they correspond in many ways to common blushing, also an everyday occurrence, and to the remittent blushing or flushing so common and so worrying in a multitude of phases in the neurotic woman, or in those whose sexual functions fail of development or fulfilment. And the resemblance perfects itself in that state of perpetual blush which is exophthalmic goître, and even to this detail: that exophthalmic goître is occasionally associated with remittent glycosuria—as I have reason to know from the case of a lady whom I occasionally see with Dr. Uhthoff, of Brighton. In none of these affections can we yet demonstrate a lesion, and I think that from the study of the remittent forms of each, it becomes clear that, as diseases, the whole group is on the borderland of pathology only, which can never be very easy of demonstration, for, though morbid in one sense, it is but physiological excess in another.

The practical bearing of all this would seem to be that, as in some phases of this vasomotor disturbance, as it is—and I believe rightly—called, so in those that are glycosuric the early conditions are very successfully treated, without the necessity for any great anxiety on the part of the doctor, by good nerve tonics, such as strychnine, arsenic, quinine, and hydrobromic acid; by careful dieting and relief from worry; by rest from brain work, and change of scene. When the conditions are pronounced with either one or the other they are very intractable; and that they are not then easily remediable let both diabetes and exophthalmic goître bear witness.

I think, too, that as opium is a remedy of unquestionable value for diabetes well established, so with paroxysmal glycosuria. Small doses of that drug have a steadying power over the nervous system or circulation which is of value in the wrecked conditions which seem to me so often to precede and accompany it. And for the same purpose it might be well to make trial of antipyrin in these cases. I say this with some hesitation, first, because I have no experience of my own to relate; and secondly, for the reason that, being recommended for nearly everything nowadays, one eyes it askance as an acquaintance who has got into bad company, and whose reputation is hardly up to his professions. However, there are records of such cases. My friend, Dr. Battiscombe, of St. Mary Cray, told me lately of two such that he had seen, and it naturally occurs to one that a drug of so undoubted a value in migraine, in some cases of chorea, of whooping-cough, and other conditions that may all go under the head of paroxysmal neuroses, it might quite possibly be of value in such a condition as that now under discussion, and certainly is worth a trial.

Ulster Medical Society.—At the meeting of this Society on December 4th, the adjourned discussion upon the Notification of Infectious Diseases Bill was resumed. After some debate, the following resolution, moved by Dr. Lindsay and seconded by Dr. O'Neill, was carried unanimously; "That this Society approves of the application to Belfast of the Notification of Infectious Diseases Bill, provided that suitable accommodation for the reception of infectious cases be afforded by the municipality. It is also of opinion that the carrying into effect of the provisions of the Bill should be vested in the chief sanitary officer." Dr. O'Neill showed two interesting and successful cases of nerve suture. Dr. Lewers read a paper upon "The Abuse of the Out-patient Department of Dispensaries and Hospitals," the discussion upon which was adjourned to the next meeting.

ON THE CENTRAL MOTOR INNERVATION OF THE LARYNX.

A PRELIMINARY COMMUNICATION.

By FELIX SEMON, M.D., F.R.C.P.,
Assistant Physician in Charge of Throat Department, St. Thomas's Hospital.
AND
VICTOR HORSLEY, B.S., F.R.S.
Professor of Pathology, University College; Assistant Surgeon to University College Hospital.
(From the Laboratory of the Brown Institution.)

In 1886 and 1887 we carried out a large series of experiments (over 100) on different species of animals—monkeys, dogs, cats, and rabbits—with a view of investigating the central motor innervation of the larynx. Circumstances have hitherto prevented us from completing these researches; but we have received so many requests from those interested in the subject that we should publish our results, if only in a preliminary form, that we desire to comply and to add the deductions which we think may be legitimately concluded from our experiments. At the same time we wish to state distinctly that this is only a preliminary communication, and that we shall lay a full account of the experiments on which our conclusions are based, together with a complete theory of the motor innervation of the larynx, before the Royal Society in next May or June. We shall also give a full description of the same before the International Medical Congress at Berlin in August next.

The conclusions which we have arrived at are as follows:—

1. There is in each cerebral hemisphere an area of bilateral representation of the adductor movements of the vocal cords, situated in the monkey[1] just posterior to the lower end of the præcentral sulcus at the base of the third frontal convolution, and in the carnivora in the præcrucial and neighbouring gyrus. This area has a focus of intensest representation in the anterior half of the foot of the ascending frontal convolution. Stimulation of this point produces complete bilateral adduction of the vocal cords, which lasts as long as the stimulation is continued. Should, however, the latter be unduly prolonged the "*besoin de respirer*" overcomes the influence of the artificial stimulus and evokes a momentary but powerful abductor movement of the vocal cords. Stimulation of the more peripheral parts of the area evokes less and less perfect adductions as we proceed from the focus outwards, and when the extreme margin of the area is excited only what is known as the "cadaveric position" is assumed by the vocal cords.

The above description applies to the monkey, dog, and rabbit. In the cat we have observed curiously different conditions, for which, at present, we are not prepared to offer any explanation.

2. We have not been able to find an area of representation in the cortex of the abductor movements of the vocal cord.[2]

3. If one of the cortical areas for adduction be so completely excised that stimulation of the neighbourhood of the lesion produces no effect upon the larynx, and if the wound be allowed to heal aseptically, no paralysis of the cords is observed. Further, if subsequently the corresponding area in the opposite hemisphere be excited, just as completely bilateral an adduction of the cords is produced, as if the opposite area were intact.

From the above facts we infer that:

(*a*) Unilateral irritation produces bilateral effect. Thus clinically in any irritative unilateral affection of this area, spasm of the glottis, that is, bilateral adduction of the vocal cords, may occur, for example, in laryngismus stridulus. That this view is not purely theoretical is shown by the association, in severe cases of the last-named illness, of the glottis spasm with the so-called carpo-pedal contractions. This association is most easily explained on the assumption that we have an overflow of energy from the laryngeal to the neighbouring cortical areas for the limbs.

(*b*) Unilateral destruction produces no effect. There is, therefore, no such thing as unilateral paralysis of a vocal cord from lesion of a cerebral hemisphere, as has been asserted. The truth of our statement is made evident by the fact that motor aphasia is not identical with aphonia. Moreover, the observation by one of us [F.S.] of several patients with complete

[1] Demonstrated to the Physiological Society, 1887.
[2] *Vid. sup. re* the cat.

aphasia and right hemiplegia, only a few hours after the apoplectic stroke, has conclusively shown that in such instances the movements of the vocal cords are perfectly preserved.

4. We have observed that on powerful or long-continued excitation of the laryngeal area true epilepsy of the vocal cords supervenes, gradually spreading to the neighbouring muscles of the face, neck, head, and upper limbs. From this we conclude that the epileptic cry is not, as has been so long believed, the result of a discharge primarily from the medulla oblongata, but rather represents a stage in the cortical excitement popularly termed an epileptic fit.

5. Whilst we have found so distinctly specialised an area of representation of adduction in the cortex, and no corresponding area of abduction in this region, we have, on the other hand, found that direct excitation of the accessory nucleus in the medulla oblongata evokes abduction of the cords, and never anything else.

From all the foregoing it follows that our results are in complete harmony with the most recent views of the relation of the cortical to the lower centres; for our experiments have shown that the representation of the laryngeal movements in the cortex is essentially that known as purposive or volitional, since it is adduction, that is, phonation; whilst, on the other hand, the bulbar representation of the larynx is as essentially adapted for the so-called automatic processes of organic life, that is, abduction-inspiration.

Finally, this series of experiments, as well as those we have previously published[3] on the peripheral innervation of the larynx, corroborates in the fullest manner the ideas which one of us [F. S.] has put forward in his first papers[4] on abductor paralysis, namely, the proclivity of the abductors to fail in organic, and of the adductors in functional, disease.

ENGLISH AND FOREIGN WINTER RESORTS.

By I. BURNEY YEO, M.D., F.R.C.P.,
Physician to King's College Hospital.

RECENTLY, both in the medical and lay press, some severe criticisms have appeared reflecting on the conduct of those "fashionable London physicians" who recommend certain patients to pass their winters out of the island of Great Britain. As I have been for some years past a considerable offender in this respect, I have felt the severity, although I have not been able to admit the justice, of these animadversions. I had, however, no intention of offering any comment on these criticisms, as I knew well that time and experience—a bitter experience probably to some—would prove their baselessness. Moreover, the absence of all competent knowledge of the subject was so apparent in many of the communications, that there was nothing worth calling an argument to reply to, and it is always an unprofitable task to combat mere assertions. But now that Sir Edward Sieveking has published, in the JOURNAL of December 14th, some reliable statistical details as to the winter climate of Falmouth, where we are invited to send those invalids who are usually sent abroad, I am afforded an opportunity of dealing with facts instead of mere assertions or impressions, and I am given the means of presenting a comparison which should prove instructive, especially to those who are accustomed to look to facts for their instruction.

When we recommend patients a winter change of climate, we usually desire to submit them to the beneficial action of some very definite physical influences. The chief of these are (1) sunshine—exposure to health-restoring sunshine in the open air; (2) a warmer temperature, which usually accompanies more abundant sunshine; (3) absence of atmospheric humidity; and (4) absence of rain. No one who has any right to express an opinion on the subject will deny the paramount importance, in the selection of a winter climate for delicate persons, of those four conditions. Now I will take from my bookshelves, as a fairly representative account of an ordinary, somewhat commonplace Continental winter resort, Dr. Hassall's work on San Remo, and it is especially appropriate in this connection, as Dr. Hassall had had a prolonged personal experience of a well-known English winter resort, Ventnor, with which he is able constantly to make instructive comparisons, and I will compare the facts as given by Sir Edward Sieveking of the winter climate of Falmouth in the four particulars I have named, and those collected by Dr. Hassall of the winter climate of San Remo. It is usual to regard the invalid's winter as consisting of the months of November, December, January, February, March, and April; or we may speak of November, December, and January as the three winter months, and February, March, and April as the three spring months.

Let us first take the three winter months, and compare the mean amount of sunshine to be obtained at Falmouth in November, December, and January, with that obtainable at San Remo.

In Falmouth, the mean amount of bright sunshine in hours for eight years was, in November, 70.9 hours; December, 57.8 hours; January, 46.6 hours:

Dr. Hassall's mean of three years at San Remo, November, 185.6; December, 219.5; January, 194.0 hours.

I must remark here that it is to me quite inexplicable that a place in which the mean amount of sunshine in the month of January reaches only 46.6 hours should be vaunted as a winter resort.

Let us next take the three spring months, February, March, and April.

Hours of Sunshine.

	Falmouth.	San Remo.
February	71.3	209.5
March	130.8	261.7
April	174.1	267.9

Taking the whole six months, we get 551.5 hours of sunshine at Falmouth, against 1,338.2 at San Remo; but if we take the four wintry months of November, December, January, and February we get the truly enormous difference of 246.6 hours of sunshine at Falmouth, against 808.6 at San Remo.

In the second place, let us look to the condition of a warmer temperature.

Mean Temperature.

	Falmouth.	San Remo.
November	47.5°	53.54° (+6.04°)
December	44.3°	49.25° (+4.95°)
January	43.6°	47.23° (+3.63°)
February	44.1°	50.19° (+6.09°)
March	44.2°	52.00° (+7.8°)
April	47.2°	57.04° (+9.84°)

A very sensible difference of temperature throughout the whole winter, and remarkably so in the spring months of February, March, and April, the period when invalids suffer so much from the protracted winter low temperature in these islands.

Thirdly, as to absence of humidity. At Falmouth the mean humidity for the winter six months is 83.6. At San Remo Dr. Hassall's means ranged from 67.2 to 72.7. The observations at the Government Observatory, being taken on higher ground, give a mean of 59.5, against Dr. Hassall's 67.2. The mean humidity at Falmouth then is high.

Finally, as to the rainfall and the number of rainy days. In Falmouth the mean rainfall for the six months mentioned amounts to 27.418 inches. Dr. Hassall's means at San Remo for the same period vary from 10 26 (1879-80) to 16.64 (1881-82) inches. But the average annual rainfall for ten years was only 28.7 inches, that at Falmouth being 49.358, and, when we come to compare the number of rainy days, the contrast becomes even more striking.

Number of Rainy Days.

	Falmouth.	San Remo.
November	22.3	5.6
December	21.9	3.7
January	19.6	5.0
February	17.8	4.3
March	17.2	3.6
April	14.3	7.0
Total	113.1	29.2

It will be seen, then, that at Falmouth, during the winter months of November, December, and January, two out of every three days are "rainy;" at San Remo, less than one out of six.

It is unnecessary to pursue this comparison further. I would, however, point out to the medical practitioners who censure those whom they are pleased to call "fashionable" physicians for sending patients out of England, that these physicians would soon

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[3] On an Apparently Peripheral and Differential Action of Ether upon the Laryngeal Muscles. By Felix Semon and Victor Horsley. BRITISH MEDICAL JOURNAL, August 28th, 1886, p. 405.

[4] Clinical Remarks on the Proclivity of the Abductor Fibres of the Recurrent Laryngeal Nerve to become affected sooner than the Adductor Fibres, or even Exclusively in Cases of undoubted Central or Peripheral Injury or Disease of the Roots or Trunks of the Spinal Accessory, Pneumogastric, or Recurrent Nerves: *Archives of Laryngology*, 1881, vol. ii, November 3rd. Ueber die Lähmung der einzelnen Fasergattungen des Nervus Laryngeus Inferior (recurrens): *Berliner Klinische Wochenschrift*. 1883, Nos. 46-49, etc.

cease to be "fashionable" or reliable if they did not give due weight to those facts of climate which the intelligent and educated portion of the public are quite capable of ascertaining for themselves; and that, by setting up pretentious claims which are inconsistent with observed facts, we run the risk of incurring suspicion and mistrust. We surely cannot desire in this matter to deceive ourselves or to mislead others.

THE CURABILITY OF PHTHISIS.[1]

By THOMAS HARRIS, M.D.Lond., M.R.C.P.,

Senior Assistant Physician to the Manchester Royal Infirmary; Physician to the Manchester Hospital for Consumption and Diseases of the Throat; and Senior Demonstrator of Pathology in the Owens College.

Considering the frequency of the occurrence of pulmonary phthisis, and the large number of deaths among the young adults of our population which it occasions, there are few questions which are of greater importance to medical men than the question of the curability of the disease.

We possess many observations by reliable physicians on cases of recovery from tubercular phthisis, and in not a few instances such observations have been confirmed by subsequent *post-mortem* examination. In addition to the observations at the bedside, however, we possess another and valuable means of forming an opinion as to the curability of pulmonary tuberculosis. Pathologists have repeatedly noticed, and called attention to, the frequency with which signs of involuted tubercle, in the shape of fibrous cicatrices, old dry caseous spots and calcareous deposits, are found in the apices of the lungs of persons who have died from various forms of disease, or from injuries. During the period I was Pathological Registrar to the Manchester Royal Infirmary, my attention was repeatedly arrested by the frequency with which such relics of former tuberculosis were present in the bodies of persons dying from different diseases. It was not, however, until I had been engaged in the pathological work for about three years that I became specially interested in the question of the involution of tubercle to pay particular attention to the subject. At the end of that time, however, I became anxious to ascertain the exact frequency with which, in the *post-mortem* examinations, such cicatrices, or caseous or calcareous formations, were present. I therefore decided that, during the subsequent twelve months, I would carefully examine the lungs of all the bodies on which a complete necropsy was made for the presence or absence of such lesions. This was done, and a record made of the presence or absence of cicatrices, caseous or calcareous formations, together with the position, size, and character of each lesion. These observations were made from October 1st, 1887, to September 30th, 1888, and some of the lesions were subsequently submitted to microscopical examination.

During the period mentioned about 200 examinations were made. The number, however, available for a statistical inquiry as to the frequency with which signs of involuted tubercle were found had to be reduced for three reasons. First, in some cases only a partial examination was allowed to be made, and the lungs could not be examined. Secondly, in the majority of the cases where death had ensued from pulmonary phthisis, the changes in the lungs were so extensive and advanced that no opinion could be expressed as to the presence or absence of involuted tubercle at some former time before the fatal illness developed. Such cases were, therefore, excluded, and only four cases of phthisis were retained, since in those only was it felt that an opinion could be expressed as to the presence or absence of obsolete tubercle. And, thirdly, all cases were excluded where the body was that of a person under 20 years of age. This was done because it was felt that, as tuberculosis is commonly a disease of young adult life, we could not expect to find involuted tubercle in children or youths, at any rate so frequently as in persons more advanced in life. The opportunities also of examining the bodies of children at the infirmary are few, since but a very small number are admitted every year. The exclusions from the above three causes reduced the number of necropsies available for our inquiry to 139. In these 139 cases, there were 54 cases where relics of former active tuberculosis—a description is subsequently given of what was regarded as a relic of former tuberculosis—was present, and in the remaining 85 cases no signs of involuted tubercle were present. It is important to note that this was the result of the naked eye examination; as we shall learn directly, the microscopical examinations of some of the cases revealed that the process was not entirely quiescent, and that consequently some of the 54 cases would have to be excluded from the list of cases of involuted tubercle or healed phthisis. But, as the result of macroscopic examination, we found that 54 cases, or 38.84 per cent. of the cases above 20 years of age presented signs of involuted tubercle.

This number is remarkable. I was prepared to find a large number of cases in which signs of obsolete tubercle would be recognised, but I was surprised, when the cases were abstracted from the pathological registers, to find the number so high. This number means that tuberculosis of lungs is not only very common but that it frequently becomes quiescent.

It is interesting to consider the ages of the bodies which were examined, and the ages of the bodies in which signs of involuted tubercle were found. The following table shows this:—

Age of body examined.	Involuted tubercle found in:	No signs of former tuberculosis in:	Total number of examinations.
20-29 years	7 cases	19 cases	26
30-39 ,, ...	11 ,,	24 ,,	35
40-49 ,, ...	17 ,,	19 ,,	36
50-59 ,, ...	11 ,,	15 ,,	26
60-69 ,, ...	7 ,,	7 ,,	14
70 years and upwards. ...	1 ,,	1 ,,	2
	54	85	139

From this table it will be seen that the greatest number of cases of involuted tubercle were found in bodies between 40 and 50 years of age, and that the proportion of cases in which such signs were found to those cases where no such indications were present was higher in this fifth decade than in any previous decade.

The number of cases above 50 years of age which were examined is not sufficiently large, and I should not have been surprised if we had found, had the number of examinations been larger, that the proportion of cases presenting signs of involuted tubercle to those where such signs were absent, gradually increased in each decade, even beyond 50 years of age. This gradual increase in the number of cases of involuted tubercle with the age of the body examined is what we should expect, because it is probable that it is slowly progressing chronic tuberculosis where much fibrous tissue is formed, which most commonly is arrested, and the experience of the majority of observers is that phthisis does more commonly run a prolonged course in old than young adults. It is quite possible that many of the cases of involuted tubercle included in the above list did not develop in early adult life, but at a later period, at an age when phthisis tends to run a chronic course and when arrest may be hoped for.

The appearances presented by the involuted tubercle in the fifty-four cases above-mentioned varied considerably. In some cases we had only a fibrous cicatrix, which puckered the apex of a lung, the surrounding pulmonary tissue being sometimes more or less markedly emphysematous. In the majority of cases, however, we had not only a fibrous cicatrix, but a caseous or caseo-calcareous focus, of greater or less dimensions. These caseous foci were well and sharply circumscribed from the surrounding pulmonary tissue, and often had a distinct capsule of fibrous tissue. It is not common for fibrous tissue to be the sole remains of former tuberculosis of the lung; usually there can be found at some part of the cicatricial tissue small caseous foci. In our fifty-four cases of involuted tubercle, the cases where caseous or caseo-calcareous foci were present far exceeded those where only fibrous tissue remained. In thirty-two instances it is recorded that caseous or caseo-calcareous foci were present, whilst in the remaining twenty-two cases no mention is made of any caseous foci, only fibrous tissue being mentioned as being present.

Few pathologists at the present day will be inclined to deny that the caseous and caseo-calcareous foci did really represent former active tubercular disease. It may, however, be otherwise with regard to the cases where only fibrous cicatrices were present without any caseous material. Before we regard a fibrous cicatrix in the lung as representing involuted tubercle, we must consider, first, its position; secondly, what are the other causes besides tubercle which may have given rise to cicatricial tissue. In all the cases above recorded, the cicatrices, as well as the caseous foci, were found in the apices of the lungs. In some cases there were several such foci, one or more of which was present in other parts of the lung than the apex. But it is important to state that no cicatrix or even caseous deposit was regarded as an instance of involuted tubercle when it was only found in some part remote from the apex. In all the fifty-four cases the involuted tubercle was found in the apex; cases were excluded from that list when

[1] Read before the Autumn Meeting of the Lancashire and Cheshire Branch of the British Medical Association.

it was felt that they might have arisen from causes other than tubercle. There are rare cases where we get limited fibrous change, which might be mistaken for the remains of former tuberculosis. Such cases, however, with one exception, which will be described immediately, are rare, and, with care, very little doubt will remain in the mind of the pathologist as to whether they are or are not of tubercular origin. The rare instances of fibroid induration resulting from changes in an infarct, the healing of an abscess or localised patch of gangrene, or induration ensuing round encapsuled parasites or foreign bodies, are not likely to be mistaken for healed phthisis. The cases also of apex cirrhosis, resulting from unresolved acute croupous pneumonia, are also rare, and do not give rise to isolated circumscribed foci of induration such as we meet with in healed phthisis. Of syphilitic induration we know very little, but it does not give rise, as a rule, to circumscribed foci limited to a lung apex, and hence it is not likely to give any trouble to distinguish it from involuted tubercle. Anthracosis is a more common lesion, and may give rise to a nodular or a more diffuse induration of the lung apex. The changes, however, elsewhere found in the lung, will prevent any mistake being made as to the exact nature of these cases.

There is one condition, however, which is not infrequently found over one or both lung apices, which probably has been included by some writers on healed phthisis as a representative of involuted tubercle, but which ought to be excluded, at any rate until our knowledge of its pathology is more perfect. This condition consists in a slight thickening of the visceral pleura over one and very commonly over both apices. The thickening, which is seen over the extreme apex, extends over a spherical area half an inch to two inches in diameter. The surface of the pleura is smooth, often of an opaque white colour, and, as a rule, not adherent to the chest wall. The pleura is thickened to the extent of about one-eighth to one-fourth of an inch; it is very firm, and occasionally calcareous. On microscopical examination, we find simply fibrous tissue causing the thickening of the pleura, and this induration extends a very short distance into the lung among the alveoli, which lie immediately below the pleura. The condition appears to be a chronic pleurogenic very superficial interstitial pneumonia, but what is the exciting cause I do not know. I have never seen it in the bodies of children, and it is very infrequently met with in young adults. In persons of middle age and in old people it is not at all infrequently found. As I cannot regard this as undoubtedly a tubercular lesion, I have excluded it from my cases of healed phthisis. But I think it is probable that some observers must have included it among their cases, since I am unable otherwise to satisfactorily account for the great discrepancy which exists between authors as to the frequency with which signs of obsolete tubercle are found in the lungs on *post-mortem* examination.

This discrepancy as to the frequency with which signs of healed phthisis are found in the lungs is very remarkable.

Cruveilhier[2] states that we rarely make a *post-mortem* examination on adults, and especially on old people, without finding in the apices of the lungs changes which indicate the healing of previous tuberculosis.

Rogée[3] found 51 cases of caseous or calcareous formations in the bodies of 100 old people who had died of diseases other than phthisis.

Déjerine[4] gives the same numbers.

Boyer[5] states that he found in 160 cases where death had not ensued from phthisis a cicatricial shrinking of the lung apex in not less than 157 cases. (There must be some mistake in these numbers.)

Bollinger[6] examined 400 bodies in reference to this point; excluding 144 cases of phthisis from that number, he found 69 cases, or 27 per cent., which indicated the curability of phthisis.

Staudacher[7] placed the number at 26 per cent. He found in 787 cases not less than 202 cases of apex cirrhosis, which he regarded as healed phthisis or phthisis in the process of healing.

Massini[8] found in 228 bodies, where death had not ensued from phthisis, 89 cases (or 39 per cent.) which he regarded as healed phthisis.

Heitler,[9] from an examination of the records of the Vienna Pathological Institute from 1867 to 1879, found that among the cases (16,562) there were 780 instances of obsolete tubercular nodules. He did not include the cases where death had ensued from phthisis or from general tuberculosis, and he excluded cases where there was only fibrous shrinking of the lung apex. He therefore found that 4.7 per cent. of the cases presented the remains of former tuberculosis in the shape of caseous or calcareous nodules. In considering this very small figure (4.7 per cent.) it is very necessary to bear in mind the fact that cases of simply fibrous change, without calcareous or caseous foci, were excluded. An interesting fact in connection with this analysis is that Heitler found that the proportion of cases of obsolete tubercle at different ages went on regularly increasing for each decennial period up to 60 years of age. Unfortunately, we want information as to the proportion of necropsies where no such lesions were found, as compared with the number where they were discovered in bodies of the corresponding age.

It will be thus seen that if we exclude Boyer's figures, about which there must be some mistake, we have authorities differing from 51 to 4.7 per cent. in their estimation of the frequency with which signs of healed phthisis are found in the lungs.

This discrepancy can be in great part explained. In the first place, we are not yet all agreed as to what is to be called healed phthisis and what is not. Heitler, for instance, in his statistics, excludes all cases of simple fibrous cicatrices in the lung apices, unless he also finds a record of caseous or calcareous foci being present, whereas all the other authors above cited would regard, and as I think quite justly, many of the cases of simple fibrous cicatrices in the lung apex as the remains of former active tuberculosis. The ages also of the bodies which were examined by the different observers varied considerably. In some cases the bodies were almost exclusively those of old people, whereas in others, as notably in Heitler's cases, the necropsies embraced children, and young and old adults. In young persons, and especially in children, we should expect signs of healed phthisis to be comparatively rarely found, since they have not reached an age at which phthisis is most common, and as my own and Heitler's statistics tend to show, cases of obsolescent tubercle are found more frequently at all events in middle-aged than in young adults.

And lastly, it makes all the difference in statistics, whether the observations, from which the statistics are collected, are made with the object of clearing up the point under consideration, or whether the observations were only directed to elucidate that among many other points. This is especially the case when the one point is one which, unless special care be taken, is likely to escape detection or to escape being recorded. Small caseous foci in lung apices are extremely easily overlooked, and, if seen, they are very liable to escape being recorded in the *post-mortem* register, unless the pathologist happens to be interested in the question of the involution of tubercle. It is this point which renders my own *post-mortem* records, made during the first years when I had opportunities of performing a number of necropsies, of so little value to me in reference to the present subject. During those years I was not specially interested in the curability of phthisis, and I did not examine with anything like the care which I subsequently did, the apices of lungs for signs of obsolete tubercle, so that I have no doubt that I not only overlooked many cases, but failed to record others which I observed, and which I unfortunately considered of no special importance. When, however, I became interested in the subject, both the examination and the records of the condition of the lung apices were much more careful, and allowed me to arrive at the 38.84 per cent. as the number of cases of healed phthisis met with in the bodies of persons over 20 years of age. Exactly the same remark applies to Heitler's statistics. His estimate of 4.7 per cent. was obtained not as the result of specially examining all bodies placed on the *post-mortem* table in the Pathological Institute of Vienna in reference to the presence or absence of signs of obsolescent tubercle. The number was arrived at by an analysis of the *post-mortem* records, which were not all made by the same individual, and many of which were probably made without the lung apices being specially carefully examined and their condition in all cases recorded.

It will be seen, therefore, that the differences in the above given

[2] *Traité d'Anatomie pathologique*, vol. iv, p. 615-616.

[3] Essai sur la Curabilité de la Phthisie pulmonaire, etc., *Archives Géner. de Méd.*, 3 Série, vol. v, 1839.

[4] Recherches des Bacilles dans la Tuberculose calcifiée et caséo-calcifiée, *Revue de Med.*, vol. iv., p. 921, 1884.

[5] *Guérison de la Phthisie pulmonaire*, 9 edit., p. 13, 1870.

[6] *Deutsches Archiv*, vol. 1, p. 140, 1869.

[7] Ueber Lungenspitzencirrhose, *Inaug. Dissert.* München, 1884.

[8] *Deutsches Archiv*, vol. xi, p. 446, 1873.

[9] Ueber die Spontanheilung der Lungenschwindsucht, *Anzeiger der Gesellschaft der Wiener Aerzte*, 1880, No. 31.

statistics can be, in part, at all events, explained. In future observations on the involution of tubercle we require not simply the analysis of *post-mortem* records, but a series of observations specially directed to the point requiring elucidation. We require also a record of the ages of all the bodies examined, together with a description of what the observer does and does not regard as involuted tubercle.

A number of the specimens of healed phthisis were submitted to microscopic examination with very interesting results. The foci consisted of old fibrous tissue, and smaller or larger patches of caseous material. The fibrous tissue usually formed a capsule round the caseous spots, and not infrequently extended in among the separate foci of caseation, separating one caseous spot from the other. Several of the specimens which were examined, and which were apparently to the naked eye perfectly quiescent, were found to show signs of activity. In some cases all the elements of tubercle could be recognised, even typical giant cells. In one instance the alveoli at the periphery of the patch contained a considerable amount of fibrinous exudation, and the periphery of the patch itself presented a considerable cellular infiltration, in which were typical giant cells. Such patches cannot, of course, be regarded as obsolete tubercle; they were cases which were still active, but where the tubercular process was progressing with a chronic course.

How many of the fifty-four cases, which to the naked eye were regarded as specimens of involuted tubercle, should be reckoned in this class, where microscopic indications of activity of a tubercular nature could be detected, I cannot say, since all the cases were not reserved for microscopic examination. Such cases would, I have no doubt, reduce the number of instances of involuted tubercle very considerably. I am certain that there would be a considerable difference in the percentage of cases of healed phthisis in a table made, as my own has been, simply from the evidence of the naked eye, and one which was made as the result of a microscopic examination of all the cases. A considerable number of the preparations which to the naked eye appear quiescent, and would be placed among the cases of healed phthisis, would, on microscopic examination, show some signs of activity, and be excluded from the class of involuted tubercle. At the same time it would be found that in nearly all the cases, which to the naked eye appeared to be quiescent, there were very evident signs, from the presence of much fibrous tissue and old caseous material, of a tendency to heal. As has been repeatedly pointed out by pathologists, the formation of fibrous tissue in connection with tubercular disease is to be regarded as a conservative change, and one showing the tendency of the process to become quiescent.

Microscopic examination, however, revealed another change in connection with these old tubercular foci, which was present in nearly all those which were examined, and which, I think, indicates the tendency of foci which are quiescent to again become active. Around old spots of caseation, just at their periphery, were to be found small groups of round cells about the size of leucocytes, which in all respects they resembled. These small groups, of which there were usually several in each section round all the old foci, were composed of closely aggregated cells, in the centre of which groups frequently no duct or channel of any description could be detected. In some, however, a small channel, which in some cases was an alveolus, in others a minute bronchus the interior of which was lined with distinct epithelial cells, could be detected. Round this channel the small cell accumulation had apparently taken place. The channel was, I think, usually a minute bronchus, and not a lymphatic duct. The cells composing these groups stained very readily, and were, evidently, of comparatively recent formation. They contrasted markedly with the surrounding old fibrous tissue.

In some cases, where several small old caseous spots were grouped together, the remains of lung alveoli could be recognised between the caseous spots, and there also the small groups of cells existed as well as at the periphery of the focus. No giant cells were ever discovered among these cell groups, and although such structures are not necessarily present in tubercles, I do not think that the groups of cells were to be regarded as minute miliary tubercles. The impression which they conveyed was that they were usually due to a peribronchitis arising from some irritation, the exact nature of which irritation, however, could not be determined. As I have stated, they were very frequently found in connection with foci which otherwise appeared to be perfectly quiescent, and free from any signs of active tubercular change.

A number of sections from different foci of obsolete tubercle were examined for tubercle bacilli, but in the majority of cases with negative results. I do not wish, however, to lay any stress on the failure to find tubercle bacilli in these old caseous spots. In the first place, negative results in such cases are of comparatively little value. Tubercle bacilli may have been present, and yet have been overlooked. I think many pathologists will admit that our present methods of staining and examining tubercle bacilli in sections of tissues are far from satisfactory. For my own part I admit that I have frequently failed to detect tubercle bacilli in sections of undoubtedly tubercular foci which were still in a state of activity. I was not at all surprised, therefore, to frequently fail in detecting those organisms in quiescent tubercular products which could be expected to contain but comparatively few bacilli. My only surprise in connection with this subject has been to find how frequently other observers, as, for instance, Déjerine[10] and Kurlow[11], have detected them. Déjerine examined seventeen cases bacterioscopically. In ten cases of completely calcified nodules he found no bacilli except in one instance in which he found a few bacilli around the calcareous centre. In seven cases, where the centre of the focus alone was calcified, he found bacilli in the peripheric caseous part, but none in the calcified centre. Kurlow examined twenty cases of caseo-calcareous nodules, and states that in five instances only were they certainly absent, in one case doubtful, and in fourteen cases present. One cause of my own failure to detect bacilli in many of the preparations may have been because in the majority of cases the tissue had been kept for a long time in spirit before sections were prepared. Bacilli do not stain so readily in sections made from preparations which have lain for a long time in spirit. In one case of a caseous focus in the lung apex, where death had ensued from acute miliary tuberculosis, the old caseous patch presented myriads of tubercle bacilli. Kurlow also mentions a similar case where the bacilli were very numerous, whilst he admits that usually only a few can be found. It is probable, however, that many cases of obsolete tubercle do not contain tubercle bacilli, although they may contain the spores of these organisms and through them still retain their infective properties. There can be little doubt that these foci of old tubercular disease are a decided source of danger to the individual in whose body they exist. We have already seen their tendency to take on activity, and probably in a considerable number of cases of phthisis we have an arrest of the disease for a time and a subsequent starting of the quiescent tubercle into activity. Certainly the careful consideration of the histories which we obtain from our phthisical patients often lends great support to such a view. It is no uncommon thing to obtain a history in phthisical cases of the occurrence of some previous illness before the illness for which they are consulting us came on. Not infrequently such previous illness has been an obscure one, or one which has been incorrectly diagnosed. In some such cases, however, careful inquiry as to the symptoms will leave little doubt in the mind of the physician that the previous illness was really a phthisical attack, and that the disease had passed for a time into a quiescent condition. Another danger which is present in these cases of healed phthisis is the risk of acute miliary tuberculosis ensuing in consequence of absorption from the old tuberculous focus.

The more complete the fibrous change and the calcareous deposit in these cases of involuted tubercle, the less must be the risk to the patient of a local or general development of tuberculosis. Déjerine's observations, above cited, as to the absence of tubercle bacilli in completely calcified foci, are much to the point when we are considering the danger to the organism of the presence of involuted tubercle in the lungs. Kurlow,[12] as the result not only of bacterioscopic observations, but also of numerous inoculation experiments on guinea pigs, shows that very many of what would be regarded merely from naked eye observation as specimens of involuted tubercle are decidedly dangerous, on account of the risk, which their presence involves, of infection. He considers, and I think with perfect justice, that the only indications of *perfectly* healed phthisis are those foci where there remains simply fibrous tissue, or perfectly calcified caseous foci; and that the caseous masses, which are not at all or only imperfectly calcified, possess all the properties of tubercle, which is capable of infecting the organism, and are, therefore, neither to be regarded as com-

[10] Recherches des Bacilles dans la Tuberculose calcifiée et caséo-calcifiée, *Ibid.*
[11] Ueber die Heilbarkeit der Lungentuberculose, *Deutsches Archiv für klin. Med.*, vol. xl. page 437, 1889.
[12] *Ibid.*

pletely healed cases of phthisis, nor as harmless to the person in whose lungs they occur.

In my own cases the cause of death was exceedingly various in the different cases. In seven cases of the fifty-four in which involuted tubercle was found, active tuberculosis, either of the lungs or other organs, took part in producing death. There was one disease which was a very common cause of death in the cases in which quiescent tubercular lesions were found. That was malignant disease, in some cases in the form of sarcomata, in others of carcinomata. The explanation of this association is not at all easy. We have already seen that the quiescent tubercular lesions were found most frequently in the bodies of persons between 40 and 50 years of age, exactly at that period of life when malignant disease is common. Hence it might be supposed that the malignant disease would be found to be a common cause of death in cases where obsolete tubercular changes were discovered. A little consideration, however, will suffice to show that this explanation cannot be accepted.

Thirteen cases of malignant disease occurred and produced death in the fifty-four cases where involuted tubercle was found, whilst only seven cases of malignant disease occurred among the eighty-five cases where no healed phthisis was present. In other words, of twenty cases of malignant disease thirteen occurred and produced death among the fifty-four cases where "healed phthisis" was discovered, whilst only seven cases of malignant disease occurred in the eighty-five instances where no such involuted tubercle was found. Some observers still consider that there is an antagonism between tubercle and carcinoma, and I am afraid that such will not consider the fact of the frequent association of malignant disease with obsolescent tubercle as any argument against their opinion. They will probably maintain that the association of malignant disease with obsolete tubercle rather supports the view as to the antagonism between tubercle and carcinoma. They will argue that from the presence of *involuted* tubercle, we may infer that there has been some tendency in existence in the body which was antagonistic to active tuberculosis, and that it is quite possible that the condition of body which favoured the development of the malignant disease was that antagonistic tendency. If that is so, why did tubercle ever develop in the body which was afterwards killed by a malignant growth?

In conclusion, I think our clinical and pathological experience warrants us in recognising three groups of cases which bear upon the question of the curability of phthisis.

1. Cases where the only remains of tuberculosis is fibrous tissue or completely calcified caseous foci. These are the only cases which can be regarded as perfectly healed.

2. Cases where there remains a caseous mass, which is not at all, or only partially, calcified. Such cases are probably not uncommonly regarded by the physician as cases of healed phthisis, but by the pathologist they cannot be so considered.[13] They are cases which may give rise to local or general tuberculosis. Probably many cases of phthisis, at one period of their history, come under this class, such cases being characterised by a history of a previous illness, due to a tubercular lesion in the lung, from which the patient has recovered and remained free from signs of disease for a longer or shorter period.

3. Cases which are characterised, pathologically, by the formation of much fibrous tissue, but where, microscopically, all the elements of tubercle are to be found at the periphery of the lesion. Clinically, these cases present the usual features of a very chronic phthisis, but in some instances the lung change is so limited and so very slow in its progress, that the general health is very little affected, and the physical signs may be very indefinite and not at all conclusive as to the existence of phthisis. Not uncommonly the physical signs are considered to indicate that the tubercular process is quiescent, which is not the case. It is probable that the majority of cases of phthisis which have at one time presented distinct symptoms and physical signs, and at a later period have become apparently quiescent, really belong to this class. They are cases which are very misleading to the physician, since they cannot be regarded as perfectly cured, but only as quiescent for a period. If we had an opportunity of examining such lesions microscopically, at a time when, from clinical observation, we should infer they were quiescent, we should find that there were signs of activity at the periphery of the focus.

[13] Probably a few cases are met with of old caseous foci, which, although they are not completely calcified, may be regarded as perfectly healed cases, and without risk to the body in which they occur. Déjerine also states that in some cases the tubercle bacilli disappear from caseous foci before lime salts are deposited.

PATHOLOGICAL MEMORANDA.

THE LEPROSY BACILLUS.

I SEE from the JOURNAL that the subject of leprosy is creating considerable interest. I have recently made some interesting experiments on the persistence and growth of the bacillus. In October, 1886, I removed some tumours from a leprous patient. Sections show the usual lepra cells and bacilli. Portions of this tumour were placed in various fluids The test tubes were loosely closed to keep out dust. No precautions were taken to sterilise the fluids or tubes. The tubes were kept in my consulting room. They all underwent a process of decomposition. The usual bacteria of decomposition were abundantly present, and in some there was a growth of aspergillus. The contents of these tubes have been examined many hundreds of times. In most of them the morsels of tumour have rotted down to a little indestructible connective tissue, and until now the bacilli of leprosy may be demonstrated by the fuchsin stains. These are formed in every stage of growth. The lepra cells at first break up into colonies of cocci; these then grow in length, and in the end quite long threads of bacilli lepræ may be seen. I have numerous slides where the culture is absolutely pure. These occurred in cold water, and are found as a light cloud in close proximity to the morsel of flesh.

Recently Dr. Prince Morrow, of New York, passed through on his way from Honolulu. He was so much interested as to request a series of slides, which he proposed to exhibit at the Paris Convention. He has already shown them in New York, and I also did so at the meeting of the State Medical Society here. In 1883 I visited the islands, and I believe sent you copies of letters which I wrote to the Hawaiian Government. But I am satisfied:—

1. That leprosy is feebly contagious.
2. Probably less so than phthisis.
3. That the spread in the Sandwich Islands affords absolute proof of contagion.
4. That its increase was due to new conditions of native life, brought about by the association with the white population.

I believe it doubtful if Keanu is a leper. The tubercle developed at the point of inoculation, in which bacilli were found at the end of a year, has disappeared without the manifestation of any new symptoms of leprosy. Dr. P. Morrow is my authority for this statement. I suggest an inquiry into the hygienic conditions of populations in Europe still subject to leprosy. I believe it can be arrested and surely prevented by abundant food and a perfect state of health. I have pretty good proof of both these statements.

J. H. STALLARD, M.B.

San Francisco.

SURGICAL MEMORANDA.

TREATMENT BY SEA WATER.

IN Surgeon O'Brien's communication on the treatment of gonorrhœa by means of sea water injections in the JOURNAL of November 30th, there is a suggestion that sea water might be useful in the treatment of other mucous membranes besides that of the urethra. I expect that many men practising in seaside towns have used it in certain cases of leucorrhœa, and also in cases of excoriation of the os uteri; my experience in the above cases is such as to recommend it. I have also tried sea-water gargles with benefit in certain forms of relaxed sore throat. Ordinary table salt and water as an outward application is an old remedy for open cancers, and was thought at one time curative. In a case of cancer of the male breast that was under my care some years ago, I tried it for a few weeks, and found it a very cleansing application, and it also seemed to check somewhat the growth of epithelium. I am afraid, however, that the paragraph from a paper by Dr. FitzGerald, read before the Folkestone Natural History Society in 1887, "Why the Sea is Salt," which closes this note, is only too true for sea-water applications ever to be widely used, although the paragraph below refers only to the internal administration of salt water; after quoting the various ingredients of sea water, the author goes on to say: "Our seas thus contain

the most powerful mineral waters which exist; and if sea water were only expensive or limited in quantity, it would be credited with the cure of all the ills which flesh is heir to. Thousands of invalids would rush to any inland town possessing a spring half as rich in mineral matter as the sea, and yet it is hardly ever taken as a medicine, except by sailors who know its value."

Folkestone. W. J. TYSON, M.D.

TOXICOLOGICAL MEMORANDA.

CASE OF POISONING BY NUTMEG.

ON the morning of December 1st I received an urgent message to attend a farmer in the country, who had been taken very ill during the night. On my arrival I found him lying on a sofa, with his knees drawn up, in a half-dazed condition, crying out, "Oh, my head!"

His wife informed me that he had gone to bed the night before at the usual hour quite well, and slept well until about 6 A.M., When he attempted to get out of bed he found he was giddy and could not stand, had great pain in the head, and could not distinguish objects around him.

Examination.—Could be roused to answer questions when spoken sharply to, and told me he had great pain in the head, great thirst, and his mouth and tongue were "parched," and he had a numbness of the limbs. He was quite unable to stand. Pulse 70, regular; temperature normal; pupils somewhat contracted, acting to light and accommodation; tongue clean, dry; heart sounds normal.

His wife now, after some hesitation, told me that the evening before she had grated up a whole nutmeg and given him in milk, as she had been told by a neighbour that it was a certain cure for boils, and her husband had some on his neck. I gave him calomel, gr. x, at once, and one ounce of castor oil two hours afterwards.

The next morning, December 2nd, I visited him, and found him quite well, with the exception of a little headache.

Not having read or heard of a case of poisoning by nutmeg, the above notes may be somewhat of interest.

P. B. BENTLIF, M.R.C.S.,
Hon. Medical Officer, Jersey Dispensary.

Bath Street, Jersey.

CLINICAL MEMORANDA.

SEVERE INTESTINAL HÆMORRHAGE FROM PASSAGE OF A FOREIGN BODY.

I was called at night, on November 10th, to J. E., aged 57. I found that he had passed about a pint of blood during the day. He had passed, his wife said, nearly a chamberpotful the day before, in small quantities. There was great pallor and a weak pulse. He had an anxious look, and could speak but feebly. I elicited no information that night, except that he had been complaining of pain the day before, that his bowels had not been acting well for the last few days, and that he was subject to piles. On rectal examination I could find nothing to account for the enormous hæmorrhage. As he was in a state of collapse, I ordered stimulants to be given frequently, and an injection of liq ferri perchlor. and water in equal quantities for the rectum. Next morning I found that he had considerable abdominal pain, and that he had passed about half a pint of blood during the night. He was still in a collapsed condition. On again inserting my finger into the rectum, I felt something sharp like the edge of a flint, and could not at first make out what it was. I at last extracted a large plumstone with exceedingly sharp jagged edges. He had "swallowed" a few plums on November 7th, but felt no pain till November 9th, when it gradually increased till he sent for me. From the character of the voided blood I had no doubt that the small intestine escaped, and that the whole mischief was in some of the vessels of the large intestine. I ordered another injection of perchloride of iron and water, and, as he had considerable pain at the anus, I ordered also an application of glycerine of tannin and morphine. Next day I found that the hæmorrhage had entirely ceased. He subsequently made a good recovery. Although swallowing damson- and plumstones is quite a common occurrence, I never before heard of dangerous or even severe symptoms resulting therefrom. J. F. CRAIG, M.A., M.B., C.M.

Gosta Green, Birmingham.

CASE OF RUPTURED SPINA BIFIDA; RECOVERY.

ON October 29th I was called by a midwife to see a male child, just born, that presented something unnatural. On examination I found a ruptured spina bifida in the lumbo-sacral region, the size of which, when entire, would correspond to that of a large orange. The collapsed wall was excessively thin, and emerging from the deficiency in the spinal column, which was large enough to admit my little finger, were various nerves.

Having procured my dressing case, I snipped off the nerves closely, and then separated carefully the lining membrane from the skin, ligatured it tightly with strong silk immediately over the deficiency, and removed the portion external to the ligature, leaving the ends of the silk about two inches long. The superabundant skin was then removed by scissors, and silk sutures applied; a pad of lint smeared with vaseline and the ordinary binder completed the dressing. No antiseptic precautions were used, and no anæsthetic was administered. The legs of the infant were tightly flexed on the abdomen and were motionless on being irritated. Oozing of blood was considerable during the process of separating the lining membrane. Healing by first intention resulted in a good cicatrix.

A hydrocephalic condition is being developed, and will sooner or later doubtless cause death, making one think that the same morbid secretion of cerebro-spinal fluid is going on as probably happened before birth and helped to give rise to the spina bifida in this case. O. BOWEN.

Heyworth Street, Liverpool.

REPORTS
ON
MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND AND THE COLONIES.

SAN FERNANDO HOSPITAL, TRINIDAD.

REMOVAL OF FRAGMENT OF CATHETER.

(By E. A GAYNES DOYLE, Acting Resident Surgeon.)

THE following case was sent by a brother surgeon in one of the outlying districts. The history he gave was that the bearer of the letter was a patient of his, and that he had been in the habit of passing a catheter for him. On May 27th, in the afternoon, he passed a "gum elastic" catheter, left it in for a few minutes, and then proceeded to withdraw it. The catheter came away easily, but without its end.

The man presented himself at the hospital on the evening of May 29th, bringing the rest of the catheter with him. It was one of the gum resinous kind, No. 10, very friable, breaking and crumbling with ease.



The patient stated that he had passed water several times since, but with some difficulty. His symptoms were not pressing. On the following morning a No. 3 silver catheter, and subsequently a No. 9, were passed without difficulty.

On May 31st he complained of a good deal of uneasiness at the perineum, and that micturition was difficult and painful. At 2 P.M. he was in much pain, and had not passed water during the day. The nurse informed me that some blood had come away from the urethra. The patient said: "I can feel the piece quite hard with my hand." The piece of catheter could, in fact, be felt in the urethra about $1\frac{1}{2}$ inch from the meatus. With a little coaxing I worked it out of the passage; it was passed point first. The sketch gives the fragment in its natural size. A quantity of blood came away after he had expelled the foreign body, so much so that I had to give him ergot internally, and apply ice to the part. He made a good recovery without any complication, and was discharged on June 5th, well.

IN view of the spread of venereal disease in Italy since the repeal of the regulations formerly in force, the Minister of the Interior has appointed a Commission to investigate the subject, and suggest measures for the repression of prostitution and syphilis.

REPORTS OF SOCIETIES.

CLINICAL SOCIETY OF LONDON.

FRIDAY, DECEMBER 13TH, 1889.

CHRISTOPHER HEATH, F.R.C.S., President, in the Chair.

Living Specimens.—Mr. SILCOCK showed a case of acromegaly in a woman, aged 53. He noticed her fingers begin to enlarge six years ago. Her features were large, and the lower jaw was massive and projecting. The cartilages of the nose were enlarged, as was also the tongue. The feet were large, but less markedly so than the hands.—Other cases of acromegaly were shown by Messrs. PERCY FLEMING and K. CAMPBELL.—Mr. CHARTERS SYMONDS showed two patients from whom thyroid cysts had been removed, one of whom had a sympathetic paralysis of the eye.—Mr. SPENCER showed a man suffering from ataxia, on whom he had operated for suppuration of the left shoulder joint beginning as an ordinary case of Charcot's disease.—Mr. JOHN MORGAN showed a case of what he described as inflamed nævus associated with subcutaneous hæmorrhages in an infant.—Mr. MORGAN also showed a lad, aged 11, the subject of an enlargement of the left frontal bone of doubtful nature, which began five years ago. —Dr. ANGEL MONEY showed a girl, the subject of symmetrical enlargements, probably rheumatic in origin, in front of both elbows. She had had rheumatism, which had left a mitral murmur. She had also had erythema nodosum.

Eight Cases of Cysts and Adenomata of the Thyroid treated by Extirpation of the Growth—Six in Women, Two in Men; One, a Woman, being Fifty-four Years Old, the Others being under Thirty. —Mr. CHARTERS SYMONDS read notes of these cases. He sketched the other methods of treatment by injection and incision, and the method used by Professor Hahn, who ligatured masses of fascia and gland as he removed the cyst. In the cases recorded, in one the entire thyroid was removed with a tumour that lay partly beneath the sternum. The lobes were empty, and Mr. Symonds regretted that he had removed them. The operation was undertaken early in 1883, before the cachexia following removal of the whole gland was generally known, and the wide oozing surface left after removal of the growth seemed to promise hæmorrhage. In the next case of a solid tumour behind the right lobe, causing dysphagia so complete that the patient had to be fed with a tube, the lobe and tumour were removed by an incision to one side of the median line over the growth. Some difficulty was experienced in obtaining sufficient room, owing to the incision being lateral. On dissecting this tumour it was found to be encapsuled, and to be situated behind the gland, and might easily have been enucleated. Consequently, in subsequent operations, Mr. Symonds decided first to search for the capsule and then to enucleate. In four subsequent cases this was done, and the growths (in one case solid, in the others partly cystic) were removed without the loss of any blood, and with great facility. As a rule, at most these small vessels required ligature. In one the lobe had to be raised up before the cyst could be reached. In the remaining case the lobe was removed because it appeared to be blended with the cyst; this turned out subsequently not to be the case. All the patients recovered with primary union, and most required but one dressing subsequently to that made at the operation. The method employed might be thus summarised. To make in every case, no matter where the tumour was situated, a median incision, which gave more room and left less scar, and, when the deep fascia was opened, the largest growth could be brought to the median line. To expose certainly and definitely the cyst or adenoma—that is, its fibrous wall, and then to dissect off the gland. If the wall were followed closely no bleeding or trouble was encountered. If the white, glistening wall of a solid tumour or the bluish wall of a cystic were not seen at once, then the edge of the gland must be sought and raised up till the capsule was seen. If a dissection were commenced outside this severe bleeding would be encountered. In the case of a cyst Mr. Symonds advocated opening it early, after sufficient of the wall had been exposed to secure with forceps, and dissecting back the thyroid. By this means the operation could be performed through a smaller opening, and the resulting scar was slight. The similarity in anatomy between these cysts and adenomata and those of the breast was pointed out, to explain why the growths could so easily be turned out. All the cysts contained in the wall a variable amount of gelatinous glandular material which showed the usual veins lined by cortical or columnar epithelium, and this structure was exactly the same as in the solid forms. As to diagnosis, it was pointed out that the cases suitable for operation were those in which the growth was localised, well defined, and limited to one side. In no case were there two tumours, though multiplicity was not considered to negative operation, there being no reason why two or more localised encapsuled growths should not be extirpated at the same time. It was impossible to decide between cystic and solid forms without exploration. It was held that excision gave more speedy recovery, and was more free from danger than any other method, while the small scar resulting from injection seemed to the author to be counterbalanced by the prolonged treatment and the often severe hectic that followed. Mr. Symonds also pointed out the necessity of the strictest antiseptic precautions in these cases. He had employed the spray except in four cases, where the wound was kept full of sublimate solution. But more particularly he called attention to the necessity of surrounding the neighbourhood of the wound with towels wrung out of lotion, and of operating with the arms of the assistant as well as the surgeon bare, and of wearing a clean linen apron or a towel pinned over the waistcoat from the neck downwards. These subsidiary precautions he considered of far more importance than the spray. He further added that in all the cases except one there were symptoms sufficiently important to demand operation. The one was that of a lady who requested that the growth might be removed. He deprecated operation where symptoms were absent. Two patients were exhibited. One from whom an adenocystoma, measuring three by two inches, was removed through an incision one inch and a half long, presented only a very small scar. The other still exhibited the ocular symptoms of sympathetic paralysis, which had antedated the operation performed nearly three years previously.—The PRESIDENT had not removed cysts from the thyroid, but had injected them with solution of perchloride of iron; and had seen cures thereby effected in cases of simple cysts without solid growth, without any inflammation supervening. Fever was sometimes caused, but he had not seen any disastrous result.—Mr. SILCOCK described a case of the disease. The enlarged lobe was to the right of the middle line, but he made a median incision, and being unable to delimit the cyst wall, he removed the right lobe. There was probably not an ounce of blood lost. He had ligatured the veins as well as the arteries in that case. In another case, that of a lady, the cyst was injected with perchloride of iron, and acute cellulitis of the neck and of the anterior mediastinum supervened. Mr. Silcock evacuated the abscess, and that patient recovered.—Mr. G. SPENCER related a case in which a silk ligature caused much trouble until it came away. He asked whether, after partial removal of the thyroid, the remaining lobes continued to decrease as they did after division of the isthmus of that body?—Mr. PARKER said that years ago he was performing tracheotomy for a child with urgent symptoms, and with a big thyroid, when he divided the isthmus in order to introduce the tracheotomy tube. Some months afterwards there was found to be a considerable diminution of the thyroid in that case.—Mr. BLACK said that Mr. Sidney Jones divided the isthmus of the thyroid as a definite plan of treatment for urgent dyspnœa due to enlarged thyroid, after the plan first advocated by Sir Duncan Gibb. He placed two ligatures upon it, and divided the isthmus between them.—Mr. BATTLE asked whether Mr. Symonds had come across any case in which a large vessel communicated with the gland. He recollected the case of a lady with a cyst, which he had first emptied and then packed with gauze, the hæmorrhage having been free.—Mr. BERRY remarked that in one case, three years after division of the isthmus, the gland (which had at first diminished) had grown again to its usual size. It was also, he thought, a common experience that if one lobe were removed, the other at first diminished, and then grew again to its original size before the operation. There was generally no hæmorrhage when the isthmus was cut across, contrary to the opinion generally entertained by surgeons in this country. He had seen three cases of such division of the isthmus without hæmorrhage, such bleeding being almost entirely from the vessels at the upper and lower borders of the isthmus. If they were tied at first, there was not generally hæmorrhage from the division of the isthmus.—Mr. GODLEE described a plan for the removal of parts of the gland for goître, carried out by Sir Joseph Lister. Opening the gland, he scooped out part of it. There was hæmorrhage only if the large veins underneath the fibrous covering of the gland were interfered with. In a case of sarcoma, however, the hæmorrhage was severe, and almost endangered the patient's life. He thought the plan advocated by Mr. Symonds, with its healing in three or

four days without rise of temperature, better than that of the injection of iron, with its attendant dangers, rise of temperature, etc.—Mr. BERRY added that in the last ten years Socin, of Basle, had successfully removed the tumour in sixty-six cases, the results of which had been published in a pamphlet which Dr. Keser had translated.—Mr. SYMONDS, in reply, said that he had not yet encountered one of the hæmorrhagic cysts. He had divided an isthmus an inch and a half wide, using much care, by tying only one vessel. If the surgeon kept free of the fibrous capsule, there was very little hæmorrhage. He still thought that Mr. Silcock might have removed the cyst in his case without cutting away any of the body of the thyroid.

Diffuse Aneurysm in the Calf of the Leg simulating Abscess. Recovery after Removal of Arteries.—Mr. W. H. BATTLE described this case. The patient, a labourer, aged 28, was admitted into St. Thomas's Hospital on December 27th, 1887, and came under Mr. Battle's care. Five weeks before admission the man was descending a ladder, when his foot slipped. Next day the left leg was painful, and the calf slightly swollen. He was able to do his work for a few days, but at the end of a fortnight the swelling began to increase rapidly, and the pain became very acute, preventing rest. The family and previous history of the patient were good. He was a slightly-built man, marked with scars of small-pox, and had an anxious appearance. The affected leg was much swollen, measuring about a third more than the right, and almost circular in shape. It was both very painful and tender. About five inches from the ankle-joint on the inner side was an area of marked redness; here there was fluctuation; œdema extended all round the ankle and for some distance up the leg. There was no pulsation in the swelling, and none in the arteries below. The swelling extended from the upper end of the tibia to within four inches of the ankle-joint, and was remarkably tense and hard. It occupied the deep calf and spread from side to side. The temperature was high; the tongue was furred; the pulse full and rapid. It was difficult to get any history of the swelling. The patient did not at first recollect the sprain. It appeared to Mr. Battle that the swelling was probably due to the formation of an abscess in the deep calf, and that its excessive hardness was the consequence of extravasation of blood into it from the giving way of a vessel of some size. The same evening antiseptic incision was carefully made into the most fluctuating part, and Esmarch's band applied above the knee. The large cavity was then emptied of its contents (which consisted only of blood partly in clots, without a trace of pus), plugged with strips of oiled lint, carefully bandaged, the elastic band removed, and the limb placed on a splint. Next day ether was again administered, Esmarch's band was applied above the knee, and, after removal of the plugs, which had effectually prevented any bleeding, the incision was prolonged upwards along the side of the leg; this incision divided the tibial origin of the soleus, and subsequently the inner head of the gastrocnemius, and upon the removal of the elastic band a spurt of blood came from an opening in the posterior tibial artery just below the origin of the anterior tibial. The popliteal artery was then tied just above its bifurcation, the posterior tibial just below the opening, and the anterior tibial at its commencement, after which the artery between the ligatures was dissected out and removed. The opening from which the blood had escaped was situated in the posterior aspect of the vessel, the margin of which showed fine granulations but no atheromatous change, nor was any found in the part removed. There was no sac other than that formed by the condensed tissues, the surface of which was shreddy, whilst the interosseous membrane had lost its firmness. Antiseptic dressing was applied, and three drainage-tubes inserted, the wound, which was about eight inches long, being closed with interrupted sutures, the limb enveloped in cotton-wool, and again placed in the splint. Further examination of the patient showed no evidence of disease of the heart, arteries, kidneys, or any of the internal organs. For some days there was sharp fever. The foot was at first cold, waxy in appearance, and retained the marks of the finger when pressure was made, but the circulation gradually improved until, on January 20th, 1888, anastomosing vessels could be felt around the knee and the upper end of the tibia. For nearly six weeks sloughs, some of them of large size, continued to come away, and although the temperature had fallen, suppuration was present in the wound. On March 18th a sharp attack of erysipelas affected the limb, and the temperature rose as high as 104.6°. This attack lasted a fortnight, and on the fourth day the knee-joint was aspirated, suppuration having taken place in it. The aspiration was repeated on the eighteenth day; the joint afterwards perfectly recovered. The wound was very slow in healing, progress being frequently interrupted by breaking down of the scar tissue. On June 5th it was examined under ether, opened up, and the surface scraped. The remainder of the cavity healed from the bottom, after relaxation of the calf muscles had been assisted by the division of the tendo Achillis. The breaking down of the scar tissue was always accompanied by fever, and preceded for some hours by enlargement of the femoral glands. The patient left St. Thomas's Hospital on October 27th, 1888, with the wound closed, but similar breakings down of newly formed tissue occurred on several occasions. However, when shown to the Society in May last he could walk with the assistance of a stick, and had perfect movements in both knee- and ankle-joints. The difficulty in diagnosing some cases in which blood had been diffused after the subcutaneous rupture of an artery had seldom been more fully exemplified than in this case. The great hardness and excessive tension of the part were so unusual that Mr. Battle thought they must be due to hæmorrhage into an abscess cavity. The extent and tension of the swelling made the absence of pulsation in the vessels below easily explicable on the supposition of pressure higher up, whilst the œdema of the limb made accurate examination difficult. This suggestion of hæmorrhage, in addition to the supposed presence of pus in the swelling, made him cautious in opening the cavity, and he was prepared to act should there be unusual bleeding. The increase in the swelling for the three weeks preceding admission probably allowed of the development of the anastomosing circulation, which at the time of operation was sufficiently established to maintain the vitality of the limb. It was suggested that the anterior tibial took a high origin, and so carried on the circulation, and that the vessel which appeared to be the anterior tibial was really the peroneal. Against this view was the point at which it arose from the popliteal, at the lower margin of the popliteus muscle; its size, which was little smaller than the posterior tibial; the fact that the anterior tibial could not be felt then at the ankle, nor for weeks later, though it could be felt to pulsate now; also the extreme anæmia of the part after operation, and the slowness with which circulation in the part became re-established. The portion of artery removed measured at least two inches in length, and presented no evidence of atheroma or of softening. The posterior tibial below the opening was pervious, as evidenced by passing a probe into it. The amount of clot was comparatively small, whilst the shreddy condition of the walls of the cavity made it a matter of no surprise that extensive separation of sloughs followed, with a failure of the antiseptic treatment employed. After the operation the course of the case might be divided into three periods: The first comprising the time during the re-establishment of the circulation, separation of sloughs, and partial healing of the wound. The second, the attack of erysipelas, complicated by suppuration in the knee-joint and the formation of a slough over the heel. The third, the continued healing of the wound and contraction of the extensive cicatrix, so often interrupted by breakings down of the newly-formed scar tissue. Mr. Battle gave in an appendix a short record of cases of a similar kind. Guthrie had a patient under his care with a rupture of a posterior tibial aneurysm. In the JOURNAL for 1878 was recorded a case of aneurysm of the posterior tibial, resulting from a wound of the calf of the leg seven months previously. Gross recorded[1] a case of aneurysm of the posterior tibial artery, which formed a pulsating tumour in the middle of the calf; there was a well-marked *bruit*. Gross ligatured the posterior tibial through an incision four inches in length, and the man recovered. A postman, under the care of Spence, had received a wound from a knife in the upper and inner part of the left leg, five weeks before admission.[2] The posterior tibial had been injured close to the popliteal, and also one of the venæ comites. A ligature was applied above and below the wound in both artery and vein, and another upon the anterior tibial, just below the bifurcation of the popliteal. The ligatures separated in eight days, and the man recovered.—Mr. BLACK thought that probably the anterior tibial artery had a high origin, and that the arteries tied were the posterior tibial and the peroneal, the anterior tibial carrying on the circulation.—The PRESIDENT said that cases of diffused aneurysm were often very difficult of diagnosis. In a case of popliteal aneurysm he had, within the last three months, seen a poultice removed when the case came before him for his opinion, the swelling being mistaken for an abscess.

[1] *Phil. Med. Times*, vol. ii, p. 374, 1871.
[2] *Med. Times and Gaz.*, 1872.

In another case he and another practitioner had been at variance as to the nature of the tumour.—Mr. BERRY related a case in which the anterior tibial, the peroneal, and the posterior tibial had been tied a week before, and yet the foot still remained warm.—Mr. BATTLE, in reply, was surprised that the circulation had been maintained, and mentioned Spence's case, in which there was extravasation in the limb. The same three arteries were there ligatured, and the patient recovered with a good limb.

PATHOLOGICAL SOCIETY OF LONDON.

TUESDAY, DECEMBER 17TH, 1889.

W. H. DICKINSON, M.D., F.R.C.P., President, in the Chair.

Cyst of Cerebellum.—Dr. HADDEN exhibited a simple serous cyst involving the right lobe of the cerebellum. It was imbedded in the white matter, and there was no sign of growth, hydatid membrane, staining or softening, in the neighbourhood. The cyst measured an inch and a half from side to side, and one inch from before backwards. The symptoms were those of cerebellar tumour. Two cases had been reported, one by Dr. Sharkey in vol. xxxiii of the Society's *Transactions*, the other by Dr. Pye-Smith in vol. xxxvi. The exhibitor referred to another case which he had published, and to one recently described by Dr. Major before the Bradford Medico-Chirurgical Society. The origin of these cysts was obscure; possibly they were due to the dilatation of lymph spaces. The explanation given by Mr. Shattock of Dr. Major's case was very doubtful. This gentleman had suggested that the cyst might be a fœtal remnant, and had alluded to the presence of a ventricle in the cerebellum of some birds.—Dr. GULLIVER then described a simple smooth-lined cyst of the right lobe of the cerebellum, which had contained semisolid material. The case was in every way very similar to the one just described by Dr. Hadden.—Mr. BOWLBY asked if the walls of the cysts had been examined microscopically.—The PRESIDENT asked Dr. Hadden whether there had been any loss of power in the lower limbs in his case. He recalled several cases of tumours in the lateral lobes of the cerebellum in which there had been loss of power in both lower extremities, but without any loss of sensation.—Dr. HALE WHITE referred to a paper that he had written, in conjunction with Dr. Savage, in which he had described the appearances of the organs of two lunatics, several of which contained cysts as well as the brain, yet these would hardly all be considered congenital.—Dr. HADDEN replied that there was no staggering or paralysis in the case that he had described, and that the cyst wall had not been microscopically examined.—Dr. GULLIVER replied that no microscopical examination had been made in the cyst wall in his case.—Dr. W. S. COLMAN then described a simple cyst of the cerebellum which had involved the middle lobe, and had also excavated the white matter of the left lateral lobe. Symptoms had existed for two years before death. These were paroxysmal left occipital headache, reeling gait, with tendency to fall to the left, occasional vertigo with sensation of falling backwards, slowly progressive impairment of power in right arm and leg, prominence of both eyes, sluggish pupils, slight nystagmus, and double optic neuritis. Great improvement occurred for a month or two after the patient first came under observation. Death had occurred suddenly from paralysis of the muscles of respiration. On microscopical examination, the wall of the cyst was found to be composed of layers of neuroglia. There was no trace of malignant disease, nor were there any other cysts in the cerebellum.

Alveolar Carcinoma of Breast following Eczema (Chronic Papillary Dermatitis) of Nipple.—Mr. BARLING described a specimen which had been removed from a lady, aged 58, who had suffered from the so-called eczema for six months. The nipple only was involved, and from it an indurated cord extended inwards on the equator of the breast for an inch and a half to a firm nodule, the size of a horse-bean. The skin over the whole breast was movable and free from puckering, and the axillary glands were free from enlargement. Only the middle third of the breast was removed, including the skin over it and the pectoral fascia and muscle beneath. The patient had continued well up to the present time, twenty months after the operation. A series of sections from the nipple through the indurated cord and the little tumour showed that there was overgrowth of the rete mucosum, with abundant small-celled infiltration. The lacteal ducts could be traced from the nipple to the growth. They were enlarged and distended with epithelium, whilst in places they were surrounded by small-celled growth. The small tumour was made up chiefly of alveolar carcinoma, with traces here and there of duct carcinoma. Mr. Barling commented on the short time which had intervened between the origin of the eczema and the development of the carcinoma, and upon the general absence of squamous-celled carcinoma in these cases.—Mr. BOWLBY alluded to a paper of Mr. Butlin's, which was read before the Medico-Chirurgical Society, in which the subject of the connection between eczema of the nipple and mammary cancer had been very exhaustively considered. Dr. Thin, a year or two later, brought a paper before this Society, in which he suggested that the eczema was secondary to the cancer. Mr. Bowlby then related the course of events in those cases which he had seen, and in which the eczema had undoubtedly preceded the cancer; and he said that he considered the relation between the two conditions was one of cause and effect. In all the six cases that he had seen the cancer had in each case been a round-celled scirrhous growth, and between the nipple and the breast tumour there had intervened a zone of healthy tissue, so that there was no direct extension of disease from the nipple inwards.—Mr. R. W. PARKER had examined one case of eczema of the nipple in which there was no tumour present, but the breast was not healthy, and on section the disease was continuous from the nipple to the breast, which led him to agree with Dr. Thin's view.—Mr. BOWLBY added that in none of the cases that he had seen had there at any time been any discharge from the nipples. The breasts had, however, undergone ordinary retrogressive changes, as the patients had been past the prime of life.—Mr. BARLING, in reply, said that the ducts were not healthy, being distended with a small-celled infiltration round them. He thought that Dr. Thin had been misled by the fact that in duct carcinoma cysts were frequently present, from which the patients were able to squeeze out a milk-like fluid.

Psorospermiæ in Ureter.—Mr. BLAND SUTTON exhibited a kidney and ureter, from the Middlesex Hospital Museum, affected with psorosperm saccules. These had previously been described as mucous cysts of the ureter. When sections were prepared by the celloidin process the saccules contained oval-shaped bodies identical with coccidium oviforme, a parasite which was the cause of a destructive liver disease of rabbits. The saccules were situated immediately beneath the mucous membrane of the ureter, and did not invade the muscular coat. The subject of psorosperms had attracted little attention in this country. It was curious that the disease, though so common in rabbits, seemed to be extremely rare in man. It was a comfort to know that eating infected rabbits was attended with no risk of infection, for the coccidia, after passing through certain stages of development, came to a standstill until they left their host. The channel of infection for man and rabbit was equally unknown as well as the condition of the parasite when it entered a mammal, as its complete life history was unknown. In cases of general psorospermia occurring in man the symptoms were much the same as those seen in rabbits. Darier had recently attempted to show that some skin affections, such as molluscum contagiosum, chronic eczema of the nipple, and the like, were due to these parasites. The evidence was as yet far from being conclusive.—Mr. SILCOCK related a case of parasitism by psorosperms. The patient was a woman, aged 53, who was admitted into St. Mary's Hospital seven days before death. She was thought to be possibly suffering from typhoid fever. The illness dated from a "chill," taken six weeks before admission into hospital. The symptoms consisted of pains in the limbs, nausea, and occasional sickness, tenderness over the liver and spleen, fever of remittent type, the temperature reaching 103° F., and slight diarrhœa. The urine was albuminous. The areas of splenic and liver dulness were increased. The tongue was coated with brown fur, which became dry. The breath was foul. Death resulted from cardiac failure. The *post-mortem* examination was made eighteen hours after death in the middle of July. The liver was much enlarged, and weighed 83 ounces; in its substance were a number of aggregations of caseous foci, for the most part near the surface, there being generally a well marked red ring of congestion or capillary hæmorrhage round each caseous area. The spleen was enlarged, and weighed 16 ounces, and exhibited sundry caseous foci varying in size from a pin's head to that of a pea. They were aggregated together with a red inflammatory zone around each nodule. In the ileum were found six papule-like elevations, with red bases and a circumferential inflammatory zone. Also in the large intestine, as well as in the ileum, there were red patches of injected mucous membrane, from one to three inches square. There was a small pneu-

monic area in the anterior border of the left lung. The other organs and tissues presented no interesting changes, except those associated with fever. The naked-eye *post-mortem* appearances to a certain extent resembled those of tuberculosis, but differed in the character, situation, and limited generalisation of the lesions. On examination of the caseous nodules, coccidia were found, which corresponded in every respect with those described by Leuchart. The psorosperms did not appear to develop within the body—a fact noticed by that author—but they were obtained by keeping the coccidia at an equable temperature, in a warm room or incubator. It was a very remarkable fact that the development of the psorosperms went on in a weak solution of bichromate of potash, such as was used for hardening purposes. The resistance and toughness of the coccidium capsule probably explained this occurrence, as also the difficulty in getting the organisms to stain with any of the reagents in ordinary use. The histological characters of the hepatic and splenic lesions were admirably given by Leuchart, and to his descriptions there was at present nothing to add. That the coccidia were present in the bile duct, and that this topographical distribution was regulated by the latter, was also obvious from an inspection of the specimens, but it was noteworthy that the only intestinal lesions found were far away from the duodenum. Their presence in the spleen could only be accounted for on the supposition that they had been carried there in the blood stream. This was the first case of the kind which, so far as he knew, had come under his notice; but from the marked *primâ facie* resemblances of the disease to tuberculosis, he could not doubt that it was much more common than was generally imagined. Mr. Silcock expressed his indebtedness to Mr. Rogers, of St. Mary's Hospital, for the specimens which were before the Society, and for the assistance he had given him in the preparation of this paper.

Psorospermiæ in Rabbit's Liver.—Dr. DELÉPINE read the following paper on this subject. He said that the presence of psorospermiæ in the livers of rabbits was a fact of such common occurrence that it hardly attracted the notice of the histologist, notwithstanding the use which was made of rabbits for experimental purposes. He had had lately to examine a large number of rabbits for special purposes, and wishing to avoid as much as possible sources of error, had made a point to note carefully the amount of psorospermic nodules found in each case. This was done chiefly with the view of discovering whether the diseased livers would react to various agents as well as those which were little or not diseased; and whether the presence of psorospermiæ diminished in any marked degree the vitality, and whether it was so serious a pathological state as to render them unfit for the carrying out of comparative experiments. Out of 50 rabbits of which the necropsy had been made during the last few months, only 4 were found apparently, and 2 certainly, free from the lesions produced by psorospermiæ. Thus, 92 per cent. were certainly affected, and possibly 96. Some of these rabbits were obtained in London; the greater number were, however, of Swiss origin, and obtained from various farms. All these animals were young, but varied considerably in size, the smallest weighing 688 grammes, the largest 1,675 grammes. He had examined in Geneva a large litter of young rabbits, and found that the animals were of different sizes. But, contrary to his expectation, he found that some of the small rabbits had very few psorospermiæ in their livers, whilst some large individuals were infested to a considerable extent. However, these animals having all been submitted at the same time to a rather long preliminary fast, two of them died, and these were very small. In one of them the liver was almost entirely replaced by psorospermic nodules. In the other, the gall-bladder was distended with a clot, resulting from hæmorrhage caused by ulceration of the roof of the gall bladder; the rest of the organ was comparatively free from lesions. Of those that remained one other got very ill, and psorospermiæ were also extremely abundant. Out of the six that remained, it was found on opening their bodies that the largest and the one that had been the most active was also the one in which psorospermiæ were most abundant. From this it would seem that in very young rabbits psorospermiæ might multiply to such an extent as to be a serious danger to the life of the animal, but that after the first few months the presence of even a large number of psorospermiæ did interfere much with the nutrition of the animal. He then continued the investigation on another line. He weighed carefully the whole bodies and the livers of all the rabbits which he had to dissect; 32 rabbits were thus examined. Out of that number 2 were found free from psorospermiæ, in 9 psorospermiæ could be found here and there in the liver, in 8 the parasites were scattered all through the substance of that organ, in 10 the psorospermiæ were abundant, in 3 they were so abundant that it was almost impossible to find a single cubic centimètre of liver tissue free from them. The average weight of the animals belonging to these various groups was as follows: Psorospermiæ absent or nearly absent, 979 grammes; psorospermiæ pretty abundant, 871 grammes; psorospermiæ abundant, 1,010; psorospermiæ very abundant, 790. Thus it appeared that so long as the psorospermiæ were not very abundant the nutrition of the body was not much interfered with. The average weight of the liver in these various groups gave more interesting results. In order to render that weight comparable, the average weight having been found, it was reduced to what it would be in rabbits weighing 1,000 grammes in each case. The liver would, when so reduced, weigh, in animals in which the psorospermiæ were few or absent, 29 grammes; in animals in which the psorospermiæ were moderately abundant, 35 grammes; in animals in which the psorospermiæ were extremely abundant, 35 grammes. Thus it appeared that although the general nutrition was not much affected, yet the liver was distinctly diseased, as its weight showed. The nature of the changes found next attracted attention, and he found that the parasite crept along the bile channels, then the contents, after becoming full of very large highly refracting bodies, escaped from their envelope, and the granules then probably penetrated into the protoplasm of the epithelial cells, and in this way a large number of those cells were invaded at the same time. The small mass then developed into a larger protoplasmic mass, which at first was nucleated and nucleolated, and finally escaped from the cell. In some of these cells a long coiled filament was produced. He was not able to make sure of the nature of this filament, but it might be the pseudo-filaria of Van Beneden, in which case there could remain no doubt as to the relation between gregarinæ and psorospermiæ. The lesions produced were at first limited to the infested epithelium, remarkably fine specimens of papilliferous cysts being thus produced, but after a time the epithelium was destroyed and proliferation of connective tissue took place. Ultimately a kind of biliary cirrhosis was produced.—Dr. HADDEN gave an account of the clinical history and *post-mortem* appearances of a case which had already been described in the Society's *Transactions*, vol. xxxiv.—Mr. TARGETT described a case which occurred in Guy's Hospital fifty-three years ago, whose kidneys and ureters were now found to contain several psorospermial cysts. He thought, owing to the variations in size of the organisms found in different cases, that possibly there was more than one variety or species parasitical in man.—Mr. SPENCER said the experience at the Brown Institution was that rabbits infested with psorospermiæ showed evidences of distinct wasting, that in different animals they were to be found in the liver and kidneys, but as far as his experience went not in the spleen, and undoubtedly they acted as irritants, causing proliferation and infiltration of the organs which they infested.—Mr. BRODIE had found similar cysts to those described by Mr. Bland Sutton in a subject in the dissecting room at Middlesex Hospital, and referred to some fatal cases in rabbits which he had examined.—Dr. PAYNE had never seen any specimens inside human bodies. It was Professor Bollinger, of Munich, who first considered that the peculiar bodies found in molluscum contagiosum were low forms of animal life. Dr. Payne said that he had examined several specimens of this disease, but had been unable to satisfy himself that these bodies were of an animal nature, and commented on the difficulty of determining the animal nature of such bodies.—Mr. SHATTOCK asked Dr. Delépine if he had noticed any intestinal lesions in the rabbits that he had dissected, and whether he considered that they got into the bile ducts from the portal system.—Mr. BLAND SUTTON, in reply, thought that great caution must be exercised in determining the nature of these cysts. They might turn out to be the eggs of some unknown parasites, and mentioned that he had found appearances in monkeys which he had at first taken to be psorospermiæ, but which ultimately were found to be the eggs of entozoa.—Mr. SILCOCK thought Mr. Shattock's suggestion, that they were originally in the blood, was probable, as in his case they had been present in the spleen.—Dr. DELÉPINE had found that when very numerous they were injurious to rabbits, as the livers had been found enlarged with a form of biliary cirrhosis. He thought there could be no doubt that irritation caused proliferation of cells, and that this was one way in which the formation of tumours could be traced. At present the

observations of Continental authors tended to show that the organisms under discussion belonged to the protozoa, though they might turn out ultimately to be immature forms of some higher animals.

Card Specimens.—Dr. HADDEN: Cast of Œsophagus, expelled during life.—Mr. SPENCER: (1) Cystic Kidney from a horse; (2) Sebaceous horn on a mouse.—Mr. JACKSON: Subdural Hæmatoma.

MEDICAL SOCIETY OF LONDON.

MONDAY, DECEMBER 16TH, 1889.

C. THEODORE WILLIAMS, M.D., F.R.C.P., President, in the Chair.

CLINICAL EVENING.

The Diagnosis and Treatment of Aortic Aneurysm.—The PRESIDENT, in resuming the adjourned discussion on this subject, congratulated Dr. R. Douglas Powell on the practical character of his propositions, and specially on his attaching more importance to the pressure phenomena than to the cardio-vascular signs in the diagnosis of aneurysm. With reference to the relation which fusiform aneurysm bore to saccular, it must be remembered that both sometimes co-existed in the same patient. He had never heard the diastolic shock sound, except in cases of aortic aneurysm, but it was not always to be detected in these, and, as for murmurs, they were quite as often absent as present. The relative importance of auscultatory phenomena and pressure signs depended principally on the portion of the aortic arch involved, aneurysm of the first portion usually presenting some physical signs in the shape of pulsation, dulness, shock, or murmur, and it was generally with this form that cases of aortic regurgitant disease with retracted lung were confused. Dr. Williams, however, thought that the position of the heart, the presence or absence of cardiac hypertrophy, and the results of measuring the two sides of the chest were generally distinguishing features. In many cases of aneurysm of the transverse and descending portions of the arch the evidence of auscultation was often wanting, and that of pressure signs most important, and the variations in this pressure in aneurysm from changes in the size of the vascular swelling often proved of assistance in the diagnosis. In these cases the presence of stridor, of metallic cough and dysphagia, with fixation of the left vocal cord, with dilatation of the left pupil, and weakening of the left pulse generally, signified aortic aneurysm, but Dr. Williams had published a case in the *Proceedings* where all these phenomena were present, and were, after death, proved to have been due to a lympho-sarcomatous tumour in the mediastinum, which was detected during life by the rapid extension of the dulness in more than one direction. Syphilitic glands might give rise to nearly all the characteristic pressure signs of aneurysm, for in one well-marked syphilitic patient of Dr. Williams's, with enlarged cervical and axillary glands, stridor of voice and breath were present, with fixing of the left vocal cord, and tubular sounds were heard above both scapulæ, with sternal dulness and accentuation of the second sound of the heart. Under large doses of iodide of potassium the symptoms entirely disappeared, which was the result in a similar case, where, in addition, dilatation of the left pupil was noted. Nevertheless, stridor was of great diagnostic value, and sometimes the only means of detecting the presence of aneurysm. A man, aged 32, was admitted into the Brompton Hospital with a history of emphysema and asthma, and during one of the asthmatic attacks stridor was noted. The spasms subsided under chloroform, and he was free for weeks, but he died suddenly in an attack from syncope, and *post-mortem* examination revealed an aneurysm the size of a Seville orange springing from the back of the transverse portion of the aortic arch, and involving the posterior pulmonary plexus. The presence of markedly tubular breathing above one or both scapulæ was one of the most valuable signs in obscure cases, but no sign or symptom coul l be absolutely relied on; they should only trust to a combination of the various phenomena to guide us to the right conclusion. Dr. Williams often experienced great difficulty in persuading the patient to adopt Tufnell's method long enough for a complete trial, but he obtained excellent results from the iodide of potassium treatment, while restricting the patient's liquids, and confining him to one floor of his house, or to the gallery of the hospital; in other words, limiting his exertions without keeping him in bed, and he thought this was sufficient for most cases of aneurysm. Consolidation of aneurysms sometimes took place under conditions the very reverse of those of rest, as Dr. Williams had witnessed in a shoemaker suffering from aneurysm of the ascending aorta apparently pointing in the second intercostal space on the right side, and who, in spite of rest being enjoined, pursued his heavy labours at his last, with the result that six months later the tumour had sufficiently consolidated to withstand a blow from the patient's hand, apparently without injury. With regard to abdominal aortic aneurysm many cases of vasomotor paresis of the aorta were mistaken for it, and Dr. Williams well remembered one instance where what had been described as saccular aneurysm of the abdominal aorta disappeared after the removal of an ill-fitting truss, which had compressed both iliac arteries.—Dr. QUAIN recalled the well-known case of the eminent surgeon Liston, the diagnosis of whose affection baffled the most eminent authorities of his time, though he was found *post mortem* to have a tumour as big as a Seville orange under the clavicle pressing on the trachea. The presence of the tumour had been suspected before death, but it had been thought to be tubercular. He said that he did not think that a similar failure in diagnosis was likely to happen in these days, the means of diagnosing aneurysm having immensely improved since that time. With regard to treatment he said he could recall to mind many cases in which iodide of potassium had saved life, or at least rendered it tolerable, and he mentioned several such. He concluded by calling attention to the importance of noticing even slight symptoms, in support of which he alluded to a case in which very slight stridor had alone saved him from giving an unguardedly favourable prognosis in the case of a man who died shortly afterwards from rupture of an aortic aneurysm.—Dr. FELIX SEMON dwelt more particularly on the cases in which there were no audible laryngeal symptoms, notwithstanding paralysis of the abductor fibres. He mentioned incidentally that the idea that the cords in man moved rhythmically during respiration was quite erroneous, and must have been derived from observations on animals. He recalled that nine years ago he had laid it down as a scientific law that while the adductors of the cords had a proclivity to become involved in functional affections, the abductors were more likely to be affected in cases of progressive organic disease, and he pointed out the bearing of this law on the subject then under discussion. He showed by means of diagrams how, if the abductor fibres were alone pressed upon, no very obvious effect was produced on phonation, at any rate during the initial stages. It was only on the supervention of paralytic contractures that attention was directed to the larynx. On this ground he urged the routine examination of the larynx by means of the laryngoscope in all cases in which aneurysm was suspected, even in the absence of laryngeal symptoms, the discovery of the paralysis of an abductor being of the utmost importance to the diagnosis.—Dr. F. DE HAVILLAND HALL said that it was not convenient to discuss aneurysm of the abdominal aorta at the same time as thoracic aneurysm. He mentioned cases showing the difficulty of distinguishing between pulsating empyema and aneurysm, and insisted upon the diagnostic importance of the steady downward progress in malignant growth simulating aneurysm, the progress of cases of aneurysm being more fluctuating. Alluding to the difficult cases in which there was direct pressure upon the trachea with bilateral paralysis of the crico-arytenoidei postici, he mentioned two cases in which, in spite of urgent dyspnœa, he had declined to advise tracheotomy, and in which the *post-mortem* examination justified his abstention by showing that the obstruction would not have been relieved by the operation. In reference to the iodide of potassium treatment, he said that Dr. Balfour's plan was to keep the patient in bed for a few days, in order to ascertain the normal pulse rate and then to commence the iodide, keeping it up until there was acceleration of the pulse, which he regarded as a sign that the limit had been reached. In one case of his the greatest benefit had followed the continuous application of ice over the tumour. He deprecated the administration of digitalis, and preferred aconite when a cardiac depressant was indicated.—Dr. MITCHELL BRUCE urged a thorough and systematic examination of every patient suspected of aneurysm, especially by means of the simpler methods of physical examination. He said that the neglect to observe they patient closely before passing on to auscultation, was one of the reasons for the affection escaping notice. He mentioned five cases treated by a combination of the Tufnell and the iodide of potassium treatments, and observed that in many cases the urgency of the symptoms precluded following Dr. Bristowe's suggestion to send the patients back to their work. Of his five cases the first remained 207 days on his back. He pointed out that if this

method were decided upon it should be thoroughly carried out with due discrimination as to the ability of the patient to support its rigour, and with the most scrupulous attention to detail, the patient retaining the most complete immobility. He showed a specimen from a case in which Mr. Barwell and Dr. Murray had introduced a bright steel wire into the sac, through which was passed a current of electricity, with the result of causing a very beautiful deposit of laminated fibrin around the wire, and on the walls of the sac.—Dr. KINGSTON FOWLER associated a diastolic murmur rather with aortic regurgitation than with aneurysm, and he thought that one cause of aneurysms being overlooked was that sufficient importance was not attached to the symptom pain. With regard to the prognosis, he was of opinion that it was not so unfavourable as was generally thought so far as duration of life was concerned. In support of this view, he mentioned several cases in which the patients had gone on for periods of as long as five and eight years. Passing on to discuss the value of treatment, he urged that the Tufnell treatment consisted of two parts, rest and diet, the relative importance of which two factors had, he maintained, not as yet been established. He quoted several passages from Tufnell's writings, to show that he attached most importance to rest, and under these circumstances the speaker urged that it was cruel and unnecessary to reduce the amount of fluids and solids below the limit consistent with comfort to the patient. He regarded aortic regurgitation as a formal contraindication of the Tufnell treatment. With reference to the treatment by surgical procedures, he mentioned Dr. Cayley's case, which had been regarded as a successful instance of the application of the ligature for the cure of thoracic aneurysm, but in which, when the patient ultimately died, the source of the symptoms was found to have been pulmonary stenosis, no aneurysm having been present.—Dr. SEYMOUR TAYLOR pointed out that in small aneurysms death most frequently resulted from bursting, whereas in large aneurysms the cause of death was pressure. He thought that the *rôle* of syphilis in the production of aneurysm had been much overrated and with regard to the influence of heredity he quoted an instance in which members of four generations of the same family had died of aneurysm.—Dr. MAGUIRE briefly alluded to five cases of aneurysm which he exhibited, and insisted upon the value of the sphygmograph in such cases. One of the cases illustrated the presence of physical signs in lieu of pressure symptoms in aneurysm of the second part of the arch, and another showed the importance of paying attention to coincident signs, individually insignificant; and he concluded with a striking example of the fact that a large aneurysm may be present and yet give rise to only trivial discomfort.—Dr. EWART gave the history of the cases exhibited by him, and expressed his concurrence in the views as to treatment put forward by Dr. Mitchell Bruce.—Dr. BRISTOWE protested against being credited with the views ascribed to him by Dr. Mitchell Bruce. He said that he never intended to intimate that patients should be sent back to their work no matter what their condition.—Dr. DOUGLAS POWELL, in reply, expressed himself as gratified with the discussion to which his paper had given rise. He explained that he did not say that fusiform aneurysm called for no treatment, but that its treatment was not that of aneurysm proper. He explained also that in saying a laryngoscopic examination was not necessary to the diagnosis in certain cases, he did not wish to detract from the extreme value of that instrument in the general diagnosis of this affection. He concurred in Dr. Hall's view that stridor was usually caused by pressure on the trachea or bronchus, and was therefore not to be relieved by tracheotomy, which was rarely of service in the dyspnœa due to the presence of aneurysm. He agreed as to the necessity of a careful choice of the cases to be submitted to the Tufnell treatment. With regard to the use of ergot, he confessed himself somewhat sceptical, and said that in any case twenty-minim doses were not likely to have much effect on the circulation. He pointed out that in a given series of cases a certain proportion of them would be sure to prove unsuccessful whatever was done, and he had only endeavoured to show which cases were most likely to be benefited by particular methods of treatment.—A large number of patients suffering from aortic aneurysm were exhibited.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

THURSDAY, DECEMBER 12TH, 1889.

J. HUGHLINGS JACKSON, M.D., F.R.S., President, in the Chair.

Note on a Case of Hereditary Tendency to Cataract in Early Childhood.—Dr. TATHAM THOMPSON (Cardiff) gave a description of well-marked heredity of cataract through four generations. The cataract developed when the individuals were from 3 to 5 years of age, and in all the cases quoted, except one, affected both eyes. There was at first a finely granular opacity of the entire lens, which rapidly increased in density till vision was reduced to mere light-perception. The cataracts were much harder than those of the ordinary congenital or the lamellar type. One peculiar feature was that the tendency was transmitted, in two generations, only through the male line, thus differing from the somewhat similar cases recorded by Mr. Berry in the *Ophthalmic Review* for January, 1888, but agreeing with the observations of Hosch and others. The heredity was more marked in the early childbearing period; this was also noted by Mr. Berry in his patients. In reply to questions by the PRESIDENT, Mr. ROCKLIFFE, Mr. GUNN, and Mr. S. J. TAYLOR, Dr. THOMPSON said that his patients were in all other respects healthy, and there was no evidence of further disease of the eyes. He was unable to obtain any information which explained the curious inheritance. There was no consanguinity in the parents of the affected children.

The Operative Treatment of Cicatricial Ectropion of the Lower Eyelid.—Mr. TWEEDY described a method by which he had obtained very satisfactory results. He showed a patient upon whom he had operated, and a drawing of the same patient previous to operation. He made a doubly curved incision from the outer canthus, downwards and outwards over the malar prominence, and a second parallel incision about 6 to 8 millimètres to its inner side, carried through the whole thickness of the everted lid. The flap thus formed was dissected up, remaining attached only at the lower end. He then made a single straight incision obliquely across the cicatrix, nearly parallel to the lid margin; the outer end of this reached to the innermost of the two curved incisions. The lid and adjoining skin were then separated from the subjacent tissues. This allowed the cut surfaces at the sides of the flap to be brought closely together and united by sutures, and the eversion of the lid was thus corrected. The gap left by the drawing up of the lower lid was filled by the flap previously made, which was turned inwards towards the nose, and secured in position by a few stitches.—Mr. MACKINLAY asked if the depressed cicatrix so usual in these cases was filled up by this plan of operating. In the case shown there was still a rather deep depression.—Mr. SPENCER WATSON fully appreciated the ingenuity of Mr. Tweedy's method, but thought that for most cases a simpler operation would suffice.—Mr. TWEEDY replied that the operation he had described was designed for the cure of the ectropion. In the particular case exhibited to the meeting there was a large osteophytic mass at the lower orbital margin, covered by a very thin cicatrix, and but little could be done to remedy the depression at the site of the scar.

The Operative Treatment of Symblepharon.—Mr. TWEEDY gave a description of a procedure which he had adopted in cases of extensive symblepharon following burns. It was most suitable for those instances in which there was a prolongation of the cicatrix on to the cornea. His plan was freely to separate the lid from the cornea and globe, making a sulcus rather deeper than that of the normal conjunctiva; then having attached two or three fine doubled silk threads to what had been the uppermost margin of the symblepharon, to pass these by means of curved needles through the lid from the bottom of the sulcus, bringing them out on the skin surface as near the lower orbital margin as possible. These threads were then tied over a piece of drainage tube, and allowed to remain in position for four or five days. By this means the cutaneous surface of the corneal portion of the symblepharon was folded inwards and became the lining membrane of the lid. The patient should be kept under observation during the process of repair, so that any adhesions which formed between the lid and the globe could be broken down. If the lower lid were much incurved by the folding of the flap, its position could be restored by buttonholing the flap near the margin of the lid.

Primary Tuberculosis of the Iris.—Dr. HILL GRIFFITH related particulars, and showed specimens and drawings from a case of tubercle of iris, which occurred in a 7 months old female child. The eye had been affected for one month, and the child subject for three months to attacks of bronchitis and diarrhœa; there was an enlarged gland in the neck on the same side, but there were no other physical signs of tubercle. The parents were healthy, and there was no family history of phthisis. A yellowish nodule grew from the periphery of the iris of the right eye, and numerous millet-seed bodies from its surface; the pupil was closed, but

there was no acute inflammation. The nodule grew rapidly, and the smaller deposits multiplied day by day. The eye was enucleated after three weeks' treatment. The disease was found to be confined to the iris and ciliary body. The new growth exhibited the histological characters of tubercle; but Professor Dreschfeld failed to detect the bacillus tuberculosis. In 32 recorded cases in which microscopic and other tests left no doubt as to the tubercular nature of the disease, one eye only was affected in 29; the average age of the patients was 12, youngest 4 months, oldest 51 years. In 10 cases bacilli were searched for, but only found in 4; in one of the remaining 6 cases however, the inoculation test was successful. Three cases in which no operation was undertaken terminated fatally from tuberculosis. Of the 27 cases in which enucleation was performed, 2 died with brain symptoms, but several others showed signs of tubercle subsequently to the operation. Dr. Griffith thought enucleation was on the whole satisfactory, cases being reported well five or more years afterwards. Iridectomy could not be recommended. In view of the fact that it was impossible to be quite certain if the disease were primary, and that some of the milder cases got well, he would enucleate only if the sight was destroyed or the eye becoming rapidly disorganised in spite of treatment, as in his own case.—Mr. LAWFORD mentioned two cases of supposed primary tubercle of the eyeball in young children. In both of these enucleation was performed, and the general condition of the patients improved markedly: one was known to be alive and well three years afterwards. In these and in many of the recorded cases there was strong heredity of tubercle. His own feeling was in favour of enucleating in cases of intraocular tubercle, as soon as there was moderate certainty that the eye was irremediably damaged; he thought the after-history of published cases justified this opinion; in a fair proportion the disease seemed to have been eradicated.—Mr. MCHARDY referred to a case of localised choroidal tubercle, which he had brought before the Society last session, and in which he had removed the eyeball. The child was still in fair health, though delicate. In cases of tubercular disease of the cornea recovery sometimes occurred even when the affection was very severe. In localised choroidal tubercle enucleation should, he thought, be performed; but in cases of tubercle of the iris he was often doubtful what treatment to adopt.—Mr. TWEEDY spoke of a young man who had been under his care at Moorfields for twelve or eighteen months, and in whom both irides were studded with little tubercular bodies. The eyes were slowly degenerating in spite of all treatment. There was no family or personal history of tubercle or syphilis.—Dr. TATHAM THOMPSON referred to a case of tuberculosis of the eye, in which enucleation was followed by tubercular meningitis and death.

Tealeaf Conjunctivitis.—Mr. CHARLES WRAY (introduced) read a paper describing a form of conjunctivitis observed by him after the application of tealeaf poultices to the eyelids. In a typical case there was swelling and congestion of the lid margins, with congestion of the palpebral and ocular conjunctiva, the latter being most affected in the line of the palpebral fissure. The caruncle and plica semilunaris were swollen, and presented a peculiar glistening, translucent appearance. There was sero-purulent discharge. Mr. Wray considered it most probable that the affection was caused by micro-organisms.

Living and Card Specimens.—Mr. TREACHER COLLINS: Microscopic section of Human Lens with Epithelium on the inner surface of the Posterior Capsule, and showing other structural peculiarities.—Mr. JESSOP: (1) Aniridia with Dislocation of Lenses; (2) Punctate Appearance of Anterior Capsule of Lens.—Mr. SILCOCK: A case of Symblepharon treated by Snellen's operation (modified).—Mr. SPENCER WATSON: Osteoma of infrasuperciliary Region.

BRITISH GYNÆCOLOGICAL SOCIETY.

WEDNESDAY, NOVEMBER 13TH, 1889.

FANCOURT BARNES, M.D., Vice-President, in the Chair.

Nephrolithotomy.—Mr. SPANTON showed renal calculi removed from a woman who had complained of pain in the left loin for three years. When she came under his care a tumour had developed reaching from the umbilicus to the iliac crest. He cut down in the left loin, and on aspiration removed half a pint of urine. A calculus weighing 180 grains was found impacted in the ureter. For several days the patient did well, passing urine freely by the bladder and from the wound; but subsequently she died. Although when under chloroform careful examination could detect nothing wrong at the right side, at the *post-mortem* examination the right kidney was found to be practically gone, consisting of a mere shell, and the ureter was completely blocked with calculi rounded off at their edges.—Remarks were made by Dr. HEYWOOD SMITH, Mr. BOWREMAN JESSETT, and Dr. OLIVER, and Mr. SPANTON replied.

Gall-stones.—Mr. LAWSON TAIT exhibited some gall-stones, removed from an American physician.[1]

Hysterectomy for Cancer.—Dr. BEDFORD FENWICK showed a pregnant uterus at about the third month, removed by hysterectomy for cancer of the cervix. Two years previously the cervix had been cauterised because of suspicious pouting points. Six months later malignancy had declared itself more by friability and other signs, and the cervix was amputated. Six months afterwards the patient was found to be two months pregnant. The uterus was found drawn up and the vault of the pelvis very tense. It was decided to induce abortion in the usual way, but it was found impossible to discover any trace of cervical canal in the hardened remnant of the cervix, which to the sight was perfectly healthy, not a trace of a soft or bleeding point being visible. The patient had made an uninterrupted recovery.—The case was discussed by Dr. EDIS, Dr. OLIVER, Mr. LAWSON TAIT, Dr. JAPP SINCLAIR, Dr. HEYWOOD SMITH, the PRESIDENT (Dr. Barnes), Dr. GRIGG, Dr. BURFORD, and Dr. RUTHERFOORD.—Dr. FENWICK replied that the *serre-nœud* was applied, as far as could be judged, at the junction of the lowest and middle thirds of the uterus. The embryo escaped complete.

Extra-uterine Gestation.—Dr. INGLEBY MACKENZIE read an interesting case of protracted extra-uterine gestation, on which the PRESIDENT made some remarks as to its bearing on the question of legitimacy.

Four Hundred Cases of Ovariotomy.—Dr. BANTOCK'S paper on this subject was discussed.—Dr. EDIS referred to some of the practical suggestions which the author had given as the result of his extensive experience, and which were an encouragement to other workers.—Dr. BARNES agreed with what had been said with regard to Listerism. As regards the ligature, he reminded the Society that Dr. Tyler Smith had adopted that plan of treating the pedicle. He strongly condemned the use of carbolic solutions in the peritoneum, and also the use of ice for thirst.—Dr. JAPP SINCLAIR said he was not convinced of the uselessness of antiseptics. Everyone was willing to give up the use of the spray, but it was impossible to overlook the good results of antiseptic midwifery. Nor did he agree with the condemnation of opium, and he thought it was downright cruelty to refuse it after some of the severe operations. Its use required judgment, but he had never seen any bad results follow. The question of purgatives in peritonitis he thought needed a great deal of consideration, and at present rested purely on Mr. Tait's authority.—After some remarks by Dr. GRIGG and Dr. LYCETT, Dr. BANTOCK replied.

EPIDEMIOLOGICAL SOCIETY OF LONDON.

MONDAY, NOVEMBER 11TH, 1889.

SIR T. CRAWFORD, K.C.B., M.D., President, in the Chair.

Malaria.—Sir WILLIAM MOORE remarked it had been stated that malaria caused more human misery than any other known cause of disease. Many theories had been originated as to the nature of malaria, but hitherto he considered we were ignorant of what malaria really was. He did not believe that the bacillus malariæ of Crudeli and Klebs was the true malaria germ, any more than he admitted that the spores of algoid plants of the palmetta species, stigmatised as such years ago by Salisbury, was the true malaria germ. He mentioned what had been advanced by Klebs, Crudeli, Marchiafava, Laveran, and others, on the subject of the bacillus malariæ. But there were fatal objections. The bacillus had not been found everywhere where paroxysmal fevers prevailed. Neither was it reasonable to suppose that every kind of surface on which paroxysmal fever occurred would produce the same kind of bacillus. It was said to require heat and moist earth. But malarious fevers prevailed in sandy deserts, where water was hundreds of feet from the surface; and on bare rocks, where there was no earth, although plenty of moisture in the form of dew at some seasons of the year. Moreover, credible authorities had stated that malarious fever might occur in half an hour after exposure; and was it to be supposed that in that short time the bacillus malariæ entered the spleen and marrow of the bones

[1] See report of meeting of Birmingham and Midland Counties Branch, JOURNAL, December 14th, p. 1341.

(where they were supposed to reside until coming into action), increased and multiplied, and then sallied forth to excite fever? Moreover, he would ask what became of the bacilli when a person recovered? Evidently they did not pass into the atmosphere, or malarious fever would be infectious. Then it was also well known that a person might have an attack of ague months, or even years, after the primary seizure. Was it to be supposed that the bacilli remained in the system all that time? Curious things were found in the blood of human beings in different parts of the world. Manson had theorised that the filaria sanguinis hominis was the cause of elephantiasis, but filariæ were found in the blood of persons who were not suffering from elephantiasis. Indeed, it had been stated that 10 per cent. of the Chinese had filariæ in their blood. Again, the spirillum which Carter thought distinctive of relapsing fever had been found in the blood of persons not so affected. Sir William Moore considered that a more rational and a more recognisable cause for paroxysmal fevers and malarious diseases generally could be found. Dr. Maclean had said that the heat-generative powers of all victims of malaria were impaired; but he (Sir Wm. Moore) said the heat-generative powers of all victims of heat were impaired, and their skin, in consequence of the excitation and consequent debility from heat, became so sensitive that they were specially liable to all changes of temperature. The effects of heat on the human system were referred to at some length. It was formerly taught that congestions and inflammations were originated by the rush of blood to internal organs consequent on a chilled surface, and probably this teaching was not altogether incorrect. Others had regarded chill as acting by a depressant effect on the nervous system. It was more recently advanced that chill indicated disturbance of protoplasmic molecular correlations, or, in chemical language, that new bodies were evolved in the protoplasm, which acted as veritable poisons. With regard to the periodicity which was supposed to characterise maladies produced by malaria, periodicity was a characteristic of all Nature, more or less; but there was no periodicity in enlarged spleen supposed to arise from malaria, and even ague sometimes became so irregular that it lost all claim to be considered a periodic malady. When ague presented in temperate climates, it did so in the autumnal season, when changes of temperature were greatest, and it did so in marshy localities where damp was added to cold, damp cold having the greatest power of abstracting heat. His position was, that so-called malarious fevers were caused by the sudden abstraction of heat, or chill, under the influence of cold, and especially of damp cold; and that the characteristic effects of chill were most marked in hot climates, because of the antecedent exposure to great solar heat and disregard of suitable precautions. He thought if they could wash in the waters of Lethe, so as to emerge fresh to the subject, the contradictions involved in the theory of malaria would lead to the abandonment of the belief. It was the heat, and not the malaria of tropical climates, which produced anæmia and blood degeneration, as well as fevers.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

Section of Pathology.

Friday, November 29th, 1889.

E. H. Bennett, M.D., President, in the Chair.

Renal Calculus.—Mr. Kendal Franks read a paper on renal calculus, describing a case in which the nucleus was an ordinary sewing needle, swallowed many years previously.—The President said it was not merely the presence of phosphate of calcium but the predominance of carbonate of calcium that characterised calculi in suppurating kidneys. But calculi of this character passing away in the urine were suggestive of suppuration rather around the kidney than originating in it. They knew that calculi originating in the kidney, apart from suppuration, were more likely to consist of oxalate of calcium or lithic acid. A noteworthy point in Mr. Franks' case was that the urine appeared to have been normal. He did not know whether the slow process of oxidisation was likely to take place in any needle introduced into the body, because as soon as the needle was introduced into any tissue it would, in a few hours, become covered with a gloss which was not very easy to describe—a kind of composition like varnish which perfectly prevented oxidisation.—Mr. Franks, in reply, said it was remarkable that all the stones which had come surgically under his notice in connection with the kidneys had the same composition, namely, phosphate of calcium mixed with small quantities of carbonate of calcium. In the present case the phosphatic compound formed 90 per cent. of the entire calculus. The present specimen was the more interesting because formerly they found it stated in textbooks and used to be taught that stones in the bladder were chiefly composed of oxalates and urates, and that renal calculi, which were formed in the kidney and had a phosphatic deposit, received it from the bladder.

United Fracture of the Base of the Skull.—The President exhibited a united fracture of the base of the skull involving the anterior and middle fossæ. The injury which caused the fracture was a fall from a car during an epileptic fit. Having detailed the symptoms observed during the fatal illness, which resembled those of Jacksonian epilepsy, the President stated the grounds on which he had declined to interfere surgically with the patient. The *post-mortem* examination disclosed a united fracture of the frontal region radiating to the base along the middle line, and the changes observed in connection with it were clearly seen to have no causal relation to the epilepsy. The man had albuminuria. Referring to the details of the fracture, the President noted the great rarity of such specimens. This, he stated, was due to the amount of force necessary to produce fractured base, which inflicted great injury on the brain, and to the fact that almost all such fractures were compound, either by external wound, or more frequently by opening the nasal and aural cavities, and so were specially prone to be complicated by inflammation.—A discussion followed, in which Dr. Myles, Mr. Franks, and the President took part.

A Contribution to the Pathology of Joint Bodies.—Dr. R. G. Patteson read a paper on this subject. The conclusions arrived at were summarised as follows:—1. In the majority of cases loose bodies of mixed bony and cartilaginous nature are wandering osteophytes, and are evidences of a latent rheumatic arthritis. 2. This form of chronic rheumatic arthritis is insidious and latent in character, occurs in young persons as well as in those more advanced in years, and is chiefly manifested in "lipping" of the articular margins, and in the formation of enchondroses and osteophytes which, while attached, cause no symptoms. 3. These bodies, after liberation in the joint, may, and do often, undergo considerable increase in size, their nutriment being derived from the synovial fluid. This fact points to the necessity of their early removal by operative interference.—The President said he was glad to find the opinion of the late Mr. Adams, that foreign bodies in joints were mostly of rheumatic origin, was now being confirmed by the elaborate microscopical researches of the day.—Mr. Franks said there had recently been great discussion in London as to whether it was not possible for bodies of this sort to be formed by the chipping off of little pieces from the articular cartilages. The body shown bore a strong family resemblance to the articular cartilage, having regard to the arrangement of the cells.—Dr. Myles said he found difficulty in understanding how the synovial fluid could have afforded pabulum enough not only for the maintenance of the cartilage, but for the development of this piece of bone.—Dr. Patteson, in reply, said his attention had been directed to the subject by a paper of Dr. Humphry, of Cambridge, and after examining the records of the cases he came to the conclusion that what had, in a great many instances, been regarded as fragments of articular cartilage or bone, chipped off by injury, or exfoliated by a process of necrosis, were in reality detached osteophytes. The matter was concluded by the experiments of two French writers, who had examined these bodies, and had found that the mode of production in all was similar. First, there was an excessive development of the articular cartilage in a localised spot; secondly, a development of bone took place which was connected by slender trabeculæ with the cancellous tissue of the shaft; and then when a fracture occurred they had a loose osteophyte. He did not attempt to explain the growth of such bodies in the synovial fluid.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

Friday, December 6th, 1889.

A. F. McGill, F.R.C.S., President, in the Chair.

Polygraph.—Professor Brock showed a projection polygraph by which the recording of muscle curves, pulse tracings, etc., could be rendered visible on a screen.

Diseases of the Thorax simulating Empyema.—Dr. Eddison described three cases. Case I. A patient was admitted to the Infirmary with a large swelling over the right hepatic region after three weeks of intense pain. There was resonance over part of the swelling, and signs of right pneumothorax. The swelling

suddenly disappeared, and the patient became collapsed. On exploration of the right chest in front pus was obtained, and an opening was made into the right pleural cavity and also into the abscess, the latter being found to be below the diaphragm. The necropsy showed a large subdiaphragmatic abscess, with an opening into the stomach near the pylorus and another opening into the right pleural cavity. Dr. Eddison thought the abscess was probably the beginning of the case, and that the ulceration was from it into the stomach. CASE II. A man, aged 48, had dulness in the upper part of the left chest in August, 1888, and pus was found on exploration. It did not appear to be an ordinary empyema, and the patient left the hospital after some months. In June, 1889, he was readmitted, and 70 ounces of clear fluid drawn from the lower part of the same side of the chest. There followed œdema of the chest wall, dysphagia, and collapse. The necropsy showed malignant disease of the upper part of the chest, involving specially the root of the left lung. CASE III. The patient was admitted with œdema, dulness, and other signs of fluid in the chest, and pus was obtained on exploration at various points, clear fluid being withdrawn at others. The case proved to be one of malignant disease of the right lung. Dr. Eddison thought these cases, and others like them to which he referred, instructive as bearing on the necessity of a guarded prognosis in cases of what seemed in their early stages to be cases of empyema, and he pointed out how difficult an exact diagnosis sometimes was in the beginning of the cases.—Dr. BARRS, who had made the necropsy in Case I, thought the primary disease was not in the liver, but the stomach, possibly from an ulcer bursting into the space between the liver and diaphragm. The stomach showed a very remarkable condition of purulent infiltration of the mucous layer. On the question of the diagnosis of empyema, he thought the liver was never displaced downwards by fluid in the pleura, but that displacement signified an abscess between the lungs and liver, which was not uncommon in cases of pleurisy, and had been described by Leyden as "pneumothorax subphrenicus."—Mr. N. PORRITT referred to a lecture by Dr. Allbutt in which a stomach ulcer was mentioned as the cause of pleurisy. He had seen the liver displaced downwards in pleurisy.—Dr. CHURTON referred to a case of Mr. M. Robson's, where in a patient from whom a colloid ovarian growth had been removed, pus and blood were found in the chest. The question arose as to its malignancy, and to the advisability of operating, owing to the risk of hæmorrhage.—Mr. LITTLEWOOD said that the case referred to by Dr. Churton had been tapped twice, and two pints of fluid removed without any effect. Referring to the difficulty in opening the chest he had experienced in Dr. Eddison's first case, he said the diaphragm was closely applied to the chest wall, so that the exploring trocar passed through it, but when he inserted his finger he pushed the diaphragm down, so that the drainage tube was inserted into the pleura, above the diaphragm.—Dr. GRIFFITH thought, considering the anatomical relations, it was possible that the liver might be pushed down in cases of pleurisy, though displacement would take place in the cardiac direction first.

Notes on the Recent Epidemic of Pneumonia in Leeds and Neighbourhood.—Dr. CHURTON read a paper on this subject.—Dr. EDDISON agreed that there had been a great epidemic of pneumonia in that neighbourhood recently. He thought the disease was clinically akin to erysipelas. Infection was difficult to prove, but he related the following: Patient No. 1 was suffering from a pulmonary attack (? broncho-pneumonia), and recovered. At the time her husband was ailing with a "cold." In a few days he developed symptoms of pneumonia, and died. His medical attendant, who slept one night in the house, developed in a few days symptoms of pneumonia, and died in eight days. A few days later his assistant succumbed in a precisely similar manner. Had this sequence occurred in a disease of acknowledged infectiousness it would certainly be said to have been communicated. The severity of cases of pneumonia, as a rule, did not bear a constant relation to the extent of pulmonary consolidation. He thought all treatment was disappointing, and that as yet we knew of no specific remedy.—Dr. BARRS related a series of cases bearing on the question of infection. 1. A man (over 50 years old), suffering from acute pneumonia, died. 2. His brother, who attended him, before the funeral of the first was taken ill in the same way, and died, the physical signs being very trifling. The wife of the last patient fell ill in similar fashion, but he did not know the sequel of this case. The mortality of acute pneumonia in hospital practice was about 20 per cent.—The PRESIDENT said there were many fallacies in the method of "collective investigation." In one locality he had heard from a medical health officer that in one-half his district there were many cases of pneumonia reported, in the other half none. He thought there was great difference of opinion as to what should be called acute pneumonia, and that the diagnosis was rather a "function" of the mind of the medical attendant than of the body of the patient.

Cases.—Mr. GODFBEY CARTER: Case of Myxœdema in a Man.—Dr. WARDROP GRIFFITH: Case of Sporadic Cretinism.—Mr. E. ATKINSON: (1) Case of Myositis Ossificans; (2) Case of Ectopia Vesicæ.—Mr. MCGILL: Patient on whom Prostatectomy had been Performed by the Transverse Method (Trendelenburg's incision).—Dr. CHURTON: Two Cases of Peripheral Neuritis (recovering).

Specimens.—Dr. ALLAN: (1) Hæmatoma of Dura Mater; (2) Tibia showing Chronic Ostitis, etc.; (3) Syphilitic Caries of Skull.—Mr. MCGILL: Tubercular Mass in Pons, Tubercular Elbow-joint, Acute Necrosis of Tibia.—Dr. EDDISON: Hæmorrhage into Pons, Subdiaphragmatic Abscess communicating to Stomach and Pleura.—Dr. CHURTON: (1) Pulsating Sarcoma of Rib; (2) Small White Kidney.—Dr. BRAITHWAITE: Ovaries Removed for Dysmenorrhœa.—Mr. LITTLEWOOD: Ulcer in the Stomach of a Rat.—Mr. WARD: Malignant Disease of the Sigmoid Flexure in Man aged 22.—Mr. NUNNELEY: Tubercular Tumour of Optic Thalamus and Cerebellum (There was optic neuritis two years before death).

PATHOLOGICAL SOCIETY OF MANCHESTER.

WEDNESDAY, DECEMBER 11TH, 1889.

J. DIXON MANN, M.D., M.R.C.P., President, in the Chair.

Multiple Deformities.—Mr. C. E. RICHMOND exhibited the photograph of a child, aged 1 year, in whom many deformities were present. There was a large cavernous nævus in the pterygoid region, and a cutaneous one on the abdomen. There were also intrauterine amputations of several fingers and toes, and annular constrictions on those which remained, and also on the legs. Mr. Richmond enumerated the theories of origin of these amputations, and stated that the present case exhibited fleshy cords which could be picked out of the constrictions, thus confirming the theory of intra-amniotic bands as causing them.

Case of Elephantiasis following Injury.—Mr. C. E. RICHMOND exhibited a hand in which elephantiasis had arisen after very serious burns of the forearm, where skin and muscles were extensively destroyed. He also showed a microscopic section of the part, demonstrating the areolar hyperplasia (particularly marked round the small blood vessels), and dilated lymph spaces characteristic of the development. It was incidentally mentioned that in this case the antipyretic action of quinine had been found far superior to that of antifebrin.

Abscess of the Cerebellum.—Dr. MILLIGAN exhibited a specimen showing an abscess cavity in the right lobe of the cerebellum. The patient, a boy, aged 14, had suffered from scarlet fever six years previously, and there had since been an occasional discharge from both ears. The discharge had suddenly stopped a week before seeking advice, during which time he had suffered from severe headache. The pain radiated over the right side of the head, but was most intense in the neighbourhood of the right coronal suture. He was quite unable to sleep although very drowsy. Pulse 80, feeble and intermittent. Nausea, but no actual vomiting. Marked optic neuritis on right side, very slight on left side. Paralysis of the right side of soft palate and uvula. When standing with his eyes closed he showed a tendency to fall forwards. Mr. Hare trephined over the right cerebellar lobe, and after introducing a trocar into the substance of the brain drew off about two drachms of dark-coloured and very fœtid pus. A drainage tube was placed in the abscess cavity, and the wound dressed with antiseptic precautions. The boy died rather suddenly about twenty-four hours after the operation. There was no other lesion found at the necropsy. The petrous bone was quite healthy. No meningitis, no sinus phlebitis.

Ulcerative Aortitis.—Dr. DRESCHFELD related the case of a girl, aged 14, in whom during life there had been symptoms of aortic stenosis and embolism of the right middle cerebral artery. During the last few months persistent pyrexia pointed to the existence of ulcerative endocarditis. A fortnight before death the patient complained of intense and persistent pain in the head, occupying only the right half of the head. At the *post-mortem* examination the valves were found normal, but the heart was much hypertrophied, and the aorta showed a marked congenital

narrowing and chronic thickening of the intima, and a large quantity of small vegetations, which had ulcerated. The right middle cerebral artery was blocked by an embolus, and below the embolus a small embolic aneurysm was found, which had burst, causing extensive extravasation. Scrapings from the vegetations showed diplococci and streptococci, and plate cultivations made from growths, obtained by inserting portions of the vegetations in gelatine, showed similar organisms. Further observations with the pure cultivations were reserved.

Fracture of the Coracoid Process.—Mr. A. H. YOUNG showed a specimen of fracture of the coracoid process of the scapula obtained in the dissecting room. The fracture, which was somewhat oblique, had resulted in the separation to the extent of three-eighths of an inch of the free end of the process, carrying with it the attachments of the coraco-brachialis and biceps and the greater part of the pectoralis minor, but firm fibrous union had taken place.

Tuberculous Affections of the Eye.—Dr. HILL GRIFFITH showed microscopical sections from cases of tuberculosis of the conjunctiva and of the iris. The latter case was shown to the Ophthalmological Society.[1] The former was briefly summarised as follows: A boy, aged 4, showed in the right eye uniform thickening of the entire ocular conjunctiva, which was pale, waxy, doughy to the touch, and studded over with yellowish-white, pin-head, follicular (?) infiltrations; there was an absence of discharge or pain, the changes did not spread to the palpebral conjunctiva, there was great enlargement of the lymphatic glands of the same side of the neck. The diagnosis was only made some five months later, when a patch of lupus appeared on the skin near the eye and the glands had suppurated, leaving fistulous openings. The eye recovered without operative interference. The sections showed well-marked giant cells, with reticulum, and slight caseation; no bacilli were found by Dr. H. G. Brooke, but there were only some half-dozen sections.

STAFFORDSHIRE BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

THURSDAY, NOVEMBER 28TH, 1889.

T. VINCENT JACKSON, F.R.C.S.Ed., President, in the Chair.

Cases.—Mr. FOLKER exhibited a girl, aged 18, who was admitted on September 3rd into the North Stafford Infirmary, suffering from an enlarged thyroid of five or six years' standing, and which during the last month had increased rapidly in size, causing great dyspnœa. Mr. Folker divided the isthmus (having tied it in two places), with immediate relief to the dyspnœa.—Mr. FOLKER also exhibited a girl, aged 14, on whom he had performed osteotomy in June last. Six years previously the patient fractured her leg, and union had followed, but the limb was greatly deformed, the patient walking on the external malleolus. The operation consisted in removing a wedge-shaped portion of the tibia and fracturing the fibula. The position was now excellent, and the patient walked well on the sole of the foot.—Mr. ALCOCK exhibited a child, aged 8, suffering from ossification of the deltoid muscle. The ossification, which had started at birth, now involved the entire muscle.—Dr. MCALDOWIE showed a patient suffering from nasal hemiopia of the left eye, the result of embolism of the arteria centralis retinæ. The patient was a perfectly healthy man, aged 59, and no exciting cause could be discovered. The attack occurred in April, 1887, and the disease had remained stationary till the present time.—Dr. MCALDOWIE also showed a boy, aged 13, suffering from Friedreich's disease. He was the youngest of nine children, but was the only one who showed any signs of nervous disease. He was undergoing the suspension treatment with considerable benefit.—Dr. HIND showed a young man who had suffered from a large number of scrofulous glands of the neck, both arms, and one leg. The glands had broken down, and were cured by scraping and the application of strong nitric acid.—Dr. HIND also showed a young man, a stoker on the railway, who had suffered from nodes on the tibia the result of a fall over a rail. Superficial treatment had been adopted without result, and afterwards the nodes were opened and scraped, and nitric acid was applied with complete success.

Specimens.—Mr. ALCOCK exhibited a specimen of intestine removed from a patient who had suffered from obstruction, the result of a portion of gut being twisted round a diverticulum. The strangulated bowel had been liberated, but the patient died from previous peritonitis.—Mr. FALKNER exhibited a fœtus which presented the following extraordinary deformities: the umbilicus in the middle of the back; the right side of the body undeveloped, with the liver and the whole of the intestines outside the body; the penis and scrotum on the lower side of the back. There was no anus. Besides other deformities, there was double hare-lip and cleft palate extending into the orbits.—Dr. HIND exhibited an ovary and tube removed from a patient. It was prolapsed into Douglas's pouch. Although the pain was always on the left side, it was the right ovary that was diseased and removed, it having passed across to the opposite side. Previous to the operation the patient had suffered from hystero-epilepsy, but not since.—The PRESIDENT exhibited multiple extra-peritoneal fibroid tumours weighing 13 ounces, which he had four days previously removed by abdominal section from a married woman, aged 38, who had never been pregnant, and whose family history indicated a strong tendency to cancer. After the tumours had been brought outside the abdomen, their base was surrounded by the wire of a *serre-nœud*, and after proper precautions they were cut away. Mr. Jackson referred to the value of using an anæsthetic to perfect the diagnosis when it was not distinctly evident whether the tumour was solid or fluid; also to the fact that the removal of uterine fibroid tumour was a distinctly different operation from ovariotomy, it being more dangerous and fatal. He further said it was unwise, at an early period after operation, to be too hopeful of recovery.

Papers.—Two papers promised by Dr. HIND and Dr. MCALDOWIE were postponed on account of the late hour.

[1] See JOURNAL, p. 1395.

MANCHESTER MEDICAL SOCIETY.

WEDNESDAY, DECEMBER 4TH, 1889.

JAMES ROSS, M.D., LL.D., President, in the Chair

Hypertrophy of the Bones of the Face and of the Hyoid Bone.—Dr. JOHN BROWN showed a mule-piecer, aged 29, who had enormous hypertrophy of the bones of the face and hyoid bone. The enlargement was first noticed when about 9 years of age, and commenced in the lower jaw when 14. The upper jaw was also hypertrophied. Its course had been slow and painless; it was symmetrical, but rather more on the left side. The deformity was very great. The orbital fossæ were encroached upon, causing exophthalmos, very marked on the left. There was obstruction of the duct, causing epiphora; obstruction of the nasal fossæ, causing loss of smell for five years. The oral cavity was diminished, owing to hypertrophy of the alveoli of the upper and lower jaw encroaching upon the roof and floor of the mouth; this caused a muffled condition of the voice. Mastication and swallowing and movement of the jaw were normal. Dr. Brown at first thought it was a case of acromegaly, but there was no hypertrophy of the hands or feet, nor overgrowth of the tissues over the bones of the face. In the *Transactions of the Pathological Society of London*, vol. xxii, there was a case reported by Mr. Bickersteth, of Liverpool, of hypertrophy of the bones of the face, cranium, and of the hyoid bone. It was similar to Dr. Brown's except that in his there was no hypertrophy of the cranial bones. There were two plates which illustrated several features in Dr. Brown's case. In Mr. Bickersteth's case the four wisdom teeth had never been developed. In Dr. Brown's case these teeth were also absent. He believed that the etiology of this condition might be explained by the suppression of the wisdom teeth and the diversion of the vascular supply to the development of the alveolar processes of the upper and lower jaw.

"All Wool" Wadding.—Dr. WILD showed a preparation of wool in the same form as ordinary cotton wadding, to be used as a substitute for cotton wool in cases of acute rheumatism and similar diseases; the "all wool" wadding was more elastic, a better absorber of moisture, and much warmer than the cotton wool.

Acute Non-Tubercular Phthisis.—Dr. THOMAS HARRIS described an unusual case of non-tubercular phthisis, which had developed in a girl aged 18 after the removal of the right lobe of an enlarged thyroid. There were, however, no signs of injury to the vagi or the recurrent laryngeal nerves, nor to the trachea. Death took place about eight weeks after the first onset of the pulmonary symptoms. The *post-mortem* examination revealed nearly complete consolidation, with small excavations, of the whole of the

left lung, and a less extensive, but also marked, change of a similar nature in the right lung. Microscopical examination proved the case to be a broncho-pneumonia with no signs of tubercle, and no tubercle bacilli could be found in sections taken from different parts of the lung. The case was one of non-tubercular broncho-pneumonia, which had produced small necrotic foci around and involving the small bronchi. One interesting clinical feature was that over the base of the left lung the respiration was not merely of the cavernous type but of almost perfect amphoric character. But, at the necropsy, there was found no cavity which exceeded a small horse bean in size. The character of the breath-sound must have depended upon the consolidation and not upon the excavations. So that the presence even of amphoric respiration could not be regarded as conclusive proof either of pneumothorax or of a cavity in the lung itself.

Unusual Case of Malignant Disease of the Œsophagus.—Dr. HARRIS also showed a specimen of a flat-cell epithelioma of the œsophagus, which had caused death by perforation into the lung and the production of pulmonary gangrene. The case was unusual in the sudden onset of dysphagia during a meal, at a time when the person thought he was in perfect health. This was ten months before his death. After the first onset of the dysphagia he did not again swallow solid food. The case presented a difficulty in diagnosis, in consequence of the ease with which a stomach tube could be passed on some occasions, even a few days before death, whilst on other occasions it could not be passed. At the necropsy there was found to be no stenosis of the œsophagus, but an ulceration, which extended all round the gullet and for a longitudinal distance of three inches and a half in the middle third of the passage. The edges of the ulcer were finger-like, not indurated, and not at all like a malignant affection. The base of the ulcer also was free from induration, but was very irregular, in consequence of being adherent to the adjoining lower lobe of the right lung, and to the presence of an aperture communicating with the gangrenous cavity in that lung. It was this condition of the base of the ulcer which apparently accounted for the occasional difficulty in passing the stomach tube. Although to the naked eye the ulcer appeared to be non-malignant, the microscopic examination proved it to be a flat-cell epithelioma.

Angina Pectoris and Pseudo-Angina.—Dr. DRESCHFELD read a paper on this subject. Of true angina there were, according to the prominence of a certain group of symptoms, several types: 1, the respiratory, which was a very rare form; 2, the neuralgic, which was the more common type, of which the gastralgic, owing to its resemblance to simple gastralgia with which it might easily be confounded, required special mention; and 3, the vasomotor type. The lesion most commonly found in true angina was some affection of the coronary arteries (atheroma, thromboses, embolism, syphilitic endarteritis), and it was to be noted that atheroma of the coronary arteries was often found before the other arteries showed any changes, and where even the opening of the coronary artery appeared healthy, patches of atheroma might be found on tracing out the course of the vessel. The cause of the anginal attack was in most cases an irritation of the peripheric portion of the cardiac sympathetic nerve—the katabolic nerve of the heart—and irritation of those spinal sensory nerves, which were embryologically associated with the cardiac sympathetic, explained the neuralgic pain in the shoulder and other parts. In those cases where no lesion of the heart or coronary vessels was found after death, the irritation of the sympathetic was probably due to spasm of the coronary artery. Gaskell's important researches on the innervation of the heart had thrown great light on the pathology of angina, and by their help many of the symptoms could be readily explained. The cardiac ganglia, though they had often been found affected in many various diseases, were in most cases of angina found healthy. Pseudo-anginal attacks might be due, 1, to central irritation of the sympathetic cardiac nerves, either by direct irritation of the vasomotor centre (as in hysteria, neurasthenia, etc.), or by some toxic agent circulating in the blood and causing irritation of the centre (gout, alcohol, tobacco, tea); and 2, to reflex irritation of the cardiac nerves, as in affections of the stomach, intestines, liver, etc. Dr. Dreschfeld gave the points of distinction between the anginal and pseudo-anginal attacks, amongst which were vasomotor disturbances, periodicity of the attacks, and great irregularity of the pulse, which often persisted for days, chiefly characterised the pseudo-anginal attacks. The paper was illustrated by numerous specimens and microscopic sections.

CARDIFF MEDICAL SOCIETY.

THURSDAY, DECEMBER 5TH, 1889.

A. P. FIDDIAN, M.B. (in the absence of the President), in the Chair.

New Members.—Messrs. Marsh and J. T. Thomas, Newport, were elected members of the Society.

Periostitis as a Cause of Death in Children.—The CHAIRMAN read a paper on this subject. Two cases were described, in one of which the symptoms came on shortly after an accident, and ran so acute a course that the whole leg became swollen from the foot upwards as far as the hip, and death ensued in six days. At the *post-mortem* examination the tibia was found lying quite loose, bathed in pus, and the tissues of the thigh infiltrated with serum. In the other, a child of three, the illness began with convulsions, high temperature, and pain and swelling in the legs. It lived only fifty-six hours from the commencement of the seizure, and after death the shaft of the tibia was discovered to be bare, with a watery fluid around it.

Extrauterine Fœtation.—Dr. CAMPBELL gave the history of a case of extrauterine fœtation. Sixteen years ago, the patient, thinking herself pregnant for the third time (eighteen years having elapsed since the last confinement), engaged a nurse to attend her. Labour pains came on, but no progress was made, although a medical man who saw her pronounced her to be pregnant. After a week in bed, she got up, but continued ill more or less for the next three years; and, when Dr. Campbell saw her then for the first time, the signs of a large abdominal abscess pointing near the umbilicus were present. This discharged pus for a few months, but, after the sinuses had been closed for some time, a large pendulous ventral hernia made its appearance. A binder supported this efficiently, but the patient suffered at intervals from abdominal symptoms, and at length died in October of intestinal obstruction at the age of 58. At the *post-mortem* examination there was found in the pelvis a mass of stony hardness, about the size of a child's head, occupying the seat of the uterus and right broad ligament. It was attached only by a small pedicle in the situation of the uterine cervix, and was freely movable in all directions. On section with a saw, it contained an almost complete set of fœtal bones enclosed in a calcareous capsule. The immediate cause of death was the constriction of a knuckle of small intestine by a band of omentum.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

THURSDAY, DECEMBER 5TH, 1889.

C. N. GWYNNE, M.D., President, in the Chair.

Specimens.—Dr. HARGREAVES showed a specimen of Aneurysm of the Abdominal Aorta just above the bifurcation. The sac was posterior, resting on the vertebræ, and of the size of a small orange. The patient, a man aged 30, was a grinder, and the probable cause of the aneurysm was a strain in lifting a grinding stone. The cause of death was rupture of the sac into the abdominal cavity.—The PRESIDENT showed a specimen of Aneurysm of the First Part of the Descending Thoracic Aorta. The patient was a healthy woman, aged 36, married, but no family. There was no history of gout, rheumatism, or syphilis, nor of any injury. She complained chiefly of acute neuralgic pains shooting from the spine to the left inframammary region. She died about a year after the symptoms appeared. A *post-mortem* examination showed an enormous aneurysmal sac filling up the entire cavity of the left chest. The necks of three ribs were quite eaten into, and the bodies of the corresponding vertebræ were eroded so as almost to expose the cord. Beyond the pain referred to there were no other pressure symptoms.—Dr. PORTER showed a specimen of Aneurysm of the Ascending and Transverse Aortic Arch. The symptoms had been those due to pressure on the trachea at its bifurcation and on the root of the right lung. The patient, a man aged 48, died of asphyxia.—Dr. KEELING showed a specimen of Epithelial Cancer of the Vulva and Vagina, removed from an elderly single woman at the Jessop Hospital. An operation had been performed on the same patient twelve years before, the disease at that time occupying the clitoris and fore part of the vulva. The old cicatrix and neighbouring tissue had remained sound, the return of the disease being in the posterior half of the vulva, extending from this point up the vagina.

Strangulated Hernia.—Dr. KEELING read a paper on two unusual cases of strangulated hernia, operated on in the Public Hospital and Dispensary. One of the patients was a man aged

72, with double inguinal hernia, that on the left side being irreducible, and containing a coil of large intestine and a mass of fat, consisting of the hypertrophied appendices epiploïcæ. Amongst these a knuckle of small intestine had descended and become strangulated. After this had been reduced, some of the fat and sac were removed; the large bowel was then loosened from its bed and returned to the abdominal cavity, along with the fat and remnant of the sac, the hernia being thus radically cured. The patient made a good recovery. The other case was that of a boy, aged 2½, who had congenital hernia, with incomplete descent of testicle. Strangulation occurred three days after a hearty meal, at which some crab shell had been munched and swallowed. A long thin pouch of gangrenous intestine (believed to be a diverticulum) was found in the sac, and in the pouch there were about two teaspoonfuls of bits of crab shell. These and the gangrenous tissue were removed and a portion of the sac was cut away, the remainder being stitched to the skin, and a drainage tube passed into the external ring. A free discharge of fæcal matter took place by the wound during the first three weeks; after this the parts healed soundly, and complete recovery followed. A small phial containing the fragments of crab shell was shown. The patients had been shown at a previous meeting.

Joint Dislocation.—Mr. GARRARD read the notes of two cases of joint dislocation. In one, a man aged 44 had sustained a dislocation of the right femur on to the dorsum ilii, and of the left femur into the thyroid foramen, with other injuries, including fractured ribs and arm. The other case was one of subcoracoid dislocation of the humerus in a young man, of five weeks' duration, which he reduced with difficulty by Kocher's method after other means had failed. He asked whether it would not be justifiable, in the case of a young man, with a comparatively recent irreducible subcoracoid dislocation, to open the joint, with the minimum of damage to the circumflex nerve and deltoid muscle, between the two heads of the biceps, clear out the glenoid fossa, and restore the head of the bone to its right position rather than leave the case to Nature. He thought that a movable joint ought to be secured.

CORK MEDICAL AND SURGICAL SOCIETY.

WEDNESDAY, NOVEMBER 28TH, 1889.

FRANCIS WM. GREENE, M.B., President, in the Chair.

President's Address.—The PRESIDENT gave a short inaugural address, in which, after thanking the members for the honour conferred upon him in electing him their President for the ensuing year, he referred to the good work done by the Society, and to the great benefit such an Association was to the medical man engaged in private or country practice, enabling him by interchange of ideas with his fellow practitioners to keep abreast of the times, and keeping him from falling into narrow grooves. A still greater advantage to the ordinary practitioner was the meeting there of men who had devoted themselves to the study of some special branch of medicine or surgery. He next referred to the great progress and triumphs of modern surgical research, especially mentioning the operations on brain, spinal canal, and abdomen, dwelling particularly on those performed on the gastro-intestinal tract. The newest advances in antiseptics and their application were alluded to, and with a few well chosen words on the immediate benefits and preservation of life derived from surgery in general, the President closed his address.

Vote of Thanks.—A vote of thanks was proposed by Dr. W. JACKSON CUMMINGS, seconded by Dr. PEARSON, and carried unanimously.

Subperitoneal Fibromyoma of the Uterus.—Dr. GUISANI showed naked-eye and microscopic specimens of uterine tumour, which he had removed by abdominal section. The patient, aged 45, unmarried, had a history of prolonged dysmenorrhœa and gradual enlargement of the lower region of the abdomen. The nature of the tumour having been diagnosed, it was removed, and the pedicle (an unusually long one) ligatured in halves, with the precaution of a second ligature nearer the uterus. The wound was dressed, closed, and the pedicle enclosed in the cavity. Drainage was effected by a tube in Douglas's *cul-de-sac*. An antiseptic dressing of sal alembroth gauze was applied over the abdominal incision. The general treatment consisted of iced water for the first six hours, and next day milk, aqua calcis, and hot water to relieve flatus. Broths, etc., were administered from the third day, the patient making an uninterrupted recovery. The microscopic specimens were made by Dr. Cotter.

Urinary Calculi.—Surgeon-Major WALKER showed specimens of urinary stones, removed by him from natives in India. Some of the calculi were of unusually large size and weight, embracing all the varieties of stone.

REVIEWS AND NOTICES.

THE ANIMAL ALKALOIDS, CADAVERIC AND VITAL; or the Ptomaines and Leucomaines. By A. M. BROWN, M.D. With an Introduction by Professor A. GAUTIER. Second edition. London: Hirschfeld Brothers. 1889.

THIS book is the outcome of incomplete information. If it had been entitled a eulogy of M. Gautier it would have been a correct designation. In every chapter, almost on every page, the French chemist is spoken of as the eminent or gifted discoverer of the animal alkaloids, or his researches are alluded to with similar adjectives of admiration. Gautier is, no doubt, one who has contributed largely to our knowledge of these substances, particularly of the leucomaines, but to maintain that he is their discoverer, or even the chief worker in the field, is a mistake.

If we may judge by the English, or, rather, want of grammatical English, in which the book is written, we should say that the greater part of the first chapters, those which relate to the chemistry of the subject, are very free translations from French papers. Gautier is, however, only one, and not the first or the most correct, among many investigators in this field. The author is almost completely ignorant of the immense amount of work done by many German investigators, who, as a whole, are much more correct and exact in their researches. Beyond a few references to Brieger, the names quoted are almost exclusively French. We have a great sympathy with and respect for French workers, but here they suffer from misplaced admiration of their errors as well as their achievements. The French origin of most of the chemistry is evidenced by such expressions as "melange" for mixture, "groupment" for group, "resumed" for summed up, "dissolvents" for solvents, and by the placing of the adjectives after instead of before the nouns; we thus frequently read "anhydride carbonic," "alkaloid liquid," "formula of constitution," "kreatinine pure," "hydrochloric acid concentrated," and so on.

The sentences as a rule are not punctuated, very often either the nominative or the verb is absent; they are always difficult to understand, and sometimes quite unintelligible. The following are a few selected at random as illustrations:—On p. 21 we read: "The products responding to ordinary tests are reliable in physiological experimentation, still, it is to be observed that in separating the alkaloids from the extracts which they accompany by this method, it is only possible, and with the utmost care to obtain even impure bases, in quantity sufficient to admit of isolation and correct analysis." On p. 56: "An alkaloid liquid that smelled of mice-piss." On p. 47: "Sensibly, the free ptomaines smell virous or cadaveric." On p. 77: "In alkalinity adenine is neutral." This last quotation is evidently a conundrum. To go through the whole book pointing out all the mistakes would take more space than we care to give to its consideration. We will however select portions of two chapters, and enumerate those errors which we have noted in passing. On p. 37 we notice three words, "Schulze," "tungstic," and "cæphalopod," wrongly spelt. On p. 38 coniine is called "conicine," as throughout the rest of the book, and in the word "orthorhombic," the second *h* is omitted. On the next page there is a misprint in the word "cholesterin." Errors of a more serious nature, however, are committed on the same pages, for here we are told that putrescine and cadaverine are not toxic. We refer Dr. BROWN to papers by von Behring, Scheuerling, and by Fehleisen and Grawitz on this subject. Turning over the page we find the formula for water wrongly written, and on p. 41 that for silver oxide is also incorrect; the long word "trimethylhydroxethylene" is here also wrongly spelt; this of course would have been pardonable if the simpler words had been correctly given; we find the same carelessness, however, on the next page, where the author comes to grief over trimethylamine and neurine, and on p. 42 his mistakes culminate in the wrong spelling of the comparatively simple word chloride. On p. 44 he commits the very serious error of accepting the truth of Pouchet's experiments on alkaloids in urine, though we should have thought that the fallacies of Pouchet's method and results had been

sufficiently fully demonstrated. To turn now to quite another part of the book, we find on p. 73 the names of three investigators wrongly given. On p. 75 we make acquaintance with a reagent the author calls "phosophate-ungestic." On p. 76 the formula for adenine is given as $C_5H_5N_3$; on p. 77 the formula for the same substance is written as $C_5H_3N_5$; both formulæ rejoicing in the fact that they are equally wrong.

The whole book is full of similar mistakes. One more we must mention, and that is in relation to snake poison, which our author teaches is an alkaloid, whereas even Gautier himself has had to confess that it is not.

When we turn to the second part of the book, which deals with the physiological side of the subject, we find the English a little better; but the reasoning is sadly defective. When a reasoner has facts right to start with, there is at least a chance that his deductions from them will be correct; but when the facts are wrong, what chance is there that the reasoning will be right? Whenever any great discovery is made, a number of persons, who forget the dangerous nature of a little knowledge, rush in and proclaim that the new drug is a panacea for every ill, the new theory an explanation for every difficulty. It was so with the germ theory; it is so now with the discovery of ptomaines. Dr. Brown lays down the platitude that neither in the teacher, far less in the practitioner, should theory usurp the place of careful observation. He proceeds studiously to act in defiance of this admirable doctrine. Not only will ptomaines, according to him, explain all the facts of disease, but they solve also all the phenomena of life. His last chapter on the causation of sleep by the action of ptomaines on the nerve cells of the cerebrum is about as good an instance as could be given of a theory entirely unsupported by a single correctly observed fact. Dr. Brown is a humoralist of the humoralists; and an opponent of the germ theory of disease, for he does not seem even to grasp the elementary and obvious truth that the discovery of ptomaines is complemental and not antagonistic to the vitalistic doctrines of pathology.

We should not have given so much space to the review of this book did we not feel it our duty to let our readers know its true character; a good book on the subject is badly wanted. The present work is put forward as being authoritative, but its writer appears to have really no correct knowledge of the facts, still less a grasp of their meaning. With one more quotation (page 120) of this kind we will conclude, leaving it to our readers to ask themselves if life on these terms is worth living:—"Life is the consequence and the resultant of the mode of aggregation, and the mechanical and chemical properties of plasmic materials and their formal parts. They perpetuate and undergo modification by continuity in transformation of the molecular conditions and the physico-chemical phenomena which take place in these aggregations, developed under the influence of similar aggregations pre-existent."

NOTES ON BOOKS.

A System for the Construction of Crystal Models on the Type of an ordinary Plait. By J. GORHAM, M.R.C.S., etc. (London: E. and F. N. Spon. 1888.)—To the crystallographer and the mineralogist this work must prove useful and interesting. The price of solid models of crystals in wood is most prohibitive. Yet the value of models of crystalline forms for illustrating lectures, etc., is very great. Mr. Gore has laid down simple directions for constructing accurate models of the principal forms of crystals by plaiting strips of glazed cambric and white demy paper, pasted together and supplied for the purpose. Numerous diagrams illustrate the methods of procedure.

Manual of Personal and Domestic Hygiene. By A. T. SCHOFIELD M.D., Member of the National Health Society. (London: Allman and Son, Limited.)—It would, perhaps, have been more correct for this little work to have been entitled an elementary treatise on anatomy and physiology, treated in popular language for the use of lay readers, than to have issued it with its title as above, which is somewhat misleading, for by far the larger portion of the contents is devoted to the consideration of human anatomy and physiology. The author, however, has taken the right course in placing before his readers an account of the more important bodily structures and functions as a preparation to the enunciation of the laws of personal and domestic hygiene; for, as is now generally recognised, to try to teach hygiene without physiology is like building a house without foundations. The anatomical and physiological details, too, are made subservient to the chief purpose of the book, which is the instruction of the reader in the method of maintaining for himself the greatest amount of bodily health and physical fitness for the work he has to do in life. Not only is the subject clothed in popular language, to the exclusion of any unnecessary technical terms, but the author shows himself to be a master of simile and allegory in many of his explanations, some of these being exceedingly well chosen, whilst others are quaint and amusing. It is in this way that the book will prove attractive to a class of readers to whom the anatomical details, as ordinarily presented in the school classbook of physiology, are partly abhorrent and partly unintelligible. We have reason to believe that physiology is far too frequently taught in schools in a parrot-like fashion without any real comprehension by the scholars of the meaning of much that they learn; Dr. Schofield's book would go far to remedy this evil, for the reasons above given. The text is copiously illustrated with diagrams, which are well executed, and considerably enhance the value of the book for teaching purposes. On the whole, we can very strongly recommend the work as a classbook in schools and colleges, and we predict for it a great success.

DIARIES FOR 1890.

CHARLES LETTS and Co., 3 Royal Exchange, E.C., have forwarded us copies of their desk and pocket diaries, of which they issue nearly 130 distinct varieties. It is, perhaps, only necessary to say that they are made in all the most approved varieties of shape, size, and style of binding. In each case they are supplemented with a large amount of useful information, and the quality of paper and printing is alike commendable. The pocket diaries are especially light and convenient.

Charles Letts's Ideal Medical Diary and Daily Visiting List is a compact and useful companion for the general practitioner, of which the good quality of the paper, printing, and binding are its distinguishing features.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

COMPOUND SULPHUR TABLOIDS.

MESSRS. BURROUGHS, WELLCOME AND CO., Snow Hill Buildings, London, prepare tabloids containing 5 grains of precipitated sulphur with 1 grain of the acid tartrate of potash. They are easily crushed in the mouth, and have a slightly acid, and not at all unpleasant, taste. They are made according to the formula suggested by Sir Alfred Garrod for the administration of sulphur.

ADULTERATED SACCHARIN.

MESSRS. BURROUGHS, WELLCOME, and Co. write: In the JOURNAL of December 7th, under the heading of "Reports and Analyses," a very serious charge is made, to the effect that saccharin "tabloids" are being sold which are chiefly composed of ordinary sugar. This grave charge naturally interests us, as we are the only makers of genuine saccharin "tabloids."

We have ourselves, from time to time, given warning of barefaced imitations of our products, which have been palmed off as substitutes for the genuine. Wherever we have found parties offending in this way have rendered themselves legally liable we have immediately stopped them.

Your correspondent can render a valuable service to the profession by exposing the name of the party who has issued the fraudulent saccharin under the name of "tabloids," and if he will do so we shall ourselves take such legal steps as may be found necessary to stop the imposition.

*** The tablets in question were sold as "Prepared Saccharine (Dr. Fahlberg's) or Sugar Substitute" by Boot's Pure Drug Company, Limited, Nottingham, Sheffield, and Lincoln. They appear to be described as "tablets," not tabloids. The fraud perpetrated is undoubtedly a very cruel and serious one; it may be hoped that it will meet with due punishment.

NATURAL AND ARTIFICIAL SALICYLATES.

MESSRS. T. MORSON AND SON (Southampton Row, Russell Square) write to state, with reference to the paper on Natural and Artificial Salicylic Acid, etc., by Professor Charteris and Dr. Maclennan, that the artificial acid and its soda salt were prepared by Von Heyden Nachfolger, but that the natural acid and its soda salt were made by Messrs. Morson.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1889.

SUBSCRIPTIONS to the Association for 1889 became due on January 1st; and notice is hereby given, in accordance with by-law 5, that Branch Secretaries' subscription-accounts close on October 31st, and all unpaid subscriptions must be forwarded, after that date, to the General Secretary, 429, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, DECEMBER 21ST, 1889.

AUTONOMY OF THE MEDICAL SERVICE OF THE ARMY OF FRANCE.

WE have before us, both in the original somewhat technical French and in a carefully written English translation, the official report on the above subject. It is entitled, *Report of the Commission ordered to report upon the Bill modifying the law of March 16th, 1882, regulating the administration of the Army, and having for its object the giving a complete autonomy to the Military Medical Service, brought before the Chamber of Deputies at the meeting of April 4th, 1889, by M. Gadaud, deputy.* The latter gentleman begins by stating that "the law of July 24th, 1873, and that of March 16th, 1882, have created the autonomy of the Military Medical Service; but the latter law has limited this autonomy in such a manner 'that it should only become complete by successive steps, so that experience might be able to decide upon the necessity of endowing the medical service with the very great powers desired for it.'"

It thus appears that the autonomy and corps independence conferred on the French Army Medical Service was not suddenly or inconsiderately thrust upon it, but was the outcome of successive steps and tentative measures as expressed in the law of 1882, but really dating from 1873. M. de Freycinet, in introducing the law of 1882, stated to the Senate that if, upon trial, the powers granted to the medical service should have been exercised with success, then, "we shall see if it will be prudent to go further and give to it this last degree of autonomy." The experiment thus made has proved wholly and unquestionably successful. M. Gadaud continues: "Since the trial of the limited autonomy, the outcome has been that, in the *Corps d'Armées* in France and in Algeria, the opinions expressed by the generals commanding the *Corps d'Armées*, and by the directors of the Intendance Service, the report of General Fay preceding the decree of December 28th, 1883, upon the medical service of the interior, the campaign of Tonkin, have proved in the most *demonstrative manner* the *indefeasible necessity* of giving the medical service the *entire disposal of its staff*, and of the *means* necessary for the performance of their duty—to endow them, in a word, under the military authority, with an *autonomy as complete* as that of the artillery and engineers."

It is impossible to conceive any report clearer or stronger than this. What do our own military hierarchs say to it? Especially would we commend it to the three dissentients of the Camperdown Committee, who actually propose to strip our medical officers of the limited command and authority which they now possess, and without which it is impossible for duty to be carried on. These gentlemen have taken up a position which is directly against the experience and testimony of the entire French army. Are they prepared to defend it in the House of Commons?

The report goes on to say: "It is necessary for this (complete autonomy) to entrust it (the medical service) with the care of providing its special supplies, to assure its full authority over the purveyors and quartermasters of the hospitals, and over the military hospital orderlies; it is necessary also that it should receive by delegation from the Minister the vote which Parliament grants it, and that it should control its own expenditure. All these powers are now actually exercised in whole or part by the Intendance Service."

The powers conferred on the medical service have thus been taken from the Intendance, transferred, in fact, not newly created.

The report next discusses the relationship of the medical service to the subordinate hospital staff. It first shows that it exhibits features specially its own. "When," said M. le Duc d'Harcourt in 1875 in his report to the National Assembly, "we look at the medical service and the administrative services with a view of comparing them, we find nothing but differences—differences in the duties, in the necessary knowledge, in the results aimed at."

The necessity of autonomy was thus seen even then. "Nevertheless, the law of March 16th, 1882, has left," says M. Gadaud, "to the Intendance Service the provision of supply for the medical service, and superior authority over the purveyors and quartermasters of the hospitals, as well as over the sections of hospital orderlies. As regards the staff *(personnel)*, the report of the Commission, which, under the presidency of General Fay, recommended the rule of December 28th, 1883, said expressly:

"'The law in maintaining the sections of hospital orderlies under the authority of Intendance Service has placed the Commission under the necessity of creating a complicated mechanism; it necessitates a continual change of positions between the directors of the medical service and of the Intendance, through the medium of the general officers commanding the *Corps d'Armées*, and of applications to the latter for orders on the subject of constant moves, of little importance, between the depôts of the sections and the detachments attached to the military hospitals. It is very true this mechanism offers the advantage of leaving to the director of the medical service the entire disposal of the unemployed (or disposable) hospital orderlies.'

"But," says M. Gadaud, "the director of the medical service never knows if the hospital orderlies present at the depôt are disengaged or not; such information being in the province of the Intendance Service, he can only express his demands without being able to enforce them." This is a very old experience, well known to our own medical officers.

"The inconveniences of this position," says the report, "are such that, to put an end to the difficulties which it produced daily in the central administration" (immediately under the

Ministry of War) "the decree of February 11th, 1887, has reattached the purveyors and quartermasters of the hospitals, and the hospital orderlies, to the authority of the medical service established at the Ministry of War; but in the *Corps d'Armées*, by virtue of the law of March 16th, the dualism exists, and the unity of the Ministerial control is divided between the Intendance and the medical services. Also the staff *(personnel)*, whom it concerns, is placed in a delicate situation: they cannot serve at the same time under two different authorities, the duality embarrasses those who ought to obey. To complete the reattachment of the purveyors and quartermasters of the hospitals, and the hospital orderlies to the medical service, for which they exist, is then a logical necessity; it will simplify immediately the performance of the duties of the service, and will put everyone in practical knowledge of his rights and duties."

Can anything be clearer? The "limited" command, the "superior" authority of the Intendance not only produced the usual circumlocution, confusion, and delay, fatal to all real efficiency, but was a stumbling-block alike to those in authority and to those whose duty it is to obey. The French have seen the "logical necessity" of complete autonomy; when will the like dawn on our War Office?

The report then discusses a question whether the complete separation of the medical service from the Intendance should not disqualify its purveyors and quartermasters from competing for the higher offices in the latter. This the Minister of War held to be a logical result, but the Commission says: "Having the greatest possible desire not to injure any acquired rights, it is well understood that the new law will have no retrospective effect."

The tenderness here shown to vested rights we would commend to those of our own reformers, law makers, and warrant framers who dabble with a light heart in altering conditions of service.

The report goes on to say: "That which has been said of the *administrative personnel* of the medical service ought to be understood also as applying to the departments." Of central depôts and magazines of medical stores, it says: "Nothing is more natural than to leave to the competence and vigilance of the medical service the care of forming, keeping, and maintaining them by its own resources, and in its own magazines. This," it says, "will cut short the delays, the difficulties, and the complication of the actual work; it will fix the responsibility."

The decree of May 27th, 1882, had already fixed the control of reserve medical stores (Paris) at the Ministry of War, and it is added: "That which has been considered indispensable in the central management is not less so in the direction of the *Corps d'Armées*; in fact, the trial has been made at Tonkin." It goes on to say that from the depôt at Hanoi, under the medical service, stores were issued just as successfully and easily as if it had been Paris, and urges that the reserve magazines at Marseilles and Algeria should also be taken from the Intendance, and administered by the medical service.

Having disposed of command of the hospital *personnel* and control of medical supplies, the report considers financial control. It points out that while the law of March 16th, 1882, "grants the assignment of the money vote to the directors of the principal services of the army," it "makes the exception for the medical service, the votes of which are received and the expenses arranged by the Intendance service." Again the old story, whether in civil or military life. Any outsider, no matter who, can control the finances of a hospital, but the doctors—never!

"The result," says the report, "is that no expense, no matter what its object is, can be entertained without the permission of an outside authority, which—not in any way managing the medical service—can, however, stop its work." ....."In times of peace this system entails considerable delay.....in time of war.....grievous results." "It is a principle of administration that the financial control is one of the essential powers of direction. If the limited direction accorded to the medical service has already produced very notable economies everywhere, where the surgeons direct the hospital services one has a right to expect more from their direct intervention and from their personal responsibility over the daily expenses.....of the hospitals." Evidently in France it is beginning to be recognised that the average medical man is at least as capable of exercising financial control of his establishments as the average Tom, Dick, or Harry, who in this country is usually placed over him.

The report winds up with the following very interesting and suggestive paragraph: "These new powers would have the consequence of rendering complete and efficacious the direction of the medical service without interfering with the professional duties of the directors."

Now, our own military authorities, in order to keep medical officers down, are never weary of reiterating that to give them military status, command, control, would weaken or destroy professional efficiency; it would be, as they say in their delicate susceptibility towards the profession, like using a razor to chop wood; and even some weak-kneed professional brethren have endorsed the same argument in what has been nicknamed the "good doctor" talk. We never believed in it, and the French have evidently ceased to listen to it; the theory of professional degeneration resulting from the burden of command and control has, indeed, been deliberately invented to prejudice and throw dust in the eyes of the public, and so prevent the doctors getting either the one or other. In all experience the military medical man who is the best soldier is invariably the best doctor also; there is no incompatibility.

We have now set forth the nature of the great change which has just been effected in the French Army Medical Service as clearly as the somewhat intricate and technical nature of the report would allow. We commend it to the study of our own War Minister and all whom it may concern in this country. The Bill giving effect to the report, when discussed before the Chamber of Deputies on April 11th, 1889, was declared urgent and forthwith adopted.

THE CŒLIAC AFFECTION IN CHILDREN.

THE abdominal affections of children are, notwithstanding much good work that has been done in recent years, still involved in a good deal of obscurity, not to say confusion, and we therefore feel especially indebted to Dr. R. A. Gibbons for his paper, with the above heading, in the *Edinburgh Medical Journal* for October and November, in which he gives a concise

and lucid description of a malady which has hitherto almost entirely escaped separate recognition. The title he has chosen means, as he is careful to explain, nothing more than that the affection is one of the abdomen, and involves no theory as to its causation or pathology; it was used by Dr. Gee two years ago, in a lecture at the Hospital for Sick Children, Great Ormond Street, and subsequently in a paper published in the *St. Bartholomew's Hospital Reports.*

The malady is one which, without being at all common, is by no means unknown, and many practitioners of large experience will, on reading the description of Dr. Gibbons, be able to recall one or more instances of it. The disease is characterised by the passage of large loose white or whitish, frothy, intensely fœtid motions; it is an affection of early life, occurring in children under five years of age. The onset is gradual and insidious, pallor and general debility being the most noticeable symptoms. The fœtid character of the motions is sometimes the first indication that there is anything wrong with the child; the motions resemble oatmeal porridge, or, as a mother said to the writer not long since, the motions are "exactly like the Chapman's flour he is taking;" generally there is only one action of the bowels a day, but that is extremely copious; there may be two or even three stools daily, and occasional attacks of diarrhœa are not uncommon. The appetite is poor or capricious, abdominal pain is often complained of, the abdomen is generally soft and doughy, the liver may be just palpable, the spleen is not as a rule enlarged, and no enlarged abdominal glands can be felt. Anæmia and great debility are usually very marked features, the child being incapable of any exertion, but as a rule there is no wasting; the flesh, however, is not firm as in health, but soft and flabby. The malady is a very serious one, as the children are very liable to die from mere exhaustion, or to be carried off by an intercurrent watery diarrhœa, and relapses are exceedingly prone to occur. Improvement as a rule first shows itself in a healthier condition of the evacuations. The prognosis must, therefore, always be grave, and will depend upon the means and intelligence of the parents, and their ability to carry out all the directions as regards diet which are so essential for the child's recovery. Nothing is known as to the pathology; no constant changes have been found upon examination after death, either with or without the microscope, nor has microscopical examination of the motions or blood during life added anything to our knowledge of the disease.

In treatment, the most scrupulous attention to every detail of diet is essential. Cow's milk must be forbidden, owing to the insoluble character of its casein, and asses' milk should be substituted; cream may be given mixed with scalded whey prepared from cow's milk. For the principal meal pounded raw meat should be used, either beef steak or mutton, it matters not which; it should be freed from skin and fat, cut up, finely pounded in a mortar, and rubbed through a hair sieve. It should be given with a little sifted sugar or fruit jelly and a pinch of salt; the amount will vary from one to four tablespoonfuls, according to the age of the child; if this is not well borne, the juice extracted from the raw meat by hydrochloric acid should be given. Plain biscuits or rusks with plenty of fresh butter may be allowed, and a little floury potato; malted foods will also sometimes be found useful. The hygienic surroundings of the child should be carefully attended to, and he should be clothed entirely in silk or wool. As regards drugs, Dr. Gibbons places great reliance on bismuth with compound tincture of camphor, or the compound kino powder for attacks of watery diarrhœa; when there is vomiting as well as diarrhœa, he recommends minute doses of grey powder.

The explanation which Dr. Gibbons offers of these cases is very plausible, though, as its author freely admits, it is at present purely theoretical; it is that the secretions of the liver and pancreas and the intestinal juices are deficient. A diminished supply of bile is quite consistent with the colourless character of the stools and with their fœtor, for, as is well known, the bile is a great antiseptic; the fermentation which they are thus permitted to undergo in the alimentary canal will fully account for their extraordinary bulk. A deficiency in the pancreatic juice would probably have the same effect, and it is consonant with this theory that starchy foods are exceedingly badly borne by the sufferers from this disease. Dr. Gibbons therefore suggests that, owing to some unknown influence acting through the nervous system, there is inhibition of the secretions of the liver and pancreas, and probably also of the glands of Brunner and follicles of Lieberkühn, the result being the production of the motions which are characteristic of this disease.

ELECTROTHANASIA.

THE commercial success which has attended the efforts of engineers to make electric currents of high tension practically useful for lighting and as a source of power, has, within the last few years, led to the creation of a new industry; the Institute of Electric Engineers was inaugurated a few weeks ago under the presidency of Sir William Thomson, and its first public meeting was addressed by the Prime Minister, who gave a voice to the vague feeling of admiration with which the public have regarded the engineering achievements of his hearers. For every skilled engineer employed in this new branch of the profession, there must be scores of workmen more or less skilled who are constantly employed by the numerous electric light and power companies which have sprung up. How important the industry has already become may be gathered from the fact that the capital of the companies now actually at work in this country exceeds two millions sterling[1]. In the United States, however, the use of electricity has become very much more general. The capital invested in electric companies is said to amount to nearly fourteen millions sterling, supplying over two hundred thousand arc lights, two and a half million incandescent lights, and working 329 cars upon fifty-three electrical railways.

One of the inevitable consequences of every industrial advance seems to be the occurrence of new varieties of injuries and disease, resembling other classes with which medicine is already acquainted, but presenting certain peculiarities. The injuries produced in the human body by strong electric currents are not strictly of a new order, for they are of the same kind as those produced by lightning; as was to be expected, however, they differ much in degree, and it is now becoming possible to recognise the effects of very powerful but not lethal currents, as well as to appreciate more clearly the mode of

[1] Burdett's *Official Intelligence.*

action of currents of deadly strength. Dr. Charles L. Dana, of New York, has recently read a short paper[2] on the subject before the Practitioners' Society of New York, and some interesting experiences were mentioned by other speakers.

A very considerable number of fatal accidents have happened in the United States—it is said over one hundred—and a certain number of cases have been recorded in which men have been injured more or less severely, but not killed. In this country the number of deaths has been much less, and few, if any, non-fatal accidents have been reported. The sensations experienced by a man who has accidentally placed himself in circuit of an electric light current were vividly described in a paragraph quoted [3] in these columns a few weeks ago; in this case the current was very strong, and consciousness was quickly lost. In other instances, in which the current was less strong, consciousness has not been lost, but the patient has experienced agonising terror and pain. Such a current knocks a man down, and causes cramp, tetanic muscular contractions, to which, doubtless, the pain is mainly due. The tetanus passes off in a few moments, and the patient is soon able to get up and to use his limbs, though the part which came into actual contact with the wire may feel numb for some days or hours. The shock to the nervous system, however, is not so quickly got over, and in persons of a nervous disposition a persistent condition of neurasthenia or of traumatic hysteria (so-called) may remain for months or years.

As to the chance of survival, Dr. H. M. Biggs has made an interesting observation, which is that the majority of the fatal accidents have occurred on or after wet days. With a wet skin and wet clothes there is good contact, and therefore little burning of the skin, but serious internal effect. With a dry skin and dry clothes there is more burning of the skin, but less penetration, less shock, and less danger of death.

The pathology of the fatal cases is not very clear; where the current passes through the brain and medulla, in the manner in which it is intended to use it in executions, it is safe to assume that the functions of the higher centres and of the medullary centres are stopped, and the cells so altered as to be rendered incapable of further function; but this explanation will not apply equally well to cases in which the limbs only, or other parts of the body, are traversed by the current. It must also be remembered that nerve paralysis is not a frequent symptom in cases which recover, that, in fact, even temporary motor paralysis is almost unknown as an after-effect. Dr. Biggs, in four cases in which death was undoubtedly due to the electric current, found the following *post-mortem* appearances:—

The blood was dark and fluid everywhere; the viscera were congested, especially the lungs; and there were petechial hæmorrhages in the pleura, pericardium, and peritoneum. In one or two cases there were also some larger hæmorrhages underneath the pleura. On many of the points of hæmorrhage in the serous membranes there were delicate deposits of fibrin on the surface of the membrane. Rigor mortis was well marked in all cases. Microscopical examination of the organs was not made, but examination of the blood did not reveal any morphological changes in the corpuscles.

These appearances clearly agree with those observed by Dr. Petersen in dogs killed by electricity in the Edison laboratory, but in two of these animals in which the current had passed through the legs, capillary hæmorrhages were found in the sheaths of the large nerves of the lower extremities, and also in the spinal cord.

Several deaths which have recently occurred in America have proved that a fatal shock may be received from a telegraph or telephone wire if it has been accidentally brought in contact with an electric light wire. In one case in New York a man, in the employment of a telegraph company, who was engaged, on a post to which no electric wire was attached, in mending a telegraph wire, received a shock which caused his death; his body, entangled in the network of telegraph wires, remained suspended, presenting a horrible spectacle for a considerable time before the electric light current could be turned off. In the inquest on this case the jury added a rider to their verdict to the effect that the system of overhead wires, as at present operated, is a constant menace to the lives and property of the citizens, and that electric wires, whether transmitting high or low tension currents, should be thoroughly insulated; that the linemen of the telegraph and telephone companies, as well as all electric light companies, should be imperatively required to wear rubber gloves, and to use insulated instruments while working upon the lines. In two other cases it is said that a horse has been killed by putting its foot on a broken telephone wire which had fallen across and got into metallic contact with a wire carrying a high tension alternating current; in both cases persons who touched the fallen horse are reported to have received shocks, in one instance fatal.

Moved by the number of accidents which have recently happened, the Grand Jury of New York have made a special presentment, in which they express the opinion that one death and one case of serious injury were directly due to the practice of attaching electric light wires to the same poles as those carrying telephone and telegraph wires. "We cannot too strongly condemn this practice," the presentment runs. Not only is it "a constant menace to linemen; but also, by the breaking of a wire, contact between it and an electric light wire may be established, which will conduct into any house or office a deadly current over a telephone wire."

It is evident, therefore, that the progress of electric lighting is making us acquainted with a class of accidents presenting peculiar symptoms, and bringing about death in a special way, and that the danger is more insidious and more widespread than has been generally suspected.

At a meeting of the Surrey County Council, held on Tuesday, December 17th, a long discussion took place over a proposal to appoint a medical officer of health for the county at £800 per annum, the general feeling being that it would be premature to make the appointment at present. A resolution giving effect to this view and referring the subject back to the committee was carried.

We understand that at the last meeting of the Committee of the Taunton and Somerset Hospital, a subcommittee was appointed to consider the terms of admission of out-patients, in view of

[2] *New York Medical Record*, November 2nd, 1889.
[3] From the *Occidental Medical Times*.

expected results from the movement now going on in the British Medical Association on the subject, which it was thought would be useful in guiding the subcommittee, of which Dr. Kelly, the honorary secretary of the West Somerset Branch of the Association, is the convener.

Professor von Bergmann, of Berlin, who was seized with inflammation of the lungs immediately after having been present at the funeral of the late Professor von Volkmann, at Halle, is now, we are pleased to learn, making satisfactory progress towards recovery. During his illness his place has been taken by his first assistant, Dr. (now Professor) Bramann.

We publish on another page (p. 1431) an explanation by Dr. D. W. Williams, of Truro, of his view of the facts and evidence given in the case of Abdulkrem. We hope that all who are interested in the case will turn to Dr. Williams's explanation. After reading it they will be able to judge for themselves how far it detracts from the force of the criticisms which appeared in our columns of December 7th, page 1295.

The statutes of the American Medical Association of Vienna, founded with the object of taking in hand British and American physicians and medical students immediately on their arrival in the city, and supplying them with all necessary information with respect to matriculation, courses of lectures, etc., have been sanctioned by the governor of Lower Austria. The Association is placed under the management of a committee of medical men, and a student arriving in Vienna is referred to a committeeman studying in the same branch as himself. The Association reckons that a student can live economically in Vienna for from £6 to £8 a month. In addition to the lectures of the professors given in the *Calendar*, there are the lectures of the assistant lecturers, new courses of which are constantly being opened all the year round. The Rev. Francis Gordon has consented to act as honorary secretary and treasurer of the Association, to whom all applications should be made.

LEESON v. THE GENERAL MEDICAL COUNCIL.

Lords Justices Cotton, Bowen, and Fry had before them on Wednesday and Thursday, by special leave, an appeal from the order made by Mr. Justice North, by which he refused (Journal, p. 1421) the application of Mr. J. F. Leeson for an injunction restraining the General Council of Medical Education and Registration of the United Kingdom from removing his name from the *Medical Register*. The case was argued at length. Judgment will be given on December 21st.

A NOVEL KIND OF MUSEUM.

A "psychological museum" has recently been established at Florence by Ministerial decree. The museum, which is to be under the direction of the well-known ethnologist, Professor Mantegazza, is intended to be a collection of what M. Zola calls "*documents humains*," or, in the words of the official announcement, of all things "which may serve as illustrations of human passions." If this programme is strictly adhered to the new museum will at least have the merit of infinite variety; it will be a chamber of horrors, a Musée Grévin, a pathological museum and a Scotland Yard museum all in one. Lectures on "experimental psychology" will, it is stated, be delivered. It appears that a society for the cultivation of this last somewhat occult department of science has been in existence at Berlin since January 31st, 1888. It devotes itself mainly to the study of hypnotism. The Secretary is Dr. Max Dessoir, 27, Köthenerstrasse, Berlin.

SURGEON T. H. PARKE, A.M.D.

At the last meeting of the Council of the Royal College of Surgeons of Ireland, Mr. Thomson moved, and Mr. Wheeler seconded, that the Honorary Fellowship be conferred upon Mr. Parke, a Licentiate of the College, in recognition of his distinguished services with Mr. H. M. Stanley in his expedition across Africa. The proposal was unanimously adopted, and Mr. Parke is now honoured by being placed among the very small band of men on whom this distinction has been conferred. This young Irish surgeon only entered the Army Medical Service in 1881, and he volunteered for active service in Egypt in 1882. Subsequently he served in the Nile column, and was present in the square when Sir Herbert Stewart was mortally wounded. The *Graphic* picture of that fight represents Parke attending to the injured. Later on he asked permission to accompany Stanley, and he was entertained by his brother officers at Cairo on the eve of his departure for Zanzibar. How he suffered with his companions in the terrible three years' walk across Africa, and how he devoted himself to the help of the sick, Mr. Stanley has made known. The Irish College has shown promptness in recognising Parke's work, and the honour which has just been paid him is no doubt only the first of not a few which he will receive on his return home.

DINNER TO SURGEON PARKE.

We understand a movement is on foot by his brother medical officers to entertain this gentleman at dinner on his return home. The heroic and devoted conduct of Surgeon Parke has shed a lustre on the Army Medical Department; it shows the stuff of which its officers are made, and, we trust, will bring prominently before the public the gross injustice of withholding clear and definite army rank and titles from such brave men.

DANGEROUS SWEETS.

Mr. William Davies, of Peckham, has called our attention to a sweet which seems to us only too likely, if it comes into favour with bachelor uncles and other dispensers of "lollipops," to cause a large increase in infantile mortality. It consists of a hollow truncated cone made of iced sugar; so far it is presumably neither better nor worse than the thousands of similar indigestible preparations which work such havoc in nurseries at this time of year. *Latet anguis in herbâ*, however, in the shape of a tin whistle inside the sweet, which appears to be ingeniously contrived to choke the confiding infant who may be tempted to keep the delicious morsel in his mouth. Our correspondent was called on the evening of December 11th to a child, aged one year and nine months, in whose throat such a whistle was said to have stuck. Fortunately, it passed into the little patient's stomach, and found its way out of the body by the natural passages on the third day without doing much damage. Such a happy deliverance cannot, however, be looked for in every case, and we deem it our duty, especially now that confectioners and toymakers are racking their invention in the production of "novelties," to raise a note of warning as to the criminal recklessness of making sweets and playthings for young children of materials noxious in themselves or made attractive by poisonous colours, or, as in the present case, with parts which may easily become detached and fall into the windpipe or stick in the œsophagus.

THE BRADFORD INFIRMARY.

A proposal to make a charge of sixpence to every out-patient has been made to the Board of Governors of the Bradford Infirmary, and, according to the information which reaches us, has found favour with certain governors. The hospital, we gather, is in financial straits; the number of out-patients has outgrown all reasonable proportions, and it is suggested that a sixpenny fee will limit the number of applicants. It would probably have this effect, but it is urged that the

Bradford Infirmary is a great public charity, designed to give medical aid in sickness to the necessitous poor; the proposed fee threatens to convert the out-patient department into a kind of cheap dispensary. The number of patients now attending is excessive, probably mainly owing to the want of proper supervision. Are there not among them many who ought to be members of a provident dispensary? The evil has grown so great that a paid staff of resident qualified assistants has been instituted, one of whom is specially employed in visiting patients in their own homes. The proposal to impose a sixpenny fee will tend to pauperise a still larger class of people, and will have a most injurious effect upon the status of medical practitioners in the town. The well-informed correspondent, who has addressed us upon the subject, observes, "it is impossible to suppose that the average Yorkshireman would imagine he was not paying the full value for the advice and medicine, but that he was only giving sixpence as a small contribution in acknowledgment of the charity dealt out to him." The mere fact that such a scheme has been seriously mooted will afford a strong argument for those who are anxious that the scope of the proposed Royal Commission on Metropolitan Hospitals should be extended to include all the hospitals and infirmaries in England.

GUY'S HOSPITAL.

THE first annual dinner of the newly formed Guy's Hospital London University Club took place on December 12th, at the Café Royal, Regent Street. The President of the club, Dr. Pavy, occupied the chair, supported by Dr. Wilks, Dr. Braxton Hicks, Mr. Durham, Dr. Pye-Smith, Mr. Howse, Dr. Savage, Mr. Brailey, Dr. Hale White, Mr. Golding-Bird, Dr. T. Stevenson, Dr. Horrocks (the Honorary Secretary), and about thirty other members of the club. After the proposal of the toast of "The Queen" by the Chairman, Dr. Hicks gave that of the "University of London," to which Dr. Wilks replied, detailing the circumstances that led to the formation of the University in the first year of Her Majesty's reign. He thought that under the proposed new charter there was a chance of greater facilities being accorded to London students for obtaining degrees in medicine. Dr. Burgess proposed the toast of "Guy's Hospital." Mr. Durham, in replying, hoped that if the University granted degrees on a lower status, it would not lower the value of its degrees. As to the dresserships at Guy's Hospital, he announced that certain changes therein were in contemplation, which would have the effect of permitting many more students to obtain those appointments, and also the house-surgeoncies. In making these alterations, the staff had in view the greatest good of the greatest number. The chairman then proposed the toast of the evening, expressing the conviction that for many Guy's men the club would fulfil a very useful purpose. Dr. J. H. Galton (the Honorary Treasurer) first replied, and considered that the club would tend to keep alive in men of the Borough school the aspirations of their early years. Dr. Horrocks also replied. Mr. Howse proposed the toast of the "Members of the Club who have Passed Examinations during the Current Year," to which Mr. Parkin, Dr. Fripp, Dr. Scott, and Dr. Campbell replied. Dr. Tanner proposed the final toast, that of "The Chairman," who responded. At the last meeting of the Council of the Royal College of Surgeons, the new Dental School of Guy's Hospital was recognised as a Dental School.

THE FELLOWSHIP OF THE ROYAL COLLEGE OF SURGEONS.

AT the recent half-yearly examination for the Fellowship of the College the number of candidates was 38, of whom only 14 passed. At the three preceding examinations the numbers examined were —May, 1888, 56; November, 1888, 31; May, 1889, 52; altogether 139, or an average of 46.3. At those same three examinations respectively the numbers who passed were in May, 1888, 31, or 55.3 per cent.; in November, 1888, 16, or 51.6 per cent.; in May, 1889, 32, or 61.5 per cent.; or, in the three examinations together, 79, being 56.8 per cent. The successes at the examination held last month were much lower than at either of the three preceding it, as only 14 of the 38 candidates, or 36.8 per cent., passed. In other words, less than 2 of every 5 men examined failed to satisfy the examiners. This leads one to suppose either that the standard of this particular examination was raised by the questions set being more difficult than usual, which we do not hear to have been the case, or that the candidates were less well prepared than usual for the test. Now it is rumoured that 7 of the 8 men who presented themselves from one of the large metropolitan schools failed, whilst 4 who came from another metropolitan school all passed. If this be correct, it is safe to infer that the former 8 were less well prepared than the latter 4 for the ordeal, which is undoubtedly a severe one. Ordinarily, it is only the best men of the schools who seek this higher diploma, and each of them must show six years of attendance at a recognised medical school ere he can appear before the Court of Examiners. At any rate, there is at present no sign of the number of Fellows of the College increasing.

DEATH UNDER CHLOROFORM.

THE following particulars of a case in which death recently occurred during chloroform inhalation at the Dorset House branch of the Samaritan Hospital have been communicated to us. Mrs. E. T., aged 41, a large, rather flabby type of woman, had trachelorrhaphy performed on her on December 2nd. Chloroform was administered by Dr. H. T. Rutherfoord with a Junker's inhaler. All went well till the end of the operation, which was somewhat prolonged, when the anæsthetist removed the face-piece. At this time the breathing was good, the pulse the same as it had been during the operation, the conjunctivæ insensitive, and the pupils did not react to light. The face-piece had been removed about half to three-quarters of a minute when the patient began to retch; the conjunctivæ were now sensitive, the pupils contracted, but reacting to light. The patient's head was immediately turned to one side, the lower jaw raised, the face-piece readjusted, and about half-a-dozen whiffs of the anæsthetic given. The straining ceased, breathing became regular and fairly full. The woman's head was turned into its original position, resting on the occiput, and the face-piece raised at its nasal extremity. Everything seemed to be going on satisfactorily, as the patient was breathing quite normally, and the pulse was good. Suddenly, after a deep sighing inspiration, followed by a similar expiration, she ceased to breathe. The conjunctivæ were quite insensitive, the eyeballs turned upwards, and the pupil extremely dilated. The face was deadly pale. Every means of restoring animation was at once tried, including hypodermic injections of brandy and electricity, both the constant and the interrupted current, but to no purpose. After the sudden cessation of breathing, there were several rather shallow inspirations and expirations, but they soon ceased. The total amount of chloroform used was three drachms. On examination of the heart before the operation nothing abnormal was detected. No *post-mortem* examination was made, as the coroner said that he thought it unnecessary.

EDUCATION OF IMBECILE CHILDREN.

THE Darenth Asylum and Schools for Imbecile Children is the only institution in Great Britain where pauper imbecile children only are educated and trained. It has attracted the attention of those interested in the care and treatment of the weak-minded and insane, not only in this country, but in many others, and during the past year a Special Commissioner was sent by the Government of Finland to obtain information respecting the working of the

schools. From the annual report of Dr. Fletcher Beach, we gather that during 1888 the average number of children daily resident was 635; 175 had been admitted; 206 discharged; and 41 died. Attention is drawn to the removal of some of the patients by their parents, who, seeing them manageable at the Asylum, took them home, and Dr. Fletcher Beach states that, "in every case in which this occurred and the patient was readmitted, deterioration had taken place, and we have had to recommence the education and training." 170 patients who were over 16 years of age were transferred to the adjoining Asylum for Adult Imbeciles. Of these 78 had improved, 2 cases were discharged "recovered." From this we presume that by the special education and training they had undergone, their mental condition was brought up to a fairly normal standard. There were 355 children on the school register, and 172 of them had made good progress during the year; while in the industrial department the value of the work done by the little patients is stated to be largely in excess of the previous year. It is interesting to note "that two of the old boys" visited the institution during the year; "one is employed as a carman and is earning 25s. per week, and the other is in business as a butcher with a shop of his own."

LEPROSY IN SPAIN.

Dr. José E. Olavide, of Madrid, the well-known Spanish dermatologist, has recently published[1] some particulars of leprosy as it is found in Spain at the present day. His remarks apply solely to Spain proper, neither the Spanish colonies, the Canaries, nor the Philippine Islands being included in the scope of his paper. He says that there are always from six to eight lepers in the Hospital de San Juan de Dios at Madrid, who have come there from some of the infected districts; they remain in the hospital till their death, as, according to recent legal enactments, they are not allowed to leave. In no case have these sufferers communicated the disease either to the other patients among whom they live, or to nurses or medical attendants, nor has Dr. Olavide during twenty-five years of practice seen any evidence of the transmission of leprosy by contagion. He adds that of the 500 lepers whom he has had under his care during that period, only one attributed his disease to that source. It should be noted that Dr. Olavide is not an anti-contagionist; he accepts the bacillary origin of leprosy without reserve, and thinks, to use his own words, that the disease "ought to be contagious and inoculable." So far, however, neither clinical observation nor experiment has, in his experience, furnished any evidence in confirmation of this *a priori* view. Leprosy is rare in the inland districts of Spain, and is chiefly found in the provinces of Almería, Murcia, and Granada on the south coast, and in Galicia and Asturias on the north coast. The disease is not known to exist in the Basque provinces, or in that of Santander, although there is free communication between these parts and America, the Malay Archipelago, Australasia, and Polynesia. It is a curious fact that in the maritime provinces where leprosy is indigenous, it is not found so much on the coast itself as at a distance of some leagues from it. According to Dr. Olavide, the only inland provinces in which there are a few foci of leprosy are Jaén, Cordova, and Guadalajara, and in these most of the sufferers are missionaries or soldiers who have been in America or the Philippine Islands. The former generally attribute the disease to bad food, and the latter to intercourse with native women. In cases that have not been imported from abroad, the disease is looked upon in Spain as hereditary. Two or three years ago it was proposed by the Government that an official census of lepers should be taken, but the project fell through, owing to difficulties of diagnosis, which Dr. Olavide attributes to the want of instruction in dermatology in Spanish medical schools. He estimates the total number of lepers in Spain at the present time as from 1,000 to 1,500. Dr. Olavide concludes by urging on all Governments the propriety of sending commissions of microscopists and dermatologists to study the disease in the West Indies, China, and the Philippine Islands, and of having exact statistics drawn up of the number of lepers in Europe and the colonies.

[1] *Revista Clínica de los Hospitales*, December, 1889.

INFLUENZA AT VIENNA.

Our Vienna Correspondent, who has himself been a victim of the prevailing epidemic, writes: Numerous cases of influenza have been observed at Vienna during the last few days. The first cases were observed among the doctors, the nurses, and the patients of the General Hospital. About 77 doctors, 165 patients, and 57 nurses had fallen ill with this disease last week. On December 14th about 40 per cent. of patients suspected of suffering from influenza were admitted into the various departments of the Vienna General Hospital and the other hospitals in the city. The director of the General Hospital, Professor Charles Böhm, has ordered that each case of influenza—which is designated in the hospital by the name of "catarrhus epidemicus"—shall be strictly noted and communicated at once to the directorship of the hospital. A meeting of the Superior Sanitary Council of Vienna, which lasted several hours, took place on December 14th, to consider the question of the epidemic. The directors of the Vienna hospitals assisted at this conference. The disease has very severely attacked the soldiers in one of the principal barracks of Vienna; all the companies of the 84th Infantry Regiment had each twelve cases; eight officers were on the sick list. A further spread of the "Russian disease" is feared in Vienna.

PRIMARY TUBERCULAR DISEASE OF THE EYE.

Like all comparatively rare diseases, cases of primary intraocular tubercle may give rise to considerable doubt in the minds of those under whose care they are, both as regards diagnosis and treatment. In certain instances it is next to impossible to distinguish between tubercular and syphilitic nodular iritis; yet in reference to the adoption of active treatment a correct diagnosis is all-important. Such doubtful cases have been described on several occasions as granuloma of the iris, a name which is said by some authors to signify that the disease is of syphilitic origin, while others hold that it is tubercular. At the best it probably means that our knowledge of such cases is not yet complete. The doubts which arise regarding treatment chiefly concern operative measures. If the disease be tubercular, should the eye be excised, in the hope of removing a centre of infection, and thus preventing general tuberculosis? If syphilitic in nature, active antisyphilitic treatment is indicated, and these measures would but doubtfully conduce to the cure of tubercle. The records of cases seem to point to enucleation as the best treatment for primary intraocular tubercle; on the other hand, in a certain number of cases recovery has ensued from disease which had all the clinical characters of tubercular iritis. One point seems fairly well established, viz., that if any operation is undertaken it should be removal of the entire globe; iridectomy performed with the intention of removing the diseased portion of iris has been almost uniformly unsuccessful.

SCOTLAND.

The classes in connection with the Edinburgh University and extra-mural medical school rose yesterday for the Christmas recess, and will not reassemble till the commencement of the second week in January.

THE appointment of Dr. John Playfair to be one of the Lecturers on Diseases of Children at Edinburgh University, in succession to Dr. Underhill, whose term of office has expired, has been approved by the University Court.

DR. ROBERT KIRKWOOD is a candidate for the County Councillorship of Ayrshire. The duties of a county councillor, though highly honourable, are likely to be very heavy; but Dr. Kirkwood states that he will be able to give all the time to them that they require. The prominence and importance which the new Act gives to questions relating to the public health make it desirable that on every County Council there should be some members of our profession.

INFLUENZA AT LEITH.

THE steamer *Moravia* arrived at Leith from Riga on December 17th with four of the crew suffering from what was believed to be influenza. On the removal of the men to the fever hospital the diagnosis was confirmed. It appears that, before leaving Riga, the master and most of the crew had been attacked with the disease, but in a mild form. Those at present suffering were taken ill on the voyage.

PHYSIOLOGICAL PAPERS AT THE ROYAL SOCIETY OF EDINBURGH.

LAST Monday's billet of the Royal Society of Edinburgh contains further illustration of the continued widening of the scope of that learned society in the direction of the inclusion of a larger number of biological contributions. Dr. Herbert H. Ashdown communicates a paper on certain Substances found in the Urine which reduce the Oxide of Copper upon boiling in the presence of an Alkali (being the substance of the report to the Scientific Grants Committee of the British Medical Association), and Dr. Cartwright Wood, a paper on Enzyme Action in the Lower Organisms.

EDINBURGH HEALTH LECTURES.

THE excellent character of the Edinburgh Health Lectures was fully maintained by Mr. George Berry, F.R.C.S.E., who, on Saturday last, discussed the subject of Prevalent Popular Ideas and Errors about the Eye and its Disorders. He drew attention to the inaccurate views which were generally held on the subject of shortsightedness, in respect of its supposed relative advantage over the refractive abnormalities. He spoke of the dangers of unadvised poulticing and other household remedies, and strongly advocated the treatment of the more common and minor ailments by cleanliness and the free exposure to air and light. For most of the ordinary affections met with it was a mistake either to shade the eyes or to keep the patient in a darkened room.

RECOGNITION OF EXTRA-MURAL LECTURERS ON MEDICINE.

THE following gentlemen have been recognised as qualified teachers in their respective departments:—Philip J. White, M.B., University College, Bangor, Lecturer on Natural History; Professor T. E. Thorpe, F.R.S., Lecturer on Chemistry and Teacher of Practical Chemistry, School of Mines, London; Frank Clowes, D.Sc., Lecturer on Chemistry and Teacher of Practical Chemistry, University College, Nottingham; E. Waymouth Reid, M.B., Lecturer on Physiology and Teacher of Practical Physiology, University College, Dundee; Ralph Stockman, M.D., Lecturer on Materia and Teacher of Practical Materia Medica, Edinburgh; and George A. Gibson, M.D., Lecturer on Practice of Medicine, Edinburgh. Recognition was continued to the already qualified lecturers and teachers of Anderson's College, Glasgow, on change of their teaching rooms to the New Medical School Buildings of the College.

PROPOSED CHANGES IN THE MEDICAL CURRICULUM.

THE Inter-Universities Students' Committee has come to the conclusion that the curriculum in medicine should extend over five years, that there should be a short preliminary course in medicine and surgery before the regular course was taken, that there should be short compulsory courses on the eye and ear, for which the fee should not exceed £1 1s., and that there should be a compulsory course in operative surgery. The Edinburgh University Court has again had the question of the proposed alterations of the regulations for the medical professional examinations under consideration. At its meeting last week, the Court discussed more particularly the proposed alterations by the Aberdeen University Court, and had before it the reply of the Aberdeen Court to the observations of the Glasgow and Edinburgh Courts, and the remarks of the Glasgow Court, and a minute of Senatus relative to the reply. The minute of Senatus was in favour of the proposed alteration. The Court remained of opinion that some of the proposals required further experience at the University of Edinburgh, in which they had been carried out, before it would be prudent to carry them further, and that the appointment of an Executive Universities Commission made it inopportune to proceed with the proposed alterations before Her Majesty in Council under the Act of 1858. At the same meeting, the Court approved of the usual arrangements having been made for the appointment of additional examiners in natural history and clinical surgery at the stated meeting on January 20th, 1890.

ST. ANDREW AMBULANCE ASSOCIATION AT CRIEFF.

ON Saturday last Dr. Thom's second course of lectures was brought to a conclusion, when Dr. John Dunlop, Glasgow, examined the pupils, both ladies and gentlemen, for certificates and medallions. There were fifty-two on the roll, and of these thirty-eight presented themselves for examination. The examination was, as usual, largely practical, and at the close Dr. Dunlop said that though he was not permitted to state anything definitely about the result, as his report had first to go to headquarters, he would remark that he was well satisfied, and that Dr. Thom had evidently spared no pains to bring them to a high state of efficiency. He inculcated prudence and modesty in the application of their knowledge, and recommended the men to keep up their stretcher drill by frequent practice. Dr. Thom's first course of lectures was delivered nearly four years ago, when there were over one hundred on the roll, and nearly seventy passed the examination. Besides these lectures, Dr. Thom has, during the last five years, conducted two courses of instruction for volunteers, of whom over twenty have passed the War Office examination, wear the Geneva Cross, and constitute the stretcher bearers of the 4th Volunteer Battalion Royal Highlanders (Black Watch), in which corps Dr. Thom holds the rank of Surgeon.

GLASGOW SOCIAL UNION.

AT a recent meeting of the Glasgow Social Union, Mr. Wm. Smart, M.A., of Queen Margaret College, lectured on "The Housing of the Poor." Mr. Smart is convener of one of the committees of the commission appointed by the Presbytery of Glasgow last year to inquire into this question. In pursuance of his work, Mr. Smart obtained information from various associations in London dealing with the same subject, and he gave statistics regarding the commercial companies, most of which were paying 5 per cent. on the money invested, and regarding Miss Octavia Hill's work.

At the conclusion of the lecture it was agreed to appoint a committee to draw up and issue a prospectus of a limited liability company in connection with the scheme for the better housing of the poor. It was stated that over £10,000 had been tendered in a few days on behalf of the proposed company.

SCOTTISH NATIONAL SOCIETY FOR THE PREVENTION OF CRUELTY TO CHILDREN.

DURING the year ending October 31st last the western portion of the Society inquired into 1,138 cases, involving the welfare of 1,561 children. Shelter was afforded to 1,063 children; 339 were clothed wholly or partially; 6,503 meals were given; 1,249 children were sent to schools or placed under some supervision; 82 convictions were obtained against parents; and 827 parents were warned. This is a bald record of work greatly needed in a city like Glasgow, and the value of which it is impossible to overestimate. Dr. Donald Macleod, in proposing the adoption of the report for the year, criticised the clause of the Criminal Law Amendment Act of 1885 providing that prosecutions for assault, etc., committed on girls under sixteen years of age could not be undertaken after the expiry of three months, and urged that everything possible should be done to have this provision altered. By recent decision of the Glasgow Local Authority no girl under sixteen and no boy under fourteen is allowed to be in the streets after 9 P.M. either selling newspapers or begging.

IRELAND.

DR. W. J. SMYLY.

AT a meeting of the directors of the City of Dublin Hospital on the 13th instant, the following resolution was passed unanimously: "That while tendering their congratulations to Dr. W. J. Smyly on his appointment to the mastership of the Rotunda Hospital, the directors of the City of Dublin Hospital have to express their sense of the value of his services and their appreciation of his skill and attention while holding the office of gynæcologist to the city of Dublin Hospital."

ROYAL UNIVERSITY.

THE period of three years for which Dr. S. O'Sullivan, of Cork, was elected by Convocation to a seat on the Senate of the Royal University having expired, he offers himself for re-election. There is not likely to be any opposition. There are now two vacancies on the Senate, caused by the death of the Earl of Granard and of the Very Rev. Monsignor Neville, who died in Cork on December 15th. As the six seats given to Convocation are now filled, the vacancies fall to the Government. Of the original thirty-five members of Senate at the opening of the University in 1882, no fewer than eleven have died, and to these must be added the Duke of Abercorn and Dr. Maguire, who became members subsequently to the date mentioned.

ROYAL COLLEGE OF PHYSICIANS.

AN ordinary comitia was held on Thursday, December 19th, 1889, at 5 P.M., Sir ANDREW CLARK, Bart., F.R.S., President, in the chair.

The TREASURER announced that the Attorney-General had presented a portrait of the late Dr. Chowne to the College, and, after a few words from Dr. QUAIN, the gift was cordially accepted by the Fellows.

The PRESIDENT announced that he had appointed Dr. James Andrew as Harveian Orator for 1890, and Dr. Saundby, of Birmingham, as Bradshawe Lecturer for 1890.

Diplomas in Public Health, conjointly with the Royal College of Surgeons, were granted to sixteen gentlemen.

A communication was received from the Treasurer of the Margate Infirmary, and the Registrar was directed to reply.

Two communications were received from the Colonial Office, enclosing reports on leprosy in Cyprus and at the Cape of Good Hope, both supporting the view of the communicability of leprosy, and urging the importance of isolation. These reports were referred to the Standing Committee on Leprosy.

A memorandum was received from the University of London enclosing a scheme for the reconstitution of the University on the general lines indicated by the report of the Royal Commission. After some discussion the memorandum was referred to the Committee on the Universities Commission. A communication was received from the Royal College of Surgeons respecting the new laboratories, and stating that Messrs. John Marshall, J. W. Hulke, and A. A. Bowlby had been nominated as representatives of that body on the new Laboratories Committee.

Two communications were received from the Metropolitan Asylums Board, the first stating that the Board would grant the use of their ambulance for the conveyance of infectious cases to places other than the Board's hospitals; and a second stating that the negotiations respecting the fever question were proceeding satisfactorily.

A communication was received from the Charity Commissioners.

A letter was read from Dr. Quain, Chairman of the Pharmacopœia Committee, respecting the publication of an addendum to the *Pharmacopœia*. The following Committee was appointed to consider the subject:—Sir A. Garrod, Dr. Bruce, Dr. Brunton, Dr. Yeo, Dr. Taylor, Dr. Biss, Dr. Lees, Dr. Murrell, Dr. F. Roberts, Dr. I. Owen, Dr. Stone, Dr. Warner, Dr. Broadbent, Dr. Gowers, Dr. Ord, and Dr. C. T. Williams.

A notification from the Royal College of Surgeons that a Member had been struck off their roll was referred to the Censors Board.

A communication from the Registrar of the General Medical Council was received, stating that the regulations of the College for the Diploma in Public Health were not in conformity with the requirements of the General Medical Council, and on the motion of the SENIOR CENSOR, seconded by the REGISTRAR, the subject was referred to the Council, who were directed to report to the Committee of Management.

A report was received from the Council of the College on several matters referred to it, and it was agreed to abrogate the existing by-law relating to the appointment of two vice-presidents. The question of appointing the Senior Censor *ex officio* Vice-President was referred back to the Council for further consideration. In accordance with the suggestion of the Council, Dr. Bristowe, Sir Wm. Roberts, Dr. Pavy, Dr. Pye-Smith, and the Registrar were appointed a Committee to consider the communication received from the Foreign Office at the last Comitia in reference to the disabilities towards English medical practitioners on the Continent.

A resolution to the effect that it was desirable that the period of the medical curriculum should be extended to five years was agreed to almost without discussion, and it was determined to send a notice of the resolution to the Registrar of the General Medical Council.

The following resolution of the Council was then put and unanimously accepted:

"That this Council recommends that the resolution of the College, by which the nomination of examiners on the subject of hygiene was transferred from the Council to the Committee of Management, be rescinded; and that in future two examiners in public health be nominated, as are all other examiners, by the Council."

Reports were received from the Committee on Fittings for the New Laboratories, and from the Educational and Scientific Uses Committee, and in accordance with the former of these, the President announced that he nominated Sir William Roberts, Dr. Pye-Smith and Dr. Payne to represent the College on the New Laboratories Committee, and a communication was received from the Royal College of Surgeons, announcing that their representatives would be Mr. John Marshall, Mr. J. W. Hulke, and Mr. A. A. Bowlby. Upon these six representatives will devolve the responsibility of appointing the Director of the Laboratory.

DR. NITZE, whose name is well known in connection with the electric illumination of the bladder, has "read himself in" as *Privat-docent* in the University of Berlin. The subject of his inaugural discourse was the importance of cystoscopy in renal surgery.

HUMAN AND BOVINE TUBERCULOSIS.

THE Committee of the North of Ireland Branch of the British Medical Association, consisting of Drs. Burden, Lindsay, Strahan, and Calwell, appointed to inquire into the question of bovine tuberculosis and its transmissibility to man, presented a report at a meeting of the Branch, held at the Royal Hospital, Belfast, on December 12th. The report was unanimously adopted.

PATHOLOGY AND ETIOLOGY.

Terminology.—At the outset the committee found it necessary to satisfy themselves regarding the views held on the general nature of the disease. The disease is known by various names, according to the parts of the body it attacks or the kinds of lesions it produces, for example, in the human subject scrofula, pulmonary phthisis, tabes mesenterica, tubercular meningitis, etc.; in the cow the "grapes," or in Germany "pearl disease," and in France "potato disease."

Pathological Identity.—It is now proved beyond all reasonable doubt, and accepted by nearly every authority, that these diseases are all forms of one and the same process, and all caused by a parasitic micro-organism, called from its discoverer "Koch's bacillus," or the bacillus tuberculosis; and that the disease is essentially the same, whether it attacks man, cow, or fowl. Any difference in the size of the microbe, or in its growth, is due to the change of medium. The bacillus flourishes best at a temperature of 98.5° to 100.5° F.; below 82° F. growth ceases, but the parasite does not die; it is slowly killed by being kept at 107.5° F. for several weeks, or by being boiled for about half an hour. The spores of the bacillus seem still more tenacious of life, and cannot be said to follow these laws exactly. The bacilli are able to resist desiccation for long periods. Tubercular matter, after being dried for several months, is still able to reproduce the disease. The virus of fresh sputum is destroyed by a 5 per cent. solution of carbolic acid, by a saturated aqueous solution of salicylic acid, by absolute alcohol (in the proportion of 3 to 1 of sputum) in twenty hours, but not under. Many other drugs fail completely. Steam destroys it in from fifteen to sixty minutes. According to M. Cornet the ordinary disinfection of household furniture is quite useless for this microbe. Besides flourishing in living animal tissue, the bacillus can be cultivated in sterilised blood serum and other media, when kept at a proper temperature. Koch still obtained the active microbe after carrying it through thirty-four generations of cultures, for a time extending through twenty-two months.

Predisposing Causes.—Although it is now practically accepted that no form of tuberculosis exists without the bacillus having been the exciting cause, the following are given as predisposing causes in all animals: (1) malnutrition; (2) bad ventilation; (3) exhausting secretions, for example, prolonged lactation; (4) hereditary influence; (5) youth; (6) dampness of soil. All animals are not equally attacked by the disease; those in the wild state escape; similarly among human beings, nomad tribes and savages are practically exempt till they are brought into contact with civilisation. Carnivora are more exempt than herbivora or omnivora, but every warm-blooded animal is liable (only one case is reported in the reptilia—an Italian snake in zoological gardens in Austria; none in amphibia, pisces, or invertebrata). The following list is arranged in order of respective liability, as given in the Departmental Committee Report: man, milch cow, fowl, rodents, pigs, goats, sheep, horses, carnivora.

Mortality from Tuberculosis.—In man, 10 to 14 per cent. of all deaths are due to tuberculosis; 150,000, it has been said, die annually in the British Isles of consumption. From 3 to 4 persons per 1,000 living die annually in Ireland of tuberculosis (Sir C. Cameron). On referring to the Registrar-General's summary, it is seen that in the ten years 1871-80 tubercular diseases of the alimentary canal caused, among children under 5 years of age, an average mortality of 2.55 per 1,000 per annum, which is more than twelve times as great as the mortality from these diseases at any other age period of five years. From an analysis of 127 cases of tuberculosis in children, Woodhead found 43 instances of tubercular ulceration of intestine, and 100 of tubercular degeneration of mesenteric glands. In addition to the actual mortality from the different varieties of tuberculosis, it must be remembered that much suffering, impairment of health and usefulness, and loss to the community also result. Among cattle, dairy cows are most affected; 25, 50, 30, 4.5, 3.5, 37.5 per cent. in various cases are given in the Departmental Committee Report, but these are immediately qualified by paragraph 60, which says: "On analysis it will be found that, as an almost invariable rule, the low percentages given are those for herds fed in the open air most of the year, the high death-rates being among dairy cattle confined in sheds." In Dublin, among slaughtered animals, 4.9 per cent.; in Edinburgh, 0.2 per cent. of all slaughtered; in Glasgow, 1 in 180; in Germany, 1.5 to 20 per cent., according to district; in Paris abattoirs, 0.6 per cent.; average of all France, 0.5 per cent.; in Berlin, in 1887-88, where inspection is very strict, 249 men being engaged in it, 4,300 out of 130,733 (high average). The disease occurs with severity among fowls, generally in a fatally epidemic form, every bird in the farmyard being swept off.

Local and General Tuberculosis.—The disease in all animals may be "local," that is, apparently affecting for a time one particular spot; or it may be "generalised," that is, manifestly affecting various parts of the body. The local variety is more common in man than in animals; in cattle it is the exception. In cattle the lungs, pleura, and serous membranes and glands are the favourite seats, any and each of the other organs, including the udder, being occasionally affected. The marrow of bone (in guinea-pig) has been affected at an early period of the disease, and the bacilli present in considerable number, before they were recognisable by changes obvious to the eye. The same part has also been found affected in a cow. The muscles, though rarely, have also been found affected (Sir Charles Cameron, Hamilton, McCall). The bacilli have also been found in the blood and emboli, and tubercular ulceration of blood vessels has been demonstrated. It is believed that the bacilli do not multiply in the blood, but only when they are lodged in some suitable nidus. The bacilli have been found in the secretions of diseased organs, the sputum, milk, urine, fæces, and these have also been proved to be infective.

Modes of Infection.—The bacilli have been proved to enter the body in the following ways: 1. By inhalation. This has been proved by causing animals to inhale tuberculous matter dried into dust, or a fine spray containing tuberculous juice. 2. By ingestion. Tuberculous material produces the disease, when swallowed by animals. 3. By inoculation. Inoculation with tuberculous material nearly invariably causes the disease. It has been supposed to be conveyed directly by (4) heredity. The great majority of opinion is that a special diathesis, susceptible to the poison, is transmitted. Cases have been published of the fœtus of an affected animal being found to be so likewise. It has been pointed out that there is no proof that every case of disease in the lungs necessarily follows from inhalation, as in experiments from ingestion, inoculation (and in the case of a fœtal calf), the lungs are found frequently attacked. The bacilli have been proved to be able to penetrate healthy mucous membrane by M. Cornil.

REGULATION OF SALE OF THE FLESH OF TUBERCULOUS ANIMALS.

In Various Countries.—The Committee now insert the practices and recommendations with regard to the sale of carcasses of tubercular animals as food. The Jews have always had a very strict code of inspection, carried out by specially qualified men, and every animal (cow, sheep, or poultry) whose viscera presented any sign of tuberculosis is entirely rejected by them. In the United Kingdom, the general practice appears to be to condemn the animal if the disease is far advanced and the body wasted; if the disease is local, and the body in fair condition, to remove and condemn the diseased viscera, and allow the rest to be sold as sound flesh. But this is not the uniform custom. There is evidence of a regular trade being done in "wasters," "mincers," that is, animals far spent with the disease, which are sold for about 30s. to £3, whose flesh is combined with that of healthy animals for making sausages. There is also evidence of dairy cows being used for their milk as long as they will give a fair quantity, and, when failing, being fattened as far as possible and sent to the butcher. In Germany the flesh is classified into such as may be sold on the butcher's stall, and such as can only be sold at a public stall (named the *Freibank*), and by a city *employé*. Tuberculosis of the costal pleura of the first degree is ranged into the second of these classes, and a ticket affixed to the flesh informs the public regarding the cause of its having been remitted to the *Freibank*. In France, a decree was made dated July 28th, 1888: "The flesh of tuberculous animals shall be excluded from consumption (1) if the lesions are generalised, that is to say, not confined exclusively to the visceral organs and their lymphatic glands; (2) if the lesions, although localised, have invaded the greater part of an organ, or are manifested by an eruption, or the walls of the chest, or of the abdominal cavity. Such flesh ex-

cluded from consumption, and also the tuberculous viscera, shall not be used for animals, and ought to be destroyed." In Austria, when the tuberculosis is limited to a local process, the flesh of good appearance, and the lymphatic glands of the chest and intestines unaffected, the meat is passed as healthy, the intestines alone being rejected. In Berlin, a very limited tuberculosis is considered as having no noxious influence on health, especially if the animals have been well nourished for a long time. The use of such flesh is permitted after seizure of the parts affected, but it must be sold as meat of mediocre quality, and under strict control. In Edinburgh, Greenock (since 1874), Paisley, and Glasgow, tubercular meat is practically refused in all its degrees. An international veterinary congress at Brussels in 1883 declared by a majority of one for complete seizure in every case. The French veterinary surgeons at Paris in 1885 modified this, allowing partial seizure. The Congress for the Study of Tuberculosis in Man and Animal in 1888, at Paris, voted, with only three dissentients, for complete seizure. The Report of the Departmental Committee, page 46, says: "Further, although the bacilli may be found but rarely in the flesh, still the chance of their being present, either there or in the blood, is too probable to ever allow of the flesh of a tubercular animal being used for food under any circumstances, either for man or the lower animals." The test case in Glasgow in May, 1889, resulted in a verdict for destruction of both animals, although probably both, certainly one, would have been passed elsewhere.

Infection of Man from the Lower Animals.

The probability of the transmission of the disease from animal to man rests on the following points: (1) the disease is the same in man and animal; (2) man is very susceptible to the disease; (3) animals which are much less susceptible than man become affected by experimental inhalation, ingestion, and inoculation. It is, therefore, a fair deduction that man may become affected by the same methods. Practically, it might be said, it must be by one or other of these methods, although not experimentally. This is supported by an ever-increasing number of recorded cases in which man seems to have been infected from the lower animals; but, as might be expected, owing to the impossibility of experimenting on many, direct proof is somewhat scanty. As regards the possibility of man being infected from the lower animals by—

1. *Inhalation.*—The Committee would draw attention to Cornet's experiments, which prove that the dust of rooms in which consumptives have lived is capable of producing the disease. If this be so, it seems probable that animals may also infect the air in a similar way.

2. *Ingestion* (*a*) of Milk.—Professor Bang, at the International Medical Congress at Copenhagen, gave the results of examination of twenty-seven cases of tubercular disease of the udder in cattle, in the milk of which he was able to demonstrate the bacilli, and by the inoculation and injection of the milk to produce the disease in pigs and rabbits; he and Galtier showed that the cream, butter-milk, and butter shared the infectivity. Bang's conclusions have been abundantly supported by numerous observers, and it has also been shown that the disease may be present in the udder, and the bacilli found in the tissues, in the ducts, and in the milk sometimes in enormous quantities, without the disease being recognisable (otherwise) during life (Woodhead and McFadyean). Distinct outbreaks of the disease among pigs, etc., have frequently occurred, which have been traced to milk from affected cows. Ernst, of Boston, U.S.A., gives results of experiments tending to show that the milk of cows affected with tuberculosis may contain bacilli and be infective, although no discoverable lesion is present in the udder. Considering the large percentage of dairy cows which are known to be affected, this is rather startling. There is a general consensus of opinion as to the danger of milk from tubercular udders, and many are inclined to believe that it is a fertile source of tabes mesenterica in the young (*v.* statistics *supra*). A large number of cases of mankind (chiefly children) being affected, presumably from milk, have been published. (*b*) of Meat.—As no one in the present day would advocate the use of actually diseased portions of meat for food, the extreme danger of such being undoubted, the evidence selected on this head is confined to the power of infectivity of the flesh of a carcass as usually sold to the public, that is, with the tuberculous viscera removed, the pleura and peritoneum "stripped."

Condemnation of Meat.—The advocates of the seizure of the entire carcass of animals affected to any extent base their opinion on the following grounds:—1. The flesh has been proved to be infective experimentally, as in the following: Of 35 animals fed on the raw flesh, 22 per cent. became affected; of 46 fed in the same manner, 13 per cent. suffered (Gerlach and Johne). Two young pigs similarly fed for ten days, also became diseased (Peuch). Eleven cats fed for two to four days, without result (Nocard). By inoculation of raw muscle juice of cows seized in the abattoirs, 1 of 21 became affected. Experiments cited at the Paris Congress in 1888, give 13 of 137 animals affected by inoculation of similar substance. With regard to fat animals, disseminated tubercle may be present in such; two rabbits became affected from juice of muscle of a cow in very good condition; fat meat is more apt to be underdone than lean.[1] Also, though rarely, muscle has at times been visibly diseased (Sir Chas. Cameron, Professor McCall). 2. It has been shown that the bacilli are found in the blood stream, and thence conveyed to all parts of the body. 3. It is the opinion of most authorities that it is impossible to remove all the diseased portions by "stripping;" it would require a careful dissection to do so. 4. That the disease may be in parts that cannot be removed, or recognised in the ordinary course; for example, bone. 5. It is found on careful examination that very few cases can be strictly classified as "localised;" only 2 out of 81 were correctly characterised as such (Veyssière). 6. Ordinary cooking is insufficient to destroy infectivity, the juice from the inside of a piece of roasted flesh of a tuberculous pig was still able to infect a rabbit. Tuberculous flesh soaked in boiling water for ten to fifteen minutes still gave positive results by feeding in 35 per cent of 62 experiments. Tubercular juice heated to 198° F. infected one animal out of six. It is generally admitted that the usual heat to which the inside of a large roast is raised, would be quite ineffective as a bacillicide in this case (Sir Chas. Cameron, V. Horsley, etc.). The advocates of the seizure of the diseased portion only, who hold that parts unaffected may be safely consumed as food, rest their opinion on the theory that the disease may be for a time strictly local, and that the chance of infection from apparently sound flesh is too remote to justify stringent measures.

3. *Inoculation.*—The possibility of this method is hardly questioned; there is some evidence that it may be more frequent than is generally supposed, and cases have been reported of undoubted inoculation in man.

Relation of Human and Bovine Death-rate from Tuberculosis.—The Committee would point out that there is some evidence in support of the view that some relation exists between the death-rate of man and animal from the disease, and this relation is affected by the use of tuberculous flesh. In 1881, the authorities of the Grand Duchy of Baden issued a chart, which applies to fifty-two towns, and shows that where tuberculosis is prevalent among cattle it is equally prevalent amongst the human population, and is particularly prevalent in those towns in which the number of low class butchers is greatest. The general statement is supported by cases cited in Q. 5,105, Q. 5,367, and Q. 8,791 of evidence before Departmental Committee.

Conclusions and Recommendations.

A. The Committee would draw attention to two points that have much impressed them:—First, a generally prevailing idea of the insanitary condition of dairies, byres, etc., and of the unhealthy lives that many of our domesticated animals are compelled to live, reacting on the health of the community. Secondly, the expressed opinion of many authorities that the licensing and inspection of dairies, byres, etc., should be rigid and frequent, and that only public abattoirs should exist, where every carcass sold to the public as food should be carefully examined.

B. The Committee would also express the opinion:—First, that there is no doubt of the danger of drinking the unboiled milk of cows whose udders are tubercular; that there is a risk, even when the udders present no manifest lesion, if the animal is diseased elsewhere. Secondly, that there is a certain amount of danger in allowing the flesh of an animal affected with local tuberculosis to be sold for consumption; to what extent this risk extends they are not prepared to say, it probably varies in different cases. Thirdly, that some such resolutions or remedial measures as those of the Paris Congress, published in full in *Journ. Comp. Path. and Therap.*, September, 1889, or of the Report of the Departmental Committee, paragraphs 65 *et seq.*, should be adopted and published.

C. Further, as a point of medical investigation of great scientific interest and of practical utility, they would recommend that in

[1] M. Arloing, in *Journ. Comp. Path. and Ther.*

all cases of tuberculosis springing up suddenly in a family, especially in isolated country houses and villages, the condition of all animals from which the disease might have spread should be carefully investigated, and the results published in a medical journal.[2]

RESOLUTION.

The following resolution was also passed:—"That in view of the recent discoveries with regard to human and bovine tuberculosis, and of the opinions held by many eminent scientific authorities concerning the communicability of tuberculosis from man to animal and from animal to man, and in view of the enormous prevalence of the disease in one form or another among mankind, this meeting of the North of Ireland Branch of the British Medical Association disapproves of the practice of allowing any part of the carcass of an animal, which has been shown to have been affected with tuberculosis, to be sold as sound and wholesome meat."

THE HOUSING OF THE POOR.

ON Monday afternoon a deputation of the London County Council waited on the Home Secretary. The deputation consisted of Lord Compton, Dr. Longstaff, Mr. Shirley Murphy (Medical Officer of Health), and others. From the report of the proceedings it appears that the London County Council is desirous of superseding the local sanitary authorities of the metropolis in respect of one of the most important parts of their duties, namely, the reporting upon houses which, through structural defects, have become unfit for human habitation. Where the local authority is conspicuously in default in the exercise of the various powers conferred by the Sanitary Acts, there is much to be said on public grounds in favour of its being superseded. But whilst admitting the force of this part of the argument of the deputation, we cannot agree to their general propositions. These, if acceded to, would involve the degradation of all local sanitary authorities, good and bad alike. This, we believe, would be a most mistaken policy. It is evidently not the way to foster the spirit of local self-government, without which it will be impossible to effect a material improvement in the housing of the poor in London. It appears to us that the County Council would do well to reconsider their propositions, so that any amendment of the law might give them power to interfere only where there is evidence that a local sanitary authority is in default, but not otherwise. Such evidence they might obtain from the reports of cases which appear in the daily newspapers; for example, we have before us the report of a case in which the magistrate at the Thames Police Court, on the application of the Mansion House Council, ordered the closure of five houses in Mile End Old Town on account of nuisances injurious to health, notwithstanding the statement of the officer representing the local authority that "he considered the houses in fair sanitary condition, and that they were not injurious to health." This seems to be a case of neglect on the part of a local authority in which the interference of a central authority is not only justifiable, but necessary.

It is well known that upon some vestries and local boards there are many members who from selfish motives are obstructive in all matters of sanitary advancement, and who paralyse the efforts of those whose duty it is to improve the conditions under which the poor are housed. On the other hand, there are many signs that local opinion on this great question of the housing of the poor is steadily improving. Local ratepayers, gentlemen of courage and independence, who work in the district, are protesting against the election of house-jobbers as members of the sanitary committees of vestries. This is the most healthy sign of the times, and it leads us to hope that the spirit of local self-government which has flourished in the provincial towns is not quite dead in London.

RABIES AND THE MUZZLING ORDER.

A DEPUTATION from the Society for the Prevention of Hydrophobia and Reform of the Dog Laws waited upon Mr. H. Chaplin, the Minister of Agriculture (with whom were Professor Brown and Mr. R. Dawson) on Saturday, December 14th, with reference to the muzzling order for dogs, which expires on December 31st. Sir Henry Roscoe, M.P., introduced the deputation, and he was supported by Sir Spencer Wells, Mr. Briton Rivière, Professor Victor Horsley, Mr. John Everett Millais, Dr. George Harley, and Mr. Sidney Turner.

Sir HENRY ROSCOE, M.P., said he believed that a system of compulsory muzzling throughout the country, at any rate, so far as England was concerned, say for twelve months, would stamp out the disease.

Sir SPENCER WELLS said, from what he could gather, the medical profession were unanimously in favour of the views of the deputation.

Professor VICTOR HORSLEY said that if quarantine was applied to all imported dogs, and the muzzle adopted, rabies would be no longer known in this country.

Some observations were made by Mr. BRITON RIVIÈRE, Dr. GEORGE HARLEY, and Mr. JOHN EVERETT MILLAIS.

Mr. CHAPLIN, in reply, said he understood that the object of Sir Henry Roscoe's deputation was to procure from the Government an order which should make muzzling compulsory and general throughout the country for a given and definite period of time. For his own part he was not sure that an order for muzzling, which should be compulsory and general through all the counties of England, was either desirable or necessary for the purpose. There were parts of England, Scotland, and Wales where there had been no cases of rabies for a great many years, and he thought they would simply be courting opposition by passing an order which was to be compulsory and universal without any exceptions whatsoever. Their object might be obtained by proclaiming certain districts, wherever there was the slightest possibility of the introduction of the disease from where it had existed for a very considerable time; and he was under the impression that that probably would be a better and more effective means of attaining their object than the proposal that they had made. The subject would be most carefully considered in all its bearings by the Board of Agriculture, and he hoped that it would be in their power to adopt measures which, sooner or later, would be thoroughly effectual in getting rid of this terrible disease, which had inflicted such suffering and unhappiness on many people.

The deputation then withdrew.

A new muzzling order extending the regulations at present in force, has been issued in the *London Gazette*, and will take effect from and after December 31st. It will apply, among other places, to districts in Cheshire, Essex, Hertford, Kent, Lancashire, Surrey, the West Riding, and to the whole metropolis and county of Middlesex.

[2] The Committee have consulted nearly all the available home literature on the subject. In addition to the usual standard books (Koch, etc.), textbooks, and journals, they have derived special advantage from (1) *Report of Departmental Committee*, 1888; (2) *Proceedings at Paris Congress*, 1888; (3) *Proceedings at Trial of Test-case in Glasgow*, 1889; (4) *Journal of Comparative Pathology and Therapeutics*, Edinburgh. They found it impossible to acknowledge each reference, as they should like to have done. They beg to acknowledge the kindness of Professor Horsley, Dr. Byrom Bramwell, Mr. Barker, Dr. Russell, Dr. Woodhead, Professor McFadyean, and Mr. McKay.

ASSOCIATION INTELLIGENCE.

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members, in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the office.

NOTICE OF QUARTERLY MEETINGS FOR 1890. ELECTION OF MEMBERS.

MEETINGS of the Council will be held on January 15th, April 16th, July 16th, and October 15th, 1890. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting, namely, December 25th, March 27th, June 25th, and September 4th, 1890.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No member can be elected by a

Branch Council unless his name has been inserted in the circular summoning the meeting at which he seeks election.

FRANCIS FOWKE, *General Secretary.*

NOTICES OF BRANCH MEETINGS intended for insertion in the JOURNAL of the current week should be forwarded, addressed to the Editor, so as to reach the office not later than mid-day Wednesday of that week.

BRANCH MEETINGS TO BE HELD.

GLASGOW AND WEST OF SCOTLAND BRANCH.—This Branch will meet on January 9th, 1890, at 4.30 P.M., in the Faculty Hall, 242, St. Vincent Street, Glasgow, to discuss the subjects of the abuse of medical charities and Dr. Rentoul's proposed Public Medical Service. The annual general meeting of the Branch will take place on January 23rd; but of this further intimation will be given.—A. NAPIER, Honorary Secretary.

METROPOLITAN COUNTIES BRANCH: WESTERN DISTRICT.—A meeting of the above District will be held in the Library of St. Mary's Hospital, Paddington, on Saturday, December 21st, at 8.30 P.M. The chair will be taken by Dr. Christie, C.I.E., in the unavoidable absence of the President. Dr. W. B. Cheadle will exhibit and give a brief demonstration of the following cases: A case of Exophthalmic Goître; Transposition of Viscera; Myxœdema; Cretinism; Rheumatic Nodules in Chorea and Heart Disease; Two Cases of Hepatic Ascites, in which recovery has taken place under repeated tappings and the administration of iodide of potassium. Mr. A. Q. Silcock, Surgeon to the Hospital, will give a brief address in Surgery, and will show cases of Acromegaly, Hyperostosis of Cranial Bones, Traumatic Meningocele, Frontal Exostosis, and others of surgical interest. He will also demonstrate specimens from a fatal case of Parasitism by Psorospermiæ in man. Mr. Crowle, F.R.C.S., will show pathological specimens.

STAFFORDSHIRE BRANCH.

THE first general meeting of the present session was held at the North Staffordshire Hotel, Stoke-on-Trent, on Thursday, November 28th; Mr. T. VINCENT JACKSON, President, in the chair. Twenty members were present.

The minutes of the last general meeting were read, approved, and signed.

Publication of Proceedings of Branch.—The PRESIDENT reminded the members of the Branch of a suggestion thrown out in his presidential address, that the proceedings of the Branch since its origin ought to be published. It was proposed by Mr. FOLKER, seconded by Mr. TAYLOR, and carried: "That the proceedings of this society for the past fourteen years be published, and that the following gentlemen be appointed as a committee to consider the best means of doing so, and of carrying such into effect, namely, the President (Mr. T. Vincent Jackson), Dr. Hind, Dr. McAldowie, and the General Secretary (Dr. Reid)."

New Members.—The following gentlemen were elected members of the Branch: Mr. A. S. Barling, North Stafford Infirmary, Stoke-on-Trent; Mr. D. W. M. Turpin, Thurvaston, Derby.

The scientific proceedings of the meeting will be found on p. 1399.

MIDLAND BRANCH: NOTTINGHAMSHIRE DISTRICT.

A MEETING of this division of the Midland Branch was held at the General Hospital, Nottingham, on December 10th.

Abuse of Hospital Out-patient Department.—The following resolutions were adopted: "That abuse of the medical charities in the town of Nottingham is known to exist." "That this division of the Midland Branch desires to join in the petition to the House of Lords to extend the scope of their inquiry, so as to include some of the chief provincial hospitals and dispensaries." "That this meeting is of opinion that the reform of the abuses existing in the local medical charities will be best met by the formation of a representative Committee to take into consideration the question, and to frame a scheme." "That Dr. Rentoul's scheme, if adopted, would be as liable to abuse as the system it proposes to replace." The meeting was confined to members of the Midland Branch. Steps are now being taken to bring the question of hospital abuse before the general body of the profession in Nottingham, with the view of forming a committee to co-operate with lay representatives of the different medical charities.

NORTH OF IRELAND BRANCH.

A SPECIAL meeting of this Branch was held in the Royal Hospital, Belfast, on Thursday, December 12th, the President (Dr. GRAY) in the chair.

New Members.—The following were elected members of the Branch: Dr. Tomb and Dr. Austin, Belfast; Dr. Davidson, Ballynafeigh, Belfast; and Dr. Nesbitt, Randalstown.

Dr. Rentoul's Resolutions.—It was decided unanimously to approve of Nos. 1 and 5 (which the members hope the Council and JOURNAL of the Association will help in every legitimate way to bring to a successful issue) and to disapprove of resolutions Nos. 2, 3, and 4.

Bovine and Animal Tuberculosis.—A report on this subject, together with a resolution passed by the Branch, will be found at page 1412.

WEST SOMERSET BRANCH.

A CLINICAL meeting of this Branch was held at the Taunton and Somerset Hospital on December 12th. Present, Mr. HUNT, President, in the chair, and twenty members.

Paper.—Mr. W. BURROUGH COSENS read notes of a case of tetanus, in which the patient had also developed facial paralysis within twenty-four hours after the accident, the symptoms of tetanus not setting in until twelve days after.

Cases.—Mr. C. RANDOLPH showed a patient with a pulsating tumour over the right sterno-clavicular articulation.—Mr. W. BURROUGH COSENS showed a patient suffering from glosso-pharyngeal paralysis, and also a patient with locomotor ataxy.

Specimens.—Fracture of Femur due to gunshot wound; Melanotic Sarcoma removed from abdominal wall; Epithelioma involving the whole Tongue, which had been removed during life.

SPECIAL CORRESPONDENCE.

PARIS.

The Fashionable Epidemic.—The Microbe of Erysipelas.—Biliary Fistula.—Cinchona Wine.—Exophthalmia.—A New Method of Treating Rectal Prolapsus.—Cholera in Persia.—General News

UNFORTUNATELY for us the Russians are as accurate in their pathological forecasts as the Americans in their meteorological. A few days ago we read in the *Temps* that the Muscovite doctors prophesied that the Russian epidemic of influenza would go the round of Europe. A day or two subsequently the *employés* of the Louvre were seized with it, the military school of St. Cyr followed suit, and the studies were suspended for a few days. The Polytechnique, a high-class military and engineering college, also suspended its lectures as the pupils were ill with influenza. There are few houses in Paris in which this epidemic has not inflicted two or three days of suffering on one or more of its inmates. Its precursory symptoms are now known, especially to medical men. A most frequent greeting is, "Bon jour! je suis pris, je serai au lit demain." No need to say what the illness will be; it is understood. A medical man, who has studied this short but severe illness on himself, recommends taking large doses of sulphate of quinine as soon as the first symptom shows itself, to eat and drink well, and take a great deal of exercise in the open, in order to burn off and eliminate by physiological function the noxious principle that works the mischief; this *traitement rationnel* has succeeded in several instances. Influenza symptoms are not uniform; in some cases there is intestinal pain and disturbance, which may present the form of dysentery. With children the muscular pain is frequently absent, and always less acute than with adults.

M. Leroy, of Lille, at a meeting of the Biological Society, described the results of his researches concerning old cultivations of the microbe of erysipelas. The fresh cultivations, which determine erysipelas when introduced into the ear of a rabbit, become exhausted in a few weeks and decay in the tubes in which they are placed. After four months the cultivation medium in these tubes becomes cloudy and assumes a rosy hue. At the end of a year the cultivation is again virulent, and when inoculated determines symptoms resembling those of erysipelas. M. Leroy raises the question whether these facts would not furnish the elements of a hypothesis which might explain recurrent erysipelas.

M. Dastre showed to the Society a dog presenting a complete biliary fistula. The animal is perfectly healthy, and has increased in weight since the operation.

The attempts hitherto made to modify the irritating action of cinchona on the intestinal mucous membrane by combining it with other substances have mostly given negative results. M. Secretan, a

Parisian chemist of note, has now discovered a preparation of cinchona in which its irritating and constipating action is neutralised. He has added to the quinine, administered in the form of wine, and rendered aromatic with the principles of bitter orange, the liquid extract of malt, which is the concentrated product of an infusion of malt, submitted to rapid evaporation at a temperature not exceeding 60°C., so that the diastasis which gives to malt all its digestive properties is preserved, and alcoholic fermentation is avoided. The different kinds of beer usually sold and improperly named extracts of malt are always obtained from infusions of malt, which have been submitted to alcoholic fermentation. These beers, though posessing nntritive properties, presented all the disadvantages of fermented drinks. M. Secretan's liquid extract of malt is therefore distinct from all these preparations, and its refreshing properties act as a corrective to the irritating action of quinine. His cinchona wine preserves all the qualities of similar preparations without their defects.

MM. Gilles de la Tourette and H. Cathelineau described before the Biological Society the results of their researches concerning fever in exophthalmia. They first ascertained that the urine is normal in Basedow's disease, without fever. During the febrile period they found that the urea, phosphoric acid, and urobilin, when examined with the spectroscope, presented the same characteristics as in normal urine. The urine was normal in three cases of exopthalmic goître, during an apyretic period of eight days. In a case of febrile goître (temperature varying from 38° C. to 39.2° C.), complicated with inflammation which might have explained the presence of fever, the urine remained the same as during the apyretic periods.

M. Verneuil, at the Société de Chirurgie, described a new method of treating rectal prolapsus, by attaching the adhesions of the posterior surface of the rectum to the corresponding portion of the pelvis. After reducing the intestine the portion of the anal orifice to be excised is determined. A triangular fragment is then traced by means of two transverse incisions passing through the posterior portion of the anal orifice, and two others passing from the extremities of the two first to the point of the coccyx. When the rectum is exposed four Florence horsehairs are introduced into its wall, and placed at intervals of $1\frac{1}{2}$ centimètre from each other. The intestine is raised by drawing all the threads towards the concave portion of the sacrum. In order to fix the intestine permanently the threads are drawn through the skin to the right and left of the wound, at 4 centimètres distant from the median line, with Emmet's needle. Thus four handles in the form of a U are contrived, which may be tightened at will. The fragment traced as above described is then detached at the base. The ano-coccygeal wound is closed by transverse sutures. A large drain is placed at the back of the rectum, in order to form a track which will sustain and increase the adhesions. The anal orifice is contracted by suture with Florence horsehair. M. Verneuil obtained good results, in a case which had lasted four months, with this method, which he names "posterior rectopexia." At the same meeting M. Delens recommended the following method in cases of voluminous prolapsus. He applies fuming nitric acid to the tumour, reduces and plugs the anus, and administers opium in order to prevent the occurrence of stools during at least eight days. M. Schwartz has obtained good results by making scores with the thermo-cautery on the projecting intestine, and pushing backwards the anus towards the coccyx, the old orifice being closed by perineorrhaphy. M. Segond considers that ablation should be practised in order to perform colopexia with success.

An official despatch of November 14th, dated from Teheran, announced the appearance of cholera at Maleyek, and also at Mosul since November 9th. The sanitary cordon has been established at the north of this locality. The hygienic council of Teheran has decided on establishing quarantine and a sanitary cordon round the capital.

A hospital is being built at Fontenay-sous-Bois for the communities of Vincennes, Montreuil, and Fontenay. The cost is estimated at 300,000 francs (£12,000). A sum of 100,000 francs (£4,000) has been subscribed towards the hospital by the General Council of the Department of the Seine. The establishment will contain 140 beds.

A curious case of prolonged sleep is reported from Alaincourt in a girl of 20, who, after several unusual nervous attacks and complete loss of consciousness, has fallen into an uneasy sleep which has lasted nine days. Sensibility, which was at first completely absent, has returned in the left side and in the arms and legs. At times she is motionless; at other moments she is shaken by convulsive moments, and strikes herself on the chest and head. She is nourished with broth and injections with peptone.

A new journal, edited by Dr. J. A. Fort, entitled *Surgical Review of Diseases of the Genito-urinal Organs*, is shortly to appear on the 1st and 15th of every month.

The tribunal of Rouen has decided that castor-oil, not being a pharmaceutical product, may be sold by grocers, but not in small doses as a medicine. This is a curious condition to make, but not more so than that exacted with regard to arsenic, which may be sold in barrels by druggists. Thus whole populations may be poisoned, as was lately the case in the Alpes Maritimes.

A municipal hospital for aged persons has just been inaugurated at Neuilly. M. Roux presided at the ceremony. The right wing of the first floor consists of the women's dormitory, containing twenty beds. The left wing is occupied by the men, and contains sixteen beds. The heating and lighting arrangements are excellent, but the other details are hardly consistent with the modern idea of hygiene.

VIENNA.

Cysticerci in the Eye.—The Thure-Brandt Method in Uterine Prolapse.—Diffuse Lipomatosis.—Treatment of Chronic Retention of Urine.—Phenacetin.

At a recent meeting of the Society of German Physicians, at Prague, Dr. Herrnheisser read a paper on Cysticerci in the Eye. In 1870 one case, and in 1873 two, of this disease had been observed in Professor Hasner's clinic. Recently, an analogous case had also come under observation in the same clinic. In the 1870 case there was a cysticercus between the lens and the iris of a man, 54 years old. Professor Hasner tried to perform extraction by means of a section through the cornea; iridectomy had also been performed, as the iris was prolapsed. During the operation the cysticercus fell to the bottom of the anterior chamber, and could not be extracted in spite of repeated attempts. The case ran an aseptic course. As to the cases of 1873, the cysticercus, on one occasion, was situated under the conjunctiva, and on another occasion in the vitreous. The case which had recently been observed in the clinic of Professor Sattler was that of a girl, aged 20 years. The disease had commenced a year before. A cysticercus was situated in the vitreous of the right eye. The patient admitted that she had eaten much raw meat. Only the movements of the hands could be seen at a distance of half a mètre; projection was quite uncertain. Whilst the patient was under observation, the movements of the animal, which were very lively, could be exactly studied. The changes produced in the eye consisted in opacity of the vitreous and detachment of the retina. On October 7th Professor Sattler performed extraction by equatorial section; the eye was illuminated by means of an ophthalmoscope, and the instruments which were introduced into the eye were thus controlled. The retina was punctured, and the cysticercus as well as the vesicle were removed with an iris pincette. There was no reaction, but cataract supervened, probably owing to injury to the lens during the repeated manipulations with the instruments for extraction.

Dr. Fellner brought before the same Society a case of uterine and vaginal prolapse, which he had cured by Thure-Brandt's method. The prolapse had commenced in 1884, after the birth of the patient's first child, and in April, 1885, she had undergone anterior and posterior colporrhaphy in Professor Weinlechner's wards, after which she remained well till the birth of a second child in December, 1886. As the prolapse recurred after this event, perineorhaphy was performed in July, 1888, and colporrhaphy in August, 1888, in the same clinic. No permanent cure, however, resulted, and Professor Weinlechner sent the patient to Dr. Fellner, that the Thure-Brandt method might be tried. At that time, March 3rd, 1889, the following conditions were present. In the recumbent position, a considerable cystocele could be seen, and when she bore down a tumour as large as a pear appeared at the entrance of the vagina; it was composed of the two inverted walls of the vagina, and also contained the descended uterus. The front wall of the tumour measured 22 centimètres in length, and the posterior 12 centimètres. The uterine cavity was 6 centimètres deep. The treatment was extremely difficult, owing to the advanced pathological changes. The walls of the vagina, the ligamentous apparatus, and the muscles of the floor of the pelvis were exceedingly thin, flaccid, and stretched. Moreover, there were the cicatrices of the colporrhaphy, which drew the vagina downwards. By con-

tinued massage the author had succeeded in strengthening the vagina, the ligaments, and the muscles of the floor of the pelvis, and re-establishing their normal contractility and elasticity so far that the prolapse was completely cured. The patient could walk for many hours; she was able to go upstairs and exert abdominal pressure without any return of prolapse. This is the first case in which the Thure-Brandt method was used with success after previous operations.

Prof. Billroth brought forward a woman who was the subject of diffuse lipomatosis. There was an exceedingly large development of fat over the arms, the shoulders, and the abdomen; the forearms, on the other hand, being rather thin. The lecturer also mentioned the circumscribed lipomata, which were distinguished from the diffused ones by the fact that they were encapsuled. Diffuse lipoma was not rarely combined with other deformities, such as syndactyly and polydactyly, and also with congenital anomalies.

In a paper read before the Vienna Medical College, Dr. Englisch said that in slight cases of retention of urine the use of warm baths was frequently sufficient to produce better contraction of the bladder, and in the case of great irritation, cold poultices could be applied to the perineum. When this was insufficient, catheterism should be immediately resorted to. Attention had to be paid to the fact that, frequently after complete evacuation of the bladder, polyuria came on. In order to prevent this, only from 200 to 300 cubic centimètres of urine should be withdrawn, and this quantity should be replaced by the injection of a 4 per cent. solution of boracic acid. After some hours a certain amount of urine was again drawn off and replaced by the same solution. The effect of this was that the hyperæmia of the mucous membrane of the bladder was not so intense after emptying the viscus. In the case of painful tenesmus, narcotics had to be resorted to. If vesical catarrh coexisted, the bladder should be frequently washed with an antiseptic solution, phosphorus and muriatic acid being administered at the same time. Later on, catheterisation once a day was sufficient.

In a recent number of the *Orvosi Hetilap*, Dr. Akos Horvath, of Buda-Pesth, gives some particulars as to experiments with phenacetin which he carried out in the clinic of Professor von Koranyi. He had tried the drug as an antipyretic, an anti-neuralgic, and an anti-rheumatic. The patients on whom it was tried as an antipyretic were in most cases adults, and the drug was administered when the temperature reached or exceeded 39° C. At the outset phenacetin was used in doses of from 0.125 to 0.25 grammes, and increased as far as to 1.0 gramme. More than 3 grammes a day were not administered in the following 25 cases: typhoid fever, 11 cases; pulmonary phthisis, 10; pulmonary and laryngeal phthisis, 1; pulmonary phthisis and chronic myelitis, 1; caries of the vertebral column and compressive myelitis, 1; follicular tonsillitis, 1. After from 0.25 to 0.50 grammes the temperature fell in an hour from 0.3 to 0.5 C.; after from three to four hours it fell, on an average, from 1.5 to 2.5 C. Occasionally even the administration of 0.125 gramme was followed by complete remission, and even intermission. This was the case in a patient suffering from typhoid fever, and in another with pulmonary phthisis. On another occasion even a gramme had no effect. No disagreeable after-effect was noticed, except increased perspiration in a phthisical patient. On two occasions a rash was noticed, which disappeared after the drug had been discontinued. In 3 cases phenacetin was used as an anti-rheumatic. In 1 it proved very useful; 3 grammes were given in three hours, and the pain entirely disappeared; the temperature became normal. In 2 cases of chronic polyarthritis in which salicylate of sodium, salol, and antipyrin had no effect whatever, phenacetin proved beneficial. As an antineuralgic it was given in doses of from 0.5 to 1 and 3 grammes a day in the following 12 cases: tabes dorsalis, 4; chronic myelitis, 2; sciatica, 1; herpes zoster, 1; migraine, 2; neuralgia of the fifth nerve, 1; nephrolithiasis, 1. The effect was *nil* in the case of nephrolithiasis, where even 3 grammes gave no relief. As to the "lightning" pains in the tabes cases, phenacetin frequently removed, and in most cases mitigated them. This was also true of chronic myelitis. In the case of herpes zoster the pains invariably disappeared after doses of from 0.5 to 1 gramme. In 2 cases of migraine phenacetin had an excellent effect.

A TELEGRAM from Teneriffe, under date of December 13th, states that the report circulated in Europe that scarlet fever was prevalent in the Canary Islands is wholly unfounded, the public health being excellent.

BIRMINGHAM.

Testimonial to Mr. Cuthbert, of Selly Oak.—Action by the Apothecaries' Society.—Action under the Registration Act.

MR. CUTHBERT, of Selly Oak, who was recently the victim of an unfounded charge of criminal abortion, has just had a testimonial presented to him which will help to compensate him for his annoyand and expenditure. It consisted of a cheque for 60 guineas and an illuminated address, the latter being signed by a number of the most esteemed residents in the district. Mr. Cuthbert unfortunately was not a member of the Medical Defence Union, so that body was unable to take up his case; but such an instance is only another strong reminder to those who are still without the pale of the Union to lose no time in joining it.

At the Birmingham County Court on Monday the Society of Apothecaries sued a man named Alfred Brown for £20, the penalty under the Apothecaries' Act for illegally acting as an apothecary, for attending and advising patients, and furnishing medicine. The defendant was liable to the same penalty in four cases, but only one was pressed. It appears that Brown had signed a confession admitting that he was liable to the penalty and offering to pay £1 weekly, but the prosecuting solicitor pressed for an order for immediate payment on the ground that the defendant would remove his goods out of reach, and this was granted. Two other similar cases came up for hearing, but they were adjourned in the absence of a principal witness.

Mr. J. S. Gettings, of Brownhills, was last week charged with unlawfully and wilfully making a false certificate and declaration in and for the purposes of the Births and Deaths Registration Act, 1874. It was alleged that the deceased had been ill for a long time, and that he was last seen by Dr. Gettings on May 12th, 1888, and that subsequently Dr. Gettings's assistant attended the patient, who died on July 17th, 1889, the certificate of death being signed by Dr. Gettings. The magistrates considered that the signing was "negligent and intentional, and therefore wilful," and they were sorry they had to impose a fine of 20s.

CORRESPONDENCE.

THE PRACTICAL ELEMENT IN MEDICAL EDUCATION.

SIR,—In the JOURNAL of December 14th you publish an interesting letter from Mr. N. C. Macnamara on the above subject, in the concluding paragraph of which the following sentence occurs:

"Few who are competent to give an opinion on the subject will be disposed to deny that education, so far as it is applied to the training of the intellectual faculties of the present day, depends largely on the nature of our examination. We may prolong our medical curriculum to five, or any number of years, to the great advantage, doubtless, of our teachers, but not of our students, unless, at the end of their career, they are obliged to pass through thorough and efficient tests of their fitness to commence the work of their profession."

With every word of this I agree; but I regret that Mr. Macnamara, who has given such attention to the subject, should confine himself solely to the task of impressing on the profession the necessity of a "thorough and efficient" examination at the end of the student's career, for, in my opinion, the greatest blot in our present system of medical education consists in the attempt to make the final examination, if not the sole, certainly the one great and chief, test of the fitness of the student to become a practitioner.

That medical education at the present time depends for its success on the efficiency of our examination is a fact so patent that it cannot be denied; but I contend that an examination cannot by any possible means be rendered thoroughly efficient if a large number of subjects be crowded into it; and to avoid this crowding there exists but one remedy, namely, that there should be a "thorough and efficient" examination at short and fixed intervals, after each of which some one subject should be dropped, or at least a part of it; by this means, the student having mastered certain subjects, and having proved his fitness to do so by examination, passes on to a higher class, and studies subjects bearing more directly on the practice of his profession, till at his final examination it should be necessary to test his knowledge in medicine, surgery, and midwifery only.

Most, if not all, of the licensing bodies now divide the examination into two parts, termed the First and Second Professional Examination, but in at least some of the bodies these two examinations may be passed in such close proximity that they virtually become one examination only, really analogous to the first and second day's examination common formerly.

The committee over which Mr. Macnamara presided evidently felt the necessity of having more frequent examinations, for, as he points out, they recommended "that provision should be made for compelling students, before commencing their second year, to pass an examination in their first year's studies;" but this recommendation was unfortunately of little value, because the committee recommended that the examination "be conducted by the recognised school authorities," who would in many cases be inefficient.

It would be interesting to know why the committee which deemed it essential that an examination should be passed at the end of the first year did not recommend that students should be compelled to pass one at the end of their second and third years also, unless, indeed, they were also thinking of a curriculum extending over but three years, and assumed that all the licensing bodies would require the "first half" to be passed at the end of the second year, which they do not do. In fine, while fully admitting the value of the work done by Mr. Macnamara's committee, I affirm that its recommendations do not meet the requirements of the present day, and need amendment.

It is generally known that the Education Committee of the General Medical Council has recommended that the study required to obtain a registrable qualification be, for the future, five years. A recommendation which I heartily approve of, provided, however, that a "thorough and efficient" examination be held at the end of each year by the licensing bodies, for if this be not insisted on the additional year in many, I fear the majority of, cases will be wasted, and though the teachers, as pointed out by Mr. Macnamara, will be benefited the students will be injured.

Unfortunately, this important question is likely to be left to the discretion of the licensing bodies themselves, some of whom are too conservative to initiate so radical a change, and while some may fear that a compulsory annual examination would have the effect of driving away candidates, one thing is certain till it becomes the rule, the adding of new subjects to the curriculum, the extension of the period of study, the increasing the number of examinations, etc., will not be improvements, but will only mean the burthening of the memory of the students with a smattering of numerous subjects, pumped in for the occasion by some clever crammer, and to be forgotten as fast as possible.

It is to the credit of the Colleges of Physicians and Surgeons of Ireland that, from the moment the conjoint scheme came into action, they adopted and have most conscientiously carried out the system of compulsory annual examination, and no student can obtain the licences of these Colleges without passing an examination in each of the four years of his student career, nor can he proceed with studies or attend the lectures required for the second year till he has passed the first professional examination, nor those required for the third or fourth year till he has passed the second and third professional examinations respectively.

I fear some time must elapse before this system will be universally adopted, but sooner or later it will be forced on all the licensing bodies, and, in my opinion, the lengthening the period of study, the adding on of additional subjects, and the reduction of the number of lectures are all matters of secondary importance compared to it.—I am, etc., LOMBE ATTHILL, M.D.

Merrion Square, December 16th.

THE SPREAD OF LEPROSY.

SIR,—Sir W. J. Moore, K.C.I.E., late Surgeon-General with the Government of Bombay, in his letter of December 14th indignantly repudiates the idea that he has publicly pronounced the danger of leprosy becoming prevalent in this country to be *nil*. Now that statement he declares would be presumptuous indeed; ill would it become Sir W. J. Moore, K.C.I.E., "to enunciate *dicta ex cathedrâ*." At the same time the late Surgeon-General with the Government of Bombay feels bound to set forth that the danger "is infinitesimal." I called Sir W. J. Moore "learned," and well is it that I did so, for he is able to distinguish accurately between danger that is *nil* and danger that is *infinitesimal*. That is more than any other man on earth can do.

Perhaps, however, Sir W. J. Moore, with that marked humility which is ever found with the truly great, may suggest that it will be well to have before us a clear definition of the word "infinitesimal." Agreed.

"Infinitesimal: An infinitely small quantity; one which is so small as to be incomparable with any finite quantity whatever, or which is less than any assignable quantity."

The witty Irishman might not now be able to see any marked difference between "*nil*" and "infinitesimal;" and if pressed for his decision he might, in his unbiassed simplicity, say: "It is hard to decide, but if there is any difference they are both alike.'

I will say no more than thank my Irish friend for so kindly supporting the Rev. H. P. Wright, M.A., when called to account by Sir W. J. Moore, K.C.I.E.

December 16th. H. P. WRIGHT, M.A., Rector of Greatham.

THE EPIDEMIC OF INFLUENZA.

SIR,—In the *Pall Mall Gazette* of last week a statement appeared alleging that the "Russian influenza" had appeared in Bedford Park. A distinguished physician was said to be the source of the information. Like most general practitioners busy both with professional and public work, writing to the press especially on medical topics is not a congenial task. An energetic reporter from the *Standard* waited on me asking for a statement on the subject, which was of importance locally and generally, and I gave him information which has excited some comment.

For some ten years past I have seen the disappearance in great measure of the common cold, with the thick purulent secretion, and the prevalence of a type distinctly epidemic and contagious in a marked manner The symptoms vary somewhat in individuals, but, generally speaking, the attack commences by general muscular aching. Shivering is present, though the temperature may be 1° to 3° above the normal. More or less frontal headache, with a feeling of great prostration, is complained of. During the first night the skin is described as burning hot, though the actual temperature seldom exceeds 100°. On the second day there may be running from the eyes and nose of an acrid watery fluid. But this year less of the nasal symptoms have been present. The usual complaint is of soreness of throat, pain in the submaxillary region and down the course of the recurrent laryngeal nerve; on the second night profuse perspiration sets in, and in the morning of the third day the aching pains have left, but a most irritating laryngeal cough is present. This is the real feature of the epidemic as I have found it, and no remedy, local or general, seems to relieve it.

In many cases what is described as mumps occurs. It is not mumps, but an enlargement of both tonsils outwardly, never inwardly, at the same time causing the sterno-mastoids to bulge. This complication is an angeioleucitis, is most obstinate, and often remains for four to six weeks, and is accompanied by unusual prostration. Sometimes only groups of the smaller lymphatics of the neck are affected. In other cases the laryngeal symptoms are latent at first, and severe abdominal pains, with or without diarrhœa, generally the latter, are observed. But whatever the variation in the onset of the disease, the itching laryngeal cough is generally present. This cough is very peculiar. No *râles* or whistling are heard on auscultation over the lung area, but in the morning a loud *râle* is obvious in the trachea. The cough is always bad on lying down in bed for one to three hours, also on awaking in the morning. To go out on a damp, foggy day seems to have no bad effect, but a warm bedroom is certain to start the cough, and once started on it goes.

This influenza is not confined to transitions of a sudden character in the weather. It occurs in the dry north-easterly cold winds of February and March quite as much as in the capricious autumn and early winter temperatures.

In this and the surrounding parishes few houses have escaped an attack. It attacks the so-called middle and upper classes most severely. As to its extremely infectious nature I have no shadow of a doubt, and I say this while being fully aware of the risks of fallacies, and of reasoning from imperfect or ill-observed data. I believe we have here, as elsewhere, ever endemic, a mild form of the old influenza. The accounts of the Russian outbreak are imperfect, but I think it is only a severe form of the ordinary type.

This is no unusual occurrence in other diseases of an epidemic character. I have had more severe cases this than in any former year.

As to treatment, many patients fight it out and go on with work as usual. In children the collapse at first is such that they lie listless in the mother's or nurse's arms. They only want cold water to drink, and nothing else. With children I have seen a little more wheezing between their shoulders than in adults, where it is rare.

When the patient will stay indoors, I give at once, in adults, gr. xx of salicylate of soda, two drops of tincture of aconite, and ten grains of antipyrin, not to lower temperature, but to relieve the muscle pains. This combination produces the perspiration during the first night, and materially shortens this stage. I let adults go out on the third day. A free saline aperient gives great relief. In children, after the heavy miserable stage is past, say on the fourth day, I give large doses of syrup of iodide of iron, which is very effective. For adults, iron in forty minim doses of tinct. ferri. perch., and may I mention that I find very large doses of this tincture keep the bowels well open, while small doses constipate? If there is much depression, syrup of bromide of quinine is often useful. As to the cough, sprays and inhalations of every sort I find generally unsuccessful in giving ease. Opiates give little relief, and when they do, so upset the system that, bad though it is, patients "prefer the cough." I can only advise patients to try not to cough—to breathe through the blanket and keep still; to be in the air, however bad or foggy, as much as possible; and keep out of warm rooms, however comfortable. This advice does not extend to children, who show more of the bronchial symptoms, but it does where only the laryngeal cough is present. Saline aperients are most useful at all stages.

One great help is to cover the head and back of the neck, if indoors, and always at night, with a warm shawl, fastened under the chin. More people catch cold through the back of the neck than through any other part of the body. Instinct prompts us to put up our collar when chilly. I conclude that influenza is an endemic in and about London, and that it is the same disease which now prevails on the Continent in a more severe type. It is infectious if it enters a house; few, if any, inmates escape. The person who brings it can generally be traced. It has increased in severity, in my experience, during the past ten years, and this year's epidemic is the most severe I have seen.—I am, etc.,

Chiswick, W., December 17th. W. GORDON HOGG, M.D.

SIR,—An epidemic of influenza is so close upon us, that there is little chance we shall escape. At what point of the United Kingdom it will make its chief attack we cannot tell, but wherever it may be we have reason to expect that a large number of persons will be stricken within a very short space of time, that the most acute and painful symptoms will occur within the first few days, and that, if there are any dangerous complications, they will come afterwards, and will be chiefly due to neglect of appropriate treatment in the acute stage. Such was what generally occurred in the epidemic of 1847, of which I have a vivid recollection, as it happened in the early dawn of my professional career, and excited my special interest. Fortunately, the influenza now raging on the Continent is of a much less serious type than that of 1847, the acute stage being shorter, and the tendency to death from lung complications and from exhaustion almost *nil*. But it does not follow that it will be just the same in our climate. It is better, therefore, to be forearmed.

Whenever a sharp, short, sudden, and widespread epidemic seizes upon a population, it is of the utmost importance to have ready a "cut and dried" routine plan of treatment carefully designed for general use, which can be put in force at once, leaving it for the doctor in each case to modify it afterwards if necessary. For instance, how often his first summons and his first visit will be hasty, not giving him time to think out an original plan of treatment! I venture, therefore, to ask you to publish the following plain directions, which I have designed and written out for several medical friends and patients, based upon my experience in 1847, modified by subsequent events, and by the special characteristics of the present epidemic.

Directions.—True influenza sets in with severe frontal headache, distressing pains in the back and limbs, sense of prostration, and quickly rising fever. These symptoms are probably due to the inhalation by the nostrils of a highly irritating infectious virus, which sets up inflammation in the lining of the post-nasal and frontal cells, which may extend lower down the respiratory tract if not quashed at once.

1. It is best to go to bed at once, and take hot gruel, hot tea, and beef-tea for diet during the more acute state, resuming ordinary solid meals as soon as practicable.

2. The bowels should be kept well open (but not much purged) by any aperient known to act most kindly with the patient.

3. The use of the following inhalation should be begun immediately:—℞ Creasoti, ℥j; olei caryoph., ℥j; olei eucalypt. glob., ℥j; tr. camph. co. ad ℥ij. Shake the bottle, and put one teaspoonful into a four-pound jam jar, nearly fill it with boiling water, wait two minutes to let the hottest steam pass off, and then hold the face well over the jar, and throw a large light handkerchief over the head and the jar; shut the eyes, and let the forehead and face be thoroughly exposed to the steam, which should be drawn up the nostrils and blown out at the mouth. Continue this as long as steam lasts (about fifteen minutes), and repeat every two hours.

4. In the interim, gargle occasionally with hot water, and let all secretions from the nose and throat be ejected.

5. Soon after the first inhalation, begin the following restorative febrifuge:—℞ sp. camphoræ, ℥j; sp. ætheris nitr., ℥j; tr. quin. ammon. ad ℥ij. Ft. Guttæ. One teaspoonful stirred in a claret glass of water every three hours.

6. If the temperature rises above 101° F., take gr. v of antifebrin in two tablespoonfuls of beef-tea, and repeat every hour till the temperature falls to 100°, continuing the inhalations and drops as before.

7. If pain or oppression at the chest sets in, apply hot poultices.

No danger need be apprehended if the above directions are followed in good time. The doses ordered are for persons over 12 years of age, and must, of course, be reduced for those who are younger under medical orders.—I am, etc.,

London, December 16th. HORACE DOBELL, M.D.

RETINITIS PIGMENTOSA.

SIR,—In an interesting lecture on "Some Forms of Retinal Pigmentation," which appeared in the JOURNAL of December 14th, Mr. Adams Frost appears to me to give the impression that the nature of the disease generally known as retinitis pigmentosa is less understood than is in reality the case. In point of fact, it is only the cause of the disease which so far has received no satisfactory explanation. But to how many other diseases does this not apply as well?

I am quoted as having used somewhat ambiguous language with reference to the "value that is to be attributed to atrophy of the pigment layers as a symptom of this disease." I must confess that the quotations given rather bear out this statement. Indeed, the account which I have given in the publication referred to is perhaps not altogether as explicit as it might have been, although other remarks, both in connection with the differential diagnosis between choroiditis with subsequent retinal pigmentation and true retinitis pigmentosa, and with the description given of the latter, very much modify the picture which the passages quoted by Mr. Frost present.

Mr. Frost considers that the "term retinitis pigmentosa tends to exalt the one factor of the disease at the expense of the other." From this it is evident that he recognises that the pigmentation is not the factor of primary importance in the disease. He does not, however, clearly point out what importance is to be ascribed to it, and he holds some views in connection with the appearances presented at different stages of the disease which are not consistent as it appears to me with our knowledge of its pathology.

Two circumstances sufficiently demonstrate the subordinate significance of the pigmentation: 1. That it only makes its appearance after the disease has advanced to a certain stage, and indeed may be permanently absent; and 2, That the degree of the blindness produced cannot be inferred from the extent of pigmentation. On the other hand, the pigment is only met with in situations where the sclerosis of the retinal connective tissue, the essential factor in the disease, has taken place. Yet there may be a sclerosis in parts of the retina where no abnormal pigmentation or depigmentation is visible. This is the case mostly in the more central portions of the retina. The process of sclerosis may spread, and indeed most frequently does appear to spread slowly from periphery to centre, so that the absence of pigmentation at the centre is often merely owing to the less serious degree of the

alteration of the connective tissue. In accordance with this, the central vision is relatively greatly better than the peripheral. But the presence of very contracted vessels and of great amblyopia may exist with only peripheral pigmentation, sometimes scanty but often abundant.

The pigment has been proved to come, and to come only, from that contained in the layer of hexagonal retinal pigment cells, in which, as one part of the degenerative process, a depigmentation takes place. But there is no constant relation between this depigmentation and the amount of abnormal pigmentary deposition met with. This is very evident from the great differences seen with the ophthalmoscope. The depigmentation is merely an atrophy of the retinal pigment, the abnormal deposition an attraction of the hyperplastic connective tissue for the pigment, which, probably to some extent, proliferates (though this is not certain) in the new situation. The two processes are, to a great extent, independent though primarily occasioned by the same cause—the sclerosis by which, too, the nerve elements—but not, or to a less extent, the nerve fibres—are destroyed. What it is that gives rise to the differences in the extent to which both pigmentation and depigmentation are met with in any case is, it must be admitted, not always clear, but certain it is that both have a tendency to become more marked as time goes on. Here it is that I would join issue with Mr. Frost. He says: "I do not think sufficient stress has been laid by writers upon the fact that as the disease progresses the affected area becomes more extensive but no proportionate increase takes place in the amount of pigment in the area of the fundus first affected." This is certainly not correct; up to a certain point, at all events, an increase does take place in the pigmentation of the area affected. Again, Mr. Frost gives it as his impression—not, however, as his positive opinion—"that the pigmentation diminishes in the later stages of the disease." Whether or not a disappearance of the pigment deposited in the retina ever does take place it is certain that the rule is for the amount of pigmentation to increase instead of to diminish with the duration of the disease. The great variety in the extent of the pigmentation to be met with in different cases, taken along with the comparative infrequency of retinitis pigmentosa altogether—from over 120,000 recorded hospital cases in this country the proportion comes to be about 1 in 1,300—make it possible for one observer to meet with so many cases in old people in which the amount of deposited pigment is slight that it is easy to get such an impression as that which Mr. Frost has received and which, when compared with the experience of others, is found to be misleading.

Mr. Frost draws attention to the difficulty of distinguishing between some cases of primary retinal sclerosis with pigmentation, and pigmentation of the retina which is secondary to choroiditis. This is a difficulty which all ophthalmic surgeons must some time or other experience, especially those who are called upon to pronounce a decided opinion for the benefit of their students. I do not suppose that anyone would assert that the differentiation is always possible. Yet it is very seldom there can be any doubt. Some cases of retinitis pigmentosa are atypical with respect to the pigmentation, which, instead of being in the shape of more or less closely-placed or interlaced one-corpuscle-shaped patches following the course of the blood vessels and capillaries, is in the form of irregular, more or less round, generally small, masses distributed without any definite arrangement in the deeper parts of the retina. The only difference in the pathology of those cases is that the sclerosis and imbibition of pigment is more confined to the connective tissue framework of the retina and less marked in the perivascular connective tissue than is mostly characteristic of the process. In other respects, and especially in the absence of any visible choroidal changes, there is no reason why such cases should, except in very rare instances, be mistaken for later stages of choroidal inflammations.—I am, etc.,

GEORGE A. BERRY, Ophthalmic Surgeon,
December 17th. Edinburgh Royal Infirmary.

SHIP SANITATION.

SIR,—An editorial note in the leading Liverpool daily nautical newspaper, referring to your article upon this subject in the JOURNAL of November 23rd, says: "We gather that the greatest fault is in matters of detail connected with hospital accommodation;" and further on: "Our contemporary takes as its text the publication of Dr. Leet, of Bootle, which we recently reviewed in these columns, and we then expressed the opinion that the Atlantic companies would do well to controvert statements which might do harm. Without attributing anything in the nature of *mala fides* to Dr. Leet, his publication is calculated to have a bad effect on that yearly increasing class of passengers—namely, those who travel for health; and inferences, backed up by the weight of our contemporary, are likely to influence this class of traffic." It appears, therefore, desirable to submit for the information of the profession a few extracts from my official reports furnished to the managers of an Atlantic steamship company upon this subject of ships' hospitals.

SANITARY REPORT FOR JULY VOYAGE.

Steamship ———. The large hospital (steerage main deck) has no ventilator; boarded up to roof all round; door altered from front to side wall. How can a patient with an injured leg be carried in the horizontal position into it? The purser, against my earnest advice, occupied, during the last three years nearly, this hospital (when not required for the sick) in order to let his cabin. In consequence, the vitiated atmosphere has damaged his health by blood poisoning, etc.....The after-deck hospital has been taken away. How can we accommodate a male and female infectious case at the same time?

SANITARY REPORT FOR OCTOBER VOYAGE.

Outward Passage.—October 11th. Forward hospital on main deck was taken down at Queenstown, the space being required for mails, etc.

October 12th. Fracture case; single steerage male passenger. No forward hospital; obliged to turn the stewardesses out of the large after-hospital for his admission, the small after-hospital being occupied with steward's utensils used in the steerage, there being no cupboards in the steerage.

October 16th. Case of measles amongst the "sisters" in the intermediate. Removed the young girl at once to forward-deck hospital; absolutely necessary to isolate her away from main deck crowded with 1,082 passengers, and stormy weather with ventilators all shut down; obliged to carry her along the open deck in rain and spray. Why was the after-deck hospital removed? (*vide* letter of July, 1886.)

October 17th. Measles case complains of sea getting through forward port and wetting her bed, and the deck of this hospital is floating with water at pump end. She also says she cannot sleep with the "pump going continually through the hospital walls." The intermediate stewardess cheerfully visits frequently with food, etc., regardless of the seas and rain along the decks.

Homeward Passage.—October 22nd. R. B., steerage passenger, drunk and incapable; may fall and break his leg, so removed him to deck hospital, the "refrigerator man," M., having to turn out of it and sleep in after small steerage hospital with A. (head steerage steward). No other available accommodation. M. complained to purser of these frequent "shifts," and it is much to be regretted that no berth is allotted to this important official..... The purser, usually so pleasant and helpful to me, rebuked me severely for turning the refrigerator man (M.) out of the hospital without getting his permission (he made it a stringent rule to come and ask his leave when I required this hospital for a sick case). But there was not a moment to lose; the case was urgent. The purser got so angry, and said "he would not sail again in the ship with me."..... How urgent is the demand that the hospitals should be under the entire control of the surgeon!

It was my last voyage in that company; the managers never acknowledged any of my sanitary reports. I wrote only one sanitary letter in the first three years of my service in that company —I am, etc.,

C. H. LEET, F.R.C.S.

Bootle, December 2nd.

ELECTROLYSIS IN URETHRAL STRICTURE.

SIR,—Having during the past few years taken much interest in the electrolytic treatment of stricture and other lesions of the urethra, I much regret that I was prevented being present at the meeting of the Medical Society the other evening when Mr. Bruce Clarke read his paper on this subject. I shall, therefore, be much obliged if you can find room for the following brief remarks.

For the successful carrying out of this treatment much time and patience are necessary. The few failures I have seen have really been due to impatience. When, in a sitting, no progress is apparent after a few minutes, an increased current is turned on, and considerable force used to get the electrode through. Can one be surprised if, under these circumstances, a false passage is made, hæmorrhage and urinary fever ensue, and the treatment is cast aside as worthless?

Experience has taught me to limit this method to strictures of the deep urethra, and in these, of whatever variety, it is almost always successful. When I say successful, I mean that the same result is attained as when an internal urethrotomy has been performed, namely, the lumen of the stricture has probably been enlarged to 22 Fr., and for the maintenance of which the passage of a bougie at stated intervals is absolutely necessary. I have not the same proportion of cures to record which Mr. Bruce Clarke claims to have obtained, for in only one of my cases has an absolute cure resulted, by which I mean that no tendency to recontraction remains, although all instrumentation has been given up for, say, six months. Mr. Clarke says that, "Of fifty cases, twenty-three were known to be well after periods varying from $1\frac{1}{2}$ to 3 years." What does he mean to imply by "well?" If he means that such a one is restored to comfortable micturition, and can maintain this state by passing his bougie at intervals, I can well believe him; but this, of course is very different from

what one usually understands as being well. I have almost entirely limited electrolysis to the treatment of resilient and severe cases of stricture, using it as a substitute for urethrotomy. In this way I have during the past year treated, amongst others, two medical men, both of whom are loud in its praise, and have unbounded confidence in it. In this respect I have been more fortunate than my colleague Mr. Reginald Harrison (*vide* his remarks on the above paper).

It is, I think, an important point in cases of multiple stricture, and one which I always endeavour to carry out, namely, to deal with those in the penile urethra, either by cutting or dilatation, before applying the electrode to the deep urethra. One is often surprised to find how much benefit has occurred to a deep-seated stricture after free division of a meatal or other anterior one, thus clearly demonstrating its, at all events, partly spasmodic character, a point on which much stress is laid by Otis. To this element of spasm, the good effect of electroylsis is no doubt greatly due.

In the *Medical Press* of April 11th, 1888, I published a paper on this subject, and subsequent experience has only confirmed the good opinion I then expressed of it when limited to subpubic strictures.

Before closing these remarks, I would add that this form of treatment is of much benefit in many cases of perineal pain and other urethral neuroses. I am at the present time treating a gentleman the subject of stricture, for which he has twice undergone internal urethrotomy, in whom the passage of a bougie is always followed by much genital excitement, and which so annoys him that he has often been tempted to neglect treatment. Since undergoing electrolysis (he has had nine or ten sittings) he is no longer troubled in this way, and his stricture has been dilated from No. 12 to No. 24, French gauge.—I am, etc.,

Wimpole Street, W. F. SWINFORD EDWARDS.

LORETA'S OPERATION.

SIR,—In the JOURNAL of December 14th, allusion is made by Mr. Bond in his paper on A Case of Loreta's Operation to my case, which was the first recorded in this country. For the benefit of your readers, I am pleased to state that it is just upon four years since I performed the operation, and my patient is still in perfect health, showing no signs of any pyloric recontraction.—I am, etc.,

ROBERT HAGYARD.

Hull, December 15th.

MEDICO-LEGAL AND MEDICO-ETHICAL.

LEESON *v.* GENERAL COUNCIL OF MEDICAL EDUCATION AND REGISTRATION AND MARSHALL.

THIS action, which came before Mr. Justice North in the High Court of Justice, Chancery Division, on Friday, December 13th, was a motion on the part of Mr. Joseph Frederick Leeson, a physician, to restrain the General Council of Medical Education and Registration from removing his name from the *Medical Register* until the trial of the action, and from publishing resolutions passed by them on November 28th.[1]

After some observations from counsel on either side, Mr. Justice North, on the question of the construction of the letter formulating the charge against Mr. Leeson, which he observed had not been very happily expressed, came to the conclusion that the plain meaning of the charge was that Mr. Leeson had been acting as cover for Mr. Harness, not merely as a medical electrician, but as a person acting as a registered practitioner; and so it had been understood and acted upon by all persons who had anything to do with the inquiry. Had it been otherwise it would have been in his power, and would have been his duty, to interfere. It being, however, an inquiry as to whether Mr. Leeson had acted as a cover for an unqualified person to act as a registered practitioner, it was a matter in which, in his Lordship's opinion, the Medical Council were alone the judges, and which he ought not and could not judge of subject to their acting regularly and *bonâ fide*. Upon this part of the case it was said that a standing order or rule had been made on the very day of the inquiry for the mode of conducting such inquiries, and at first sight that did look strange; but on looking at what was actually done he was convinced that the rules were only what ought to have been made, and the inquiry would have been conducted in the same way if the rules had not been made. Another matter of complaint dealt with by his Lordship was that the mode of conducting the inquiry laid down by the Council's standing orders had been departed from by allowing the solicitor of the Medical Defence Union to take it up at a certain point. That, his Lordship thought, was within their power and was not prejudicial or unfair to the person accused. Another point taken on the part of the applicant was that certain matters had been before the Council in the inquiry that were not evidence. The Council, he pointed out, were not in a position to administer oaths, and could not be guided only by what would be strict evidence in a court of law. He did not consider that the proceedings were in any way invalidated by such a cause as that. There was another point on which he had some hesitation, it being a point of law as to whether, the parties having a right to have it decided at the hearing, he ought not to postpone it, and there was a question for the trial whether the injunction ought not to go; but being satisfied, as he felt, that on other grounds there was no case for an injunction, he took upon himself the decision of what was a point of law at this stage. The point was whether the judicial proceedings of the Council were invalidated by reason of two members out of some thirty who sat on the investigation being interested parties. If they were interested, it was clear law that the proceedings would be invalidated; but was it necessary that their interest should be a pecuniary interest for that result to follow? In this case the two members of the Council were subscribers to the Medical Defence Union of 10s. a year, and were under a guarantee to that society, the society being, in fact, the prosecutors. To consider the effect of this argument his Lordship looked at the objects of the union, which comprised not only the prosecution of unregistered practitioners and the removal of persons guilty of unprofessional conduct, but the protection of practitioners. They were perfectly impartial; their duty as members of the union was as much for the protection of Mr. Leeson as a qualified practitioner as to have him removed if he ought to be removed. This point of law, therefore, his Lordship decided in favour of the defendants. There was one other point his Lordship dealt with. It was argued that the inquiry was not *bonâ fide* because the acts and conduct of Harness had been gone into, and it was said the inquiry was not really into Leeson's conduct so much as into Harness's. That was so in a sense, but it was necessary and proper to inquire into Harness's acts for the purpose of seeing what it was that the accused was acting as a cover of; and, that being so, he could not say the inquiry was not *bonâ fide*. His Lordship therefore refused the motion.

[1] See report of the proceedings of the General Medical Council, in the JOURNAL of November 30th (page 1229), and December 7th (page 1284).

SURGEON'S FEES FOR DENTISTRY.

TELL.—A medical practitioner duly registered under the Medical Acts can sue for charges in respect of dentistry.

THE TITLE OF PHYSICIAN.

M.D.—We do not think that a person holding a registrable degree in Medicine could be legally prevented from signing himself "Physician."

AMERICAN PRACTITIONERS.

M. J. H.—A medical man holding an American qualification only is not entitled to be registered under the Medical Act of 1886, as that Act has not yet been applied to the United States, nor can he practise as a medical man in this country.

CIRCULARS.

J. W. L.—Probably the most effective answer that we can render to "J. W. L.'s" ethical inquiry will be found in the following quotation extracted from the forthcoming new edition (a proof copy of which has been placed at our service) of the *Code of Medical Ethics*, chapter ii, section I, Rule 3:

"It is alike derogatory to the profession to solicit practice by advertisement, card, or printed circular, or to notify change of residence, the introduction or addition of a partner, or the transfer of a practice, otherwise than *vivâ voce* or by an autographic or other *facsimile* of a written note, and its circulation strictly limited to *bonâ fide* patients of the transmitter."

THE MEDICAL ACT (1886) AND THE RIGHTS OF LICENTIATES.

CHIRURGUS.—It was decided in Leman *v.* Fletcher, *L. R.*, 8, Q. B., that a medical practitioner registered under the Medical Act of 1858, but only as a Member of the College of Surgeons, could not recover fees for attendance and medicine supplied except in a surgical case. In Leman *v.* Houseley, *L. R.*, 10, Q. B., it was decided that in order to recover fees for medicines and attendance as an apothecary it was necessary that the practitioner should have been qualified and registered at the date of the services being rendered. The principle laid down in these cases doubtless applies equally to Licentiates of the sister Colleges of Scotland and Ireland, but the former case has no application to a medical practitioner registered since the coming into operation of the Medical Act 1886.

DEFAMATION.

A MEMBER writes: One morning I was called to a patient, O. H., about 7 A.M., a distance of two miles. I arrived there about 7.30 A.M., and learnt he had expired soon after the messenger left. I attended the patient off and on for four years. It was a case of heart disease. I had informed the patient and his friends of the danger he was in, and given him the usual caution. O. H. was a member of a club for which I am medical officer, and have been for four years without any complaint. At a general meeting of members of the said club a member, W. I., proposed another medical man and was seconded by a member, W. H. In doing so the latter stated he had been informed that I had refused attending to the deceased member, O. H., for upwards of two hours, and made a remark to the effect that if I had not so neglected him the deceased might have been well to-day. Under the circumstances the members went to vote, the result of which was in my favour with a good majority. W. H.'s informant's charge against me is untrue, and, upon the advice of friends, I have written to W. H., informing him that I require an apology from him, and the names of his informants, which I have not yet received. What course may I take to compel him to do so, and how may I prosecute his informants? and can I claim any damages for infringing with my professional character?

*** "A Member" was, we think, quite right in demanding an apology; but with regard to bringing an action, it must be borne in mind that, although slanderous words are actionable when they attack the plaintiff in his profession or calling, it is in general necessary to prove that the plaintiff has suffered some particular damage.

FEES TO WITNESSES.

MEMBER.—The fee allowed to a medical practitioner for attending a police court to give evidence is 10s. 6d. if the witness resides in the neighbourhood, £1 1s. if at a distance, in addition to travelling expenses 6d. per mile one way. In courts of assize £1 1s. is the fee, with 2s. for every night the witness is detained from home and 6d. per mile, one way, for travelling expenses.

PARTNERSHIP WITH AN UNQUALIFIED PRACTITIONER.

A MEMBER would be glad of an answer to the following, namely: A. is a duly registered practitioner, B. says he is a M.D. of the Pontifical College of Rome. Is it illegal for A. and B. to enter into partnership as general practitioners? Would A. render himself liable to have his name erased from the *Register* as covering unqualified practice?

*** There would seem to be nothing illegal in the partnership referred to, but if B. should practise he would render himself liable to penalties under the Apothecaries' Act, and might also render himself liable to penalties under Section 40 of the Medical Act, 1858, and there would be as regards the duly registered practitioner the liability of having the case inquired into by the General Medical Council.

NAVAL AND MILITARY MEDICAL SERVICES.

THE LATE PROFESSOR BOYES SMITH, M.D., F.R.C.P.

AN APPEAL.

IT is seldom that an appeal for help is called for on behalf of the widow of a medical officer of Her Majesty's Indian army. A painful exception to this rule has now to be brought to the notice of the retired brother officers of the late Dr. Boyes Smith, of the Bengal Army.

They will be surprised and grieved to learn that his widow and little girl, aged 6, have been left, to put it plainly, with £60 a year. Dr. Smith, as a single man, indulged a generous disposition in helping others who were in reduced circumstances, and sustained pecuniary losses in other ways. He married after retirement from the service, and could not by the rules of the Military Fund become a subscriber to that fund on behalf of his widow and child.

After a very distinguished career in India, both in the military and civil branches of the medical service, Dr. Smith was appointed to the chair of military medicine in the Army Medical School, and was cut off by cerebral disease before he could "redeem the time," and make something like an adequate provision for wife and child. The case has been warmly taken up by the *Indian Medical Gazette*, and a subscription list has been opened in its columns. It is hoped that the retired brother officers of the late Dr. Smith will assist their old friends in India to rescue his widow and child from a condition, considering their former position, little short of want.

Messrs. Grindlay and Co., 55, Parliament Street, S.W., are authorised to receive subscriptions and give acknowledgments.

THE MEDICAL STAFF.

SURGEON S. POWELL, M.B., who is serving in the Bengal command, has leave of absence for six months on private affairs.

Surgeon W. G. A. BEDFORD, M.B., has taken over the duties of Assistant Instructor at the Depôt and Training School at Aldershot, *vice* Surgeon J. J. Falvey.

Brigade-Surgeon SAMUEL ARCHER is promoted to be Deputy Surgeon-General, ranking as Colonel, *vice* W. Cattell, placed on retired pay. His previous commissions are dated: Assistant-Surgeon, August 5th, 1858; Surgeon, March 1st, 1873; Surgeon-Major, April 1st, 1873; and Brigade-Surgeon, October 16th, 1884. Brigade-Surgeon S. Archer was attached to the 101st Fusiliers with the Eusofzai Field Force on the North-West Frontier of India in November and December, 1863, and was present at the storming of the Conical Hill and the destruction of Umbeylah (medal with clasp). He served with the Nile Expedition in 1884-85 in charge of the field hospital at Korti (medal with clasp and Khedive's star), and with the Soudan Frontier Field Force in 1885-86 in medical charge at Wady Halfa and of the line of communications to Akasheh.

Surgeon-Major J. P. H. BOILEAU, M.B., F.R.C.S.Ireland, is promoted to be Brigade-Surgeon, ranking as Lieutenant-Colonel, *vice* S. Archer. He dates as Assistant-Surgeon from September 30th, 1864; as Surgeon from March 1st, 1873; and as Surgeon-Major from September 30th, 1876. He has no war record.

Surgeon W. B. STOKES, M.B., has retired on temporary half-pay. He entered the service January 30th, 1886, and was sent to Bengal early in 1887, but was granted leave on sick furlough on March 2nd last.

Quartermaster ALFRED PLATT has been placed on retired pay. His commissions bear date: Lieutenant of Orderlies, June 25th, 1873; Captain of Orderlies, January 17th, 1877; Quartermaster, July 1st, 1881.

Deputy Surgeon-General S. A. LITHGOW, M.D., C.B., D.S.O., has been brought on the administrative medical staff of the Bengal army, *vice* Deputy Surgeon-General J. Landale, whose tour of service in India has expired.

The undermentioned surgeons, serving in the Bombay command, are posted to general duty as follows: D. V. O'CONNELL, M.D., having returned from furlough, to Aden district; A. DODD, from Aden district to Bombay district; S. J. W. HAYMAN, to Sind district.

Surgeon THOMAS ROBERT LINGARD, M.D., died at Glasnevin, Dublin, on October 20th last. His commission was dated July 30th, 1881; he retired on August 3rd, 1888, on half-pay, which was converted into retired pay on August 3rd last. He served with the Nile Expedition in 1884-5, and in the operations of the Soudan Frontier Field Force in 1885-6, and had received the Egyptian medal with clasp and the Khedive's bronze star.

INDIAN MEDICAL SERVICE.

THE services of Brigade-Surgeon J. G. PILCHER, Bengal Establishment, are replaced at the disposal of the Government of Bengal.

Surgeon-Major O. BAKER, Bengal Establishment, joint Civil Surgeon of Simla, is appointed to the medical charge of Army Headquarters' Staff and and establishments remaining at Simla during the winter, in addition to his other duties.

Brigade-Surgeon E. H. R. LANGLEY, Bombay Establishment, is permitted to retire from the service on a pension of £700 per annum, and is granted the extra pension of £103 per annum. He entered as Assistant-Surgeon July 23rd, 1858, and became brigade-surgeon June 23rd, 1884. He served in the China War in 1862, and was present in the operations against the Taepings near Shanghai, the attack and capture of Wankaza and Tseer-poo, the actions at Nazeau on April 27th and 30th, the storming of Tsing-poo and repulse of the rebel army near Nazeau on May 25th (medal).

Surgeon-Major R. BOWMAN, Bombay Establishment, is promoted to be Brigade-Surgeon, *vice* Brigade-Surgeon E. Sexton, retired. Brigade-Surgeon Bowman entered the service as Assistant-Surgeon March 31st, 1866. He served in the Abyssinian Campaign in 1867-8 in medical charge of the 3rd Regiment Sind Horse (medal).

Surgeon-Major C. W. S. DEAKIN, Bengal Establishment, medical officer of the 34th Pioneers, died at Jhelum on November 17th aged 40. His commissions were dated: Surgeon, September 30th, 1873; Surgeon-Major, September 30th, 1885. He was present with the Hazara Expedition in 1888, was mentioned in despatches for his services, and was entitled to the India Frontier medal with clasp.

The services of Surgeon A. T. BOWN, Bengal Establishment, Medical Officer of the 37th Bengal Infantry, are replaced at the disposal of the Military Department from the date on which he may be relieved of his duties as officiating medical officer of the Bhopal Battalion, and of the Bhopal Political Agency, by Surgeon-Major A. H. C. Dane, M.D.

Surgeon W. H. W. ELLIOT, Bengal Establishment, is appointed to the officiating medical charge of the 45th Sikhs.

Surgeon H. F. WHITCHURCH, Bengal Establishment, is appointed to the officiating medical charge of the 37th Dogras, *vice* Surgeon A. T. Bown.

Surgeon H. W. G. MACLEOD, Bengal Establishment, is appointed to the officiating medical charge of the 1st Battalion 2nd Goorkhas, *vice* Surgeon-Major D. P. Macdonald, M.D.

Surgeon R. PEMBERTON, Madras Establishment, Acting District Surgeon, Ganjam, is granted furlough for one year.

Surgeon T. E. DYSON, Bombay Establishment, officiating in medical charge, 2nd Native Infantry, is appointed to the medical charge of the 5th Native Cavalry (Sind Horse), *vice* Surgeon W. H. Burke, M.B., transferred to the Civil Department.

Surgeon B. B. GRAYFOOT, Bombay Establishment, Officiating Secretary to the Surgeon-General with the Government of Bombay, is appointed to the medical charge of the 24th Native Infantry, *vice* Surgeon W. H. Quicke, transferred.

Surgeon W. S. P. RICKETTS, Bombay Establishment, is posted to general duty in the Poona District.

THE VOLUNTEERS.

MR. LOVELL DRAGE, M.B., is appointed Surgeon to the Herts Yeomanry.

Mr. ERNEST WYKEHAM BARNES is appointed Acting Surgeon to the 6th Volunteer Battalion Liverpool Regiment (late the 19th Lancashire).

Surgeon G. H. DARWIN, of the Manchester Division of the Volunteer Medical Staff Corps, has resigned his commission, which was dated June 11th, 1887.

Surgeon O. M. WHITE, 1st Tower Hamlets Rifle Volunteers, is appointed Brigade-Surgeon, ranking as Lieutenant-Colonel, to the East London Brigade Infantry Volunteers.

Surgeon G. D. P. THOMAS, 18th Middlesex Rifle Volunteers, is appointed Brigade-Surgeon, ranking as Lieutenant-Colonel, to the North London Brigade Infantry Volunteers.

Surgeon-Major A. CLARK, 4th Middlesex (West London Rifle Volunteers) is appointed Brigade-Surgeon, ranking as Lieutenant-Colonel, to the South London Brigade Infantry Volunteers.

Surgeon-Major S. P. SMITH, 1st Volunteer Battalion Royal Fusiliers (late the

10th Middlesex), is appointed Brigade-Surgeon, ranking as Lieutenant-Colonel, to the West London Brigade Infantry Volunteers.

Surgeon-Major W. R. BRUNTON, 1st Surrey (South London) Rifle Volunteers, is appointed Brigade-Surgeon, ranking as Lieutenant-Colonel, to the Surrey Brigade Infantry Volunteers.

CHANGES OF STATION.

THE following changes of station among the officers of the Medical Staff of the Army have been officially notified as having taken place during the past month:—

	From	To
Dep. Surg.-Gen. J. Landale, M.D. ...	Quetta ...	... Cork.
Surgeon-Major J. P H. Boileau, M.B....	Woolwich...	... Bengal.
,, J. S. M'Cutchan, M.B.	Bermuda ...	... Cork.
,, W. F. Stevenson, M.B....	Bengal ...	... Netley.
,, A. Kirwan	Aldershot...	... Barbadoes.
Surgeon R. F. Adams, M.B.	,, ...	... Bombay.
,, E. Butt	Falcarragh	... Bengal.
,, W. G. Macpherson, M.B. ...	Bengal ...	... Woolwich Arsnl
,, R. P. Bond	— ...	... Chatham.
,, C. J. Holmes, M.D.	Tipperary...	... Cahir.
,, A. Stables, M.B.	— ...	... Dublin.
,, A. Perry	Woolwich Arsenal...	Home District.
,, H. D. James...	— ...	... Chatham.
,, S. G. Allen	Dublin ...	... Belfast.
,, H. T. Baylor	— ...	... Cork.
,, H. T. Knaggs	— ...	... Dublin.
,, J. Hickman	Chatham ...	... Sierra Leone.

THE CORPS TITLE.

M.S. has seen "Army Ambulance Corps" suggested in a contemporary as a fitting title, and considers it an apt one. He thinks it would express the function of the combined corps of officers and men, and asks us to support it.

*** No; if there is to be a corps, it must have the prefix "Royal." "Ambulance" is a special word. The only English word we possess which embraces and expresses the profession generally is "medical." The term "surgeon' in its limited sense implies specialism.

SURGEON PARKE AND THE STANLEY EXPEDITION.

MEDICAL STAFF writes: It will generally be admitted that if Mr. Stanley had died the expedition would have perished; but the latter fully explains how much of its success depended on Surgeon Parke. It would be a graceful compliment, applauded by every officer of the medical staff, if that officer were promoted to be Surgeon-Major. Let the Secretary of State for War take the initiative. Parke's noble conduct will not, of course, be appreciated by the clique who try to crush and vilify medical officers. Let them beware. The public are beginning to see through their tactics, and will not much longer stand them.

MR. AYRES MOORE (East India Road) writes: We may shortly expect the return of Surgeon Parke from the above expedition. May I hope that the medical profession at large, and more especially his Irish brother graduates, will accord him a fitting welcome as he so well deserves.

DEPUTIES AND BRIGADE-SURGEONS.

M.S. says that if the recommendations of the Committee were carried out, fifty brigade-surgeons would lose their distinctive titles; but if their proposed amalgamation with the deputies was carried out, the latter would lose nothing and be in no worse position. There would then be a greater field for the selection of principal medical officers, and the appointment would be only for five years; this would give all a reasonable chance. The title of Surgeon Brigadier-General which has been proposed is absurd. The Surgeon-Colonel would be entitled to a little higher allowance than the Lieutenant-Colonel, but this would be all the expense of the amalgamation. It would induce good men to stay on.

INDIAN MEDICAL SERVICE.

REGIMENTAL MEDICAL OFFICER writes: In your article of October 26th on the Indian Medical Service you say "the one Surgeon-Generalship in Bengal has been conferred on a member of the civil branch," and "arms have given way before the gown." But surely it is well known the "one Surgeon-Generalship" left is a purely civil appointment: the head of the large and important civil branch of the service and sanitary adviser to the Government of India. The other surgeon-general in Bengal is purely military (H.M. Forces), and is usually, but not necessarily, a medical staff man. How could a man who has spent his life in purely military duties "be suddenly expected" to assume the most important civil appointment? What could he know of the administration of gaols, schools, civil hospitals, etc.?

The fair way of settling the matter seems to be: Let those members of our service who elect to remain in military employ be alone eligible for the (alas! few) administrative military medical appointments left to us, and those who choose civil employ look to purely civil appointments, including the Surgeon-Generalship to the Government of India.

As regards reconstruction of the service, the very last thing desired by any member of the Indian service is "organic union with the medical staff." It would be a one-sided affair, in which the Indian would have everything to lose and nothing to gain. The medical staff is thoroughly discontented and the station hospital system unpopular. We do not want to join in this chorus of complaint. We should lose pay and allowances and the privileges enjoyed under the Indian Government, and do not want a non-regimental system. The vast majority of the Indian medical service are in civil employ. This is the reason we have so little sympathy with the agitation for new titles, gold lace, and stars.

*** Our article was based on very strong comments forwarded by members of the Indian medical service on the system of selection for the "one Surgeon-Generalship" in Bengal. Our correspondent here speaks apparently for the other side; but his tone and arguments do not invalidate but confirm our impression that the division of the Indian medical service into civil and military is causing not only friction but disunion; it is time this dual arrangement was reconsidered. Our argument was that civil employ was no training for military administration, and he turns it conversely, the force of which we quite admit; but that only more clearly brings out the mistake of trying to keep two incompatibles in a state of semi-mixture. He advocates a practical separation between the two branches, although keeping up a nominal unity which he will find impossible, because the military branch is sure to gravitate towards or undergo "organic union" with the medical staff, whether he likes it or not. In the broad interests of the Indian army and of finance we cannot but see that the hospital organisation and administration of the European and native forces must soon be brought into line, and will not be allowed to remain apart. The Indian service proper will then be civil, which our correspondent avers it largely is already. We regret the tone of his remarks on the rank question in the medical staff, which indicate his civil leanings although signing himself "Regimental Medical Officer." We cannot believe he represents the feelings of any large class of Indian medical officers, for we have found no more staunch and strong supporters of the rights of medical officers towards proper military status and titles than among them. The interests of the two services in a just settlement of the rank question are identical.

LORD CAMPERDOWN'S COMMITTEE.

SPES would willingly contribute towards the circulation of the Report on Relative Rank to members of Parliament, as a counterpoise to the evidence given before the Committee. Better still the suggested "Defence Fund." Men independent of the military authorities, who would come forward to work such a defence, would never want preliminary aid.

SUPPORT OF THE COLLEGES.

F.R.C.S. urges the Council of the Royal College of Surgeons of England to take action on the rank question. Lord Camperdown's Committee, on which their nominated Fellow served, has laid the matter fully before them, and there can now be no ignorance of the bearing of the controvery. Other Colleges also should take the matter up, as it involves the credit of the whole profession.

VOLUNTEER AMBULANCE SCHOOL OF INSTRUCTION.

MR. R. R. SLEMAN, Hon. Sec. (7, St. Benet"s Place, Gracechurch Street, E.C.), writes: I have the honour to inform you that the official inspection and examination took place on December 16th at the headquarters of the London Scottish Rifle Volunteers. The examiners were Surgeons Barnes and Gubbin, Medical Staff. Forty-four men were sent up, and all passed. After being taken through a course of stretcher drill, each man had a searching *vivâ voce* examination.

At the conclusion Surgeon Barnes congratulated Surgeon Pearce on the result, and told the men that the class was by far the best that he had ever inspected.

The next class will be neld at the "Artists'" headquarters, commencing Thursday, February 6th, 1890.

THE following are the results of the biennial competition held at the headquarters of the 20th Middlesex (Artists') Rifle Volunteers on Thursday, December 12th, 1889:

New Members' Competition.—1st, Lance-Corporal Thatcher, 4th Volunteer Battalion the Queen's R.W.S. Regiment, 28 marks out of a possible 30 (Surgeon Sir Morell Mackenzie's prize). 2nd, Private Barnes, 1st Volunteer Battalion the Queen's R.W.S. Regiment, 27; 2nd, Private F. Gill, L.R.B., 27; 2nd, Corporal Golland, 21st M.R.V., 27 (Surgeon H. A. Des Vœux's prize).

Detachment Competition.—No. 6. Detachment: Private R. MacCormack, 2nd London, Private W. H. Gardiner, 17th Middlesex, Private F. Gill, L.R.B., Corporal T. A. Golland, 21st Middlesex (Brigade-Surgeon Giles's prizes), 100 marks out of a possible 120, first; 2nd Detachment; Corporal W. Brown, C.S.R.V., Private J. Titley, C.S.R.V., Private P. Eley, C.S.R.V., Private H. Hill, L.R.B. (Surgeon W. H. Bull's prizes), 93 marks out of a possible 120, second,

Past Members' Competition.—1st. Engineers' Detachment.—Sergeant H. W. Killingback, 1st L.V.R.E. 2nd, Corporal Painter, Sapper R. Moore, T.H.V.R.E., Sergeant F. Hocker, 3rd M.R.V. (Messrs. Hobson's prizes). Marks, 139 out of a possible 200. 2nd. Artists' Detachment.—Lance-Corporal C. Carter, Privates Bursell, A. de Wet, H. Craufurd Smith. Marks, 136 out of a possible 200.

Examiners.—Anatomy and Physiology: Brigade-Surgeon P. P. Giles, Welsh Border Brigade; Surgeon Bull, 3rd Volunteer Battalion Oxfordshire Light Infantry. First Aid: Surgeon-Major James, H.A.C.; Surgeons O. White, T.H.R.B.; A. Bateman, London Irish R.V. Drill: Surgeons Walter Pearce and H. A. Des Vœux, with Lieutenant A. Maclure, London Scottish R.V. Additional Examiner: Surgeon A. R. Evershed, Artists' R.V.

OBITUARY.

MARY ORRELL HIGGINBOTHAM, Superintendent-General of the Glasgow Sick Poor and Private Nursing Association.

MRS. HIGGINBOTHAM, notable among women in Glasgow as the organiser of a system of trained nursing for the sick poor, died last week of an affection of the heart. A lady of means, and the wife of a Glasgow merchant, she early turned her attention to a consideration of the miserable circumstances attending the poor

in times of sickness, the absence of all comfort in their homes, the want of any methodical nursing, and the neglect of the dozen and one little things in attendance, cooking, etc., which go to turn the scale on the side of recovery. To qualify herself for undertaking some work in the direction of supplying this need, she served an apprenticeship in the Glasgow Western Infirmary, and subsequently joined Miss McAlpine's Training Home.

In 1875, she began her own peculiar work by taking rooms in Sauchiehall Street, and commencing the Glasgow Sick Poor and Private Nursing Institution. At the end of the first year she reported that only one district nurse had been employed, and 100 cases treated. But the institution grew, public support gradually increased, private trained nurses were maintained for the sake of the revenue to the institution, and last year the work had so prospered that 1,727 poor cases were taken over by 14 trained nurses and 9 assistant nurses, and, during the last seven years, a total of 15,000 cases have been cared for by her. Happily, Mrs. Higginbotham's work lives after her, and the institution she has founded has obtained too firm a hold on public opinion and its benefits are too widely recognised for its security and prosperity to be in any degree in doubt.

UNIVERSITY INTELLIGENCE.

CAMBRIDGE.

FIRST EXAMINATION FOR THE DEGREE OF M.B.—Michaelmas Term, 1889. Part II. Elementary Biology. Examined and approved:

Barker, Emmanuel.; Blandford, Pemb.; Bousfield, Caius; Bower, Trin.; W. L. Brown, Joh.; Cowie, Joh.; Cundy, Trin.; Fielden, Emman.; Fothergill, Queens'; Hadow, Caius; Heywood, Emman.; Hunt, Clare; F. A. S. Hutchinson, Trin.; Hutchinson, Trin. H.; Hyde, Clare; G. C. Jackson, Joh.; M. B. Johnson, Trin. H.; T. P. King, Joh.; Latham, Caius; Manners Smith, Down; C. E. Marriott, Clare; J. H. Pead, Pemb.; Phillips, Caius; Ll. Powell, Trin.; Rotherham, Trin.; Rowland, Down; Russell, Emman.; Seligman, Caius; Smallwood, Caius; Taylor, Caius; Thomas, Christ's; D. M. Turner, Joh.; Waldon, Joh.

Part I. Chemistry and Physics. Examined and approved:

Allen, King's; W. J. Anderson, Pemb.; Bedford, Trin.; N. G. Bennett, Joh.; Biss, King's; Bousfield, Caius; W. L. Brown, Joh.; Burn, Pet.; Burnett, Joh.; Cooper, Caius; Cornaby; N. Devereux, H. Selw.; Gordon, King's; Haigh, Joh.; Haward, Sid.; Hayne, Caius; A. Hill, Joh.; Hobday, Christ's; C. L. Hopkins, Caius; F. A. S. Hutchinson, Trin.; G. C. Jackson, Joh.; Lance, King's; Long, Caius; Milward, Clare; Muntz, Trin.; Phillips, Caius; Robinson, Emman.; Roper, Christ's; Rowland, Down; Russell, Emman.; Savage, Caius; Sedgwick, Clare; Seligman, Caius; C. B. Stewart, Christ's; Taylor, Caius; Thomas, Christ's; Thornely, Clare; Tod, Trin.; Twentyman, Christ's; Waldon, Joh.; White, Sid.; Wills, Caius; Wrangham, Emman.

SECOND EXAMINATION FOR THE DEGREE OF M.B.—Michaelmas Term, 1889. Part II. Human Anatomy and Physiology. Examined and approved:

Ansorge, Pemb.; J. S. Barnes, Pemb.; Beggs, Sid.; G. T. Birdwood, Pet.; Bolus, Jesus; Budden, Caius; Chappel, Caius; Connop, Caius; Coulby, Trin.; Dufton, Caius; Dumbleton, Pet.; T. H. Evans, Joh.; Fenton, Caius; Finch, Trin.; Freer, Caius; J. H. Godson, Joh.; Goldsmith, Caius; Herd; Hill, Trin.; Hollis, Sid; Joyce, Queens'; Kent, Trin.; Lister, Trin.; W. F. Lloyd, Clare; Luce, Christ's; Master, Caius; Palmer, Down.; Parry, Joh.; Parsey, Pet.; Paterson, Trin.; Poole, Cath.; Pulford, Trin.; Robinson, Down.; Sharp, Caius; T. R. Smith, Trin.; W. A. L. Smith, Trin.; W. W. Walker, Trin.; Ware, Joh.; Whichello, Sid.; Wingfield, Caius.

LONDON.

M.S. EXAMINATION. 1889.—Pass List.

H. P. Dean, B.Sc., University College; A. Parkin, Guy's Hospital.

B.S. EXAMINATION. 1889.—Pass List.

First Division.—A. G. Francis, St. Bartholomew's Hospital; C. A. Kent, B.Sc., University College; C. McG. Kitching, Guy's Hospital; R. D. Mothersole, Guy's Hospital; B. G. A. Moynihan, Yorkshire College; G. B. M. White, University College.

Second Division.—G. Black, Guy's Hospital; W. S. Fenwick, London Hospital and Strassburg and Berlin; A. D. Fripp, Guy's Hospital; F. H. Napier, St. Bartholomew's Hospital.

M.D. EXAMINATION. 1889.—Pass List.

Medicine.—J. H. Abram, University College, Liverpool; E. O. Ashe, London Hospital; P. Ashworth, B.S., B.Sc., Owens College and Manchester Royal Infirmary; J. T. Bays, St. Mary's Hospital; R. Bird, B.S., St. Bartholomew's Hospital; J. R. Bradford, D.Sc. (Gold Medal), University College; W. C. Carter, University College; W. C. Chaffey, St. Bartholomew's Hospital; W. F. Clarke, B.S., Guy's Hospital; H. E. Crook, B.S., Guy's Hospital; *H. M. Fernando, B.Sc., University College; J. L. Firth, University College; T. Fisher, Guy's Hospital; L. M. Gabriel, St. Thomas's Hospital; J. E. Gould, University College; G. W. Hill, B.Sc., St. Mary's Hospital; A. P. Luff, B.Sc., St. Mary's Hospital; H. G. Lys, London Hospital; H. J. Macevoy, B.Sc., St. Thomas's Hospital; A. A. Mumford, Manchester Medical School and Royal Infirmary; C. D. Muspratt, B.S., Guy's and Sussex County Hospital; *J. P. Parkinson, University College; W. B. Ransom, B.Sc., University College; W. N. Risdon, B.S., Guy's Hospital; H. A. Sansom, St. Thomas's Hospital; H. Smith, London Hospital; *E. H. Thane, University College; E. F. Willoughby, University College; W. G. Willoughby, St. Bartholomew's Hospital.

State Medicine.—C. E. Baddeley, King's College; F. F. Burghard, M.S., Guy's Hospital; W. B. Featherstone, Birmingham School.

* Obtained the number of marks qualifying for the Gold Medal.

The following is the result of the Examination for Honours in Obstetric Medicine at the M.B. Examination:

First Class.—E. P. Paton, St. Bartholomew's Hospital.

Second Class.—R. Pickard, St. Bartholomew's Hospital; G. H. Barker, B.Sc., Bristol Medical School; C. MacG. Kitching, Guy's Hospital; J. A. Hayward, St. Bartholomew's Hospital; C. F. Seville, Owens College and Manchester Royal Infirmary.

Third Class.—J. J. Macgregor, St. Bartholomew's Hospital; W. S. Fenwick, London Hospital and Strassburg and Berlin; R. D. Mothersole, Guy's Hospital.

VICTORIA.

THE following appointments to vacant examinerships have been made by the Council:

External Examiner in Medicine: Sir Dyce Duckworth, M.D., F.R.C.P.(Ed.), Lecturer on Clinical Medicine, St. Bartholomew's Hospital, London. External Examiner in Materia Medica and Pharmacy: J. Mitchell Bruce, M.D., F.R.C.P., Lecturer on Therapeutics, Charing Cross Hospital, London. External Examiner in Botany: G. R. M. Murray, F.L.S., Senior Assistant Department of Botany, British Museum.

HOSPITAL AND DISPENSARY MANAGEMENT.

THE REFORM OF THE OUT-PATIENT DEPARTMENTS OF OUR MEDICAL CHARITIES.

DR. RENTOUL writes: As the amount of *free* medical relief given to the people of Liverpool is so out of proportion to the wealth of this city, the following figures will just now be of deep interest. If any one supposes the out-patients are counted over twice, then I am willing to deduct 67,047 from these. This will leave them 1 in 4 as receiving *free* medical aid.

Number of in-patients treated at 14 medical charities... ...	10,264
,, out ,, 19 ,, ...	267,047
Total in- and out-patients at 20 ,, ...	277,311
Total number of attendances at 11 ,, ...	417,806
,, ,, in- and out-patients treated in 1884... ...	253,677
,, ,, ,, ,, ,, 1885... ...	256,624

	£	s.	d.
Amount paid by patients at 20 charities in 1888	5,871	9	9
Cost of drugs at 21 medical charities	6,645	13	10
Salaries of medical staffs at 12 charities	3,167	17	6
Total salaries and wages at 21 ,, ...	13,182	9	4½

Number of doctors engaged at 21 medical charities: 44 consultants; 123 visiting; 25 resident; and 9 dentists.

	£	s.	d.
Total incomes of 21 medical charities	49,830	11	3
,, expenditure of 21 medical charities	57,171	8	0
Balance credit at 4 medical charities	407	18	8
Deficits at 17 medical charities	11,598	2	11
Interest from invested funds	9,084	18	8
Number of beds at 13 medical charities			1,106

Number of Paupers receiving Medical Relief at the Four Workhouse Infirmaries for Year ending 1888.

Number of in-door sick paupers	14,899
,, out- ,, at two unions	10,677
Total receiving in- and out-door medical relief	25,576
Number of beds at 4 workhouse infirmaries	3,948
,, visiting doctors to 4 infirmaries, 5; and 8 resident... ...	—
Number treated at 3 municipal fever hospitals	1,234

Birkenhead Five Medical Charities, 1888.

Total number of in-patients at 4 medical charities	913
,, out- ,, 5 ,, ...	14,708
,, in-and out- ,, ...	15,621
Total attendances	17,723
,, number treated in 1884...	13,859
,, ,, 1885...	15,968

	£	s.	d.
Sums paid by patients at 4 medical charities ...	328	19	0
Cost of drugs at 5 medical charities	694	5	8
Total salaries and wages at 4 medical charities ...	980	2	8

(Number of doctors, 10 consulting, 15 visiting, 3 resident, and 2 dentists.)

Total income at 5 medical charities	4,639	2	11
,, expenditure at 5 medical charities	4,989	11	4
Credit to balance at 3 medical charities	46	11	
Deficit at 2 medical charities...	296	19	
Interest from invested funds at 3 medical charities ...	491	0	9

Number of medical staff: 10 consultants; 15 visiting; 3 resident; and 2 dentists.

(Birkenhead Poor-law Union gives medical treatment to 900 in- and 10,677 out-patients. There are 300 beds, and it has 1 visiting doctor!)

There are 30 non-medical charitable institutions in this city, each having an honorary medical staff. Suppose there are 40 residents in each, this will give as receiving free medical treatment	1,200
Five hundred doctors giving free private medical aid, each one treating on an average 10 such, would give	5,000
(I do not know what number receive free vaccination.)	

The estimated population of Liverpool city for 1888 is 599,738. But as it has been stated that many hospital patients come from the out-lying districts, I take the estimated population of the parish of Liverpool, Toxteth, and West Derby unions; and when I add that the enormous union of West Derby takes in Everton, Kirkdale, Bootle, Walton, Fazacerley, Great and Little Crosby, Waterloo, Seaforth, Ince Blundell, Litherland, Aintree, West Derby, Childwall, Allerton, and Garston, no one can acuse me of trying to magnify the sad and deplorable state of affairs existing.

The total number receiving free medical aid in the above three unions is not less than 310,321.

The estimated population of these three unions is about 800,000. These figures therefore show that 1 in 2.5 receive free medical treatment from the medical charities, Poor-law fever hospitals, private practitioners, and non-medical benevolent or religious institutions. About 1 in 3 receive free medical treatment from 20 medical charities. There has been an increase of 21,600 patients at 17 hospitals since 1885.

It might be said that these hospital patients pay for what they receive! Well, the patients at the Liverpool hospitals last year paid £5,871, and their cost for drugs alone amounted to £6,645! So that, for about five coppers, each received medical, surgical, dental treatment, and medicines, a very great number being able to pay the usual medical fees. Perhaps the same argument will be applied to the Poor-law cases, that they have at one time paid poor rates. But have they? The present arrangement of extracting coppers from patients is a screaming farce, and is prostituting our noble charitable institutions. Let the Poor-law authorities begin to charge patients, and we shall soon see our ridiculous and untenable position.

I would point out that the four Liverpool workhouse infirmaries contain 3,948 beds, containing a mine rich in clinical material, and that these are lying idle owing to the foolish law which prevents the teaching of students therein.

The fourth report of the Statistical Committee of the General Medical Council shows that, at the end of 1888, there were 377 doctors practising in Liverpool, thus giving 1,564 persons to each doctor. Supposing this year there are 380 doctors and a population of 599,738, this gives 1,578 to each. But then there are 283,511 persons receiving free treatment at the hospitals, benevolent institutions, and probably from doctors, so that we must deduct this number from the city population, leaving, therefore, only 780 persons to each doctor—a deplorable condition of affairs. The above figures of the Medical Council are unreliable, as it would appear that the total number of practitioners has been simply divided into the total population without deducting charity cases.

Now, Sir, I trust these figures will stimulate us as a profession to drop all these grovellingly low and petty trade jealousies which at present keep us from advancing. Our condition is becoming deplorable. Our want of harmony of action and organisation is now traditional—a laughing stock and byword. Our cut-throat competition has benefited the public, and has reduced ourselves, wives, and children to the verge of poverty. The lower shopkeeping class and skilled mechanics are better off than we are. Why? Simply because we will not co-operate. This hospital reform question has been on the carpet for at least thirty years. Let us try and get these differences settled. The public are laughing at us. There is no great difficulty in bringing about a very fair settlement. Dock labourers can settle their affairs, so can we. Our tendency has ever been to undersell each other; theirs always to keep up the price and value of their labour.

Let us, therefore, reform the out-patient departments of our medical charities, so that well-to-do people and professional mendicants may be made to provide for themselves. By adopting a reasonable "wage limit," and by having a hearty hospital co-operation, this can be done. Next, let us have an efficient public medical service of England—one which will take its position among the public institutions of this country; and let us give the eight millions and a quarter of the industrial classes the power of providing themselves by its use with good medical treatment, either by the provident insurance system, or by the immediate payment of small fees—such service to be used only by those wage earners who are making under 45s. per week per family. One thing we must not err in. We must not be domineered over by lay committees. Doctors are gradually being excluded from hospital committees; the laymen of the provident dispensaries exclude them; while on the sick clubs and friendly societies they are treated as curs and as low class servants.

I think the above proportion of doctors to population shows us the time has come when the number of men entering should be lessened. Let us get back a modified apprentice system. The dental surgeons still retain this plan, and it works well. But so long as there are so many doctors making a bare livelihood by entrapping young men "to go to college," by coaching, and by securing their fees, then we need expect their wild opposition. From such we need expect as little help as from the Council of the College of Surgeons. "Give us your fees and go to the devil" is the working motto of such. Will the 17,000 medical practitioners in England be dominated and ruled by so small a clique? If they are, then they deserve to occupy even a more degraded position than they now fill. Fortunately, a good number of doctors holding hospital appointments are in favour of reform. May I ask that, in all cases where a consultation is sought, these frends of ours may be called in? Charity begins at home, and, as God helps those who help themselves, we must, if men like Sir Andrew Clark go about saying there is little or no abuse, look to our own actions and efforts to put matters right. But, if a reform of the out-patient department is to lead to the establishing of a public service which will give rise to as great abuses as now exist, then I had rather no reform whatever take place. The unbusiness-like qualities of many practitioners suggests that they should at least be made to pass the "seventh standard" of the School Board, before being qualified, as it would seem that not a few "cheap doctors" want only the hospitals reformed, so that they might start a few more "dispensaries," and overrun the towns with unqualified assistants. If we cannot provide the industrial classes with a good service, then we had better leave things as they are.

A SPECIAL meeting of the Lancashire and Cheshire Branch was held at the Medical Institution, Hope Street, Liverpool, on Wednesday, December 11th, at 4 P.M. Dr. DAVIDSON, President, occupied the chair, and 103 members were present.

The HONORARY SECRETARY read so much of the minutes of the last general meeting of the Branch held at Blackburn as referred to the arrangements for holding the special general meeting at Liverpool.

The CHAIRMAN having elicited from the members present that five minutes be the time limit allowed to each speaker, called upon Dr. RENTOUL to open the discussion by moving the following:

Resolution 1.—This meeting of the Lancashire and Cheshire Branch, recognising the existence of the abuse of the out-patient departments of our medical charities, and wishing to see such abuse eliminated, suggests that in deciding who are eligible for out-patient treatment, the following "wage limit" be adopted: When a single man or woman is making under 14s. per week; man and wife under 20s. per week; and each child 1s. 6d. per week, that such be eligible for out-patient treatment. Thus, for instance, although a man with wife and eight children be making 32s. per week, he and his family are eligible for free treatment, as it can readily be understood that such a man with a large family will be more in need of free aid than a man and wife without family. Those "wage earners" making over this "wage limit" to be ineligible for treatment, and to be referred to the nearest recognised medical service. All accident and urgency cases to be admitted at once without any inquiry, and to be treated by the medical staff. It is also suggested that a modification of the Manchester system for checking the abuse of hospitals be adopted, namely:—That each day the hospital clerk take the names and addresses of all those applicants for treatment who are in the waiting hall; that he make a careful inquiry into the social circumstances of each; that he refuse admission to those who are making over the above "wage limit;" that he require such applicants as are dissatisfied with his decision to fill up a form similar to that below; that he, or the inspector of the Charity Organisation Society, inquire into the social circumstances of doubtful cases; that those who are eligible through the above "wage limit" be admitted for immediate and succeeding treatment, and also accident and urgency cases. If a supposed urgency case is passed in, the out-patient physician or surgeon on duty that day

to have the power of refusing treatment, should either find the case not to be urgent, but in all cases where the hospital clerk is in doubt as to the urgency, the applicant must have the benefit of the doubt. That those who have either a club or parochial doctor be ineligible for hospital treatment, even when out of work, and when making under the "wage limit." Applicants dissatisfied with the finding of the hospital clerk or inspector, to possess the power of appeal to the secretary or committee of Medical Charity. Recommendations of subscribers or medical practitioners not to carry any weight, unless the person recommended conform to the "wage limit" and urgency clause. It is further suggested that a notice, similar to that in use at the London Hospital, be placed in the waiting rooms of medical charities, stating that the hospital is for the use of the sick poor, and that an investigation will be made into the social circumstances of applicants for relief; as such notice in itself has a deterrent effect on those who impose on hospitals. It is suggested that the committees and medical staffs of all the hospitals and dispensaries in a town or city co-operate, and use the same "wage limit," else ineligible applicants will be able to go to another hospital when refused elsewhere.

This resolution was seconded by Dr. COLLINS, of Manchester.

A discussion now ensued, in which the following gentlemen took part: Dr. RIGBY (Preston), Dr. DUNN (Preston), Dr. HARRIS (Manchester), Dr. PIERCE (Manchester), and Dr. BRIERLEY (Manchester).

Dr. RIGBY (Preston) proposed the following amendment: "That Dr. Rentoul's scheme be declined, as it is calculated to intensify the evils of contracting for medical services; it is much too complicated, and mixes up the diverse questions of the abuse of hospitals and the payment of private practitioners."

This amendment was seconded by Dr. WOLLASTON (Liverpool) and supported by Mr. PAUL (Liverpool).

Dr. FITZPATRICK now proposed a second amendment to the effect: "That the whole scheme is impracticable, and unworthy of the (confidence of the) profession, and this Branch in particular."

This amendment not being seconded, fell to the ground.

The discussion on Dr. Rigby's amendment was then proceeded with by Dr. BURY (Manchester), Dr. BARK (Bootle), Dr. BARR (Liverpool), Dr. BROADBENT (Manchester), Dr. STANSFIELD (Birkenhead), Dr. SMART (Liverpool), and Dr. GODSON (Cheadle).

The CHAIRMAN having now put the amendment, it was carried by a majority of 42 to 4. It was then put as the substantive resolution, and carried.

Dr. BRIERLEY (Manchester) now proposed:

"1st. That medical practitioners and the managers of our medical charities in the various towns and cities meet together and decide who are eligible for out-patient medical aid, and that the Manchester system of checking abuse, or that used at the London and St. Bartholomew's Hospitals to be put into force, but that preference be given to the plan used in Manchester."

"3rd and 4th. That having secured hospital co-operation, this Association appoint a Committee, composed of two representatives elected by each Branch, and that this Committee draw up a series of rules and scale of fees on the principle of wage limit, and that existing clubs and other provident schemes for administering medical and surgical relief be recommended to co-operate and adopt such rules, and thus ensure a thorough and general reform."

This resolution was seconded by Dr. VACHER (Birkenhead).

Mr. PAUL (Liverpool) proposed, and Dr. BARK (Bootle) seconded: "That this meeting approves of a general inquiry into the abuse which is stated to exist in the out-patient departments of hospitals in Lancashire and Cheshire by this Branch of the British Medical Association."

At this point, the meeting having lasted over two hours, it began rapidly to thin. It was proposed amid some confusion that this meeting do adjourn. This having been put, and carried by 24 votes to 1, the meeting dispersed.

A GENERAL meeting of the Metropolitan Counties Branch was held at the Royal School of Mines, on Thursday, December 12th, the President (Dr. ORD) in the chair.

The object of the meeting was to discuss Dr. Rentoul's resolutions, in accordance with the request from the Council of the Association. The subjects were arranged under two heads: the first being the question as to the existence of abuse in the out-patient departments in hospitals; the second being the consideration of measures to counteract such abuse. The meeting decided almost unanimously that the abuse complained of did exist, and a resolution proposed by Dr. NORMAN KERR, and seconded by Dr. ALDERSON, of Hammersmith, was passed to that effect.

Dr. Rentoul's resolution No. 2, with regard to the formation of a Public Medical Service (as suggested in the JOURNAL of June 22nd, 1889), was put to the vote and negatived *nem. con.*

The following was proposed by Mr. NELSON HARDY, and seconded by Dr. HUGH WOODS:—"That in view of the proved abuses of the present hospital out-patient system in London, and the consequent great waste of public money, this Branch is of opinion that there should be a system of Government registration and inspection of voluntary hospitals and dispensaries, with a view of bringing these institutions up to a level with those of the Poor-law, as regards efficiency of treatment and exclusion of unsuitable cases, and also with a view to establishing a general connection between hospitals, dispensaries, and infirmaries; that the Poor-law infirmaries, as well as the fever hospitals, should be made available for clinical instruction of students, and that the committee appointed by the Council of the Association to report upon Dr. Rentoul's resolutions be requested to forward these as our views to the Council of the Association."

After considerable discussion, in which Drs. ORD, DICKENSON, ALLFREY, W. SMITH, G. BROWN, KISCH, BOYD, and Mr. FISHER took part, Mr. NOBLE SMITH urged that it was undesirable to call in Government action in this matter, and he proposed an amendment.

Mr. NELSON HARDY thereupon consented to expunge the word "Government" from his resolution; but Mr. NOBLE SMITH remarked that, although by so doing the resolution was apparently considerably changed, yet he thought that it was undesirable that any reference should be made to the management of the Poor-law institutions, and that the Council of the Association should be left to deal with the matter as they thought best. Dr. PARAMORE seconded the amendment; and it was subsequently agreed that the last part of Mr. Nelson Hardy's motion should be added, and also the words "that a copy of the resolution be sent to the Local Government Board."

Mr. NELSON HARDY then withdrew his resolution in favour of Mr. Noble Smith's amendment, which then read as follows: "That in view of the proved abuses of the present hospital out-patient system in London and the consequent great waste of the money of the public, this Branch is of opinion that it is desirable that a comprehensive scheme be organised to correct abuse in hospitals throughout the country; that the Poor-law infirmaries, as well as the fever hospitals, should be made available for the clinical instruction of students; and that the committee appointed by the Council of the Association to report upon Dr. Rentoul's resolutions be requested to forward these as our views to the Council of the Association, and that a copy be sent to the Local Government Board."

This was carried *nem. con.*

AT a special meeting of the West Somerset Branch held at Taunton on December 12th, to consider Dr. Rentoul's proposals, there were present sixteen members, Mr. HUNT, President, in the chair.

Mr. Fowke's letter of October 18th, addressed to Dr. Kelly, requesting him to bring under the notice of the Branch the above-mentioned proposals, was read; and the resolutions appended to Mr. Fowke's letter were discussed *seriatim.*

There was some difference of opinion regarding the extent of abuse by persons too well off who obtained gratuitous advice and medicine as out-patients at hospitals in the West Somerset district, although all present agreed that abuse in this direction did exist to a greater or less extent; but it was by general consent allowed that a much greater abuse was practised by numbers not too well off, who should go to the parish doctor, but who now habitually applied to the hospital for every ailment, however trifling. Some remedy for these abuses, it was felt, was desirable. It was not, however, considered that the amount of wage limit suggested is applicable to this district, and whether the principle should be adopted at all as a rule was thought to be questionable.

The plan of a Public Medical Service, as suggested by Dr. Rentoul, did not appear to the meeting to be practicable; and the same difficulty was felt as to Resolution 4. The meeting unanimously assented to Resolution 5.

On the subject of the inquiry into the management of medical charities the meeting warmly approved of the resolution, which

expressed an earnest hope "that the scope of the inquiry" (made or to be made into the management of the metropolitan medical charities) "will be extended so as to include the provincial hospitals and dispensaries, and thereby obtain as complete information as is possible upon this important subject."

THE CITY OF BIRMINGHAM LUNATIC ASYLUMS.

Winson Green.

In Mr. Whitcombe's annual report for this asylum, he states that the physical condition of the patients admitted during the year 1888 has been unusually bad. Thirty-nine males and 8 females were "suffering from general paralysis, all in an advanced and hopeless stage of the disease." We are not told where these unfortunate people had received the treatment necessary in the earlier stages of their malady. Over and over again has attention been drawn to the necessity for early treatment in such cases, yet here are 47 general paralytics admitted who must have been ill for months. Besides these, cases of heart disease, phthisis, bronchitis, and kidney disease were numerous, and in many instances rapidly fatal. Considering the condition of so many of the admissions, the recovery rate is good, namely, 43.1 per cent. The death-rate was, however, high, being 14.6 on the average number resident. The cause of death in 30 cases was due to general paralysis, in 14 heart disease, in 11 phthisis, and in 9 old age; these account for 64 out of the 84 deaths in the year. Of the 584 patients remaining at the close of the year, only 30 were deemed curable; 120 had been in the asylum upwards of ten years and 235 had resided from two to ten years. Some interesting facts are given concerning the physical condition of these patients; thus we find 62 are general paralytics, 46 suffer from heart disease, 10 from phthisis, 75 from epilepsy, and 33 are over 70 years of age. With regard to the cost for maintenance, Mr. Whitcombe says he considers that the truest economy, and the greatest saving of the public rates, lies in promoting the earliest recovery of the patients rather than their cheapest maintenance, and we agree with him in thinking there is too great a tendency to judge asylum management by the cost per head.

Ruberry Hill.

In this institution there were remaining at the end of last year 593 patients, nearly an equal number of each sex, namely, 302 males and 291 females. There were 58 admissions, 31 of them being transfers from Winson Green, and 23 from the Warwick County Asylum, all of whom were chronic cases with little or no hope of cure, and 23 suffered from epilepsy in addition. Twelve patients were discharged recovered, 3 relieved, and 4 not improved. Of the recoveries, 1 patient had been ten and another eleven years under asylum treatment; they were transferred to this asylum about six years ago, and were at that time considered beyond all hope of cure. Dr. Lyle reports that the general health of the patients has been good, and that a good number have improved in their bodily health, although "mentally the cloud shows very little sign of lifting." The charge of close upon 600 chronic and practically incurable lunatics is by no means a cheerful or light-hearted task, yet Dr. Lyle goes at his work with commendable energy. We find the occupations and amusements of his unfortunate patients duly cared for, and even enthusiastically carried out. He says "no patient is confined to the airing courts who is physically able to go beyond them, and, as we are quite in the country, many of them take walks extending for miles in the surrounding lanes. It is pleasant," he adds, "to reflect upon the happy relationships which exist between the people in the neighbourhood and our patients." The number of amusements has been increased, and, in addition to the weekly dance which takes place throughout the year, six concerts and fifteen theatrical performances have been held. No suicide happened during the year, though the asylum contains many suicidal patients.

CORK AND KILLARNEY LUNATIC ASYLUMS.

His Excellency Lord Zetland has been pleased to appoint Dr. Oscar T. Woods, resident medical superintendent of the Killarney Lunatic Asylum, to be medical superintendent of the Cork District Asylum, *vice* Dr. Dwyer, deceased; and also to appoint Dr. L. T. Griffin, visiting physician of the Killarney Asylum, to be its resident medical superintendent in succession to Dr. Woods. The last mentioned has given rise to a good deal of irritation. It has been usual to promote one of the numerous resident assistants in the services to the position of full superintendent, but in the present case they have all been passed over, and a gentleman has been appointed to a senior position without having the training of intern management that has been supposed to be necessary. Dr. Griffin, it is true, was visiting physician to the asylum; but the work of an extern consultant is very different from that of a resident superintendent, who, in addition to ordinary medical duties, directs the whole establishment. The juniors who have lost promotion by this manœuvre have a real grievance. There is no personal objection to Dr. Griffin, who would, we are sure, be the first to admit the hardship to which so many have been subjected.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

HEALTH OF IRELAND.

The quarterly return of marriages, births, and deaths in Ireland, recently issued, contains statistics relating to the three months ending September last. The marriage and birth rates were slightly below the average, while the death-rate showed a slight excess. The returns of pauperism for the quarter under notice, compared with those for the corresponding period of 1888, showed a decline in the number of persons in receipt of relief. The deaths registered in Ireland during the third quarter of 1889 were equal to an annual rate of 15.2 per 1,000 of the population, estimated at 4,730,532 persons; this death-rate slightly exceeded the mean rate in the corresponding periods of the ten preceding years, 1879-88. In the four provinces of Ireland the death-rates were 13.0 per 1,000 in Munster, 10.5 in Connaught, 14.6 in Ulster, and 15.9 in Leinster. The 17,929 deaths registered in Ireland during the quarter under notice included 708 from diarrhœa, 367 from different forms of "fever" (including 202 from enteric fever, 104 from typhus, and 61 from simple and ill-defined fever), 348 from whooping-cough, 96 from scarlet fever, 85 from diphtheria, 81 from measles, and not one from small-pox. Thus, 1,685 deaths were referred to these principal zymotic diseases, equal to an annual rate of 1.5 per 1,000, which was slightly below the average rate in the corresponding periods of the ten preceding years. Compared with the preceding quarter the deaths referred to each of the zymotic diseases, except measles, showed an increase. Scarlet fever was somewhat fatally prevalent in Limerick and Ballinasloe; diphtheria in Belfast, and whooping-cough in Limerick. In the sixty-two urban sanitary districts of the country (including Dublin), comprising a population of upwards of a million persons, the death-rate from all causes during the quarter under notice was equal to 21.5 per 1,000, and the zymotic rate to 3.2. In Dublin, consisting of nine urban districts, and containing a population of 346,695 persons, the death-rate from all causes was last quarter equal to 23.3 per 1,000, and the zymotic rate to 3.4. In London during the same period these rates were respectively 16.5 and 3.0, and in Edinburgh 15.8 and 2.4 per 1,000. The number of emigrants who left Irish seaports during the third quarter of this year was 15,510; this number was 2,631 less than in the third quarter of 1888, and 2,486 below the average number in the corresponding periods of the ten preceding years.

HEALTH OF EDINBURGH.

The slight increase in the Edinburgh death-rate for the month of November, as compared with that for the corresponding month for some years back, is to be traced to an outbreak of measles which had occurred in the Old Town. The deaths had occurred specially among children under 5 years.

HEALTH OF ENGLISH TOWNS.

During the week ending Saturday, December 7th, 5,354 births and 3,946 deaths were registered in twenty-eight of the largest English towns, including London, which have an estimated population of 9,555,406 persons. The annual rate of mortality in these towns, which had been 18.2 and 19.0 per 1,000 in the two preceding weeks, further rose to 21.5 during the week under notice. The rates in the several towns ranged from 14.2 in Birkenhead, 16.7 in Brighton, 17.3 in Nottingham, and 18.0 in Leicester to 28.4 in Wolverhampton, 29.8 in Huddersfield, 30.7 in Derby, and 36.7 in Plymouth. In the twenty-seven provincial towns the mean death-rate was 22.7 per 1,000, and exceeded by 2.5 the rate recorded in London, which was 20.2 per 1,000. The 3,946 deaths registered during the week under notice in the twenty-eight towns included 87 which were referred to measles, 87 to whooping-cough, 70 to scarlet fever, 67 to diphtheria, 39 to "fever" (principally enteric), 33 to diarrhœa, and not one to small-pox; in all, 383 deaths resulted from the principal zymotic diseases,

against 353 and 343 in the two preceding weeks. These 383 deaths were equal to an annual rate of 2.1 per 1,000; in London the zymotic death-rate was 2.2, while in the twenty-seven provincial towns it averaged 2.0 per 1,000, and ranged from 0.3 in Leicester, 0.4 in Brighton, and 1.1 in Derby and in Huddersfield to 4.0 in Salford, 4.1 in Bolton, and 7.3 in Plymouth. Measles caused the highest proportional fatality in Wolverhampton, Nottingham, Sunderland, and Norwich; scarlet fever in Blackburn and Plymouth; whooping-cough in Wolverhampton, Hull, and Bolton; and "fever" in Preston, Birkenhead, and Halifax. Of the 67 deaths from diphtheria recorded during the week under notice in the twenty-eight towns, 47 occurred in London, 5 in Salford, 2 in Liverpool, 2 in Preston, 2 in Sheffield, and 2 in Newcastle-upon-Tyne. No fatal case of small-pox was registered either in London or in any of the twenty-seven provincial towns, and only 1 small-pox patient was under treatment in the Metropolitan Asylums Hospitals on Saturday, December 7th. These hospitals contained 1,588 scarlet fever patients on the same date, against numbers increasing from 538 to 1,569 in the twenty-three preceding weeks; 151 cases were admitted during the week, against numbers declining from 183 to 122 in the four previous weeks. The death-rate from diseases of the respiratory organs in London was equal to 5.2 per 1,000, and was considerably below the average.

During the week ending Saturday, December 14th, 5,646 births and 4,235 deaths were registered in twenty-eight of the largest English towns, including London, which have an estimated population of 9,555,406 persons, The annual rate of mortality in these towns, which had been 19.0 and 21.5 per 1,000 in the two preceding weeks, further rose to 23.1 during the week under notice. The rates in the several towns ranged from 17.1 in Norwich, 18.0 in Derby and in Brighton, and 19.2 in Birmingham to 31.9 in Oldham, 32.3 in Blackburn, and 34.7 in Plymouth. In the twenty-seven provincial towns the mean death-rate was 24.7 per 1,000, and exceeded by 3.5 the rate recorded in London, which was 21.2 per 1,000. The 4,235 deaths registered during the week under notice included 105 which were referred to whooping-cough, 74 to measles, 63 to scarlet fever, 59 to diphtheria, 40 to "fever" (principally enteric), 37 to diarrhœa, and not one to small-pox; in all, 378 deaths resulted from these principal zymotic diseases, against 343 and 383 in the two preceding weeks. These 378 deaths were equal to an annual rate of 2.1 per 1,000; in London the zymotic death-rate was 1.9, while in the twenty-seven provincial towns it averaged 2.2 per 1,000, and ranged from 0.3 in Leicester, 0.6 in Huddersfield, and 0.7 in Oldham to 4.7 in Sunderland, 5.0 in Bolton, and 9.3 in Plymouth. Measles showed the highest proportional fatality in Derby, Nottingham Bradford, and Sunderland; scarlet fever in Liverpool, Wolverhampton, Bolton, and Plymouth; whooping-cough in Bolton, Hull, Wolverhampton, and Bristol; and "fever" in Birkenhead. Of the 59 deaths referred to diphtheria in the twenty-eight towns during the week under notice, 35 occurred in London, 5 in Salford, 3 in Plymouth, 2 in Liverpool, and 2 in Oldham. No fatal case of small-pox was recorded, either in London or in any of the provincial towns; and only one small-pox patient was under treatment in the Metropolitan Asylums Hospitals on Saturday, December 14th. These hospitals contained 1,596 scarlet fever patients on the same date, against numbers increasing from 538 to 1,588 in the twenty-four preceding weeks; 133 cases were admitted during the week, against 122 and 151 in the two previous weeks. The death-rate from diseases of the respiratory organs in London was equal to 6.5 per 1,000, and slightly exceeded the average.

HEALTH OF SCOTCH TOWNS.

In the eight principal Scotch towns, 800 births and 612 deaths were registered during the week ending Saturday, December 7th. The annual rate of mortality in these towns, which had increased from 19.8 to 21.0 per 1,000 in the four preceding weeks, further rose to 23.9 during the week under notice, and exceeded by 2.4 per 1,000 the mean rate during the same period in the twenty-eight large English towns. Among these Scotch towns the lowest rates were recorded in Aberdeen and Dundee, and the highest in Leith and Paisley. The 612 deaths in these towns during the week under notice included 67 which were referred to the principal zymotic diseases, equal to an annual rate of 2.6 per 1,000, which exceeded by 0.5 the mean zymotic death-rate during the same period in the large English towns. The highest zymotic death-rates were recorded in Greenock and Leith. The 256 deaths registered in Glasgow included 9 from whooping-cough, 3 from measles, 3 from scarlet fever, and 3 from diphtheria. Seven fatal cases of measles and 8 of whooping-cough were recorded in Edinburgh, and 8 deaths resulted from scarlet fever in Leith. The death-rate from diseases of the respiratory organs in these towns was equal to 6.5 per 1,000, against 5.2 in London.

In the eight principal Scotch towns 821 births and 604 deaths were registered during the week ending Saturday, December 14th. The annual rate of mortality, which had been 21.0 and 23.9 in the two preceding weeks, declined again to 23.6 during the week under notice, but exceeded by 0.5 per 1,000 the mean rate during the same period in the twenty-eight large English towns. Among the Scotch towns the lowest rates were recorded in Leith and Perth, and the highest in Aberdeen and Glasgow. The 604 deaths registered in these towns during the week included 85 which were referred to the principal zymotic diseases, equal to an annual rate of 3.3 per 1,000, which exceeded by 1.2 the mean zymotic death-rate during the same period in the large English towns. The highest zymotic death-rates were recorded in Glasgow and Leith. The 270 deaths registered in Glasgow during the week under notice included 11 from measles, 9 from whooping-cough, 7 from diarrhœa, 6 from "fever," 5 from diphtheria, and 3 from scarlet fever. Eight fatal cases of measles and 4 of diphtheria were recorded in Edinburgh; 4 deaths resulted from diphtheria in Dundee, and 3 in Leith. The death-rate from diseases of the respiratory organs in these towns was equal to 5.4 per 1,000, against 6.5 in London.

HEALTH OF IRISH TOWNS.

During the week ending Saturday, December 7th, the deaths registered in the sixteen principal town districts of Ireland were equal to an annual rate of 27.0 per 1,000. The lowest rates were recorded in Drogheda and Wexford, and the highest in Armagh and Londonderry. The death-rate from the principal zymotic diseases averaged 3.6 per 1,000. The 188 deaths registered in Dublin during the week under notice were equal to an annual rate of 27.8 per 1,000 (against 24.2 and 28.7 in the two preceding weeks), the rate for the same period being only 20.2 in London, and 26.4 in Edinburgh. These 188 deaths included 21 which resulted from the principal zymotic diseases (equal to an annual rate of 3.1 per 1,000), of which 12 were referred to different forms of "fever."

During the week ending Saturday, December 14th, the deaths registered in the sixteen principal town districts of Ireland were equal to an annual rate of 28.2 per 1,000. The lowest rates were recorded in Kilkenny and Dundalk, and the highest in Dublin and Londonderry. The death-rate from the principal zymotic diseases averaged 2.7 per 1,000. The 218 deaths registered in Dublin during the week under notice were equal to an annual rate of 32.2 per 1,000 (against 28.7 and 27.8 in the two preceding weeks), the rate for the same period being 21.2 in London and 23.1 in Edinburgh. These 218 deaths included 33 which resulted from the principal zymotic diseases (equal to an annual rate of 1.9 per 1,000), of which 6 resulted from different forms of "fever," principally enteric.

AWARDS TO PUBLIC VACCINATORS.

X. Y. Z. asks: Is the payment of the Government vaccination grant affected by the public medical officer resigning his appointment after the inspector has carried out the inspection but before the award has been made?

*** No; the official regulation governing the point is that "no award in respect of the vaccination in any district will be made to any public vaccinator who has not held his office for at least one year, nor, under ordinary circumstances, to any person who at the time of inspection is not actually in office as the public vaccinator." The making of the award dates from the inspector's visit, but recently there has been considerable delay in paying the awards made this year owing to the new arrangements inaugurated under the Local Government Act, 1888. But, apart from the above regulation, the two posts of public vaccinator and Poor-law medical officer, although generally held by the same practitioner, are entirely distinct from and independent of each other.

THE DIFFICULTIES OF MEDICAL OFFICERS OF HEALTH.

Medical Officer of Health writes: What, in your opinion, is the right course for a medical officer of health to pursue under the following circumstances?

1. A case of small-pox is reported. He visits the house, and the mother asks him to see the child, as she thinks it is chicken-pox. The officer finds this to be the case, but says nothing to the mother, but sends a note by the inspector to the practitioner who had reported the case, explaining that he found it to be chicken-pox, but left it to him to inform the mother. The medical officer makes no report to his authority, but leaves the matter. Under the Notification of Diseases Act, would he not have been obliged to inform his authority? or should he leave them in ignorance, let them pay the half-crown, and also incur the expenses of supporting that family during their period of isolation? The above is a true statement, and it is very difficult to know what to do.

(2) Another fact is puzzling. A medical man sees a child ten minutes after death. He signs a certificate that death has occurred from an infectious disease, though there is not a case of this disease within a hundred miles. What is the medical officer of health to do? Is he justified as an honest man in accepting such a certificate, and if not what is he to do?

*** In the first case submitted for our opinion, we should say that our correspondent would act wisely in accepting the diagnosis of the medical practitioner in attendance. As regards the advice he gives his authority, he will, of course, be influenced by his knowledge of all the circumstances of the case.

In the second case submitted to us we have not the data to form an opinion.

MAINTENANCE IN INFECTIOUS HOSPITALS.

Inscius writes: I shall feel obliged by your informing me as to the following:

Scarlatina breaks out in a rural district. A private house is offered and accepted by the medical officer of health as a hospital for purposes of isolation, the patients being for the most part young children. Who is responsible for the payment of the medical attendance on these patients during the time of their residence in such hospital? Is it their parents or the sanitary authority? If the latter are, as they presumably are, during such time responsible for keeping soul and body together by the supply of what are commonly termed the "necessaries of life," why should they not be responsible for keeping soul and body together by the supply of medical aid which, under the circumstances, would seem only somewhat less necessary?

*** We presume that the medical officer of health has taken the house referred to for the purposes of a hospital with the knowledge and assent of the sanitary authority, or, at all events, that the authority hold themselves responsible for his action, as he has no authority by virtue of his office as medical officer of health to provide a hospital. The matter is governed by Sections 131 and 132 of the Public Health Act, 1875, the former of which enacts that "any local authority may provide for the use of the inhabitants of their district hospitals or temporary places for the reception of the sick, and for that purpose may themselves build such hospitals or places of reception, or contract for the use of any such hospital or part of a hospital, or place of reception." The power given by this section includes the cost of food, maintenance, and all necessary medical attendance and nursing for patients in the hospital. As to recovery of expenses, Section 132 of the Act provides that "any expenses incurred by a local authority in maintaining in a hospital, or in a temporary place for the reception of the sick (whether or not belonging to such authority), a patient who is not a pauper, shall be deemed to be a debt due from such patient to the local authority, and may be recovered from him at any time within six months after his discharge from such hospital or place of reception, or from his estate in the event of his dying in such hospital or place." But this, like the previous section, is permissive, and it rests with the sanitary authority whether they defray the expenses out of the rates or proceed to recover them from the patients.

MEDICAL NEWS.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—Fellowship Examination. The following gentlemen, having passed the necessary examination, have been admitted by the President (Dr. Meldon) Fellows of the College:

L. A. Byrne, L.R.C.S.I., L.K.Q.C.P.I., and E. Rundle, L.R.C.S.I., L.K.Q.C.P.I.

DEPUTY SURGEON-GENERAL J. LANDALE has been appointed Principal Medical Officer on the Staff at Cork.

SIR HICKMAN BECKETT BACON, Bart., has given a donation of £500 to the Barnsley Beckett Hospital.

THE Bombay Legislative Council has passed the Village Sanitation Bill.

THE Congress of Internal Medicine, which, up to the present has always held its annual gathering at Wiesbaden, will, on the invitation of Professor Nothnagel, meet at Vienna in 1890.

THE Directors of the Dundee Royal Infirmary have resolved to expend a sum of about £400, in order to add to the security of the building against fire.

DR. FRITZ BRAMANN, who recently declined a chair at Greifswald, has been appointed Extrordinary Professor of Surgery in the University of Berlin.

AFTER January 1st, 1890, our Prague contemporary, the *Prager medicinische Wochenschrift*, will be edited by Drs. Dittrich, von Limbeck, and Pietrzikowsky.

THE Managers of the Montrose Infirmary have received the sum of £2,250, being the legacy of £2,500 left to the institution by the late Dr. Wyllie, less the duty, which amounted to £250.

A WARNING.—A nurse in a private hospital in New York was pouring ether from one bottle to another too near a gaslight when the vapour exploded, and the liquid catching fire caused burns which were fatal after forty-eight hours.

PRINCESS BEATRICE, on behalf of Princess Christian, presented, at the Albert Institute, Windsor, on Monday, December 16th, the medallions and certificates awarded to the successful members or the local centre of the St. John Ambulance Association.

THE twelfth Congress of Balneologists will meet on March 8th, and 9th, 1890, at the Pharmacological Institute at Berlin, under the presidency of Professor Liebreich. Notice of communications should be sent as soon as possible to the General Secretary of the Balneological Society, Dr. Brock, Schmidtstrasse 42, Berlin S.O.

THE chair of surgery at Halle, vacant by the death of Volkmann, will, it is stated, be offered to Dr. Schede, of Hamburg, a favourite pupil of the deceased surgeon, and for many years his chief assistant. In the meantime Professor Oberst and Dr. Fedor Krause have charge of the surgical clinic. The latter has just been appointed an Extraordinary Professor.

HUGH WILMOT pleaded "guilty" at the Central Criminal Court on December 17th to an indictment charging him with publishing a false and defamatory libel concerning Dr. Sutherland Rees Phillips, the medical officer of Holloway's Sanatorium, where the the defendant was a patient in 1886. An apology was made, and the defendant was discharged, on his own recognizances in £50 and two sureties in £25, to come up for judgment if called upon, and to keep the peace towards the prosecutor.

WE regret to have to announce the death of the oldest *employé* of the BRITISH MEDICAL JOURNAL, Mr. William Toone, who has been employed in the printing office of the JOURNAL continuously since the issue of its first number in London, in 1852, up to within a short period of his death. He has died after a short illness in the 65th year of his age, leaving a widow to deplore his loss, and much esteemed and respected by all his comrades, as well as by his employers, whom he served so faithfully.

A NEW DANISH PHARMACOPŒIA.—A new Danish *Pharmacopœia* is being prepared by a committee which is at present sitting at Copenhagen. The committee consists of Professors Warncke, S. M. Jörgensen, and Trier, and Dr. Gram, as representing medicine; and Messrs. H. P. Madsen, Chr. Steenbuch, and H. J. Möller, as representing pharmacy. Delegates from Sweden and Norway also take part in the proceedings, in order that the new Danish formulary may be, as far as possible, in agreement with the other Scandinavian *Pharmacopœias*.

UNFORTUNATE RESULT OF ABSENCE OF MIND.—A French Canadian practitioner, intending to order a dose of bisulphate of quinine for a child, recently, in a fit of absence of mind, wrote bisulphate of morphine. The apothecary made up sulphate of morphine. The child died, and the father has sued the medical practitioner; the latter has, according to the report in the *New York Medical Journal*, sued the apothecary on the ground that he had not prescribed sulphate of morphine, and that the apothecary must bear the consequences of having sent out a drug not prescribed.

THE annual dinner of the Volunteer School of Instruction was held on Saturday evening, December 14th, at Crosby Hall, Bishopgate Street. The President, Lieutenant Maclure, presided, and he was supported by Colonel Comerford (Q.W.R.V.), Surgeon Des Vœux (Q.W.R.V.), Surgeon Bateman (L.I.R.V.), Surgeon Leslie Ogilvie (L.S.R.V.), Surgeon G. Ogilvie (L.S.R.V.), Surgeon W. Pearce (Artists'), Lieut. Gordon (L.S.R.V.), Surgeon Evershed (Artists'), and Sir Morell Mackenzie. Numerous toasts were proposed and drunk, that of "Success to the Volunteer Ambulance School of Instruction" being proposed by Colonel Comerford, and acknowledged by Surgeon W. Pearce. The prizes were afterwards distributed.

SPANISH GYNÆCOLOGICAL SOCIETY.—The Spanish Gynæcological Society held its first meeting this winter on December 4th, under the presidency of Dr. Francisco Alonso Rubio. The introductory address was delivered by Dr. Enrique Oliván; the gist of it is sufficiently indicated by what the Spanish reporter calls its "kilometric" title: Some reflections tending to show that the confidence at present inspired by anæsthetics, and the use of modern antiseptic methods, neither justifies nor excuses the practice, far too frequent nowadays, of intra-abdominal operations, and more especially of those termed exploratory laparotomies." The reactionary tendencies of Señor Oliván's discourse and his "ultra-conservative anathema" hurled against recent advances in modern surgery seem to have excited more amusement than irritation among his hearers.

THE STUDY OF TUBERCULOSIS IN SPAIN.—At a meeting on December 2nd, in the rooms of the Medico-Chirurgical Society of Madrid, which was largely attended by the leading members of the profession in the Spanish capital, Dr. Espina, President of the Academy, delivered an address on the light which recent investigations have thrown on the nature and mode of transmission of tuberculosis. He proposed that an association should be formed in Spain for the purpose of studying the disease. In spite of some slight differences of opinion on points of detail, the proposition was unanimously agreed to, and in less than an hour (a rate of progress which our contemporary, *La Medicina Practica*, says is rare in Spain) the new Society was formally established, its regulations approved of, and the practitioners present enrolled as members. Among those who have joined the association are the the Rector and the Dean of the Medical Faculty of the Central University (Madrid), Drs. San Martin, Gomez de la Mata, Aycart, Salazar, Ustáriz, Calatraveño, and many others.

FUNERAL REFORM.—The Church of England Burial, Funeral, and Mourning Reform Association has recently taken a very judicious step. It has been generally supposed that this society was advocating reform burial in opposition to cremation, a suicidal policy, inasmuch as cremation is undoubtedly the best mode of disposal of the dead, from a sanitary point of view. Quite lately, however, at an important conference in the Church House at Westminster, a resolution was unanimously adopted leaving the advocacy or non-advocacy of cremation an open question. The association is doing good work in calling attention to the overcrowded and dangerous condition of many of our churchyards and cemeteries. Very valuable, also, are the indefatigable efforts of the Council to restrain the profuse and extravagant expenditure which is too much the fashion. In many cases the health of the surviving members of the families of the deceased is apt to be impaired by the lengthened after-period of restricted food supply, necessitated by unnecessary funeral outlay. In not a few instances, what is called "a respectable funeral" is dearly paid for by a long course of suffering and privation.

THE ARRAN MURDER.—The respite of the convict Laurie who was found guilty of the murder at Arran will have surprised no one. The mere fact, if indeed it be a fact, that he was only convicted by a bare majority of the jurors, would in itself justify a

remission of the sentence. There was, moreover, as there almost invariably is, an element of uncertainty as to the medical evidence and the mode in which the injuries to the head were or could have been produced. With such a conflict of medical testimony as the jury were presented with, it must have required very strong corroborative evidence from other sources to induce even a majority of the jury to return a verdict of guilty, and that requisite testimony was supplied by the prisoner himself. The case has attracted much feeling in medical circles in the north, and we have received from Dr. Campbell Black a pamphlet in which the medical evidence for the prosecution is criticised very severely. Dr. Black's argument, however, loses much of its force from the conclusions at which he arrives as set forth in his letter to the Secretary of State for Scotland, and when he tells us, almost in the same breath, that it is impossible to say that death was not due to natural causes, and that death must have been instantaneous, we cannot but feel that his contribution has not done much to elucidate the subject.

MEDICAL VACANCIES.

The following Vacancies are announced:

BIRMINGHAM AND MIDLAND COUNTIES SKIN AND LOCK HOSPITAL.—Additional Medical Officer. Applications by January 4th to the Honorary Secretary.

CHELMSFORD UNION.—Medical Officer and Public Vaccinator. Salary, £140 and fees. Applications by December 31st to W. W. Duffield.

CHELSEA HOSPITAL FOR WOMEN, Fulham Road.—Assistant-Physician. Applications by December 23rd to the Acting Secretary.

CHELTENHAM GENERAL HOSPITAL.—House-Surgeon, Salary, £80 per annum, with board and apartments. Applications by December 26th to Lieutenant-Colonel Croker-King.

DERBYSHIRE GENERAL INFIRMARY.—Resident Assistant House-Surgeon. Bonus, £10, with board and washing. Applications by December 31st to the House-Surgeon.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell, E.—House-Surgeon. Board and lodging. Applications by January 9th to the Secretary.

GENERAL HOSPITAL, Birmingham.—Two Assistant House-Surgeons. Board, lodging, and washing. Applications by December 28th to the House Governor.

GENERAL INFIRMARY, Northampton.—House-Surgeon. Salary, £125, with board and lodging. Applications by December 23rd to the Secretary.

GORDON HOSPITAL FOR FISTULA, etc., 278, Vauxhall Bridge Road, S.W.—Anæsthetist. Applications by December 21st to N. S. Hincks.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway Road.—Surgeon. Applications by December 27th to the Secretary.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street.—Surgical Registrar. Salary, £40. Applications by December 31st to the Secretary.

LEEDS GENERAL INFIRMARY.—Resident Ophthalmic Officer. Appointment for six months. Honorarium, £50, with board and lodging. Applications by December 23rd to Mr. W. H. Brown, 19, Queen Street, Leeds.

LIVERPOOL NORTHERN HOSPITAL.—House-Surgeon. Salary, £100 per annum, with board and lodging. Applications by December 27th to the Chairman of the Committee.

LIVERPOOL NORTHERN HOSPITAL.—Assistant House-Surgeon. Salary, £70 per annum, with board and lodging. Applications by December 27th to the Chairman of the Committee.

MANCHESTER ROYAL INFIRMARY (MONSALL FEVER HOSPITAL).—Assistant Medical Officer. Salary, £100 per annum, with board and residence. Applications by December 21st to the Chairman of the Board.

MERCER'S HOSPITAL, Dublin.—Physician. Applications by January 7th to A. McGucken, Esq., Registrar.

ROYAL ALBERT HOSPITAL, Devonport.—Assistant House-Surgeon. Board, lodging, and washing. Applications by December 25th to the Chairman of the Medical Committee.

ROYAL BERKS HOSPITAL, Reading.—House-Surgeon. Salary, £80 per annum, with lodging. Applications by January 7th, 1890, to the Secretary.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, King William Street, Strand.—Clinical Assistants. Applications by December 31st to the Secretary.

VICTORIA HOSPITAL FOR SICK CHILDREN, Chelsea, S.W.—House-Physician. Salary, £50, with board and lodging. Applications by January 4th to the Secretary.

VICTORIA HOSPITAL FOR SICK CHILDREN, Chelsea, S.W.—House-Surgeon. Salary, £50, with board and lodging. Applications by January 4th to the Secretary.

WEST LONDON HOSPITAL, Hammersmith Road, W.—House-Physician.—Board and lodging. Applications by December 26th to the Secretary-Superintendent.

WEST LONDON HOSPITAL, Hammersmith Road, W.—House-Surgeon.—Board and lodging. Applications by December 26th to the Secretary-Superintendent.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—Two Honorary Gynæcologists. Applications by December 30th to Chairman Weekly Board.

MEDICAL APPOINTMENTS.

ALBERT, H. L., M.R.C.S., L.D.S., appointed Lecturer on Dental Surgery to St. George's Hospital, *vice* A. Winterbottom, F.R.C.S., L.D.S., resigned.

ASHE, E. Oliver, M.D.Lond., appointed House-Surgeon to the London Hospital.

BASSET, W., M.R.C.S., L.R.C.P.Lond., appointed Honorary Surgeon to the Out-Patient Department of the Newport and County Infirmary.

BIRKENHEAD, Harold, L.R.C.P.Lond., M.R.C.S., appointed Junior House-Surgeon to the Royal Albert Edward Infirmary and Dispensary, Wigan, *vice* E. C. Lomas, M.B., M.R.C.S., promoted to Senior House-Surgeon.

BROWN, John, M.D.Vic., B.S., D.S.Sci., etc., reappointed Medical Officer of Health to the Borough of Bacup and Physician to the Sourhall Fever Hospital.

BURGHARD, Frédéric F., M.D., M.S.Lond., F.R.C.S., late Surgical Registrar to Guy's Hospital, appointed Assistant Surgeon to King's College Hospital, *vice* W. Watson Cheyne, F.R.C.S., appointed Surgeon.

CHEATLE, G. L., M.R.C.S., appointed Sambrooke Surgical Registrar to King's College Hospital.

DAVIDSON, Peter, M.D., appointed Lecturer on Diseases of Children to the Liverpool University College.

DAVISON, J., M.D., M.R.C.P., appointed Physician to the National Sanatorium for Consumption and Diseases of the Chest, Bournemouth, *vice* W. S. Falls, M.D., F.R.C.P.

EDWARDS, H. N., M.R.C.S., L.R.C.P., appointed Assistant House-Surgeon to the Scarborough Hospital and Dispensary, *vice* S. T. Williamson, M.B., C.M.Edin., resigned.

FRY, J. Farrant, appointed Medical Officer to the Shepton Mallet District Hospital.

JOSCELYNE, Arthur E., M.R.C.S., L.R.C.P., L.S.A., appointed House Surgeon to the Oxford Eye Hospital.

KAYE, J. R., M.B., appointed Medical Officer of Health to the Borough of Huddersfield, *vice* J. S. Cameron, M.D., resigned.

LANGDALE, H., L.R.C.P., M.R.C.S., appointed House-Surgeon to the Oldham Infirmary, *vice* W. H. Tomlinson, M.B., M.R.C.S., L.S.A., resigned.

MACKENZIE, J. I., M.B., M.R.C.S.Eng., appointed Surgeon to the West End Hospital for Diseases of the Nervous System, *vice* T. F. Pearse, M.D., F.R.C.S. resigned.

MCGRANE, J. L., L.R.C.S.I., L.K.Q.C.P.I., appointed Medical Officer to the Killucan Dispensary, Mullingar Union, *vice* J. W. Williams, M.D., L.M.K.Q.C.P.I., deceased.

MACLEOD, Charles G., M.A., M.B., C.M.Edin., L.R.C.P., appointed Junior Assistant Medical Officer to the St. Andrew's Hospital, Northampton, *vice* A. L. F. Robertson-Fullerton, M.B., C.M., resigned.

MARSHALL, C. F., M.B., M.R.C.S., appointed Junior House-Surgeon to the North-Eastern Hospital for Children, *vice* E. H. Brock, M.B., M.R.C.S., resigned.

MORTON, A. S., M.B.Ed., F.R.C.S.Eng., appointed Ophthalmic Surgeon to the Great Northern Central Hospital, Holloway Road, *vice* J. Hutchinson, Jun., F.R.C.S., resigned.

OPENSHAW, T. H., M.B., F.R.C.S., appointed Surgical Registrar to the London Hospital, *vice* J. Hutchinson, jun., F.R.C.S.

PEARSON, A. E., M.R.C.S.Eng., L.R.C.P.Ed., appointed Resident Medical Officer to tne Leeds Borough Hospitals, *vice* J. Hick, M.R.C.S.Eng., L.R.C.P.Edin., resigned.

PHILLIPS, John, M.D., appointed Assistant Physician for the Diseases of Women and Children and Assistant Physician Accoucheur to King's College Hospital.

PRIESTLEY, J., M.D., M.R.C.S.Eng., appointed District Medical Officer and Public Vaccinator to the Parish of the United Parishes of Whittlesey, *vice* C. F. Harding, M.D., M.R.C.S.Eng., resigned.

SIEVEKING, Herbert, M.R.C.S.Eng., L.R.C.P.Lond., appointed Medical Officer to the Jumpers Gold Mining Company, Johannesburg, Transvaal, South Africa.

SYMES, W. L., appointed Demonstrator of Physiology to the St. Mary's Hospital Medical School, *vice* E. W. Reid, M.B., M.R.C.S., resigned.

WATERS, J. M., appointed Resident Medical Officer and Superintendent to Atkinson Morley's Convalescent Home, *vice* F. W. Humphery, M.B., resigned.

WILLIAMS, Augustus Frederick, L.F.P.S.G. & L.S.A.Lond., appointed Public Vaccinator to the No. 2 District of the Brixworth Union.

DIARY FOR NEXT WEEK.

MONDAY.

MEDICAL SOCIETY OF LONDON, 8.30 P.M.—Dr. Sansom: On Mitral Stenosis in Children. Mr. Watson Cheyne: On case of Abscess in Left Temporo-sphenoidal Lobe after old-standing Ear-disease: Trephining: Recovery.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the announcement. The first post on Thursday mornings is the latest by which advertisements can be received.

BIRTH.

LANGFORD-JONES.—On December 15th, at Tan-y-Graig, Bangor, N.W., the wife of R. Langford-Jones, M.R.C.S.Lond., of a daughter.

MARRIAGE.

MAYNARD—HARRISON.—On November 18th, at St. Stephen's Church, Bareilly, India, by the Rev. H. C. Spring, Chaplain to the Forces, Frederic Pinsent Maynard, M.B., Indian Medical Service, Bengal, younger son of the late Thomas Maynard, Preston, and Mrs. Maynard, Walton-le-Dale, to Maria Gertrude, second daughter of Edward Harrison, Worbuck, Southport, formerly of East Cliff, Preston, Lancs.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK' JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the office of the JOURNAL, and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

QUERIES.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* JOURNAL *are devoted, will be found under their respective headings.*

ROARING IN HORSES.

M.R.I.A. asks: Would "F.R.C.V.S." kindly say how long the tube should be kept in the trachea, and when the operation should be performed?

ANSWERS.

HOSPITAL FOR HYSTERICAL WOMAN.

NEMO might apply to Dr. Bower, Springfield House, Bedford.

EXCREMENT DISPOSAL.

E. F. W. asks to be recommended books on excrement disposal in rural districts.

*** Mr. Netten Radcliffe's Report to the Medical Officer of the Local Government Board, published in 1875, can be obtained for a small sum from the Parliamentary publishers. *Our Homes and how to Make Them: Healthy* (Cassell and Co.) contains a large amount of useful information on the subject of excrement disposal in the houses of all classes in rural districts.

TEMPERANCE.

L.M.C.T. asks where he can procure pamphlets or leaflets for distribution among school children and young persons generally, showing in a concise and comprehensible form, supported by statistics and scientific investigation, the dangers of drink.

*** National Temperance Publication Depôt, 33, Paternoster Row, E.C.; United Kingdom Band of Hope Union, 4, Ludgate Circus, E.C.; Church of England Temperance Publication Depôt, 9, Bridge Street, Westminster, S.W.

NOTES, LETTERS, ETC.

HEALTH OF EGYPT.

PYRAMID takes exception to a recent statement in the JOURNAL that "Egypt is happily free from epidemics; tourists and visitors may come and enjoy our marvellous winter climate without fear." The climate is certainly unrivalled, yet no one predisposed to enteric fever can reside in it without risk. Let the public understand this, as it may lead to proper remedies.

*** We believe a scheme for the thorough drainage of Cairo is now before the Egyptian Government.

HATTON GARDEN ROBBERY.

MR. MARK C. RIMMER, Secretary to the Sanitary Wood Wool Company, Limited (11, Hatton Garden, E.C.) writes: I shall esteem it a favour if you will insert in the JOURNAL, for the benefit of any of the medical profession who wrote to us on Monday, December 16th, that, owing to the Hatton Garden robbery, the whole of our mail was stolen before it reached our office on Tuesday morning, and we shall be pleased if they will communicate with us again at once.

INFLUENZA.

DR. BERNARD O'CONNOR (London) writes: It may be of advantage to some practitioners to know that there is a substance, perfectly harmless in use, which has the effect of immediately lessening, if not of altogether putting an end to, the most pronounced nasal symptoms of acute febrile catarrh. One application is generally sufficient for an ordinary "cold in the head." Powdered periodate crystals (Weaver's), forcibly blown into the nostrils—or simply dropped in, if the patient is lying flat on his back—and then "sniffed up," will cut short an attack if administered at the very beginning. The combination of bismuth, morphine, and gunpowder in the form of snuff, once commonly used, is valueless when compared with periodate, which is, as far as is at present known, the most powerful antiseptic ever used. It can be swallowed in almost any quantity without the least risk.

THE TREATMENT OF OBESITY.

DR. NATHANIEL EDWARD DAVIES (Sherborne) writes: Will you kindly favour me with a little space to answer Mr. Towers-Smith? My aim in constructing my little book *Foods for the Fat* (Chatto and Windus) was to give those with a tendency to excessive corpulency a dietary that would gradually but surely reduce weight and still be easy and pleasant to carry out. I took Ebstein and Oertel more particularly as my guides. Ebstein's formula, as is well known, consists in very much restricting the food eaten, giving a large proportion of fat, and curtailing those articles of diet that contain sugar and starch, his theory being that fat assists in the body by its transformation into heat in eliminating other materials. Acting on these lines in my dietary, I totally forbid sugar (substituting saccharin), malt liquors, and greatly limit the amount of starch; in fact, my daily diet may be roughly represented thus: 12 ounces of meat, 3 ounces of butter or fat, 4 ounces of bread (as dry toast, bread-crumbs, or for other culinary purposes), 2 or 3 ounces of milk or a little cream. Tea, coffee, claret for drink, and eight or ten miles walking exercise daily. To enable sufferers to have a choice of food, I have culled about three hundred receipts, embracing soups, fish, meats, jellies, fruits, etc., always endeavouring to give at each meal a certain amount that shall represent in the twenty-four hours as nearly as possible 8 ounces of nitrogenous food (dry), 3 ounces of fat or butter (hence the cream that Mr. Towers-Smith objects to), 3 or 4 ounces of carbo-hydrates, and 1 ounce of salt.

For those who like more rapid results, there is no doubt that Mr. Towers-Smith's system offers all that can be desired. I congratulate him on his success. Those who have adopted my dietary speak well of it, and find it reduces them to comfortable dimensions; it agrees well with patients with flabby hearts and with those of the gouty and bilious diathesis, a great desideratum. As I propose to take patients to diet under observation, I hope shortly to be able to give Mr. Towers-Smith and numerous other inquirers further and more accurate information.

ROARING IN HORSES.

DR. T. GERALD GARRY (Liverpool) writes: I agree with "F.R.C.V.S." that the paragraph appearing in the JOURNAL of November 16th relative to the above is liable to mislead the public, and it is only fair to Dr. Fleming, principal veterinary surgeon to the army, that it should be corrected. It is to him that the success of the operation of laryngotomy is chiefly due, and anyone interested in laryngeal disease in the horse would do well to consult his very admirable and interesting book recently published on the *Pathology and Treatment of Roaring in Horses*. In this work the operation for roaring recommended by him is minutely described, and cases recorded in which it has been successfully performed.

Your contributor does not deny its value, inasmuch as he says "there can be no doubt a good many roarers were very decidedly benefited by it," and yet he confidently prophesies a discontinuance of the operation, and says that "we shall hear little more of it." It is very difficult to reconcile his statements, for if the operation "decidedly benefits" some horses, why is it to be "discontinued?" Is it because a few failures have been chronicled by its opponents? It is to be hoped, however, that Dr. Fleming will not be discouraged, but will still continue his researches, as unfortunately in estimating the value of a new operation the conditions which call for it are only too often overlooked.

AN INDIAN OCULIST.

DR. D. W. WILLIAMS (Truro) writes: With reference to the "Indian Oculist" the facts are the following: On October 20th last I was hastily summoned to attend Abdulkrem professionally, long before I had heard anything of the action in question, and whom I had never seen before, but it is true I had previously heard of his success as an oculist. After paying a few visits and becoming better acquainted, our conversation—it will, I think, be admitted not unnaturally—turned on his operation for cataract, and he unreservedly and, as far as his imperfect knowledge of English permitted, gave a fairly intelligible description of his operation, and I at once recognised it as a modification of couching, as practised within my memory in England some years ago. This I, however, found afterwards was not the case.

I must confess to feeling very curious and interested to witness, from his description, this novel method of operating. This he frankly offered to grant me the first opportunity, after his recovery from a rather severe illness, on a patient whom he had then in view, and on whom accordingly he operated on November 8th in my presence. The operation I must describe as minutely as its importance in this case deserves. He seats the patient on a chair, the head supported by an assistant; gives no anæsthetic whatever, notwithstanding which it is remarkable the slight pain complained of. He then lightly fixes the eye with the thumb and index finger of the left hand, and inserts the point of a strong, narrow lancet, well guarded by some adhesive cotton within about a line and a half of its point, into the sclerotic, on the external side of the globe, and much lower down than obtained in our operation of couching, horizontally and parallel to its longitudinal fibres, and of just sufficient height to pierce through the sclerotic only, and about two lines from the sclero-corneal margin, and somewhat on a line with the inferior margin of the iris. A fine triangular-pointed probe about five inches long, with a narrow neck of about one-fifth of an inch long and half an inch from the point to allow of freedom of motion without crushing in the incision, terminating in a rounded handle, constituting its principal length, of the same metal and of some size and weight, to facilitate its lightly lanced introduction by the thumb and two first fingers of the right hand in a semi-rotatory manner through the vitreous humour to the back of the lens. It is then carried round and over its inner edge, and brought rapidly and carefully to the front, just behind the pupil. The capsule is then pierced by the end of the probe, the lens depressed and drawn backwards and downwards in the same semi-rotatory manner, and deposited in the space made in the vitreous in the first stage of the operation, where it is held for a second or two and then withdrawn.

I claim for this simple incision, admitting of the introduction of a comparatively blunt instrument, a distinct and overwhelming advantage—and is the very essence of the Indian method—over the couching needle advocated by Mr. Square in his evidence, which is well known to those who know anything of couching as nothing more or less than a fine double-edged knife, and which he graphically describes, although never having used it, as "doing its own work"—and, I might justly add, of destruction—"in the dark," and was much more likely, in clumsy hands, at all events, "to wound the zonula of Zinn, or the ciliary body," which he so unwarrantably assumed as exaggerated in Mrs. Polmear's case, and which he had no justification in

describing as being unsuccessfully performed, in the absence of any proof to the contrary, and the all but impossibility of the occurrence of the above contingencies with the customary precision observed in making the incision, and the blunt instrument afterwards lightly and skilfully used. And I contend still further, as I did in my evidence—never reported—that I did not see why this operation should not be revived, engaging as it does structures so much less vital than those obtained in the linear operations, to wit, with some modifications, such as crushing the lens and extracting it piecemeal—as is, I believe, sometimes done in the linear—and supersede those operations.

We now know that much greater liberties can be taken with the peritoneum than would have been probably dreamt of some years ago. And I do not see why, with the incision slightly widened in the sclerotic, the lens could not safely be extracted *en bloc*. The revival of one operation, not a whit less important than the one under consideration, is well known, namely, the high or suprapubic operation for stone, which had been superseded by an operation introduced close upon a century ago by Cheselden, an illustrious intellectual athlete in anatomy and surgery, and who scorned the difficulties and dangers attending the lateral operation for lithotomy, which slight modification held its sway for wellnigh a century, then to be contested and reintroduced by Sir Henry Thompson, another veteran lateral lithotomist, who has, I believe, in a comparatively short time, considering the issue, carried the day without a dissentient voice, so that the high operation is again *pro tanto un fait accompli* and universally recognised and practised—if I may now except that distinguised veteran lateral lithotomist, Cadge, of Norwich.

Who knows but that the humble and persecuted Indian eye-doctor may not yet be the unwitting pioneer of an improved operation, to be still further revived, with a success equal to Sir Henry Thompson, by some veteran English ophthalmic surgeon?

It is quite true that I expressed my satisfaction with Abdulkrem's operation, and certainly did give it as my opinion that he was a dexterous and skilful operator, and for coolness, nerve, delicacy, and precision of manipulation equal to any of the first operators of the day, most of whom I have witnessed. In consequence of this I was subpœnaed and again fully reiterated my former opinion in evidence before the court.

Abdulkrem is qualified, and holds a diploma from the Lahore College, which I have seen myself, and, until it is proved to the contrary, I have a right to accept this as an incontrovertible fact, and it was on the strength of this I went to witness the operation.

Your reference to the shovelful of burning cinders charm is absurd. It is no charm at all, and is used as an aseptic, and a much superior one to carbolic spray from the amount of sulphur fumes evolved, which it goes without saying is the best chemical antiseptic or germicide extant. The brickbat is another exaggeration equally absurd. A piece of brick is simply put into the fire and heated to a proper temperature, and then folded up in a doubled piece of flannel and applied round the eye to relieve pain and inflammation, as recommended by Nettleship by the means of heated rolls of cotton-wool, but, from its superiority in retaining heat, much better.

ERRATA.—In our last issue, p. iii of programme, for "J. C. McVail, M.D., F.F.P.S.G.," read "J. C. M'Vail, M.D., D.P.H.Camb."—The remarks made by Dr. A. Hill Griffith, in the report of the meeting of the Manchester Medico-Ethical Association in the JOURNAL of December 14th, page 1375, were incorrectly given. Dr. Griffith really said that the Secretary of the Manchester Royal Eye Hospital, who entered every case, was fully empowered to make inquiry and refuse admission to such a case.

COMMUNICATIONS, LETTERS, etc., have been received from:

Sir Joseph Lister, London; Mr. W. Davis, Peckham; Dr. A. Money, London; Dr. J. Hinshelwood, Glasgow; B. Squire, M.B., London; Dr. T. W. Hime, Bradford; Mr. G. Nicholls, Birmingham; Dr. O. Wood, London; Dr. Willoughby, London; Mr. H. Birkenhead, Wigan; Mr. R. Roberts, Blaenau-Festiniog; Mr. J. F. Fry, Shepton Mallet; Mr. H. Goodwyn, Bovey Tracey; Mr. C. G. May, London; Dr. J. A. Myrtle, Harrogate; Dr. F. A. Gange, Farnham; Mr. W. Joyce, London; Dr. D. W. Williams, Truro; Mr. S. Paget, London; Mr. W. Briggs, Arbroath; Dr. Seaton, London; Mr. G. C. Peachey, Portslade; Mr. C. A. Patten, Ealing; Dr. P. Boobbyer, Nottingham; Dr. G. Hogg, Chiswick; Our Birmingham Correspondent; Mr. R. R. Sleman, London; Mr. E. Ball, Southport; Dr. G. Mundie, Canterbury; Dr. J. B. Tuke, Edinburgh; Mr. J. W. Greenwood, Hanley; Dr. A. W. Stirling, Grays; The Secretary of the Medico-Chirurgical Society, Aberdeen; Mr. W. J. Wordsworth, West Brighton; Nil Desperando; Messrs. Sharp and Kent, London; Mr. G. A. Berry, Edinburgh; Dr. W. M. Kelly, Taunton; Our Oxford Correspondent; Mr. W. L. Rollo, London; Dr. T. Wood, London; Dr. L. Atthill, Dublin; Dr. J. Oliver, London; Dr. R. H. Wagner, Plymouth; Mr. J. Russell, Sandhurst; Tell; Mr. L. Mark, London; W. J. P.; Mr. W. Woodward, Bodmin; Mr. G. C. Morrison, Reigate; Mr. A. Moore, London; Mr. W. Bassett, Newport; Mr. Adams Frost, London; Biceps; Dr. J. Phillips, London; Dr. G. Thin, London; Dr. E. O. Ashe, Louth; Dr. A. Henry, London; Dr. T. G. Garry, Liverpool; Mr. R. Dobell, Truro; Messrs. Burroughs, Wellcome, and Co., London; Mr. W. B. Cosens, Taunton; Our Edinburgh Correspondent; Our Paris Correspondent; Mr. F. Round, Southport; M. B. L.; Mr. J. H. Harris, Modbury; A Stickler; Dr. A. Napier, Glasgow; Rev. H. P. Wright, Greatham; A Subscriber; Dr. C. Coombs, Castle Cary; Charcoal; Dr. C. E. Glascott, Manchester; Dr. W. R. Cossham, Cirencester; Dr. H. Dobell, London; Mr. J. B. Blackett, London; Dr. C. H. Allfrey, Brighton; Mr. H. T. Sells, Northfleet; Mr. H. Sieveking, Johannesburg; Dr. Mickle, London; Dr. G. Harley, London; Mr. A. H. F. Cameron, Liverpool; Mr. A. H. Jackson, Wolverhampton; Dr. J. C. McVail, Kilmarnock; Dr. E. Berdoe, London; Miss Deane, London; Mr. R. J. Pye-Smith, Sheffield; Mr. R. Hagyard, Hull; Mr. W. F. B. Eadon, Hambrook; Mr. F. L. Wood, Heaton Moor; Dr. E. J. Edwardes, London; Mr. T. Holmes, London; Enquirer; Dr. A. H. Griffith, Manchester; Mr. T. A. Collinson, Hanwell; Nemo; Mr. J. M. Farquharson, Edinburgh; Dr. W. P. Northrup, New York; Surgeon-Major Samuel Smith, Bristol; Mr. F. B. Jones, Leicester; Dr. F. Warner, London; Mr. J. B. Lawford, London; Mr. G. Steell, Manchester; Dr. L. Parkes, London; Mr. G. Smith, Upper Clapton; Dr. C. R. Drysdale, London; The Director-General of the Naval Medical Department; Dr. G. E. J. Greene, Ferns; Dr. N. E. Davies, Sherborne; Dr. Ward Cousins, Southsea; Dr. Railton, Manchester; Dr. F. Payne, London; Dr. Brailey, London; Dr. N. Kerr, London; Mr. W. W. Wagstaffe, Sevenoaks; Mr. T. R. Scott, Portsmouth; Messrs. C. Griffin and Co., London; M.S.; Dr. Hugh Woods, London; J. Lloyd, M.B., Birmingham; Dr. Rentoul, Liverpool; Mr. T. Fielding, Blandford; Dr. J. Byers, Belfast; Dr. Macpherson, London; Mr. S. O. Bishop, Upper Assam; Dr. R. Kirkwood, Largs; Dr. T. Cranstoun Charles, London; Dr. Clement Godson, London; Mr. Douglas, Hounslow; Messrs. Cassell and Co., London; Mr. E. White Wallis, London; Professor E. Porro, Milan; The Secretary of the University of London; Mr. C. B. Rendle, Stoke; Dr. Dudley Buxton, London; Dr. Edridge-Green, London; Surgeon H. D. Rowan, Punjab; Mr. F. A. Davis, London; Mr. O. Bowen, Everton; Surgeon E. D. Farmer-Bringhurst, Bournemouth; Manna; Mr. R. J. Godlee, London; Dr. E. F. Neve, Kashmir; Mr. C. B. Lockwood, London; Mr. S. Keith, Edinburgh; The Secretary of the Victoria University, Manchester; Mr. W. Wallis, Hartfield; C. H. Mallett, M.B., Axminster; Messrs. Clay and Abraham, Liverpool; Dr. A. H. Corley, Dublin; Mr. S. G. Denton, London; L.R.C.P.E.; Mr. J. H. Wormer, Sherborne; Aggrieved; Mr. A. E. Pearson, Leeds; Dr. R. M. G. Binnie, Brandon Colliery; Mr. G. E. Williamson, Newcastle-on-Tyne; Mr. P. P. Burroughs, Weston-super-Mare; A Member; Mr. F. Kerslake, London; Dr. Steele, Morley; Mr. W. J. Gooch, Windsor; L. M. C. T.; A. W. L. G.; J. Adam, M.B., Hamilton; Mr. T. H. R. Crowge, London; Mr. R. Stack, Omagh; Dr. H. Handford, Nottingham; Mr. J. Russell, Sandhurst; Mr. A. Carter, London; Mr. H. Buxton, Ripon; Dr. R. Chicken, Nottingham; Sir W. J. Moore, London; Mr. D. Hughes, Deal; Dr. Thursfield, Shrewsbury; Mr. W. J. Serjeant, London; Dr. Steele, London; Dr. B. O'Connor, London; M.S.; Dr. Grainger Stewart, Edinburgh; Our Vienna Correspondent, etc.

BOOKS, ETC., RECEIVED.

Messrs. Macmillan and Co.

Tom Brown's Schooldays. By an Old Boy.
The Scouring of the White Horse, and the Ashen Faggot. By the Author of Tom Brown's Schooldays.
Mr. Isaacs; a Tale of Modern India.
Cressy. By Bret Harte.
Flowers of Paradise. By R. F. Hallward.
History and Pathology of Vaccination. Vol. I. A Critical Inquiry. By Edgar M. Crookshank. M.B. London: H. K. Lewis. 1889.
A Manual of Nursing. By Chas. J. Cullingworth, M.D. Third Edition, revised. London: J. and A. Churchill. 1889.
Hazell's Annual for 1890. Edited by E. D. Price, F.G.S. London: Hazell, Watson, and Viney.
Essay on Medical Pneumatology. By J. N. Demarquay. Philadelphia: F. A. Davis. 1889.
Master of His Fate. By J. Maclaren Cobban. London: W. Blackwood and Sons.
A Treatise on Materia Medica, Pharmacology, and Therapeutics. By John V. Shoemaker, M.A., M.D., and John Aulde, M.D. In two vols. Philadelphia: F. A. Davis. 1889.
On the Geographical Distribution of some Tropical Diseases. By R. W. Felkin, M.D., F.R.S.E., F.R.G.S. Edinburgh: Young J. Pentland. 1889.

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RETROSPECT: 1889.

THE future historian of medicine will not have to point to the year which is now closing as having witnessed any fundamental discovery, or the birth of any far reaching theory. The articles, which have been specially prepared by specialists for this number, chronicle rather a steady advance all along the line; this ought perhaps rather to be a matter for congratulation than regret. The advance which is made "by leaps and bounds" is sometimes, in science as in finance, delusive. *Festina lente!*

THE BRITISH MEDICAL ASSOCIATION.

ITS SCIENTIFIC WORK.

The Branches of the Association.—The scientific work of the Branches has, during the past year, been worthy of the best traditions of the Association, as is evidenced by the reports which have been published in the JOURNAL from week to week. During the last few months the Branches have also shown great activity in discussing the important question raised by Dr. Rentoul concerning the abuse of medical charities. The opinions expressed and the various remedies suggested will, it may be hoped, bring about some practical solution of this difficult but most momentous question.

The Annual Meeting.—The fifty-seventh annual meeting, held at Leeds on August 13th, 14th, 15th, and 16th, was eminently successful. Though the attendance of members was not quite so large as on several previous occasions, the scientific work accomplished was of the highest excellence; in particular we may point to the reports of the proceedings of the Sections of Medicine, Surgery, Obstetric Medicine, and Pharmacology and Therapeutics, which have recently been appearing in full in these columns; valuable work was also done in the Sections devoted to the special departments of Psychology, Public Medicine, Laryngology, and Otology. The meeting had for its President an old and tried friend who has served the Association in many capacities, and who had been placed by the suffrages of the general practitioners of England at the head of the poll in the election of direct representatives on the General Medical Council. Very appropriately, therefore, Mr. Wheelhouse selected for his presidential address a subject of the first practical importance—the Practical Element in Medical Education. While all are agreed as to the importance of the end, differences of opinion as to the means are inevitable, and the true solution can only be obtained through the free ventilation of opinions, perhaps better described as convergent than divergent, to which the columns of the JOURNAL have been open. The three general addresses were directly concerned with the nature or treatment of disease, and were delivered by such masters in their own departments as Dr. Hughlings Jackson, who delivered the address in Medicine; Mr. T. Pridgin Teale, who delivered that in Surgery; and Sir J. Crichton Browne, who delivered an address in Psychology. The Stewart Prize was presented to Dr. E. Klein, F.R.S., for his valuable researches on micro-organisms, and "especially for work in connection with etiology of scarlet fever."

The Next Annual Meeting.—The fifty-eighth annual meeting will be held at Birmingham under the presidency of Dr. W. F. Wade, Senior Physician to the Birmingham General Hospital and one time Treasurer of the British Medical Association. For the purposes of the meeting the Town Hall, Mason Science College, Queen's College, and Midland Institute have been placed at the disposal of the local Committee, which is now engaged in making the necessary arrangements for the work of the Sections and for the business of the general meetings. There is every reason to anticipate a most successful meeting, and the numerous places of historical interest within easy reach of Birmingham will afford various opportunities for many interesting excursions.

Scientific Grants Committee.—The research scholarships instituted by the Association are at present held by Dr. Ralph Stockman, assistant to the Professor of Materia Medica in the University of Edinburgh, and Dr. Sidney Martin. Reports have been received and published in the JOURNAL, from the former on the coca alkaloids and from the latter on proteid poisons. Annual grants, amounting altogether to £300, have also been made to a number of scientific workers, and the following reports have been received and published during the year: Professor Victor Horsley and Mr. Walter G. Spencer, on the control of hæmorrhage from the middle cerebral artery and its branches by compression of the common carotid; on intestinal surgery, by Dr. Frederic B. Jessett; on the etiology of summer diarrhœa, by Mr. Henry Tomkins; on cerebro-spinal fluid, by Dr. W. D. Halliburton; on proteid poisons, with special reference to that of the jequirity (*Abrus precatorius*), by Dr. Sidney Martin; on the physical condition of London school children, by Dr. Francis Warner; on the influence of lesions of the corpus striatum and optic thalamus on the body temperature, by Dr. W. Hale White; on the medico-legal detection of human blood, by Dr. S. Monckton Copeman; on the relation of the ptomaines or animal alkaloids to some of the infectious fevers, by Mr. Arthur P. Luff; on the structure of the vertebrate liver, by Messrs. T.W. Shore and H. Lewis Jones.

The Library of the Association.—The Council of the Association during the past year granted a sum of £300 for the purchase of books for the library of the Association; this sum has been chiefly expended on the purchase of works of reference, and the books thus added, together with the numerous donations which have been made during the year, raised the total number of volumes in the library to over 2,000. The collection, though so recently begun, already possesses several of the most important reference series in French and German as well as in English medical literature, which may be consulted by members of the Association, in the spacious council room at the offices in the Strand. In order, however, to render the library still more generally available, and to meet especially the wants of provincial members, a scheme for lending the books with proper safeguards is now under consideration.

Therapeutic Committee.—The Therapeutic Committee has during the past year instituted pharmacological investigations, which have been carried out under the personal superintendence of Dr. Lauder Brunton, Professor D. J. Leech, of Owens College, Manchester; and Professor Theodore Cash, of Aberdeen. The Committee is now extending its work beyond pharmacology to purely therapeutical questions—the utility of drugs in the treatment of disease. The Committee have selected a certain number of workers, but all members of the Association are invited to co-operate. A sum of £200 has been granted to meet the necessary expenses for drugs, apparatus, etc.

GENERAL MEDICAL COUNCIL.

New Members.—The British Pharmacopœia.—Systematic Lectures.—Clinical Study of Infectious Diseases.—Practical Element in Medical Education.—Lengthening of the Curriculum.—Clinical Instruction in Mental Disease.—Diplomas in State Medicine.—Disciplinary Cases.—Registration of Midwives.

New Members.—The vacancy created by the resignation of Dr. Aquilla Smith, for many years the representative of the King and Queen's College of Physicians in Ireland, was filled by the nomination of Dr. Lombe Atthill. Dr. W. S. Church was elected by the University of Oxford to the vacancy caused by the death of Dr. T. K. Chambers. Dr. Donald MacAlister succeeded Professor Humphry as the representative of the University of Cambridge.

The British Pharmacopœia.—The Council adopted the recommendations of the report of the Pharmacopœia Committee, presented by Dr. Quain, to the effect that an *addendum* to the last edition of the *Pharmacopœia* should be prepared and issued as early as possible in 1890.

Systematic Lectures.—During the spring session Dr. Kidd, on the part of the Education Committee, moved a resolution intended to reduce the enormous number of systematic lectures which students were now required to attend. A candidate for the degree of the University of Edinburgh had to attend, it was stated, 1,300 lectures. The Education Committee, in its report, expressed itself "strongly of opinion that the number of systematic lectures in certain subjects of medical education should be reduced."

Clinical Study of Infectious Diseases.—The importance of requiring from candidates a practical acquaintance with the symptoms and treatment of infectious disease has frequently been discussed and affirmed by the Council in former years, and this year a deputation to the President of the Local Government Board was appointed to represent to him the urgent need for making the metropolitan infectious hospitals available for the study of infectious disease.

Practical Element in Medical Education.—At the spring meeting Dr. Glover, one of the direct representatives for England, brought forward a motion calling attention to the reports of the Inspectors of Examinations with reference to their bearing on the

practical element in medical education. The important speech which he delivered on this occasion was subsequently issued in a separate form, and was recently the subject of extended comment in these columns. No action has yet been taken by the Council, but the question will be brought up again at the first meeting of the Council next year.

Lengthening of the Curriculum.—Meanwhile, however, an interim report was presented on November 30th by the Education Committee. This contained the important statement that the Committee were unanimously of opinion "that steps should be taken by the Council to fix the period of study to be five years."

Clinical Instruction in Mental Disease.—During the spring session a resolution was adopted expressing the opinion that the proposal before the County Council for London to establish a hospital with a visiting medical staff for the study and treatment of insanity would be of great educational value, by affording to practitioners and students increased facilities for becoming acquainted with the early symptoms and treatment of insanity.

Diplomas in State Medicine.—A great deal of the Council's time was given to settling the regulations as to the examinations for diplomas in State Medicine held by the various qualifying bodies. A proposal to appoint inspectors of these examinations was also under consideration, and the Executive Committee was authorised to draw up a scheme should the Council's legal advisers be of opinion that it was legally empowered to inspect the examinations.

Disciplinary Cases.—A very large part of the sessions was taken up with the hearing of disciplinary cases, and in discussing proposed improvements in the procedure in such cases. In certain cases the Council reinstated names which had been removed by it at a previous session; the temporary removal of the name having been, it was apparently considered, sufficient punishment for the irregularities committed.

Registration of Midwives.—After a discussion which was unduly prolonged by the introduction of a proposal to express an opinion as to the desirability of registering sick nurses, the Council passed a resolution reaffirming once more that the want of proper public provision for the certification of competent midwives was conducive to a large amount of suffering and danger to life among poor lying-in women. On the motion of Sir Walter Foster, a resolution was also adopted urging upon the Government the importance of making statutory provision for the education and registration of midwives.

UNIVERSITIES, COLLEGES, AND MEDICAL SCHOOLS IN ENGLAND.

UNIVERSITY OF OXFORD.

Clinical Teaching.—During the past year the chief teaching o medicine and surgery has been carried on by the Lichfield Lecturers, who have given regular instruction in medical and surgical ward work intended to serve as a preliminary to more advanced clinical teaching in London. Dr. Collier and Mr. Lewis Morgan have succeeded Dr. Brooks and Mr. Symonds as Lichfield Lecturers for the coming two years. It is very difficult for students to attend regularly to the practice of the Radcliffe Infirmary, as the physicians and surgeons visit the wards in the morning, at which time students are engaged in science work at the museum. To obviate this inconvenience the physicians of the infirmary have arranged to devote two afternoons in each week to instruction in the wards.

Comparative Anatomy.—In the department of comparative anatomy, Professor Moseley is still absent owing to continued ill-health, and Mr. Hatchett Jackson, of New College, has been elected to carry on the work for a further period of a year. Mr. O. Lather of Keble College, and late Berkeley Fellow of Owens College, Manchester, has succeeded as demonstrator Mr. G. C. Bourne, who has left Oxford to take on the direction of the British Marine Zoological Station at Plymouth. Mr. C. P. Mitchell, of Christ Church, has continued to assist the department as junior demonstrator. Mr. E. Poulton, late science tutor of Keble College, who has done much work on colour in animals, has been elected a Fellow of the Royal Society. The number of students attending lectures in comparative anatomy has averaged twenty-one.

Human Anatomy.—The department of human anatomy has been well attended during the year, and though the University Lecturer (Mr. Arthur Thomson) is unaided in the teaching, the number of lectures and practical demonstrations shows the activity of the department. Buildings and endowments to provide assistance both in teaching and in the procuring of specimens for demonstration are much required. The dissecting room and lecture theatre are only temporary buildings, and it is evident that the next expenditure on science must be the provision of a home for human anatomy which will compare with the Physiological Laboratory.

Physiology.—Owing to illness of Professor Burdon Sanderson, the physiological department has for the past few months been deprived of its head. Mr. F. Gotch has taken on the work for the Professor, and has been assisted by Messrs. Dixey and Haldane. The last report issued by Dr. Sanderson shows that thirty-seven students have attended various courses of instruction during the year of which number eighteen were preparing for honours in physiology, whilst the remainder were students working the preliminary honour school or for medicine. It is obvious that this department is of great importance to the large number of students of philosophy and psychology in the University, and especially to those who are endeavouring to gain some insight into the physiological antecedents of mental phenomena. Physiology thus recruits its ranks both from the science undergraduates who are passing through this school, and also from those who have taken their degree in the classical school.

Botany.—The department of botany has undergone an important change since last year, Professor Sydney Vines, of Christ's College, Cambridge, succeeding Professor Balfour, who has been appointed Professor of Botany at Edinburgh. This department shows signs of increased activity, the number of students having risen from ten to twenty-three during the year. Some of the students working in this department are women students from Somerville and Lady Margaret Halls. Botany seems an ideal subject for lady undergraduates who are wishing to work at science in preference to classics. The professor has been assisted in the work of the department by Mr. J. B. Farmer who has recently been elected to a Science Fellowship at Magdalen College.

Chemistry.—Chemistry still asserts its superiority to the other science departments in its power of attracting students. During the year the number of students working regularly in this department, averaged over a hundred in addition to others who attend for special instruction, of whom no record was kept.

Junior Scientific Club.—Perhaps the clearest indication of the steady growth of interest in science in the University is afforded by the Junior Scientific Club. This is an association for resident science students below the degree of M.A., which forms a common meeting ground for students in the various departments. The growth of the club has been extremely satisfactory, and there are now about a hundred resident members on its books.

UNIVERSITY OF CAMBRIDGE.

Medical Students.—The past year has been one of steady growth in the departments of natural science and medicine. The number of medical students entered during the Michaelmas term is something over 120, and there appears to be no diminution in their reputation for good discipline and steady work, a reputation which is attracting the attention of those who have hitherto been least favourable to the development of the medical school.

Buildings and Appliances.—The new buildings for human anatomy are rapidly approaching completion, and promise to give, if not magnificent, still abundant, accommodation for the excellent collection in anatomy and anthropology which have been gathered, but hitherto anything but well displayed, by Professor Humphry and Professor Macalister. The old chemical laboratory has been completely transformed into a very commodious and well-furnished pathological laboratory under Professor Roy, and we hear rumours that in some part of it, at least, the germ of a new Institute of Preventive Medicine may find a home. By the munificence of Professor Henry Sidgwick, who gave a "grant in aid" of no less than £1,500, it has become possible for the University to undertake the long-delayed extension of the physiological laboratory, now for several years inadequate to the accommodation of researchers and teachers. This, with the handsome new lecture-room, which is included in the plans, and will be used by physiologists and anatomists in common, will render possible many projected improvements in the carrying on of the classes in these subjects. The chief thing now remaining to be done, to give the medical school breathing room, is to transform the buildings soon to be vacated by human anatomy into class-rooms for the professors and lecturers in the purely medical and surgical subjects. The old octagonal building and its annexes, which have already outlived several transmutations, and are

endeared, in spite of many inconveniences, to generations of teachers and students, will thus experience what is probably a final change before they are swept away to make room for the Sedgwick Memorial Museum. The operating room at Addenbrooke's Hospital has also, by the liberality of the physicians and surgeons, been enlarged and improved, so that students may observe with greater comfort and attention the work of the surgeons.

General Medical Council.—The vacancy caused by the regretted retirement of Professor Humphry, after twenty years' service on the General Medical Council, was filled up, not without a contest, by the election of Dr. Donald MacAlister, of St. John's College, for a period of five years. The almost unanimous support accorded to the successful candidate by the resident members of the medical faculty, and by a large majority of the professors and other resident graduates, justifies the supposition that Dr. MacAlister is regarded as representing the progressive spirit which, in a decade or so, has transformed Cambridge from one of the smallest into one of the largest medical schools of England.

Fellowships.—The election to a Fellowship of Mr. Francis Darwin, M.B., at Christ's; of Dr. Gaskell, at Trinity Hall; and of Mr. H. D. Rolleston, M.B., at St. John's, are significant, to those who remember the old way of dealing with these rewards, of the advance of the medical sciences in the favour of Collegiate governing bodies.

Examinations.—No change of importance has been made in the curriculum and examinations during the past year, if we except the fact that it has become necessary to provide for additional examiners in medicine and surgery, owing to the increase in the number of candidates for the Third M. B. and B. C. examinations. The desire of the Medical Board to obtain outside help in ascertaining the fitness of their students for the distinction of a degree is expressed by the appointment of such examiners as Dr. Ord, Dr. Dreschfeld, and Dr. Ralfe in medicine; Mr. Macnamara, Mr. Willett, and Mr. Herbert Page in surgery; and Dr. Galabin and Dr. Gervis in midwifery. At the final examination (Part II) in May and December 65 candidates in all satisfied the examiners, and it is noteworthy, in connection with remarks sometimes made on this subject, that of these only one was not already a Bachelor or a Master of Arts. In the majority of cases the period of medical study of these candidates was well over six years, and as they have, after the final examination, to prepare and defend an original thesis before admission to the M.B. degree, it cannot be said that the degree is too easily obtained. It is also worthy of note that this year the number of candidates for the Natural Sciences Tripos exceeded that for the Mathematical Tripos, hitherto the largest.

UNIVERSITY OF LONDON.

The report of the Royal Commission on university education in London over which Earl Selborne presided, recommended changes in the constitution of the University of a fundamental character. The Senate of the University has drawn up a scheme founded upon the report which however will require the assent of the Royal Colleges of Physicians and Surgeons before the clauses affecting medical students can be operative. The scheme, the general features of which have already been indicated in the JOURNAL, was under the consideration of the Royal College of Physicians at its last meeting, and will no doubt be considered by the Council of the Royal College of Surgeons early next month. The question is of the greatest practical moment to medical students of the metropolitan schools, and will it may be hoped, receive the full and impartial consideration which its great importance deserves.

THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

The Voting-Papers, the President's Speech at the Annual Meeting, and the Opening of the Library in the evening.—In respect to the proceedings of the College there is much that is so current as to be well known to all amongst our readers who take any interest in such matters, and so much involving questions of routine and embedded in official formulas as to be unsuitable for a brief annual review. In the year 1889 three innovations appear conspicuous as part of the history of the college. At the July elections for members of Council, voting-papers first came into use, by which any Fellow can record his vote without attending the election in the College building in person. The election was held on July 4th. One prominent feature in the result was a considerable increase in the number of votes. Thus in 1887 only 199 valid votes were recorded; this year precisely 600 were polled. The candidates were eight in number—Mr. Christopher Heath, Mr. Hulke, Mr. Howse, Mr. Rivington, Mr. Lawson Tait, Mr. Tweedy, Mr. Steele, and Mr. Cowell. The first three were elected to fill the vacancies caused by the retirement of Sir James Paget, who did not offer himself for re-election, and of Mr. Hulke and Mr. Heath, who were re-elected. The result showed that although the powerful influences which impel Fellows of the College to vote for their old teachers and for representatives of medical schools in London were brought to bear on this occasion with unusual force, the highest number of votes recorded under those influences was under 400; that is, less than a third of the total number of Fellows. The three members who were elected are distinguished surgeons, but from the point of view adopted by the Association it is to be regretted that one or more of the candidates whose views are in accordance with those of the bulk of the Fellows and Members were not elected. A careful analysis of the voting, however, showed that only half the nominal list of Fellows voted. The dread of "spoilation" through reform in favour of the Members could not have been very great, since a large proportion of the majority evidently voted rather from custom than from fear of change. A pleasant feature at the Annual Meeting of Fellows and Members was the address delivered by the President, Mr. Hutchinson. He deliberately reviewed the more important topics contained in the Annual Report, and spoke very moderately on contentious matter. Dr. Elliston, of Ipswich, moved a resolution, which was seconded by Dr. Danford Thomas, and carried by a large majority, urging that immediate steps should be taken to forward the introduction, early next session, of a Bill to amend the constitution of the College, so as to secure a just representation in and upon the governing body of that institution. The third innovation was the decision of the Council, at its Quarterly Meeting in October, to open the College Library of an evening "as an experiment." The Library was therefore kept open from October 21st till the end of December, till 9 p.m., on every week-day evening excepting Saturday. We hope that the experiment may prove a success. It is certain that many have already availed themselves of that convenient hour before dinner, during which the Library has hitherto been closed but is now opened.

The College and its Members.—There remains a novelty far less pleasing to record. The dispute between the Council of the College and the Association of Members reached a very acute stage early in the spring of 1889. That Association entered into negotiations with the Privy Council relative to a Bill for increasing the privileges of Members, described elsewhere in this Retrospect. In the course of these transactions, the Association requested the President and Council to convene a meeting. This request, made in official foam, was refused. The Members, acting on legal advice, convened a meeting, to be held in the College premises themselves, after giving due notice to the Council. The meeting was publicly announced for February 28th. The Council, thereupon, closed the entire College buildings, including the Library and Museum, on the day announced for the assembly. The Members made a demonstration outside the closed gates of the College, and legal proceedings, not yet settled, followed the high-handed action of the Council. The legal question, in relation to the dispute, turned on the first clause of the seventeenth by-law of the College, wherein the right of convening meetings is solely vested in the President and Council, and where Fellows and Members who infringe the clause are rendered liable to severe penalties. The Association of Members, acting on legal advice, maintained that the penal clauses, at least, were not of legal validity, nor applicable to the question in hand.

Business of the Council.—We will pass over the intricate proceedings which necessarily occupied the attention of the Council through the disputes with Fellows and Members above noted. The unveiling of the bust of the Queen was a pleasing transaction which the College shared with the College of Physicians. The four years' reign of Mr. Savory as President came to an end in July, when Mr. Jonathan Hutchinson was elected President and Mr. Bryant and Mr. Croft Vice-Presidents. The Council prosecuted several professional malefactors with laudable activity, and claimed, in negotiations with the Medical Council, that their disciplinary powers be enlarged. The Council nominated Mr. Macnamara as their representative in a committee appointed by the War Office to consider the pay and condition of army and navy surgeons, in which capacity he showed great ability and public spirit. Lavish expenditure has been incurred in enlarging the College buildings; and about £500 will be expended in additional fire apparatus. The Council have approved of the extension of professional study from four to five years, and are considering how to effect the

change in harmony with the sister College. This projected step is a very grave step, but one entirely in accord with the growing necessities of the higher medical education. The time allotted for medical education is very short, its extension will no doubt be, in practice, a serious matter for impecunious students and their parents, but if it operates to lessen the pressure of new candidates for admission into the profession, that result will not be unsatisfactory. The Council are also endeavouring to pass more stringent regulations to enforce the holding of clinical appointments by candidates.

Lectures.—The Hunterian Oration was delivered on February 14th by Mr. Henry Power. The Morton Lecture, on Cancer, was delivered by Mr. John Marshall, on November 18th; the Bradshaw Lecture, by Mr. Bryant, on December 5th.

Prize.—The Council awarded to Mr. Jonathan Hutchinson, jun., the Jacksonian Prize, for his essay on "The Pathology, Diagnosis, and Surgical Treatment of Intracranial Abscess and Tumour."

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

Two importants events have occurred at the College of Physicians during the past year. On February 8th, Dr. Seaton moved and Dr. Samuel West seconded, a resolution that "a committee be appointed to consider whether and in what way the fever hospitals of the Metropolitan Asylums Board can be made available for clinical study." A large committee including representatives from all the metropolitan schools was appointed, and the committee in due time made a report which was adopted, and has already borne fruit, for it is an open secret that it was entirely owing to the action of the College of Physicians that the clause relating to this matter in the Poor Law Amendment Act which was passed last summer was inserted, and at the present time, representatives of the College are actively engaged with the authorities of the Board in working out the details by which effect shall be given to the clause. The other important event is the resignation of Sir Henry Pitman, after thirty years' service as Registrar, the College in accepting his resignation elected him Emeritus Registrar in recognition of his invaluable services. Dr. Edward Liveing, who has been for three years assistant-registrar, has been elected to succeed him. Early in the year, though a long time after the event, a resolution was passed condemning *The Fatal Illness of Frederick the Noble*, by Sir Morell Mackenzie, written at a time when he was a Member of the College. Sir Andrew Clark has been elected President for the second time, and Dr. Quain and Dr. Wilks have been elected Vice-Presidents. The Goulstonian lectures were delivered by Dr. Howard Tooth, on secondary degenerations of the spinal cord, the Croonian lectures by Dr. Lauder Brunton, on the relationship between chemical structure and pysiological action; the Lumleian lectures by Dr. John Harley, on enteric fever; the Milroy lectures by Dr. Arlidge, on occupations and trades in relation to public health. Dr. Norman Moore gave the Bradshaw lecture on visceral new growths: and Dr. James Pollock gave the Harveian oration. On May 24th, the Prince of Wales unveiled the statue of the Queen at the Examination Hall, on the Thames Embankment, in the presence of a large number of fellows of the two Colleges. The Baly medal was awarded to Prof. Heidenhain, of Breslau, and the Swiney prize to Dr. C. Meymott-Tidy. The College portrait gallery has been enriched by likenesses of the late Sir George Burrows, of Sir William Jenner, and the late Dr. Wilson Fox. Twelve Members have been elected to the Fellowship, and many new Members have been admitted. The licence of the College was granted to 467 gentlemen, of whom 326 presented themselves under the regulations of the Examining Board.

SCIENTIFIC PAPERS PUBLISHED IN THE *BRITISH MEDICAL JOURNAL.*

THE compilation of an analytical subject catalogue of the very numerous original scientific articles which have appeared in the JOURNAL would be a task of great magnitude, and would occupy a great deal of space. In the following paragraphs are enumerated some of the more important articles not mentioned in subsequent pages. The list is by no means complete, and we are conscious that many communications of great value have been omitted, in particular the numerous practical notes classified under the general head of Memoranda, which often contain clinical observations of exceptional interest. Neither do these paragraphs contain any reference to the very considerable number of articles on ophthalmology, laryngology, and other special departments, which yet have been fairly represented. Many important reports made to the Scientific Grants Committee, and subsequently published in the JOURNAL, have already been noticed.

Medicine.—Sir Andrew Clark, President of the Royal College of Physicians, has contributed his address on non-tubercular and non-cardiac hæmoptysis. A paper has been published by Sir George Paget, on a case of alternate partial anæsthesia. The Lettsomian Lecture by Dr. W. R. Gowers on syphilis and the nervous system, the address by Mr. Jonathan Hutchinson, President of the Royal College of Surgeons, on the relation of neurology to surgery and dermatology, and a paper by the same author on leprosy, will have been read with interest. The various clinical features of albuminuria have been discussed in papers by Dr. George Johnson and F. W. Pavy. The Goulstonian Lectures by Dr. H. H. Tooth on secondary degenerations of the spinal cord, and the Milroy Lectures by Dr. Arlidge on trade diseases; a paper by Sir Peter Eade on the association of erythema and acute rheumatism with chorea, a paper on tropical diarrhœa or white flux by Sir Joseph Fayrer may also be mentioned. Dr. W. M. Ord and Dr. J. F. Goodhart have contributed papers on glycosuria.

Surgery.—Sir Joseph Lister's address describing his new antiseptic dressing, the Morton Lecture on cancer by Mr. John Marshall, President of the General Medical Council, Sir Henry Thompson's report of his experience of the suprapubic operation have been recently published. The papers by Mr. Henry Morris on renal surgery; by Mr. Frederick Treves on typhlitis; by Mr. T. R. Jessop on cancer of the rectum; by Mr. McGill on prostatectomy, and the discussions thereon at the annual meeting, will have been read with instruction. Professor Thomas Annandale's description of his method of excision of a semilunar cartilage, and an article on intubation of the larynx by the same surgeon, Mr. Priestley Smith's valuable lectures on glaucoma, the clinical lectures conducted by Mr. Christopher Heath on the common diseases of the breast, and his address on tumours and on shock, and Mr. C. B. Lockwood's lectures on hernia may also be mentioned. Papers on the surgical treatment of pyloric obstruction have been contributed by Dr. W. Gardner. Mr. C. J. Bond, and Mr. F. Treves. Abstract reports of Mr. Berkeley Hill's lectures on some affections of the genito-urinary organs, and of Mr. Howard Marsh's lectures on surgical tuberculosis were prepared by the respective authors. Sir Spencer Wells has contributed, in conjunction with Dr. W. N. Maccall and Professor Dreschfeld, a report of a successful case of splenectomy.

Obstetrics and Gynæcology.—The value of electricity in gynæcology was the subject of a discussion at the annual meeting, introduced by Dr. W. S. Playfair. A paper by Dr. Thomas Keith had been previously published, and its conclusions had been controverted by Mr. Lawson Tait. Dr. J. H. Aveling had also contributed a paper on the subject. An address by Dr. G. E. Herman on the pathological relationships of uterine displacements; a paper on placenta prævia by Dr. Braxton Hicks; on the action of certain drugs on the pregnant uterus, by Dr. Lombe Atthill, President of the King and Queen's College of Physicians; an address by Dr. Robert Barnes on the analogies of menstruation, pregnancy, and labour; an historical note on ovariotomy in Spain by Sir Spencer Wells; and a paper on gonorrhœa as an element in the etiology of certain of the diseases of women by Dr. C. J. Cullingworth, are a few among the many communications in this important department.

Pathology.—Pasteur's method of treating rabies has been discussed and defended by Professor Horsley and Dr. A. Ruffer. M. Pasteur's Croonian lecture on preventive inoculation, Mr. Adami's account of an outbreak of rabies among deer, and of his personal experiences of M. Pasteur's method, have also been published. Mr. Hankin's important observation on the production of immunity from anthrax by means of a chemical substance marks a distinct advance in this department of pathology. Dr. George Thin's report of his experiments with the fungus of ringworm, Mr. Bland Sutton's lectures on evolution in pathology, Dr. R. G. Patteson's paper on trichomycosis nodosa, papers on actinomyces by Professor McFadyean and Mr. F. Eve, Dr. William Hunter's lectures on transfusion, and Professor J. A. McWilliams's experimental observations on cardiac failure and on the electrical stimulation of the heart in man also call for mention.

Therapeutics.—We have but recently published Professor D. J. Leech's admirable address on recent hypnotics. Dr. Goodhart's paper, giving his experience with some of these drugs, and Dr. Hale White's clinical notes on chloralamide have afforded reliable information as to some of the most recent advances. Valuable contributions to knowledge were also contained in the papers on

the action of paraldehyde and urethane by Dr. John Gordon, and on the phenacetins by Dr. Dujardin-Beaumetz. Dr. Lauder Brunton's Croonian lectures on the relationship between chemical structure and physiological action, an instructive discussion on foods for invalids and infants introduced by Drs. Burney Yeo and Sidney Martin, a report by Professor Charteris and Dr. Maclennan on natural and artificial salicylates, and Professor T. R. Fraser's paper on the relative value of opium, morphine, and codeine in diabetes mellitus all dealt with subjects of great practical importance.

SOCIETIES.

Royal Medical and Chirurgical Society.—In this Society the papers read numbered twenty-five, of which ten were relative to purely medical, and fifteen to surgical topics. The year was opened by papers from Drs. A. Garrod and Herringham discussing the relations of chorea and rheumatism, the former physician contending that "rheumatism was a very general disease of which arthritis was only one symptom." The contribution on actinomycosis hominis was the most important paper of the year. This was founded on a case under the care of Dr. Douglas Powell and Mr. Godlee in the Brompton Hospital for Diseases of the Chest. The whole subject was reviewed at length, and beautifully illustrated by microscopical sections prepared by Mr. H. H. Taylor, specimens being shown of the ray fungus as met with in man and the bovine tribe. Several papers were read on subjects connected with the surgery of the abdomen, the most noticeable being on the removal of a gangrenous vermiform appendix containing a fæcal concretion, and followed by secondary laparotomy for suppurative peritonitis, ending in recovery. This was a case under the care of Sir Dyce Duckworth and Mr. Langton. The surgery of the kidney was illustrated by a series of twenty nephrectomies by Mr. Knowsley Thornton, who warmly advocated the anterior operation through the peritoneum. This view is still *sub judice*, as several well known surgeons prefer the retro-peritoneal incision. Cases of cholecystenterostomy by Mr. Mayo Robson, and abdominal section for ruptured tubal pregnancy by Mr. Bland Sutton, were brought before the Society. There was only one paper on the surgery of the cerebro-spinal system, but it marked an advance in that branch of science. This detailed a case of severe spasmodic pain in the leg and thigh, for which nerve stretching, amputation, and nerve excision had been tried without any benefit ensuing. Mr. W. H. Bennett then opened the spinal column, and performed subdural division of the posterior roots of certain spinal nerves; the result of this was an immediate cessation of the pain, which had reduced the man to a condition of great exhaustion. Unfortunately, the patient died unexpectedly during apparent convalescence. Dr. Walker, of Peterborough, read a suggestive paper on the significance of colourless or clay-coloured stools without jaundice, and the part played by the pancreas in eliminating bile from the intestines. He contended that "in disease, a deficiency of pancreatic fluids will, equally with a deficiency of bile, cause the pathological condition of colourless or clay-coloured stools." Two cases were detailed in which a diagnosis of obstruction of the pancreatic duct was made, and confirmed subsequently at the necropsy. It is probable that this paper will cause more of these cases to be recorded, as but few have been as yet observed. The session terminated with a contribution from Mr. Roughton on the pathology of pulsating tumours of bone, in which the various conditions met were ably discussed.

Clinical Society.—The meetings, which from the foundation of the Society in 1867 had been held in Berners Street, have since the summer vacation taken place at the new home of the Royal Medical and Chirurgical Society in Hanover Square. One other important change has occurred, in accordance with a suggestion made by the new President, Mr. Christopher Heath; it is, that every other meeting night is partly a clinical evening, the first hour being given up to the exhibition of cases, after which the usual papers of the Society are taken. On these evenings the proceedings commence at 8 o'clock. In January, a discussion on cancerous disease of the larynx took place. Mr. Butlin, Dr. D. Newman (Glasgow), and Dr. F. Semon contributed papers. Mr. Mayo Robson (Leeds) read a paper on nerve-grafting which originated an interesting discussion. Mr. H. W. Allingham read notes of a case of removal from the knee-joint of a dislocated internal semilunar cartilage, with recovery, and a perfect joint. Mr. Bowlby detailed notes of dislocation of the elbow-joint, with laceration of the ulnar artery, that ended in recovery and a freely movable joint. In February, Dr. Caton (Liverpool) described a case of narcolepsy; Dr. Savill, another of hystero-epilepsy in a male; and Dr. S. West, a case of Raynaud's disease, with erysipelatous eruption on the face. Dr. Finlay described a case of tubercular disease, with inversion of the temperature curve; Dr. C. H. Ralfe contributed a case of suppression of urine caused by impaction of calculi in both ureters, and relieved by operation; Mr. Silcock described cases of chronic enlargement of the gastrocnemio-semimembranosus bursa, treated by partial excision. In March Drs. Whipham and Delépine furnished a report of a case of tubercular lupus of the larynx, trachea, and bronchi, producing stenosis of the trachea and bronchi; Mr. Bland Sutton described an erectile tumour removed from the mamma of a boy; Dr. Payne described a case of molluscum fibrosum; and Dr. Burney Yeo gave his personal experiences of quinine rash. Mr. Barwell described his instrument for measuring the different deviations in lateral curvature of the spine; Mr. Jacobson gave a full report of four cases of nephrolithotomy, and Dr. Steavenson and Mr. Butler-Smythe, one of a case of the kind fatal from ulceration into a branch of the renal artery. In April. Mr. H. W. Allingham read notes of a case of cerebral hæmorrhage, treated successfully by trephining; Dr. Lees and Mr. Page described a case of traumatic epilepsy treated by trephining; Dr. F. Semon exhibited a patient in whom unilateral incomplete Graves's disease followed the removal of nasal polypi, and Mr. J. Hutchinson described a case of xanthelasma and gout with fusiform enlargement of many tendons. Dr. G. Macdonald and Mr. C. Symonds read notes of a case of total extirpation of the larynx for epithelioma, with recovery and a useful voice; Mr. A. Lane gave abstracts of five cases of disease of the middle ear complicated by suppuration in its vicinity, and Mr. B. Sutton described a case of leontiasis ossea. In May, Mr. W. H. Bennett gave an account of a case in which he had excised both angles of the inferior maxilla for bilateral ankylosis, with resultant mobility of the jaw; Mr. B. Browne described a case of suprapubic prostatectomy; Mr. W. Anderson another of suprapubic cystotomy for tumour of the bladder, and Mr. Makins a case of intussusception treated unsuccessfully by excision. Mr. Mayo Robson exhibited a case in which he had obtained bony union of a transverse fracture of the patella by a new method, without opening the joint; he also described a case of successful tendon grafting; and Mr. Battle detailed one of compound comminuted fracture of the tibia, with fracture of the fibula and resection of a part of the latter bone. In October, Mr. Mayo Robson communicated a paper on fourteen cases of cholecystotomy, which was discussed during the whole of one meeting. In November, Mr. Rivington read notes of a case of Pott's fracture with fracture and displacement of the astragalus, followed by symptoms of tetanus, which subsided after removal of the displaced fragment; Mr. Spencer described a case of irreducible dislocation at the elbow; Mr. Barton gave details of a case of paroxysmal methæmoglobinuria; Dr. S. Martin related the history of a case of pyloric gastric ulcer, fatal from hæmatemesis; Dr. Coutts and Dr. A. E. Garrod described three cases of rheumatic periostitis; Mr. B. Sutton described the treatment of a case of tumour of the infra-orbital nerve; and Dr. C. S. Watson narrated particulars of a case of ptomaine poisoning. In December, Mr. C. Symonds described nine cases of thyroid cysts and adenomata which he had successfully treated by excision, and Mr. Battle read notes of a case of diffuse aneurysm of the calf, treated by removal of parts of the popliteal and both tibial arteries. The cases exhibited on the clinical evenings have been of great interest, but want of space forbids us to notice them in detail.

The Pathological Society of London.—The meetings of the year commenced with the adjourned meeting for the discussion of the pathology of chronic alcoholism, a subject which had been introduced by Dr. Payne at the end of the previous year. The conclusions which were brought to the front were three: (1) The close similarity of the action of alcohol on the tissues with that of several mineral and specific poisons, such as phosphorus, lead, and diphtheria; (2) that alcohol was an important factor in favouring tubercular disease and particularly pulmonary phthisis, and (3) that the organic changes produced by alcohol were of more importance than had been previously supposed. At this meeting Sir James Paget resigned the position of President, which he had occupied with such benefit to the Society for the last two years. At the next meeting the new President, Dr. W. Howship Dickinson, gave his inaugural address on the subject of the past and future of pathology, in which he showed how great an advance the science had made during the last forty years, a period almost exactly coinciding with the age of the Society, and pointed out that, though many discoveries had been made, yet the problems to be solved were still more numerous. The work of the Society generally, has been similar to that of former years, the description and inspection of morbid specimens

with discussions after the papers. These have, perhaps, been more varied than usual, and papers on specimens of animal and vegetable pathology are apparently becoming more numerous. There were several important papers on parasites, amongst which may be mentioned Drs. Gamgee and Delépine's paper on a case of actinomycosis, a subject which has been attracting very considerable attention during the year, and concerning which, Mr. Bland Sutton suggested (from certain specimens of new growths of the uterus which he brought before the Society) that there might be some connection between the presence of this parasite and malignant erosions of the uterus. Specimens of other parasites (psorospermiæ) which, though common in some other mammalia, had only very rarely been found in human beings, were on two or three occasions brought before the Society. In strictly human morbid anatomy, several specimens of new growths, having unusual characters, were described, especially a peculiar condition of cancer named by Mr. Jonathan Hutchinson "crateriform ulcer." All the cases that he had seen had been on the face, and consisted of bossy masses shaped like beehives, which grew rapidly and softened in the centre, leaving a deep central cavity. There was no tendency to infection of the glands, and after removal no local recurrence: examined microscopically they appeared to possess all the histological characters of epithelioma. Other specially noteworthy papers were: the President's, on hereditary albuminuria—in which he showed that in one family several individuals of three successive generations had suffered from Bright's disease, and that in the family portraits, which existed from the time of Edward IV., the skin had a similar pallor to that which characterised the living and late members, who were the subjects of the disease; Mr. Targett's on an apparently unique liver, which consisted almost entirely of fibrous tissue, infiltrated with calcareous deposits, so that the whole organ was of stony hardness, and two papers on rare tubercular conditions—(1) by Mr. Golding-Bird on tubercular ganglia of synovial sheaths; (2) by Mr. Shattock, who found that certain mammary abscesses had a tubercular origin.

Epidemiological Society.—The most important papers read during the past year were those by Professor Horsley on Pasteur's treatment of hydrophobia, and Surgeon Morris's on beri-beri. The former, which we published *in extenso* in our issue of February 16th, gave a rational explanation of the *modus operandi* of the inoculations, and especially of the differences in procedure, and results of the "simple" and "intensive" methods, while it effectually disposed of the objections urged against M. Pasteur's statistics, by examining the numerical results of cases coming under group A, or those in which the rabidity of the animals had been verified by the crucial test of experiment. Surgeon Morris gave the best description extant of beri-beri, with special reference to the paralytic phenomena and pericardial effusion. The predisposing causes he believed to be malaria, unhygienic conditions, and insufficient diet, while hæmic and neurotic factors had equal shares in its pathology. Dr. P. S. Abraham contributed an exhaustive description of the distribution, etiology, and pathology of leprosy throughout the world, maintaining its bacillary nature and communicability, and exhibiting examples of the two typical forms. Dr. J. E. Squire treated of the prevention of [tubercular] phthisis, the modes by which the bacilli gained entrance to the organism, and the conditions rendering the individual susceptible to infection. Dr. R. W. Smith read a paper on the relation of micro-organisms to disease, and Sir W. Moore one on malaria *versus* more recognisable causes of disease. The address of the new President, Sir T. Crawford, dealt with the statistics of acute specific diseases in the British army at home and abroad, with special reference to enteric fever.

Society of Medical Officers of Health.—Several papers of the highest interest were contributed during the present year, Dr. Tomkins, of Leicester, discussing the question of the compulsory notification of infectious diseases, and the objections urged against the single and dual systems. He was decidedly in favour of the latter, which had been found most successful in his own town, but was strongly of opinion that the medical officer should not be engaged in private practice. Indeed, the feeling of medical men in some places against the Acts, arose solely from the fact of the medical officer being a practitioner like themselves. Dr. Hope, of Liverpool, discussed the meat supply of large towns, the transport and slaughter of cattle, and the state of the law as regards diseased and unsound meat. Dr. J. F. J. Sykes criticised the present system of certification and registration of the causes of death, with suggestions for its amendment. Dr. Louis Parkes discussed the working of Torrens's Act, and Dr. Tomkins described an improved form of Ransome's disinfecting oven. The Presidential address of Mr. Armstrong on the education, qualifications, and status of the medical officer of health, was full of instruction and suggestion, and the work of the present session opened with papers by Dr. Reginald Dudfield on the revision of the Society's tables of births and deaths, and by Mr. St. Clair Shadwell on the need for infectious hospitals in the suburban districts of the metropolis.

Royal Academy of Medicine.—The sixth annual report shows that the Fellows number 244, the members 28, and the student associates 11, while the funds invested amount to £596 2s. 4d., the balance in hand being £11 19s. 3d. The annual meeting approved of a scheme for the purpose of extending the method of collective investigation to anatomical research in the schools of Ireland, and agreed to bear the necessary expense in connection with the carrying out of the scheme. The papers read were: —Medical Section: Dr. Atthill, action of drugs on the utero-ovarian system; Dr. J. W. Moore, accidental rashes in typhoid fever; Dr. A. W. Foot, chromidrosis; Dr. C. J. Nixon, mixed case of typhus and typhoid; Dr. Patteson, improved clinical chart; Dr. P. Maxwell, method of generating neutral fumes of ammonium chloride and bromide; Dr. A. M. Boyd, disappearance of cardiac murmurs; Mr. J. K. Barton, Teneriffe as a health resort; Dr. C. J. Nixon, (*a*) myxœdema, (*b*) senile chorea, (*c*) diver's paralysis; Dr. Cox, acute endo- and pericarditis; Dr. Patteson, trichomycosis nodosa; Dr. Nicholas, abdominal section for perforation in typhoid fever; Drs. W. G. Smith and C. B. Ball, cholecystotomy. Surgical Section: Dr. Robert McDonnell, pulsating tumours of bone; Mr. Pratt, peculiar dislocation of thumb; Mr. Benson, exostoses of external auditory meatus; Mr. Franks, cholecystotomy; Mr. McArdle, treatment of tubercular disease in and near joints; Mr. Tobin, stricture of urethra; Mr. O'Callaghan, abdominal section in tubercular peritonitis; Mr. Myles, extra-articular suture of patella; Dr. Corley, removal of thyroid gland; Mr. Heuston, arthrectomy; Dr. Ball, linear proctotomy; Mr. Thornley Stoker, some points in the treatment of intestinal obstruction. Obstetrical Section: Dr. Lane, notes on sloughing fibrous polypus; Dr. Horne, inflammation of the breast and its treatment; Dr. W. J. Smyly, prolapsus uteri; Dr. A. J. Smith, œdematous fœtus; Dr. More Madden, amputation of cervix uteri in cancer and cervical injuries; Mr. Thornley Stoker, ectopic gestation; Dr. A. J. Smith, treatment of prolapsus uteri by massage and pelvic gymnastics; Dr. W. J. Smyly, diagnosis and treatment of small submucous uterine fibro-myomata; Dr. J. F. Knott, normal ovariotomy, clitoridectomy, and infiltration—a study in comparative ethnology. Pathological Section: Dr. W. G. Smith, thoracic and popliteal aneurysm; Dr. C. B. Ball, umbilical tumour; Sir W. Stokes, epithelioma of the bladder; Mr. Wheeler, gangrene after fracture; Dr. R. G. Patteson, epithelioma in the horse; Dr. James Little, tubercular ulceration of intestine; Dr. S. M. McSwiney, heart with diseased valves; Dr. E. H. Bennett, congenital malformation in a mummy; Dr. Bewley, typhoid ulceration of intestine; Mr. Wheeler, syphilis in tongue followed by epithelioma; Dr. Corley, epithelioma of tongue; Dr. C. J. Nixon, aneurysm of sinus of Valsalva; Dr. McKee, endothelioma of liver; Dr. T. S. Little, intrathoracic tumour; Dr. E. J. McWeeney, rhinolith; Dr. J. O'Carroll, leprosy; Mr. Wheeler, warty excrescence; Mr. Tobin, knee-joint after resection; Dr. Bennett, fractures of patella; Mr. Thomson, (1) dislocation of thumb, (2) fracture and dislocation of clavicle; Mr. A. W. W. Baker, dental polypi; Dr. Ball, tumour of brain; Dr. Bennett, intraocular sarcoma; Dr. Bagot, fœtus with congenital cystic kidneys; Dr. Berry, imperforate rectum. State Medicine Section: Dr. McSwiney, isolation in infective fevers; Dr. Cosgrave, the spread of tubercular disease by contagion; Sir C. Cameron, tuberculosis in the fowl; Dr. Flinn, the registration of plumbers movement in Ireland. Section of Anatomy and Physiology: Mr. Robinson, on the relation of the costal arch to the sternum; Dr. Birmingham, on nerve supply of sternalis in anencephalous fœtus; Dr. Cunningham, report from Committee of Investigation in connection with anatomical department, Trinity College, Dublin; Dr. Hughes, on a proposed method of dissecting the pelvic viscera; Dr. J. Barton, (1) case of obturator hernia, (2) malposition of great intestine.

Reports of the meetings of the Hunterian, the Harveian, and the Epidemiological Societies; of the Society of Medical Officers of Health; of the Clinical, Pathological, and Medical Societies of Manchester; of the Medico-Chirurgical Societies of Cork, Bradford, Brighton, Bristol, Edinburgh, Glasgow, Leeds, Nottingham, Sheffield, West Kent, and West London, among others, have also been published. [The work of the Obstetrical and Gynæcological Societies is mentioned at page 1463.]

ANATOMY.

Changes in the Anatomical World.—General Anatomy.—Muscular System.—Vascular System.—Osseous System.—Nervous System.—Special Senses and other Organs.—Comparative Anatomy.—Embryology.—Teratology.—Histology.

Changes in the Anatomical World.—During the year the Anatomical World has seen various changes. Professor Struthers has left the University of Aberdeen, and been succeeded by Dr. Reid, who was Lecturer at St. Thomas's Hospital. The Anatomical Society has continued to flourish, and most excellent work has been laid before it. When our Association decided not to have an anatomical and physiological section at Leeds, this Society arranged to hold a meeting, and members will remember the very beautiful series of photographs which were shown by Professor Fraser, and the practical and instructive paper of Drs. Griffiths and Oliver.

General Anatomy.—In general anatomy we have to record new editions of old favourites, and the appearance of some new and important works. Mr. Treves, Mr. Holden, and Messrs. Huxley and Martin have brought out new editions of their text books. Professor Alexander Macalister has enriched anatomical literature with a text book, which is a distinct advance upon previous works of the kind, and a credit to British anatomy. The subject is scientifically handled, and the latest views on morphology and embryology are embodied. Professor Cunningham has also brought out what is practically a new volume of his excellent series of manuals of descriptive anatomy.

Muscular System.—Professor Windle has endeavoured in a paper which was read before the Royal Society to deal with the morphology of the pectoral group of muscles. He considers that that portion of the lateral sheet of muscles consists of three segments, manubrial, gladiolar, and abdominal. Each of these segments has its own nerve and may undergo secondary lamination. These researches help to explain many interesting anomalies, such as the pectoralis minimus and the pectoralis quartus. Elsewhere,[1] the same observer has brought up to date the current knowledge of that curious muscle, the rectus sternalis, and, on the whole, seems to agree with Professor Cunningham that it is derived from the pectoralis major by a process of displacement. In the *Journal of Anatomy and Physiology*, Mr. J. T. Wilson gives a further series of observations on the innervation of the axillary muscles, and two cases of variation of the nerve supply of the lumbricales. But, more important than these, are Professor B. Windle's observations on the flexors of the digits of the hand, which, we note, are only the first of what are intended to be a series of observations.[2] In his Hunterian Lectures on Hernia, Mr. Lockwood has attached fresh importance to the suspensory muscle of the mesentery, by endeavouring to show that when it fails to support the mesentery, an acquired hernia results.[3] M. Nicaise has written upon the insertions of the aponeurosis of the external oblique,[4] and wishes us to believe that the ligaments of Fallopius and Gimbernat do not exist. Most anatomists will recoil from this idea, and adhere to their old belief of that which they think they have so often seen.

Vascular System.—The arteries seem an ever-fruitful field to till, and Dr. F. Rojecki has gathered from them much of interest, and has set it forth in a paper on the Arterial Circulation of the Macacus compared with that of the Anthropomorphic Apes and Man.[5] Dr. H. D. Rolleston has likewise noted an interesting variation of the hepatic artery.[6] A work which might easily be overlooked, but which is of great merit, is Dr. Ewart's, on the *Bronchi and Pulmonary Blood Vessels.* This is a marked advance upon our previous knowledge of both those systems, and those who read it will find that the author is not an adherent to the generally accepted views of the late Professor Aeby.

Osseous System.—Professor Cunningham has written an interesting note on the occasional eighth true rib in man, and considers it a reversion to type, and caused by the more frequent use of the right hand.[7] The same anatomist, in the next pages almost, discusses the proportion of bone and cartilage in the lumbar section of the vertebral column of the ape and several races of man. In this and another paper, published in the Royal Society's *Proceedings*, it is shown that elongated lumbar bodies are a decided degradation. The same author has likewise described the lumbar spine of an Australian aborigine.[8] Braune, again, discusses the functions of the sternum, and considers it a check upon the movements of the ribs.[9]

Nervous System.—In *Brain* Dr. Gaskell gives the results of his latest researches on the origin of the nervous system of vertebrates. It is perhaps a surprise to those who are not versed in the more recent advances of morphology and embryology to learn that the nervous system has an intimate relation with the alimentary tract of the invertebrates, or even that its central hollows communicate with the fore and hind gut in vertebrates, and yet the first possibility has certainly had light thrown upon it by Dr. Gaskell's work. This suggestive writer also opens up many other interesting problems, which are referred to elsewhere. At the recent meeting of the Anatomical Society, Professor Cunningham, in a most ingenious memoir, dealt with the intra-parietal sulcus, and showed with success that the ordinary accounts did not represent the common condition. The general morphology of the occipital lobes was also discussed, We understand that this important paper will shortly appear in the *Journal of Anatomy and Physiology.* Two other essays of anatomical interest are also given in *Brain:* Dr. Meigs an essay on Asymmetry of the Olivary Bodies of the Medulla Oblongata, and Dr. Alexander Bruce an excellent addition to the number of cases of absence of the corpus callosum. We note in passing that the subject of this abnormality was fairly rational and only rather "dour." We also note an important paper by Dr. M. v. Lenhossék on the Course of the Posterior Roots of the Spinal Nerves in the Cord.[10]

Special Senses and Organs.—Schwalbe and His have both written upon the anatomy of the ear, and Taguchi discusses the topographical anatomy of the larynx.[11] The intranarial position of the epiglottis has also been brought prominently forward by Professor Howes and Dr. Bowles. It has been clearly shown that although this is the usual condition in many animals that it is only occasional in the human subject.[12]

Comparative Anatomy.—Professor Ewart has continued the investigation of the cranial nerves of the elasmobranch fishes in his paper, which was read before the Royal Society in February. Sir Richard Owen communicated to the same Society an interesting description of the skull of an extinct carnivorous marsupial, of the size of a leopard, which was found in a cave in New South Wales. Professor Shufeldt has further contributions to the comparative osteology of the Arctic and sub-Arctic water birds; we have already noticed his previous work in this direction. Professor Struthers has published his researches upon the humpback whale, a work which stamps him as a leading authority upon this branch of anatomy. The same observer has also compiled a list of the work he has achieved during a long and laborious career. In our columns we have reviewed Professor Marshall's work on the frog.

Embryology.—The maturation of the ovum of the Cape and New Zealand species of peripatus has been described in the *Quarterly Journal of Microscopic Sciences*, by Miss Lilian Sheldon. The process seems to have been very clearly and successfully worked out by this lady. Drs. Thomas W. Shore and J. W. Pickering have also described in the *Journal of Anatomy and Physiology* the proamnion of the chick, a structure which has already been seen in the rabbit by Van Beneden and others. In the same journal Mr. Frederick Tuckerman gives a further short account of the development of the taste buds of the human embryo. The development of the nails of the human fœtus from their first appearance, until birth, has been described by F. Curtis.[13] The nails of the lower limb, like the lower limb itself, are later in appearance than the nails of the hands. Preparations begin to be made for their development in the first week of the third month of intrauterine life, although we confess that we wonder how our author can speak with such certainty as to the ages of his embryos. Nevertheless, these researches are well worthy of study. In the same publication as that which contains the researches of Curtis, Mathias Duval describes the placenta of rodents, and his work is a great advance on that of Von Bischoff, which is usually quoted in our textbooks, but which has by this time had a good deal of doubt thrown upon it. Fourneux, whose work on the gubernaculum is

1 *Anatomischer Anzeiger.*
2 *J. of A. & P.*, vol. iv, N. S.
3 JOURNAL.
4 *J. d'Anat. et de Phys.*
5 *J. d'A. et Phys.*
6 *J. of Anatomy and Phys.*
7 *J. of A. and P.*, vol. iv, N. S.
8 *Proc.* R. S.
9 *Archiv. für Anatomie.*
10 *Archiv. für Mik. Anat.*
11 *Archiv fur Anatom. und Phys.*
12 *J. of A. and P.*
13 *J. d'A. et Phys.*

well known, has an important contribution upon the development and evolution of the genital tubercle in the human fœtus of both sexes, together with some remarks concerning the development of the prostatic glands. It is now beginning to be clear that the prostatic glands correspond to the urethral glands of the female. This question is raised by Fourneux,[14] and further information upon the same point is found in Dr. Griffiths's paper on the origin and functions of the prostate.[15] Professor Windle has also given an interesting summary of recent discoveries upon the segmentation of the ovum. G. Henricius's paper on the development and structure of the dog's placenta may also be mentioned, and Czerny's on the organ of Giraldès and Born's on the mammalian heart.[16] William His, junior, who, we presume, is the son of the well-known His, has elucidated the development of the seventh pair of cranial nerves in the human embryo.[17] The heart and diaphragm are fast acquiring a literature of their own, and papers have been written upon their development by Raun, Strahl, and F. Carius, and others, in the *Archiv. für Anatomie und Physiologie.* The mesoderm is discussed by Carl Rabdl, in a long and learned paper, in which he leans to the view of its double origin.[18]

Teratology.—The French have long been distinguished for the excellence of their teratological work, and Dr. C. Phisalix follows in excellent footsteps in his endeavours to elucidate Cyclopian monsters.[19] His material seems to have been derived from man, the dog, and sheep, and he gives a more minute account of the brain and eye of these creatures than we can remember to have met with. A case of hypospadias in a dog is also given by G. H. Roger.[20] Pouchet and Chabry continue the most important line of teratological investigation started by Dareste by ascertaining the influence of artificial sea water upon the development of marine animals. The results are very striking.[21]

Histology.—Anatomists have not yet resigned their rights to histology, and, therefore, we note Dr. W. A. Haswell's endeavour to reconcile, or clear up, all the difficulties which surround the comparative study of striated muscles. The drawings which accompany this essay are exceedingly good and a credit to the publication in which it appears, namely, the *Quarterly Journal of Microscopic Sciences.* Indeed, all the illustrations in this journal are excellent, and we wish we could say the same of all of those which appear in the sister journals. We also note that an excellent index of the *Quarterly Journal of Microscopic Sciences* and of the *Transactions of the Microscopical Society* is given at the beginning of vol. xxx of the first-named publication. Although this is hardly an important event in the anatomical sense, yet it affords so much assistance to anatomists that it cannot be passed over in silence. Dr. F. Hermann's contribution to that much-worked at subject, the histology of the testicle, will also repay perusal.[22] From the above glimpse at that which our workers have done, it will be seen that anatomy is as progressive as it is important.

PHYSIOLOGY.

Congress of Physiologists.—Nervous System.—Muscle.—Electrical Organs.—Alimentary Canal.—Calorimetry.—Blood.—Cells.—Respiration.—Circulation.

Congress of Physiologists.—One of the most important events of the year for physiologists was their first International Congress held at Basle, in the month of September. It was attended by about 130 representatives from all the countries of Europe, and a few also from America. Of the many interesting communications and demonstrations made, the following were the most important: Professor His gave a summary of the results of his recent researches on the anatomy of the nervous system; the paper related in great measure to the cells the author has previously termed neuroblasts. Professor Heidenhain read a paper on the formation of lymph, stating, as the outcome of his researches, the conclusion that lymph results from the secretory activity of the cells of the capillaries. Professor Mosso spoke on the subject of fatigue in muscle. He showed an instrument called the ergograph, for obtaining the graphic record of the contractions of the human arm muscles, and compared the contractions produced by stimulating the median nerve obtained before and after a sitting of the Medical Examining Board; the contractions obtained after mental exertion were more feeble, and probably the brain during its activity gives rise to some substance of the nature of a poison. Professor Goltz showed a dog from which he had removed the left half of the brain two years ago, and which now showed no signs of paralysis. Professor Horsley and Dr. Beevor gave a very successful demonstration of the minute representation in the cortex of the movements of the upper limb. Professor Horsley, with Mr. Gotch, also demonstrated the electrical variations that occur in the spinal cord during its activity. Professor Bowditch showed specimens of composite photography. Professor Fano showed some beautiful tracings of the heart of the chick on the second and third days of incubation. Professor Kronecker related his experiments on the physiology of deglutition. Drs. Minkowski and Mering stated that complete extirpation of the pancreas gave rise to glycosuria. Professor Denys claimed to have found a peptonising ferment in the blood. Dr. Waller demonstrated the electromotive changes of the human heart, using electrodes placed in connection with the limbs and head, and leading these off to a capillary electrometer. Professor Hering gave an account of his theory of colour vision, and demonstrated by many very simple and ingenious pieces of apparatus experiments confirmatory of his views. Drs. Dastre and Morat showed the presence of vasodilatator fibres for the buccal region in the cervical sympathetic; and Professor Arloing read a paper on the properties of nerve fibres in the same region.

Nervous System.—Gaskell has published a full account of some masterly researches on the structure and functions of the cranial nerves, together with a theory of the origin of the nervous system in vertebrata. He shows that the cranial nerves are built up of somatic and splanchnic parts similar to those in the spinal nerves; the splanchnic portions are small-fibred; the nerves also have two roots, the motor root alone remaining active in many cases, the sensory root with its ganglion being atrophied; in other cases the motor and sensory portions have become scattered, are and known as separate nerves. The view of the development of the central nervous system, as a deposit of nerve ganglia finally fusing together around the old alimentary canal, will be read with interest by all embryologists. C. S. Sherrington has published a preliminary account of his researches, the object of which is to ascertain to what extent there is in the pyramidal tract a grouping of nerve fibres corresponding to the grouping of nerve cells in the cerebral cortex. The most important result obtained, in a very laborious and painstaking series of experiments, is that the fibres of the tract branch as they pass down the spinal cord, one branch in many cases recrossing to the opposite side of the cord; the recrossed tracts are most numerous in the regions of the cervical and lumbar enlargements. Other interesting points noted in the course of the inquiry are the degenerations that occur in the fornix and in the corpus callosum. A research on the spinal cord, which promises to yield important results, has been commenced by De Boeck. It relates to stimulation of different regions of the spinal cord by electrical current; indeed, it is almost the first attempt made at localisation in the cord by the method of stimulation. The author has yet had time to do little more than perfect his apparatus. He excites by means of a single needle. The advantage of unipolar excitations in localising functions was first pointed out by Kühne. The result of stimulating one side of the cord is to produce movement generally of the same side, but often, though to a less degree, of the opposite side as well. Hale White draws the following conclusions from his further observations on the sympathetic ganglia:—First, that in lower mammals and young human beings, the collateral ganglia (judging from the superior cervical and semilunar) are functionally active, but that in monkeys there are evidences of the commencing loss of their function, which has completely disappeared in the human adult; secondly, that in man the function of the lateral ganglia is maintained well into adult life, and only begins to disappear in old age Gad and Joseph have investigated the spinal ganglia by both histological and experimental methods with the following results:—Most of the centripetal nerve tracts are interrupted in the spinal ganglia by bipolar nerve-cells. These cells have a trophic influence on the fibres connected with them. Each functional nerve impulse in a centripetal direction must pass through a nerve cell in the spinal ganglion. This probably gives rise to delay, and it may be here that the summative effects of subminimal stimuli are brought about. J. R. Bradford has studied

[14] *J. d'Anat. et Phys.*
[15] *J. of Anatomy and Phys.*
[16] *Archiv. für Mikros Anatomie.*
[17] *Archiv. für Anatomie und Phys.*
[18] *Morph Jahrbuch.*
[19] *J. d'Anat. et Phys.*
[20] *J. d'Anat. et Phys.*
[21] *J. d'Anat. et Phys.*
[22] *Arch. für Micros. Anat.*

the innervation of the renal blood vessels with the following results:—All renal vasomotor fibres leave the spinal cord through anterior roots, especially between the sixth and thirteenth dorsal (in the dog). They are of two kinds, constrictor and dilatator, the former being the more abundant. Expansion is sometimes obtained by excitation of the central end of a posterior nerve root of the eleventh, twelfth, and thirteenth nerves. The vagus does not apparently contain vasoconstrictor nerves for the kidney vessels. There is no decussation of the vasomotor fibres in the splanchnic, the right splanchnic apparently supplying only the right kidney. J. R. Bradford, with H. P. Dean, has done an important piece of work on the innervation of the pulmonary blood vessels. The method adopted was to excite the roots of the spinal nerves, and to observe the effects of such stimulation on the aortic and pulmonary blood pressure respectively. Their experiments show that there is in the medulla a mechanism, stimulation of which causes a contraction of the pulmonary vessels, and that in the dorsal nerves, from the second to the seventh (in the dog), there are vasoconstrictor fibres passing to the pulmonary vessels. G. N. Stewart has continued his researches on the stimulation effects in a polarised nerve during and after the flow of the polarising current. He insists that a distinction must be drawn between excitability and conductivity, and, contrary to generally received notions, finds that these are not necessarily altered in the same way during and after the electrotonic state. For instance, he finds that the conductivity is depressed around the cathode during the flow, except with weak currents; the excitability here is at the same time increased. Gross has published a paper on the refractive index of the living axis cylinder; the mean value found was 1.367. On activity this does not alter, or at least does not alter so much as to affect the fourth place of decimals.

Muscle.—E. Münzer has continued the study of the remarkable experiment shown by Kühne in his Croonian lecture to the Royal Society, namely, secondary contraction from muscle to muscle; this experiment has also been the subject of study by Regeczy. Münzer differs from Regeczy somewhat, stating that a secondary stimulation from muscle to muscle never occurs through a tendinous inscription. J. Bernstein also enters the lists with Regeczy on the subject of the theory of electrical stimulation; these polemical papers will be found in *Pflüger's Archiv.* Loeb and von Korányi have made an extensive study of voluntary muscular contraction, especially of the arm, and the relation of the work done with the various parts of the contraction. A paper of rather psychological than physiological interest by J. Orchansky on voluntary activity should be read in connection with the above just mentioned. W. P. Lombard, from a careful study of the knee-jerk, concludes that the reflex theory is the most satisfactory; the difficulty, however, of the rapidity of the process still remains unexplained. The latent period of muscle as determined by Yeo is shorter than has been hitherto considered. Marey has investigated certain muscular movements, such as the closure of the hand and the flight of a bird, by means of photochronography, a method introduced by Muybridge in the study of the locomotive movements of quadrupeds. Miss Brinck, and Miss Popoff, in Kronecker's laboratory, have tested on the frog's and turtle's heart the nutritive action of various proteid fluids; the main result of these experiments is to extend to this, and later to skeletal muscle, the conclusion that serum albumin is the nutritive proteid *par excellence.* It should however be noted in passing that Ringer's results with saline solutions do not appear to have had sufficient weight with these investigators. Lauder Brunton believes that there are several phenomena connected with muscular contraction, which are best explicable by the hypothesis that relaxation is not merely a passive action, but due to contraction in the transverse direction. R. Nicolaides has previously shown that immediately after a muscle is cut out, its excitability is somewhat increased; he now shows by experiments with the capillary electrometer, that the muscle current runs parallel in this respect to the excitability.

Electrical Organs.—Burdon Sanderson and F. Gotch have published a further contribution on the electrical organ of the skate, the nature of the normal reflex, and the measurement of the electromotive force of the response of the organ to a single stimulation being the subjects more especially dealt with. The reflex centre is situated in the optic lobes; each disc of the organ is capable of developing during excitation, evoked by a single induction shock, an electromotive force of over 0.02 Daniell, which is extraordinarily great as compared with muscle. A critical survey of the work done by Sanderson and Gotch on electrical organs has been published by Du Bois Reymond, who is a great authority on this particular subject.

Alimentary Canal.—L. Herrmann found in a loop of intestine, separated in the manner of Thiry and Vella, that at the end of some weeks it became filled with bacteria, cellular *débris*, and often fat, the whole mass having a fæcal appearance. He considers it probable therefore that the intestinal secretion and walls may furnish a portion of the excrements. Both J. R. Bradford and J. N. Langley have published memoirs on the physiology of gland nerves. The electrical changes in the human skin dependent on the secretion of sweat have been investigated by J. Tarchanoff. Observations, chiefly of a histological nature, on secreting glands, especially the salivary glands, have been published by O. Drasch. These observations relate to the minute changes occurring on secretion; occurring either spontaneously or as the result of electrical stimulation; and E. Gley has investigated the question of the inhibition of excito-secretory nervous impulses. J. N. Langley has shown that it is possible to preserve the mucous granules in mucous glands by means of osmic acid vapour. T. W. Shore and H. Lewis Jones, in investigating the vertebrate liver in a series of animals, find that, in the lowest vertebrate (amphioxus), the organ is a compound tubular gland; the solid anastomosing rods of the lamprey's liver form the next stage in development; penetration of blood channels between these leads to the condition found in fishes and reptiles; and a still finer penetration of blood vessels, and further subdivision of the hepatic cylinders leads to the condition found in the mammalian adult.

Calorimetry.—J. Rosenthal has published three long and exhaustive papers on calorimetry; the animals investigated were placed under varying conditions, and the numerical results are given in tables. The reader interested in the subject will find these papers in *Du Bois Reymond's Archiv.*

Blood.—The literature of the blood has been enriched this year by the publication of a large volume of original investigation (*Du Sang*) by G. Hayem; the chief points of interest in the book relate to the formed elements, and the author's views of the origin of the blood tablets are fully explained. A number of hæmacytometric observations are published by A. Gürber; his observations were carried out in frogs. An estimate of the total amount of blood in the animal's body being also made by Welcker's method, the data for the total number of corpuscles in the body were obtained; they were found in round numbers to vary from 500,000,000 to 1,100,000,000.

Cells.—An excellent account of the most recent doctrines concerning cell division has been published by Waldeyer, and is translated by Dr. Benham in the current volume of the *Quarterly Journal for Microscopical Science.* C. S. Sherrington and C. A. Ballance have together written a paper on the formation of scar tissue; they show that the important cell element in the formation of new connective tissue is not the leucocyte as taught by the Cohnheim school, but certain large tissue cells, which they term plasma cells.

Respiration.—H. Head shows that if an animal is breathing rhythmically, the first effect of a permanent increase or decrease in the volume of the lungs is to cause the abolition of rhythmic breathing. If the lungs are inflated, the inspiratory muscles remain in a condition of complete elongation. If, on the other hand, they are diminished in volume, the inspiratory muscles become tonically contracted. But in either case, provided the advent of dyspnœa be averted, the centre ultimately adapts itself to the permanently increased or diminished volume of the lungs, and the breathing again becomes rhythmic. When this adaptation has occurred the normal zero is altered. Assuming that the centre is adapted to a certain volume A, and subsequently to a greater volume B, then collapse to the volume A, which previously produced no effect on the centre, acts as a strong inspiratory stimulus. At the present day there are a large number of complex machines for performing artificial respiration, which have replaced the simple bellows used in the early days of phy siological experiment. One of the latest of these is figured and described by J. Rosenthal in *Du Bois Reymond's Archiv*, and it is apparently well adapted, to judge by the tracings taken with it in use, for the end it has in view.

Circulation.—The sphygmograph has been studied in a new light by J. L. Hoorweg, who, by means of mathematical measurements of the curves, arrives at conclusions respecting the rate of blood flow, the amount of blood pressure, and the amount of work done by the different parts of the vascular system. Von Kries has

introduced a new gas tachograph, and Basch's sphygmomanometer has been employed in a series of experiments by Potain, who does not regard it as such a valuable instrument as its inventor does. A new plethysmograph, applicable to the frog, has been invented by J. Katzenstein. McWilliam has published in the JOURNAL (January and February, 1889) a number of important observations relating to cardiac physiology and pathology.

MEDICAL CHEMISTRY.

ALBUMINS—*Character—Myosin—Action of Steam on Fibrin—Commercial Peptones—Proteids in White of Egg—The Sulphur in Proteids.* CARBOHYDRATES—*A Starch Solution for Use in Volumetric Analysis—Action of Sugars on the Economy.* FOODS AND DIGESTION—*The Proteids Required—Analyses of Milk—Beans as Food—Effect of Saccharin on Digestion—Formation of Gastric Juice, particularly the Origin of the Acid—Estimation of the Acid—The Presence of Micro-organisms in Alimentary Digestions—The Presence of Sugar in the Alimentary Canal—Change in Potato Starch in Digestion—Action of Stomach and Intestine on Peptone.* TISSUES AND ORGANS—*Composition of Elastic Fibres—Matrix of Tracheal Cartilage—Effect of Nerve Section on Metabolism—Blood: its alkalinity, lactic acid, peptones, precipitants of its proteids, composition of its corpuscular stroma, preparation of hæmoglobin and its true characters, spectrum of reduced hæmoglobin, tension of oxygen, blood tablets, characters of blood in carbonic oxide poisoning—Liver—Suprarenals—Kidneys.* URINE—*Presence of Carbohydrates—Detection of Sugar—Reducing Substances in Urine—Precautions in Fehling's Process—Volatile Fatty Acids—Estimation of Uric Acid—Aromatic Substances—Urobilin—Sulphuric Acid and Organic Sulphates—Ferments—Evolution of Sulphuretted Hydrogen—The Nitrogen present.* PTOMAÏNES—*Preparation and Constitution.* RESPIRATION, OXIDATIONS, ETC.—*The Organic Poison in Expired Air—Oxidations Occurring in the Body—Action of Light on Production of Carbonic Acid Gas—Influence of Ingestion of Salines on Metabolism—The Ingestion and Discharge of Water—Animal Synthesis—Influence of Alcohol on Metabolism—Effect of Starvation on Glycogen—Source of Glycogen—Mineral Constituents of Milk and Young Tissues Contrasted—Mucin in Myxœdema.*

ALBUMINS.—Michailoff has recently shown that albumins are acid and globulins basic compounds. The first phase of the gelatinisation of albumins is the result of hydration, but subsequently the changes are rather the result of more or less complete dehydration.

Myosin is probably, as Halliburton has suggested, a chemical compound formed by the interaction of one or more myosinogens and a ferment. Chittenden and Cummins find ammonic chloride solutions the most useful for extracting myosin from flesh. When the salt is afterwards separated by dialysis the myosin is obtained in a jelly-like condition.

An interesting paper upon the products of the action of superheated steam on *fibrin* has been published by Neumeister, to which we can only refer the reader.[1]

In some recent examinations of commercial *peptones* by König and Kisch, Kühne and Chittenden's method was adopted of precipitating the albuminoses with a saturated solution of ammonic sulphate, and precipitating from another portion both albuminose and peptone by sodic phosphotungstate, the peptone being estimated from the difference. About 10 grammes are taken, boiled in water, and filtered, and the nitrogen in the precipitate on the filter then determined by Kjeldahl's process, the weight obtained multiplied by 6.25, giving the albumin. The filtrate is next made up to 500 cubic centimètres, of which 100 cubic centimètres are evaporated down to a small bulk, 100 cubic centimètres of cold saturated solution of ammonic sulphide added to it, and the precipitate obtained dried and weighed. Another 100 cubic centimètres are next acidified with sulphuric acid and precipitated with an acid solution of sodic phosphotungstate, the precipitate washed with dilute sulphuric acid, and its nitrogen determined.[2]

In the white of egg, according to Corin and Berard, there are two kinds of proteids, those coagulable by heat, and peptones. In the former three, members of the albumin class coagulating at different temperatures are described, and two belonging to the globulin class precipitable by saturation with magnesic sulphate. The peptones increase as the eggs become stale.[3]

There are probably two forms of sulphur present in proteids, one loosely and the other firmly combined; and, according to Danilewsky, the latter may be divided into four varieties, according to their removability by $\frac{1}{2}$, 2, 5, or 10 per cent. solutions of caustic soda. In white of egg the total sulphur was 1.66 and the loosely-bound 0.44, or as 4 to 1.006; while in fibrin the proportions are 1.2 and 0.38, or as 3 to 0.95. Legumin and casein are examples of native proteids in which all the sulphur is apparently firmly combined. Krüger has examined the proteid that has undergone treatment with caustic potash. He found it an amorphous peptone-like body, which was separable into two substances by saturation with ammonic sulphate, the one precipitate giving the reactions of an albumose and the other those of a peptone.[4]

To estimate the proteids, particularly in milk, the following method may be followed: Tannic acid precipitates all the proteids completely, but the precipitate must not be washed with hot water or spirit, as it is partially soluble in both reagents. Albumoses are thrown down only in part, and peptones are soluble in excess of the tannic acid. Phosphomolybdic acid acts somewhat similarly, except that the precipitation of the albumoses and peptone is more complete. By saturating the milk with ammonic sulphate all the proteids except peptone are thrown down; but no peptone is present in the filtrate, as can be shown by the absence of any precipitate after the addition to it of tannic acid, and by no biuret reaction being given by it. A method recommended as the most accurate for quantitative determinations of proteids is that of estimating the total nitrogen in the tannic acid precipitate and multiplying this by 6.37 to get the total proteid. To separate the casein and lactalbumin and leave all the albumin in solution, precipitation by magnesie sulphate was found the most effective. Sodic chloride also precipitates all the casein. To estimate the albumin, after separation of the casein, by boiling the filtrate has been found very incomplete (Sebelien).[5]

CARBOHYDRATES.—A good starch solution for use in volumetric analyses with iodine may be made by mixing 5 grammes potato starch with 0.001 gramme mercuric iodide, stirring up with a little water, and then pouring the mixture into one litre of boiling water. A solution thus prepared may be kept for a long time.[6]

Albertoni has made a series of experiments on men and animals so as to determine the action of such carbohydrates as the sugars on the economy; and he shows their ingestion is followed by a quickening of the pulse and an increase of the blood pressure; the blood vessels also are enlarged, so that when cut about double the normal quantity of blood flows from them. He therefore concludes that their effect on the action of the heart is of much importance.[7]

FOODS AND DIGESTION.—The generally received opinion as to the proteids required by a healthy man is that at least 100 to 120 grammes should be ingested daily. This, however, is opposed to the conclusions lately arrived at by Hirschfield, according to which it is possible for a healthy adult to maintain his body weight as well as his nitrogenous balance on 30 to 35 grammes daily of proteid, corresponding to 5.8 grammes of nitrogen. These experiments, however, only lasted for a short time (ten to fifteen days), so it is impossible to regard the conclusions drawn as decisive.[8]

Some experiments of Randnitz on the digestibility of boiled milk are interesting as showing that the nitrogen is always assimilated better when the milk is fresh than after being boiled, but that little difference is produced upon the assimilation of the fat.[9] A paper of Vieth's gives the results of nearly 85,000 analyses of milk. The specific gravity rarely falls outside 1030 to 1034. The determination consisted in that of the total solids, the non-

[1] *Zeit. Biol.*, xxvi, 57.

[2] *Zeit. Annal. Chem.*, xxviii, 191.
[3] *Archiv. d. Biol.*, ix, 1.
[4] *Pflüger's Archiv*, xliii, 244.
Zeit. Physiol. Chem., xiii, 135.
[6] *Bull. Soc. Chem.*, 1, 172.
[7] *Chem. Centr.*, 1889, 608.
[8] *Pflüger's Archiv*, xli, 533.
Zeit. Physiol. Chem., xiv, 1.

fatty solids, and the fats. The non-fatty contain about six-twelfth parts of milk sugar, one-twelfth part ash, and five-twelfth proteids, about two-thirds of which are casein. The best milk is that obtained in November, and the evening milk is richer than that of the morning.[10]

In a man fed with beans for three days, together with a little fat, meal, salt, vinegar and beer, it was found by Pausnitz that, so far as the nutrition of the body is concerned, beans compare most unfavourably with other forms of vegetable food.[11]

Stift finds, as the result of his experiments with saccharin, that it interferes with digestion on account of its tendency to delay the ferment actions of which digestion essentially consists.[12]

Girard found by injecting sodium chloride into the rectum he increased both the amount of the gastric juice and the percentage of hydrochloric acid, the pepsin also being apparently increased; but the same results did not follow the injection of other chlorides.[13]

The most generally accepted theory as to the origin of hydrochloric acid in the gastric juice is that the lactic acid formed from the carbohydrates sets hydrochloric acid free by acting on the sodium chloride. Now acidity tends to stop fermentation processes, and in experiments with artificial gastric juice Cohn has found that, while pepsin itself appears to favour acetic or lactic acid fermentation, this is hindered by even traces of hydrochloric acid; the artificial gastric juice containing both bodies likewise hinders it, but not so powerfully as the acid alone; in the presence of peptone, however, no hindrance of the fermentation is produced at all.[14]

A new method has been proposed for estimating free hydrochloric acid in the stomach contents. These are evaporated to dryness with baric carbonate, and then incinerated, by which means the organic salts are burnt, the baric chloride present being unchanged. The latter salt is then extracted with water, and the dissolved barium titrated by the addition of potassic bichromate. The standard solution of the latter is best made of such a strength that each cubic centimètre corresponds to 4.05 milligrammes of hydrochloric acid. When it is added to the barium solution, a precipitate insoluble in water and acetic acid is formed, the yellow colour which appears with the smallest excess of the bichromate being the indicator of the end of the reaction.[15]

Harris and Tooth state that the presence of micro-organisms is not necessary for gastric digestion; and their experiments to prove that micro-organisms are competent of themselves to convert proteids into peptones proved unsatisfactory, albumoses only appearing, never true peptones. They also found that tryptic ferment can convert proteids into peptone without the assistance of micro-organisms. The formation of indole is variable, and can be easily prevented by the addition of the smallest amount of phenol or mercuric chloride; it would seem to be derived from the peptone, and not from leucin or tyrosin.[16]

According to the experiments of Ellenberger and Hofmeister, with horses and pigs fed on starchy food, there is always a variable quantity of sugar to be found in the stomach and intestines; in the stomach of the horse they have found as much as 30 to 150 grammes, constituting from 1 to 3.5 per cent. of sugar, and in that of the pig from 0.6 to 0.8 per cent. The largest amount of sugar is present an hour to an hour and a half after a meal; the presence of much hydrochloric acid stops the conversion of starch into sugar, the latter being also affected by the cooked or uncooked condition of the starch. These results are opposed to those of Seegen, who has made special reference to the small proportion of sugar to be found in the intestinal tract; the authors are of opinion that Seegen probably killed his animals too late, that is, three hours and a half to eighteen hours after a meal.[17]

Potato starch is converted in the human stomach into dextrin and maltose, part remaining unaltered. When eggs and water had been previously ingested the soluble starch is changed in some unknown way, but no sugar is formed.[18]

Ott proved that the stomach has the power of changing peptone into serum albumin. Popoff found in her experiments that in a tortoise's heart a standstill is soon produced when a peptone formed by gastric juice is made the circulating fluid; but that if this peptone had been previously kept in the stomach or intestine of a living dog for fifteen minutes, the heart continued to beat. The same results, however, were not obtained with pancreatic peptone.[19] According to Brinck, various forms of animal cells appear likewise to possess this power.

Some recent quantitative experiments of Limbourg have only confirmed what has been the general belief as to the bile exerting an antiputrefactive action on the alimentary canal in virtue of the biliary acids it contains.[20]

Tissues and Organs.—From some recent experiments of Ewald's it would appear that an *elastic fibre* consists of two substances, both of which are digestible by trypsin and pepsin at 40° C., one refracting light strongly and being readily soluble in cold acid pepsin solutions, and the other insoluble.[21]

In the matrix of *tracheal cartilage*, Mörner finds a mucin body, differing from ordinary mucin in not being so stringy, and which when treated with alkalies yields an albuminate, a peptone-like substance and chondroitic acid; collagen, yielding gelatin on boiling; chondroitic acid, which appears to be free, and to be the body originally described by Krukenberg as a hyalin, and which on treatment with dilute mineral acids yields a reducing sugar; and a very soluble form of proteid which is not present in young cartilage.[22]

Section of the nerve of a *muscle* produces a pathological condition in which its metabolism is altered by a tendency to accumulation therein of glycogen.[23] With regard to sarcolactic acid, it was found by Gleiss that the quickly contracting muscles of the frog became acid more rapidly and extensively than the slowly contracting muscles of the tortoise; and this rule appeared to hold good throughout the animal kingdom, the more active muscles always being the more acid; but no difference could be noted between the pale and red muscles in rigor mortis.[24]

K. B. Lehmann has placed horseflesh in a flask and exposed it to the continuous action of a stream of pure water. At the end of seven months the fatty acids had doubled as compared with those present in a similar piece of beef preserved for a similar time in alcohol.[25]

Blood.—To estimate the alkalinity of the blood, Haycraft and Williamson prepared a series of red litmus papers, acidified with oxalic acid, and glazed by being dipped in paraffin oil. A single drop of blood exercises a neutralising effect after a short interval has elapsed. The amount of alkali which will turn the litmus paper blue is known, and in this way an approximation is made.[26]

In the living blood no lactic acid is usually to be found; but if the blood is allowed to stand some hours before being examined, or if the examination is made after death, then lactic acid may readily be detected. If, therefore, lactic acid is formed during life, its oxidation must be very rapid.

Peptones are not present in the blood, even during active digestion, as they are rapidly transformed during, or immediately after, absorption into blood proteids, as is generally believed, or into certain nitrogenous non-proteids. As the result of some experiments, Torup concludes that if a certain quantity of blood is removed from an animal which is then left to starve, an increase of the blood proteids occurs, an increase not merely relative but also absolute. The number of the red corpuscles is augmented, a slight increase likewise manifesting itself in the proteids of the serum, which is specially marked in fibrin. Here the increase cannot be said to be due to the absorbed peptones.[27]

The following salts, even when added to saturation, produce no precipitation of the serum proteids: potassic sulphate, nitrate, and chloride; ammonic chloride, nitrate, and acetate; magnesic chloride, nitrate, and acetate. A certain amount of precipitation, more or less complete, was caused by potassic chloride and acetate; sodic chloride, sulphate, nitrate, chlorate, phosphate, and acetate; and magnesic sulphate. Lewith also gives the results of his quantitative estimations of the amount of salt required to produce the precipitation of the two proteids of serum.[28] Later on,

[10] *Jour. Roy. Agric. Soc.*, xxv, 180.
[11] *Zeit. Biol.*, xxvi, 227.
[12] *Bied. Centr.*, xviii, 458.
[13] *Arch. d. Physiol.*, 1889, 595.
[14] *Zeit. Physiol. Chem.*, xiv, 75.
[15] *Zeit. Physiol. Chem.*, xiii, 1.
[16] *Jour. Physiol.*, ix, 220.
[17]
[18] *Bied. Cent.*, 1887, 1889.
[19] *Archiv. f. Physiol.*, 1889, 83.
[20] *Zeit. Physiol. Chem.*, xiii, 196.
[21] *Zeit. Biol.*, xxvi, 1.
[22] *Skossd. Archiv f. Physiol.*, i, 210.
[23] *Virchow's Archiv*, cxiii, 332.
[24] *Pflüger's Archiv*, xli, 69.
[25] *Bied. Cent.*, 1889, 66.
[26] *Proc. Roy. Soc. Ed.*, cxxvii, 396.
[27] *Compt. Rend. Soc. Biol.*, v, 416.
[28] *Archiv exp. Path. Pharm.*, xxiv, 1.

in the same journal, a similar research is recorded by J. Hofmeister. He found that as a rule the purgative powers, difficulty of diffusion, and power of precipitating globulins, run together in these and similar salts.

In the stroma of mammalian red corpuscles Halliburton and Friend detected only the globulin coagulating at 75°. It has fibrino-plastic properties, being identical, probably, with fibrine ferment. No nuclein or nucleo-albumin was present.[29]

Mazet has modified with advantage Hoppe-Seyler's method for the preparation of crystalline hæmoglobin. The defibrinated blood is first washed with 14 times its volume of a solution of sodic sulphate (2.5 per cent.), the washed corpuscles placed in a special vessel with a stop-cock at the bottom, and there mixed with their own volume of water, and then with ether, or better, with benzene; the mixture is shaken for a short time, and then kept at a low temperature for twenty-four hours. A layer of hæmoglobin solution separates, which is drawn off and gradually mixed with one-fifth its volume of pure absolute alcohol. The filtrate is cooled to —14°, and afterwards remelted. By draining the imperfect crystals thus obtained, and redissolving them in a little water at 35°, again adding alcohol and cooling as before, good crystals are obtained.[30]

In the red corpuscles the pigment takes the place of protoplasm in the cell, instead of being mixed with it, and in their high percentage of solids they also differ from animal cells. According to Hoppe-Seyler a distinction must be drawn between the pigment in the corpuscles and the hæmoglobin separated from the corpuscles. For these pigments as they exist in the corpuscles the names arterin and phlebin are suggested, and they are probably compounds of hæmoglobin and oxyhæmoglobin respectively, with lecithin. The pigments as they exist in the corpuscles are insoluble, while the separated hæmoglobin and oxyhæmoglobin are soluble, in the blood plasma and serum. In the corpuscles the pigments do not crystallise, give off oxygen *in vacuo*, and decompose hydric peroxide, which is not the case with the separated hæmoglobin. Again, a weak solution of potassic ferricyanide has no action on the combined pigment, while oxyhæmoglobin is thus changed into methæmoglobin. In spectroscopic appearance, however, both bodies correspond, but this does not prove they are the same, for in different animals the hæmoglobins have not the same percentage composition, solubility, or crystalline form, yet they all have the same spectrum.[31]

Hermann states that the spectrum of reduced hæmoglobin, generally described as consisting of only one band, consists of two, the second being a narrow band nearly coincident with the D line. In connection with hæmoglobin, Hermann has also shown that in hunger it is less quickly used up than the other solids of the blood.[32]

When pure protoplasm, such as the blood corpuscles of the horse or bullock, or the lymph corpuscles of the spleen or lymphatic glands, is placed in contact with pure crystalline hæmoglobin, methæmoglobin is first formed, and, later, the hæmoglobin is completely destroyed. A gradual reformation of hæmoglobin and methæmoglobin, however, occurs, so that at the end of a fortnight more is present than was there originally.[33]

The tension of oxygen in blood and in solutions of hæmoglobin has received attention from Hüfner, and he gives a table recording his results. To render breathing possible at high altitudes, the best means would appear to be to increase the hæmoglobin in the blood.[34] Löwit states that the blood tablets of mammalian blood seem not to be present in the blood of birds, amphibians, reptiles, or fishes. These tablets consist chiefly of globulin, and he regards them as fibrin precursors. In the blood of batrachians and birds, the spindle cells found are regarded by him as varieties of white corpuscles, and not as the equivalents of blood tablets.[35]

In carbonic oxide poisoning, if the blood is diluted with 50 volumes of water, and to 100 cubic centimètres of this 0.2 cubic centimètre yellow ammonic sulphide, and 0.3 per cent. acetic acid (30 per cent) are added and gently mixed, a bright red coloration is produced, normal blood only giving a greenish grey.[36]

Liver.—Girard has published a valuable table showing the percentage of sugar and glycogen at certain periods after death, and the figures indicate an increase in the sugar, and a corresponding decrease in the glycogen. The power of the hepatic cells to change glycogen into sugar is not destroyed after death, but the presence of blood in the liver assists in the process. Muscles, also, which contain glycogen possess the same power, for their glycogen is likewise converted into sugar.[37]

Suprarenals.—The extract of these bodies has been known for several years to possess a poisonous nature, but upon what this depends was unknown. Marino-Zuco has found that when the extract is rendered acid or alkaline in reaction the toxic power disappears. Neurine and certain organic phosphatic acids were also discovered in this extract; and Marino-Zuco further noted that if a mixture of these organic phosphatic acids is saturated with neurine, the liquid obtained possesses the poisonous properties of the original extract, even when very dilute; but the action of acids or alkalies destroys the combination, and thus removes the poisonous properties. Neurine orthophosphate, prepared synthetically, was also found very poisonous.[38]

Kidneys.—The percentage composition of healthy as compared with waxy kidneys is here shown:

	Healthy.	Waxy.
Albumin	1.116 to 1.394	0.792
Globulin	8.633 to 9.225	5.553
Other proteids	1.436 to 1.598	0.485
Gelatin	0.996 to 1.849	2.685
Albuminoids	—	0.992 (38)

URINE.—In our last report will be found a short abstract of some of the recent work as to the presence of *carbohydrates* in normal urine. It is probable that a mixture of two carbohydrates is present, as part is soluble in caustic soda, and gives the reactions of animal gum; while the insoluble residue dissolves in alcohol and gives the grape sugar reactions.[40] Leube, however, states that he has been unable to detect any carbohydrate in healthy urine, but that in diabetic urines he has discovered glycogen in varying quantity.[41]

To detect *sugar* in urine add 1 to 2 cubic centimètres plumbic acetate to 10 cubic centimètres urine, and filter; mix 5 cubic centimètres of the filtrate with an equal quantity of normal potash solution and a drop or two of phenyl hydrazine, then shake well and boil: when sugar is present the liquid becomes yellow in colour, and on the addition of acetic acid in excess is rendered opaque, a finely divided yellow precipitate being thrown down.[42] Another delicate test is also here given: When 5 cubic centimètres of aqueous safranin solution ($\frac{1}{10}$ per cent.) are heated in a test tube with 1 cubic centimètre urine containing grape sugar, and 2 or 3 cubic centimètres soda solution (10 per cent.) added, the safranin is reduced and the solution rendered colourless; but the colour rapidly reappears at the surface owing to reoxidation.[43]

Besides sugar other substances occur in urine which reduce alkaline solutions of cupric oxide, such as uric acid and kreatinin, and the glycuronic acid compounds. The latter are much increased by the administration of camphor, chloral hydrate, phenyl, benzoic acid, etc. The glycuronic acid is probably derived from certain changes, possibly putrefactive, occurring in the proteids in the intestine. Hagemann in his paper likewise refers to certain practical difficulties in the use of Fehling's solution. He found, however, that the addition of a small quantity of calcic chloride prevented the mechanical separation of cuprous oxide, and that in case the filtrate is to be tested for copper at the end of the reaction, it is necessary to filter rapidly, and to test the first two drops that pass, owing to the rapid reoxidation of the reduced oxide.[44]

To render the exact point of decolorisation more easily seen in the above Fehling reaction Causse suggests the addition of 4 cubic centimètres of a 5 per cent. solution of potassic ferrocyanide and 20 cubic centimètres water to each 10 cubic centimètres Fehling's solution. The ferrocyanide dissolves the cuprous oxide as rapidly as it is precipitated, and thus maintains a colourless solution.[45]

Volatile fatty acids are formed in the ammoniacal fermentation of sugar, as Salkowski has shown. The distillates of two urines were compared, one of which was fresh when distilled with strong

[29] *Jour. Physiol.*, x, 522.
[30] *Compt. Rend.*, cix, 159.
[31] *Zeit. Physiol. Chem.*, xiii, 477.
[32] *Pflüger's Archiv*, xliii, 235.
[33] *Chem. Cent.*, 1889, 1623.
[34] *Zeit. Physiol. Chem.*, xiii, 285.
[35] *Archiv. Exp. Path. Pharm.*, xxiv, 188.
[36] *Virchow's Archiv*, cxiv, 53.
[37] *Pflüger's Archiv*, xli, 294.
[38] *Gazetta*, xviii, 199.
[39] *Compt. Rend. Soc. Biol.*, v. 51.
[40] *Zeit. Physiol. Chem.*, xiii, 122.
[41] *Virchow's Archiv*, cxiii, 392.
[42] *Pharm. Zeit.*, xxxiii, 465.
[43] *Pharm. Zeit.*, xxxiii, 651.
[44] *Pflüger's Archiv*, xliii, 501.
[45] *Bull. Soc. Chem.*, l, 625.

sulphuric acid, while the other had been allowed to undergo the ammoniacal change. As a mean of eight analyses the distillate of 300 cubic centimètres of the fresh urine contained acid equivalent to 2 cubic centimètres of standard alkali, and the ammoniacal urine acid equivalent to 12.2 cubic centimètres of the same. The amount of volatile acid per day would therefore be equal to nearly 0.15 gramme acetic acid in fresh, and to 0.915 gramme in putrid urine. The acidity is not due to carbonic acid, but appears to be owing to the presence of acetic, propionic, and butyric acids.[46]

Camerer proposes the following as an accurate process for the estimation of *uric acid*. To the urine of the twenty-four hours is added some soda solution (1 to 2 grammes in the litre of water) to precipitate the phosphates, and water is added to bring the specific gravity to about 1010; 50 cubic centimètres magnesia mixture (mag. sulph. 1, ammonic chloride 2, ammonia 4, and water 8) are added to 300 cubic centimètres of the urine mixture, and the precipitate removed by filtration. To a measured amount of the filtrate some finely-divided calcium carbonate is added, and then about 5 cubic centimètres of a silver nitrate solution (3 per cent). In the precipitate, when collected on a filter and washed and dried, the nitrogen is determined by Kjeldahl's method, and from this the uric acid is calculated.[47]

Salkowski, in a recent paper, criticises the silver process for the determination of uric acid, and he reaffirms his original statement that the method is a bad one, the error in analysis averaging 3 to 60 per cent.[48]

In diseased conditions of the body where there are abnormal putrefactive changes, an increased proportion of such *aromatic substances* as phenol, cresol, indol, etc., makes its appearance in the urine. In erysipelas and pyæmia, putrefactive processes are undoubtedly often present. Benger lately classed scarlet fever and diphtheria with pyæmia, regarding them all as putrefactive. Benger's method consisted in weighing the phenol as tribromo-phenol, but this has been found by Haldane to be wanting in accuracy, for the more concentrated the urine the greater is the quantity of tribomo-phenol to be obtained from it. Indeed, the increase in phenol described by Benger as occurring in scarlet fever and diphtheria is susceptible of an easy explanation by the increased specific gravity of the urine in these diseases. The method adopted was to estimate the proportion of sulphuric acid combined as ethereal sulphates, and to compare it with that combined as ordinary sulphate. The normal proportion is about as 1 to 10, while in 16 cases of scarlatina it was as 1 to 17 in the urine passed during the fever; and in 13 cases it was 1 to 21 in the urine passed in the first three days of convalescence. In diphtheria the ratio was 1 to 13. There does not, therefore, appear to be any ground for regarding scarlet fever or diphtheria as being analogous to putrefactive processes.[49]

Gumbert confirms Jaffe's opinion that *urobilin* does not pre-exist as such in the urine, but is formed from some chromogen body by oxidation. To detect it, he mixes the urine with an equal volume of fuming hydrochloric acid, heats the mixture up to boiling point, then lets it cool and shakes with ether. The ether becomes of a pale brownish-red colour, with a well-marked green fluorescence, giving the absorption band of urobilin with the spectroscope, and leaving behind a red residue on evaporation, which forms a fluorescent solution in chloroform and a non-fluorescent one in alcohol, glycerol, and acetone. When the ethereal solution is shaken with an alkali, the latter is coloured deep red, but when fresh ether is added and an excess of acid, a yellowish solution is obtained, which is fluorescent, and gives the urobilin absorption band.[50]

Some work has been done by S. Sher to estimate the relation between the total *sulphuric acid* of the urine and that existing as *ethereal sulphates* in rest and work. It was found that the total sulphuric acid, as well as the ethereal sulphates, were less during rest, and that the ratio between the two was less during rest than work, the only exceptions being when the work was excessive and exhausting.

	By Day.	Ratio.	By Night.	Ratio.
Rest:—				
Sulphuric acid ...	1.4128	... 8 to 1	1.334	... 8 to 3
Ethereal sulphates ...	0.1733		0.160	
Work:—				
Sulphuric acid ...	1.617	... 8 to 9	1.355	... 9 to 6
Ethereal sulphates ...	0.180		0.140	
During 24 hours:—				
Sulphuric acid ...	2.973	... 9 to 2	—	... —
Ethereal sulphates ...	0.321			

Hoffmann finds that a varying amount of *pepsin* and *diastatic ferment* makes its appearance in normal human urine, and that this fluid has no power to destroy either; that no trypsin is present; that the urine has the power of destroying small but not large quantities of this last ferment. He further states that trypsin is to be found in the liver, spleen, and kidneys of different animals.[51]

Salkowski is of opinion that the *evolution of sulphuretted hydrogen* from urine is due to the action of bacteria on the neutral compounds of sulphuric acid present in the urine. He found, for example, when nutritive solutions containing suitable triosulphates were inoculated with urine already containing sulphuretted hydrogen, that large quantities of the gas were given off; a similar experiment with sulphates showed the same result. Part of the sulphur taken in the form of flowers of sulphur is absorbed, he states, and this goes to form sulphuric acid.[52]

According to Bohland 15.54 per cent. of the nitrogen of urine is not combined as urea, of which 0.065 exists as preformed ammonia. The nitrogen in the extractives precipitable by phosphotungstic acid forms 6.51 per cent. of the whole.[53] In estimating the total nitrogen of urine by Kjeldahl's method it should be remembered that when ptomaines are present serious errors are likely to arise.[54]

PTOMAINES.—Wyborn, by macerating some finely-minced beef with twice its weight of water, and exposing it in the sunlight for sixteen days, then straining and precipitating with an equal volume of absolute alcohol, washing with boiling alcohol, and finally drying in warm air, obtained a ptomaïne product without the use of acid. The residue formed 0.067 per cent. of the original beef. When treated with a mixture of equal volumes of glycerol and water an amber-coloured solution and a brown precipitate were obtained. After the solution had been kept a month subcutaneous injections of 5 minims, containing $\frac{1}{15}$ grain of residue, were made with mice, and proved fatal in about an hour. Peptones and cadaveric alkaloids were present.[55]

The ptomaïnes and leucomaïnes have a similar chemical constitution to meta- and para-phenylenediamines, and accordingly, the physiological action of the latter possesses much interest. When administered in the proportion of 0.1 gramme to each kilo. of body-weight, salivation, vomiting, diarrhœa, increased diuresis, and coma are produced by both bodies, death ensuing in two to three hours with the para-compound, and in fifteen hours with the meta-compound. They remove the oxygen from the blood and tissues, and a dark tint is imparted to these and the brownish products formed. In dogs, severe influenza symptoms, accompanied by constant sneezing and cough, ending in coma and death, are caused by the meta-compound; and a very remarkable exophthalmia with complete alteration of the tissues of the eye results from the para-phenylenediamines.[56]

RESPIRATIONS, OXIDATIONS, ETC.—Brown-Séquard and d'Arsonval in a previous paper showed that the expired air contains some body that possesses highly poisonous properties. They have continued their investigations, and have placed rabbits in a series of air-tight cages, so arranged that the air entering at one end passes right through; the animal, therefore, in the eighth cage, breathing an atmosphere loaded with the respiratory products of the seven others, only the rabbit in the first cage breathing pure air. All the rabbits, with the exception of those in the first two cages, die rapidly, in the last three cages two or three days being sufficient; but if a rabbit that is nearly dead is removed from the cage, it generally recovers after a considerable time. The carbonic anhydride in the second cage is much below 1 per cent., and in the last it averages only about 3 per cent. So far as carbonic anhydride itself is concerned, the authors found that men can breathe without much discomfort or any permanent bad effect air containing 20 per cent. of this gas. If before the air from the sixth chamber enters the next, it is passed through tubes containing beads moistened with sulphuric acid, the poison is removed, but not the

46 *Zeit. Physiol. Chem.*, xiii, 264.
47 *Zeit. Biol.*, xxvi, 84.
48 *Zeit. Physiol. Chem.*, xiv, 31.
49 *Jour. Physiol.*, ix, 219.
50 *Jour. Pharm.*, xviii, 481.
51 *Pflüger's Archiv*, xli, 148.
52 *Berlin klin. Wochensch.*, xxv, 722.
53 *Pflüger's Archiv*, xliii, 30.
54 *Compt. Rend. Soc. Biol.*, v, 540.
55 *Chem. News*, lix, 2.
56 *Compt. Rend.*, cvii, 535.

carbonic anhydride, and the rabbits in the seventh and eighth chambers continue to live without inconvenience, while the rabbit in the sixth chamber soon dies. The injurious effect of expired air is chiefly due, therefore, to the presence of some pulmonary poison, and not to carbonic anhydride.[57]

Nasse speaks of the oxidation which occurs in the blood and fluid of the body when neutral oxygen combines with some readily oxidisable matter, such as *direct oxidation*; that occurring chiefly in the body, where some fermentative action so alters the complex molecules as to render them readily oxidisable, as *primary oxidation*; and that in which the oxidation affects metabolic products, formed by other than oxidation processes, as *secondary oxidation*. When fats are oxidised in the system, secondary oxidation processes are furthered, as shown by the increase in the amount of ethereal hydrogen sulphates, and the decrease in the glycuronic acid in the urine.[58]

It has been the generally accepted opinion that more carbonic anhydride is produced in the light than in the darkness. That light exerts some indirect effect on animals with a normal central nervous system is very probable, some reflex effect being produced, possibly through the optic nerves or the sensory nerves of the skin; but a series of experiments made by Loeb incline to the conclusion that the light really causes no increase in the ordinary oxidation processes of the body.[59]

The ingestion of saline material has been shown by Loewy to exercise an influence on the *gaseous metabolism*. Rabbits and glauber salts were used in the experiments, and experiments were also made on men. An increase in the gaseous exchanges in the lungs was noticed to occur when the sodic sulphate was administered, not only the carbonic anhydride exhaled being increased but also the oxygen absorbed. The increased metabolism is probably the result of the increased activity of the intestinal muscles, and probably to a less extent of the glands.[60]

Marker and others have stated that about 48 per cent. of the water ingested by animals is discharged in the form of vapour. Henneberg, however, who has been working at this subject, denies this entirely, as he found that in sheep 61.92 per cent., and in oxen 83 to 93 per cent. of the whole water ingested is excreted in the dung and urine. The percentages, therefore, for water discharged in the form of vapour are 25.8 for sheep and 12.6 for cattle.[61]

The synthetical processes occurring in the animal organism form the subject of a very interesting paper by Pflüger. The formation of glycogen by the liver is referred to, not only carbohydrates, glycerol, gelatin, but also proteids acting as sources; and Mering's researches on phloridzen are referred to, in which diabetes was produced by its administration, all the carbohydrate material in the body being discharged in a few days in the urine as sugar; an enormous quantity of sugar being also similarly discharged by the same animals if the drug was again administered after an interval of a few days' starvation. Whether the well-known "economy theory" offers a satisfactory explanation of the formation of glycogen after the administration of glycerol and like substances; or that the result depends on a stimulation of the liver it is still difficult to say, although the question here receives attention.[62]

Keller has made a series of careful experiments upon himself, lasting over a week, upon the influence of ethyl alcohol on the tissue metabolism. The daily food consisted of 500 grammes of meat, 400 grammes of bread, 100 grammes of butter, 1,500 cubic centimètres of spring water, and 2 grammes of common salt. With this, on the fourth day, 150 cubic centimètres of ethyl alcohol (96 per cent.) were given. The urine was carefully analysed, and it was found that alcohol acts as a diuretic, and that the excretion of nitrogen was slightly lessened on the first day of the administration of the alcohol, due probably to the disturbing action of the alcohol on absorption and digestion, but slightly increased afterwards. A slight increase also showed itself in the phosphoric acid and chlorine, but the duration of the experiment was too short to enable any positive conclusions to be drawn.[63]

Aldehoff, in his experiments on the *influence of starvation on the glycogen* in liver and muscle, estimates the glycogen by Kultz's method, that is, by extraction with hot potash, separation of the proteids by hydrochloric acid and potassio-mercuric iodide, and the precipitation of the glycogen by alcohol. According to him the glycogen disappears in starvation from the cardiac and striated muscles more slowly than from the liver—a statement in opposition to Luchsinger, but in accordance with Weiss.

In some recent investigations of E. Voit there was distinct evidence of the formation of glycogen from the carbohydrates. This is, therefore, opposed to the "economy theory," according to which the whole of the glycogen in the body is formed from proteids.[64]

When jaundice is produced mechanically the glycogenic function also appears to be somewhat diminished, and this slight modification may help to explain the symptoms in certain cases where the jaundice has a mechanical cause.[65]

The mineral constituents of milk and of the fœtal tissues are generally present in the same proportion, but with some differences. When the ash, say of dog's milk, is compared with the ash of the fœtal tissues of a dog, the former is found to be rather richer in potash and poorer in soda; the percentage present in the milk is only one-sixth of that in the fœtal tissues, while that of the chlorine in the milk is double that in the tissues. The body is found to contain less and less iron as the age advances, for more iron is given by the placenta to the young animal than by the milk; and it is probable that this large quantity of iron given by the mother is not directly derived from the food taken during pregnancy, but that a storage up of iron in the maternal organs, beginning probably before the first conception, is of constant occurrence, which might explain the frequent appearance of chlorosis about the age of puberty.[66]

In the report of the committee appointed by the Clinical Society to investigate the disease known as myxœdema, the average of ten analyses only showed a percentage of mucin equal to 0.374 per cent., approximately the same as in normal adult skin. In the case of certain of the organs a moderate increase was observed, particularly in the tendons, and specially those of the heart. In the case originally examined by Charles, the amount of mucin was greatly in excess of that present in normal skin; and although in the cases since examined by him he has never found so much mucin, in some, indeed, no marked increase being perceptible, yet it appears to him if the examination were made in the earlier stages of the disease, it might be possible to detect a greater preponderance of the mucin.

MEDICINE AND GENERAL PATHOLOGY.

The Gastritis of Phthisis.—Gastro-intestinal Ulceration.—Arthritic Hæmoptysis.—Pericardial Effusion.—Massage of Heart.—Addison's Disease.—Puncture in Intestinal Obstruction.—Intussception.—Metallic Toxæmia.—Bright's Disease: Renal Dropsy; Toxic Nephritis; Hæmorrhagic Nephritis in Suppurative Meningitis; The Histology of Bright's Disease.—Pathology and Morbid Anatomy of Chronic Alcoholism.—Pathology of Pernicious Anæmia.—Transfusion, its Physiology, Pathology and Practice. NEUROLOGY—*Exophthalmic Goître—Visual Centres—Functions of the Glosso-pharyngeal Nerve—The Influence of the Corpus Striatum and Optic Thalamus on Temperature—Diagnosis of Disease of Corpora Quadrigemina—Localisation of Olfactory Sense—Thomsen's and Allied Diseases—Ophthalmoplegia and Polio-myelitis—Hysterical Tremors—Cerebral Abscess and Tumours—The Cerebral Circulation—Ascending Degenerations—Special Cases—Spinal Cord—The Cord in Epilepsy—Cerebro-spinal Fluid—Experimental Myelitis—Relations of Cord and Vertebræ—Ganglion of Posterior Root—The Knee-jerk—Peripheral Nerves—Therapeutics of Nervous Diseases—Hypnotics—Compression of the Carotid—Nerve-stretching in Leprosy—Surgical Treatment of General Paralysis and of Epilepsy—Simulo in Epilepsy—Suspension in Diseases of the Spinal Cord — Hypnotism — Recent Books and Papers on Neurology.* DERMATOLOGY — *Penjdeh Ulcer—Cure of Sarcoma by Erysipelas—Alopecia Areata—Treatment of Leuco-*

[57] *Compt. Rend.*, cviii, 267.
[58] *Pflüger's Archiv*, xli, 378.
[59] *Pflüger's Archiv*, xlii, 393.
[60] *Pflüger's Archiv*, xliii, 575.
[61] *Bied. Cent.*, lxxxviii, 813.
[62] *Pflüger's Archiv*, xlii, 144.
[63] *Zeit. Physiol. Chem.*, xiii, 134.
[64] *Zeit. Biol.*, xxv, 543.
[65] *Archiv. d. Physiol.*, 1889, 473.
[66] *Zeit. Physiol. Chem.*, xiii, 399.

plakia—Iodii Purpura—Ichthyosis in Infancy—Treatment of Keloid—Vaccinia and Lupus—Psorospermosis—Wart Bacilli—Zoster Gangrenosus—Lichen Rubra—Xanthoma—Leprosy—Paget's Disease of the Nipple.

The Gastritis of Phthisis.—Digestive derangements such as anorexia, epigastric discomfort, and vomiting, not infrequently form some of the most troublesome symptcms with which the practical physician has to deal in cases of pulmonary phthisis. And while the clinical aspect of dyspepsia in phthisis has been the subject of more or less attention from Rosenthal, Klemperer, and others, the question from the standpoint of pathological anatomy has been somewhat neglected. The only monograph of importance that has appeared since the older writings of Louis, Wilson Fox, Fenwick, and others, is by Margan,[1] in France, who has in many respects given an able account of the subject both from a clinical and from a pathological point of view. The most recent contribution is from the pen of Dr. Schwalbe,[2] who, bearing in mind the importance of *post-mortem* changes,[3] took the precaution to remove the stomach in his twenty-five cases very shortly after death (generally 1 to 2, never more than 5 hours after). He was thus able not only to study more satisfactorily the naked-eye appearances, but also to enhance considerably the value of his histological investigations. In each case he examined the fresh tissue microscopically, and removed portions from different regions of the stomach for subsequent histological investigation. In only two cases did he meet with dilatation of the stomach, and he considers that *ectasia ventriculi* must be regarded as a rare complication of phthisis. As to the state of the mucous membrane itself, except that it occasionally looked slightly thickened and swollen, it presented in the great majority of the cases no morbid appearances worthy of note. The exceptions were one case in which amyloid infiltration was marked, and here the mucous membrane presented multiple but small erosions scattered over the surface. In another case it was decidedly opaque and mottled in yellowish patches; in a third, tubercular ulceration was found near the pylorus. In no case was a thinning or atrophy of it met with, and only rarely was it noticed coated with tenacious mucous indicative of a catarrhal condition. The results of histological examination showed that in five the organ was normal, in fifteen interstitial gastritis was found, but for the most part slight or moderate in degree; of the remaining five cases, amyloid changes were found in one, both in the mucosa and submucosa, and marked parenchymatous degeneration of the glands in four. The interstitial gastritis was invariably in the form of a small-celled infiltration of the intertubular stroma, and in no instance had it developed into fibrous tissue so as to cause atrophy of the mucosa. But in cases where it was more obvious, secondary changes in the tubules were also observed, namely, cystic dilatation and alterations in the epithelial cells. Schwalbe maintains that it is only in cases where the tubules have undergone alterations in position, form, and size, that any definite pathological significance can be attached to the accompanying cellular changes. The four instances where the parenchymatous were the only changes noted must be regarded as examples of simple parenchymatous gastritis (Virchow), with extensive fatty degeneration of the cells. He was not able to trace a metamorphosis of the two kinds of cells one into the other (for example, the principal into the parietal, and *vice versâ*); nor did he find a perceptible or constant diminution in the parietal or peptic cells, so that in this respect he does not confirm the results of other observers. Coming now to the important question, how far these structural changes are responsible for the functional disturbances, he differs materially from previous writers. He is of opinion that the interstitial gastritis which occurs in the later stages of phthisis is seldom of such extent or importance that any noteworthy impairment of function can be ascribed to it. It never reaches the intensity of that atrophic form in which nearly all secretory power is lost as Fenwick, Ewald, Rosenheim and others have shown in idiopathic disease of the stomach. Even in the cases of simple parenchymatous gastritis it is doubtful whether the hydrochloric acid production is interfered with to any material degree, for in a case of acute yellow atrophy of the liver, where no diminution was noted, Rosenheim found extensive fatty degeneration of the tubular glands. He has seen both parenchymatous and interstitial inflammation in persons who never complained of dyspeptic symptoms and, on the other hand, patients have complained severely of dyspeptic symptoms, in whose stomach there was little or no inflammatory change. Accordingly he holds that it is not possible to establish any constant relation between the pathological conditions and the clinical signs. At the same time he does not state that such changes as he has described are entirely without effect, but believes other important factors must be taken into account to explain the dyspeptic symptoms of phthisis. These are anæmia, nervous depression, atony of the stomach, and vitiation of taste from constant expectoration of foul sputum. Regarding the etiology of the gastritis, Schwalbe believes it develops in the later stages of phthisis during the formation of vomicæ, and is to be attributed to the absorption of toxic substances resulting from the necrosing lung parenchyma, which enter the blood and set up a gastritis much in the same way as they may excite a nephritis.

Gastro-intestinal Ulceration.—In sixteen cases where hæmorrhages, hæmorrhagic erosions, and ulcerations of varying degree were met with in the mucous membrane of the gastro-intestinal tract. Openchowski[4] found hyaline degeneration of the walls of the blood vessels. His researches were conducted in the laboratory of Professor von Recklinghausen, who had also chanced to come across the same degeneration of the blood vessels in an early round ulcer of the stomach. So far as concerns the hæmorrhages and hæmorrhagic erosions, two forms of hyaline degeneration were met with: (1) hyaline thrombosis of the vessels within the lumen, the thrombus lying separate from the vessel wall, and often surrounded by red blood cells, and (2) hyaline degeneration and swelling of the vessel walls themselves, affecting chiefly the middle coat. A favourite site was the point of division of the vessel where a knob-like swelling usually presented. The arterial branches were more frequently affected than the venous. As regards the ulcers, the more fully developed they were, and the deeper the necrotic process, the less frequently blood vessels so affected were met with, but here, in the base of the ulcer, it seemed as if the perivascular connective tissue had undergone hyaline metamorphosis. In older ulcers the degenerative process was most pronounced at the periphery, possibly the hyaline necrotic tissue in the central part had been removed, or in cases of gastric ulcer had undergone artificial digestion. It is evident that grave disturbances of the circulation must follow upon the hyaline degeneration of the blood vessels, such as hæmorrhagic infiltration and erosion, which prepare the ground for the subsequent development of ulceration. But what are the conditions favouring the occurrence of hyaline degeneration? In anæmic, cachectic, or otherwise enfeebled subjects—especially if they are exposed to toxic influences—it is easy to suppose spasm and contraction of the vessels take place, whether of peripheral or of central origin. Such abnormal contraction may lead on the one hand to changes of a degenerative nature in the vessel wall, and on the other hand to temporary arrest of the circulation and stasis of the white blood corpuscles, which themselves may undergo the hyaline degeneration, and so form hyaline thrombi within the vessels. Embolism, whether produced experimentally or otherwise, produces the same effects. Thus it would seem that Virchow's theory as to the causation of gastric ulcer is correct, the only point remaining to be explained being those general pathological conditions that tend to produce the disease of the walls of the blood vessels.

Arthritic Hæmoptysis.—Sir Andrew Clark has called attention to the occurrence in elderly persons of hæmoptysis not due to tubercular or cardiac disease, and probably due to structural alterations in the terminal pulmonary blood vessels. He maintains that these vascular alterations occur in persons of the arthritic diathesis, resemble the vascular alterations found in osteo-arthritic articulations, and are themselves of an arthritic nature. As the address in which the subject was unfolded was so recently

[1] *Troubles et Lésions Gastriques de la Phthisie Pulmonaire.* Paris, 1887.

[2] Die Gastritis der Phthisiker vom pathologisch-anatomischen Standpunkte, *Virch. Arch.* B. 117, Heft 2.

[3] These must certainly be taken into account in the older researches of Wilson Fox, Fenwick, and others, which are open more or less to fallacies on this account. In this country, where it is seldom possible to make *post-mortem* examination so soon after death, it is a good plan to pour into the stomach by means of a funnel and syphon, a quantity of methylated spirit to which a little boroglyceride is added. This preserves portions of the stomach from *post-mortem* changes, and at the necropsy a great part of the organ will be found suitable for histological investigation.

[4] Zur pathologischen Anatomie der geschwürigen Processe im Magenderm tractus, *Virch. Arch.*, B. 117, H. 2. His sixteen cases included eight of phthisis and the remainder various diseases—pneumonia, pneumothorax, œdema of lungs, asthenia, diphtheria, cerebral hæmorrhage, and a case of burns and amyloid disease.

published in this JOURNAL, it will be sufficient to recall his opinion that this form of hæmoptysis usually subsides without the production of further damage, and that it is best treated, not by astringents and the local application of cold, but by quiet, the restriction of liquid diet, the stilling of cough, and the use of calomel and salines, of alkalies with iodide of potassium, and in frequently repeated counter-irritation.

Pericardial Effusion.—Though the number of cases in which pericardial effusion has been treated by tapping or incision is still small, the evidence of the justifiability of the operation continues to increase. M. Ferrier has collected twenty-two cases[5] of tubercular pericarditis thus treated; in two cases the operation was completely successful, and in the majority of the rest considerable benefit was obtained, though one case succumbed eight hours after the operation. He also collected nine cases of hæmorrhagic pericarditis, in which the operation had been performed, with five recoveries. Simple aspiration may be sufficient when the fluid is serous, but incision appears to be the better treatment when the collection is purulent. Sixteen cases of purulent pericarditis, treated by evacuation of pus, have been reported: of these, eleven were treated by puncture and all died, whereas, of five treated by incision and free drainage, three recovered. The operation should not be too long deferred, and M. T. Ferrier considers that it ought to be resorted to (1) when the exudation is dangerous, owing to its abundance (in case pleural effusion also exists, the latter should be first evacuated); (2) when, even if small in amount, it shows no tendency to subside, and from its chronic course exposes the heart to fatty degeneration; and (3) when the effusion is purulent, and might give rise to septic conditions.

Massage of the Heart.—A peculiar manipulation, to which he has applied the term "massage of the heart," has been recommended by Oertel in cases of cardiac insufficiency, whether due to weakness of the heart muscle or to obstruction due to valvular disease, emphysema, or peripheral pressure where compensatory hypertrophy is not complete. The manipulation is thus performed: The masseur places his hands on either side of the chest of the patient, at the level of the fifth or sixth rib in the axillary line, and moves them forward and downward during expiration till the lower border of the seventh or eighth rib is reached, at the same time exerting pressure. This occupies the whole period of expiration, and is repeated with each inspiration. The following inspiration is deeper, and to this much of the good effect claimed for the method must be attributed, since it must increase the negative thoracic pressure, but Oertel believes that some direct pressure is also exerted on the heart during the manipulation, and that the cardiac circulation is thus facilitated. The method should not be employed in recent cases of endo-, myo-, or pericarditis, nor where there is much arterial atheroma.

Addison's Disease.—The most important recent contribution to our knowledge of Addison's disease was published by Dr. von Kahlden[6] in 1888, too late for notice last year. He questions the truth of the widely accepted view that the complex train of symptoms of this disease is to be referred to primary or secondary changes in the semilunar ganglia. Two fatal cases happened to come under his notice, in which the clinical symptoms were so unequivocal that he was induced to study their pathological anatomy with much care and minuteness. The affected adrenals were much enlarged, and the capsule of the organ was thickened. They presented a large caseous centre surrounded by a narrow greyish peripheral zone. Tubercle bacilli were found sparsely distributed in the caseous detritus in both cases. Histologically the capsule was thickened and fibrosed; the grey peripheral zone was the seat of small-celled infiltration, aggregated in closely set patches around dilated blood vessels; and no traces of the proper cellular structure were discernible. The histological changes found in the semilunar ganglia and the solar plexus in both cases varied in intensity in the individual ganglia: (1) pigmentary atrophy of the ganglion cells; (2) proliferative endarteritis leading to obliteration of the vessels, affecting medium-sized arteries, thickening and small-celled infiltration of the perivascular connective tissue, especially around the veins, and occasionally hyaline degeneration of the walls of the smaller arteries and capillaries; (3) general fibrous thickening of the capsule and of the connective tissue stroma, which here and there was the seat of blood extravasation and blood pigment; (4) perineuritis of the nerve bundles entering the periphery of the ganglia, but little alteration of the nerve fibres themselves. It is evident, therefore, in both these cases that the semilunar ganglia were the seat of important and more or less intense pathological changes, which must have gravely affected their function; and while they tend to confirm the view above mentioned, von Kahlden is careful to reserve any definite conclusions till a larger number of cases have been thoroughly investigated from this standpoint. He refers especially to those cases described by Bell Fletcher and Aran, where the adrenals were unaffected, but other important changes were found in the neighbourhood of the semilunar ganglia. He emphasises also the following points: The symptoms of Addison's disease are far more frequently associated with tubercular disease than with other morbid conditions of the adrenals. Cancer of the adrenals has been observed to occur without the classical symptoms of Addison's disease being present. The progress of the disease may in all probability be referred less to the effects of pressure of the affected adrenals than to the influence of some irritant exerted in their immediate neighbourhood. At all events, the remarkable vascular and connective tissue changes in the semilunar ganglia seem to support this view. Regarding the theory of the pigmentation in Addison's disease, his conclusions are as follows: The pigmentation of the skin takes place in the deeper layer of the rete Malpighii and in the outer root sheath of the hair follicles. The pigment, however, is not formed in these cells, but in the deeper layer of the cutis, and transferred by amœboid connective tissue cells. From general pathological considerations, as well as from the relative position of the wandering cells to the blood vessels, it is highly probable that the pigment is derived from the blood itself; but the derivation is not to be referred to alterations in the vessel walls or to hæmorrhages, because such conditions are not constant, and when present are usually secondary. In two cases of Addison's disease Bradshaw[7] found tubercle in the one and cretaceous metamorphosis of the adrenals in the other. In the semilunar ganglia, diminution and pigmentary atrophy of the nerve cells and increase in the connective tissue stroma were the changes noted. In association with other morbid conditions, Beaven Rake has described a case of morbus Addisonii associated with syphilis and leprosy. The adrenals were converted into sac-like bodies filled with brown granular *débris* and a few small yellow grains having the appearance of minute tubercles. Whether these changes were the result of leprous, syphilitic, or tubercular lesions could not very well be determined. No tubercle bacilli were found. Drs. Samuel West and Hale White[8] have reported cases of Addison's disease associated with diabetes and exopthalmic goître respectively.

Puncture in Intestinal Obstruction.—The value of capillary puncture of the intestine in cases of extreme flatulent distension, whether due to organic stricture or to a removal cause, is becoming generally recognised. Our knowledge of the method is chiefly derived from the researches of Dr. John W. Ogle, who not long ago published a valuable little monograph on the subject. He established it as a legitimate procedure, not attended by any excessive amount of danger, capable of giving excellent results when adopted in time, and of yielding the patient much relief as a last resource. At the meeting of the Surgical Congress in Paris, in October, M. Demons, of Bordeaux, reported six cases in which he had made use of this procedure with encouraging results. He used a Dieulafoy's aspirator, so that, if necessary, fluid fæces could be aspirated. His cases were examples of intestinal obstruction, believed to be due to peritoneal bands or inflammation of the subperitoneal tissue. The danger of extravasation of fæces into the peritoneum appears to be small if a fine needle is used, but a case of Sir William Jenner's shows that the operation has certain special dangers. In that case, which was an instance of malignant stricture, each point of puncture was found to have become the seat of a secondary cancerous deposit.

Intussusception.—The use of gaseous enemata in the treatment of intussusception has been sanctioned by long usage, but it is not without danger, and though successful cases have been reported during the past year, the use of enemata of water or oil appears to promise better results since the pressure can be more readily measured. A simple means of doing this has been devised by Dr. W. E. Forrest. He assumes that since a column of water 33 feet high exerts a pressure of 15 pounds on the square inch, a column of water in an ordinary not very narrow india-rubber tube will exert a pressure of 1 pound to the square inch for each length of 2 feet. Experiment appears to show that in infants and young

[5] *Bull. gén. de Thér.*
[6] *Virchow's Archiv*, Bd. 114.
[7] *Liverpool Med. and Surg. Journal*, July, 1889.
[8] Report of Proceedings of Path. Soc. Lond., JOURNAL, November 9th, 1889.

children it is not safe to use a pressure greater than from 6 to 8 pounds on the square inch. It follows, therefore, that the necessary pressure can be obtained with an india-rubber tube 16 feet long; it is provided with a rectal nozzle at one end, and a funnel at the other. The fluid used is warm salt solution, and after the nozzle has been introduced into the rectum the funnel is slowly raised, until the required height is attained.

Metallic Toxæmia.—In a series of experimental researches conducted by Drs. E. Ziegler and N. Obolonsky with a view of investigating the changes produced by the action of arsenic and phosphorus on the tissues, some interesting results were arrived at, which are well worthy of reference. They will be found published *in extenso*.[9] In order to ascertain the effects of these drugs upon the liver and kidneys, Drs. Ziegler and Obolonsky experimented on rabbits and dogs by the subcutaneous administration of small doses repeated over various periods of time, or by the administration of the drug in the form of pills with their food. The animals were killed from time to time, and the organs preserved. In the case of arsenic, the organs found to be most frequently affected were undoubtedly the liver and kidneys, in which important histological changes were discovered, even in instances where there was little or no evidence of macroscopic change. The changes seem to affect both the parenchyma and the interstitial connective tissue more or less contemporaneously. In the liver, during the whole time of the operation of the poison, degenerative changes in the hepatic cells were in progress, namely, moderate fatty degeneration, dropsical swelling and vacuolation, and molecular disintegration of their nuclei. Here and there a patch was met with in which the liver cells showed signs of proliferative activity. Regarding the interstitial changes, they were very active and of a proliferative character, and were seen mostly around the capillaries and in the interacinous connective tissue. They could be perceived quite as early as the second day, but were most pronounced in the second and third weeks. Proliferative changes had likewise been observed in the epithelium of the bile ducts, but never to the extent of the formation of new ducts. The parenchymatous and interstitial changes appeared to be coordinate processes, going on together but apparently independent of each other. From their researches they found that weak doses produced for the most part fatty changes, while strong doses excited active proliferative changes as well. Fatty degeneration was unquestionably the most constant and important effect of phosphorus, but the fatty molecules might, even after prolonged operation of the poison, completely disappear from the liver cells. Vacuolation of the cells occurred simultaneously. The stellate cells of the connective tissue, the capillary walls, and the bile ducts were likewise the seat of fatty changes. Proliferative and inflammatory phenomena were, relatively speaking, rarer than in arsenical poisoning, and very slight even when present. In cases of slight poisoning the kidneys were unchanged, but in advanced cases fatty degeneration of the epithelium, mostly of the straight tubules, was to be observed. In contrasting the operation of the two poisons, the effects produced by phosphorus are pre-eminently degenerative and mainly passive in their character, while those of arsenic are, in pronounced cases of poisoning, strikingly proliferative as well as degenerative, but the proliferation and the degeneration are not related to each other in such a way that the first may be said to be reparative to the second. The cell proliferation is probably induced by the direct influence of the poison on the individual cells themselves. Professor F. W. Draper,[10] in a paper on the anatomical appearances resulting from poisoning by arsenic, says that if, in addition to gastritis, fatty degeneration is found in the heart, liver, and kidneys, if the blood is dark and fluid, and subendocardial ecchymoses are also present, there is a strong evidence in favour of arsenical poisoning, and he should be inclined in such a case to call in the chemist to his assistance. It is possible to find sometimes arsenical deposits in the gastric mucous membrane, which is always found more or less reddened, but, with this exception, he would not rely on the results of the examination of any single organ for testimony in favour of arsenical poisoning. The examination of the viscera should be exhaustive and conducted in some systematic order. Ziegler and Obolonsky found the gastric mucous membrane in rabbits comparatively unaffected. Drs. Ed. Coen and Giovanni d'Ajutolo[11] have investigated the histological changes in the kidneys, muscles, and gastro-intestinal tract in chronic lead poisoning, and the results of their researches may be briefly summarised as follows:—Kidneys: first, parenchymatous degeneration and necrosis of the epithelium of the convoluted tubules with the formation of hyaline casts: secondly, a glomerulitis with hyaline degeneration of the capillary tufts; thirdly, a plastic or productive interstitial nephritis which may gradually pass into renal cirrhosis. Muscles: first of all a granular degeneration of the muscle substance is perceptible; secondly, a patchy interstitial myositis develops. Stomach: parenchymatous inflammation, with a considerable degree of proliferative change in the epithelium of the follicles; to this succeeds patchy interstitial gastritis, starting around the vessels in the submucosa and extending upwards in the stroma between the glands. Intestine: proliferative inflammation of the submucosa and of the reteform tissue between Lieberkühn's follicles. Liver: cloudy swelling and necrosis of the liver cells, cell infiltration of the walls of the bile ducts, and a new formation of fibrous connective tissue, comparable in all respects with the interstitial nephritis. Thus lead makes its poisonous influence felt first and directly on the specific elements of organs, that is, the parenchyma proper; then it operates on the blood vessels and perivascular connective tissue, originates patchy inflammatory foci around the vessels, and terminates in organisation and the production of new fibrous tissue. It is very slowly progressive, and attacks organs only in a disseminated fashion. It is well-known that lead poisoning is, in certain cases, manifested by acute symptoms. Marked anæmia precedes the onset; the earliest symptoms are colic, headache, vomiting, and diplopia, which may be succeeded by convulsions and coma, ending in death in a few days. There may be no albuminuria and no gross *post-mortem* lesions, but Dr. Stephen Mackenzie has stated that in every instance in which a chemical analysis of the brain had been made at the London Hospital distinct, traces of lead have been found. It would appear that these acute cases generally occur among persons newly employed at lead works (Corner). The statistics of the Newcastle Infirmary, as given by Dr. Oliver, are that out of 135 cases 8 died of acute manifestations. All the acute cases reported occurred among lead workers, but as the symptoms are not very distinctive, it is not improbable that their cause might be overlooked if the patient were not known to have been exposed to lead. In chronic lead poisoning, neuritis and granular contraction of the kidneys appear to be the most common lesions producing symptoms. Lead favours the retention of uric acid in the blood, and thus the outbreak of an acute attack of gout; but many facts go to prove that it does not produce gout in a person not predisposed. Thus Dr. Oliver states that gout is practically unknown among the Newcastle lead-workers.

Renal Dropsy.—Regarding the pathology of renal dropsy, Dr. Auld believes that that condition of the blood to which the term anæmia is applied must be regarded as an important factor in the production of the anasarca and dropsy of Bright's disease. First of all it is possible in Bright's disease, as in other conditions, that certain retained products of the organism, or their toxic derivatives, may exert a deleterious influence on the tonicity of the vessel walls. Then we have to consider the grave alterations in the vital and physical properties of the blood when anæmia is combined with hydræmic plethora, and the disturbances of the circulation resulting therefrom. By the progressive diminution in its corpuscles, the vital energy of the blood itself is impaired; and by the advancing attenuation of its proteid constituents, the specific gravity of the plasma becomes relatively lighter than that of the corpuscles themselves, and its physical relations to the plasma circulating in the lymph canalicular system outside the vessels are materially disturbed. Under these abnormal conditions the circulation of the blood corpuscles is impeded, the whole vascular tension becomes increased (Hamilton), and transudation of the fluid within the vessels readily takes place; and such transudation will, moreover, be rendered still greater according to the toss of tonicity of the vessel wall, in whatever way we may consider that condition to be brought about. With increasing anæmia the dropsy becomes augmented, and is regulated in its distribution by physical laws. Where the *vis a fronte* is greatest and the circulation feeblest, there the dropsy will be found most marked; namely, in the extremities furthest from the heart. Here the venules become hyperdistended, and are unable to absorb and transmit the lymph which pours forth excessively from the capillaries. Should this state of matters continue, the circulation will fail nearer and nearer the heart, until the fluid accumulates inter-

[9] Ziegler's *Beiträge zur pathologischen Anatomie u. allgemein. Path.*
[10] *Boston Med. and Surg. Journ.*, August 8th, 1889.
[11] *Beiträge zur path. Anat. u. allgm. Path.* von Ziegler u. Nauwerck, Bd. III, No. 5.

nally, in the serous cavities, lungs, and other organs, when death is imminent. A most important and valuable contribution to this subject has been published during the year by Dr. Saundby,[12] whose lectures on Bright's disease handle the subjects of albuminuria, uræmia, renal dropsy, and the cardio-vascular changes in an admirable manner. The latest information on these matters will be found set before the reader of these chapters in a terse but very lucid style, while those devoted to the special pathology of the various forms of Bright's disease are enriched by the author's own extensive personal experience. It is a work which will be extensively read and referred to.

Toxic Nephritis.—Even if Lustgarten's discovery of numerous micro-organisms in the urine of persons suffering from acute nephritis has, so far, not met with much confirmation, the views of Semmola[13] on the toxæmic theory of nephritis have met with considerable support in a discussion which took place at the recent meeting of the Italian Society of Medicine upon Bright's disease.[14] Semmola believes albuminuria to depend upon the malassimilation of proteids, and M. Rattone so far supports this, that he states, in his opinion, nephritis is set up by the transition through the kidney of substances which have a toxic action, and produce inflammatory changes in the vascular apparatus, the connective tissue, and the epithelium. In a large number of cases acute nephritis is the effect of the operation of some poison, whether organic and particulate, such as a microbe, or else of a chemical nature. Dr. Maragliono concurred in this view, and, regarding the acute nephritis supervening in pneumonia, said that although the pneumococcus had not been discovered in the kidney, he had no doubt that the renal inflammation was set up by the absorption of some toxic products from the diseased lungs. These views as to the nature and etiology of acute nephritis occurring in other severe febrile disorders are, in a great measure, confirmed by a paper recently published by Drs. Crooke and Nason on the occurrence of acute hæmorrhagic nephritis in suppurative meningitis. Two of the cases of meningitis were manifestly septic, while the third seemed to be a simple case. In one case the nephritis was undoubtedly secondary to, and caused by, the meningitis; in a second there was strong presumptive evidence of its secondary nature, while in a third its relationship to the meningitis was not so clearly determined, but still highly probable. The distinguishing features of the nephritis were its pronounced hæmorrhagic type, and its resemblance, as regards its intratubular exudation to the inflammatory process in acute croupous pneumonia. In none of the cases were evidences of embolism present, and in none could they satisfy themselves as to the presence of micro-organisms. They mention incidentally another case of acute nephritis of an exquisitely catarrhal type occurring in a case of cancrum ovis; and though various micro, organisms were found in profusion at the local seat of the disease they could not be detected in the kidney. In all these cases, notwithstanding the absence of micro-organisms, the ureters maintain the septic nature of the nephritis, which they believe to have been originated by the absorption of some toxic product allied to the ptomaines or leucomaines, and probpbly manufactured at the seat of the primary disease. They are inclined to attribute the marked hæmorrhagic character of the nephritis in the cases of meningitis to some obscure nervous influence originating in, and reflected from, so to speak, the vasomotor disturbances common to meningitis.

The Morbid Anatomy and Histology of Bright's Disease.[15]—In a very brief abstract of a paper on the above subject, read at the Pathological Section of the British Medical Association at Leeds this year, it is not difficult to discern in Dr. Crooke a strong adherent to the doctrine of the unity of Bright's disease. The only link he could not include in the chain of evidence is represented by certain cases of chronic interstitial nephritis (red granular kidney), such as occur in gout and other states, where the cardio-vascular changes precede the nephritis. He agrees with Dr. Saundby in not being able, so far as his observations have yet led him, to include lardaceous kidney as a special form of Bright's disease. He has observed lardaceous changes associated in large white kidney, but does not think they bear any causal relation to the chronic inflammatory changes present, which are often quite extensive. In these cases he regards the lardaceous changes as a concomitant morbid process, traceable to the same causes as the nephritis itself. He has examples in his possession showing the transitional stages of large white into the small white contracting kidney. The paper is based on the examination of a large material—over 150 cases of Bright's disease—and represents work extending over ten or twelve years. Presumably it will be published at some future time *in extenso*.

The Morbid Anatomy and Pathology of Chronic Alcoholism.—This important inquiry was selected for special discussion at the Pathological Society of London during the session 1888-89.[16] The debate was opened by Dr. Payne, who, after a short historical introduction, first propounded his views as to the manner in which alcohol acted as a poison on the tissues, and then proceeded to enumerate the changes found in the viscera and nervous system. These changes appear to be degenerative and productive in their nature; the former affects the specialised or parenchymatous elements of the organs, the latter affects principally the perivascular connective tissue, and appears to be of a chronic inflammatory type, resulting in the overgrowth of fibrous tissue. But whether the one is to be regarded as the primary and the other secondary, or whether both operate concurrently, are questions upon which a considerable diversity of opinion was expressed. Taking the viscera first, the liver appears unquestionably to be the organ most frequently affected, since it is also the first to feel the effects of the poison. Following out his theory as to the toxic action of alcohol, Dr. Payne argued strongly in favour of the view that the essential and primary changes in this organ were the parenchymatous, affecting the liver cells in the form of fatty degeneration and necrosis, while the interstitial changes he regarded as secondary, and present in greater or less degree, according to the chronicity of the case. Dr. Lionel Beale went even further; for what most pathologists take to be a new formation of fibrous tissue he regards simply as the *débris* of the atrophied liver substance, and the entire process, according to him, is simply atrophic. The weight of testimony, however, was in favour of the now widely-accepted view that the connective tissue is the seat of the primary changes, which are mostly slowly proliferative,[17] and may be found to exist even when there is little or no evidence of parenchymatous degeneration present. Coming now to the nervous system to seek for structural changes to account for the paraplegic symptoms, those found in the brain are comparatively unimportant and by no means distinctive; they are simply atrophic, and comparable in all respects to those found in senile decay. But whatever functional or psychical disturbances might be attributed to them, these were ably discussed by Dr. Savage, who dealt mainly with the relationship between alcoholic paralysis and insanity. Little or no change has been found in the spinal cord, while important and sometimes extensive changes have been discovered in the peripheral nerve trunks. These consist in degeneration of the nerve fibres and interstitial neuritis, which is sometimes characterised by much small-celled infiltration of the connective tissue. In alcoholic neuritis, the parenchymatous and the interstitial changes seem to go hand in hand, there being no evidence as yet to decide the point as to which is the primary. Dr. Buzzard referred, however, to cases described by Strümpell and others, which formed such marked exceptions to the above rule, that Erb suggested the two processes represented two distinct diseases, namely, a degenerative atrophy of peripheral nerve fibres, and an interstitial neuritis, having no connection with the former. Notwithstanding the absence of any observable lesion, Dr. Buzzard has for some time felt that there was probably some change in the cord responsible for the coincident and limited affection of so many nerves, and some years ago suggested that it was upon the vasomotor centres in the medulla that the toxic action of alcohol was primarily excited. Other changes, evidently secondary to those in the nerves, have been described by Drs. Hadden and Ormerod in the muscles, namely, granular atrophy of the muscular fibres and interstitial myositis, and Dr. Mott found extensive fatty degeneration of the heart in one case. Regarding the kidneys, there is but little evidence to show that any influence can be ascribed to alcohol as a direct factor in the production of granular kidney, though it may materially assist in the presence of other

[12] *Lectures on Bright's Disease*, Hamilton, Adams and Co., 1889.

[13] *Arch. de Physiologie*, see also Gaucher, Recherches Expérimentales sur la Pathogenie des Néphrites par Auto-intoxication, *Rev. de Médecine*, viii, p. 883, 1888.

[14] *La France Médicale*, No. 127.

[15] The Histology of Bright's Disease, by George F. Crooke, M.D., JOURNAL, December 7th, 1889.

[16] JOURNAL, December, 1888; January, 1889.

[17] Professor Hamilton teaches that we may come upon stages of exacerbation characterised by extensive cell infiltration and proliferation. In such stages the liver cells may be seen dividing and becoming converted into fibroblasts (connective tissue cells).

dyscrasiæ such as gout or lead poisoning. Another point of interest brought out in the discussion was the frequent association of pulmonary phthisis and tuberculosis with alcoholic paralysis. Concerning their pathological relationship, Dr. Hadden thought the pulmonary lesions might be attributed to changes in the branches of the vagus supplying the lungs, which impaired their nutrition tone so as to predispose them to inflammatory changes, and that these latter formed a suitable nidus for the tubercle bacillus to settle in and multiply. Altogether, the discussion has been fruitful in bringing to our knowledge many changes of interest that were previously but little known; it forms a compact and valuable contribution to the literature of the subject, and will serve as a guide to future investigators in their attempts to clear up what still remains obscure or doubtful in the pathology of the disease.

Pernicious Anæmia.—In considering the pathology of this disease we are met, as Dr. Russell aptly puts it,[18] on the very threshhold of the inquiry with the following problem, Is it the result of the diminished formation, or of increased destruction of the red corpuscles? For we certainly have to do with a true oligocythæmia in pernicious anæmia, even if the individual corpuscles are as rich, or even richer, than the normal in the amount of hæmoglobin. Assuming that the red marrow is at least one of, if not the most, important seat of blood formation, then, if the replacement of the ordinary yellow marrow of the long bones by red marrow (Pepper and Tyson) be regarded as a morbid change whose presence is essential to pernicious anæmia, Russell thinks there is but one answer to the question of diminished production, and that is a negative one. The change in the marrow has been found also in other wasting, cachectic, anæmic conditions, and in a case of anæmia from hæmorrhage by Neumann; it is the expression of an effort on the part of this tissue to meet the demand for red corpuscles in which it becomes hyperplased. On the other hand, Russell found in the same case of pernicious anæmia evidences enough of blood destruction, the products of which, in the shape of hæmatin pigment in combination with iron he found plentiful in the liver, spleen, and kidneys. Not the least interesting part of his paper is that which is concerned with the results of his search for evidences of blood destruction in these organs taken from other cases met with in everyday work of the *post-mortem* room. The pigment was detected in the usual way by treating either small blocks or thin sections of the tissue first with a solution of ferrocyanide of potassium, and then washing in dilute hydrochloric acid. The pigment comes out stained the colour of Prussian blue. In the livers of forty-four cases the reaction was marked in seven, and in the spleen in six out of the seven, and in the kidney in three. In twenty cases where no reaction was obtained in the liver, the spleen was examined in ten, four of which yielded positive results. From these observations Russell is uuable to regard the disease known as pernicious anæmia primarily a liver disease, especially in the face of evidence of blood destruction in the spleen and kidney. No doubt blood destruction does go on in the liver in an exaggerated degree, and this is probably due to some condition in which the blood reaches the liver. But what the antecendent condition of the blood may be we are not yet in a position to state, until the whole history of the blood-elaborating and blood-purifying processes in the body are more fully known. Reference may be specially made to the extremely able lectures of Dr. William Hunter on transfusion, its physiology, pathology, and practice, which embody much original research and philosophical thought. They were published in the JOURNAL, July to August, 1889, and should be read in their entirety, and the numerous experiments carefully examined, for these constitute mainly the premisses from which Dr. Hunter draws his interesting and valuable conclusions as to the utility and practical application of transfusion.

Brain.

Exophthalmic Goître.—Hale White[19] published a case which he argued showed that exophthalmic goître was a disease due to a functional disturbance of the central nervous system in the neighbourhood of the floor of the fourth ventricle.

Visual Centres.—Danillo[20] and Lannegrace[21] have studied in the human subject the relation of the cortex to vision, and have come to the conclusion that a lesion of one occipital lobe has no effect on vision, lesion of the angular gyrus affects the vision of the opposite eye for a short time, a lesion of both these parts affects both eyes, producing crossed amblyopia as well as crossed hemiopia. It will be seen that these results agree with those of Ferrier.

Laryngeal Centres.—In the last number of the JOURNAL Semon and Horsley have located the centres for the laryngeal muscles.

Internal Capsule.—In a paper read this month before the Royal Society Beevor and Horsley have shown the arrangement of the fibres in the capsule and the effect of their stimulation.

Functions of the Glosso-pharyngeal Nerve.—Pope has published an extremely important case[22] in which a thrombosed vertebral artery pressed upon the left glosso-pharyngeal nerve. There was loss of power of swallowing and of raising the palate of the left side, due to the unopposed action of the levator palati, and complete loss of taste at the back of the tongue on the left side, and loss of taste to sweet things even on the front of the left side.

The Influence of the Corpus Striatum and Optic Thalamus on Temperature.—Hale White[23] has published a paper on the influence on the bodily temperature of lesions of the corpus striatum and optic thalamus, in which, after carefully taking the normal temperature of the animals operated upon, he injured in some cases the corpus striatum, in others the optic thalamus, in others the white matter. A considerable rise of temperature always followed when the basal ganglia were affected by the lesion, but never when the white matter only was implicated. It is shown that these rises of temperature are much greater than can be accounted for by the administration of the anæsthetic or the mere operation. In rabbits the rise of temperature is bilateral. Some cases published by the same author show that in man a similar rise of temperature occurs in lesions of the basal ganglia, but that the rise is usually greater on the side opposite the lesion. Ott has published three papers on the same subject. In one[24] he argues that in the lower animals at least the rapidity of respiration is the most important agent in regulating the bodily temperature, and that in lesions at the base of the brain the temperature mounts because this regulatory mechanism is disturbed. In his two other papers[25] Ott argues in favour of the nervous origin of fever, using the terminology of Dr. MacAlister's Goulstonian lectures.

Diagnosis of Disease of Corpora Quadrigemina.—In the following number of *Brain* Nothnagel contributes an important paper on diseases of the corpora quadrigemina, and concludes that there are grounds for localising a tumour in that position, if unsteady reeling gait is an early symptom, and if it is associated with ophthalmoplegia existing in both eyes, but not quite symmetrically nor implicating all the muscles in equal degree.

Localisation of Olfactory Sense.—Hughlings Jackson and Beevor[26] record a case, in which there was a small sarcoma at the extreme anterior end of the right temporo-sphenoidal lobe. The patient during life complained subjectively of a very unpleasant smell. A far as it goes, this case confirms our ideas of the localisation of smell.

Thomsen's and Allied Diseases.—Martins and Hauseman[27] have recorded an important case, in which there was spasm upon voluntary effort affecting the upper extremities only. Although in some respects this case resembled Thomsen's disease, yet it was very different in the freedom of the lower extremities, and also the malady did not appear to be constantly present, but only in cold weather. Also a case of Thomsen's disease is recorded in the *Neurol. Central.*, October 1st, 1889.

Ophthalmoplegia and Poliomyelitis.—Sachs, in a paper on poliomyelitis and polioencephalitis,[28] brings forward a case to show that ophthalmoplegia is related to anterior poliomyelitis of the spinal cord in the same way that the latter is related to bulbar paralysis; so that we have now a complete ascending series of inflammation, affecting either the anterior coronal cells in the cord or their homologues in the brain.

Tremulous Diseases.—It is well known that Horsley showed that experiments upon the thyroid gland may, in monkeys, give rise to tremulous movements. Starr[29] discusses the pathology of tetany, and shows that it cannot be due, as has been suggested, to intoxication from the thyroid gland, and he

[18] JOURNAL, January 12th, 1889.
[19] JOURNAL, March 30th, 1889.
[20] Vorläufige Mittheilungen, *Wratsch.*, No. 48, 1889.
[21] *Arch. de Med. exp.*, 1889, ii, p. 289
[22] JOURNAL, November 23rd, 1889.
[23] JOURNAL, June 22nd, 1889.
[24] *Jour. of Neu. and Ment. Dis.*, April, 1889.
[25] *Brain*, Pt. xliv, and *Jour. Neu. and Ment. Dis.*, August, 1889.
[26] *Brain*, Pt. xlvii.
[27] *Virchow's Archiv*, Bd. 117, s. 587.
[28] *Amer. Journ. of the Med. Science*, July, 1889.
[29] *Int. Journ. Med. Scien.*, December 18th, 1889.

concludes that it must be due to an instability of the nervous system. Diller[30] gives us a very interesting paper on hereditary chorea, and quite confirms the usually received impression that it differs from ordinary chorea in coming on at middle life, in being associated with a weak mental condition, and in never recovering. Suckling[31] has also recorded a most interesting case of hereditary chorea. The patient's mother, sister, and daughter had it. This same author also records two cases of Friedreich's ataxia. Pitres, in a paper in *Le Progrès Médical*, Nos. 37 and 38, 1889, discusses hysterical tremors, which he divides into three varieties, namely, (1) shaking tremors, generally limited to one of the lower extremities, and consisting of rapid rhythmical movements of flexion and extension; (2) vibrating tremors, which consist of rapid minute oscillations, and may affect any part of the body; and (3) voluntary hysterical tremors, which are those produced only when some voluntary act is attempted.

Cerebral Abscess and Tumours.—Several instances of operation for cerebral abscess have been published, but they do not teach us anything new, and a great many cases of cerebral tumour have been recorded, but they only show features in localisation already well known.

The Cerebral Circulation.—Some experiments performed by Corin[32] show how extremely difficult it is to control the pressure in the cerebral artery by ligature, either of the vertebrals or internal carotids. These results should be borne in mind when considering the possibility of arresting cerebral hæmorrhage by ligature of the carotids. Rummo and Ferrannini[33] have studied the influence of hypnotic substances upon the cerebral circulation. They experimented upon cases in which the skull was deficient. During natural sleep from 10 P.M. to 1 A.M. there was ischæmia; from 1 to 3 A.M., vascular dilation; and from 3 to 5 A.M., vaso-constriction of cerebral vessels. Similar observations with drugs show that some substances, such as narceine and morpheine, modify the excitability of the nerve centres; others, such as chloral hydrate, paraldehyde, and ethyl urethane, modify the cerebral circulation; while others, such as hypnone and methylal, modify both.

Special Cases.—Passing now to the more clinical side of cerebral diseases, we have a few interesting cases to note. Messrs. Wiglesworth and Bickerton[34] called attention to the great frequency of errors of refraction among epileptics. Dr. Hadden has, in the same number of this journal, recorded an interesting case of xerostomia, or dry mouth. Those who wish to study the microscopical appearances of the grey centres in the cerebrum will do well to consult a paper by Vittorio Marchi[35] on the shape and grouping of the cells of the corpora striata and optic thalami. Bernhardt[36] has published some examples of a rare form of spinal and bulbar paralysis complicated with muscular atrophy.

Spinal Cord.

The Cord in Epilepsy.—Messrs. Gotch and Horsley towards the end of last year brought before the Royal Society the results of some experiments they had made in which, after the cortex cerebri was stimulated in the monkey, the spinal cord in the dorsal region was tapped electrically, and an electrometer introduced into the circuit. There was only a movement of the electrometer when the cortical area for the lower limb was touched, never when the arm or other area was stimulated, even if a strong current was used. The excursions of the mercury of the electrometer were photographed, and it was found that the electromotive changes in the spinal cord are exactly parallel, as regards the character of their sequence, to the convulsions of muscles as recorded by the graphic method. The authors conclude that the existence of the epileptic rhythm in the dorsal region of the spinal cord points to its being almost entirely of cortical origin.

Ascending Degenerations.—Dr. Tooth and Mr. Horsley[37] have studied the effect upon the cord of cutting the posterior nerve roots. They divided all the posterior roots of the cauda equina on the right side. At the level of the fifth lumbar there was a minute point of degeneration at the apex of the posterior cornu; this increased in size as it was traced upwards, till at the level of the third lumbar it occupied most of the postero-external column; in the dorsal region it was much smaller again, and triangular in shape, with the base at the posterior median fissure and the apex coming to the surface between the posterior median fissure and the posterior root; in the cervical region there was only a minute tract of degeneration in the posterior median column close to the posterior median fissure, and a little in front of its posterior extremity. These experiments were performed upon monkeys, and they confirmed those carried out by other observers upon other animals. With regard to the cerebellar tract, Dr. Tooth points out that, in monkeys at least, in the lower dorsal region, it is composed chiefly of small fibres, and in the cervical and upper dorsal regions chiefly of large fibres which occupy the posterior part of the tract. This was confirmed experimentally; for in the experiments just quoted there was no degeneration of the cerebellar tract; but if the section of the posterior nerve roots was carried out in the cervical region there was degeneration above the section, not only in the posterior column, but also in the posterior part of the cerebellar tract. Consequently the posterior roots do not enter into the composition of the lower part of the cerebellar tract; and it is most probable that its lower part really consists of fine descending fibres which have passed out from the crossed pyramidal tract. These are probably visceral fibres. Most likely the direct cerebellar tract conducts sensory impressions from the upper part of the body and the upper limbs, and the antero-lateral fibres from the lower part of the body and the lower limbs.

Cerebro-spinal Fluid.—Halliburton[38] has investigated the composition of cerebro-spinal fluid, and finds no peculiarity as regards the saline constituents, but great interest attaches to the presence of albumoses and peptones, although no digestive ferment could be discovered which could have produced them. It is curious that cerebro-spinal fluid contains pyrocatechin.

Experimental Myelitis.—In the *Journal of Nervous and Mental Diseases* for April, 1889, is a long paper on experimental myelitis which was produced by quickly passing a ligature round the cord with a curved needle, and drawing it tight against the spine. It was found that there were almost directly acute inflammatory changes in the grey matter, but the white passed into a condition of inflammation much later. The muscles underwent atrophy with vacuolation of their fibres, with but little increase of fibrous tissue, and no great multiplication of nuclei, a change was produced, in fact, like that found in progressive muscular atrophy.

Relations of Cord and Vertebræ.—Reed[39] has shown that it is quite impossible to tell precisely from the position of the spinous processes the position of the nerve roots.

Ganglion of Posterior Root.—Gad and Joseph[40] have confirmed what is known about the trophic influence of the ganglion upon the posterior root. They consider that nearly all centripetal nerve paths are interrupted in the ganglia and that impressions are delayed for 0.036 of a second.

The Knee-jerk.—It has for a long while been felt that the usually-accepted theory for the knee-jerk, that as the jerk took place in so short a time it was not a genuine reflex, but that the influence of the cord upon the jerk was due to a presiding influence over the tone of the muscles, is very unsatisfactory, so that it is pleasing to find that Lombard[41] is able to bring strong arguments against this view from the side of experimental physiology, and also that he considers that the knee-jerk is a genuine reflex act, and that the apparent time discrepancy is due to a faulty measurement of the time occupied by the reflex act.

Peripheral Nerves.—Not much new work has been done in this department, but many excellent cases have been recorded, and our previous knowledge has been confirmed. Bradford[42] has shown that all renal vasomotor nerves leave the spinal cord through the anterior roots chiefly from the sixth to the thirteenth dorsal nerves, below this in gradually decreasing numbers to the third and fourth lumbar. There are two kinds, vaso-constructor and vaso-dilator; the former are best developed. Ross has written a valuable paper on the premonitory symptoms of alcoholic paralysis.[43] According to him the most important are (1) disorders of tactile sensibility of the extremities, which the patients usually describe as numbness of the fingers and toes; (2) vasomotor spasm of the extremities, which the patients describe as a

[30] *Int. Jour. Med. Scien.*, December, 1889.
[31] *Birm. Med. Review*, September, 1889.
[32] *Archives de Biologie*, ix. 1, May, 1889.
[33] *Arch. Ital. di Biologia*, xi, 2, March, 1889.
[34] *Brain*, Pt. xliv.
[35] *Rivista Sperimentale di Freniatria e di Med. Legale.*
[35] *Virchow's Archiv*, Bd. 115.
[37] JOURNAL, April 13th, 1889.
[38] *Jour. of Phys.*, vol. x, No. 4.
[39] *Journal of Anat. and Physiology*, April, 1889.
[40] *Archiv für Anat. und Phys.*, 1889, iii. and iv.
[41] *Journal of Physiology*, vol. x. Nos. 1 and 2.
[42] *Jour. of Phys.*, vol. x. No. 5.
[43] *Lancet*, June 8th, 1889.

dead feeling; (3) cramps most severe in the calf. Behrend[44] has described lesions of nerves in certain forms of alopecia areata, and in the same volume of the same periodical Miura discusses the etiology and condition of the skin in kakke. Déjerine[45] has contributed an important paper, in which he has shown that muscular atrophy is common in those who die of tabes dorsalis, and he considers that this atrophy is due to the peripheral neuritis which so often accompanies tabes dorsalis, and Dr. Weir Mitchell has brought forward a case of locomotor ataxy confined to the arms. Suzuki, at a meeting of the Medical Society in Japan, brought forward cases to show that in leprosy the tendon reflexes are increased; from this he concludes that there must be in this disease changes in the spinal cord. Affleck[46] records two cases in which there was peripheral neuritis associated with Raynaud's disease, but this is probably only an effect of a common cause; at any rate it cannot, for many reasons, be the cause of Raynaud's disease. Suckling[47] has recorded some cases of peripheral neuritis occurring among brassworkers. Mackenzie[48] records a case in which a patient died from rupture of the phrenic nerve; death was instantaneous.

Therapeutics of Nervous Diseases.

Hypnotics.—Much interest has been taken in hypnotics, and an admirable summary of our knowledge of the chemistry and physiological action of the newer hypnotics will be found in the address which Professor Leech delivered at the annual meeting of the British Medical Association. Sulphonal continues to hold a high place as a safe hypnotic. The worst results that may follow its use seem to be that sometimes giddiness, headache, and weakness of the legs are produced. Some admirable cases showing its value have been published by Drs. Percy Smith, Sutherland, and Bond.[49] Chloralamide, too, appears to be a valuable hypnotic, having very few, if any, bad after-effects. It has the advantage over sulphonal that it is more easily soluble and it is much cheaper. In a recent number of the JOURNAL Hale White has recorded twenty cases to whom it was administered. Thirty grains is the usual dose, and it dissolves with spirit, and, therefore, a good way to give it is to take it in a little brandy and water about half an hour before going to bed. It is feebly soluble in water. Many Continental observers record successful cases of its employment.

Compression of the Carotid.—Messrs. Spencer and Horsley[50] have suggested that compression of the carotid artery might be tried in the human subject to control cerebral hæmorrhage, but at present this method of treatment has not found many advocates.

Nerve Stretching in Leprosy.—Dr. Beaven Rake has in his Government report studied the effect of nerve-stretching in leprosy. He performed a hundred operations, and came to the conclusion that the best nerve to stretch was the sciatic, for it is nearest the spinal ganglia, and commands the supply of the whole leg, and foot, and back of the thigh. The operation only seemed to be of value for the pain associated with ulceration, but often in these cases the relief was very marked.

Surgical Treatment of General Paralysis and of Epilepsy.—Quite recently Dr. Claye Shaw has recorded in the JOURNAL a case in which large portions of the bones of the skull were removed in a patient suffering from general paralysis of the insane; the dura mater was cut and much subarachnoid fluid was let out. It is stated that the patient was much improved after the operation; but, before passing any opinion upon its value, we must have many more cases before us. Dr. Alexander[51] has suggested removing the superior cervical ganglion for epilepsy. It is difficult to know what sound reason there can be for this; for, as far as we know, the superior cervical ganglion has no function that can be concerned in the production of epilepsy. Still, as it has been advised, probably many will be induced to try it. The statistics given are encouraging—so encouraging, in fact, that one is tempted to suspect a fallacy somewhere.

Simulo in Epilepsy.—Stan[52] has confirmed previous observations that simulo is a useful remedy for epilepsy in cases in which bromides have failed. Gauster,[53] after the result of a very large experience in the treatment of epilepsy by bromide of potassium, comes to the conclusion that it is the best mode of treatment we at present possess; but it must be used in very large doses (ʒ iv. or ʒ v. a day) for a long while, and must be omitted on the appearance of any symptoms of bromidism. The loss of intellectual power and moderate emaciation are not contra-indications, but the patient should eat heartily; wasting diseases are a contra-indication.

Suspension in Diseases of the Spinal Cord.—The treatment of diseases of the spinal cord by suspension has attracted much attention. Although Motchükowski, as long ago as 1883, suspended patients suffering from tabes dorsalis, it was not till the commencement of the present year the treatment was brought prominently forward by Charcot and Gilles de la Tourette.[54] The patient is suspended in an ordinary Sayre's apparatus; the feet are just off the ground. At first the suspension lasts a minute, afterwards its duration is gradually increased till the patient remains suspended for about seven minutes. The suspensions take place on alternate days. About thirty suspensions are generally considered enough. Except that in extremely rare cases a rise of temperature has followed, no evil results have ensued when the suspension has been properly applied. Three or four instances of death, probably from dislocation of the cervical vertebræ, have been recorded in patients who suspended themselves. It would be impossible here to criticise all the hundreds of cases that have been published. According to some authors the most striking improvement has resulted. The cases that have been quoted as having done best come from French sources. Thus Charcot[55] reports that in most of his cases the power to stand with the eyes shut is improved, and the patient complains less of vesical troubles, numbness, anæsthesia, pains and insomnia; and if there has been impotence, sexual desire and the possibility of erections return. As far as can be judged after a year's trial, it seems that those who first tried the treatment over-estimated its value. Thus some cases have been recently recorded in the *Lancet* from the National Hospital for the Paralysed and Epileptic, in which no good resulted. Dr. Saundby's cases did not improve much. Dujardin-Beaumetz has recorded cares in which the most careful tracings of the walking were taken before and after suspension; he is inclined to think that not much good resulted. Abadie obtained the best results in cases in which the diagnosis was doubtful. A careful study of the published cases, and those under our own care, leads us to the conclusion that the symptoms which are most under the patient's will, such as inco-ordination pains, numbness, incontinence of urine, are certainly benefited by suspension; but the organic symptoms, such as the loss of the reflexes, are not improved. This makes it probable that supension only acts mentally. That the novelty of the treatment, and the full hope that it will do some good, are perhaps the chief reasons why the patients feel better after it. When the craze for it has died down it will probably cease to be beneficial and will fall into disuse, just as metallotherapy has done. An important paper on the subject by Messrs. Haushalter and Adams has recently appeared in the November number of the *Progrès Médical*. The authors agree with the opinion we have expressed upon the value of the treatment. It has been suggested that the benefit may be due to the separation of the vertebræ, general traction, and hyperæmia of the cord (Charcot and Motchütkowski), to anæmia of the cord (Dujardin-Beaumetz), or to tearing down of adhesions of the meninges. By a most careful series of experiments Haushalter and Adams have shown that the lengthening of the vertebral column during suspension is no greater than often takes place physiologically; that even when the vertebral column is stretched, the cord, its nerves, and vessels are not appreciably altered. The treatment has been applied in a number of other diseases, such as myelitis, disseminated sclerosis, lateral sclerosis, Friedreich's disease, paralysis agitans, etc., but without much benefit. Quite recently there has appeared in *Brain* a translation of Motschütkowski's paper, and appended to it is the after history of some of his cases; from this it appears that the benefit was permanent, although no more suspension had been employed. Bonuzzi has attempted to obtain all the good effects of suspension without any of its disadvantages, by forcibly flexing the legs on the body and bending the body forwards. From experiments on the dead subject and one experiment upon the living, he concludes the circulation in the spinal cord is profoundly modified.

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44 *Virchow's Archiv*, Bd. 117.
45 *Rev. de Méd.*
46 JOURNAL, December 8th, 1888.
47 JOURNAL, December 15th, 1888.
48 *Indian Med. Gazette*, July, 1889.
49 *Lancet*, November 23rd, 1889.
50 JOURNAL, March 2nd, 1889.
51 *The Treatment of Epilepsy.*
52 *Med. Record*, May 11th, 1889.
53 *Wien. med. Presse.* 1889, xxx, 609.
54 *Le Progrès Médical*, Februarv 25th, 1889.
55 *Le Progrès Med.*, January 19th, 1889.

Hypnotism.—In the department of hypnotism the Charcot or Salpêtrière school have not brought forward any new facts. The Nancy school continue to treat patients suffering from the most various disorders by suggestion. Voisin, during his visit to England, related some of his experiments and their surprising results. In England not much has been done with hypnotism, for the attempts to use it for medical purposes have been chiefly carried out upon lunatics, who, it is universally acknowledged, are the most difficult patients to cure; in fact it is often quite impossible to hypnotise the insane, The literature of the subject is increasing at an enormous rate, but nearly all the articles published consist of nothing but a short report of cases cured by suggestion. Heidenhain's theory of the hypnotic state still remains the most satisfactory that we have.

Recent Books and Papers on Neurology.—It will perhaps be useful to mention some books and articles which have appeared in England during 1889, and which contain information on special branches of neurology. Such are: *The Surgery of the Spinal Cord*, by W. Thorburn; *A Textbook of Mental Diseases*, by W. Bevan Lewis; *The Injuries and Diseases of Nerves*, by A. Bowlby; *A Textbook of General Therapeutics*, by W. Hale White (chapters on hypnotism, electricity, suspension treatment, Weir-Mitchell treatment, etc.). The Goulstonian lectures on the secondary degenerations of the spinal cord, by H. H. Tooth (JOURNAL, March); the Lettsomian lectures on syphilis and the nervous system, by W. R. Gowers (JOURNAL, April); on peripheral neuritis, by J. Ross (*Med. Chron.*, June-December, 1889); on the absence of the corpus callosum, by Alexander Bruce (*Brain*, part xlvi); cerebral localisation in its practical relations, by C. K. Mills (*Ibid.*, parts xlvi and xlvii); the pathology of central aphasia, by Allen Starr (*Ibid.*, part xlvi); and cerebral localisation in its practical relations, by D. Ferrier (*Ibid.*, part xlvi); the morbid anatomy of chronic alcoholism, by J. F. Payne (*Path. Trans.*, 1889); on the value of eye symptoms in cerebral disease (*Ophthal. Trans.*, 1889).

DERMATOLOGY.

Penjdeh Ulcer.—Woskrensky has reported on thirty-four cases of "Penjdeh ulcer," observed in the Military Hospital at Merv. He does not consider that this is the same disease as the bouton de biskra, Indian ulcer, etc. It has an incubation period, lasting from three to eight days. In a third of the cases observed there was a secondary nodular eruption, and lymphangitis in about one-half.

Anthrarobin.—Further experiments on the action of anthrarobin in psoriasis have shown that it is much inferior to chrysarobin, or even pyrogallic acid, and that it is liable to create a considerable amount of dermatitis.

Cure of Sarcoma by Erysipelas.—Bruns has reported three cases of sarcoma (diagnosis confirmed by the microscope), which were permanently cured by an attack of idiopathic erysipelas.

Alopecia Areata.—Joseph, of Berlin, had attempted to support the nerve theory of alopecia areata by experiments on animals. These experiments have been repeated by Dr. Behrend who found that section of the sympathetic in the neck did not lead to baldness.

Treatment of Leucoplakia.—Rosenberg has found good results by painting patches of leucoplakia buccalis with balsam of Peru. The painful and fissured spots are painted by means of a soft brush, while on the insensible spots frictions are made with a hard brush, the paintings and frictions being made one to three times a day by the patient. After each application the balsam is to be retained in the mouth for three to five minutes.

Iodic Purpura.—Besnier has brought forward the case of a patient in whom iodide of potassium produced purpura of the legs, but who could take tincture of iodine with impunity, and suggests that iodic purpura occurs only when iodide of potassium is given, and that pure iodine does not cause it.

Ichthyosis in Infancy.—Róna has reported two cases of early ichthyosis, a firstborn child being affected immediately after birth, and dying of the disease at the age of four months. In the other case the disease occurred within the first week of life.

Treatment of Keloid.—M. Vidal has stated that he has been successful in the treatment of keloid by scarification. The scarification must penetrate the entire depth of the lesion. The projecting part only represents one-third of the entire thickness. No nucleus of the keloid must be left. The result is slow.

Vaccinia and Lupus.—Besnier has shown the case of a young man in which a vaccinal cicatrix was the seat of a limited patch of lupus vulgaris.

Psorospermosis.—Darier has described two unique cases of parasitic affection of the skin, under the name of "follicular vegetating psorospermosis." A small papule, crowned by a blackish-brown or greyish crust, when removed leaves behind it a depression corresponding to a dilated follicle. These papules are found on the whole body, but mostly on the scalp, face, sternum, loins, and, above all, on the inguinal regions. The parasite is a sporozoon, and they are found isolated and in groups in the rete mucosum, and in the cells.

Wart Bacilli.—Kühnemann states that in all the cases of warts which he has examined he has found a characteristic bacillus. The bacilli are found between and in the cells of the stratum dentatum of the epidermis, and seldom in the cutis. They are very delicate, and are found most plentifully in recent warts.

Zoster Gangrenosus.—Kaposi has published four cases of atypical zoster gangrenosus. They were characterised by an eruption in the form of grouped papules and vesicles, gangrene and destruction of the skin at the base of the eruption, and a cyclical course. The eruption is apt to relapse.

Lichen Ruber.—An interesting discussion has taken place during the year (chiefly in Paris and America) on lichen ruber. M. Besnier considers that the nomenclature is responsible for some of the confusion which has existed, and maintains that there is no means of distinguishing the pityriasis rubra pilaris of French from the lichen ruber accuminatus of American authors.

Xanthoma.—Besnier has remarked, in reference to diabetic xanthoma, the greater frequency of buccal localisations and the usual, but not constant, absence of palpebral *plaques*, and that buccal xanthoma usually, but not always, undergoes spontaneous involution, is intermittent or remittent, progresses with rapidity, but disappears quickly without leaving any trace.

Leprosy.—During the year an unusual amount of attention has been given to leprosy, the death of Father Damien especially having excited the attention of the public to the disease. Archdeacon Wright has published a book in which he has brought together evidence collected from various sources with the object of showing that leprosy is contagious, and Mr. Macnamara has published a second edition of a pamphlet originally published in Calcutta in 1866, in which he expressed the opinion that the disease is hereditary and communicable. In both these publications interesting facts are given regarding the origin and spread of leprosy in the Sandwich Islands. Zuriaga has published facts observed by him at the village of Limat de Valldigna (Valencia, Spain), which appear to point very unmistakably to the transmission of leprosy by contagion. Armauer Hansen visited America in order to make inquiries regarding the descendants of the lepers who had emigrated there from Norway. He found that of the descendants of 160 individuals none had become lepers; of the original 160 only 16 or 17 are now living.

Paget's Disease of the Nipple.—Dr. Wickham, of Paris, has stated that in Paget's disease of the nipple he has found the scales on the surface filled with parasites of the class of sporozoa.

SURGERY.

Antiseptic Surgery.—Cerebral Surgery.—Spinal Surgery.—Thoracic Surgery.—Abdominal Surgery.—Hepatic Surgery.—Splenectomy.—Renal Surgery.—Surgery of the Urinary Organs.—Radical Cure of Hernia.—Cancer of the Rectum.—Operations on the Larynx.—Grafting.

Antiseptic Surgery.—In this annual review of the progress of surgery it would seem advisable to direct attention at first to the latest improvement and modifications that have been made in the technical details of the antiseptic method. Although this method is now almost universally recognised and practised by surgeons, there is still much difference of opinion as to the utility of all the precautions which have been insisted on as necessary conditions of success, and also a general agreement that there is much difficulty in finding a thoroughly satisfactory antiseptic agent for purposes of dressing. There is now, however, good reason for believing that this difficulty has at last been overcome, and that in the course of the new year surgeons will have at their disposal a new antiseptic preparation which will prove potent and effectual, and at the same time be free from the inconvenient and troublesome effects of those which have hitherto been used. In an address delivered before the Medical Society of London on November 4th Sir Joseph Lister stated that, after numerous experiments carried out with the object of finding a better antiseptic agent than corrosive sublimate or sal alembroth, he had discovered in a

double cyanide of mercury and zinc a substance possessing very important antiseptic properties. Sir Joseph has used this agent for one year in hospital practice, and recommends the dressing of which it forms the active element as the most satisfactory he has hitherto met with. The best test of a suitable agent for antiseptic dressing, it is held, is not its germicidal but its inhibitory property. In the course of this important address Sir Joseph stated that he had never been satisfied with dressings of sal alembroth, in consequence of the excessive solubility of this agent, and had not given at any time his published sanction of its extensive employment. The practice of drainage in the treatment of operation wounds, which is highly valued by most surgeons and even by those who attach but little importance to the other details of the antiseptic method, has lately been opposed by Professor Boeckel, of Strassburg. This surgeon states that he has now discarded drainage altogether, and regards the practice as erroneous and absurd. This view is supported by the result of a long series of cases in which major operations were performed with complete success without any attempt to drain the wounds. Boeckel, in other respects, deals with wounds according to the most advanced principles, and is a firm believer in the antiseptic method, and his success, notwithstanding his rejection of so valuable an aid as drainage, may be attributed to the very great care and rigorous antiseptic precautions observed by him in the performance of his operations. On the other hand, Professor Weeks, of Maine, holds that the use of drainage-tubes is more necessary with antiseptic than with other forms of dressing, since under the stimulating influence of antiseptic agents more effusion is to be expected.

Cerebral Surgery.—The operative treatment of tumour of the brain, so far as can be learnt from published reports, does not seem to have established any further claims to surgical favour. The majority of cases recorded during the past year tend mainly to confirm the views expressed by Dr. J. T. Morrison in a paper on the localisation of intracranial lesions, published in April, that no other department of medical practice more severely taxes the resources of the diagnostician, and that many cases present perplexities which baffle the most acute investigation. A series of cases recorded early in the year by Mr. Jordan Lloyd of different cerebral affections treated, some very successfully, by trephining, includes one instance in which the tumour, when exposed, was found to be too extensive for removal, and another in which, although the symptoms pointed to localisation in the motor area, the tumour was found not in the expected situation but at the base of the brain. In a case in which Pilcher, of New York, trephined the left occipito-temporal region the tumour was found after death in the anterior half of the hemisphere. Another difficulty in the surgical removal of cerebral tumour is indicated in a case reported by Fischer, of Breslau, who, although the situation of the growth had been correctly diagnosed, failed to find it until a second operation, which proved very successful, was performed, at the request of the patient. At the end of last year, Dr. Bradford, of Boston, U.S., removed a growth, the situation and size of which had been previously made out by his colleague, Dr. Knapp, from the motor region on the right side of the brain. This operation, which was performed as a last resource in a very desperate case, proved fatal through shock. The future records of this operation should, we think, show much less unsatisfactory results. Although, as has been shown by Von Bergmann and Dr. White, cerebral tumour is removable by surgical means in but a small proportion of cases, still, in most of these exceptional cases, the disease can be extirpated without much risk and with incalculable benefit to the patient. The results in cases of cranial lesions and of cerebral abscess, of trephining performed under antiseptic conditions have been very good, and therefore we may anticipate that, with improved diagnosis, based on more extended research, and with a more careful selection of cases, surgical intervention in cases of tumour of the brain will soon be equally successful. At the annual meeting held in Leeds Mr. Rushton Parker read notes of a case in the practice of Dr. Austin Williams, of Liverpool, in which a small cerebral tumour, supposed to have been a gumma, was removed by trephining, with very good results. In March Péan, of Paris, reported a case in which a patient, suffering from epileptiform convulsions, had been cured by the removal of a fibro-lipomatous growth from the left motor region of the brain. The list of contributions to the literature of cerebral surgery made in 1889 includes two papers which are of much interest from the suggestions they give of a further extension of surgical means to the treatment of severe brain lesions. The JOURNAL of March 2nd contains a report by Mr. Walter G. Spencer and Professor Victor Horsley in which it is argued on anatomical, pathological, and experimental grounds that digital compression and, under favourable conditions, temporary ligature of the common carotid would be likely to prove beneficial in arresting or controlling hæmorrhage from the middle cerebral artery and its branches in an early stage of apoplexy. A more recent paper by Dr. Claye Shaw, on the surgical treatment of general paralysis,[1] suggests the advisability of operative interference at an early stage of this disease, with the object of allowing the brain to relieve itself from the increased arterial tension which, as has been determined by sphygmographic observation, is one of the early conditions in general paralysis. Reference is made in this paper to a case in which Mr. Harrison Cripps trephined the right side of the cranium over the central sulcus with such success that the patient, who had previously been rapidly approaching a condition of dementia, was after the operation considered as being no longer insane. In August, M. Lucas-Championnière reported a case in which he had removed, with very good results, from the region of the Rolandic fissure on the left side, an old hæmorrhagic focus consequent on spontaneous cerebral hæmorrhage. The efficacy of surgical treatment in cases of traumatic epilepsy still remains uncertain. Dr. Terrier, though a strong advocate for trephining in other morbid and traumatic conditions of the head, has not formed a very favourable opinion of the prospects of the operation in instances of this kind. The primary results of such treatment, though often very encouraging, are liable to be followed in the course of a few months by return of the convulsive attacks. As an instance of the benefit to be derived from operative treatment of other remote results of head injury, we would allude to a case reported by Dr. Felkin and Mr. Hare, of Edinburgh, of arrested development and partial paralysis of both limbs on the right side, in which considerable improvement followed the removal of a large extra-dural cyst of traumatic origin.

Spinal Surgery.—Since the summer of 1887, when Mr. Horsley removed, with brilliant results, a fibro-myxoma from the spinal cord, very little has been added to our experience of the surgical treatment of tumours in this region. Cases have been recorded by Dr. Abbe and Dr. Deaver, of the United States, in which operations were performed for the removed of supposed morbid growth; but in one of these the disease was a tuberculous deposit, and in the other a diffused deposit of uncertain but probably inflammatory nature. In cases of spinal caries and of old fracture of the spine trephining, or, as it has been more properly called, laminectomy, has of late been frequently performed, and with result that confirm the statement of Dr. Macewen, a pioneer in this department of surgery, that encroachments upon the lumen of the spinal canal may be removed therefrom without unduly hazarding life. Laminectomy for pressure paralysis from angular curvature has been ably advocated by Dr. Willard, of Philadelphia, and very successful cases of such treatment have been reported in the course of the year by Mr. Lane, of Guy's Hospital, and Mr. John Duncan, of the Edinburgh Royal Infirmary. The same operation has been performed, though not with so much success, in cases of paraplegia from fracture, by Mr. Herbert Allingham, Mr. Duncan, and Dr. Dawbarn, of New York. In Mr. Ernest Hart's "Notes on Medical Paris of To-day," allusion is made[2] to a case in which, after removal by M. Péan of ten fragments of bone which had been driven into the cord by the bite of a horse, the patient was restored to almost his normal condition. The subject of spinal surgery in its modern developments has been very fully and ably discussed by Dr. W. White, of Philadelphia,[3] who holds that trephining of the spine in cases of injury, of caries, and of tumour, has a rapidly widening field, and deserves more serious and careful consideration from practical surgeons than it has hitherto received. There can be no doubt that the operative treatment of injuries and diseases of the spinal column and its contents has of late attracted much attention, and that a rapid advance has been made in this branch of surgery. This advance is to be attributed not so much to improved methods of operation and of wound-dressing as to the results of much careful clinical investigation, good recent instances of which are afforded by the able papers of Mr. Thorburn, of Manchester, on the extent of the disturbance of nerve function caused by lesions of the cord and by tumour of the cauda equina, and by his recent excellent treatise on the subject.

[1] JOURNAL, November 16th.
[2] JOURNAL, March 23rd.
[3] *Annals of Surgery.*

Thoracic Surgery.—But few instances have been recorded this year of successful surgical intervention in the treatment of affections of the lung. Two very important papers relating to thoracic surgery have been communicated to the Royal Medical and Chirurgical Society, but these are interesting rather from their pathological and clinical than their therapeutical aspects. The first of these was a case related by Dr. Powell and Mr. R. J. Godlee of actinomycosis hominis affecting the right side of the chest. At a subsequent meeting of the Society Mr. Godlee brought under the notice of the Fellows a case of dermoid cyst of the right side of the chest communicating with a bronchus. Dr. Shewen, of Sydney, has reported two cases of supposed gangrene of the lung, treated with good results by incision and by resection of a portion of rib. In his comments on these cases Dr. Shewen agrees with the majority of surgeons who have had any experience of the treatment of pulmonary cavities, that the operation for gangrene possesses great advantage over that for phthisical vomica, and accounts for this advantage by the fact that in the former affection firm adhesions between the costal and pulmonary pleura are almost constantly present. Successful cases of incision of pulmonary abscess have been recorded in the JOURNAL of this year by Mr. Harris, of Exeter, and Dr. Cummins, of Cork. Opensovsky, a Russian surgeon, has published a case of pulmonary abscess and gangrene, in which, after partial resection of the fifth and sixth ribs, a large cavity was exposed in the right lung, into which the whole hand could be passed. The patient was quite well eighteen months after the date of this operation.

Abdominal Surgery.—Loreta's operation of digital divulsion of the pylorus for cicatricial stenosis has of late received much attention from surgeons in the United States. A paper contributed by Dr. Barton, of Philadelphia, to the last volume of the *Transactions of the American Surgical Association* contains in addition to the record of a successful case under the care of this surgeon, a table of twenty-four collected cases, the whole showing fifteen recoveries and ten deaths. This operation, which has been performed twice in England, once in Australia, and, according to Dr. Barton, not at all in France or Germany, seems to deserve more consideration than has hitherto been given to it by other than Italian surgeons. The published records show that there is not so great a tendency as might be expected to relapse of the stenosis after digital divulsion, the mortality of the operation is likely to be much reduced with further experience and improved diagnosis, and, as Dr. Barton has pointed out, in every successful case the patient is rescued from certain and by no means distant death. As has been pointed out, however, this mode of treatment must of necessity be of very limited application, since non-cancerous stenosis of the pylorus is a rare affection. A very satisfactory case in which this operation was performed by Dr. William Gardner, of Adelaide, has very recently been reported in the JOURNAL of December 14th. On March 17th, Professor Loreta successfully dilated, at the same sitting, both the pyloric and cardiac orifices of the stomach. To the list of formidable operations that are now performed on the abdominal organs may be added extirpation of the cæcum, this portion of the intestinal tract, together with adjacent pieces of small intestine and colon, having been removed in Italy—twice with success, once with a fatal issue—by Durante, Bassini, and Trombetta. The important contributions of Dr. Senn, of Milwaukee, to abdominal surgery, especially those relating to operative procedures for restoring the gastro-intestinal canal after obstruction or division of continuity, have in the course of the year been brought fully and clearly under the notice of surgeons in this country by Mr. F. B. Jessett, in his able report on intestinal surgery.[4] The substitution of the methods of lateral apposition and of approximation by means of bone plates for the slow and difficult procedure of direct suture of the ends of divided intestine constitutes a very decided advance in practical surgery, of which, however, but few surgeons have hitherto had any opportunity of taking advantage. The operation for establishing what is called intestinal anastomosis has been performed in some few cases by Dr. Senn himself, and in the course of the year Dr. Abbe, of New York, has reported two successful cases in which he applied this method. In this country gastro-enterostomy has been performed with very good results in a case of cancer of the pylorus, by Mr. Kilner Clarke, of Huddersfield.[5] As the bone plates devised by Senn may not always be at hand, and as their preparation requires time and some labour, efforts have been made to obtain simpler and more readily available material. Dr. Abbe has used with good results rings of stiffened and aseptic catgut; and Dr. Brokaw, of St. Louis, thinks that he has improved on these as well as on the decalcified bone plates, by forming his rings of unperforated drainage tubing stiffened by strands of dried catgut. The tendency at the present time to resort to laparotomy simply as an exploratory or tentative procedure was illustrated in February at the Medical Society of London, by a case reported by Professor Annandale, and also by certain statements made in the course of the discussion. The case in question was one in which complete relief of very troublesome symptoms was afforded by abdominal section and the raising up of depressed ensiform and costal cartilages. Although, as was proved by Mr. Treves, remarkable improvement may result from exploratory laparotomy in the hands of experienced and careful surgeons, another speaker, whose opinions on all questions of practical surgery must always carry great weight, was led to remark that such cases, interesting as they were, must be regarded as dangerous and likely to tempt rash operators to explore more frequently than should be done.

Hepatic Surgery.—Very little has been done in the course of the year to assist surgeons to arrive at definite conclusions on the operative treatment of affections of the gall bladder. In January an interesting series of cases was published in the JOURNAL by Mr. Knowsley Thornton, who is inclined to regard with favour cholecystectomy, and would not hesitate to perform this operation in any instance in which the gall bladder is much damaged, or in which it is impossible to return it effectually to the abdominal wound. A remarkable case has recently been recorded by Dr. Mears, of Philadelphia, in which cholecystotomy by the lumbar incision was performed on a distended gall bladder simulating a floating kidney. On the subject of the surgical treatment of hydatid of the liver a valuable contribution has been made by Dr. Davies Thomas, of Adelaide, who objects to tapping as unsatisfactory in its results and not always devoid of risk, and shows by statistics that the results of abdominal section are very good, the proportion of recoveries amounting to nearly 90 per cent. This subject has been discussed also by Mr. Henry Morris, and illustrated by instructive cases.

Splenectomy.—In July Sir Spencer Wells published another case of successful splenectomy, the hypertrophied organ weighing over 4 lbs. The interest of this case is enhanced by a report of an examination of the blood made by Dr. Dreschfeld one year after the operation. This fluid, when examined microscopically, appeared quite normal, the red blood corpuscles being of normal size and appearance, and the leucocytes present in normal proportion.

Renal Surgery.—At the annual meeting of the Association renal surgery was the subject of an interesting discussion, which was opened by Mr. Henry Morris, and in which, amongst others, Dr. David Newman and Mr. Lawson Tait took part. The chief points to which attention was directed by Mr. Morris were, the best means of overcoming certain difficulties presented from time to time in the course of the operation of nephro-lithotomy; the doubtful value of nephrectomy in advanced tubercular disease of the kidney; the indications for nephrectomy in cases of large fluid collections within and around the kidney, and the value of nephrorrhaphy for movable kidney. In a paper read at a meeting of the Royal Medical and Chirurgical Society on April 9th, Mr. Knowsley Thornton again supported his opinion as to the superiority of the abdominal over the lumbar method of nephrectomy by a table of twenty-five cases. Dr. John Homans, of Boston, U.S., who has had much experience of renal surgery, has lately written in favour of the abdominal operation for the removal of every solid renal tumour which might be diagnosed as weighing a pound or more, whilst advocating the lumbar incision in cases of small tumours and those that can be reduced in size by tapping. The success which followed free division of the capsule of the kidney in a case of severe nephralgia treated by Dr. Tiffany, of the University of Maryland, has led this surgeon to account for the relief that so frequently follows an unsuccessful attempt at nephro-lithotomy by the inference that inflammation of the renal pelvis and the ureter may give rise to symptoms resembling those due to calculus of the kidney. A remarkable case has been put on record by Professor Socin, of Basle, in which successful removal was performed of one-half of a horseshoe kidney affected with hydronephrosis. The patient is reported to have been in excellent health four months later. The good results of this operation, which was performed by the abdominal method, show that the existence of a horseshoe kidney is not in every

[4] JOURNAL, July 27th.
[5] JOURNAL, November 16th.

instance an absolute contra-indication to excision. Nephrorrhaphy for the treatment of floating kidney has been advocated as a safe and successful surgical procedure by Mr. H. Morris, who has practised it in ten cases. This operation has been advocated also by Terrillon, of Paris; and Guyon, though holding that such operation is rarely indicated, states that he would not hesitate to perform it in cases in which the abnormal condition of the kidney renders life a burden.

Surgery of the Urinary Organs.—The value of suprapubic cystotomy as a convenient and not very dangerous method of removing from the bladder calculus morbid growth, and also foreign body has been well confirmed during the year. In a case reported to the Clinical Society, in which both the perineal and high operations had been done at different times on the same patient for tumour, Mr. W. Anderson found not only that the latter procedure gave far greater facility for examination and manipulation, but the after-progress was more satisfactory than in the procedure by the perineal route. On July 6th, Mr. Herring published in the JOURNAL a report of twenty-nine cases in which the suprapubic operation by the new method had been performed up to that date by Sir Henry Thompson, in eleven of these for tumour and in eighteen for calculus; all these, it was stated, representing the most advanced and most complicated examples of disease. Of these twenty-nine cases four were fatal. Dr. Lavista, a Mexican surgeon, reported in October a case in which he removed the blade of a large knife from the bladder by the high operation, after the failure of a previous attempt at extraction by perineal section. The main point to note with regard to urinary surgery is the important addition made in 1889 to our knowledge of the operative treatment of enlarged prostate. Although attention had been previously directed to this subject, and some isolated cases of prostatectomy had been put on record by Dr. Belfield, of Chicago, Mr. McGill, Mr. Mayo Robson, and Mr. Buckston Browne, it was not till the annual meeting at Leeds that this subject was fully described and discussed. In the able and elaborate address by which this discussion was opened in the Section of Surgery, Mr. McGill advocated suprapubic cystotomy for the double purposes of draining the bladder and permanently removing the cause of obstruction, in cases of prostatic enlargement in which, through failure or uselessness of the ordinary catheter treatment, some more radical measure is indicated. The views of Mr. McGill as to the value and prospects of such treatment were supported by a list of no fewer than twenty-four cases, in which removal of the prostate by the high operation had been performed in the Leeds General Infirmary. Although the results in many of these cases seem to have been very good, and the mortality, considering the age and condition of most subjects of advanced prostatic disease, very small, it remains doubtful whether this operation will ever come into general favour, or be regarded by many surgeons as indicated even in those instances in which treatment by catheter has failed. A case has been related by Dr. M. Schmidt, of Cuxhaven, in which no relief of the bladder symptoms followed the operation.

Radical Cure of Hernia.—The pathology and causation of hernia, more especially in relation to its attempted cure by surgical operation, formed the subject of the lectures delivered this year by Mr. C. B. Lockwood as Hunterian Professor to the Royal College of Surgeons. The results of Mr. Lockwood's careful investigatious into the morbid anatomy and mode of origin of hernial swellings are very interesting, and, if confirmed by more extended observation, will serve to establish with much precision the indications and contra-indications of operative interference, and certainly tend to reduce the number of operations for so-called radical cure. By these investigations Mr. Lockwood has been led to the conclusion that acquired hernia has, in most instances, a pathological and not a mechanical origin, but, at the same time, is due, not so much to elongation as to a condition named prolapse of the mesentery, which consists in a slipping away at its attachment along the spine of the root of this peritoneal membrane. If acquired hernia, in a large majority of cases, be really due to such prolapse, which, however, at present seems a somewhat obscure condition, and is attributed, for the most part, to a weakness or failure of action in a somewhat obscure muscle which probably exists only in infancy and has not hitherto been recognised in any of our handbooks of anatomy, then such forms of hernia are by no means fitted for curative operation upon the abdominal walls. On the other hand, congenital hernia, especially in adult age, when the length of the mesentery has been reduced by natural change, is, according to Mr. Lockwood, particularly suited for remedial operation, since this form of hernia is due to defect in the abdominal wall, and not to any fault in the mesentery or its suspensory apparatus.

Cancer of the Rectum.—Mr. Jessop's opening address in the Section of Surgery at the Leeds meeting was in itself a statement of much practical value, and, moreover, gave rise to a very important discussion, in which the views of representative British surgeons were expressed on excision of rectal cancer, and on the relative merits of lumbar and inguinal colotomy in the palliative treatment of this disease. In the opinion of those in this country who have had the most experience of excision, cases suitable for this operation are not frequently met with, being not more, according to Mr. Cripps, than 15 or 20 per cent. of all cases of rectal cancer. Although aware of the fact that wounding and penetration of the peritoneum in proctectomy is not of necessity followed by fatal consequences, our own surgical authorities, as a rule, would recommend the adoption of this operation in those cases only in which the finger can be passed beyond the upper limits of the disease, and do not seem disposed to regard with favour the extensive and formidable operations that have been performed and advocated by some surgeons in Germany. The results, however, of this operation, even in the most favourable cases, do not seem to have been very satisfactory in consequence of the tendency to recurrence of the disease, and of subsequent incontinence. The latter objection, however, may be overcome by the performance of a preliminary colotomy, as recommended by Mr. Howard Marsh and Mr. Jessett. With regard to the palliative treatment of malignant disease of the rectum, it still remains doubtful whether inguinal colotomy will retain the favour with which it has been recently regarded by many surgeons. The lumbar operation is still advocated by Mr. Bryant, who insists on the greater risk in inguinal colotomy of cancer attacking the wound. The tendency of the external opening to contract and the frequent occurrence of prolapse are, however, the most evident objections to the latter operation, both of which objections may be completely overcome by the ingenuity of those who have done so much towards improving the inguinal method.

Operations on the Larynx.—The operative treatment of cancer of the larynx has been, in 1889, the subject of numerous papers. Early in the year the diagnosis and treatment of this disease were discussed by Fränkel, of Berlin, who holds that, in most cases in which surgical intervention is indicated, partial laryngectomy is preferable to the endolaryngeal operation, and that our present experience of total removal of the larynx, showing the dangers and the subsequent tendency to recurrence of the disease, is not favourable to this operation. Some statistics, recently published by Wassermann, of Heidelberg, show that relapse is frequent after both partial and total removal of laryngeal cancer. In a case of total extirpation of the larynx, reported by Dr. Macdonald and Mr. Symonds, the patient made a promising recovery with a useful voice, but when seen again, about seven months after the operation, was suffering from recurrence of the malignant disease. Boccomini, of Milan, has also reported a case of removal of the whole of the larynx for cancer, in which the disease returned after an interval of four months. Schede, of Hamburg, has put on record a case of laryngeal cancer, the subject of which was quite well four years after complete excision. Two cases of epithelioma, treated with very satisfactory results by thyrotomy and excision of the diseased parts, were communicated to the Clinical Society by Mr. Butlin in January last. At the same meeting the dangers of partial removal of the disease and of intra-laryngeal interference in cancer of the larynx were illustrated by two cases reported by Dr. Newman, of Glasgow. The practice of intubation in the treatment of diphtheria has been strongly recommended by Dr. Guyer, of Zurich, who states that of twenty-seven cases of acute obstruction thus treated, thirteen ended in recovery. Tracheotomy for foreign body in bronchus was the subject of a communication in June to the Royal Medical and Chirurgical Society by Mr. Bryant, who mentioned a successful case in which a whistle was extracted by forceps introduced nearly six inches beyond the lower angle of the tracheal wound.

Grafting.—Some interesting instances of transplantation and grafting have been recorded in the course of the year. Mr. Mayo Robson has brought two cases before the Clinical Society, one of successful nerve grafting in which a defect in the median was filled up by a piece of posterior tibial nerve taken from a recently amputated limb; the other of removal of four inches and a half of flexor tendon of an injured finger to the dorsum of the hand, so as to form a new extensor for another injured finger. Wolfler, of Gratz, has recorded seven cases in which mucous membrane was

transplanted with good results, to fill up defects caused either by injury or ulceration. Silbernik, a Russian surgeon, and Borsuk, of Warsaw, have succeeded in closing large intractable ulcers of the legs by Thiersch's method of transplanting long strips of skin. Dr. Gradenigo, of Padua, has it is stated, transplanted with good results the cornea of a hen into the human eye.

PHARMACOLOGY AND THERAPEUTICS.

Antiseptics.—Antipyretics.—Hypnotics and Cerebral Stimulants.—Cardiac Remedies.—Remedies for Sweating.—Mercurial Preparations.

THE Croonian Lectures delivered before the Royal College of Physicians this year by Dr. Lauder Brunton have admittedly been the feature of the year in English therapeutics, for their whole tenour was an endeavour to indicate in what direction pharmacology was tending, so as to give into the hands of the therapeutists reliable remedies in the treatment of disease. Simple empiricism forms still a large part of practical medicine, and must continue to do so as long as our scientific knowledge remains deficient. But pharmacology, at one time looked down upon, is now acquiring a prominent place in the minds of thoughtful men. To those of the last generation, indeed, the object of Dr. Brunton's lectures would have appeared transcendental. As stated in his introduction, the object was to (1) "try and show what principles guide us in selecting new remedies from the enormous number of substances known to chemistry, and (2) to indicate the lines upon which further work is desirable, in order that we may be able to manufacture substances which will not only act upon any part of the body we wish to influence, but will produce upon it any particular effect we may desire." The manner in which Dr. Brunton accomplished his object is evident to all careful readers of his lectures, and although all the conclusions arrived at might not be universally accepted, yet in some classes of remedies enormous progress has been made. There is no class of remedy which will better illustrate the bearing of pharmacology on therapeutics than the one which will be first considered in this report, viz., that of "Antiseptics."

Antiseptics.—We are now getting a clear appreciation of the fact that the growth of organisms yields products which are deleterious to the animal body, and which, introduced into the system in sufficient quantity, will produce death. Thus we know that the danger to wounds is chiefly from putrefactive bacteria and from the erysipelas organism. Our object in treatment is to stop the growth and produce the death of these organisms, and this we can do by means of substances—antiseptics—the effect of which can be tested on the organism or organisms outside the body in the nutrient media in which such organisms flourish. This statement of fact may seem trite, but it has a wider, if not a more important, application. Thus organisms may obtain access from outside to the bronchi and lungs, to the alimentary tract, to the bladder, ureter, and pelvis of the kidney, and there produce symptoms of poisoning from absorption of their products of activity. Insoluble and non-toxic antiseptics (such as naphthalin) will disinfect the alimentary tract, and antiseptics eliminated by the kidney will aid in stopping the growth of organisms in the urinary tract. It is not, moreover, *a priori* impossible to imagine that antiseptics circulating in the blood-stream may be germicidal to pathogenic organisms, the results of which are seen in disease. Up to the present time, however, all trials with such an idea seem to have been without beneficial effect; this will be seen presently in the account of the recent antiseptic treatment of tubercular phthisis. It may be pointed out, also, that from a pathological and therapeutical standpoint it is important to remember that many organisms have been shown to produce substances which are detrimental to their growth; and this fact may explain recovery from poisoning by a pathogenic organism. To turn now to the work done in antiseptic remedies during the past year, we find many remedies, each of which have their particular promoter. The object of all experimentation on this class of remedies is to find an antiseptic which will be fatal to the organisms, but will not be a local irritant or cause poisonous symptoms after absorption. Of the newer ones we may mention hydronaphthol, oxynaphthoic acid, sozoiodol, thio-resorcin, and myrtol. Dr. Edington [1] considers hydronaphthol an ideal antiseptic. It is soluble in water (1 in 1,100), in alcohol (1 in 2), and in oil (1 in 20). When dissolved in ordinary water it is about half as powerful as mercuric chloride (1 in 1,000); but it is as powerful as the latter in its effect on anthrax, and more powerful in its effects on bacillus subtilis. A solution of 1 in 300 in warm water may be used for washing out cavities. Hydronaphthol has the advantage of being non-poisonous. Schütsing recommends α-oxynaphthoic acid as a substitute for iodoform, over which it possesses the advantage of being without odour, of having no toxic effect on the cerebrum, and of being less costly. For washing out cavities, it may be used in the strength of 0.3 to one per cent., combined with phosphate of sodium. Sozoiodol in another odourless, non-poisonous substitute for iodoform. It is a combination of iodine (54 per cent.), carbolic acid (20 per cent.), and sulphur, or, more strictly speaking, it is a compound of iodine with paraphenol-sulphonic acid. Combined with sodium it may be given in 20-grain doses without any poisonous effect; but it is not yet certain whether in this form sozoiodol is an efficient antiseptic. Sozoiodol is useful applied alone, or mixed with milk-sugar in diseases of the nose and pharynx; it may be used in douche (5 to 7 per cent.). It is non-irritating to burns, and may be combined with lanolin in an ointment. Thio-resorcin is a still more recent antiseptic. It is a compound of sulphur with resorcin, and is in the form of an odourless powder, which is not poisonous. It may be used as a dusting powder, or in ointment (10 to 20 per cent.) for eczema and parasitic skin diseases. It is very little soluble in water. The introduction of such antiseptics as sozoiodol and thio-resorcin is due to the consideration that some organic compounds of sulphur or iodine, and phenol or resorcin will in the body split up into their respective active agents, iodine and sulphur (as sulphides) being set free, act as antiseptics, and so will phenol and resorcin. These remedies are, however, still on their trial. Myrtol is another class of compound, and has been introduced as an antiseptic for the air-passages in bronchiectasis or gangrene of the lung. It may be given in capsules of two and a half grains three times daily. It has no effect on the tubercle bacilli (Eichhorst). Passing from these recent remedies to the antiseptic treatment of phthisis, we come into the region of the indefinite. Since Koch's discovery of the tubercle bacillus, and of its *rôle* in the production of tubercular disease and of phthisis pulmonalis, numerous attempts have been made to destroy the bacilli within the body by means of antiseptic agents, but with no success. It is only necessary to mention the rectal injections of sulphuretted hydrogen and carbonic acid, a treatment now happily of the past. Many attempts have been made by means of the air-passages and by the blood to introduce antiseptics to the place of growth of the bacilli, and during the past year the hot air treatment of phthisis has been brought before the profession (and laity) in England. It is well known now that tubercle bacilli will not withstand a continued temperature of 42° C. (104° F.), so it was considered that air heated to 200° C. and inspired might have this effect. So it undoubtedly would if air at this temperature actually reached the organisms. Apart, however, from the *a priori* consideration that the living structures of the mucous membrane of the trachea and bronchi could not withstand this heat, or even one of 100° C. (the boiling point of water), it has been proved by U. Mosso and A. Rondelli [2] that air inspired at 200° C. is rapidly cooled down during inspiration, so that the temperature of the lung tissue near the bronchi is not only not increased, but actually lowered as compared with the rectal temperature. Any beneficial results ascribed to this treatment must therefore be considered as hypothetical; and it does not seem too much to say that the hot-air treatment of phthisis will soon be relegated to the past, if it has not already been so dealt with by all impartial observers. In estimating the effect of drugs used as inhalations in phthisis, a proper distinction has not in published records been usually drawn between the beneficial effect of the drug on the bronchitis which so commonly accompanies phthisis, its effect on the central nervous system as a sedative of cough, and on the underlying fundamental tubercular process. Turpentine and creasote undoubtedly benefit many phthisical patients, but it remains yet to be proved that they affect the tubercular disease itself. They may disinfect cavities communicating with bronchi, but how they are to get at the nodules of phthisis it is impossible to understand from what we know of the anatomy of the disease. This remark also applies, although perhaps to a less extent, to the internal administration of creasote, whether by the mouth or by subcutaneous injection. Andreesen, indeed, concludes (as many others have concluded) that its persistent administration does benefit phthisical patients,[3] but he proceeds to state his opinion

[1] JOURNAL, May 11th, 1889.

[2] See abstract in *Cent. f. d. med. Wissenschaften*, No. 38, 1889, p. 696.

[3] *Petersburger med. Wochenschrift*, No. 25, 1889.

that the good effect results from the action of the drug on the stomach and intestines, stimulating the weak muscular walls, preventing putrefaction, and thus increasing the amount of food absorbed, while the drug may by its antiseptic action inhibit the development of tubercle bacilli in the intestine, and thus prevent the exhausting diarrhœa of such patients. The intrapulmonary injections of creasote (advised by Rosenbusch) are not to be recommended. The first injection may do good, but the succeeding ones are usually valueless, and may set up hæmoptysis and other complications. The antiseptic treatment of phthisis, we may conclude, has not up to the present time yielded any results of permanent value.

Antipyretics.—Many of the recently-introduced antipyretics (those belonging to the aromatic series of carbon compounds) are also to a greater or less extent antiseptic and analgesic. In fact, it may be said that at the present time antipyrin and antifebrin are as frequently used for their analgesic properties as their antipyretic, and many practitioners consider the pain-relieving property of these drugs of greater importance than their temperature-reducing. Antipyrin is now commonly administered in 10-grain doses for headache, migraine, and various other forms of neuralgia, as well in the pain due to organic as that due to functional disease. It seems, however, more beneficial in functional disease than in the severe pains of the pressure of tumours or in the lightning pains of tabes dorsalis. It is also given hypodermically—8 grains for each injection. After the local burning (which is common) has passed off, the seat of injection becomes anæsthetic. Wolfe [4] has utilised this local anæsthetic action of antipyrin in relieving the joint pain in rheumatism, the chest pains in phthisis, the cutting pains of acute pleurisy, and those of muscular rheumatism; relief is obtained in a few minutes. No bad results were noticed from the injection, except the first smarting caused. Antipyrin ought to be given with care, according to Demme, in all cases of weak heart or weak general condition, or in case of tendency to cardiac failure or in advanced cases of phthisis. Merkel,[5] after a prolonged trial of antipyrin injections, confirms Wolfe's results in acute rheumatism, the chest pains of phthisis, and in pleuropneumonia. Before leaving antipyrin to pass on to the other analgesics, it must be remembered that this drug has a marked effect on the nervous system. It not only acts on the sensory nerve-endings, thus being a local anæsthetic, but it affects the central nervous system, both the brain and the spinal cord. Batten and Bokenham [6] in their experiments found that antipyrin produced in animals (guinea-pigs, etc.) a spastic rigidity of the legs, appearing increased by an attempt to move the limbs. These symptoms resemble lateral sclerosis in man, so that it seems probable that antipyrin affects the motor tracts in the lateral columns of the spinal cord. Antipyrin has, moreover, an effect on some secretions. Both Haven Ross [7] and Salunci [8] describe cases where 8 grains of the drug, three times daily, acted as an antigalactagogue in puerperal women. The milk secretion was much diminished on the first day in Salunci's case, and ceased on the third day.

Gomier describes a case of diabetes (? glycosuria), in which the sugar totally disappeared from the urine when antipyrin was given in 15-grain doses three times daily. More information is, however, requisite on this subject, and cases of glycosuria ought to be separated from cases of true diabetes mellitus. Panas [9] treated two cases of diabetes, who had cataract, with antipyrin in daily doses of 30 to 45 grains; the diet was not altered. Sugar disappeared from the urine, in spite of the eating of carbohydrates; the thirst disappeared, and sleep became normal. At the end of Panas's paper Germain Sée lays down rules for the administration of antipyrin in cases of glycosuria. He says that antipyrin cures those cases in which the amount of sugar is not more than 80 to 100 grammes in the litre of urine (35 to 44 grains per ounce). In England such a condition is not considered as glycosuria; so large an amount as Sée's highest limit would indicate diabetes mellitus. However, Sée affirms that antipyrin given to such patients causes all the symptoms of the disease to disappear—the thirst, the polyuria, and the sugar, the increased excretion of urea, the affections of the skin and of the nervous system. There is no effect in diabetics who have wasted greatly, or who have phthisis. Robin speaks more judiciously of the treatment. He says that a complete cure is not observed, only a suspension of the symptoms. Large doses of the drug cause loss of appetite and albuminuria, so that daily doses of between 30 and 45 grains ought to be adhered to. According to Robin, also, it is most useful at the commencement of diabetes, and the medical treatment must be accompanied by a dietetic one. From the effects of the drug that he has noticed Robin can only consider antipyrin in the treatment of diabetes as a two-edged sword. Worms asserts that he has obtained as good results in diabetes with sulphite of quinine as with antipyrin. The truth about antipyrin probably lies between Sée's statements and Robin's; the drug benefits some cases of glycosuria and not others.

Antifebrin appears also to be a local anæsthetic as well as a general analgesic. Newth [10] speaks well of it in ointment (20 grains to the ounce) as an application to irritable ulcers, to psoriasis, and various forms of inflammatory skin diseases.

Phenacetin is extolled by Dujardin-Beaumetz[11] as an antipyretic but chiefly as an analgesic. It does not, like antipyrin, derange the stomach or cause a rash; and it does not, like antifebrin, tend to cause cyanosis. In daily doses of 15 to 30 grains, it is said to relieve all sorts of pain, whether due to functional or organic disease. These results are confirmed by Ott,[12] who goes so far as to say that there are few neuralgias that will not yield to phenacetin, but that in hemicrania and occipital headache the most beneficial results are noticed. Masius, on the other hand, considers phenacetin inferior to antipyrin, both as an antipyretic and as an analgesic, so that it has yet to find its place in therapeutics.

Methacetin (para-acetphenetidin) is a recently introduced antipyretic. It has not yet been extensively tried.[13]

Exalgine is a recently introduced local and general anodyne. It is chemically ortho-methylacetanilide, $C_9 H_{11} NO$; and possesses both the antipyretic and analgesic characters of antipyrin. The analgesic action is, however, more pronounced than the antipyretic. In doses of 4 to 6 grains, it is beneficial in all forms of neuralgia, and no poisonous effects have been noticed from such doses. The toxic dose is about 56 grains for an average man, or about $7\frac{1}{2}$ grains for every two pounds of body weight. It is best given in warm water, to which a small quantity of alcohol is added.

Hypnotics and Cerebral Stimulants.—This is a most important class of drugs, which is engaging the attention of pharmacologists and therapeutists, both at home and abroad. The Therapeutic Committee of the Association have taken hypnotics as the subject of investigation for the current year; and it is hoped that the results obtained will aid in determining the utility of the more recently introduced drugs of this class. What is wanted is a safe hypnotic—a drug that will produce sleep without depressing to any great extent the heart, and without having, on the patient waking from sleep, any cerebral or motor disturbance. Such a drug is still a desideratum. Sulphonal seems to approach in its qualities nearest to what is considered a typical hypnotic. For the work which has already been done on it we must refer to two leaders which have appered in the JOURNAL this year, one on April 27th, and the other on November 2nd. Nothing of importance has been published since the last leader appeared. The subject of hypnotics was introduced as a discussion by Prof. Leech, of Manchester, at the Leeds meeting of the Association this year. Dr. Leech's able paper, which has appeared in the JOURNAL, sets forth clearly and succinctly what is known of hypnotics and what is required to be known. The two most recently introduced hypnotics, ural and chloralamid, may be dismissed in a few words, as they are still on their trial. Ural, described by Poppi,[14] is a combination of chloral and urethan. It produces a quiet sleep in therapeutic doses, without lowering the blood pressure; and has no unpleasant after-effects, even in cases of heart-disease. Poppi has given it in hysteria and other nervous diseases. Chloralamid, $C_3H_4NO_2Cl_3$, is a combination of anhydrous chloral and formamid. It is given to adults in doses of 30 to 45 grains in water. Sleep is said to result in half an hour, and to last about eight hours. Its utility has yet to be established; but it is well spoken of by Dr. Hale White in a recent paper.[15] Surgeon Firth's excellent

[4] *Therap. Monatshefte*, June, 1888.
[5] *Münch. med. Wochenschr.*, 1888, No. 33.
[6] JOURNAL, June 1st, 1889.
[7] *Med. News, Philad.*, vol. 53, p. 645.
[8] *Bull. gén. de Thérap.*, 1889.
[9] *Bull. de l'Acad. de Méd.*, 1889, xxi, p. 503.

[10] *Lancet*, April 6th, 1889.
[11] JOURNAL, March, 1889.
[12] See JOURNAL, January 12th, 1889.
[13] See Mahnert, *Pharm. Post*, April 7th, 1889.
[14] *Wien. med. Woch.*, November 22nd, 1889.
[15] JOURNAL, December 14th, 1889.

paper on kola nut[16], is a valuable contribution to the caffein-containing class of vegetable products, such as coffee, tea, cocoa, and paraguay tea. True kola (as distinguished from "false" kola), contains a relatively large amount of caffeine; and so it is affirmed to be a tonic and stimulant to the nervous system. Surgeon Firth's experiments were undertaken with the idea of testing the advisability of giving the nut to soldiers when they were performing hard duty, such as in forced marches. It is said to remove the sense of fatigue after marching. The results show that kola stimulates the central nervous system, augments the force of the heart-beat, thus increasing arterial tension. It does not seem to be of any benefit in convalescence, or in removing the results of alcoholism, but its astringent properties might be serviceable in cases of diarrhœa.

Cardiac Remedies.—Very little has been added to the main facts about strophanthus since Fraser published his research a few years ago. Most practitioners who have carefully tried the tincture speak well of it in cases of mitral regurgitation and of functional irregularity of the heart. It has been said to be useful in renal dropsy. Sée, during the discussion on strophanthus and strophanthin, at the Académie de Médecine, this year, recomended strophanthin instead of strophanthus. He not only denies that the tincture of strophanthus is useful in cardiac disease, but says that it is apt to irritate the kidneys and produce albuminuria. Bucquoy, however, during the same discussion, stated that he found strophanthus relieve the dyspnœa of cardiac disease and cause diuresis. From these conflicting statements, it is probable that all preparations of the drug are not of equal value. The general English opinion seems to be that strophanthus is very useful in some cardiac cases, and with no action in others, like digitalis, in fact. Adonidin, the active principle of Adonis vernalis and A. æstivalis, has been recommended in cases of cardiac disease. The dose is one-eighth to one-sixth of a grain in chloroform water three times daily. Like digitalis it regulates and strengthens the cardiac beat, and to a less extent than that drug it causes an increase of blood pressure by contracting the arterioles. In this last respect, therefore, adonidin stands between digitalis and strophanthus. Borgiotti recommends adonidin chiefly in case of mitral regurgitation and stenosis, in which there is great cyanosis.[17] Dr. T. Oliver found relief by adonidin from the præcordial pain, the palpitation and dyspnœa of mitral and aortic regurgitation. He concludes that the cases of aortic regurgitation in which the drug appears to be most beneficial are where the lesion is due to a rupture of the valve (traumatic) or to atheroma, and not in those cases due to rheumatic endocarditis.[18]

Remedies for Sweating.—The active principle of white agaric and of agaricin is, according to Hofmeister,[19] agaric acid, investigated chemically by Fleury and Jahns. This acid may be given in pill form, each pill containg one-third or half a grain. Agaric acid is a local irritant when subcutaneously injected, and when a very large dose is given by the mouth, it causes vomiting and diarrhœa. When absorbed, it lowers the blood pressure. It checks normal perspiration, like atropine, by acting on the secretory apparatus. A ten per cent. solution of chromic acid applied every two or three weeks is beneficial in sweating of the feet, and the method has been used with success in the German army.

Mercurial Preparations.—Many attempts have been made to find a serviceable method of subcutaneously injecting mercury for the treatment of syphilis. By means of hypodermic injection it is asserted that the treatment of the disease is simplified owing to the fact that the injections need only be made every five to eight days, or in some cases every fortnight, while the patient is by this method more readily brought under the influence of the drug, a result which is very desirable in syphilitic affections of the brain, eye, or larynx. For some reason or other, not easily defined, the hypodermic injection of mercurials is not in vogue in our country, but numerous trials have been made abroad, especially in Germany, of the mode of treatment. It is obvious that the hypodermic injection of any of the more soluble preparations of mercury, such as the bichloride and bicyanide, is out of the question. Not only is there serious danger of mercurial poisoning, but the drugs cause intense local irritation, which may end in abscess. One of the latest preparations introduced is Lang's so-called oleum cinereum, or grey oil. It is a mixture of mercury and lanolin of each 3 parts, olive oil 4 parts, and thus contains about 30 per cent. of solid mercury. Before injection the mixture must be warmed over a spirit lamp. Speaking generally, an injection of 0.1 to 0.15 cubic centimètre is made deep into the back or nates every five to eight days; the intervals are then made longer, and the dose increased to 1.5 to 2 cubic centimètres. There is little if any local trouble, and the effect of the mercury is soon evidenced on the syphilitic process. The preparation is also useful as an application to specific lesions difficult to get at, as in the ear, Eustachian tube, larynx and nose.[20] Owing to the tendency to rancidity of the oil in the oleum cinereum, Neisser recommends an oleum cinereum benzoatum, which is composed of 20 parts of mercury and 40 parts of paraffin, with 5 parts of benzoin-ether.[21] One cubic centimètre contains 0.3766 gramme of mercury, or about 6 grains. The dose is 0.25 cubic centimètre once; then in eight days two such doses, and so on. No abscesses were found in Harttung's experiments, and mercury was found in the urine on the third day after administration. The injections cause some local induration. Beneficial results were observed, but they were not so good as when calomel was given. Frost[22] says that oleum cinereum is better than a similar calomel preparation subcutaneously administered, since it does not produce such local irritation. Von Handring[23] found, indeed, that with the calomel preparation, abscesses formed in 6 cases out of 274 injections, but he speaks very well of it. A fatal case of poisoning by oleum cinereum is recorded by Lukasiewicz.[24] A well nourished woman, aged 46, was treated for syphilis with the oil, hypodermically; she received altogether 2.15 cubic centimètres in the course of seven weeks, altogether about 98 grains of mercury. A week after the last injection severe stomatitis appeared, accompanied by profuse bloody diarrhœa, with tenesmus and abdominal pain; the patient rapidly succumbed. *Post mortem* the kidneys were found diseased, there being small celled interstitial infiltration with swelling of the epithelium of the convoluted tubules. The mucous membrane of the intestine was swollen. The sites of the injections were found in many cases occupied by partially or totally necrosed tissue, and in one of the last injections, 69.5 per cent. of the mercury injected was found. Such cases are admittedly rare, but several cases of stomatitis occurring after the last injection have been noticed by the same observer.

For the mode of administration of salicylate of mercury, and what is called thymol-mercury, the original papers must be consulted.[25]

[16] *Practitioner*, 1889. See also Christy's *New Commercial Plants and Drugs*. No. 8.
[17] *Deustch. med. Zeits.*, August. 1888
[18] *Lancet*, November 24th, 1888.
[19] *Arch. f. exp. Path. etc.*, xxxv., p. 189
[20] Lang. *Wiener. klin. Wochens.*, 1888, No. 9. See also *Central. f. d. med. Wiss.*, 1887, page 64.
[21] For details of the mode of preparation see Harttung, *Vierteljahrsschr. f. Dermat. u. Syph.*, xv, 1888, pages 309-660.
[22] *Wien. med. Wochenschr.*, 1888, No. 41.
[23] *Petersburger med. Wochens.*, 1888, No. 43.
[24] *Wien. klin. Wochens.*, 1889, No. 29.
[25] See Plumert, *Vierteljahrsschr f. Dermat. u. Syph.*, xv, page 663; and Jadassohn and Zeising, *ibid.*, page 781.

OPHTHALMOLOGY.

We regret to have to record that the most memorable events in the ophthalmological world that have occurred in 1889 are the deaths of Professors Donders and Jacobson.

In Donders we have lost an epoch-marking man, who, as such, may rank with Harvey and Jenner; one who, by reducing empirical knowledge to an exact science, has laid a foundation for all subsequent workers in the same subject. Such men do not die in a scientific sense; their personal presence is removed, but their influence is permanent, and that which they have added to the sum-total of human knowledge is an heirloom to unborn generations.

Jacobson's work being essentially practical bears upon the present more than upon the future. We have so recently given an epitome of his career that we will only now recall the fact that to him the modern improvements in the operation of cataract extraction are in a large measure due; and, although in the march of time further modifications necessarily throw the work of the earlier operators into the shade, it would be unfair to minimise the importance of the lower steps of the ladder, and the name of Jacobson will always have a place in the history of cataract extraction.

An interesting discussion took place at the annual meeting of the Association at Leeds on the subject of cataract extraction, especially on the vexed question whether iridectomy should form part of it. Leeds may in a sense be considered a stronghold of the so-called "simple" extraction, and an immense number of

cases were exhibited which had been operated on without iridectomy. It was evident, however, that wide differences of opinion existed on this subject, and probably no converts were made on either side. It seems that in this country the operation with iridectomy is still by far the most frequently performed, while in America iridectomy is being more and more abandoned. There will probably always be advocates of both proceedings. Indeed, as far as mature senile cataracts are concerned, the question is chiefly one of personal preference, and each operator will obtain the best results from the proceeding in which he is most experienced. It is not unlikely, however, that it will eventually be determined by the bearing that it has on the treatment of immature cataracts, and at present iridectomy would here seem to present a definite advantage. Not much has been heard of washing of late out the cortex with a stream of water in these cases, and indeed the whole subject of immature cataract has hardly received the attention that might have been expected from its practical importance.

On the subject of refraction, there is nothing new to record. Public attention has been directed to the question of the eyesight of children in board schools by a correspondence which appeared in the *Standard*. There are no signs, however, of any practical result; indeed, it was quite evident from the nature of the letters published that the question is one that is totally unfitted for discussion in a lay paper, and it seems to us that it was at least a serious error of judgment to start such a correspondence.

A question in which the public are more directly concerned, as it affects their lives and pockets, is that of the vision, and more particularly the colour-vision, of sailors and railway *employés*. Thousands of lives and an immense amount of property are constantly dependent on the ability of one man to distinguish between a green and a red light, yet the means taken to exclude colour-blind men from positions involving this responsibility are of the most flimsy description. Year by year this has been prominently brought before the authorities, hitherto without result. We are glad to say, however, that at length there are signs that some effect is being produced, and that the Board of Trade has recognised the urgent necessity for some reform in this matter. The public have begun to take an interest in the subject, and even the men themselves are anxious to see a fair and efficient test instituted. We confidently hope, therefore, that before long a thoroughly efficient test carried out be competent examiners, will be made compulsory on all railway *employés* and seamen who are liable to be called upon to interpret signals. In speaking in this more hopeful strain, we do not forget that we owe a debt of gratitude to Mr. Bickerton, who for years past has laboured at the subject, and read a paper on it at the Leeds meeting.

In ophthalmic literature, the year has not been prolific. Deutschsmann's monograph, *Ueber die Ophthalmia Migratoria*, is a very able and complete exposition of the writer's well-known experiments and opinions on the pathology of sympathetic ophthalmitis. It is a pity that Randolph's paper in *Knapp's Archives*, which questioned many of Deutschsmann's facts and most of his conclusions, was published too late to be noticed by him. Among textbooks we would especially notice Mr. Berry's admirable work, and Professor Fuch's *Handbuch*, while from minor works we would select for special mention a little book on *The Clinical Use of Prisms* by Mr. Ernest Maddox.

The Bowman Lecture was given by Professor Hansen Grut, whose researches into all questions connected with the muscles of the eye are well known. It is perhaps unfortunate that the special subject chosen—concomitant squint—has been so thoroughly threshed out of recent years that interest in it has a little flagged.

MIDWIFERY AND GYNÆCOLOGY.

Electricity in Extra-Uterine Pregnancy.—Cæsarean Section.—A Source of Puerperal Fever.—Rupture of Uterus.—Acute Tympanites.—Pernicious Anæmia in Pregnancy.—Drugs in Pregnancy.—Transfusion in Metrostaxis.—The Line of Extension of Uterine Cancer.—The Treatment of Uterine Tumours by Electricity.—Acute Spinal Disease after Hysterectomy.—The Endometrium.—Dangers of the Curette.—Uterine Pathology.—Flushing the Peritoneum.—Ovariotomy in Childhood.—Ovarian Pathology.—Kraurosis Vulvæ.—Non-retention of Urine in Young Girls and Women.—Salpingostomy and the Conservative Surgery of the Fallopian Tubes.

Electricity in Extra-Uterine Pregnancy.—Dr. Hanks[1] reports two cases of early extra-uterine pregnancy successfully treated by electricity. Unfortunately it is impossible to make the diagnosis with certainty at an early period of extra-uterine gestation; and all agents, electricity included, that have been used in undoubted cases to kill the fœtus, have proved exceedingly uncertain in their action. When the evidence points very strongly to extra-uterine pregnancy, at an early stage probably an exploratory abdominal section is the most satisfactory treatment.

Cæsarean Section.—The question as to the justifiability of Cæsarean section as an operation of election in moderately severe cases of pelvic contraction is one that is likely to assume increased importance. In some directions there is a tendency to admit that it may be right to perform Cæsarean section, although delivery by craniotomy would be quite possible, or even fairly easy. It is impossible to give any definite ratio of values as between the life of the mother and of her unborn child, but few would deny that the former is a great many times more valuable than the latter. The results of craniotomy since the introduction of antiseptics have not been shown by statistics, and it is obviously not fair to compare the results of craniotomy in the pre-antiseptic days with the results of the modern Cæsarean section. Even if the mortality of the latter operation be only from 15 to 20 per cent., this is without doubt far in excess of the death-rate of craniotomy performed with antiseptic precautions by the best operators even in high degrees of pelvic contraction. The outcome of this line of reasoning is that Cæsarean section should remain an operation of necessity and not of election.

A Source of Puerperal Fever.—A series of deaths at Limehouse this year shows once again how disease in the accoucheur or midwife may cause puerperal fever. In this instance the midwife was suffering from tertiary syphilitic mischief of the nasal passages. Even so, it is very likely that the infection was conveyed by the fingers, so that if she had thoroughly cleansed her hands and disinfected them by soaking in an efficient antiseptic, no harm would have resulted.

Rupture of Uterus.—Dr. Green[2] has reported a case of rupture of the uterus. The patient had a flattened pelvis; the child, weighing nine pounds, had been extracted by turning. It then appeared that rupture of the uterus had occured; the placenta had escaped into the peritoneal cavity, and lay among the intestines. After it had been removed through the rent, nothing more seems to have been done. The patient made a good recovery.

Acute Tympanites.—Dr. Charles Wicks recorded a case of acute tympanites occurring at the 6th month of pregnancy. The abdomen was punctured in four places with a medium-sized trocar. A large quantity of gas escaped, labour came on, and was easily completed. The patient recovered.

Pernicious Anæmia in Pregnancy.—Dr. W. Osler[3] reported nine cases of pernicious anæmia, five of which began in the puerperal period. He has found arsenic of great value in these cases.

Drugs in Pregnancy.—Dr. Atthill wrote early in the year on the action of certain drugs during pregnancy, and said that in ordinary medicinal doses ergot, quinine, and strychnine would not act as emmenagogues. In corroboration, we may mention that women may even become pregnant while taking half-drachm doses of the liquid extract of ergot thrice daily. Several observations have been reported on the use of antipyrin during labour. The results obtained have not been at all uniform, for while Dr. J. O. Winkle considers that the drug lessens the pain, and shortens the duration of the first stage, others, among whom are Drs. Auvard and Lefebre, have failed to obtain such results.

Transfusion in Metrostaxis.—Mr. W. H. Brown, of Leeds, performed transfusion successfully in a patient who was in a state of extreme exhaustion from hæmorrhage due to a fibroid polypus. He injected 25 ounces of saline solution into the median cephalic vein. It is well to bear in mind that a simpler alternative, the injection of saline solution into the rectum has been apparently successful in similar cases.

The Line of Extension of Uterine Cancer.—Two radical operations are frequently performed with a view to extirpate, for a time at least, the most serious disease to which woman is subject. The first is supra-vaginal amputation of the cervix, the second total extirpation of the uterus. By cancer of the uterus, that form which begins in the cervix is understood, primary cancer of the body being very rare; besides, in the latter form the second opera-

[1] *New York Medical Journal*, January 5th, 1889.
[2] *New York Medical Journal*. December 29th, 1888.
[3] *American Journal of Obstetrics*, February 18th, 1889.

tion could alone offer any chance of relief. According to the ideas of the general surgeon, total extirpation would be the most scientific operation in cases of the commoner form of uterine cancer. It is, however, very difficult, and involves much manipulation in the dark. Dr. John Williams prefers supra-vaginal amputation of the cervix, as he finds that the cancer does not first extend upwards along the endometrium into the uterine cavity, but laterally into the parametric connective tissue. After amputation of the cervix, recurrence took place in that tissue, and not in the stump. This theory of the extension of cancer does not, however, correspond with some researches of German pathologists, collected in an article published in the *Deutsche medicinische Zeitung*, February 4th, 1889. Drs. Abel, Fränkel, Saurenhaus, and Thiem found that even in an early stage of cancer of the cervix the endometrium was always diseased. In some cases it was already cancerous; in the remainder, a kind of glandular endometritis was established, a very suspicious condition, which might accurately be termed pre-cancerous. On the strength of these observations, the above-named German writers all advocated total extirpation of the uterus in cases of cancer of the cervix. There are, however, two other sides, surgical and clinical, to this question, and they cannot be overlooked. Duchamp and Rendu, of Lyons (*Lyon Médical*), hold opinions similar to those of Williams, and also prefer, on the whole, amputation of the cervix, on clinical grounds.

The Treatment of Uterine Tumours by Electricity.—On June 8th an article bearing this title appeared in the JOURNAL and excited great interest. for its author was Dr. Thomas Keith. He openly advocated electricity in the treatment of uterine fibroids as preferable to hysterectomy. The latter operation showed a high mortality, although the kind of disease for which it was performed seldom shortened life. Electricity, on the other hand, relieved the patient of all troublesome symptoms; in fact, it changed her whole life. Dr. Keith insisted, however, on the difficulties of the new line of treatment. The surgeon must learn the science of electricity; he must not merely "get up" the use of certain instruments, nor leave the application of those instruments to a specialist. He must apply the electricity himself, and the treatment demanded great patience. It is certain that electricity employed for fibroid disease is not without danger, even when in the hands of experts. Dr. Keith's paper gave rise to much interesting correspondence and discussion. A long series of after histories is advisable before the profession can come to any decision on the relative merits of electricity and hysterectomy. Uterine fibroid is a very chronic disease, and many remedies, even pure therapeutics, afford temporary relief. In any case, the disease can only be satisfactorily treated by men of long experience in gynæcology.

Acute Spinal Disease after Hysterectomy.—Dr. Walzberg described in the *Berliner klin. Wochenschrift* a case where sub-acute anterior poliomyelitis set in two months after the patient had been discharged from hospital, where she had undergone hysterectomy for fibroid. The precise relation of the operation and the spinal affection does not appear to have been ascertained. The poliomyelitis ultimately disappeared.

The Endometrium.—The precise characters of the endometrium between and at the menstrual period, and in the earliest stages of pregnancy, have by no means been accurately determined. The subject is of obvious interest to the obstetrician, and likewise important to the gynæcologist, nor is it without the province of medical jurisprudence. The precise distinction between different forms of dysmenorrhœal casts, and between the most thoroughly organised of these casts and the decidua of early pregnancy, is not very clear, considering what grave questions may depend upon such a distinction. Hence Dr. Minot's monograph on the Histology of the Endometrium ("Uterus in Embryo: 1 Rabbit; 2 Man," *Journal of Morphology*, Boston, U.S.A., April, 1889) is an important publication. Once Dr. Minot believed that true decidual cells formed in the endometrium at the menstrual periods, and many still hold this opinion. After very careful research, Dr. Minot finds that there is no evidence that such cells develop under the circumstances. During menstruation, the uterus becomes hyperæmic. Hyperplasia of the connective-tissue of the endometrium and hypertrophy of the uterine glands take place. The most superficial part of the endometrium appears undoubtedly to be shed. The changes during menstruation and pregnancy are homologous, but the process is arrested during the former phenomenon before a true decidua is developed. In pregnancy, the decidual cells are probably developed from the proliferating connective-tissue cells in the endometrium. Hence gynæcologists must be very careful in examining under the microscope suspicious shreds of membrane discharged, in the course of painful symptoms, from the uterine cavity.

Dangers of the Curette.—There can be no doubt that the curette must not be lightly taken in hand for the purpose of scraping the endometrium. It involves the preliminary use of tents or dilators, and its sharp or blunt extremity deliberately wounds the uterus. Hence it is needless to point out that the use of the curette is no "minor operation." Doléris and Geyl have found that this instrument sometimes causes paralysis of the uterine walls, which comes on suddenly, so that the curette seems to go into a space, or, rather, feels as though it had perforated the uterus. Under these circumstances, the condition of the uterus favours sepsis more than ever.

Uterine Pathology.—Besides Dr. Minot's valuable researches on the endometrium noted in full in this retrospect, we may note Dr. Paul Mundé's case of racemose tumour of the cervix, described in the *American Journal of Obstetrics*, in February. This tumour is very malignant, and Pernice, a year ago, showed that in its early stage it is made up of embryonic, striped muscular fibres. Later, its tissue assumes the character of spindle-celled sarcoma. Its grape-like clusters are invested by a common epithelial investment, so that this remarkable tumour is hard to recognise before it is removed. Another interesting case of malignant uterine disease was recorded in the *Centralblatt für Gynäk.*, No. 17, this year, by Dr. Liebman. A large uterine polypus was removed; it consisted of a stroma of plain muscle-cells, enclosing alveoli stuffed with cells of an epithelial type, a myo-carcinoma, as it might be termed. The patient died a little over a year after the operation. The lungs, ovaries, and abdominal and pelvic lymphatics were found infested with myo-carcinomatous masses.

Flushing the Peritoneum.—Mr. Lawson Tait's practice of washing out the peritoneum with hot water after ovariotomy and other forms of abdominal section where morbid fluids have escaped into the serous cavity or where much effusion is likely to take place has greatly spread during the past year. The *Annales de Gynécologie* for September contain an important monograph by Dr. Pierre Delbet. He has made a series of experiments to ascertain the physics and physiology of flushing the peritoneum. The fluid used for the process is diffused over the whole of the peritoneal cavity, even as far as the diaphragm. Foreign bodies cannot be entirely displaced by flushing. After the process, a considerable amount of fluid remains in the pelvis and flanks. There appears to be no danger of arresting the heart's action, as the temperature between 64° and 122° F. has no marked effect on the respiration or circulation. About 100° seems to be the best temperature. As Dr. Bantock and others have already affirmed, Dr. Delbet does not believe that M. Polaillon's case, which died after flushing, perished through that process. The water contained carbolic acid, which might have poisoned the patient, nor is there clear evidence that death did not occur through the anæsthetic. A great quantity of water is absorbed into the circulation during the first few minutes after flushing is commenced. Then a considerable amount of any poisonous antiseptic solution may be introduced into the peritoneum without fear of absorption, provided that it be followed by a third flushing with a seven in a thousand solution of salt in water.

Ovariotomy in Childhood.—Dr. Hamaker reported in the *New York Medical Record*, September 14th, a case of ovarian tumour in a girl aged seven. Ovariotomy was successfully performed. The youngest patient on whom that operation has been successfully undertaken was one year and eight months old, the operation was performed in Berlin several years ago by Küster, and has been quoted in several well-known textbooks. The subject turns on fhe question how abdominal section is born in infancy. According to the statistics published by Dr. Stolypinsky (*Centralblatt f. Gynäk.*, No. 11, 1889), and Lindfors (*ibid.* No. 28), new-born infants bear radical operations for congenital umbilical hernia very well. Dunlap and Phenomenoff have both operated successfully on infants one hour old; both operations were true abdominal sections, the peritoneal cavity, as well as the hernial sac, being freely explored. As several cases of congenital ovarian tumours, well pedunculated, have been described, it is probable that ovariotomy at a very early age may prove safe and justifiable.

Ovarian Pathology.—Dr. Sippel has contributed to the *Centralblatt f. Gynäk.*, No. 18, 1889, an interesting paper on supernumerary ovaries. Mr. Doran described in the JOURNAL, June 8th, a case where he successfully removed a large fibroma of the utero-ovarian ligament. M. Terrillon removed a solid ovarian tumour (*Bulletin de la Soc. Anatom. de Paris*, January, part 2),

which consisted of interlacing bundles of well-formed, striped muscular issue.

Kraurosis Vulvæ.—In examining the external organs of young women, it is not rare to discover a singular change in the vulva, which assumes the appearances naturally seen in old age. The labia minora are chiefly affected, and the atrophic degeneration of the vestibular structures causes gaping of the meatus urinarius and consequent irritation. To this condition Dr. Breisky has given the name "kraurosis vulvæ." In th ecourse of the past year, Dr. Janovsky, of Prague, published, in the *Monatscheft f. pratische Dermatologie*, some observations on six cases. In one of these cases, œdema followed by a sclerotic process and consequent atrophy of the affected tissues seemed to have occurred; but the etiology was in no case very clear. Chronic venereal discharges and ulcers appeared to predispose to kraurosis. Therapeutic measures proved perfectly unavailing.

Non-retention of Urine in Young Girls and Women.—Dr. Harry Marion Sims found that in cases of simple enuresis in girls, as well as in instances of irritable bladder after cystitis in age, the bladder was small and contracted through hypertrophy of the muscular coat, so that its holding power was much reduced. He has successfully treated such cases (*Amer. Journ. Obstet.*, September, 1889), by gradual dilatation of the bladder. A silver catheter was introduced into the bladder and warm water injected by means of a Higginson's syringe. The treatment was continued daily, the amount of fluid which was injected being steadily increased, and in one case, a bladder which could hold less than two ounces at first, could retain eighteen at the end of three months. When the bladder was thus distended to a certain extent, involuntary micturiction ceased.

Salpingostomy and the Conservative Surgery of the Fallopian Tubes.—Removal of the tubes is certainly justifiable in many cases of salpingitis and hydrosalpinx, and more assuredly in pyosalpinx. Still it is much to be desired that surgeons could find a way of laying an obstructed tube open so that it could resume its normal functions. Hitherto, tentative operations have proved impossible, or more dangerous than amputation of the tubes, according to Mr. Lawson Tait and other authorities. Dr. Skutsch, of Jena, in one case, emptied two dilated tubes, and on each side cut a piece out of the tubal wall near the ostium. The mucous and serous coats were united along the edges of the artifical ostium by fine silk. A sound was then passed through the opening, along the tube into the uterus. The results appear to be satisfactory. Dr. Skutsch terms this operation "salpingostomy" (*Centralblatt für Gynäkologie*, 1889, p. 565). It may be a step in the right direction, but should there be a trace of suppuration in the tube, this proceeding would be most perilous and in any case local inflammation would very likely ensue, a complication which could hardly fail to close the tubes once more, so that the patient would be worse off than before the operation.

Obstetrical Society of London.—In February, Dr. John Williams resigned the presidency to Dr. Galabin, who delivered an address on modern progress in obstetrics and gynæcology, in which he dwelt especially on the perfection of Cæsarean section and the lessening of mortality in cases of extra-uterine pregnancy. A valuable discussion took place on a paper by Professor Stephenson, of Aberdeen, on the relation between chlorosis and menstruation. A very long and active discussion followed the reading of an essay by Dr. Champneys, on a case of Cæsarean section for contracted pelvis: Dr. John Phillips contributed a careful paper on acute non-septic pulmonary disorders as complications of the puerperium. A paper by Dr. Herbert Spencer on the diagnosis of placenta prævia by palpation of the abdomen also led to an active discussion. The discussion was all the more remarkable in that several leading obstetrical authorities took part in it, and differed widely on some of the simplest and most fundamental questions. Mr. Doran read a paper on a form of localised peritonitis which simulated abdominal tumours. He also read a paper on the changes which the Fallopian tube undergoes in chronic inflammation. A great number of interesting cases have also been reported and discussed, especially a remarkable series of teratological specimens.

British Gynæcological Society.—The inaugural address of the President, Dr. A. V. Macan (Master of the Rotunda, Dublin), was devoted to an advocacy of the value of bimanual examination of the pelvic organs, and to some methods of treatment which may be termed direct developments of the process, as in breaking down bands of adhesions in cases of fixed retroflexion of the uterus, and in the case of prolapsed and fixed ovaries. A second development is the use of massage in the treatment of chronic pelvic inflammation, as originally introduced by Thure-Brandt, of Stockholm. Later in the session an exhaustive paper, on massage, its use and abuse in gynæcological practice, was read by Dr. Macnaughton Jones. Dr. Bantock's last paper on ovariotomy, showing a mortality of 4 per cent. in the last hundred cases, and Mr. Lawson Tait's work on the subject of ectopic gestation, with a large array of illustrative specimens, may be given as proofs of the utility of this Society, and of the success which is attending gynæcological study. The subject of hysterectomy for fibrous tumours has been illustrated with specimens by Dr. Bantock, Dr. R. T. Smith, Dr. Fenton, Mr. Lawson Tait, and Mr. Bowreman Jessett; Mr. Jessett's case was associated with fæcal fistula, and some others were referred to. Specimens were shown of pregnant uteri removed by Dr. Fancourt Barnes for a fibroid tumour, and by Dr. Murphy, of Sunderland, and Dr. Bedford Fenwick, in cases, respectively, of obstruction due to cancer of the cervix, and to an impervious uterine opening after amputation of the cervix for epithelioma. Dr. Edis, and Surgeon-Major Joubert, of the Eden Hospital, Calcutta, contributed cases of extra-uterine gestation, in addition to others shown by Mr. Lawson Tait and Dr. Bantock. The vast advance made in recent years in the discrimination and treatment of small pelvic "lumps," inflammatory or new growths, is evident in the complete relief given so frequently by abdominal section. Mr. Tait showed several tubes distended with pus; Dr. Heywood Smith, a most interesting case of primary tubercular salpingitis; Dr. Bantock, a case of double hæmorrhagic cystoma of the ovaries; and numerous specimens of small excessively painfully dermoid tumours were exhibited by Dr. Mansell Moullin and others. Papers were read on nervous disorders associated with uterine ailments by Dr. Routh, Dr. R. T. Smith, and Dr. Bevington, and numerous communications of general interest were also contributed. The Society has now acquired a local habitation for its library at the new house of the Royal Medical and Chirurgical Society in Hanover Square, where, on and after January 1st, its collection of works on gynæcology will be more readily available.

BACTERIOLOGY.

Psorospermosis.— Pyocyanic Bacillus.— Diphtheria.— Puerperal Fever.—Tubercular Disease of Joints.—Bacillus of Tubercle.— Bacteria in Spring Water.—Bacilli after Death of Organism.— Bacillus Mesentericus Vulgatus.

Psorospermosis.—The parasites known as psorospermiæ have been frequently observed, but not rightly interpreted, until quite recently. Bollinger and Neisser, who attributed the varioliform acne of Bazin to the presence of these parasites, were the first who accurately observed it. These parasites present the form of granular cells, with a nucleus or refracting granule, in which a nucleolus cannot be detected. Excellent histologists, have considered these cells to be degenerated Malpighian cells. M. Malassez has observed granulated bodies in epithelial tumours closely resembling the parasites found in rabbit's liver, and in rats infected with psorospermiæ, but in the large number of these tumours M. Malassez has examined, it was in one only that he clearly detected the presence of psorospermiæ. M. Darier, at a meeting of the Biological Society, read a paper on a form of cutaneous psorospermiæ, diagnosed as sebaceous acne. In this case there was not the slightest doubt concerning the parasitic cellular bodies observed, or as to their *rôle* in the pathological development of this affection. The lesions were similar to those observed in psorospermosis of rabbit's liver. Epithelial proliferation from the parasite, leading to fungoid growth, was observed in the epidermis of M. Darier's patient. The question of inoculating in order to produce in animals a disease similar to that observed in the human race presents many difficulties, which have been clearly stated by M. Malassez. Before inoculation, these parasites must be cultivated in many different media in order that they may be submitted to different stages of transformation, and these media are, for the greater part unknown.

Pyocyanic Bacillus.—The pyocyanic bacillus studied by M. Charrin secretes a colouring substance, easily detected by certain reagents. Chloroform dissolves this substance, and when treated with acidulated water loses the coloration which is taken up by this latter. This microbe is easily cultivated, and produces a characteristic series of symptoms. M. Charrin has demonstrated[1] that the virulence of this bacillus increases or decreases according to

[1] *La Maladie Pyocyanique*, Paris, 1889.

the surrounding conditions. This has already been observed in other bacteria, and it is interesting to learn that M. Charrin has ascertained that a new microbe behaves in the same manner. The pyocyanic bacillus has the singular property of developing diseases in a number of animals far removed from each other in the zoological scale, and also by physiological differentiation. It attacks pigeons, rabbits, and frogs; and, curiously enough, in order to produce any effect on pigeons which have a higher temperature than rabbits, or on frogs, which have a lower, a stronger dose is necessary than for rabbits. The phenomena caused by the presence of this bacillus vary in each class of animal. In man it determines blue suppuration, in pigeons a tendency to sleep and loss of appetite; frogs are rendered inert and grow thin; the lesions are enteritis and epithelial nephritis, and cachexia, sometimes hæmorrhage and degeneration. The origin of these secondary lesions M. Charrin does not consider clearly demonstrated by his experiments. The presence of another microbe, and different idiosyncrasies of these different animals, he regards as probable factors. With regard to inoculation, M. Charrin's experiments indicate that the vaccine substance which is to confer immunity is elaborated by the bacillus; that the theory of immunity by substances proceeding from the micro-organism acting as antiseptics is not tenable; neither is the one which supposes immunity to be due to substances taken up from the body. Further experiments showed that the pyocyanic bacillus acts on charbon virus, and that the one infectious disease may be, to a certain extent, combated by another.

Diphtheria.—MM. Roux and Yersin have published in the *Annales de l'Institut Pasteur* two memoirs entitled "Contribution à l'Étude de la Diphthérie," in which they minutely describe their method of research and the results they afforded. The bacillus of diphtheria cultivated in broth renders it acid, afterwards alkaline; in the alkaline state it is excessively toxic in consequence of the soluble products contained in it. These products, used for inoculating guinea-pigs, rabbits, and small birds, produce, according to the dose, acute diphtheria or a chronic septic condition accompanied by characteristic paralysis. A series of experiments made by these investigators show that the bacillus of diphtheria secretes soluble toxic substances. These MM. Roux and Yersin supposed might probably resemble a ferment. They sought to ascertain in the organs of patients dead from diphtheria the presence of the same diphtheritic virus that was detected in the microbe cultivations. The spleen of a child which had died from diphtheria was macerated and crushed in water, then filtered; 8 cubic centimètres of the fluid were inoculated under the skin of a guinea-pig; 30 cubic centimètres were injected into the veins of a rabbit. The guinea-pig grew thin and died five days after the injection; the rabbit lived two months; the hind legs became paralysed. When the diphtheritic virus is filtered away from the cultivation broth, it remains intact a considerable time, provided it is not in contact with the air. This virus is most virulent in an alkaline medium; in an acid medium a strong dose is necessary to kill the animals under experiment. MM. Roux and Yersin suppose that the alkaline properties of the cultivation fluid are due to the oxidation of the nitrogenous substances contained in the broth. Cultivations made out of contact with the air are not alkaline. In cultivations two or three months old crystals of ammonia-magnesian phosphate appear. Filtered cultivation fluid mixed with lactic or tartaric acid injected into guinea-pigs, caused slight œdema; a dose of half the quantity in which the acid was neutralised caused death in a short time. The longer diphtheritic virus remains in contact with an acid the weaker it becomes; carbolic and boric acid and borax retard the toxic action but do not arrest it. Introduced into the digestive tract diphtheritic virus does not produce any disturbance even in large quantities. In certain respects this virus appears to resemble diastase, although it does not change sugar nor albuminoid substances; it acts specially on the coats of vessels, causing vascular dilatation, hæmorrhage, and œdema, resembling somewhat the action of venom. Animals do not get accustomed to the influence of this virus. This is frequently manifested after inoculation. MM. Widal and Chantemesse, in a series of careful researches on the bacillus of diphtheria have observed that the solution of Dr. Soulez (de Romorantin), which consists of 5 grammes of carbolic acid, 20 grammes of camphor, 30 grammes of olive oil, does not arrest the cultivation of the bacillus, but renders it slower; nor does the addition of tartaric acid according to M. Gaucher's method increase the antiseptic properties of the solution. These investigators think that this negative result is owing to the presence of olive oil and fatty bodies. Oils are bad sterilising media, because they do not moisten the cells. Camphorated naphthol has been used with satisfactory results in M. Chauffard's wards in the Broussais Hospital. MM. Widal and Chantemesse in their laboratory experiments found the following mixture the most successful: 25 grammes of glycerine, 5 grammes of carbolic acid, 20 grammes of camphor. The mixture is shaken for ten minutes in a water-bath. When cold this mixture separates into two layers—a lower and an upper; the former fluid, the latter white and viscous—a compound of glycerine, phenol, and camphor. Silk threads impregnated with the virus of diphtheria were plunged for 20 seconds in this mixture, then washed in alcohol at 95°, and used for inoculating a tube of broth; but the broth remained sterile. Nevertheless, alcohol at 95° does not kill the bacillus of diphtheria. This mixture has not yet been used in treating diphtheria, but MM. Widal and Chantemesse say it is slightly caustic, and adheres to the surface with which it is contact. It may be applied twice a day to the throat. Every day the throat should be well washed out with a solution of naphthol, or of carbolic acid. In order that the antiseptic agents may come in contact with the mucous membrane, the false membranes should be removed by means of a tampon of wool Herr Kolisko and Herr Paltauf,[2] in fifty cases of diphtheria, studied in the course of two years researches on croup and diphtheria, invariably found Löffler's bacillus in every form of diphtheria which fell under their notice. In a case of vaginal diphtheria it was absent. Widal's researches have proved that this form of diphtheria is due to the presence of the streptococcus pyogenes. Löffler's bacillus develops easily in the serum of blood mixed with a quart of nourishing sweetened broth, also in pleuritic effusion mixed with peptone and sugar. Near the false membranes or in the mucous membrane, MM. Kolisko and Paltauf have observed, in addition to Löffler's bacillus, staphylococci and streptococci; in the liver they only observed it once. Inoculations with pure cultivations of Löffler's bacillus only caused inflammation, but the cultivation fluid, passed through a porcelain filter used for inoculation, killed the animals under experiment. Staphylococci and streptococci are inert. Kolisko and Paltauf believe that Löffler's bacillus is the sole cause of diphtheria.

Puerperal Fever.—M. Widal[3] believes puerperal infection to be produced by the streptococcus pyogenes entering the animal economy by first lodging in the ulcerated uterine mucous membrane. The diffusion of the micro-organism by the uterine vessels explains the distribution of this affection in various organs. M. Widal has observed that the false membrane sometimes present in puerperal fever has no analogy with the false membrane of diphtheria. The puerperal false membrane and the pus of the abscesses are of the same origin, and are produced by the streptococcus pyogenes. M. Widal has examined the veins in a number of cases of puerperal phlegmasia alba dolens, and has ascertained that the origin of this affection is always due to the presence of the streptococcus pyogenes in the endothelium of the vein; the clot forms after inflammation has set in. The difference between the mildest form of phlegmasia alba dolens and the most serious form of suppurative phlebitis is only a question of degree. The clot sometimes changes into true pus, not a fluid containing pus corpuscles. According to M. Widal the streptococcus which produces erysipelatous dermatitis can, unassociated with other microbes, produces suppuration in phlegmonous erysipelas. The streptococcus, isolated from puerperal discharges, produces erysipelas, in the same way as does the streptococcus isolated from a patch of erysipelas.

Tubercular Disease of Joints.—Dr. Pawlowsky[4] has observed that tuberculous affections of the articulations are of a mixed character. In 1887 he examined different portions of fungoid growth removed from joints. He observed the presence not only of the bacillus tuberculosis, but also of streptococci; in one case there were only a few, but in another the bacillus was present in large numbers; its extremities were rounded. Rabbits inoculated from pure cultivations of this bacillus died eleven or fifteen days after from generalised infection; their organs contained the microbes of inoculation. In another series of experi-

[2] Zum Wesen des Croups und der Diphtherie, *Wiener klinische Wochenschrift*, No. 8, 1889.

[3] Etude sur l'infection puerpérale de phlegmasia alba dolens (*These de la Faculté de Médecine*, Paris, 1879).

[4] Sur les Formes Mixtes de la Tuberculose des Articulations, *Annales de l'Institut Pasteur*, No. 10, 1889.

ments Dr. Pawlowsky inoculated pure cultivations of the bacillus tuberculosis mixed with pure cultivations of streptococcus pyogenes, staphylococcus aureus, and the pyocyanic bacillus, and observed that the animal which had been inoculated with the bacillus tuberculosis and the pyocyanic bacillus became the most rapidly ill; it died on the twelfth day after inoculation. The necropsy showed that there was suppuration of the knee-joint and grey tubercles in the lungs; the pus of the articulation contained the pyocyanic bacillus. The inoculation of the bacillus tuberculosis and the streptococcus resulted in an enormous swelling, and death ensued fifty-two days after. The joint was full of cheesy masses. Cultivations of pure bacillus tuberculosis, inoculated into the knee-joint, produced death three months after from miliary tuberculosis of the lungs, kidneys, and articulations. The result of M. Pawlowsky's research is to demonstrate the existence of mixed tuberculous affections, also to prove that not only do they render local symptoms more complex but they lessen the general power of resistance.

Bacillus of Tubercle.—Hammerschlag[5] made a series of interesting researches in Professor Nencki's laboratory at Berne, on the media favourable to the development of the bacillus of tuberculosis. This bacillus develops in a mixture containing 5 per cent. of glycerine in broth solidified by agar-agar, also in ordinary nutrient broth to which has been added 5 per cent. of glycerine, but not solidified. MM. Roux and Nocard have observed that the glycerine can be replaced by mannite or fruit sugar, soda, or potash salts. If trypsin is substituted for peptone, the bacillus does not appear, but in a decoction of yeast and water containing 5 per cent. of glycerine, this micro-organism develops rapidly. An analysis of these bacilli gives 88.82 per cent of water and 11.18 per cent. of dry substance; of this latter, 22.7 per cent. was soluble in alcohol and ether. After extraction by alcohol and ether, the residuum contained 8 per cent. of ashes, 51.02 per cent. of carbon, 8.07 per cent. of hydrogen, and 9.09 per cent. of nitrogen; the alcoholic extract had a toxic effect on animals; apparently it contained a tetanising substance.

Bacteria in Spring Water.—Herr Karlinsky Justyn[6] examined five samples of spring water of Lunsbruch, and observed in these samples seven different kinds of bacteria. Having ascertained what were the normal bacteria contained in the water, he placed in it pathogenic microbes; typhoid fever bacilli decreased in number, and finally disappeared towards the sixth day. With cholera bacilli there was a more rapid disappearance; on the third there were none to be seen; the bacillus anthracis also disappeared about the third day. These results coincide with those obtained by Krauss, and most probably are explained by the presence of the bacteria indigenous to the water, which destroy the pathogenic bacteria, as in the case of anthrax. Herr Justyn experimented not with cultivations of anthrax, but with blood taken from an animal infected with anthrax.

Bacilli after Death of Organism.—E. von Esmarch[7] has investigated the history of bacilli after the death of the body containing them. He naturally limited his researches to the study of pathogenic microbes. The bacilli of septicæmia of mice in a dead mouse, which decompose slowly in the earth, are, ninety days after burial, still virulent, but lose their virulence when this time has elapsed if the dead body be kept in water. If the body be placed in a stove the virulence disappears eight days after. The micro-organism of the swine plague buried three mètres under ground preserves its vitality during three months. Eighteen days was the longest time that Esmarch observed charbon bacilli remain virulent after the death of the animal containing them. The blood vessels from which this infected blood was taken had been kept in ice during that time, otherwise the virulence would have disappeared sooner. M. Pasteur has demonstrated that with this bacillus there is an absence of spore formation if air be excluded. Apparently the rapidity of the destruction of the bacilli is in proportion to the degree of decomposition. Gärtner observed that bacteridia in the bodies of dead animals lost their virulence twelve days after death. Von Esmarch has seen silk threads impregnated with charbon spore and enclosed in the body of a dead animal multiply after eighteen days. In animals buried the earth spores do not multiply. The micro-organism of fowl cholera in infected bodies and putrid fluids live a long time—from four to six weeks. Von Esmarch concludes from his researches that after death pathogenic microbes disappear quickly; the more intense the putrefaction that takes place the quicker is their disappearance. Decomposition is not the sole factor in this destruction of microbes; a fragment of liver containing charbon bacteridia was inclosed in agar-agar; when examined three weeks after it was impossible to obtain a single colony from it.

Bacillus Mesentericus Vulgatus.—An important contribution to bacteriology has been made by M. William Vignal, in a thesis presented to the Faculty of Science of Paris for the Doctor's degree. Dr. Vignal has hitherto confined his researches to bacilli found in normal tissue, probably believing that in the study of bacteriology, as in other departments of science, the normal should be an anterior study to the abnormal. The bacillus "mesentericus vulgatus," named by Dr. Koch "Kartoffel bacillus" because it is easily cultivated in potato, is one of the micro-organisms most frequently met with. It exists in water, air, the alimentary canal, and in substances beginning to putrefy. A pinch of earth taken from the Luxembourg gardens contained 313 colonies of micro-organisms; of these, 41 were of the mesentericus vulgatus. In earth taken from a field, in 287 colonies there were 31 of this bacillus. In the Paris atmosphere this bacillus exists in the proportion of 4 in 70; in Seine water in 13 in 442. In corn, bran, and flour a large number of this bacillus is found. M. Vignal describes in detail how to cultivate this bacillus, its behaviour in different media, its multiplication by division and spore formation. The multiplication by division observes the rule which holds good in all plants. In the middle of a long bacillus a septum appears which divides in two and gives birth to two bacilli; these when they equal in size the cell from which they proceed, in their turn become subdivided. This phenomenon is repeated in every successive generation. The spores of this bacillus are observed in cultivations a few days old; they appear at the same time as the division of the bacilli takes place, and thus furnish conclusive proof that the spores are not bodies engendered by bacilli when the nourishing media is impoverished. Dr. Vignal considers the spores to be a stage of development of these bacilli or plants in which they are less easily attacked than when they reach the condition of bacilli, in the same way that seeds of plants offer more resistance to external influences than the plants from which they proceed. The spores are not coloured by ordinary methods until they are dead. From the data given by M. Vignal concerning this bacillus, it is evident that one of the ferments of albuminoid substance, the tyrothrix tenuis, discovered by Duclaux, resembles closely the mesentericus vulgatus, but M. Vignal does not think that it is the same bacillus. In a series of experiments made on the respiration of the bacillus mesentericus vulgatus, M. Vignal observed that 1 gramme of this plant dried at a temperature of 100°, and cultivated in broth, containing 21 to 24 grammes of solid and combustible bodies per litre, fixed 1.164.29 cubic centimètres of oxygen, and transformed 7,147.28 cubic centimètres into carbonic acid. If the proportion of combustible substances is increased to 24.15 grammes, the quantity of oxygen fixed is also increased to 1,602; likewise the quantity of oxygen transformed into carbonic acid, but this latter in a larger proportion; it reaches 12,849.70 cubic centimètres. The physiological activity of one gramme of this plant is as much greater than that of one gramme of tissue of an adult man, that in the same given time it consumes 215 times as much. Albumen in the presence of the mesentericus vulgatus becomes dissolved, and this is apparently due to the influence of a ferment secreted by this micro-organism; fibrin is also dissolved. This bacillus coagulates milk very quickly, two layers are formed, the coagulum underneath, the fluid portion on the top; on the third day the coagulum breaks down; on the fifth the casein is completely dissolved; a small proportion of lactic acid is always formed in the milk. Casein coagulated by lactic acid is also dissolved by this micro-organism if the acid be neutralised; coagulated casein dissolved in an alkaline salt solution is also attacked by the mesentericus vulgatus. Sugar is transformed into dextrose and levulose by the action of this bacillus. This takes place whether the sugar solution be weak or strong. Only a small quantity of saccharose is burned or utilised *per diem* by this bacillus; 25.35 grammes of saccharin were consumed in 110 days. Cooked starch is also transformed into a substance capable of reducing Fehling's fluid probably to glucose, maltose, and dextrine. Among the many important facts concerning this micro-organism discovered by M. Vignal

[5] Ueber bakteriologisch-chemische Untersuchung der Tuberkelbacillen, *Correspondenz Blatt für Schweize Aerzte*, 1888, No. 19.

[6] Ueber das Verhalten einiger pathogener Bakterien in Trinkwasser, *Archiv f. Hygiene.*

[7] Das Schicksal der pathogenen mikroorganism in todten Körper (*Zeitschrift für Hygiene*, Bd. vii. Seite 1, 1889).

is that it secretes a ferment which disintegrates vegetable cells and fibres when the wood and liber formation is not too far advanced; its action on urea is negative. The nature of the food given to this bacillus has a certain influence on the quantity and quality of the ferments it secretes. In veal broth it secretes an amylolytic ferment, a rennet, a ferment which disintegrates young vegetable cells, and another ferment which prevents casein from solidifying. If a small quantity of starch and sugar be added, the quantity of amyl ferments is increased. But the influence of food in the secretion of is most evident with milk. One part of broth in this only micro-organism has been cultivated, only coagulates thirty parts of milk. One part of casein solution coagulates sixty parts of milk, one part of coagulated milk in which also this micro-organism has been cultivated coagulates 140 parts of milk; one part of neutralised milk coagulates 1,200 parts of milk. Besides the rennet and casein, the milk in which the bacillus has been cultivated contains an amylolytic ferment. When nourished on raw potatoes this bacillus secretes a small quantity of amylolytic ferment, and a ferment which disintegrates vegetable cells. The same weight of mesentericus vulgatus as that of a dog's pancreas in full activity secretes in five days either only half the quantity of amylolitic ferment secreted by the pancreas, or the pancreatic ferment is twice as energetic. This short summary will show how Dr. Vignal's researches suggest general conclusions concerning the *rôle* of microbes in the digestive function, though the author is too careful a scientist to anticipate the existence of phenomena not yet proved; he considers the question, What is the part played by the glands and by the micro-organisms respectively of the intestinal tract in digestion? too complex to be solved without more extended study.

PUBLIC MEDICINE.

Legislation in 1889: *Work of the Parliamentary Bills Committee of the British Medical Association: Local Government (Scotland) Act.—Lunacy Acts Amendment Act.—Infectious Disease (Notification) Act.—Poor Law Act, and Hospitals of Metropolitan Asylums Board.—Minor Acts.—Certifying Factory Surgeons.—Infant Life.—Registration of Midwives.—The Control of Noxious Gases.—Small-pox—Vaccination.—Foreign Epidemics—Scarlet Fever. — Measles. — Typhus. — Diphtheria. — Enteric Fever.—Yellow Fever. — Cholera. — Epidemic Pneumonia. — Contagious Ophthalmia.—Epidemic Influenza.—Rabies.—Leprosy.—Diseased and Unsound Food.—Water-Gas and Roburite.—The Housing of the Working Classes.—Water Supplies.—Sewerage. — Vital Statistics—Lunacy Legislation.*

Legislation in 1889.—Several important measures affecting sanitary administration have been passed into law by Parliament during the past year. Unfortunately, time was not found for the completion of the reform of the English system of local government, of which the Local Government Act of 1888 was the first instalment. But by the Local Government (Scotland) Act, Scotland has been granted a system of county government very similar to that granted to England and Wales in 1888. As originally introduced, however, the Scotch Bill was very defective, and proposed to perpetuate several arrangements which would have been most inimical to good sanitary administration. Happily, the strenuous efforts of the Parliamentary Bills Committee of the British Medical Association, supported as they were by the West of Scotland Branch, and by several influential members of Parliament, especially Dr. Farquharson and Sir Walter Foster, succeeded in securing several very important modifications of the original proposal. The clause empowering the new County Councils to appoint a medical officer of health was made compulsory instead of permissive—"*shall* appoint" was substituted for "*may* appoint"—and a further clause was introduced, providing that medical officers and sanitary inspectors appointed under that Act or under the Public Health Acts, shall be removable from office only by the central authority—the Board of Supervision. In both these instances Scotland has obtained what was denied England in 1888; but further efforts will be made, when opportunity offers, to obtain the reasonable security of tenure of office for English health officers, which has been extended to those of Scotland, and is already enjoyed by poor-law medical officers.

Lunacy Acts Amendment Act.—It is satisfactory that in this case also, the efforts of the Parliamentary Bills Committee were rewarded by securing the adoption of several very important modifications of the original proposals—modifications which are desirable in the interests not only of the medical profession, but also of the insane. These amendments have been fully discussed from time to time in the pages of the JOURNAL.

Infectious Disease (Notification) Act.—The expediency of the prompt notification to the local sanitary authority of the occurrence of cases of infectious disease has long been recognised. By the Act of last session, the notification was made compulsory throughout the metropolis after October 31st, and in any extra-metropolitan district, so soon as it is adopted by the local sanitary authority. The "dual" system of notification, is the one adopted in the Act, and although there are obvious objections to the imposition of the duty of notification on the medical attendant, medical practitioners will be found ready to carry out loyally the duty in this matter, which Parliament has thought fit to impose upon them. Up to the present time (the middle of December), the Act has been voluntarily adopted by nearly five hundred extra metropolitan sanitary authorities, with an aggregate population of six millions. If to this be added the four millions of Londoners, and the four millions of residents in the fifty-nine large towns where the system is compulsory by virtue of local Acts, it will be seen that nearly a half of the population of England and Wales is subject to compulsory notification of infectious disease.

Poor Law Act.—By this Act, the action of the Metropolitan Asylums Board in receiving cases of diphtheria into their hospitals, has been legalised. The Board are also authorised to allow their hospitals to be used for the purposes of medical instruction, and they are further empowered to allow their ambulances to be used for conveying infectious patients to other places than to the Board's hospitals.

Minor Acts.—The Public Health Act, 1889, which removed certain doubts in connection with the cholera regulations of the Local Government Board; the Town Police Clauses Act, authorising local authorities to make by-laws as to omnibuses; the Public Libraries Act Amendment Act; the Trust Investment Act; the Weights and Measures Act, etc., are all Acts giving increased and useful powers to local sanitary authorities, and additional benefits or protection to the community.

Certifying Factory Surgeons.—A proposal which was made to the Home Secretary early in the year by the Manchester Cotton Spinners Association, for the abolition of the office of certifying surgeons in factories was promptly met by the Parliamentary Bills Committee, and the result of the action taken in the matter has been to prevent the suggested ill-advised step being taken. Mr. Matthews expressed his intention of introducing a Bill to amend the Factory Acts and deal with this question, but pressure of public business prevented him from so doing.

Infant Life Protection.—During the past year there have been numerous cases which have shown the insufficiency of the existing law to protect the lives of young children. Baby-farming is still practised to a very large extent, whilst the ease with which the lives of infants can be insured in the present state of the law affords a strong incitement to child-murder. The law requires considerable and speedy amendment in the direction of the draft Bill, first prepared on behalf of this JOURNAL, in order to deal with both these evils.

Registration of Midwives.—The proper instruction, certification, and registration of midwives is a subject the great importance of which has long been recognised by the Parliamentary Bills Committee and Association. The draft Bill of the Committee has already been approved by the Privy Council and the General Medical Council, but has been delayed by parliamentary apathy. The need for some such scheme has been shown by many instances in which puerperal fever or other mischief has followed the operations of the ignorant midwife. The General Medical Council has recently had the question again under consideration, and has passed resolutions to the effect (1) that public safety demands from Government the passing into law of some measure to enforce the education, licensing, and registration of midwives; and (2) that the Council would be willing to advise as to the general rules of education, examination, and discipline, but that it would not undertake the duties of licensing, controlling, and registering midwives. This is precisely on the lines of the draft Bill of Parliamentary Bills Committee of our association of six years ago.

The Control of Noxious Gases.—The Alkali, etc., Works Regulation Act, 1881, has been administered and enforced during the year with good results. But Mr. A. E. Fletcher, the Chief Government Inspector under the Act, has pointed out that the result

attained would be much better (without the infliction of any serious burden on manufacturers) if the Act were amended so as to enumerate the noxious gases to be controlled rather than the processes of manufacture by which those gases are generated. This is undoubtedly a matter worthy of the consideration of Parliament.

Diarrhœa.—The results of the exhaustive inquiry which Dr. Ballard has been making for the Local Government Board into the causes of diarrhœa, have been embodied in a very instructive Blue Book, shewing, amongst other things, that mere heat is not a sufficient cause of the disease, but that "the essential cause of diarrhœa resides ordinarily in the superficial layers of the earth, where it is intimately associated with the life processes of some micro-organism not yet detected, captured, or isolated."

Small-pox at Sheffield.—Dr. Berry's report on the epidemic of small-pox in Sheffield in 1887—1888, was issued early in the year, and furnished one of the most complete and telling vindications of vaccination that has ever been obtained. [A full notice of the report was given in the JOURNAL for April 13th, page 855.]

Vaccination.—The great event of the year as regards vaccination has been the appointment of a Royal Commission with Lord Herschell as Chairman, to inquire into the whole question. The first report of this Commission (which is still sitting), was recently issued and fully noticed in these columns [see pages 853, *et seq.*].

Small-pox in 1889.—During the year only twenty deaths from small-pox occurred in the whole of England and Wales. The smallness of this number is remarkable.

Foreign Epidemics.—The island of Porto Rico was visited by a severe outbreak of small-pox towards the close of 1888. The epidemic extended into the present year, and before it died out it had caused upwards of 1,000 deaths among a population of about 40,000 persons. Full particulars are not yet to hand respecting the outbreak of a disease like typhus fever (which however appears to have been plague), which occurred in the Yemen, Assyr, and other districts of Arabia in the past summer and autumn.

Scarlet Fever.—In the metropolis, scarlet fever, as indicated by the returns of patients admitted to the Metropolitan Asylums Board Hospitals, has shown the usual autumnal increase, but has not exhibited any widespread epidemic prevalence at any portion of the year. At the commencement of the year the North-Western District Hospital was practically closed, patients from this district being taken to the Western Hospital at Fulham. The inadvisability of entirely closing the North-Western Hospital, and the hardship of sending patients a distance of some seven miles from their homes to hospital in the ambulance carriages, were pointed out in these columns. The views then expressed were of sufficient weight to induce the managers of the Asylums Board to maintain the North-Western Hospital in a state of efficiency for the requirements of those parishes allocated to it, and also for the accommodation of a limited number of convalescents from other hospitals should the necessity arise. The South-Western Hospital at Stockwell has more recently been opened again for the reception of patients, but the Northern Hospital at Winchmore Hill still remains closed. Epidemics of scarlet fever have occurred at Birmingham, Plymouth, and Glasgow, during the course of the year. In the former town the accommodation in the City Fever Hospital was exceeded, and arrangements had to be made for the reception of patients in the fever hospitals of neighbouring local authorities, and temporary buildings have also been erected for a like purpose. In Plymouth there have been over 500 cases, and 130 deaths; a proposal to close the elementary schools was negatived by the Town Council. The epidemic in the neighbourhood of Glasgow was clearly traced by Dr. Russell to the milk of a certain farm, where were found two cows with ulcers and scabs upon their teats, similar to those described in connection with the Hendon outbreak. At Macclesfield, also, a virulent outbreak of the fever, which attacked several hundred persons, was traced to the milk supply. A somewhat novel method of propagating infection has been brought to light by proceedings taken at the instance of the Maidstone Rural Sanitary Authority, against a local fruit grower, for allowing his red currants to be picked in his orchard by children who were desquamating from scarlet fever, and for sending the fruit to the London market. The case was dismissed by the magistrates, on the ground that fruit is not included either specifically or generally in the meaning of Section 126 of the Public Health Act, under which the proceedings were taken.

Measles.—Measles was virulently epidemic in London during the early portion of the year, and severe outbreaks have been reported from various parts of the country. Mildness of type, which was formerly a characteristic of measles, seems to have disappeared, and epidemics of this disease are now accompanied by a mortality which calls for the most energetic measures of repression. Beyond the compulsory closing of schools, little is done during a measles outbreak. In few places is measles a notifiable disease, and isolation of cases in hospitals is very rarely attempted. In London the Metropolitan Asylums Board has refused to take any steps to secure the admission of cases of measles into its hospitals, and this in view of the fact that for three months of the past winter the deaths from measles in the metropolis averaged 133 per week, indicating a mortality far exceeding that of any epidemic of small-pox during the last seventeen years, and one nearly equal to that caused by the memorable small-pox epidemic of 1870–71. Whether the mortality is caused by the change in type, that is, a larger proportion of severe or malignant cases in an outbreak, or by the greater fatality of the after-complications of the disease, has yet to be decided. In the provinces notable epidemics have occurred at Branston, in Lincolnshire; at Rugeley, where 50 per cent. of the children under 10 years of age were affected; in the Potteries, at Hanley, Paisley, and other places, where the wide spread of the epidemic and its unusual fatality caused almost a panic; at Warwick; at Windhill and Baddon, small townships near Bradford; and at Glasgow, where an epidemic of whooping-cough ran concurrently with the measles.

Typhus.—An outbreak of typhus occurred at Hull at the commencement of the year; and quite recently in London several cases have been removed to hospital from a crowded slum in St. Olave's, Southwark. As usual, these outbreaks have occurred in filthy, overcrowded tenements, and prompt removal of the cases to hospital and the remedying of the insanitary conditions in the houses have served to prevent the spread of the infection. Attention has been drawn to the difficulties experienced in making a diagnosis of typhus at an early stage of the disease—a difficulty which is enhanced by the want of familiarity of modern practitioners with a disease now of some rarity except in a few large towns, and which may cause a delay in notification that enables an epidemic to make headway before measures can be taken for its suppression. There is a pressing necessity for imparting to students practical instruction in the diagnosis of typhus and other fevers. Such a course of instruction is available in some provincial towns, and a scheme of this sort is now under the consideration of the Metropolitan Asylums Board, whose hospitals are capable of affording the desired clinical instruction.

Diphtheria.—During the whole of the year diphtheria has been very prevalent in London, and the mortality from this disease in the metropolitan returns continues to exhibit a steady rise, although isolation of cases can now be secured by their removal to the hospitals of the Metropolitan Asylums Board. Diphtheria has been reported as very prevalent in Uxbridge and in parts of East Kent. A number of reports have been issued by the Local Government Board of investigations by their inspectors of outbreaks of diphtheria. In most of these cases it was found that cases of "croup" had also been occurring, which were without much doubt cases of the more malignant disease. Especially was this the case in a prevalence of diphtheria in the Camelford Rural District. Dr. Ballard, who made the inquiry, was at once told by one local medical practitioner that he made no distinction between "croup" and "diphtheria," and that he regarded these terms as synonymous. Other medical men made the same admission. Similarly, when Mr. Spear investigated a prevalence of "croup" and other throat affections at Harwich, and in other cases, it was found that no clear distinction had in all instances been drawn between diphtheria and some other affections of the throat. During the year, a very interesting and thoughtful paper by Dr. G. B. Longstaff on the geographical distribution of diphtheria was issued by the Local Government Board. From that paper, it would seem as if the disease had a preference for certain special districts, the great majority of which are rural. The relation of diphtheria to affections of the lower animals, cats, etc., was suggested. This relationship has been observed with greater certainty in other quarters, and is still being closely investigated by Dr. Klein. The medical officer of health for part of East Kent gives instances of the disease running concurrently in isolated farm houses with disease amongst the stock (cows and horses). The evidence is gradually accumulating to establish the view that diphtheria is a disease which is transmissible both from man to some of the lower animals, and from these in turn to man.

Enteric Fever.—The condition of the Royal Barracks at Dublin

has continued to attract considerable attention. Most of the troops previously stationed there have been encamped during the summer in the Phœnix Park, and are now occupying the Agricultural Buildings. Mr. Rogers Field has presented an interim report upon the barracks, but has been unable to discover any special cause for the long-continued prevalence of enteric fever in them. As was shown in the report of Sir C. Cameron and Dr. Grimshaw, the sanitary condition of these barracks, to a large extent, forms only a part of the larger problem of the sanitary state of Dublin generally. Dublin probably has one of the highest enteric fever death-rates of any town in the country, on account of its defective sewers and the pollution of the Liffey with sewage. Until these matters are remedied, the site of the oldest portion of the city must be unhealthy from the existence of a sewage-laden soil under and around the houses. There are, no doubt, barracks in this country which are little, if at all, superior to those in Dublin. A notable example, the Clarence Barracks at Portsmouth, have been closed this year, the insanitary condition of the buildings being at last officially recognised. Epidemics of typhoid have occurred during the past summer and autumn at St. Helens and Burnley, in Lancashire, in the prison at York Castle, and at Belfast and Carlow, in Ireland. In these cases the origin of the outbreak is attributable either to defective drainage and sewerage, or to the polluted condition of wells and water-courses. In London there has been a considerable prevalence of the disease during the past autumn in the East End. A very limited outbreak in the Hanover Square district in August attracted considerable attention, and was popularly supposed to be due to foul emanations from unflushed sewers. In the matter of flushing sewers, London is undoubtedly much behind some provincial towns. Epidemics of typhoid, which have been traced to the milk supply, are reported as having occurred at Stirling, Leeds, and in the Strand district of London. Dr. J. R. Roberts, of the Indian Medical Service, has published an interesting note[1] on the occurrence in dogs of lesions resembling those of enteric fever in the human subject, and suggests from this fact an explanation of the continued prevalence of the disease in Indian cantonments, in spite of the sanitary precautions taken. Dr. J. Cameron, in describing a limited outbreak of typhoid at Hendon, has raised the question of the identity of swine fever (porcine pneumo-enteritis) with human enteric fever. Principal Walley, in an instructive letter,[2] adduces a variety of evidence to negative such a view, and agrees with Dr. Klein that swine fever has no connection with, and does not bear any sort of pathological relation to, human typhoid. In India enteric fever now causes a far larger mortality amongst troops than cholera. At Lucknow and other cantonments the disease is especially felt amongst the raw youths who have recently arrived from the home stations. Much has been done to improve the sanitary condition of the barracks, but the disease appears to be most frequently contracted in the bazaars and drinking shops in native quarters to which the soldiers have access.

Yellow Fever.—Intelligence has been received during the year of a severe epidemic of yellow fever in Rio Janeiro. The first accounts of the outbreak appear to have been exaggerated as regards panic and business stagnation, but the mortality at one time was doubtless very great. At Santa Cruz de la Palma, an island under the Spanish Government, a serious epidemic has occurred, the percentage of deaths to cases being very high. Four-fifths of the inhabitants are said to have fled the island.

Cholera.—Europe has been free from Asiatic cholera this year. A very extensive epidemic has occurred in Bagdad, Bussorah, and other parts of Mesopotamia (Asiatic Turkey), the quarantine enforced by the Ottoman Government entirely failing to limit its spread. From Bagdad the disease was imported into Persia through the western frontier, where its encroachments threaten an extension of the epidemic to central Europe. Cholera has also been very prevalent at Pekin in China, and in the Philippine Islands.

Epidemic Pneumonia.—Dr. Ballard's report to the Local Government Board on the epidemic of pneumonia which prevailed in Middlesbrough and its neighbourhood from January to July, 1888, contains some interesting information. The disease was distinctly infectious, and had an exceptional incidence on males above the age of 15. The contagion was apparently transported directly through the air, by means of the breath, from the sick to the healthy, and also by means of infected sewer and drain emanations. Dr. Klein discovered a bacillus in the lung juice and fresh sputa, which he regards as specific. The deaths of a medical man and his assistant at Doncaster from acute pneumonia apparently transmitted by infection from a patient have been recently recorded.

Contagious Ophthalmia.—The continued prevalence of ophthalmia in the central London district schools at Hanwell has been the subject of much comment in this JOURNAL. The Board of Management has for years been extremely apathetic in allowing a condition of things to remain which has been condemned by every expert called in to report, but has at last ordered the erection of temporary dwellings for the isolation of 400 ophthalmic patients, this being the number of children, out of 1,200 in the schools, who have to be isolated and systematically treated every year. From the reports of Dr. Bridges and of Mr. Nettleship, it appears that the schools are in a very insanitary condition, and that certain dormitories in the attics are very badly ventilated and much overcrowded, whilst the nursing is very defective. These schools have become a great public scandal, and it is time that the managers should exert themselves to give effect to the recommendations contained in the reports of Dr. Bridges and Mr. Nettleship. Ophthalmia is also reported to be very prevalent amongst the children in the Edmonton schools of the Strand Union. At least one-half of the children are affected, and the sick ones are allowed to bathe in the same water with the healthy ones. With so eminently preventable a disease as ophthalmia, these revelations must create a general feeling of disgust with the system of management pursued by parochial school authorities.

Epidemic Influenza.—The existence of a widespread epidemic of influenza in Russia, which is apparently spreading all over the continent of Europe, the latest reports showing that the disease has reached Austria, Germany, Sweden, and Denmark, points to the return of a contagious disorder which has not been extensively prevalent in Europe since 1848. Its progress will be watched with the greatest interest by epidemiologists, and many points in its mode of propagation, which are now obscure, will possibly be cleared up.

Rabies.—Little progress has been made during the year in organising any effective system for the eradication of rabies from this country. Muzzling orders are still issued by local authorities, or withdrawn, at their discretion, with the result that it is our unpleasant duty from time to time to chronicle the infliction of bites by mad dogs on human beings, and to receive intelligence of occasional deaths from hydrophobia. Except to a small number of uninformed or prejudiced persons, the immense success of Pasteur's preventive inoculations is becoming more and more evident as time elapses; and the recognition by the Corporation of the City of London of the immense benefits conferred upon our countrymen who have undergone the treatment in Paris, and the raising of a fund to send over those who have been bitten, but are unable to afford the expense of a visit to the French capital, is one of the pleasing events of the year. It would, no doubt, have been even more satisfactory to have applied the funds to the foundation of a Pasteur Institute in London, but we must be content at present with the knowledge that no one need die of hydrophobia for want of means to avail himself of M. Pasteur's charity. During the last few months of the year the muzzling of dogs has been compulsory in the metropolis under an Order in Council with the view of stamping out rabies. The existing order expires at the close of the year, but the Board of Agriculture, to whom the powers of the Privy Council in the matter have been transferred, has happily renewed it over an extended, though possibly still inadequate, area. The refusal of the London County Council, as the local authority responsible for the execution of the order in the metropolis, to enforce it, on the plea that any order which did not include the whole country was practically useless, was logically sound enough, but did not display any sufficient sense of the needs of London in this matter. We trust that the subject is now so far understood in all its bearings that in the coming session Parliament will be able to legislate for the whole country, and, whilst providing for muzzling and the destruction of ownerless dogs, will also take steps to prevent the importation of the disease from foreign countries. Germany and Scandinavia have adopted general measures of suppression, with the result that in these countries rabies is practically eradicated. A very interesting account of an outbreak of rabies amongst the deer in the Marquis of Bristol's park at Ickworth will be found in the JOURNAL of October 12th. The disease was for some time supposed to be anthrax, and it was not until careful pathological inquiry had

[1] JOURNAL, August 30th.
[2] JOURNAL, November 9th.

been made, and the matter had been put to the test of inoculation, that the diagnosis of rabies could be definitively settled.

Leprosy.—The death of Father Damien from this disease in the island of Molokai—the leper settlement of the Hawaiian Isles—the almost simultaneous reading of a paper on leprosy before the Epidemiological Society, and the discovery by the general public that cases of leprosy existed in London, and that many members of the medical profession regard leprosy as a contagious disease transmissible by inoculation, have served to concentrate attention on the subject in a manner almost unprecedented. As a consequence, information has been received and published from many parts of the world as to the number of lepers in various States, the systems adopted for their segregation and isolation, and the views generally held as to the contagious nature or otherwise of this disease. As regards the State control of lepers our own Imperial Government, with its numberless dependencies, by no means takes first rank. Dr. Pringle's paper read to the Epidemiological Society contains a sweeping indictment against the Indian Sanitary Departments for taking no steps to enforce the segregation of lepers, and for not providing sufficient asylums for their reception and treatment. According to good authorities leprosy is increasing gradually, not only in India, but at the Cape, in Egypt, Russia, Spain, and other countries. At the Cape compulsory segregation of lepers was the subject of enactment in 1884, but has not yet been enforced. Attention has been called in the public press to the neglected condition of the Cape Leper Settlement on Robben Island. On the subject of the contagiousness of leprosy there is still no consensus of medical opinion. Experience in this country, where leprosy is by no means unknown, although the number of cases to the population is relatively very small, and the experience of practitioners in other parts of Europe, in Turkey, Syria, and Egypt gives no confirmation to the contagion theory; on the other hand, in parts of the world where leprosy is more common, evidence which appears conclusive as to the spread of leprosy by contagion is abundant, and such a view is a matter of firm belief with those on the spot who are competent to judge. The extraordinary interest manifested in the subject in London ought to bear good fruits in arousing the Government to the necessity for taking measures to extirpate the disease from its great Indian dependency. As a preliminary measure the thorough resifting of the whole subject by a competent commission of medical experts in India and other parts of the world where leprosy is prevalent is highly desirable. The best tribute this country could pay to Father Damien's memory would be the adoption of such measures as the commission might recommend for the eradication of so foul and loathsome a disease.

The Housing of the Working Classes.—Again this important question has come prominently to the front, and is attracting a degree of attention which it has not received since the last great impetus to reform in 1884. Improved dwellings for the working classes are now an important feature in the programme of every political party, and the President of the Local Government Board recently said that the proper housing of the poor was the most important element of all in the social condition of the people. He correctly summed up the situation when he remarked that legislation was not at fault for the continuance of the present evils, but the failure on the part of sanitary authorities to give effect to the sanitary enactments must be held accountable. Nevertheless, the Government contemplates next session the consolidation of all Acts dealing with the housing of the working classes into a single Act, in order to facilitate their application by local authorities; and the Local Government Board has quite recently issued circulars to the various sanitary authorities throughout the country, setting forth in a succinct manner their powers and duties in regard to these matters. The London County Council has the subject much at heart, and has appointed a committee to deal with the whole question. From their action, with the assistance of their medical officer of health, much good may be expected. Already the vestries appear to recognise that the time of slothfulness and inaction is rapidly passing away, and the reports to the County Council on insanitary areas in their districts, which some of these bodies have presented, are models of right feeling and good sense. At the East End of London, where the neglect of sanitation by vestries is most pronounced, private individuals and societies have recently been energetically engaged in prosecuting the owners of insanitary houses. They have every reason to be satisfied with their success, but until the law is so far amended that the existence of a nuisance injurious to health, when proved in a court of justice, becomes an offence punishable by a fine, we are afraid that house-farmers and small property owners will continue to endanger the lives of their tenants in order to line their own pockets. The splendid gift of a quarter of a million sterling by Sir Edward Guinness to be applied to providing clean and healthy homes for the poorest of the wage-earning classes in London and Dublin, fenced as it is by conditions which shall secure the money from being wasted in objectless charity, will no doubt prove the starting-point for a clearance of those metropolitan rookeries, which have so long been allowed to disgrace the richest city of the world. Of provincial towns, Birmingham and Liverpool are active in meeting the requirements of their large and growing populations—Birmingham in erecting workmen's dwellings, and Liverpool in removing back-to-back houses and others which are dangerous to health. Manchester appears also to be now ready to attack the question of insanitary dwellings, on which its excessive death-rate so largely depends. In the JOURNAL of November 16th will be found the decision given in the important case of Walker *v.* Hobbs, in which it was laid down by the judges of appeal that Section 12 of the Housing of the Working Classes Act of 1885 enables a tenant of a workmen's dwelling not only to leave the house, if found to be unfit for habitation, but to recover damages from the owner for any loss or injury he may have sustained by reason of the defective condition of the premises.

Water Supplies.—The past year has seen no very substantial advance made to our knowledge of the conditions under which water is liable to absorb lead from pipes and cisterns. The absence of silica, the presence of free acid, the question of sustained or intermittent pressure in the pipes, and the bacteriological factor have all been discussed and appropriate remedies suggested, but with no indication that any generally applicable law is capable of formulation on the subject. Cases of lead poisoning from drinking water have occurred at Bradford and its vicinity, and at Keighley Workhouse and Infirmary. We have also had occasion to notice in these columns the liability to contamination with sewage of the Enfield water supply, from the admixture of subsoil water in the surface gravel with the pure water derived from chalk wells; and the very primitive arrangements still in use at Perth for supplying the inhabitants of that city with a very incompletely filtered water taken from the sewage-polluted river Tay have also been a matter of comment. The water supplied to London by its eight water companies has been of normal purity. The filtration and purification have been carefully performed, but so long as the bulk of the water is derived from the Thames and Lea after those rivers have received the sewage of numerous towns and villages on their banks, the supply, though ordinarily safe and good, cannot be regarded as an ideal one. Moreover, in a recent interesting report by Major-General Scott, the official water examiner, attention is seriously directed to the ever-increasing drain on the Thames to meet the requirements of the increasing population, and it is pointed out that ere long the problem of the whole water supply arising from the Thames basin must come prominently forward.

Sewerage.—Mr. Baldwin Latham's scheme for sewering the town of Margate and carrying the sewage in a large outfall tunnel sewer to Foreness Point, where it is to be stored in a reservoir and discharged into the sea at suitable states of the tide, is now being put into execution. It is much to be regretted that it was not in this case found possible to purify the sewage before discharging it, as it so frequently happens that in the case of sewage discharge the easiest method is not in the end the cheapest or best that could be adopted. The city of Chichester, which for long has been in an indifferent sanitary condition, proposes to carry out sewerage and sewage precipitation works. A new process for the chemical treatment of sewage, known as the "Amines" process, has been introduced during the course of the year. The essential element in this process is the addition of a small quantity of herring brine (methylamine) to the lime used as a precipitant. The herring brine acts as a deodorant and antiseptic. During the year the new works of the Native Guano Company's (A B C) process have been opened at Kingston-on-Thames.

Vital Statistics.—For the first three-quarters of the present year in England and Wales the birth-rate was 30.8 per 1,000, the death-rate 17.8 per 1,000, and the zymotic death-rate 2.21 per 1,000. In the twenty-eight large towns of the Registrar-General the birth-rate was 31.3 per 1,000, the death-rate 19.2 per 1,000, and the zymotic death-rate 2.97 per 1,000, whilst in London the birth-rate was 30.7 per 1,000, the death-rate 17.3 per 1,000, and the zymotic death-rate 2.4 per 1,000. In the first and second

quarters Brighton had the lowest death-rates of any of the twenty-eight towns (15.5 and 14.7 per 1,000), whilst in the third quarter Derby had the lowest rate (14.2 per 1,000). The highest death-rate in the first quarter was recorded by Blackburn (32.3 per 1,000), Manchester coming next with 28.5; in the second quarter Preston stood highest (32.6 per 1,000), Manchester again being second with 28; whilst in the third quarter Preston again is highest (33.0 per 1,000), and Newcastle-on-Tyne second with 27.6. The zymotic death-rates exhibit an extremely wide range in the different large towns, the lowest being in Halifax (first quarter, 0.79 per 1,000), in Norwich (second quarter, 0.85 per 1,000), and in Bristol (third quarter, 2.13 per 1,000), whilst the highest are in Blackburn (first quarter, 9.03 per 1,000), and Preston (second quarter, 10.09 per 1,000; third quarter, 12.75 per 1,000). Plymouth stands second in the third quarter with a mortality of 9.95 per 1,000, largely due to deaths from scarlet fever, which was epidemic at this season in the town. During the first quarter of the year measles was very prevalent, and caused a large number of deaths, the rate of mortality being 1.16 per 1,000 in the large towns, and 1.02 per 1,000 in London, In this quarter the death-rate from whooping-cough was considerably below the average. In the second quarter measles shows a considerable decline, the death-rate being 0.82 per 1,000 in the large towns, and 0.62 per 1,000 in London. Whooping-cough was also below the average, whilst diarrhœa was rather in excess of the usual rate at this season, the death-rate in the twenty-eight towns being equal to 0.33 per 1,000. In the third quarter the measles death-rate fell below the mean rate in the corresponding periods of the seven preceding years. The death-rate from diarrhœa rose to 2.46 per 1,000 in the large towns, and to 1.8 per 1,000 in London. The rate ranged from 0.49 in Halifax to 4.94 in Leicester, and 7.36 in Preston. The "fever" death-rate (principally enteric fever) was much below the average, and was 0.22 per 1,000 in the large towns, and 0.15 per 1,000 in London. The highest rates were recorded in Salford, Leeds, and Preston. During the whole period under review scarlet fever mortality has been below the average, but as usual there has been an increasing prevalence of the disease in London during the autumn months. The number of scarlet fever patients in the Metropolitan Asylums Hospitals, which had been 541 and 547 at the end of the first two quarters of the year, rapidly increased during the third quarter, and was 1,449 at the end of September. Diphtheria mortality still continues to be largely in excess of that recorded in previous years. This has been notably the case in London, where the deaths have been equal to an annual rate of 0.35 per 1,000, against a rate of 0.26 per 1,000 in the corresponding period of 1888, and of only 0.12 per 1,000 in the ten years 1871-80, which rate was then equal to that of the whole country. The death-rate from diphtheria for the first three-quarters of the present year in the twenty-eight towns was 0.25 per 1,000, against a rate of 0.18 per 1,000 in the corresponding period of last year. Small-pox only caused 20 deaths in England and Wales in the three-quarters, of which number 5 only occurred in the large towns. Only 3 cases of small-pox have been under treatment in the Metropolitan Asylums Hospitals during this period, and these three cases were all admitted during the first three months of the year. There has been no death from small-pox in London.

Diseased and Unsound Food.—The tuberculous meat question has been one of absorbing interest to health officers and the profession generally. The judicial inquiry at Glasgow is one of so much importance that we may be pardoned for summing up in this place its leading features. The inquiry was held with a view to decide whether the sanitary authorities can condemn a whole carcass, however sound it may appear, if indubitable evidence of tubercle, however much localised, is present. The case was raised by the seizure by the sanitary inspector of the carcasses of a bullock and a cow affected by tuberculosis. The chief question that came up for decision was whether the flesh of an animal suffering from tuberculosis could be consumed without risk to the consumer, when the disease was apparently limited to the lungs, pleuræ, or other organs, the diseased parts being removed. The inquiry lasted a number of days, and a variety of expert medical evidence was arrayed on both sides. The Sheriff's decision was to the effect that the carcass was unfit for food, and must be destroyed, as he considered it proved in evidence that tuberculosis was transmissible from animals to man by ingestion: and that, although in the carcasses in question the tuberculosis was limited to the chest and the prepectoral lymphatic glands, and the flesh appeared quite healthy, still the possibility of its having extended further than was apparent was sufficient to justify the condemnation of the carcasses. The decision is one that may well be the subject for congratulation, as if acted upon by local authorities generally, the grave danger of tuberculisation through diseased meat will be very completely warded off. It seems curious that with this decision, so clearly stated, nothing has hitherto been done to prevent the sale of milk from tuberculous cows, and yet the danger in this case is even more imminent and more pressing than it ever could be in the case of a food which is invariably cooked before being eaten. Evidence is continually accumulating as to the infective qualities of the milk from tuberculous cows, and yet nothing has yet been attempted to protect the population, and especially the younger members of it, from so grave a source of disease. All that is required, at first, is that tuberculosis and all udder eruptions should be included in the list of diseases of the cow as legally defined in the Dairies and Cowsheds Order. Cases of meat poisoning have occurred during the course of the year at West Retford, where four families were rendered ill by eating pickled pork; at Cleator, where a number of young men were attacked with severe gastric symptoms after consuming beef sandwiches; at Aberdeen, where forty-eight persons were poisoned by stale fish roe; and at Carlisle and Oldham. In these cases there does not seem to have been any adequate investigation of the exact causes of the illnesses; but, no doubt, as in previous cases of the kind, they may be attributed to bacterial agencies, or to the poisonous products of their activity in the meat or flesh whilst undergoing incomplete putrefaction.

Water-Gas and Roburite.—Water-gas has been largely advocated this year as a cheap substitute for coal-gas in manufacturing and industrial pursuits. The great dangers attending the use of water-gas are only beginning to be realised. Already there have been several fatal cases of poisoning by this gas in Yorkshire. The percentage of carbonic oxide in the gas is far larger than in coal-gas, varying as it does from 25 to 40 per cent., as against 5 or 6 in coal-gas; and besides water-gas is nearly or quite odourless, so that escapes from pipes are not readily perceived, and the victims are overpowered by the poisonous carbonic oxide before they are aware that there is any danger. From Baltimore in the United States, where water-gas has been in considerable use for some years, it is reported that fifty-one deaths have occurred in that city since 1881 from this form of poisoning alone. Roburite is a new explosive which has been recently introduced into some Lancashire collieries. It is a mixture of nitrobenzenes and ammonium nitrate, and it exerts its explosive force without the production of any flame such as might ignite coal dust or inflammable gases in the mine. Several cases of poisoning having occurred amongst the miners, either from handling the cartridges or from breathing the fumes after explosion, a Committee was appointed to inquire into the effect of roburite on the health of the workmen. From their report[3] it appears that if stringent care is exercised the use of roburite will not add to the harmful conditions under which the miner works. Some of the unpleasant symptoms in the workmen appear to have been caused by absorption of the substance itself into the system, either by the skin or the lungs. In the blood the nitrobenzol is reduced, forming aniline, which gives rise to cyanosis, dyspnœa, and syncope; but in cases of poisoning by the fumes after explosion, carbonic oxide appears to be the deleterious gas.

LUNACY LEGISLATION.

THE Lunacy Acts Amendment Bill of 1889, more fortunate than its four annual predecessors, was passed by the Houses of Parliament during the year; but, except as regards a very small share of its provisions, the Act does not come into force until May, 1890. After the Bill had been introduced in the House of Lords, the Lord Chancellor brought forward some amendments with regard to mechanical restraint in the treatment of the insane, which, had they passed into law, would have had a fettering effect upon the action of medical officers in charge of the insane such as would have been detrimental to the best interests of the patients in some of the most urgent and severe cases, and in some cases neither severe nor urgent. Largely in consequence of a leading article in this JOURNAL, and of recommendations by the Parliamentary Bills Committee, the Lord Chancellor vastly modified and improved the provisions as to mechanical means of restraint in his amendments, so that medical officers would not be hampered in the application of restraint in cases really requiring it. The original provision

[3] JOURNAL, June 15th.

was that mechanical means of bodily restraint shall not be applied to any lunatic unless a medical certificate shall have been previously signed describing the mechanical means to be used, and certifying that the restraint is necessary for purposes of surgical treatment, or to prevent the lunatic from injuring himself, and stating the grounds upon which the certificate is founded. This narrow limitation of cases to which mechanical restraint might be applied, and the provision that, no matter how desperate and urgent the case, a long certificate must be drawn up and signed before any restraint could be legally applied, were obviously provisions the general effects of which would have been prejudicial to the insane. In the form in which it was eventually passed, the provision is that mechanical means of restraint shall not be applied unless necessary for purposes of surgical or medical treatment, or to prevent the lunatic from injuring himself or others; and that, as soon as it can be obtained, a medical certificate shall be signed, describing the mechanical means used, and the grounds upon which the certificate is founded. The provision in the Bill which discriminated against medical men by limiting them to the reception, into their private houses, of three specified classes of "single patients," was finally removed from the Bill, and a provision was passed having a contrary effect, and permitting any person having charge of a "single patient" to receive, under special circumstances, more than one patient into his private and unlicensed house. Previously, not more than one person of unsound mind could be received under care in a house not licensed for the reception of lunatics. The provision as to letters written by private patients and not forwarded to their addresses was altered by omission of the direction that such letters should be forwarded to Commissioners in Lunacy or to Masters in Lunacy, an alteration vastly for the better, considering the rubbish many patients write in large amounts. The provision relating to the posting up of notices concerning the right of private patients to have all letters forwarded, and to have personal and private interviews with official visitors at every visit, was modified by making the posting up of such notices dependent upon a direction by the Commissioners in Lunacy. It was also promised verbally that the special reports and certificates from the medical officers of asylums relating to insane patients detained therein, and required as a prerequisite to renewal by the Commissioners of the reception orders relating to such patients, should be in such form as that the making of them should not occupy so much time, or necessitate so much work, as to interfere unduly with the performance of the ordinary duties of these medical officers. Several new features were also introduced into the Bill, as, for example, that concerning the power to recover expenses of his maintenance, etc., against the estate of a lunatic chargeable to any union, county, or borough:—that which enacts that a judge of County Courts and magistrate shall not be required to exercise any powers under this Act so as to interfere with or delay the exercise of his ordinary jurisdiction; and that which enables a public department to apply the pension, pay, superannuation, or other allowance or annuity of a lunatic, under the control or management of the department, to the maintenance of the lunatic, and of those dependent upon him. Many of the alterations made in the Bill during its passage through the Houses of Parliament were in accordance with suggestions urged by the Parliamentary Bills Committee, and by the members of Parliament who supported that Committee's recommendation.

NAVAL AND MILITARY MEDICAL SERVICE.

NAVAL MEDICAL SERVICE.

Again, it may be said, as in the retrospect of the previous year, that in the naval there is little to chronicle compared with the Army Medical Service. This should properly be a subject of congratulation, for the land service would gladly have less of contentious history to record. Although coupled with the army in the scope of Lord Camperdown's Commission, the naval service evidently did not occupy much of its deliberations, and, fortunately, has little space devoted to it in the Report. It had, indeed, no crying grievances to ventilate like its sister service. The Report in noting considerable reductions in the establishment during recent years, significantly adds, that in the dockyards such reductions had been carried to the limit of safety and efficiency; the process of paring to the quick will therefore probably now cease. This is good news, for the senior medical officers had real cause to say the continued reductions of these shore appointments was a serious blow to them after many years of sea service, mostly in foreign parts. But the reduction in the number of shore appointments was coupled with a shortening of the period of tenure of them—a double blow. This was strongly objected to by many officers, but has been defended by some on the ground that it gives a larger number a better chance of occupying them in turn.

In the Naval Medical Service there has been no agitation on the subject of rank and titles; it was therefore the less excusable for the "three dissentients" in the Camperdown Report to drag in the question of naval titles, as a sort of "red herring," across the pressing reform of army rank and titles. It was a manœuvre promptly seen through and exposed.

During the year an important order was issued regulating the admission of surgeons for temporary service in the navy. It was feared it would give offence to the regular medical officers, but such does not seem to have been the case, and it was announced some time ago that upwards of 200 surgeons had joined this species of naval medical reserve.

Death, as usual, has claimed a certain number of victims, but the obituary is not a heavy one. Among well known and distinguished old officers on the retired list there have died during the year Inspector-General Peter Leonard, Fleet-Surgeons Cunningham, Little, Clarke, Duncan, Crawford, Mockridge and Nelson; Staff Surgeons Osman, Preston and Evans; and Surgeon J. G. Lyell. On the active list the names of Surgeons Julyan, McDonnell and Vasey have been recorded.

THE ARMY MEDICAL STAFF.

Lord Camperdown's Committee.—The Army Medical Service has passed through another year of agitation and controversy, with which we have endeavoured to keep our readers fully informed in these columns. Although the War Minister has not yet disclosed his plans as the outcome of the controversy, he cannot now delay on the plea of want of information, and, we hope, no longer considers the grievances of medical officers as "mainly sentimental." The delay in settlement, although trying to the patience of medical officers, has had its compensations in permitting the vital questions of rank, station, titles and retirement to be narrowed and consolidated into definite issues. This has chiefly been brought about through the report of Lord Camperdown's Committee, of which, in a series of articles, we have endeavoured to place an analysis in a non-partisan spirit before our readers. The recommendations of that Commission, whether viewed as good, bad, or indifferent, have at least had the merit of evoking from writers and correspondents clearer and more definite expressions of opinion. Keen disappointment has been felt and expressed by a large number, especially of the younger medical officers, that the Committee did not boldly advise the consolidation of the medical department into an autonomous Royal Corps, in which the officers should have substantive rank and military titles. That such must and will be the ultimate settlement ef the difficulty there seems not the smallest doubt, as has been the result in the medical department of the French army, after years of tentative and unsatisfactory shuffling with the Intendance Service. But our older officers, more experienced in the ways of our military authorities, never expected radical or final recommendations from the Committee constituted as it was; indeed, it is no secret that, but for the ability and persistence of Mr. Macnamara, as an independent representative of the profession, its representations and recommendations would have been less favourable than they are. The important points in the report may be summarised as follows:—The Committee allow that the abolition of relative rank enabled medical officers to affirm with a logical correctness—there is no "sentiment" in pure logic—that they have no rank at all; the suggestion of consecutive compound titles is an admission that medical officers should have clear military titles; the explicit condemnation of increase of tours of foreign service is a recognition of the fact that the wear and tear of service, already too great, cannot be safely added to; they report the rates of pay fixed in 1879 to be adequate, but no more than necessary; they decline to recommend, what would be a clear breach of faith, any interference with the existing right of retirement; they condemn the injustice of not making Royal Warrants run in India, where so many medical officers are constantly quartered. We consider the above findings to be not only in the right direction, but most important in strengthening the general position of the medical officers, and in clearing away misconceptions, and tending to enlighten all from the War Minister downward. We quote from the body of the report in which the recommendations are brought prominently

into relief by the curious "dissents" appended. Of these we will only say, that if conditions of service and retirement are treated in the high-handed way suggested, not only will gross injustice be done, but a shock given to public confidence and morality. The proposal to deprive medical officers of their present limited but absolutely necessary command, we can only characterise as outrageously retrograde. It is easy to see its object, which is to accentuate the class and caste position of medical officers, and keep them outside army organisation. But the tendency of enlightened administration and organisation is the very reverse; it aims at fixing them more definitely as integral portions of the military machine, and conferring such full power as is essential for the efficient performance of duty. The French War Minister has just given Mr. Stanhope a lead in this matter which we very strongly advise him to study and follow irrespective of military prejudices.

Army Medical Reserve.—This reserve—made up of medical officers already part and parcel of the auxiliary forces—has not attracted much attention during the year. From what we can learn it has probably attained its full dimensions, and is more likely to contract than expand, in view of the feeling that a more thorough organisation of the volunteer medical service is much needed in its own proper sphere.

Director General.—Surgeon-General W. A. Mackinnon, C.B., succeeded Sir Thomas Crawford, K.C.B., in the Director-Generalship. In the reign of the latter, which was by no means a bed of roses, much was done in consolidating the regulations and perfecting hospital equipment; and we are very pleased to hear that the latter is now in a state of preparedness for mobilisation second to no other branch of the army. Sir Thomas Crawford had many amiable qualities, but it would have been better for his departmental popularity had he sooner recognised the importance of the rank question, and listened less to counsels suspected of civilianising his department. We trust the new Director General will make the roster an open document, and do his best to dispel the air of mystery in the working of his office.

Honours and Rewards.—While such are, as a rule, but too sparingly dispensed to medical officers, we note with pride that two of their number have during the year received the highest decoration of all—the Victoria Cross—namely, Surgeon Crimmin of the Indian Medical Service, and Surgeon Le Quesne of the Medical Staff. Both of these officers have been decorated for heroic conduct under fire in the field in Burmah. As the veriest fire-eating fighters can do no more than risk their lives as these officers did, surely, for very shame, we shall hear no more of the talk at once untruthful, ungenerous, and unmanly, of doctors being non-combatants!

Obituary.—The mortality both on the active and retired lists has been moderate; nevertheless some well-known, loved, and respected names have disappeared. Among these have been such widely known men as Surgeon-General E. J. Franklyn, and Deputy Surgeons-General H. B. Franklyn, D. Boyes Smith, M. Combe and J. Fraser, Inspector-General F. C. Annesley, and Deputy-Inspectors C. R. Boyes, J. J. Clifford and George Anderson; the latter was one of the fathers of the department, and a fine specimen of the gentleman of the old school; also Brigade-Surgeons L. A. White, F. A. Turton, J. D' Altera, and J. Barker, Surgeon Magins, J. C. Haverty, R. Keith, R. W. O'Donnell, J. A. Smith, and T. Faris. The death of Keith, who was in personal attendance on the Duke of Connaught, was very deeply regretted by a wide circle of friends. In T. Faris, the department lost one of its ablest officers, who at the time of his lamented death was Staff-Officer of the Medical Staff Corps at head-quarters; he was the inventor of the stretcher which bears his name, and to his many accomplishments was a barrister-at-law, as was also H. B Franklyn. The deaths were also recorded of promising young officers—Surgeons C. Hayden, J. Bulfin, H. E. B. Flanagan, and G. S. Tate. The rapidly diminishing remnant of assistant-surgeons was lessened by the deaths of G. D. Milne, and A. H. Lynch.

THE INDIAN MEDICAL SERVICE.

THE most important event in this service during the past year has been the retirement of Sir James Simpson from the head of the medical department of Bengal. Sir James Simpson was deservedly popular with his brother officers for his courteous and just administration. Some feeling has been excited in the service by the appointment of his successor, who superseded two medical officers whose claims to promotion were generally acknowledged by the service to be worthy of more consideration, more particularly on ground of military service, Sir James Simpson's successor's service having been entirely civil. The government of India is intent on economy, and the medical service has been disturbed by rumours of further reductions in its higher grades. We hope these disquieting rumours have no foundation, in fact there would be little wisdom in any measure of this kind; to reduce the number of the few prizes open to the medical service of the state would be disastrous to its well-being, and would be false economy in the real meaning of the term. Economy at the cost of efficiency carries failure on the face of it. It is with great regret that we learn that the local government of India is still seeking economy at the expense of efficiency, in urging the Secretary of State for India to withdraw the young medical officers from the Netley school. It has been demonstrated, over and over again, that the proposal to give the needful practical instruction for military medical service in India to surgeons on probation for the three Presidencies, would, far from being a saving, cost much more money than the present system. It has been shown that the professors in the medical colleges of the three Presidencies have their hands full, and cannot, under the trying conditions of climate, undertake this heavy addition to their already sufficiently onerous duties. The advisers of the government of India seem ignorant of another fact. The Army Medical School has been in existence since the year 1860, and has, in this long course of time, accumulated a costly teaching plant and a library for the use of the surgeons on probation, complete in every branch of medical literature, "ancient and modern." Is the government of India prepared, on the score of "economy," to supply a like teaching plant for the three Presidencies for the use of its young medical officers on probation? This question has now been thoroughly threshed out on both sides, and the final decision rests with the Secretary of State for India, We sincerely trust he may be guided in this important matter to a wise judgment.

MEDICAL EVENTS OF THE YEAR IN SCOTLAND.

EDINBURGH.

The Universities (Scotland) Act.—The University of Edinburgh.—The Royal Colleges of Physicians and Surgeons.—The Edinburgh Medical School.—Public Health.—Lunacy.—Burial Reform.—Sick Nursing.—The Societies.

The Universities (Scotland) Act.—The passing of the Universities Act, after many futile attempts, is perhaps the most important event of the year. The measure indicates not merely a further elaboration of presently existing arrangements. Its scope is extremely wide, and includes, so far as the subject of medicine at Edinburgh is concerned, the whole question of medical education. The length and arrangement of the curriculum, the relation of systematic to practical and clinical instruction, the sub-division of advancing and developing branches of science, the number and remuneration of professors, of assistant professors and assistants, the method of conducting professional examinations, the desirability of increased facilities in respect of extra-mural classes, the relation of the University to the medical education of women—these and many other important topics, will all form the subject of a close review. We look for a large solution of many pressing problems, and this can only be expected as the result of the utmost patience, fairness, and disinterested action on the part of the gentlemen, to whom has been entrusted the responsible office of adjudication and recommendation. The country is to be congratulated on having found so suitable a bench in the persons of the fifteen noblemen and gentlemen who have been selected as commissioners. Their labours will commence more formally in January, and will be watched with keenest interest by all parties. The passing of the Act has already necessitated certain important changes. Notably, it has transferred from the Senatus Academicus to the enlarged University Court the necessarily anxious cares involved in the adminstration of the property and finances of the University, with which, we have always held, the University professors were unnecessarily and unsuitably burdened. The increase in the size of the University Court is due to an increase of three representatives each, respectively from the Senatus Academicus and the General Council. The names thus added are:—Professors Crum Brown, Taylor, and Sir William Turner, from the University and Dr. John Duncan, President of the Royal College of Surgeons, the Right Honourable the Lord Justice Clerk, and Mr. T. M'Kie, Advocate, from the General Council. The Commissioners have,

meanwhile requested all the interested bodies to prepare statements of the kind of evidence they desire to lead.

University of Edinburgh.—We have had to report a continuance of the remarkable development of the largest medical school in the kingdom. The number of matriculated students in medicine promises to be larger this year than previously. As pointed out by our correspondent some weeks ago, however, this apparent numerical increase has been manifestly accentuated by the growing tendency at Edinburgh—a tendency in the right direction—to devote five years in place of four to the necessary study for the degree. In the medical professoriate, no change has occurred, though the school has had to lament the removal of Professor Muirhead, who, while belonging to the faculty of law, took the broadest and deepest interest in all that affected the general good of the University. In the ranks of the assistantship more than one change has occurred. Dr. Howden has been called from the department of anatomy to the lectureship in anatomy at Newcastle, and Drs. R. W. Philip and Ralph Stockman have become lecturers in the extra-mural school, in practice of physic and materia medica, respectively. The University Council meetings have, on the whole, been more lively, though there is much need for improvement. The question of publicity in professional examinations was raised by Dr. Alexander James, and a resolution recommending the granting of leave to University graduates to attend was adopted. The Council also dealt with the qualification of University graduates in respect of the honorary physicianships and surgeoncies to the public charities. Communications were received from the managers of most of those, including the Royal Infirmary, to the effect that, after full consideration they preferred to leave the matter *in statu quo*. This, therefore, continues the ultimate patronage in the hands of the Royal Colleges of Physicians and Surgeons. The University still continues to dispense its fair quota of medical diplomas. At the annual graduation in August, the degree of M D. was conferred on fifty-nine gentlemen, and the degree of M.B.,C.M. on 164, while a special graduation was held recently, when some twenty gentlemen who had been referred on one special branch for three months, received the University's qualification to practise. The Students' Representative Council has maintained its high character for activity and resolution in respect of academic discipline, and there is reason to believe that its establishment has been a most wise step on the part of the University authorities who encouraged it. The students continue to crave alterations in the curriculum, and having achieved a modification of the conditions of the first examination, they have been urgent in the request that it should be permissible for them to present themselves for the first division of the second (anatomy and physiology), at the end of the second year. This proposal, if not initiated by, has the support of the majority in the medical faculty of the University—and it has been approved by the University of Aberdeen—but the Edinburgh University Court has delayed the matter for further consideration. This winter session, the students of Edinburgh have had the enormous boon granted them of using the now completed Union buildings. The success of the undertaking has been determined. Indeed, the only fear is that the membership may increase out of proportion to the possibilities of the building. The further work in connection with the new buildings goes on apace, and already the outline of the great academic hall begins to rear itself over the lofty palisading which shuts off the work from the public view. The new year should see the erection of the Academic Hall completed The various special lectureships have been thoroughly appreciated, and Mr. Romanes and Dr. Hutchinson Stirling have both had good audiences. This year, there was inaugurated a movement, called the Edinburgh University Gathering, having for its object the bringing of the educational advantages afforded by University extension lectures more directly before the people. Several of the scientific and medical staff contributed lectures. There is still need for a greater stirring up of the love of research in the University laboratories. Much depends, doubtless, on the inspiration of the official head of the laboratory, and if this be lacking, nothing else can supply the place. On the other hand, the foundation of fellowships for the endowment of research will help much, and the asssociation with this in view, is urgent in its demands for further help. The last contribution has come from Dr. A. H. Barbour, whose own researches have done something for the reputation of Edinburgh, and who has instituted a scholarship of £50 per annum.

The Royal Colleges of Physicians and Surgeons.—This year has brought a change in the presidentship of both colleges. Dr. Peel Ritchie, late President of the Royal College of Physicians, has been succeeded by Dr. Grainger Stewart, and Dr. Joseph Bell, late President of the Royal College of Surgeons, by Dr. John Duncan. The Research Laboratory of the Royal College of Physicians has contributed excellent work during the past year, and the first volume of reports has received high encomiums in most influential quarters. A second volume is in course of arrangement, and is expected to prove a thoroughly worthy successor. The Royal College of Physicians, we are informed, has invited the Physiological Society to hold their annual meeting in Edinburgh, and have placed their rooms and laboratory at their disposal, an invitation which the physiologists have cordially accepted. The means of encouraging research at the disposal of the College of Physicians have been further increased by the institution of a scholarship of the value of £100 per annum, to be competed for biennially. The donor is Dr. A. H. Barbour. The establishment of the laboratory was celebrated by a *conversazione* in the Royal College of Physicians, which, under the excellent presidency of Dr. Peel Ritchie, proved an admirable success.

The Edinburgh Medical School.—The Edinburgh Medical School maintains its unique position as an adjunct source of great strength to the teaching of medicine at Edinburgh. A number of new lecturers have been added to the list; Dr. Stockman, in materia medica; Drs. G. A. Gibson and R. W. Philip, in practice of physic; Dr. Mathieson, in midwifery, etc. The system of special classes has been further elaborated, and there is evidence of undoubted appreciation on the part of young graduates and senior students. The dream of last year is coming more near fulfilment, and men have begun to recognise that, in certain departments at least, Edinburgh is prepared to offer advantages equal to those afforded by the great continental centres. Already the foundations have been laid of what may fairly be expected to develop into a powerful post-graduate school. The autumn course of post-graduate instruction was well attended by graduates from all parts of the world. A new prize has been instituted in materia medica and therapeutics, called the Bathgate Memorial Prize, in memory of the late Dr. Bathgate. Things have not gone quite smoothly in the ladies' camp. In an action at the instance of two late members of the Edinburgh School of Medicine for Women, against the executive of the school, Lord Kyllachy, pronounced a judgment adverse to the latter, finding them liable to each of the pursuers in a sum of £50, along with costs. In pronouncing judgment, the Lord Ordinary condemned the system of government which had been allowed to prevail in the school as unnecessarily harsh and stringent. Public interest has been awakened afresh on the whole question of the medical education of women, and it has been resolved to establish a Scottish Association for the Medical Education of Women, which shall take cognisance of every department of this important subject and, more particularly, will arrange for the establishment of classes, on a basis similar to that of the already existing school for male students to be open to all. For the present winter, temporary arrangements have been made with several teachers, with whom the lady students—fifteen in number—have heartily co-operated. The association has received influential support, professional and lay. The managers of the Royal Infirmary have still further increased the staff of assistant-surgeons, so that the surgical side of the hospital is well equipped. The medical half of the hospital seems less sufficiently manned. Dr. Keiller, after many years of service at the Royal Maternity Hospital, has resigned, and the vacancy thus created has been filled by the election of Dr. Berry Hart.

Public Health.—The awakened interest in questions of hygiene, which was noted last year, has been maintained. The subjects of improved sanitation and plumber work have been abundantly discussed. The vital questions affecting the condition of the poor have not been overlooked. In the Social and Sanitary Associations there exist two agencies largely occupied with an attempt to ameliorate the condition of the poor. The weekly public health lectures, which it was feared might have to be given up for want of funds, have been continued this winter, and appreciative audiences have filled the lecture hall. The beneficent institution of halfpenny dinners for poor children has been reinaugurated this winter. The attention of the authorities has been drawn to the culpable selling of methylated spirit to poor persons, notoriously for consumption, and stringent regulations have been adopted with a view to the prevention of this crying evil. A suggestion was offered to the Town Council that an attempt should be made to supply Edinburgh with salt water, more particularly for bathing and for watering and cleaning

purposes. The matter was referred for further inquiry, but as yet no practical issue has resulted. The idea is one, however, that should not be lost sight of. The epidemics of sore throat and scarlatina, which, in 1888, were clearly traced to contaminated milk supply, roused public attention, and a more thorough inspection of the cowhouses and dairies of the city and neighbourhood was called for, with the result that a large proportion of these were found to fall short of statutory requirements. The immediate effect has been to ensure more rigid surveillance in this very important department, and ultimately a large reform may be expected. The subject of pleuro-pneumonia in cattle has occupied the attention of our veterinary societies, and several members of the medical profession—notably Professors Chiene and Hamilton—have offered their co-operation in the carrying out of investigations on the subject.

Lunacy.—Gratifying reports have been issued by the commissioners on the state of the Royal Edinburgh Asylum. The managers and the enthusiastic physician superintendent are to be congratulated on having this year received the plans and estimates for the erection of a magnificently arranged new building. It is much to be regretted that the Edinburgh medical students do not take fuller advantage of the unusually good clinical advantages afforded by this institution. Unhappily, many graduates learn too late what an important part of medical training they have omitted; and nowhere are better opportunities offered than at the Royal Edinburgh Asylum.

Burial Reform.—At a meeting held under the presidency of the President of the Royal College of Physicians strong resolutions were adopted, condemning the unnecessary display and expenditure in connection with the disposal of the dead. An association, to be named the Burial, Mourning, and Funeral Reform Society of Edinburgh, was formed, with the object of disseminating more rational views on the subject.

Sick Nursing.—The nursing of the sick poor has always been looked on with much interest in Edinburgh, and for years we have had the services, both administrative and working, of devoted ladies in this special field. The names of Miss Ann Maitland, Miss Cowan, Mrs. Chiene, Miss Ferguson, and others occupy an honourable place on the list. More recently the work has received fresh impetus through the foundation of the Scottish Branch of the Queen Victoria Nurses' Institute, under the energetic presidency of the Countess of Rosebery. The branch has already done much excellent work, and most efficiently supplemented the labours of the earlier workers. From the large amount of general interest which the more conspicuous movement has awakened a career of much usefulness may be expected. The Royal College of Physicians of Edinburgh has signified its approval by subsidising the branch through a donation of £250.

The Societies.—The medical and scientific societies have been most active. Our correspondent has noted increased evidence of vitality over past years. The Medico-Chirurgical has, during the year, had several discussions of importance, notably that on proposed legislation with regard to habitual drunkenness, in which the Society had the co-operation of their brethren in the legal faculty, and that on intestinal obstruction, in which both physicians and surgeons took active part. The reports of the meetings have been recorded in the JOURNAL from month to month, and present a list of papers, rare cases, therapeutic advances, pathological specimens, and discussions of much value. The Obstetrical Society celebrated its jubilee this year under the presidency of Dr. Underhill. Its transactions, too, form an important contribution to this department of medicine. The Royal Society still progresses in the development of the biological side, and this year the *Proceedings* contain several papers of medical interest. Thus papers were communicated by Professor T. R. Fraser on the natural history and pharmacology of strophanthus hispidus, by Dr. Alex. Bruce on the corpus callosum, by Drs. Paton and Stockman on metabolism of man during starvation, by Dr. Ashdown on certain substances, found in the urine, which reduce the oxide of copper upon boiling in the presence of an alkali, by Dr. James on some points connected with clonus, by Dr. Haycraft on the chromatology of bile, etc. The Pathological Club still maintains its excellent reputation, but as the meetings are private and no transactions furnished, fuller details of its work are impossible. There is always a keen competition for vacant places in its membership, which is limited to thirty. The Scottish Microscopical Society has started well; it has selected Professor Sir William Turner as first president.

GLASGOW.

The University.—Extension of University Teaching and Post-graduate Courses.—The Extra-mural Schools of Medicine.—Queen Margaret College.—Faculty of Physicians and Surgeons.—Public Health and Social Problems.—Tuberculous Meat.—Dwellings of the Poor.—Population.—The Infirmaries.—Lunacy in Scotland.

The University.—During the year which is closing there has been a truce to the strife of intra-university political parties. It was clear that university reform could no longer be delayed; and if there were any within the University who objected to reform altogether, they were wise enough to perceive the inevitable, and prudent enough to make the best of it. So at the last all parties endeavoured to make the best of the oft-introduced Universities' Bill, and combined to secure the settlement of a subject already too long delayed. Thus on August 30th the Bill passed into law and comes into force on January 1st next. But over the question of the election of three additional assessors to the University Court from the Council the truce has been broken. The University Council Association, somewhat engrossed, perhaps, in congratulating themselves on the success of their efforts to improve the Bill by enlarging the Court and increasing their powers at the expense of the Senate, were anticipated in nominations for the assessorships by a committee rapidly formed to secure the election of three gentlemen who, though pledged to reform, had taken no active part in the strife, and were not, at any rate, *personæ ingratæ* to the University authorities. Before even the Council Association had nominated their candidates, this committee had secured pledges sufficient to warrant their formation and almost to promise them victory. An attempt at a compromise, made at the last moment, failed; and at the General Council meeting, held in November, six candidates were nominated: Dr. Hector C. Cameron, the well-known surgeon and extra-mural teacher, and the representative of the Faculty of Physicians and Surgeons on the General Medical Council, Sir John Neilson Cuthbertson, chairman of the Glasgow School Board, and Mr. David Hannay, who for seventeen years was clerk to the University Council, on behalf of the committee already mentioned; and Sheriff Guthrie, of Glasgow, Mr. Vary Campbell, Advocate, and Dr. D. C. McVail, on behalf of the Council Association. The vote taken at the meeting showed nearly two to one in favour of the first three gentlemen, and that result was subsequently confirmed by a poll by voting papers of the entire constituency. One important fact brought out by the contest was that, if any anti-reform party ever existed, it now no longer exists. All the candidates were pledged to reform in the direction of the institution of entrance examinations, the rearrangement of studies by the introduction of optional courses in arts and science degree subjects, the affiliation of new colleges, the widening of examining boards, and the fuller extension of university teaching by an increase of the teaching staff and in other ways. The difference in parties may now be indicated by saying that one advocates reform from within, maintaining the characteristic features of the Scottish university system; and the other seeks reform from without, by adding on to the university new colleges—in fact, breaking down distinctions between intra- and extra-mural classes. Meanwhile all parties are busily preparing for the Commission; and there is no manner of doubt that the commissioners will not want for evidence, nor for proposals, nor for schemes of far-reaching reform. The University assistants have lately entered the field, and are already occupied preparing a careful statement regarding their status and duties in the University, and will be ready with a well-considered series of proposals for remedying the altogether anomalous and unsatisfactory position they at present occupy in the constitution of the University. No changes in the University staff have occurred this year on the medical side, but on the arts side changes have occurred, owing to the resignation of three of the best known and most eminent professors: Professor Nichol, of the English literature chair, Professor Jebb, of the Greek chair, transferred to Cambridge, and Professor James Thomson, of civil engineering; and now Professor Bradley, Professor Murray, and Professor Barr reign in their stead. An addition to the staff has been made by the bequest of £2,500 left to the University by a citizen of Glasgow, Mr. Wm. Baxter, for the founding of a demonstratorship in geology. The first occupant of the office is Mr. B. G. Cormack. The attendance of students, though in the medical and arts faculties very slightly less than last year, owing doubtless to the con-

tinued prosperity of trade, still maintains the high average of recent years. The total number of matriculated students is 2,041, and of these 683 are medical, 11 fewer than last year. Among the medical students a vigorous effort is being made to establish a volunteer medical staff corps, similar to those already in existence in Edinburgh and Aberdeen. The effort was begun last year, but it is expected to be this session crowned with success by Government recognition. The surgeon-commandant is Dr. George T. Beatson, and among the students the leader in the movement is Professor McKendrick's son, Mr. W. J. McKendrick. There is a movement of another character, common to all the students, which, if successful, is likely to lead to the desirable result of establishing among them a social bond, so characteristically lacking in the Scottish universities. It is one for providing on a permanently satisfactory footing a Students' Union. The buildings for the purpose have been already provided by the generosity of an old medical student, Dr. J. McIntyre (Hants), but little advantage can be taken of them till a sum is raised for their maintenance, the sum required being £10,000. To raise this a grand bazaar was held a few days ago, attended by most remarkable success, the sum aimed at being much more than realised. With the complete establishment of the union, aided by the energetic but prudent action of the Students' Representative Council (at present prudence seems to regulate the proceedings of that body, and, *quoad ultra*, only masterly inactivity), there ought to be aroused among the body of students some community of life and sentiment, some realisation, as regards the university, of a feeling of citizenship, some *esprit de corps*, of all which, meantime, there is little or none. In fact, the body of students attending a Scottish university answers very well to the description given by someone of a well-known nostrum, "a heterogeneous combination of irreconcilable elements."

The Extension of University Teaching and Post-Graduate Courses have not prospered in Glasgow, and the latter have praccally ceased to be. In our last year's review it was suggested that the subjects which were selected with which to make the experiment of evening classes in the University were too limited, and not wisely chosen. This opinion has been confirmed by their failure, and that experiment has been meanwhile closed. Without the University, in the city, and in surrounding towns extension classes have met with meagre success, if success it can be called. Some classes, notably those of English literature, have prospered, and this session courses of lectures on physiology, delivered by Professor McKendrick in Pollokshields and Paisley, have been well attended; but, taking the scheme all in all, failure is written across it. Whether apathy of the public mind in the matter of university culture is to blame for this or bad management of the Extension Board, is a question that would bear discussion, and might not be decided altogether in favour of the Board.

The Extra-mural Schools of Medicine are passing through a critical stage in their history. The Royal Infirmary Medical School has ceased to exist as such, having been incorporated in the newly-founded St. Mungo's College, incorporated as a limited company by licence from the Board of Trade. The establishment of this College was achieved chiefly by the action of the managers of the Royal Infirmary, guided by Dr. McVail. It was done in pursuance of the effort of the managers to attract more students to the Infirmary Medical School in the interests of the efficient working of the Infirmary. But all efforts proved unavailing, chiefly, in the managers' opinion, because only four courses were permitted to count for the University degree. The affiliation of the School to the University, as it stood, seemed unlikely to be realised, while every chance of success seemed to be with a college duly incorporated and endowed. Students would probably be attracted to such a college, related to the infirmary, since they would then be on an equal footing with university students. The incorporation has been obtained, powers being also secured to extend the teaching to all the arts and sciences. The whole scheme of the new college, with fully developed proposals for the teaching of arts, science, law, and medicine on a more complete scale than is found in any Scottish university, is excellently set forth in the scholarly address with which the Principal, Dr. Blackie, opened the new college. Meantime teaching facilities in medicine and law only are provided, and an effort is being made to raise an endowment. The next step is the securing of affiliation, without which there is no prospect of any more medical students being drawn to the classes than attended them when under the designation of the Royal Infirmary Medical School, and it would be unfair to judge of the probable future of the college from the present number of students. The prospects of affiliation have, however, been gravely compromised by the unwise, and, in the opinion of some people, improper method of appointing to the various chairs and lectureships in the college. Some time after the appointment of governors to the new college and their committees, and without any previous intimation that appointments were about to be made, announcement was made in one of the daily papers that all the medical and law chairs had been filled, the names of the favoured individuals being given. In the case of the medical faculty the professors were those who had been lecturers in the Royal Infirmary Medical School, but this rule had its exceptions, and not one of those appointed to the faculty of law had held previously any similar appointment. This wholesale manufacture of professors surprised and amused the public of Glasgow, and it remains to be seen whether it will not seriously affect the question of affiliation so far as St. Mungo's College is concerned.—The Anderson's College Medical School opened the session in their new buildings, in close proximity to the University and Western Infirmary, scarcely yet completed; and, with capacity and energy on the part of the teachers, a new era of prosperity may await them. The vacancy in the chair of chemistry, due to Professor Dittmar remaining with that part of Anderson's College which became amalgamated with the Technical College, was filled by the appointment of Mr. J. Robertson Watson, M.A.; and to the chair of midwifery, vacant by the resignation of Dr. Abram Wallace, removed to London, Dr. W. L. Reid was appointed.—The small Western Medical School has terminated a brief existence, the men whose abilities alone secured for it a brief term of life having joined the staff of St. Mungo's College or that of Anderson's College, one of the early breaks being made by the death of the teacher of anatomy, Mr. Carter.

Queen Margaret College continues its work of extending a university education to women. The resources of the College have been much increased by the building of two laboratories, one of which is devoted to physical and microscopical purposes, while the other has been fitted up in a very thorough fashion as a chemical laboratory. The numbers in attendance, however, do not increase as might have been expected. The scientific subjects taught this year are physics and chemistry. A proposal is being revolved by those responsible for the management for adding to the functions of the College that of providing a complete medical education for women, but no serious steps have yet been taken in that direction.

Faculty of Physicians and Surgeons.—At the annual meeting Dr. Perry was elected President, and Dr. Yellowlees Vice-President; the representative to the General Medical Council is still Dr. Hector C. Cameron.

Public Health.—During the year 1888 there was recorded the lowest death-rate for the city of Glasgow since registration began. For that year it was 22 per 1,000 per annum; for the year previous it was 23; and there has been a gradual decline since 1883, when it was 27. Some of the reasons assigned were the absence of any severe epidemic, especially of the infectious diseases of children, a cold summer, safeguarding from the fatal diarrhœa of infants, and a warm winter, implying a diminution of pulmonary disease. The report for 1889 is not, of course, yet complete; but several circumstances indicate there will not this year be such a combination of favourable circumstances. At the close of last year an epidemic of scarlet fever occurred in the western outskirts of Glasgow. That, of course, does not affect the Glasgow rate, having occurred beyond the boundaries. The district affected was at the junction of three districts—Hillhead, Dowanhill, and Partick—under different local authorities, and as a natural consequence there were delays and difficulties in the way of any systematic effort being made to cope with it. There were strong grounds for believing the infection to be spread by milk from one dairy, and some forty cases in all occurred. The beginning of the year saw a growing epidemic of measles, which continued to spread with great rapidity till it involved every district of the city. As it spread to the poorer districts the mortality rose, till in one fortnight (in March) 707 cases were registered, and seventy-two deaths. During the same period whooping-cough was widely prevalent, the deaths from this cause following hard after these due to measles, and subsequently exceeding them. With the advent of summer diarrhœal diseases of children caused a renewed increase of the death-rate, so that as early as August Dr. Russell was constrained to declare that the present year would be remarkable for its high infant mortality

In the later months of the year, scarlet fever, though not occuring in outbursts, has prevailed more extensively than the registered cases indicate, and there are indications of a higher death-rate from pulmonary disease than characterised last year. On the whole there is no doubt Dr. Russell's gradual but uninterrupted decline of mortality for six years will this year be replaced by a considerable increase. Many towns in the West of Scotland, Johnstone, Greenock, Paisley, etc., were visited by similar outbreaks. In January the first case of small-pox registered in Glasgow since April, 1888, occurred in the person of a seamen, but it was promptly suppressed. It was introduced into Dundee in December last year, also by a seaman from a Mediterranean port; eleven cases occurred, of whom four died. In the same town, in April, a renewed outbreak occurred, three cases occurring in children in the same family. The Glasgow authorities have adopted the Infectious Diseases (Notification) Act.

Tuberculous Meat.—Early in the year the public mind was much agitated by a series of articles appearing in the *Glasgow Herald*, with reference to the sale of diseased, and especially tuberculous, meat. As the result, the sanitary authorities raised a test case by seizing two diseased carcasses, and claiming the right of wholly destroying them. The owners resisted, and a judicial inquiry was held, presided over by the sheriff of the county, Sheriff Berry. After a long and most careful inquiry, to the aid of which a large amount of expert evidence was forthcoming, the sheriff found the sanitary authorities entitled to confiscate the whole of a carcass in which evidence of tubercular disease was found, however localised. Subsequently the sanitary authority took steps to place the business of meat inspection on a thorough basis, and, by arrangement with the cattle salesmen, condemned carcasses are now to be immersed in a solution of picric acid, to prevent the possibility of them being sold for food, and yet to permit of them being disposed of for other purposes.

Dwellings of the Poor.—The interest awakened on the subject of the unhealthy dwellings in which the poor live by a series of addresses delivered by Dr. Russell, as President of the Philosophical Society, has borne fruit much more speedily than was anticipated, and of a very satisfactory character, The Town Council, who, under the operation of the City Improvement Act, had acquired some of the worst property in the city, and were unable, owing to the decline in prices, to realise it satisfactorily, have been compelled to acknowledge themselves as among the worst sinners of the landlord class. Before calling upon other landlords to set their houses in order they have proceeded to attend to their own. Extensive alterations and reconstructions are being carried out in some of the worst property in consequence. Another result has been a public movement to establish a company, on lines similar to some in existence in London, for providing healthy homes for the poor. A Social Union has been formed, with those and similar aims, and under its auspices, only a few weeks ago, the first steps were taken for the formation of such a company, it being intimated at the preliminary meeting that £10,000 was already promised towards the capital of the company, were it successfully launched.

Sewage.—The disposal of the city sewage is still the unsolved problem of the municipal authorities; but an experiment is likely to be made in treating a portion of the sewage (that from the east end of the town) by chemical precipitation. The opportunity is offered, owing to railway operations rendering necessary extensive reconstruction and alteration of sewers, the expense of which the railways must bear.

Population.—Dr. Russell's last estimate of the population living within the municipal area is 551,478 persons, an increase of 6,169 on last year. This number, of course, excludes the suburbs, which are likely soon to be brought within the city boundaries, the opposition of several having by recent elections been shown to be contrary to the wishes of their inhabitants. The population of Greater Glasgow is somewhere between 750,000 and 760,000.

The Infirmaries seem to be, like the city, beginning to feel the influence of improved trade. The annual excess of ordinary expenditure over ordinary revenue is lower this year than for previous years; and the public claims upon them are almost always more than they can fully overtake. The new infirmary on the South side—the Victoria Infirmary—is soon to be opened, which will place an additional 80 beds at the service of the public. At the Maternity Hospital Dr. Murdoch Cameron performed his second successful case of Cæsarean section, the former case having been performed last year.

Lunacy in Scotland.—The thirty-first annual report of the Commissioners in Lunacy for Scotland shows a total increase in the number of registered lunatics of 345; the increase in 1888 over the previous year was 304. The increase was made up of 244 pauper lunatics, 96 private, and 5 in the lunatic department of the General Prison. The total numbers at January 1st, 1889, were 5,612 male lunatics and 6,342 female lunatics, a total of 11,954, which is equal to a proportion of 289 per 100 000 of the population. In England and Wales the proportion is 290.7, and in Ireland 360. The increase in the number of lunatics chargeable to parishes has become a source of much anxiety to parochial boards, many of whom are compelled to face the question of largely increased accommodation.

ABERDEEN.

Extension of University Buildings.—The Teaching Staff.—University Fellowships and Prizes. — Gifford Lectures. — Thomson Lectures.—Students.—Assessors.

Extension of University Buildings.—The scheme to meet this much felt want of more extensive buildings has now reached something like a half-way stage. The various lecture rooms designed for natural history, physiology, medical jurisprudence, and materia medica are now either occupied or fit for occupation. Some of these departments, having, in the past, been destitute of lecture rooms of their own it may safely be anticipated that the convenience and comfort of both lecturer and students will be greatly increased. Meanwhile the erection of the building which is to contain the new laboratories is being rapidly proceeded with; and when they are fully equipped the various departments will be very complete. As may be readily understood, these additions will greatly increase the area occupied by Marischal College, but, unfortunately, this extension will not free the College from its hampering and ungainly environments. The opening up of the classic front of the building to Broad Street bulked largely in the minds of the citizens of Aberdeen during the recent municipal elections. In fact it almost seemed to be a test question, Whether the candidate was in favour of the opening up of Marischal College to Broad Street? And, as all the candidates professed their desire for this improvement, it is surely not too much to hope that we are within measurable distance of this long-delayed duty being taken up and carried to a successful end by the new Town Council.

The Teaching Staff.—The only change in the teaching staff at Marischal College has been that caused by the resignation of Dr. Struthers, who had filled the chair of anatomy since 1863, in succession to Professor Lizars, and the appointment as his successor of Dr. R. W. Reid, who had been joint lecturer on anatomy for many years at St. Thomas's Hospital.

University Fellowships and Prizes.—The Thomson fellowship, which may be termed the blue ribbon for young graduates in medicine, as it enables its holder to spend some time abroad untrammelled in the cultivation of original research, has fallen this year to Arthur R. Cushine, M.A., M.B., C.M., who recently graduated with highest honours in medicine and surgery. Another new prize is the Strachan medical bursary, competed for at the beginning of the fourth year of medical study, and has been awarded this year to Mr. Levack. The bursary was placed at this stage of the curriculum as an incentive to the study of therapeutics and clinical medicine, and its value has been fully appreciated by the students.

Gifford Lectures.—The crowded audiences, comprising professors, graduates, students, and the general public, and their enthusiastic reception of Dr. E. B. Tylor, D.C.L., F.R.S., go, so far, to show that the Senatus has been successful in securing the services of a lecturer who, at any rate, is able to attract and also to interest those who attend. The clerical element is marked at these lectures, and their watchful attendance will the better be understood if it be remembered that the £20,000 left by Lord Gifford was for the foundation of a lectureship having for its object "the promoting, advancing, teaching, and diffusing the study of natural theology." The lecturers need not belong to any religious denomination, and they sign no test. They are appointed for two years, and may be twice reappointed for other two.

Thomson Lectures.—The first half of this course, given by Dr. Donald MacAlister, of Cambridge, has just been delivered in the Hall of the Free Church College. The subject was "Germs and Disease," and large and enthusiastic audiences, comprising many students and other members of the University, testified to the interest which the lecturer succeeded in arousing.

Students.—The attendance of students at Marischal College is still in advance of former years.

Assessors.—The Senatus Academicus appointed as its assessors to the University Court Professors Stephenson, Hay, and Pirie; the fourth assessorship is held by Professor Milligan, whose term of office is still unexpired. The medical faculty is represented by two members of the Senatus.

MEDICAL EVENTS OF THE YEAR IN IRELAND.

The Amalgamation of Dublin Schools.—Professional Honours.—Typhoid in Dublin.—The Dublin Hospitals Bill.—The Dublin Branch.—Dublin Barracks.—Sir E. Guinness's Gift.

The Amalgamation of Dublin Schools.—One of the most important events of the year is the amalgamation of medical schools in Dublin. The number, which heretofore was five, has now been reduced to three, a number quite sufficient to promote and keep alive beneficial rivalry. The project was first brought before the College of Surgeons a few years ago and was defeated, but in 1887 Mr. Thomson succeeded in carrying a motion requesting the Council to take steps to effect an amalgamation of the Carmichael and Ledwich, both of which were proprietary schools, with the school of the College. The Council subsequently submitted a scheme which was carried by the Fellows after some opposition. Many interests were affected by this change, and the settlement of various claims demanded time and the exercise of much tact and patience. Ultimately, however, all obstacles were overcome, and the conjoined school is now in full swing with a class of 290 students. Most of the lecturers in the schools have been made professors in the College, and this has the disadvantage of diminishing the value of the chairs in a pecuniary sense, but provision is made that as vacancies occur these shall not be filled up until the number of professors reaches a fixed number, when the income will become proportionately valuable to the holders.

Professional Honours.—The profession in Ireland, after long expectation and delay, has at last received some recognition from the State. Sir George Porter, one of the surgeons to the Queen, who was knighted some years ago, received the further honour of a baronetcy from Her Majesty, and has had the hearty congratulations of his friends. In the case of Dr. Banks, one of the Queen's physicians, and President of the Association in the year of its last visit to Dublin, Her Majesty was pleased to confer the distinction of K.C.B. His elevation was very popular, and it was marked by his being the guest of the evening at the first dinner of the old students of the Richmond, Whitworth, and Hardwicke Hospitals, of which he is senior physician. The banquet was attended by many distinguished guests, and was altogether a brilliant gathering. Dr. Meldon, the President of the College of Surgeons, has been made a deputy-lieutenant of the city of Dublin. Dr. Aquilla Smith, for so many years a representative on the General Medical Council, having resigned his position, was presented with his portrait by the Fellows of the College of Physicians, and received the expression of their deep regret at the loss of his valuable services. More recently the Honorary Fellowship of the College of Surgeons has been conferred upon Mr. Thomas Heazle Parke, for his distinguished labours in the expedition of Mr. H. M. Stanley across Africa. The honour is very well deserved. Mr. Parke is a young officer of the Army Medical Department, and Mr. Stanley has expressed unstinted praise of the services which Mr. Parke has rendered the explorer and his whole party.

Typhoid in Dublin.—During the autumn there was an outbreak of typhoid fever in Dublin, which for a few weeks was rather fatal. The origin could not be clearly traced, although the public freely declared that it was to be found in the eating of oysters which had been taken from impure beds. Undoubtedly there were many cases of severe diarrhœa following from this cause. In a certain proportion of cases the disease was contracted in Paris during the exhibition, and this accounts probably for the fact that there has been an increase of it in several large towns in Ireland and elsewhere. The outbreak is now disappearing from Dublin.

The Dublin Hospitals Bill.—At the close of the last session the Government introduced a Bill dealing with the parliamentary grants to Dublin hospitals, and based upon the report of the recent commission. There was no chance of such a measure passing at such a date (August), and the measure was accordingly withdrawn, a promise being made that it would again be brought forward in 1890. The main proposals are to reduce the total grant by £4,500 a year; to hand over the bulk sum to a board for distribution; and that no hospital shall benefit which has not fifty pupils and eighty beds. As the provisions apply they will force the closure of the Richmond, Whitworth, and Hardwicke Hospitals, which, being entirely supported by grant, could not on the withdrawal of £7,600 keep even one bed open. We have pointed out some defects of the measure as they appear, and no doubt those who are interested, and who will be adversely affected, will make their views known when the subject again comes up for discussion. At present, at all events, the Bill does nothing more than provide for a redistribution of funds, and the benefit to be derived from this has not been made apparent.

The Dublin Branch.—The twelfth annual meeting of the Dublin Branch was held on January 30th, when Dr. W. Moore, Physician to the Queen, was elected President for the year. The meeting was made the occasion of presenting an address to the outgoing president, Dr. Mapother, on his removing to London. It was signed by the heads of the colleges and by nearly every hospital physician and surgeon in Dublin, and was a gratifying testimony to Dr. Mapother's great popularity and professional eminence. In March Mr. Lambert Ormsby resigned his position as Honorary Secretary and Treasurer, and received the thanks of the Council for the zeal and ability with which he had discharged his duties. Dr. Conolly Norman was appointed his successor by unanimous vote.

Dublin Barracks.—The condition of the Dublin barracks received frequent notice in Parliament during the year. Frequently recurring outbreaks of typhoid among the officers and men gave these buildings, particularly the Royal Barracks, an unenviable notoriety. Finally, with regard to the last named, it was found necessary to remove the troops altogether, and to place them under canvas. This was done in the autumn. The Royal Barracks haue since been in the contractor's hands, and extensive alterations are being made with the hope that they will be made more sanitary than they have been. The opinion of Dr. Grimshaw and Sir C. Cameron is that the chronic condition of unhealthiness is due to the fact that the building is erected on a gravel bed, which is itself on a layer of impervious clay, and that the leakage from imperfect sewers is retained in the gravel, owing to the formation just mentioned. Mr. Field's report is referred to at page 960, vol. i, 1889, of the JOURNAL.

Sir E. C. Guinness's Gift.—The remarkable generosity of Sir Edward Guinness, who has given £200,000 to London and £50,000 to Dublin for providing dwellings for the poor, deserves to be specially recorded. The purpose to which this money is to be devoted is a wise one, and may serve as a beginning of the solution of that large problem, how are the poor of large towns to be healthily housed. The trustees are engaged in devising a scheme in accordance with the donor's desires, and before another year passes we hope to see some of the good effects which are expected.

PROVIDENT AND BENEVOLENT INSTITUTIONS FOR THE BENEFIT OF THE MEDICAL PROFESSION.

British Medical Benevolent Fund.—The proceedings of this charity during the year 1889 have well sustained the past reputation of the fund for useful and unobtrusive help. The Grant Department, through which sums, varying from £5 to £20 are given to applicants duly recommended and vouched for by a subscriber's signature, after approval by the Committee without any vexatious canvassing of Governors, printing of cards, or other publicity, has disbursed £1,594 among 149 applicants up to the end of November, which is fully up to the average. The last meeting of the year falling upon December 31st, prevents the rendering of a full account. These grants are generally given by instalments, weekly or monthly, distributed through the instrumentality of the Cheque Bank, or through honorary local secretaries, or, in instances where it is felt by the Committee that the assistance rendered by the prompt payment of a sum may prevent the necessity of any future applications, directly by the treasurer. In the Annuity Department the selection of annuitants is managed somewhat differently. A subcommittee selects from a list of those who have received grants, are over 60 years of age and are without income or assistance from a sister charity, those most deserving, and these candidates are submitted to the General Committee in May and November. The total number of annuitants now receiving £1 13s. 4d. a month is 58, and there are in addition 7 medical men who, thanks to a special fund, are in receipt of 10s. a week. Six annuitants of £20 each were elected in May, and six more will be elected in January, 1890; besides these, two were elected "Dunlap Gift Annuitants," as directed by the will of Mrs.

Dunlap, being "widows of medical men without other provision." Several valuable legacies have been received, and the interest will be applied to the creation of fresh annuities. Mr. Parker Young left the Committee, and Dr. Stocker was elected in his stead. The working of the fund has been carried out in the same economical manner as usual by the help of its honorary officers, no one being paid with the exception of the collector. Subscriptions, due on January 1st, should be paid to Dr. Sidney Phillips, Honorary Financial Secretary, 21, Upper Berkeley Street, W.

Society for Relief of Widows and Orphans of Medical Men.—During the current year, a sum of £2,741 has been distributed among 63 widows, 14 orphans, and 3 orphans on the Copeland Fund. Fresh applications for grants have been received from 2 widows and 2 orphans, and assistance has been given them. Through the deaths of 3 widows, and 2 orphans becoming ineligible through age, grants to the amount of £157 have fallen in, and fresh grants amounting to £74 per annum have been made. The expenses of the year have been £301 4s. 8d. Twenty-three new members have been elected, 6 members have died, 2 resigned, and 6 have ceased to be members, the number of members at the present time being 334. The expenses of the Charity for the year have been £301. Legacies have been received from the following:—Miss Wilson, £50; Miss Caspar, £1,000; Mrs. Ely-Douglas, £35 2s. 2d. (remainder). The Society early in the year lost the valuable services of Mr. Fuller, who had filled the office of Acting Treasurer for 16 years. Dr. Potter was elected in his place. The offices of the Society are now at 20, Hanover Square, where the Secretary attends every Wednesday and Friday from 4 to 5, to give any information respecting the Society that may be desired. The Society is restricted to members of the medical profession living within a radius of 20 miles from Charing Cross, and the benefits of the Society can only be given to the widows and orphans of deceased members of not less than 3 years' standing.

Royal Medical Benevolent College, Epsom.—Epsom College, under its new head master, the Rev. T. N. Hart Smith, late of Marlborough College, has been doing good work during the past year. The Council have built a new class room for the students of the natural sciences, proviping the best instruments for their use; and a natural history society has been started upon the lines of a similar institute which has been so productive of good results at Marlborough. Epsom College is conducted as a first-rate public school with a medical foundation, and various privileges that are reserved to the medical profession, but in every other respect open to all classes alike. The educational work has been carefully arranged on the system that has proved so successful at Wellington College, Haileybury, Marlborough, and other public schools; on the classical side the best training is given for the universities and the learned professions; the modern side has been tabulated to meet the requirements of the London University, the Army, and the Civil Service. There is also a class in which boys are prepared for commercial pursuits. For boys who are intended for the medical profession no school in England possesses equal advantages; special training is provided for the London matriculation and preliminary scientific examinations, and, owing to the generosity of the London hospitals, there are seven scholarships, ranging in value from 90 to 125 guineas, offered annually to leaving boys. For the encouragement of classics, there are several very valuable prizes in money and books, and one exhibition every year of £50, tenable for three years at the universities. A munificent benefaction lately received from Dr. Haviland and his brother, Mr. F. G. Haviland, has provided two exhibitions of £60 a year each of four years. One of these exhibitions will be awarded every alternate year for proficiency in natural science, the holder declaring his intention to graduate in medicine at the University of Cambridge. The late Dr. Harvey Owen has bequeathed the sum of £1,620, to found an exhibition for foundation scholars or the orphans of medical men, to be held at one of the universities. Six scholarships of smaller value, held in the School, are offered annually, and the Council award several valuable exhibitions which are restricted to sons of medical men under certain conditions.

OBITUARY FOR 1889.

England.

During the past year it has been our duty to chronicle the deaths of several men of great eminence in the medical profession. Among physicians we may recall such well-known names as those of C. J. B. Williams, C. B. Radcliffe, S. O. Habershon, G. Owen Rees, T. K. Chambers, Charles Elam, and Protheroe Smith, all men who had lived to the full ripeness of their years, and who had worthily accomplished the work that it was in them to do. Far otherwise was it with the lamented Leonard C. Wooldridge, who was cut off in the early blossom of his rich scientific promise. English surgery has to mourn the loss of Haynes Walton and Walter J. Coulson. Among men of general distinction may be mentioned Dr. Joseph Rogers, whose name should be held in eternal honour by the poor of this country, and by the practitioners whose especial duty and privilege it is to give them such medical succour as they require; Sir W. Tindal Robertson, M.P. for Brighton; Dr. John Percy, who would undoubtedly have risen to the first rank in medicine had he not preferred another sphere of activity; and Mr. Henry James Wolfenden Johnstone, whose health compelled him prematurely to abandon a profession in which he was exceptionally fitted to excel. Among others who have valiantly done their duty in their chosen province of professional work may be mentioned Dr. L. T. Cumberbatch, Dr. C. Royston, and Mr. James Lattey, well-known general practitioners in the West End of London; Mr. George Woods and Mr. Henry Lowndes, of Liverpool; Dr. James Beddard, of Nottingham; Dr. J. B. Wright, of Southsea; Mr. John Jobson, of Bishop Auckland; Mr. James Barron, of Sunderland; Mr. C. J. Moore, who died of diphtheria contracted by sucking the tracheotomy tube of his own child; Mr. L. P. Jackson, of Plymouth, who died in his early prime, of scarlet fever, a martyr to duty in the truest sense of the words; and Dr. W. P. Davis, physician to the British Ambassador at Paris. Mr. Percival Leigh, a well-known and highly esteemed contributor to the leading comic journal for upwards of half a century, should not be forgotten.

Scotland.

We have to record the deaths, during the past year, of the following honoured members of the profession: Dr. R. Paterson, Leith; Mr. R. Hogue, Edinburgh; Dr. Alex. Sinclair, Edinburgh; Dr. Murray Gibson, Portobello; and Dr. Wm. Strettel Miller, Edinburgh. Dr. Alexander Mackintosh, late of the Royal Lunatic Asylum at Glasgow; Dr. John Mackenzie, of Tighnabruaich, and Dr. James Maclaren, of the Stirling District Asylum, Larbert.

Ireland.

The death of Robert McDonnell, F.R.S., on May 5th last, was a serious calamity to the profession at large. He had just returned from a holiday, taken for the benefit of his health, when he suddenly died, presumably from aneurysm. He had only closed his 61st year, and was at the height of popularity and of professional distinction. Robert McDonnell had done excellent scientific work, and he was, some years ago, made a Fellow of the Royal Society. He had served on many Royal Commissions, and he was a member of that upon the education and employment of the blind at the time of his death. He was a very able surgeon, and above all, a pure and just man. Dr. J. Rutherfoord Kirkpatrick, Professor of Midwifery in the University of Dublin, also died during the year, and was very generally lamented. He was a man of singularly retiring manner, but he was a good practical teacher, and was popular with his pupils. We must add the name of Dr. J. Cuffey, who met a tragic death with many others on board the *Duke of Buccleuch*, which was sunk by a collision in the English Channel in April last. He had been house-surgeon to Sir Patrick Dun's Hospital, and he was taking a voyage as ship's surgeon when he was drowned. Dr. Cuffey was a very brilliant man, and his melancholy death has caused universal regret among his teachers and old fellow-students. Dr. McNab, Professor of Botany in the College of Science, died suddenly of heart disease early in December at the age of 45. He was a most able lecturer, and his reputation as a scientist was very widespread. One of the best known of Dublin practitioners was Mr. Edward Alexander Stoker, F.R.C.S.I., who died on January 18th, 1889, aged 81. He was in his early days a very successful teacher of anatomy, and for many years he was one of the Examining Board at the College of Surgeons. He remained in harness practically to the last, and his death was deeply deplored.

*** Owing to the space occupied by the Annual Retrospect, numerous letters, notices, and other communications are unavoidably crowded out.

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